

# contentACCESS

## Manual - version 3.1



**DECEMBER 12, 2016**

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## Introduction to contentACCESS

contentACCESS is a modular product primarily designed to solve email archive and file archive scenarios in an organization. It uses built-in or custom plugins, which are able to connect with many kind of input systems and process the information as desired. Based on the plugins, contentACCESS is providing email, SharePoint and file management and also archive in the cloud or on premise. With contentACCESS you can choose from many storage systems to store your data – either with the built-in processing or with a completely custom processing workflow.

contentACCESS provides a simple way of just implementing the actual processing task and writing to a storage or archive system of your choice. You can set demanded plugin instances (jobs) in the background for processing these tasks without any need to change your employees' behavior. It also provides methods for accessing stored content regardless of the target, providing unified access. contentACCESS can be fit to customer needs very easily.

## Services provided by contentACCESS

- ✓ **Processing plugins:** Processing plugins are responsible for crawling and processing your data. The way of processing data depends on the framework-functions that the plugin has and on further configurations of the plugin. Besides the basic plugins custom plugins are also available. The crawling method is configurable and is offering different optimizations for different use cases. The crawled data can be filtered by data age, size, file type and further specific properties. The plugin selects the crawling method, the filtering and the target storage and is focusing only on the data processing. A typical use case is to archive emails or files into an archive system, or to export to a file system, etc.
- ✓ **Manual archiving tool:** To manually archive emails directly from your MS Outlook or Outlook Web Access contentACCESS uses **Mail app** application. With this application the end user can archive old emails very easily, and also retrieve them at any time with the help of shortcuts which replaced the original item.
- ✓ **Clustering:** Helps to optimize your capacities and divide data processing between more servers to make contentACCESS work more smoothly.
- ✓ **Storages:** The contentACCESS framework is offering the following storage providers out of the box: Disk store (simple disk storage), inPoint, iTernity. Third party storages are possible to be implemented as well.





- ✓ **contentWEB:** contentWEB is a web application running in browsers and also on mobiles (mobile browsers), which provide an easy to use interface for accessing processed and stored content. Its functions include folder browsing, item listing, item paging, item filtering, restoring, exporting and searching.
- ✓ **contentACCESS client access and WEB Services:** contentACCESS provides an API for executing plugins on demand, manually processing emails using plugins, unified access of processed elements.
- ✓ **Mobile access:** The processed data for users are accessible through the contentACCESS Mobile application as well.

## Software requirements

The following prerequisites have to be installed on the machine(s) where you want to run the contentACCESS installation wizard:

- MS SQL 2008, MS SQL 2008 R2, MS SQL 2012, MS SQL 2012 R2, MS SQL 2014 SP2 or MS SQL 2016
  - MS Outlook 2010/2013 (64 bit version) or later
  - .NET Framework 4.5
  - Internet Information Services (IIS) and ASP .NET 4.5
- These prerequisites are also checked by the installation wizard. If not installed, SQL, Framework and IIS will be installed directly from the wizard during the installation.
- Operating system memory (RAM): 8 GB is recommended
  - Free disk space (HDD): 20 GB free space is recommended

**Note:** For more information about contentACCESS prerequisites you can read the Hardware and software requirements manual [here](#).

## contentACCESS setup package

The installation package makes the contentACCESS installation process very transparent and intuitive. This section leads you through the dialogs of the installation wizard and describes the step-by-step installation of the product. To run the contentACCESS setup self-extracting package the following is required:

- .NET Framework 4.5
- Ability to run the setup as an administrator



What is involved in the contentACCESS setup package?

- Under section **Documentation** the contentACCESS manual and the Best practices to the software can be found, and it also contains a link to the contentACCESS website.
- Under **Planning** the links to hardware and software requirements can be found, and the user may download the **contentACCESS Analysis Tool** right from here. The tool is used to measure the performance of file shares to be archived and also the speed of the desired target store. It is also used to analyze the files that will be archived, and can help to set up the correct file archiving strategy.
- Under **Tools** you can find the Legacy MAM retrieve server setup, the Outlook forms used to transparently open the archived email messages directly from Outlook and from here you can also download TECH-ARROW's WinShortcutter. WinShortcutter is a collection of small and useful utilities that are primarily focused at people working in a Windows dominant office environment with a weak MAC support. It is primarily used to open MS Windows shortcuts (.LNK).
- Under **Products** you can read a short description about other software solutions of TECH-ARROW: contentGATE, streamGATE, officeGATE.
- The installation process of the contentACCESS server and it's components can be started on the **Installation** page of the setup. The following components can be installed using the **Installation** page of the wizard:
  - the contentACCESS server
  - [contentACCESS Central Administration](#) – the contentACCESS configuration interface available for system administrators and tenant administrators
  - [contentWEB](#) – the archive user interface also for the end users
  - [Central login page](#) – used to log in to the respective application with forms provider or third-party authentication providers
  - [contentACCESS Web services \(Proxy\)](#) – to ensure secure (HTTPS) connection between the user and the contentACCESS server
  - [Virtual drive](#) – a drive that's used to display the contents of the File system archive; the drive is also mandatory to retrieve the archived files from shortcuts

contentACCESS components' prerequisites are the following:

- For Central administration: Internet Information Services (IIS), .NET 4.5
- For contentWEB: IIS, MS Outlook 2010/2013 (64 bit version) or later, .NET 4.5
- For contentACCESS Proxy: IIS, .NET 4.5



- For Central login page: IIS, .NET 4.5
- For the contentACCESS Server: .NET 4.5, SharePoint Server Client components SDK (for SharePoint processing); MS Outlook 2010/2013 (64 bit version) or later (for email processing)

These prerequisites (except of MS Outlook) are installed by the setup package automatically. If any problems occur during the automatic installation, the prerequisites must be installed manually.

SharePoint Client components and the MS SQL server can be installed using the respective application file from the contentACCESS installation package library:

- SharePoint client components:  
C:\TECH-ARROW\contentACCESS\_Package\Setups\SharePointClient
- SQL Server 2012 Express:  
C:\TECH-ARROW\contentACCESS\_Package\Setups\SQL

If the Internet Information Services (IIS) haven't been installed automatically, the IIS features must be turned on in the Windows features. Open the Server manager → click the **Roles** node → click **Add roles** → select **Web server (IIS)** in the **Select server roles** window and turn on the features based on the table below:

<b>Application development features</b>	.NET Extensibility 4.5 ASP .NET 4.5 ISAPI filters ISAPI extensions
<b>HTTP common features</b>	Default document HTTP errors Static content
<b>Performance features</b>	Static content compression
<b>Security</b>	Basic authentication Windows authentication

The contentACCESS components can be installed

- on one single machine,

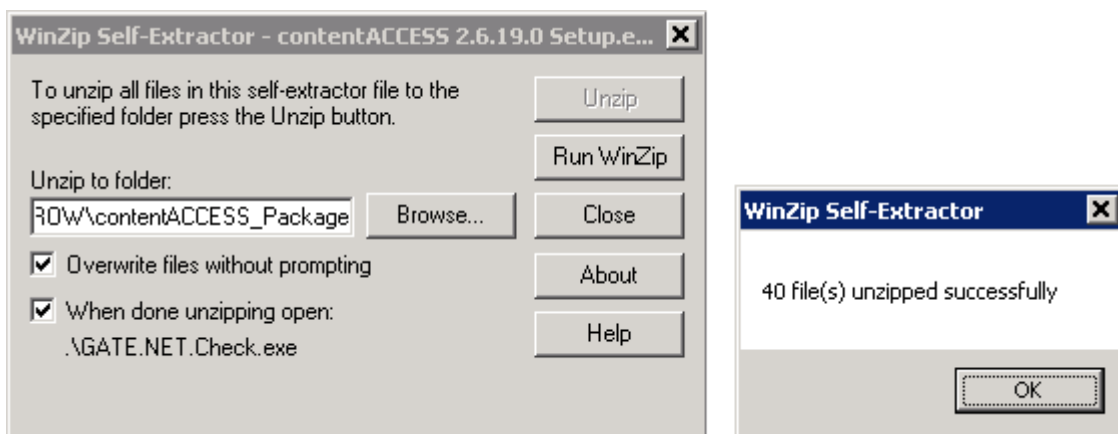


- in a cluster system – when more servers are installed on different machines, and they are all joined with one configuration database
- in a distributed environment – when there is one contentACCESS server installed on one machine and the components are distributed (installed) on different machines

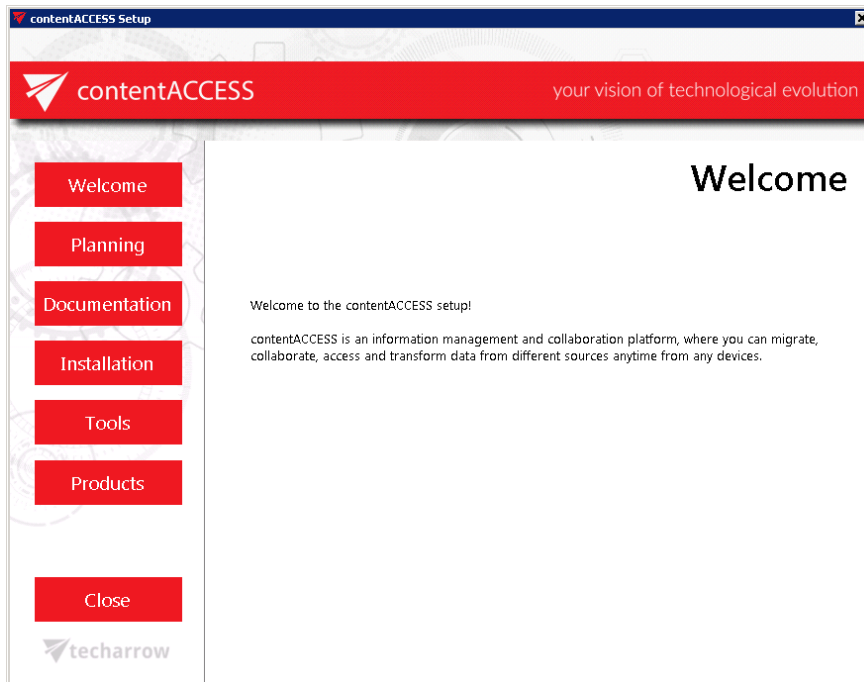
These components are described in more details in chapter [contentACCESS components](#). First the contentACCESS installation will be described.

## Installation of contentACCESS

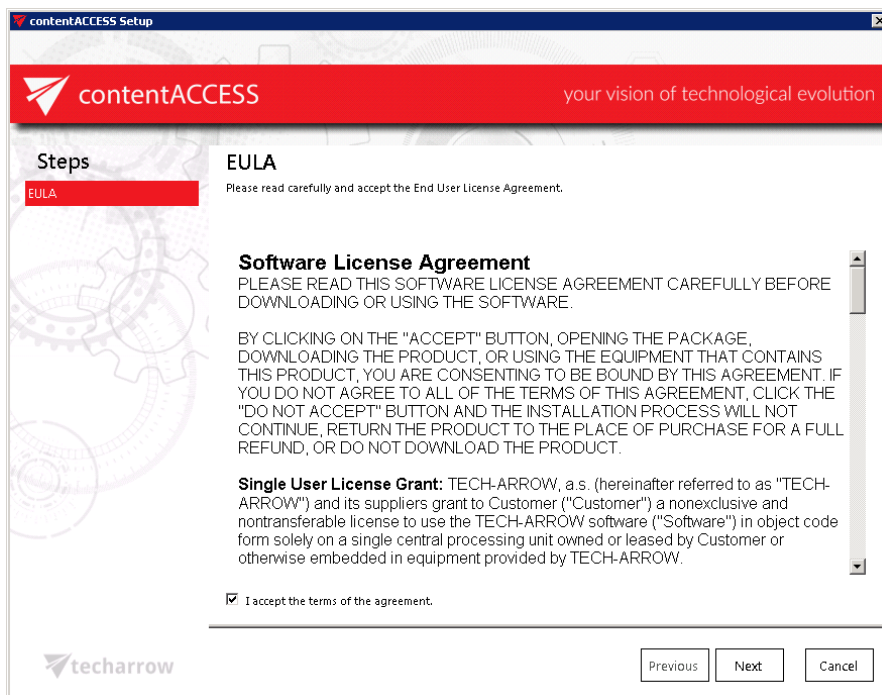
To install contentACCESS, first download and run the setup package (contentACCESS X.X Setup.exe). As default it unzips to `c:\TECH-ARROW\contentACCESS_Package` folder but you can use the **Browse** button if you want to change the directory. Click **Unzip**. After the files have been successfully unzipped click **OK**.



**Welcome!** Now the contentACCESS installation wizard will open which will lead you through all the steps of the deployment process. All components of contentACCESS can be deployed during this deploying process. Click **Installation** on the Welcome page.



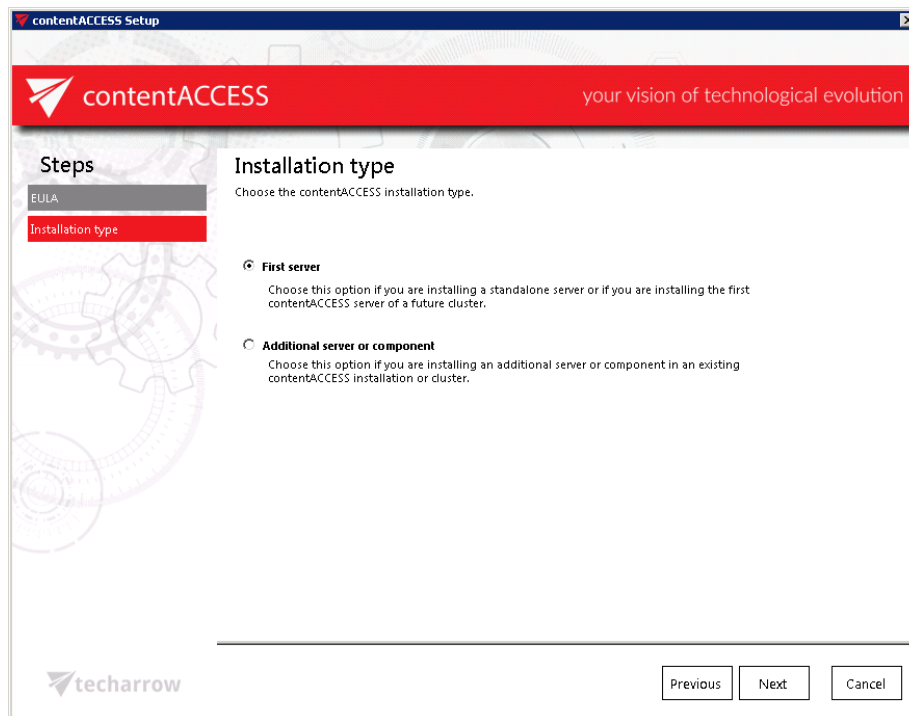
1. **EULA.** After you have read the End User License Agreement carefully check checkbox **I accept the term of the agreement** and click **NEXT**.



2. **Installation type.** This installation step is available at the very first install only. When updating the product, this step is no more available. In this step the user is asked to select between 2 types of installations:

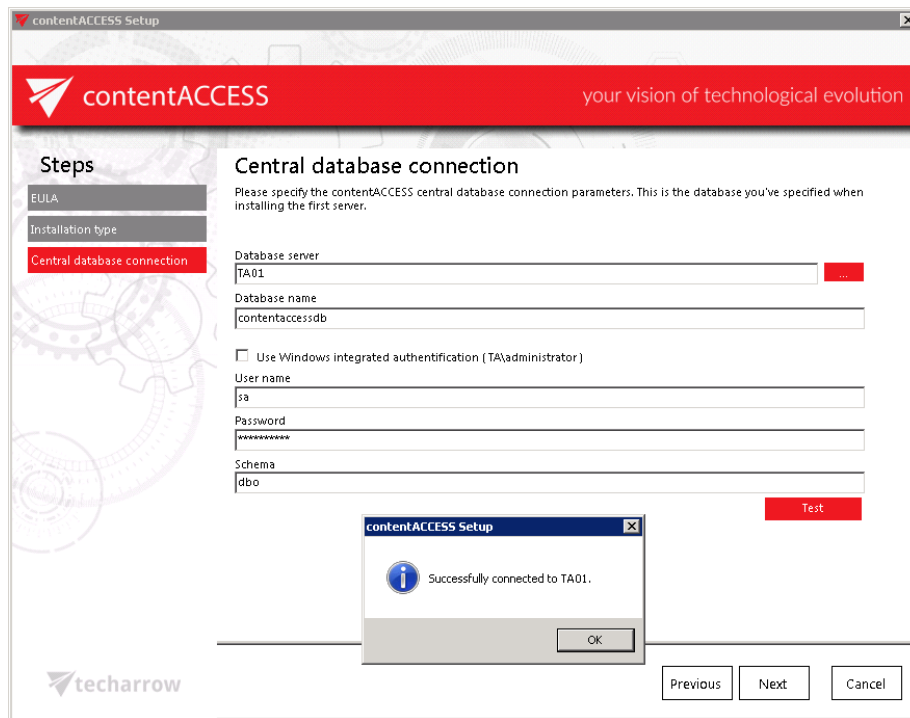


- **First server** – choose this option if a) you are installing a standalone server (so everything will be installed on the same machine as in this use case), or b) you are installing the first contentACCESS server of a future cluster;
- **Additional server or component** – choose this option if you are installing an additional server or component (Virtual Drive, Central Administration, contentWEB etc.) in an existing contentACCESS environment or in a cluster.

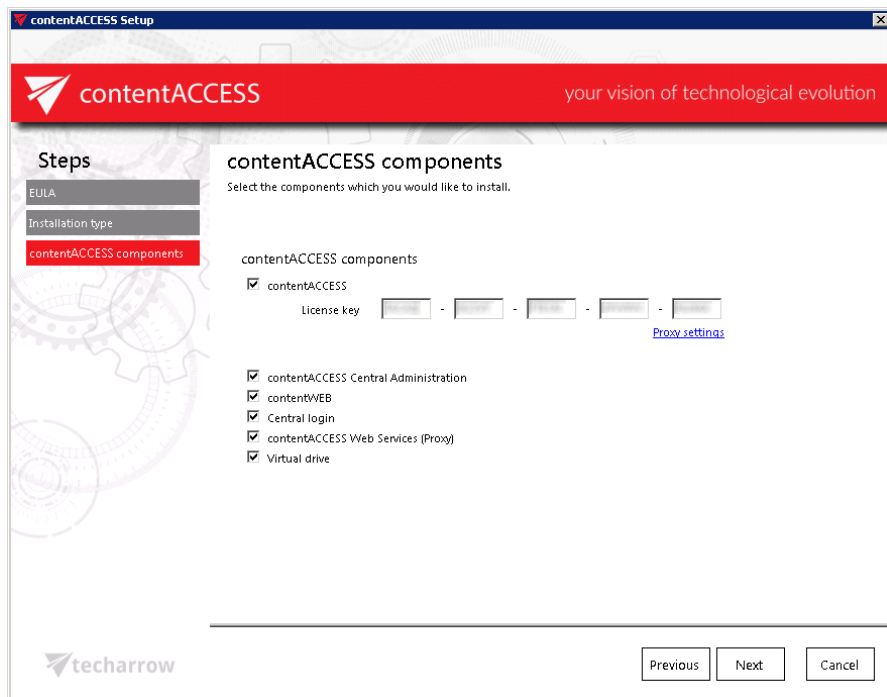


**Note:** Cluster is a system consisting of multiple servers (nodes) tied to the same configuration database.

In case that you are installing an additional server in a cluster, or a component in an existing contentACCESS environment (i.e. you marked the 2<sup>nd</sup> radio button), you will be required to set the connection with the already existing central database that you have specified at installing the first contentACCESS server. Test the connection and click **Next**.



3. **Components.** In this step you have to choose which contentACCESS components you want to install on a server. The components are fully described in chapter [contentACCESS components](#). It is recommended to read this section before you select the respective components to be installed. Check all the checkboxes in this step if you want to have all components on a single server.



If you have selected the contentACCESS server component, you need to apply the license before proceeding the installation. License activation can be done either **a) online** or **b) offline**.

**a)** If the machine where the setup is running **has internet connection**, you can activate the license **ONLINE**. Follow the next steps:

- Choose **Online activation** in the wizard.
- Enter your license key and click **Next**.
- License will be validated and you can continue the installation.

**b)** If the machine where the setup is running **has NO internet connection**, you can either **1) use the Web Proxy's credentials to activate the license through the configured proxy server** or **2) activate the license offline**.

**1<sup>st</sup> option:** **Configure the proxy URL** and applicable credentials to the proxy. The proxy that you configure here is used by the licensing component to reach the licensing server for the activation. By default the proxy server is disabled. To enable it, open the **Proxy settings** dialog (option **Proxy settings** in the wizard). You can either

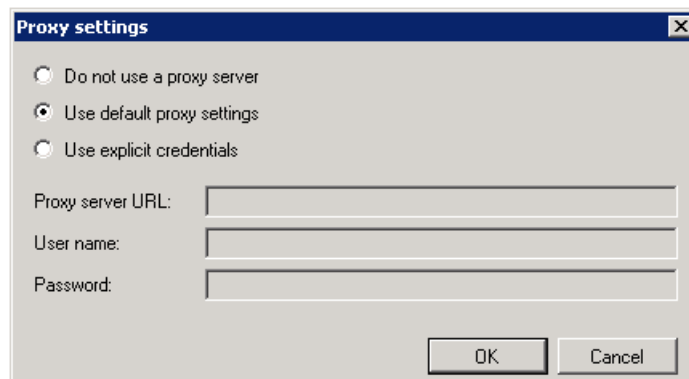
- **Use default proxy settings** that is configured on the contentACCESS server in **Control Panel**  
→ **Internet options** → **Connections tab** → **LAN settings** → **Proxy server**





or you can

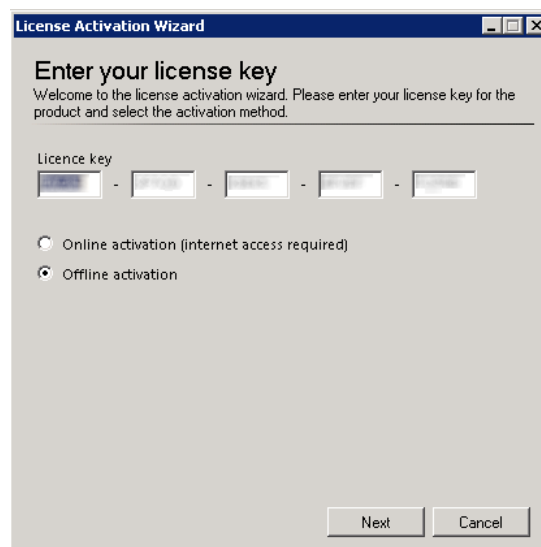
- **Use explicit credentials** (explicit proxy server URL and user)



If the proxy is configured, you can continue with online license activation based on point a) above.

**2<sup>nd</sup> option: Activate the license OFFLINE** by following the steps below

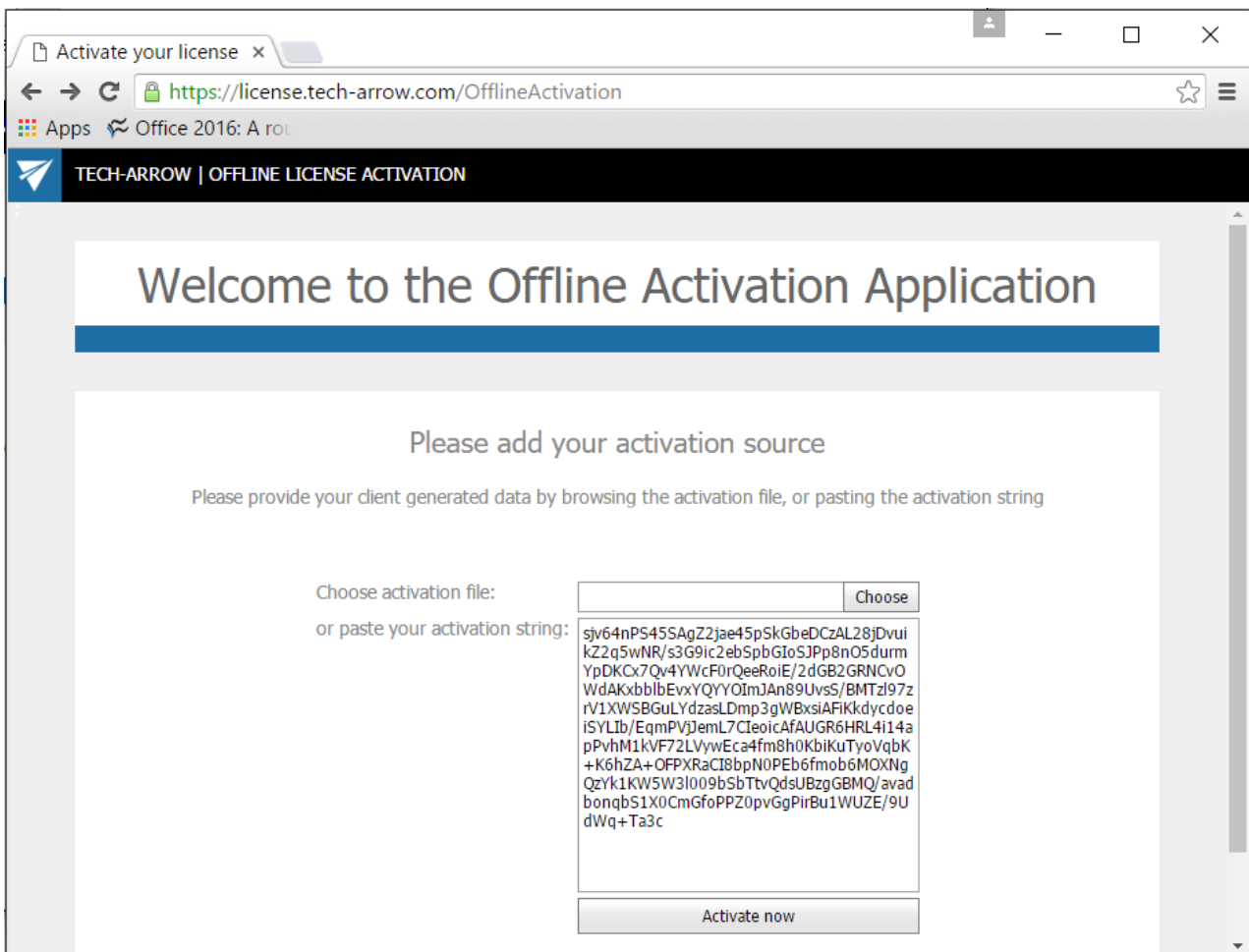
- Insert your license key.
- Select the **Offline activation** button and click **Next**.



- Activate your product on the offline license activation page of TECH-ARROW. The page can be accessed using the link in the activation dialog:

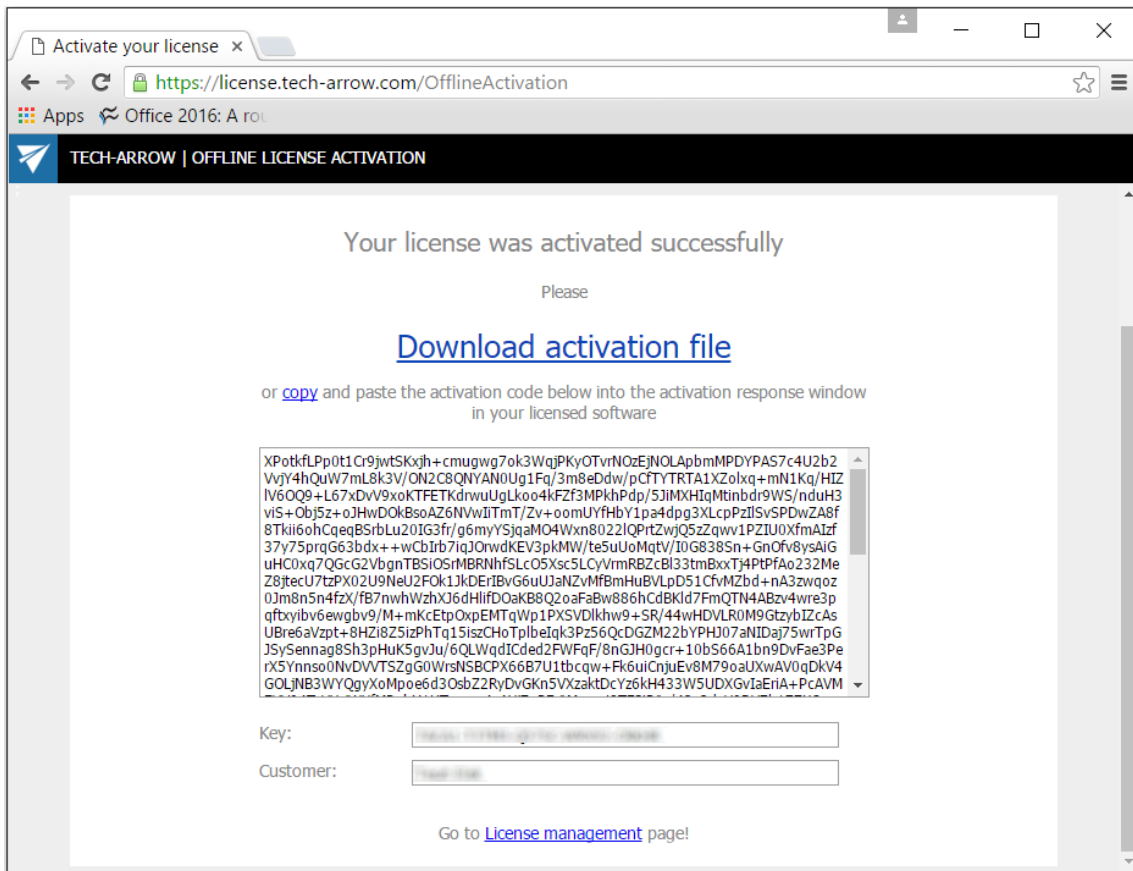


- Copy/paste (or download/upload) the **License request information** from the above wizard and activate it on the offline license activation page. Use the “Choose” option to upload the .dat file if you have saved it, or copy the activation string into the text box and click “Activate now”.

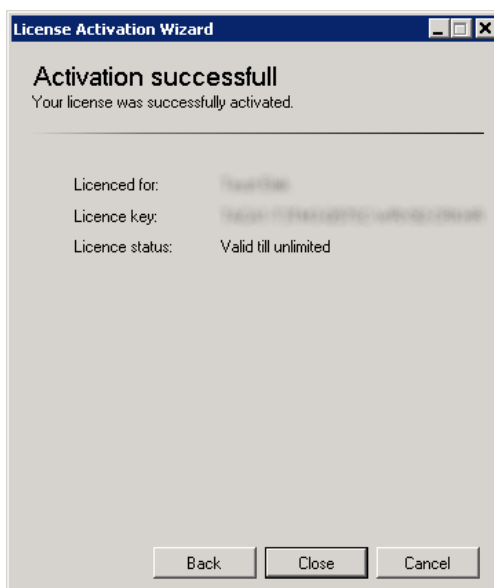
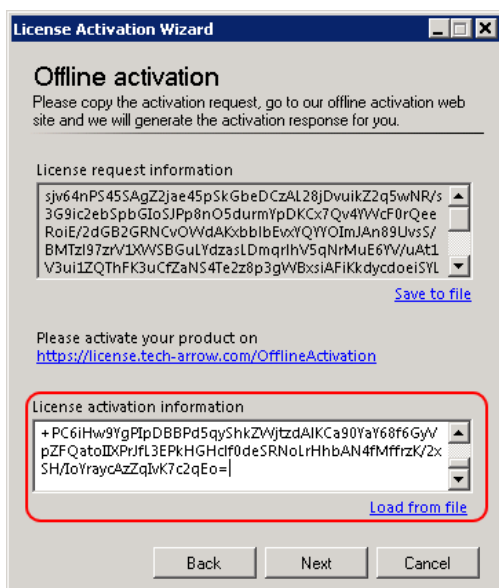




- Copy/paste (or download/upload) the activation code (1<sup>st</sup> screenshot below) from the web page to the License activation wizard (2<sup>nd</sup> screenshot below):



- When you have successfully applied the license, click “Next” in the wizard to continue the installation. In the last window click “Close” to complete the activation process.

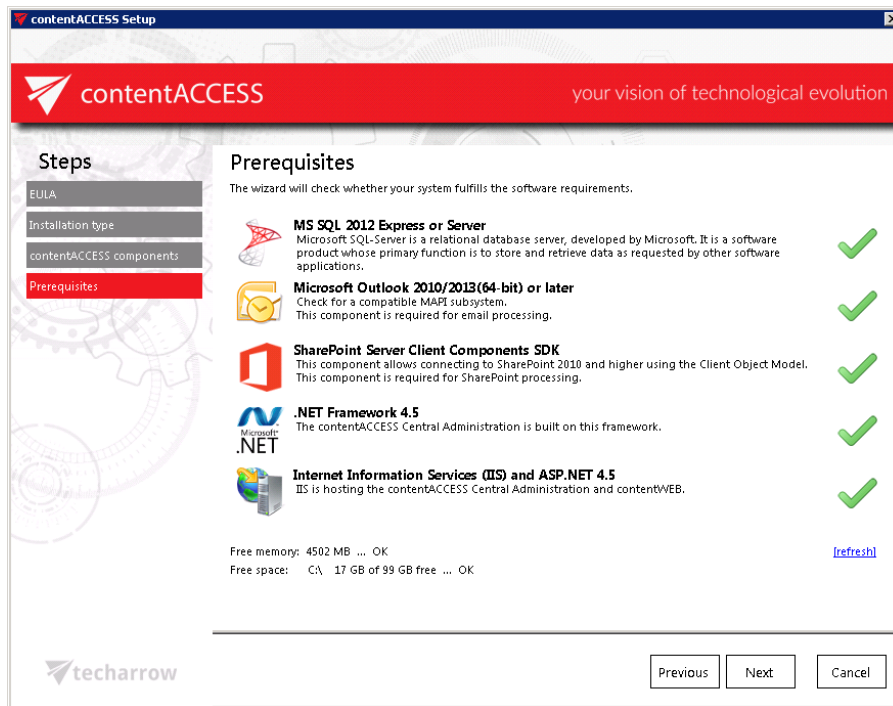




- **Note:** After the expiration date it will be needed to activate the license again. The user can do it in the central administration interface of contentACCESS. For further information refer to section [How to activate your license key](#).

**4. Prerequisites.** During this step the wizard will check if your system fulfills the software requirements. The missing prerequisites will be installed during the installation. Use the [refresh](#) button to actualize the prerequisite information after the missing software is installed. Once it is ready, the user can continue with the installation process. After the wizard has run the system requirements check click **NEXT**.


For more information about these requirements check the section above: [Software requirements](#).

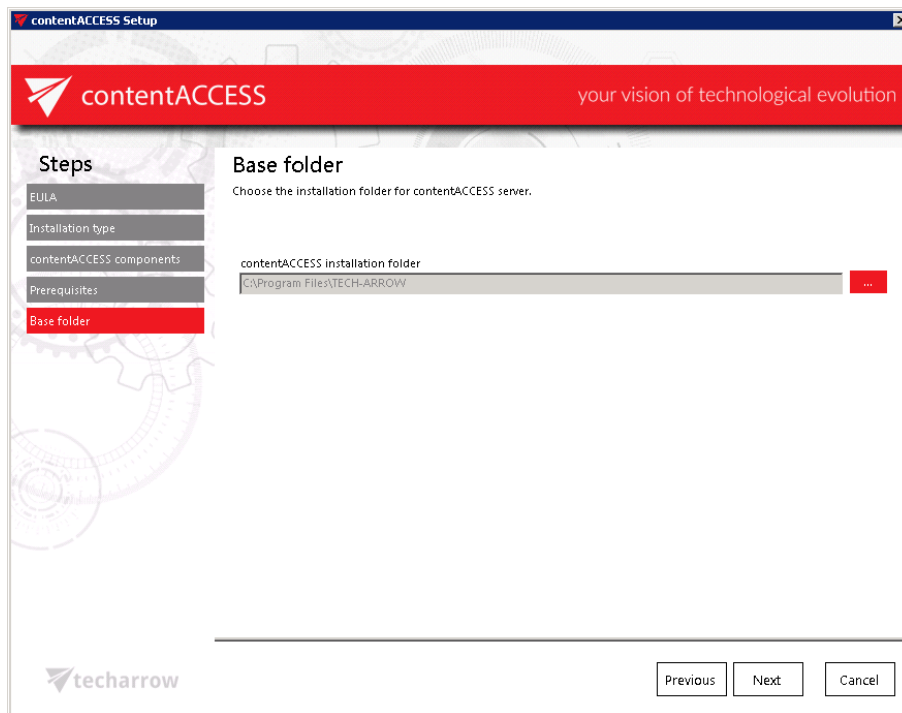


**Note:** MS Outlook prerequisite will be checked only in case that the license supports email based plugins.

**5. Base folder.** The next step is to select the installation base folder. By default the contentACCESS server, contentWEB and the Central Administration installs in C:\Program Files\TECH-ARROW folder. Other components are automatically installed one level deeper, in the base

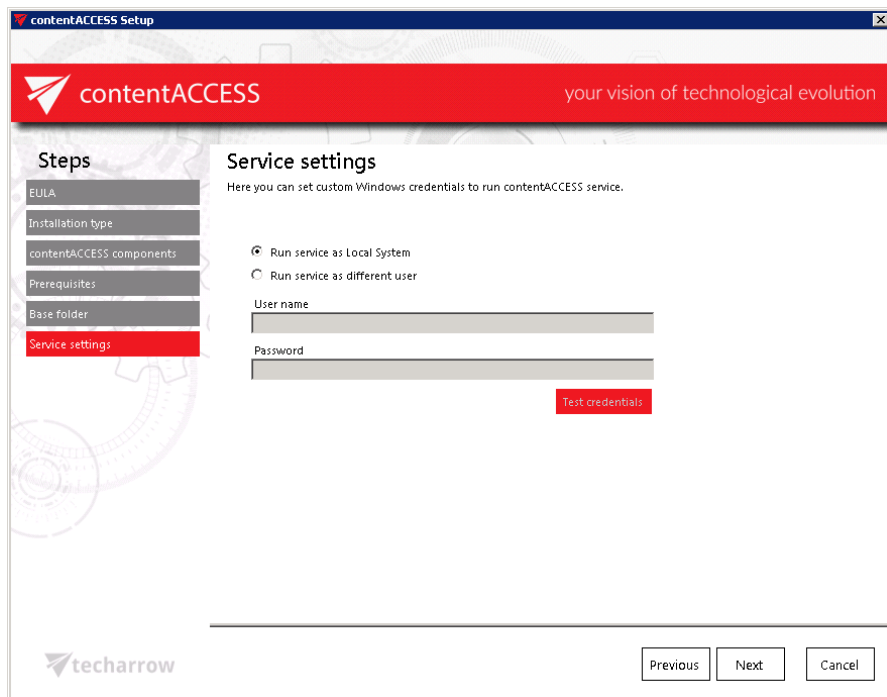


folder\contentACCESS folder. So if the default base folder is set, then the further components are installed in C:\Program Files\TECH-ARROW\contentACCESS folder. The installation folder can be changed. Click on the  button and browse for the desired destination. Click **NEXT**.



6. **Service settings.** The administrator may set here, under which credentials the contentACCESS service should run. There are multiple choices:

- The service can be run as Local System; no credentials are needed;
- The service can be run under custom Windows credentials (local or domain user); the administrator may run a test also, to verify the Windows credentials are OK.



7. **Database connection.** The next step is to specify the system database server to be used by contentACCESS. contentACCESS is storing data in MS SQL server. **If you do not have a database server installed**, you can install an SQL 2012 Express (free version) with this installer. In this case check the **Install new SQL Server 2012 Express** radio button and the database will be automatically created with the following credentials:

Database server: [ServerName]\contentACCESS

Database name: contentACCESSSDB

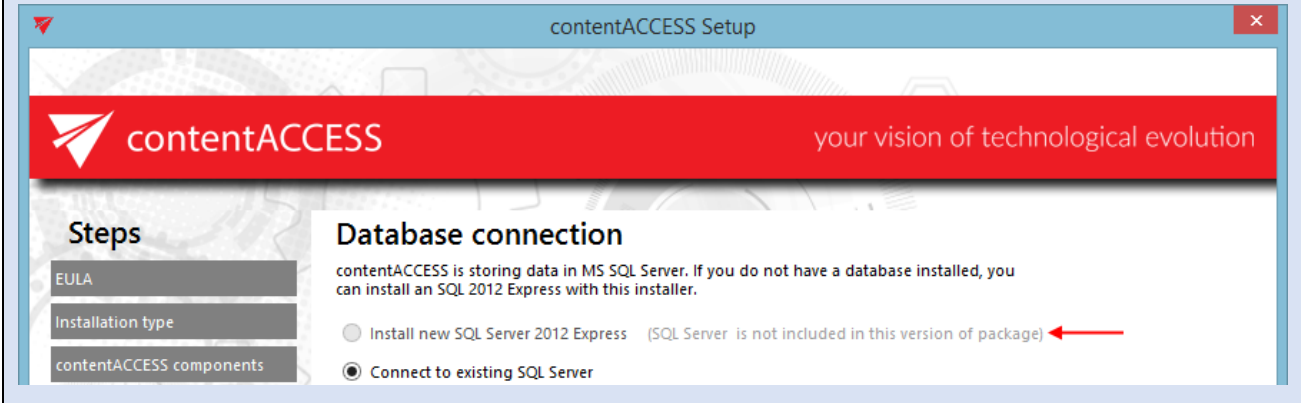
User name: system

Password: cOntent@ccess


Schema: dbo



**Note:** In some contentACCESS package versions, where you see the grey text like on the picture below, the SQL server is not included in the package. In such package version it's not possible to allow for the package to install SQL server, and the installation must be performed manually.



If you already have an SQL Server installed, select the **Connect to existing SQL server** radio button and follow the next steps:

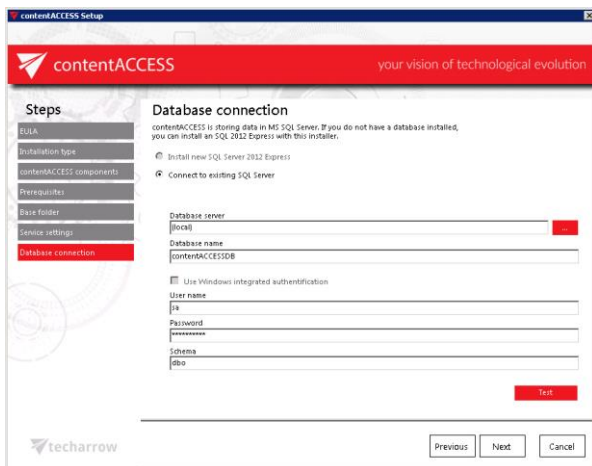
- Enter the name of the database server into the **Database server** text box, or use the  button to locate it.
- Type the **Database name** into the next textbox. A system database will be created with the name entered here.
- Type in a schema (with an optional name).

**Note:** If you are updating to a higher version, then all these above mentioned settings will be preselected and it will not be allowed to change them.

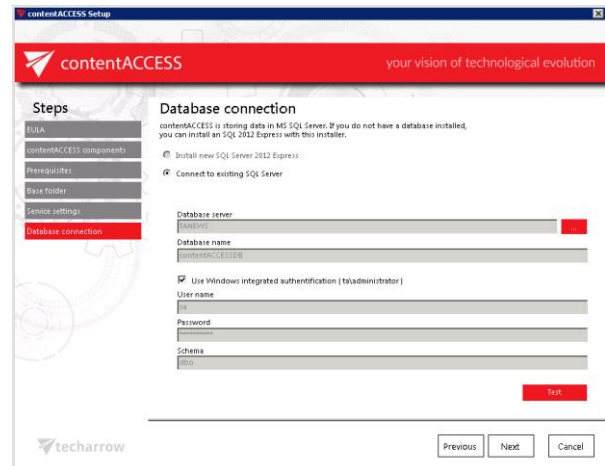
Continue with setting the user credentials to connect contentACCESS with SQL server. Enter the SQL user name and password into the textboxes. You have multiple options here: a) You can use either an SQL user, or b) you can use WIA (Integrated Windows Authentication) with checking the "Use Windows integrated authentication" checkbox. In this second case contentACCESS will connect to SQL with the service credentials specified in step 6 above, in the service settings.

**Note:** The setup verifies, if the specified database is already existing or not. If it's not existing (as in this use case), you need to specify an SQL user with the right to create a new database. If the database already exists, then the user must have only access rights on the given database.

If you would like to make sure that all entered data are right run a test connection with a simple click on the **Test** button.

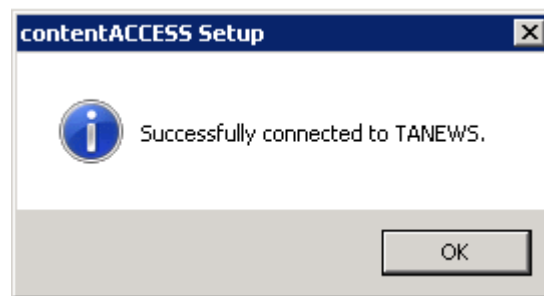


a) Using SQL user



b) Using WIA

If the connection was successfully established the following Setup window will confirm it:



Click **NEXT**.

In the next steps the contentACCESS components' settings will be specified.

**Important:** To ensure a trouble free access, it is highly recommended to create an alias for each component, and to specify the connection URL to each of these components in an FQDN format.

**8. contentACCESS Central Administration:** On this page you can define the port number that this component will use:

**Port:** This port is the physical port of Central Administration used by the Internet Information Services (IIS) on the current server.

The physical port cannot be changed later on, for example at updating the product. First the given component (in this case Central Administration) must be uninstalled, and then the port can be changed in the setup wizard. This rule refers to each contentACCESS component.

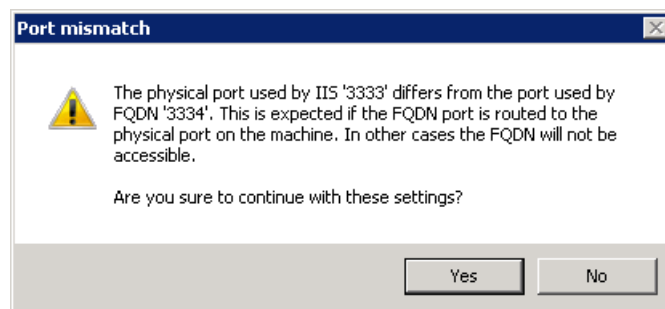




**Fully qualified domain name:** FQDN enables for the user to access the given component (in this case Central Administration) from everywhere (from home, from the office etc.). From this reason, this URL must be accessible from everywhere where the user is coming from. The FQDN that's defined here is written to the Application settings (**System** tab → Client applications group → **Application settings** page) in the Central Administration, and can be changed from there at any time. By the next update the setup will automatically read the value which is defined in the **Application settings**.

**Hint:** By double clicking the empty text field the wizard puts there the FQDN of that server. This functionality is the same by FQDN settings of further contentACCESS components, on the next installation pages as well.

Usually the physical port matches the port that FQDN used. However, in special cases, the FQDN port can differ from the physical port on the IIS. In such cases the following warning pops up for the user – this is expected if the FQDN port is routed to the physical port. In such cases the user can continue with these settings. The same rule applies for other contentACCESS components as well.



**contentACCESS service connection:** This URL is used by the Central Administration to communicate with the contentACCESS server. If contentACCESS server is installed on the same machine, you can use "localhost" as host name.



9. **contentACCESS Web Services (Proxy):** On this page you can define the settings, that contentACCESS Web Services (Proxy) will use. The same rule applies for these configurations as for the contentACCESS Central Administration settings above.

**Port:** This port is the physical port of contentACCESS Web Services used by the Internet Information Services (IIS) on the current server.

**Note:** It is always a good thing to select 80 as port number because this port is enabled on Firewall in most of cases.

**Fully qualified domain name:** This URL must be accessible from everywhere where the user is coming from. If you want to enable a secure connection for the user, choose https. Keep in mind, that **https must be configured manually on the IIS** (more [here](#)). This value is used for Email archive shortcut retrieve as well.

The FQDN that's defined here is written to the **System** settings (**System** tab → **Services** group → **System** page, section **External accessibility settings: Retrieve server FQDN**) in the Central Administration, and can be changed from there at any time. By the next update the setup will automatically read the value which is defined on the **System** page.



If Proxy uses https, the FQDN URLs of further contentACCESS components (contentWEB, Central login page) will be automatically prefilled by the package with https connection, too.

**contentACCESS service connection:** This URL is used by the contentACCESS Web services to communicate with the contentACCESS server. If contentACCESS server is installed on the same machine, you can use “localhost” as host name.

**Hint:** If the communication port with the contentACCESS server is changed, then the communication between the given component and the contentACCESS service is ensured by the contentACCESS Proxy. If the Proxy is not installed and the port is changed, then the service connection won't be established. The same rule applies for the connection between the contentACCESS service and another contentACCESS components as well (in the Central administration and Central login page setup windows it is disabled to change the port number).

10. **ContentWEB.** On this page you can define the settings that contentWEB (contentACCESS archive user interface) will use.



The same rules apply for contentWEB as for the contentACCESS Central Administration settings above with one exception. contentWEB connection with the contentACCESS server supports net.pipe connection as well.

**Port:** This port is the physical port of contentWEB used by the Internet Information Services (IIS) on the current server.

**Fully qualified domain name:** This URL must be accessible from everywhere where the user is coming from. By double clicking the empty text field the wizard puts there the FQDN of that server. If you want to enable a secure connection for the user, choose https.

The contentWEB FQDN that's defined here is written to the Application settings (**System** tab → Client applications group → **Application settings** page) in the Central Administration, and can be changed from there at any time. By the next update the setup will automatically read the value which is defined in the **Application settings**.

**contentACCESS service connection:** This URL is used by contentWEB to communicate with the contentACCESS server. If contentACCESS server is installed on the same machine, you can use "localhost" as host name. There are 3 communication types that can be used between contentWEB and the contentACCESS server:

- http – use this if you want to establish a direct connection with contentACCESS. If direct connection should be used, do not change the port number that's prefilled by the setup package (8736), otherwise contentACCESS proxy connection will be used automatically.
- https – use this to establish a secure connection through the contentACCESS Proxy server
- net.pipe – use this type if contentWEB and contentACCESS are installed on the same machine; this is the fastest and most recommended connection type.



**contentACCESS** your vision of technological evolution

**Steps**

- EULA
- Installation type
- contentACCESS components
- Prerequisites
- Base folder
- Service settings
- Database connection
- contentACCESS Central
- contentACCESS Web Services
- contentWEB**

**contentWEB**

On this page you can define the settings the contentWEB will use.

Port: 80

Fully qualified domain name: https // tanews.ta.internal : 443

contentACCESS service connection: net.pipe // localhost : -1

Test

Previous Next Cancel

11. **Central login:** On this page you can specify the settings that the Central login page will use. Same rules apply as for the connection settings of components from above. The FQDN that's first configured is written by the setup to the System settings of the Central Administration (**System** tab → **Services** group → **System** page, section **External accessibility settings: Central login**). It can be changed on the respective page of the Central Administration at any time, and the new configuration will be then read and prefilled by the setup when updating the product.

**contentACCESS** your vision of technological evolution

**Steps**

- EULA
- Installation type
- contentACCESS components
- Prerequisites
- Base folder
- Service settings
- Database connection
- contentACCESS Central
- contentACCESS Web Services
- contentWEB
- Central login**

**Central login**

On this page you can define the settings the Central login will use.

Port: 80

Fully qualified domain name: https // tanews.ta.internal : 443

contentACCESS service connection: http // localhost : 8735

Test

Previous Next Cancel



12. **Virtual drive:** Here you define the settings that Virtual drive will use:

**Virtual drive fully qualified server name:** this value is used to retrieve archived files from shortcuts

**Virtual drive letter:** drive for publishing the virtual drive content (the archive files)

**contentACCESS service connection:** URL used for the communication with the contentACCESS server. There are 3 communication types that can be used:

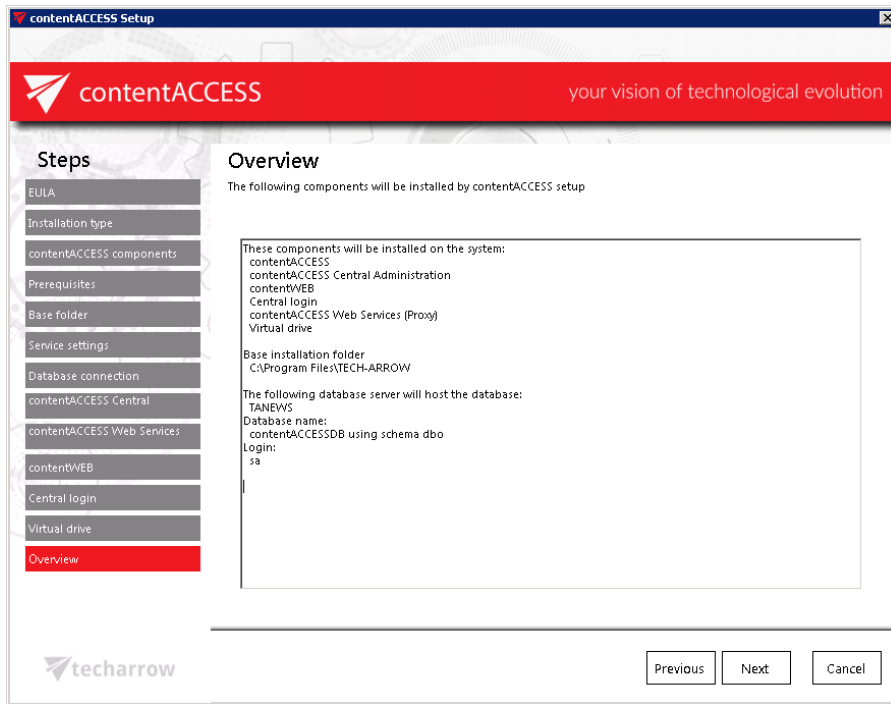
- http – use this if you want to establish a direct connection with contentACCESS. If direct connection should be used, do not change the port number that's prefilled by the setup package (8736), otherwise contentACCESS proxy connection will be used automatically.
- https – use this to establish a secure connection through the contentACCESS Proxy server
- net.pipe – use this type if Virtual drive and contentACCESS are installed on the same machine; this is the fastest and most recommended connection type.

The installation package writes at first install/reads at each product update these parameters into/from the **Virtual drive configurations** page of Central Administration (**System** tab → **Client applications** group → **Virtual drive configurations** page).

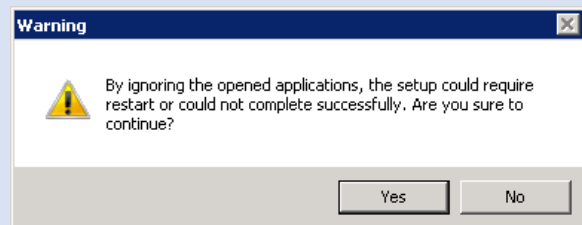
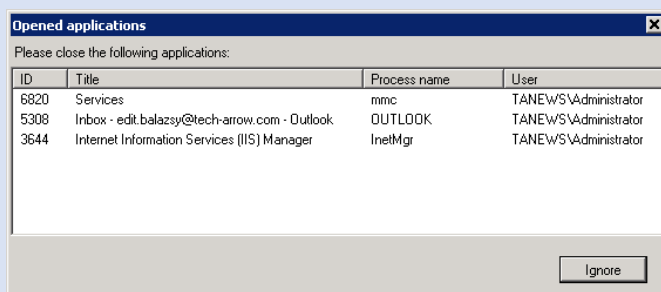
Further specify the user credentials used to run the Virtual drive service. This can be either Local system user, or an explicit user.



13. **Overview:** In this step the contentACCESS setup gives a general overview about the components that you have selected to install on server. Click **NEXT**.

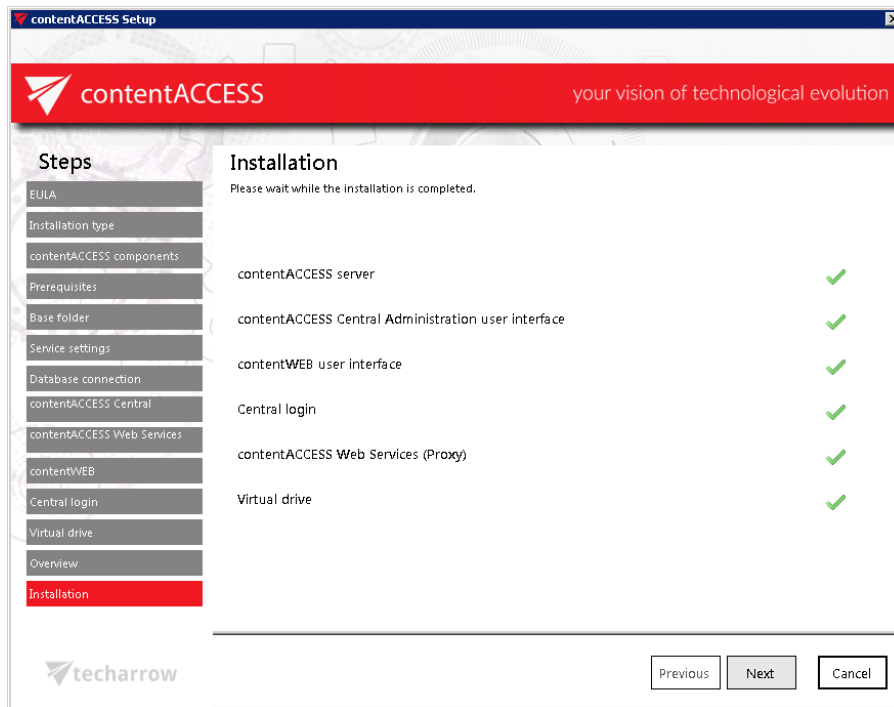


**Note:** In case that there are unwanted applications running in the background, the setup will warn the user about this. Unwanted applications are: MS Outlook, Services and Internet Information Services. It is possible (but not recommended!!) to kill these applications directly from this window by right clicking on the application in the list and selecting “Kill”. The best approach is to close the running applications manually. You can also skip closing the applications by clicking the “Ignore” button in the pop-up window.

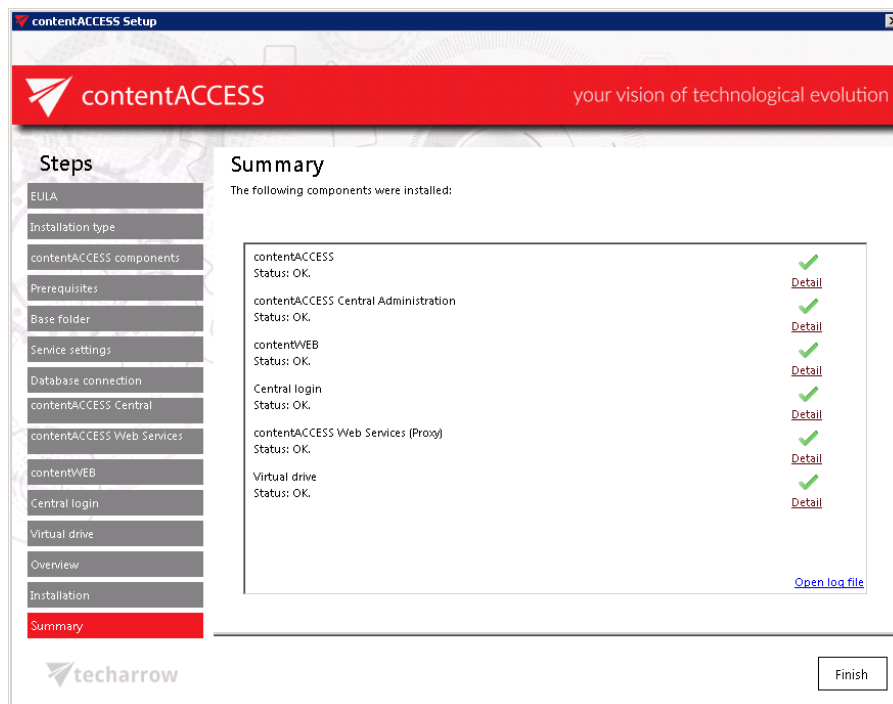




14. **Installation.** Click **Install** and wait until the installation process is completed. Then click on **NEXT**.



15. **Summary window** will give an overview for you about the already installed products:

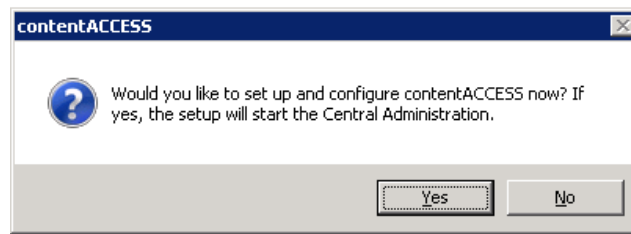




**Note:** If any problem occurred during the installation process click on [Open log file](#) option in the right down corner of the last setup window (check above). The reason of unsuccessful installation might be included in this log file

Click **Finish** to complete the whole installation process.

After installation is completed and you want to continue with further settings and configurations in the contentACCESS Central Administration, click on **Yes** in the following popup window. This dialog pops up if you have installed the component now or if you have already installed it on another server (distributed environment).





## contentACCESS components

contentACCESS has the following components, that can be installed by the contentACCESS setup package directly:

- the contentACCESS server
- [contentACCESS Central Administration](#) – the contentACCESS configuration interface available for system administrators and tenant administrators
- [contentWEB](#) – the archive user interface also for the end users
- Central login page – used to log in to the respective application with forms provider or third-part authentication providers
- [contentACCESS Web services \(Proxy\)](#) – to ensure secure connection for the end user and enable email shortcut retrieve
- [Virtual drive](#) – a drive that's used to display the contents of the File system archive; the drive is also mandatory to retrieve the archived files from shortcuts

## contentACCESS Central Administration

contentACCESS is a modular product, with built-in or custom plugins. The built-in plugins are available for on premise Exchange server, Office365, SharePoint and File servers. With these plugins contentACCESS can combine several systems into one archive storage in the cloud or on premise. There are many possibilities to visualize and work with the archived data: use officeGATE (Outlook add-in) to see the data directly in Outlook, use a web browser to see the data using contentWEB, use accessGATE Mobile application to see the data on your smartphones or use accessGATE to interconnect your data with SharePoint.

contentACCESS is software which supports multiple-tenancy. Multi-tenancy is an architecture in which a single instance of a software application serves multiple customers. Each customer is called a tenant. Every tenant of contentACCESS has its own data management processes. This means, that every tenant uses its own plugin instances (jobs), also have its own databases and storages. All these data can be isolated from the data of other tenants. Even if these tenants are isolated from each other, in case of need one or more users with system administrator permission can have the right to manage the processes to more tenants.



Multiple-tenancy might be very useful e.g. for those companies who have more affiliates and would like to build a deeper administration structure for the company as a whole. Each affiliate could become a tenant and could have its own administration. In this case other affiliates would not have a right to manage the processes of another affiliate and everybody could build his own processes in a way he wants. Dividing of tasks and responsibilities could be more transparent and the work would be more effective using this method.

contentACCESS Central Administration is a user interface for administrators, over which they can configure contentACCESS, create new automatically running jobs to process company data, configure these jobs, adjust framework feature settings, set up schedulers, databases, storages, create clusters etc..

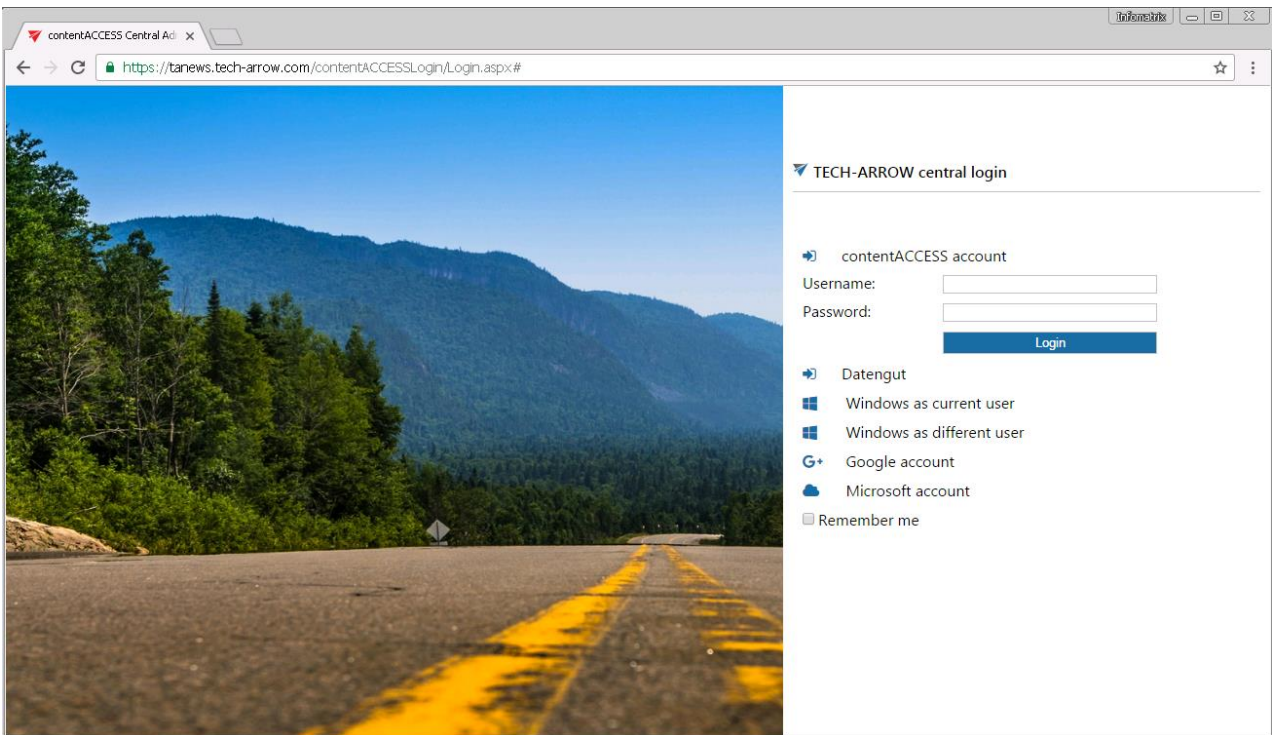
Before you proceed to read the Central Administration, we advise for you to read section [Terms of use](#) to understand the structure of the contentACCESS Central Administration user interface, and to navigate easier on the ribbon.

## Central administration login

The user can log in to the Central Administration of contentACCESS only in case that he has the **Manage tenant and/or Manage system** permissions. Read the **Roles** section to learn more about roles.

There are 3 possibilities how the contentACCESS Central Administration can be opened:

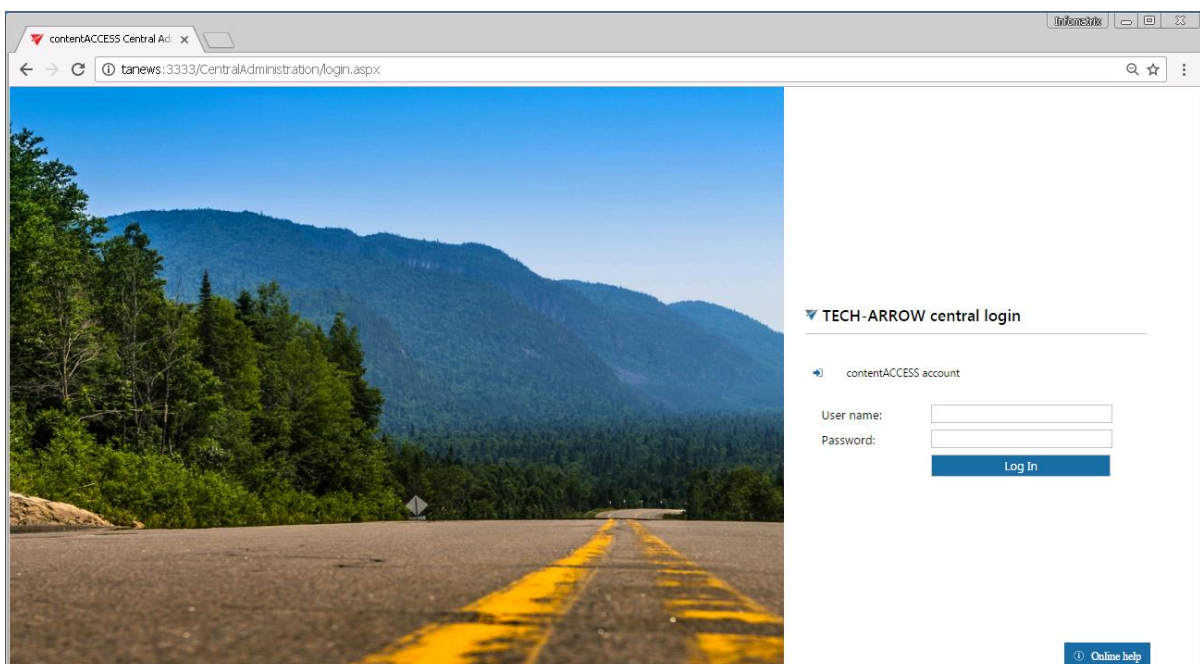
- **Standard login:** using the **standard Central Administration URL**, which is set and can be modified in the **Application settings**:  
[http://\[ServerName\]:\[PortNumberOfCentralAdministration\]/CentralAdministration](http://[ServerName]:[PortNumberOfCentralAdministration]/CentralAdministration)
- **From the central login page** – [http://\[Central LoginServerName\]/contentACCESSLogin](http://[Central LoginServerName]/contentACCESSLogin) – which is installed by the contentACCESS setup (read more in section [Installation of contentACCESS](#)). This page URL is set/can be also modified on the System → Services → System page of Central Administration (in the Application settings it's read-only). The same page opens by opening the Central Administration web page from the Start menu of the machine where Central Administration is installed.



- With the “backdoor” Central Administration URL, which should be used in emergency cases only:

[http://\[ServerName\]:\[PortNumberOfCentralAdministration\]/CentralAdministration/Login.aspx](http://[ServerName]:[PortNumberOfCentralAdministration]/CentralAdministration/Login.aspx);

On this page you can log in to the Central Administration with **Forms** login provider only, external authentication providers are not allowed. Enter your contentACCESS credentials and sign in.

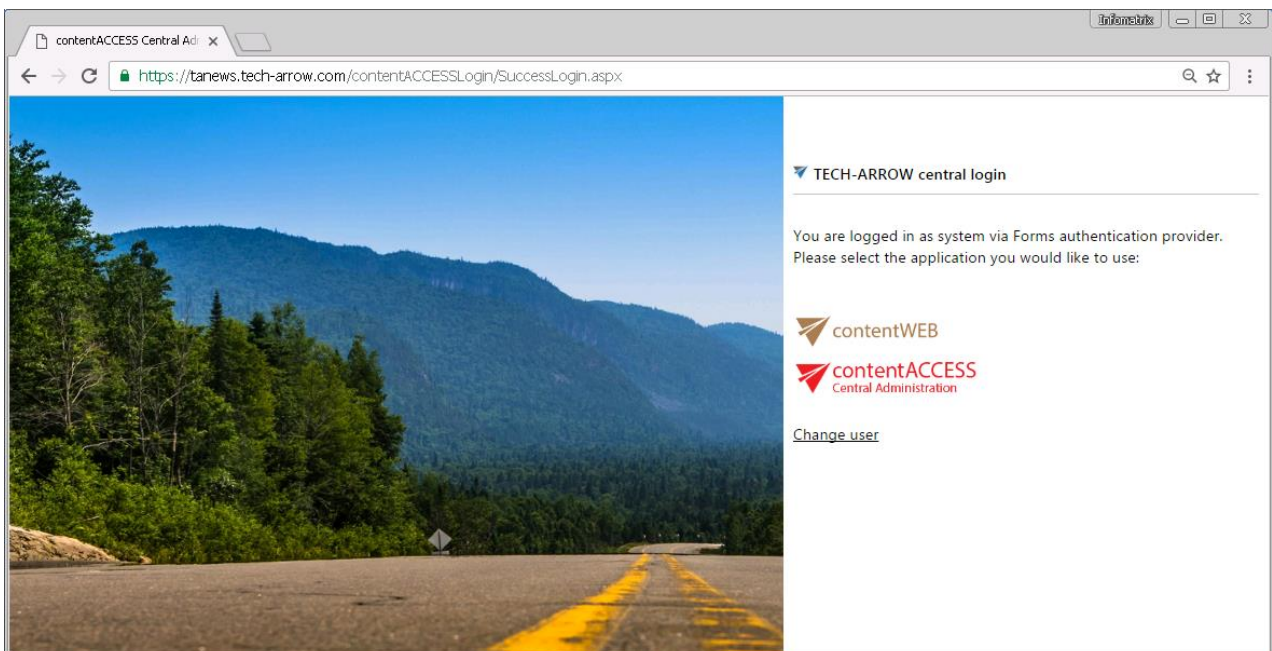




Log in either with:

- a contentACCESS account (Forms login provider) or
- any of your external login providers (Forms, Windows, Microsoft account etc.) if they are configured in the Central Administration (more in section “**Login providers**”).

After a successful login the logged in user gets displayed. The applications allowed for the user are featured on the page, under the logged in user. Click “contentACCESS Central Administration” and the central login page will redirect you to the Central Administration. By clicking contentWEB you can log in to the archive, if you have the necessary permissions.



**Note:** If you use Chrome, it is recommended to turn the password saving off. Learn more [here](#) about how to turn it off.

When you log in to contentACCESS Central Administration for the very first time use the internal system account:

User name: **system**

Password: **cOntent@ccess**

**Important:** It is highly recommended to change this internal system account after the first login immediately.



For more information how to enable further external login providers, please refer to section [Login providers](#).

**Note:** Central administration remembers the last accessed page of the user and will automatically navigate back when logged on again. The same rule applies to tenant settings. Central Administration will log in under the tenant which was last selected.



## contentACCESS Automated single sign on

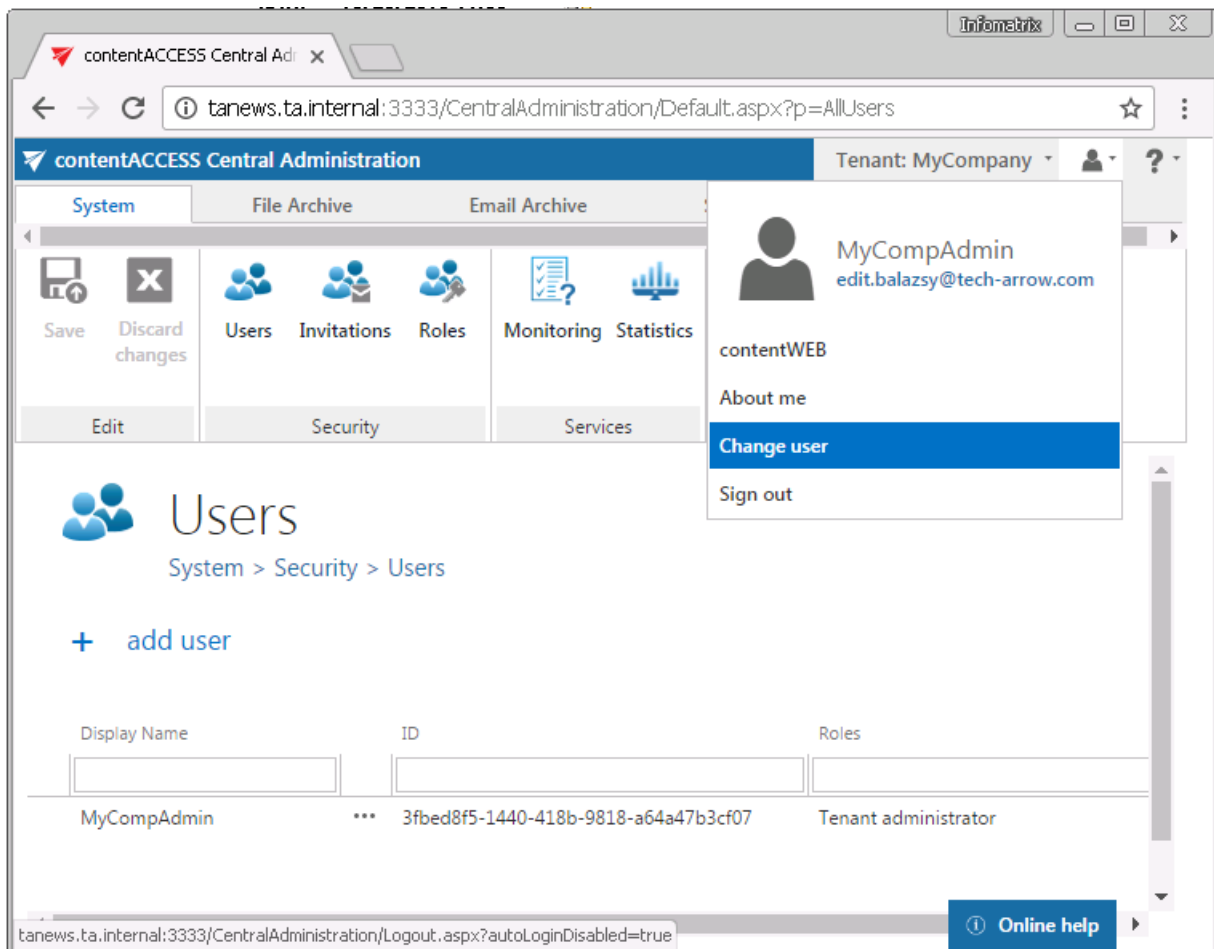
Third-party login providers can be set for automatic login. Automated login providers sign in the user into contentACCESS Central Administration (also into contentWEB) without any further interaction with the selected provider. The following login providers can be automatized: Azure, Google, Windows and any other third-party authentication providers. Datengut and Forms providers cannot be set to automatic. (Read more about login providers [here](#).)

To automatize one of the above mentioned login providers, select it in the **Auto login** column on the **Login providers** page (**System** tab → **Security** group → **Login providers** button)

Provider name	Provider type	Provider availability	Create user	Is enabled	Auto login
Azure	*** Azure	All applications	False	Yes	<input checked="" type="checkbox"/>
Google	*** Google	contentACCESS only	False	Yes	<input type="checkbox"/>
Forms	*** Forms	All applications	False	Yes	<input type="checkbox"/>
Windows	*** Windows	contentACCESS only	False	Yes	<input type="checkbox"/>
Datengut	*** Datengut	All applications	False	Yes	<input type="checkbox"/>

Please note, that only one login provider can be selected at the same time.

To change the user who is logged in with his auto login provider (e.g. [edit.balazsy@tech-arrow.com](mailto:edit.balazsy@tech-arrow.com) in this use case), open the user menu in the upper right corner and click option "Change user".



## Central Administration logout

The user who is logged in to the Central Administration can log out from the application using the User menu in the upper right corner of the user interface:

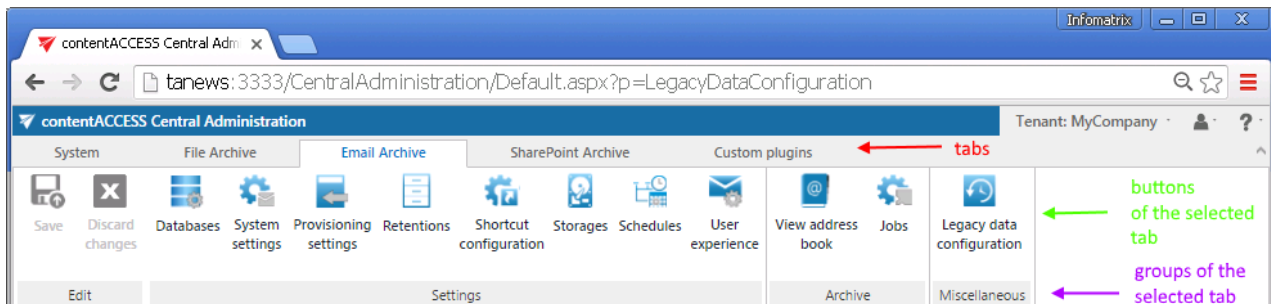
- Option “**Sign out**”
  - a) if auto login provider is NOT used: the user is signed out from the application, and then he is redirected to the central login page, where he can log in again;
  - b) if auto login provider is used: the user is signed out from the application, he is redirected to the login page of the respective third-party provider and he is automatically logged in again with the login provider selected for auto login.
- Option “**Change user**” –the user is signed out from the application, and then he is redirected to the central login page, where he can log in (also with another user) again.





## contentACCESS Central Administration user interface

After you have successfully logged in, the Central administration of contentACCESS page will load in. The ribbon is divided into 5 main tabs: **System**, **File archive**, **Email Archive**, **SharePoint Archive** and **Custom plugins**. Each tab is divided into several groups, which also have several buttons.

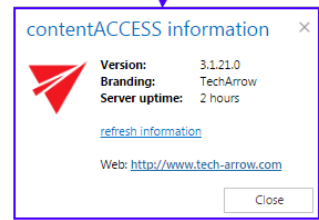
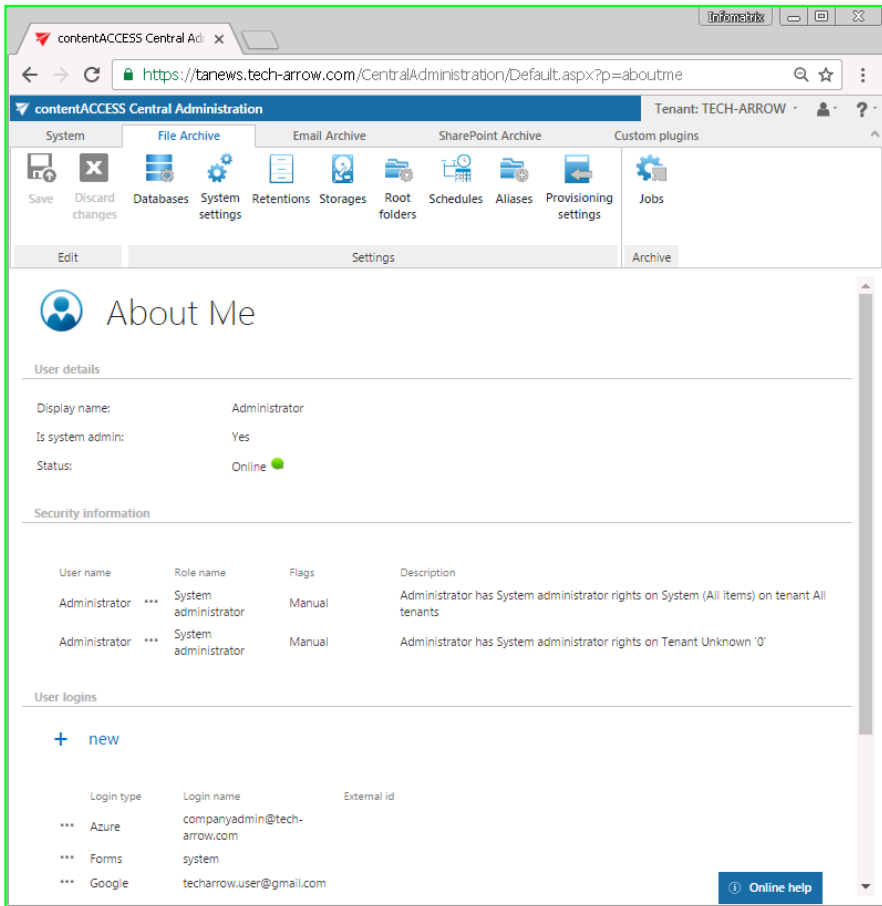
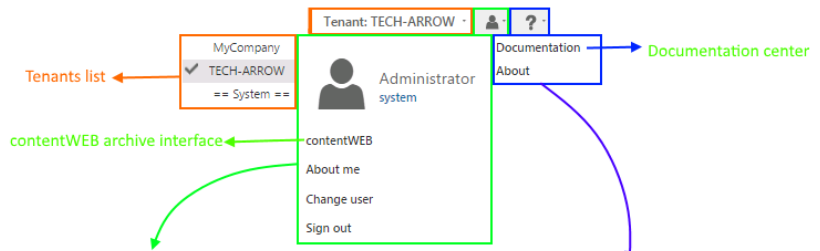


General system settings (application settings, security settings, system database settings, external accessibility, license activation, clusters, statistics, setting up new databases etc. ) are accessible under **System** tab (marked with red frame on the screenshot above). Configurations of File Archive, Email Archive, SharePoint Archive and Custom plugins can be adjusted on the **File Archive**, **Email Archive**, **SharePoint Archive** and **Custom plugins** tabs on the ribbon.

In the right upper menu of the Central Administration user interface you can **switch between the tenants**.

In the **user menu** you can see the signed in user, the detailed information about the signed in user (**About me**), or you can **change the already logged in user**. Also here you can **sign out from the Central Administration** and to **log in to the contentWEB archive interface**.

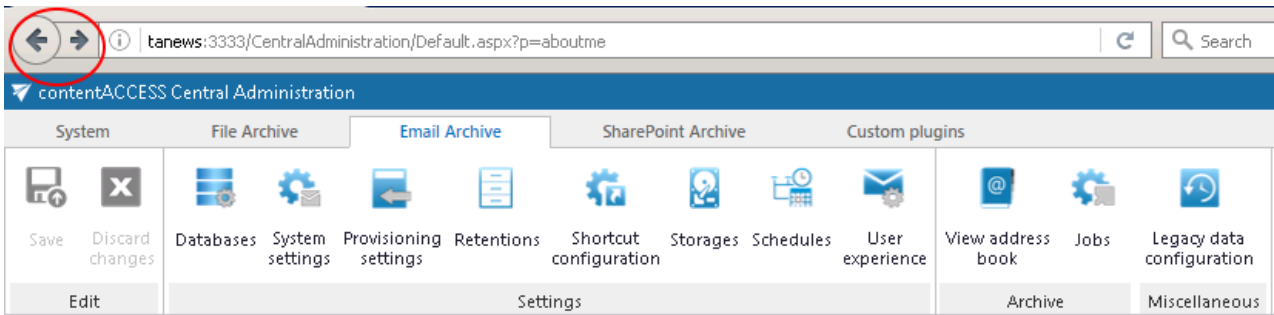
Click on the “?” question mark to roll down the **help** menu. Under **About** menu point you will find the information about the contentACCESS **version** that you have installed, here you can check the system uptime, and it also contains a link on the company’s website. Under **Documentation** menu point you can **access all documentations** related to contentACCESS software.



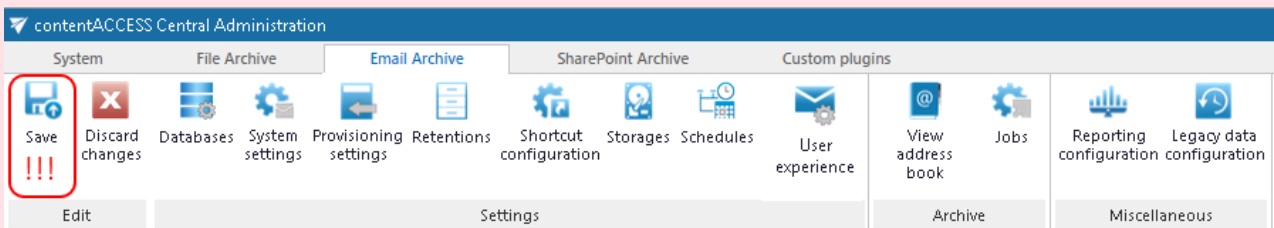
**Note:** In the **About me** menu under the **Security information** in the **Role name** column you can see the role assignment(s) of the signed in user. The **Flags** show whether the rights were given by provisioning job (flag name is **Automatic**) or manually (flag name is **Manual**).



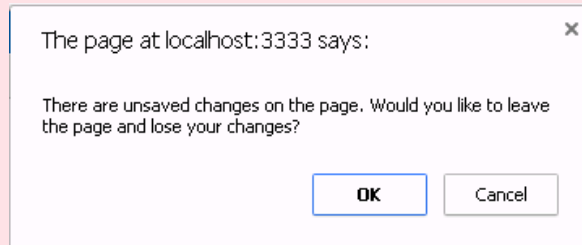
In contentACCESS, the back/forwards button is also supported:



**Important!!!** Any changes made in the Central Administration must be saved via “Save” button, which is accessible in the left upper corner of the ribbon.



If the user has any unsaved settings, the system will warn him about it:



When you enter to contentACCESS Central Administration for the very first time, you need to create a tenant first (check section [Tenants in contentACCESS](#)). Further you need to adjust the system settings (refer to section [General system configurations](#)).



## contentWEB

What is contentWEB? contentWEB is a web user interface for the contentACCESS archive, which ensures an over-simple read-only or full access to any items (files and emails), which have been previously archived/processed by contentACCESS. For the end user these items are also accessible from any mobile device. The searching, item listing, recovery and export functions of contentWEB make the work with these archive items more comfortable and intuitive.

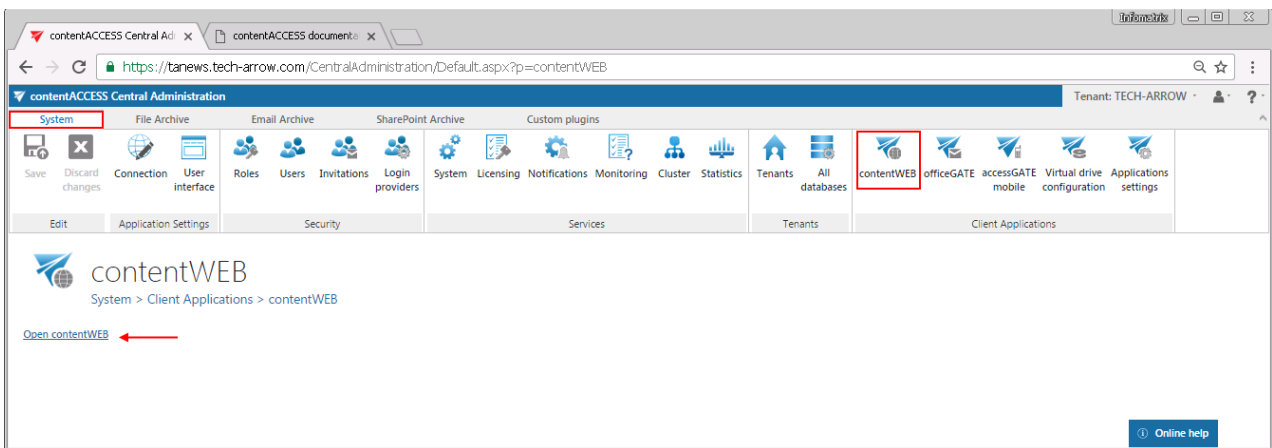
The only condition to achieve this is, that the end user must have access permission to the mailboxes/folders of which contents he would like to access. Such permissions must be granted by the system administrator. Email archive access permissions can be granted in the contentACCESS address book (on page View address book, more information [here](#)), File archive access permissions can be granted in the File archive's provisioning settings according to the steps described in [this](#) chapter.

The main advantages of using contentWEB are as follows:

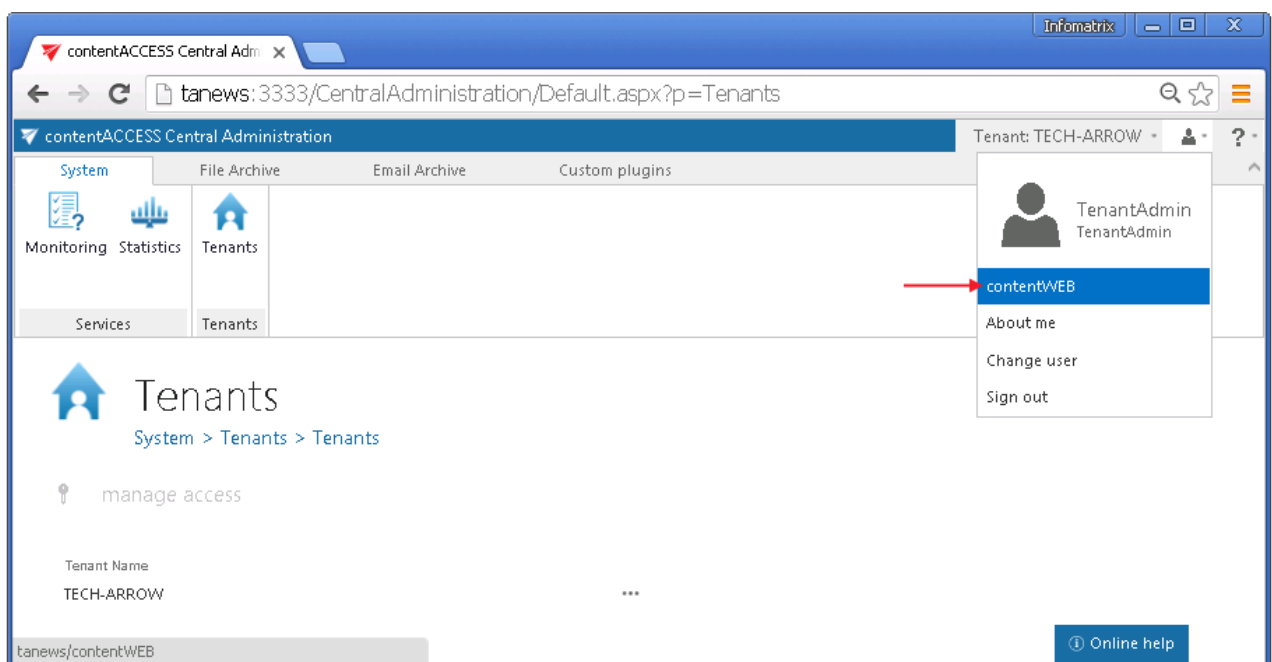
- ✓ Quick and easy access to the archived documents with the help of mobile devices.
- ✓ Ability to search between the archived items according to the certain parameters of an archived item (To, From, Modified by, Subject).
- ✓ Searching in the full text contents of the documents across multiple shares, using File Content Extractor plugin.
- ✓ Easy item sorting, item listing.
- ✓ Zero term search, advanced search.
- ✓ Active/inactive document view.
- ✓ Option to view document versions in the file archive.
- ✓ Recovery option in file archive.
- ✓ Export function to PST and ZIP format.
- ✓ One-click login with the help of external providers.
- ✓ Saving the last view of the logged in user.
- ✓ Ability to grant access to the archived documents for an explicit user.

## Logging in to contentWEB

**System administrators** can log in to contentWEB directly from the Central Administration using the “Open contentWEB option” on the “contentWEB” page (**System tab**→ **Client Applications group**→ **contentWEB** button). By clicking on “Open contentWEB” the login page opens. Enter your credentials and log in.



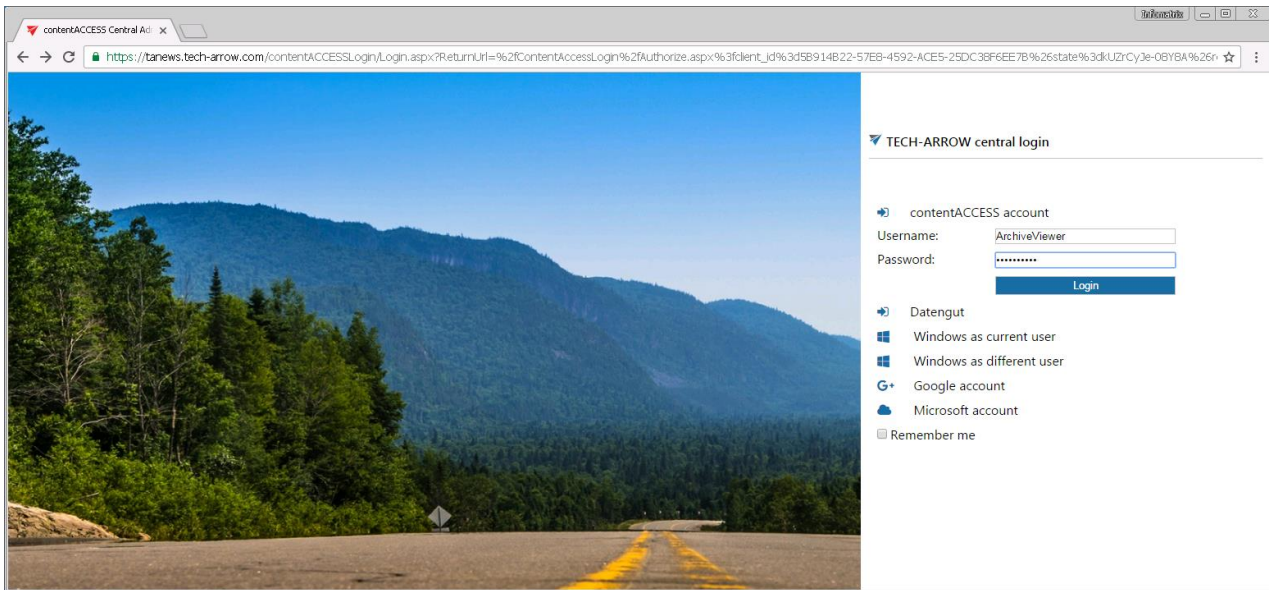
**Tenant administrators** (and also **system administrators**) can log in to contentWEB directly from the Central Administration using the login menu in the upper right corner of the interface. Open the menu, select “contentWEB” and the login page opens.



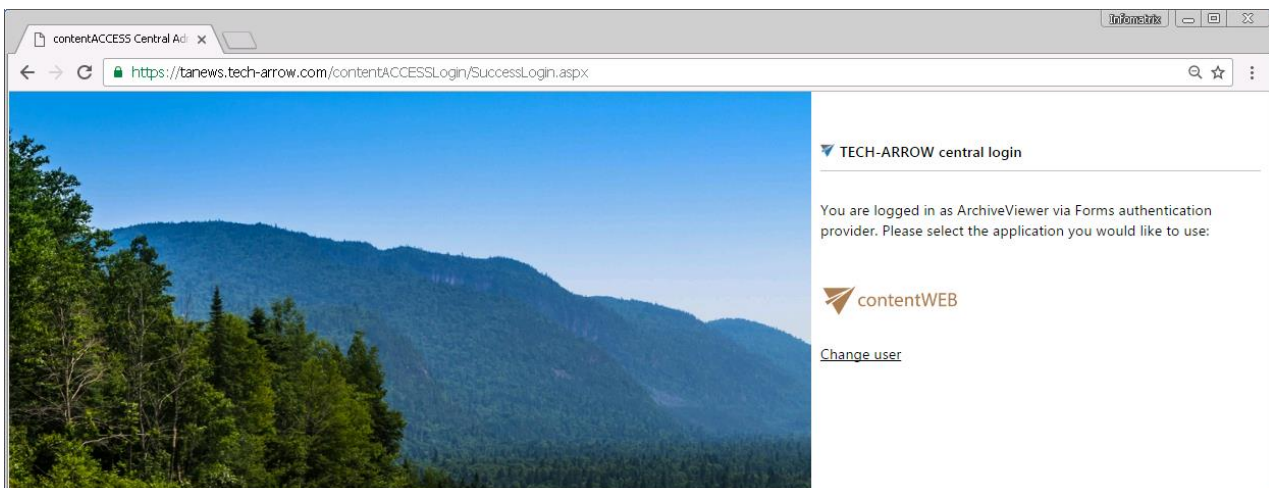


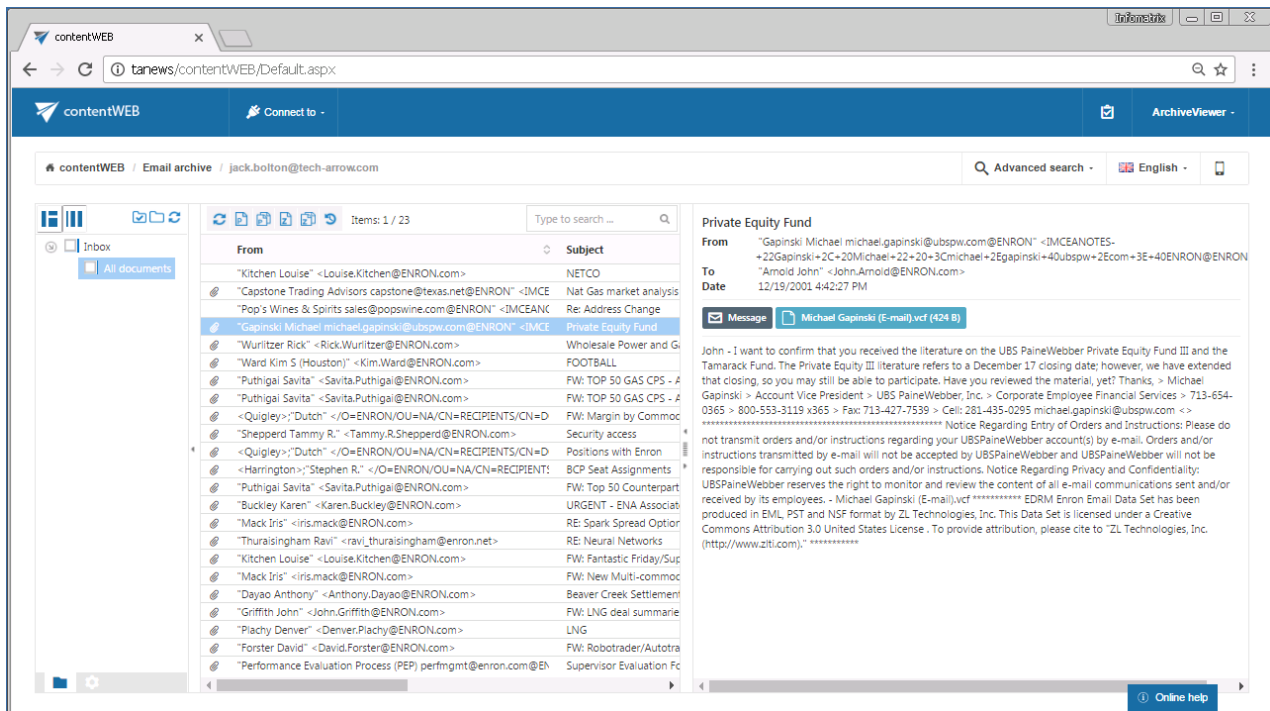
The **end users**, who do not have an access to the contentACCESS Central Administration page, but also the **system and tenant administrators** can log in to contentWEB using the **central login page**. From this central login page the user with the necessary permissions (roles) is further redirected to the contentWEB application:

Central login URL: [https://\[ServerName\]/contentACCESSLogin/Login.aspx](https://[ServerName]/contentACCESSLogin/Login.aspx)



Once you are logged in centrally, click “contentWEB” to open the desired application:





To be able to log in to contentWEB and to access the desired content on this interface, the user must have the necessary permissions. These must be granted for a user either

- in the Email archive/File archive settings (earlier described), or
- on the Users page, by assigning the necessary role to the user (Standard user role, with “Specific” rights in the archive)

**Note:** A system or tenant administrator can also create roles with specific permissions for a given user. E.g. it is possible to create a role, which allows for the assigned user to view the archived emails of [x@domain.com](#), but the emails of [y@domain.com](#) won't be available for the user in the archive.

## contentWEB Automated single sign on

Third-party login providers can be set for automatic login. Automated login providers sign in the user into the contentWEB archive interface without any further interaction with the selected provider. The following login providers can be automatized: Azure, Google, Windows and any other third-party authentication providers. Datengut and Forms providers cannot be automatized. (Read more about login providers [here](#).)



To automatize one of the above mentioned login providers, select it in the **Auto login** column on the **Login providers** page (**System** tab → **Security** group → **Login providers** button in the Central Administration).

## Login providers

System > Security > Login providers

+ new

Provider name	Provider type	Provider availability	Create user	Is enabled	Auto login
Azure	*** Azure	All applications	False	Yes	<input checked="" type="checkbox"/> ←
Google	*** Google	contentACCESS only	False	Yes	<input type="checkbox"/>
Forms	*** Forms	All applications	False	Yes	<input type="checkbox"/>
Windows	*** Windows	contentACCESS only	False	Yes	<input type="checkbox"/>
Datengut	*** Datengut	All applications	False	Yes	<input type="checkbox"/>

Please note, that only one login provider can be selected at the same time.

To change the user who is logged in to contentWEB with his auto login provider (e.g. with Azure in this use case) open the user menu in the upper right corner and click option “Change user”.

The screenshot shows the contentWEB interface. The top navigation bar includes the contentWEB logo, a 'Connect to' dropdown, and the user 'Administrator'. Below the navigation bar, the breadcrumb path is 'contentWEB / File system archive / C:\Files2Archive\Folder1'. The main area displays a file list with columns for name, date, time, and size. The file 'brenda\_k\_stone.doc' is selected. In the top right corner, a user menu is open, showing options for 'Settings', 'Change user', and 'Logout'. The 'Change user' option is highlighted. The bottom status bar shows the URL 'tanews/contentWEB/Logout.aspx?autoLoginDisabled=true' and an 'Online help' button.





Logout from contentWEB works the same way as the logout from the contentACCESS Central Administration.

## Virtual Drive

**What is a virtual drive?** It is a virtual file system that presents/virtualizes any data (files and folders of an actual disk) to the end-user. Virtual drive is a non-existing drive that does not physically exist in the computer, but it contains the exact structure of the items that have been processed by contentACCESS.

The contentACCESS Virtual Drive was developed by TECH-ARROW and serves as a key access point between the end user and the **contentACCESS File Archive**. **Virtual Drive is a must have-tool for customers who have contentACCESS File system archive, as it is used to retrieve the archived files from the shortcuts.** The archived items can be also viewed from this drive by the end users.

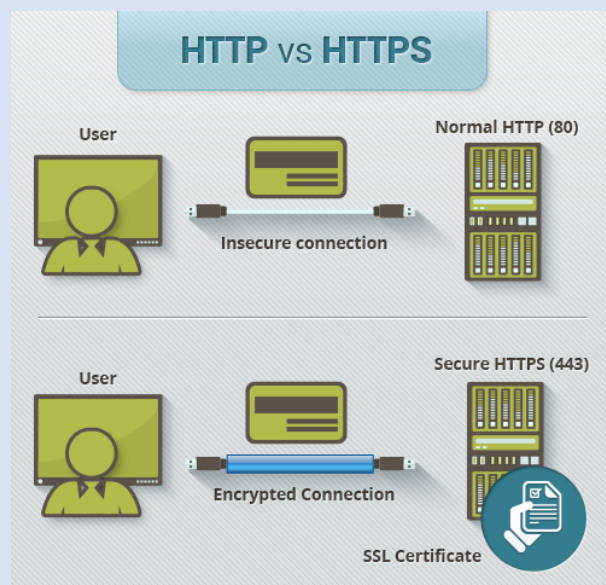
The Virtual drive configurations are accessible on the [Virtual drive configurations](#) page of Central Administration.

## contentACCESS Web Services (Proxy)

Most of the companies understood, that sensitive information/data should be transmitted using a secure connection. TECH-ARROW also reacted on this demand and offers a secure connection, i.e. HTTPS connection to enable communication between the user and the contentACCESS server. To enable to use HTTPS security, it is required to install a proxy server, which will enable for the user to communicate with the contentACCESS server. The contentACCESS Proxy is available between the contentACCESS components, in the contentACCESS setup package.

**Proxy server is a must-have tool for customers who have contentACCESS Email Archive (or any email based plugins) and want to retrieve their archived emails from shortcuts, or they use accessGATE mobile.**

**Note:** Hyper Text Transfer Protocol Secure (HTTPS) is the secure version of HTTP the protocol over which data are sent between client (as in our case the Outlook form) and the contentACCESS server that you are connected to. The “S” at the end of HTTPS stands for “Secure”. It means all communications between the client and the server are encrypted. HTTPS is often used to protect highly confidential online transactions. HTTPS pages use one of two secure protocols to encrypt communications – SSL (Secure Socket Layer) or TLS (Transport Layer Security)(proxy that we will install uses SSL). Both of these protocols use what is known as asymmetric Public Key infrastructure (PKI) system. This PKI system uses two “keys” to encrypt communications, a “public key”, and a “private key”. Anything encrypted by the public key can only be decrypted by the private key and vica-versa.



### How to allow HTTPS secure connection between the proxy server and the contentACCESS in case of need?

The contentACCESS setup package cannot configure the contentACCESS Proxy to use https on the Internet Information Services (IIS), therefore this must be set manually. It is also necessary to mention, that the proxy server must be installed with the “https” connection from the contentACCESS package, otherwise it is not possible to establish HTTPS connection between the proxy server and contentACCESS.

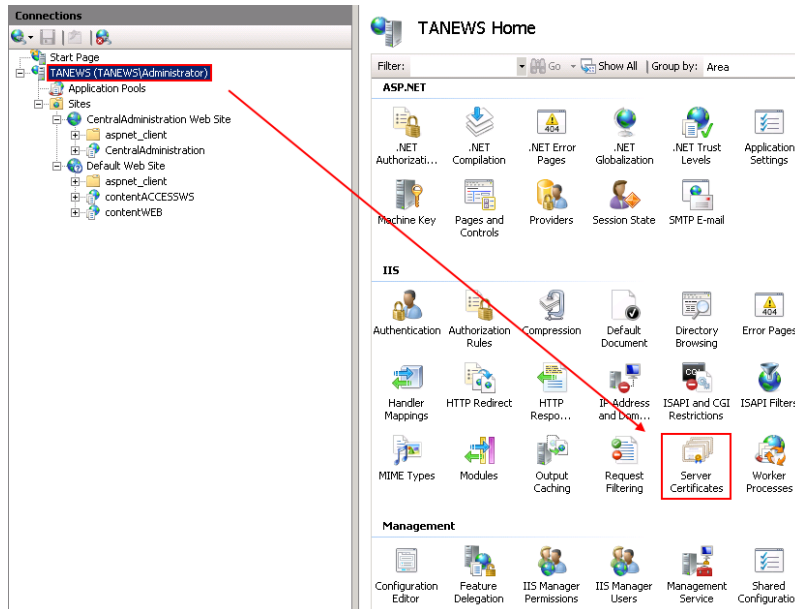
Once the contentACCESS Proxy is installed, continue according to the next steps:

1. Open Internet Information Services (IIS) Manager on the computer where the proxy server is installed.

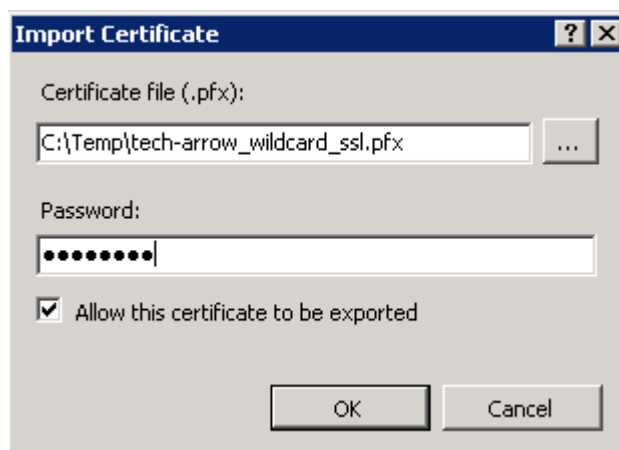
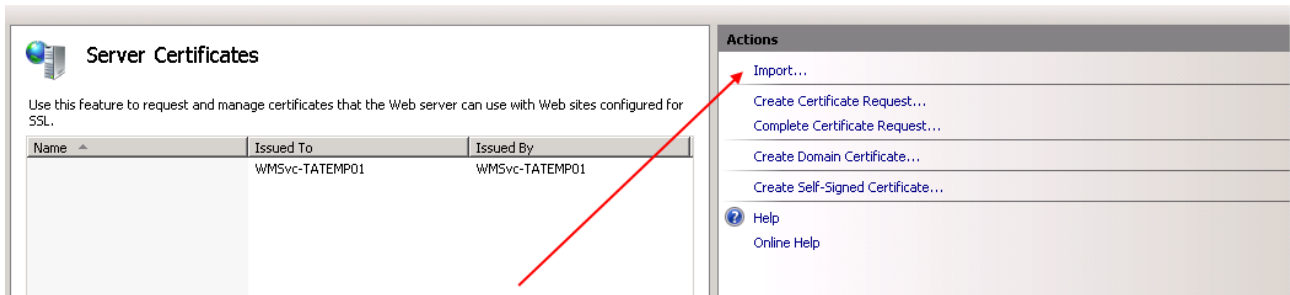


2. Import the company's SSL Certificate

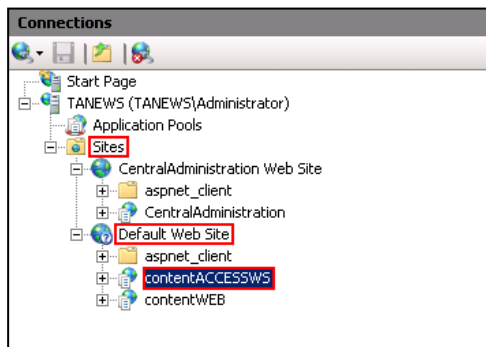
- a) Click on the server name – “TANEWS(TANEWS\Administrator)” in our case – and under section **IIS** double click on **Server Certificates**:



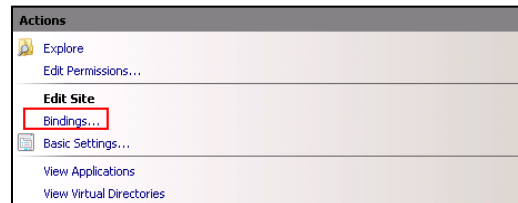
- b) **Import the certificate.** In the right hand corner of the Actions pane click on **Import** and in the **Import certificate** window browse for the company's certificate, open it, then enter the password to it and click on **OK**:



- c) **Bindings configuration.** Now enable the access to the proxy from HTTPS. Search for the node contentACCESSWS in the **Connections** pane. Double click on the **Default Web Site** in the pane, and in the right upper corner of the **Actions** pane click on **Bindings** option.

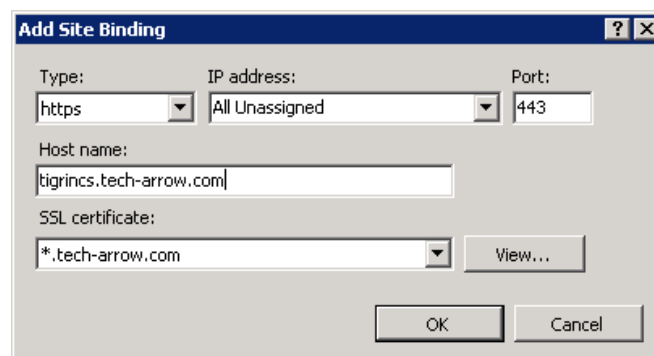


Screenshot A



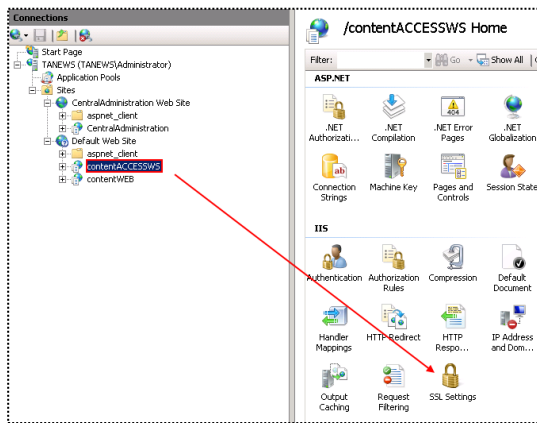
Screenshot B

In the **Site Bindings** window, click on **Add**. In the **Add site binding** window, under **Type** select “**https**” from the dropdown list, enter the Host name and select the SSL certificate from the dropdown list. Then click on **OK**.

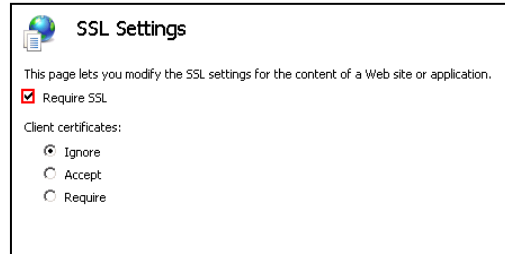


### Cancellation of HTTP-allowance

- a) If you would not like to allow using HTTP connection any more, unfold the appropriate site in the **Connections** pane and click on the proxy (contentACCESSWS), then double click on **SSL Settings** option under **IIS** section (Screenshot A). The **SSL Settings** page will open. Here check checkbox **Require SSL** (Screenshot B).

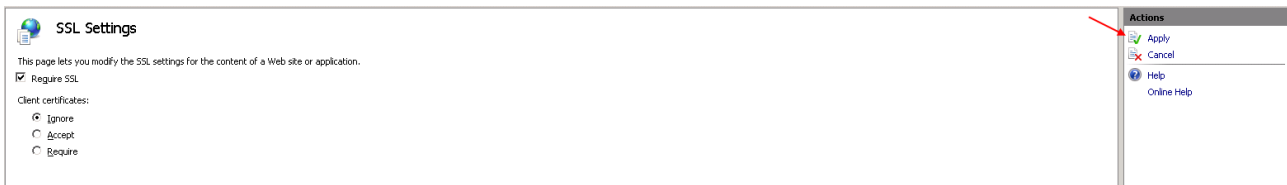


Screenshot A



Screenshot B

b) In the right hand corner click on **Apply** to save these changes.



To check, if the communication between the proxy and the contentACCESS is well established.

Into the browser enter URL:

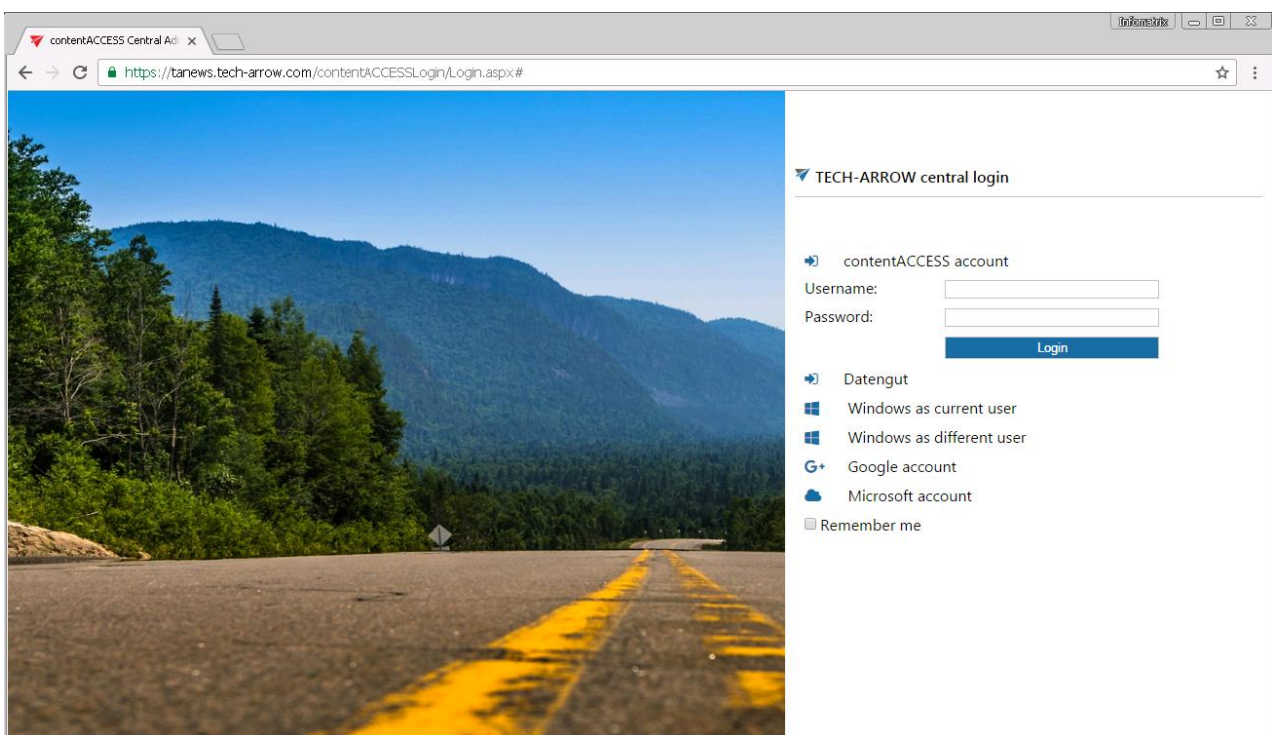
[https://\[HostName\]/contentACCESSWS/MobilityService.svc/ping](https://[HostName]/contentACCESSWS/MobilityService.svc/ping).

If the connection was well established, then the ping result will show **OK**.

## Central login page

The Central login page is a separate component, that's also involved in the contentACCESS installation package. It can be deployed on the machine where the contentACCESS server is deployed, or also on any other server, separately from other components.

The Central login page is a must-to component that enables to use the third-party login providers and also social login providers like Windows, Google, Azure etc. – i.e. the user can log in to the respective application using his Google, Azure, Windows etc. account only from this page:



The component is using a standard OAUTH protocol, i.e. any other client application, which is able to authorize through the OAUTH, can be also authorized by contentACCESS.

### Central login page features:

- **Long term login:** using option “**Remember me**” the logged in user is remembered in the next 3 months – this ensures, that the user is not forced to log in to the application every time
- **Disabling application(s)** by disabling login to contentACCESS from that/those application(s) – e.g. by disabling officeGATE but leaving contentWEB enabled the company allows for the end user to browse the contentACCESS archive through contentWEB only, but in



officeGATE the connection with contentACCESS will be disabled for that contentACCESS installation (read more in section [Application settings](#))

- **Social authentication support** (Google, Facebook, O365/Live – **Important!**: You still need to register yourself on these social providers; read more in [External login provider configuration](#))
- **Automatic login provider (single sign on)** –the central login page first tries to authenticate the user who tries to log in with login provider which is set to automatic; the user is automatically redirected to the desired application if the authentication was successful (read more in [contentACCESS Automated single sign on](#))
- **User invitation support**

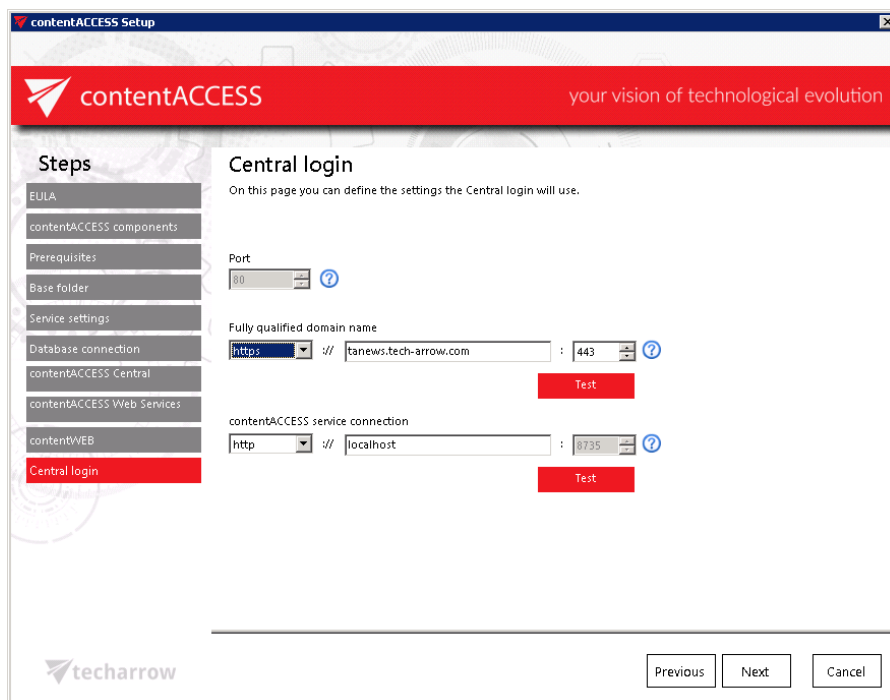
### Central login configuration

The Central login page is accessible at the following address:

[http://\[CentralLoginUrl\]/contentACCESSLogin](http://[CentralLoginUrl]/contentACCESSLogin)


The physical port of the page in IIS, the application URL settings of the Central login page and the connection settings between the Central login page and the contentACCESS server are first configured at first install of the product, and are written to the database by the setup package. These values can be changed

- by **updating** the product;





- on the **System** page of the Central Administration;

 **System**  
 System > Services > System

General settings

Is system configured:

Plugins directory: C:\Program Files\TECH-ARROW\contentACCESS\G

User search settings

Disable user searching:

Database settings

Database type: MSSQL  
 Server name: TANEWS  
 Database: CONTENTACCESSDB  
 Schema: dbo  
 User: sa

Proxy settings

Do not use proxy  
 Use system default proxy settings  
 Use explicit proxy server settings

Proxy server URL:   
 Username:   
 Password:

External accessibility settings

Retrieve server FQDN: https://tanews.tech-arrow.com:443  
 Enter an externally accessible alias for the contentACCESS server. This value is used for shortcut links too.

Central login: https://tanews.tech-arrow.com:443  
 Provide necessary information, where central login is deployed.  
 Connection successful!

When configuring the application URL for the Central login page, it is highly recommended to create an alias and to specify it in FQDN form to ensure a trouble free access from everywhere.

The **Applications settings** allow to configure certain Central login page settings as well, but the Application URL cannot be changed here. It is written here by the setup package as well, but it can be changed on the System page (System → Services → System) only:





### Edit application ×

---

**Application**

Display name:*	<input type="text" value="Central Login"/>
Application url:	<input type="text" value="http://szandra-notebook:80/ContentAccessLogin/"/> <small>This URL can be changed on the page System &gt; Services &gt; System</small>
Redirect url:	<input type="text" value="Default.aspx"/>
Name:*	<input type="text" value="Central Login"/>
Description:*	<input type="text" value="Central login page for ContentAccess."/>
Enabled:	<input checked="" type="checkbox"/>

---

**Application credentials**

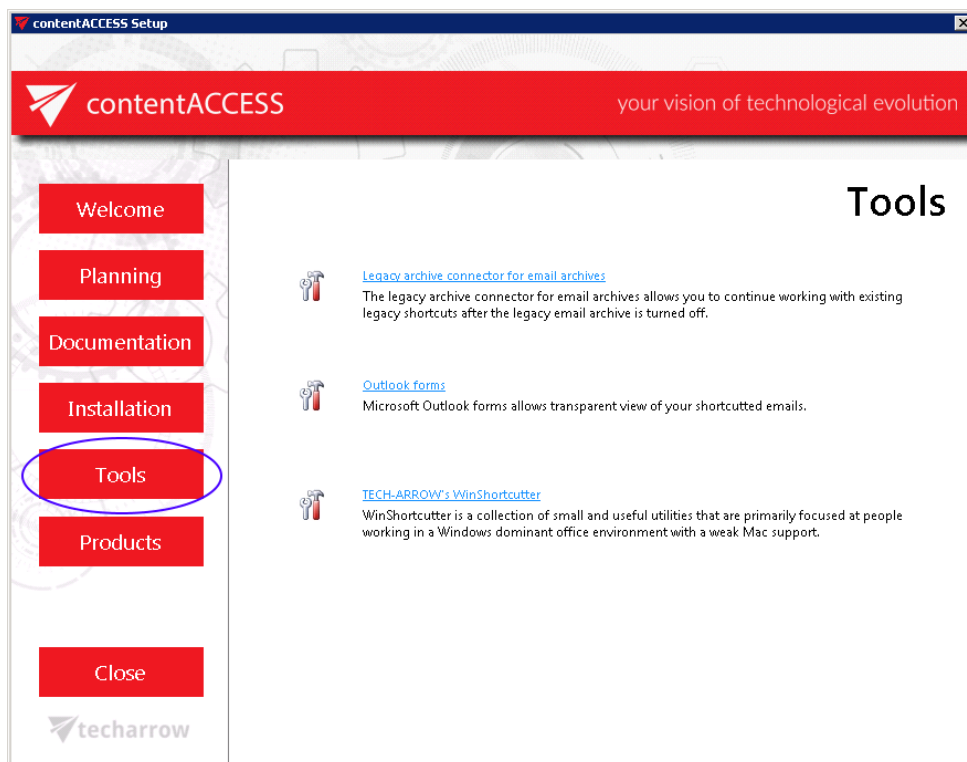
Application id:	bb484a32-5bc6-4b83-8589-d951c5aa2c5c
Application secret:	<input type="text" value=""/>



## contentACCESS Tools

The contentACCESS setup package is extended with the following tools:

- **Legacy archive connectors** (used to access the legacy email archives [MAM EE and ELM]; for more information check section [Legacy email archive connectors](#)),
- **MS Outlook Forms** (further mentioned in section [Email Archive](#)) and
- from here you can download **TECH-ARROW's Winshortcutter** as well. (For more information click [here](#).) Here you can also read a short description about these extensions of the contentACCESS setup:



## Installing Outlook forms

In Microsoft Outlook, each of the windows where you enter content — for example, a new email message or a new calendar appointment—is called an Outlook form. These default forms are stored in the Standard Forms Library for Outlook. There are additional libraries as well, including Personal Forms and Organizational Forms if you have an Exchange Account. Each folder within the Outlook hierarchy has a default Outlook form associated with it. As you would expect, a mail folder such as



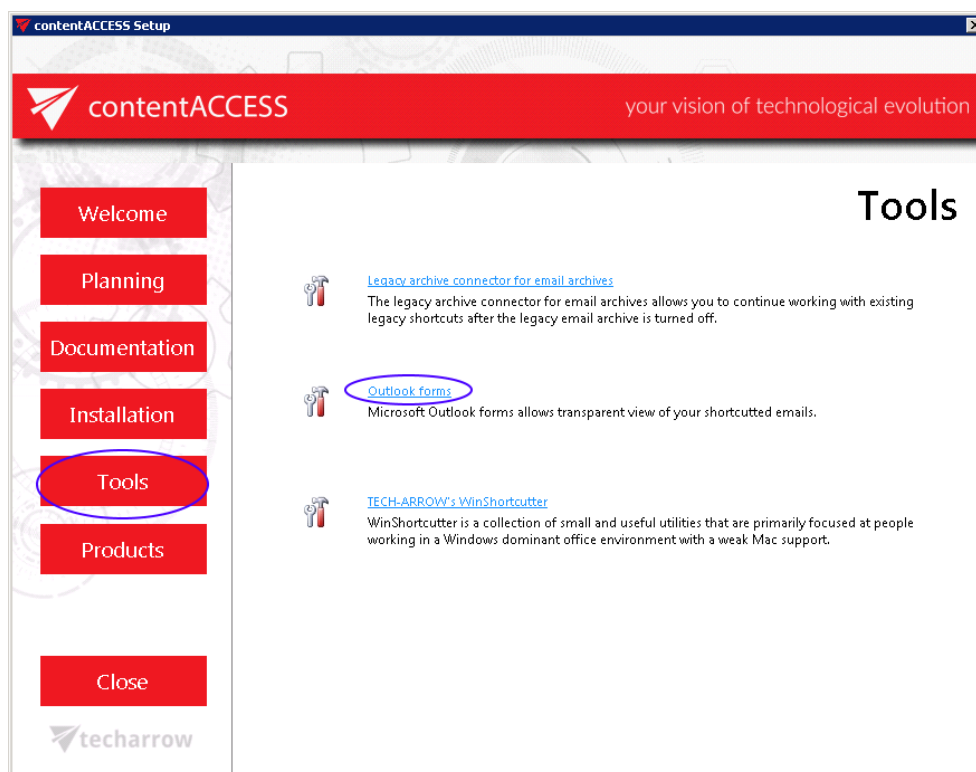
your Inbox has the Message form as the default, and the Contacts folder opens the Contact form as its default.

When archiving MS Exchange contents, the contentACCESS MS Outlook forms are used to open an HTML shortcut – which replace the archived email message – transparently with the original email message. If the forms are installed, then the end user will not notice any change between the original email and the archived (shortcutted) one.

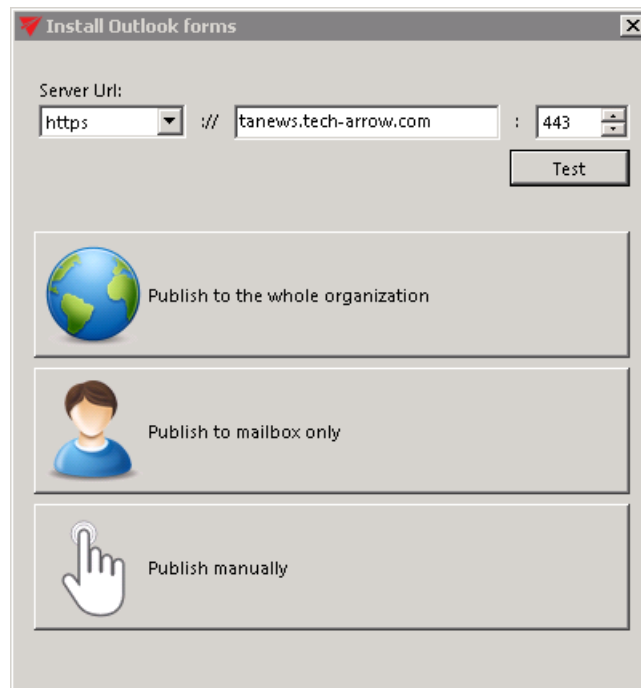
There are 3 contentACCESS Outlook forms available. For the correct functionality all these forms must be installed.

- CA\_techarrow.oft – is used to transparently open the standard archive messages
- CA\_R\_techarrow.oft – is used to transparently open the replied archive messages
- CA\_F\_techarrow.oft – is used to transparently open the forwarded archive messages from the mailbox.

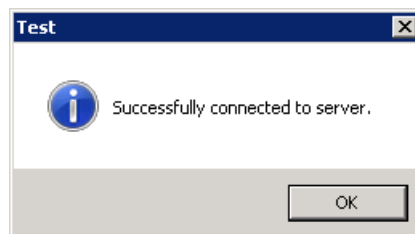
To install Outlook forms, open the **Tools** section in the contentACCESS installation wizard → click [Outlook forms](#) option.



By clicking the option the **Install Outlook forms** window opens:



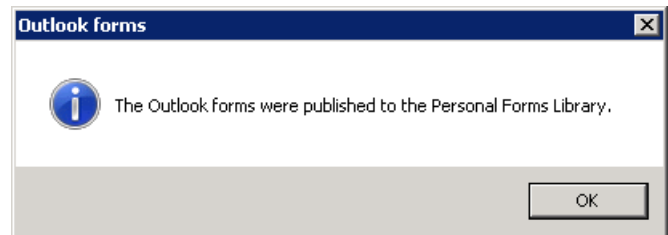
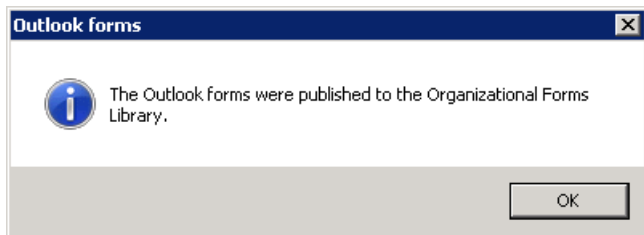
First the administrator needs to set the contentACCESS retrieve server (contentACCESS Proxy) URL. This option allows to install the forms for HTTP and HTTPS Proxy, too. It is also recommended to test the connection with the server.



The application simplifies the Outlook form publishing, by providing an automated way for publishing. The application allows automatic publishing of the forms to the Organization forms library but also to publish the forms into the user Personal forms library.

- **Publish to the whole organization** (Organizational forms library) – this is the recommended method, because the forms must be published once and will be available for the whole organization.
- **Publish to mailbox only** (Personal forms library) – if it's not allowed to publish to Organizational forms library (Office 365 doesn't have Organizational forms library), then this option is used.

By publishing to Organizational and/or personal forms library, Outlook starts automatically. If forms were published successfully, the user is warned about this:

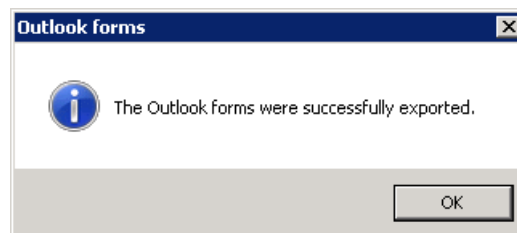


**Requirements for automatic publishing** are the following:

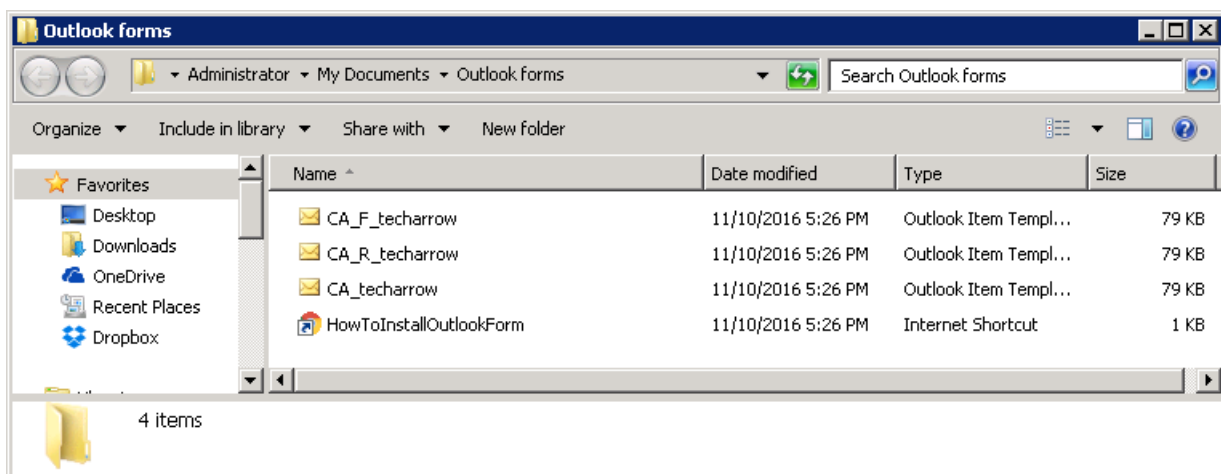
- Outlook x64 2013 and higher
- The user account running the application must have the necessary permissions

If the **requirements for automatic publishing are not fulfilled**, manual publishing is used:

- **Publish manually:** you need to select a folder, where the forms will be exported together with the link pointing to the Outlook forms installation manual.



Once exported, the folder will be opened and you can deploy the forms using the steps described in the manual ([click](#) to get the link to the manual).






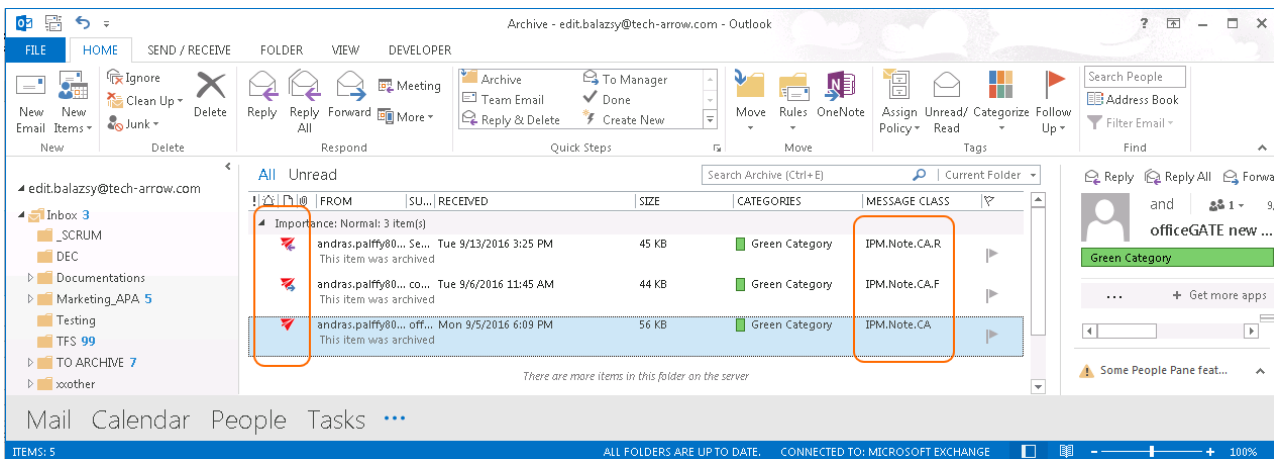


During the email archive process, the archive job changes the message class of the email messages:

- Standard messages – get the IPM.Note,CA message class
- Replied messages – get the IPM.Note.CA.R message class
- Forwarded messages – get the IMP.Note.CA.F message class

Based on these message classes, the Outlook forms mark the archived emails with the following icons:

- Standard messages – 
- Replied messages – 
- Forwarded messages – 



**Important!!!** Outlook 2013 users will have access to the Organizational forms library but cannot publish to it using Publish custom forms.

There are 2 possible ways how to solve this:

- a) Use an **earlier version** of MS Outlook to publish the Outlook Forms;
- b) Publish the Forms to your **Personal Forms Library** and then use the **Outlook Options → Advanced → Developers group → Custom Forms... → Manage Forms** functionality to copy the form from **Personal Forms** to **Organizational Forms**.



## Legacy email archive connectors

Legacy retrieve services bring for the user the advantages of hybrid archiving (connection to the legacy archive and the new archive through contentACCESS).

With installing the given retrieve service and configuring it in the contentACCESS Central Administration and on the legacy server, you will be able to **retrieve the old email archive shortcuts** and to **check your legacy archive using contentWEB**. It is recommended to install the retrieve service on the legacy archive server.

To be able to work with the existing legacy shortcuts the legacy email archive should be turned off. contentACCESS has two legacy archive connectors:

- Legacy archive connector for **Metalogix Archive Manager Exchange Edition (MAM EE)**
- Legacy archive connector for **Email Lifecycle Manager (ELM)**

In the following subchapters we will learn how to install the MAM EE and ELM retrieve services and how to do necessary configurations in contentACCESS.

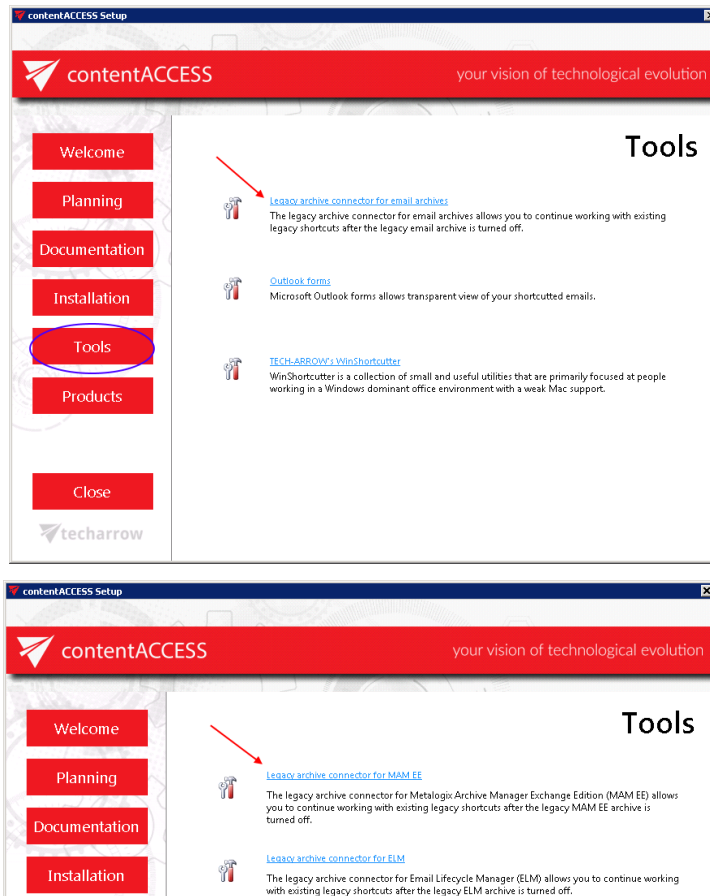
### Legacy archive connector for Metalogix Archive Manager Exchange Edition (MAM EE)

**Legacy MAM retrieve service** is a replacement of the original Metalogix Archive Manager Exchange Edition (MAM EE) retrieve service. This service is used to access archived files over the legacy shortcuts, if you have uninstalled Metalogix Archive Manager (and Archive Web) from your computer, and you need to check the archive contents.

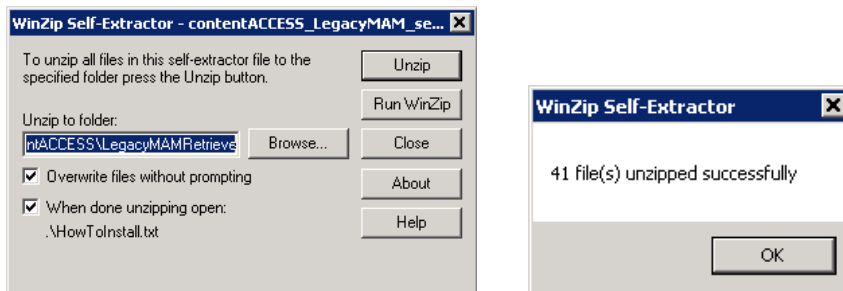
**Important!** Do not uninstall HSM from the server. It will be needed to access the MAM shortcuts and to retrieve the archived items.

#### *Installing Legacy MAM retrieve service and its configuration on the MAM server*

1. In the **Tools** of the contentACCESS setup package click on **Legacy archive connector for email archives/Legacy archive connector for MAM EE** and start to run the setup package.



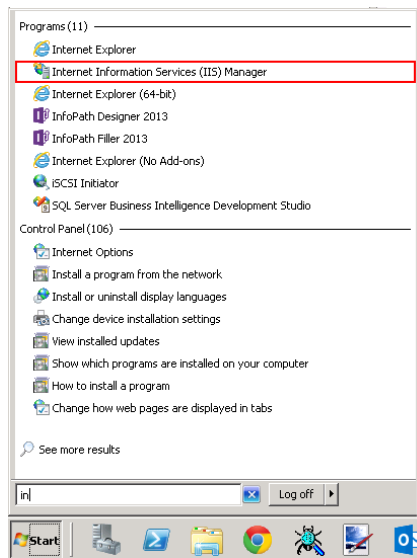
By default it unzips to c:\Program Files\TECH-ARROW\contentACCESS\LegacyMAMRetrieve folder. Click “Unzip”. After the files have been successfully unzipped click “OK”.



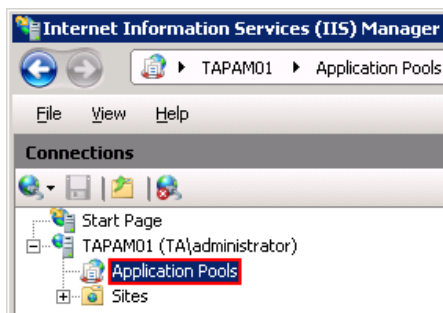
2. A short **HowToInstall** manual will automatically open to help you with installing the server. Follow the next steps of this short step-by-step manual:

3. Open **Internet Information Services (IIS) manager** from the **Start** menu:

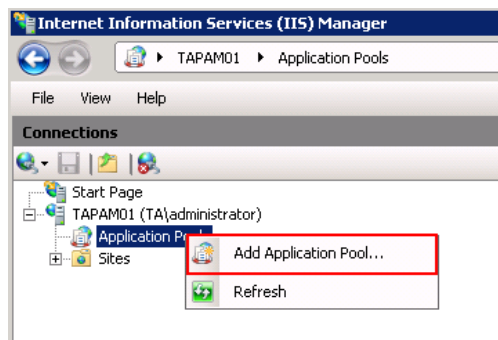




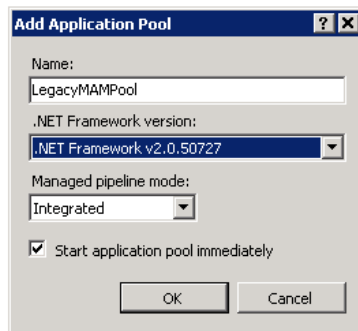
4. Navigate to the following node in the tree on the left side: [SERVER\_NAME]\Application Pools:



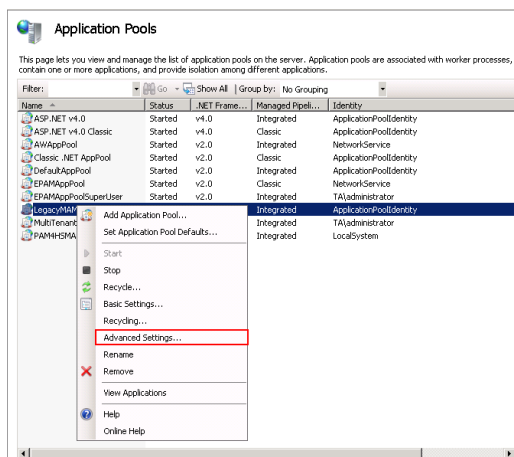
5. Right click on the node “Application Pools” and select “Add Application Pool”:



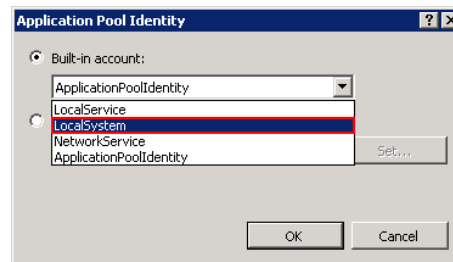
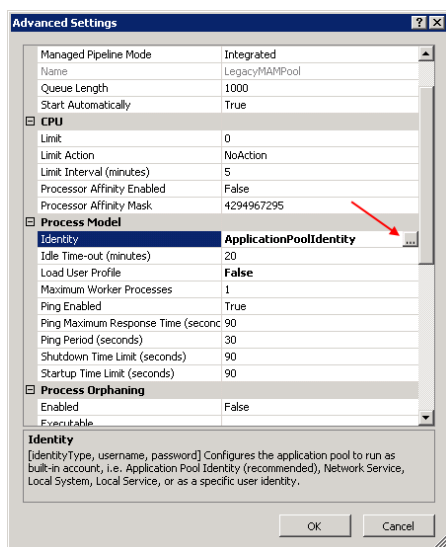
6. The “Add Application Pool” window will open. Enter "LegacyMAMPool" as name and select the .NET Framework version from the .NET Framework version dropdown list, then click OK.



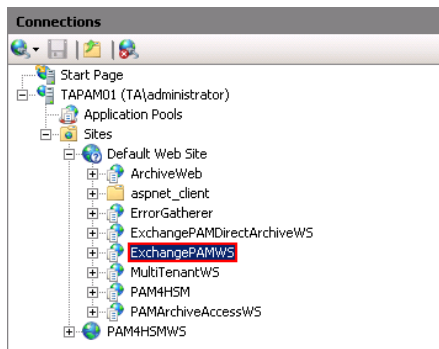
7. Right click on the newly created "LegacyMAMPool" in the grid, and select "Advanced Settings" from its context menu.



8. Change "Identity" to "Local system" built in account in the "Application Pool identity" window, then click "OK".

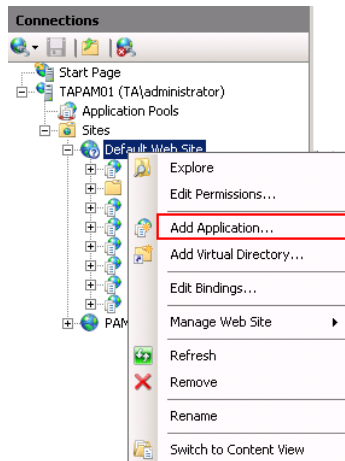


9. Navigate to the following node in the tree on the left side: [SERVER\_NAME]\Sites\Default Web Site\ExchangePAMWS:



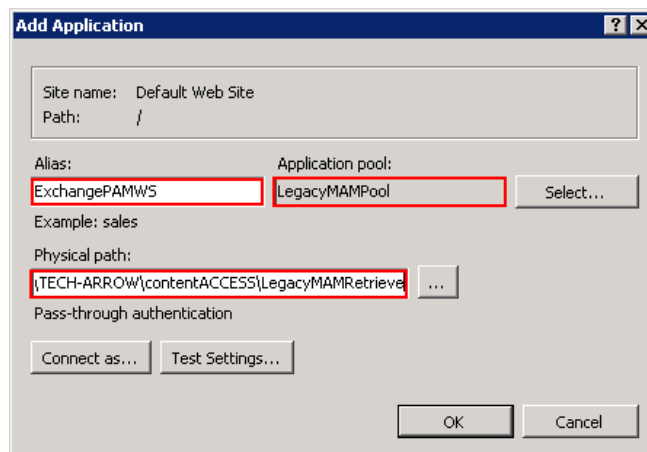
If the ExchangePAMWS is NOT found, then:

a) Right click on the “Default Web Site” and click on the "Add Application".



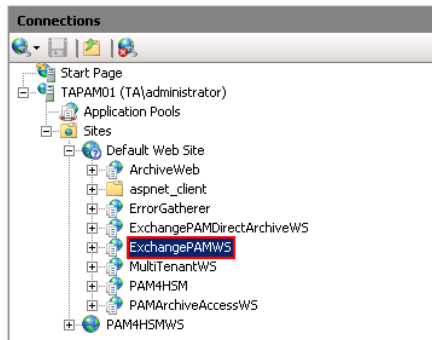
b) Enter “ExchangePAMWS” into alias and “C:\Program files\TECH-ARROW\contentACCESS\LegacyMAMRetrieve” as **Physical path**. Select the “LegacyMAMPool” by clicking the “Select” button.

c) Click “OK”.

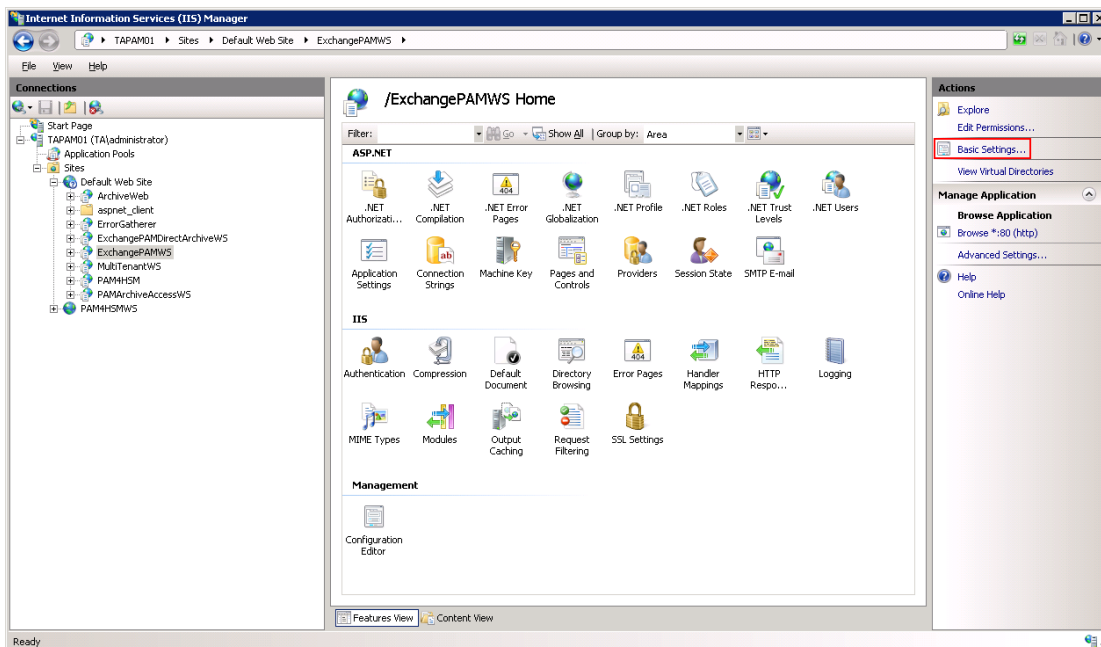


If the ExchangePAMWS is found, then:

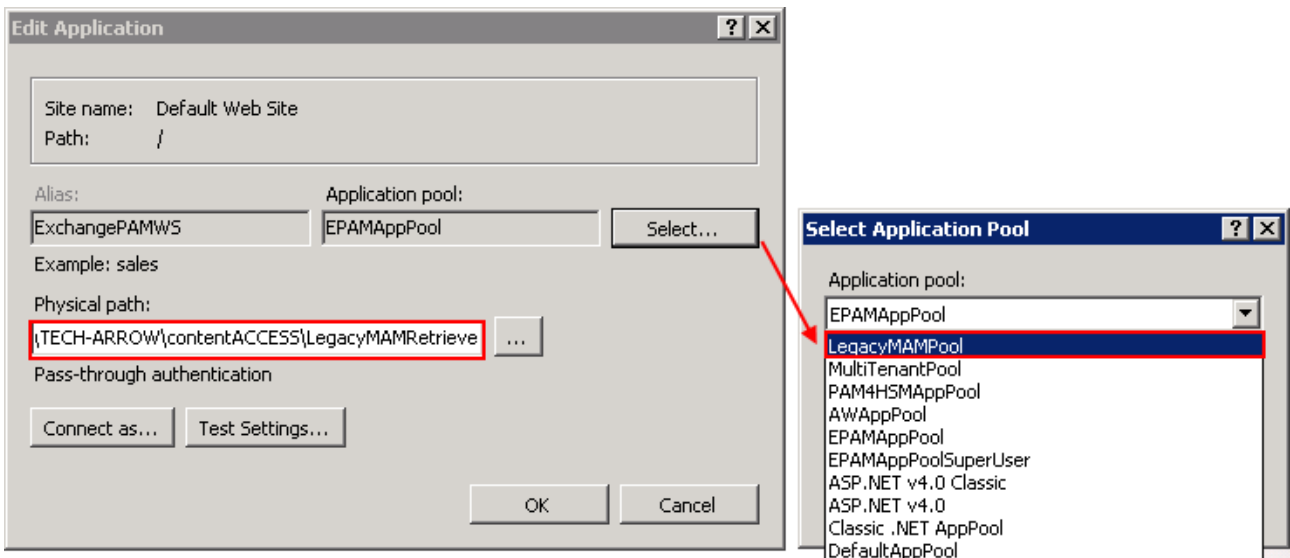
a) Select the "ExchangePAMWS" node by clicking on it.



b) Click "Basic Settings..." in the Actions pane (right side of the IIS Manager).



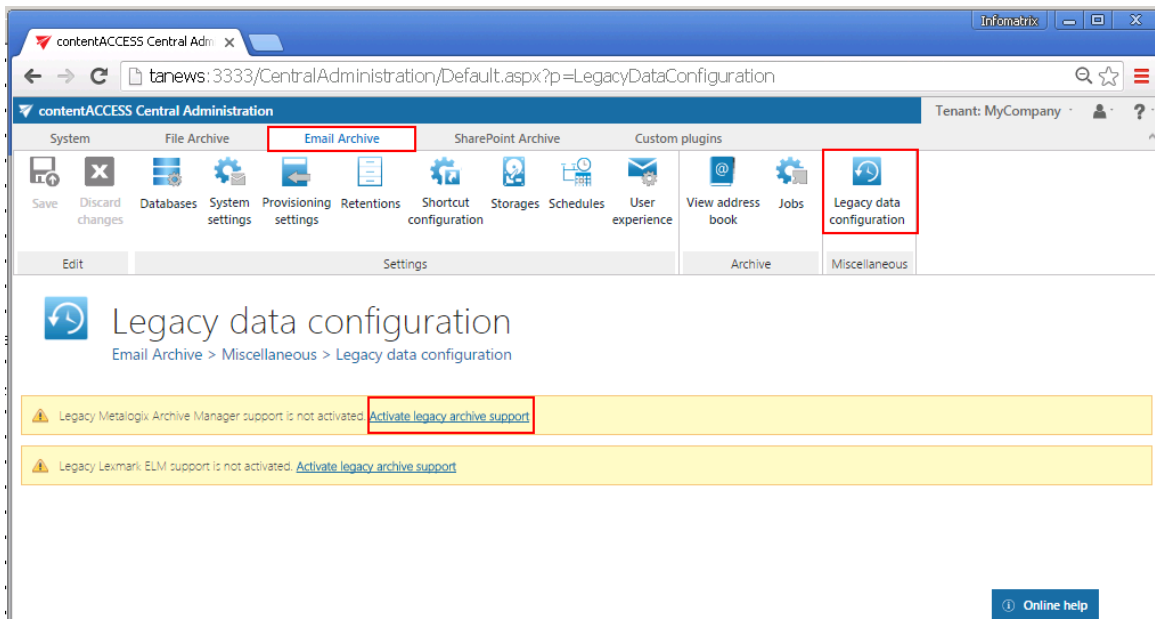
c) In the "Edit Application" dialog, select the "LegacyMAMPool" by clicking the "Select" button and enter "C:\Program Files\TECH-ARROW\contentACCESS\LegacyMAMRetrieve" into the Physical path textbox.



10. Continue with setting up the MAM server in contentACCESS:

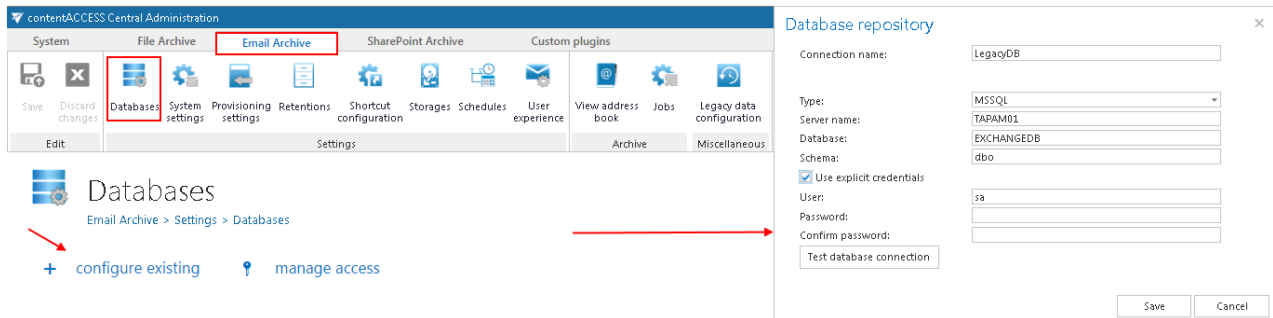
**Configuration of the MAM server in contentACCESS Central Administration:**

- a) Open contentACCESS Central Administration from your browser:  
*http://[contentACCESSServerName]:3333/CentralAdministration*
- b) Navigate to **Email Archive** → **Miscellaneous** → **Legacy data configuration** on the ribbon:
- c) Activate legacy archive support with clicking on the “Activate legacy archive support” option in the warning box.

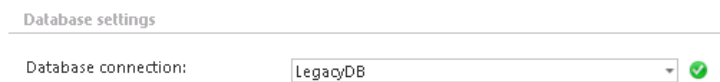




- d) **Database settings:** go to **Email Archive** → **Settings** → **Databases** button on the ribbon, and configure the connection with the old Metalogix database on the MAM server. In this use case the MAM database is on *TAPAM01*.



- e) Navigate back to the **Legacy data configuration** page on the ribbon, and select the created database connection from the database dropdown list.

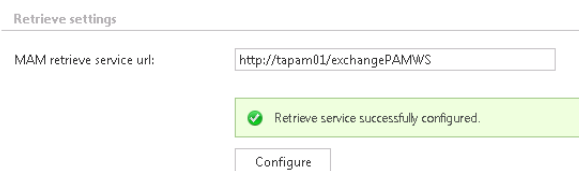


Now you can configure the URL's for the MAM retrieve server.

- f) Under **Retrieve settings**, enter the **MAM retrieve service URL** using the server name (in our case "TAPAM01"), where the Legacy MAM retrieve service was installed.

Use the following sample: [http://\[MAMServerName\]/exchangePAMWS](http://[MAMServerName]/exchangePAMWS)

Click **Configure**. In this step, the contentACCESS will configure the retrieve proxy with the correct parameters.



- g) **HSM server settings:** Enter the HSM server name into the text field using the following sample:

[http://\[HSMServerName\]/PAM4HSM/PAM4HSMWS.aspx](http://[HSMServerName]/PAM4HSM/PAM4HSMWS.aspx)



HSM server settings

HSM Server name:

✔ Connection successful!

Test

Once the retrieve service installation and its configuration is ready, it will be possible to retrieve the old MAM shortcuts from Outlook/OWA and browse the legacy archive through contentWEB.



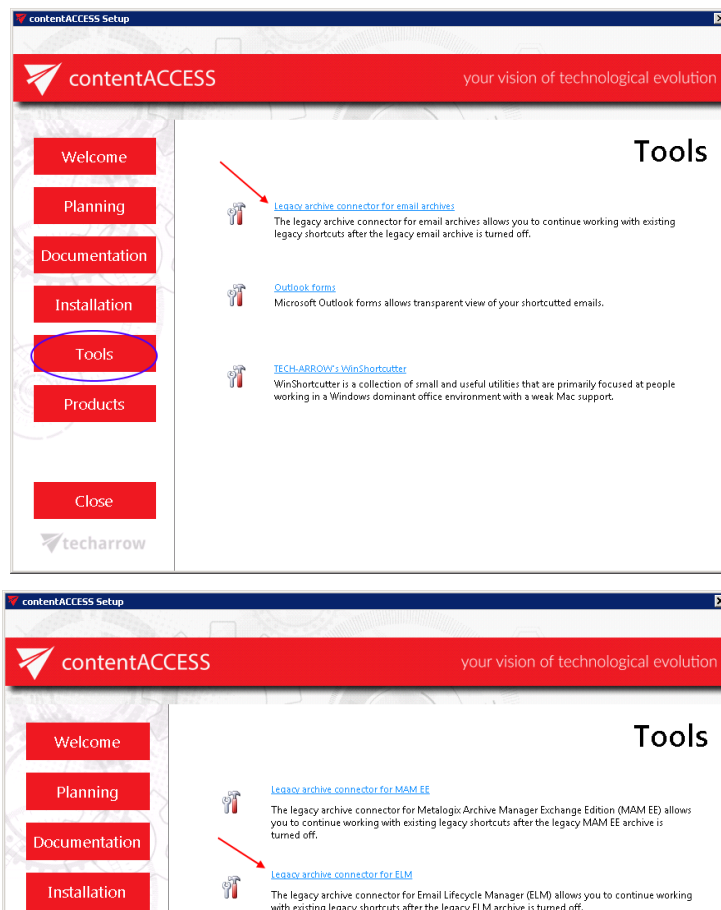
## Legacy archive connector for Email Lifecycle Manager (ELM)

This service is used to access archived files from the legacy ELM shortcuts, if you have uninstalled Email Lifecycle Manager from your computer, and you need to check the archive contents.

### Installing Legacy ELM retrieve service on the ELM server and its configuration

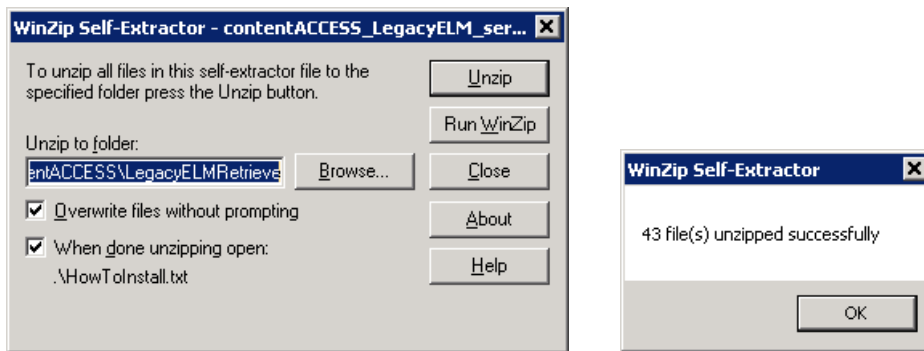
In this use case the ELM is installed on server *taelm01*. The retrieve service will be installed on the same server as it is recommended by us.

1. In the **Tools** of the contentACCESS setup package click on **Legacy archive connector for email archives/Legacy archive connector for ELM** and start to run the setup package.

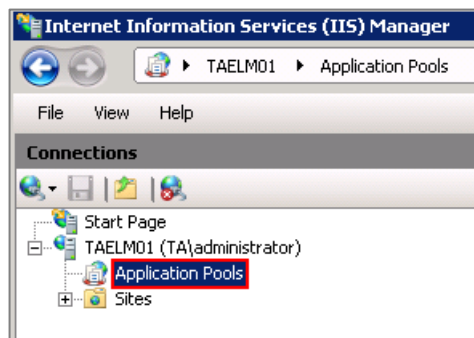


By default it unzips to `c:\Program Files\TECH-ARROW\contentACCESS\ LegacyELMRetrieve` folder. Click "Unzip". After the files have been successfully unzipped click "OK".

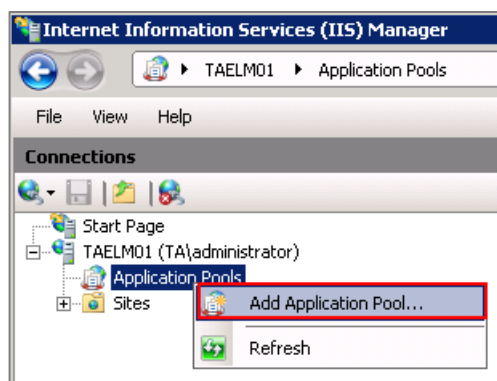




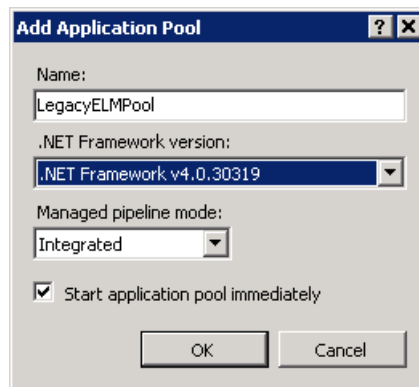
2. A short **HowToInstall** manual will automatically open to help you with installing the server. Follow the next steps of this short step-by-step manual:
3. Open **Internet Information Services (IIS) manager** from the **Start** menu:
4. Navigate to the following node in the tree on the left side: [SERVER\_NAME]\Application Pools:



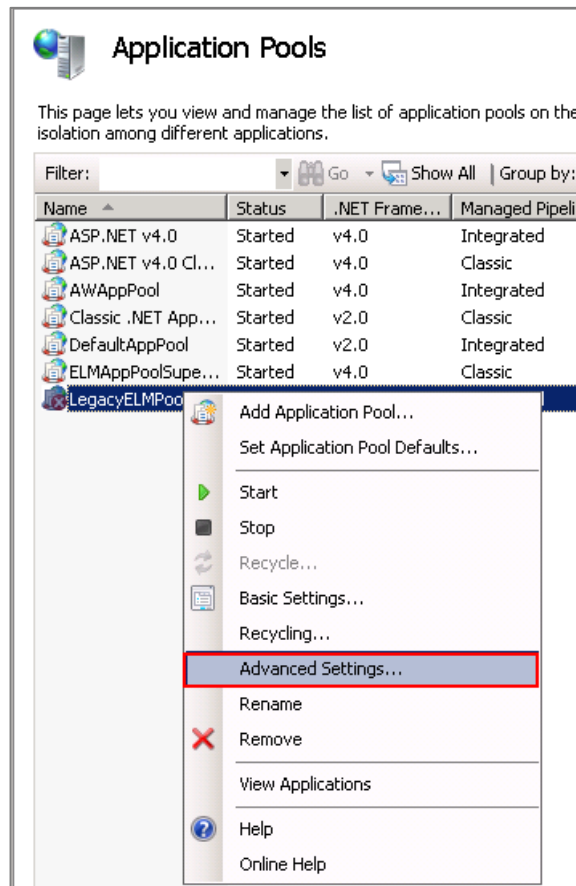
5. Right click on the node “**Application Pools**” and select “**Add Application Pool**”:



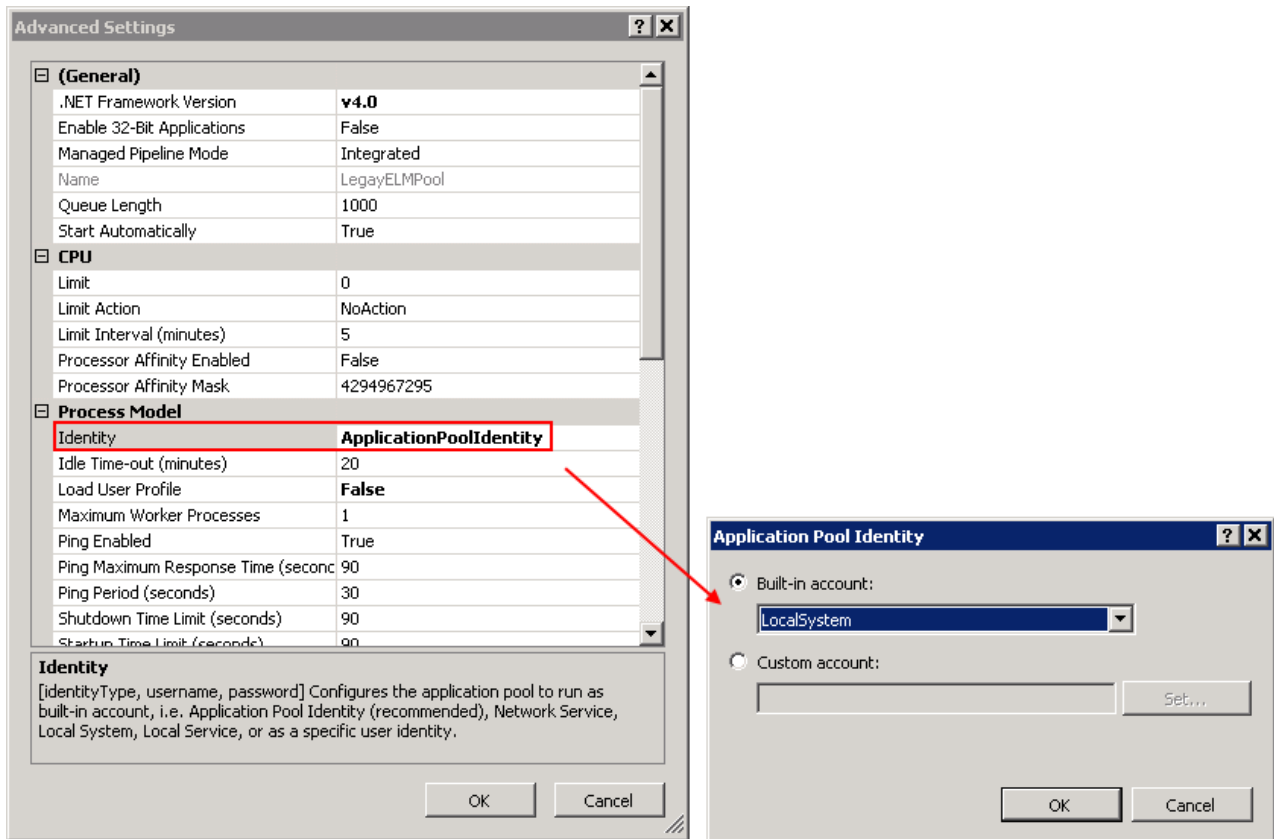
6. The “**Add Application Pool**” window will open. Enter "LegacyELMPool" as name and select the .NET Framework version from the **.NET Framework version** dropdown list, then click **OK**.



- Right click on the newly created "LegacyELMPool" in the grid, and select "Advanced Settings" from its context menu.



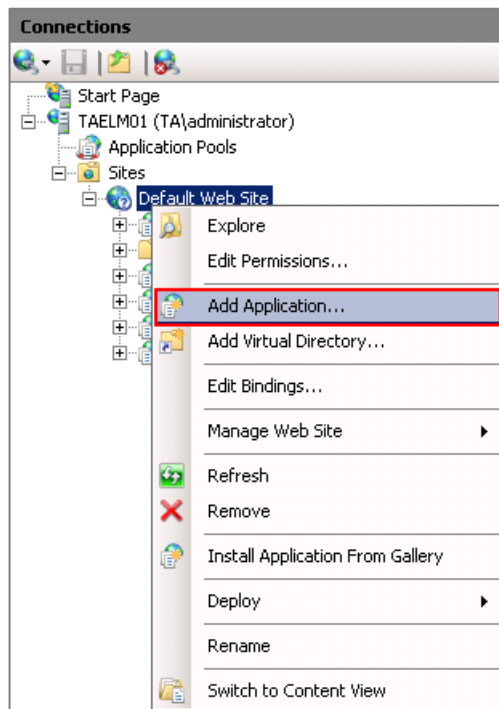
- Change "Identity" to "Local system" built in account in the "Application Pool identity" window, then click "OK".



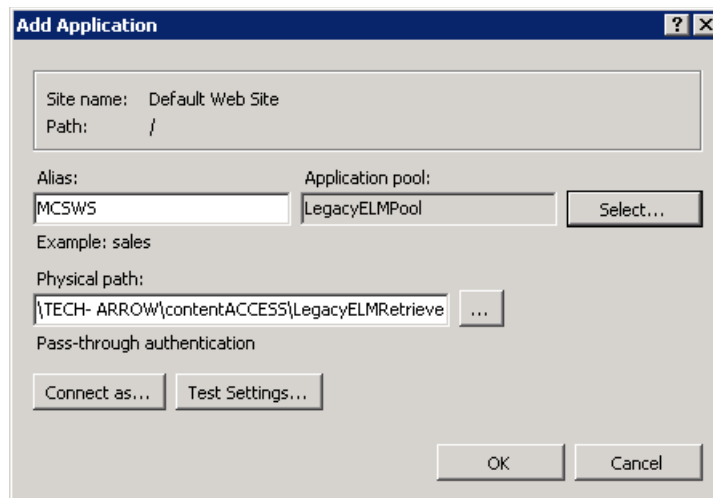
9. Navigate to the following node in the tree on the left side: [SERVER\_NAME]\Sites\Default Web Site\MCSWS:

If the MCSWS is **NOT** found, then:

- a) Right click on the "Default Web Site" and click on the "Add Application".

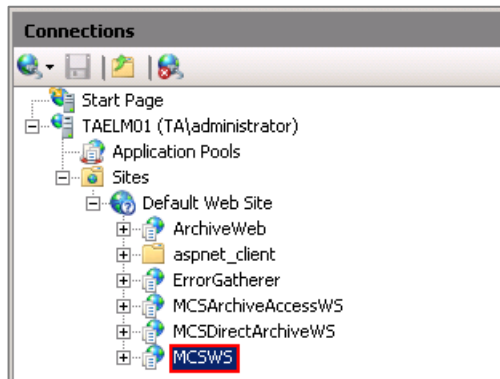


- b) Enter "MCSWS" into alias and "C:\Program files\TECH-ARROW\contentACCESS\LegacyELMRetrieve" as **Physical path**. Select the "**LegacyELMPool**" by clicking the "**Select**" button.
- c) Click "**OK**".

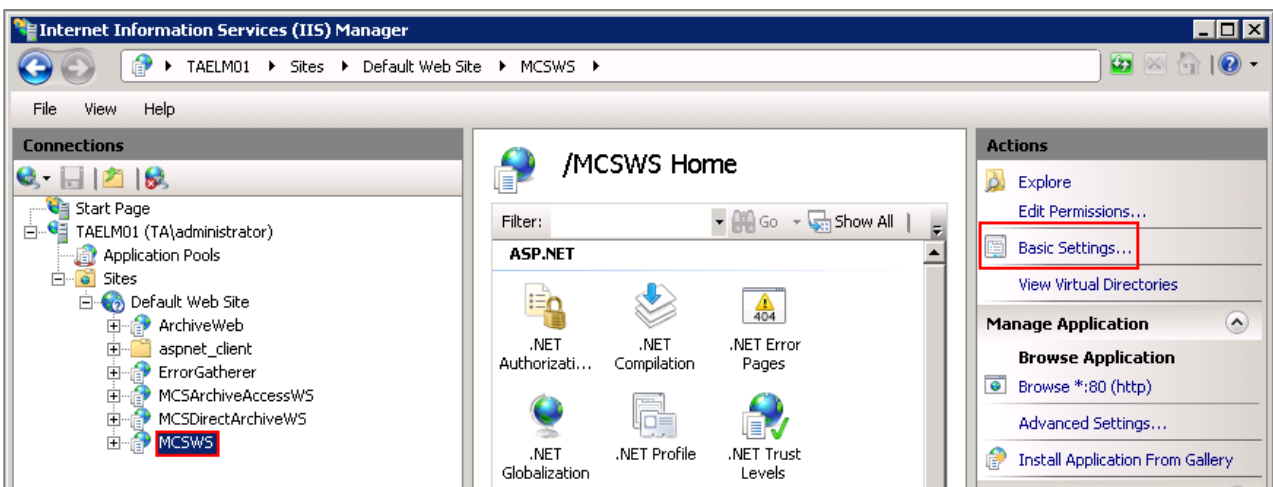


If the MCSWS is found, then:

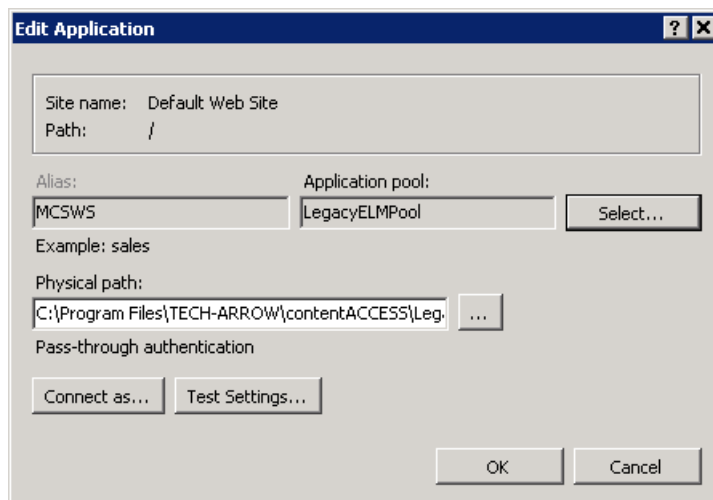
- a) Select the "MCSWS" node by clicking on it.



b) Click "Basic Settings..." in the Actions pane (right side of the IIS Manager).



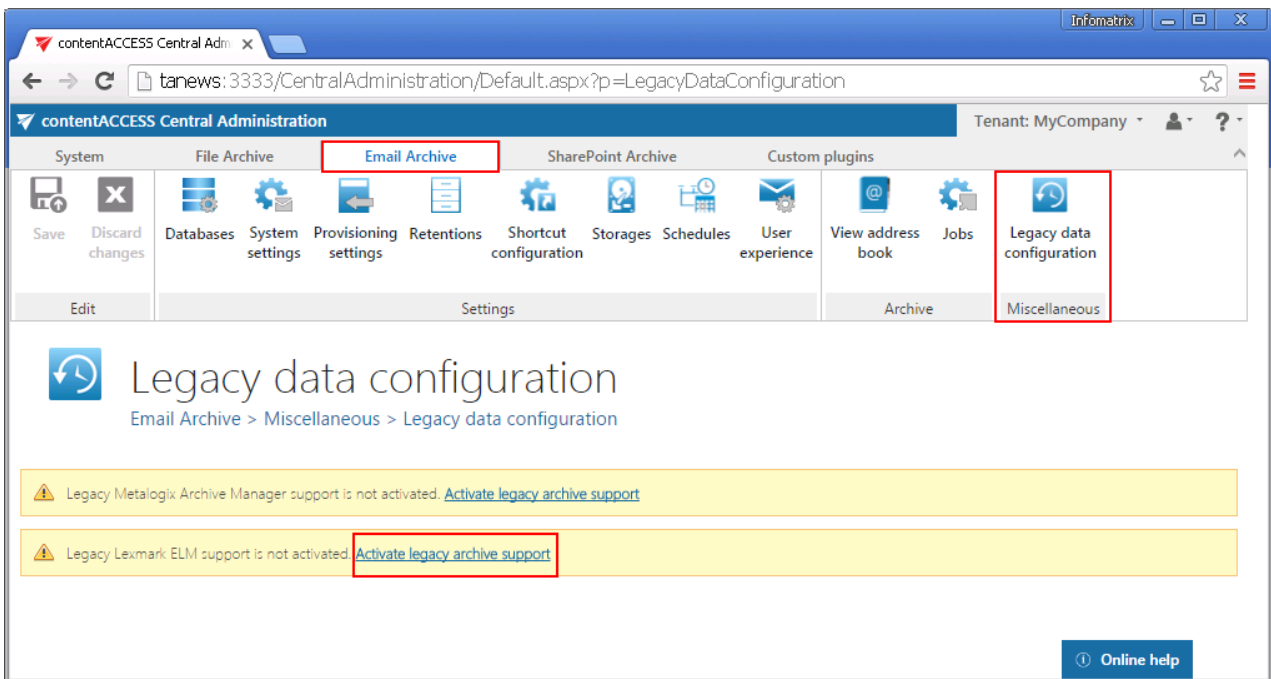
c) In the "Edit Application" dialog, select the "LegacyELMPool" by clicking the "Select" button and enter "C:\Program Files\TECH-ARROW\contentACCESS\LegacyELMRetrieve" into the Physical path textbox.



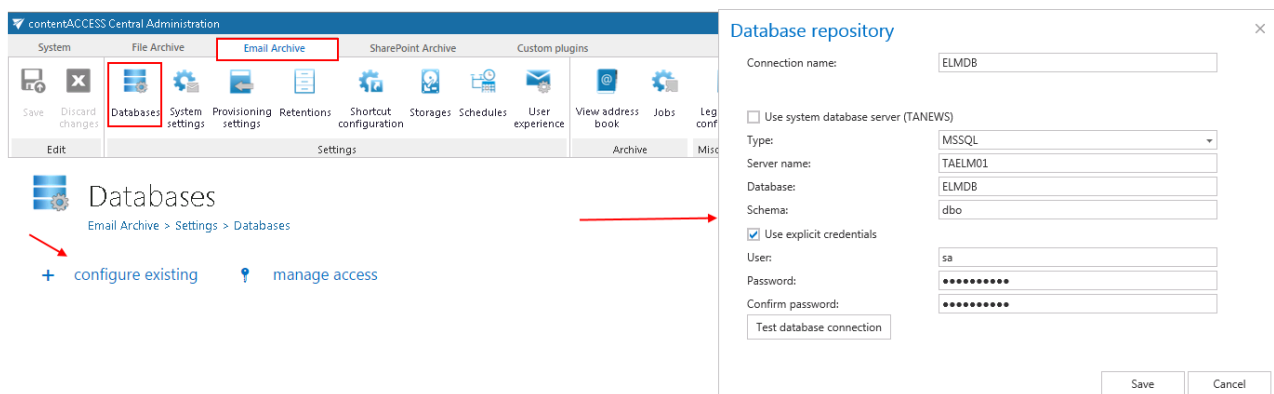
10. Continue with setting up the ELM server in contentACCESS:

### Configuration of the ELM server in contentACCESS Central Administration:

- a. Open contentACCESS Central Administration from your browser:  
*[ServerName]:3333/CentralAdministration*
- b. Navigate to **Email Archive** → **Miscellaneous** → **Legacy data configuration** on the ribbon:
- c. Activate legacy ELM archive support with clicking on the “Activate legacy archive support” option in the warnings box.



- d. **Database settings:** go to **Email Archive** → **Settings** → **Databases** button on the ribbon, and configure the connection with the old ELM database on the ELM server (in our case with *taelm01*).

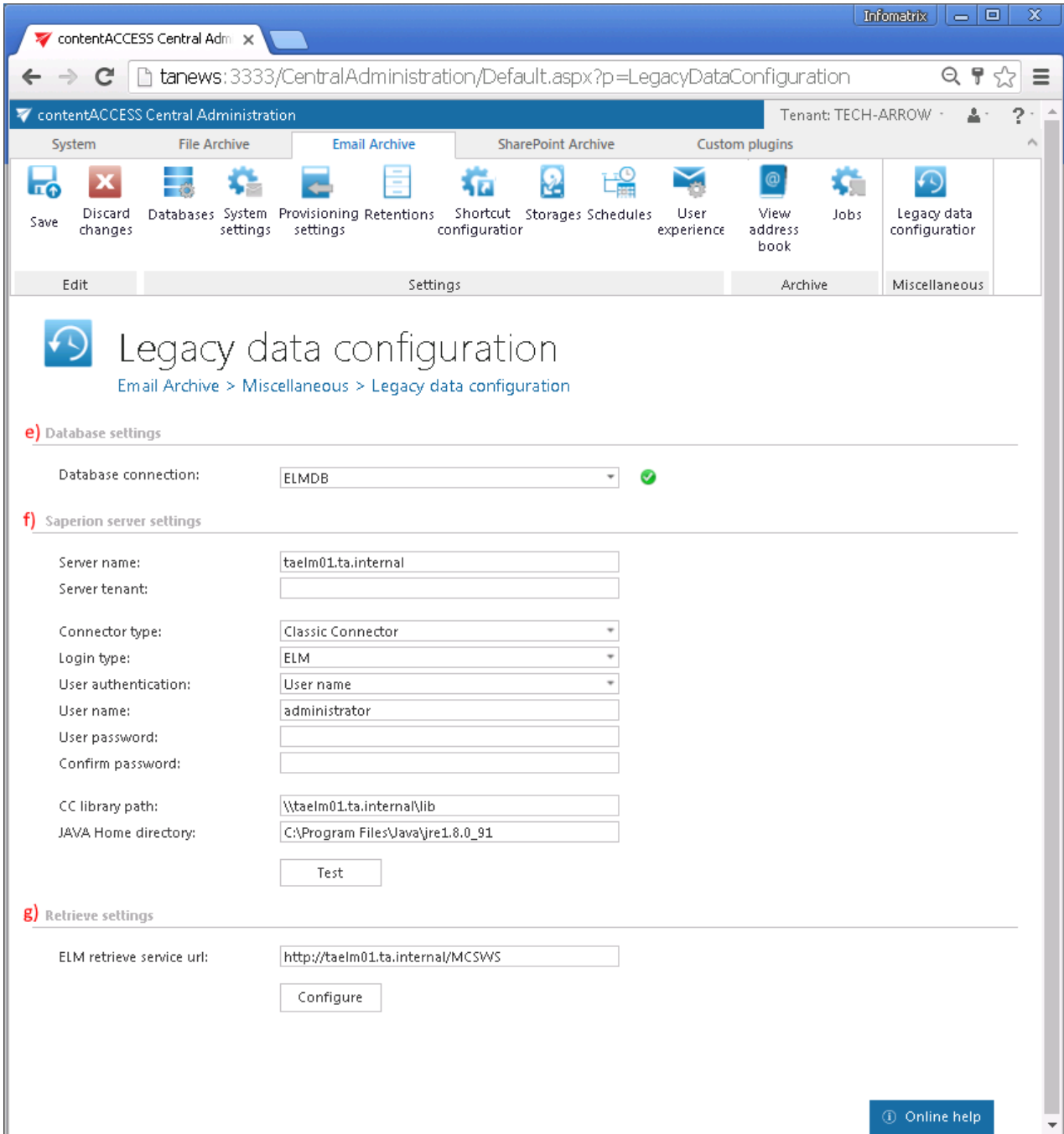




- e. Go back to the **Legacy data configuration** page on the ribbon, and set the connection with the ELM database (ELMDB from step *d*) above) in the **Database settings** section.
- f. In section **Saperion server settings** set the connection with the Saperion server. Set the values based on your configurations on the Saperion server. The connector has some prerequisites:
  - JRE x64 on the contentACCESS server (Check if folder exists: "c:\Program Files\Java\jre X.X") – to be configured in section **JAVA Home directory**
  - Need the ELM references, but it could be also referenced directly from the ELM machine. This is the path on which the Classic Connector jar files can be reached, e.g. *c:\Program Files\SAPERION\Application\scr\scr-classicconnector\lib* – to be configured in section **CC library path**.

Also run a test connection to verify the connection with the Saperion server.

- g. In section **Retrieve settings** enter the ELM retrieve service URL using the following sample: [http://\[ELMServerName/MCSWS\]/](http://[ELMServerName/MCSWS]/) and click on **Configure**.



The screenshot shows the contentACCESS Central Administration web interface. The browser address bar displays the URL: `tanews:3333/CentralAdministration/Default.aspx?p=LegacyDataConfiguration`. The page title is "Legacy data configuration" and the breadcrumb trail is "Email Archive > Miscellaneous > Legacy data configuration".

The interface includes a navigation menu with categories: System, File Archive, Email Archive, SharePoint Archive, and Custom plugins. The "Email Archive" category is active, showing sub-items like Save, Discard changes, Databases, System settings, Provisioning settings, Retentions, Shortcut configurator, Storages, Schedules, User experience, View address book, Jobs, and Legacy data configurator.

The main content area is titled "Legacy data configuration" and contains three sections:

- e) Database settings:** A dropdown menu for "Database connection" is set to "ELMDB" with a green checkmark.
- f) Saperion server settings:** A form with the following fields:
  - Server name: `taelm01.ta.internal`
  - Server tenant: (empty)
  - Connector type: `Classic Connector`
  - Login type: `ELM`
  - User authentication: `User name`
  - User name: `administrator`
  - User password: (empty)
  - Confirm password: (empty)
  - CC library path: `\\taelm01.ta.internal\lib`
  - JAVA Home directory: `C:\Program Files\Java\jre1.8.0_91`
 A "Test" button is located below the JAVA Home directory field.
- g) Retrieve settings:** A text input field for "ELM retrieve service url" contains `http://taelm01.ta.internal/MCSWS`. A "Configure" button is located below the field.

An "Online help" button is visible in the bottom right corner of the page.

Once the installation of the service and its configuration is ready, it will be possible to

- retrieve the old ELM shortcuts in Outlook/OWA (necessary MS Outlook/OWA integration need to be also installed, see more [here](#)) and
- browse the legacy archive using contentWEB.

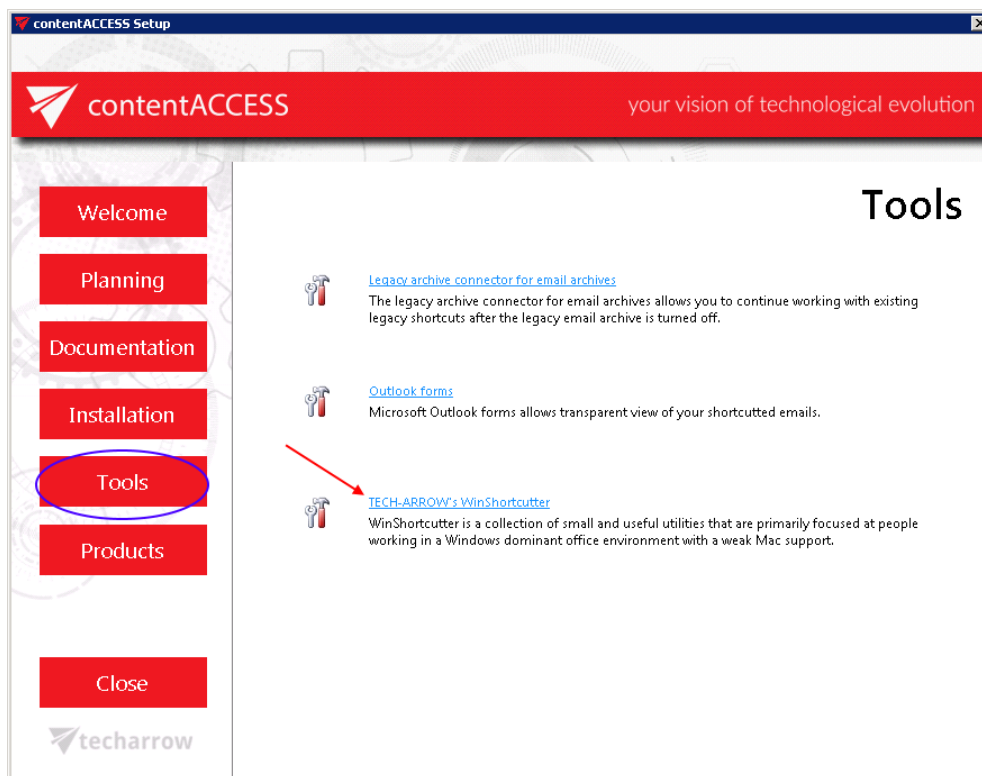




## Installing TECH-ARROW's WinShortcutter

**What is TECH-ARROW's WinShortcutter?** It is a collection of small and useful utilities that are primarily focused on people working in a Windows dominant office environment with a weak MAC support. With this application you can open Windows shortcut files (.lnk files) on Apple OS X operating system and also shortcut files created by contentACCESS File Archive.

To install it, open the **Tools** in the contentACCESS setup window, and click on option WinShortcutter.



For further information about the application please refer to the TECH-ARROW's WinShortcutter Manual [here](#).



## contentACCESS Outlook add-in

**What is contentACCESS Outlook add-in?** Outlook add-in is an application that allows the user to retrieve items from the archive, to capture actions as forwarding or replying retrieved items, and update changes in the archive database and also in the shortcut item. Currently there are supported only message class changes when retrieved item is sent away (forward or reply).

There are some terms which may need further explanation:

- **Message class** – type of the item in the mailbox. The message class defines which kind of form will be used to render the item in Outlook, OWA and other clients
- **Outlook form** – each message in Outlook is rendered using a form. There are standard forms (Note, Post, etc.) and there are custom forms. The custom forms are derived from the standard ones and are extending the standard functionality
- **contentACCESS Outlook form** – custom Outlook form belonging to contentACCESS
- **Standard shortcut** – type of archiving when the message class of the item is changed by contentACCESS
- **Primary mailbox** – the main mailbox in the Outlook profile
- **Additional mailbox** – the user can load additional mailboxes to Outlook profile next to the primary mailbox. Select Account settings in Outlook, change existing profile and add the next mailbox to the profile (you need to have permission to access the selected mailbox)
- **Shared Folder** – one Exchange account can share folders in his account with other people on the same Exchange server

## Installation of contentACCESS Outlook add-in

First, follow [this](#) guide to help you with installing contentACCESS.

**Note:** To use the add-in, the user must install the [Outlook forms](#) as well.

The following prerequisites should be present on the machine(s) where you want to use the Outlook add-in to make it work correctly:

- .NET 4.5.2

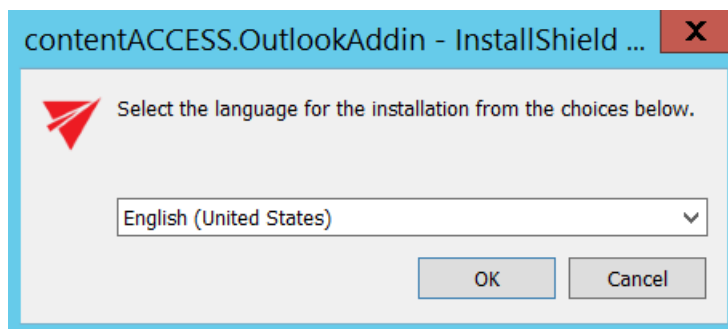


- Visual Studio 2010 Tools for Office Runtime 10.0.60724 (can be downloaded [here](#))

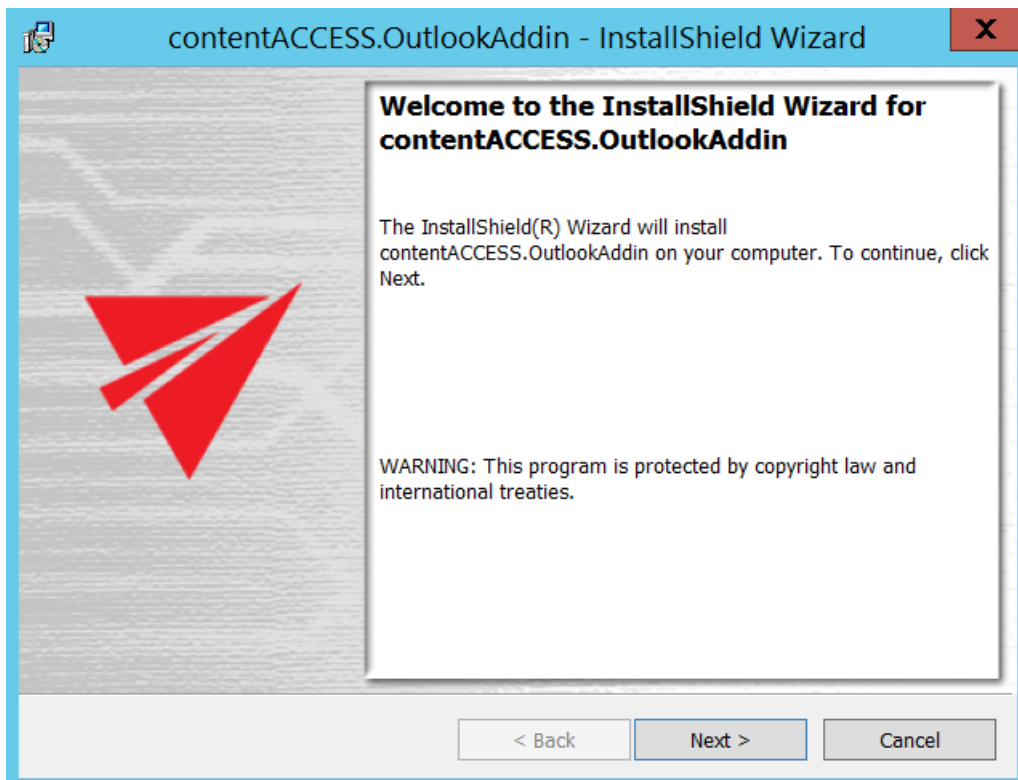
Next, you need to go to **C:\TECH-ARROW\contentACCESS\_Package\Setups\Tools** or locate the folder to which you unzipped **contentACCESS\_Package** when installing contentACCESS. Find and run the file with name **contentACCESS.OutlookAddin\_x64** (if using 64bit Outlook) or **contentACCESS.OutlookAddin\_x86** (if using 86bit Outlook).

**Note:** Outlook add-in is installed using an Administrator account and doesn't have to be installed for every user profile separately.

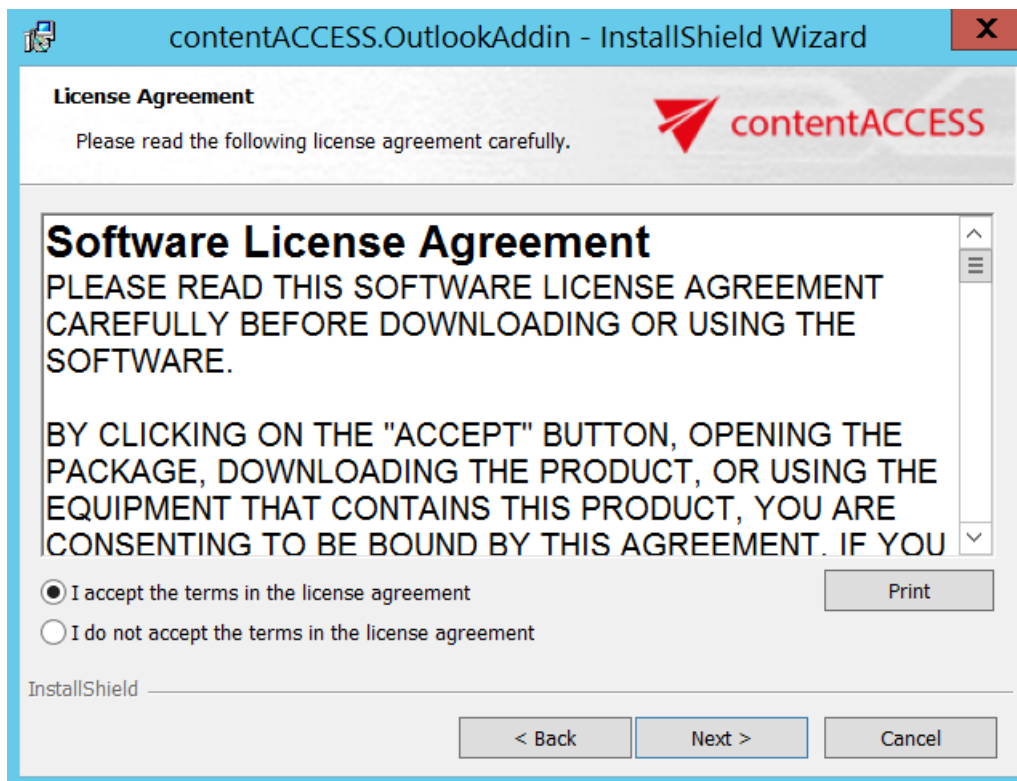
1. Choose the language that you will be using - English or German.



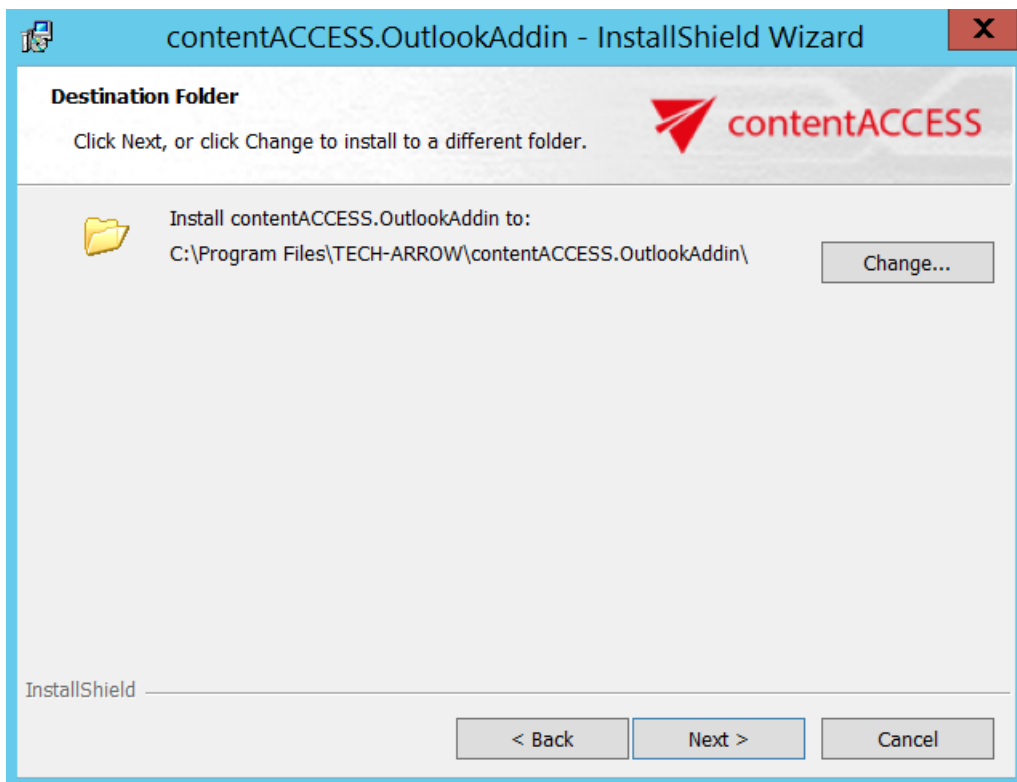
2. Click **Next**.



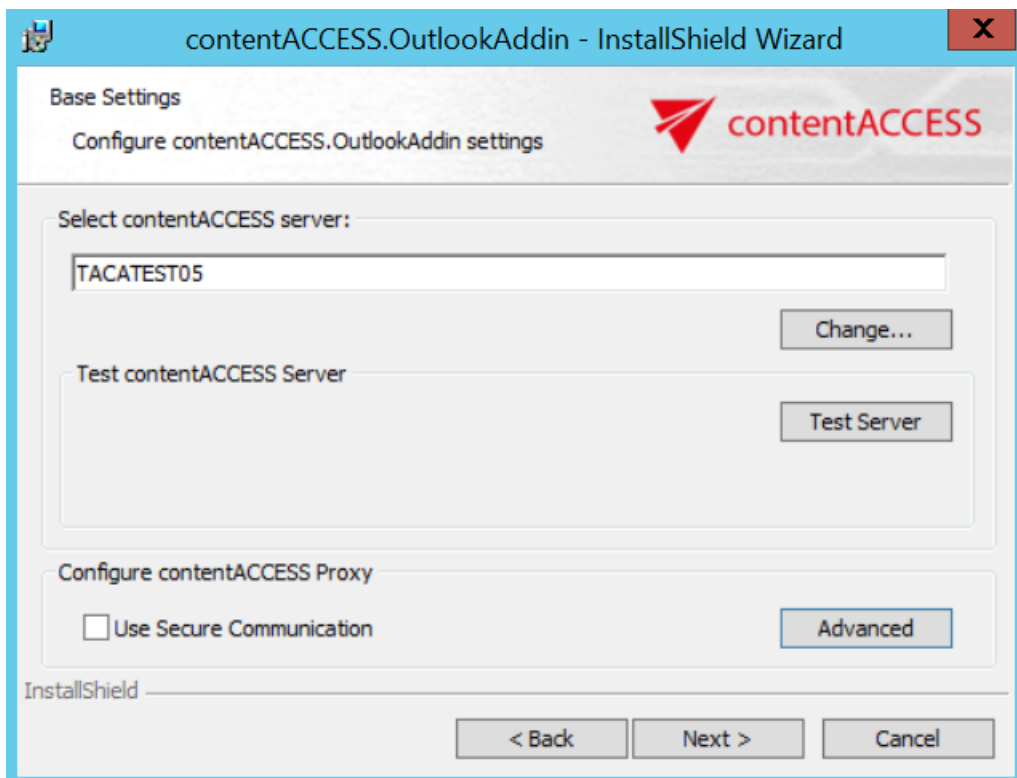
3. Choose **I accept the terms in the license agreement** and click **Next**.



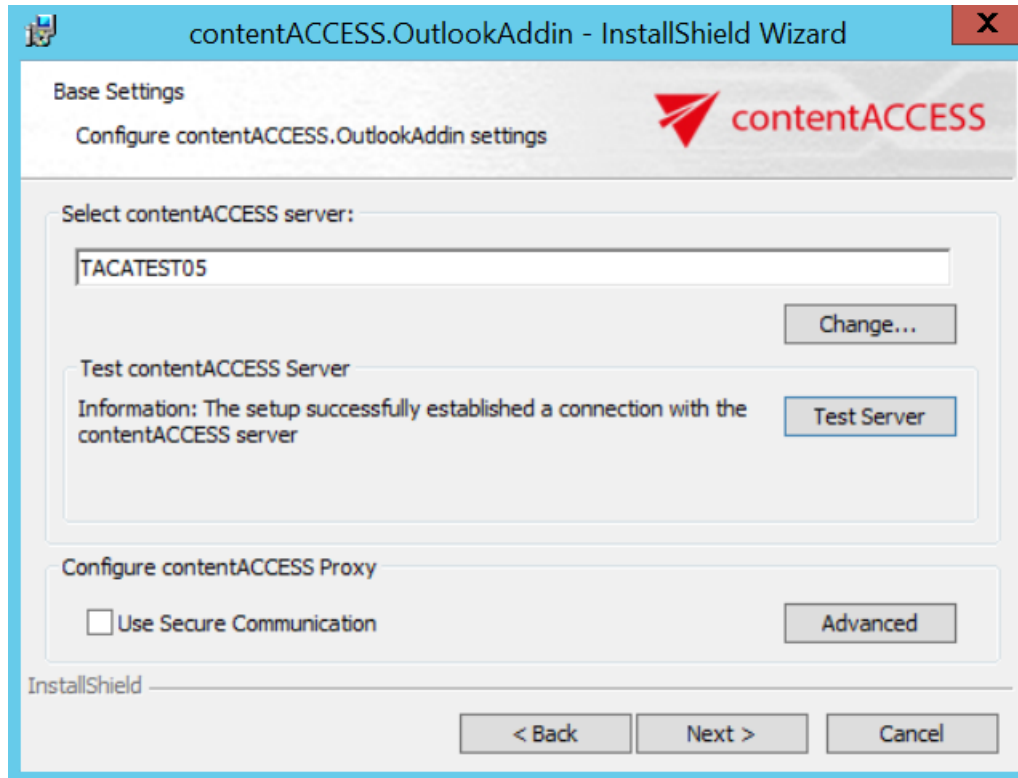
4. Here you can choose the folder, to which Outlook add-in will be installed. We recommend to leave it like this. Click **Next**.



5. Type the name of contentACCESS server you are using (in this case we used TACATEST05).

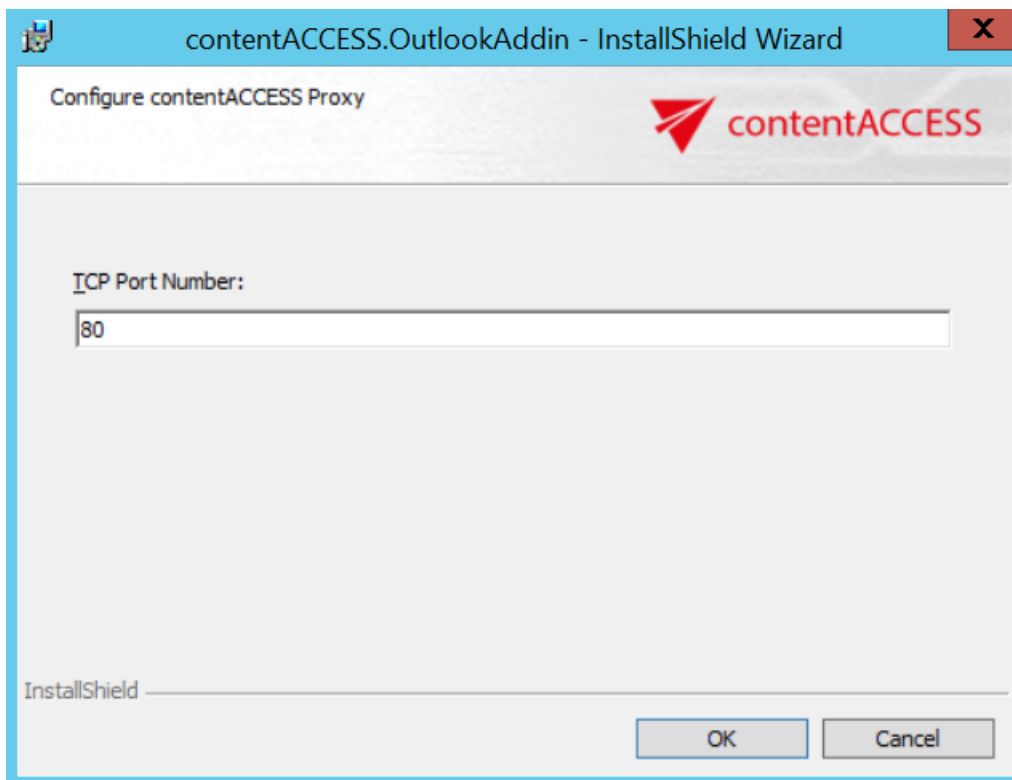


Click on **Test Server**. This will show you if the connection with contentACCESS server was established.

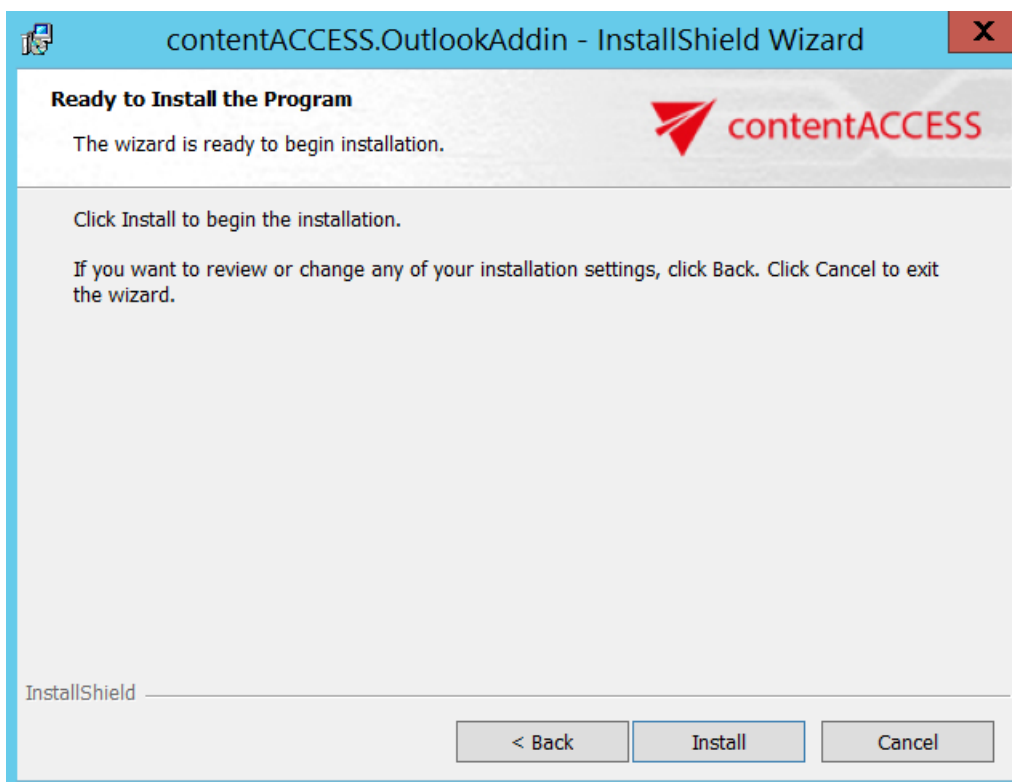


When clicking on **Advanced**, you can specify the TCP port number. If you check the **Use Secure Communication** option, the port number will be 443, if not, the port number will be 80. You can also specify a custom port number. Click on **OK** and then **Next**.

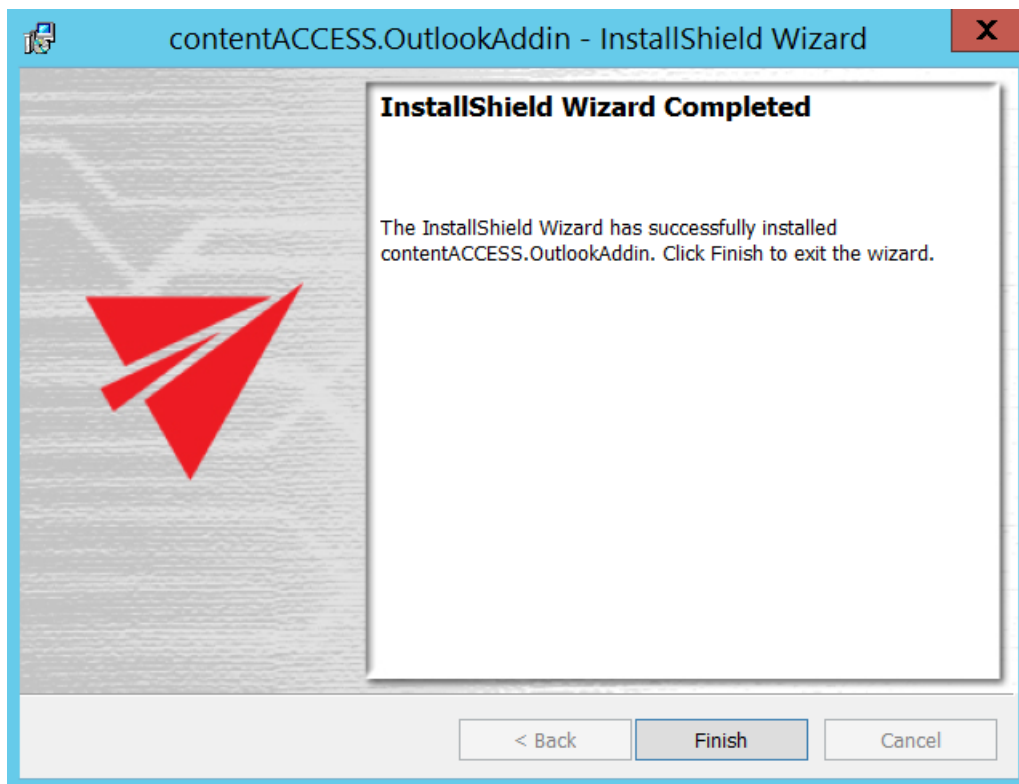
**Note:** These settings must match the settings that you used when configuring [contentACCESS Proxy settings](#). So if you used HTTPS, then the option **Use Secure Communication** must be checked. If you specify a custom port number here, you also have to change it in **System** settings (**System** tab → **Services** group → **System** page, section **External accessibility settings: Retrieve server FQDN**) in the Central Administration, otherwise contentACCESS Outlook add-in won't work.



6. Click on **Install**.



7. Click on **Finish** to complete the installation process.



**Note:** If you have repaired or updated the contentACCESS Outlook add-in, always restart Outlook under each profile. The new features will be available only after Outlook restart.

## How to use contentACCESS Outlook add-in

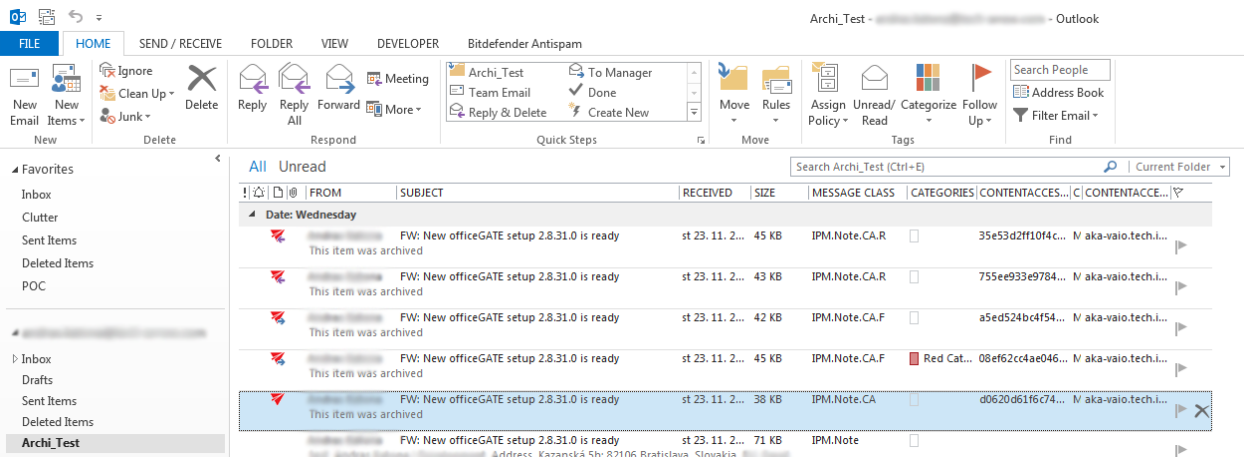
**Important:** For now, contentACCESS Outlook add-in works only with [Windows authentication](#). It means that Windows authentication should be set up correctly and Windows user should be present in contentACCESS.

When a user forwards or replies a message archived using HTML or Normal shortcut, the records are updated in the archive database with the appropriate changes, and also the shortcuts are updated in the owner's mailbox.

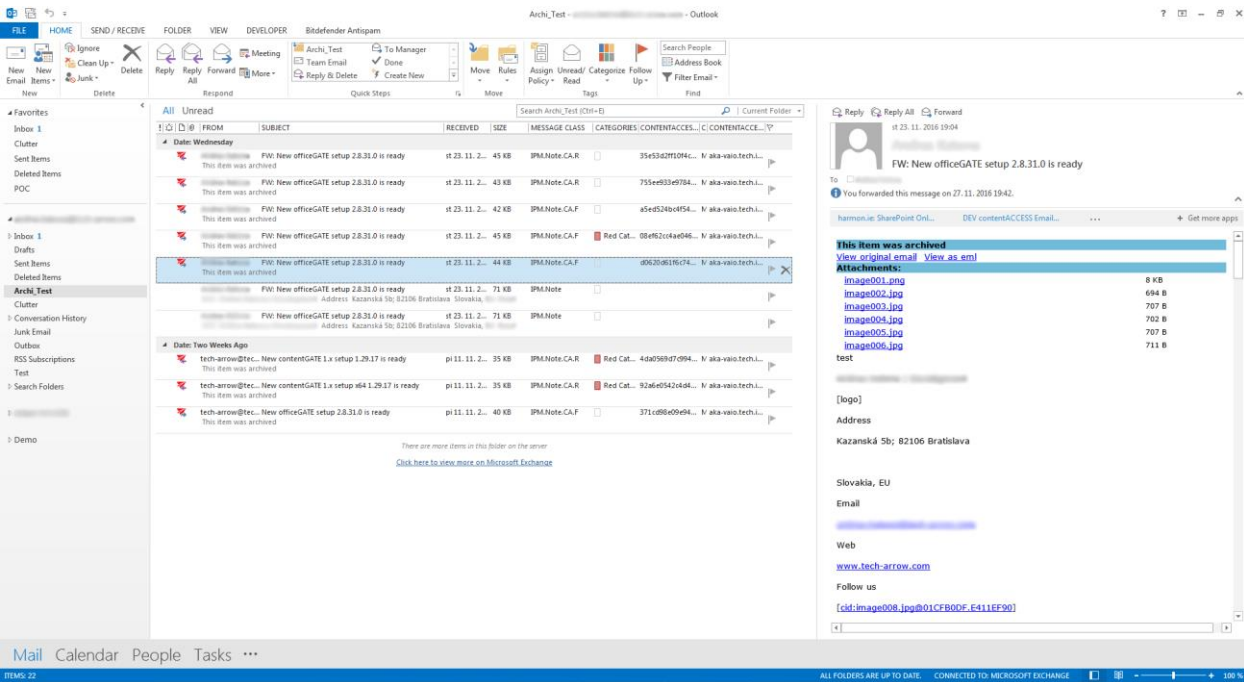
Some possible scenarios are:

1. **Shotcut is in the primary mailbox** – add-in updates shortcut in the primary mailbox



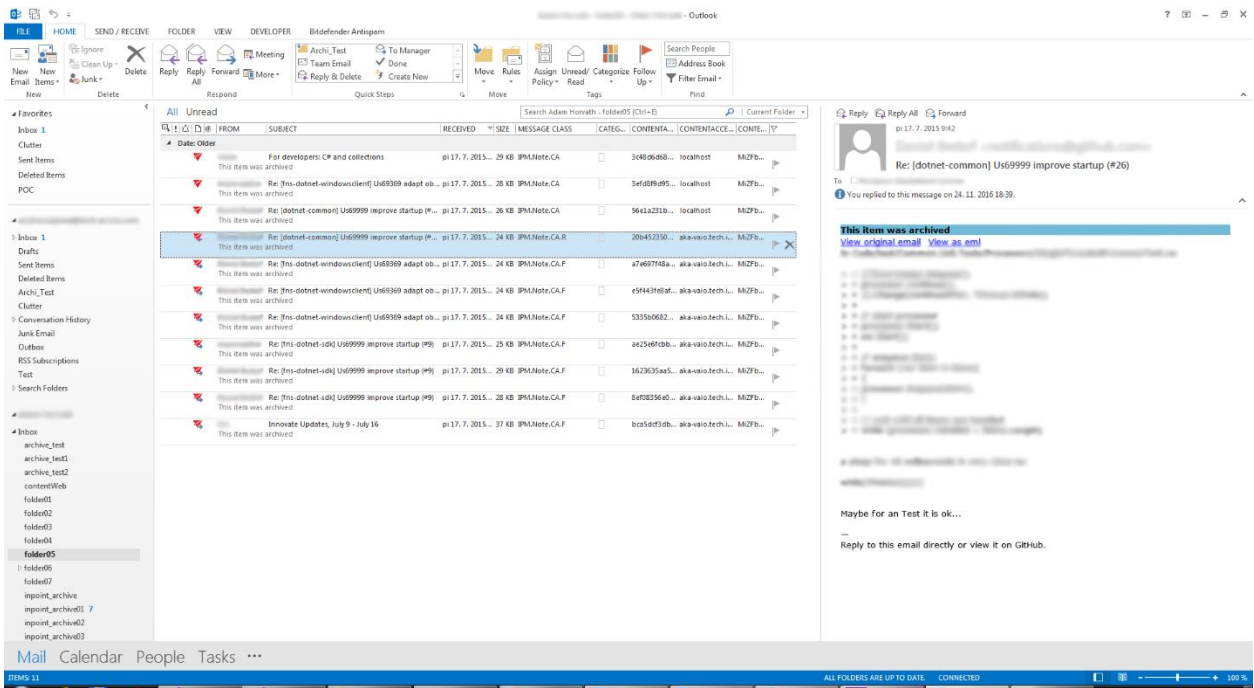


Screenshot.1. Shortcut in primary mailbox (message class IPM.Note.CA)

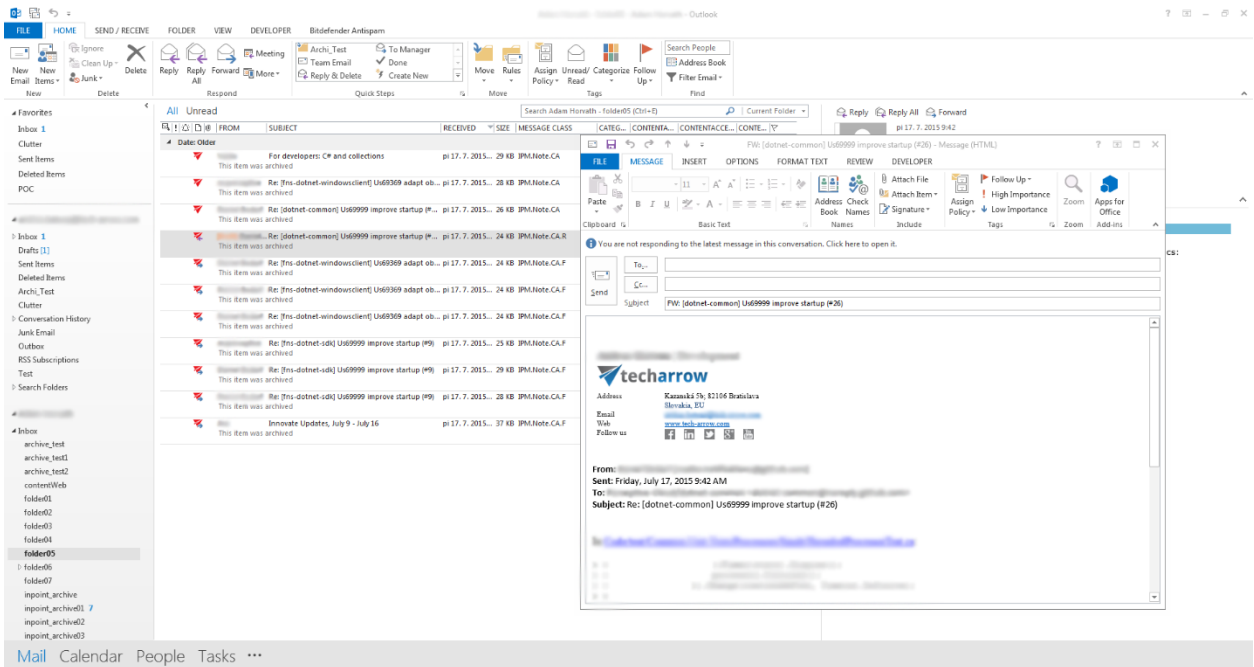


Screenshot.2. Shortcut in primary mailbox after retrieve and forward (message class IPM.Note.CA.F)

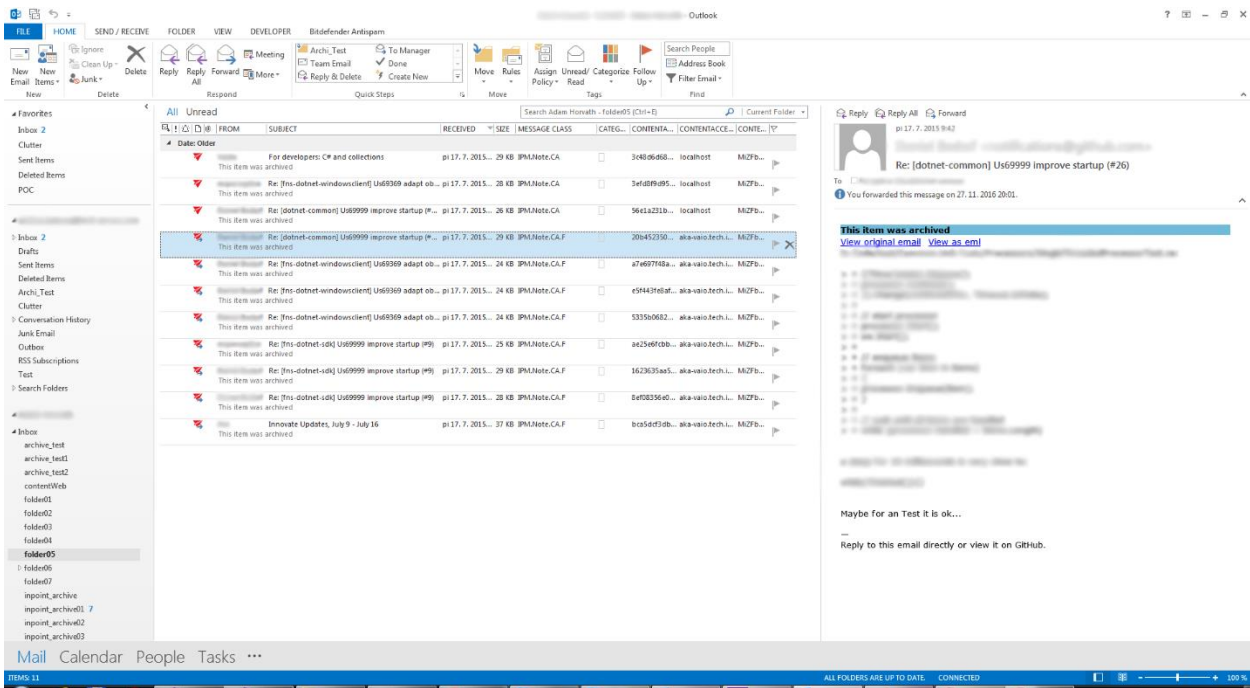
2. **Shortcut is in the additional mailbox or shared folder** – add-in updates shortcut in the shortcut’s owner mailbox



Screenshot.3 Shortcut is in additional mailbox (org. message class is IPM.Note.CAR)

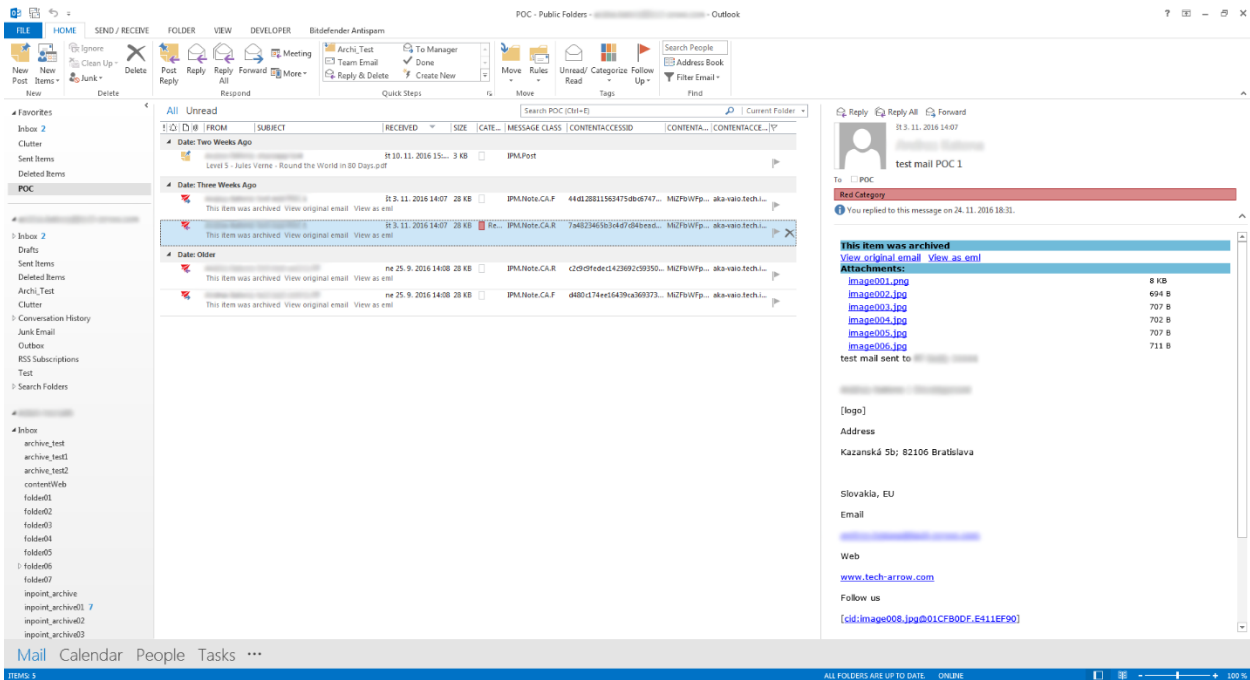


Screenshot.4. Call forward straightaway on the shortcut item, the Forward inspector is shown

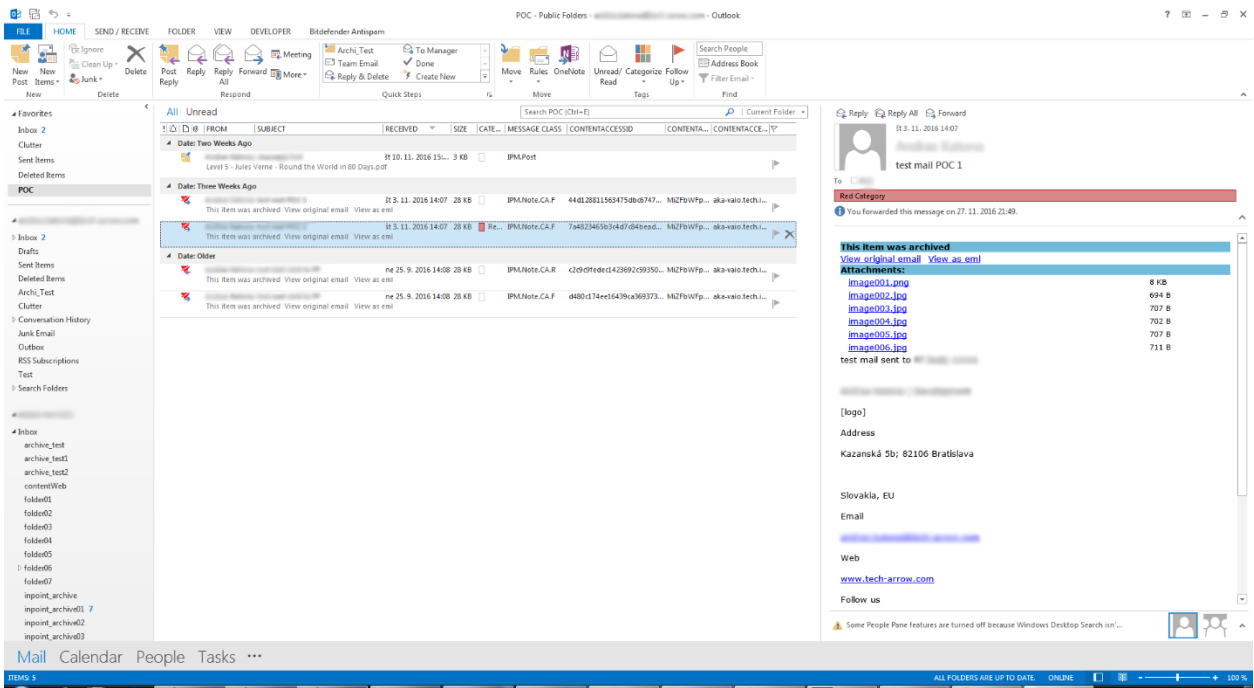


Screenshot.5. Shortcut in the additional mailbox after forwarding (message class is IPM.Note.CA.F)

### 3. Shortcut is in the public folder – add-in updates shortcut in the Public Folder



Screenshot.6. Shortcut is in Public Folders (original message class is IPM.Note.CA.R)



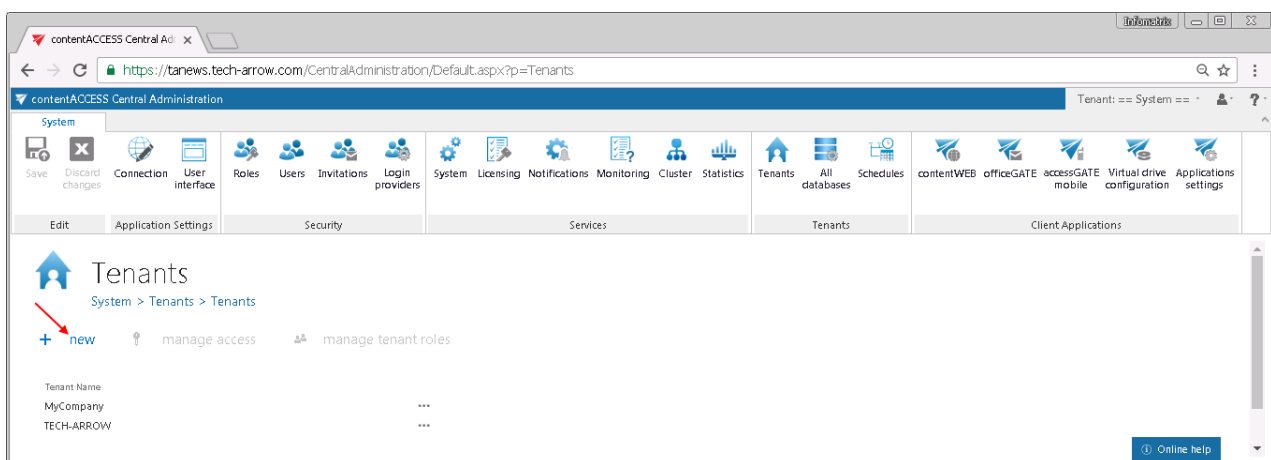
Screenshot.7. Shortcut's changed message class to IPM.Note.CA.F

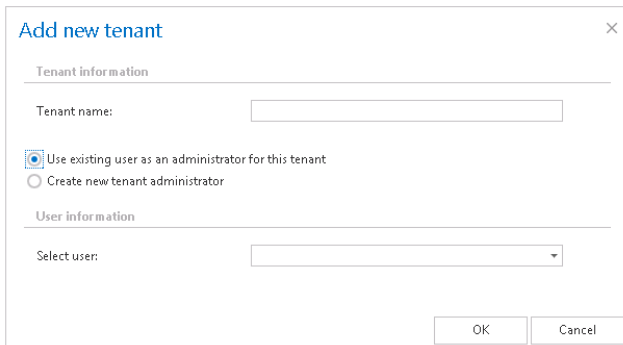
## Tenants in contentACCESS

contentACCESS supports multi-tenancy. This section will provide you with information how to create a new tenant in contentACCESS. If you have a single tenant license, then your default tenant is already created and you can skip this section.

### How to create a new tenant

In contentACCESS, only a user with **Manage tenant and Manage system permissions** has the right to create a new tenant. If these permissions are not granted, the **+ new** option (i.e. to create a tenant) is unavailable for the logged on user. The default system administrator role contains both these permissions. To create a new tenant, open the **Tenants** page in the Central Administration (**System** → **Tenants** → **Tenants** button). On this page you see the list of all tenants, which are present in contentACCESS. If you have not added a tenant to contentACCESS yet, the list is obviously empty. To add a new tenant to the list, click on **+ new**. The **Add new tenant** dialog will open.





**Add new tenant** [X]

Tenant information

Tenant name: [Text box]

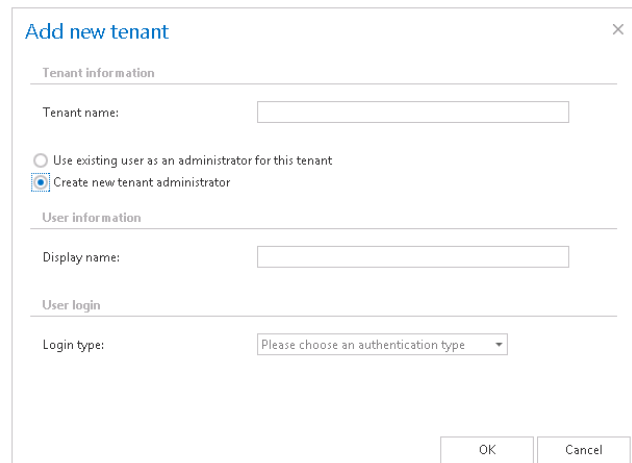
Use existing user as an administrator for this tenant  
 Create new tenant administrator

User information

Select user: [Dropdown menu]

[OK] [Cancel]

Screenshot A: Use existing user as tenant administrator



**Add new tenant** [X]

Tenant information

Tenant name: [Text box]

Use existing user as an administrator for this tenant  
 Create new tenant administrator

User information

Display name: [Text box]

User login

Login type: [Please choose an authentication type]

[OK] [Cancel]

Screenshot B: Create new tenant administrator

When you are creating a new tenant the same time you need to add a tenant administrator user for it. Type the **Tenant name** into the textbox first. You have now multiple choices how to create a tenant administrator:

A) With selecting **Use existing user as an administrator for this tenant** radio button – select an existing contentACCESS user from the **Select user** dropdown list and click **OK**. This user already has contentACCESS credentials which he will use to log into contentACCESS Central Administration;

B) If you choose option **Create new tenant administrator** radio button:

1. Type a **Display name** for this new user,
2. Select a login provider configuration from the **Login type** dropdown list (Forms, Windows etc.). Only a provider configured in [Login providers](#) control (System tab → Security → Login providers) can be selected here. **Forms** and **Windows** are enabled by default. **Login name** and **Login password** are needed only in case that the **Forms** type has been selected from the list.

If you filled the required fields click **OK**. The already created tenant will appear in the tenant list on the **Tenants** page. With a left click on the ellipsis (...) the tenant context menu can be opened. The menu allows to edit the tenant name or tenant limitations, to delete the tenant, manage access to it (manage access = create new tenant administrator), and to manage the roles of the tenant (manage roles of tenant = add custom roles that will be available for the selected tenant; see more in chapter [Roles](#)).



# Tenants

System > Tenants > Tenants

+ new

🔑 manage access

👤 manage tenant roles

Tenant Name

MyCompany

...

✓ TECH-ARROW

...

- Edit tenant name
- Edit tenant limits
- Delete
- Manage access to tenant
- Manage roles of tenant

## Tenant limitations

Each tenant in contentACCESS can manage only processes to which he has got the necessary rights. E.g. while one tenant has the right to archive emails only, another tenant can archive both files and emails using contentACCESS. The tenant rights can be restricted/extended on the **Tenant limitations** page of the respective tenant. Only a system administrator has the necessary right to manage tenant limitations. The administrator may set on this page the:

- **System limitations** – plugins and stores that the given tenant will be able to use
- **Limitations related to the allowed plugins** – e.g. if Email archive plugin is allowed, then the maximum email count, mailbox count and email size that the given plugin can process can be defined

The **Tenant limitations** page can be opened from the context menu of the given tenant. Open the context menu and select “Edit tenant limits”:



# Tenants

System > Tenants > Tenants

+ new

🔑 manage access

👤 manage tenant roles

Tenant Name

MyCompany

...

✓ TECH-ARROW

...

- Edit tenant name
- Edit tenant limits
- Delete
- Manage access to tenant
- Manage roles of tenant



The **Tenant limitation** page is divided into 3 sections:

- **System limitations** – Plugins and stores available for the given tenant may be limited in this section.

By unchecking the **“Unlimited”** checkbox you open the list of plugins/stores. Check the plugins/stores that the tenant should be allowed to use.

#### System limitations

Plugins:	<input type="checkbox"/> Unlimited <input type="checkbox"/> Sharing <input type="checkbox"/> Datengut DMS plugin <input type="checkbox"/> Mailbox move <input type="checkbox"/> Email archive <input type="checkbox"/> Email recovery <input type="checkbox"/> Email restore <input type="checkbox"/> Gradient OCR plugin <input type="checkbox"/> PAM4Exchange connector	Stores:	<input type="checkbox"/> Unlimited <input type="checkbox"/> Datengut <input type="checkbox"/> Azure <input type="checkbox"/> Disk <input type="checkbox"/> EASY <input type="checkbox"/> ELM <input type="checkbox"/> HybridStore <input type="checkbox"/> inPoint <input type="checkbox"/> iTernity
----------	---	---------	--

- **Email archive limitations** – If the **Email archive** plugin is allowed, the administrator may limit the mailbox count, email(s) count, email(s) size that the given tenant will be able to archive.

#### Email archive limitations

Mailbox count:	<input type="text" value="500"/>	Email(s) size:	<input type="text" value="1"/>	<input type="text" value="TB"/>
Email(s) count:	<input type="text" value="100000"/>			

- **File archive limitations** – If the **File archive** plugin is allowed, the administrator may limit the root folder count, file(s) count, file(s) size that the given tenant will be able to archive.

#### File archive limitations

Root count:	<input type="text"/>	File(s) size:	<input type="text"/>	<input type="text" value="B"/>
File(s) count:	<input type="text"/>			


If the Email archive limitations and File archive limitations text boxes are empty, this means that the allowed mailbox/root count and email/file count and size is unlimited.


The tenant administrator may see his own limitations in read only view only.

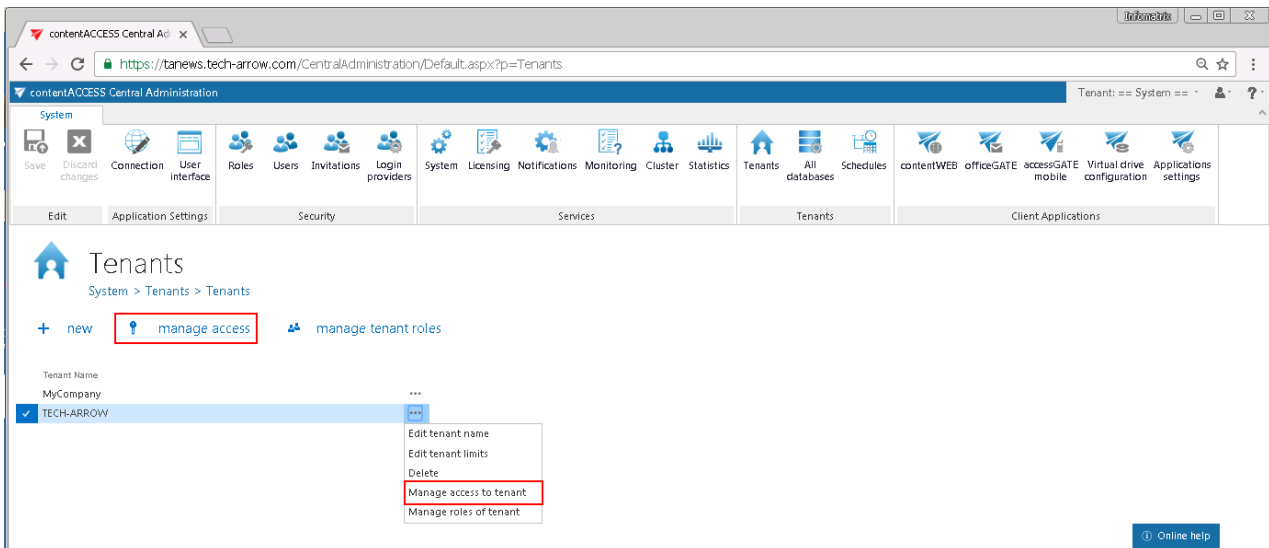
## How to provide access to a tenant (adding new tenant administrators)

A tenant can have one or more tenant administrators. If you want to provide access to a tenant for one or more users except of the tenant administrator, open the **Tenants** page (**System** → **Tenants**



→  **Tenants**), select the tenant from the list, with a left click on ellipsis ( ... ) open the context menu and choose option **Manage access to tenant**.

It is also possible to manage access to the tenant with clicking on the  **manage access** option on the same page. The button is active if the tenant is selected in the grid.



With this action you will be redirected to the manage access page of the selected tenant. All currently existing tenant administrators of this selected tenant can be seen on this page. For adding a new tenant administrator to the list click on **+ new** on this page. The **Create new role association** window will open. There are multiple options how to add a new tenant administrator.

### Create new role association ✕

**Tenant information**

Role:

Invitation type:

---

E-mail address\*:

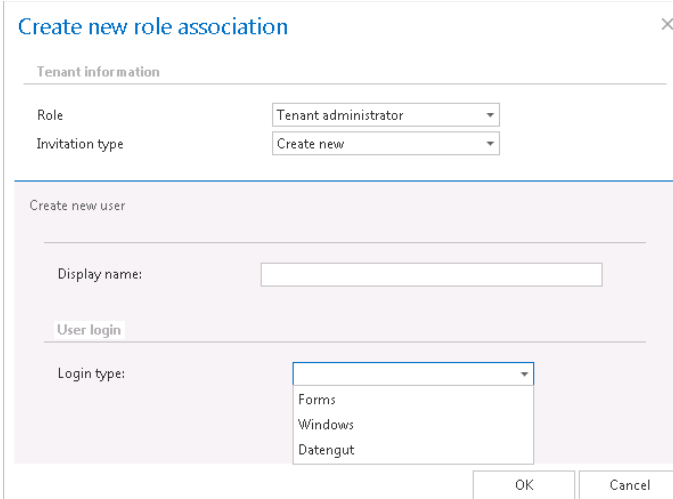
Additional message:

## Tenant administrator invitation types

There are multiple options how to add a new tenant administrator in the **Create new role association** window. You can **Create new** user, you can **Search for existing** worker from the company or you can also **Send an invitation** to somebody who is not a contentACCESS user yet. Select the **Tenant administrator** role type from the **Role** dropdown list.

### ➤ Create new

If you select **Create new**, insert a **Display name** into the dialog first. From **Login type** list select the authentication provider configuration that this user will use when logging in the system. Then fill the credentials (if **Forms** type was chosen then both Login name and Password) and click **OK**.

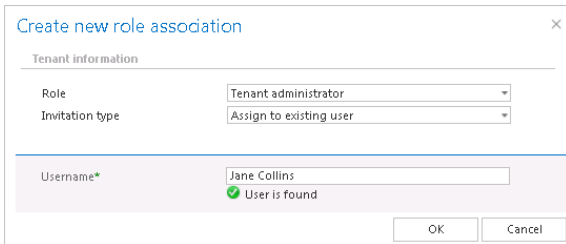


**Note:** Only a provider configuration set up in [Login providers](#) control (System tab → Security → Login providers) can be selected from the list of login types. **Forms** and **Windows** are enabled by default.

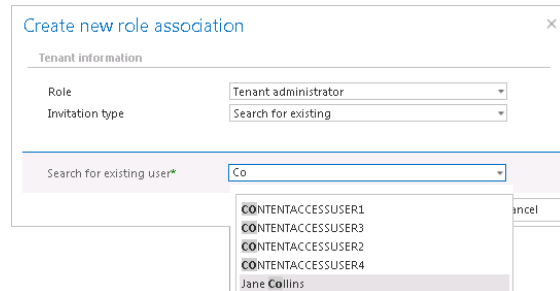
### ➤ Search for existing/Assign to existing user

To the **Search for existing user\*** field fill in part of name of the person you want to find. After you have selected the user click **OK**. This user will use his already existing credentials to log into Central Administration.

**Note:** The invitation type can be used if user searching is enabled in the User search settings (more information [here](#)).



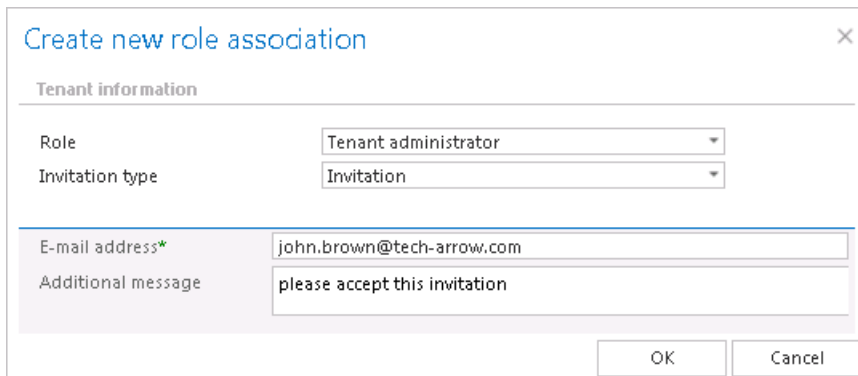
Screenshot A: Granting tenant administrator rights for Jane Collins if user searching is **disabled**



Screenshot B: Granting tenant administrator rights for Jane Collins if user searching is **enabled**

### ➤ Send invitation

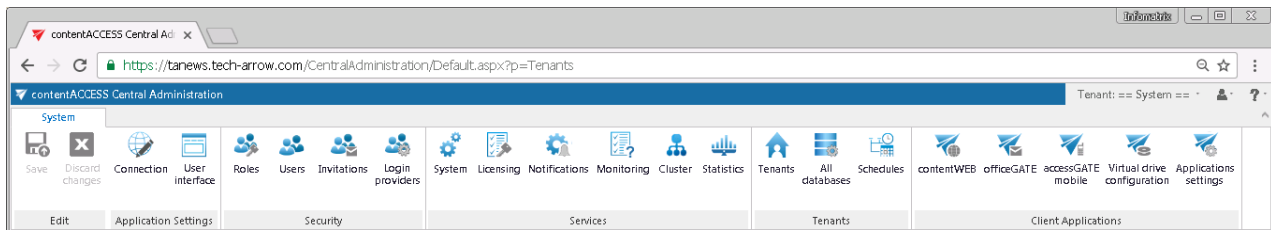
This option enables for you to invite a person (who is not a contentACCESS user yet) to be a tenant administrator to your tenant. Select the **Tenant administrator** role type, enter the **E-mail address\*** of the new user who you wish to invite, and fill the **Additional message\*** textbox which will be included in the email message that the invited user will receive from you. Then click **OK**.



The invited person will get an invitation message from you. If the user accepts your invitation he/she will be redirected automatically on the login page of contentACCESS. Here he can configure his authentication provider that he prefers to use for future logins into the system (this can be adjusted with navigating to **System → Security → Login providers**).

## General system configurations

General system settings of contentACCESS are available in the respective configuration groups under the **System** tab.




Only a user with Manage system permissions has the right to configure system settings. The user may find here all general system settings.

The **Application settings** are set by default, but can be changed (not recommended). Under **Security settings** the administrator can find all users of contentACCESS, here he can find the default system roles and to configure new custom roles for the users, and also here he can configure new authentication providers. The list of invitations can be found here as well. Under **Services** it is possible to activate the license key, set up external accessibility settings, change system database connections, set default values for the clustering etc. Under **Tenants** the administrator may create new tenants and create databases for these tenants. The notification schedulers can be defined on the “Schedules” page, which is also accessible from here. Under **Client Applications** group the contentACCESS client applications are accessible. Virtual drive must be configured if File system archive is used.

If you do not use Email Archive based plugins and also do not use accessGATE Mobile, the FQDN settings (accessible under **System** → **Services** → **System**) are irrelevant.

In the following subchapters we will go through each of these settings:

## Connection

Navigate to **System** → **Application settings** →  **Connection** button. Here can be found and edited service connection settings such as contentACCESS URL, plugins, plugin controls and storage controls directories. Plugins, plugin controls and storage controls directories are set by default as on the screenshot below, but in case you need to place them somewhere else on your computer you can change the destinations right here (not recommended):

Plugins directory:	C:\Program Files\TECH-ARROW\contentACCESS\GATE.contentAccess\Plugins
Storage controls directory:	C:\Program Files\TECH-ARROW\contentACCESS\CentralAdministration\Storages
Plugin controls directory:	C:\Program Files\TECH-ARROW\contentACCESS\CentralAdministration\PluginControls



## User interface

Navigate to **System** → **Application settings** →  **User interface** button. Here you can choose the Date-time format.



# User interface

System > Application Settings > User interface

### General settings

---

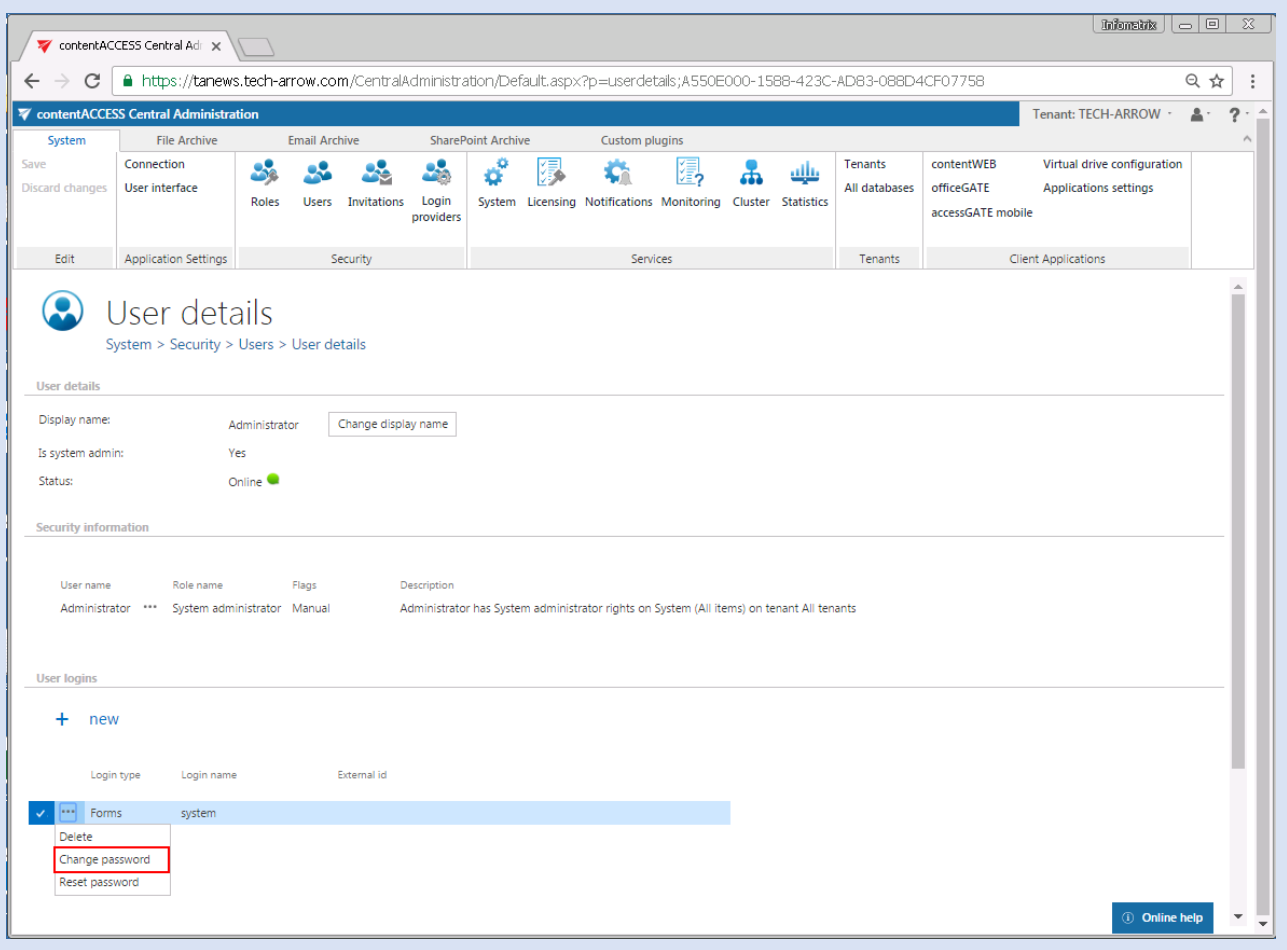
Date-time format:

## Users in contentACCESS

All currently present contentACCESS users are listed on the **Users** page (open it with navigating to **System** → **Security** → **Users** button).

Initially there is only one user present in contentACCESS, and this is the system administrator with the internal system account (**user: system; PW:c0ntent@ccess**). The basic user information (display name, ID number and role) are featured in the respective columns of the grid. The role defines the permissions that the given user has in contentACCESS.

**Note:** From security reasons, it is highly recommended to change the above mentioned default system administrator's login password after the very first login to the Central Administration. This can be done on the **User details** page of the **Administrator** user, in section **User logins**, **Forms** login provider's context menu:



The screenshot displays the 'User details' page for the 'Administrator' user. The page is divided into several sections:

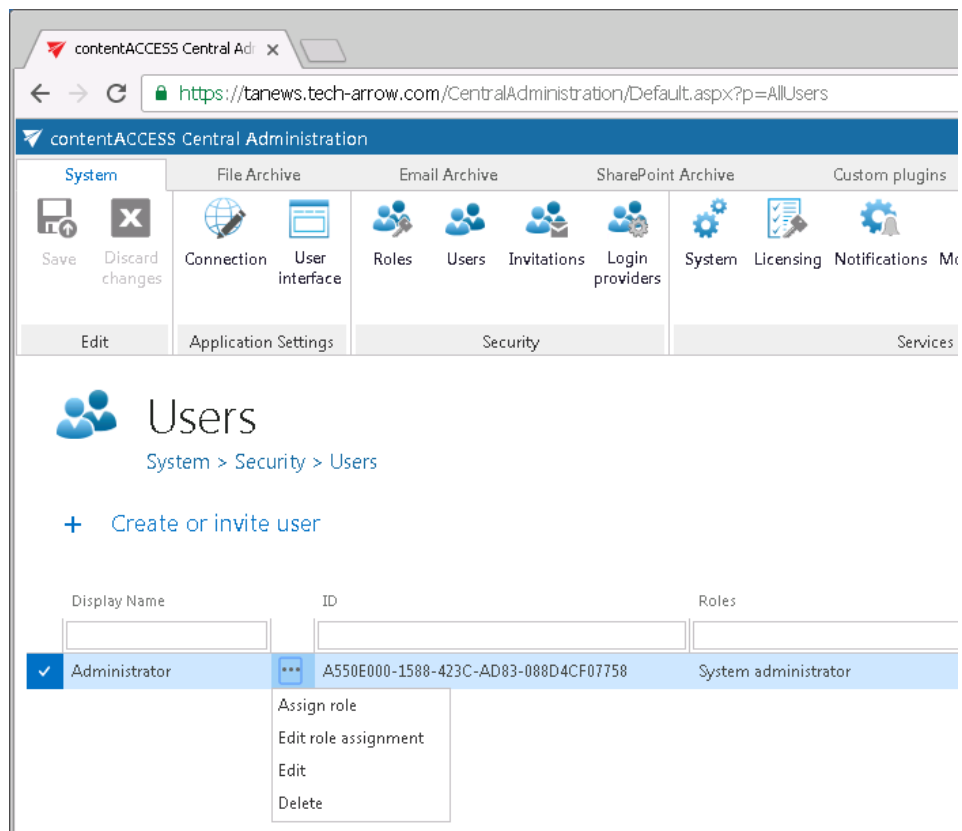
- User details:** Shows the display name 'Administrator', 'Is system admin: Yes', and 'Status: Online'.
- Security information:** A table listing the user's details:
 

User name	Role name	Flags	Description
Administrator	System administrator	Manual	Administrator has System administrator rights on System (All items) on tenant All tenants
- User logins:** A table listing the user's login providers:
 

Login type	Login name	External id
Forms	system	

 The 'Forms' login provider is selected, and its context menu is open, showing options: 'Delete', 'Change password', and 'Reset password'. The 'Change password' option is highlighted with a red box.

## Users' context menu



The users' context menu allows the following operations:

- **Assign role** – assign a role to an already existing user; read more in section “Roles”

**Note:** In case that the logged on administrator has **specific** permissions on schedulers, repository items, jobs and/or to view the archive, than he cannot assign roles containing these permissions for second users. E.g. If the logged user has specific permission to Edit job, then he cannot assign a role which contains Edit job permission. Read more about roles and permissions in chapter “Roles”.

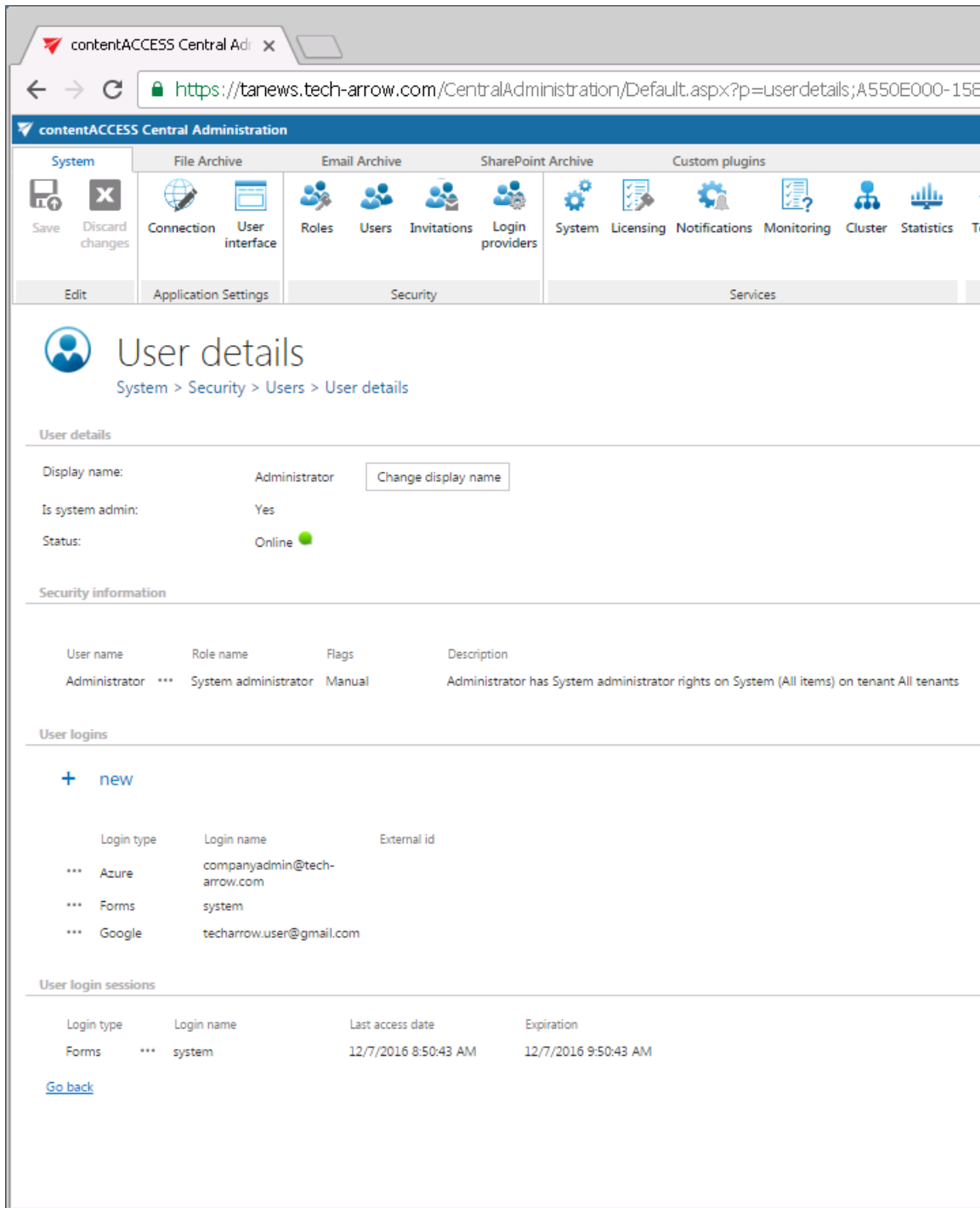
- **Edit role assignment** – edit permissions of the user's assigned role
- **Edit** – view the user details; add user logins; view user's login session(s); log off the user
- **Delete** – delete the user from the system

**Note:** It is good to know that from security reasons it is impossible to delete all system administrators from the list of users. It is possible to delete users with system admin permissions except of the default system administrator.



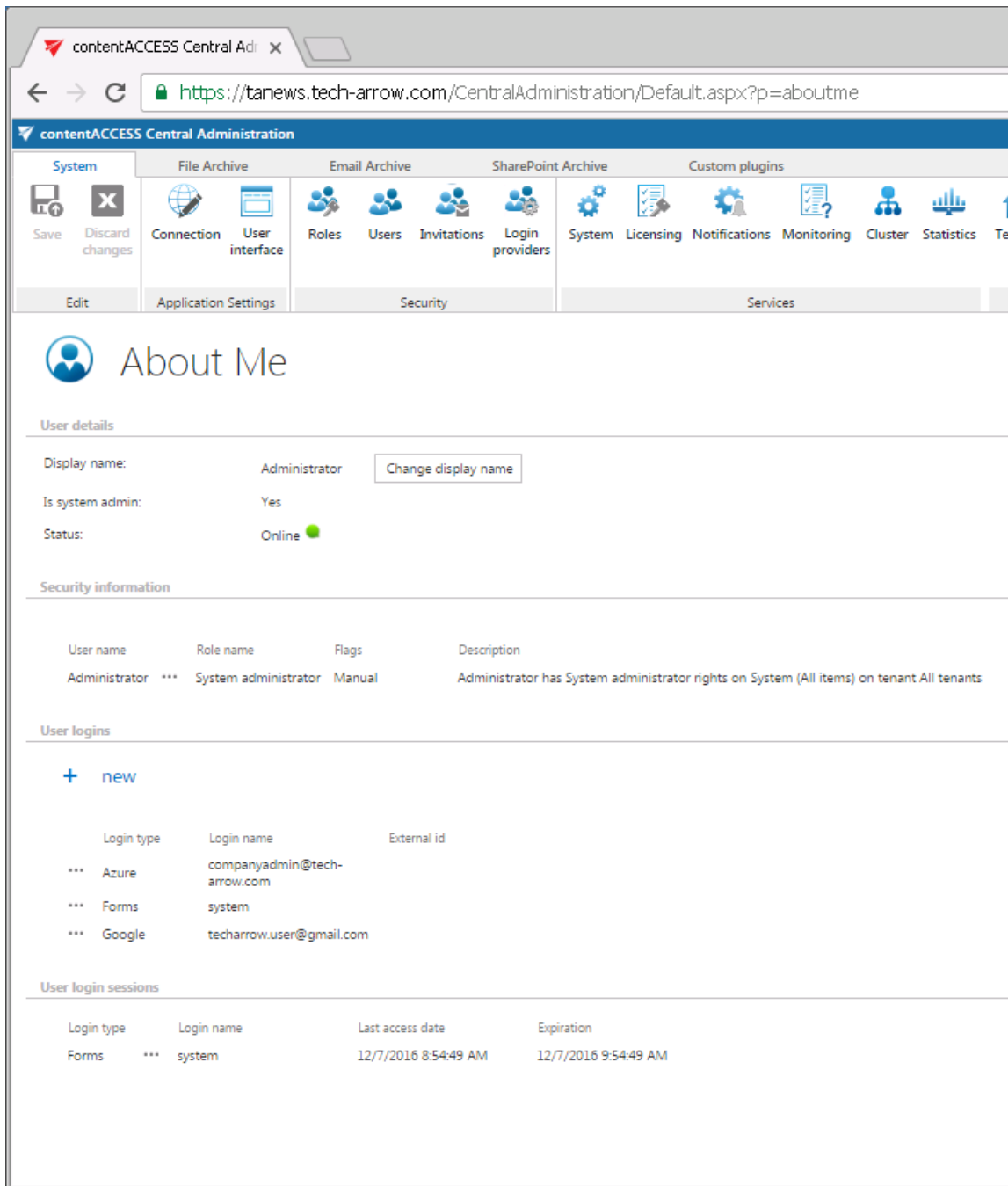
### User details

The detailed user information can be accessed by selecting option “Edit” in the user’s context menu (the logged on user can access his own user details by clicking “About me” in the upper right user menu). With this option the **User details** (or **About me**) page opens.



Screenshot A: Details of the selected contentACCESS user





Screenshot B: Details of the logged on user

## Section “User details”

In this section you can find the given user’s display name (i.e. his name in contentACCESS), and the information about the user’s status. To change the actual display name, click “Change display name” and type the desired name in the pop-up window:



The user's status signalizes if the user is:

- **Online (green):** means there was an interaction in the last 5 minutes
- **Away (yellow):** the user is logged in, but inactive in the last 5 minutes. If the user has clicked the Remember me when logging in, then he will be displayed as Away until his token expires
- **Offline (red):** the user does not have any login session

### Section "Security information"

Here you find the user's display name, the role(s) assigned to the given user and a description about the user's rights. Each role assignment has a flag. **Manual** flag means that the given role was assigned manually. Manual permissions are not changed/removed by the automatism. **Automatic** flag means that the role was assigned by the provisioning job. Automatic flag is marked with "(100)".

### Section "User logins"

New user logins can be assigned to a user in the **User logins** section. By clicking "+new" in this section the "Add new login" window opens.

In the **Add new login** window, select a provider configuration that the given user will use when logging into the given application. The providers, that were configured on the **Login providers** page (for more information check "[Login providers](#)") can be selected here. **Windows** and **Forms** authentications are enabled by default. Multiple user logins are not enabled for Forms and Windows login providers.

## Change password, Reset password context menu options:

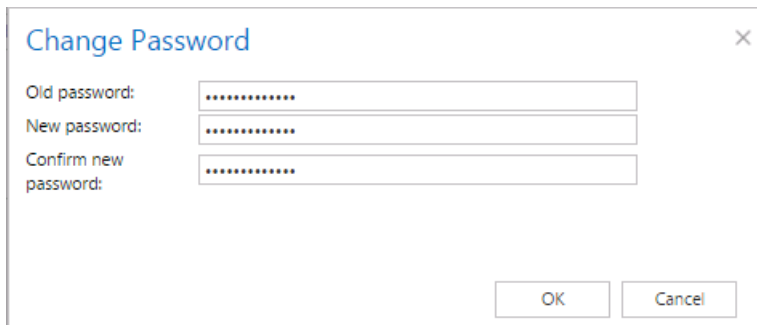
User logins

+ new

	Login type	Login name	External id
***	Azure	companyadmin@tech-arrow.com	
✓	Forms	system	
	Delete	techarrow.user@gmail.com	
	Change password	TA\Administrator	S-1-5-21-1454735840-2720631597-1747903052-500
	Reset password		

By the Forms type login accounts, the administrator can change the user's actual login password. The administrator must have Manage tenant. Permissions to change, and/ or to reset the password of a user.

To change the password, just select this option and enter the old, new, and confirm the new, desired password in the pop-up window:



**Change Password** [X]

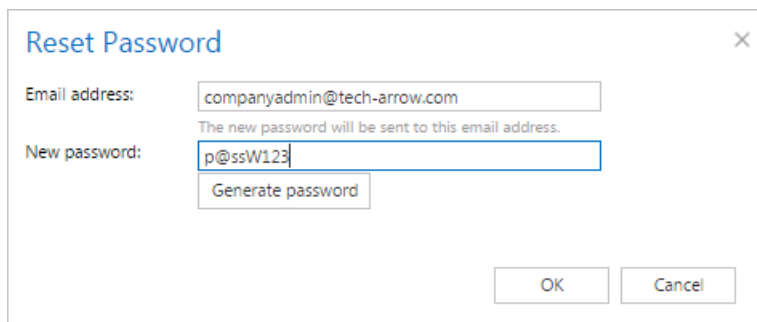
Old password:

New password:

Confirm new password:

OK Cancel

If the password has been lost or forgotten, use the **Reset password** option to create a new one. New passwords can be created manually (just type the desired password to the appropriate text field), or generated randomly (click option "Generate password"). Enter the email address where the password should be sent.



**Reset Password** [X]

Email address:

The new password will be sent to this email address.

New password:

Generate password

OK Cancel



At the next notification job run the new password will be sent to the email address specified in the dialog.

### Section “User login sessions”

At the bottom of the **User details** page, there is a list of active login sessions (if the user logged in in officeGATE, contentWEB etc., then all these apps will have a separate login session; if the user is logged in from different browsers, there will be separate login sessions for each browser as well). From that page, the administrator can also log off an existing user. Once the logoff is done, the user will be redirected to the login page on the next click in the given application.

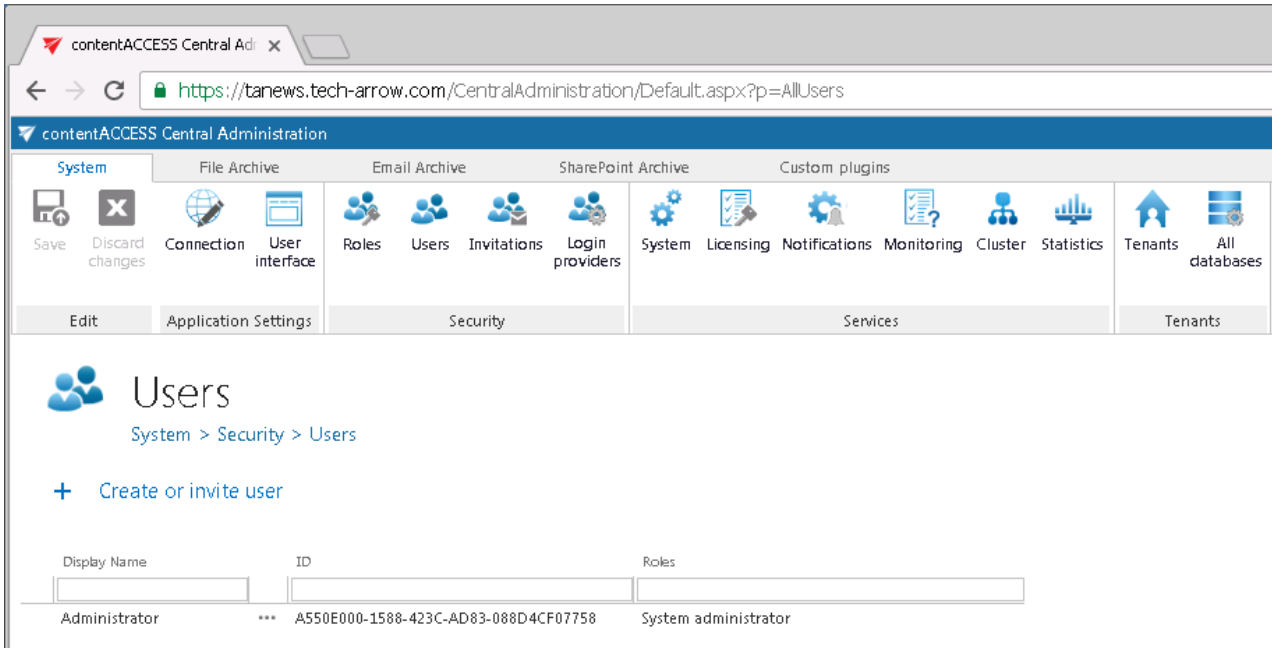
### *Creating/inviting contentACCESS users*

When you create/invite user(s) in contentACCESS, always follow these steps:

- a) **Prepare a role** with the permissions that will be assigned to the user(s) – this step can be skipped if you want to assign an already existing, default global role to the user(s); more info in section “**Roles**”
- b) **Create/Invite the user(s) and assign the role** in the **Create/Invite a user** dialog
- c) **Edit the specific permissions of the assignment** – only if specific permissions were defined in the assigned role (read more in “**Roles**”)

**Any new users/existing users (with new roles/permissions)** can be added to contentACCESS on the **Users** page. To create/invite a user, click “**Create or invite user**” on the **Users** page (**System** tab→

Security group → Users page).



Display Name	ID	Roles
Administrator	*** A550E000-1588-423C-AD83-088D4CF07758	System administrator

The **Create/Invite user** dialog pops up, where you need to choose one of the user adding methods (Create new user/Invite user) and fill the necessary parameters into the dialog.

- “Create new user”** – use this option to add a new user (with the necessary roles) to contentACCESS without invitation. “Without invitation” means, that the newly added user will not get a notification email message, that he was invited to contentACCESS.
- “Invite user”** – with this option a **new user and/or an already existing contentACCESS user** with the necessary role(s) can be **invited**. “Will be invited” means, that the new/existing user will get a notification email, that he/she was invited into contentACCESS. Notification messages are sent by the notification job in specific time slots defined in the Notification settings. Read more about invitations in section [Invitations](#).



Create / Invite a user
✕

Create new user    Invite user

Display name:

Login type:

Please choose an authentication type ▼

Assign role

Role:

Select a role ▼

Tenant:

Select a tenant ▼

Globally allowed permissions of the selected role **will be assigned** to the user.

[Show details](#)

**Note:** contentACCESS Email Archive/File archive standard users (and user permissions) can be automatically added to contentACCESS by the **File system archive provisioning job** and/or by the **Email archive provisioning job**. On the provisioning settings pages of Central Administration the administrator defines the role that the provisioning job will assign for the given Exchange user/group or for the users of the entire Exchange server. The provisioning job evaluates the user rights on the Exchange, creates the contentACCESS user(s) and assigns the permissions for these newly added contentACCESS user(s). Read more in [Provisioning settings and managing access to contentWEB](#) (File Archive) and [Email archive Provisioning settings](#) (Email Archive).

### Option “Create new user”

Mark the “**Create user**” option in the **Create/Invite user** dialog and continue with the following settings:

Type in the user’s name into the dialog box, and choose an authentication provider configuration from the **Login type** dropdown list. **Forms** and **Windows** providers can be selected by default. (Other provider configurations need to be set on the [Login providers](#) page first.) If you select the **Forms** type (as in this use case), then the login credentials must be also entered into the dialog.



Further select a (default or predefined) role that will be assigned to the given user – in this use case we are creating a tenant administrator, so we select this role from the list. The globally allowed permissions of the selected role get displayed in the window. These can be shown/hidden.

Save your settings. In case that you have assigned a role containing at least one “Specific” permission, you will be automatically redirected to the **Assign specific permissions** page, where you can further specify these specific permissions of the role assignment. This will be described later in section “**Roles**”.

**Create / Invite a user** [X]

Create new user  Invite user

Display name: Jack Bolton

Login type: Forms

Login name: j.bolton

Login password: [REDACTED]

Confirm password: [REDACTED]

**Assign role**

Role: Tenant administrator

Tenant: MyCompany

Globally allowed permissions of the selected role **will be assigned** to the user.

**System:** Manage users and roles,  
**EmailArchive:** Manual recovery, Manual restore, Export, View mailboxes, Preview,  
**SharePointArchive:** View SharePoint sites,  
**PerceptiveDMS:** View Perceptive DDCs,  
**Tenant:** Manage tenant,  
**LegacyEmailArchive:** View mailboxes,  
**DatengutDMS:** View Datengut DDCs,  
**FSArchive:** View folders,

[Hide details](#)

Save Cancel

### Option “Invite user”

Invitation is another way of how to

- a) create new users with a given role or
- b) **assign role to an existing user.**

To send an invitation for an already existing or potential contentACCESS user, click the “**Invite user**” option.



The pop up dialog requires to fill the email address, where the invitation will be sent and the role that should be assigned to this user. If you are ready with the necessary configurations, click “Save”. In case that you have assigned a role having at least one “Specific” permission, you will be automatically redirected to the **Assign specific permissions** page, where you can further specify these specific permissions of the role assignment. This will be described later in section “Roles”.

The next running notification job (must be configured in **System** → **Services** → **Notifications**) will send the invitation for the respective user. You can start this job manually as well.

## Invitations

Invitation is a way of how to add

- a) **new users** (with certain roles/permissions) and
- b) **already existing users** with new permissions to contentACCESS.

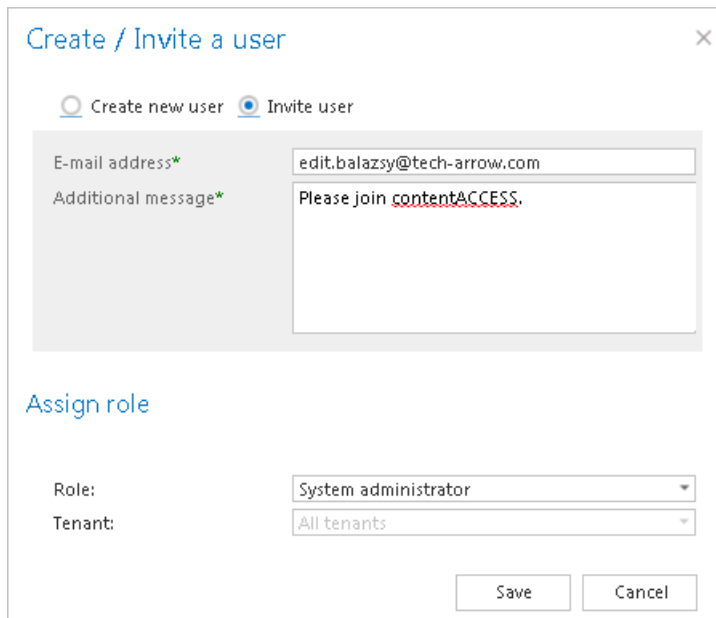
To send an invitation for an already existing or potential contentACCESS user, select the “**Invite user**” option in the **Create/Invite user** dialog.

Further fill the email address, where the invitation will be sent and select the role that should be assigned to this user. If you are ready with the necessary configurations, click “Save”. In case that

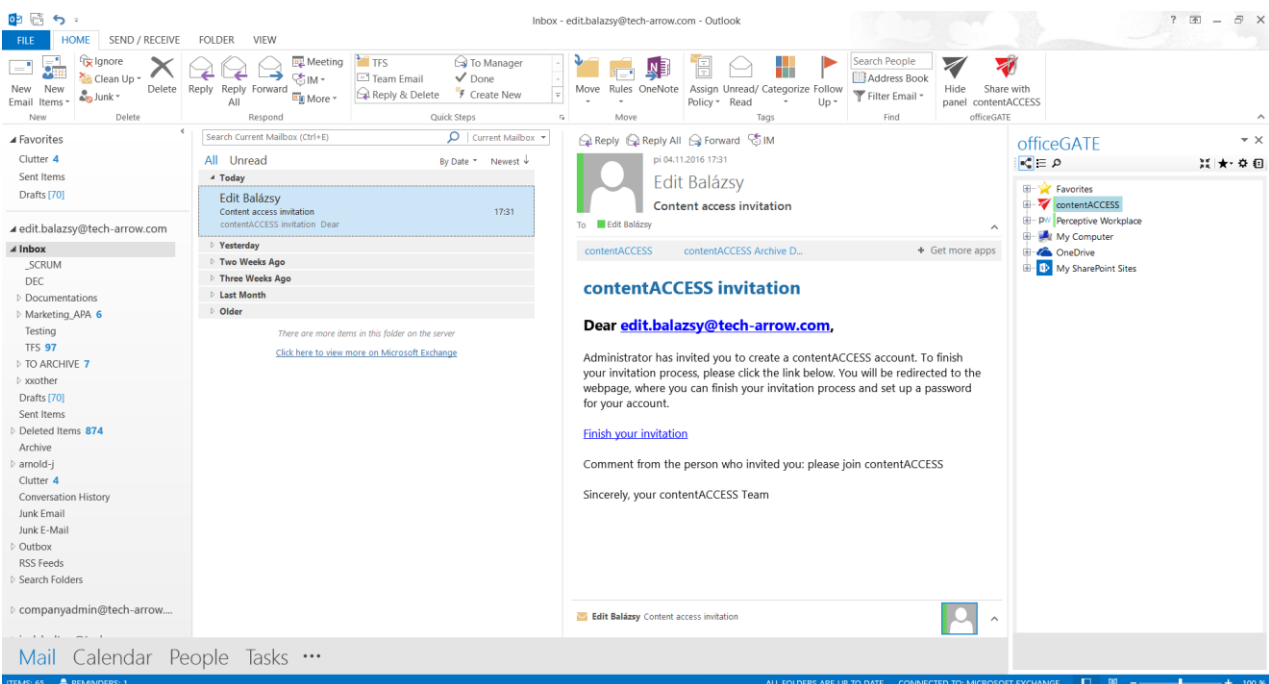




you have assigned a role containing at least one “Specific” permission, you will be automatically redirected to the **Assign specific permissions** page, where you can further specify these specific permissions of the role assignment. This will be described later in section “Roles”.



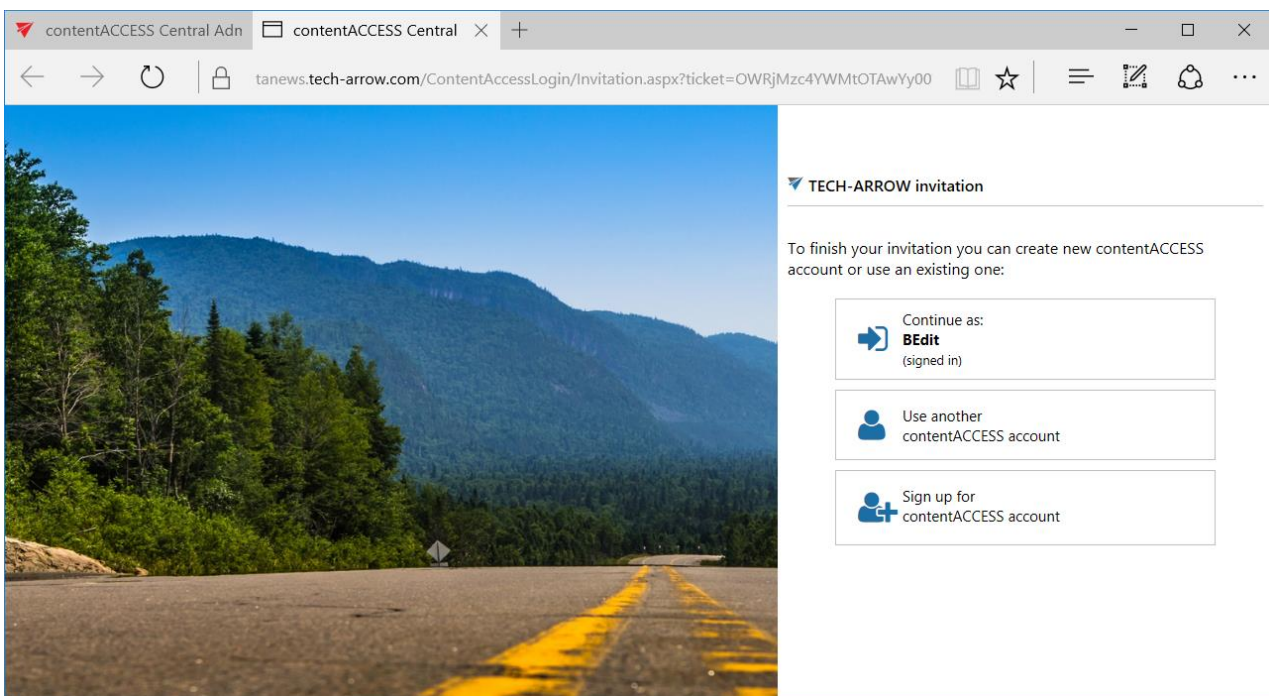
After the notification job has run, the invited user gets an invitation message, that he was invited to contentACCESS. To accept this invitation, he clicks “Finish invitation”.



He is now redirected to the webpage where he can finish the invitation process. Depending on if the invited user already exists/doesn't exist in contentACCESS, or if the user is already signed in to contentACCESS, he has multiple options how to finish the invitation process. He can

- use **already signed in** user (on picture below the user is already signed in as **BEdit**) –As the user is already logged in, he is not required to log in again.
- sign in with the **existing user, with the existing contentACCESS account**, if he has a contentACCESS account already, but currently he is not signed in to contentACCESS (option “Use another contentACCESS account”)
- sign up for a contentACCESS account, if he's not a contentACCESS user yet (option “Sign up for contentACCESS account”) – the user logs in with any login provider to contentACCESS. He can either create his own contentACCESS account (**Forms** authentication) and sign in with it, or he can use any of his available authentication providers to sign in. After successful login the new user will be created and role will be assigned. The user login that he used at first will be saved in the **User details**.

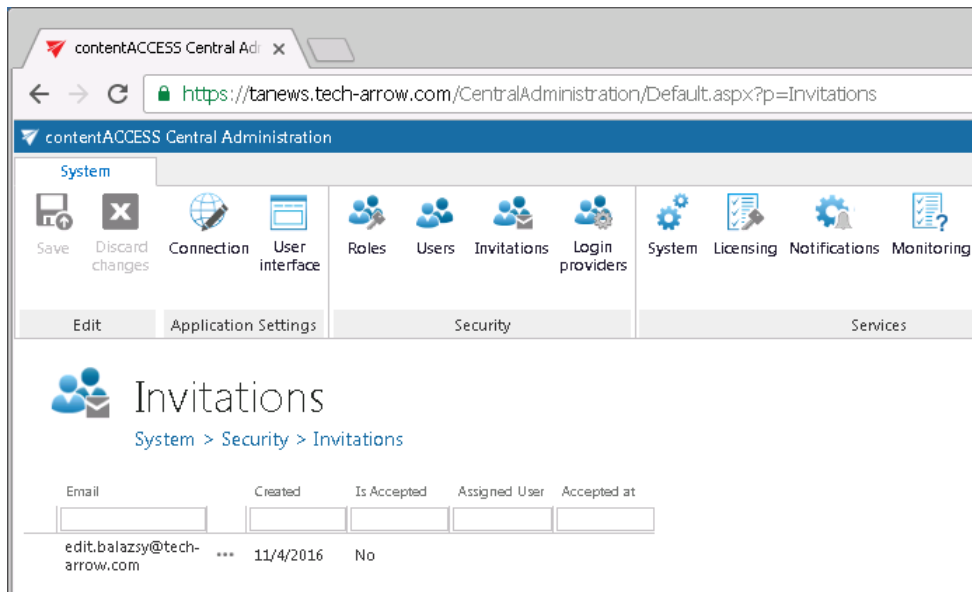
After successful login, the new user is created / the respective role defined in the invitation will be automatically assigned for the new/existing user.



The list of invitations, so the list of already invited users can be viewed on the **Invitations** page accessible at: **System** → **Security** → **Invitations**. The following columns are displayed in the grid:



- **Email:** the email address where the invitation was sent
- **Created:** the date when the invitation was sent to the user
- **Is accepted:** here can be viewed if the invited user has accepted the invitation, or it is still a pending invitation
- **Assigned user:** the user with the assigned role(s)
- **Accepted at:** the date when the invitation was accepted by the user



The context menu option of the respective invitation allows to delete it from the list.

## Roles

contentACCESS role(s) define the permissions that a certain contentACCESS user has in the entire system. Every contentACCESS user has an assigned role. The user roles can be extended, and a user can also have multiple roles assigned. There are 5 default (system level) roles in contentACCESS, but new roles with specific permissions can also be created. The default role types are visible for all tenants, on the system level. It is not possible to edit or delete them, and they have a different color on the user interface. These default roles are the following:

- A **system administrator** user has permissions to configure everything in contentACCESS Central Administration, and he has access to all processed data in contentWEB.
- A **tenant administrator** can configure his own tenant in Central Administrator and see all processed data of this tenant.



- A **standard user** is a client application user, who has specific permissions – from this reason, it is necessary to associate him with specific contentACCESS objects – e.g. with archived mailbox.

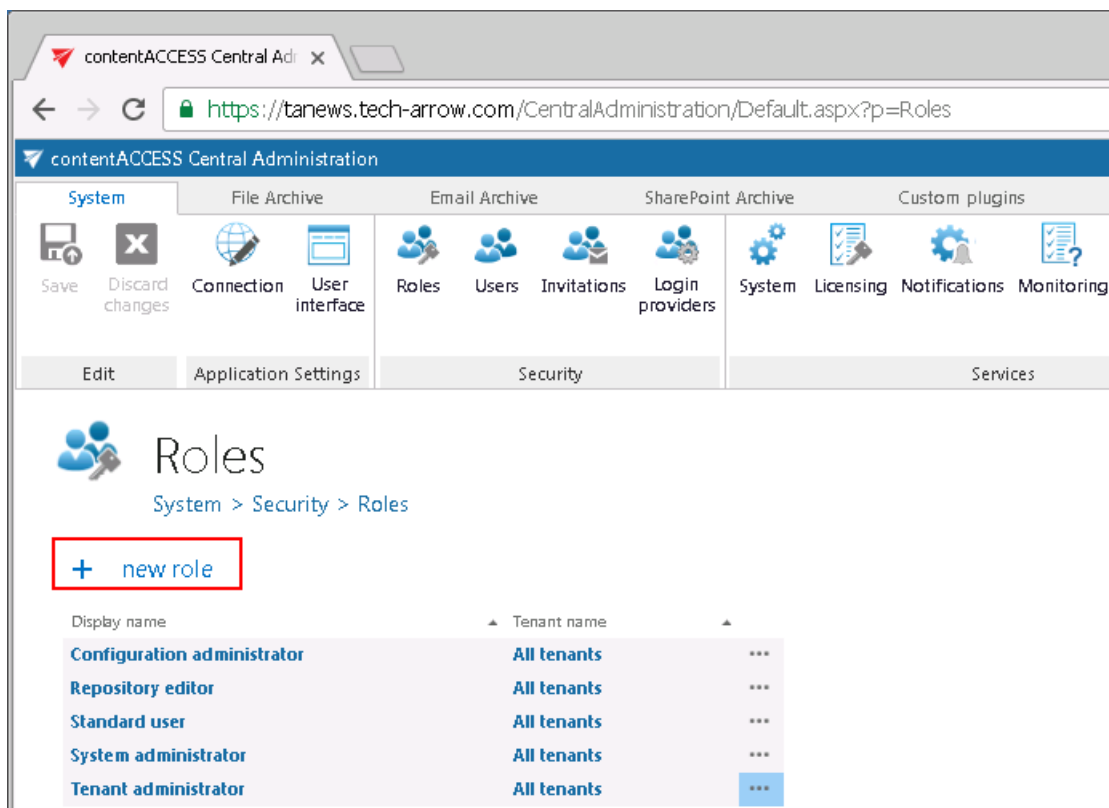
Standard user role is typically created for end users, who have access to their assigned archives in contentWEB.

- A **repository editor** has the permissions to create/edit/delete repository items (i.e. databases, storages).
- A **configuration administrator** has the same permissions as the system administrator with one exception: he hasn't got the access to the archived data, so to contentWEB.

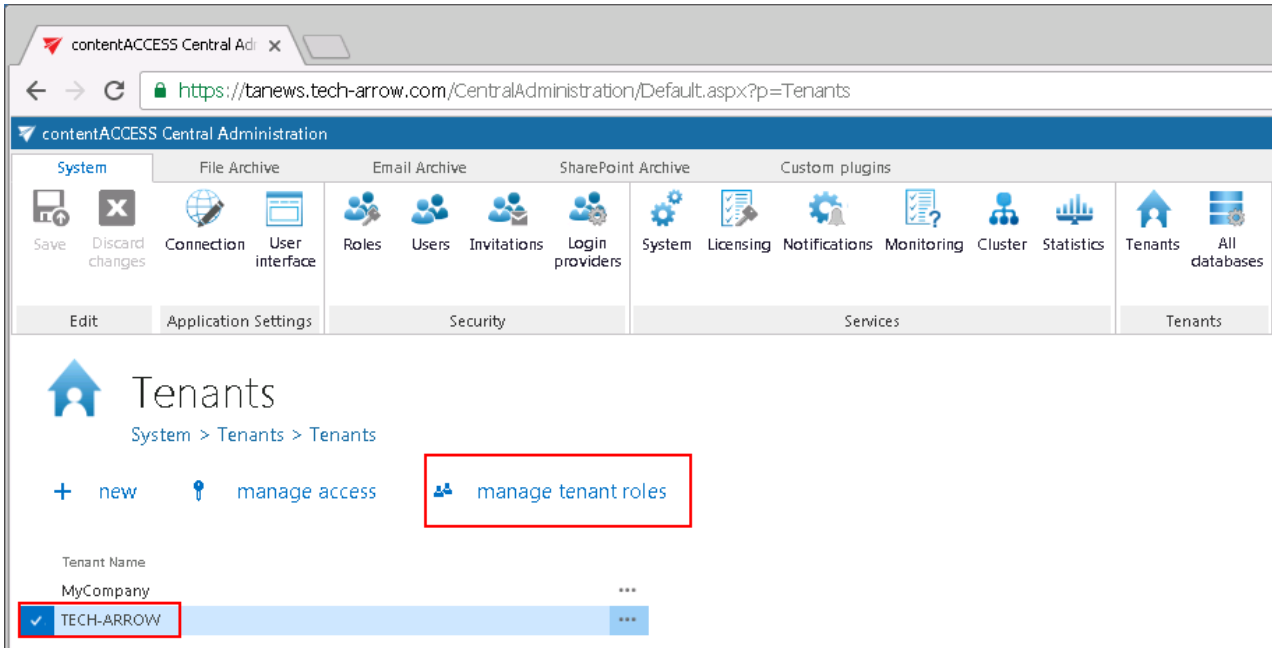
### Creating roles

It is possible to create

- **custom roles** in Central Administration on the **Roles** page (**System** tab → **Security** group → **Roles** page) – option “+ new role”:



- or you can create **tenant level roles** on the **Tenants** page (**System** tab → **Tenants** group → **Tenants** page) using the **Manage tenant roles** option, too.



The screenshot shows the contentACCESS Central Administration interface. The breadcrumb path is System > Tenants > Tenants. The main navigation bar includes System, File Archive, Email Archive, SharePoint Archive, and Custom plugins. The main content area has three buttons: '+ new', 'manage access', and 'manage tenant roles' (highlighted with a red box). Below the buttons, there is a table with a 'Tenant Name' column. The first row shows 'MyCompany' and the second row shows 'TECH-ARROW' (highlighted with a red box).

### Role details

Based on availability, a role can be:

- **System level role** – which is **available for all tenants** in the system; the grid's "Tenant name" column contains "All tenants";
- **Tenant level role** – which is **available only for the selected tenant**; the grid's "Tenant name" column contains the name of the selected tenant

The role's availability is set in the **Role details** window, when creating it:



### Role details ✕

Role display name:

#### Permissions

System			
Manage system:	<input checked="" type="radio"/> Not allowed	<input type="radio"/> All allowed	?
Manage tenant:	<input checked="" type="radio"/> Not allowed	<input type="radio"/> All allowed	<input type="radio"/> Specific allowed
Manage users and roles:	<input checked="" type="radio"/> Not allowed	<input type="radio"/> All allowed	?
Tenant			
Add job:	<input checked="" type="radio"/> Not allowed	<input type="radio"/> All allowed	?
Add repository item:	<input checked="" type="radio"/> Not allowed	<input type="radio"/> All allowed	?
Add scheduler:	<input checked="" type="radio"/> Not allowed	<input type="radio"/> All allowed	?
Edit job:	<input checked="" type="radio"/> Not allowed	<input type="radio"/> All allowed	<input type="radio"/> Specific allowed
Edit repository item:	<input checked="" type="radio"/> Not allowed	<input type="radio"/> All allowed	<input type="radio"/> Specific allowed
Edit scheduler:	<input checked="" type="radio"/> Not allowed	<input type="radio"/> All allowed	<input type="radio"/> Specific allowed
Remove job:	<input checked="" type="radio"/> Not allowed	<input type="radio"/> All allowed	<input type="radio"/> Specific allowed
Remove repository item:	<input checked="" type="radio"/> Not allowed	<input type="radio"/> All allowed	<input type="radio"/> Specific allowed
Remove scheduler:	<input checked="" type="radio"/> Not allowed	<input type="radio"/> All allowed	<input type="radio"/> Specific allowed
Plugin.Datengut			
View Datengut DDCs:	<input checked="" type="radio"/> Not allowed	<input type="radio"/> All allowed	?

Select a tenant, where the role will be available

Tenant: 


- MyCompany
- TECH-ARROW
- All tenants

A role is a collection of permissions that will be assigned for the user when associating the given role with him.

The permissions can be divided into certain permission groups:

- **System level permissions** – Allow to manage the **system settings**, (Manage system: “All allowed”); **all tenants** (Manage tenant: “All allowed”) or **specific tenants** in the system (Manage tenant: “Specific allowed”), and to **manage users and roles in** the system. If the “Manage tenant” is specific in the role, then the given role will be available for a specific tenant only. Only a user with “Manage system” and/or “Manage tenant” permissions has got the right to log in to the Central Administration.

**Warning:** Manage system permission does not allow to manage the entire system. A user with this permission has access to client applications settings, system-,license-,notification-, cluster-, login provider settings and to set the notification scheduler. Such a user cannot create tenants or databases, this requires to have Manage tenants permission.

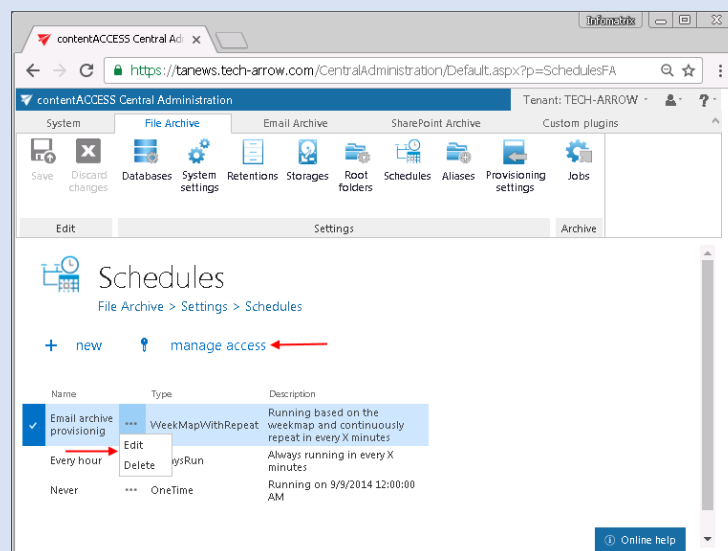
**Note:** Roles with Manage system and/or Manage tenant permissions cannot be assigned automatically (by contentACCESS email and file archive provisioning job).

**Note:** If the **Manage users and roles** permission is not assigned to a tenant administrator, then this tenant administrator will be able only to view the roles on the **Roles** page.

- **Tenant level permissions** – Allow to **manage all** jobs/repository items/schedulers (“All allowed”), and/or **to manage only specific** jobs/repository items/schedulers (“Specific allowed”) of the selected tenants.

**Note:** The **Edit**, **Delete** and **+ new** options on the Schedulers, Jobs, Storages, Databases, Aliases, Retentions, Shortcuts and Exchange connections pages/context menus are enabled based on the permissions defined in the **Role details**.

If the logged in user has got the Edit “All allowed” permission on the repository item and/or job and/or scheduler on the assigned tenant, and also has the **Manage users and roles** permission, then he can manage access to the selected object(s) on this tenant.





- Permissions to manage the **respective plugins of the selected tenant(s)** – Allow to **manage all or specific plugins** (email archive, file archive, SharePoint archive plugins etc.) **on all tenants** if Manage tenant is “All allowed” and you assign this role to user on all tenants.; allow to manage all or specific plugins **of the selected tenant** if Manage tenant is “Specific allowed”.

When you move your mouse over the question mark in the **Role details** dialog, the permission description gets displayed in a tooltip. Select the permissions that you want to assign for an already existing or for a newly created contentACCESS user, name your role, and save it.

### **Role assignment**

Only users with "Manage users and roles" permissions can **assign roles** to users, and also to **edit** role assignments and to **manage** access to certain contentACCESS objects for second users on his own tenant. Otherwise the pages and options related to these settings (**Roles** and **Users** pages, and "manage access to" option on the respective pages) are not available for the logged on user in Central Administration.

The **logged on user's own permissions define, which roles this user will be able to assign, and which role assignments he will be able to edit.**

**Note:** In case that the logged on administrator has **specific** permissions on schedulers, repository items, jobs and/or to view the archive, than he cannot assign roles containing these permissions for second users. E.g. If the logged user has specific permission to Edit job, then he cannot assign a role which contains Edit job permission.

**The logged on user must have equivalent or more permissions on the tenant than the role to be assigned for the second user includes.** E.g. if the logged on user has only "Edit all" repository items permission assigned on tenant "X", but he is not allowed to delete these repository items, then he is not allowed to assign a role for a second user with "Delete all" repository items permissions on this X tenant.

Or if the logged on user is tenant administrator on tenant "Y", but cannot view the archive mailboxes on his tenant (View mailboxes- not allowed), then he cannot assign a role (and also cannot edit a role assignment) containing permissions to view the archive mailboxes of this tenant.



The administrator can assign a role:

- For a newly created/invited user in the **Create/Invite user** dialog directly

**Create / Invite a user**

Create new user  Invite user

Display name:

Login type:

---

**Assign role**

Role:

Tenant:

Globally allowed permissions of the selected role **will be assigned** to the user.

[Show details](#)

Save Cancel

- for an already existing contentACCESS user using the given user’s “Assign role” context menu option

contentACCESS Central Administration

System > Security > Users

Display Name	ID	Roles
Jack Bolton	3d5009b6-3b8b-4209-9b8f-8e0dc4723676	Tenant administrator
Administrator	3C-AD83-088D4CF07758	System administrator
BEEdit	04-bda7-787de96dc7c4	Standard user, Tenant administrator

Context menu for Jack Bolton:

- Assign role
- Edit role assignment
- Edit
- Delete



Role assignment ✕

Role:

Tenant:

Globally allowed permissions of the selected role **will be assigned** to the user.

[Show details](#)

**Important:** If you are assigning a role containing both specific permissions and Manage tenant “All allowed” permissions and you have selected one specific tenant in the **Role assignment/Create /invite user** dialog, then every tenant will automatically get the Manage all tenants permission as it is defined in the role itself, and then you will be redirected to the **Assign specific permissions** page. If “All tenants” is selected in one of the above mentioned dialogs, then Manage all tenants permissions are assigned, but the user is not redirected to the **Assign specific permissions** page. These specific permissions can be assigned later using the user’s “Edit role assignment” context menu option.

### **Defining specific permissions of a role assignment**

#### **Definition of terms:**

**Specific permissions** = user permissions which allow to manage only certain (specific) objects of the selected tenant (e.g. certain jobs of TECH-ARROW tenant only)

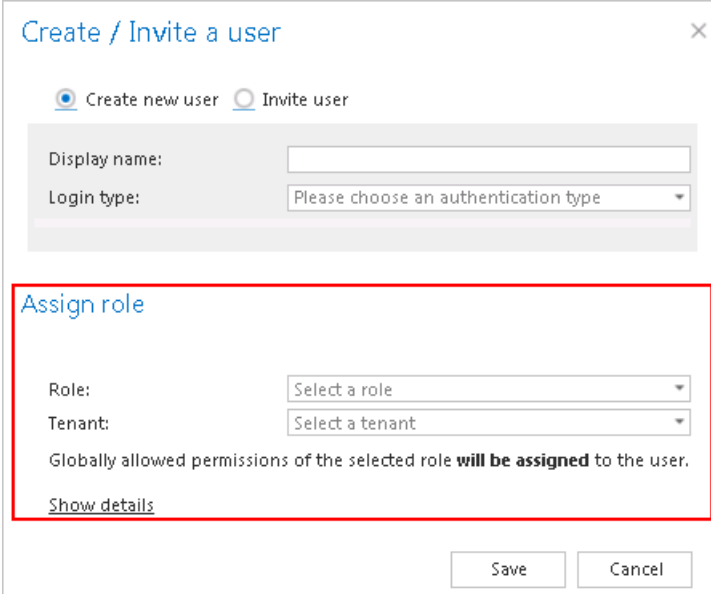
**Objects** = specific objects (databases, schedulers, jobs etc.) of the selected tenant

Specific permissions can be granted to various objects of the selected tenant(s): jobs, repository items (databases, storages, aliases, retentions, shortcuts and Exchange connections), schedulers and also to the processed contentACCESS data (e.g. permission to manage the archive mailbox). The administrator decides, which objects of which tenants will be able the user (with the given permissions) to manage. Specific permissions of a role assignment can be granted on the **Assign specific permissions** page. Only the objects with “Specific allowed” permissions are listed on this

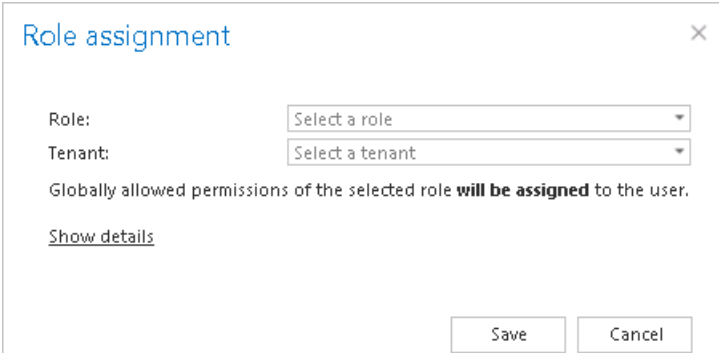
page (e.g. if Tech-Arrow tenant was selected, then Tech-Arrow's jobs, repositories etc. with "Specific allowed" permissions are displayed).

To define specific permissions open the **Assign specific permissions** page. The page can be opened:

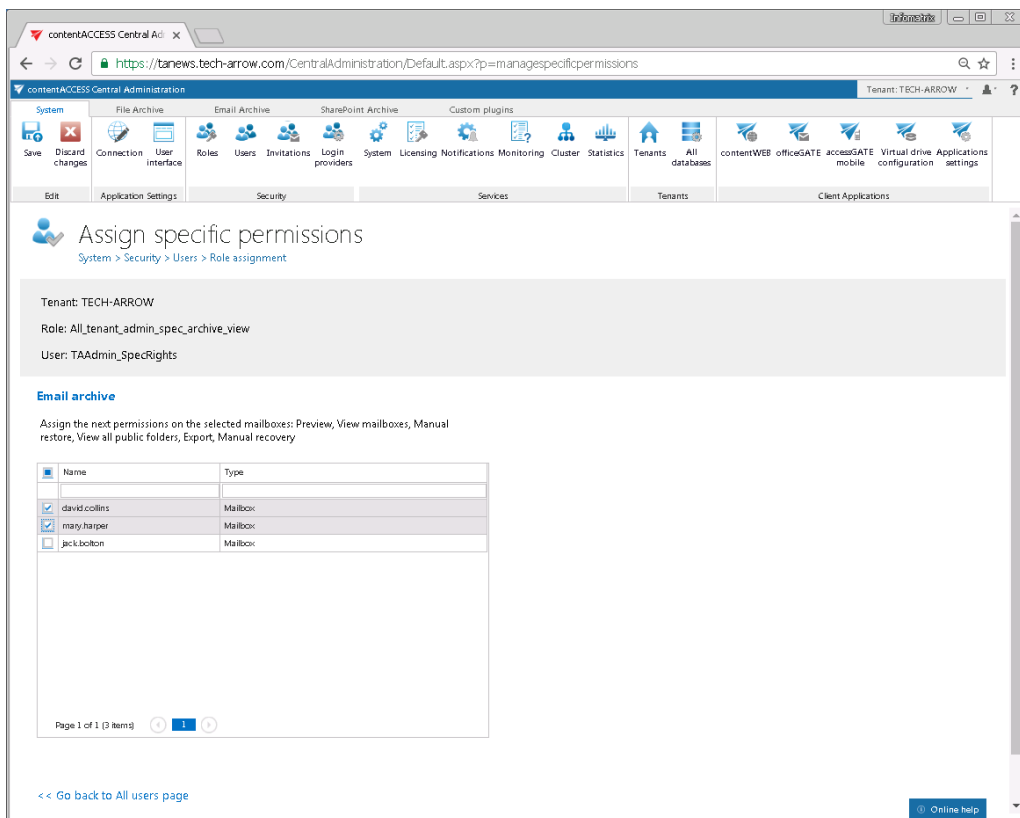
- From the **Create/invite user** dialog when creating/inviting a user;



- From the **Role assignment** dialog (user's "Assign role" context menu option) when assigning a role to an already existing user.



In one of the above mentioned dialogs, select the predefined role with the specific permissions, and then **select a tenant**, of which specific objects the user will be allowed to manage. When a given role is assigned to a user, the "All allowed" permissions and the manage tenant specific permission is assigned to the user. contentACCESS verifies, if there are any specific permissions defined in the respective role. If any specific permissions are found, the user is automatically redirected to the **Assign specific permissions** page (see below), where he can select the objects that the given user will be allowed to manage:

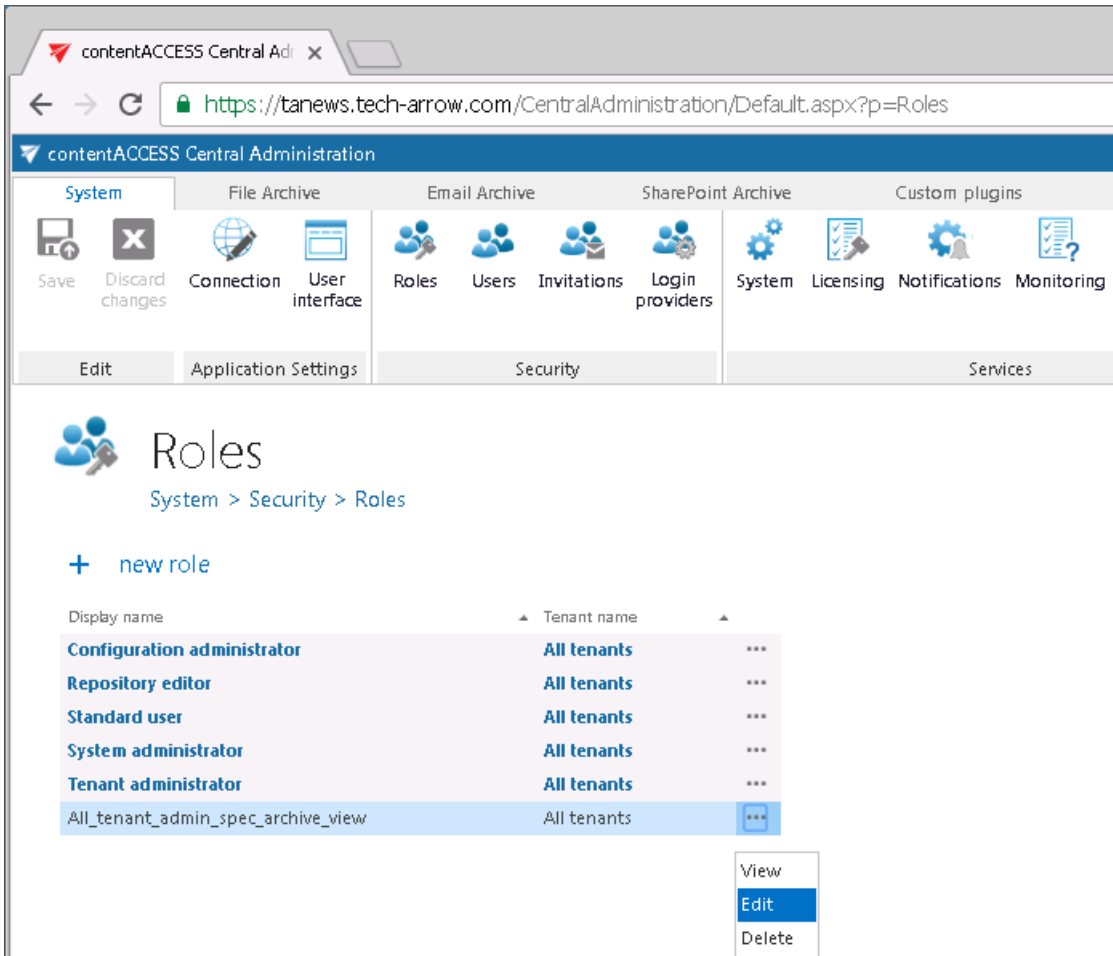


Tenant administrator role with specific permissions on the selected archive mailboxes

**Important:** If the user selects “All tenants” in the dialog (option is available if “Manage all tenants” permission is defined in the given role), then specific permissions page won’t be opened. The “All allowed” permissions (global permissions) will be granted to **All tenants** automatically.

### **Editing roles, editing role assignments**

**Roles** can be edited in the **Role details** window. Open it using the given role’s context menu (option “Edit”).



contentACCESS Central Administration

System | File Archive | Email Archive | SharePoint Archive | Custom plugins

Save | Discard changes | Connection | User interface | Roles | Users | Invitations | Login providers | System | Licensing | Notifications | Monitoring

Edit | Application Settings | Security | Services

## Roles

System > Security > Roles

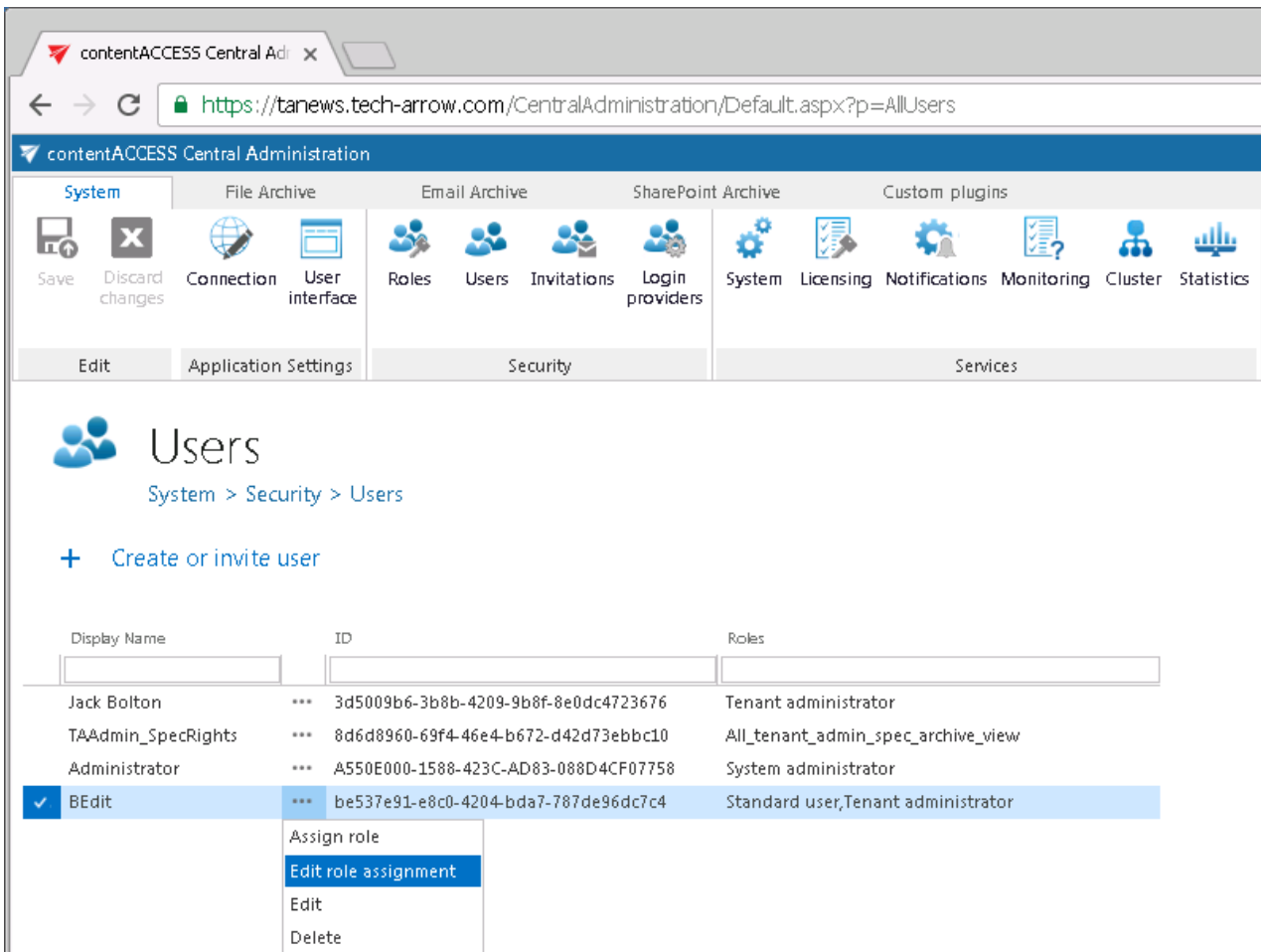
+ new role

Display name	Tenant name	
Configuration administrator	All tenants	...
Repository editor	All tenants	...
Standard user	All tenants	...
System administrator	All tenants	...
Tenant administrator	All tenants	...
All_tenant_admin_spec_archive_view	All tenants	...

View  
Edit  
Delete

The rule is, that the logged on user cannot edit a role already assigned to himself, i.e. he cannot extend his rights.

**Role assignments** are roles already assigned to a given user, with or without specific permissions. These role assignments can be edited from the user's context menu, using option "**Edit role assignment**". The **Role assignment** window opens, where you select the role to be edited (you may have multiple roles assigned). If the role has any specific permissions defined, the **Assign specific permissions** page opens, where you can change your settings.



contentACCESS Central Administration

System | File Archive | Email Archive | SharePoint Archive | Custom plugins

Save | Discard changes | Connection | User interface | Roles | Users | Invitations | Login providers | System | Licensing | Notifications | Monitoring | Cluster | Statistics

Edit | Application Settings | Security | Services

## Users

System > Security > Users

+ Create or invite user

Display Name	ID	Roles
Jack Bolton	3d5009b6-3b8b-4209-9b8f-8e0dc4723676	Tenant administrator
TAdmin_SpecRights	8d6d8960-69f4-46e4-b672-d42d73ebbc10	All_tenant_admin_spec_archive_view
Administrator	A550E000-1588-423C-AD83-088D4CF07758	System administrator
<input checked="" type="checkbox"/> BEdit	be537e91-e8c0-4204-bda7-787de96dc7c4	Standard user, Tenant administrator

- Assign role
- Edit role assignment**
- Edit
- Delete

Only users with "Manage users and roles" permissions can edit role assignments, otherwise the **Users** page is not available for them. It depends on the logged on user's own permissions, which role assignments he will be able to edit. **The logged on user must have equivalent or more permissions than the role assignment has that he/she would like to edit.** E.g. if the logged on user has no permissions to edit jobs of his associated tenant, then he cannot edit a role assignment with permissions to edit the jobs of this tenant.

### **General use cases of how to create/assign roles**

In this chapter we will demonstrate general use cases of how to work with roles. We will create 3 contentACCESS users with the following roles/permissions:

1. System administrator (name: "SysAdmin") **with the default "system administrator" role**
2. Tenant administrator (name: "TAdmin") **of all tenants without** a right to edit/delete the jobs, repository items and schedulers and to manage the processed (archived) data.



3. Email archive user (name: "EAUser") of TECH-ARROW tenants **with rights to view all** archive mailboxes, but with limited permissions to work with archive mailboxes (**recover, export allowed on specific mailboxes of the selected tenant only**).

#### A) Prepare roles for your future users first:

1. For the System administrator the default role is already created, so here this step can be skipped.



2. For the second user the role must be created so open the **Roles** page, click **+new role** and set the following in the **Role details** window:

**Role display name:** optional ("2<sup>nd</sup>\_user\_role" in this use case)

**Manage system permission:** "Not allowed"

**Manage tenants:** "All allowed" – so the associated user will have permissions to manage all tenants

**Manage users and roles:** "All allowed" – without this permissions user and role creation, association is not allowed

Under **section Tenants:** set the "Add job" "Add repository item" and "Add scheduler" to "All allowed" – the user will be able to create these objects for every tenant, but **set the Edit and Delete of the same objects to "Not allowed"** – the user won't be allowed to edit/delete these objects

Under **each Plugin section select option "Not allowed"** – the user won't be able to view and/or manage the processed data.

Save your changes and the role will be added to the **Roles** grid.



### Role details ✕

Role display name:

#### Permissions

System	Not allowed	All allowed	Specific allowed	
Manage system:	<input checked="" type="radio"/>	<input type="radio"/>		?
Manage tenant:	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	?
Manage users and roles:	<input type="radio"/>	<input checked="" type="radio"/>		?
<b>Tenant</b>				
Add job:	<input type="radio"/>	<input checked="" type="radio"/>		?
Add repository item:	<input type="radio"/>	<input checked="" type="radio"/>		?
Add scheduler:	<input type="radio"/>	<input checked="" type="radio"/>		?
Edit job:	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Edit repository item:	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Edit scheduler:	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Remove job:	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Remove repository item:	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Remove scheduler:	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
<b>Plugin.Datengut</b>				
View Datengut DDCs:	<input checked="" type="radio"/>	<input type="radio"/>		?
<b>Plugin.EmailArchive</b>				
View mailboxes:	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Export:	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Manual recovery:	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Preview:	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
View all public folders:	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
<b>Plugin.FSArchive</b>				
View folders:	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
<b>Plugin.Legacy</b>				
View mailboxes:	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
<b>Plugin.Perceptive</b>				
View Perceptive DDCs:	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
<b>Plugin.SPArchive</b>				
View SharePoint sites:	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?

Select a tenant, where the role will be available

Tenant:





3. For the third user the role must be prepared, too. Create a new role and define the following settings in the **Role details** window:

**Role display name:** optional (“3<sup>rd</sup>\_user\_role” in this use case)

**Tenant dropdown list at the bottom of the window:** select “TECH-ARROW”

Everything must be set to “Not allowed” except of the **Plugin.EmailArchive** section, where:

**View mailboxes, Preview and View all public folders** are “All allowed”

**Export, Manual recovery** are “Specific allowed” – i.e. only specific mailboxes can be recovered and /or exported from contentWEB. The exact mailboxes will be set later on the **Assign specific permissions** page.

Save your changes.

### Role details ✕

Role display name:

#### Permissions

Edit repository item:	<input type="radio"/> Not allowed	<input type="radio"/> All allowed	<input type="radio"/> Specific allowed	?
Edit scheduler:	<input checked="" type="radio"/> Not allowed	<input type="radio"/> All allowed	<input type="radio"/> Specific allowed	?
Remove job:	<input checked="" type="radio"/> Not allowed	<input type="radio"/> All allowed	<input type="radio"/> Specific allowed	?
Remove repository item:	<input checked="" type="radio"/> Not allowed	<input type="radio"/> All allowed	<input type="radio"/> Specific allowed	?
Remove scheduler:	<input checked="" type="radio"/> Not allowed	<input type="radio"/> All allowed	<input type="radio"/> Specific allowed	?

#### Plugin.Datengut

View Datengut DDCs:	<input checked="" type="radio"/> Not allowed	<input type="radio"/> All allowed		?
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#### Plugin.EmailArchive

View mailboxes:	<input type="radio"/> Not allowed	<input checked="" type="radio"/> All allowed	<input type="radio"/> Specific allowed	?
Export:	<input type="radio"/> Not allowed	<input type="radio"/> All allowed	<input checked="" type="radio"/> Specific allowed	?
Manual recovery:	<input type="radio"/> Not allowed	<input type="radio"/> All allowed	<input checked="" type="radio"/> Specific allowed	?
Preview:	<input type="radio"/> Not allowed	<input checked="" type="radio"/> All allowed	<input type="radio"/> Specific allowed	?
View all public folders:	<input type="radio"/> Not allowed	<input checked="" type="radio"/> All allowed	<input type="radio"/> Specific allowed	?

#### Plugin.FSArchive

View folders:	<input checked="" type="radio"/> Not allowed	<input type="radio"/> All allowed	<input type="radio"/> Specific allowed	?
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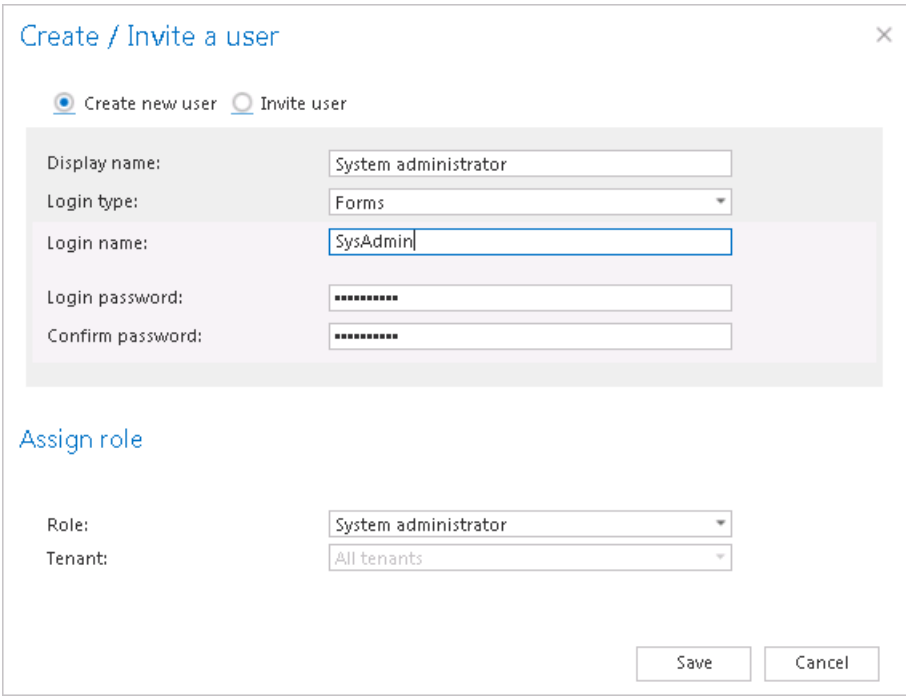
Select a tenant, where the role will be available

Tenant:  ←

## B) Create your users and assign roles to them

Now the roles for all three users are ready. We just have to create users and assign the roles to them, and to set specific permissions for our 3<sup>rd</sup> (Email Archive) user. In these use cases we will create users with Forms provider. Go to **Users** page (System → Security → Users) and click “**create or invite user**”.

1. Create a system administrator, set his credentials and assign the default “system administrator” role to him. Save the user.



**Create / Invite a user** [X]

Create new user
  Invite user

Display name:

Login type:

Login name:

Login password:

Confirm password:

**Assign role**

Role:

Tenant:

2. Create your **TAdmin** tenant administrator user and assign “**2nd\_user\_role**” to him. Select “All tenants” from the tenants dropdown list. The Add job, scheduler, repository item, Manage tenants and Manage users and roles permissions will be assigned for the user on all tenants. Other permissions that we set to not allowed won’t be granted for the user. Save your user and use it.

### Create / Invite a user ✕

Create new user    Invite user

Display name:	<input type="text" value="TAAdmin"/>
Login type:	<input type="text" value="Forms"/>
Login name:	<input type="text" value="TAAdmin"/>
Login password:	<input type="password" value="*****"/>
Confirm password:	<input type="password" value="*****"/>

#### Assign role

Role:	<input type="text" value="2nd_user_role"/>
Tenant:	<input type="text" value="All tenants"/>

Globally allowed permissions of the selected role **will be assigned** to the user on the selected tenant.

**Plugin:** Add job,  
**Scheduler:** Add scheduler,  
**Repository:** Add repository item,  
**Tenant:** Manage tenant,  
**System:** Manage users and roles,

[Hide details](#)

3. Create your **EAuser** email archive standard user and assign “**3rd\_user\_role**” to him. “TECH-ARROW” will be automatically selected in tenants dropdown list, as this role was created for this specific tenant only.

In the details part of the window you can see the global permissions allowed for the user on this TECH-ARROW tenant – the user is able to view all archive mailboxes and public folders and also to use the email archive’s preview function in contentWEB.



### Create / Invite a user ✕

Create new user  Invite user

Display name:

Login type:

Login name:

Login password:

Confirm password:

#### Assign role

Role:

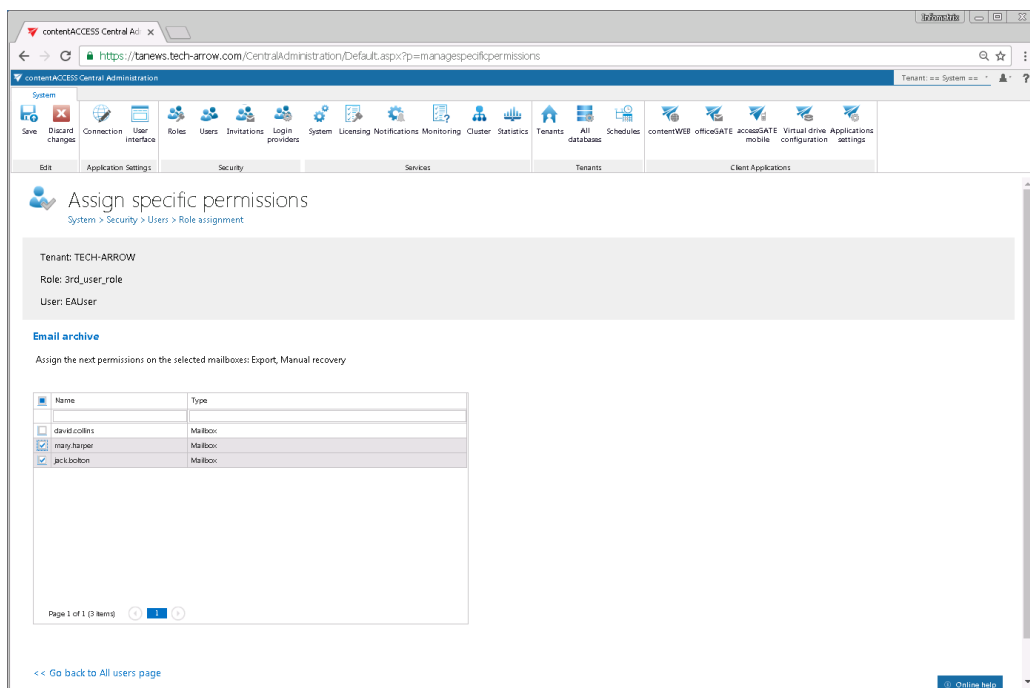
Tenant:

Globally allowed permissions of the selected role **will be assigned** to the user on the selected tenant.

**EmailArchive:** Preview, View all public folders, View mailboxes,

[Hide details](#)

The role assigned to the **EAUser** has also specific email archive recovery and export permissions on the **TECH-ARROW** tenant. As there are specific permissions defined in the role, the admin is automatically redirected to the **Assign specific permissions** page, where he can set the mailboxes, that the **EAUser** will be able to recover and export. In this use case this permission is granted on **mary.harper's** and **jack.bolton's** mailboxes. Save your changes and use your **EAUser**.



## Managing access to contentACCESS objects

### Definition of terms:

**Logged on user** – the user logged in to the Central Administration, who has the permissions to manage access to contentACCESS objects;

**Second user** – the explicit user, who gets the rights (involved in the assigned role) to manage certain contentACCESS objects;

**Tenant objects** – objects like jobs, repositories, schedulers, archive mailboxes etc. of the given tenant;

**Tenant repositories** – databases, storages, retentions, shortcuts, Exchange connections, aliases of the tenant.

contentACCESS allows to manage access to the contentACCESS objects for second users. These objects are the following:

- **schedulers and repositories** of tenants (database, storage, retention, shortcut, Exchange connection, alias)
- **jobs** of tenants
- **archive mailboxes** of a given tenant
- **the file archive** of the tenant
- the **tenant** itself

**In case of schedulers, repositories and jobs** the “manage access” means, that the logged on user (with the necessary permissions) assigns for a second user a role containing permissions to

- edit and/or
- delete

the assigned tenant’s

- schedules and/or
- repositories and/or
- jobs.

**In case of tenants** “manage access” means, that the logged on user grants rights for a second user to manage the tenant assigned for him, i.e. he **gives tenant administrator permissions** for this user. The second user’s exact permissions on the given tenant are defined in the assigned role.



In case of **archive mailboxes** and **file archive** “manage access” means, that the logged on user grants for the second user access rights to the archive mailboxes and file system archive on the assigned tenant.

The permissions of the role assignment define, what the second user will be allowed to manage. E.g. if my user called “Job manager” has got “Edit job – All allowed” permission on the TECH-ARROW, but the “Delete job” permission is not allowed in his role assignment, then he will be able to edit the jobs of this tenant, but won’t be able to delete any jobs of the tenant.

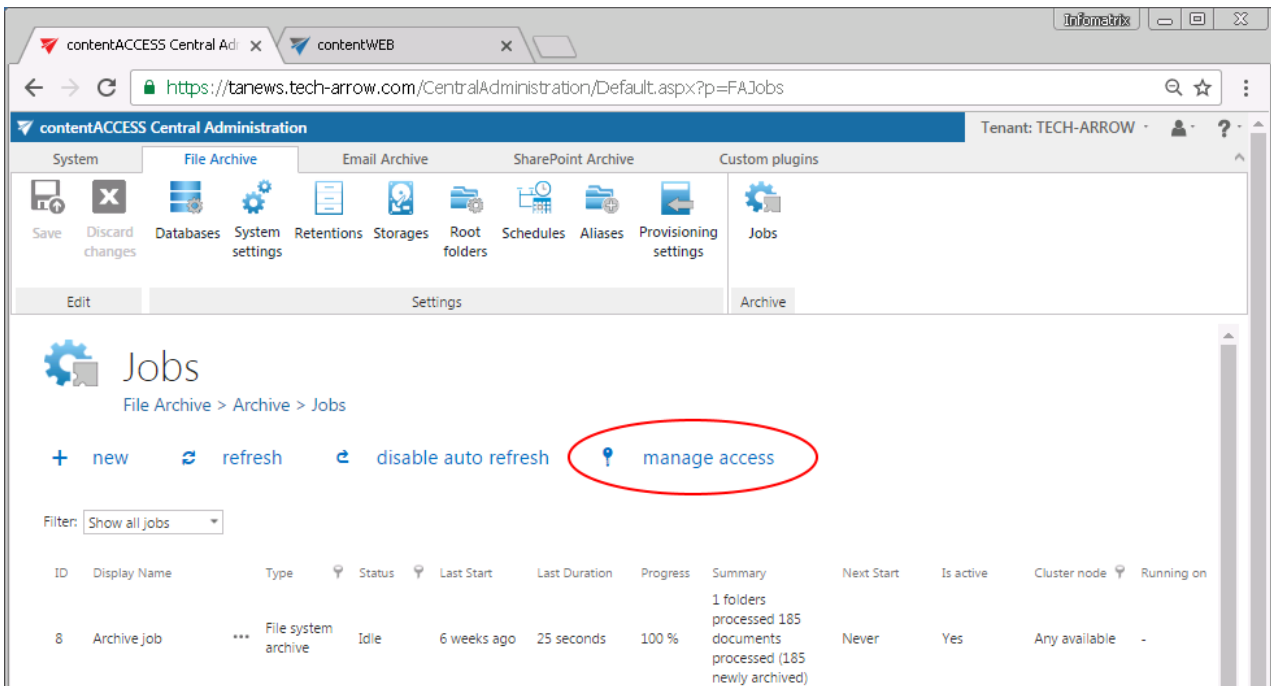
The **user logged on to the Central Administration**, who is **able to give access e.g. to TECH-ARROW tenant’s objects for second users**, must have “**Manage users and roles**” permissions and “**Manage tenant**” permissions on the TECH-ARROW tenant and also

- **Edit repositories** – “**All allowed**” permission to be able to manage access to the repository items on the TECH-ARROW tenant;
- **Edit jobs** – “**All allowed**” permission to be able to manage access to the jobs of the TECH-ARROW tenant;
- **Edit schedules** – “**All allowed**” permission to be able to manage access to the schedules of the associated tenant
- **Manage tenant** –permission on the TECH-ARROW tenant to be able to add tenant administrator rights on the TECH-ARROW tenant for a second user
- **View mailboxes/View folders/View public folders** – “**All allowed**” permissions on the TECH-ARROW tenant to be able to give access to the archive mailboxes/file system root folders/public folders for second user(s)on the tenant.

**The rule is, that the logged on user must have equivalent or more permissions than the role to be assigned for a second explicit user.** E.g. the logged on user is not allowed to assign a role for a second user containing permission “Delete job”, if this permission is not granted for him as well.

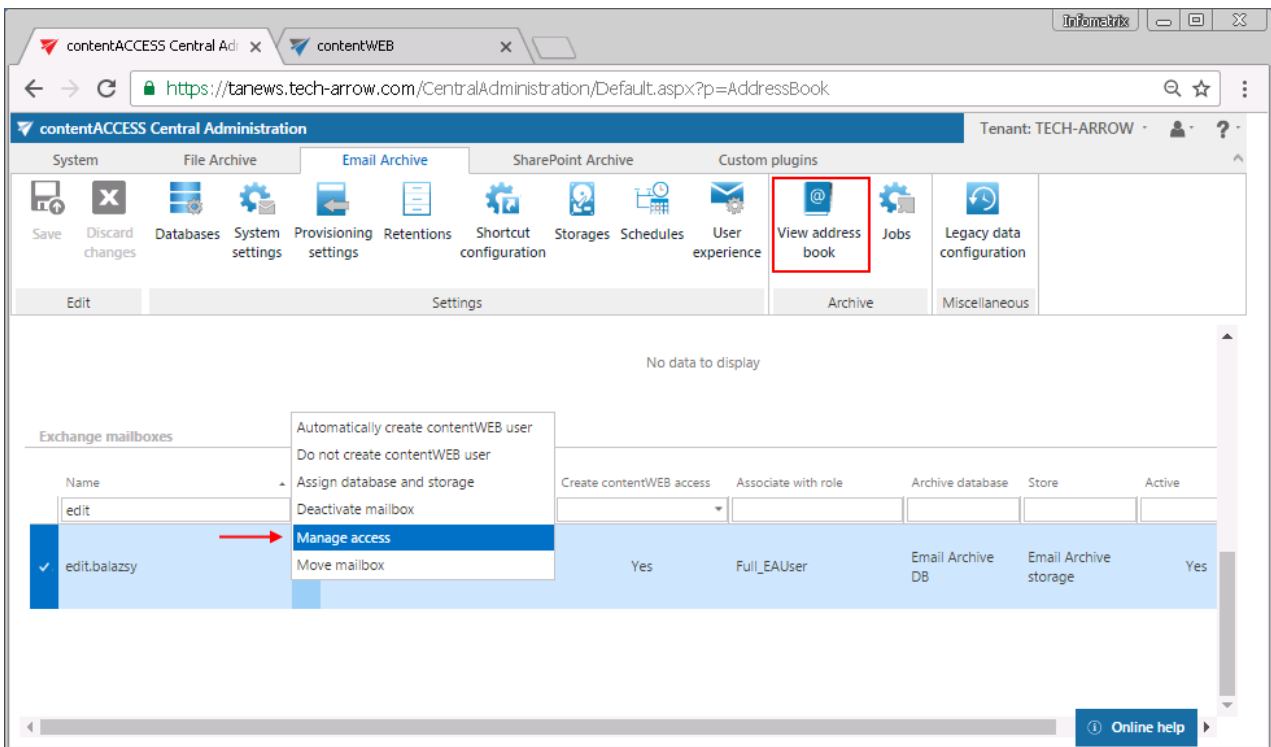
**Manage access** option is available for the logged on user on the respective pages of the Central Administration.

In case of repository items, schedules, jobs and tenants the option is available above the list of items:



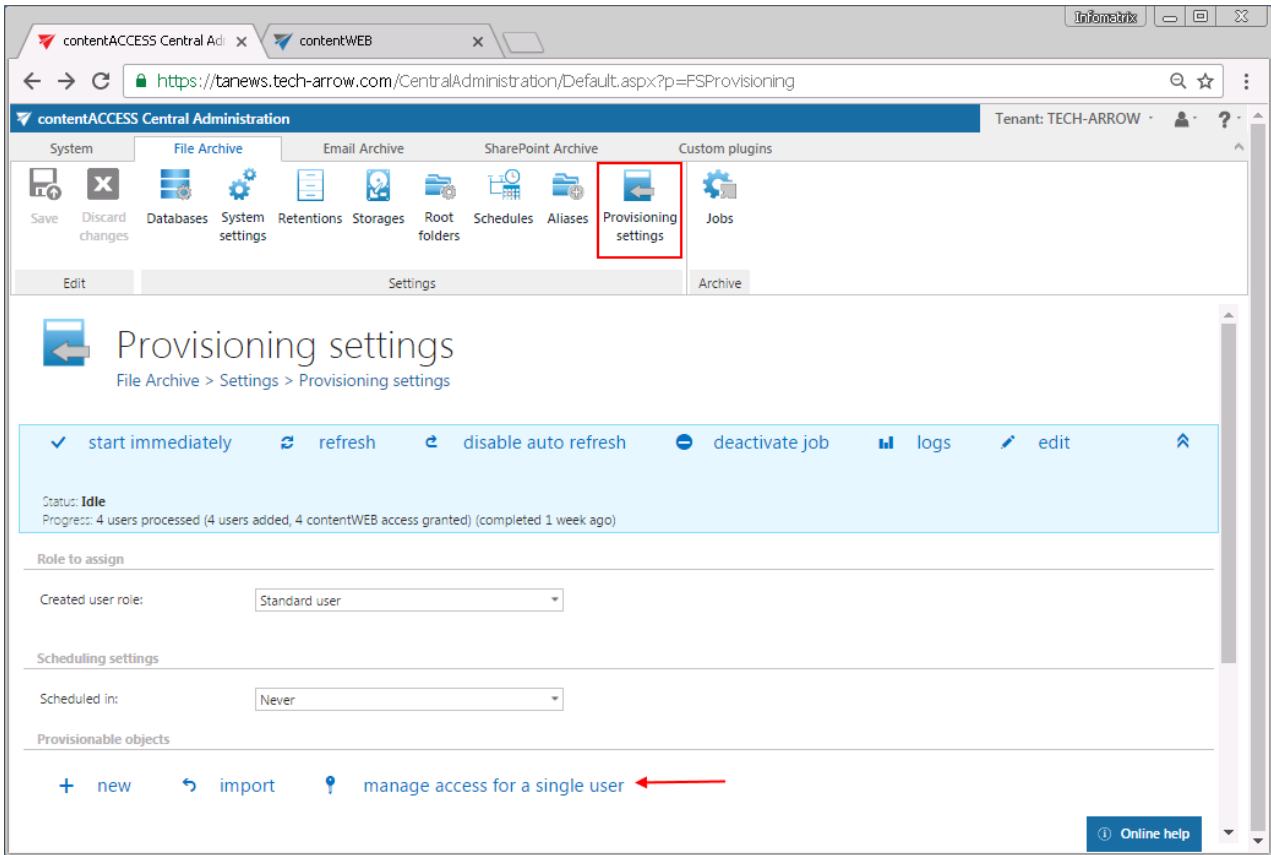
Screenshot A: Manage access to the TECH-ARROW tenant's file archive jobs

In case of archive mailboxes the option is available in the Address book, in the context menu of the given Exchange mailbox:



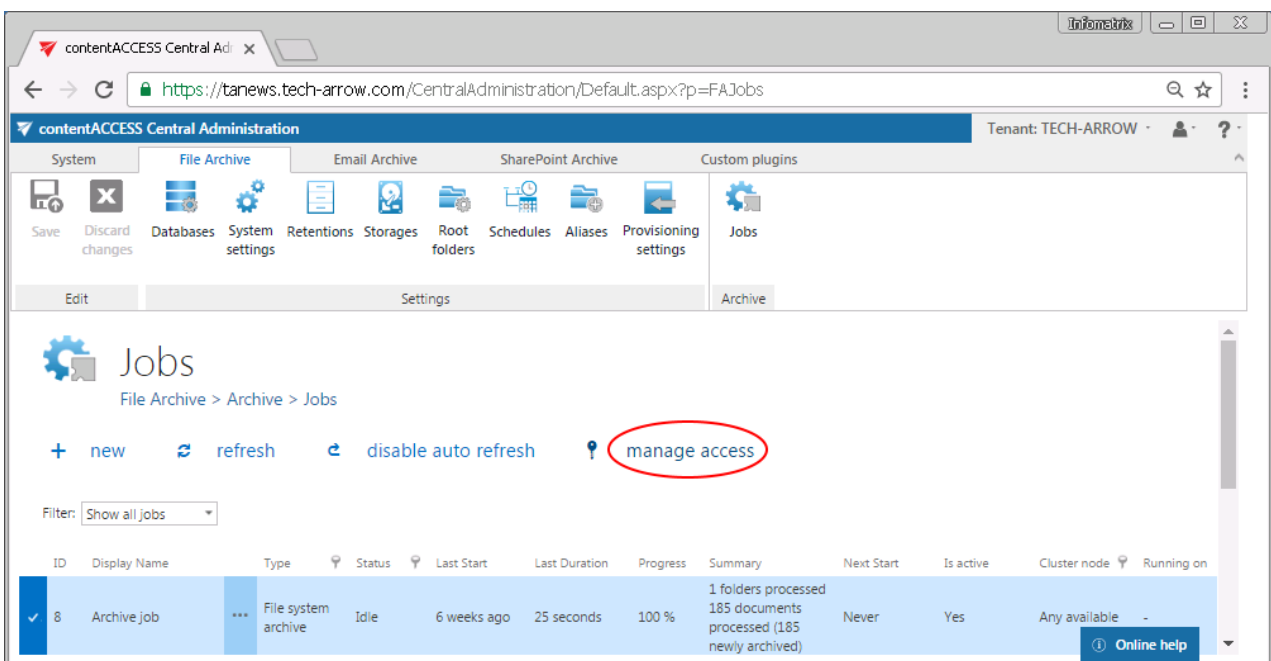
Screenshot B: Manage access to edit.balazsy's archive mailbox

In case of file system archive the option is available in the File archive's Provisioning settings:



Screenshot C: Manage access to the file system archive folders

First the user needs to select an item (a given job, database, retention, mailbox etc.) from the list.







In each cases, by clicking the “manage access” option, the logged on user is redirected to the **Manage access to Object** page. Here he can manage access to the contentACCESS object. He clicks **+new** and the **Create role association** window opens.

The **Role** dropdown list lists only the roles that the logged on user is allowed to assign, and which contain specific permissions on that object (in this case the object is the job). Roles containing “All allowed” permissions (e.g. “Edit job –All allowed” or “View mailboxes – All allowed”) cannot be granted on the ”Manage access to Object page”. The user selects the role with the necessary permissions and assigns it to a new or an existing contentACCESS user.

In this use case we grant access for Jack Bolton to edit the Archive job of TECH-ARROW tenant. The **TAdmin\_job\_editor** role is already prepared and contains permission to edit specific job(s) of this tenant (“Edit job – Specific allowed”):

### Role details ✕

Role display name:

#### Permissions

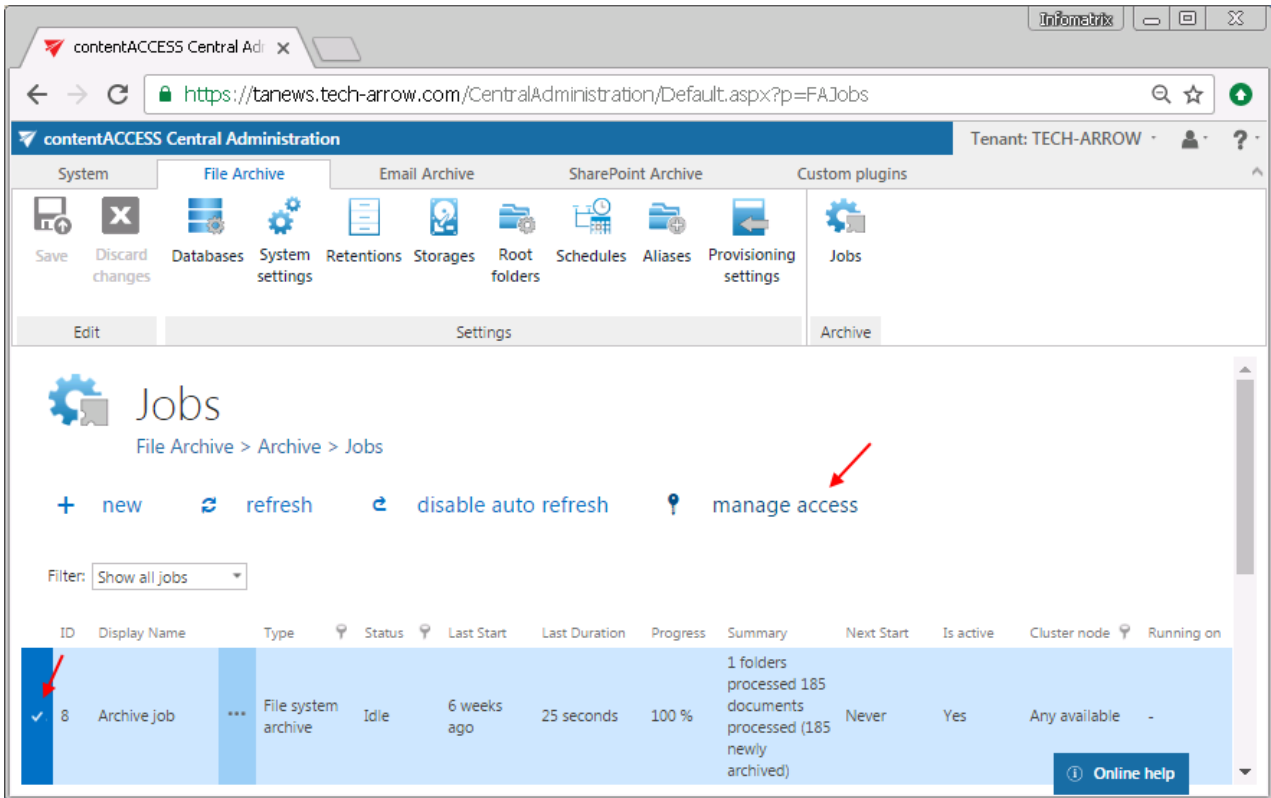
System			
Manage system:	<input checked="" type="radio"/> Not allowed	<input type="radio"/> All allowed	?
Manage tenant:	<input type="radio"/> Not allowed	<input type="radio"/> All allowed	?
Manage users and roles:	<input checked="" type="radio"/> Not allowed	<input type="radio"/> All allowed	?
Tenant			
Add job:	<input checked="" type="radio"/> Not allowed	<input type="radio"/> All allowed	?
Add repository item:	<input checked="" type="radio"/> Not allowed	<input type="radio"/> All allowed	?
Add scheduler:	<input checked="" type="radio"/> Not allowed	<input type="radio"/> All allowed	?
Edit job:	<input type="radio"/> Not allowed	<input type="radio"/> All allowed	?
Edit repository item:	<input checked="" type="radio"/> Not allowed	<input type="radio"/> All allowed	?
Edit scheduler:	<input checked="" type="radio"/> Not allowed	<input type="radio"/> All allowed	?
Remove job:	<input checked="" type="radio"/> Not allowed	<input type="radio"/> All allowed	?
Remove repository item:	<input checked="" type="radio"/> Not allowed	<input type="radio"/> All allowed	?
Remove scheduler:	<input checked="" type="radio"/> Not allowed	<input type="radio"/> All allowed	?
Plugin.Datengut			
-	-	-	-

Select a tenant, where the role will be available

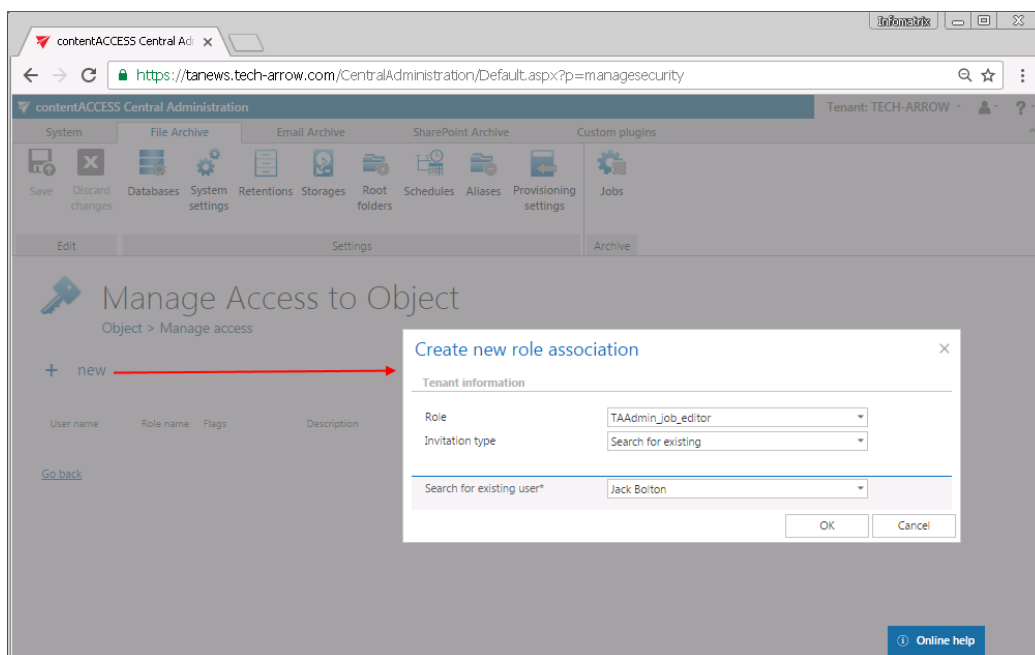
Tenant:  Save Cancel



On the File Archive’s **Jobs** page of TECH-ARROW tenant we locate the **Archive job**, select it and click “manage acces”.

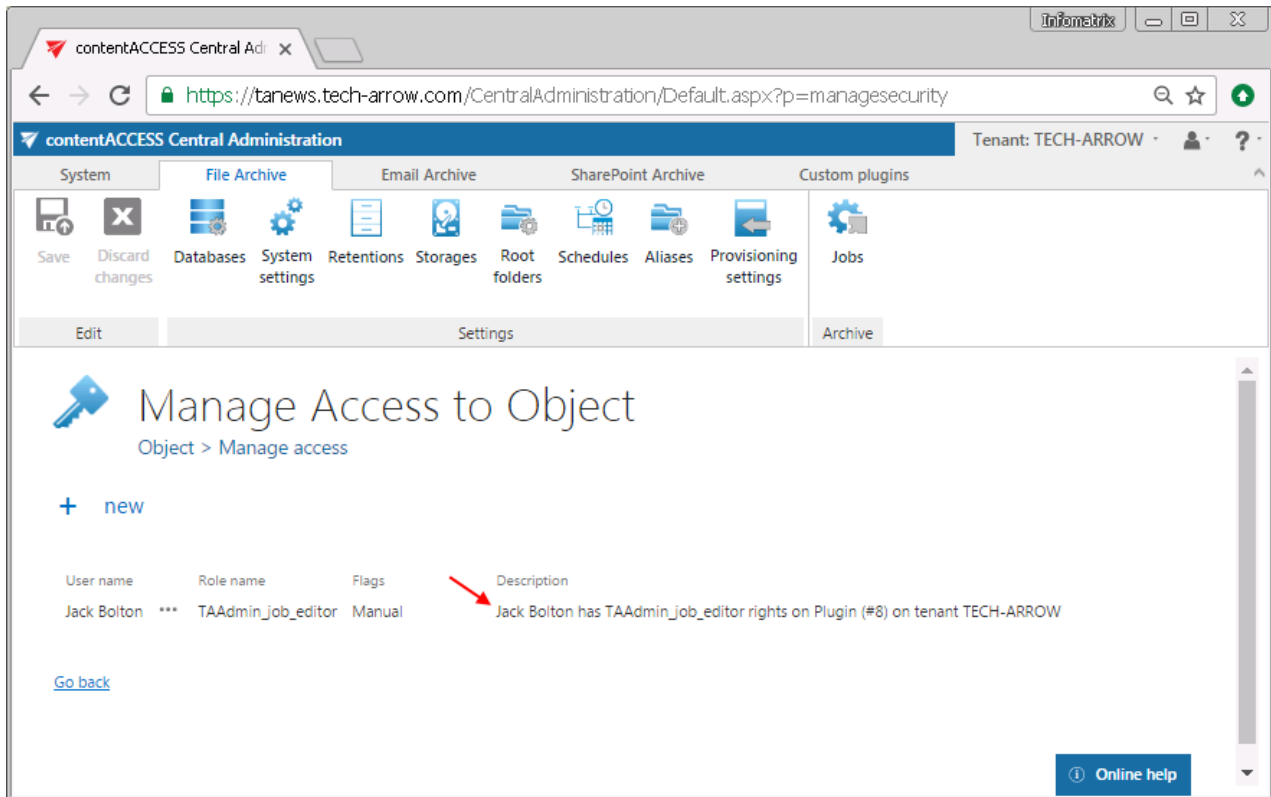


On the “Manage access to Object” page, we select the “TAdmin\_job\_editor” role, and assign it to our existing user, to Jack Bolton:





Our Jack Bolton user has now rights to edit the “Archive job” on the TECH-ARROW tenant, but he cannot delete this job from the list.



## Login providers

A contentACCESS user may log into contentACCESS (and/or into client application “contentWEB”) with an external user account (using third-party providers) or internal (“Forms” provider) user account.

The following external authentication providers are available in contentACCESS:

- Windows
- Azure
- Google
- Datengut
- Perceptive

If you use a third party provider then this third party authentication provider will authenticate you when logging into the system. It’s also possible to set Azure, Google and Windows providers as automated single sign on providers (column option Auto login), and to use them as default providers



to sign in to the Central Administration (read more [here](#)) and/or into contentWEB (read more [here](#)). The configuration steps required for third-party providers are detailed in the External login provider configuration chapter. The **Forms** type requires to enter credentials when logging in.

**When setting up a user account, a login type must be always selected. Users can only use login types which have been enabled in “Login providers”.** “Windows” and “Forms” login providers are enabled by default. Other providers are available only after they are configured. The configuration settings of a login provider allow to define, if the login provider can be used to log in to the contentACCESS Central Administration only, to contentWEB only, or to both of them.

### Login providers' context menu options

The list of enabled providers can be found on the **Login providers** page. To open it, navigate to the **System** tab → **Security** group on the ribbon and click on the **Login providers** button.

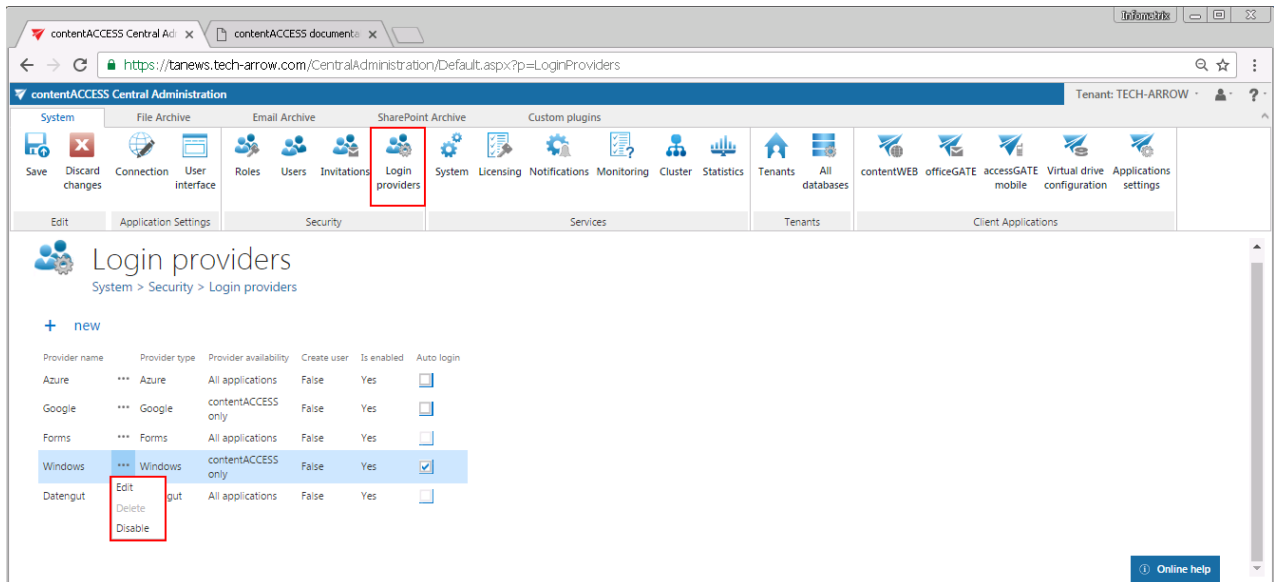
To edit or enable/disable/delete providers, open its context menu on the **Logins provider** page, and click on the desired item in the dropdown list.

- Option “edit”: Use this option to edit/modify the current login provider configurations. Here you can set the provider availability, i.e. to define, if the appropriate login provider can be used to log in to:
  - contentACCESS Central administration only – option “contentACCESS only”
  - contentWEB only– option “contentWEB only”
  - both to contentACCESS and to contentWEB – option “All applications”

The screenshot shows a dialog box titled "Login providers" with a close button (X) in the top right corner. Below the title is a section labeled "Login Provider settings". There are three input fields: "Provider name" with the value "Windows", "Provider type" with a dropdown menu showing "Windows", and "Provider availability" with a dropdown menu. The dropdown menu for "Provider availability" is open, showing the following options: "contentACCESS only" (highlighted in blue), "All applications", "contentWEB only", and "Client applications only". A "Cancel" button is located at the bottom right of the dialog box.

- Option “disable”: If a provider is disabled, it will not be possible to log in to contentACCESS with it. For security reasons, the user can't disable “Forms” authentication.

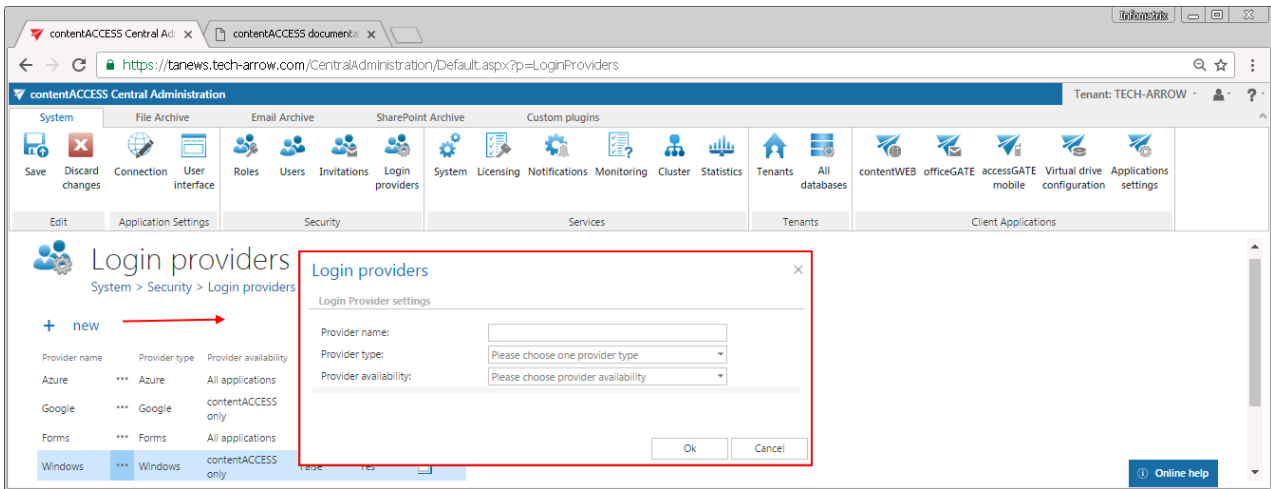
- Option “delete”: For security reasons, the user can't delete “Windows” and “Forms” login providers. Those login providers, which are already associated with a user login, also can't be deleted (only can be disabled).



## External login provider configuration

To configure a new login provider, click on **+new** on the **Logins provider** page. The **Login providers** dialog will open which requires to:

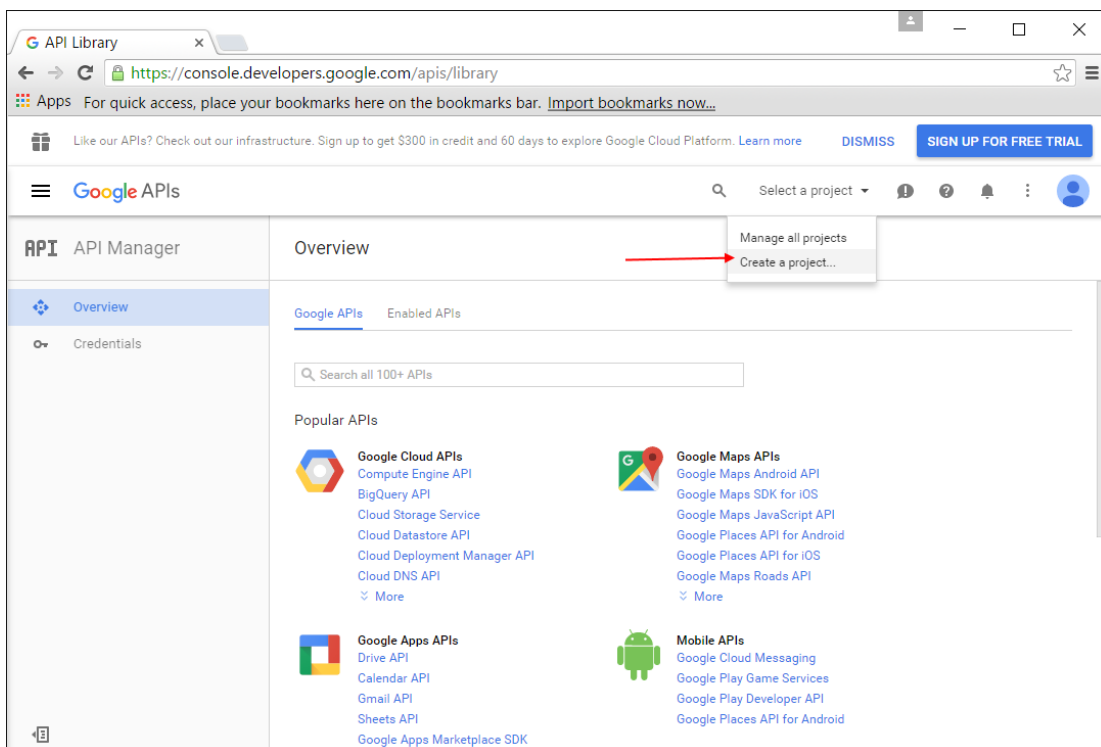
- name the provider,
- choose a supported external provider from the **Provider type** list,
- set the provider availability – here you may set the applications that will use the given provider
- fill the required fields – detailed below for the provider types
- and click on **OK** to save the settings.



### Configuring Google OAuth:

contentACCESS supports Google authentication as well. Would you like to use it, you need to apply for a Client ID and Client Secret by registering the contentACCESS application on the **Google Developers Console** page first. Open the page, sign in with your Google account and follow these steps:

- 1) Click **“Create a project”** in the upper right **“Select a project”** menu:



2) Name your project and create it:

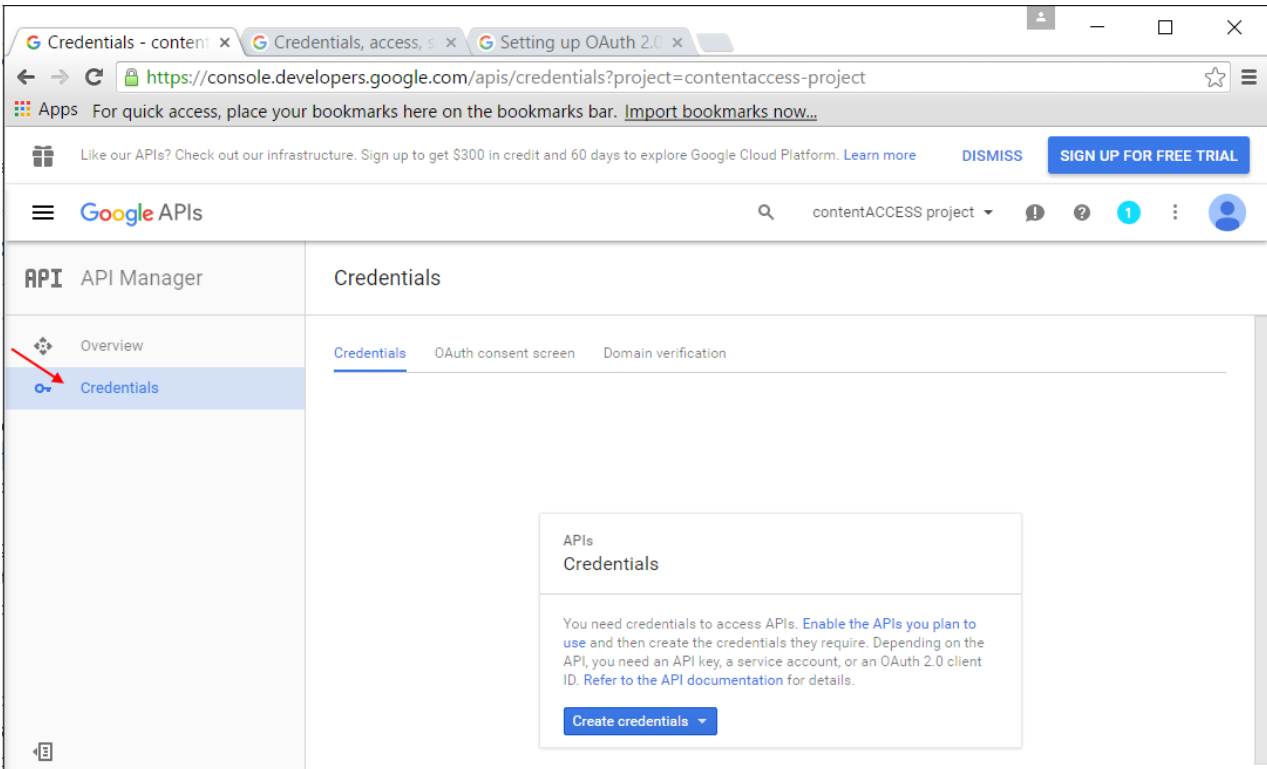
New Project

Project name <sup>?</sup>

Your project ID will be contentaccess-project <sup>?</sup> [Edit](#)

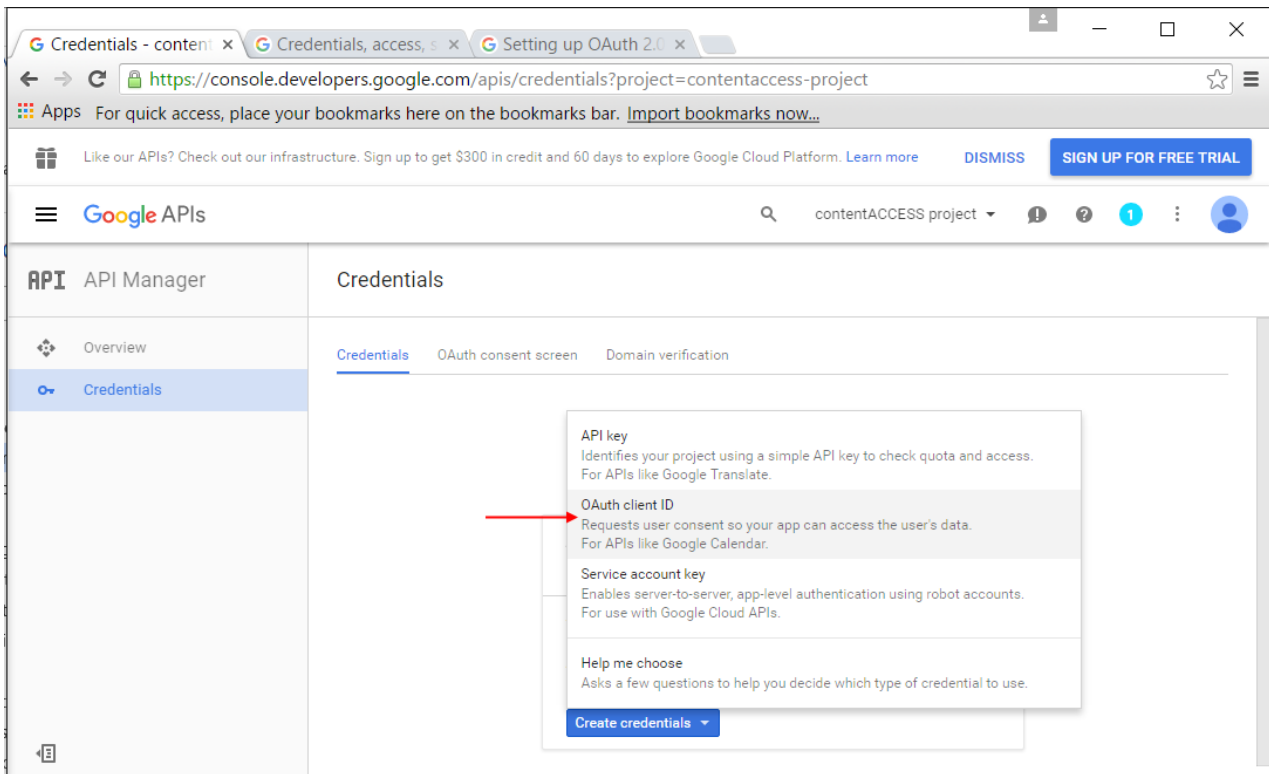
[Show advanced options...](#)

3) If the API Manager page isn't already open, open the console menu and select "API manager".  
On the left, click "Credentials".

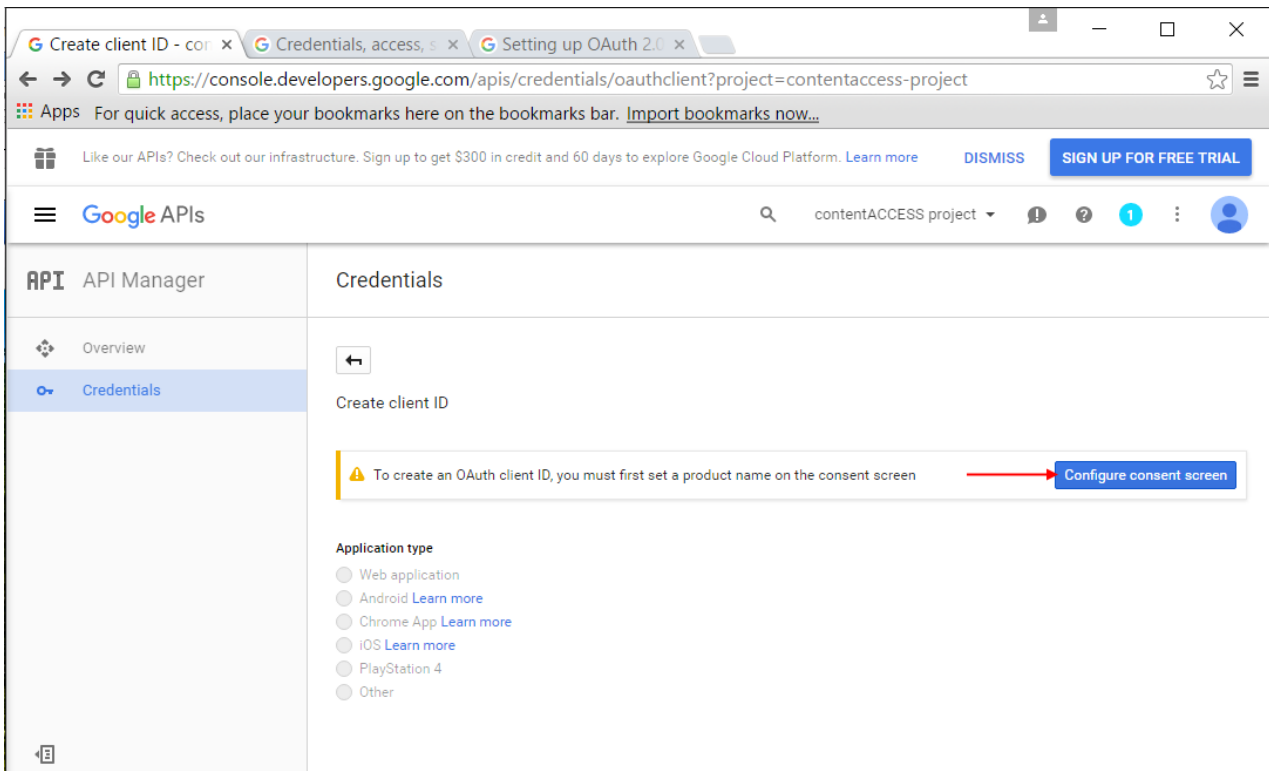


The screenshot shows the Google Cloud Platform API Manager interface. The browser address bar indicates the URL is <https://console.developers.google.com/apis/credentials?project=contentaccess-project>. The left sidebar shows the 'API Manager' menu with 'Credentials' selected. The main content area displays the 'Credentials' page, which includes a 'Create credentials' button.

4) Click "Create credentials", then select "OAuth client ID".

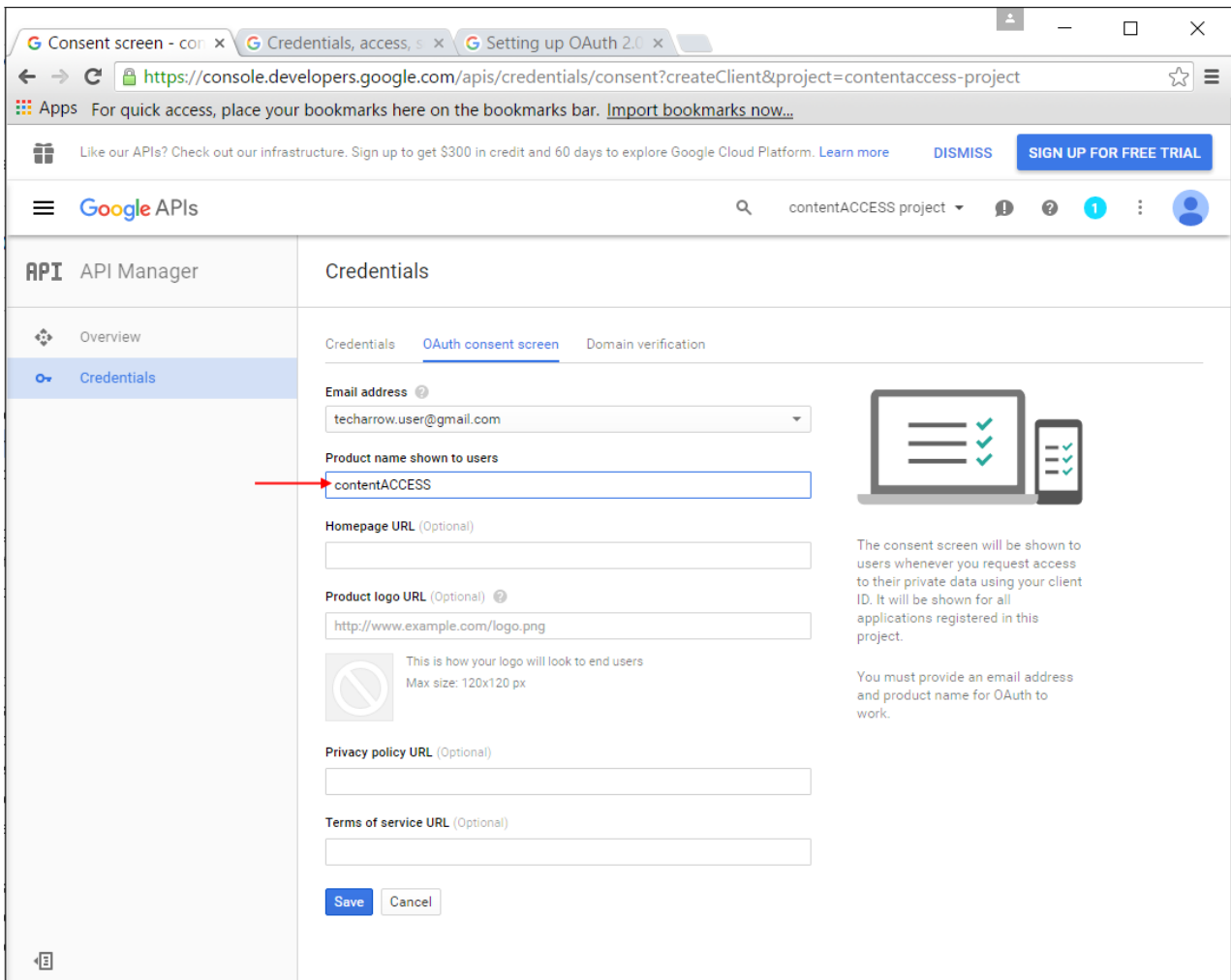


5) If this is your first time creating a client ID, configure your consent screen by clicking **“Configure consent screen”**.

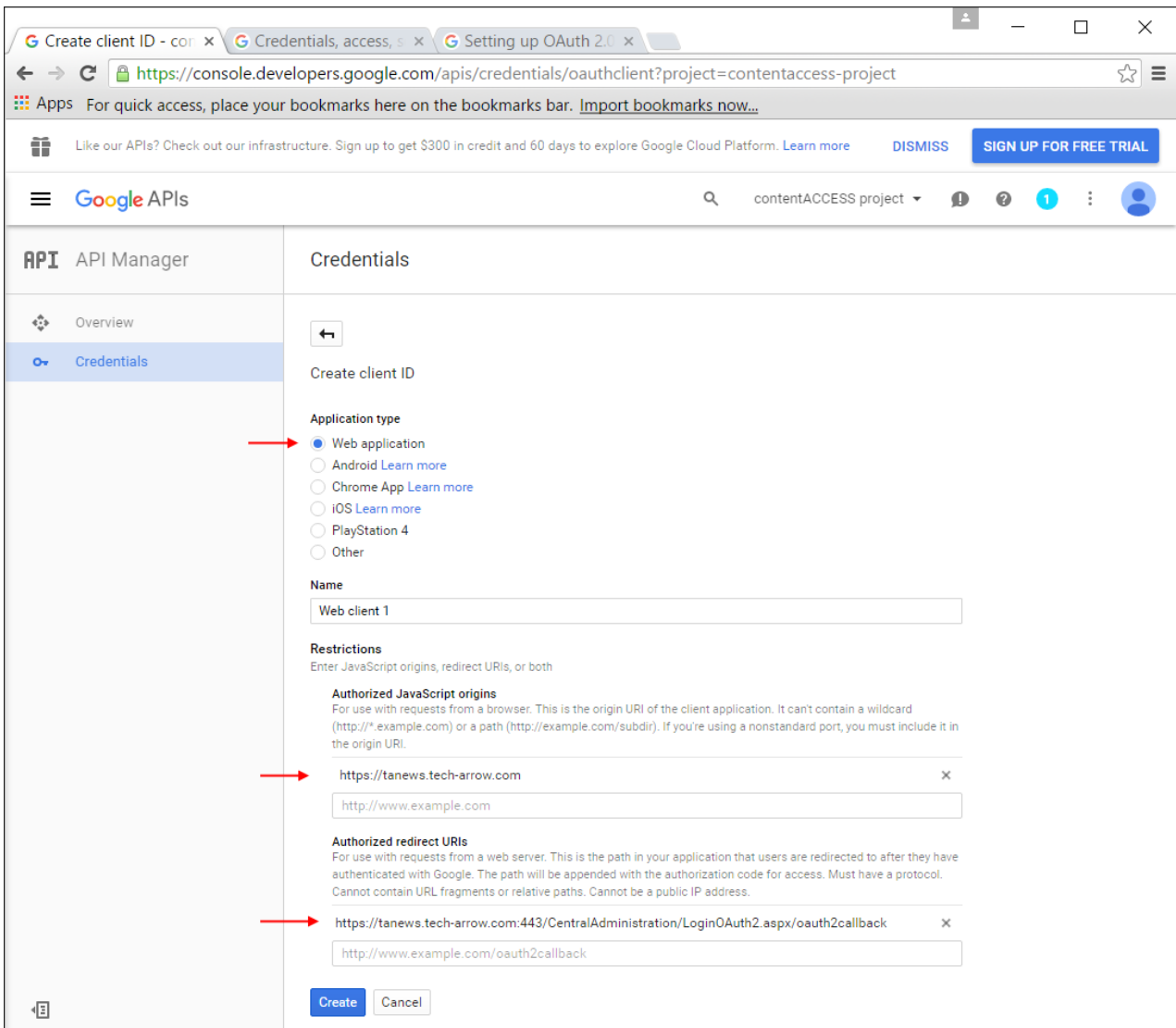


6) Enter the product name and fill the optional fields if you want. Save your settings.

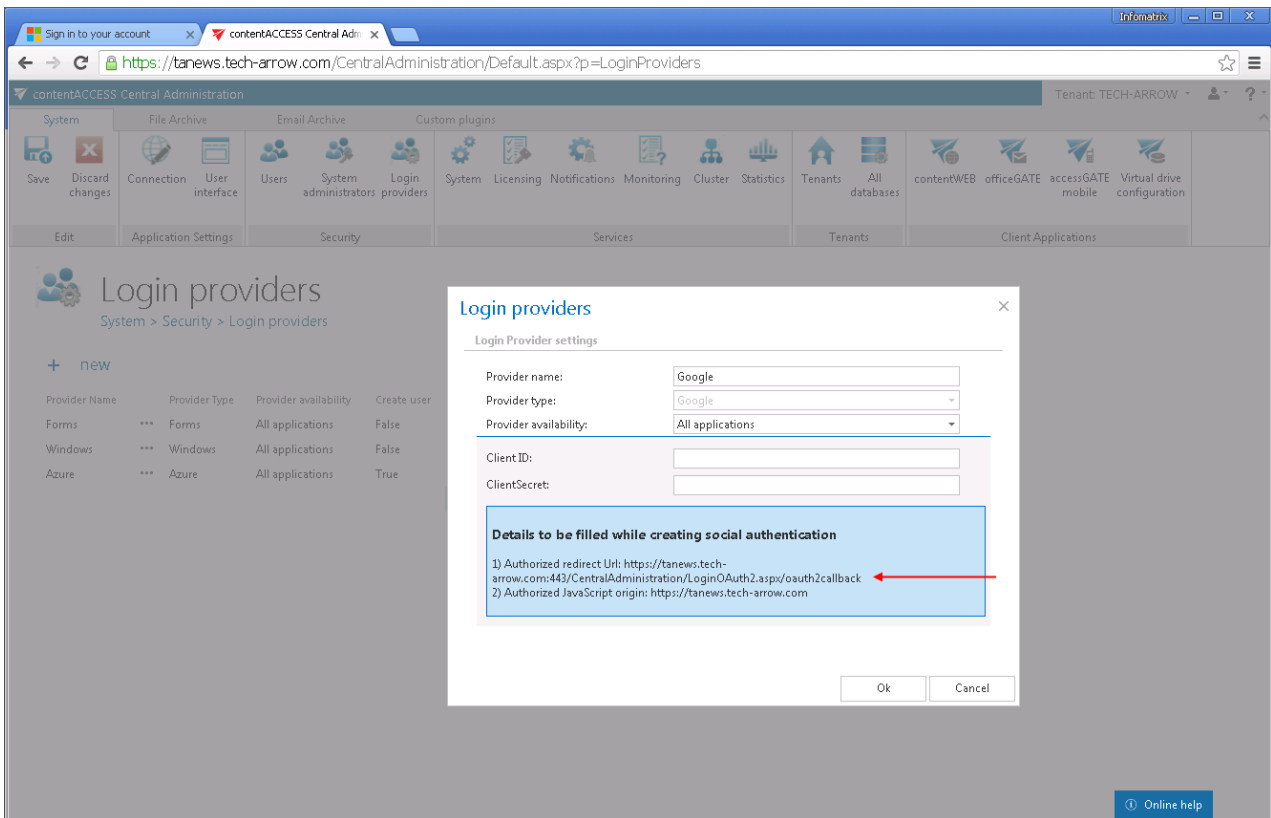




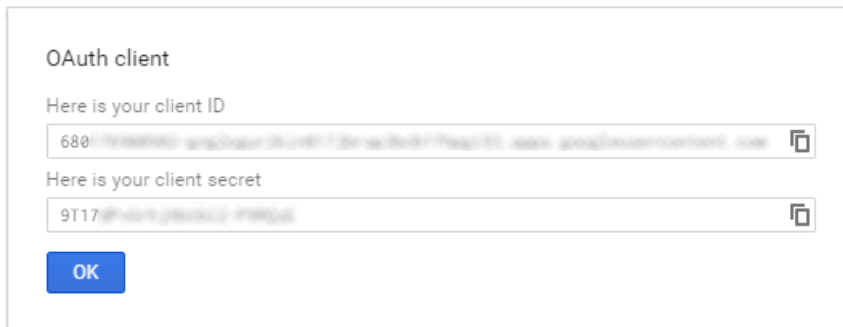
7) Select the WEB application type for your project and enter JavaScript Origins, redirect URLs or both to the appropriate text fields.



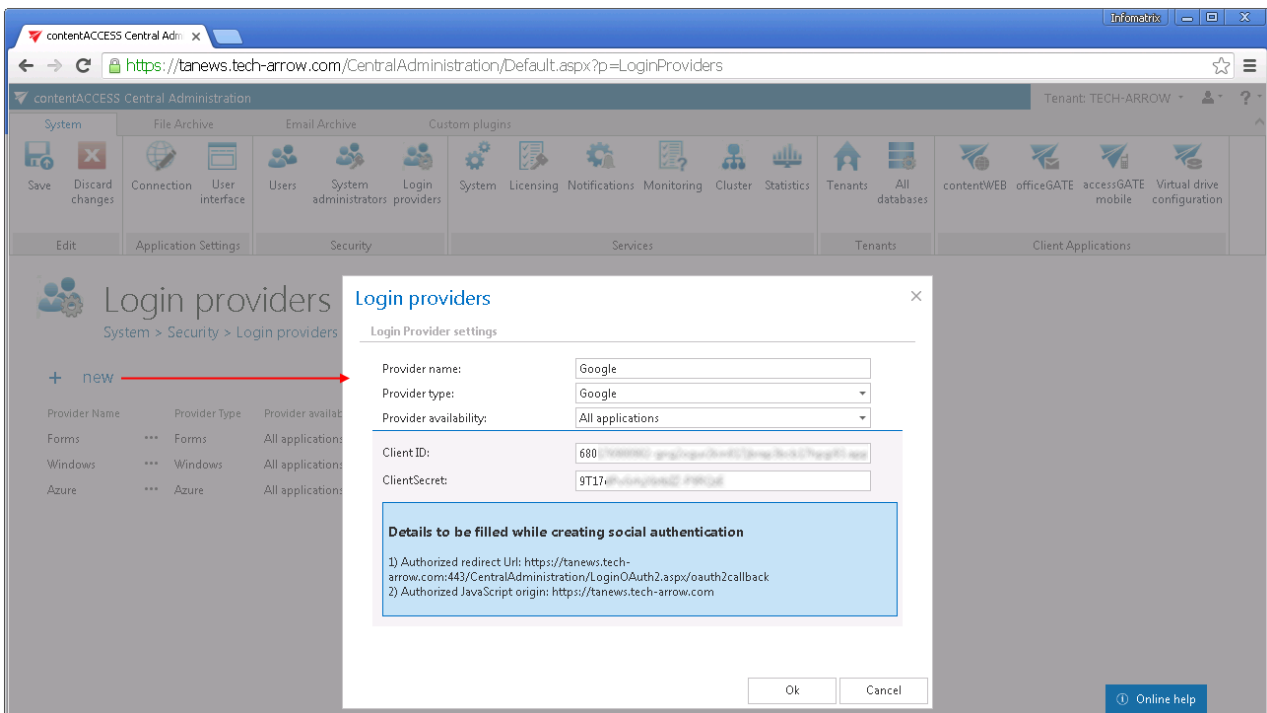
Use the URLs accessible in the Google login provider's window in contentACCESS Central Administration, like in the blue frame on the picture below.



8) Click “Create” on the Google developers console and the Client ID and Client Secret will be created automatically. Save these values somewhere on your computer:



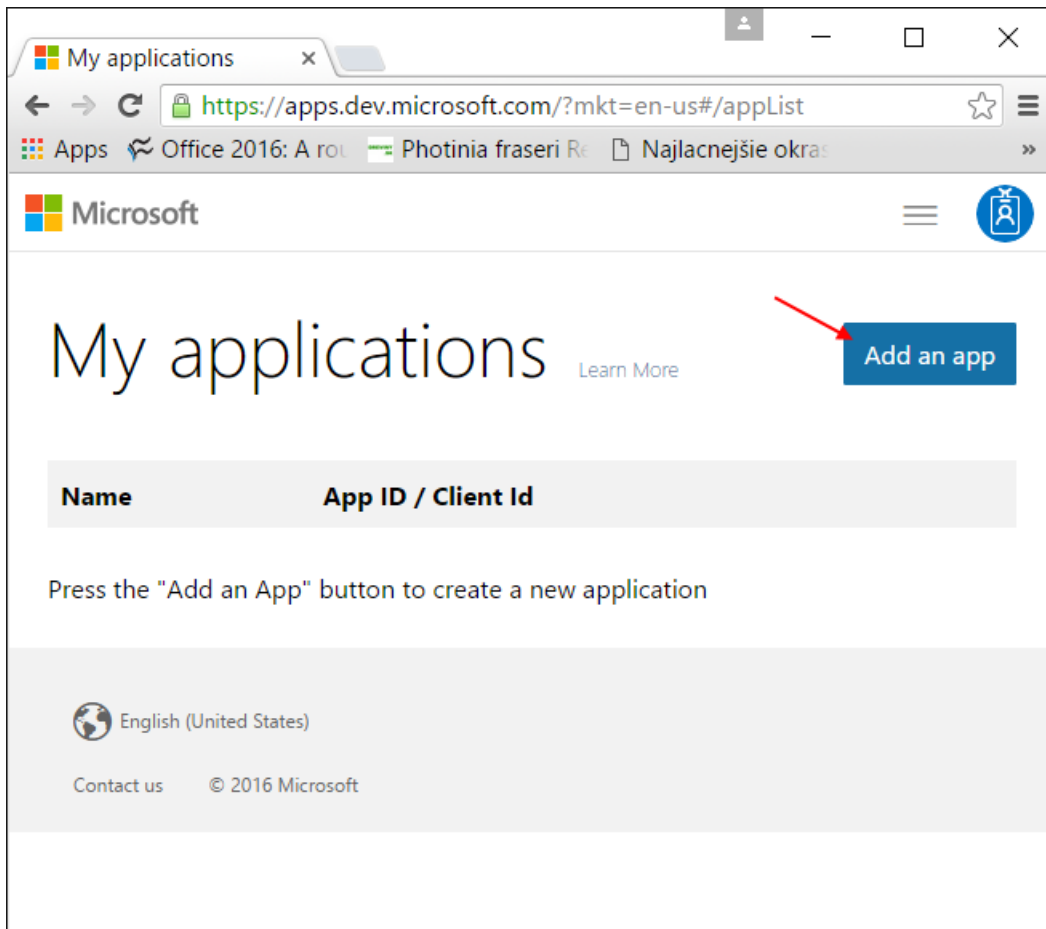
Now configure your **Login provider** in contentACCESS Central Administration. Open the **Login providers** page (**System** → **Security** → **Login providers**), click here on “+new”. In the **Login providers** window name your provider, select **Google** provider type and choose the application that should use this authentication type. Further enter the **Client ID** and **Client Secret** from step 8) to the respective text fields, and click **OK**.



### Configuring Azure login provider:

contentACCESS supports log in using your Microsoft account. The first thing you need to do is to register an application (contentACCESS) under your Microsoft account. We used [jack.bolton@tech-arrow.com](mailto:jack.bolton@tech-arrow.com) personal account for the registration in our use case below.

- 1) Go to the [Windows Live application management site](#) and sign in.
- 2) Click “Add an app” and name your application. The name that you specify should contain only alphanumeric characters and cannot be changed after registration is complete.

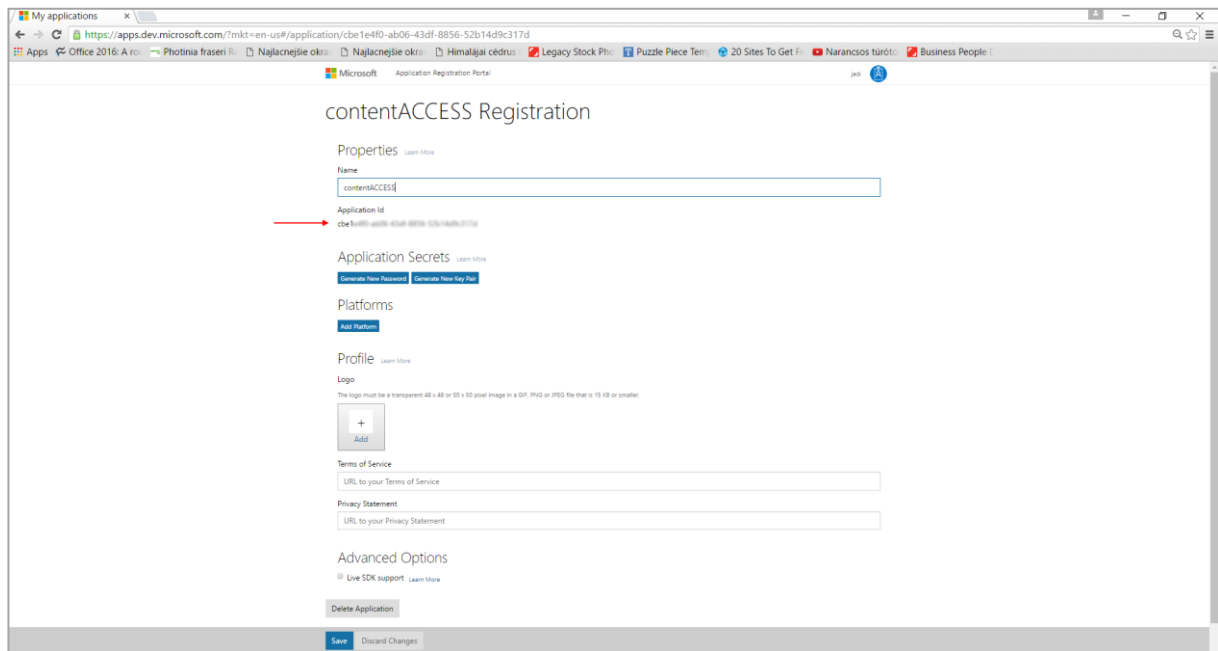


## New Application Registration

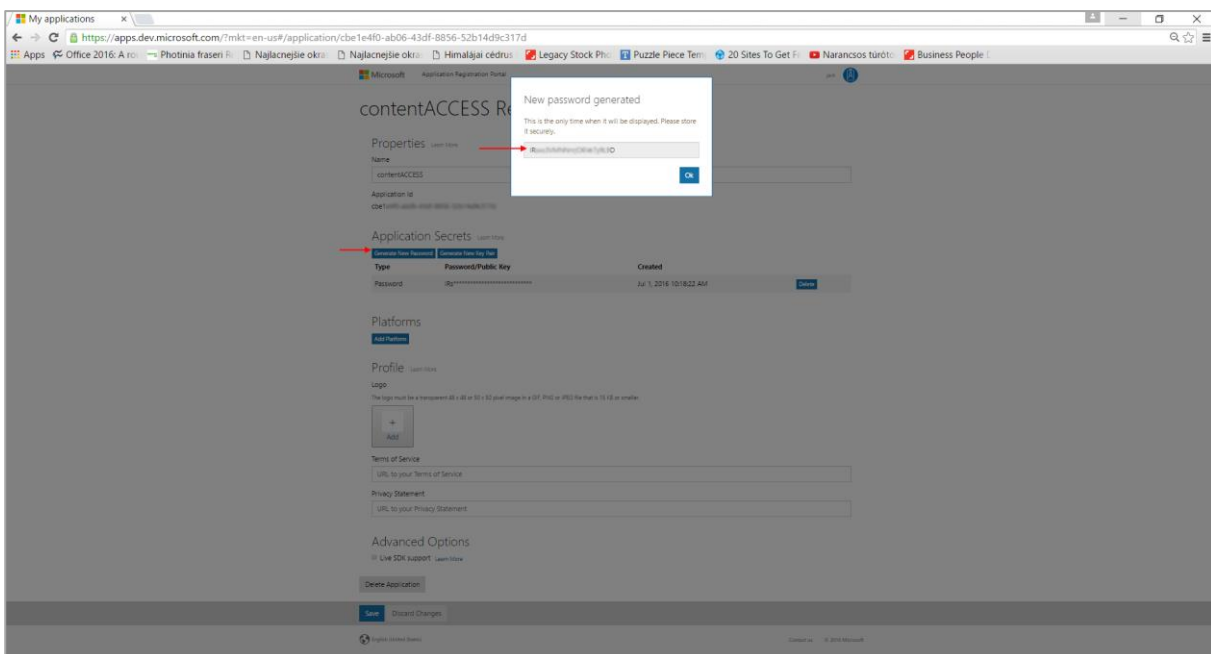
Name

[Create application](#) [Cancel](#)

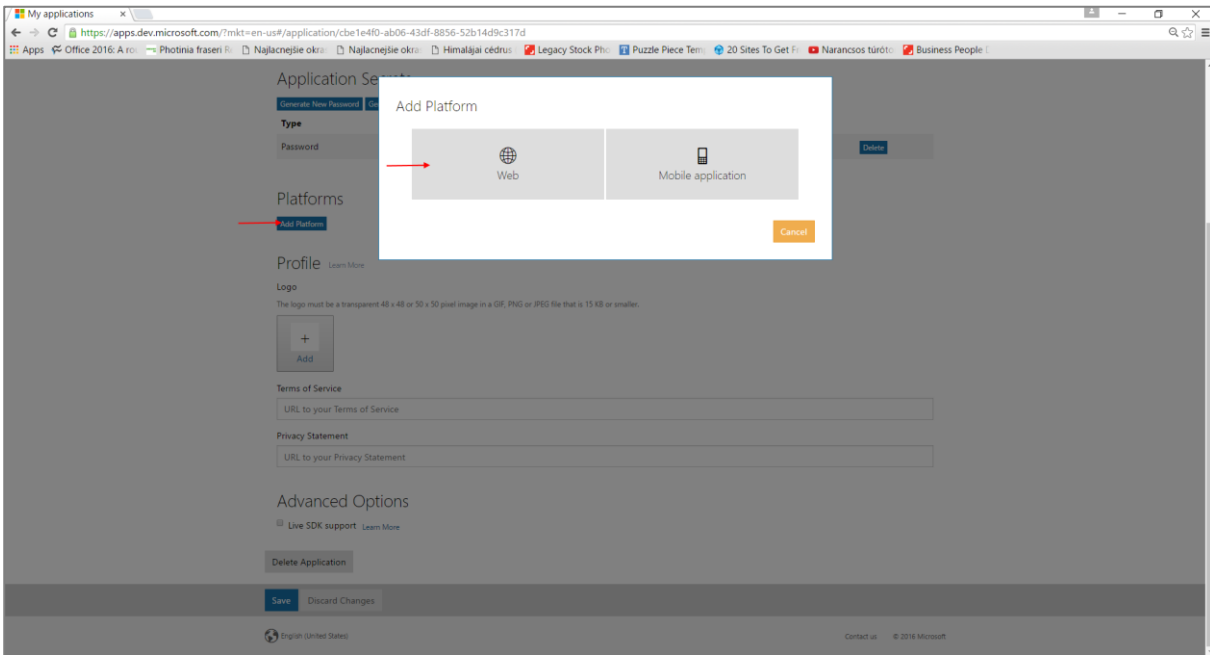
- 3) The **Application ID** will be later used as the **Client ID** in your application (in the Login provider's window of contentACCESS Central Administration).



4) Click option **Generate New Password**. This will be the **ClientSecret** in your application. You should record this key, but we recommend that you do not store it in the same location as its corresponding client ID:



5) Choose your application platform: Click **"Add platform"** and choose **"Web"**.

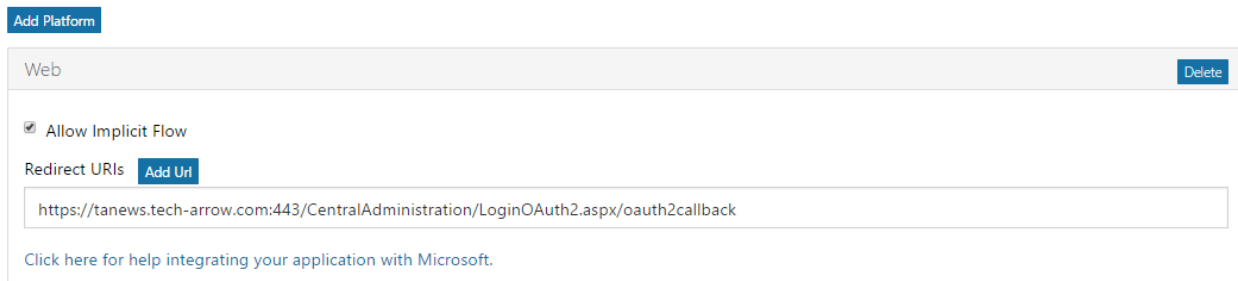


6) Now you can specify the redirect URIs – ( more with clicking on the **Add Url** button)  
 Use the URL displayed in the Login provider’s window of the contentACCESS Central Administration.

Sample: [https://\[contentACCESS Server:Port Number\]/CentralAdministration/LoginOAuth2.aspx/oauth2callback](https://[contentACCESS Server:Port Number]/CentralAdministration/LoginOAuth2.aspx/oauth2callback)

**Important:** Microsoft OAuth requires to use secure protocol – HTTPS – for the contentACCESS Central Administration URL.

### Platforms



7) Upload your application logo, add terms of services and Privacy Statement. If you want to use the personal accounts too, you need to check the Live SDK support. Save your changes.

## Profile [Learn More](#)

**Logo**

The logo must be a transparent 48 x 48 or 50 x 50 pixel image in a GIF, PNG or JPEG file that is 15 KB or smaller.

+  
Add

**Terms of Service**

**Privacy Statement**

## Advanced Options

**Live SDK support** [Learn More](#)

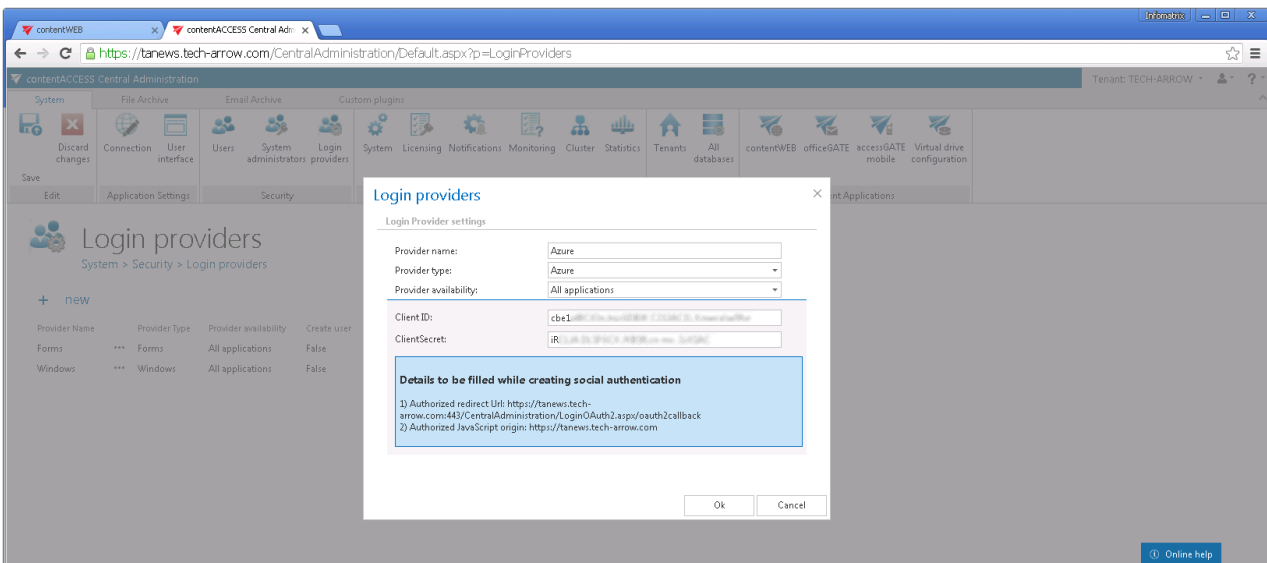
Delete Application

Save
Discard Changes
There are unsaved changes.

English (United States)
Contact us © 2016 Microsoft

Now configure the Azure login provider in the contentACCESS Central Administration.

- 8) Open the **Login providers** page (System → Security → Login providers) and click **+new**. Name your provider, select the „Azure“ provider type and specify the applications that will use the Azure login (All applications/contentACCESS only/contentWEB only/Client applications only). Enter the Client ID and ClientSecret from steps 3) and 4) above and click „OK“.







With this step, this new login provider configuration has been enabled in contentACCESS. A user can use the configured login provider if this login type is associated with him. In the following subchapter we will learn how to associate a login type with a user.

### Associating an enabled provider with a user login:

It depends on the provider type if it supports multiple configurations or not. You can create only one **Windows** and **Forms** login provider configuration for a user login, but can create multiple e.g. for **Azure**.

Once the desired provider is enabled and configured, you have to create a new user login to the user, who will use the provider. Navigate to **System** → **Security** → **Users** button on the ribbon. Click on it, and the **Users** page will open. Select the desired user and double click on it.

The **User details** page will open. Click on **+new** under **User logins** section.

The screenshot displays the 'User details' page in the contentACCESS Central Administration interface. The breadcrumb trail is 'System > Security > Users > User details'. The page is divided into several sections:

- User details:** Shows 'Display name: Administrator', 'Is system admin: Yes', and 'Status: Online'.
- Security information:** A table listing user roles and flags.
 

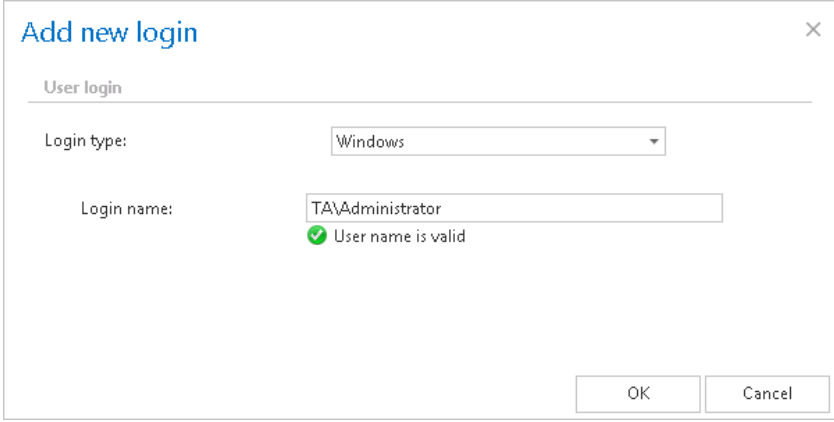
User name	Role name	Flags	Description
Administrator	System administrator	Manual	Administrator has System administrator rights on System (All items) on tenant All tenants
Administrator	System administrator	Manual	Administrator has System administrator rights on Tenant Unknown '0'
- User logins:** This section is highlighted. It contains a '+ new' button with a red arrow pointing to it. Below it is a table of existing logins.
 

Login type	Login name	External id
Forms	system	
- User login sessions:** A table showing active sessions.
 

Login type	Login name	Last access date	Expiration
Forms	system	11/14/2016 2:50:30 PM	11/14/2016 3:50:30 PM

At the bottom right, there is an 'Online help' button.

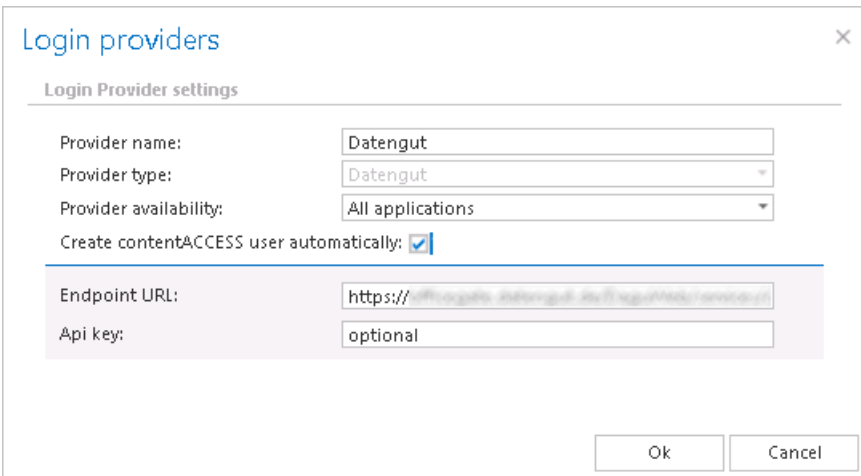
In the **Add new login** dialog select the desired provider configuration from the **Login type:** dropdown list, fill in the required credentials and click **OK**.



The external provider gets available in the **login window of the selected applications**.

### contentACCESS users in third party systems

Datengut Baueakte and Perceptive DMS can be interconnected with officeGATE, which is an MS Outlook add-in used for collaborating on documents residing in different data management systems (DMS). officeGATE is a client application of contentACCESS, and it requires a contentACCESS user to sign in to the particular data management system that is interconnected with contentACCESS. To simplify this login process into these third party systems (DMS like Datengut, Perceptive), it is possible to automatically create a contentACCESS user from the particular provider's configuration dialog, in contentACCESS Central Administration. This ensures single sign on into the particular DMS providers in officeGATE.



To achieve this, check the **“Create contentACCESS user automatically”** checkbox (and fill the required credentials). When you are logging in to Datengut or Perceptive DMS in officeGATE with




your personal account, the contentACCESS user will be created automatically at the moment of logging in.

If the “**Create contentACCESS user automatically**” function is not enabled in the provider’s configuration dialog, then the administrator is forced to create contentACCESS users manually. Automated user creation helps to save much time for the administrator, as he does not need to create contentACCESS users for each user of the third party application (**like Datengut or Perceptive**).



## System

The **System** page (**System** → **Services** →  **System**) consists of 7 configuration sections: **General settings**, **User search settings**, **Database settings**, **Proxy settings**, **External accessibility settings**, **Active directory integration settings** and **Cluster settings**. The first two sections are configured by the setup by default.



■ **General settings**

If the 1<sup>st</sup> checkbox is checked it means that the system is configured, thus connection to SQL Server database is well configured and the plugins directory is pointing to a correct folder. Until this checkbox is not checked, the contentACCESS will run in a so called “zombie” mode.

**Plugins directory** textbox contains the path where the processing plugins are stored on the server.

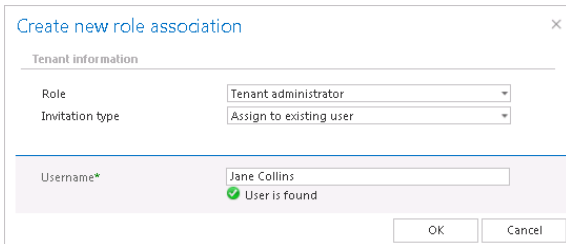
#### ▪ User search settings

By default this option is turned off. The feature is used to disable / enable user searching when assigning

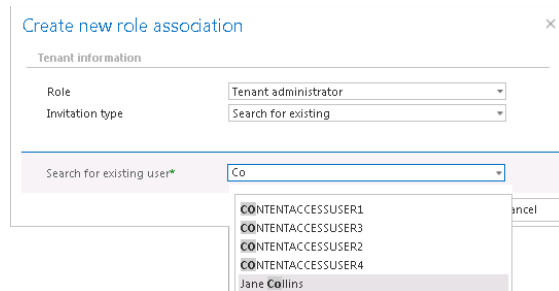
- tenant administrator rights,
- File Archive access rights
- access rights to a certain Exchange mailboxes
- access rights to jobs, schedulers, retentions, databases, root connections, email archive shortcuts, storages, file archive aliases

for a contentACCESS user **already existing** in contentACCESS.

If the option is **turned off**, all the existing contentACCESS users are listed in the respective dialog when assigning the access rights (like on Screenshot B below). If the option is turned on, then the rights can be granted only in case if the correct contentACCESS **User name** is manually entered in the dialog (like on Screenshot A below). This configuration option is used if you have contentACCESS in a hosted environment and you want to hide the users of one customer from the users of other customer.



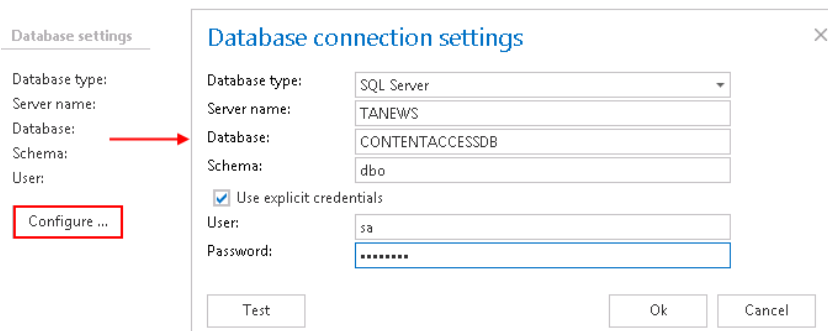
*Screenshot A: Granting tenant administrator rights for Jane Collins if user searching is **disabled***



*Screenshot B: Granting tenant administrator rights for Jane Collins if user searching is **enabled***

#### ▪ Database settings

Under **Database settings** the system database configurations can be found, which are filled in by the setup by default. If you need to edit these settings (not recommended), click on the **Configure** button and fill the fields in the **Database connection settings** window:



By default contentACCESS is connected to the database with the credentials of the user, under whom contentACCESS is running. If you want to use SQL credentials which differ from these credentials data, then check checkbox **Use explicit credentials** and enter the **User** and **Password** that you want to use for connecting to database. You can also run a test connection with the **Test** button in the left corner of the window.

#### ▪ Proxy settings

In this section the user can configure (or change already configured) URL and user credentials to the proxy server. The licensing component will use this proxy in order to reach the licensing server. The user has multiple options. He can:

- **Use default proxy settings** – based on the Proxy settings on the contentACCESS server machine (**Control panel** → **Internet options** → **Connection tab** → **LAN settings** → **Proxy server** section) or
- **Use explicit proxy server settings** (explicit proxy server URL and user)
- “**Do not use proxy**” option is used to disable proxy usage.

#### ▪ External accessibility settings

Under **Retrieve server FQDN**: enter the externally accessible, fully qualified domain name for the contentACCESS proxy server into the Server FQDN textbox (in case the contentACCESS proxy is not installed, then the domain name of contentACCESS server need to be entered here). The contentACCESS proxy server ensures the communication between the user and the contentACCESS, and forwards user requests to the contentACCESS server. These external accessibility settings are used by the shortcut links in the Email Archive system. **If you have contentACCESS Email Archive and/or accessGATE Mobile, then this setting is mandatory. In all other cases this setting is also highly recommended.**


**Important:** If the contentACCESS Server ID is changed, then the HTML shortcuts pointing to the archived mailbox items will not work. The solution is to update the contentACCESS Server ID in the Outlook forms, too. For more information refer to the [Outlook form installation manual](#).

Under **Retrieve server FQDN** is the option to enable link security:

#### External accessibility settings

Retrieve server FQDN:  ://  :

Enter an externally accessible alias for the contentACCESS server. This value is used for shortcut links too.

Enable link security:  

Central login:  ://  :

Provide necessary information, where central login is deployed.

If you would like to protect the links in your mailbox pointing to archived items from unauthorized access, it is recommended to have this option turned on.

If this option is checked and you try to download some files, you will need to authenticate via CentralLogin. That means if you click on a link (download email, attachment, shared files), at first you will get to login page, then after successful login you can download your file.

The following parts are affected:

- MailApp for archivation
- [ShareApp](#) links
- Email shortcuts
- [contentACCESS Outlook add-in](#)
- All download links for files, emails, attachments

**Under Central login:** the Central login page URL and communication port configurations (previously specified in the setup package by installing the product) are accessible here. The package writes here/reads from here the Central login page URL if it's changed. Read more in [Installation of contentACCESS](#).

- **Active directory integration settings**





Some contentACCESS functionalities [like contentWEB access for mailboxes or Virtual Drive] require LDAP connection. Enter the required data and the user/administrator credentials into the user name and password textboxes over which you would like to connect to the active directory. It is not necessary to fill in these fields in case that you use an online Exchange server.

#### ▪ Cluster settings

contentACCESS supports clustering, which enables to run contentACCESS and its jobs on multiple nodes, and thus improve performance. To adjust default cluster settings, scroll down on the **System** page. At the bottom of page, the following can be adjusted:

**Node update interval (sec):** in time intervals, which is set here (in our case in every 30 seconds) each node will “ping” the central database and will update his state in it.

**Node auto logoff time (sec):** if an input has not been received by a node during the time period set here, the node will automatically switch to offline.

**Events retention time (sec):** events (i.e. commands to run a job, added/changed/removed job configurations, changes in already set schedulers etc.) that are shared and distributed between nodes will be stored in the database during this retention time.

**Events distribution interval (sec):** events to be distributed between nodes are written into the system database. These events are periodically checked by each node in time periods, which is set here.

**Task auto disable time (sec):** if any failure occurred when running of a node (server shutdown, hardware problems etc.), the task(s) performed by this specific node (job running, retrieving contents etc.) will be automatically disabled within the time set here.

**Stop task after ping failures (count):** the value which is set here will determine, after how many ping failures will be the task stopped. After the ping failure count reaches this value, all the tasks running on a node will be stopped.

**Node selection strategy:** the administrator can select here, how the nodes will be automatically selected for processing. A node that is picked up for a task can be selected according to one of these strategies:

“First wins” strategy – using this strategy the first running node will be picked for the task.




"Balanced" strategy – by this strategy type the CPU- and memory usage, and the number of running jobs will be considered before picking up the node for a task.

**Default node role:** the administrator can select here the default role type of a node added to the system. It is recommended to set here "Universal", i.e. when the node can be used both for processing and retrieving data. Later on, the role type of a node can be adjusted with navigating to **System** → **Services** → **Cluster** on the Central Administration ribbon, in the nodes' grid, from the nodes' context menu.

**Enabled by default:** by default all nodes are enabled (the checkbox is checked), i.e. if contentACCESS service starts up, the nodes start the processing (to run jobs, publish models etc.), too. In case the user will install contentACCESS components on next nodes, it is recommended to disable the nodes (uncheck this checkbox). The reason for this is, that a node must be fully configured before he picks up any job for processing. Enabled status of a node is marked with green color, disabled status is signed with yellow color in the nodes' grid.

## Licensing

A new license can be activated on the **Licensing** page, which is reachable with navigating to **System** → **Services** →  **Licensing** button on the ribbon. The administrator can also update the telemetry job (further described in chapter [Statistics](#)) on this page. The license restrictions and the current usage may be checked in the corresponding sections of the **Licensing** page.

The page is divided into the following sections:

- **General information** – the actually used license details are shown here. Here you can also check the date when your license has been activated and the expiration date.
- **Customer information** – displays information about the owner of the license
- **Contact information** – the contact person responsible for software-related issues, usually a contact person between the TECH-ARROW and the customer
- **System limitations** – in this section you may see the plugins and storages available in the activated license, and the maximally allowed tenant and node count (currently used count is in brackets)

The contentACCESS license system allows to set limits for the File archive plugins and for the Email archive plugins. The user will be allowed to archive emails and files in a given range only,



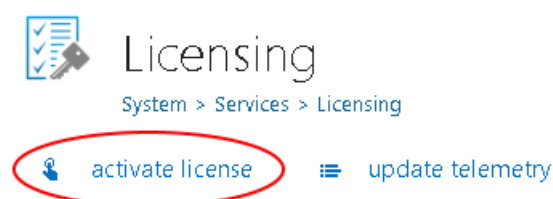
which is defined in the respective license. The currently archived item count and size is displayed in brackets.

- **Email archive limitations** – the maximally allowed and currently archived mailbox count (both active and deactivated mailboxes, read more [here](#)), email(s) count and size is displayed here
- **File archive limitations** – the maximally allowed and currently archived root folder count, file(s) count and size is displayed here

The screenshot shows the 'Licensing' page in the contentACCESS Central Administration interface. The 'Licensing' menu item in the top navigation bar is highlighted with a red box. Below the navigation, the 'Licensing' page is displayed with various sections: General information, Customer information, Contact information, System limitations, Email archive limitations, and File archive limitations. The 'activate license' button is visible below the breadcrumbs.

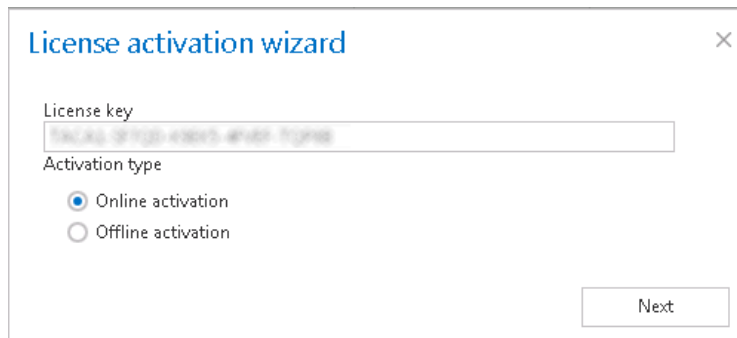
## How to activate your license key

If you want to activate a new license click on option “[activate license](#)” below the breadcrumbs.



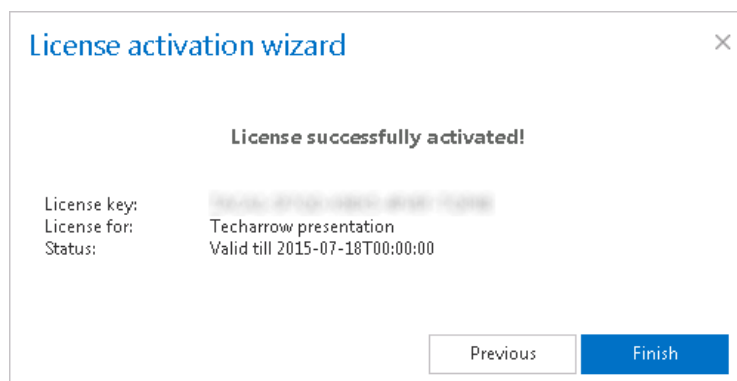


Insert your license key into the **License key** textbox of **License activation wizard** dialog and choose from 2 methods of license activation and follow the steps described below:



The image shows a dialog box titled "License activation wizard". It contains a text input field for "License key" with a blurred license key. Below it, under "Activation type", there are two radio buttons: "Online activation" (which is selected) and "Offline activation". A "Next" button is located at the bottom right of the dialog.

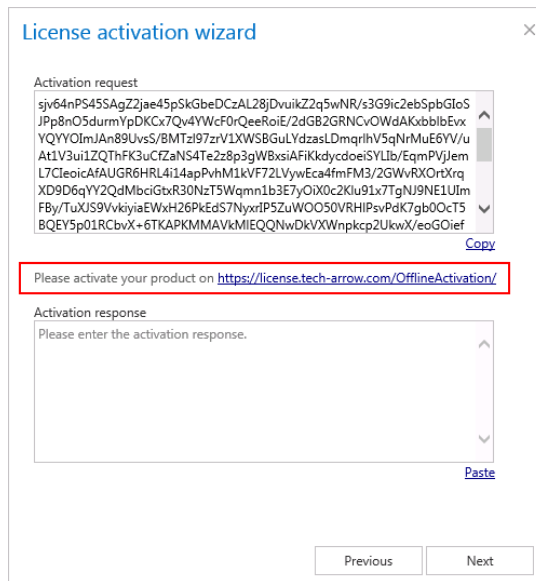
1) **Online activation** (requires internet access on the contentACCESS server) – click **Next** → **Finish** and your license will be activated automatically.



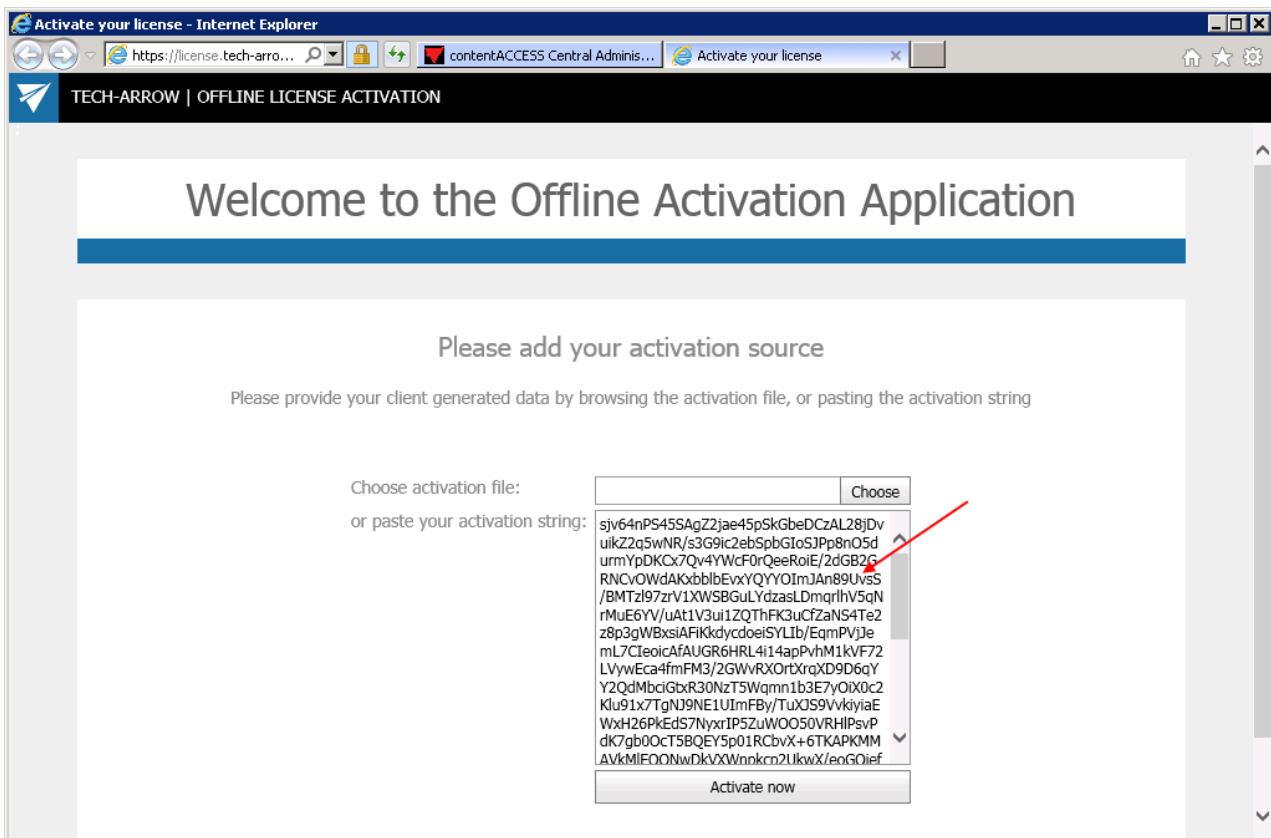
The image shows the "License activation wizard" dialog box after successful activation. The title is "License activation wizard". The main text says "License successfully activated!". Below this, it displays the license details: "License key:" followed by a blurred key, "License for:" followed by "Techarrow presentation", and "Status:" followed by "Valid till 2015-07-18T00:00:00". At the bottom, there are two buttons: "Previous" and "Finish".

2) **Offline activation** (doesn't require internet access on the contentACCESS server)

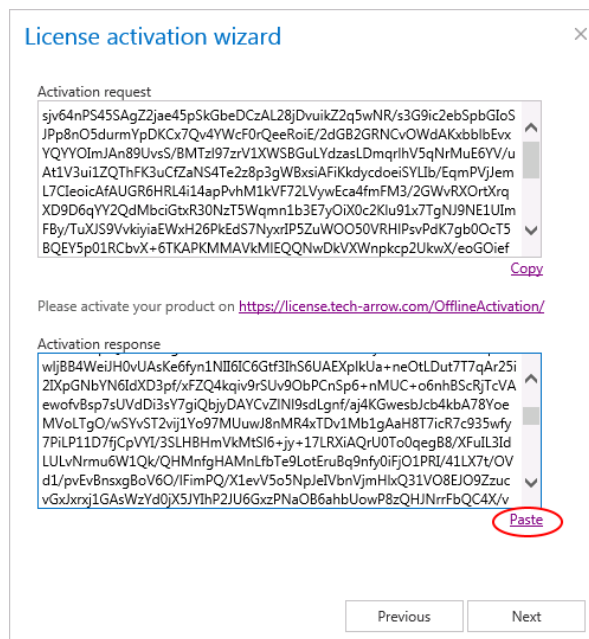
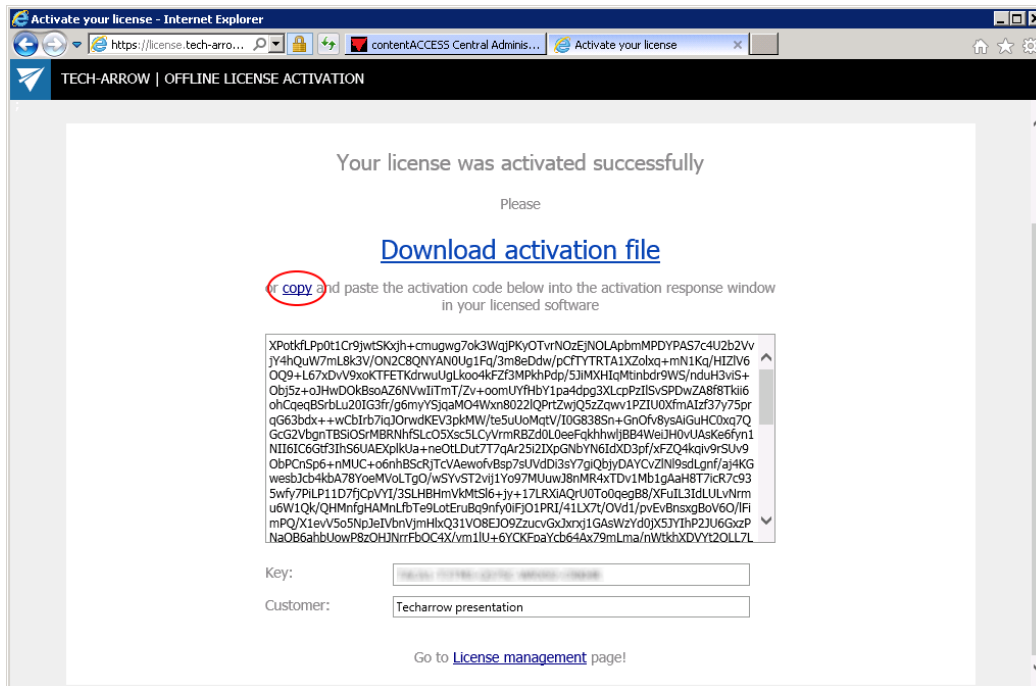
a) Open the offline license activation page of contentACCESS using the link in the dialog:



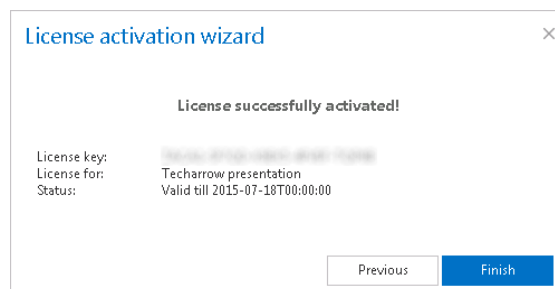
- b) Copy&paste the **Activation request** from the above dialog to the appropriate field and click **“Activate now”** to generate an activation response.



- c) Copy&paste the activation response from the web page (1<sup>st</sup> picture below) to the license activation dialog (2<sup>nd</sup> screenshot below).




d) Click **Next** and the license key will be successfully activated.

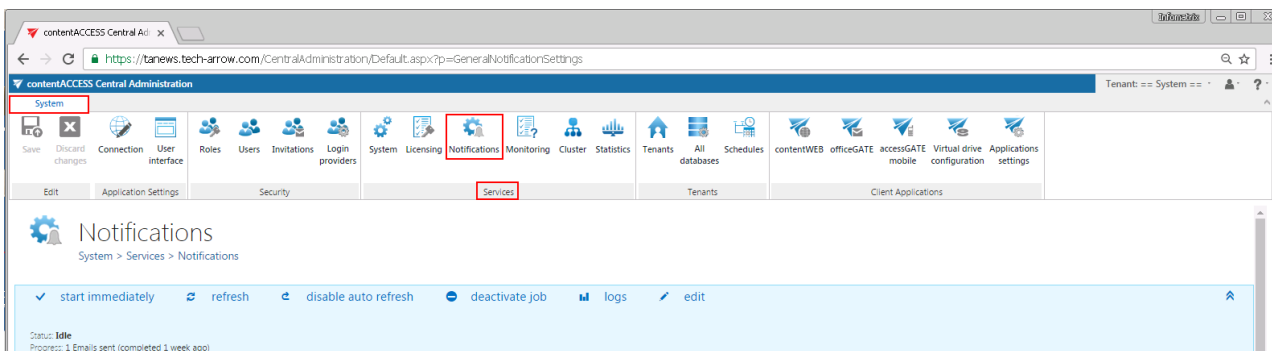


After successful license activation all **Allowed plugins, stores and limitations** within this license will be updated on the page.

## Notifications

To increase efficiency of the troubleshooting process, contentACCESS uses notification plugins. These plugins are used to send notification emails to the user about the errors/warnings/misconfigurations or possible system or job failures in contentACCESS. Based on the settings in the Central Administration, the transport server of these notifications can be either an Exchange server, or an SMTP server. If the organization doesn't have Exchange Server, SMTP server can be used instead.


For Notification settings open the **Notifications** page (**System** tab → **Services** group →  **Notifications** button) on the Central Administration ribbon.



In the status bar of notifications there are 6 control buttons:

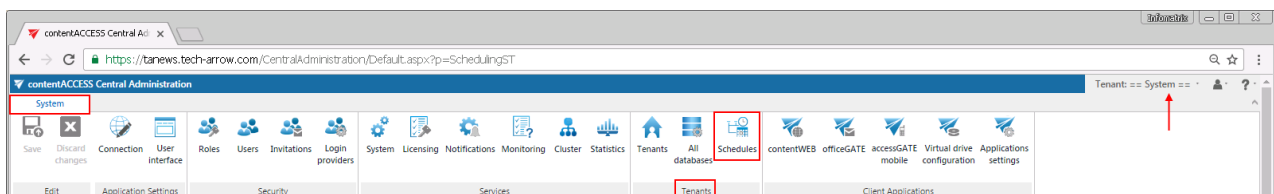
- With the “start immediately/stop” button it is possible to manually start/stop sending of notification emails;
- “refresh” control button serves to reload (manually refresh) the current state of notification plugin;
- “enable auto refresh”/“disable auto refresh”: serves for activating/deactivating the auto refresh of notification plugin status information; if enabled, then the current state will be refreshed in every 5 seconds;
- “deactivate job/activate job” button is used to deactivate/activate the job if it should not run; a deactivated job will not be started automatically, nor can be started manually.



- “logs”: in case that you want to check the notifications plugin events, or if any problem occurred during the sending of notifications emails, click on this control button and you will be redirected on the correspondent monitoring page, where the last run of the plugin will be pre-selected, and the corresponding run events will be displayed.
- “edit” control button is used to change the name of the notification job and to specify the node where the job should run;
- With the arrows mark (  ) at the right side of the status bar the user may collapse or expand the progress information about the job’s running. The status bar’s last state is always stored, and the last state will be opened by navigating to the page again.

Under the status bar the following sections are configured:

- **Scheduling settings:** This configuration option is common both for SMTP and Exchange server transport types. The administrator can choose here an already existing notification scheduler from the list, or to create a new one. Notification emails will be sent at time, which is set here. New notification schedulers can be also created (or edited) by selecting the “system” tenant in the right upper menu of the Central Administration user interface, and configuring the schedulers on the **Schedules** page (**System** tab → **Tenants** group → option **Schedules** on the ribbon, refer to screenshot below).



- **Notification settings:** The administrator can choose right here, if the SMTP server or Exchange provider will be used to transfer notification emails.

**Notification settings**

Transport server type:  Use Exchange Server  Use SMTP server

From address:

Administrator addresses:

Test email was successfully sent



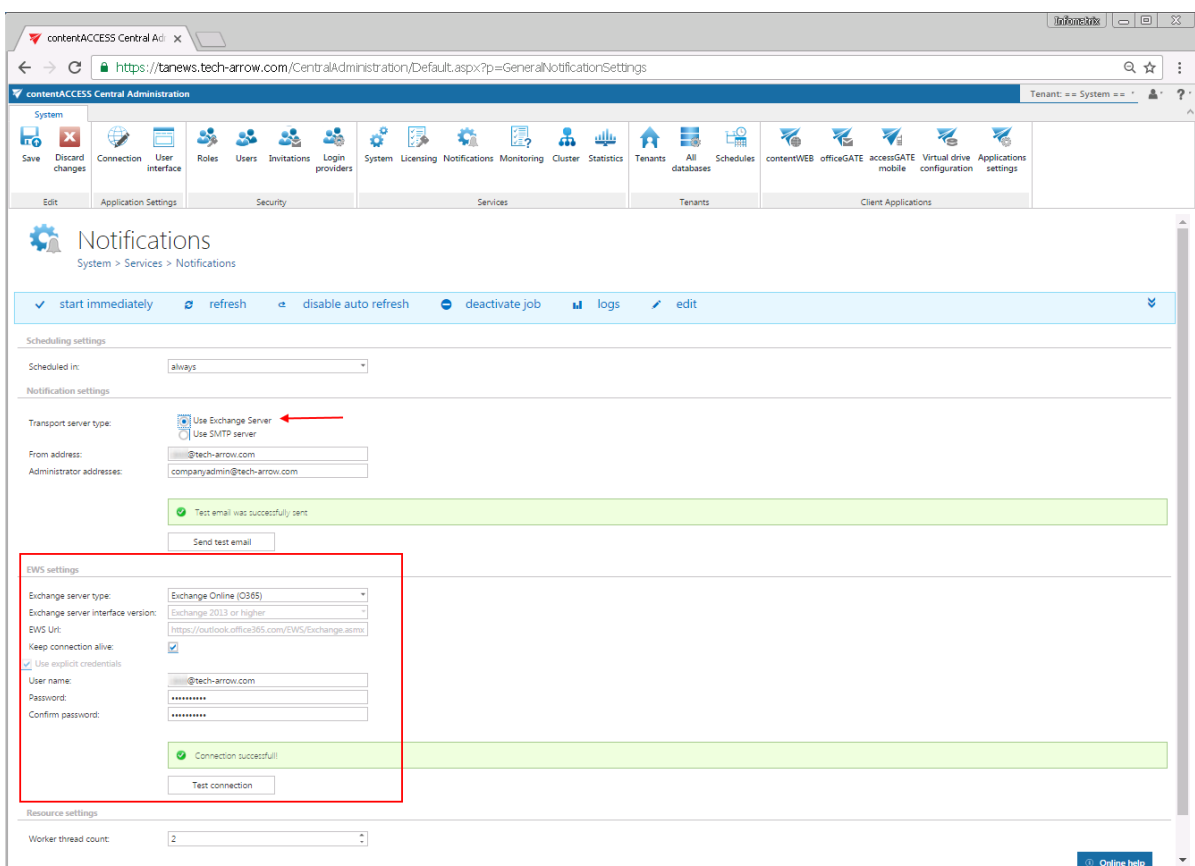
In both cases, the

**From address** – the email address of the real sender

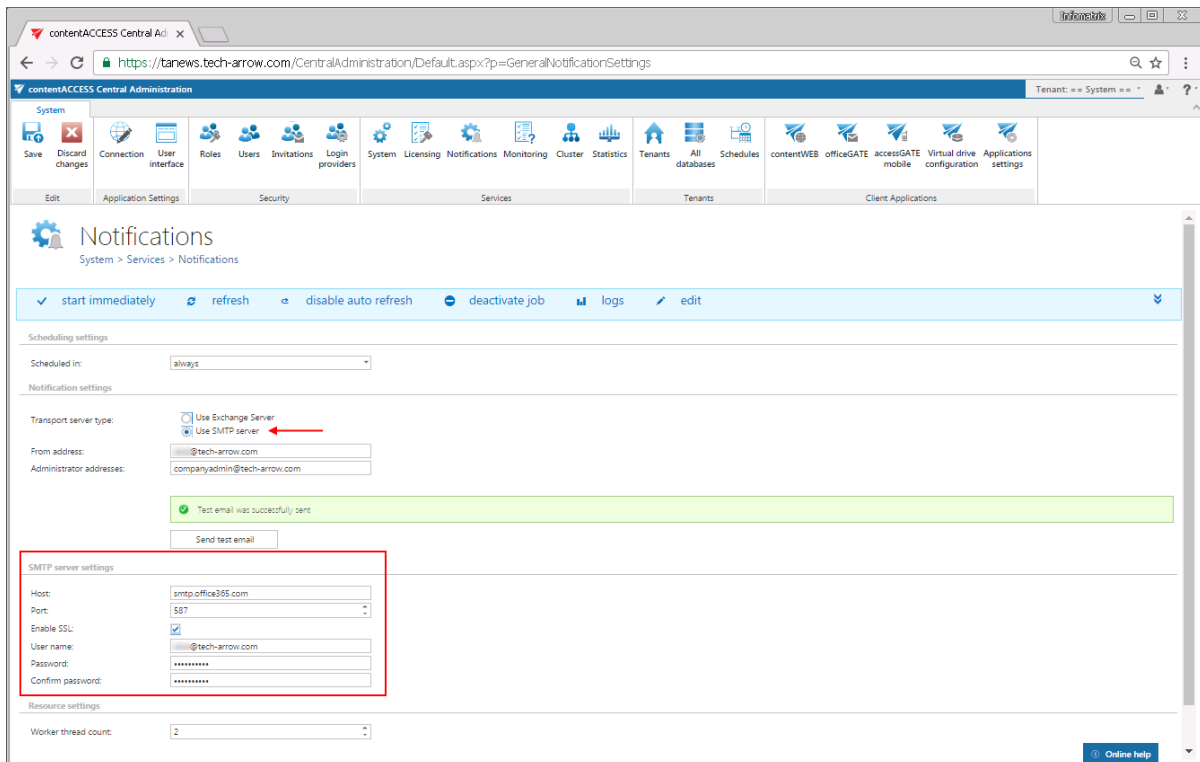
**Administrator addresses** – the recipient addresses

text boxes must be filled. It is also possible to send notification emails on behalf of somebody else. The condition for that is to have on behalf permissions on the mailbox of this second user. It is recommended to send a test email via the “Send test email” button to check, if everything works correctly.

The page displays different configuration sections based on which transport type is selected in the Notification settings section. If “Use Exchange Server” is selected, then the **EWS settings** must be configured; if “Use SMTP server” is set, then the **SMTP server settings** must be configured. SMTP server is used if the organization doesn’t have Exchange Server.



Screenshot A: Exchange Server used



Screenshot B: SMTP server used

- **EWS settings:** The following parameters are needed for EWS connection:

**Exchange server type, Exchange server interface version:** the type and version of the Exchange provider which will send the notification emails.

**EWS URL** (received from the Exchange provider)

**Keep connection alive:** If it is turned on, then the connection between contentACCESS and the Exchange server is cached, which increases the performance. If the Exchange is load balanced, some requests can land on another Exchange which causes errors in contentACCESS. In these cases unchecking the keep alive option will destroy the connection after each request and will rebuild it on the next request.

- If you are communicating with **one Exchange server:** **turn it on** to increase the performance
- If you have a **load balanced Exchange environment** and there are **communication problems** with the Exchange: it is recommended to **turn it off**

**User name, Password:** Finally enter the **User name** (email address) and **password** of the EWS user that can be applied to connect to the Exchange server.

- **SMTP server settings:** the following parameters are needed for the STMP connection:



**Host** – name of the SMTP server (like: smtp.gmail.com, smtp.office365.com, ...)

**Port** – the SMTP port of the SMTP server. There are some recommendations and standards. Usually the port 25 is used for SMTP (or 2525). But because this protocol is vulnerable, the port is usually blocked by firewall. The secure SMTP port is either 465 or 587. The port 587 is usually using TLS (Transport layer security).

**Enable SSL** - based on the SMTP server it is possible to enable SSL (recommended)

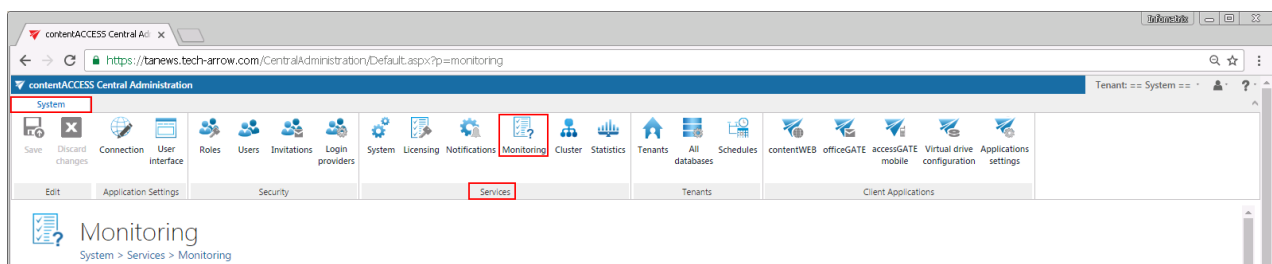
**User name, password:** authenticated user on the SMTP server (required)

Use the **Send test email** button to verify if the notification emails are working properly.

- **Resource settings:** under worker thread count, at the bottom of the page you can set the count of simultaneously sent notifications.

## Monitoring – how to find out possible misconfigurations / reasons of potential system/job failures

Navigate to **System** → **Services** →  **Monitoring** button.



The monitoring feature enables to check the currently running or in the past run system or job related events very easily. The user can check here all desired system events such as system updates, shutdowns, startups, system component updates, or possible system errors etc. In monitoring feature, the user also has the chance to check all possible failure details that might happen during the running of the jobs, so it makes the troubleshooting easier.

If you first open monitoring, you can see the following basic parts on the interface: **Runs** of the jobs or system on the left side (**red** frame); **system and job events** on the right side (**green** frame). With



clicking on the **Refresh** button (purple arrow) you can also check the real-time running jobs. With this button it is possible to reload the current runs/event from the database. With a single click on the **collapse all/expand all** buttons (indicated with blue arrows) you can expand or collapse all sessions for all jobs. It is also enabled to list among the events at the bottom of the monitoring page (orange frame).

The screenshot shows the Monitoring interface with the following elements:

- Filteration:** Type: (All types), Job: (All jobs), Start Date: [empty], End Date: [empty], Event types: (All events), Export, Settings.
- Runs Table:** Columns: #, Start date, End date. It lists various jobs like Mailbox Provisioning Job, EMP job, File archive job, etc.
- Events Table:** Columns: Date, Title, Description, Job. It shows system events such as 'User permissions can't be set because the user SID could not be resolved' and 'Updating existing group'.
- Navigation:** Page 1 of 1 (27 items) for Runs, Page 1 of 30 (854 items) for Events.

**Sorting in monitoring:** sorting option is enabled both in the **Runs** and **Events** tables. Click on the particular column name (Start date, End date by the runs, Date, Title, Description, Job by the events), and the items will be displayed in the reverse order.

The screenshot shows the Monitoring interface with the following elements:

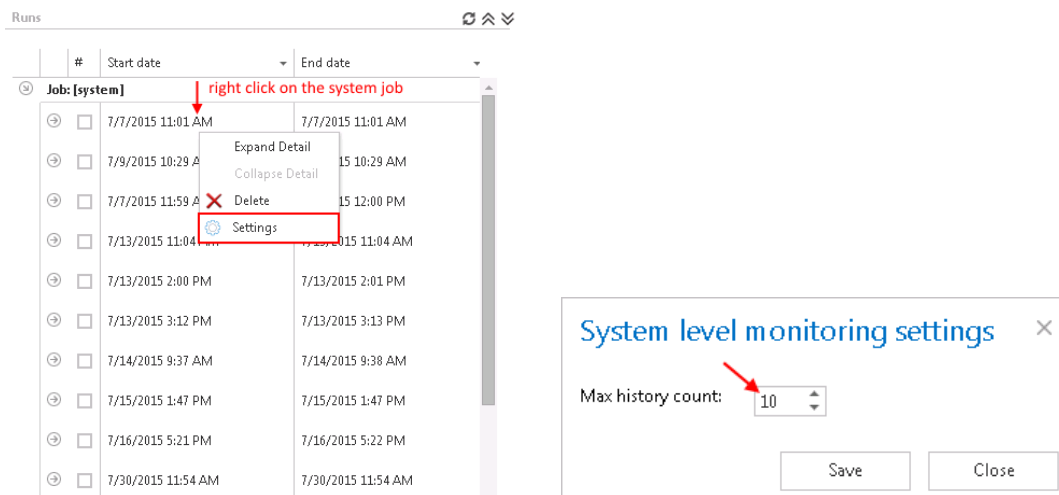
- Filteration:** Type: (All types), Job: (All jobs), Start Date: [empty], End Date: [empty], Event types: (All events), Export, Settings.
- Runs Table:** Columns: Start date, End date. Red arrows point to these columns.
- Events Table:** Columns: Date, Title, Description, Job. Red arrows point to these columns.

**Setting of maximum history count of the runs:** With this option it is possible to set, how many job runs the user would like to keep. If the value is set to 10 for example, and a job has run 20 times, then only the last 10 runs can be viewed, remaining 10 will be deleted and the user will not have an access to them. It is recommended to set a higher value here, if a job is running too often, or during the weekends, and the user needs to view the events retroactively.



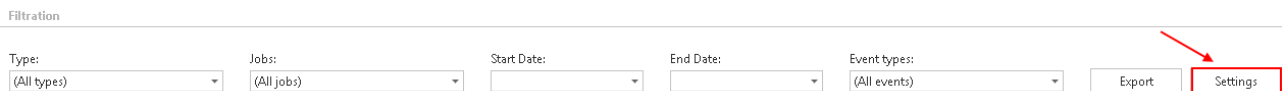
This value is always inherited from the higher level. There are three levels altogether, where the history counter can be adjusted; the **system** is the highest level, the next is **tenant** level and the last one is the level of **jobs**.

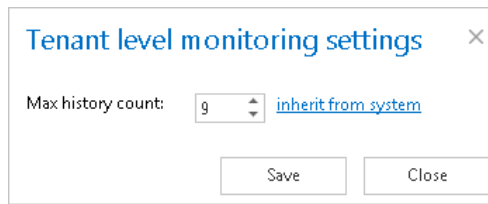
- **System level settings** are accessible with right mouse click on a system related job in the column of **Runs**; here click on **Settings**, and adjust these settings in the **System level monitoring setting** dialog.



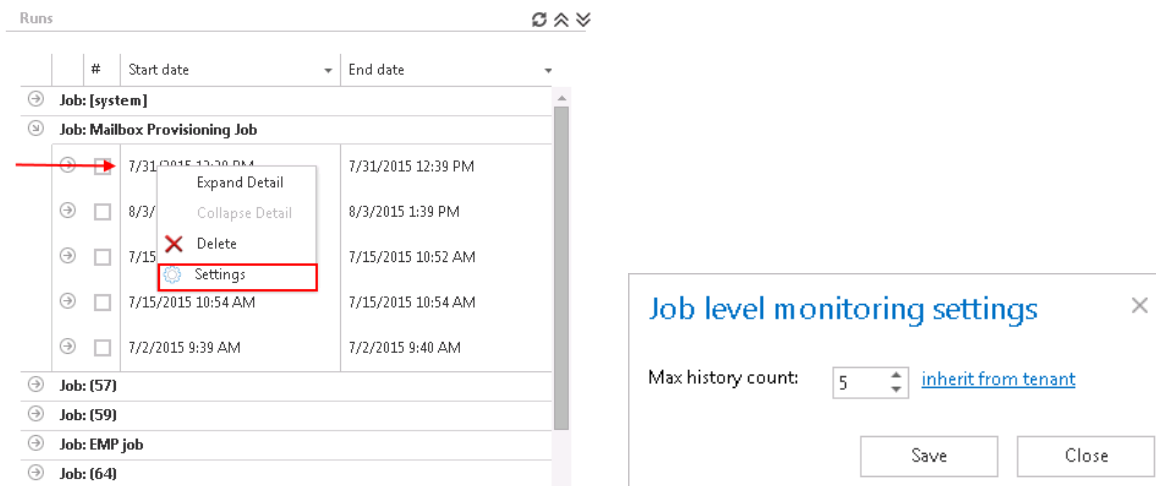
- **Tenant level monitoring settings** are inherited from the system, i.e. if maximum history count is set on “10” on system level, then the same value will apply for the tenant level monitoring settings, too. Nevertheless it is possible to configure the tenant level settings independently from the system settings. Click on the **Settings** button and set the required value into the **Tenant level monitoring settings** dialog. If the tenant level settings are set independently, it can be still adjusted to the system settings with a click on the “inherit from system” option in the **Tenant level monitoring settings** dialog.

Monitoring  
System > Services > Monitoring

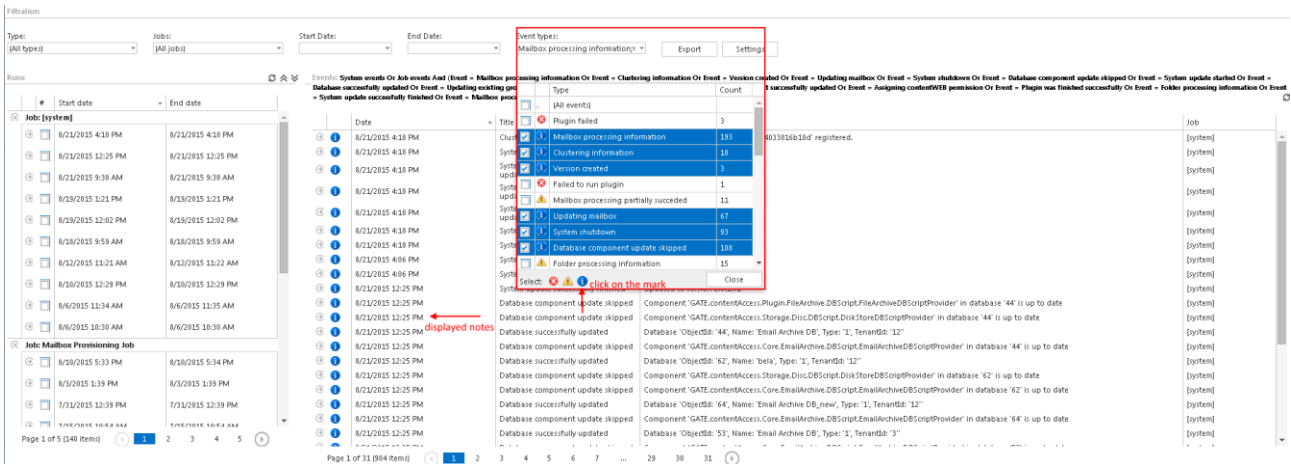




- **Job level monitoring settings** can be adjusted with clicking on the particular job running in the column of **Runs** and configuring these settings in the **Job level monitoring setting** dialog. These settings are inherited from the tenant by default. Nevertheless it is still possible to set another value with a right click on the particular job in the **Runs** column, select here **Settings** and set the maximum history count in the dialog. This value can be adjusted to the default value inherited from tenant with clicking on the “inherit from tenant” option in the same dialog.

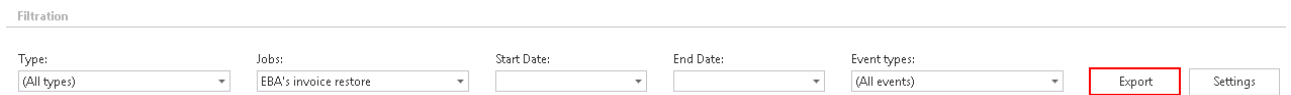


**Filtration in monitoring:** If the user would like to check details of a certain system/job running, then he can also filter among the jobs under **Filtration** → **Jobs:** dropdown list. If it is necessary to check the system/job events that run in a certain period of time, then it is possible to further filter among these items with setting the **Start date** and the **End date** under filtering options. Under **Event types** it is allowed to filter among event types occurred in the actually selected events. An event type filter is also available at the bottom of the Event types dropdown list. Using this filter it is possible to sort out all events which belong to one of the 3 event groups [1. error (❌), 2. warning (⚠️) or 3. note (ℹ️)]. Click on the mark of the particular event group next to “Select”, and the selected events will be displayed. On screenshot below, we sorted out all the notes (with a click on “ℹ️” mark).



**Note:** If the logged in user is a system administrator then he will be allowed to see the system related events, if he has tenant administrator rights, then he will be allowed to check the tenant related events using monitoring feature.

The **Export** function makes it easy to save the reviewed events into XML, CVS or HTML. The report contains all necessary information (date, job ID, Message, Details) which enable to have a look at the desired information, and also identify possible failures very quickly. This enables a very quick access to the system/job processing information, and also ensures a very quick troubleshooting in case of need.



On the below displayed screenshot we have filtered out **Mailbox Provisioning Job** and **TA\_ Email Archive job** and set 1<sup>st</sup> of July 2015 as **Start date**, and 8th of July as **End date**. Among event types we have also set **All events**. This filter will find all the events related to these 2 jobs, which happened in this time interval.



# Monitoring

System > Services > Monitoring

Filtration

Type: Job Start Date: 7/1/2015 12:00 AM End Date: 7/9/2015 12:00 AM Event types: (All events) Export

Jobs: Visioning Job;TA\_Email archive job

Runs

#	Start date	End date
Job: Mailbox Provisioning Job		
<input type="checkbox"/>	7/2/2015 9:39 AM	
Job: TA_Email archive job		
<input type="checkbox"/>	7/2/2015 9:22 AM	
<input type="checkbox"/>	7/3/2015 10:56 AM	
<input type="checkbox"/>	7/3/2015 11:08 AM	
<input type="checkbox"/>	7/3/2015 11:15 AM	
<input type="checkbox"/>	7/3/2015 11:15 AM	
<input type="checkbox"/>	7/3/2015 11:19 AM	
<input type="checkbox"/>	7/7/2015 11:16 AM	
<input type="checkbox"/>	7/7/2015 12:16 PM	

Events: Job is Mailbox Provisioning Job Or Job is TA\_Email archive job And (Date >= 7/1/2015 12:00:00 AM And Date <= 7/9/2015 12:00:00 AM)

Date	Title	Description
7/7/2015 12:17 PM	Plugin was finished successfully	Plugin.EmailArchive
7/7/2015 12:17 PM	Mailbox processing information	Processing was finished
7/7/2015 12:17 PM	Mailbox processing information	Mailbox processing finished
7/7/2015 12:17 PM	Mailbox processing succeeded	Plugin.EmailArchive
7/7/2015 12:16 PM	Mailbox processing information	Processing was started. Number of mailboxes: 1.
7/7/2015 11:18 AM	Plugin was finished successfully	Plugin.EmailArchive
7/7/2015 11:18 AM	Mailbox processing information	Mailbox processing finished
7/7/2015 11:18 AM	Mailbox processing information	Processing was finished
7/7/2015 11:18 AM	Mailbox processing succeeded	Plugin.EmailArchive
7/7/2015 11:16 AM	Mailbox processing information	Processing was started. Number of mailboxes: 1.
7/3/2015 11:19 AM	Plugin was finished successfully	Plugin.EmailArchive
7/3/2015 11:19 AM	Mailbox processing information	Processing was finished
7/3/2015 11:19 AM	Mailbox processing information	Mailbox processing finished
7/3/2015 11:19 AM	Mailbox processing succeeded	Plugin.EmailArchive
7/3/2015 11:19 AM	Mailbox processing information	Processing was started. Number of mailboxes: 1.

Under **Runs** section click on the arrow mark next to the job, and the last run times will be opened. In the table of **Events** at the right side of the screenshot you can see all the events related to these 2 jobs, in time period 1<sup>st</sup> of July – 8<sup>th</sup> of July. With a click on the certain run of the job instance (for example with a click on the Mailbox Provisioning job that run at 7/2/2015 at 9:39-9:40) you can open further details about this running. In our case we can see that Mailbox provisioning job has processed in this time 98 mailboxes, of which 25 mailboxes added, 71 mailboxes skipped, 2 mailboxes updated etc. (red arrows).

If you check the checkbox next to this job running, then the right hand table will display all events, all event types related to this job running at 9:39-9:40, on 2<sup>nd</sup> of July.

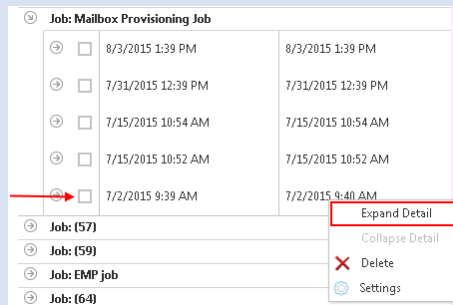
Runs

#	Start date	End date	Date	Title	Description	Job
Job: Mailbox Provisioning Job						
<input checked="" type="checkbox"/>	7/2/2015 9:39 AM	7/2/2015 9:40 AM	7/2/2015 9:40 AM	Plugin was finished successfully	Plugin.MailboxProvisioning	Mailbox Provisioning Job
<input type="checkbox"/>	7/2/2015 9:22 AM		7/2/2015 9:40 AM	contentACCESS user skipped from permission sync	User 'sa' permissions can't be set because the user SID could not be resolved.	Mailbox Provisioning Job
<input type="checkbox"/>	7/3/2015 10:56 AM	7/3/2015 10:56 AM	7/2/2015 9:40 AM	contentACCESS user skipped from permission sync	User 'new user' permissions can't be set because the user SID could not be resolved.	Mailbox Provisioning Job
<input type="checkbox"/>	7/3/2015 11:08 AM	7/3/2015 11:08 AM	7/2/2015 9:40 AM	contentACCESS user skipped from permission sync	User 'MA' permissions can't be set because the user SID could not be resolved.	Mailbox Provisioning Job
Job: TA_Email archive job						
<input type="checkbox"/>	7/2/2015 9:22 AM		7/2/2015 9:40 AM	contentACCESS user skipped from permission sync	User 'administrator' permissions can't be set because the user SID could not be resolved.	Mailbox Provisioning Job
<input type="checkbox"/>	7/3/2015 10:56 AM	7/3/2015 10:56 AM	7/2/2015 9:40 AM	Updating mailbox	Updating mailbox '9 (@babal@tech-arrow.com)' in DB.	Mailbox Provisioning Job
<input type="checkbox"/>	7/3/2015 11:08 AM	7/3/2015 11:08 AM	7/2/2015 9:40 AM	Adding mailbox to group	Adding mailbox '9 (@babal@tech-arrow.com)' to group '1'.	Mailbox Provisioning Job
<input type="checkbox"/>	7/3/2015 11:15 AM	7/3/2015 11:15 AM	7/2/2015 9:40 AM	Mailbox permission change	Mailbox permission changed for '26 (@vladimir.werskov@tech-arrow.com)'.	Mailbox Provisioning Job
<input type="checkbox"/>	7/3/2015 11:15 AM	7/3/2015 11:15 AM	7/2/2015 9:40 AM	Adding new mailbox	Adding new mailbox '26 (@vladimir.werskov@tech-arrow.com)' to DB.	Mailbox Provisioning Job
<input type="checkbox"/>	7/3/2015 11:15 AM	7/3/2015 11:15 AM	7/2/2015 9:40 AM	Mailbox permission change	Mailbox permission changed for '25 (@peter.magdina@tech-arrow.com)'.	Mailbox Provisioning Job
<input type="checkbox"/>	7/3/2015 11:19 AM	7/3/2015 11:19 AM	7/2/2015 9:40 AM	Adding new mailbox	Adding new mailbox '25 (@peter.magdina@tech-arrow.com)' to DB.	Mailbox Provisioning Job
<input type="checkbox"/>	7/3/2015 11:19 AM	7/3/2015 11:19 AM	7/2/2015 9:40 AM	Mailbox permission change	Mailbox permission changed for '24 (@support@tech-arrow.com)'.	Mailbox Provisioning Job
<input type="checkbox"/>	7/7/2015 11:16 AM	7/7/2015 11:16 AM	7/2/2015 9:40 AM	Adding new mailbox	Adding new mailbox '24 (@support@tech-arrow.com)' to DB.	Mailbox Provisioning Job
<input type="checkbox"/>	7/7/2015 11:16 AM	7/7/2015 11:16 AM	7/2/2015 9:40 AM	Mailbox permission change	Mailbox permission changed for '23 (@sales@tech-arrow.com)'.	Mailbox Provisioning Job
<input type="checkbox"/>	7/7/2015 12:16 PM	7/7/2015 12:16 PM	7/2/2015 9:40 AM	Adding new mailbox	Adding new mailbox '23 (@sales@tech-arrow.com)' to DB.	Mailbox Provisioning Job
<input type="checkbox"/>	7/7/2015 12:16 PM	7/7/2015 12:16 PM	7/2/2015 9:40 AM	Mailbox permission change	Mailbox permission changed for '22 (@peter.magdina@tech-arrow.com)'.	Mailbox Provisioning Job
<input type="checkbox"/>	7/7/2015 12:16 PM	7/7/2015 12:16 PM	7/2/2015 9:40 AM	Adding new mailbox	Adding new mailbox '22 (@peter.magdina@tech-arrow.com)' to DB.	Mailbox Provisioning Job





**Note:** The exact details of a job/system running can be opened/collapsed with a right click on the particular session and selecting **Expand Details/Collapse Details** from the context menu.



**Note:** With a right mouse click on a particular event and selecting **Expand Detail/Collapse Detail** from the context menu the user can open/close additional details related this selected event.

#	Start date	End date	Date	Title	Description	Job
1	7/31/2015 12:39 PM	7/31/2015 12:39 PM	7/2/2015 9:40 AM	Plugin was finished successfully	Plugin.MailboxProvisioning	Mailbox Provisioning Job
2	8/3/2015 1:39 PM	8/3/2015 1:39 PM	7/2/2015 9:40 AM	98 mailboxes added, 71 mailboxes skipped, 2 mailboxes updated, 18 groups added, 11 groups skipped		
3	7/15/2015 10:54 AM	7/15/2015 10:54 AM	7/2/2015 9:40 AM	contentACCESS user skipped from permission sync	User 'sa' permissions can't be set because the user SID could not be resolved.	Mailbox Provisioning Job
4	7/15/2015 10:52 AM	7/15/2015 10:52 AM	7/2/2015 9:40 AM	contentACCESS user skipped from permission sync	User 'new user' permissions can't be set because the user SID could not be resolved.	Mailbox Provisioning Job
5	7/2/2015 9:39 AM	7/2/2015 9:40 AM	7/2/2015 9:40 AM	contentACCESS user skipped from permission sync	User 'MA' permissions can't be set because the user SID could not be resolved.	Mailbox Provisioning Job
6	7/2/2015 9:39 AM	7/2/2015 9:40 AM	7/2/2015 9:40 AM	contentACCESS user skipped from permission sync	User 'administrator' permissions can't be set because the user SID could not be resolved.	Mailbox Provisioning Job

Now, if you want to visualize only **Plugin was finished successfully** information even type, then set this filter in the **Event types** checkbox. This will result, that only this type of event will be displayed in the table of **Events**.

Filteration

Type: Job: Mailbox Provisioning Job;TA, Email Start Date: 7/1/2015 12:00 AM End Date: 7/9/2015 12:00 AM Event types: **Plugin was finished successfully** Export

Events: Run is 'Mailbox Provisioning Job 7/2/2015 9:39:32 AM And (Date >= 7/1/2015 12:00:00 AM And Date <= 7/9/2015 12:00:00 AM) And (Event = Plugin was finished successfully)

#	Start date	End date	Date	Title	Description	Job
1	7/2/2015 9:39 AM	7/2/2015 9:40 AM	7/2/2015 9:40 AM	Plugin was finished successfully	Plugin.MailboxProvisioning	Mailbox Provisioning Job

98 mailboxes processed (25 mailboxes added, 71 mailboxes skipped, 2 mailboxes updated, 18 groups added, 11 groups skipped)

With the **Export** function save this report in one of the file types, for example in HTML:



Filteration

Type: Job: Mailbox Provisioning Job;TA, Email Start Date: 7/1/2015 12:00 AM End Date: 7/9/2015 12:00 AM Event types: **Plugin was finished successfully** Export

Events: Run is 'Mailbox Provisioning Job 7/2/2015 9:39:32 AM And (Date >= 7/1/2015 12:00:00 AM And Date <= 7/9/2015 12:00:00 AM) And (Event = Plugin was finished successfully)

#	Start date	End date	Date	Title	Description	Job
1	7/2/2015 9:39 AM	7/2/2015 9:40 AM	7/2/2015 9:40 AM	Plugin was finished successfully	Plugin.MailboxProvisioning	Mailbox Provisioning Job

98 mailboxes processed (25 mailboxes added, 71 mailboxes skipped, 2 mailboxes updated, 18 groups added, 11 groups skipped)

Export as: HTML (highlighted in red)

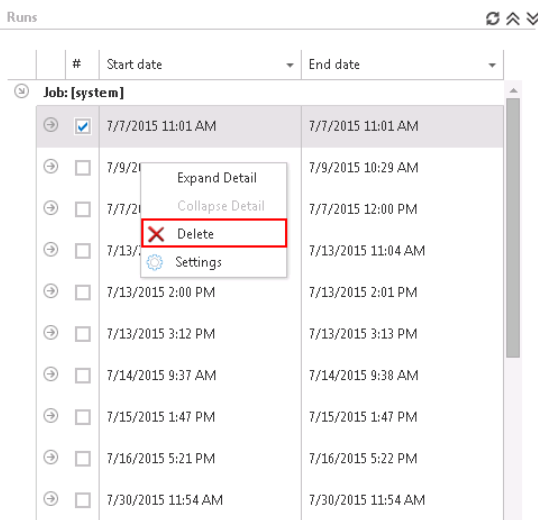


The report will contain all necessary information that might be very useful for a user to identify any failure, or just check the last event(s) of this job at the time period that was filtered out.

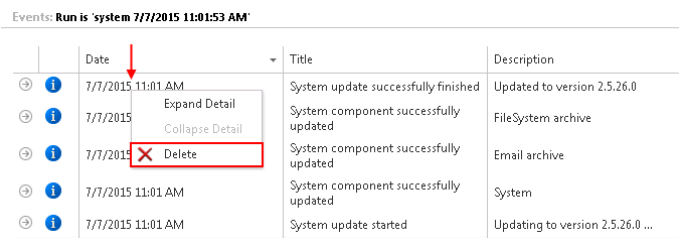
ID	Code	Type	Title	Date	Job ID	Message	Details
Filter: Run is 'Mailbox Provisioning' job 7/2/2015 9:39:32 AM And (Date >= 7/1/2015 12:00:00 AM And Date <= 7/9/2015 12:00:00 AM) And (Event = Plugin was finished successfully)							
158	13103	Info	Plugin was finished successfully	7/2/2015 9:40:23 AM	56	Plugin.MailboxProvisioning	<d t="MonitoringStatDetails"><s> 98 mailboxes processed (25 mailboxes added, 71 mailboxes skipped, 2 mailboxes updated, 18 groups added, 11 groups skipped)</s></d>

**How to manually remove system/job runs and system/job related events from monitoring:**

- **To delete system/job runs** right click on the particular system/job run in column **Runs** and select **Delete** from the context menu (Screenshot A).
- **To delete a particular event** right click on the particular event and select **Delete** from the context menu (Screenshot B)



Screenshot A: Deleting system/job runs



Screenshot B: Deleting system/job events

**What to do if more space is needed on the monitoring page?** If there are too many events and the user would like to have more space on the monitoring page, it's a good idea to hide the ribbon with clicking on the arrow sign at the right upper corner of the user interface, under the **About** menu.

**Distributed environment in contentACCESS – Clusters**

**Why is it efficient to use clusters?** A server cluster is a group of independent servers (nodes) working together as a single system to provide high availability of services for clients. When a failure occurs on one computer in a cluster, resources are redirected and the workload is redistributed to another computer (node) in the cluster. It can happen, that one processing job is currently running on a



processing node, but a server failure occurs and the server will shut down. In this case a second, alternative node (either with “Job runner” or “Universal” role) can pick the task up to finish the archiving process. To achieve this, the running of this particular job should be allowed on any available node.

contentACCESS's cluster technology guard against the following types of failure:

- ✓ **System and hardware failures**, which affect hardware components such as CPUs, drives, memory, network adapters, and power supplies.
- ✓ **contentACCESS's application and service failures**, which affect the software, its applications and essential services.

Thanks to clustering in contentACCESS, the user can make the job processes scalable, and thus increase the performance. The user may decide how the nodes should be used, and how the work processes should be divided between them. The jobs can be run on a specific or any available node. It is also possible to install the full contentACCESS on one node and the contentACCESS server part on another nodes to ensure a better performance for job processing and for contentACCESS as a whole. It is also possible to use the nodes in a balanced mode; in this case the nodes are selected according to their Memory and CPU usage. The actually running jobs on the node will be considered as well.

There are 3 main node roles available in contentACCESS (can be adjusted from the context menu of the particular node).

- ✓ **Universal**: this type can be used for all operations performed in contentACCESS;
- ✓ **Model provider (retriever)** type can be used to publish models, i.e. this type is used to connect client applications with contentACCESS and to retrieve items through these client applications;
- ✓ **Job runner (processing)** type was developed to run jobs (plugin instances) in contentACCESS.

The user must decide, which role type he assigns to a particular node, how he divides work processes between the nodes, and how he makes the work processes more effective. A typical use case is, when a customer installs the contentACCESS server, Central Administration and contentWEB on one node, and contentACCESS server on a second node. Then he sets the first node to “Universal”



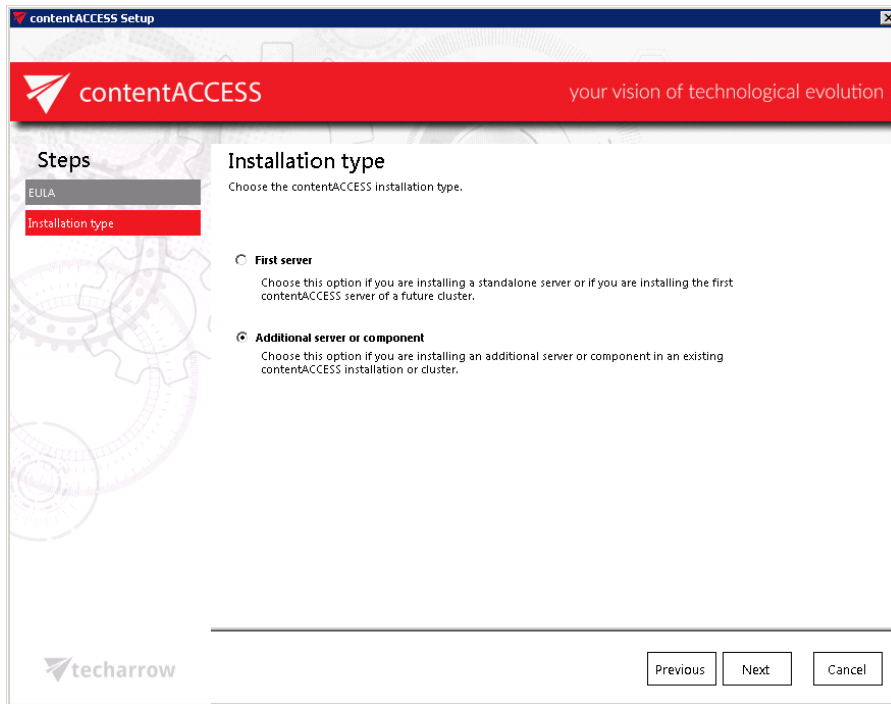
and the second to “Job runner”, and assigns File system archive jobs to the first node, and the Email archive jobs to the second node.

Now, let’s assume, that contentACCESS is already installed on the first “main” node (TANEWS), where the file system archive jobs are running. Now our customer decided to buy TECH-ARROWS’ Email archive, and he would like to run email archive jobs on a second node. To achieve this, he needs to install the contentACCESS server on a second node (e.g. TECHNB0002).

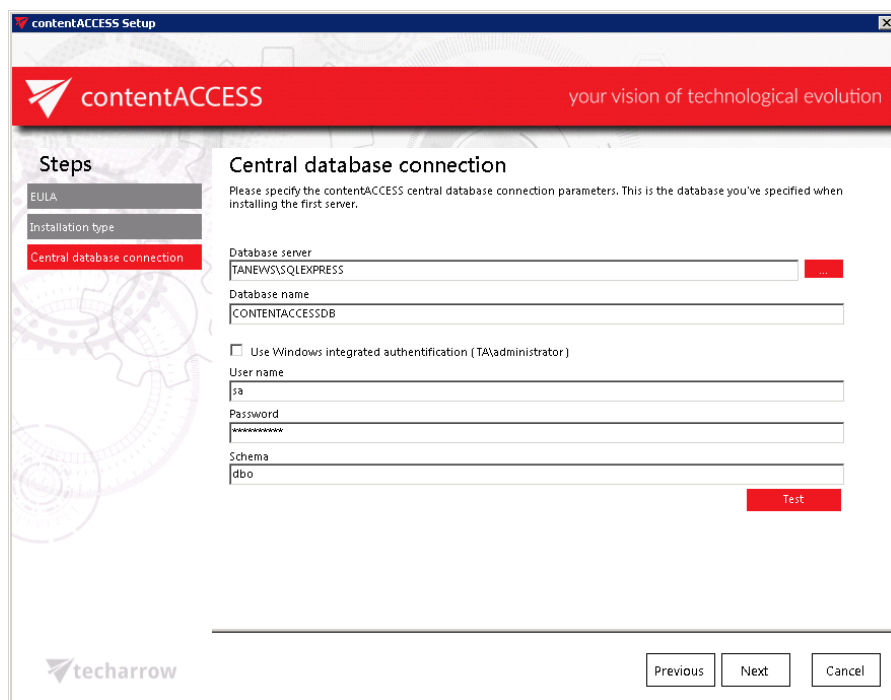
Before the user starts to install any contentACCESS component on a second node, it is always recommended to set the node to disabled (to prevent the new node from picking up new tasks before it is fully configured). We set now the default role type to “Job processing”, as we will use it to run the email archive jobs. For more information about these default cluster settings please refer to section [System](#), section “Cluster settings”.

Cluster settings	
Node update interval (sec):	30
Node auto logoff time (sec):	120
Events retention time (sec):	1800
Events distribution interval (sec):	60
Task auto disable time (sec):	30
Stop task after ping failures (count):	2
Node selection strategy:	First wins
Default node role:	Job runner (processing)
Enabled by default:	<input type="checkbox"/>

To install any contentACCESS component on a second node, start to run the contentACCESS setup package on the selected server (TECHNB0002). First you will be required to select the installation type. As we are now installing a contentACCESS component (a node) in an existing contentACCESS environment, we select the “Additional component” option:

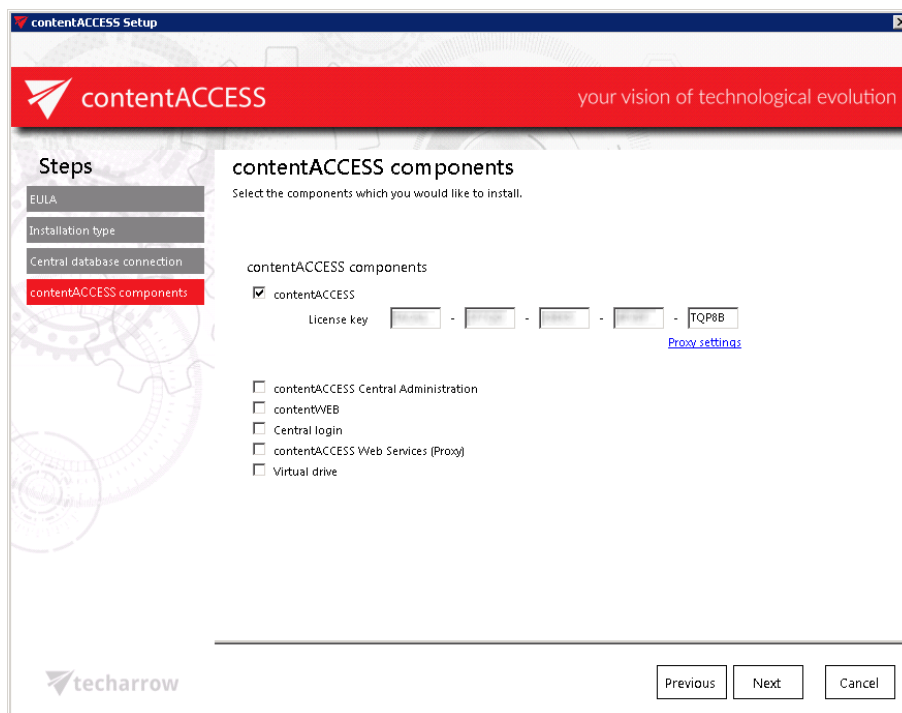


In the next step you will be asked to specify the central database connection that is already used. Enter the server name, where the database is already installed (in our case it is installed on our 1<sup>st</sup> node called "TANEWS"), enter the name of the already existing system database (in this case it is "CONTENTACCESSDB"; can be checked on the SQL server), type here the database user credentials and the database schema.



**Important!!!** In the Database connection settings either a domain user must be specified (if Windows authentication is used), or an SQL user's credentials must be added to connect to the database.

Further you need to select the components to be installed. As mentioned above, in this use case we select the contentACCESS server to install on this second node:



Finish the installation process of this second node. Now, let's check the available nodes in the Central Administration.

**Status pane of nodes, grid of nodes, available operation from the nodes' context menu:** Nodes where contentACCESS components are installed can be viewed with navigating to **System** tab → **Services** → **Cluster**, in the nodes' grid below the status bar (displayed with **green** color on the below displayed screenshot).



Status	Server name	Server IP	Memory usage	CPU usage	Overall load	Running jobs count	Role	Max job count	Enabled	Last start	Last stop	Last ping
Online	TANEWS	192.168.190.63	31%	1%	77.33%	0	Universal	Unlimited	Yes	9/17/2015 10:20:20 AM	Never	9/17/2015 11:17:40 AM
Online	TECHNB0002	192.168.30.1	61%	12%	20.33%	0	Job runner (processing)	Unlimited	No	9/17/2015 10:20:37 AM	Never	9/17/2015 11:17:45 AM

Screenshot: Nodes' grid

There are 2 control buttons available in the status pane of the available nodes:

- ✓ “refresh” button serves to reload the last cluster status from the database;
- ✓ “disable auto refresh”/“enable auto refresh” buttons serve to disable/enable auto refresh (in every 5 seconds) of the last state from the database.

The node where contentACCESS Central Administration is installed is marked with a bold black color.

Status	Server name	Server IP	Memory usage	CPU usage	Overall load	Running jobs count	Role	Max job count	Enabled	Last start	Last stop	Last ping
Online	<b>TANEWS</b>	<b>192.168.190.63</b>	31%	1%	77.33%	0	Universal	Unlimited	Yes	9/17/2015 10:20:20 AM	Never	9/17/2015 1:45:14 PM
Online	TECHNB0002	192.168.30.1	61%	0%	20.33%	0	Job runner (processing)	Unlimited	No	9/17/2015 1:45:08 PM	9/17/2015 1:33:56 PM	9/17/2015 1:45:08 PM

**How a node can be configured?** Node configurations are available for the user from the node’s context menu, with clicking on “Edit” in the dropdown list and configuring it in the “Change node” dialog.

Status	Server name	Server IP	Memory usage	CPU usage	Overall load	Running jobs count	Role	Max job count	Enabled	Last start	Last stop	Last ping
Online	<b>TANEWS</b>	<b>192.168.190.63</b>	31%	1%	77.33%	0	Universal	Unlimited	Yes	9/17/2015 10:20:20 AM	Never	9/17/2015 1:48:34 PM
Online	TECHNB0002	192.168.30.1	62%	84%	40.67%	0	Job runner (processing)	Unlimited	No	9/17/2015 1:45:08 PM	9/17/2015 1:33:56 PM	9/17/2015 1:48:50 PM

Edit  
Delete  
Shutdown

### Change node ✕

Enabled

Role Job runner (processing)

Max job count -1  Unlimited

Description

OK
Cancel

In this dialog it is possible to set up the following node configurations:

- ✓ Enable/disable a node with checking/unchecking the **Enable** checkbox;
- ✓ Change the role assignment of the selected node with selecting the role type from the **Role** dropdown list;
- ✓ Set the maximum count of jobs that can parallel run on the node (option **Max. job count**).

The following information are available in the nodes' grid, when reading from left to right:

**Status:** This column marks if the selected node is online or offline, i.e. if it is ready to process tasks or not.

Status	Server name	Server IP	Memory usage	CPU usage	Overall load	Running jobs count	Role	Max job count	Enabled	Last start	Last stop	Last ping
Online	TANEWS	192.168.190.63	38%	1%	30%	0	Universal	Unlimited	Yes	9/17/2015 10:20:20 AM	Never	9/17/2015 3:36:55 PM
Online	TECHNB0002	192.168.30.1	62%	6%	33%	0	Job runner (processing)	Unlimited	No	9/17/2015 2:36:13 PM	9/17/2015 2:31:35 PM	9/17/2015 3:36:49 PM

The node can have one of these 3 statuses:

- ✓ The green (●) spot means, that the node is enabled, i.e. its service is running and the node is ready for processing;
- ✓ The yellow (●) spot means, that the node is disabled, i.e. its service is stopped and the user cannot run any plugin on it. However the server is still running.
- ✓ The red spot (●) means that the contentACCESS server on the selected node is currently turned off. A node in offline status can be started again with starting up its service ("GATE.contentACCESS" windows service must be started).

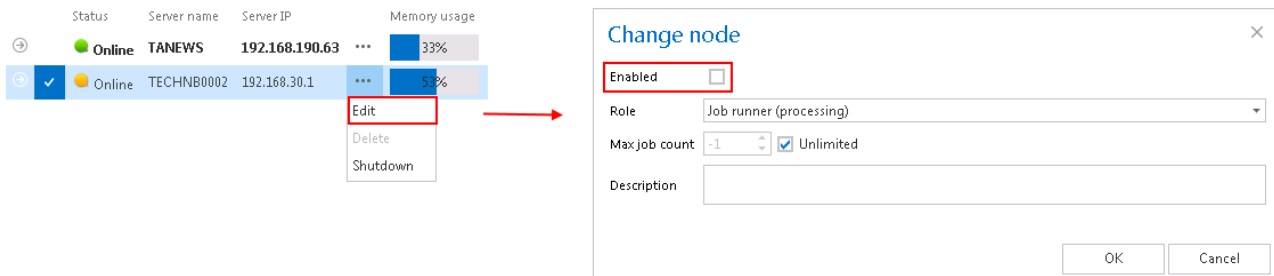
Our TECHNB0002 node was installed in disabled mode, which is indicated with a yellow spot in the status column:

Status	Server name	Server IP	Memory usage	CPU usage	Overall load	Running jobs count	Role	Max job count	Enabled	Last start	Last stop	Last ping
Online	TANEWS	192.168.190.63	31%	1%	7.33%	0	Universal	Unlimited	Yes	9/17/2015 10:20:20 AM	Never	9/17/2015 11:17:40 AM
Online	TECHNB0002	192.168.30.1	62%	12%	7.33%	0	Job runner (processing)	Unlimited	No	9/17/2015 10:20:37 AM	Never	9/17/2015 11:17:45 AM





The node can be enabled/disabled with opening the node's context menu, clicking on "Edit" and checking/unchecking the "Enabled" checkbox in the "Change node" dialog:



**Server name:** The server name where the contentACCESS node is installed is displayed here. Our first node is installed on server "TANEWS", and the second node installed on "TECHNB0002".

Status	Server name	Server IP	Memory usage	CPU usage	Overall load	Running jobs count	Role	Max job count	Enabled	Last start	Last stop	Last ping
Online	TANEWS	192.168.190.63	39%	1%	30%	0	Universal	Unlimited	Yes	9/17/2015 10:20:20 AM	Never	9/17/2015 3:36:55 PM
Online	TECHNB0002	192.168.30.1	62%	36%	43%	0	Job runner (processing)	Unlimited	No	9/17/2015 2:36:13 PM	9/17/2015 2:31:35 PM	9/17/2015 3:36:49 PM

**Server IP:** The IP of the server, where the node is installed is displayed here.

Status	Server name	Server IP	Memory usage	CPU usage	Overall load	Running jobs count	Role	Max job count	Enabled	Last start	Last stop	Last ping
Online	TANEWS	192.168.190.63	39%	1%	30%	0	Universal	Unlimited	Yes	9/17/2015 10:20:20 AM	Never	9/17/2015 3:36:55 PM
Online	TECHNB0002	192.168.30.1	62%	36%	43%	0	Job runner (processing)	Unlimited	No	9/17/2015 2:36:13 PM	9/17/2015 2:31:35 PM	9/17/2015 3:36:49 PM

**Memory usage, CPU usage, Overall load:** Displays actual information about the load balance of the selected node. If the cluster selection strategy is set to "Balanced", then the nodes will be selected for the tasks that they should perform according to these values. If the node is in offline status, the value will be "0". If the value is more than 70%, then the value will get a red background color.

Status	Server name	Server IP	Memory usage	CPU usage	Overall load	Running jobs count	Role	Max job count	Enabled	Last start	Last stop	Last ping
Online	TANEWS	192.168.190.63	39%	1%	30%	0	Universal	Unlimited	Yes	9/17/2015 10:20:20 AM	Never	9/17/2015 3:36:55 PM
Online	TECHNB0002	192.168.30.1	62%	36%	43%	0	Job runner (processing)	Unlimited	No	9/17/2015 2:36:13 PM	9/17/2015 2:31:35 PM	9/17/2015 3:36:49 PM

**Running job count:** Informs the user about the currently running job count on a specific node. On the screenshot below we can see, that on node "TANEWS" two file system archive jobs are running. With clicking on the arrow sign at the left side of the row the user may open the details of these 2 job runs:

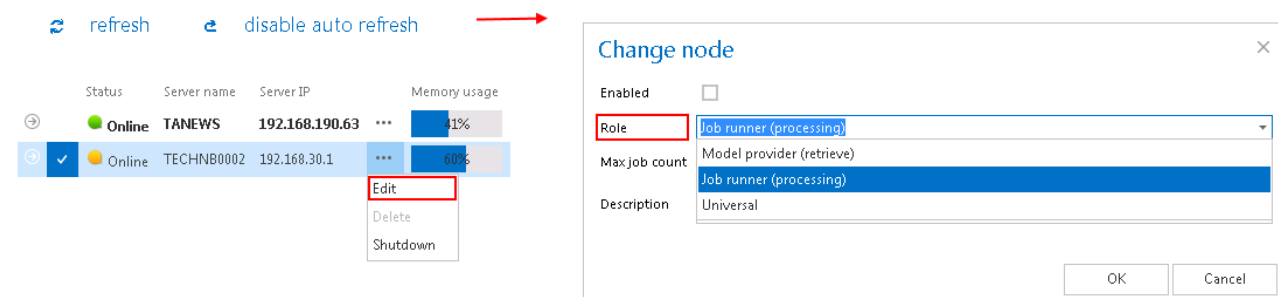
Status	Server name	Server IP	Memory usage	CPU usage	Overall load	Running jobs count	Role	Max job count	Enabled	Last start	Last stop	Last ping																					
Online	TANEWS	192.168.190.63	40%	2%	30.67%	2	Universal	Unlimited	Yes	9/17/2015 10:20:20 AM	Never	9/17/2015 12:42:43 PM																					
<table border="1"> <thead> <tr> <th>ID</th> <th>Tenant</th> <th>Display Name</th> <th>Status</th> <th>Last Duration</th> <th>Progress</th> <th>Summary</th> </tr> </thead> <tbody> <tr> <td>72</td> <td>TECH-ARROW</td> <td>File archive job</td> <td>Running</td> <td>7 seconds</td> <td>0 %</td> <td>0 folders processed 28 documents processed (7 versions created, 21 newly archived)</td> </tr> <tr> <td>139</td> <td>TECH-ARROW</td> <td>File archive with DELETE method</td> <td>Running</td> <td>6 seconds</td> <td>0 %</td> <td>0 folders processed 21 documents processed (21 newly archived)</td> </tr> </tbody> </table>													ID	Tenant	Display Name	Status	Last Duration	Progress	Summary	72	TECH-ARROW	File archive job	Running	7 seconds	0 %	0 folders processed 28 documents processed (7 versions created, 21 newly archived)	139	TECH-ARROW	File archive with DELETE method	Running	6 seconds	0 %	0 folders processed 21 documents processed (21 newly archived)
ID	Tenant	Display Name	Status	Last Duration	Progress	Summary																											
72	TECH-ARROW	File archive job	Running	7 seconds	0 %	0 folders processed 28 documents processed (7 versions created, 21 newly archived)																											
139	TECH-ARROW	File archive with DELETE method	Running	6 seconds	0 %	0 folders processed 21 documents processed (21 newly archived)																											
Online	TECHNB0002	192.168.30.1	58%	24%	44%	2	Job runner (processing)	Unlimited	No	9/17/2015 10:20:37 AM	Never	9/17/2015 12:42:59 PM																					



**Role:** A node can be either universal, job runner or model provider; the role type of the particular node can be viewed here. As we can see, our “TANEWS” node has assigned “Universal” role, and “TECHNB000” has assigned “Job runner” role.

Status	Server name	Server IP	Memory usage	CPU usage	Overall load	Running jobs count	Role	Max job count	Enabled	Last start	Last stop	Last ping
Online	TANEWS	192.168.190.63	39%	1%	30%	0	Universal	Unlimited	Yes	9/17/2015 10:20:20 AM	Never	9/17/2015 3:36:55 PM
Online	TECHNB0002	192.168.30.1	62%	36%	433%	0	Job runner (processing)	Unlimited	No	9/17/2015 2:36:13 PM	9/17/2015 2:31:35 PM	9/17/2015 3:36:49 PM

The assigned roles can be edited with clicking on “Edit in the node’s context menu, and setting the desired node in the “Change node” dialog.



If we are planning to use a node for multiple tasks in the future, we can modify its role to “Universal”.

**Max. job count:** The maximum count of jobs that can be parallel run on a node can be viewed right here. The number of jobs that can run on a node can be limited. In case of our nodes this job count is unlimited.

Status	Server name	Server IP	Memory usage	CPU usage	Overall load	Running jobs count	Role	Max job count	Enabled	Last start	Last stop	Last ping
Online	TANEWS	192.168.190.63	39%	1%	30%	0	Universal	Unlimited	Yes	9/17/2015 10:20:20 AM	Never	9/17/2015 3:36:55 PM
Online	TECHNB0002	192.168.30.1	62%	36%	433%	0	Job runner (processing)	Unlimited	No	9/17/2015 2:36:13 PM	9/17/2015 2:31:35 PM	9/17/2015 3:36:49 PM

This value can be adjusted with opening the “Change node” dialog from the node’s context menu. Click on “Edit” in the node’s context menu, and set the desired value in the dialog. Now we set this value to “10”:



If 10 jobs will be parallelly running on this node, and we want to start up a new, 11<sup>th</sup> job that should run on this node, then this job will be in waiting status until the processing node will be available.



139	File archive with DELETE method	File system archive	Waiting	2 hours ago	12 seconds	Waiting for 1 second	Yes	TANEWS [192.168.190.63]
-----	---------------------------------	---------------------	---------	-------------	------------	----------------------	-----	-------------------------

If our 11<sup>th</sup> job could be run on any available node, then another node will pick it up for processing. The node where the job should run depends on the job settings. For more information check section [“Jobs’ page, jobs’ context menu”](#).

**Enabled:** A node can either be enabled (it is online, and its service is currently running), or can be disabled. A node is disabled, when it is running, but it is unavailable for further processing tasks. By default, the nodes are in enabled state, but it is recommended to set them here as disabled in case of planned system updates, or if any failure occurred and the problem must be fixed.

Status	Server name	Server IP	Memory usage	CPU usage	Overall load	Running jobs count	Role	Max job count	Enabled	Last start	Last stop	Last ping
Online	TANEWS	192.168.190.63	39%	1%	30%	0	Universal	Unlimited	Yes	9/17/2015 10:20:20 AM	Never	9/17/2015 3:36:55 PM
Online	TECHNB0002	192.168.30.1	62%	86%	48/33%	0	Job runner (processing)	Unlimited	No	9/17/2015 2:36:13 PM	9/17/2015 2:31:35 PM	9/17/2015 3:36:48 PM

To enable/disable nodes open the “Change node” dialog with clicking on “Edit” in the node’s context menu, and check/uncheck the “Enabled” checkbox in the dialog.

**Change node** ✕

**Enabled**

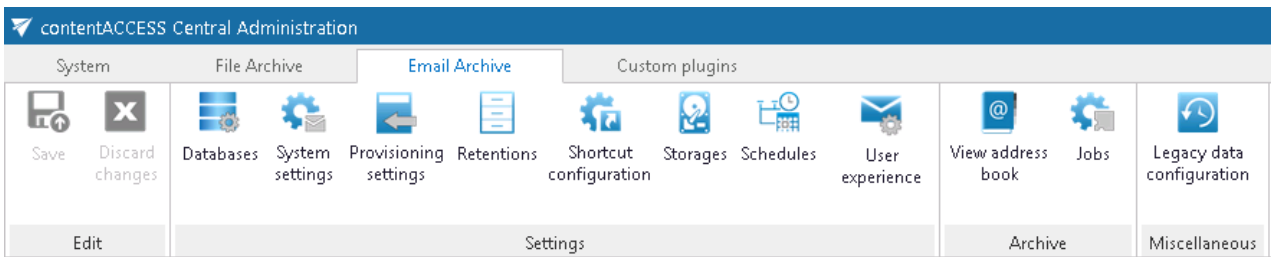
Role:

Max job count:   Unlimited

Description:

In the last columns of the grid the time of **Last start/Last stop** and **Last ping** are available.

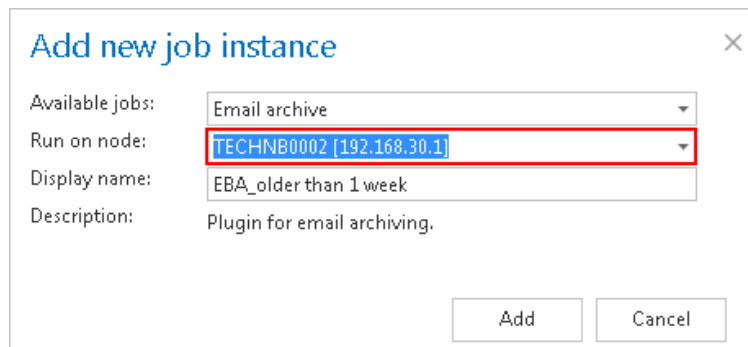
**How to assign a job to the selected node?** Now we will assign an Email archive job to the “TECHNB0002” node. We navigate to the **Email Archive** tab → **Archive** → **Jobs** on the ribbon, and open the Jobs’ page. Here we click on **+ new** to create an email archive job, which will be assigned to this node.



Jobs  
Email Archive > Archive > Jobs

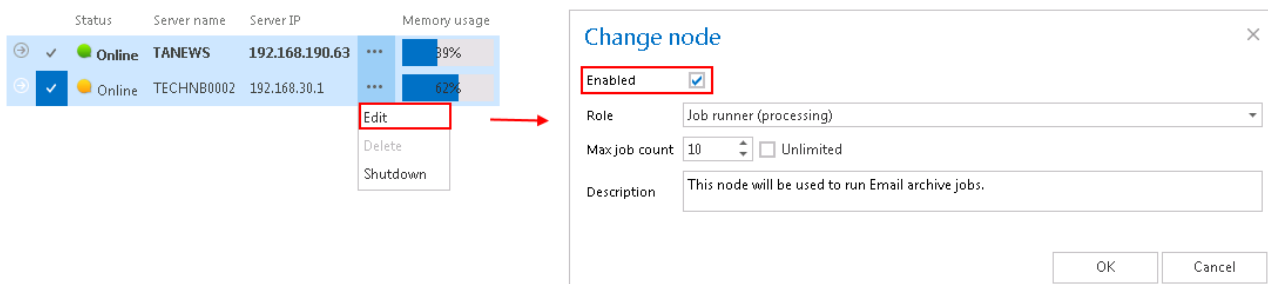
+ new refresh disable auto refresh

The “Add new job instance” dialog will open. Here we set up the desired job, and select “TECHNB0002” from the “Run on node” dropdown list. Then we click on “Add”.



We need to configure the newly added job on its job configuration page. For more information how to configure processing jobs refer to the respective sections.

Now we can enable the TECHNB0002 node.



The node will start to run the assigned job at time which is configured in the job’s scheduler settings.

**Important!!!** When configuring a job that may run in a cluster system the administrator must specify a storage and a database that is accessible by all the nodes in the cluster. If a node which picks up

the job can't access the configured storage or database, the job will fail and will not execute the task:

- In the **database repository settings** of the database (selected for the job) the administrator must **establish the connection with SQL user credentials**. If an explicit user is not specified, then the contentACCESS service user will be used, and the service must run under the same domain user. This ensures that the database can be accessed by the job regardless of where it is running.
- In the **storage repository settings** of the storage (specified for the job) the administrator must **specify the storage as a network share** (e.g. `\\ServerName\RootFolder\Subfolder`) so it can be accessible by the job from everywhere.

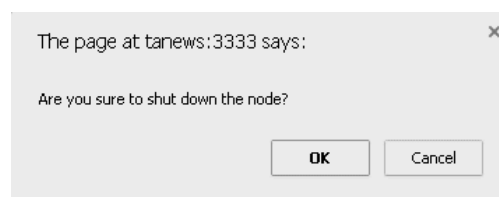
**How to shut down a node?** In certain cases it might happen, that a node should be turned off. This operation can be done from the context menu of the selected node. Click on the ellipses (...) and select "Shutdown" option from the dropdown list. With this action the contentACCESS service on the selected node will be turned off, and the node will get a red color (offline). Node shutdown is a deferred action and it might take 1 minute.

Status	Server name	Server IP	Memory usage	CPU usage	Overall load	Running jobs count	Role	Max job count	Enabled	Last start	Last stop	Last ping
Online	TANEWS	192.168.190.63	89%	1%	30%	0	Universal	Unlimited	Yes	9/17/2015 10:20:20 AM	Never	9/17/2015 2:37:04 PM
Online	TECHNB0002	192.168.30.1	43%	100%	71%	0	Job runner (processing)	Unlimited	No	9/17/2015 2:36:13 PM	9/17/2015 2:31:35 PM	9/17/2015 2:36:45 PM

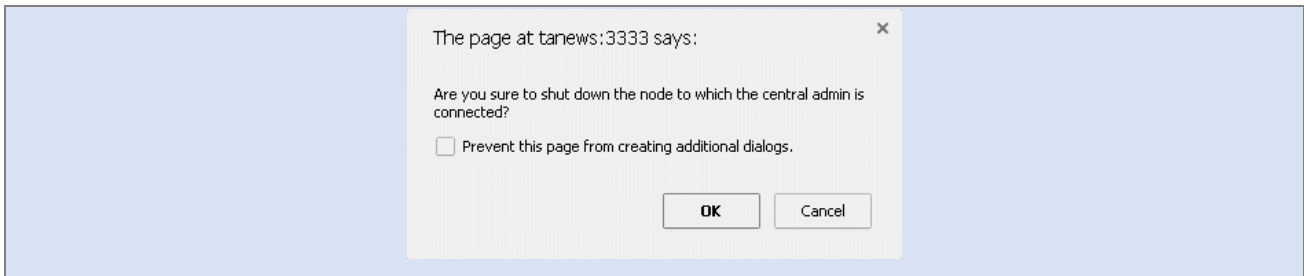
Context menu for the selected node (TECHNB0002):

- Edit
- Delete
- Shutdown

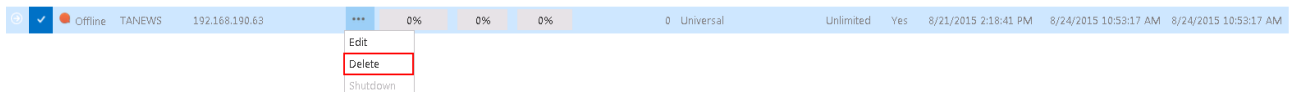
If you are quite sure that you want to shut down the node, answer "OK" for the following pop-up window:



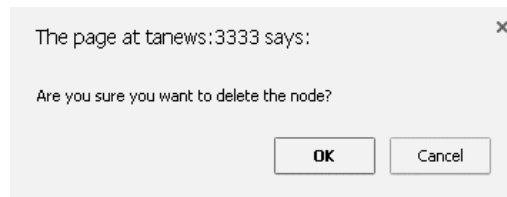
**Note:** If you are about to turn off the node where Central Administration is running, a next pop-up window will warn you about this again.



**How a node can be deleted?** With this action the user may delete a node from the node list. Only nodes with offline status can be deleted. When the contentACCESS service is started up again, the node will appear in the list. To delete it, click on it, open its context menu with a click on the ellipses (...), then select "Delete".



contentACCESS will ask the user again, if he is sure about deleting the node.



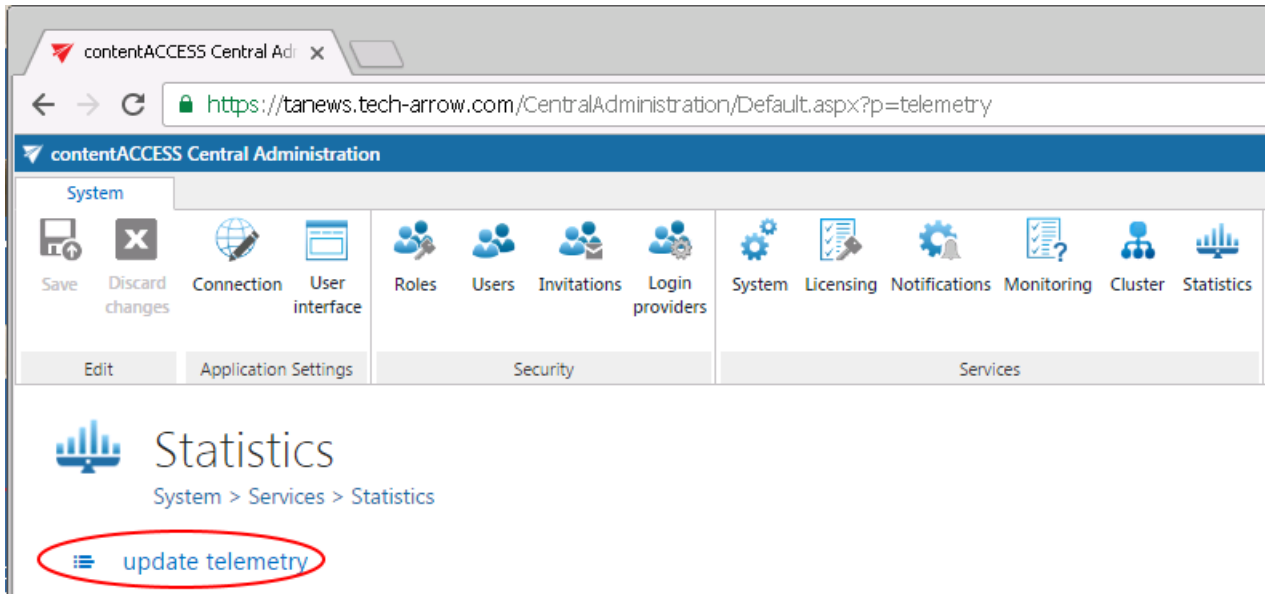
## Statistics

The telemetry service of contentACCESS permanently collects data from the

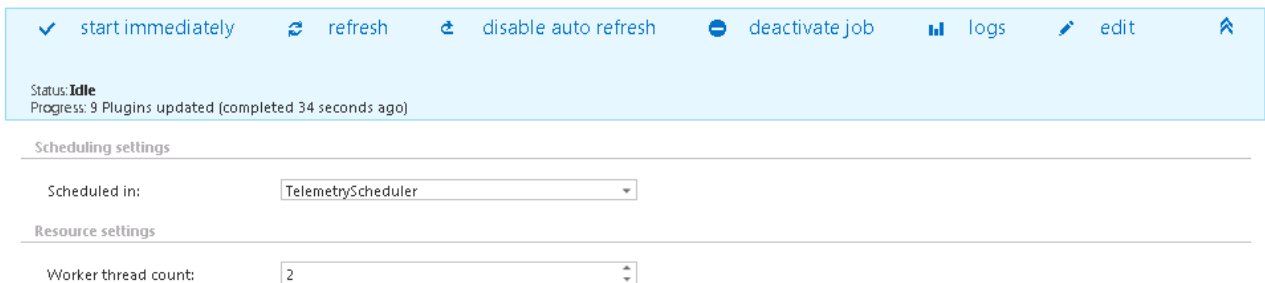
- contentACCESS system as a whole,
- email archive and
- file archive jobs

and makes a record of the collected data. The data changes are summarized into telemetry graphs. These graphs give a simple and quick overview about the actual data usage of the last 10 days. The graphs can be viewed on the **Statistics** page, which is reachable by navigating to **System** → **Services** → **Statistics** on the ribbon. The values displayed on this page are permanently updated by the telemetry job, which runs and collects the necessary data every night between 1 AM to 2 AM. If you want to see the actual usage data immediately, then you can run the **telemetry updater**, which will actualize it for you immediately.

The telemetry job's configuration page can be opened by clicking on the “update telemetry” option. Only a user with manage tenant permissions has access to the telemetry job. With clicking the option the telemetry job is automatically triggered, too.

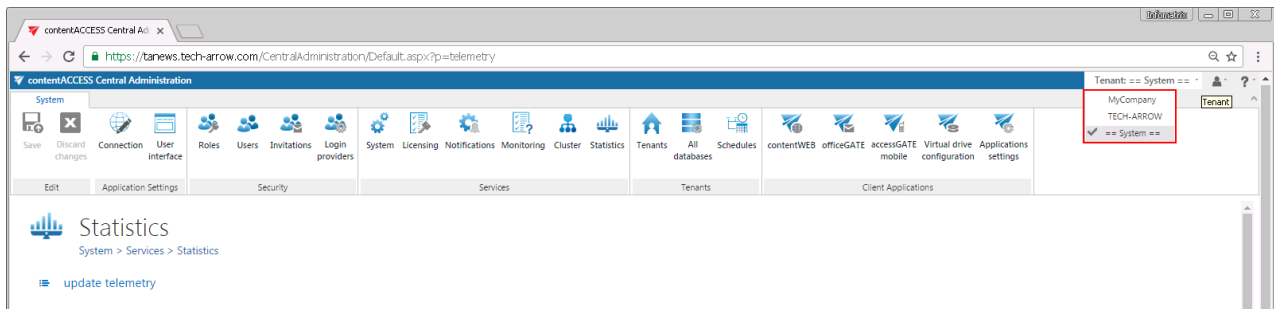


A new scheduler may be created and resource settings may be changed to the telemetry job on this page. The job can be started/stopped or activated/deactivated from the same page's status bar, too.



The telemetry information may be checked to the

- **system** as a whole– if the system tenant is selected
- **given tenant** – if only the given tenant is selected in the upper right menu:



The given page is divided into 3 sections/4 charts. Any growth or reduction in the count of tenants, archived emails, databases, root folders count can be checked here using the respective graph.

### 1. Email archive statistics

**Left axis:** displays the number of the archived emails (blue line) and mailboxes (green line)

**Right axis:** displays the total size of the archived emails (red line)

### 2. File archive statistics

**Left axis:** displays the number of the archived files (blue line) and root folders (green line)

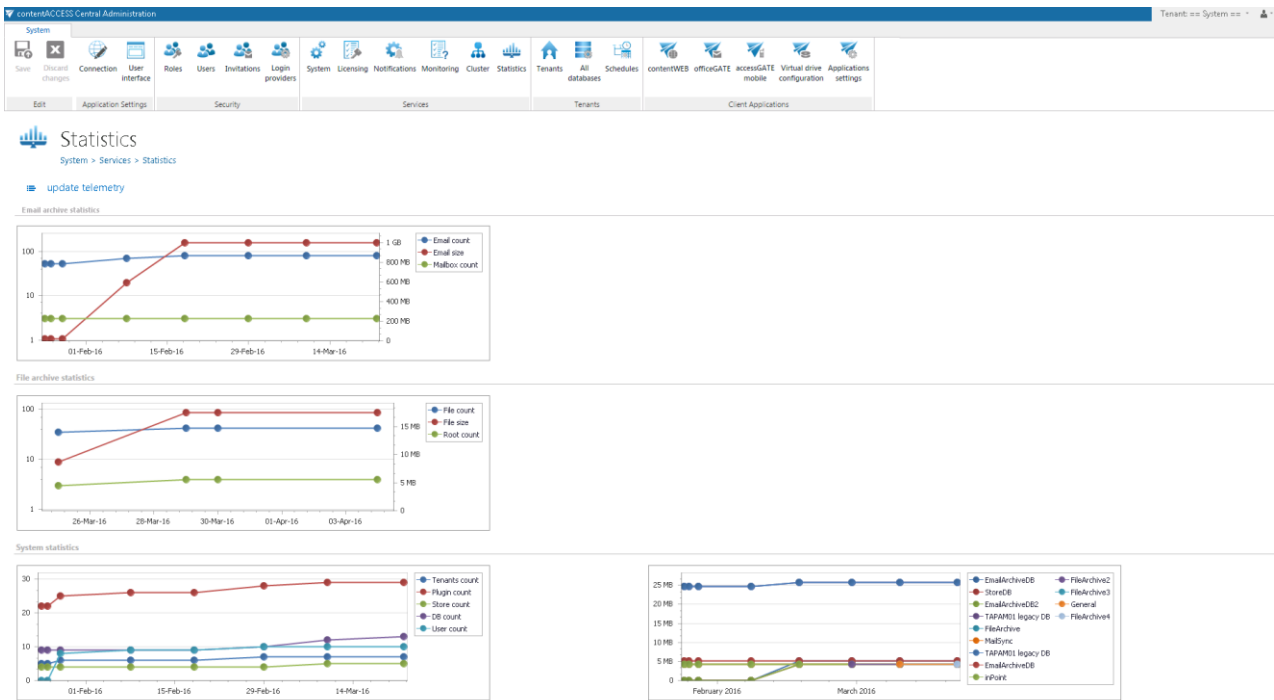
**Right axis:** displays the total size of the archived files (red line)

### 3. System statistics

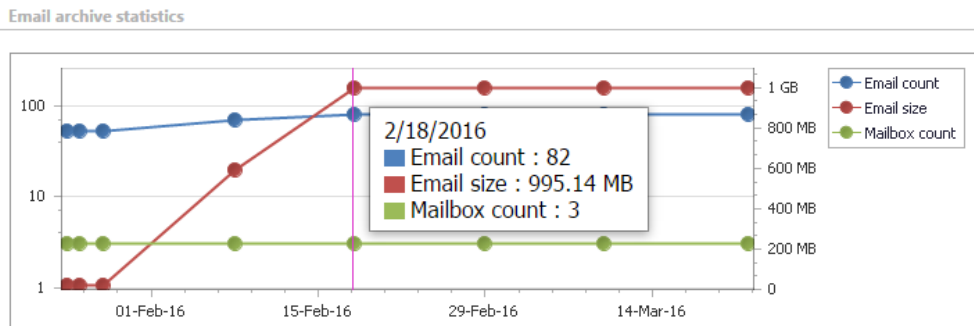
The 1<sup>st</sup> chart displays the actual count of tenants (blue line), plugins (red line), stores (green line), databases (purple line) and users (light blue line) depending on the selected day. Move with your cursor over the grid to view the exact values in the given time period.

The 2<sup>nd</sup> chart displays the size of the configured databases. Each database is marked with a different color.





The actual information is displayed with moving with the cursor over a given date in the chart.



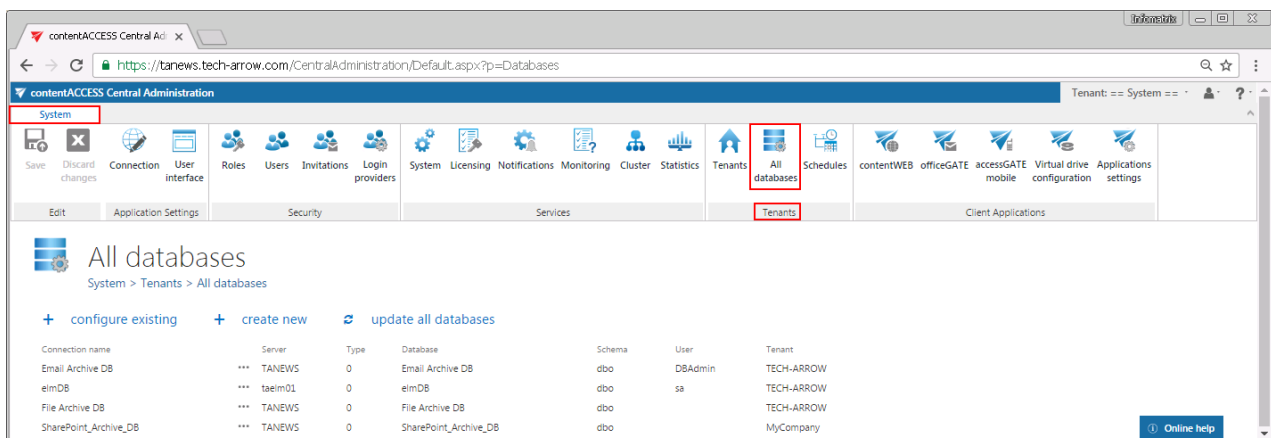
## How to create/configure databases – All databases

Processing plugins of a tenant write the metadata into the selected SQL database, which was formerly created by the administrator. The system database is always created during the installation process of contentACCESS, but it is not associated with a tenant. Databases associated with specific tenants are set up by the system administrator, on the **All databases** page.

Factors to be considered before creating databases:

- ✓ The number of users expected for your database – if the company (tenant) has more than 2,000 mailboxes, it is recommended to create more archive databases (e.g. for storage, email archive, provisioning, or to set separate databases for the Exchange groups) to ensure a better transparency of data.
- ✓ The amount of expected data in the database – always estimate how much space your data will require.
- ✓ It is also worth to consider the retrieving capacities of the database.

To open **All databases** page in contentACCESS, navigate to **System** tab → **Tenants** → **All databases** control on the Central Administration ribbon. On this page you may find all databases created to all tenants. The server, where the tenant databases are installed, the database name, schema, user details and the associated tenants are also displayed in the grid:

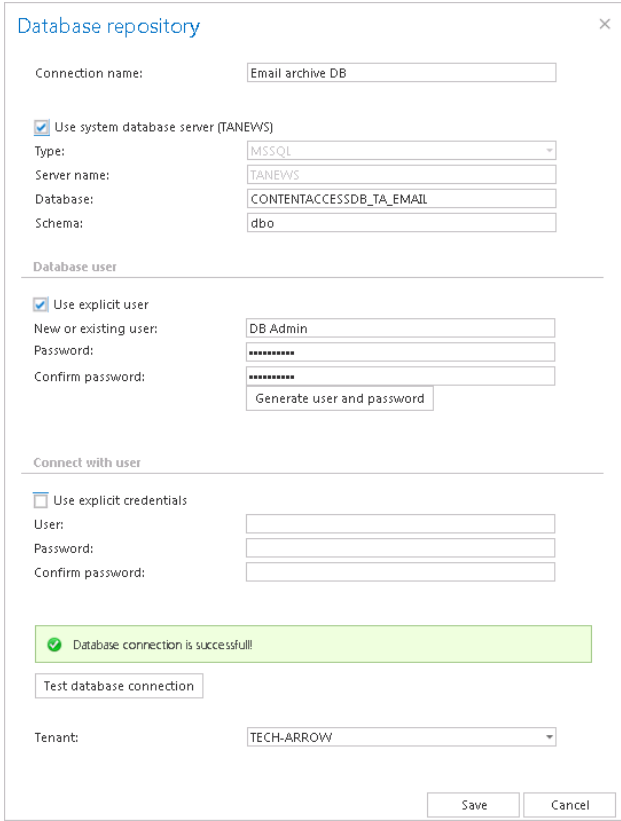


The screenshot shows the 'All databases' page in the contentACCESS Central Administration. The page title is 'All databases' and the breadcrumb is 'System > Tenants > All databases'. There are three action buttons: '+ configure existing', '+ create new', and 'update all databases'. Below these is a table with the following data:

Connection name	Server	Type	Database	Schema	User	Tenant
Email Archive DB	TANEWS	0	Email Archive DB	dbo	DBAdmin	TECH-ARROW
elmDB	taelm01	0	elmDB	dbo	sa	TECH-ARROW
File Archive DB	TANEWS	0	File Archive DB	dbo		TECH-ARROW
SharePoint_Archive_DB	TANEWS	0	SharePoint_Archive_DB	dbo		MyCompany

## + create new

To be able to run processing jobs in contentACCESS, a new database must be created. This database must be then selected on the job's configuration page, or in case of archiving the Exchange, it can be also associated to a mailbox from the address book. Click on **+ create new** option and fill required data in the **Database repository** window.



The screenshot shows the 'Database repository' window with the following configuration:

- Connection name:** Email archive DB
- Use system database server (TANEWS)
  - Type:** MSSQL
  - Server name:** TANEWS
  - Database:** CONTENTACCESSDB\_TA\_EMAIL
  - Schema:** dbo
- Database user**
  - Use explicit user
    - New or existing user:** DB Admin
    - Password:** [masked]
    - Confirm password:** [masked]
    - Generate user and password
- Connect with user**
  - Use explicit credentials
    - User:** [empty]
    - Password:** [empty]
    - Confirm password:** [empty]
- Database connection status:** Database connection is successful!
- Test database connection:** [button]
- Tenant:** TECH-ARROW
- Buttons:** Save, Cancel

**Connection name:** Enter a display name for the newly created database. This will be the name of the database in contentACCESS Central Administration.

If you want to use system database server check the “Use system database server” checkbox as it is shown on the screenshot above. This will populate the server settings. Type the database name into the “Database” field. This will be the name of the database on the SQL server. If you want to use database server which differs from the system database server, then follow the next steps:

- Type:** choose the type of database from the dropdown list (**MSSQL** is supported by default)
- Server name:** enter the name of the database server (where MSSQL is installed) here
- Database:** the database will be created on SQL server under this name



d) **Schema:** type in the database schema (optional)

Under **Database user** configurations you may create a database user. There are multiply options how to create a database user: 1) You can use an already existing user to connect to the database, or 2) you can create a new database user. 3) It is also possible to use the service user credentials to connect to the database, or 4) you may create a database user with random credentials (the user name can be edited).

- 1) If you want to use an already existing user, check the **Use explicit user** checkbox and enter the user credentials into the **New or existing user/Password/Confirm password** textboxes.

Database user

Use explicit user

New or existing user:

Password:

Confirm password:

- 2) If you want to create a new database user with custom credentials, type them into the **New or existing user/Password/Confirm password** textboxes. Do NOT click on the **Generate user and password** button.

Database user

Use explicit user

New or existing user:

Password:

Confirm password:

- 3) To connect with the service account, leave the **Use explicit user** checkbox unchecked and leave all the fields empty.

Database user

Use explicit user

New or existing user:

Password:

Confirm password:

- 4) To create a new user with a random password check the **Use explicit user** checkbox, and click on the **Generate user and password** button. The user name can be edited directly here.

Database user

Use explicit user

New or existing user:

Password:



A newly created database user will have access permissions only to the currently created database.

Under **Connect with user** enter the credentials of the database user, who has the right to create a new database on the SQL server. If the **Use explicit credentials** checkbox is not checked, then contentACCESS will automatically connect to the database (MSSQL) under the contentACCESS service account. If you want to connect with an explicit user, check this checkbox, then enter the login data.

**Test database connection:** with a click on this button run a test connection to check if contentACCESS managed to connect to the selected database server (MSSQL).

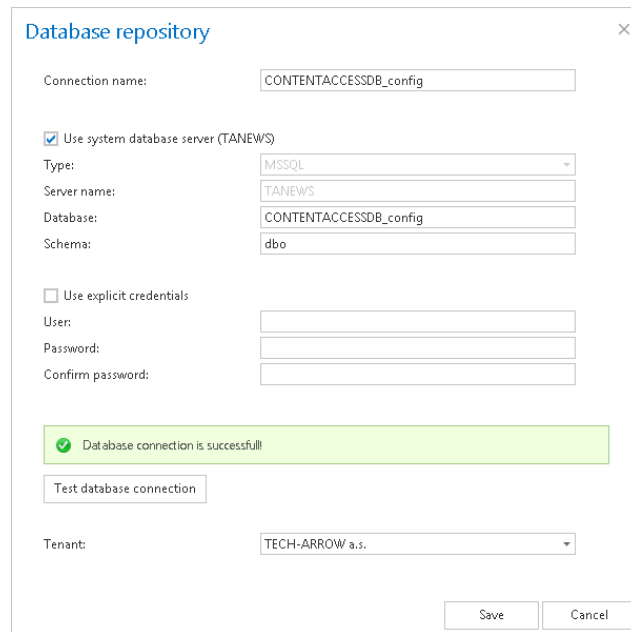
**Tenants:** select a tenant from the dropdown list to which the database will be associated.

Click on **Save** and the **New database** will turn up in the list of databases.

**Note:** When we are archiving from the Exchange server, the database must be associated with the mailbox from the address book, or the first running email archive job will associate the configured database to the archived mailbox(es). In case of file system archive a database must be selected during the configuration process of the job.

#### + [configure existing](#)

If you need to establish a connection between an already existing SQL database and contentACCESS, click on [+ configure existing](#) and configure the required data in the **Database repository** window. In this case, you do not create a new database; an already existing database from the SQL server is used only.



**Connection name:** Enter a display name for the database. This will be the name of the database in contentACCESS.

If you want to use system database server check the “Use system database server” checkbox as it is shown on the screenshot above. This will populate the server settings. Type the database name into the “Database” field. This will be the name of the database on the SQL server. If you want to use database server which differs from the system database server, then follow the next steps:

- a) **Type:** choose the type of database from the dropdown list (**MSSQL** is supported by default)
- b) **Server name:** enter the name of the database server here (where MSSQL is installed)
- c) **Database:** type here the name of an already existing database on the SQL server
- d) **Schema:** type in the database schema (optional)

**Use explicit credentials:** if this checkbox is not checked, then contentACCESS will automatically connect to the database (MSSQL) under the contentACCESS service account. If you want to use an explicit database user, check the checkbox and enter the user credentials.

**Test database connection:** with a click on this button run a test connection to check if contentACCESS managed to connect to the selected database server (MSSQL).

**Tenants:** select a tenant from the dropdown list to whom the database will belong to

Click on **Save** and the **New database** will turn up in the list of databases.



**Note:** The “create new” and “configure existing” options are unavailable for the logged on user, if the Add repository item permission on the tenant is not allowed in his role assignment. Read more in [Role details](#).

## Update all databases

With a click on this option it is possible to update the structure of all databases. Click this button and the status bar of the updating plugin will appear. In this status bar, the following operations are accessible; start/stop running, manual refresh, enable/disable auto refresh and logs (this will redirect the user to the last run session of the database updating plugin):



The screenshot shows the 'All databases' page with the following elements:

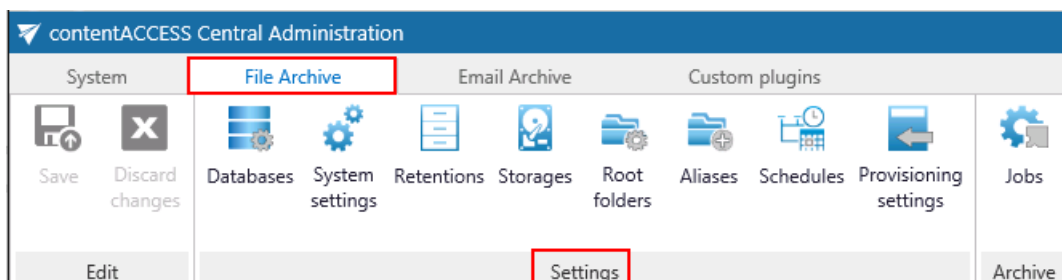
- Header: All databases (System > Tenants > All databases)
- Buttons: + configure existing, + create new, **update all databases** (highlighted with a red arrow), deactivate job, edit
- Status bar: Status: **Idle**, Progress: 11 databases processed (11 skipped) (completed 3 minutes ago)

## Common features

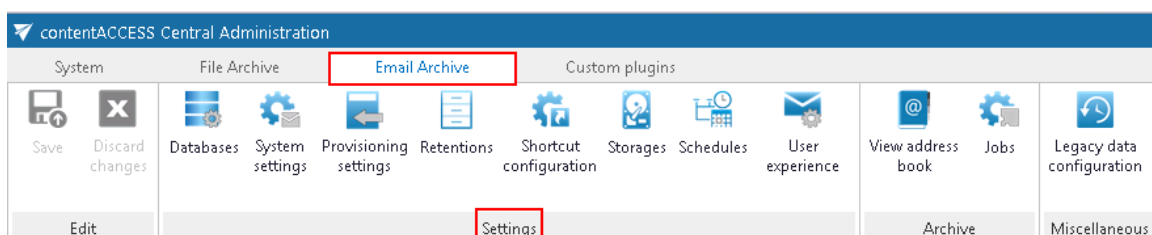
For crawling mailbox and folder contents contentACCESS uses **plugins**. A plugin in contentACCESS is a component of the software that adds specific features to the application. Each type of a plugin has its own specific use-case, but its features can be simply extended dependently on the process that it should implement.

Dependently on the implemented process the administrator creates certain instances from these plugins, which we call “jobs”. Even these jobs differ from each other concerning their settings, but there are certain features that are common to all of these jobs: all jobs will use a database where they will write metadata, they will have a storage where they will store binaries, they will have a scheduler which will specify their run times, they will have a retention which will determine the period as long as the data (documents, emails, etc.) processed by a job must be accessible etc. These settings are configurable in the following groups:

- **File Archive tab → Settings group by the File Archive;**

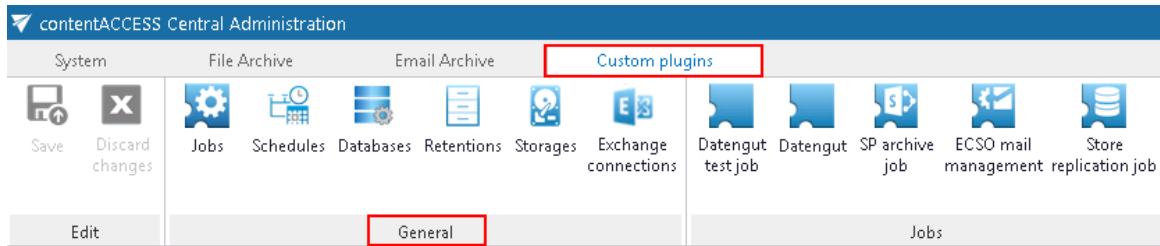


- **Email Archive tab → Settings group by Email Archive;**

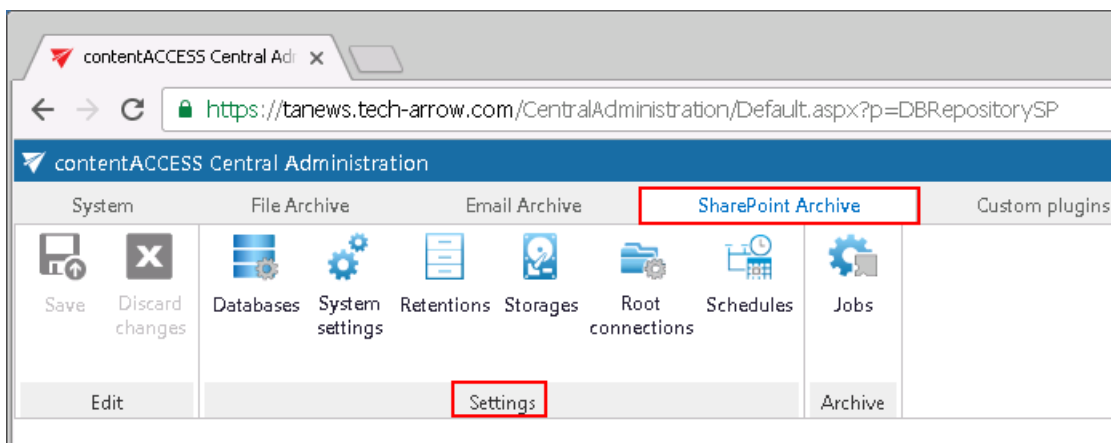




- **Custom plugins tab** → **General** group by Custom plugins.



- **SharePoint Archive tab** → **Settings** group by the SharePoint Archive;




Only the features configured in these settings can be selected on the processing job's configuration page.

In this section we will explain for you how to adjust these framework features. These configurations can be done in the same way by all plugin types, with navigating to the appropriate control button on the Central Administration ribbon. The configuration logic is from left to right. If you follow this logic, then all necessary configuration will be done for the next step.

## Databases

- (**Email Archive** → Settings → Databases button;
- File Archive** → Settings → Databases button;
- SharePoint Archive** → Settings → Databases button;
- Custom plugins** → General → Databases button)

Open the **Databases** page from the  **Databases** button. The databases configured to your selected tenant are displayed on this page, in the database grid. The grid contains the following database information: the server name, where the database is installed, the type of database (MSSQL), the



database name on SQL, the schema and the database user name. On this page the administrator can configure a connection, where the processed metadata **of this particular tenant** will be stored. If such a database will need to be configured, click on the **+ configure new** button and fill the required fields in the **Database repository** window. If the system database server will be used, then check the **Use system database server** checkbox. Into **Database** textbox type the already existing SQL database name (if such a database has not been created yet, refer to “**+ create new**” in section “[How to create/configure databases – All databases](#)”).

By default contentACCESS is connected to the database with the credentials of the user, under whom contentACCESS is running. If you want to use other credentials which differ from these credentials data, then check checkbox **Use explicit credentials** and enter the **User** and **Password** that you want to use for connecting to the tenant database. You can also run a test connection with the **Test database connection** button in the left corner of the window.

Database repository

Connection name: Email Archive DB

Use system database server (TANEWS)

Type: MSSQL

Server name: TANEWS

Database: Email Archive DB

Schema: dbo

Use explicit credentials

User:

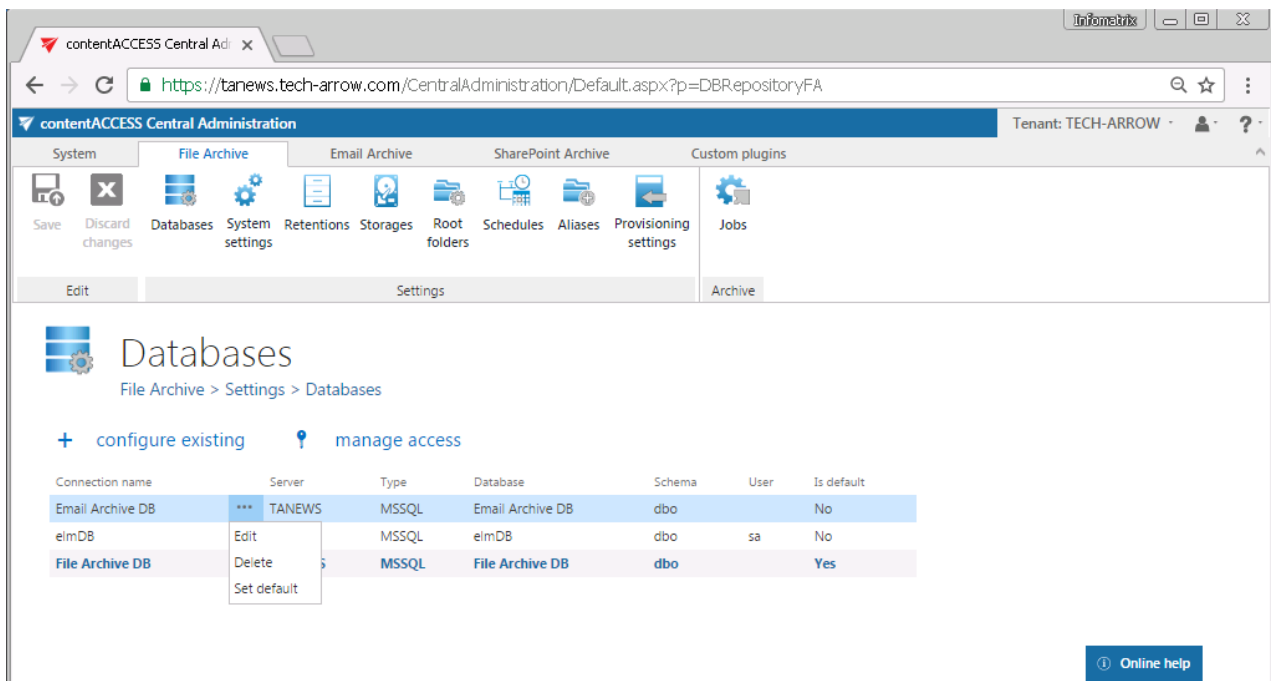
Password:

Confirm password:

Test database connection

Save Cancel

It is possible to modify the settings, delete the database or set the database as default on the **Databases** page, from the database’s context menu as it is shown on the screenshot below:



**Note:** The “configure existing” option (i.e. to configure an existing database connection) is unavailable for the logged on user, if the Add repository item permission on the tenant is not allowed in his role assignment.

The “manage access” option allows to grant access permissions on the selected database connection for a second user. This “manage access” option is available for the logged on administrator, if his role assignment contains the Edit repository item – All allowed permission on the tenant. Read more in [Managing access to contentACCESS objects](#).

## Schedules

(Email Archive → Settings → Schedules button;

File Archive → Settings → Schedules button;


SharePoint Archive → Settings → Schedules button;

Custom plugins → General → Schedules button)

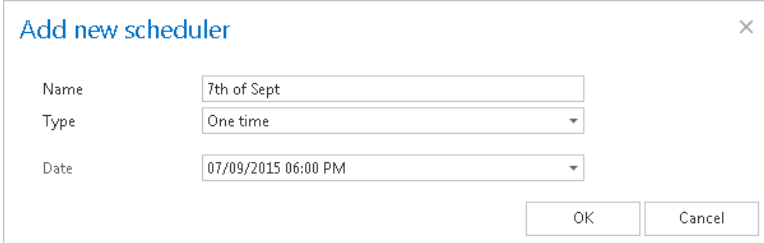
**How to use schedulers in contentACCESS?** Jobs in contentACCESS can be automatically triggered with the help of schedules. Schedules are used to define, when a processing task should start automatically and when the processing should end and restart again. In other words, administrator may schedule jobs which will automatically run at times which is configured in the given job’s scheduler settings. It is possible to set numberless schedulers, and then select the appropriate one



when configuring an exact job. Schedules help the users to work more efficiently, without wasting their time with logging into the software and start the processing manually.

Navigate to the **Schedules** page from the  **Schedules** button on the ribbon. Here click on **+ new** option. In the **Add new scheduler** dialog window enter the scheduler **Name**, select the **Type** of scheduler from the dropdown list. In contentACCESS, there are 3 types of schedulers which can be set: **One time**, **Always run** and **Week schedule with repeat**.

**One time** will run only once; by this type of scheduler we specify the start date only; the job will end when it finished the processing. One time schedulers are often used by restore or recovery jobs, i.e. by jobs which are run occasionally. The schedule that we set up now will start to run on 7<sup>th</sup> of September at 6 PM, and will end once the job finished its task:



**Always run** will run always without interruption. The job which uses this scheduler type will be started immediately when it is configured and saved. With the use of **Frequency in minutes** function the user may set the time intervals, when the scheduler should check, if the job is running. In case of our “Non-stop” scheduler (check the screenshot below) the running frequency is set to 1 minute, so the scheduler will wake up in each minute and will check, if the job is still running. If it is running, then it will check the running after 1 minute again; if it is not running, then the job will be started again. This scheduler type is typically used by archiving from journal mailboxes.



**Week schedule with repeat** will run at the same hours every week, repeatedly. In the scheduling tab click on the fields to set the days and hours, when the processing should start. One cell will mark one hour. By using the **Running frequency in minutes** option the user may set the time intervals, when the scheduler should check, if the job is running. If running frequency is set e.g. to 5 minutes,



then the scheduler will check in every 5 minutes, if the job is still running. If it is running, then it will check the running after 5 minutes again: if it is not running, then the job will be started again. It is worth to use this option, if the processing should run continuously, e.g. from morning to evening, and new tasks are continuously added that should be processed. If we check the **Run only once per interval** checkbox, then the running frequency will be automatically deactivated, and the job will run only once in this time period. It is recommended to run a process once in an interval, if the processing should be performed e.g. at the end of each working day. With checking the **Stop job at interval end** checkbox the user may stop a job after the time interval, which is set. Never mind, if the processing has not been finished yet, the job will be forcibly stopped and it will be started again according to the calendar settings. The red color of the **Add new scheduler's** cells mark the time intervals, when the job is stopped.

Our “Every night” scheduler (its setting can be viewed on the screenshot below) will run the job from 7 PM till midnight, will stop processing at midnight, nevertheless the process is finished. It will run only once in this interval. We can use a similar scheduler to archive the old company documents. It makes no sense to select running frequency in this case, because during the night nobody will add new files to archive into the file location.

The screenshot shows the 'Add new scheduler' dialog box. The 'Name' field is 'Every night' and the 'Type' is 'Week schedule with repeat'. The 'Week schedule with repeat' section shows a grid with columns for 0, 6, 12, and 18. The grid is divided into a red area (0-18) and a blue area (18-24). Below the grid, there are three options: 'Run only once per interval' (checked), 'Running frequency in minutes' (set to 5), and 'Stop job on interval end' (checked). The dialog has 'OK' and 'Cancel' buttons at the bottom right.

Setting the **Running frequency in minutes** option might be useful when the user is archiving from an Exchange journal mailbox for example, or from any location, where the tasks to be performed are accumulating continuously during a time period. If the job processed all items, the schedule should also check periodically, if there is anything new to archive. The “Every working day” scheduler (on the screenshot below) is set to process the email records from 7 AM till 6 PM. The first archive process will run from 7 AM until it has finished all current tasks, and the scheduler will check in each 5 minutes, if any new tasks (email records) were added to process. The archiving will end at 6 PM



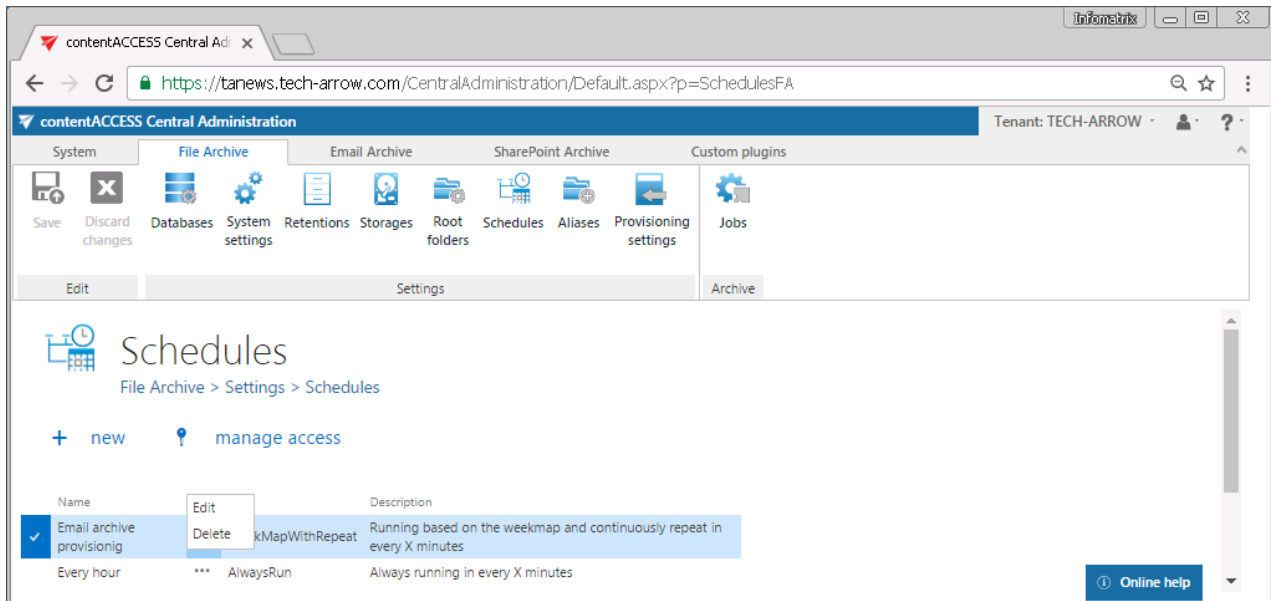
each day, nevertheless there is something left unfinished. A scheduler similar to this may be set to archive journal mailboxes on the Exchange:

This scheduler type is often used to run provisioning jobs, too.

If the user would not like to end the processing at 7 PM, he should uncheck the “Stop job at interval end” option.

**Tip:** When the user is setting a desired time range, or just moves with the mouse over the selected time range, the Weekmap scheduler highlights this time range and displays the exact start and end times beneath the calendar:

From the scheduler’s context menu, with a left click on ellipsis ( **...** ) it is possible to edit or delete this configuration if any modifications must be implemented. The scheduler type and its description can be also viewed in the grid.



**Note:** The “+ new” option above the item list is unavailable for the logged on user, if the “Add scheduler” permission on the tenant is not allowed in his role assignment.

The “manage access” option allows to grant access permissions on the selected scheduler for a second user. This “manage access” option is available for the logged on administrator, if his role assignment contains the Edit scheduler – All allowed permission on the tenant. Read more in [Managing access to contentACCESS objects.](#)

## Retentions

(**Email Archive** → Settings → Retentions button;


**File Archive** → Settings → Retentions button;

**SharePoint Archive** → Settings → Retentions button;

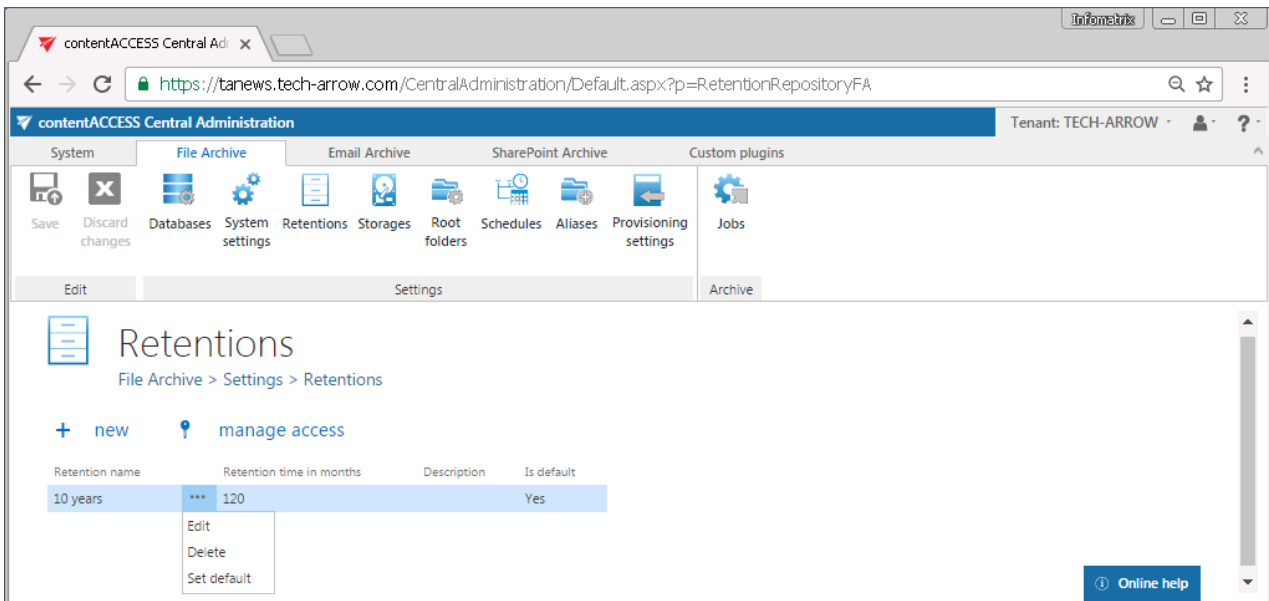
**Custom plugins** → General → Retentions button)

**What is retention time?** It represents the period of time a document should be kept or "retained" electronically. Each country has different retention times required, so it is recommended to set a time, which is required by the competent organization in your country, or by the internal regulations of the company.

On the **Retentions** page the administrator may see all already configured retentions, and to set up new retention times, which will be used by a processing job. Only retentions configured on the **Retentions** page can be selected when configuring a processing job. To set up a new retention click on **+ new** option. In the **Retention repository** dialog enter the **Retention name**, fill the **Description** and set the **Retention time in months**. Then click **Save**.



It is possible to modify the settings, delete the item or set the retention as default one from the retention's context menu, via left click on ellipsis (...) as it is shown on the screenshot below:



Retention name	Retention time in months	Description	Is default
10 years	120		Yes

Default retentions are used by manual archiving/manual restoring of emails directly from the mailbox.

**Note:** The “+ new” option above the item list is unavailable for the logged on user, if the “Add repository items” permission on the tenant is not allowed in his role assignment.



**Note:** The “manage access” option allows to grant access permissions on the selected retention for a second user. This “manage access” option is available for the logged on administrator, if his role assignment contains the Edit repository items – All allowed permission on the tenant. Read more in [Managing access to contentACCESS objects](#).


## Storages

(**Email Archive** → Settings → Storages button;

**File Archive** → Settings → Storages button;

**SharePoint Archive** → Settings → Storages button;

**Custom plugins** → General → Storages button)

For storage configurations open the **Storages** page (navigate to  **Storages** button on your ribbon). The storage configured on this page can be selected as a destination for the processed binaries when configuring a certain contentACCESS job. contentACCESS supports **Disk** storage (most frequently used type), **H&S Hybrid Store**, **Perceptive**, **Datengut** storage etc. The table of storages is initially empty.

To configure a new storage click on **+ new** on the **Storages** page. The **Storage repository** window will open. Type in the **Store name** and select a **Store type** from the list. The required storage settings depend on the storage type that you have selected.

Configurations of the most frequently used storage types will be detailed in the following sections of this chapter:

### ✓ **Disk** store type

This store type is used if the user would like to store the binaries on a single local or remote disk. This is the most frequently used store type from the above listed types. After this store type has been selected, fill in the **Path** (the target destination for the binaries) and enter credentials if required. Choose whether you would like to have extra recovery functionality with checking/unchecking **Store metadata in DB**. When selected, contentACCESS saves the extended metadata into the storage database. This function can spare even more space in the database. The user also has the possibility to decide about the usage of **Compression function**. With checking this checkbox all files larger than 4 kilobytes will be compressed except of already compressed file formats such as JPG, MP3 etc. This feature might slow down the store functionality, but will spare



storage space on the other hand. Under **Database settings** select a **Database connection**. This configuration will play an important role when using the Store replication plugin described in section [Storage replication plugin](#). **We recommend NOT to change the already configured database that the disk storage uses** (however, it can be changed using the “Change” button if it is needed). We also advise to verify the connection using the **Test** button. **The test is checking if the right credentials have been specified, and if the connection with the database has been established.**

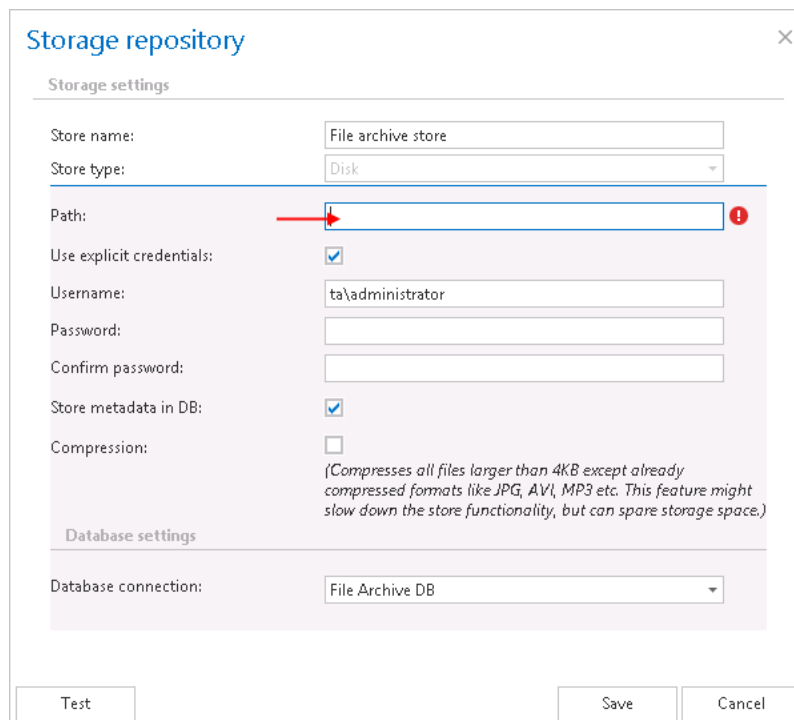
When using Disk store type, please consider requirements for data deduplication. Data deduplication finds and removes duplication within data on a volume while ensuring that the data remains correct and complete. This makes it possible to store more file data in less space on the volume. Deduplication is not supported on:

- ✓ System or boot volumes;
- ✓ Remote mapped or remote mounted drives;
- ✓ Cluster shared volume file system (CSVFS) for non-VDI workloads or any workloads on Windows Server 2012;
- ✓ Files approaching or larger than 1 TB in size;
- ✓ Volumes approaching or larger than 64 TB in size.

### What to consider before a previously configured disk storage is changed?

In some cases it may happen, that the administrator needs to move the already configured storage to a new location (e.g. if “C” disk got full and the storage should be moved to disk “D”)? In this case, the following steps must be executed to ensure an access to the already archived data and to continue with archiving the new data:

1. Stop all running jobs!!!
2. Move your old storage location manually into the new storage location (e.g. the folder of “C” disk into a new location on “D” disk);
3. Open the **Storages** page on the contentACCESS Central Administration ribbon, locate your old storage in the list, and double click on it to open the **Storage repository** window to it;
4. In the **Storage repository** window specify the new storage path (where you moved your old storage location);



The screenshot shows the 'Storage repository' dialog box with the following settings:

- Store name: File archive store
- Store type: Disk
- Path: (Empty text box with a red arrow pointing to it and a red warning icon to its right)
- Use explicit credentials:
- Username: ta\administrator
- Password: (Empty text box)
- Confirm password: (Empty text box)
- Store metadata in DB:
- Compression: 

(Compresses all files larger than 4KB except already compressed formats like JPG, AVI, MP3 etc. This feature might slow down the store functionality, but can spare storage space.)
- Database settings:
  - Database connection: File Archive DB

Buttons at the bottom: Test, Save, Cancel

These settings will ensure, that the archive and restore jobs will automatically use this new storage path. The administrator will not be required to change the storage settings on the jobs' configuration page, too. The new value will be automatically used by the jobs, where the “old” storage was already configured.



## ✓ HybridStore

contentACCESS supports the connection with the Hybrid Store. This connection allows contentACCESS to connect to any third-party storage that is supported by this store type. If you want to store the binaries in the Hybrid Store, select it from the **Store type** dropdown list and specify the required connection settings. The following storage settings are required:

**Store name:** optional name for the Hybrid Store that contentACCESS will use

**Store type:** HybridStore

**Server name:** the server where the Hybrid Store is installed

**Binding:** **http** – universal protocol

**net.tcp** – can be used only in case that the Hybrid Store and contentACCESS are in the same domain

**net.pipe** – the fastest and **recommended protocol**; can be used only in case that the Hybrid Store and contentACCESS are installed on the same machine

**Use secure connection:** Check this option to allow a secure connection with the Hybrid Store. The communication will be secured by a Windows authentication (the contentACCESS service user will be used).

**Hybrid store tenant:** Click on “Load” to load the list of available tenants based on your Hybrid Store configurations and select the one that should be applied. To load the tenants, there are some requirements:

- NET.TCP or NET.PIPE connection must be used (on HTTP the loading is not supported)
- the contentACCESS service user must be a local system administrator on the HybridStore machine

If the tenants are not loaded, then the user needs to enter the HybridStore tenant ID (GUID) manually.

**Scheme:** Click on “Load” to load the available Hybrid Store schemes and select the one that should be applied. If Hybrid Store uses secure connection and the option is not checked in the dialog, the schemes will not be loaded.



**Database settings:** Select here an already created database that contentACCESS will use to store the necessary data. It is **NOT recommended to change** the already configured database that the Hybrid store uses. However, it can be changed using the “Change” button if it is really necessary.

It is advisory to verify the database connection using the “Test” button at the bottom of the dialog.

The screenshot shows a dialog box titled "Storage repository" with a close button (X) in the top right corner. The dialog is divided into a "Storage settings" section and a bottom section with buttons. The "Storage settings" section includes the following fields and options:

- Store name: HybridStore
- Store type: HybridStore
- Server name: tahs01
- Binding:
  - http
  - net.tcp
  - net.pipe
- Use secure connection:
- Hybrid store tenant: TecharrowHybridStore (with a "Load" button below the dropdown)
- Scheme: Local (with a "Load" button below the dropdown)
- Database connection: TESTDB (with a "Change" button to the right)

At the bottom of the dialog, there are three buttons: "Test", "Save", and "Cancel".

## ✓ Datengut

This storage type is currently used by synchronizing emails in multiple mailboxes. For more information refer to [Email synchronizer plugin](#).

After this store type has been selected in **Storage settings**, name your storage. contentACCESS will use this name to display the storage on the **Storages** page. Further configure the following sections in the dialog:

**Connection configuration:** necessary settings to establish a connection with the Datengut storage

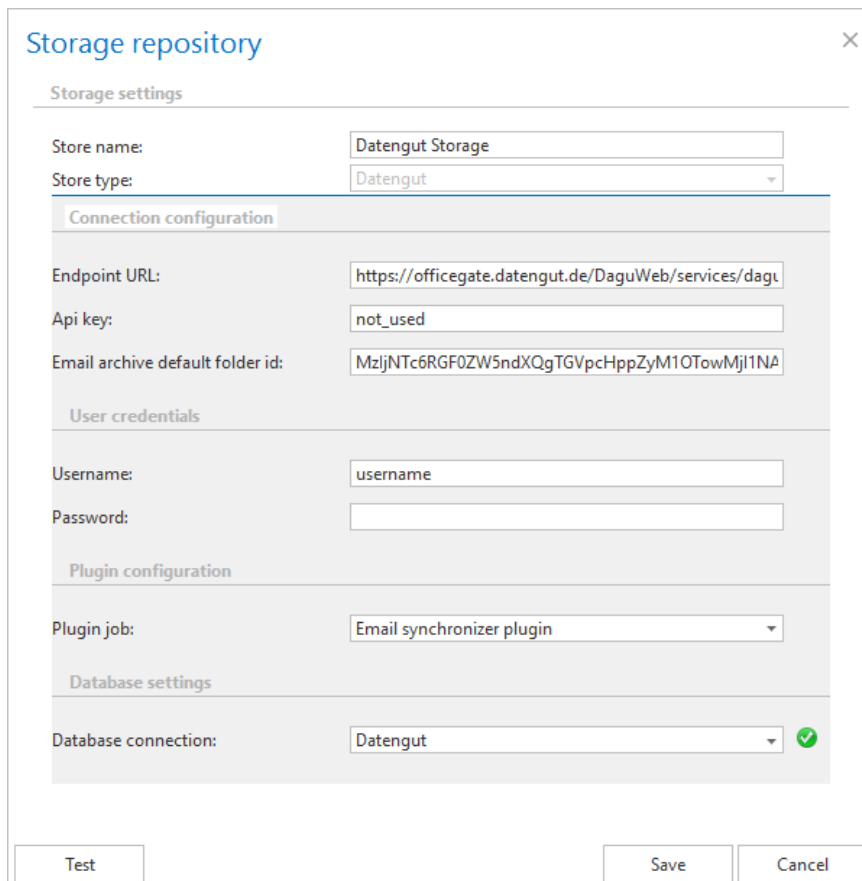
- **Endpoint URL:** Datengut service URL
- **Api key:** optional setting, any value can be entered here
- **Email archive default folder id:** during the archiving process Datengut storage saves the data into a specific storage folder; the ID of this folder must be set here

**User credentials:** set the Username and Password that can be applied to connect to the storage

**Plugin configuration:** The email synchronizer job(s) already created in **Custom plugins** → **General** → **Jobs** will be listed in the dropdown list. Select from the dropdown list the **Email synchronizer job** that will collect the metadata of the archived emails in a queue. This job is used to synchronize the email message categories in multiple mailboxes based on the metadata that are saved into its queue.

**Note:** For more information refer to chapter [Email synchronizer plugin](#).

**Database settings:** select an already created database that Datengut storage will use to store the necessary data



**Storage repository**

Storage settings

Store name:

Store type:

Connection configuration

Endpoint URL:

Api key:

Email archive default folder id:

User credentials

Username:

Password:

Plugin configuration

Plugin job:

Database settings

Database connection:  ✓

Test Save Cancel

### ✓ Perceptive

After this store type has been selected, name your storage. contentACCESS will use this name for the given storage on the **Storages** page. The user is further required to specify the following connection parameters:



- **Server name:** the server name where the storage is installed
- **CC library path:** path on which the Classic Connector jar files can be reached, e.g.  
*c:\Program Files\SAPERION\Application\scr\scr-classicconnector\lib*
- **JAVA\_HOME:** JAVA home directory must be set. Depending on the application bitness x64 or x86, e.g.: *c:\Program Files\Java\jre1.8.0\_66*
- **Tenant:** in case of non-multitenant system this fields is blank, otherwise the Perceptive tenant should be specified
- **Login type:** “INDEX”, “ADMIN” or “ELM” can be used, the recommended type is “INDEX”
- **Authentication:** choose the applicable authentication from the dropdown list; the recommended is “UserName”
- **User, Password:** specify the applicable user and credentials to be applied for the connection with the storage
- **DDC:** the DDC name where the files will be packed

The screenshot shows a dialog box titled "Storage repository" with a close button (X) in the top right corner. The dialog is divided into a "Storage settings" section and a "Test" section. The "Storage settings" section contains the following fields:

Store name:	Perceptive storage
Store type:	Perceptive
Server name:	Saperion-01
CC lib path:	c:\Program Files\Saperion\Application\scr\scr-classi
Java home:	C:\Program Files\Java\jre1.8.0_51
Tenant:	
Login type:	Index
Authentication:	UserName
User:	administrator
Password:	••••••••
DDC:	elm4

At the bottom of the dialog, there are three buttons: "Test", "Save", and "Cancel".

### ✓ Kendox storage

Kendox storage can be used for various operations like for email and file archiving, SharePoint archiving and for publishing data into SharePoint libraries and custom lists as well. In the **Storage repository** window, select the **Kendox** store type, name your storage and configure the connection as follows:



### Connection configuration section:

**Endpoint URL:** Kendox service URL

**Culture:** The names of folders, properties will be shown in the language specified here. The language can be a country-code (e.g. de) or both the language and country-code (e.g. de-CH).

### Authentication configuration:

**Username and password:** Specify the Username and Password that can be applied to connect to the storage.

**Use empty password:** Use empty password. If this is checked in a password empty string is saved. Otherwise - if the username was not changed - the old password is saved.

**Default folder path:** During the archiving or publishing process the data will be saved/published from the folder which is specified in the path.

**Mobile Web Client URL:** This configuration option needs to be set only in case that the storage is used in a [SharePoint Publishing job](#), and the job is configured to create custom lists with links pointing to the source documents. The URL must be the Kendox Mobile Web Client's URL where the published documents can be accessed. The URL is used to generate the retrieve URL of the published document.

### Import template configuration:

In the archiving process, import template is used to map the metadata between the source document and the newly created document in the Kendox store. Click the "Get available import templates" button to get the available import templates. This import template is only used if the target folder doesn't have any default import template, otherwise it is ignored.



### Storage repository ✕

**Storage settings**

Store name:

Store type:

---

**Connection configuration**

Endpoint URL:

Culture:

---

**Authentication configuration**

Username:

Use empty password:

Password:

Default folder path:

Mobile Web Client URL:

---

**Import template configuration**

---

From the given storage's context menu, on the **Storages** page, by clicking on ellipsis (...) you can modify (Edit/Delete/Set default) the storage settings. The configurations set in the **Storage repository** window can be viewed in the grid.

The screenshot shows the 'Storages' page in the contentACCESS Central Administration interface. The breadcrumb is 'File Archive > Settings > Storages'. Below the breadcrumb, there are buttons for '+ new' and 'manage access'. A table lists storage configurations:

Storage Name	Storage Type	Is default
Email Archive storage	Store.Disk	Yes
File Archive storage	...	No

A context menu is open over the 'File Archive storage' row, showing options: Edit, Delete, and Set default.

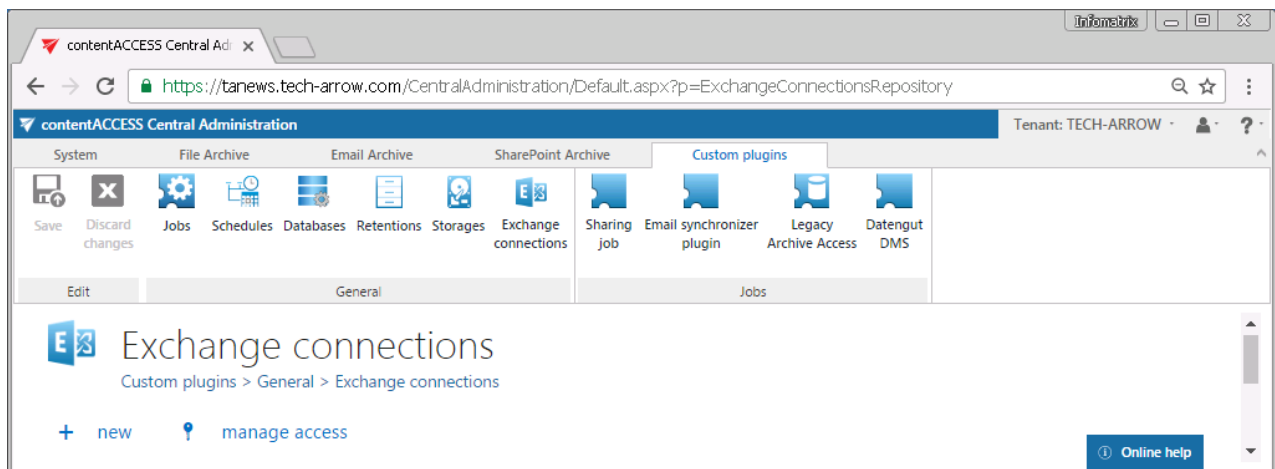
**Note:** The “+ new” option above the item list is unavailable for the logged on user, if the “Add repository items” permission on the tenant is not allowed in his role assignment.

The “manage access” option allows to grant access permissions on the selected storage for a second user. This “manage access” option is available for the logged on administrator, if his role assignment contains the Edit repository items – All allowed permission on the tenant. Read more in [Managing access to contentACCESS objects](#).

## Exchange connections

During the configuration of Exchange-based jobs it is obligatory to set the Exchange server connections, where the mailbox to be crawled is located. The Exchange connections can be configured on the following pages of the Central Administration:

- o In case of Custom jobs on the **Exchange connections** page (Custom plugins → General group →  Exchange connections button).



Here select option **+ new** and specify the necessary data in the **Exchange connection repository** window.

**Note:** The “+ new” option above the item list is unavailable for the logged on user, if the “Add repository items” permission on the tenant is not allowed in his role assignment.

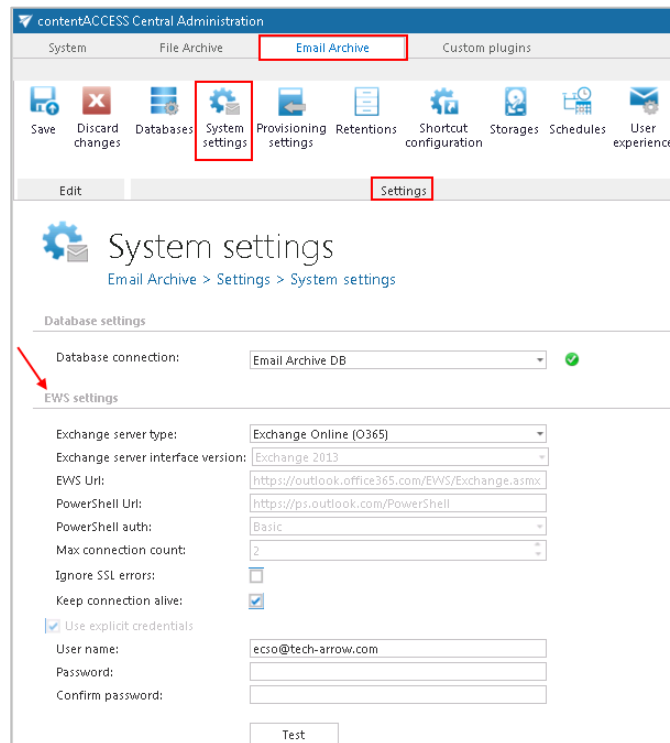
The “manage access” option allows to grant access permissions on the selected Exchange connection for a second user. This “manage access” option is available for the logged on

administrator, if his role assignment contains the Edit repository items – All allowed permission on the tenant. Read more in [Managing access to contentACCESS objects](#).

By the custom plugins it is possible to configure multiple Exchange connections.

- o In case of Email Archive jobs on the **System settings** page (**Email Archive** → **Settings** → **System settings**, under **EWS settings** section).

In case of Email Archive either an Exchange Online O365 or On-premise Exchange server connection can be configured within one tenant. If there are multiple Exchange server versions used in a company (e.g. both Exchange server 2013 and Exchange server 2010), always define the highest Exchange server version in the **System settings**. Read more in chapter **Hybrid Exchange environments**.



The screenshot shows the 'contentACCESS Central Administration' interface. The 'Email Archive' tab is selected. The 'System settings' icon is highlighted with a red box. The 'Settings' button is also highlighted with a red box. The 'Database connection' dropdown is set to 'Email Archive DB'. The 'EWS settings' section includes fields for Exchange server type (Exchange Online (O365)), Exchange server interface version (Exchange 2013), EWS Url, PowerShell Url, PowerShell auth (Basic), Max connection count (2), Ignore SSL errors (unchecked), Keep connection alive (checked), Use explicit credentials (checked), User name (ecso@tech-arrow.com), Password, and Confirm password. A 'Test' button is at the bottom.

If you are configuring EWS connection to custom plugins, a **Connection name** must be also entered into the **Exchange connection repository** dialog. Under **Exchange server type** and **Exchange server version** select the type and version of the server, which is used by your email provider. Then enter the **EWS URL**, **PowerShell URL** and the **PowerShell authentication** into the dialog. These data must be requested from the email provider. Under **Max. connection count** option the user may define, how many parallel connections will be maintained by the system when connecting to PowerShell. It is also possible to disregard any SSL errors with checking the **Ignore SSL errors** checkbox.



**Keep connection alive:** If it is turned on, then the connection between contentACCESS and the Exchange server is cached, which increases the performance. If the Exchange is load balanced, some requests can land on another Exchange which causes errors in contentACCESS. In these cases unchecking the keep alive option will destroy the connection after each request and will rebuild it on the next request. The recommended settings of “keep alive” option are as follows:

- If you are communicating with **one Exchange server**: **turn it on** to increase the performance
- If you have a **load balanced Exchange environment** and there are **communication problems** with the Exchange: it is recommended to **turn it off**

If you want to use an explicit user for Exchange connection, check **Use explicit credentials** and enter the **User name** and **Password**. It is also possible to log in under service-credentials. In this case the **Use explicit credentials** option must be unchecked. Run a test connection via **Test** button. Do not forget to save the changes.



Exchange Connection repository

EWS settings

Connection name: O365 connection

Exchange server type: Exchange Online (O365)

Exchange server version: Exchange 2013

EWS Url: https://outlook.office365.com/EWS/Exchange.asmx

PowerShell Url: https://ps.outlook.com/PowerShell

PowerShell auth: Basic

Max connection count: 2

Ignore SSL errors

Keep connection alive

Use explicit credentials

User name: ecs0@tech-arrow.com

Password: \*\*\*\*\*

Confirm password: \*\*\*\*\*

Connection successful!

Test

Save Cancel

## EWS settings

Exchange server type: Exchange Online (O365)

Exchange server interface version: Exchange 2013

EWS Url: https://outlook.office365.com/EWS/Exchange.asmx

PowerShell Url: https://ps.outlook.com/PowerShell

PowerShell auth: Basic

Max connection count: 2

Ignore SSL errors:

Keep connection alive:

Use explicit credentials

User name: ecs0@tech-arrow.com

Password:

Confirm password:

Test

Exchange connection configurations for custom jobs

Exchange connection configuration in Email  
Archive system

**Important!!!** The user set under *Exchange connections* must have a full access to the mailbox(es) that he/she would like to archive. Provisioning job requires to have “View-Only Organization Management” right on the Exchange. Role “Org Custom Apps” must be assigned for the EWS user on the [Email archive System settings](#) page, in section **EWS settings**, if [Mail app](#) will be also used. This role enables an administrator to install and manage custom apps for the organization (read more about the role [here](#)).

**Note:** To speed up the email archiving processes, TECH-ARROW has implemented MAPI protocol for communication with the Exchange server. MAPI can be used only in case that the customer has an on premise Exchange server (Exchange 2013 or earlier), and uses contentACCESS with Email archive licence (by custom plugins MAPI cannot be selected). MAPI can be selected on the email archive/restore/recovery job’s configuration page only. By default, contentACCESS uses EWS



settings to connect to the Exchange. **Some functionalities still require EWS settings. From this reason it is a must to configure EWS settings as well.**



## Exchange performance settings – turning off the Exchange throttling policies

Throttling is a mechanism of Exchange Server to distribute the Exchange resources evenly between the users. It gives every user the chance to access their emails. The users are limited for example to send max 5 emails in a minute. If this limit is reached, the user is throttled, forcing the user to wait a minute until a new mail can be sent.

The archiving user requires more resources: it needs to access multiple mailboxes, process multiple messages. The standard throttling policy is not suitable for the archiving user (superuser).

If you are experiencing problems that may be caused by these policies, you can turn them off. The commands below are turning off any limitations for the archiving user, allowing to use as many Exchange resources as needed.

### Exchange 2013

```
New-ThrottlingPolicy -Name CAPolicy -ThrottlingPolicyScope Organization

Set-ThrottlingPolicy CAPolicy -RCAMaxConcurrency Unlimited -EWSMaxConcurrency
Unlimited -EWSMaxSubscriptions Unlimited -CPAMaxConcurrency Unlimited -
EwsCutoffBalance Unlimited -EwsMaxBurst Unlimited -EwsRechargeRate Unlimited

Set-Mailbox "Administrator" -ThrottlingPolicy CAPolicy
```

### Exchange 2010

```
New-ThrottlingPolicy -Name CAPolicy

Set-ThrottlingPolicy CAPolicy -RCAMaxConcurrency $null -RCAPercentTimeInAD
$null -RCAPercentTimeInCAS $null -RCAPercentTimeInMailboxRPC $null -
EWSMaxConcurrency $null -EWSPercentTimeInAD $null -EWSPercentTimeInCAS $null -
EWSPercentTimeInMailboxRPC $null -EWSMaxSubscriptions $null -
EWSFastSearchTimeoutInSeconds $null -EWSFindCountLimit $null -
CPAMaxConcurrency $null -CPAPercentTimeInCAS $null -CPAPercentTimeInMailboxRPC
$null -CPUStartPercent $null

Set-Mailbox "Administrator" -ThrottlingPolicy CAPolicy
```

There are 3 commands which must be run in PowerShell to apply the throttling for the superuser:

#### #1 New-ThrottlingPolicy



Creates a new policy, gives a name to the policy. It is created with default values.

## #2 Set-ThrottlingPolicy

This changes the parameters of the policy – turning off any throttling for the contentACCESS user.

This list should be discussed with the customer, they might not allow all these options. This is a matter of support.

## #3 Set-Mailbox

Assign the policy to the user.

The whole association can be verified by running this command: **Get-Mailbox "Administrator" | fl ThrottlingPolicy**

## Hybrid Exchange environments in the Email Archive system

contentACCESS is supporting a wide range of Exchange Servers, starting from Exchange 2007 SP1 up to Exchange 2016. A company can simultaneously use multiple versions of Exchange servers. In such cases contentACCESS needs to process/archive the mailboxes hosted by all these Exchange servers (versions).

There are some rules how to configure the archiving in a hybrid Exchange environment. This chapter will provide you with a quick overview about these configurations.

**In this use case**, we have the following Exchange versions in our domain:

- **Exchange server 2013**
- **Exchange server 2010**

We would like to archive some mailboxes – the part of them are hosted by Exchange 2013, but some of them are still on Exchange 2010. This is a common scenario when the company is already migrating mailboxes from a lower to a higher Exchange version. As first step, it is recommended to





collect the mailboxes to be migrated into Exchange groups – these groups will be later provisioned by the Email Archive Provisioning job into the contentACCESS Address book.

Further we continue with the **EWS (Exchange Web Services) settings**. In Central Administration, open the **System settings** page (**Email Archive** tab → **Settings** group → **System settings**). Go to section **EWS settings**. Here select your server type (On-premise) and select the highest Exchange server version that is used – in this use case **Exchange 2013 or higher**. Set the necessary parameters described earlier, test the connection and save your settings.

The screenshot shows the 'System settings' page for 'Email Archive > Settings > System settings'. The 'Database connection' is set to 'Email Archive DB'. The 'EWS settings' section is highlighted with a red box and contains the following configuration:

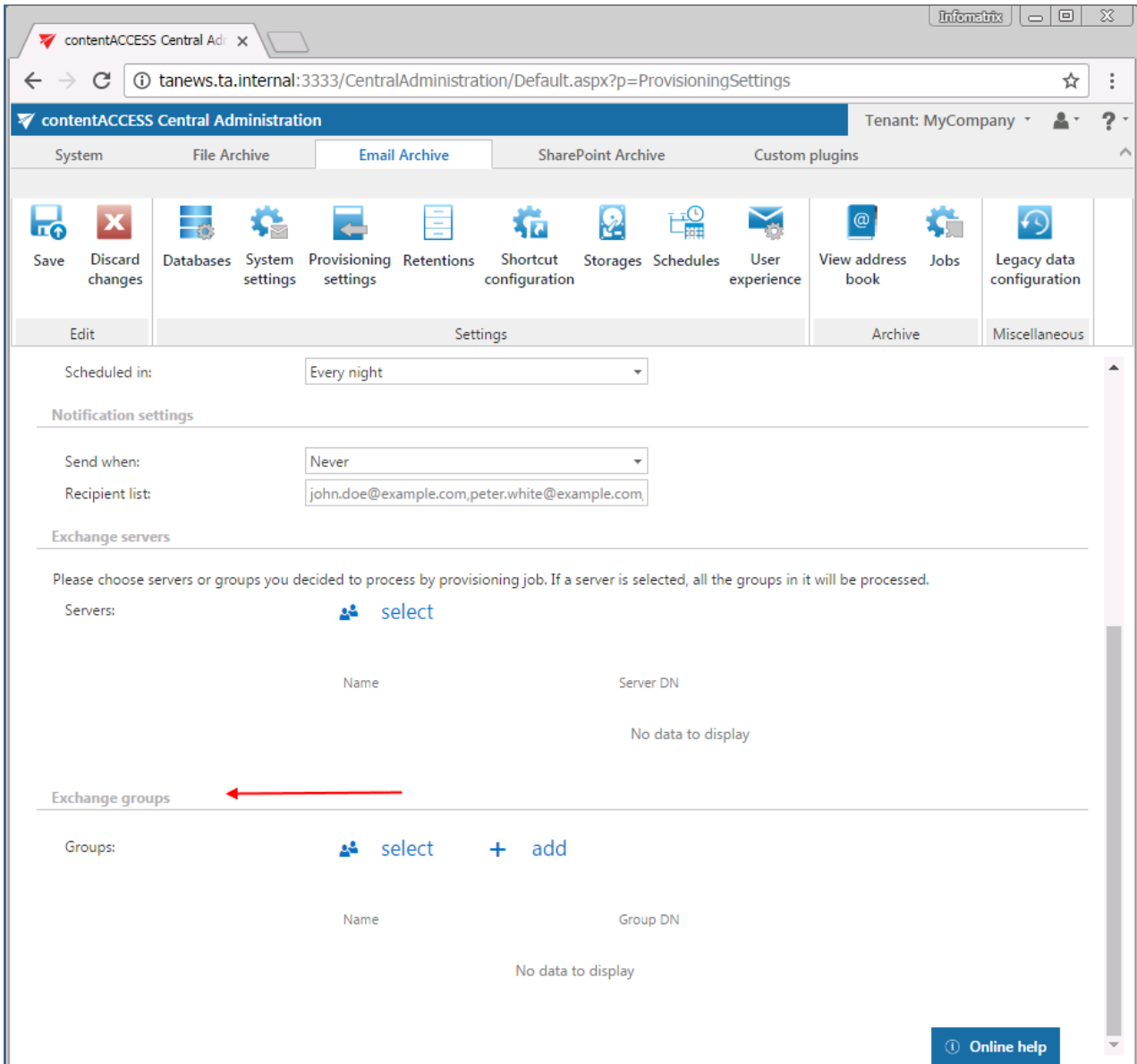
- Exchange server type: On-premise
- Exchange server interface version: Exchange 2013 or higher (indicated by a red arrow)
- EWS Url: https://TECHEX2K13.tech.internal/EWS/Exchange.as
- PowerShell Url: https://TECHEX2K13.tech.internal/PowerShell
- PowerShell auth: Default
- Max connection count: 3
- Ignore SSL errors:
- Keep connection alive:
- Use explicit credentials
- User name: tech\eba
- Password: [Empty field]
- Confirm password: [Empty field]

A 'Test connection' button is located at the bottom of the EWS settings section. An 'Online help' button is visible in the bottom right corner of the page.

Now we need to set the **Exchange groups to be archived in the Email Archive Provisioning settings**. Open the Provisioning settings” page (**Email Archive** → **Settings** → **Provisioning settings**).



Here you select the **specific Exchange groups** (or Exchange servers including all groups) that should be archived, and start the provisioning job to synchronize them to the contentACCESS Address book.



After the provisioning job has finished the task, both Exchange versions (2010 & 2013) and the provisioned Exchange groups are in the Address book:

**View address book**  
Email Archive > Archive > View address book

import servers manually | import groups manually | import mailboxes manually

Exchange servers				
Name	EWS version	Server DN	Create contentWEB access	
MIGRATION	Exchange2013	/o=TECH-ARROW/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Configuration/cn=Servers/cn=MIGRATION	No	
TECHEX2K10	Exchange2010_SP1	/o=TECH-ARROW/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Configuration/cn=Servers/cn=TECHEX2K10	No	

Exchange groups				
Name	Group DN	Create contentWEB access	Active	
TECH only	CN=TECH only,CN=Users,DC=tech,DC=internal	No	Yes	
TECH subgroup	CN=TECH subgroup,CN=Users,DC=tech,DC=internal	No	Yes	

Public folders					
Name	Access email	Archive database	Store	Active	Server name
Public Folders	vwe@tech.internal	TECH	TECHStore	Yes	TECHEX2K10

Exchange mailboxes							
Name	Email	Distinguished Name	Create contentWEB access	Archive database	Store	Active	Server name
pf12010	pf12010@tech.internal	CN=pf12010,OU=DevUsers,OU=Users	No	TECH	TECHStore	Yes	TECHEX2K10
Vladimir Werskov	vwe@tech.internal	CN=Vladimir Werskov,OU=Users,OU=TECH,DC=te	No	TECH	TECHStore	Yes	TECHEX2K10

The context menu of the Exchange servers allows to change the server settings:

Exchange servers		
Name	EWS version	Server DN
TECHEX2K10	Exchange2010_SP1	/o=TECH-AF (FYDIBOHF2
MIGRATION		/o=TECH-AF (FYDIBOHF2

- Automatically create contentWEB user
- Do not create contentWEB user
- Change server settings

By clicking this option the “Server configuration” window opens, which allows to change the EWS version for the server and to define a custom EWS URL for the server. “For the server” means that all mailboxes belonging to the server will use those values. This is useful in hybrid environments (example: 2010 and 2013 in one domain – you can define different URL for both servers!).



Server configuration

EWS version: Exchange 2010 SP1

Custom EWS Url: If empty, the default url will be used.

OK Cancel

The combo box allows you to select the option “Not specified”. This is a way to reset your custom settings – and use the global one (see the **System settings** page – **EWS server interface version**).

Server configuration

EWS version: Exchange 2010 SP1

Custom EWS Url:

Exchange 2010 SP1

Not specified

Exchange 2007 SP1

Exchange 2010

Exchange 2010 SP1

Exchange 2010 SP2

Exchange 2013 or higher

Cancel

## Importing contentACCESS configurations from files

contentACCESS allows to import data from files in the following available file formats: CSV, XML, Tab delimited files and Space delimited files. This simplifies adding of huge amount of data to different configuration sections in contentACCESS instead of entering each entry manually. There's an option to set if we want to overwrite the existing items, update or skip them. The user may also download a sample file to check, if the file that he wishes to import contains all necessary information (columns) for the given configuration section. Column names are displayed in the sample file if the **"First row is header"** option is turned on in the respective importer dialog.

**Important!!!** By importing **Email archive** and **Email restore** configuration sections it is highly recommended to define the mailbox folders to be imported with wildcards (e.g. %INBOX%). Wildcards ensure, that the given mailbox folder (e.g. the "INBOX" folder) will be processed regardless of the language settings of the mailbox. This is important mainly for companies who archive mailboxes using different languages.

After browsing the file to be uploaded and configuring the importer the file can be uploaded. After the initial upload the file's columns can be mapped to the importable entry's fields by dragging the column headers. When the mapping is finished the newly imported entries will be added to the configuration section.

contentACCESS allows to **import the folders to be archived/restored/recovered/excluded:**

### 1. to File archive, File restore, File recovery jobs

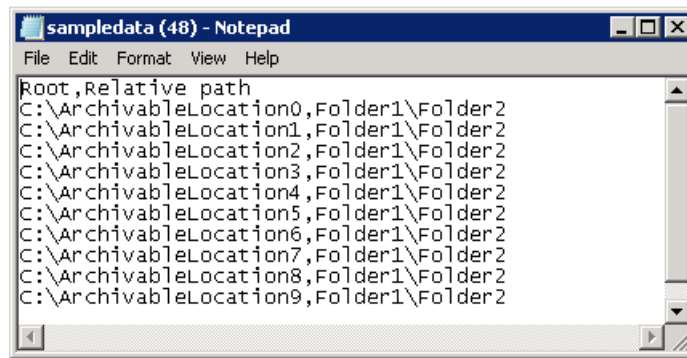
The import option is available on the respective job configuration page, under sections "Folders to process" and "Exclude folders":



An importable file with **Folders to process** contains the following rows:

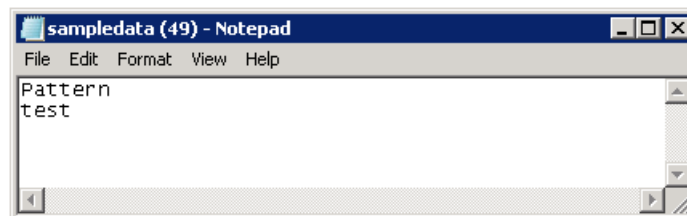
- **Root - mandatory**
- **Relative path - nullable**

Example in case of a CSV file:



An importable file with **Folders to exclude** contains the

- **Exclude pattern**, e.g. if folder called “test” needs to be excluded, the CSV will look like this:



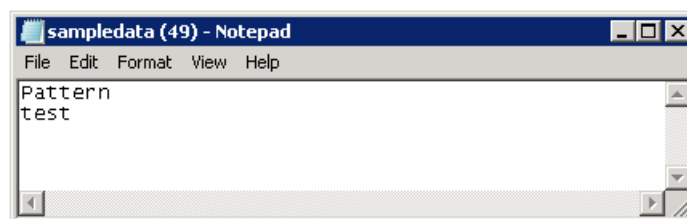
## 2. to Email archive, Email restore, Email recovery jobs

The import option is available on the respective job configuration page, under section “Exclude folders” and “Exclude addresses”:



An importable file with **Excludable folders** contains the

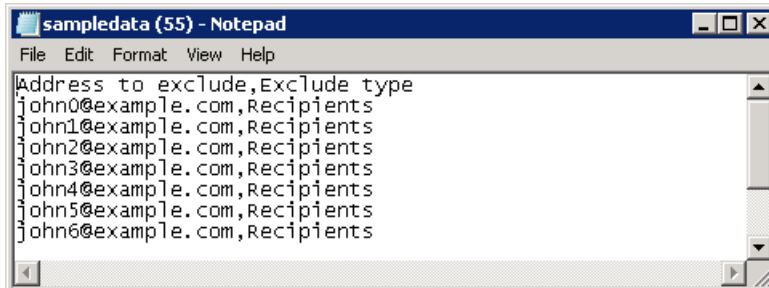
- **Exclude pattern**, e.g. if mailbox folder called “test” needs to be excluded, the CSV will look like this:



An importable file with **Exclude addresses** contains the:

- **Address(es) to include**
- **Exclude type(s)** – Sender/Recipients/All

Example in case of a CSV file:



```

Address to exclude,Exclude type
john0@example.com,Recipients
john1@example.com,Recipients
john2@example.com,Recipients
john3@example.com,Recipients
john4@example.com,Recipients
john5@example.com,Recipients
john6@example.com,Recipients

```

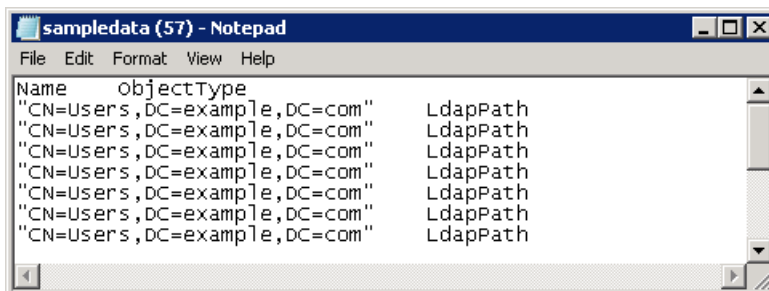
3. **File Archive provisioning job** (used to synchronize the users in the Active Directory with contentACCESS) also uses this feature to import the objects to be provisioned:



The importable file must include the:

- **Name**
- **Object type**

Example in case of a Tab delimited file:



```

Name      ObjectType
"CN=Users,DC=example,DC=com"  LdapPath
"CN=Users,DC=example,DC=com"  LdapPath
"CN=Users,DC=example,DC=com"  LdapPath
"CN=Users,DC=example,DC=com"  LdapPath
"CN=Users,DC=example,DC=com"  LdapPath
"CN=Users,DC=example,DC=com"  LdapPath
"CN=Users,DC=example,DC=com"  LdapPath
"CN=Users,DC=example,DC=com"  LdapPath

```

4. The **root folders** used in File Archive may be also imported into contentACCESS from files (read more [here](#)):

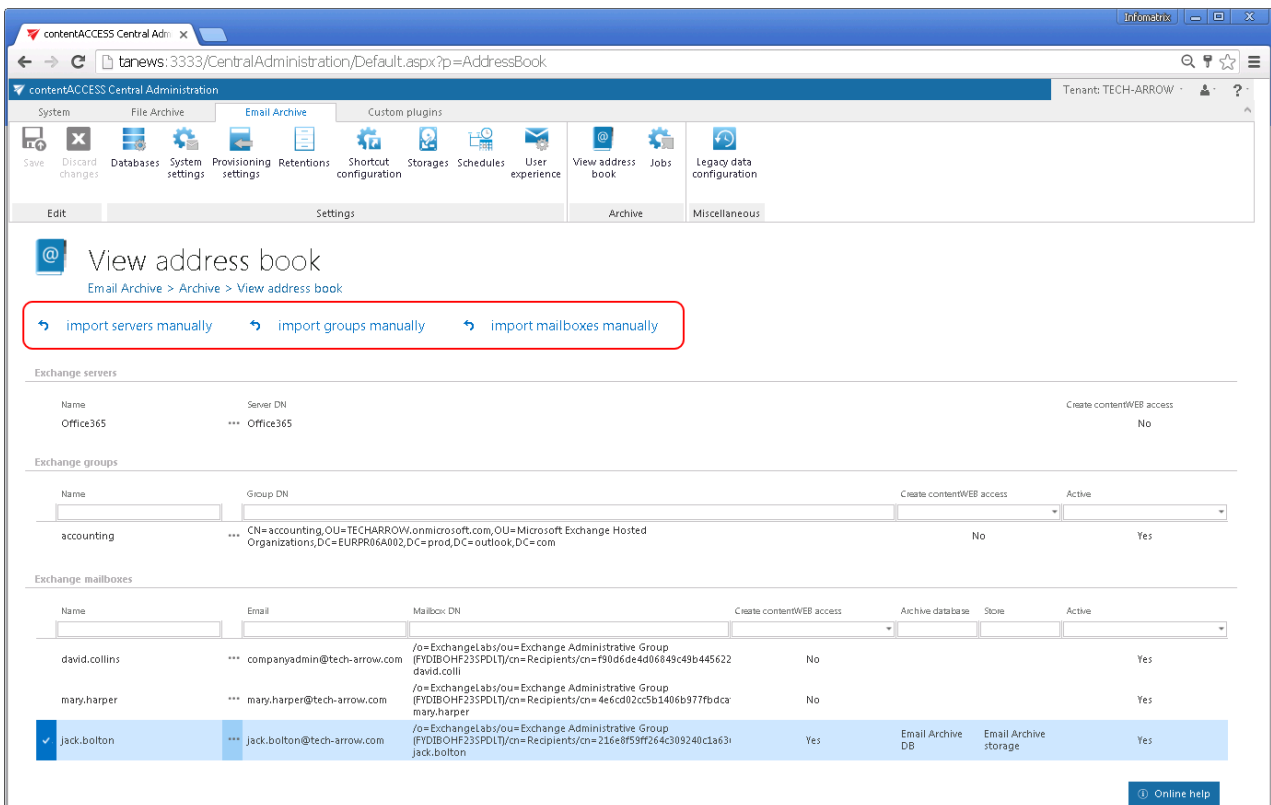


## Root folders

File Archive > Settings > Root folders

+ new **import**

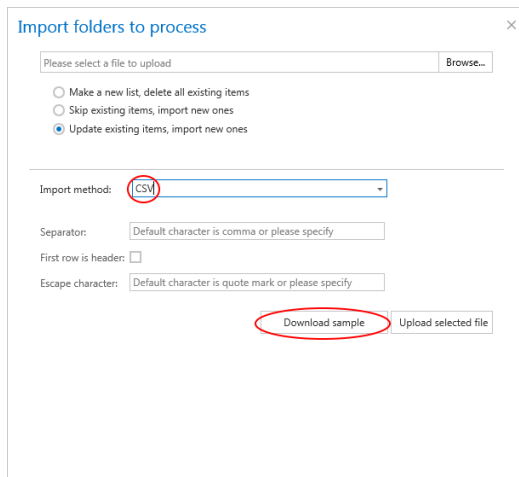
5. Servers/groups/mailboxes can be imported from files to the contentACCESS Address book using options “**Import servers manually**”/ “**Import groups manually**”/ “**Import mailboxes manually**” as well (read more [here](#)):



To import a file follow these steps:

- Click the **import** button on the respective configuration page. The importer dialog opens.
- From the **Import method** dropdown list select an import method to be applied (in our case CSV) and download a sample file using the **Download sample** option. Based on the sample file prepare the file to import and verify, if your prepared file contains all necessary information for the respective configuration section.





Import folders to process

Please select a file to upload Browse...

Make a new list, delete all existing items  
 Skip existing items, import new ones  
 Update existing items, import new ones

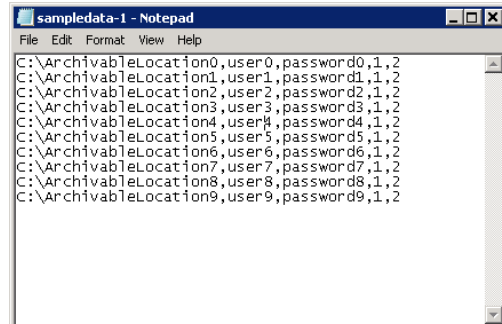
Import method: CSV

Separator: Default character is comma or please specify

First row is header:

Escape character: Default character is quote mark or please specify

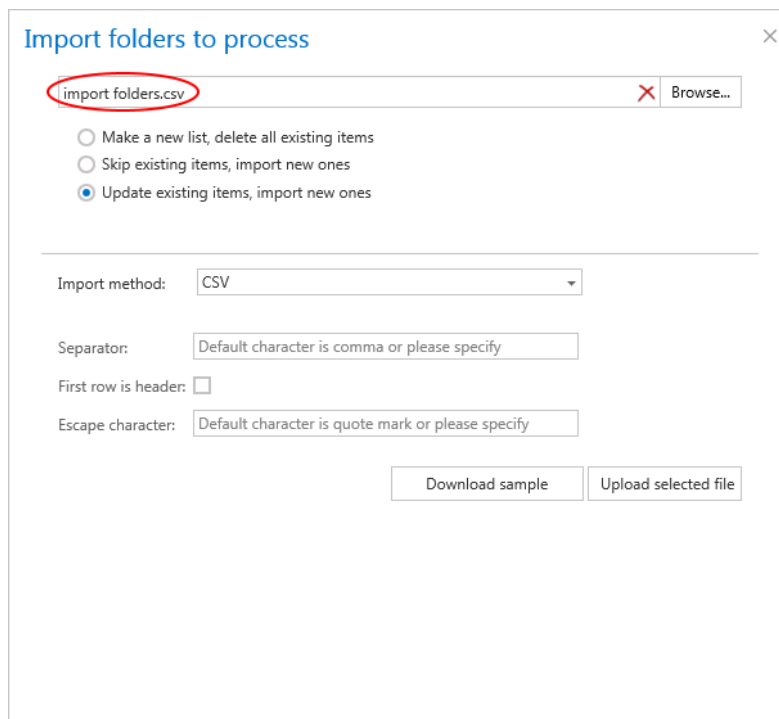
Download sample Upload selected file



```

C:\ArchivableLocation0,user0,password0,1,2
C:\ArchivableLocation1,user1,password1,1,2
C:\ArchivableLocation2,user2,password2,1,2
C:\ArchivableLocation3,user3,password3,1,2
C:\ArchivableLocation4,user4,password4,1,2
C:\ArchivableLocation5,user5,password5,1,2
C:\ArchivableLocation6,user6,password6,1,2
C:\ArchivableLocation7,user7,password7,1,2
C:\ArchivableLocation8,user8,password8,1,2
C:\ArchivableLocation9,user9,password9,1,2
  
```

- Further click **“Browse”** and locate the file to be imported. (On the picture below we have selected a CSV file.)



Import folders to process

import folders.csv Browse...

Make a new list, delete all existing items  
 Skip existing items, import new ones  
 Update existing items, import new ones

Import method: CSV

Separator: Default character is comma or please specify

First row is header:

Escape character: Default character is quote mark or please specify

Download sample Upload selected file

- Further specify, how the selected file should be imported. Choose one from the 3 available options (the available options are configuration specific, not all are available by all configurations):

**Make a new list, delete all existing items** – select this option to create a completely new list of items; any already set items will be deleted

**Skip existing items, import new ones** – select this option to add the new items from the list; while the already configured items will be skipped



**Update existing items, import new ones** – this option is available by importing root folders from files; it can be applied if the password has been changed and should be updated

- **Depending on the selected import method the user is further required to specify the following settings:**

#### In case of CSV:

Specify the CSV separator (in our case it is a comma). If the first row in the CSV file is a header, mark the respective checkbox. Further specify the escape character, if such exists in your CSV file (in our case quotation marks)

---

Import method:\*

Separator:

First row is header:

Escape character:

#### In case of Tab delimited file

If the first row of the file is a header, mark the respective checkbox. Further specify the escape character, if such exists in the file.

---

Import method:\*

---

**Settings**

First row is header:

Escape character:

#### In case of Space delimited file

If the first row of the file is a header, mark the respective checkbox. Further specify the escape character, if exists in the file.

---

Import method:\*

---

**Settings**

First row is header:

Escape character:\*

**In case that the file to be imported is an XML**, no further settings are required.



Import method:\* XML

- Click **Upload selected file** to upload the file with the desired items.

**Import folders to process** ×

---

Import method: CSV

Path	User	Password	Store Id	Database Id
C:\TestPath1	user1	password1	1	2
C:\TestPath2	user2	password2	1	2
C:\TestPath3	user3	password3	1	2
C:\TestPath4	user4	password4	1	2
C:\TestPath5	user5	password5	1	2
C:\TestPath6	user6	password6	1	2
C:\TestPath7	user7	password7	1	2
C:\TestPath8	user8	password8	1	2
C:\TestPath9	user9	password9	1	2
C:\TestPath10	user10	password10	1	2

- Click **“OK”**. The list of imported items will be added to the respective section.

In a file containing multiple columns the user may specify, which column should be imported. Simply drag and drop the column header (on the picture below the **Database ID** header) over the respective column that should be imported.

### Import folders to process ✕

Import method: CSV

Path	User	Password	Store Id	Database Id		
C:\TestPath1	user1	password1	1	2	3	4
C:\TestPath2	user2	password2	1	2	3	4
C:\TestPath3	user3	password3	1	2	3	4
C:\TestPath4	user4	password4	1	2	3	4
C:\TestPath5	user5	password5	1	2	3	4
C:\TestPath6	user6	password6	1	2	3	4
C:\TestPath7	user7	password7	1	2	3	4
C:\TestPath8	user8	password8	1	2	3	4
C:\TestPath9	user9	password9	1	2	3	4
C:\TestPath10	user10	password10	1	2	3	4

OK
Cancel

## Manual import of Exchange servers/groups/mailboxes to the contentACCESS Address book

As already mentioned, contentACCESS allows to import servers, groups and mailboxes manually into the address book from CSV or XML files as well. The importing options are available on the **View address book** page of the Central administration (**Email Archive** tab → **Archive** group → **View address book** button).



### View address book

[Email Archive](#) > [Archive](#) > [View address book](#)

[↶ import servers manually](#)   
 [↶ import groups manually](#)   
 [↶ import mailboxes manually](#)

### How can you import?

In all cases you need to create a CSV file as in the sample file – select the import method in the dialog and click **Show sample**:

### Import servers manually ✕

Please select a file to upload Browse...

Skip existing items, import new ones

Import method: CSV

---

**Settings**

Separator: Default character is comma or please specify

First row is header:

Escape character: Default character is quotation mark or please specif

Show sample
Import...

**Nullable** fields are not mandatory and can be left empty.

A row in the **CSV file with SERVERS** contains:

- **Name**
- **Server DN - nullable**
- **Settings - nullable**

Example: **Office365,Office365,settings**

If you do not have some of the nullable data, no problem. Simple add an empty character instead of them, e.g.: server: **Office365,,,**

```

sampledata (17) - Notepad
File Edit Format View Help
Name,Server DN,Settings
name0,/o=TECH-ARROW/ou=Exchange Administrative Group (AAAAAAAAAAAAA)/cn=Configuration/cn=Servers/cn=EX2k10,"Version 14.3 (Build 123.4);Mailbox, ClientAccess, HubTransport"
name1,/o=TECH-ARROW/ou=Exchange Administrative Group (AAAAAAAAAAAAA)/cn=Configuration/cn=Servers/cn=EX2k10,"Version 14.3 (Build 123.4);Mailbox, ClientAccess, HubTransport"
name2,/o=TECH-ARROW/ou=Exchange Administrative Group (AAAAAAAAAAAAA)/cn=Configuration/cn=Servers/cn=EX2k10,"Version 14.3 (Build 123.4);Mailbox, ClientAccess, HubTransport"
name3,/o=TECH-ARROW/ou=Exchange Administrative Group (AAAAAAAAAAAAA)/cn=Configuration/cn=Servers/cn=EX2k10,"Version 14.3 (Build 123.4);Mailbox, ClientAccess, HubTransport"
name4,/o=TECH-ARROW/ou=Exchange Administrative Group (AAAAAAAAAAAAA)/cn=Configuration/cn=Servers/cn=EX2k10,"Version 14.3 (Build 123.4);Mailbox, ClientAccess, HubTransport"
name5,/o=TECH-ARROW/ou=Exchange Administrative Group (AAAAAAAAAAAAA)/cn=Configuration/cn=Servers/cn=EX2k10,"Version 14.3 (Build 123.4);Mailbox, ClientAccess, HubTransport"
name6,/o=TECH-ARROW/ou=Exchange Administrative Group (AAAAAAAAAAAAA)/cn=Configuration/cn=Servers/cn=EX2k10,"Version 14.3 (Build 123.4);Mailbox, ClientAccess, HubTransport"
name7,/o=TECH-ARROW/ou=Exchange Administrative Group (AAAAAAAAAAAAA)/cn=Configuration/cn=Servers/cn=EX2k10,"Version 14.3 (Build 123.4);Mailbox, ClientAccess, HubTransport"
name8,/o=TECH-ARROW/ou=Exchange Administrative Group (AAAAAAAAAAAAA)/cn=Configuration/cn=Servers/cn=EX2k10,"Version 14.3 (Build 123.4);Mailbox, ClientAccess, HubTransport"
name9,/o=TECH-ARROW/ou=Exchange Administrative Group (AAAAAAAAAAAAA)/cn=Configuration/cn=Servers/cn=EX2k10,"Version 14.3 (Build 123.4);Mailbox, ClientAccess, HubTransport"

```

A row in the **csv file with GROUPS** contains:

- **Name**
- **Display name - nullable**
- **Sid**
- **Distinguished name - nullable**
- **When changed**
- **When created**



```

sampledata (10) - Notepad
File Edit Format View Help
Name,display name,sid,distinguished name,when changed,when created
name0,display name0,S-1-1-11-1111111111-11111111-11111111-1111,"CN=TestUsers,OU=Resource Groups,OU=TECH,DC=tech,DC=internal",1900-01-01 00:00:00.000,2016-03-11 09:36:34.000
name1,display name1,S-1-1-11-1111111111-11111111-11111111-1111,"CN=TestUsers,OU=Resource Groups,OU=TECH,DC=tech,DC=internal",1900-01-01 00:00:00.000,2016-03-11 09:36:34.000
name2,display name2,S-1-1-11-1111111111-11111111-11111111-1111,"CN=TestUsers,OU=Resource Groups,OU=TECH,DC=tech,DC=internal",1900-01-01 00:00:00.000,2016-03-11 09:36:34.000
name3,display name3,S-1-1-11-1111111111-11111111-11111111-1111,"CN=TestUsers,OU=Resource Groups,OU=TECH,DC=tech,DC=internal",1900-01-01 00:00:00.000,2016-03-11 09:36:34.000
name4,display name4,S-1-1-11-1111111111-11111111-11111111-1111,"CN=TestUsers,OU=Resource Groups,OU=TECH,DC=tech,DC=internal",1900-01-01 00:00:00.000,2016-03-11 09:36:34.000
name5,display name5,S-1-1-11-1111111111-11111111-11111111-1111,"CN=TestUsers,OU=Resource Groups,OU=TECH,DC=tech,DC=internal",1900-01-01 00:00:00.000,2016-03-11 09:36:34.000
name6,display name6,S-1-1-11-1111111111-11111111-11111111-1111,"CN=TestUsers,OU=Resource Groups,OU=TECH,DC=tech,DC=internal",1900-01-01 00:00:00.000,2016-03-11 09:36:34.000
name7,display name7,S-1-1-11-1111111111-11111111-11111111-1111,"CN=TestUsers,OU=Resource Groups,OU=TECH,DC=tech,DC=internal",1900-01-01 00:00:00.000,2016-03-11 09:36:34.000
name8,display name8,S-1-1-11-1111111111-11111111-11111111-1111,"CN=TestUsers,OU=Resource Groups,OU=TECH,DC=tech,DC=internal",1900-01-01 00:00:00.000,2016-03-11 09:36:34.000
name9,display name9,S-1-1-11-1111111111-11111111-11111111-1111,"CN=TestUsers,OU=Resource Groups,OU=TECH,DC=tech,DC=internal",1900-01-01 00:00:00.000,2016-03-11 09:36:34.000
    
```

A row in the csv file with MAILBOXES contains:

- Name
- Display name- nullable
- MailboxGuid
- User principal name
- Sam account name
- Primary smtp address
- Linked master account- nullable
- Is linked
- Is mailbox enabled
- Is resource
- Is shared
- Quota
- Use database quota defaults
- Archive GUID- nullable
- Email addresses - nullable
- Mailbox DN- nullable
- Recipient type- nullable
- Distinguished name
- When changed
- When created
- Associated user sid

```

sampledata (21) - Notepad
File Edit Format View Help
Name,display name,mailboxguid,user principal name,sam account name,primary smtp address,linked master account,is linked,is mailbox enabled,is resource,is shared,quota,use database
quota defaults,archive guid,email addresses,recipient type,distinguished name,when changed,when created,associated user sid
name 0,display name 0,f0f600a2-30f9-4efc-97cd-f9ec5d69c975,testuser0@testdomain.com,testuser0,tu0@testdomain.com,NT AUTHORITY
\SELF,false,false,false,0,true,SMTP:testuser0@testdomain.com,/o=Tech-Arrow/ou=Exchange Administrative Group
(AAAAAAAAAAAAAAAAAA)/cn=Recipients/cn=aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa-aaaaaa,UserMailbox,"CN=test0,CN=Users,DC=testdomain,DC=com",1900-01-01 00:00:00.000,2016-03-11 09:36:34.000,S-1-2-21-1218810553-3938697923-1081931466-1090234
name 1,display name 1,f0f600a2-30f9-4efc-97cd-f9ec5d69c975,testuser1@testdomain.com,testuser1,tu1@testdomain.com,NT AUTHORITY
\SELF,false,false,false,0,true,SMTP:testuser1@testdomain.com,/o=Tech-Arrow/ou=Exchange Administrative Group
(AAAAAAAAAAAAAAAAAA)/cn=Recipients/cn=aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa-aaaaaa,UserMailbox,"CN=test1,CN=Users,DC=testdomain,DC=com",1900-01-01 00:00:00.000,2016-03-11 09:36:34.000,S-1-2-21-1218810553-3938697923-1081931466-1090234
name 2,display name 2,f0f600a2-30f9-4efc-97cd-f9ec5d69c975,testuser2@testdomain.com,testuser2,tu2@testdomain.com,NT AUTHORITY
\SELF,false,false,false,0,true,SMTP:testuser2@testdomain.com,/o=Tech-Arrow/ou=Exchange Administrative Group
(AAAAAAAAAAAAAAAAAA)/cn=Recipients/cn=aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa-aaaaaa,UserMailbox,"CN=test2,CN=Users,DC=testdomain,DC=com",1900-01-01 00:00:00.000,2016-03-11 09:36:34.000,S-1-2-21-1218810553-3938697923-1081931466-1090234
name 3,display name 3,f0f600a2-30f9-4efc-97cd-f9ec5d69c975,testuser3@testdomain.com,testuser3,tu3@testdomain.com,NT AUTHORITY
\SELF,false,false,false,0,true,SMTP:testuser3@testdomain.com,/o=Tech-Arrow/ou=Exchange Administrative Group
(AAAAAAAAAAAAAAAAAA)/cn=Recipients/cn=aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa-aaaaaa,UserMailbox,"CN=test3,CN=Users,DC=testdomain,DC=com",1900-01-01 00:00:00.000,2016-03-11 09:36:34.000,S-1-2-21-1218810553-3938697923-1081931466-1090234
name 4,display name 4,f0f600a2-30f9-4efc-97cd-f9ec5d69c975,testuser4@testdomain.com,testuser4,tu4@testdomain.com,NT AUTHORITY
\SELF,false,false,false,0,true,SMTP:testuser4@testdomain.com,/o=Tech-Arrow/ou=Exchange Administrative Group
(AAAAAAAAAAAAAAAAAA)/cn=Recipients/cn=aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa-aaaaaa,UserMailbox,"CN=test4,CN=Users,DC=testdomain,DC=com",1900-01-01 00:00:00.000,2016-03-11 09:36:34.000,S-1-2-21-1218810553-3938697923-1081931466-1090234
name 5,display name 5,f0f600a2-30f9-4efc-97cd-f9ec5d69c975,testuser5@testdomain.com,testuser5,tu5@testdomain.com,NT AUTHORITY
\SELF,false,false,false,0,true,SMTP:testuser5@testdomain.com,/o=Tech-Arrow/ou=Exchange Administrative Group
(AAAAAAAAAAAAAAAAAA)/cn=Recipients/cn=aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa-aaaaaa,UserMailbox,"CN=test5,CN=Users,DC=testdomain,DC=com",1900-01-01 00:00:00.000,2016-03-11 09:36:34.000,S-1-2-21-1218810553-3938697923-1081931466-1090234
    
```

In case of mailbox import you need to set some common properties from the outside – there is an extra configuration available for the mailboxes import in the **Mailbox options** section of the importer dialog. Only values marked with “\*” are mandatory. The mailbox options configurations allow to associate the importable mailboxes to an already provisioned/imported Exchange group, to an archive database and storage.

### Import mailboxes manually ✕

Please select a file to upload Browse...

Skip existing items, import new ones

---

**Mailbox options**

Server *:	<input type="text"/>
Add mailboxes to group:	<input type="checkbox"/>
Group:	<input type="text"/> <small>Note: Please start to type the group name</small>
Associate with storage:	<input type="text"/>
Associate with email archive database:	<input type="text"/>
Exchange mailbox database *:	<input type="text"/>
Exchange archive database:	<input type="text"/>
Import method:	<input type="text"/>

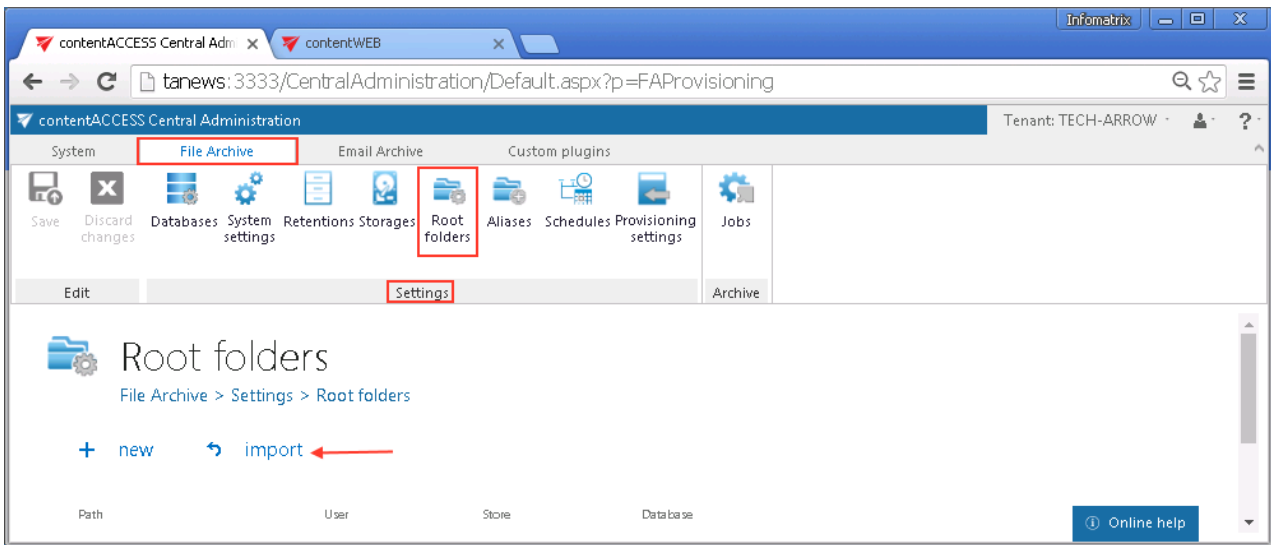
These properties will be set for all the imported mailboxes:

- **Server**
- **Group** – nullable if checkbox is not checked
- **Database** – nullable
- **Storage** - nullable
- **Exchange database**
- **Archive database**- nullable

The importer control uses the [skip existing items](#) method for importing.

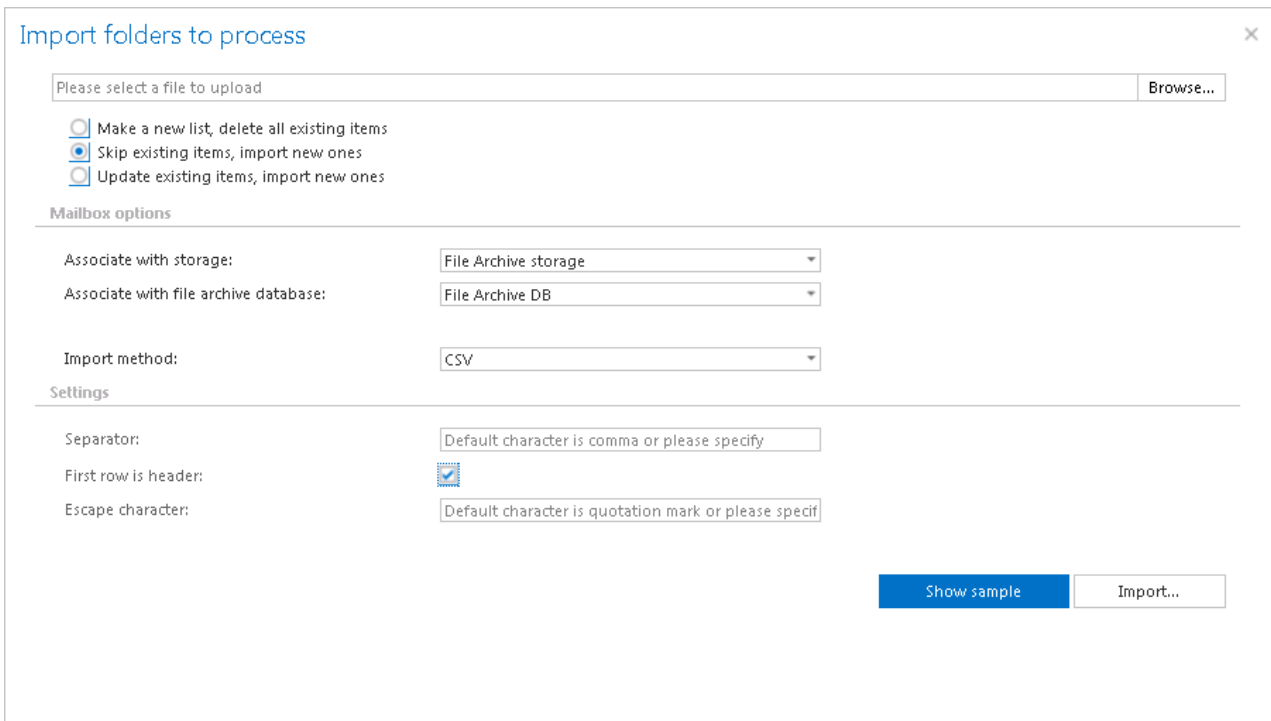
### Importing File Archive root folders to be archived

As mentioned already, contentACCESS allows to import root folders to be archived from files. The importing option is available on the **Root folders** page of the Central administration (**File Archive** tab → **Settings** group → **Root folders** button).



### How can you import?

In all cases you need to create a CSV file as in the sample file – a) select the import method in the dialog, b) associate your importable root folder(s) with an archive storage and archive database and c) click **Show sample**:

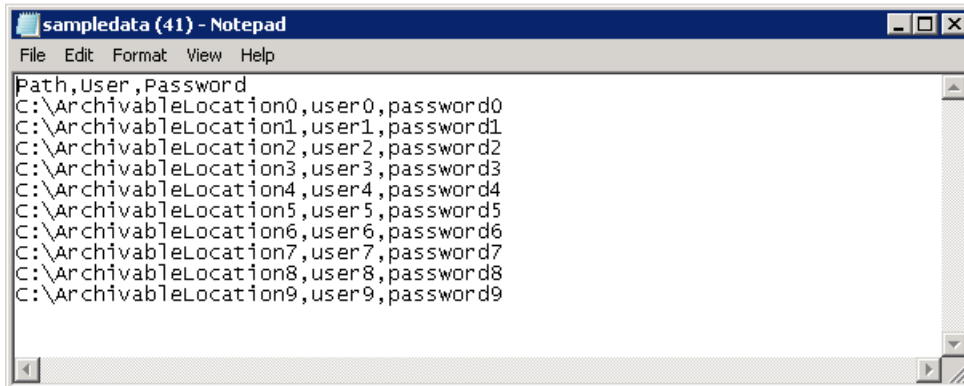


A row in the CSV file contains:

- **Root folder(s) to be archived**



- User name
- Password



```
sampledata (41) - Notepad
File Edit Format View Help
Path,User,Password
C:\ArchivableLocation0,user0,password0
C:\ArchivableLocation1,user1,password1
C:\ArchivableLocation2,user2,password2
C:\ArchivableLocation3,user3,password3
C:\ArchivableLocation4,user4,password4
C:\ArchivableLocation5,user5,password5
C:\ArchivableLocation6,user6,password6
C:\ArchivableLocation7,user7,password7
C:\ArchivableLocation8,user8,password8
C:\ArchivableLocation9,user9,password9
```

Finally browse for your file and import it to the root folders grid.

**Note:** One importable file can have only one archive database and archive storage associated. If you have multiple roots to be archived and you want to archive them to different archive databases and storages, you need to prepare multiple import files with different database and storage settings, and import them into contentACCESS one-by-one.



## Creating new jobs in contentACCESS

contentACCESS is a modular product, and its functionality is extended with plugins, which are intended to manage certain data management processes. The licensed plugins can be also customized and fitted to ones needs. To achieve this, it is necessary to create **new jobs** from an available plugin.

A new job is created from a type of a built-in plugin, which is characteristic with its own configuration settings (scheduling, retention, database, storage settings etc.). These configurations assign to the job certain tasks of how to process data. It is possible to create numberless jobs from the same type of a plugin. Each of them will have different configurations regarding the database where the processed metadata will be located, the storage where the processed binaries will be stored, the frequency of their running etc.

In contentACCESS, plugins can be categorized into 4 main groups:

- **Email Archive** plugins,
- **File Archive** plugins,
- **SharePoint Archive** plugins,
- and **Custom plugins** (all licensed plugins except of Email Archive and File Archive plugins are accessible here).

To create a new job from any of these plugins, the administrator should open the **Jobs** page and here click on **+ new**.

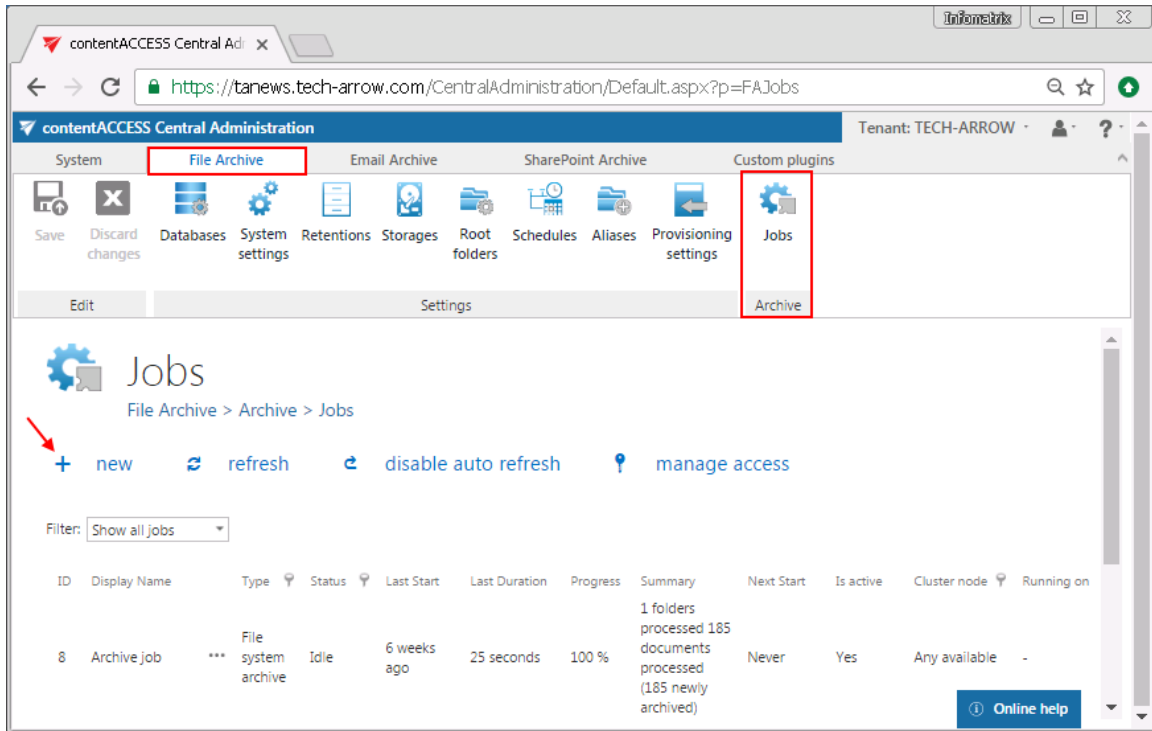
**Note:** The “+ new” option (i.e. to create new job) is unavailable for the logged on user, if the “Add jobs” permission on the tenant is not allowed in his role assignment.

The “manage access” option allows to grant access permissions on the selected job for a second user. This “manage access” option is available for the logged on administrator, if his role assignment contains the Edit jobs – All allowed permission on the tenant. Read more in [Managing access to contentACCESS objects](#).

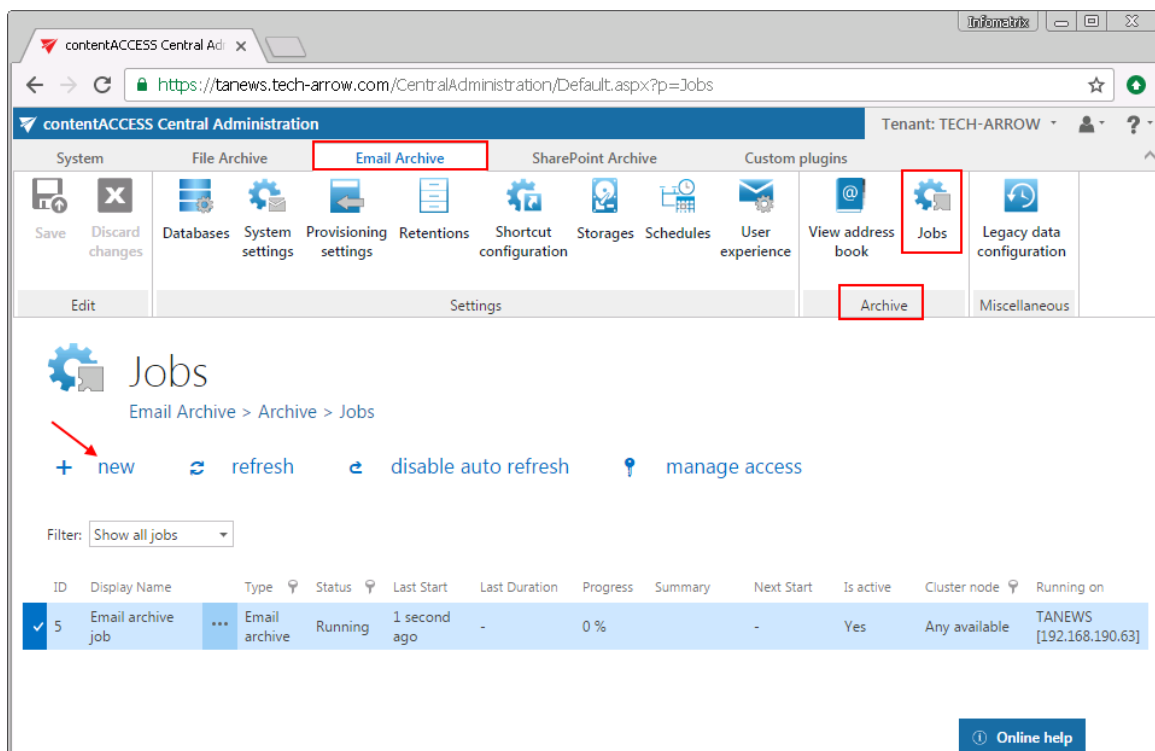


The **Jobs** page can be opened with navigating to the following button on the Central Administration ribbon:

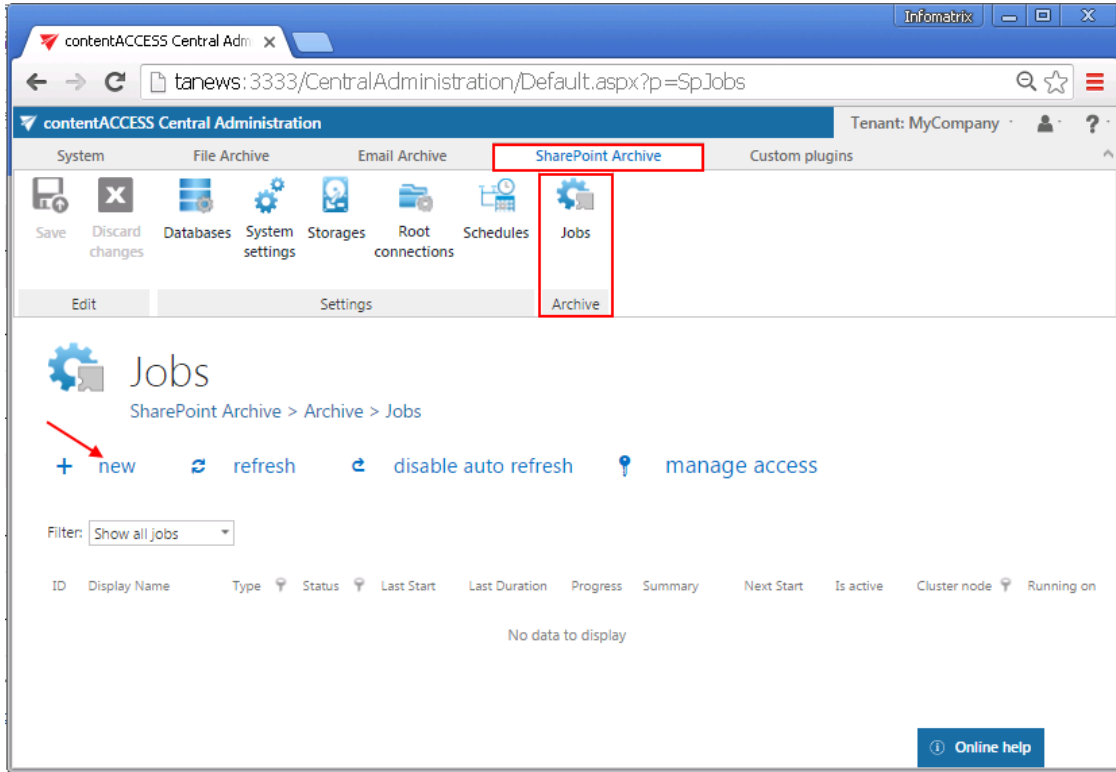
- **File Archive → Archive → Jobs** (by the File Archive plugin type);



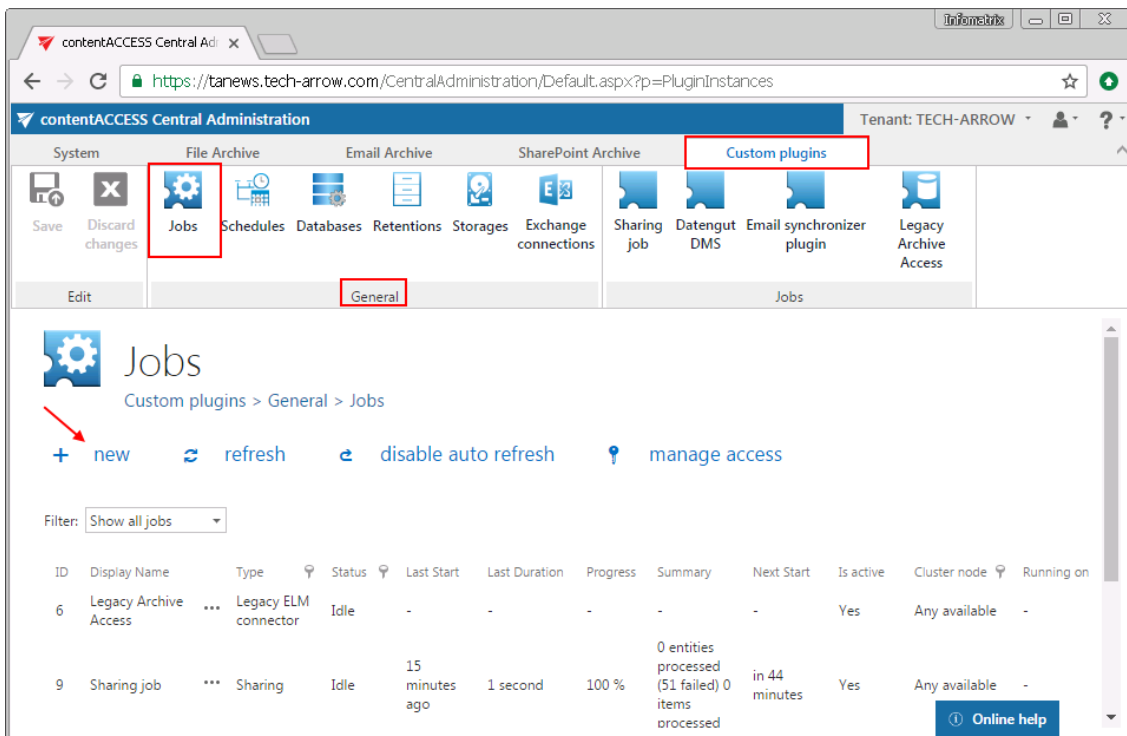
- **Email Archive → Archive → Jobs** (by the Email Archive plugin type);



- **SharePoint Archive → Archive → Jobs** (by the SharePoint Archive plugin type)



- **Custom plugins → General → Jobs** (by the Custom plugin type).





On the same page, the user may refresh the status information to all jobs. This can be done either manually with the **refresh** button, or by enabling/disabling automatic refresh with the **enable/disable auto refresh** button.

**How to create new jobs:** Open the **Add new job instance** dialog with a click on **+ new** on the **Jobs** page. Select an available plugin from the dropdown list (the list contains the licensed plugins only). Open the **Run on node** dropdown list, and select a node from the cluster, where the job should run. If you would not like to specify a node, select **Any available** from the list. Enter a **Display name** for your job. In the same window below you can read a very short description about the selected plugin type. Click on **Add**.

A pop-up window will ask you if you would like to configure the newly created job immediately.

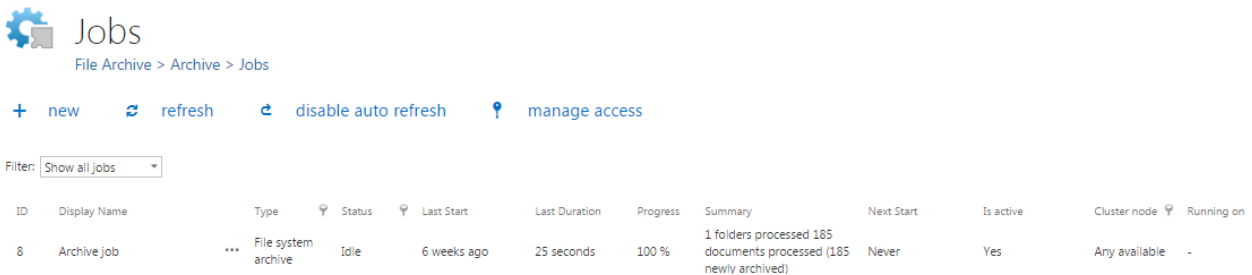
With clicking on **OK** the Job's configuration page will be automatically loaded. If you would like to configure the job later on, click on **Cancel** in this window. In this case the job will be only added to the list of jobs on the **Jobs** page (but will not run as it is not configured yet).

ID	Display Name	Type	Status
114	EBA's invoice restore	*** Email restore	Idle
135	EBA's mailbox archive_shortcutting	*** Email archive	Idle

Further information about how to configure jobs in contentACCESS can be read in the respective subchapters.

## Jobs' page, jobs' context menu

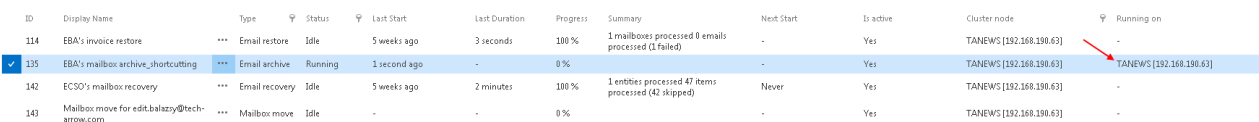
The **Jobs** page is accessible with a click on the **Jobs** button of the respective tab in the contentACCESS Central Administration ribbon (**Email Archive** → **Archive** → **Jobs**; **File Archive** → **Archive** → **Jobs**; **Custom plugins** → **General** → **Jobs**). Here you can view the list of all jobs created from a particular plugin type.



ID	Display Name	Type	Status	Last Start	Last Duration	Progress	Summary	Next Start	Is active	Cluster node	Running on
8	Archive job	File system archive	Idle	6 weeks ago	25 seconds	100 %	1 folders processed 185 documents processed (185 newly archived)	Never	Yes	Any available	-

The grid contains the following columns. Each instance has an **ID** number, a **Display name** a **Type** and a **Status**. If the job is in *Idle* status, this means that it has completed the task, it is not running.

Next columns hold certain information about the **Last start**, **Last duration** and **Next start** of the job. The **Progress** column informs about the volume of the already processed items, while **Summary** gives a general overview about the processed/skipped/failed items. In **Is active** column can be viewed, if a job is active, or it is has been deactivated. Active jobs will run based on the schedule; the data that they are processing are accessible. Inactive (deactivated) jobs are not running (nor can be manually started); the data that they have processed are still accessible. In the **Cluster node** column we can check the node, where the selected job can run. The **Running on** column informs the user about the node, where the job is currently running. On the screenshot above we can see, that **EBA's mailbox archive\_shortcutting** job can be run on any available node, and is currently running on TANEWS.



ID	Display Name	Type	Status	Last Start	Last Duration	Progress	Summary	Next Start	Is active	Cluster node	Running on
114	EBA's invoice restore	Email restore	Idle	5 weeks ago	3 seconds	100 %	1 mailboxes processed 0 emails processed (1 failed)	-	Yes	TANEWS [192.168.190.63]	-
135	EBA's mailbox archive_shortcutting	Email archive	Running	1 second ago	-	0 %	-	-	Yes	TANEWS [192.168.190.63]	TANEWS [192.168.190.63]
140	ECOO's mailbox recovery	Email recovery	Idle	5 weeks ago	2 minutes	100 %	1 entities processed 47 items processed (42 skipped)	Never	Yes	TANEWS [192.168.190.63]	-
143	Mailbox move for edit.balazy@tech-arrow.com	Mailbox move	Idle	-	-	0 %	-	-	Yes	TANEWS [192.168.190.63]	-

Any operations to a job can be done from the job context menu, with selecting the corresponding job from the list and left click on the ellipses (...). Now we select **EBA's mailbox archive\_shortcutting**

job from the list. With the help of this job we will demonstrate how to handle with jobs from the context menu.

ID	Display Name	Type	Status	Last Start	Last Duration	Progress	Summary	Next Start	Is active	Cluster node	Running on
114	EBA's invoice restore	Email restore	Idle	2 weeks ago	2 minutes	100 %	1 mailbox processed 93 emails processed (1 failed)	Never	Yes	TECHNB002 [192.168.190.20]	-
135	EBA's mailbox archive_shortcutting	Email archive	Idle	20 minutes ago	14 seconds	100 %	1 mailbox processed 2 emails processed	in 5 hours	Yes	Any available	-
138	Mailbox move for edit.balazy@tech-arrow.com	Mailbox move	Idle	-	-	-	-	-	Yes	TECHNB002 [192.168.190.20]	-
142	ECSO's mailbox recovery	Mailbox recovery	Idle	-	-	-	-	-	Yes	Any available	-

The context menu of a job contains the following options:

- **Clone:** use this option to create a clone of an already configured job. A clone job has the same configurations as the original job that it was created from. With clicking the “Clone” option the “Clone job instance” window opens, which requires to name the job:

### Clone job instance ✕

Display name:

If a job with the same name already exists, an error message warns the user about this.

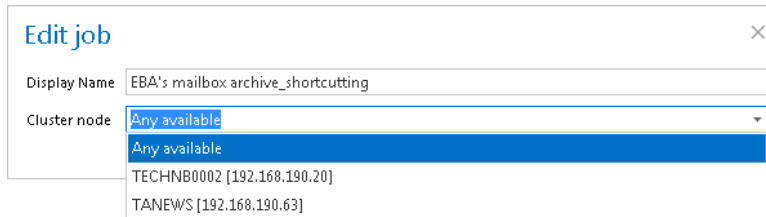
- **Start:** with a click on “Start” the administrator can start the job running manually;
- **Stop:** with a click on “Stop” the administrator stops the running of the selected job;
- **Configure:** required values can be configured for the job on its configuration page, which can be opened using this option.
- **Show last logs:** with selecting this option the user will be redirected to the monitoring page, where the last running of the selected job will be preselected, and the corresponding events will be displayed in the table of events;

#	Start date	End date	Date	Title	Description	Job
1	9/28/2015 11:05 AM	9/28/2015 11:05 AM	9/28/2015 11:05 AM	Plugin was finished successfully	Plugin.EmailArchive	EBA's mailbox archive_shortcutting
2	9/28/2015 10:52 AM	9/28/2015 10:54 AM	9/28/2015 11:05 AM	1 mailbox processed 2 emails processed		EBA's mailbox archive_shortcutting
3	9/28/2015 10:41 AM	9/28/2015 10:42 AM	9/28/2015 11:05 AM	Mailbox processing information	Processing was finished	EBA's mailbox archive_shortcutting
4	9/28/2015 10:41 AM	9/28/2015 10:41 AM	9/28/2015 11:05 AM	Mailbox processing information	Mailbox processing finished. Mailbox: 'edit.balazy/'. Total mails: 2   Mails processed: 2   Failed mails: 0   Skipped mails: 0	EBA's mailbox archive_shortcutting
5	9/28/2015 10:40 AM	9/28/2015 10:40 AM	9/28/2015 11:05 AM	Mailbox processing information	Abort signal received	EBA's mailbox archive_shortcutting
6	9/22/2015 10:53 AM	9/22/2015 1:46 PM	9/28/2015 11:05 AM	Mailbox processing information	Processing was started. Number of mailboxes: 1.	EBA's mailbox archive_shortcutting
7	9/22/2015 10:51 AM	9/22/2015 10:51 AM	9/28/2015 11:05 AM	Processing was started	Plugin.EmailArchive	EBA's mailbox archive_shortcutting

- **Edit:** with a click on this option the **Edit job** dialog opens, where the user can:

✓ rename the job;

✓ change the node, where the job can be run.



○ **Deactivate:** it is recommended to deactivate jobs which are not in use for a longer time, but very probably will be used in the future (e.g. restore or recovery jobs). With selecting this option the administrator does not permanently delete the job from the list. The deactivated job will be hidden only and it will not run according to the schedule (nor can be manually started). Running and waiting jobs cannot be deactivated.

○ **Delete:** with this option the administrator can permanently delete selected jobs from the list; the processed data by some plugin types will not be accessible through the standard interfaces (data processed by file archive jobs will not be accessible if all file archive jobs wrote the data into the same database, and all of them were deleted; if only one job remained which wrote data into this particular database, then all data processed by all file archive jobs will be accessible. In case of email archive jobs the data will be still accessible, even the jobs have been deleted). Running and waiting jobs cannot be deleted.

### Filtration between active/inactive jobs

A job can be either active (an active job will be started according to the configured schedule, or can be started manually), or its status may be set to deactivated (if the administrated sets a job to deactivated, it cannot be started neither by the scheduler, nor manually). On the page of **Jobs** the user can filter among **Active/Deactivated jobs**, or he can also choose to display all jobs in the list (**Show all jobs**).





# Jobs

Email Archive > Archive > Jobs

+ new refresh disable auto refresh

Filter: Deactivated jobs

- Deactivated jobs
- Active jobs

ID	Type	Status
135	Email archive	Idle

If a job has been deactivated, it can be restored to the list of active jobs again. Select the job, open its context menu and choose **Activate** from the list:



# Jobs

Email Archive > Archive > Jobs

+ new refresh disable auto refresh manage access

Filter: Deactivated jobs

ID	Display Name	Type	Status	Last Start	Last Duration	Progress	Summary	Next Start	Is active	Cluster node	Running on
135	EBA's mailbox archive_shortcutting	Email archive	Idle	-	-	-	-	-	No	Any available	-

## Sorting between jobs

The jobs can be also sorted based on the type, status or cluster nodes where they are running. Click on the funnel ( ) icon located next to the particular column in the grid:

ID	Display Name	Type	Status	Last Start	Last Duration	Progress	Summary	Next Start	Is active	Cluster node	Running on
114	EBA's invoice restore	Email restore	Idle	2 weeks ago	2 minutes	100 %	1 mailboxes processed 93 emails processed (1 failed)	Never	Yes	TECHNB0002 [192.168.190.20]	-
135	EBA's mailbox archive_shortcutting	Email archive	Idle	34 minutes ago	14 seconds	100 %	1 mailboxes processed 2 emails processed	in 5 hours	Yes	Any available	-
138	Mailbox move for edit.balazy@tech-arrow.com	Mailbox move	Idle	-	-	-	-	-	Yes	TECHNB0002 [192.168.190.20]	-
142	ECSO's mailbox recovery	Email recovery	Idle	-	-	-	-	-	Yes	Any available	-

## Available operations from the status bar of the job

With a double click on the selected job in the list of jobs you open the configuration page to the job. On a blue background you will see the status bar of the job.

start immediately refresh disable auto refresh deactivate job logs edit

Status: Idle  
Progress: 4 folders processed 23 documents processed (23 newly archived) (completed 2 hours ago)

collapse/expand the progress

With the arrows mark ( ) at the right side of the status bar the user may collapse or expand the progress information about the job's running. The status bar's last state is always stored, and the



last state will be opened by navigating to the page again. The status bar of a job contains the following status bar buttons:

- **start immediately/stop**: with a click on this option the administrator can start/stop the job running manually;
- **refresh**: click on this option and the status bar information about the progress of the job will be refreshed;
- **disable/enable auto refresh**: turn on/off the auto refresh of progress bar information (if enabled, the information will be refreshed in every 5 seconds)
- **deactivate/activate job**: use “deactivate” button if you want to temporarily cancel the job; use “activate” button if you want to restore the job among the active jobs;
- **logs**: with selecting this option the user will be redirected on the monitoring page, where the last running of the selected job will be preselected, and the corresponding events will be displayed in the table of events. Use this option for troubleshooting if any failure occurred during the job running;
- **edit** control button is used to change the name of the job and to specify the node on which the job should run.

In the following chapters we will learn how to configure and use the contentACCESS File Archive, Email Archive, SharePoint archive, Email management, Store replication, Sharing and Email synchronization jobs.

## File Archive

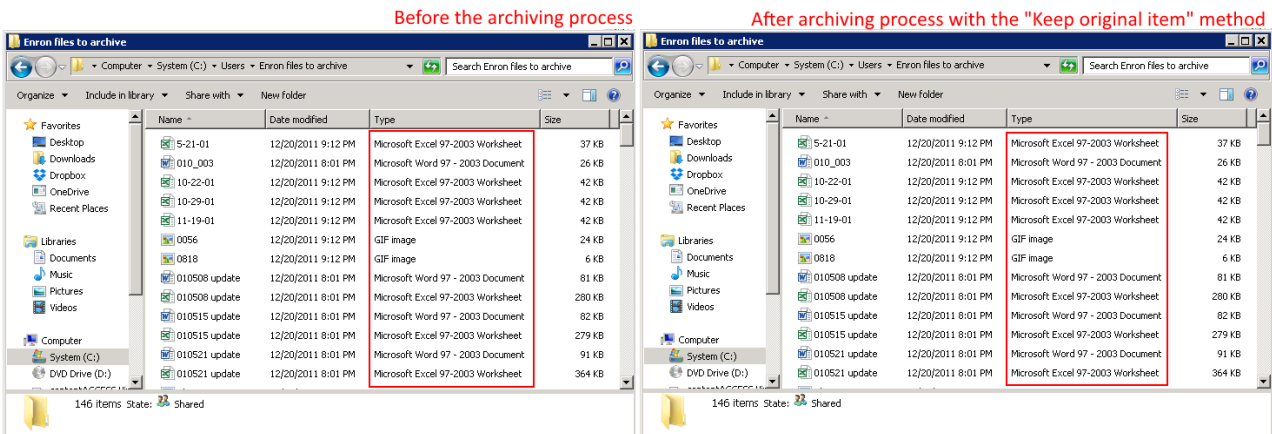
With the help of File system archive jobs it is possible to archive data located either in local file systems or on network shares (UNC paths). Time for which the documents are available in the archive is set via retention categories. The File Archive database and storage is always assigned to a root folder (chapter [File Archive settings](#)). This prevents the user from archiving the same root to multiple databases/storages and having troubles with the file retrieve.

The archived files can be viewed either in contentWEB (more information [here](#)), or in the shared folders on virtual (more information [here](#)). It is also possible to restore the archived files from shortcuts, or to recover them, if the original was deleted from the file system.

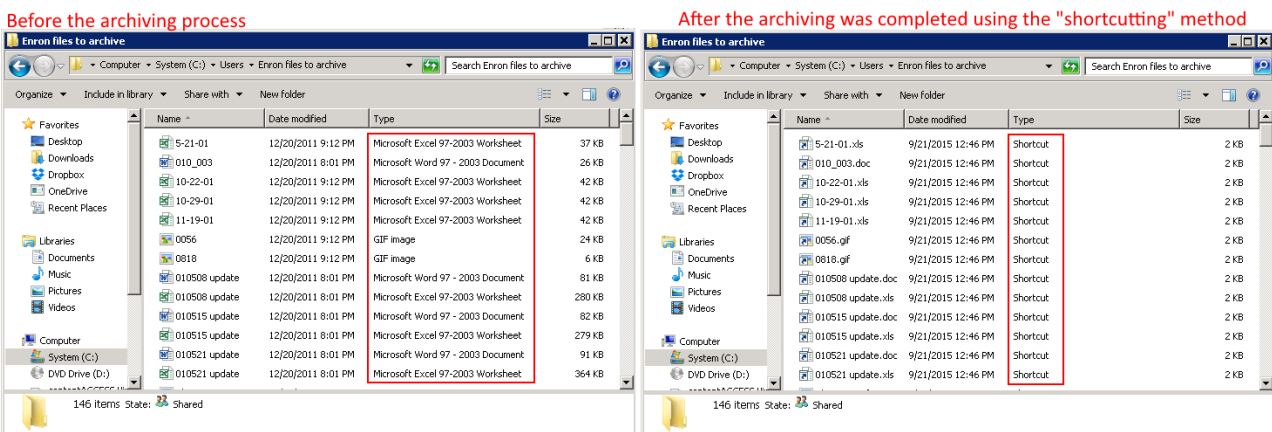
## Introduction to File system archive

There are 4 file system job types available in contentACCESS: 1) **File system archive** job was meant to archive documents from the selected location into a selected storage. Archiving can be done in multiple ways. The administrator selects the archiving strategy and decides, if the archived file is kept in the file location, it is replaced with shortcuts or is deleted from there. The pictures below show the contents of the original file location before and after the archiving process;

a) With the “Keep original item” method the original file is kept in its original location (recommended archive method for files younger than 1 year):



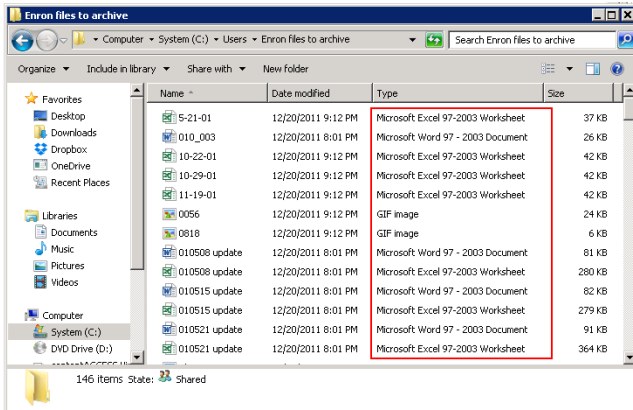
b) The archived items can be also replaced with a shortcut, thus not taking up so much space on the file-server (disk), yet files are available for working with them as usual. In this case the “Create shortcut from original item” method should be used. This is the recommended archive method for files older than 1 year and younger than 2 years:



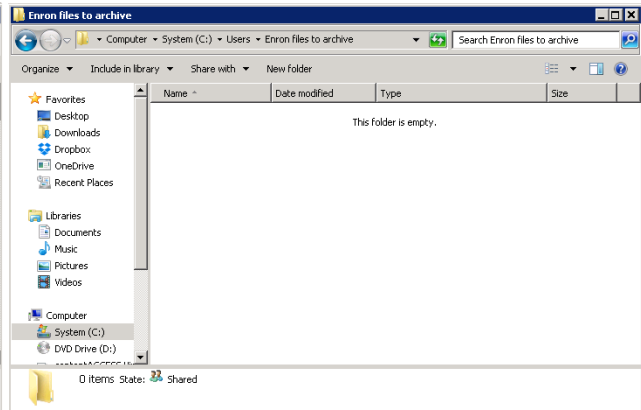


- c) The archived item can be also deleted from its current location, in this case the “Delete original” method should be used (recommended archive method for files older than 2 years):

Before the archiving process



After the archiving process using the "Delete original" method is finished



It depends on a typical use case which method is the most advisable to use. Customers use the “Keep” original method with versioning, when they are working on long-term projects, and their files are modified too often. E.g. if an architect is working on a project and would like to have a version from his project each day, then he may archive his project each day and create versions from it. This protects him from losing his work that he worked on for a longer time (e.g. if a hardware problem occurs). Shortcutting is used by older files, which still may be used, so the user would not like to delete them from the file location yet (e.g. files older younger than 2 years). Those items, which are not in use any more - but must be retrievable from the archive during the retention time required by the law – should be deleted from its location when archived. In this case, it is advisable to use the “Delete original item” method.

2) A **File system restore** job is used to restore the already archived items from shortcuts from the storage back into the original location.

3) **File system recovery** may be used to recover deleted items/folders/recursive folder structure if they have been deleted from its original location. It might be very useful if any archived item or folder has been deleted by accident, or deletion was caused by a technical failure etc. The user may recover either the original file or the shortcut.

4) **Remote shortcutting** job is a special job type, which can be used with the file archive jobs together. Use this job if you have several remote locations synchronized with your central data center. contentACCESS is installed on the data center, and continuously archives the files already synchronized with the data center. By the synchronization process the files are copied to the data



center. So the archiving itself is done by a standard File system archive job; the Remote shortcutting job is used to create shortcuts on the remote locations.

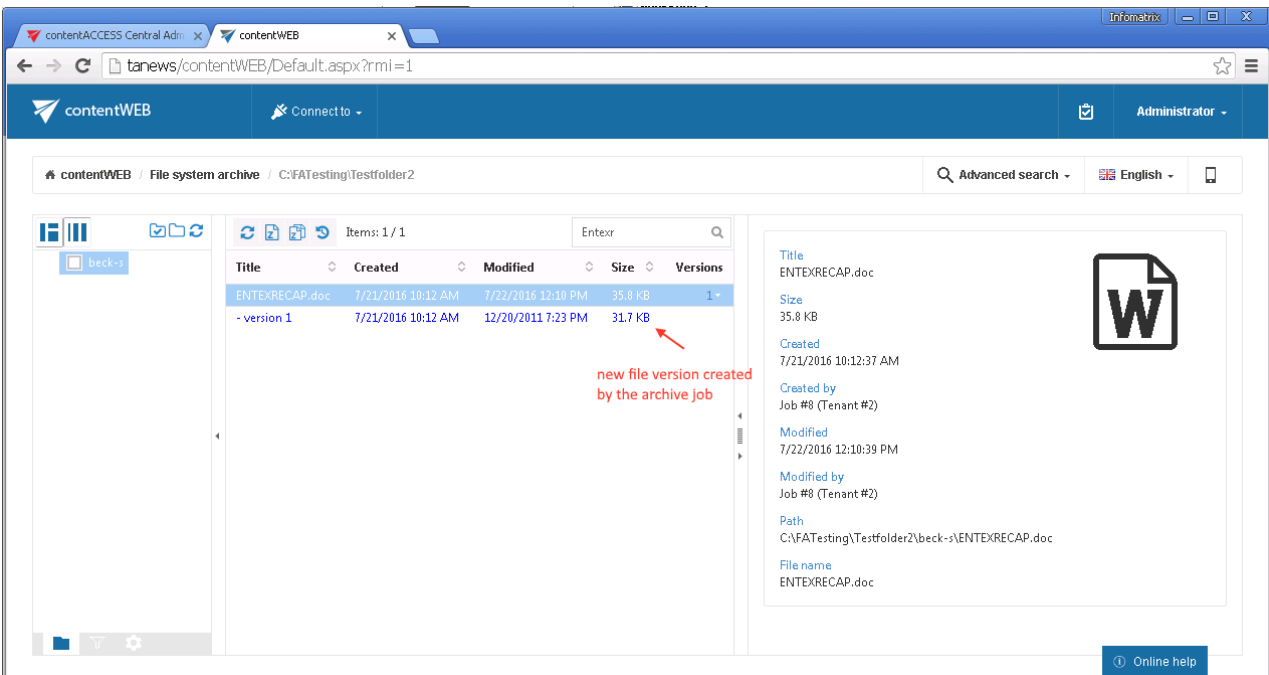
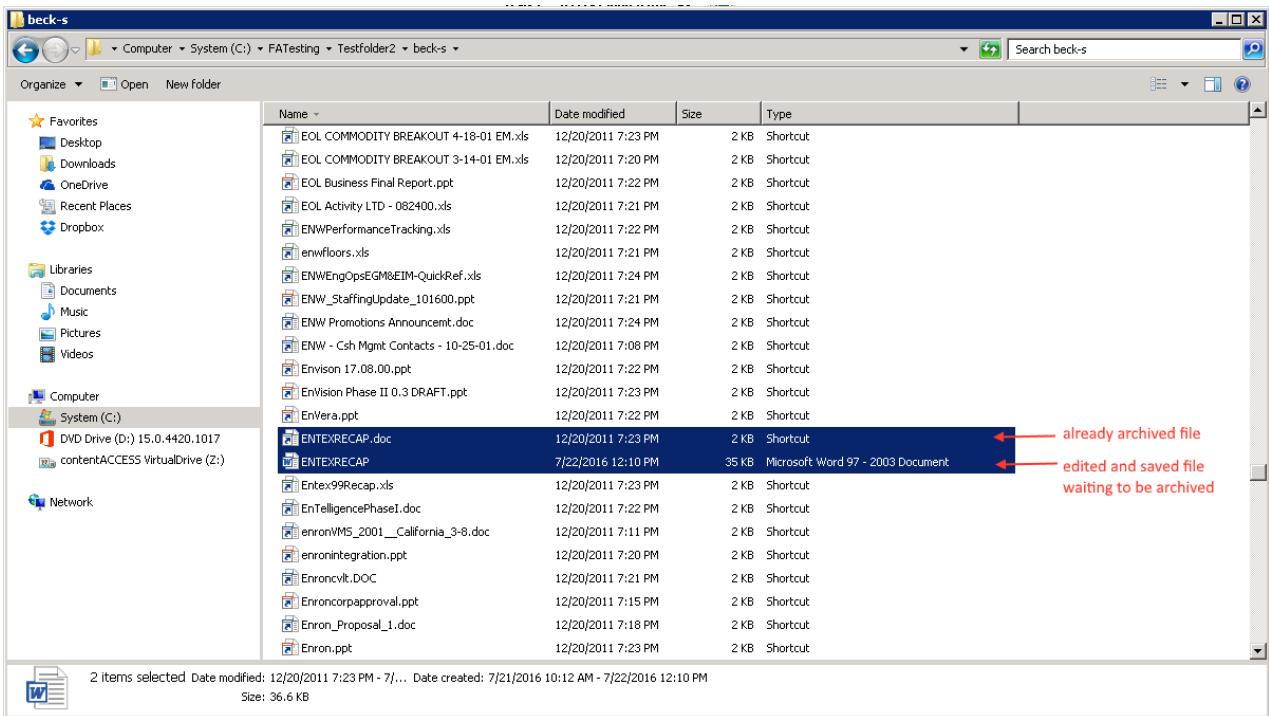
Use this method, if you would like to run the archiving process in a central data center, and replace the remote files with shortcuts if they are not in use. If you have multiple remote shares to archive and you need to speed up the archiving process and save bandwidth, this is the right solution for you.

### Editing of already archived files, file versions in File system archive

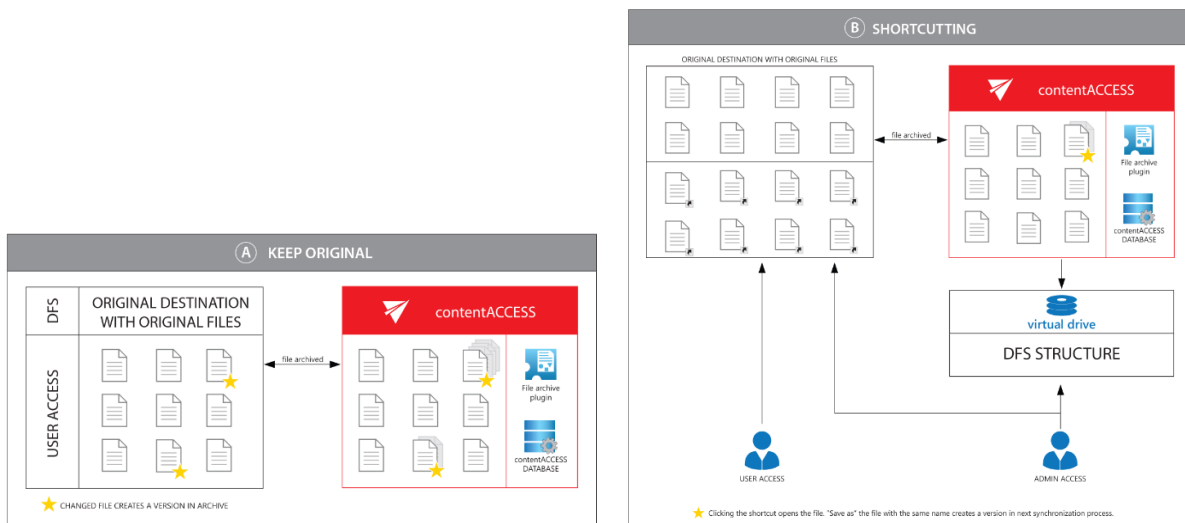
You can edit an already archived file by opening the original file (if was archived with the *Keep original method*) or the shortcut to it (LNK, if it was archived with the *Shortcutting method*) in the original file location or through the Virtual drive.

- if the file **was not shortcutted** (i.e. the already archived file is kept in the original file location), then you can open the file in a standard way, edit it and save it. The next archive job will create a version to this file in the archive.
- if the file is **shortcutted** (i.e. was archived using shortcuts) and you open the file through the shortcut, then you will open the file in read-only mode (as it is opened directly from the archive). You can edit it, but then you need to save it to the original file location with the same name (1<sup>st</sup> screenshot below). Then the next archive job will point it out, will create a new version, will delete the original file, and will leave the shortcut there, which will point to the new version.

**Note:** If the archived file is opened and edited through the Virtual drive, it must be saved to the original file location, from where it was archived.



The versioning feature might be very useful for users, who are working on long-term projects and would like to protect themselves from losing their data. In such cases, it is recommended to run an archive job on the project each day, and save the current state (version) of the file/project into the archive.



Screenshot A: Versions created when keeping the original item      Screenshot B: Versions created when using shortcuts

## Synchronization of rights to a folder/file

The synchronization of **user rights to a folder/file in contentWEB File Archive** is managed by the **File Archive job**. File Archive job writes the file system permissions to the database, and then synchronizes these user permissions in contentWEB, too. The File archive job synchronizes:

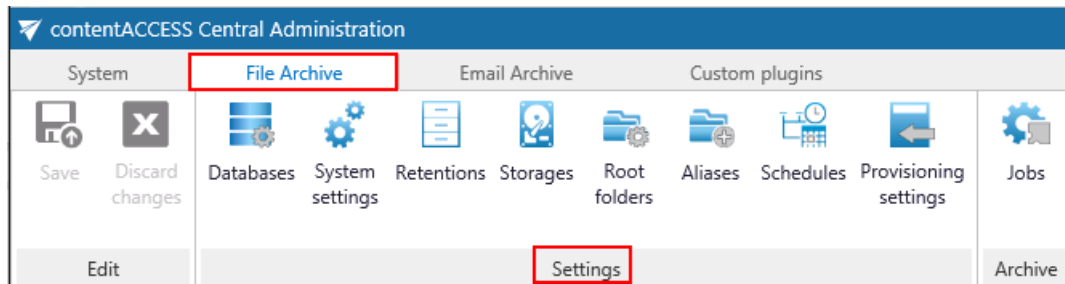
- the rights **to a folder** permanently at each job run;
- the rights **to a file** only in case that a new version of the respective file has been created.

## File Archive settings

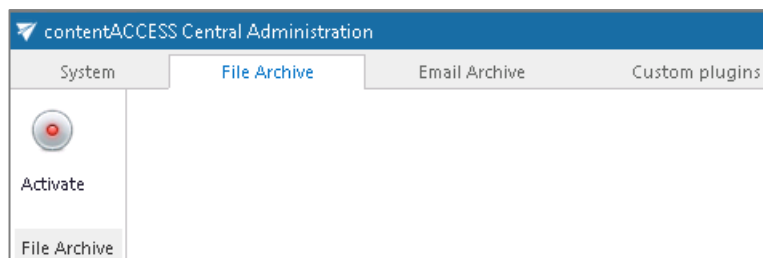
To be able to use the contentACCESS File Archive the following settings are mandatory in the Central Administration:

- 1) The virtual drive must be installed and configured (configurable here: **System** tab → **Client applications** → **Virtual drive configurations**). For more information refer to [Virtual drive](#).
- 2) The LDAP settings must be configured (configurable here: **System** → **Services** → **System**, section **Active directory integration settings**). This will be used by contentWEB to evaluate user access permissions to folders/files. For more information refer to [System](#).
- 3) Settings available in **File Archive** → **Settings** need to be configured. The configuration logic is from left to right. By following this logic everything will be configured for the next step. These settings will be described below in this chapter.

**Note:** Aliases are used by the *Remote shortcutting job* only. If you do not use a *Remote shortcutting job*, you can skip [Configuring aliases](#).



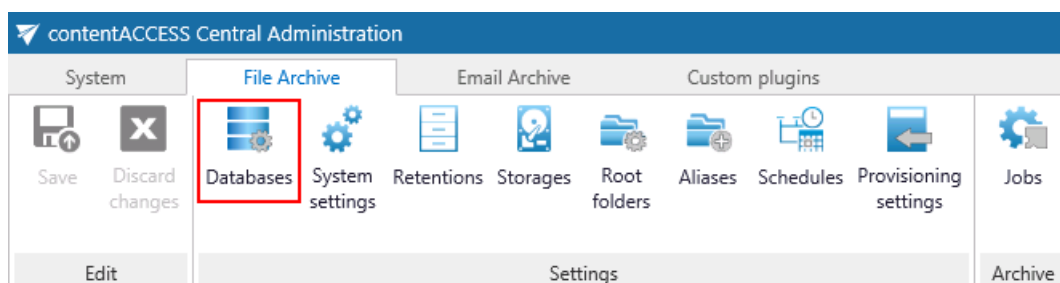
When starting to configure File Archive for the first time, the user is required to activate the File Archive provisioning job. Open the File Archive tab on the ribbon and click on the “Activate” button:



After successful activation the **Settings** of the File Archive is displayed. The tab (already mentioned in step 3) above) features the following configuration options:

### File archive Databases

The administrator must set here the database where File Archive will store the metadata; to create such database, refer to chapter [Databases](#) of this guide



### File archive System settings

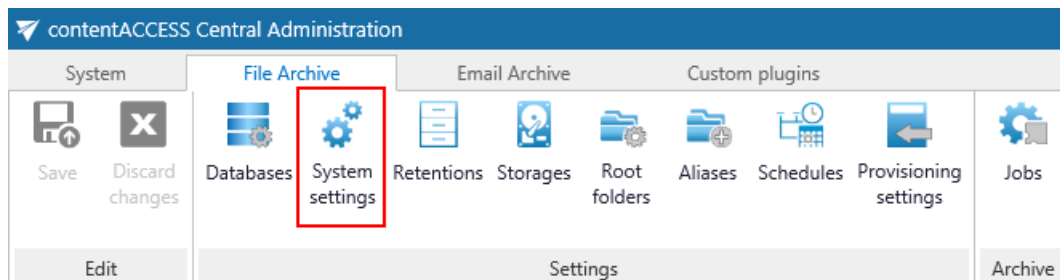
The main system database for the File Archive is selected on this page. All the root folders (and its settings) that will be applied in the archive jobs are kept in this database.





Select the database connection to be applied from the dropdown list ("FileSystemDB" in our use case) and save your settings.

**Note:** A database connection already configured on the **Databases** page (File Archive → Settings → Databases) can be selected as a system database.



## System settings

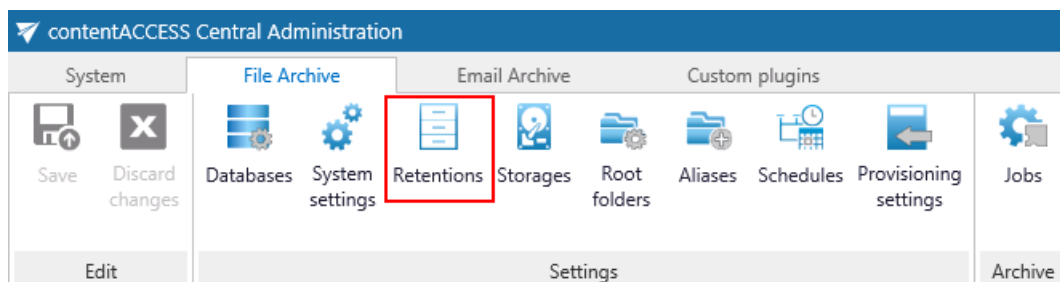
File Archive > Settings > System settings

### Database settings

Database connection: FileSystemDB ✎ Change ✔

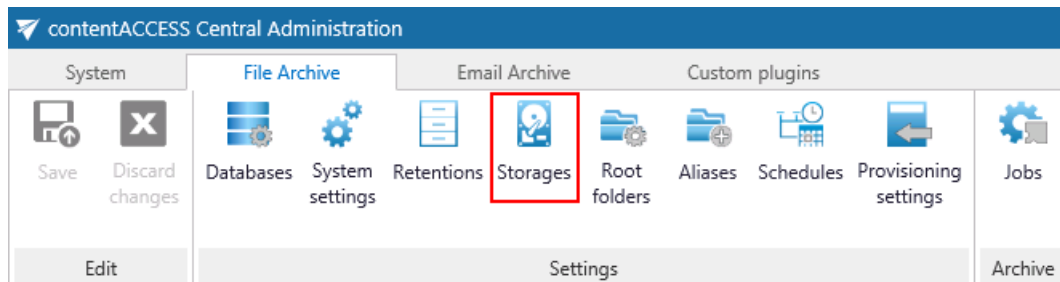
### File archive Retentions

The time period of storing the data is specified on this page; for more information how to create retentions to be applied refer to chapter [Retentions](#) of this guide



### File archive Storages

The administrator must set here the File archive storage for the binaries; for detailed information how to create a new storage connection refer to chapter [Storages](#) of this guide



## Root folders

The root folder paths to be applied in a file archive job is specified in this section. **The root folder defines the start point (start point = e.g. "c:") of the archive process.** A root folder set here is selected for an archive job on the given job's configuration page. The relative path (e.g. folder "Test files" if directory "c:\Test files" will be archived) can be set in the given job's configuration section further on.

The root folders and their settings are written to the file system database defined in section **System settings** above (**File Archive** → **Settings** → **System settings**). A connection that already exists in the system database cannot be specified twice. E.g. if "[\\tanews\TECH-ARROW files to archive](#)" is already set, then "[\\tanews\TECH-ARROW files to archive\contracts](#)" cannot be added to the root folder's list. This feature prevents the users from archiving the same folder into two different databases/storages. If the user wants to add a root which already exists in the system database, he will be prompted about this.

**Hint:** When the root folders are defined, be careful to **NOT** add the **SAME PHYSICAL PATH TWICE**.

Example: D:\Share which is shared as [\\server\Share](#) can be added twice, like this:

- D:\Share

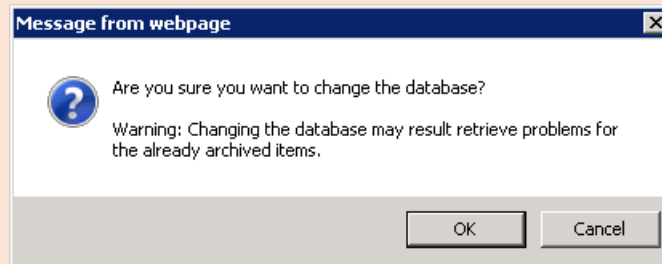
or as a shared path:

- [\\server\Share](#)

These paths are pointing to the same physical directory. contentACCESS can't detect such collision. This configuration might result in a not deterministic behavior: if both root folders are assigned to a different database or they are processed by different jobs, it is not possible to predict in which archive the files will be stored.

**A root folder always must have an assigned database and a storage.** The job which archives (restores/recovers) this root will use this database and storage.

**Hint:** It is not recommended to change the database and storage connections already associated with a root folder. Changing the database will lead to problems when trying to retrieve the already archived items, because some of your data will be saved in the originally set database, and another part of data in the newly set database. The same retrieve problem might occur with changing the storage, too. The application warns the user about it:

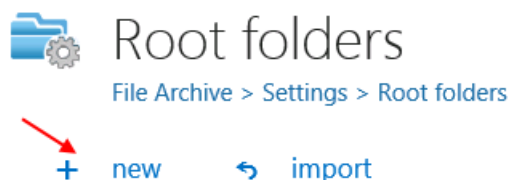
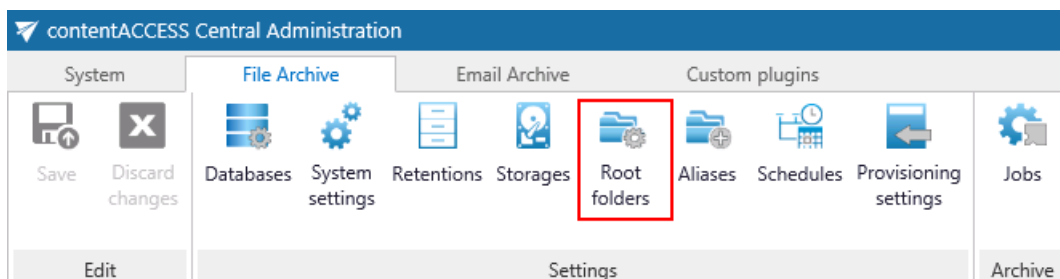


However, the database and storage assigned to a root can be changed using the “Edit” menu item in the root context menu. Do not use this option unless it is very necessary.

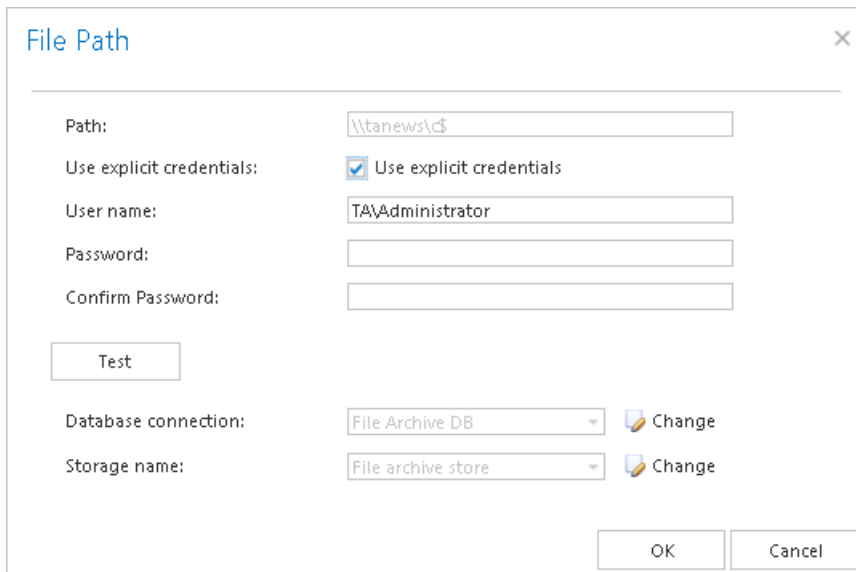
The root folders may be either

- imported using the “import” button (refer to chapter [Importing contentACCESS configurations from files](#)) or
- added to the list using the “new” button.

Click “new” to manually add a root folder that should be processed by a job.



The **File Path** dialog opens. Enter the file path that should be applied and the applicable user credentials. **The File Archive database and storage must be associated with this specific root folder directly in this dialog.** It is NOT recommended to change the database and storage that is already used, because it will lead to file retrieve problems (as mentioned in the hint above). Use the “Change” option only in case if such change is really necessary (e.g. if you haven’t archived the root yet).



The 'File Path' dialog box contains the following fields and controls:

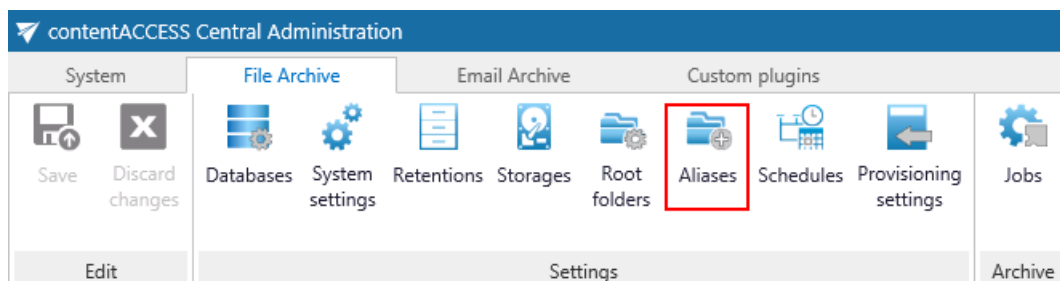
- Path:** Text input field containing '\\tanews\c\$'
- Use explicit credentials:** Checked checkbox with label 'Use explicit credentials'
- User name:** Text input field containing 'TA\Administrator'
- Password:** Text input field (empty)
- Confirm Password:** Text input field (empty)
- Test:** Button
- Database connection:** Dropdown menu showing 'File Archive DB' with a 'Change' button
- Storage name:** Dropdown menu showing 'File archive store' with a 'Change' button
- OK** and **Cancel** buttons at the bottom right.

**Note:** We recommend to specify the parent folder (the start point of the archive process) in the File Path dialog. The relative folder path can be specified further on when configuring the respective job.

**Deleting a root:** Already configured root folders can be deleted from the list using the root's context menu. A deleted root is only hidden, but it still exists in the database. If the user wishes to add an already deleted root again, he will be prompted that it already exists in the database, and he will be able to restore it with the old settings only (with the originally assigned database and storage).

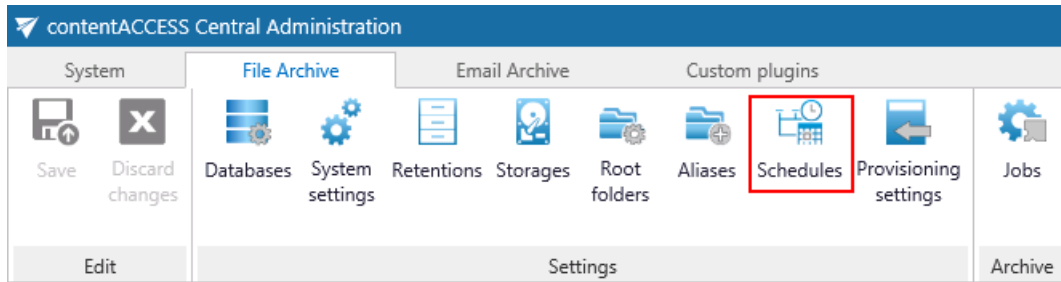
## Aliases

Use this feature to specify different folder names pointing to the same file location. Read chapter [Configuring aliases](#) for more information.



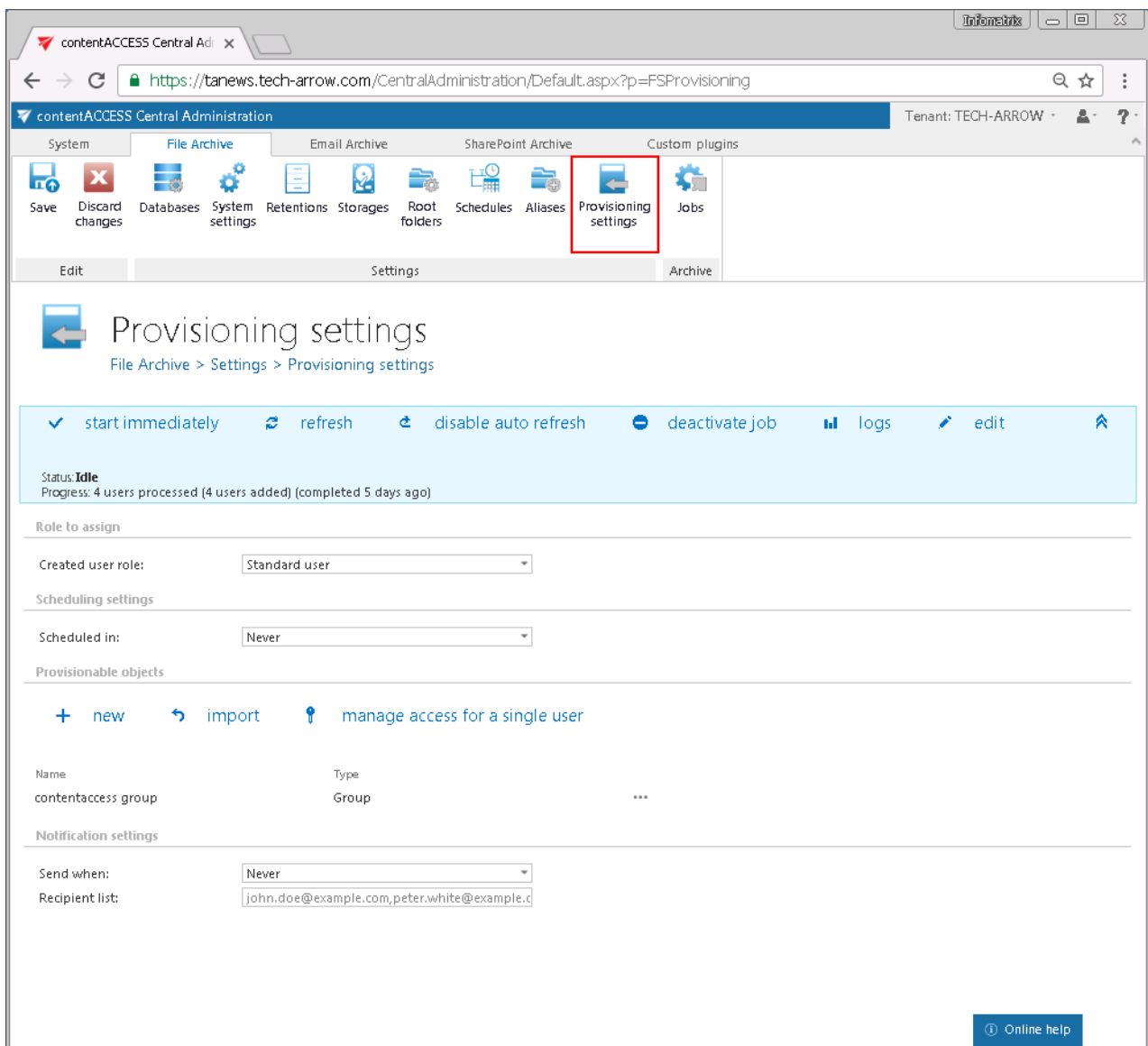
## File archive Schedules

The schedulers automatizing the file archive process are configured on this page; for more information how to create schedulers refer to this chapter: [Schedules](#).



## Provisioning settings and managing access to contentWEB

The File Archive provisioning setting are accessible on the **File Archive** → **Settings** → **Provisioning settings** page.





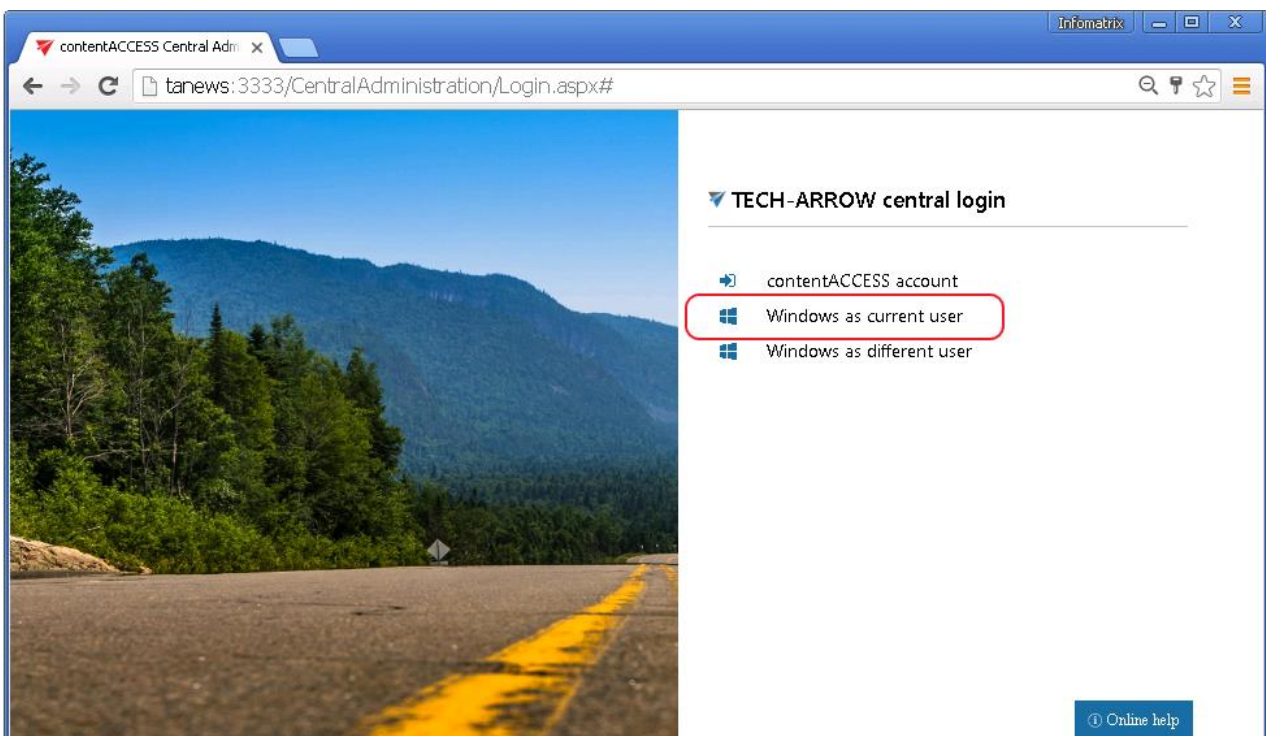
The provisioning job that synchronizes the Active directory with contentACCESS can be set directly on this page.

**Note:** The system's LDAP settings specified on page *System* → *Services* → *System* in section “Active directory integration settings” are used to connect to the Active Directory.

When the provisioning job is started, it automatically **adds the new Active Directory users into contentACCESS** based on provisioning settings. The provisioned objects will automatically get log on rights to the contentWEB File Archive.

**Hint:** Access permissions on the file archive folders/items are NOT granted by the provisioning job. Provisioning job grants only log on rights to the contentWEB File Archive. The access rights to files/folders are evaluated and updated by the file system archive job. Read more in [Synchronization of rights to a folder/file](#).

The contentWEB users can log in to contentWEB using Windows authentication.



The existing contentWEB users can be viewed with clicking on the “**manage access for single user**” option on the **Provisioning settings** page:



Provisionable objects

+ new    ↶ import

**🔑 manage access for a single user**

Name	Type	
contentACCESS group	Group	...

The users that are already provisioned have an automatic flag, while manually added users have a manual flag:



## Manage Access to File archive

System > Tenants > Tenants > Manage access

+ new

User name	Role name	Flags
tesztelek	*** Standard user	Manual
CONTENTACCESSUSER1	*** Standard user	Automatic (770)
CONTENTACCESSUSER2	*** Standard user	Automatic (770)
CONTENTACCESSUSER3	*** Standard user	Automatic (770)
CONTENTACCESSUSER4	*** Standard user	Automatic (770)

[Go back](#)

New contentWEB users (with default Standard role or manually created explicit role) can be manually added to the contentACCESS File Archive using the + new option on the same (Manage access to File archive) page. File archive access rights can be given to an already existing or a new contentACCESS user.

**Create new role association** ✕

---

**Tenant information**

Role:

Invitation type:

---

Search for existing user\*:

**Andras** Katona

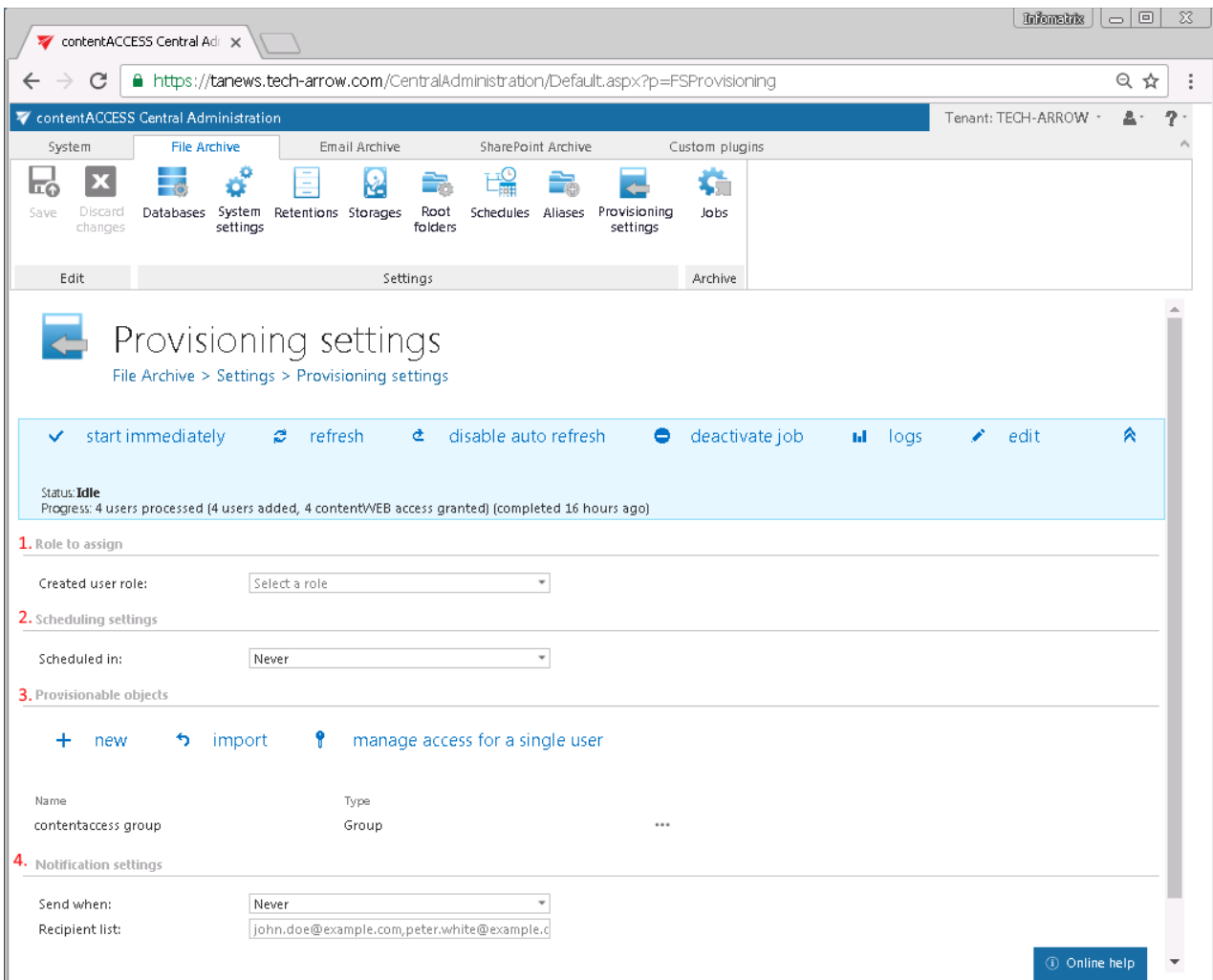
**Andras** Palffy

**Note:** This manage access option is available for the logged on administrator, if his role assignment contains Manage tenant permission on the assigned tenant, and also contains View archive folder rights. Read more in [Managing access to contentACCESS objects](#).

## Configuration of File archive provisioning:

To configure the File archive provisioning, the administrator is required to set

1. The role, that will define the file archive user's permissions in contentWEB. Standard user role is available in the list by default, other roles with other permissions must be first configured on the **Roles** page.
2. The time periods, when the provisioning will run – this must be configured in section “Scheduling settings”.
3. The objects to be provisioned – must be set in section “Provisionable objects”
4. Notification settings (optional)



The screenshot shows the 'Provisioning settings' page in the contentACCESS Central Administration interface. The page is titled 'Provisioning settings' and is part of the 'File Archive > Settings > Provisioning settings' navigation path. The status is 'Idle' with a progress report: 'Progress: 4 users processed (4 users added, 4 contentWEB access granted) (completed 16 hours ago)'. The page is divided into four main sections:

- 1. Role to assign:** A dropdown menu for 'Created user role' with the text 'Select a role'.
- 2. Scheduling settings:** A dropdown menu for 'Scheduled in:' with the value 'Never'.
- 3. Provisionable objects:** This section includes action buttons for '+ new', 'import', and 'manage access for a single user'. Below these is a table with columns for 'Name' and 'Type'. One entry is visible: 'contentaccess group' with type 'Group'.
- 4. Notification settings:** A dropdown for 'Send when:' set to 'Never', and a text field for 'Recipient list:' containing 'john.doe@example.com,peter.white@example.com'.

An 'Online help' button is located in the bottom right corner of the page.

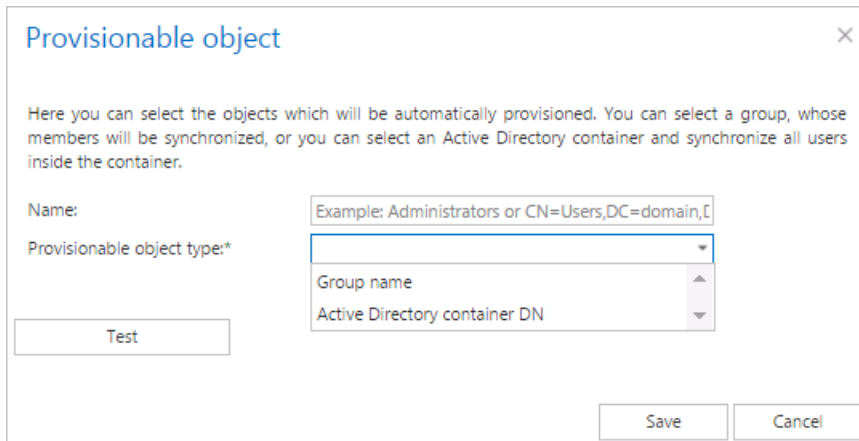
Provisionable objects may be added:



- a) from importable files, using the “import” function (described in more details in chapter [Importing contentACCESS configurations from files](#))
- b) manually via the “new” button.

To add object manually, click “new” and specify the object(s) in the respective dialog. You can select a **group**, of which objects will be provisioned, or you can select an **Active Directory container**, and synchronize all users inside this container. Choose the object type and enter the data in the following format:

- in case of a **Group**: enter the name of the group
- in case of a **Container**: enter the distinguished name (DN) like in the sample.



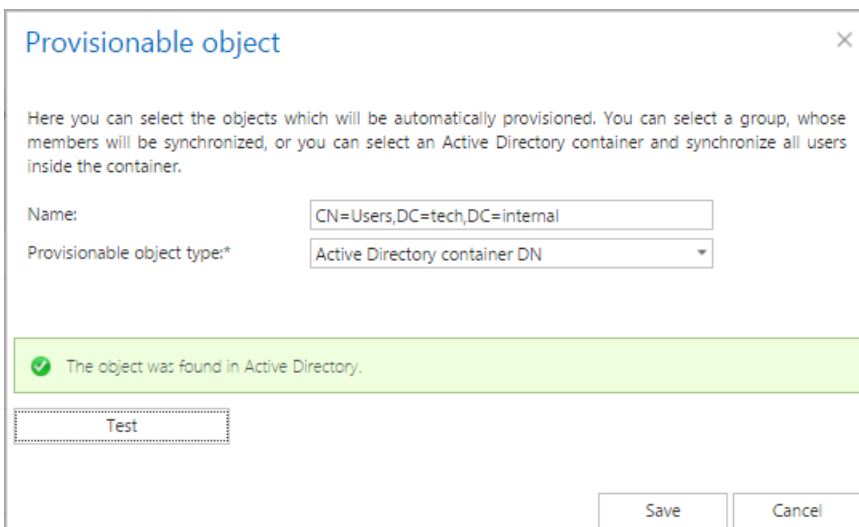
**Provisionable object**

Here you can select the objects which will be automatically provisioned. You can select a group, whose members will be synchronized, or you can select an Active Directory container and synchronize all users inside the container.

Name:

Provisionable object type:\*

It is recommended to use the “Test” button to verify if the Active Directory container DN/Group name has been correctly entered in the first text box.



**Provisionable object**

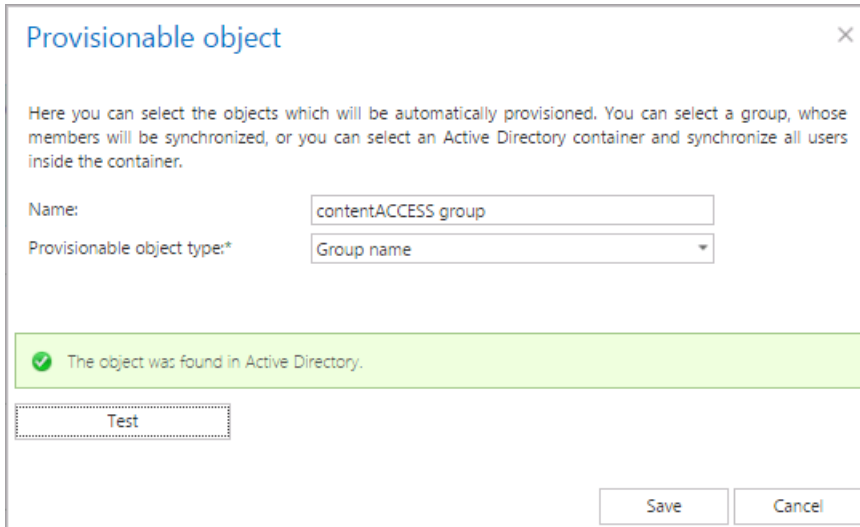
Here you can select the objects which will be automatically provisioned. You can select a group, whose members will be synchronized, or you can select an Active Directory container and synchronize all users inside the container.

Name:

Provisionable object type:\*

The object was found in Active Directory.

Screenshot A: Selecting an AD container to be provisioned



**Provisionable object** [X]

Here you can select the objects which will be automatically provisioned. You can select a group, whose members will be synchronized, or you can select an Active Directory container and synchronize all users inside the container.

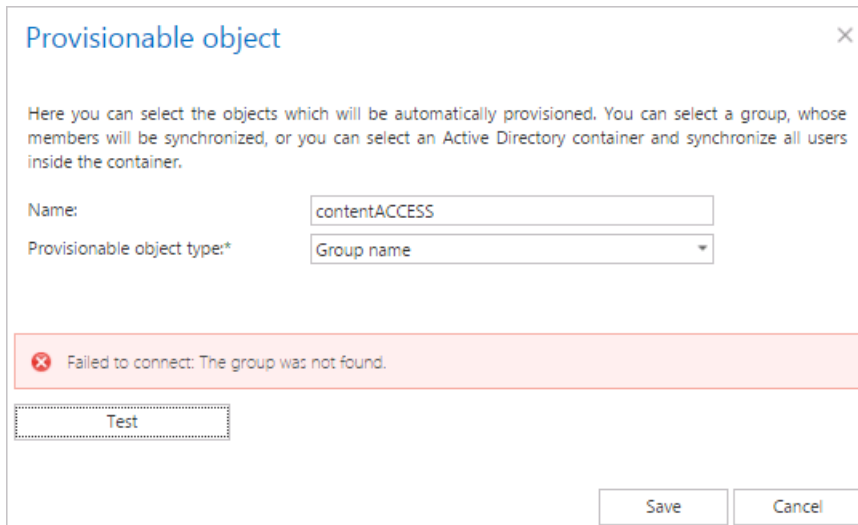
Name:

Provisionable object type\*:

✓ The object was found in Active Directory.

Screenshot B: Selecting an AD group to be provisioned

If not the correct data is entered, then the provisionable object is not found, and the user is warned about this:



**Provisionable object** [X]

Here you can select the objects which will be automatically provisioned. You can select a group, whose members will be synchronized, or you can select an Active Directory container and synchronize all users inside the container.

Name:

Provisionable object type\*:

✗ Failed to connect: The group was not found.

### The provisioning job

- adds all the users involved in the Container/Group into contentACCESS
- grants contentWEB File Archive permissions (based on the selected role) for the users involved in the LDAP path/Group.

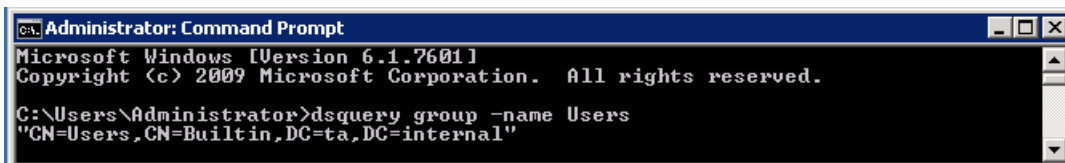
### ***How to find the distinguished name (DN) of an Active Directory object***

Objects are located within Active Directory domains according to a hierarchical path, which includes the labels of the Active Directory domain name and each level of container objects. The full path to the object is defined by the distinguished name (also known as a "DN").

If the object to be provisioned (to be synchronized) into contentACCESS is an Active Directory container, then it can be located in the Active directory using his DN. The distinguished name of an Active Directory object can be found using the "dsquery" command line application. For more information about the "dsquery" read [this](#) guide.

### General use case for identifying the "Users" container in the Active directory

- Open a Windows command prompt.
- Type the command **dsquery group -name Users** (example: `dsquery group -name [known object name]`)
- The result will look like "CN=Users, CN=Builtin, DC=MyDomain, DC=com":

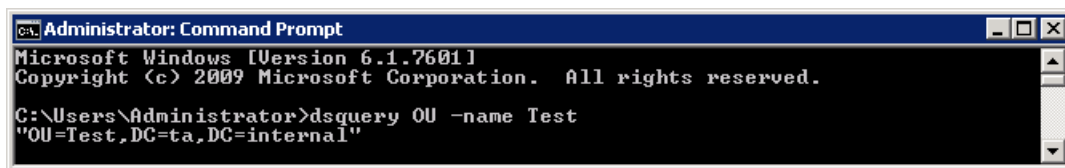


```
Administrator: Command Prompt
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>dsquery group -name Users
"CN=Users, CN=Builtin, DC=ta, DC=internal"
```

### General use case for identifying the "Test" Organizational unit in the Active directory

- Open a Windows command prompt.
- Type the command **dsquery OU -name Test** (example: `dsquery OU -name [known object name]`)
- The result will look like "OU=Test, DC=MyDomain, DC=com":



```
Administrator: Command Prompt
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>dsquery OU -name Test
"OU=Test, DC=ta, DC=internal"
```

File archive provisioning's notification settings are used to set automatic email notifications to specific addresses if any warnings/errors occur. Set the notification emails if necessary and save your settings.

## Configuring aliases

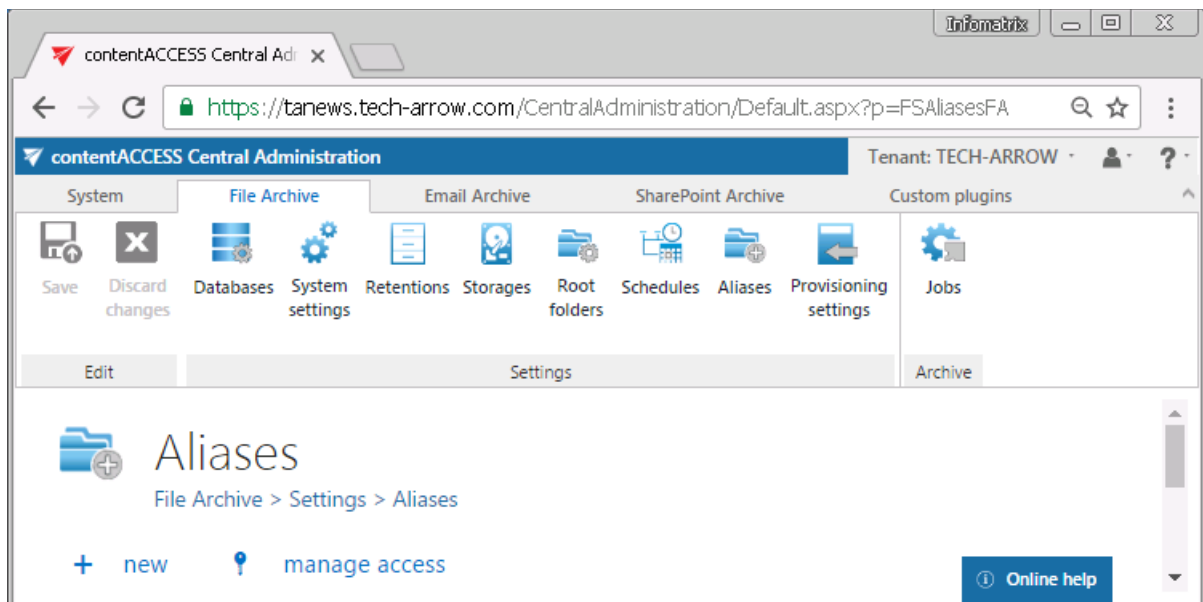
**What are aliases?** Aliases are multiple folder paths with different names which point to the same folder/set of files.



Currently contentACCESS uses aliases by mapping remote location paths to local paths, which is a must-to configuration by the Remote shortcutting job. (For more information refer to section [Configuration of Remote shortcutting job.](#))

**Configuring an alias for the Remote shortcutting job.** If you are shortcutting remote shares, but contentACCESS has archived the matching files on a local share, the shortcutting job must “pair” the remote share with the local share to be able to replace the matching files with shortcuts on the remote share and to open them. This “pairing” by the job can be done only in case, if remote and local shares are “paired” in contentACCESS, too (i.e. Aliases are specified).

Navigate to **File Archive** → **Settings** → **Aliases** tab on the Central Administration’s ribbon. On the **Aliases** page click on **+ new**:



**Note:** The “+ new” option is unavailable for the logged on user, if the “Add repository items” permission on the tenant is not allowed in his role assignment.

The “manage access” option allows to grant access permissions on the selected alias for a second user. This “manage access” option is available for the logged on administrator, if his role assignment contains the Edit repository item – All allowed permission on the tenant. Read more in [Managing access to contentACCESS objects.](#)

The **Alias repository** will open. The repository requires to specify the:



- **Original location:** select the file archive root folder from the dropdown list; this is the file path used by the archive job
- **Remote location:** add the matching remote file path that needs to be replaced with shortcuts

Further click on **Save**. The **Remote location** that you configured here can be selected on the **Remote shortcutting** job's configuration page later on.



**Note:** A path extension can be added when setting the remote file location on the Remote shortcutting job's configuration page.

### Configuration of jobs available in contentACCESS File Archive

Once all the necessary settings are done, select the tenant and navigate to the **File Archive** tab. Under **File Archive** → **Archive** group click on the **Jobs** control button, then click on **+ new** option.

**Note:** You can configure a file system job either immediately, or later on with navigating to the file system jobs' page, using the "Configure" option in the given job's context menu. The job configuration page can be also opened with a double click on the selected job in the jobs' grid.

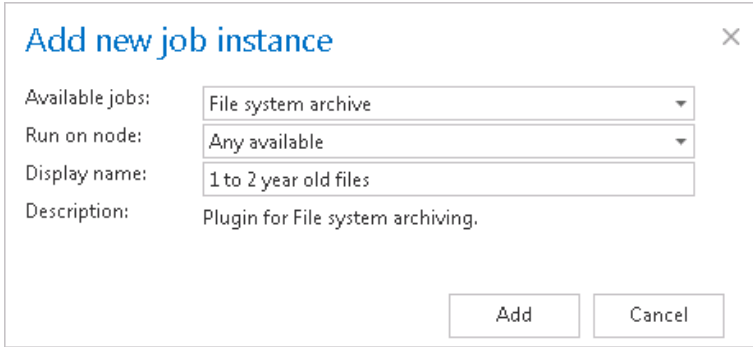
Screenshot A: Configure the job page immediately when it is created

Screenshot B: Opening the job's configuration page from its context menu

Screenshot C: Opening the job's configuration with a double click in the grid

## Configuration of File system archive job

In this section we will configure a file system archive job, which will run every day from 6 PM, will archive our 1-2 year old files, and the archived files will be replaced with shortcuts. Our database, storage, root folder, retention and scheduler are already configured. Navigate to **File Archive** → **Archive** → **Jobs** button, click on **+new**. In the **Add new job instance** dialog select **File system archive** job from the **Available jobs:** dropdown list. Select the node where the job should run from the **Run on node** list. Now we you would not like to specify a node, so we select “Any available”. Enter a **Display name**, and click on **Add**.



On the job’s configuration page go through the following sections; most of them are mandatory, filtering settings are optional:

### ✓ Scheduling settings:

In this step the running times of the archive job must be selected. It is possible either to select a scheduler from the list or to create a new scheduler via create new option. For archiving job it is recommended to set up a scheduler which will run always, or in certain times during the week. Our job will run every day from 6 PM till midnight, after business hours. (For more information about how to set schedulers refer to the section [Schedules](#) above.)

#### Scheduling settings

Scheduled in:



### ✓ Retention settings:

Under retention settings the administrator may select a previously configured time period. During this time it will be disabled to delete the archived items from the storage. It is recommended to set here a time interval based on data recording regulations required either by the law of the country, or by internal company policies. In our country the required retention time is 10 years, so we set this here. (For more information how to set retentions check section [Retentions](#) above.)

Retention settings

---

Retention:

### ✓ Shortcut settings in File archive:

The user may decide, if the files will be archived using shortcuts or will be simply archived, creating a backup file to the original. It is also possible to set automatic deletion of the original document from the file system location. There are 3 shortcut types available in file system archive (the state before and after the archiving process is illustrated on the respective screenshots):

a) **Keep original** method (backup files with versioning) is often used on a daily basis. The main advantage of this processing type is, that the documents are ready at hand at any time, and the versions can be accessed from the archive at any time, too. This method keeps the original item in the original file location:

b) **Create shortcut from original item:** Files older than 1 year are usually archived with this shortcutting method. The main advantage of this method is the spared space on the computer. In case of need, the documents can be easily retrieved from the archive with clicking on the respective shortcut.

If the user modifies the file and saves it to the original location again, then the next archive job will create a new version from it into the archive, and will synchronize the shortcut with this new version.

c) **Delete original:** with this method the user deletes the file from the original location when archiving it. This processing type is often used when the document is not in use any more, but it must be restorable until a definite date required by the general records retentions of the country.

It depends on a particular situation, which method is advisable to use. You can use all methods simultaneously to have your daily backup – create versions when files are changed, or archive with shortcutting or delete original method in case of old(er) files.



## Shortcut settings

Shortcut processing type: Create shortcut from original item

Virtual drive server name: Keep original item  Use default (tanews)

Create shortcut from original item

Delete original item

In this use case we will archive by using shortcuts. If you decide to use shortcutting, it is also necessary to specify the Virtual drive server name. This is the name of the server where the virtual drive is installed. In our case it is *tanews*. It is strongly recommended to use a name of the server under which it will be always accessible (DNS alias at best). This server name is then included in the generated shortcuts. By using the **Use default** checkbox you may automatically select the Virtual Drive, which is already configured in the **System** → **Client Applications** → **Virtual Drive configuration** section. It is very useful to use this option, as if the Virtual Drive server name has been changed, then you have to change these settings on the **Virtual Drive configuration** page only. (For more information refer to section "[Virtual drive](#)".) On the jobs' configuration page the default Virtual Drive will be prepopulated.

With clicking on the **Test** button it is allowed to check if the connection to the Virtual drive server was established.

## Shortcut settings

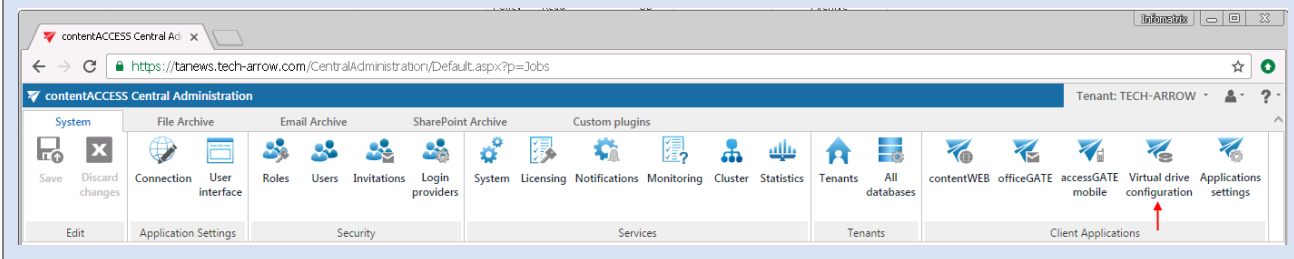
Shortcut processing type: Create shortcut from original item

Virtual drive server name: tanews  Use default (tanews)

✓ Connection successfull

Test

**Note:** Virtual drive is included in the content ACCESS setup package. It needs to be configured on the *Virtual drive configuration* page (*System* tab → *Client applications* → *Virtual drive configuration* button on the ribbon). After these necessary steps it will be shown among another drives (by default the Virtual drive will be the Z drive).





**Note:** The shortcuts used in file archive system are compatible with Macintosh operating system, too. It is a must to install TECH-ARROW's WinShortcutter application on every client machine. It can be downloaded either from the Tools of the contentACCESS setup, or from our website, [here](#).

**Note:** It is important to bear in mind that archiving an HTML file with the shortcutting method in contentACCESS File Archive has certain technical limitations. If an HTML file to be archived contains pictures, then after the archiving process these pictures will not be visible when trying to open the HTML over the shortcut in the original location. Nevertheless these pictures will be still accessible with opening the HTML from the Virtual Drive.

#### ✓ Folders to process:

In this section the user is required to select the local folder(s) or remote share(s) where the system data are located and will be archived. There are two available options how the list of folders may be specified:

- a) The folder(s) may be added via **+new** option. In this case the folder(s) must be added manually one-by-one. Click on **+new** to open the **File Path** dialog.

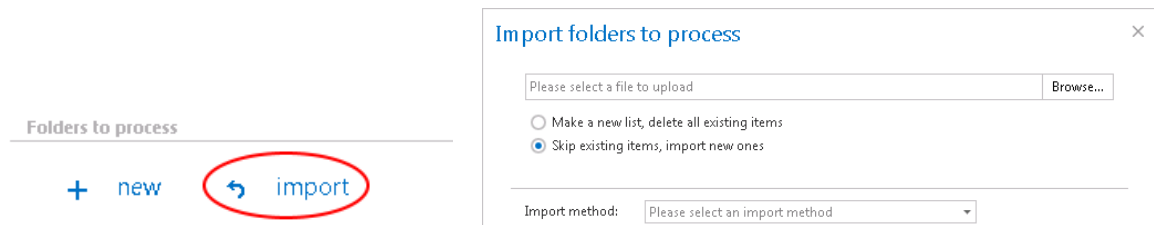
Click on **"new"** to specify the folder to be archived manually. In the "Folder to process" dialog unroll the list of already created roots and select the one that should be applied. This dropdown lists the roots that are already configured (in File Archive settings: *File Archive* → *Settings* → *Root folders*). Enter the **Relative path** if necessary, test the path via the "Test" button and click "OK".

#### Folders to process





- b) The **folder list may be also imported from a file**. The file to be imported must contain the list of folders that should be processed. Click the **import** button and the **Import file location dialog** opens. Specify here the required settings according to chapter [Importing contentACCESS configurations from files](#) of this guide.



**Important!!!** It is recommended to specify a file path that can be accessed from anywhere. This is quite important also in case that the user has contentACCESS installed in a distributed environment (using multiple cluster nodes).

#### ✓ Exclude folders

With this function you may set, which folders/subfolders should not be archived. If you would not like to exclude any folder from the archive process, you can skip these settings.

The folders may be excluded using one of the available methods: a) The folders to exclude may be **added manually** via the **+ new** option or; b) may be **imported** in one of the available file formats via the **import** option.

#### Exclude folders

a) **+ new**    b) **↶ import**

#### a) Add the folders to exclude **manually**:

Click on **+ new** option. In the **Exclude folder** dialog's textbox specify the folder(s). Use the hints that are listed in the same dialog.

### Exclude folder ✕

**Exclude folder settings**

Pattern:  ▼

Hint:

\Example	Exclude the folder Example on the root
\Example\*	Exclude subfolders of the folder Example on the root
Example	Exclude all folders with name Example
Example\*	Exclude all subfolders of folders with name Example
Ex*	Exclude all folders that start with Ex
Ex*\*	Exclude subfolders of all folders that start with Ex
\Ex*	Exclude all folders that start with Ex on the root
\Ex*\*	Exclude all subfolders of folders that start with Ex on the root

Special characters \*, +, ?, |, , { }, [ ], ( ), ^, \$, ., # need to be escaped by backslash \

Example: Inbox\Folder \John\ will exclude the path Inbox\Folder (John)

The entered pattern is case-insensitive

### Test pattern button

This button is used to check, if the entered pattern will be suitable for the path that the user would like to exclude from the archiving process. Click the **Test pattern** button to open the **Manual test of pattern matching** window. Enter the folder path into the **Folder path** field, and click on **Test** button.

The test will be successful, if the **Pattern** was entered correctly into the **Exclude folder** window.

### Manual test of pattern matching ✕

Pattern:

Folder path:

✔
The folder will be excluded

### b) Import the list of exclude folders:

Folders to exclude may be imported as files in one of the available formats: CSV, XML, Tab delimited files or Space delimited file. The file to be imported must contain the list of folders to exclude. To

import such a file with the list of folders refer to chapter [Importing contentACCESS configurations from files](#) of this guide.

## Excluding folders with special characters

Also the folders including special characters like brackets, hyphens, question marks etc. can be excluded from the archiving process. To exclude such folders from the archiving process, the special characters included in the folder(s) must be excluded **using the backslash “\” escape character**. The **escape character must be added before the special character** to be excluded, in the **Exclude settings** of the archive job’s configuration page.

E.g. you have a “(folder)” in your file system, and the “(folder)” must be excluded (the special characters are the brackets), then you must specify the folder to be excluded like this: “\(folder).”

This information is available at the bottom of the **Exclude folder** window:

Exclude folder
×

---

**Exclude folder settings**

Pattern:

Hint:

\Example	Exclude the folder Example on the root
\Example\*	Exclude subfolders of the folder Example on the root
Example	Exclude all folders with name Example
Example\*	Exclude all subfolders of folders with name Example
Ex*	Exclude all folders that start with Ex
Ex*\*	Exclude subfolders of all folders that start with Ex
\Ex*	Exclude all folders that start with Ex on the root
\Ex*\*	Exclude all subfolders of folders that start with Ex on the root

Special characters \*, +, ?, |, , (, ), [, ], (, ), ^, \$, ,, # need to be escaped by backslash \

Example: Inbox\Folder \John\ will exclude the path Inbox\Folder (John)

The entered pattern is case-insensitive

## ✓ Item filtering:

This configuration enables for the user to filter among items by 3 types of criteria: by age, size or file type. It is also enabled to use more filters simultaneously. For filtering documents according to any of these criteria activate the filter button by checking the checkbox next to it, then click on the activated button.

### Item filtering

Filtering type:	Filters:	<input checked="" type="checkbox"/> Age filter <input type="checkbox"/> Size filter <input type="checkbox"/> File Type filter
-----------------	----------	---

### ▪ Age filter:

With this filter the user may select files to process with a specific age. The user has multiple choices here; he can select the filtration type from the list, and a) use either the **Use dates** option and pick up a date from the calendar, or b) he can enter a value into days/months/years textbox and search for the files which are younger than/older than or fall into time interval set here.

**Using the creation date or modification date for filtering:** By default the modification date is the determinative date, but this can be changed by checking the “**If creation date is younger than the modification date, use creation date for filtration**” checkbox. However, in certain cases the creation date of a file is set to younger date than the modification date of a file. This happens, if a file is copied to another external disk (for example from disk G to disk I). In this case the creation date will be set to the date of the copy action. If the user would like to use this file in the future and would not like to archive it, this enhancement that can solve this problem. With this feature it is possible to exclude the file with the newer creation date from the archiving process. To create a proper archiving policy take into consideration these rules: <https://support.microsoft.com/en-us/kb/299648>.

Examples of using dates:



**Age Filter** items younger than the specified date will be processed ✕

**Select filtration type:**

- Modification date is younger than
- Modification date is older than
- Modification date is in interval

Use Dates

Younger

2/1/2015 12:00 PM

Days  Months  Years

If the creation date is younger than the modification date, use creation date for filtration

OK Cancel

**Age Filter** items older than the specified date will be processed ✕

**Select filtration type:**

- Modification date is younger than
- Modification date is older than
- Modification date is in interval

Use Dates

Older

2/3/2015 12:00 PM

1  Days  Months  Years

If the creation date is younger than the modification date, use creation date for filtration

OK Cancel

**Age Filter** items with the specified date interval will be processed ✕

**Select filtration type:**

- Modification date is younger than
- Modification date is older than
- Modification date is in interval

Use Dates

From: 1/1/2013 12:00 PM To: 1/1/2014 12:00 PM

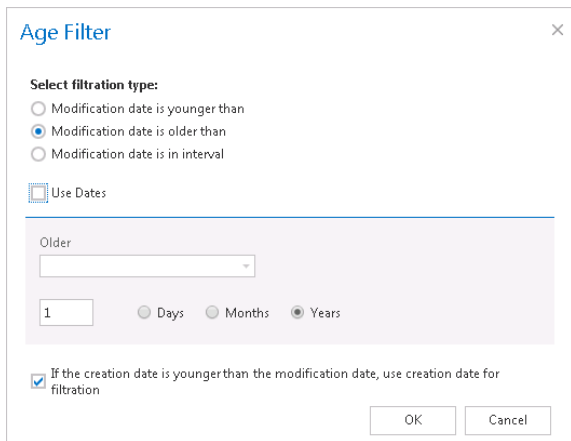
From:  To:   Days  Months  Years

If the creation date is younger than the modification date, use creation date for filtration

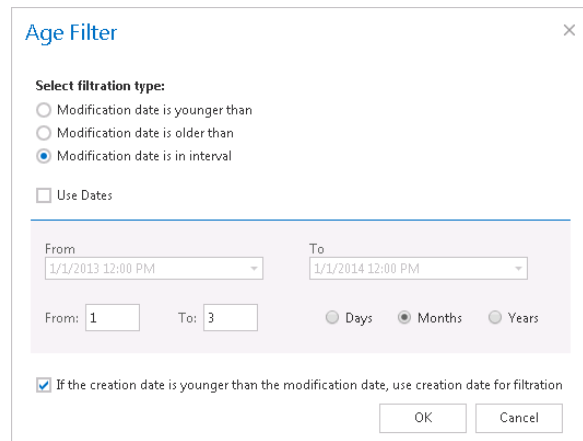
OK Cancel

### Examples of filtering using days/months/years:

If the **Use dates** checkbox is not selected, then the date selection option becomes inactive. In this case it is allowed to filter between items with **Modification date is younger than/Modification date is older than** a certain number of days/month/years. Enter the value into the **From, To** checkboxes next to the **Days/Months/Years** radio button (screenshot A). It is also allowed to filter out items which belong to a certain period of time, e.g. items that are 1-3 months old (screenshot B). This age filtering type should be used if you would like to archive items, which are older/younger than a certain number of days/months/years (e.g. items older than 1 year). If the Age filter has been set click **OK**.



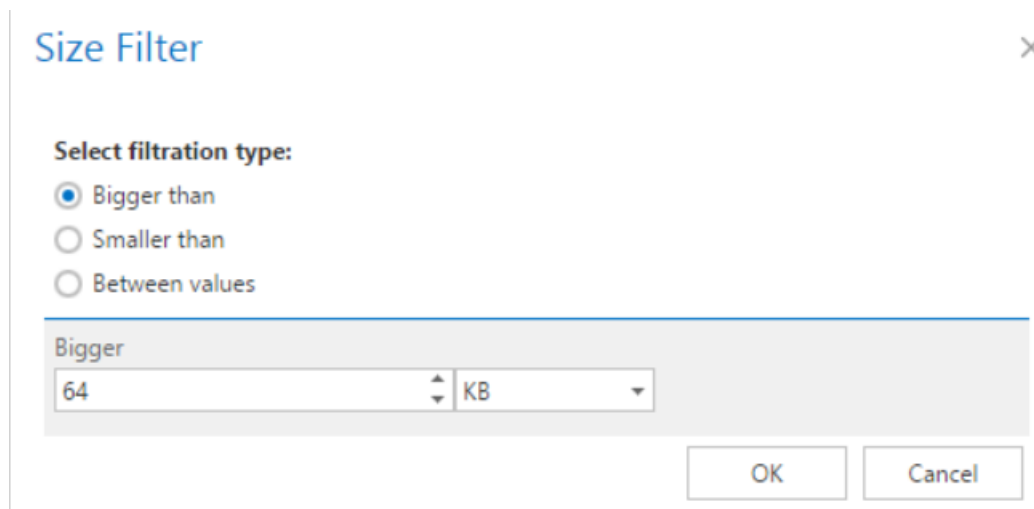
Screenshot A:



Screenshot B

- **Size filter:** This filter can be very useful because it enables to find the biggest files to archive and save space. For filtering files according to this criteria activate **Size filter** button by checking the checkbox next to it, then click on the active button.

In the **Size filter** dialog choose from the filtering types (**Bigger than, Smaller than, or Between values**), enter the size in kilobytes, megabytes or gigabytes and click **OK**.



Screenshot: Files bigger than 64 kB will be processed

**Important!!!:** When the user changes the file content of an already archived item, e.g. deletes a picture from the file and saves it to the original location, (and thus the file size will be reduced e.g. from 110 to 85 kB) and file size filter is set on >100 kB, then File archive job will not archive the newly created item by the next processing. The newly created item will be saved in the original



location, and the old shortcut will be present in the original location, which will still link to the old file without any changes.

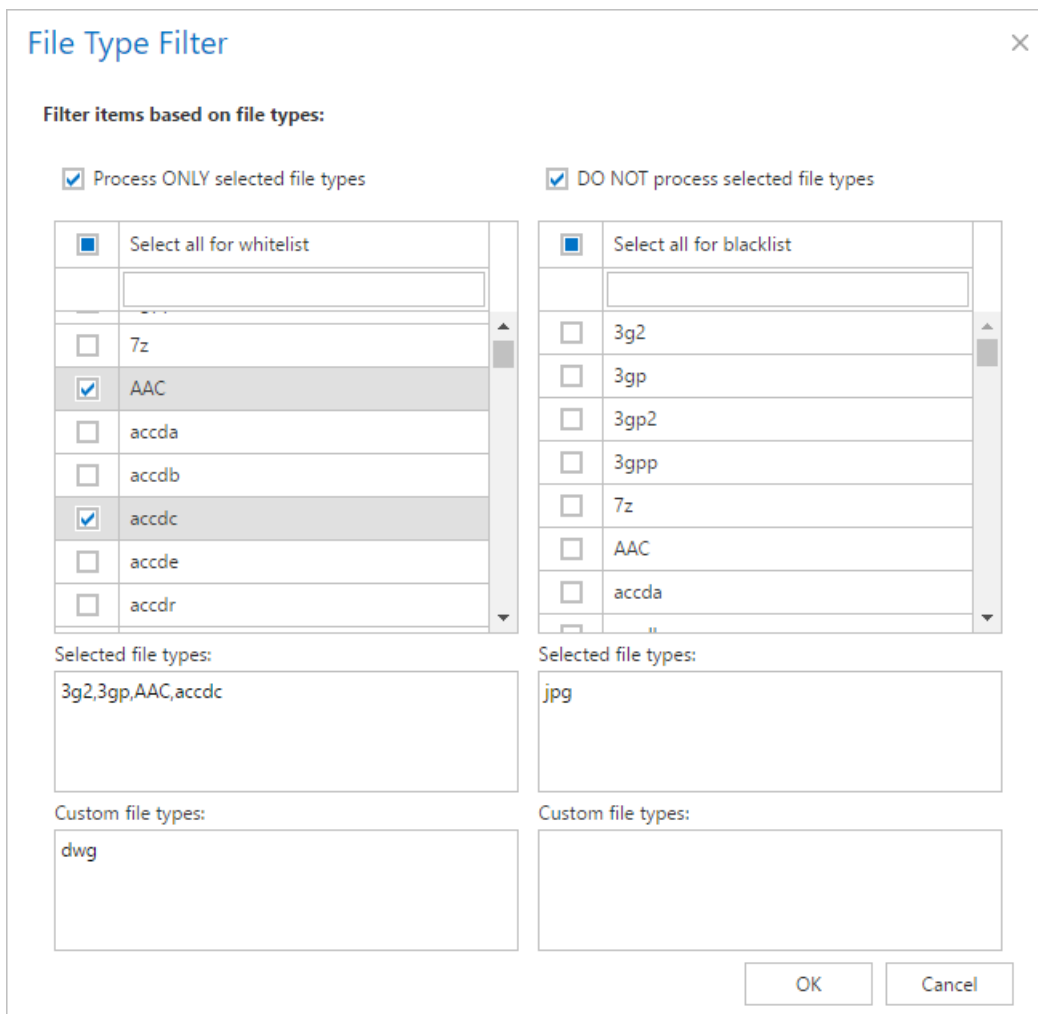
From this reason, it is recommended to always check the size filter settings, if a file has not been archived by the next archiving process.

- **File type filter:** This filter was improved to select certain file types for processing. For filtering between documents according to this criteria activate **File Type filter** button by checking the checkbox next to it, then click on the active button.

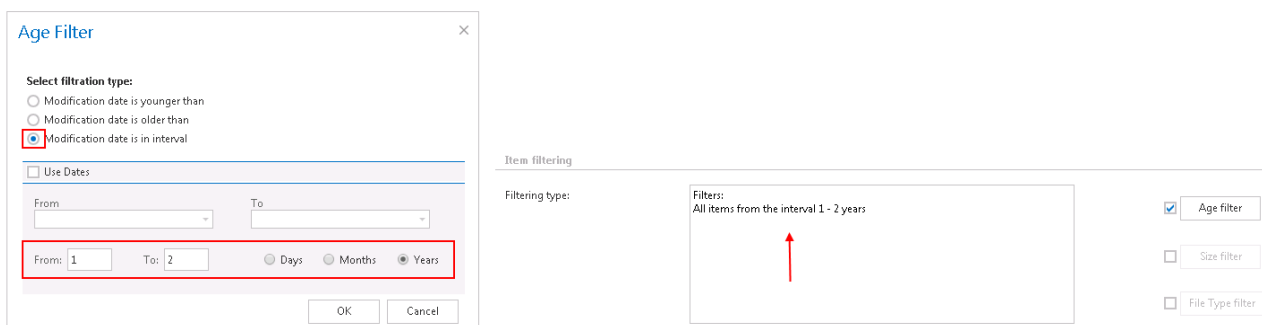
In the **File Type filter** dialog the user may select the file types that need to be processed (option **Process ONLY selected file types**), or he may specify file types, that should be excluded from the processing (**DO NOT process selected file types**).

The file types selected in the whitelist/blacklist are displayed below the grid in a read-only text box. Any file types (also file types that are not included in the whitelist and/or blacklist) can be specified in the **Custom file types** text box (in this use case "dwg").





In our use case we will set only **age filter** for files older than 1 year, but younger than 2 years:



✓ **Notification settings.** Select here, when you will need to get notification emails from the File Archive job. It is possible to set here, if you need a notification email always/never, or, you need it only if an error/warning occurred during the archiving process – for example, if the archive of one or more items failed, then you may get a notification email about this error. Into the **Recipient list** textbox insert the email addresses of the persons, to whom you would like to send these emails. It



may happen, that the files are modified too often, and too many version are created. With the **Notify if version count reaches** option it is possible to define a maximum number of versions, over which the notifications will be sent. It is recommended to set here a higher value. This feature might also be used for troubleshooting purposes. E.g. if the number of versions gets higher than the value specified here, then an error might have occurred during the processing. In this use case the notifications will be sent to Walter White, if any errors or warning occur and/or version count reaches 50.

**Notification settings**

---

Send when:

Recipient list:

Notify if version count reaches:

✓ **Resource settings.** Set the value, which will determine how many items will be processed simultaneously by the file archive job. The recommended value is 2, as in our case.


**Resource settings**

---

Worker thread count:

At the end never forget to save your job configurations: click on **Save** in the left upper corner of UI.

Now you need to wait till 6 PM, when the scheduler starts the job. Its running can be checked in the file archive jobs' grid.

 **Jobs**  
File Archive > Archive > Jobs

+ new    ↻ refresh    ⏸ disable auto refresh

Filter:

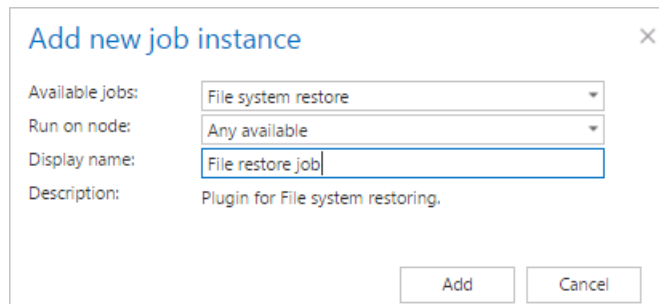
ID	Display Name	Type	Status
72	1 to 2 year old files	File system archive	Running

### **Where an end user may find his file system archive?**

An end user has multiple choices where to view his archived files. He may either browse for them on the Virtual drive, or he can view them in contentWEB (contentWEB is the archive interface of contentACCESS). Virtual drive is a special contentACCESS extension developed by TECH-ARROW. Even the archived item will not be present here on this drive (it will be present in contentACCESS), but the user can browse for them here. A file opened through the Virtual drive is opened in read-only mode. This drive can be shared with any other users, so they can have a very easy access to the archived files. The shortcuts that replace the originals can be opened from the original file location. These shortcuts link to the virtual drive.

### **Configuration of a File system restore job**

File system restore jobs are used to restore already archived items from shortcuts back into the original file location. To create a restore job, navigate to **File Archive** → **Archive** → **Jobs** button (File archive jobs page), and click on **+new**. In the **Add new job instance** dialog, select **File system restore** job from the dropdown list, select a node where the job should run from the **Run on node** dropdown list (if you would not like to specify a node here and the job should run on any available node, then select “Any available”), enter a **Display name**, and click on **Add**.



On the File system restore job's configuration page the user is required to set the following sections:

#### **✓ Scheduling settings:**

In this step the running times of the restore job must be selected. It is possible either to select a scheduler from the list or to create a new scheduler via create new option. Restore jobs are run only in specific cases. In most of the cases a **One time** scheduler is used for the restore job (e.g. with start date 7<sup>th</sup> of September as in our case). (For more information about how to set schedulers refer to the section [Schedules](#) above.)

### Scheduling settings

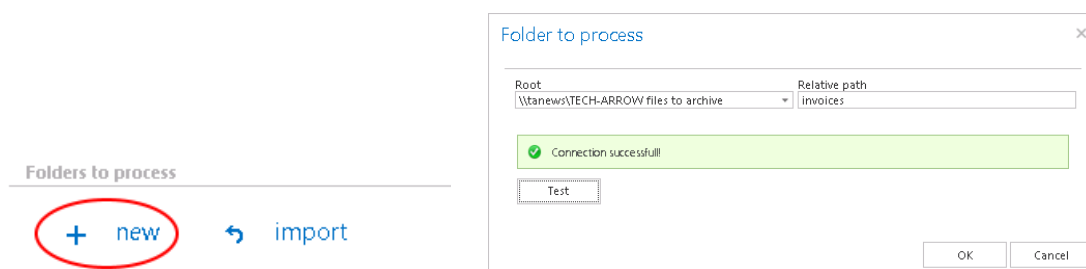
Scheduled in:

#### ✓ Folders to process

In this section you have to select the local folder(s) or remote share(s) where the shortcuts – which replaced the original files – are located. The job will restore the original files from these shortcuts. There are 2 methods how these folders may be specified:

a) Via “new” button:

Click on **+ new** and fill in the path to restore into the **Folder to process** dialog.



b) Via the “import” button:



Import the folder path(s) to be restored from a file. Click “import”, browse for the import file, select the import method and specify the required settings, then upload the file with the desired file path(s). Learn more about files to import in chapter [Importing contentACCESS configurations from files](#) of this guide.

**Important!!!** It is highly recommended to specify file path(s) that can be accessed from anywhere. This is quite important also if the user has contentACCESS installed in a distributed environment (using multiple cluster nodes).

#### ✓ Exclude folders

With this function you may set, which folders/subfolders should not be restored. The same rules apply for these settings is in the file archive job. If you would not like to exclude any folder from the restore process, you can skip these settings.



The folders may be excluded using one of the available methods: a) They may be **added manually** via the **+ new** option; b) or may be **imported** in one of the available file formats via the **import** option.

#### Exclude folders

a) **+** new    b) **↩** import

#### a) Add exclude folders manually:

Click on **+ new** option. In the **Exclude folder** dialog's textbox specify the folder(s) to be excluded. Use the hints that are listed in the same dialog.

\Example	Exclude the folder Example on the root
\Example\*	Exclude subfolders of the folder Example on the root
Example	Exclude all folders with name Example
Example\*	Exclude all subfolders of folders with name Example
Ex*	Exclude all folders that start with Ex
Ex*\*	Exclude subfolders of all folders that start with Ex
\Ex*	Exclude all folders that start with Ex on the root
\Ex*\*	Exclude all subfolders of folders that start with Ex on the root

Special characters \*, +, ?, |, {, }, [, ], (, ), ^, \$, ., # need to be escaped by backslash \

Example: Inbox\Folder \John\ will exclude the path Inbox\Folder (John)

The entered pattern is case-insensitive

#### b) Import the list of folders:

Exclude folders may be imported as files in one of the available formats: CSV, XML, Tab delimited files or Space delimited file. The file to be imported must contain the list of folders to exclude. To import such a file with the list of folders refer to chapter [Importing contentACCESS configurations from files](#) of this guide.

#### ✓ Modification date



This section allows to command to a restore job to restore the archived item a) either with the original modification date [**original modification date (default)**], or b) with the date of restore (**restore date**).

#### Modification date

Set the modification date of restored items to:

- original modification date (default)
- restore date

It is rather recommended to restore the item with the original modification date, which is also set as default. However, “restore date” option might be useful in case, if an archive job on the selected folder path is already running and the age filter is set to younger older than the restore date. With this setting we can prevent the restored document from re-archiving. From this reason we also set in this use case “restore date” option.

- ✓ **Notification settings.** Select here, when you will need to get notifications from the File Archive restore job. It is possible to set here, if you need a notification email always/never, or, you need it only in case when an error/warning occurred during the restoring process – for example, if the restore of one or more documents failed, then you will get a notification email about this error. Into the **Recipient list** textbox insert the email addresses of the persons, to whom you would like to send these emails. Notifications emails may be used as means of troubleshooting of possible failures/errors. (In this use case we do not require such notifications, so we set it to “Never”)

#### Notification settings

Send when:

Recipient list:

- ✓ **Resource settings.** Set the value, which will determine how many items will be processed simultaneously by the file restore job. The recommended value is “2”.

#### Resource settings

Worker thread count:

At the end never forget to save your job configurations: click on **Save** in the left upper corner of UI.



The restore job has finished its task. The restored items can be viewed in the original file location, with the restore dates.

### Configuration of File system recovery job

File system recovery jobs are used to re-generate a file system from the archive back into the original file location. This processing type can be used in the following cases:

- The entire folder structure has been deleted;
- One or more folders have been deleted;
- One or more documents from the folder(s) have been deleted and the user needs to get back these already archived documents from the archive.

The file system recovery is able to reconstruct the entire folder structure from the archive: the items which have been already archived will be put back into their source location. It will also create the folder if it was deleted from the folder structure. It is possible to recover any part of the structure:

- One or multiple folders;
- Recursive folder structure;
- One or more folder contents.

The file system recovery job is checking for the duplicates, so the same recovery job can be run safely multiple times, duplicates will not be created:

- If there is a shortcut for the recovered file in the folder – the file won't be recovered;
- If the file is already present in the folder – the file won't be recovered;
- If the same file is archived multiple times into the same folder – only the youngest file will be recovered.

The user has multiple options what to recover; it is possible to recover either the original file, or the shortcut. The recovery job can be also used, if the user archived the files with the “delete” method, and these files should be put back into the file system.

To create a recovery job, navigate to **File Archive** → **Archive** → **Jobs** control button, and click on **+new**. In the **Add new job instance** dialog, select **File system recovery** job from the dropdown list, select a node where the job should run from the **Run on node** dropdown list (if you would not like to specify a node here and the job should run on any available node, then select “Any available”), enter a **Display name**, and click on **Add**.



**Add new job instance** ✕

Available jobs:

Run on node:

Display name:

Description:

On the File system recovery job's configuration page the user is required to set the following sections:

#### ✓Scheduling settings:

In this step the running times of the recovery job must be selected. It is possible either to select a scheduler from the list or to create a new scheduler via create new option. Recovery jobs are run only in specific cases. In most of the cases it is recommended to set a **One time** scheduler for the recovery job (e.g. with start date 7<sup>th</sup> of September at 6 PM), or to start the job manually from the status bar. (For more information about how to set schedulers refer to the section [Schedules](#) above.)

**Scheduling settings**

---

Scheduled in:

#### ✓Processing settings:

There are two possibilities what to recover by the job: the user may recover either the original, or the shortcut. If the user selects the shortcutting option, it is also required to specify the Virtual drive server name. By using the **"Use default"** option the Virtual Drive that was already configured on the Virtual Drive configuration page will be automatically preselected. It is recommended to use this option, as if the settings have been changed on the Virtual Drive configuration page, the value will be automatically used by the job, too, without a need to change the job's settings.



### Processing settings

Shortcut processing type:

Virtual drive server name:   Use default (tanews)

Connection successful!

### ✓ Folders to process:

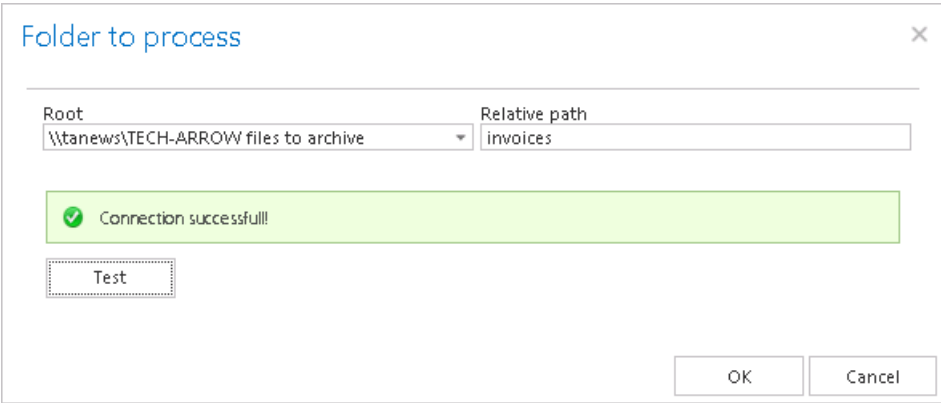
In this section the user is required to specify one or multiple archive folder(s), or recursive folder structure(s) that were deleted and need to be recovered from the archive. There are multiple options how to add new source location(s) of which contents need to be recovered:

#### Folders to process

a) **+** new    b) **↶** import

a) Via the **+** new option:

Click **+new**. The **Folder to process** dialog will open. In our case the contents of the “**invoices**” folder (file path `\\tanews\TECH-ARROW files to archive\invoices`) was originally archived and deleted, and we need these documents receive back from the archive. First we select the **Root** file path from the dropdown list and enter the subfolder to the **Relative path** text box.



Folder to process

Root:  Relative path:

Connection successful!

b) It also possible to import the files to recover from a file, where the file path(s) are specified. To import this file, click the “**import**” button and follow the steps specified in chapter [Importing contentACCESS configurations from files](#) of this guide.



**Important!!!** It is highly recommended to specify the file location as a path that can be accessed from anywhere. This is quite important also if the user has contentACCESS installed in a distributed environment (using multiple cluster nodes).

### ✓ Exclude folders

With this function you may set, which folders/subfolders should not be recovered. The same rules apply for these settings is in the file archive job. If you would not like to exclude any folder from the recovery process, you can skip these settings.

The folders may be excluded using one of the available methods: a) They may be **added manually** via the **+ new** option; b) or may be **imported** in one of the available file formats via the **import** option.

#### Exclude folders

---

a) **+** new    b) **↶** import

#### a) Add exclude folders manually:

Click on **+ new** option. In the **Exclude folder** dialog's textbox specify the folder(s) to be excluded. Use the hints that are featured in the same dialog.

### Exclude folder ✕

**Exclude folder settings**

Pattern:

Hint:

\Example	Exclude the folder Example on the root
\Example\*	Exclude subfolders of the folder Example on the root
Example	Exclude all folders with name Example
Example\*	Exclude all subfolders of folders with name Example
Ex*	Exclude all folders that start with Ex
Ex*\*	Exclude subfolders of all folders that start with Ex
\Ex*	Exclude all folders that start with Ex on the root
\Ex*\*	Exclude all subfolders of folders that start with Ex on the root

Special characters \*, +, ?, |, , { }, [ ], ( ), ^, \$, \, # need to be escaped by backslash \

Example: Inbox\Folder \John\ will exclude the path Inbox\Folder (John)

The entered pattern is case-insensitive

#### b) Import the list of exclude folders:

Exclude folders may be imported as files in one of the available formats: CSV, XML, Tab delimited files or Space delimited file. The file to be imported must contain the list of folders. To import such a file with the list of folders refer to chapter [Importing contentACCESS configurations from files](#) of this guide.

#### ✓ Modification date

The files can be recovered either with the original modification date, or with the recovery date. It is recommended to set the recovery date, if the folder is already processed by an archive job, and the user wants to prevent the folder from re-archiving.

##### Modification Date

Set the modification date of recovered items to:

original modification date (default) ▾

original modification date (default)
recovery date

#### ✓ Notification settings:



The user may select here, in which cases he needs to get notifications from the recovery job. It is possible to set here, that the notification emails will be sent only in case of errors or warnings, or they can be sent in all cases, too. Into the **Recipient list** textbox the user should insert the email addresses of the persons, to whom these emails should be sent. Notifications emails may be used as tools of the troubleshooting process.

Notification settings	
Send when:	Errors or warnings occur
Recipient list:	first name_last name@example.com

#### ✓ Resource settings:

The user may set a value here, which will determine how many items will be processed simultaneously by the recovery job.

Resource settings	
Worker thread count:	2

### Configuration of Remote shortcutting job

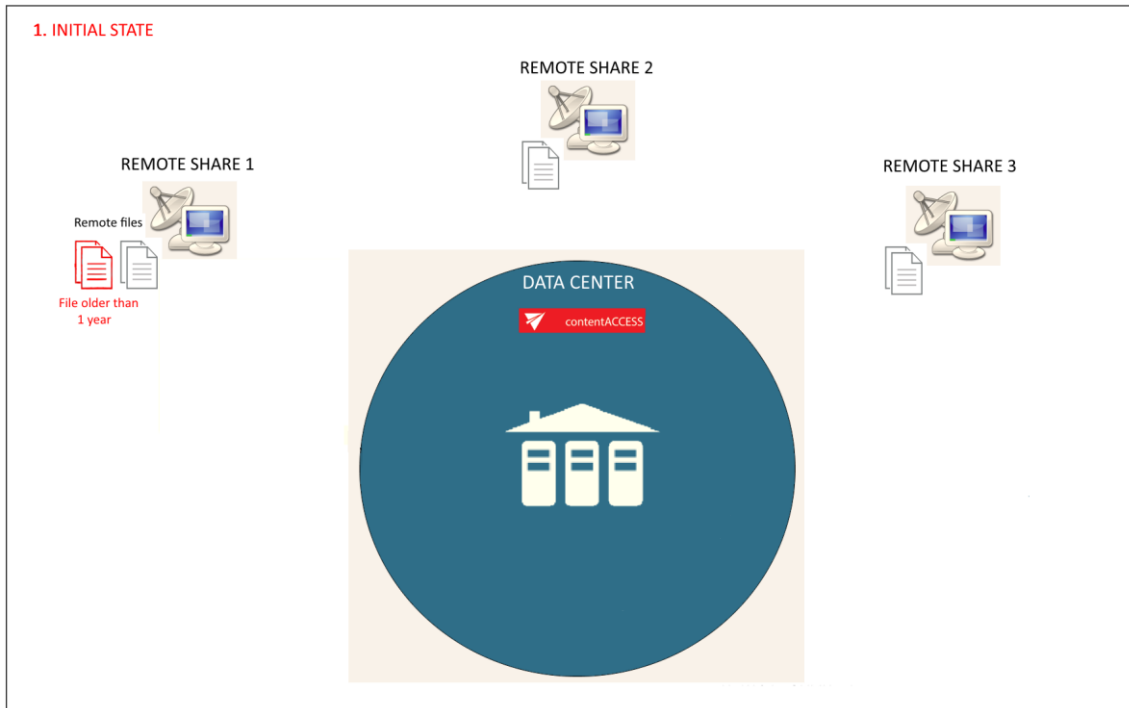
**Remote shortcutting** job is a special job type, which is used with the file archive job together. This type of job is used if you have several remote locations synchronized with your central data center, you are archiving files in the data center with a File system archive job, and the remote files should be replaced by shortcuts (by the Remote shortcutting job) to spare storage space on the remote shares. contentACCESS is installed on the data center, and continuously archives the files already copied to the data center. So the archiving itself is done by a standard File system archive job; the Remote shortcutting job is used to create shortcuts on the remote shares. Archiving from the data center can be done with the shortcutting, journal or with the keep original method, so all types can be used.

**Note:** Remote shortcutting job **can replace remote files with shortcuts** only in case, if the matching file in the data center (where contentACCESS is installed and file archive job is running) has been **already archived**. The **modification date** of the remote file and data center-file **must be the same**, too, otherwise the shortcutting job will skip the file and will write this information into the .log file.

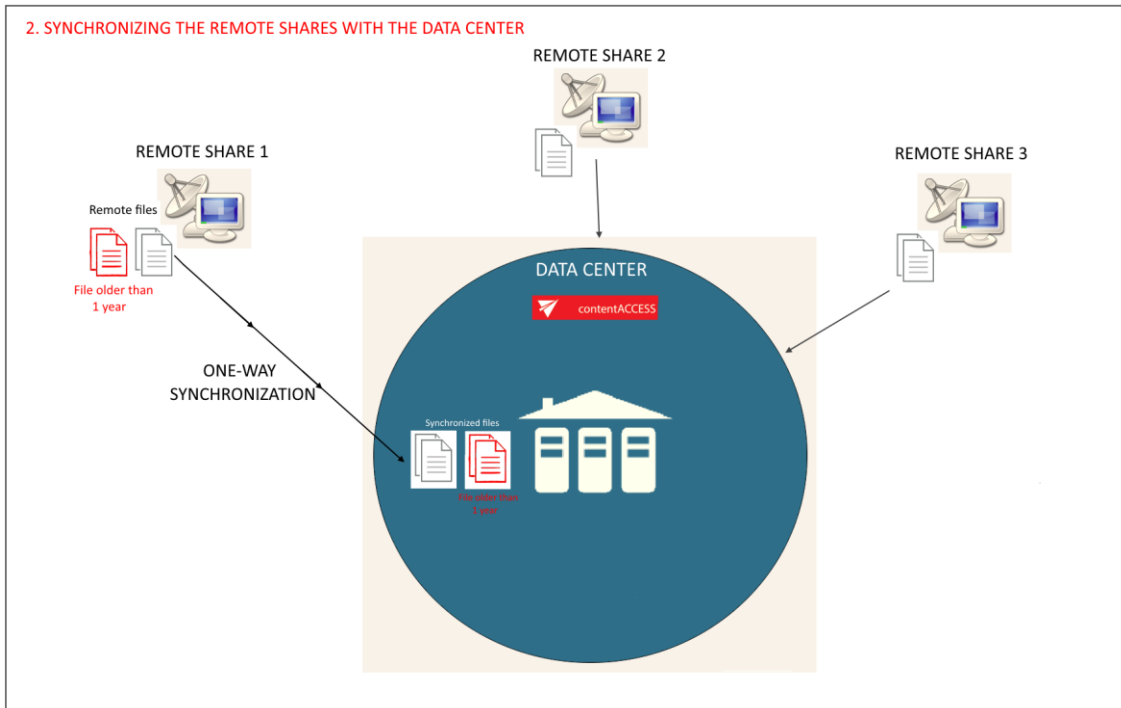


On the chart below you can see the phases of this shortcutting process; contentACCESS server is installed on the data center only:

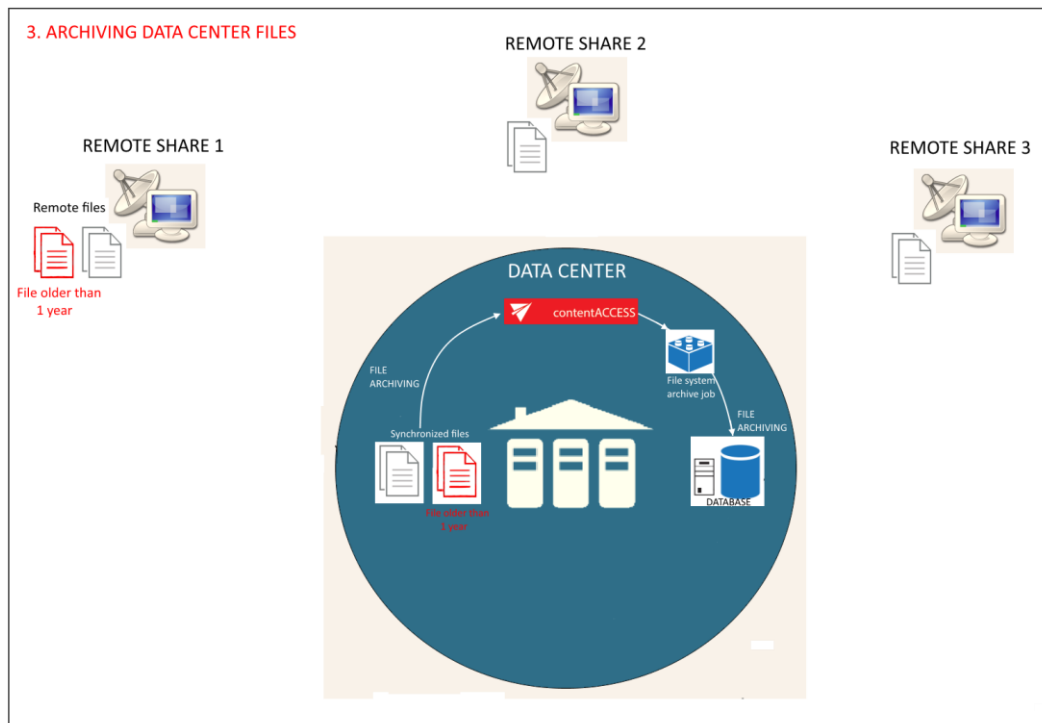
1. The first chart illustrates the initial state of the remote shares and the central data center, where the remote files will be synchronized;



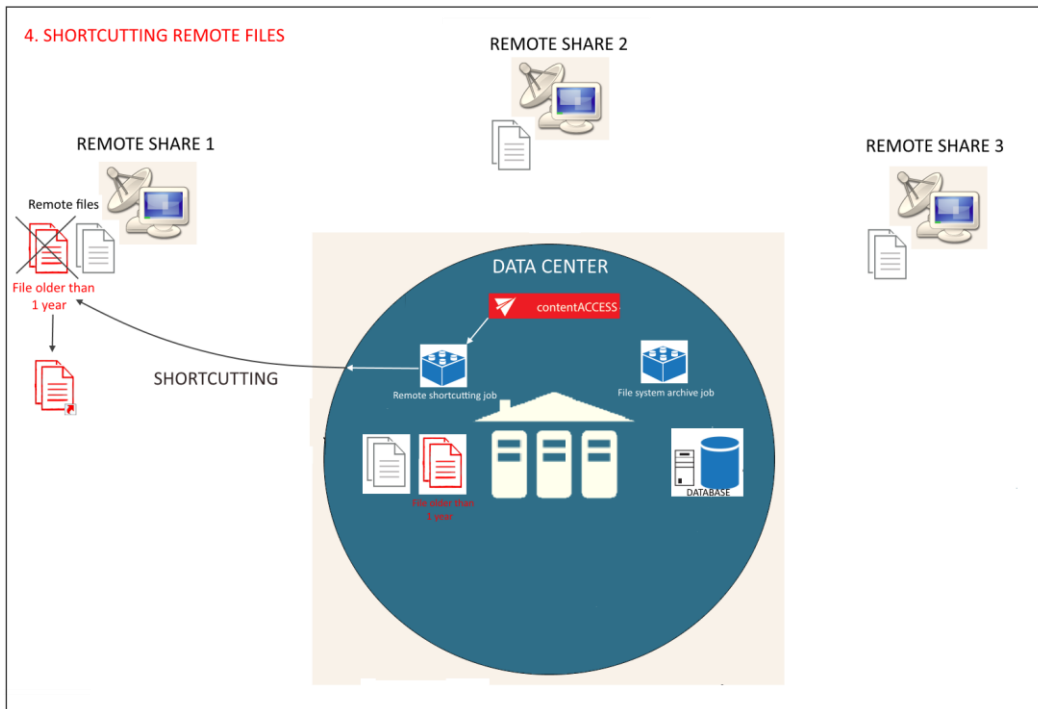
2. On the second chart you may see how the remote shares are synchronized by the data center (i.e. files from the remote share(s) are copied to the data center);



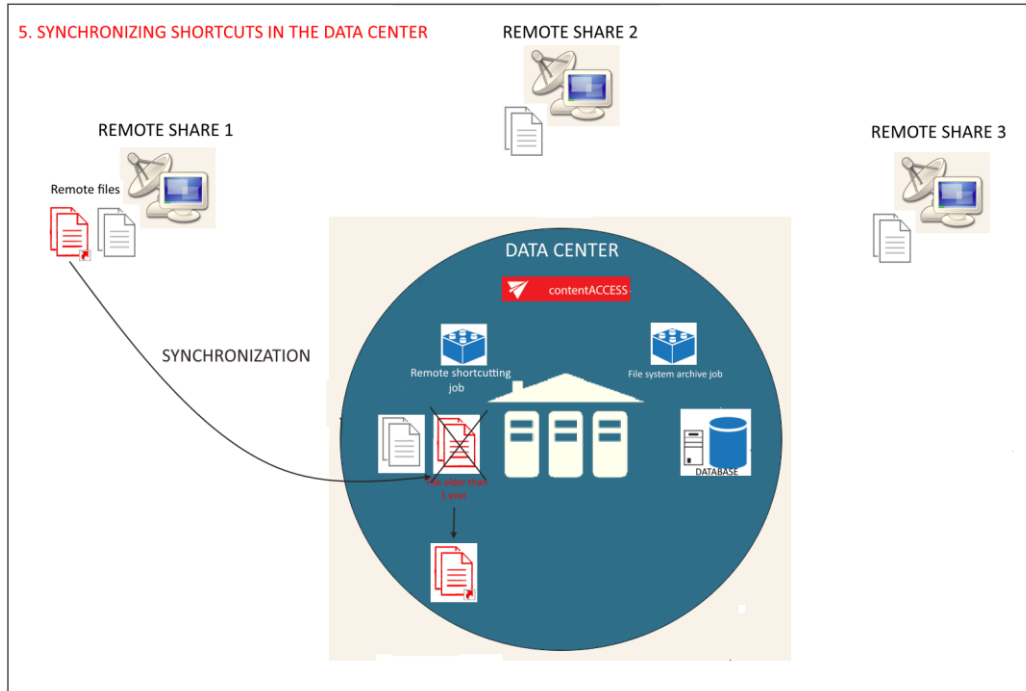
3. The third chart shows how the File system archive job archives the files in the data center into the contentACCESS database;



4. On the forth chart the already archived, <1 year old files (the age is specified in the Remote shortcutting job) are replaced with shortcuts on the remote share; this process is executed by the Remote shortcutting job;



5. The last picture illustrates, how the shortcuts on the remote share are synchronized with the data center files (i.e. the data center files are also replaced with shortcuts).



In this section we will configure a **Remote shortcutting** job, which will run every day from 6 PM and will replace our remote files with shortcuts, that weren't touched for a year (modification date is >



1 year). The remote files are located in “\\tawin10\.....\Test documents for Remote shortcutter job”. Let’s assume that the remote files have been synchronized with the files in a data center and have been already archived, so our archive database is already configured in contentACCESS. (For more information refer to section [Databases](#)) We also assume, that the remote share’s file path and the data center’s file path have been configured on the Aliases page. (For more information refer to section [Configuring aliases.](#))

Navigate to **File Archive** → **Archive** → **Jobs** button, click on **+new**. In the **Add new job instance** dialog select **Remote shortcutting** job from the **Available jobs:** dropdown list. Select the node where the job should run from the **Run on node** list. Now we you would not like to specify a node, so we select “Any available”. Name it, and click on **Add**.

On the job’s configuration page go through the following sections; most of them are mandatory, filtering settings are optional:

#### ✓ **Scheduling settings:**

In this step the running times of the shortcutting job must be selected. It is possible either to select a scheduler from the list or to create a new scheduler via “create new ...” option. It is recommended to set up a scheduler which will run always, or in certain times during the week. Our job will run every day from 6 PM till midnight, after business hours. (For more information about how to set schedulers refer to the section [Schedules](#) above.)



## ✓ Processing settings

Enter the server name, where the virtual drive has been installed (DNS alias at best). Virtual drive will be used to open the shortcuts linking to the archived files.

By using the “**Use default**” option the Virtual Drive that was already configured on the Virtual Drive configuration page will be automatically preselected. It is recommended to use this option, as if the settings have been changed on the Virtual Drive configuration page, the value will be automatically used by the job, too, without a need to change the job’s settings.

Processing settings

Virtual drive server name:   Use default (tanews)

✓ Connection successful!

## ✓ Remote file system locations

In this section the user needs to specify the remote share(s) containing the files to be replaced with a shortcut. It is also possible to specify multiple remote shares. Only the remote file path(s) specified on the **Aliases** page will be listed in the dialog. (For more information about configuring aliases refer to [Configuring aliases](#).)

Click on **+new** and the **Remote file path** dialog will open. Unroll the **Alias** dropdown list and select the alias that the job should use. The relative folder path must be set in the **Path extension** text box.

Remote file system locations

+ new

**Remote file path**

Remote file location settings

Alias:  Path extension:

## ✓ Item filtering:

This configuration enables for the user to filter among items to be shortcutted by 3 types of criteria: by age, size or file type. It is also enabled to use more filters simultaneously. For filtering documents

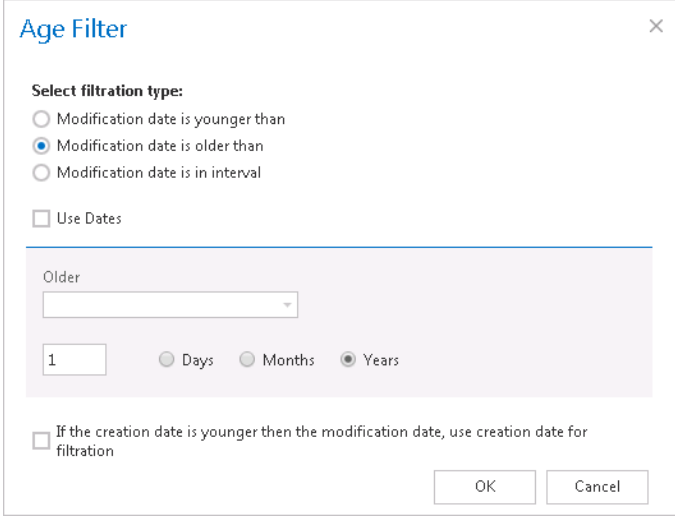
according to any of these criteria activate the filter button by checking the checkbox next to it, then click on the activated button.

▪ **Age filter:**

With this filter the user may configure, how old files should be processed by the shortcutting job. The user has multiple choices here; he can a) use either the **Use dates** option and pick up a date from the calendar, or b) he can enter a value into days/months/years textbox to process the files which are younger than/older than or fall into time interval set here.

The shortcutting job is checking if the modification date of the remote files is the same as the modification date of the data center files. If the dates are the same, the job replaces the remote files with a shortcut; if the dates are different, it skips the remote files and writes this information into the .log file.

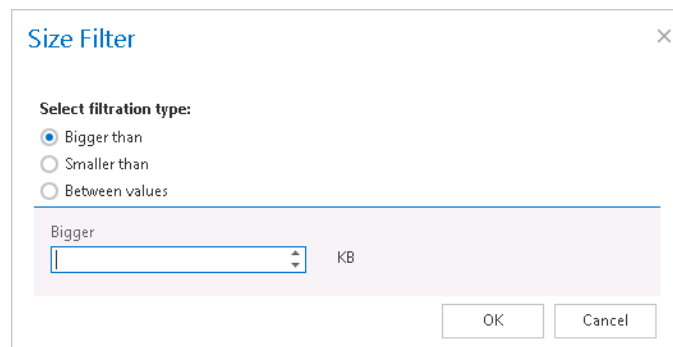
As we would like to replace with shortcuts remote files older than 1 year, we set “**Modification date is older than**” 1 year in the **Age filter** repository window.



Screenshot: Remote files older than 1 year will be replaced with shortcuts

▪ **Size filter:** This filter can be used, if you would like to replace with shortcuts only files of a certain size. To use it, activate **Size filter** button by checking the checkbox next to it, then click on the active button.

In the **Size filter** dialog choose from the filtering types (**Bigger then**, **Smaller then**, or **Between values**), enter the size (in kilobytes) and click **OK**.



**Size Filter** [X]

Select filtration type:

Bigger than  
 Smaller than  
 Between values

Bigger [ ] KB

OK Cancel

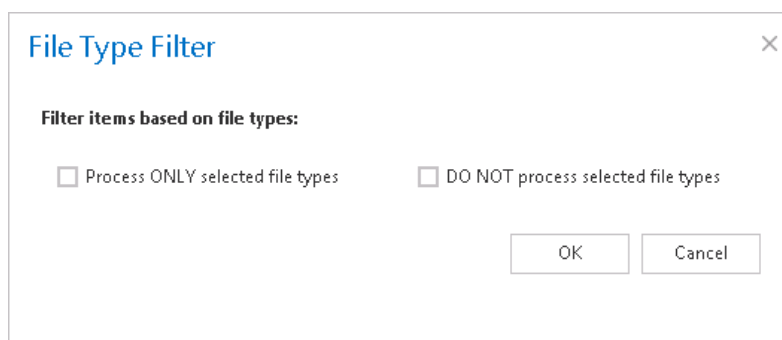
If the user would like to process all files of the remote share, he can skip this filter settings (like in this use case as well).

**Important!!!:** When the user changes the file content, e.g. deletes a picture from the file and saves it to the original location, (and thus the file size will be reduced e.g. from 110 to 85 kB) and file size filter is set on >100 kB, then the shortcutting job will not process the newly created item by the next processing. The newly created item will be saved in the remote location, and the old shortcut will be present in the remote location, too, which will still link to the old file without any changes.

From this reason, it is recommended to always check the size filter settings, if a file has not been replaced by a shortcutting job.

- **File type filter:** This filter was improved to select certain file types for processing. For filtering between documents according to this criteria activate **File Type filter** button by checking the checkbox next to it, then click on the active button.

In the **File Type filter** dialog the user may select the file types that need to be processed (option **Process ONLY selected file types**), or he may specify file types, that should be excluded from the processing (**DO NOT process selected file types**).



**File Type Filter** [X]

Filter items based on file types:

Process ONLY selected file types       DO NOT process selected file types

OK Cancel



If you need to process all files on the remote share, skip these settings.

✓ **Notification settings.** Select here, if you will need to get notification emails from the **Remote shortcutting** job, and in which cases you would like to get such email message.

Into the **Recipient list** textbox insert the email addresses of the persons, to whom you would like to send these emails.

#### Notification settings

Send when:	<input type="text" value="Errors occur"/>
Recipient list:	<input type="text" value="walter_white@tech-arrow.com"/>

✓ **Resource settings.** Set the value, which will determine how many items will be processed simultaneously by the job. The recommended value is 2, as in our case.

#### Resource settings

Worker thread count:	<input type="text" value="2"/>
----------------------	--------------------------------

At the end never forget to save your job configurations: click on **Save** in the left upper corner of UI.



## Active/inactive documents in File system archive

**Definition of terms: file = file on the file system; item = archived file in the archive**

To avoid displaying duplicate items in the archive the user has got the choice to filter between active and inactive items in the contentACCESS archive (contentWEB). A duplicated item is created, when a file is processed multiple times and is saved into the archive multiple times. A typical use case might be, when a user copies a file from one source folder to a target folder in his file system, then deletes the file from the source folder. Let's assume, that the archive job meanwhile caught and processed both files (created duplicates in the archive). To avoid the user from confusing, the files processed in the source and target folder need to be differentiated from each other in the archive. The file archived from the source location will be inactive in the archive (the file in the source location is not available on the user's side, the user deleted it); the file archived from the target location will be active in the archive (the file in the target location is available for the user). The contentWEB active/inactive filter makes it easy to display the actual (last touched) files in the archive.

*When is an item/folder inactive in the archive?* An item/folder gets an **inactive status** in the archive, if the **file/folder no longer exists in the file system (neither the original, nor the shortcut to it)**. Once the item is touched (e.g. versions were created, it was restored by a job, or recovered), its status will turn to active.

When an archive job is running, it is synchronizing the current state of the archive with the state of the file system. The following tables will give an overview to a user, when an item is active/inactive in the archive. The light blue cells contain the files/folders that are found by an archive/restore/recovery job in the file system (on the user's side), the grey cells inform the reader about the action that the job performs when it finds this particular file/folder.



### Archive with shortcutting method

File system (user's side)	Is item in archive in the same location?	
A) Shortcut was found by the archive job	YES: the job does not touch the shortcut. The item will be <b>ACTIVE</b> .	NO: the job will duplicate the item to the new location. The shortcut will be updated with a new ID. The new item will be <b>ACTIVE</b> (the old item is not touched).
B) File was found by the archive job	Is item in the archive?	
	YES: If the file was changed, a new version will be created in the archive, and the file will be converted to shortcut. The item will be <b>ACTIVE</b> in the archive.	NO: The file will be archived and the file will be converted to shortcut; the item will be <b>ACTIVE</b> in the archive.
C) No shortcut, no file was found by the archive job	YES: the item will be <b>INACTIVE</b> in the archive.	NO: no action will be performed by the job
D) Folder no longer exists	Is folder in the archive?	
	YES: folders will be <b>INACTIVE</b> (recursively); items will be <b>INACTIVE</b>	
E) Folder exists	Is folder in the archive?	
	YES: permissions will be actualizes and the folder will be set to <b>ACTIVE</b>	NO: it will be archived and will be set to <b>ACTIVE</b>

### Archive with the “Keep original” method

File system (user's side)	Is item in archive in the same location?	
A) Shortcut was found by the archive job	YES: the job does not touch the shortcut. The item will be <b>ACTIVE</b> .	NO: the job will duplicate the item to the new location. The shortcut will be updated with a new ID. The new item will be <b>ACTIVE</b> (the old item is not touched).
B) File was found by the archive job	Is item in the archive?	
	YES: If the file was changed, a new version will be created in the archive, and the file will be kept in the file system. The item will be <b>ACTIVE</b> in the archive.	NO: The file will be archived and the original will be kept; the item will be <b>ACTIVE</b> in the archive.



C) No shortcut, no file was found by the archive job	YES: the item will be <b>INACTIVE</b> in the archive.	NO: no action will be performed by the job.
D) Folder no longer exists	Is folder in the archive?	
	YES: folders will be set to <b>INACTIVE</b> (recursively); items will be set to <b>INACTIVE</b> .	
E) Folder exists	Is folder in the archive?	
	YES: permissions will be actualized and the folder will be set to <b>ACTIVE</b> ,	NO: it will be archived and will be set to <b>ACTIVE</b> .

### Archive with the “Delete original” method

File system (user’s side)	Is item in archive in the same location?	
A) Shortcut was found by the archive job	YES: the job does not touch the shortcut. The item will be <b>ACTIVE</b> .	NO: the job will duplicate the item to the new location. The shortcut will be updated with a new ID. The new item will be <b>ACTIVE</b> (the old item is not touched).
B) File was found by the archive job	Is item in the archive?	
	YES: If the file was changed, a new version will be created in the archive, and the file will be deleted from the file system. The item will be <b>INACTIVE</b> in the archive.	NO: The file will be archived and the original will be deleted; the item will be <b>INACTIVE</b> in the archive.
C) No shortcut, no file was found by the archive job	YES: the item will be <b>INACTIVE</b> in the archive.	NO: no action will be performed by the job.
D) Folder no longer exists	Is folder in the archive?	
	YES: folders will be set to <b>INACTIVE</b> (recursively); items will be set to <b>INACTIVE</b> .	
E) Folder exists	Is folder in the archive?	
	YES: permissions will be actualized and the folder will be set to <b>ACTIVE</b> .	NO: it will be archived and will be set to <b>ACTIVE</b> .

**Note:** The user may browse for his archived items either in contentWEB, or on Virtual drive. By default, Virtual drive displays the active items only, but this is configurable from the Virtual drive's configuration page (System → Client applications → Virtual drive configuration).

### Automatic restore from shortcut

File system (user's side)	Action performed by the restore job
a) Shortcut found	The job restores the original into the file system location; the item in the archive will be set to <b>ACTIVE</b> .
b) No shortcut found	No action.

### Automatic recovery

File system (user's side)	Action performed by the recovery job
A) File found	No action, file will be skipped.
B) Shortcut found	No action, shortcut will be skipped.
C) Nothing found	C/1) If the job configuration requires to recover original: the original will be created in the file system; the item will be <b>ACTIVE</b> in the archive.
	C/2) If the job configuration requires to recover shortcut; the shortcut will be created in the file system; the item will be <b>ACTIVE</b> in the archive.

### Manual recovery from contentWEB

File system (user's side)	Action performed by the manual recovery
D) File found	No action, file will not touched, it will be skipped. The item will be <b>ACTIVE</b> in the archive.
E) Shortcut found	Shortcut will be replaced by the original file in the file system; it will be <b>ACTIVE</b> in the archive.
F) Nothing found	New file will be created in the file system; the item in the archive will be <b>ACTIVE</b> .

### Other use cases:

- ✓ The shortcut is deleted from file system: during the archive process nothing happens in the archive, the items change to **INACTIVE** if they were active before.





- ✓ The shortcut is moved: the item is duplicated to the new location. The new item is ACTIVE. The old item will be INACTIVE if there is no file or shortcut at the old location.

## Email Archive

Today companies have a growing need to create a safe archive for storing their company documents (mainly accountant documents). The reason for this growing demand is that these documents must be accessible during a certain period of time determined by the regulations of the country and of the company itself. contentACCESS Email Archive solution offers long-term storage of emails with easy search (over contentWEB) and retrieval capabilities saving the space on the Exchange server. For the moment the following store types are supported: Disk Store, inPoint, iTernity, Easy and Perceptive. Processing is ensured both from the local Exchange servers, or from the cloud (O365). Public folders can be also archived. The archived documents can be also accessed/restored/recovered from the archive in case of need. Restore and recovery functions are ensured either with automatically running jobs, or they can be restored manually. contentACCESS is a brilliant solution for archiving emails into supported or any implemented third party storages.

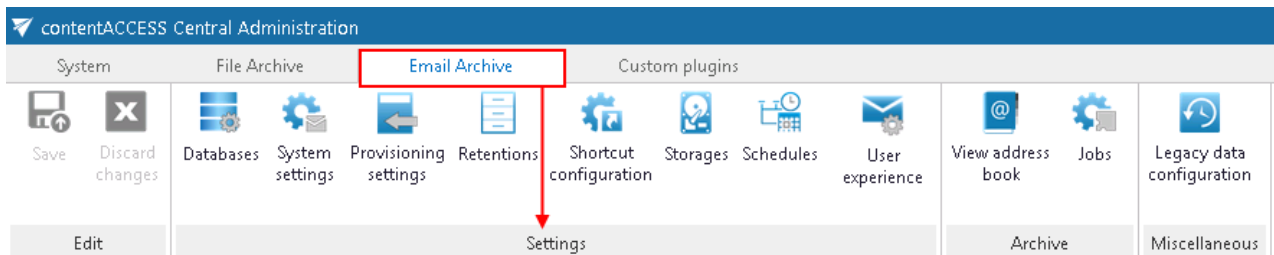
There are **two main methods of archiving** available with contentACCESS Email Archive:

- ✓ **Archiving by scheduled jobs**, which are configurable in the contentACCESS Central Administration – archiving process running in the background according to pre-defined settings.
- ✓ **Manual archiving/restore directly from MS Outlook** with the help of **Mail app** feature (in case of Exchange 2013 or higher) or **OWA 2010 extension** (if Exchange 2010 is used).

The following **processing types** are available when archiving from the Exchange server:

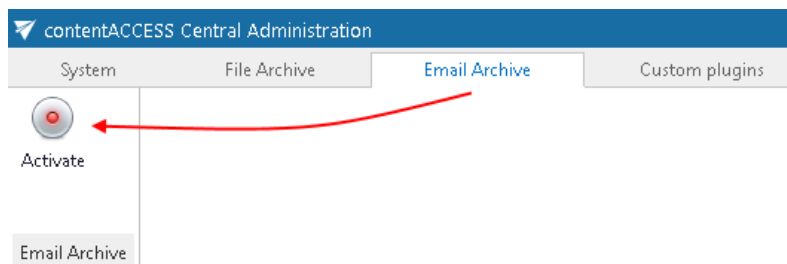
- ✓ **Archive with keeping the original item** in the source location – this processing method is generally used to archive emails younger than 1 year.
- ✓ **Archive with shortcutting method** (transparent shortcuts in case that MS Outlook is used; HTML shortcuts in case that MS Outlook can't be used (OWA) – shortcuts are used by archiving mailbox items, which are older than 1 year, but younger than 2 years and must be easily accessed without a need to search for them in the archive; it also helps to save storage space.
- ✓ **Archive with delete method** – the mailbox items older than 2 years are usually deleted from the source location (but they are stored in the archive during the required retention time).

The mandatory email archive settings can be done directly from **Email archive** tab → **Settings** group (Screenshot A).



Screenshot A: Required settings in email archive

The steps described in section “[Important settings before creating an Email Archive job](#)” will lead you through the settings that need to be done before starting to configure an Email archive job. When navigating to the **Email archive** tab for the first time, the user needs to activate Email archiving with a click on **Activate** button (Screenshot B).



Screenshot B

With this action a provisioning job will be automatically created which will perform necessary synchronizations in the background.

### Important settings before creating an Email Archive job

- 1) It is required to install the contentACCESS Proxy.
- 2) Make sure that the needed tenant database(s) are created (for more information refer to section “[How to create/configure databases – All databases](#)”).
- 3) Under **System** → **Services** → **System** check if the Database, FQDN and LDAP settings are well configured (for more information navigate here: “[System](#)”).

Configure the mandatory settings accessible in the **Email Archive** → **Settings** group. The configuration logic is from left to right. If you follow this logic, then all the necessary configuration will be done for the next step.



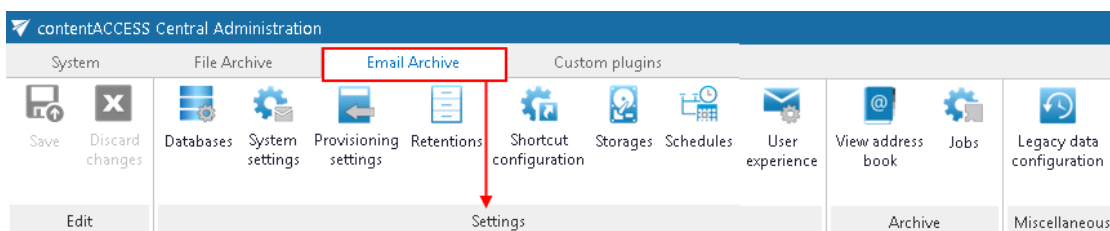
If you want to archive public folders as well, it is necessary to set it in the Email archive System settings (Email archive tab → Settings → System settings, section General settings).

**Note:** These configurations are described in the details in this section below.

- 4) Assign a database and storage to the mailbox that will be archived (for more information refer to section “Database and store assignment in email archiving”; if a database and storage has not been assigned manually, the first running email archive job will assign them to the mailbox.

**Email archive settings:** Navigate to **Email Archive → Settings** group. Here can be set the mandatory settings and many useful criteria for automated email archiving:

- ✓ Tenant database connections can be configured;
- ✓ System settings can be performed;
- ✓ Provisioning settings can be set;
- ✓ Retentions can be created; the retentions configured here can be selected on the jobs' configuration page;
- ✓ Shortcuts and further processing types can be configured; the processing types configured here can be selected on the jobs' configuration page;
- ✓ Schedulers can be set; the schedulers configured here can be selected on the jobs' configuration page;
- ✓ and User experience configurations can be accessed from here, too.



## Database settings

Navigate to **Email Archive → Settings → Databases**:



contentACCESS Central Administration

System | File Archive | **Email Archive** | Custom plugins

Save | Discard changes | **Databases** | System settings | Provisioning settings | Retentions | Shortcut configuration | Storages | Schedules | User experience | View address book | Jobs | Legacy data configuration

Edit | **Settings** | Archive | Miscellaneous

---

**Databases**  
Email Archive > Settings > Databases

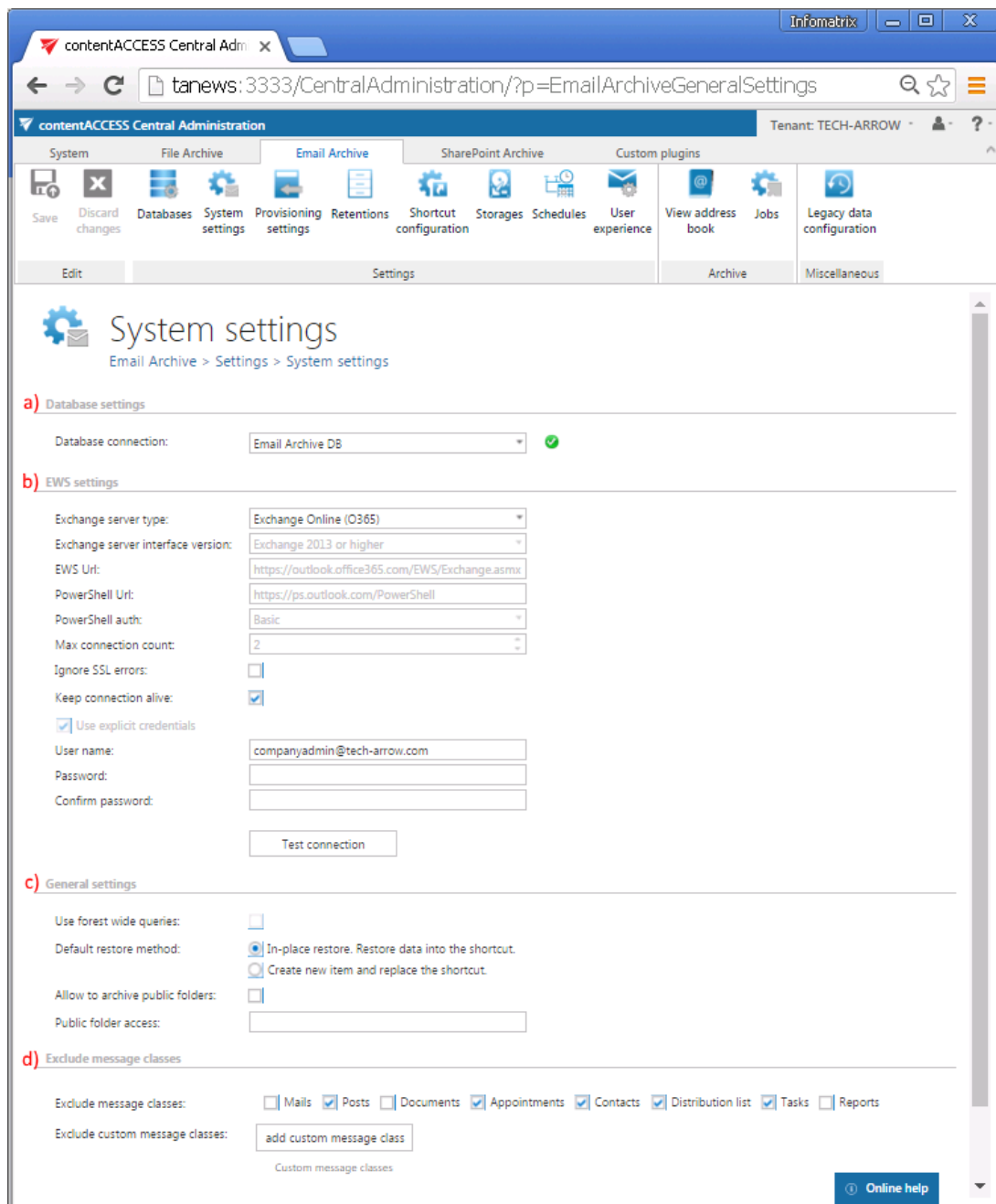
+ configure existing | manage access

Connection name	Server	Type	Database	Schema	User	Is default
TESTDB	*** TANEWS	MSSQL	TEST_DB	dbo		No
File Archive DB	*** TANEWS	MSSQL	CONTENTACCESSDB_TA_FILE	dbo		No
Store DB	*** tanews	MSSQL	CONTENTACCESSDB_TA_FCE	dbo		No
STORE REPLICATION DB	*** TANEWS	MSSQL	CONTENTACCESSDB_TA_STORE REP	dbo		No
Email Archive DB_new	*** TANEWS	MSSQL	CONTENTACCESSDB	dbo		No
EX-employees' DB	*** TANEWS	MSSQL	CONTENTACCESSDB_EX EMPL	dbo		No
LegacyDB	*** TAPAM01	MSSQL	EXCHANGEDB	dbo	sa	No
<b>Email Archive DB</b>	*** <b>TANEWS</b>	<b>MSSQL</b>	<b>CONTENTACCESSDB_TA_EMAIL</b>	<b>dbo</b>		<b>Yes</b>

Here you can find the full list of all accessible databases configured for the tenant. Database settings enable to choose the destination on premise or cloud, where the processed metadata will be stored. For further information how to add new databases and perform database settings please refer to section “[Databases](#)”.

### Email archive System settings

General Email archive system settings are available on the **System settings** page. To configure these settings navigate to **Email Archive** → **Settings** → **System settings** on the ribbon:



a) **Database settings:** Select the Email archive database from the dropdown list, that you have already configured on *Email Archive* → *Settings* → *Databases* page (in our case it is database “Email Archive DB”). This selected database will be used by the provisioning job. The provisioning job will store here the metadata during the synchronization process.

b) **EWS settings:**

Under **Exchange server type** and **Exchange server interface version** select the type and version of the server where your email provider is running.



Then enter the **EWS URL**, **PowerShell URL** and the **PowerShell authentication**. These data must be requested from the email provider that you use.

Under **Max. connection count** option the user may define, how many parallel connections will be maintained by the system when connecting to PowerShell.

If you do not have a valid certificate, you can check the **Ignore SSL errors** checkbox.

**Keep connection alive:** If it is turned on, then the connection between contentACCESS and the Exchange server is cached, which increases the performance. If the Exchange is load balanced, some requests can land on another Exchange which causes errors in contentACCESS. In these cases unchecking the keep alive option will destroy the connection after each request and will rebuild it on the next request.

- If you are communicating with **one Exchange server: turn it on** to increase the performance
- If you have a **load balanced Exchange environment** and there are **communication problems** with the Exchange: it is recommended to **turn it off**

Further enter the applicable **User name** and **Password** to connect to the Exchange (use explicit credentials or log in under service-credentials).

We recommend to run a test connection via **Test** button.

**Important!!!** The user set under *Exchange connections* must have a full access to the mailbox(es) that he/she would like to archive. Provisioning job requires to have "View-Only Organization Management" right on the Exchange. Role "Org Custom Apps" must be assigned for the EWS user if [Mail app](#) will be also used. This role enables an administrator to install and manage custom apps for the organization (read more about the role [here](#)).

#### c) **General settings:**

**Use forest wide queries:** This option allows to list the users and groups in other child domains. The option is available by On-premise Exchange server type only.

Many big companies are separating the users from resources into multiple child domains. Without that option the email provisioning will search only the current domain (where the MS Exchange is installed) but not the others. Using this option, the searching will be extended to look into other domains too. This option has some impact on the provisioning performance.



**Default restore method:** The administrator may decide the default restore method here. The data can be restored either into the existing shortcut (in-place restore), or a new item can be created. The default setting is used by the Email archive restore and Shortcut synchronization jobs.

**Allow to archive public folders:** The default contentACCESS behavior is not to archive the public folders; if you want to archive them, this option must be selected, otherwise they will be ignored. If public folder archiving is turned on and later off, the existing archive public folder mailbox is not removed (nor disabled). It will be simply not archived further, but the existing data remain in the archive.

**Public folder access:** When connecting using Exchange Web Services, a mailbox (any mailbox) must be opened. This mailbox is defined here. It is recommended to use the superuser mailbox. If this value is changed, it is necessary to run the email provisioning job.

d) **Exclude message classes:** Enables to exclude certain message classes from the email archiving process **on the level of the tenant**. This feature can be quite useful for companies who have a policy, that certain message classes, e.g. Contacts, Tasks etc. mustn't be archived. Here you can also **exclude custom message classes**. E.g. if your company already has a third party archive, then you can exclude these already archived emails from the re-archiving process. Wildcards are also supported in the exclude message class list. Supported formats are: contains: \*Test\*; EndsWith: \*Test; StartsWith: IPM\*.

**Important:** In case of **custom Exchange solution(s)** used for emails the **custom email properties will not be archived!** The recommended solution: do not archive these emails and/or use the exclude feature (in [Email archive System settings](#)) for these custom message classes.

**Important:** It is important to bear in mind that the message class settings performed within **Email Archive → Settings → System settings**, under section **Exclude message classes** will always take priority over the message class filtering configurations of an archiving job.



## Email archive Provisioning settings

The provisioning job:

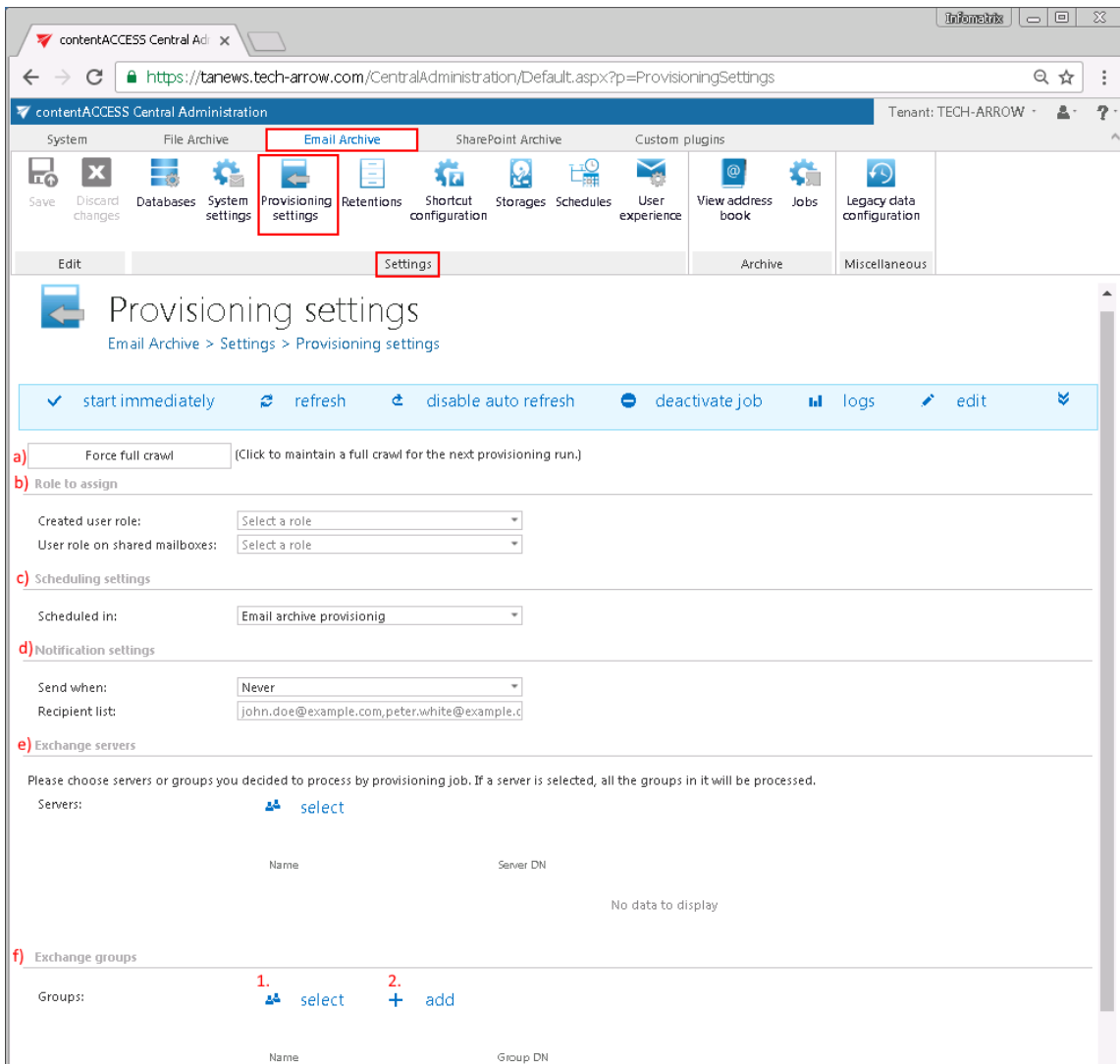
- Synchronizes the Exchange server objects specified on the Provisioning settings page to the contentACCESS Address book
- Verifies the user's permissions on the mailboxes on the Exchange server and synchronizes these permissions to contentACCESS
- If contentWEB user creation is turned on in the Address book for an object (Exchange mailbox/group/server), it creates a contentWEB user for mailboxes
- Based on the roles assigned in the Address book, it gives permissions on the specific archive mailbox(es)

The mailbox provisioning job is an elementary job, which is intended to extract Exchange groups and subgroups on the Exchange server, and synchronize their changes with contentACCESS. For example, if a new user has been added to an Exchange group which is under archiving process, the provisioning job will "point out" this change and the mailbox of this new user will be crawled/archived automatically. Provisioning job will synchronize the mailbox permissions as well.

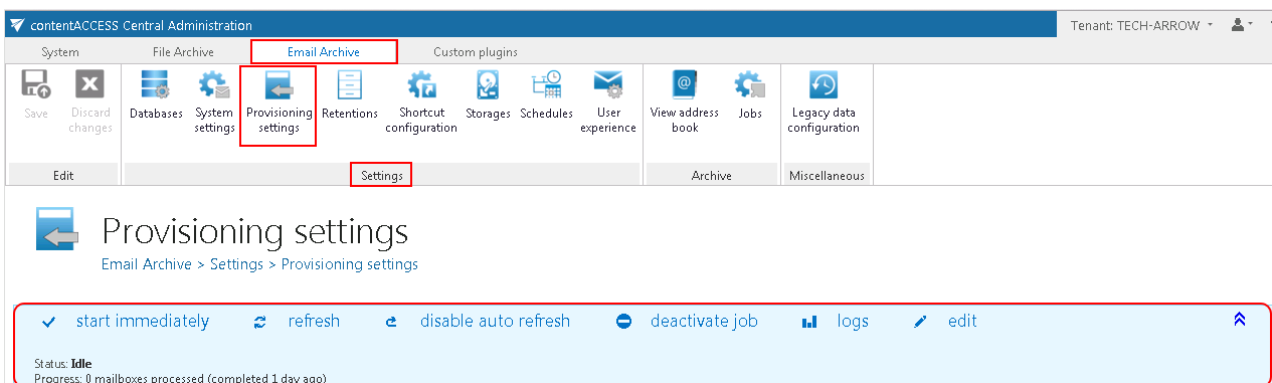
In contentACCESS, a provisioning job is created automatically when activating email archive for the first time.

Email Archive provisioning settings are available on the **Provisioning settings** page (**Email Archive** → **Settings** → Provisioning settings):





The **status bar** of the provisioning job offers the following options:




If a scheduler has not been selected, the provisioning job can be still started (and also stopped) manually with the “start immediately/stop” control button. For manual refresh of provisioning progress information, click on “refresh” button. To enable/disable auto refresh in every 5 seconds, click on “enable auto refresh”/“disable auto refresh” button. The provisioning job can be also




deactivated with the “deactivate job” button. A deactivated job will not start neither automatically, nor can be started manually. The “edit” button is used to select the node, where provisioning job will be run. The user may also rename the provisioning job from here. To view further event details of provisioning job (and also to detect any potential failures/errors in the provisioning events) click on “logs” button. This will redirect you to the monitoring page, where the last run of the provisioning job will be preselected, and the last events will be shown in the events table.

#	Start date	End date	Date	Title	Description
1	8/10/2015 5:33 PM	8/10/2015 5:34 PM	8/10/2015 5:34 PM	Plugin was finished successfully	Plugin.MailboxProvisioning
2	8/3/2015 1:39 PM	8/3/2015 1:39 PM	8/10/2015 5:34 PM	contentACCESS user skipped from permission sync	User 'new user' permissions can't be set because the user SID could not be resolved.
3	7/31/2015 12:39 PM	7/31/2015 12:39 PM	8/10/2015 5:34 PM	contentACCESS user skipped from permission sync	User 'MA' permissions can't be set because the user SID could not be resolved.
4	7/15/2015 10:54 AM	7/15/2015 10:54 AM	8/10/2015 5:34 PM	contentACCESS user skipped from permission sync	User 'sa' permissions can't be set because the user SID could not be resolved.
5	7/15/2015 10:52 AM	7/15/2015 10:52 AM	8/10/2015 5:34 PM	contentACCESS user skipped from permission sync	User 'administrator' permissions can't be set because the user SID could not be resolved.
6			8/10/2015 5:34 PM	Updating mailbox:	Updating mailbox: '26 (#vladimir.werskov@tech-arrow.com)' in DB.
7			8/10/2015 5:34 PM	Updating mailbox:	Updating mailbox: '25 (#tfs@TECHARROW.onmicrosoft.com)' in DB.

With the arrows mark (  ) at the right side of the status bar the user may collapse or expand the progress information about the provisioning job's running. The status bar's last state is always stored, and the last state will be opened by navigating to the page again.

The following configuration sections are available on the **Provisioning settings** page:

a) **Force full crawl:** The Exchange provisioning job is performing an incremental crawl of the Exchange objects (mailboxes and groups). This means that if an object is not changed, it is not necessary to access it. This makes the provisioning job faster and helps to use less resources. In some situations however it is necessary to perform a full crawl of the objects – need to synchronize every object, independently whether it was changed or not from the last synchronization. This can be done with a single click on the „force full crawl“ button, which is located under the status bar if the provisioning job.



## Provisioning settings

Email Archive > Settings > Provisioning settings

✓ start immediately
↺ refresh
↻ disable auto refresh
⊖ deactivate job
📊 logs
✎ edit
⤴

**Status: Idle**

Progress: 0 mailboxes processed (completed 1 day ago)

➡ Force full crawl (Click to maintain a full crawl for the next provisioning run.)

b) **Role to assign:** This configuration section allows to assign default contentWEB user roles. The provisioning job will assign the role defined here for the Exchange objects, which are already synchronized to the Address book, and contentWEB user creation is allowed for them (option



“Automatically create contentWEB user” in the Address book). It is recommended to specify here a default role with less contentWEB permissions, e.g. a role without permissions to recover from the archive. The roles to be assigned must be created on the [Roles](#) page.

**Important:** If there are multiple roles assigned for the same Exchange object (e.g. one role with less permissions in the provisioning settings, another role with more permissions in the Address book), then the rule is, that always the role with more permissions wins.

**Important:** To be able to assign roles using the provisioning job, first the contentWEB user(s) creation must be allowed in the Address book, otherwise the role will not be assigned.

Name	Group DN	Create contentWEB access	Associate with role
accounting	CN=accounting,OU=TECHARROW.onmicrosoft.com,OU=Microsoft Exchange Hosted Organizations,DC=EURPR06A002,DC=prod,DC=outlook,DC=com	Yes	Inherited

Roles containing Manage system and/or Manage tenant permissions are unavailable in the default roles' dropdown list. If the role is changed in this configuration section, the next running email provisioning job will replace the previously assigned user permissions with the permissions defined in the newly assigned role.

In the **Roles to assign** configuration section you need to set:

**Created user role:** this is a default role, which be assigned for the Exchange objects (mailboxes/groups/entire server) if the “Use the role defined in the provisioning job” option is selected for the given Exchange object in the Address book.




**User role on shared mailboxes:** select a role, which will define the user's permissions on the shared mailboxes on the Exchange server.

Role to assign

Created user role:

User role on shared mailboxes:

For more information on how to assign explicit permissions for newly created contentWEB users, and how to change these explicit permissions, please refer to chapter [Creating contentWEB users](#).

- c) **Scheduling settings:** Select the running times of the provisioning job or create a new scheduler. For more information how to configure scheduler settings please refer to section [Schedules](#) described above.
- d) **Notification settings:** If the provisioning job could not run properly due to some reasons, contentACCESS can send a warning about the problem. The notification email message will be sent to the email address that is set here under **Recipient list** option. Here you can also choose, when these email messages should be sent: only if errors occur, or when errors or warnings occur, or always, regardless of the faultless running of the provisioning job.
- e) **Exchange servers:** click on  **select** option and select the Exchange servers to synchronize from the list of **Select Exchange Server** dialog.

Select Exchange Server

refresh

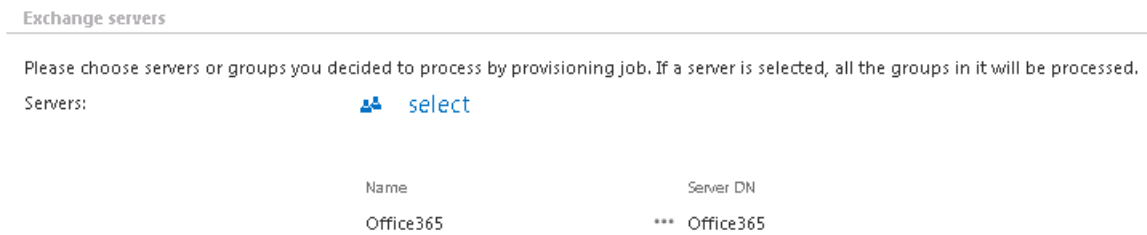
Drag a column header here to group by that column

<input type="checkbox"/>	Name	Server DN
<input type="checkbox"/>	Office365	Office365

Ok Cancel



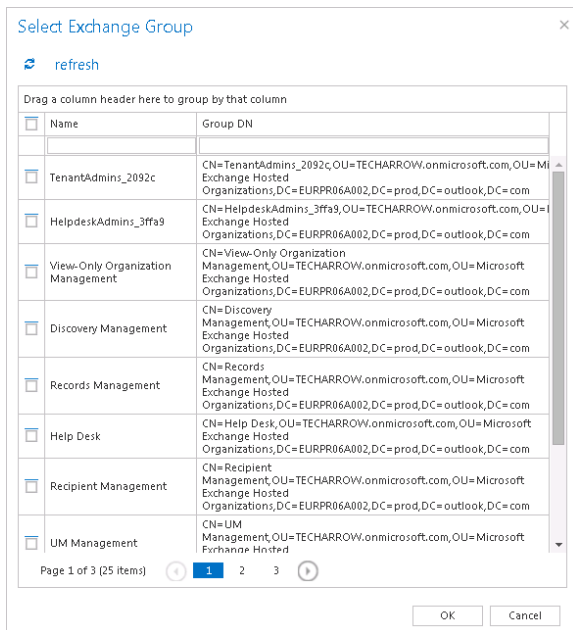
If you select a server, then all mailboxes falling under this server and also all Exchange groups within the organization will be permanently processed by the provisioning job. This will eventually mean that if a server is selected, then it makes no sense to select an Exchange group as well. If all settings are done, click on **OK**. The selected server can be deleted from its context menu:



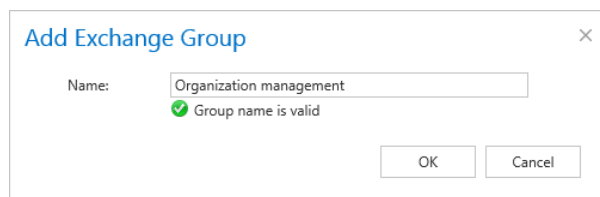
f) **Exchange groups:** all users of an Exchange server fall under an Exchange group (or can belong to even more Exchange groups simultaneously). In this section it is possible specify one or more Exchange groups to be synchronized by the provisioning job.

Group(s) can be

- **selected from the list** of all groups available on the Exchange – Click on **select** option and select the groups in the **Select Exchange Group** dialog's list (Screenshot 1).
- **added manually** to the groups to be provisioned – Click on **+ add** and fill the group to the **Add Exchange Group** dialog manually (Screenshot 2).



Screenshot 1

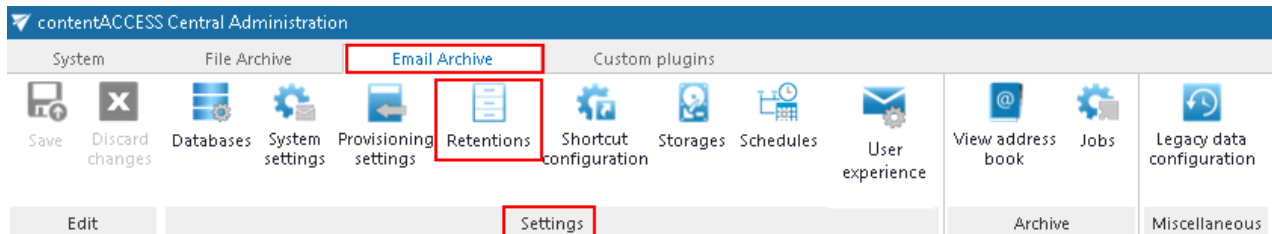


Screenshot 2

**Note:** If you selected a server one step earlier, then all groups falling under this server will be processed and it makes no sense to select groups as well.

## Retention settings

Navigate to **Email Archive** → **Settings** → **Retentions**:



## Retentions

Email Archive > Settings > Retentions

+ new    🔑 manage access

Retention name	Retention time in months	Description	Is default
Retention required by law (10 years)	120	...	Yes
2 years	24	...	No
1 year	12	...	No

Retention settings enable to specify the time period of storing of the email message. For adding new retention attribute click on **+ new** and refer to section “[Retentions](#)” above for further configurations.

## Shortcuts in email archiving

In contentACCESS's email archive solution the emails can be archived with one of the following archiving methods. They can be

- replaced by shortcut; there are 2 shortcut types that can be used: normal shortcut and HTML shortcut;
- completely deleted;
- kept in the original file location.

Mailbox items younger than 1 year are archived continuously on a daily base, but the originals are kept in the original mailbox folder. From 1 to 2 year old items are usually archived with the shortcutting method, to ensure an easy access to them in case of need. They enable to open the already archived items directly from the mailbox without a need to browse for them in the archive. Another advantage of shortcuts is the spared storage space. They help to unburden Exchange



servers from numbers of redundant documents which are not in use any more. If the mailbox items are older than 2 years, then they are usually deleted. It depends on the customer, how he combines these processing methods.

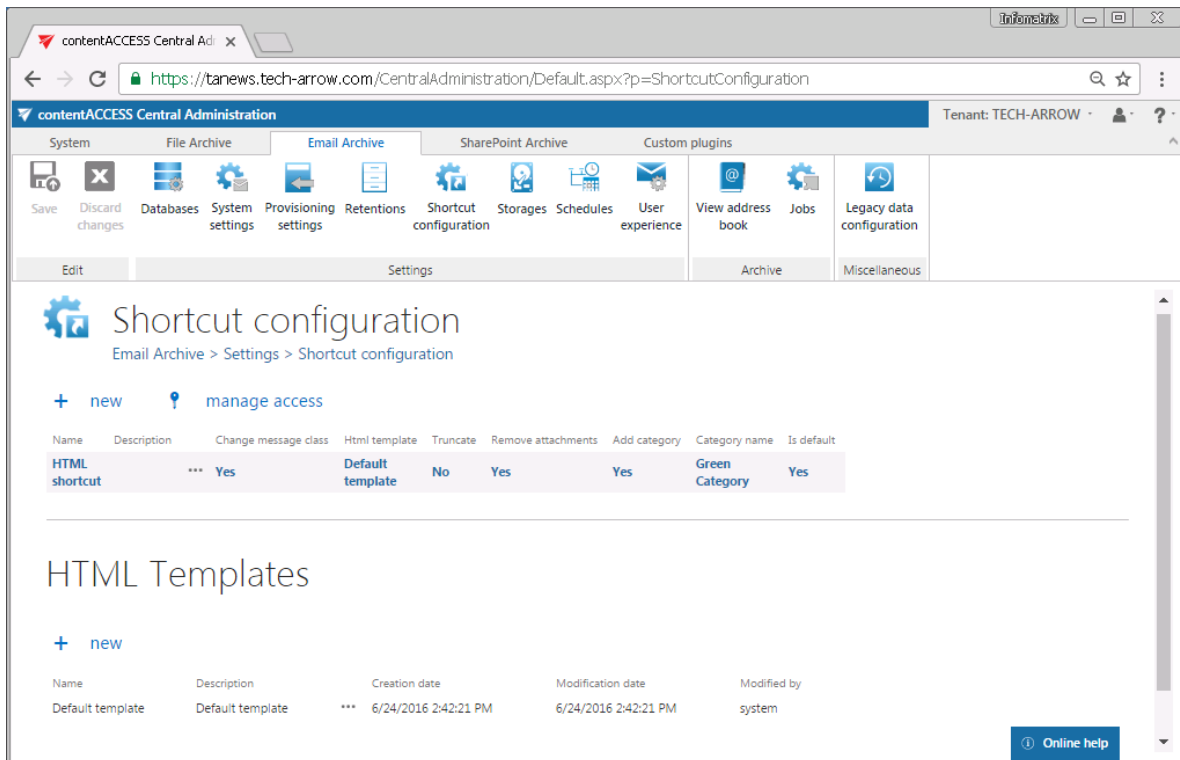
**Note:** There are situations when mails are archived with a shortcut type which turns out to be incorrect. This is usually because of incorrect planning or bad decisions. If there are already shortcuts created and they need to be replaced, the Shortcut repair job type can easily solve this problem. Read more in chapter [Shortcut repair job](#).

These archive methods and shortcut types can be configured on the **Shortcut configuration** page. Navigate to **Email Archive → Settings → Shortcut configuration** control button to open it. On this page, under **Shortcut configuration** section you may find the full list of already configured shortcuts. The grid also contains the configuration information of the respective shortcuts. The bold color of a shortcut means, if it was set as default (i.e. if they are used by manual archiving).

Under the **HTML Templates** section you may see all HTML templates configured for the HTML shortcuts. The date of creation, modification and the modified by information can be viewed in the templates' grid, too.

The shortcuts that the admin configures on this page can be selected when configuring an email archive job instance on the job's configuration page.

The listed items can be deleted/edited from their context menu, with a click on the ellipses (...).



To create a new shortcut, click on **+ new** under the **Shortcut configuration** section, and select a shortcut type from the **Type** list of the **Shortcut configuration** dialog.

**Note:** The “+ new” option is unavailable for the logged on user, if the “Add repository items” permission on the tenant is not allowed in his role assignment.

The “manage access” option allows to grant access permissions on the selected shortcut configuration for a second user. This “manage access” option is available for the logged on administrator, if his role assignment contains the Edit repository item – All allowed permission on the tenant. Read more in [Managing access to contentACCESS objects](#).

There are 4 types of shortcuts in contentACCESS’s Email Archive, namely:

- ✓ **Normal shortcut**
- ✓ **HTML shortcut**
- ✓ **Journal shortcut**
- ✓ **Keep original shortcut**





### Shortcut configuration ✕

Name:

Description:

Type:

Normal shortcut

HTML shortcut

Journal shortcut

Keep original

Change message class:

Remove attachments:

Add category:

**Normal shortcut:** Normal shortcut is completely transparent with the original message, after restoring/reopening the user cannot see any change between the original email and the shortcut version. This is the recommended shortcut type if the end user uses MS Outlook. This type of shortcut works in:

Normal shortcut			
	Installed prerequisites	Are attachments directly accessible? (direct preview)	Is email body accessible?
Outlook 2013 or higher	Mail app* or Outlook forms	Yes	Yes
	Nothing installed	No	Yes
OWA 2013 or higher	Mail app	Yes	Yes
	Nothing installed	No	Yes
Outlook 2010	Outlook forms	Yes	Yes
	Nothing installed	No	Yes
OWA 2010	OWA 2010 extension	Yes	Yes
	Nothing installed	No	Yes

\*Exchange 2013 (or higher) requirements

**MS Outlook 2013 or higher:** To display archived attachments the user needs to have the contentACCESS Outlook form **or** the Mail app (refer to section [User experience](#)) installed in Outlook. If not installed, the email body will be still accessible.



**MS Outlook 2010:** To display archived attachments the user needs to have the contentACCESS Outlook form installed in Outlook. If not installed, the email body will be still accessible.

For more information how to install contentACCESS Outlook forms please refer to installation guide accessible [here](#). Regarding system requirements: MS Outlook 2010 or 2013 is needed. The form should work on both 32 and 64 bit Outlook versions. On mobile devices the form is not supported.

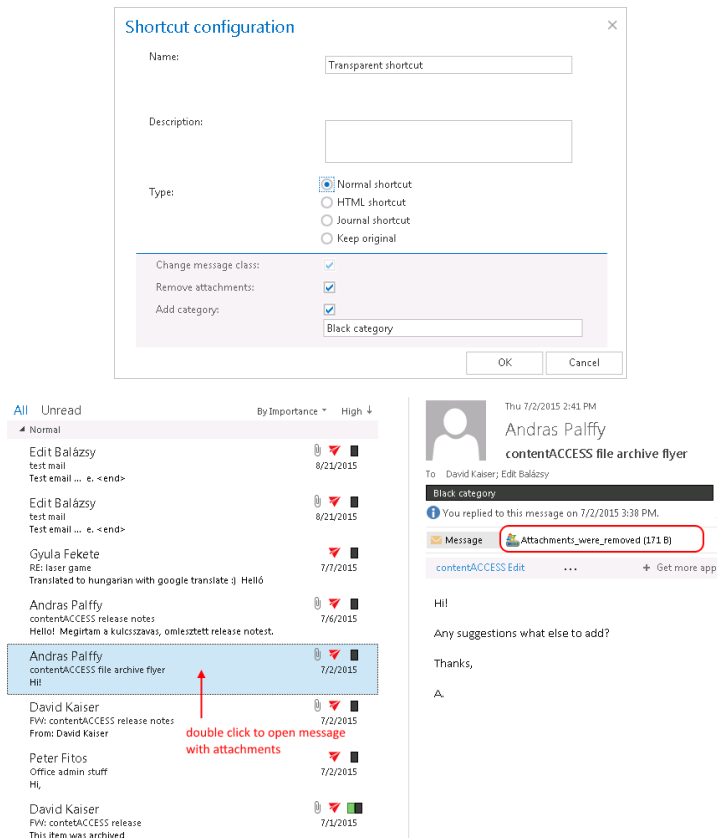
**OWA 2013 or higher:** To display archived attachments the user needs to have Mail app installed. For more information refer to section [User experience](#). If not installed, the email body will be still accessible.

**OWA 2010:** To display archived attachments the user needs to have contentACCESS OWA integration installed. For more information refer to section [User experience](#). If not installed, the email body will be still accessible.

If the **Remove attachments** function was turned on during the configuration of the shortcut, the attachments will be still accessible by a double click on the archived message, in the compose window. (In case if the correct extension – Outlook forms, Mail app or OWA 2010 extension – is installed.)

On the normal shortcut's configuration dialog the **Change message class** check box is selected by default. With this setting the restore from shortcuts is ensured.

It is also possible to set here, if the attachment of the processed email should be removed (check **Remove attachments**) or should be kept (leave **Remove attachments** unchecked). Removed attachments can be retrieved by double clicking on the archived email, in the compose window. If you check the **Add category** option in the **Shortcut configuration** window and enter a category into the textbox, then archived emails will be marked with this category (e.g. if Black category is selected, then emails will be marked with black color). After filling all required data in the **Shortcut configuration** window click **OK**.



Screenshot A:  
Normal shortcut used by an email archive job

Screenshot B:  
Original email replaced with the normal shortcut in the user's mailbox

**HTML shortcut:** If the user is archiving with a job using an HTML shortcut, then the body of the original email message will be replaced with an HTML file containing 2 links to the original email message and the attachment(s); one link opens the original email as an .msg, second opens it as .eml.

**Note:** The .eml link ensures the compatibility with a wide range of applications and operating systems (compatibility with MAC OS is also ensured).

If the user has MS Outlook and the contentACCESS Outlook forms are installed, then the HTML-shortcut will display the email message in the same way as the normal shortcut. The user cannot see any difference between them. However, in certain situations it is not possible to use Outlook to check our emails. In these circumstances the user cannot use normal shortcuts for accessing emails. However, HTML-shortcuts can be still used to access email bodies and also attachments with the help of links. Emails can be checked for example with OWA. To ensure an easy access to the archived items in any cases, it is highly recommended to use this shortcut type.



The following table gives a general overview how the archived emails and attachments can be accessed with the HTML shortcuts if MS Outlook or OWA (Outlook Web Access) is used:

HTML shortcut				
	A) The following prerequisites are installed	The attachments are accessible	B) The prerequisites are not installed	The attachments are accessible
Outlook 2013 (or higher)	Mail app* or Outlook forms	In direct preview	-	Over links
OWA 2013 (or higher)	Mail app	In direct preview	-	Over links
Outlook 2010	Outlook forms	In direct preview	-	Over links
OWA 2010	OWA 2010 extension	In direct preview	-	Over links

\*Exchange 2013 or higher requirements

**MS Outlook 2013 or higher:** To transparently view the archived items (the body and the attachment) the user needs to have the contentACCESS Outlook forms or the Mail app installed in Outlook.

**MS Outlook 2010:** To transparently view the archived items (the body and the attachment) the user needs to have the contentACCESS Outlook form installed in Outlook.

**OWA 2013 or higher:** To transparently view the archived items (the body and the attachment) the user needs to have Mail app installed. For more information refer to section "[User experience](#)".

**OWA 2010:** To transparently view the archived items (the body and the attachment) the user needs to have contentACCESS OWA integration installed. For more information refer to section "[User experience](#)".

**If the extensions are not installed, then the body and the attachment are still accessible over the shortcut links.**

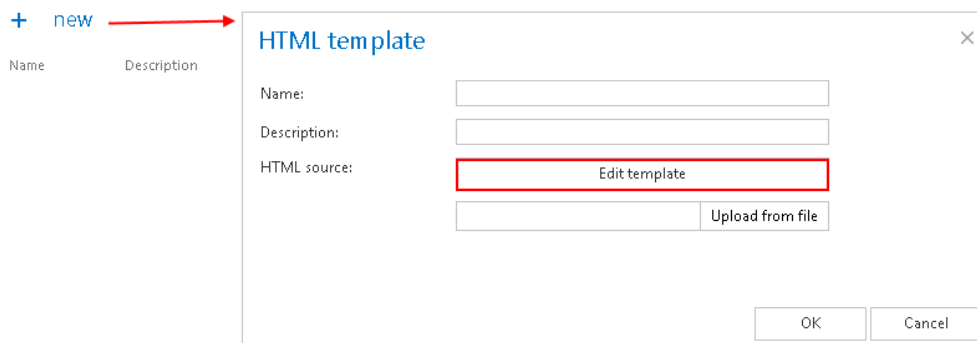
If the **Remove attachments** function was turned on, the attachments are still accessible by a double click on the archived message, in the compose window.

**Note:** contentACCESS Outlook add-in catches changes when replying, forwarding an HTML and/or Normal shortcut. Read more about the contentACCESS Outlook forms in [this](#) section.

**Before you start to configure the HTML shortcut, HTML template(s) must be created.** You can use a default HTML or to customize a new HTML template.

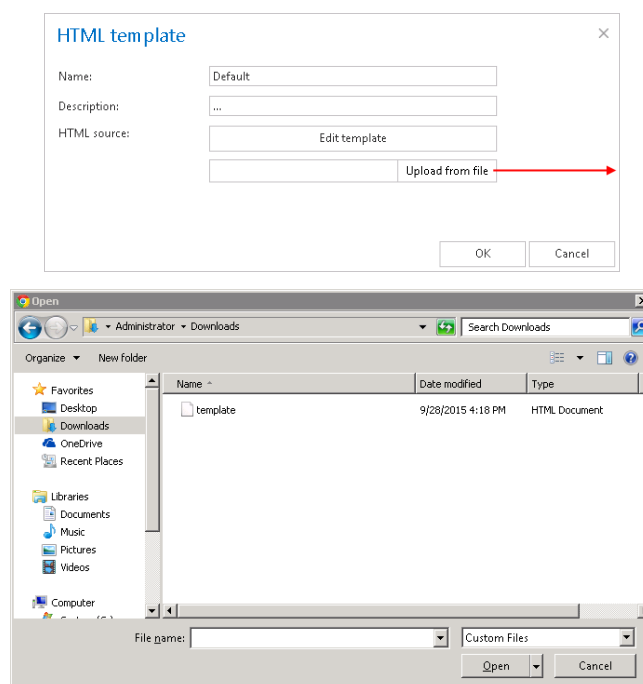
- a) A default HTML template can be downloaded automatically with a click on **+ new** under the **HTML Templates** section, then with clicking on the **Edit template** button in the **HTML template** dialog.

## HTML Templates



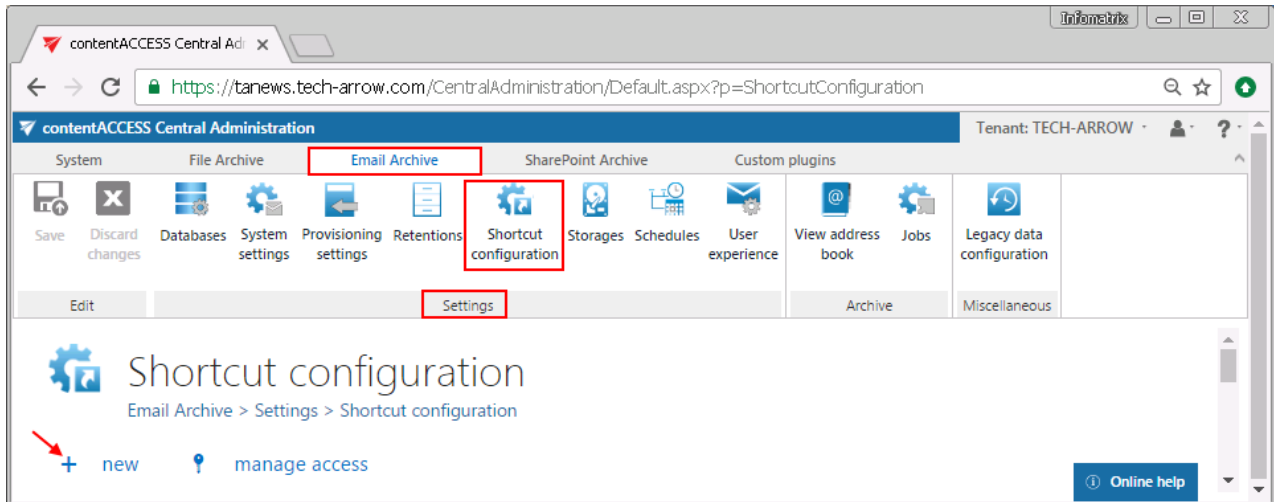
- b) For creating a custom-HTML click on **+new** under the **HTML Templates** section, then click on **Edit template** button in the HTML template dialog, and download a default template first. Save it somewhere on your disc. Download an HTML editor from the web and edit your template, then save it.

**Upload the default/custom HTML template to the template list:** Under **HTML Templates** section click on **+new**. The **HTML template** dialog will open. Here give a **Name** for the HTML, and fill the **Description** field (not required), then click on **Upload from file** and browse for the desired template that you have created. Upload it to the template list.

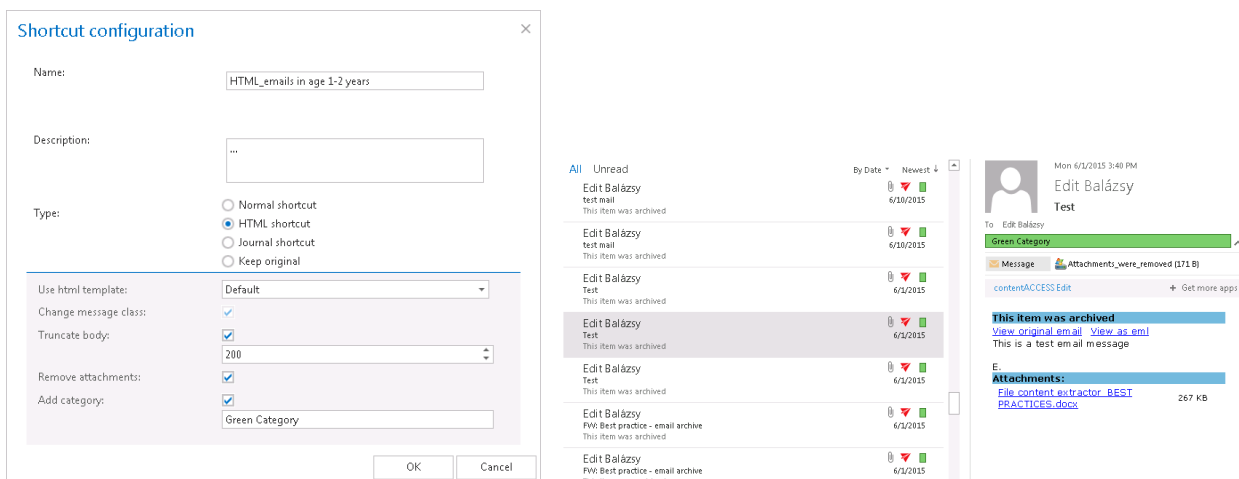




Once your desired template is uploaded, a custom HTML shortcut can be configured. Navigate to **Email Archive** → **Settings** → **Shortcut configuration** and click on **+ new** under the **Shortcut configuration** section.



The **Shortcut configuration** dialog opens. Enter a name for the shortcut into the **Name** field. In the **Use html template** dropdown list select the HTML that you have created. The **Change message class** textbox is selected by default. This enables to restore the archived emails from the shortcuts. You can also set here if the attachment of the processed email should be removed (check **Remove attachments**) or should be kept (leave **Remove attachments** unchecked). Removed attachments can be also retrieved by double clicking on the archived email, in the compose window. If you want a certain number of characters to be included in the shortcut, check the **Truncate body** option and enter a value (e.g. 200) here. During the HTML shortcut configuration the user can set how to mark the archived emails. The archived email will be marked with the category specified under option **Add category** (in our case the archived emails will get a green category).



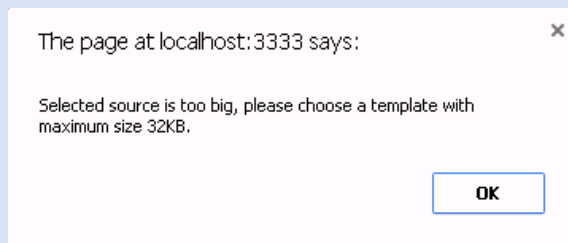


Screenshot A:  
HTML shortcut used for archiving 1 to 2 year old emails

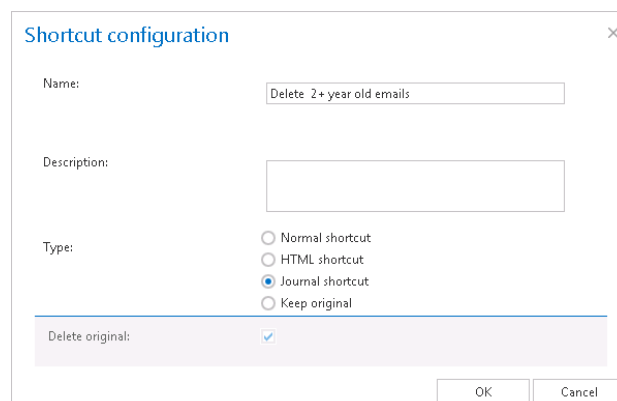
Screenshot B:  
Email replaced with the HTML shortcut in the user's mailbox

After filling all required data in the **Shortcut configuration** window click **OK**.

**Note:** always keep in mind that the size of a HTML-template cannot exceed **32 kB**. If the template is edited with MS WORD, then numbers of redundant informations will be included in the template, which might easily cause, that the maximum filesize will be exceeded. From this reason, it is not recommended to use MS WORD for editing the HTML-templates. If you got a Warning such as this one below, then delete the template and try to edit a new default one with an alternative HTML-editor.



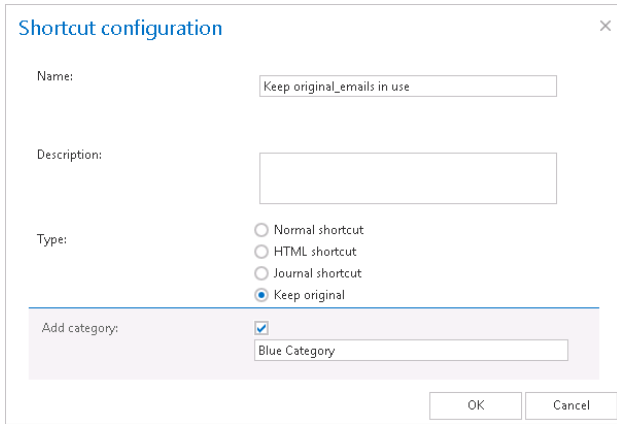
**Journal shortcut:** With using this option the original message will be automatically deleted from the original location. The **Delete original** checkbox is inactive, and selected here by default. This processing type is commonly used when archiving mailbox(es), which won't be used in the future (e.g. if the mailbox user/employee leaves the company), or the mailbox items are older than 2 years. It is commonly used for archiving Exchange server journal mailboxes as well.



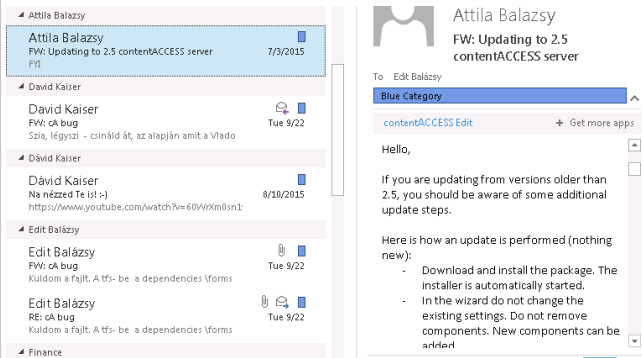
**Keep original method:** With using this option the original document will be kept in the original location/folder. It is recommended to select this processing type for archiving emails younger than 1 year. With checking the **Add category** checkbox, and specifying a custom category the user may



set up a custom category for the archived email message (e.g. if the “Blue category” is set as on the screenshot B below, then email will be marked with this color).

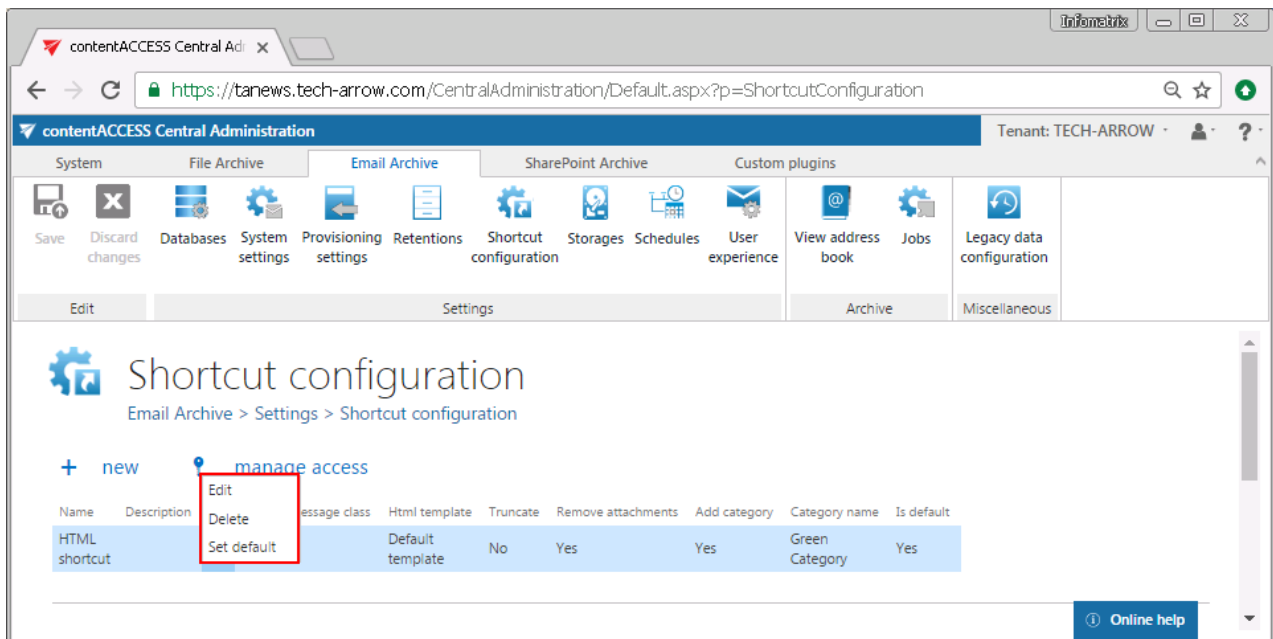


Screenshot A:  
Keep original method used for archiving 2+ year old emails



Screenshot B:  
Untouched originals marked with blue

**Editing of shortcuts:** Select the shortcut from the grid, which you would like to modify, and open its context menu.

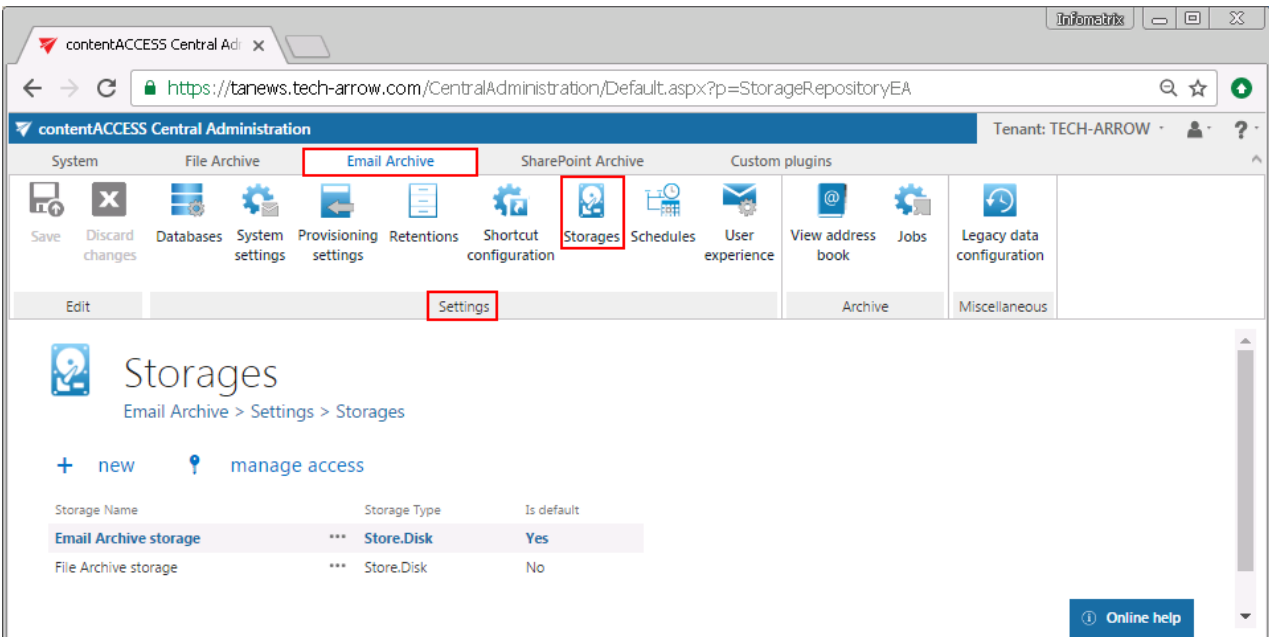


To modify shortcut settings, click on **Edit** and change the settings in the **Shortcut configuration** dialog, so that the shortcut contains the information that you require. You can also set the selected shortcut as default from the shortcut’s context menu. This is a must-to setting, if you would like to archive/restore the emails manually using the Mail app or OWA integration (more information [here](#)).



## Storing of archived emails

Navigate to **Email Archive** → **Settings** → **Storages**. The grid of already configured email archive storages can be found on this page. Here you can set up a new storage, where the binaries will be stored during the archiving process. For further configurations how to set new storages check section “[Storages](#)” above.

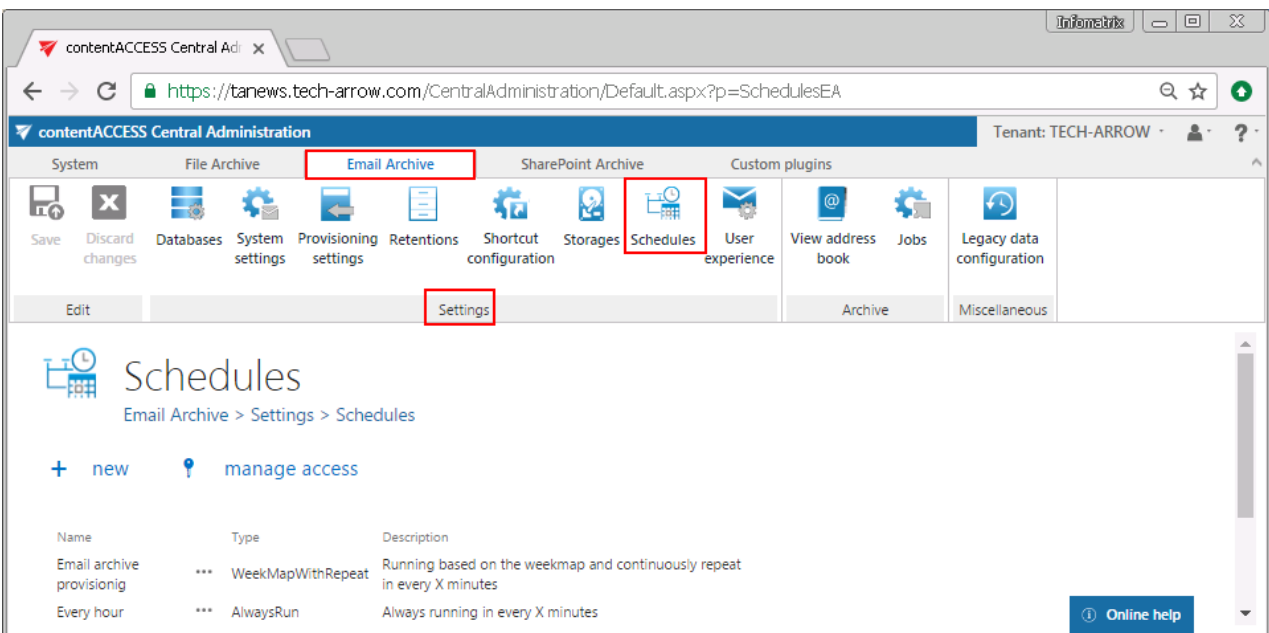


The screenshot shows the 'Storages' page in the contentACCESS Central Administration interface. The breadcrumb navigation is 'Email Archive > Settings > Storages'. The page features a table with the following data:

Storage Name	Storage Type	Is default
Email Archive storage	Store.Disk	Yes
File Archive storage	Store.Disk	No

## Creating email archive schedulers

Navigate to **Email Archive** → **Settings** → **Schedules**:



The screenshot shows the 'Schedules' page in the contentACCESS Central Administration interface. The breadcrumb navigation is 'Email Archive > Settings > Schedules'. The page features a table with the following data:

Name	Type	Description
Email archive provisioning	WeekMapWithRepeat	Running based on the weekmap and continuously repeat in every X minutes
Every hour	AlwaysRun	Always running in every X minutes

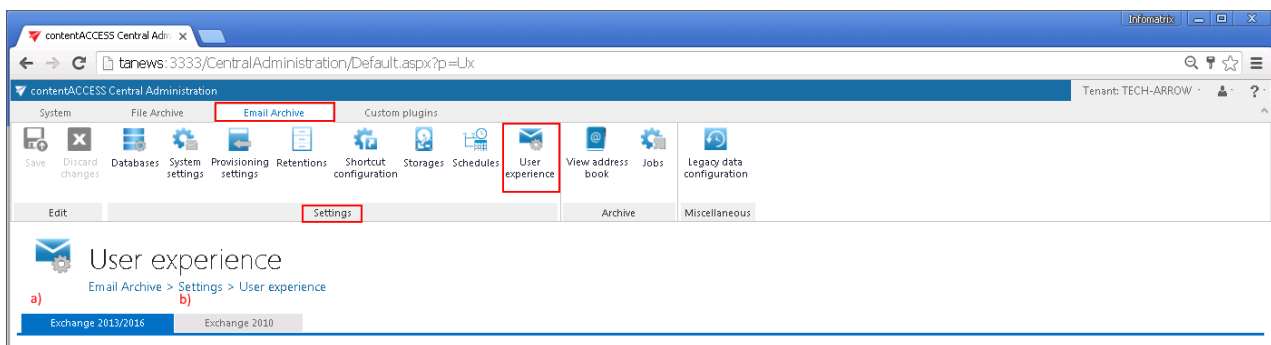


The already configured schedulers for automatized email archiving are listed on this page, in the scheduler's grid. With clicking on the **+ new** option, it is possible to create a new scheduler. (For more information about how to set schedulers refer to the section "[Schedules](#)" above.)

## User experience

contentACCESS Email Archive may archive the emails either from Exchange 2010 or Exchange 2013 or higher. The exact Exchange version that is used is configured on the Email Archive's **System settings** page, under section **EWS settings**. The items archived and replaced with shortcuts can be accessed both from MS Outlook desktop version and OWA if the right extensions (*OWA 2010 integration* for OWA 2010 and *Mail app* for OWA 2013 (or higher) or MS Outlook desktop version 2013 or higher) are installed. Items archived with Metalogix Archive Manager Exchange Edition (MAM EE) and Email Lifecycle Manager (ELM) can be retrieved as well. To retrieve MAM EE and ELM shortcuts the given legacy retrieve service must be also installed and configured in contentACCESS. (Read more in [Legacy email archive connectors](#).)

OWA 2010 integration and Mail app can be installed on the **User experience** page of the Central Administration. Open the **User experience** page with navigating to **Email Archive** → **Settings** → **User experience** on the ribbon.



There are 2 tabs that can be opened from this page:

- a) **Exchange 2013/2016** - If this version is used, you may use **Mail app** with OWA 2013 or higher and MS Outlook desktop version (2013 or higher) directly. This ensures manual archive of mailbox items/manual restore of shortcuts directly from the mailbox. Emails and attachments archived with MAM EE and ELM can be opened from the legacy shortcuts as well if the legacy retrieve service is installed and configured. (Read more in [Legacy email archive connectors](#).)



b) **Exchange 2010** – If this version is used, you may integrate contentACCESS with **OWA 2010**, and allow transparent opening of the shortcuts in OWA. The extension ensures manual archive of mailbox items/manual restore of contentACCESS shortcuts directly from the mailbox. Emails and attachments archived with MAM EE and ELM can be opened from the legacy shortcuts as well if the legacy retrieve service is installed and configured. (Read more in [Legacy email archive connectors](#).)

For more information about these settings read the corresponding sections below:

**Exchange 2013+: Mail app in OWA 2013+ or on MS Outlook 2013+ desktop version**

Mail app is a simple end-user friendly contentACCESS feature, which was designed to manually archive/restore from/to mailboxes directly in MS Outlook desktop version or OWA 2013 or higher, without any need to use an email archive job.

Mail app is running on the following platforms:

- Desktop (Windows, Macintosh – on Macintosh MS Outlook 2015+ is required)
- OWA (desktop computer, android, iOS, phone, tablet)
- Native MS Outlook app on tablets

Native Outlook app on mobiles doesn't support Mail app.

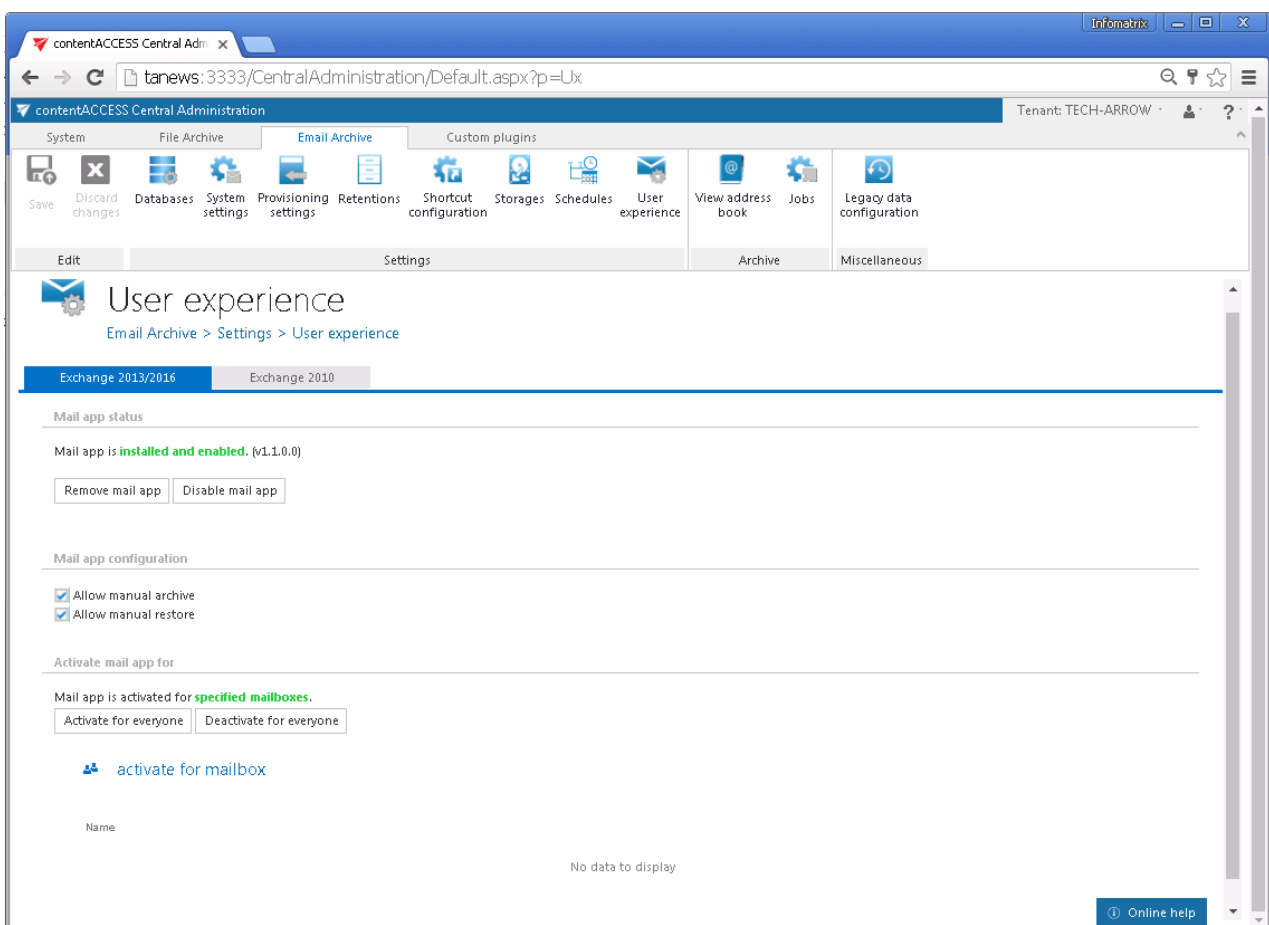
**Important!! Mail app prerequisites:**

- **Exchange 2013 or later** version
- **MS Outlook 2013 or later** desktop version or **OWA**.
- **One of the following browser versions needed:** at least Windows Internet Explorer 9, Mozilla Firefox 12, Apple Safari 5 or Google Chrome 18.
- **Proxy installed over HTTPS** connection.
- **Default shortcut** and a **default retention** must be set in contentACCESS Central Administration.
- On the **System** page (**System** tab → **Services** group → **System** button → **External accessibility settings**) a HTTPS alias must be configured.
- Role “Org Custom Apps” must be assigned for the EWS user on the Email Archive [System settings](#) page, in section **EWS settings**. This role enables an administrator to install and manage custom apps for the organization (read more about the role [here](#)).

The administrator is required do the following configurations for manual email archiving. He has to

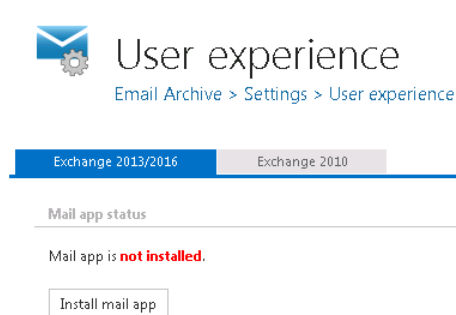
- 1) configure a shortcut that Mail app will use and set this shortcut as default (refer to section [“Shortcuts in email archiving”](#));
- 2) configure a retention that Mail app will use and set this retention as default (refer to section [“Retentions”](#));
- 3) install the Proxy server with HTTPS connection;
- 4) configure HTTPS based alias under External accessibility settings;
- 5) install Mail app (section **Mail app status**);
- 6) configure Mail app (section **Mail app configuration**)
- 7) Activate Mail app for the desired mailboxes (section **Activate mail app for**).

To install Mail app, navigate to **Email Archive** → **Settings** → **User experience** on the ribbon, and click on **Exchange 2013/2016** tab on the **User experience** page:

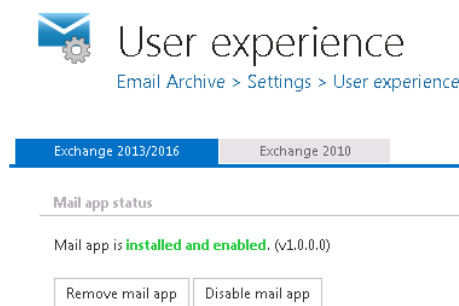


## Mail app status

In section **Mail app status** you may install or remove mail app on the Exchange. To install it, click on **Install mail app** button and wait until the installation process finishes (Screenshot A). With clicking on option **Remove mail app** you can uninstall this application from the Exchange; with clicking on **Disable mail app** the application can be globally disabled (turned off) for all Exchange groups/mailboxes (Screenshot B).



Screenshot A: Mail app uninstalled



Screenshot B: Mail app installed/enabled

## Mail app configuration

Once mail app is installed, you can set the mail app functionalities – manual archive and/or manual restore – to be used. This configuration will be applied globally for every mailbox. If manual archive and/or manual restore functionality is not allowed, the mailbox user can see a notification in the footer area of the mail app and the button related to the disabled functionality is hidden.

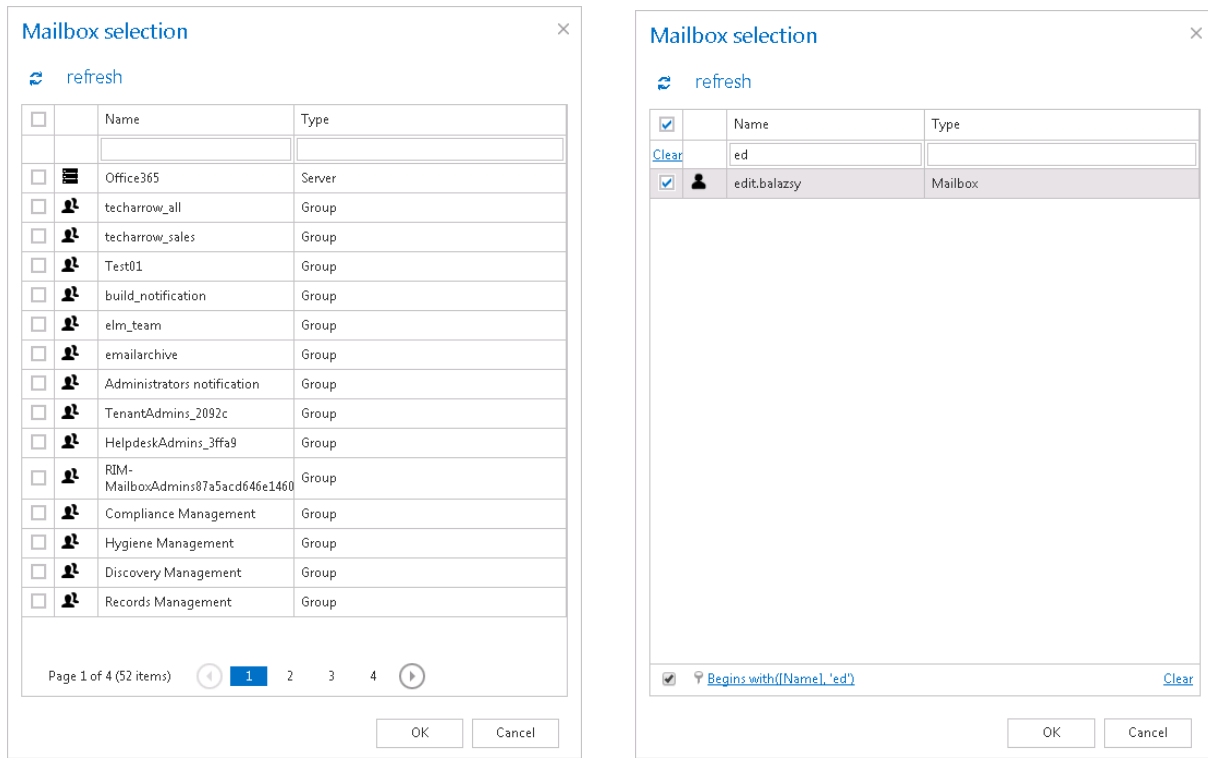
This configuration is very useful e.g. if you want to allow manual restore for the users, but want to restrict manual archiving directly from the user mailboxes.

**Activate mail app for (Exchange servers/groups/mailboxes):** The application is available for the user (in his mailbox) only in case if it's activated for the given user. Once Mail app is installed and the functionality is configured, you can activate it for the mailboxes that will use this application. If Mail app is disabled, the activation settings are unavailable.

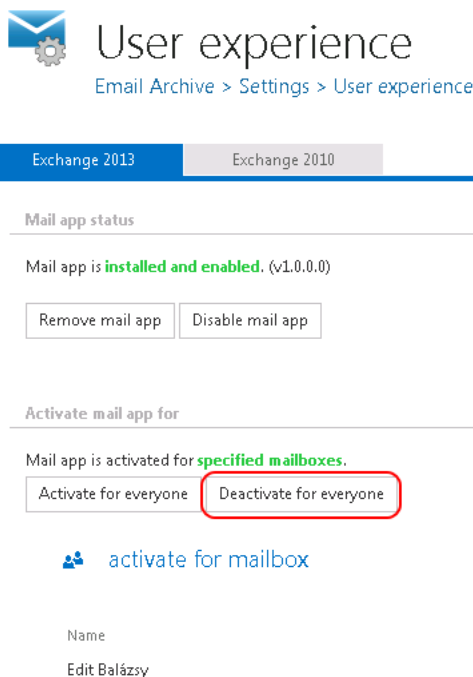
Scroll down to section “Activate mail app for”. Use option “Activate for everyone” if the application should be activated for every user. To activate it only for a given Exchange group/Exchange mailbox,



click “**activate for mailbox**” and select the desired mailbox(es)/group(s) from the list of the **Mailbox selection** dialog. In this use case (refer to the pictures below) we have activated it for one user only.



It is also possible to deactivate the application for all configured Exchange groups/mailboxes (option “**Deactivate for everyone**”)

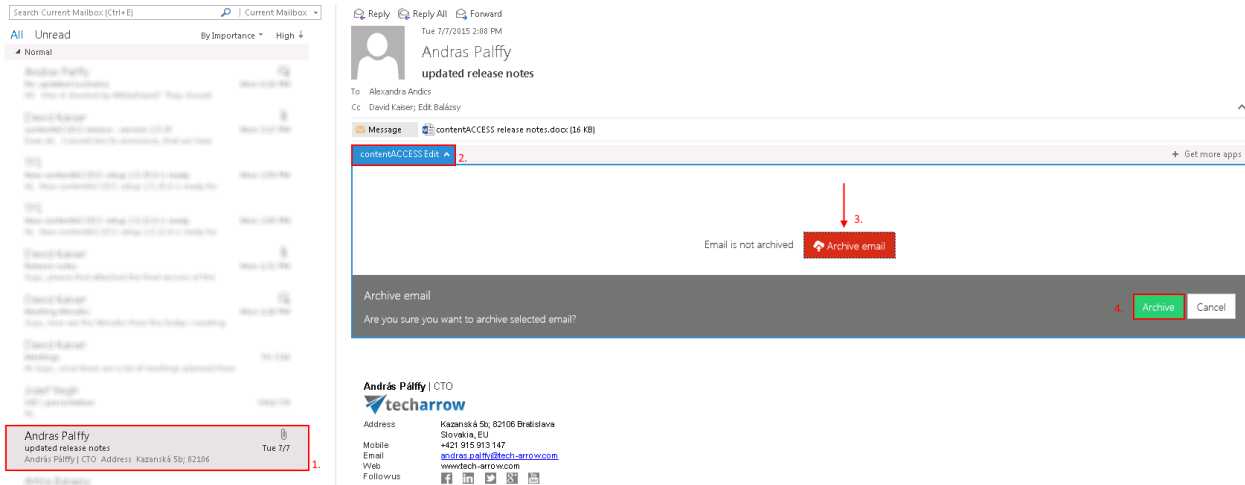


### How Mail app works in MS Outlook 2013+ and OWA 2013+



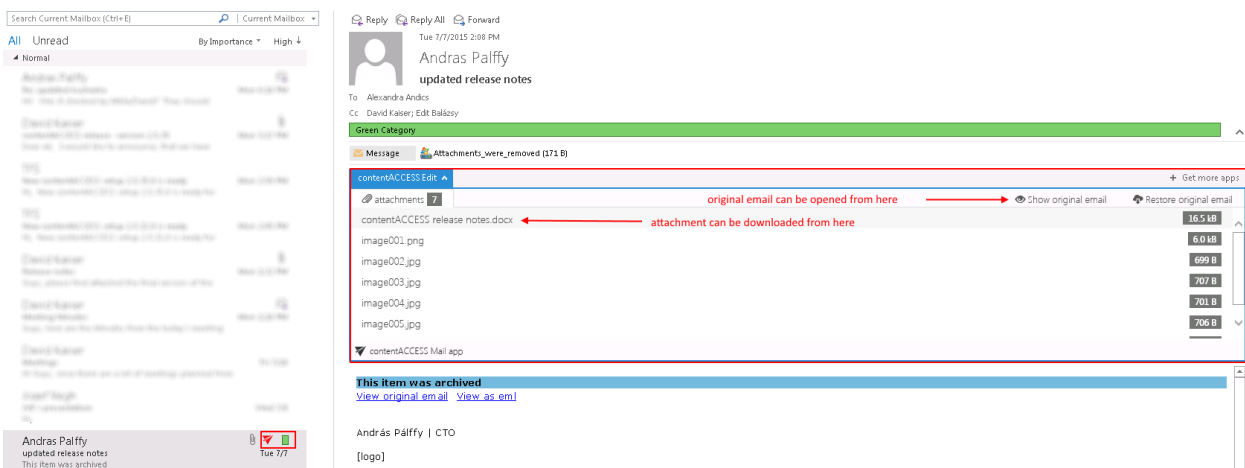
After you have installed Mail app it is recommended to restart your Outlook.

Open your Outlook desktop, and select a message including an attachment that you would like to archive manually (1). In the reading pane, click on **contentACCESS Mail app** (2)... **Archive email** (3)... **Archive** (4) buttons.

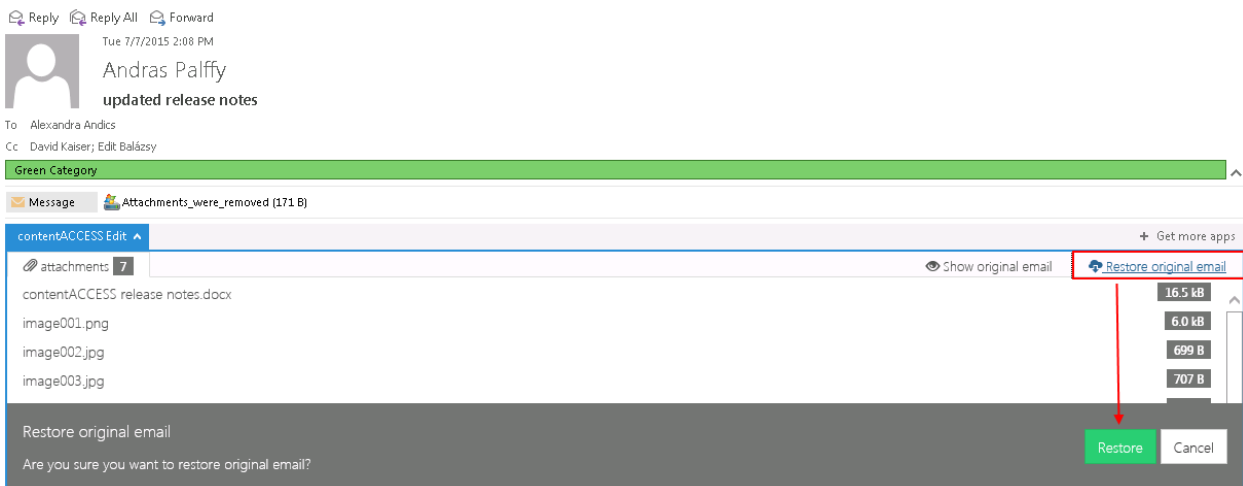


The manual archiving job will use the default shortcut and retention. As we set an HTML shortcut as default, where green category has been set, our archived email will be archived with this shortcut and will be signed with green category.

In the reading pane, click on contentACCESS Mail app again. To view the original email, click on **Show original email** option. To download the archived attachment, click on it in the message and it will be downloaded automatically.

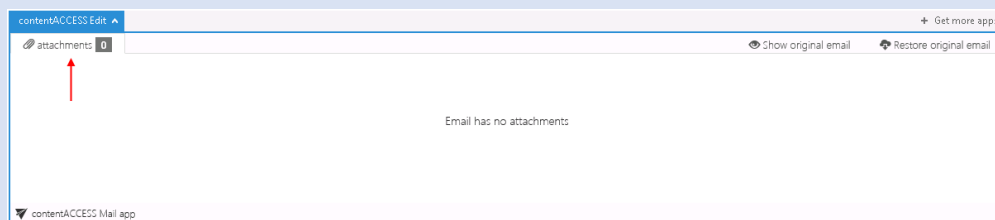


**How to manually restore with Mail app?** To restore already archived email manually, click on **Restore original email** → **Restore** in the same window:



**Important!!!** Turning on the **Change message class** option in the HTML shortcut configuration is a must if the user would like to manually restore from shortcuts, otherwise this app will not be visible in MS Outlook when trying to restore the original email.

**Note:** In Mail app the “split attachments” function is active by default. That means that the body of the email and the attachment are stored separately. It is good to know: if the email message containing an attachments has been previously archived by a job, where attachments were not split, then the mail app in MS Outlook will show 0 attachments.



### **Exchange 2010: OWA 2010 integration**

With the Exchange 2010 user experience you may deploy the OWA (Outlook Web Access) support to your Exchange server. **This allows transparent opening of contentACCESS and legacy (MAM and ELM) shortcuts in OWA 2010. The mailbox items can be manually archived, and the contentACCESS shortcuts can be restored directly from the mailbox, too.**

The OWA integration feature requires to have:

- 1) **Proxy with HTTPS connection installed** – it can be installed on the CAS 2010 (Client Access Role) server as well. The proxy will be used by the OWA to retrieve emails from the shortcuts.

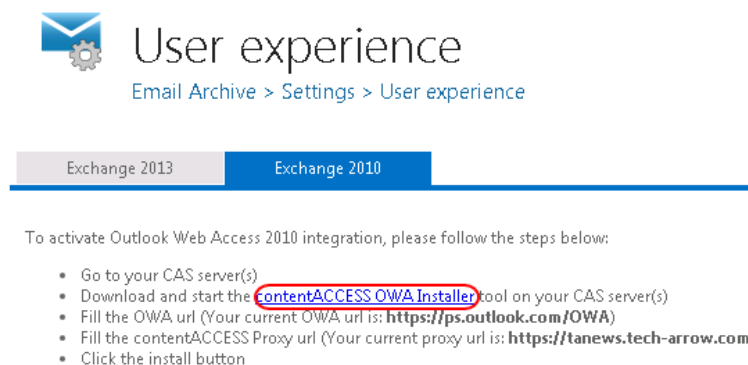




- 2) A **HTTPS alias** configured on the **System** page, under **External accessibility settings** section (more information [here](#));
- 3) A **default shortcut**, which will be used by archiving from the mailbox (more information [here](#));
- 4) A **default retention** (more information [here](#));

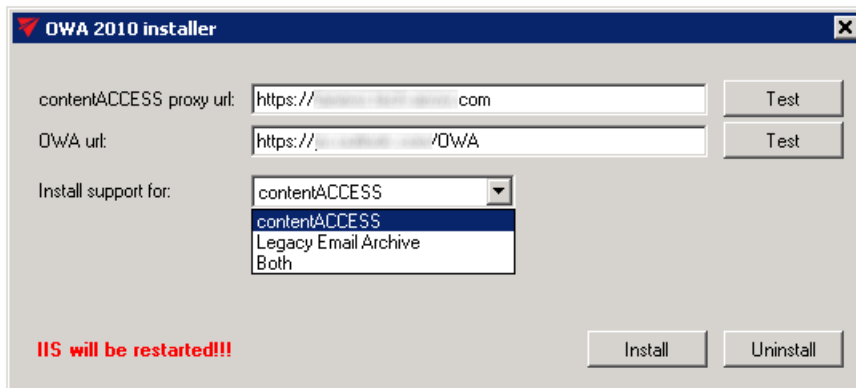
### Installing the OWA integration on the CAS 2010 (Client Access Role) server(s).

Go to your CAS server(s). The OWA integration setup can be accessed on the **User experience** page of the Central Administration. Open this page with navigating to **Email Archive** → **Settings** → **User experience** in the contentACCESS Central Administration. If you have Exchange 2010 configured in the Email Archive's **System settings**, the right tab will be automatically preselected on this page, too. Use the link below to download the **contentACCESS OWA Installer** tool and start it on your CAS server(s).



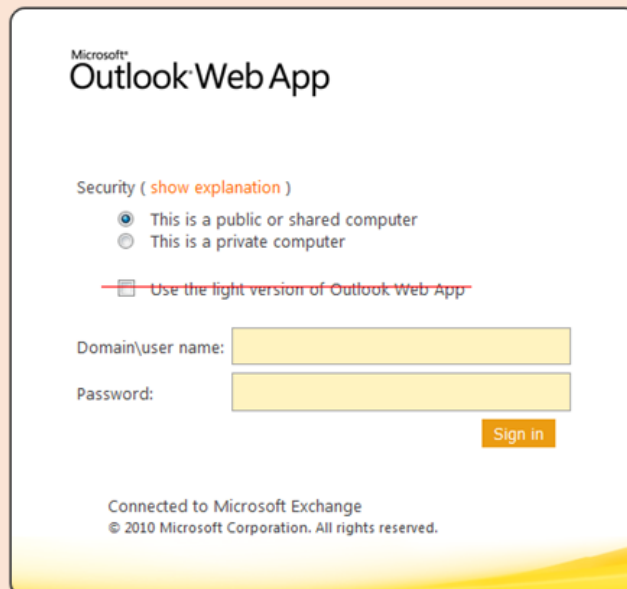
The OWA installer requires to:

- Fill the **OWA URL** (the value is prepopulated in the **OWA 2010 installer** window on the **User experience** page)
- Fill the **contentACCESS Proxy URL** (the value is prepopulated in the **OWA 2010 installer** window on the **User experience** page)
- Choose from the **Install support for** dropdown list where the OWA support should be installed: for contentACCESS, for Legacy Email Archive or for both of them.
- Click the **Install** button.

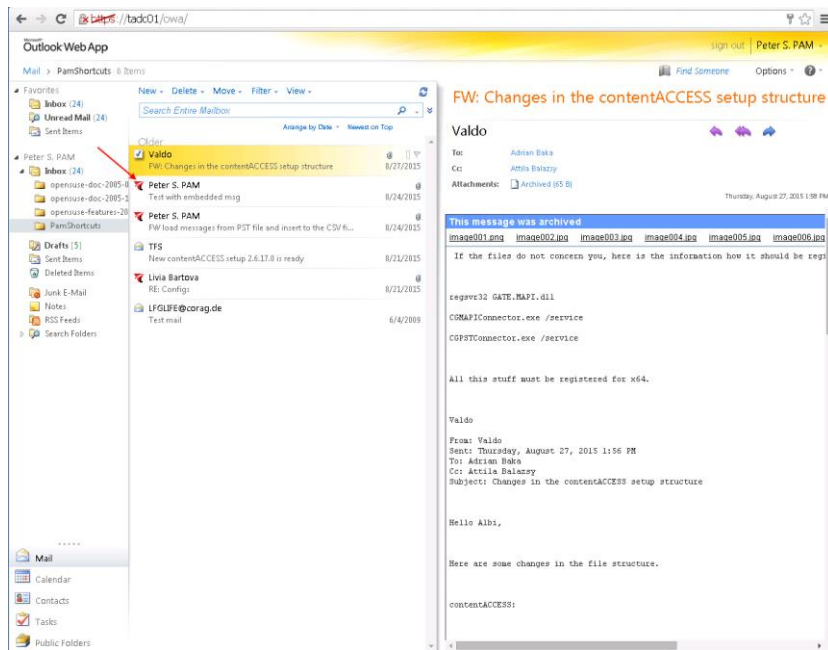


Screenshot: OWA 2010 installer

**Important!!!** The shortcuts in OWA 2010 do not work with the light version of OWA, so do not select this option by the sign in:

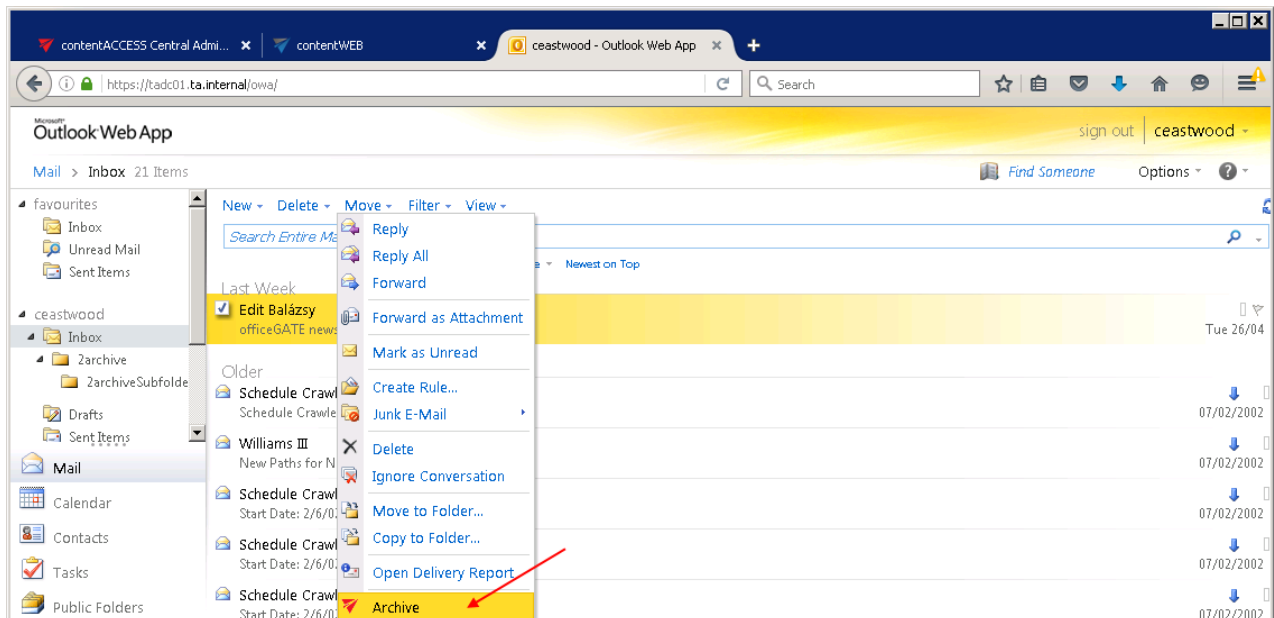


The contentACCESS icons in your mailbox will sign, that the OWA 2010 integration has been successfully installed on your CAS server. With uninstalling OWA 2010 support these icons will be removed automatically. Legacy shortcuts are marked with an icon containing "L" letter, as on the screenshot below.

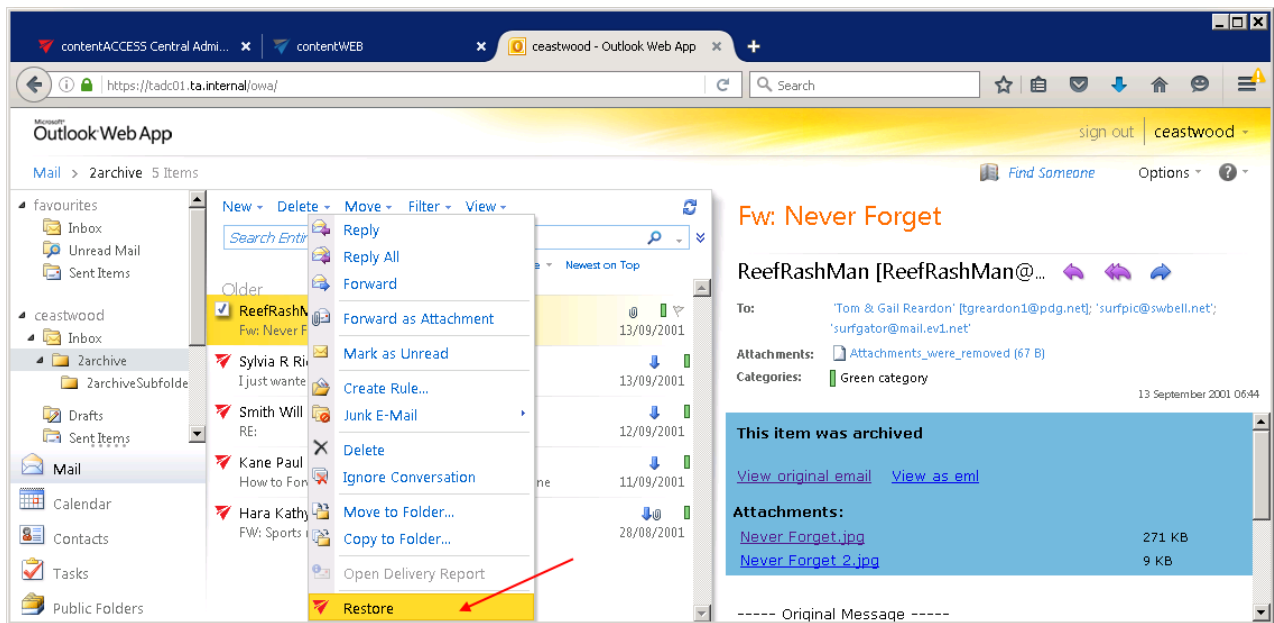


If OWA 2010 is used, the following operations are available in the contentACCESS mailbox items context menu:

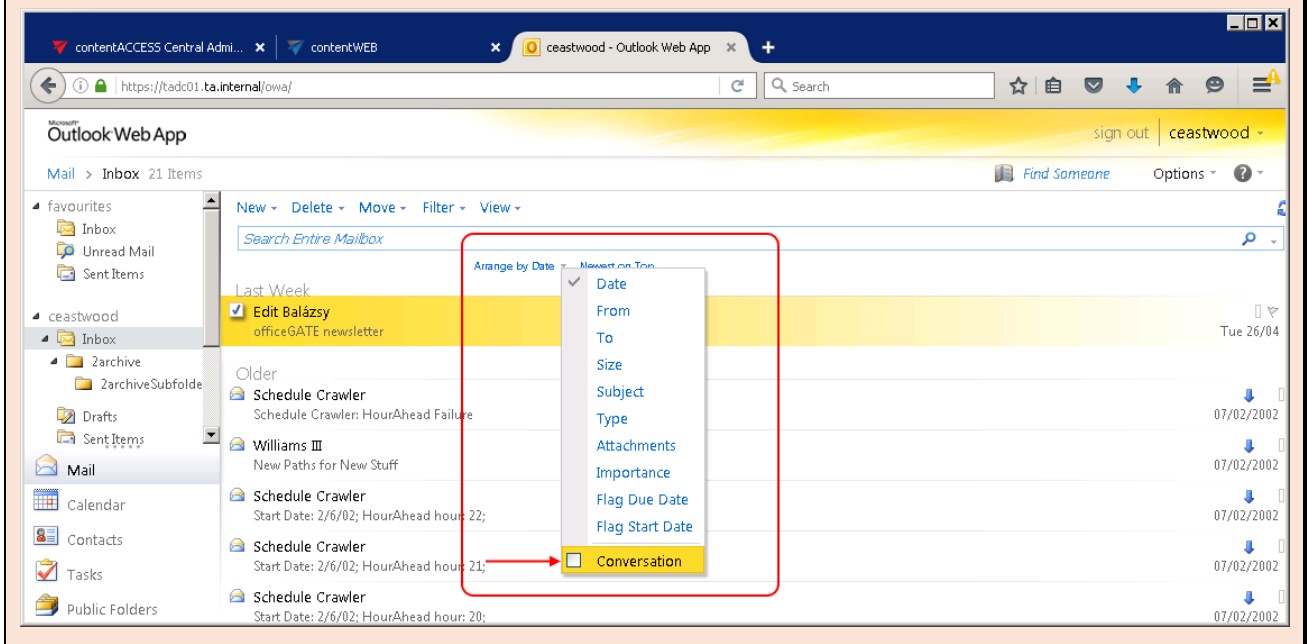
**Manual archive:** Mailbox items that have not been archived yet can be archived manually; it is possible to archive multiple items at once;



▪ **Manual restore:** Already archived emails can be restored using the email’s context menu;



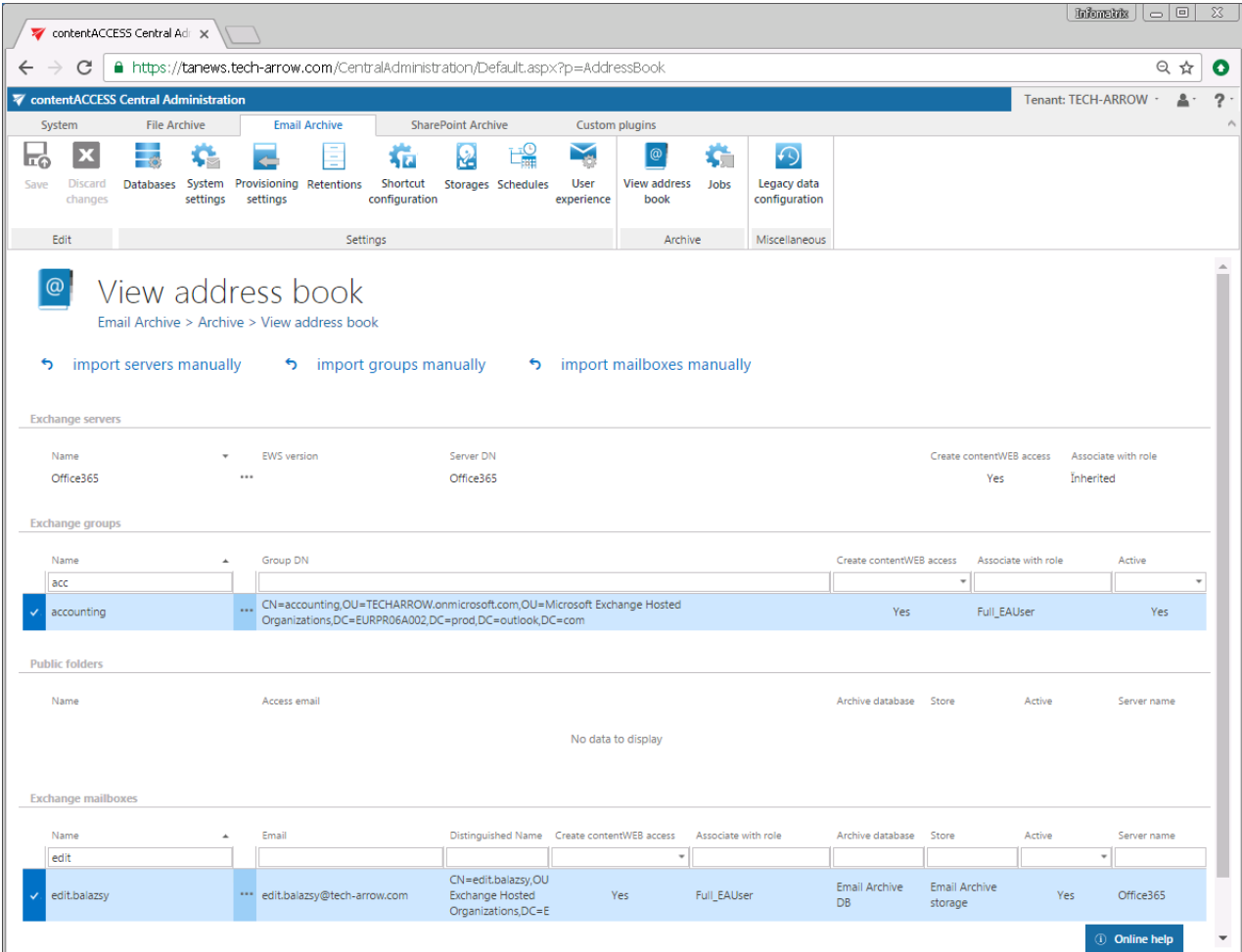
**Hint:** The conversation mode must be turned off, otherwise the manual archive/manual restore is not available in the context menu.



- In case of **contentACCESS** shortcuts: all operations (forward, reply, manual restore) are available (multiple restore is also supported), except of forwarding AS attachment;
- In case of legacy MAM and legacy ELM shortcuts: forwarding and replying are available, but manual restore and forwarding AS attachments are unavailable.

## Address book objects

Navigate to **Email Archive** → **Archive** → **View Address Book** to open the **View address book** page:



The screenshot shows the 'View address book' page in the contentACCESS Central Administration interface. The page is organized into several sections:

- Exchange servers:** A table with columns: Name, EWS version, Server DN, Create contentWEB access, Associate with role. One row is visible for 'Office365'.
- Exchange groups:** A table with columns: Name, Group DN, Create contentWEB access, Associate with role, Active. One row is visible for 'accounting'.
- Public folders:** A table with columns: Name, Access email, Archive database, Store, Active, Server name. It shows 'No data to display'.
- Exchange mailboxes:** A table with columns: Name, Email, Distinguished Name, Create contentWEB access, Associate with role, Archive database, Store, Active, Server name. One row is visible for 'edit.balazsy'.

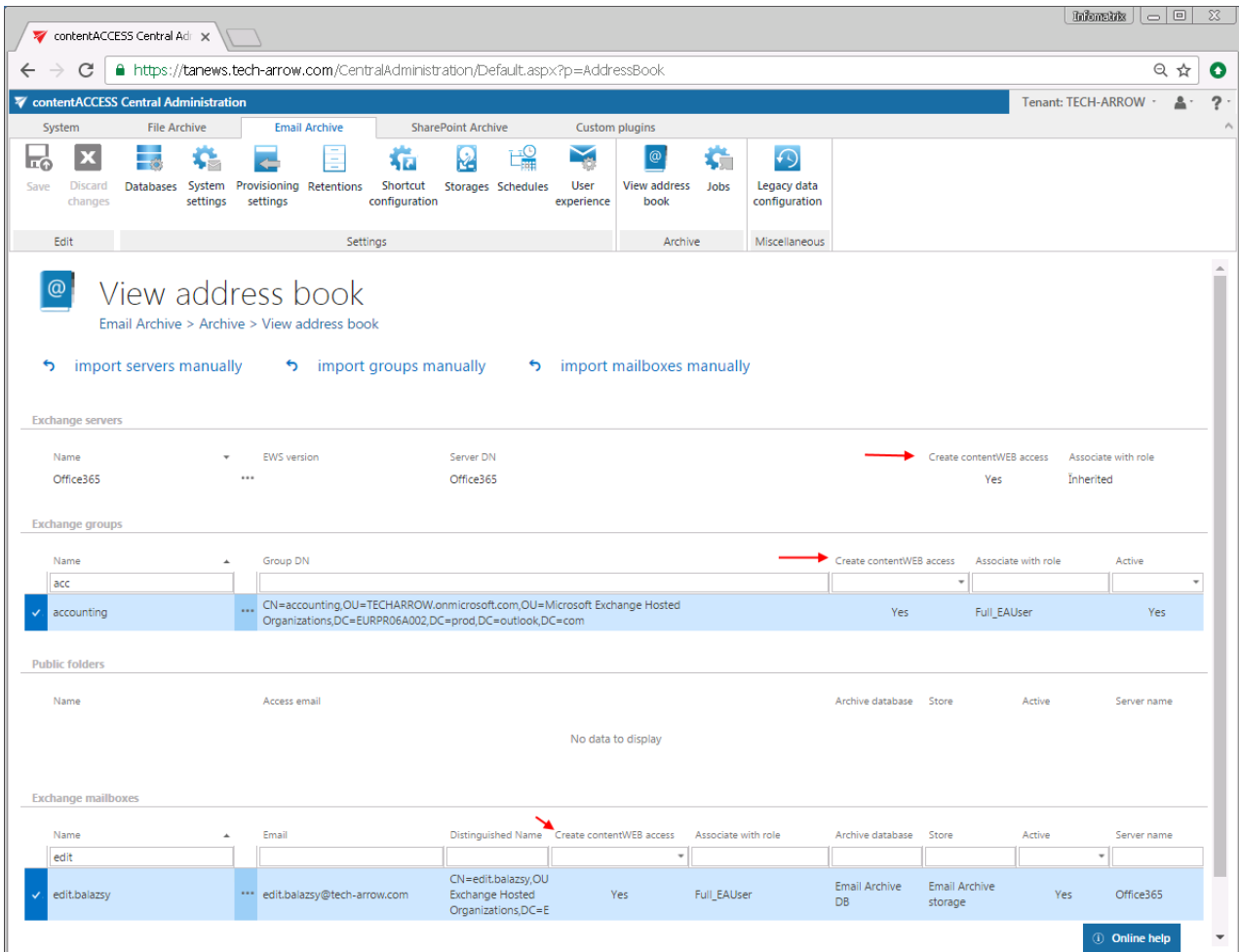
The address book contains a read-only list of objects which are provisioned in the address book. The objects can be added to the address book:

- by the Email Archive provisioning job – read more [here](#)
- manually, using the “**import servers manually**”/“**import groups manually**”/“**import mailboxes manually**” options – these options allow to import the objects from files, read more [here](#).

The address book objects are organized on the page in a hierarchical structure; starting with **Exchange servers** at the top, **Exchange groups**, Public folders (if any) and the **Exchange mailboxes** at the bottom of the page. Read more about public folders in chapter Public folder archiving.



The **Create contentWEB access** columns indicate if there is a command for the provisioning job to create a contentWEB user to the selected mailboxes. Once a contentWEB access is granted (provisioning job must be run), every mailbox user will access the archives of the mailboxes, to which he has access on the Exchange server.



The “Associate with role” column displays the role assigned/to be assigned for the Exchange object by the next running Email provisioning job. By default, the Exchange server mailboxes inherit the default role specified in the Email archive Provisioning settings, but the administrator can decide to assign custom roles for the objects. Such custom roles can be selected when contentWEB user is created for the Exchange object (more information [here](#)).



The screenshot shows the 'View address book' page in the contentACCESS Central Administration interface. The page is divided into several sections: Exchange servers, Exchange groups, Public folders, and Exchange mailboxes. Each section contains a table of items with various columns. Red arrows point to the 'Associate with role' column in the Exchange servers and Exchange groups sections.

Name	EWS version	Server DN	Create contentWEB access	Associate with role
Office365	...	Office365	Yes	Inherited

Name	Group DN	Create contentWEB access	Associate with role	Active
accounting	CN=accounting,OU=TECHARROW.onmicrosoft.com,OU=Microsoft Exchange Hosted Organizations,DC=EURPR06A002,DC=prod,DC=outlook,DC=com	Yes	Full_EAUser	Yes

Name	Email	Distinguished Name	Create contentWEB access	Associate with role	Archive database	Store	Active	Server name
edit.balazsy	edit.balazsy@tech-arrow.com	CN=edit.balazsy,OU Exchange Hosted Organizations,DC=E	Yes	Full_EAUser	Email Archive DB	Email Archive storage	Yes	Office365

Column “Active” shows, if the respective mailbox or group is active in contentACCESS. With this feature it is possible to deactivate no longer used mailboxes, keeping the licenses under control. Deactivated mailboxes/groups are neither touched by the Email archive/Email restore, Email recovery and/or by the Shortcut synchronization jobs, nor they are counted to the licensed mailboxes. To set a group or mailbox to active/inactive, the telemetry job must be run, too. It is running automatically every day or can be started manually on the **Licensing** page (**System** tab → **Services** group → **Licensing**, option “update telemetry”). Please note that you can’t have more activate mailboxes than the license allows. If you have already reached the limit, some mailboxes will be automatically deactivated.



contentACCESS Central Administration

https://tanews.tech-arrow.com/CentralAdministration/Default.aspx?p=AddressBook

Tenant: TECH-ARROW

System | File Archive | **Email Archive** | SharePoint Archive | Custom plugins

Save | Discard changes | Databases | System settings | Provisioning settings | Retentions | Shortcut configuration | Storages | Schedules | User experience | View address book | Jobs | Legacy data configuration

Edit | Settings | Archive | Miscellaneous

### View address book

Email Archive > Archive > View address book

import servers manually | import groups manually | import mailboxes manually

Exchange servers

Name	EWS version	Server DN	Create contentWEB access	Associate with role
Office365	...	Office365	Yes	Inherited

Exchange groups

Name	Group DN	Create contentWEB access	Associate with role	Active
acc				
accounting	CN=accounting,OU=TECHARROW.onmicrosoft.com,OU=Microsoft Exchange Hosted Organizations,DC=EURPR06A002,DC=prod,DC=outlook,DC=com	Yes	Full_EAUser	Yes

Public folders

Name	Access email	Archive database	Store	Active	Server name
No data to display					

Exchange mailboxes

Name	Email	Distinguished Name	Create contentWEB access	Associate with role	Archive database	Store	Active	Server name
edit								
edit.balazsy	edit.balazsy@tech-arrow.com	CN=edit.balazsy,OU Exchange Hosted Organizations,DC=E	Yes	Full_EAUser	Email Archive DB	Email Archive storage	Yes	Office365

Online help

Inactive address book objects, and the objects to be set to inactive at the next provisioning running are marked with red color:





contentACCESS Central Administration

Tenant: TECH-ARROW

System | File Archive | **Email Archive** | SharePoint Archive | Custom plugins

Save | Discard changes | Databases | System settings | Provisioning settings | Retentions | Shortcut configuration | Storages | Schedules | User experience | View address book | Jobs | Legacy data configuration

Edit | Settings | Archive | Miscellaneous

**Warning:** To apply the changes in the license counting, the telemetry job needs to be started. You can wait for the scheduled run or you can [start it now](#)

Email Archive > Archive > View address book

import servers manually | import groups manually | import mailboxes manually

Exchange servers

Name	EWS version	Server DN	Create contentWEB access	Associate with role
Office365	***	Office365	Yes	Inherited

Exchange groups

Name	Group DN	Create contentWEB access	Associate with role	Active
accounting	CN=accounting,OU=TECHARROW.onmicrosoft.com,OU=Microsoft Exchange Hosted Organizations,DC=EURPR06A002,DC=prod,DC=outlook,DC=com	Yes	Full_EAUser	Yes

Public folders

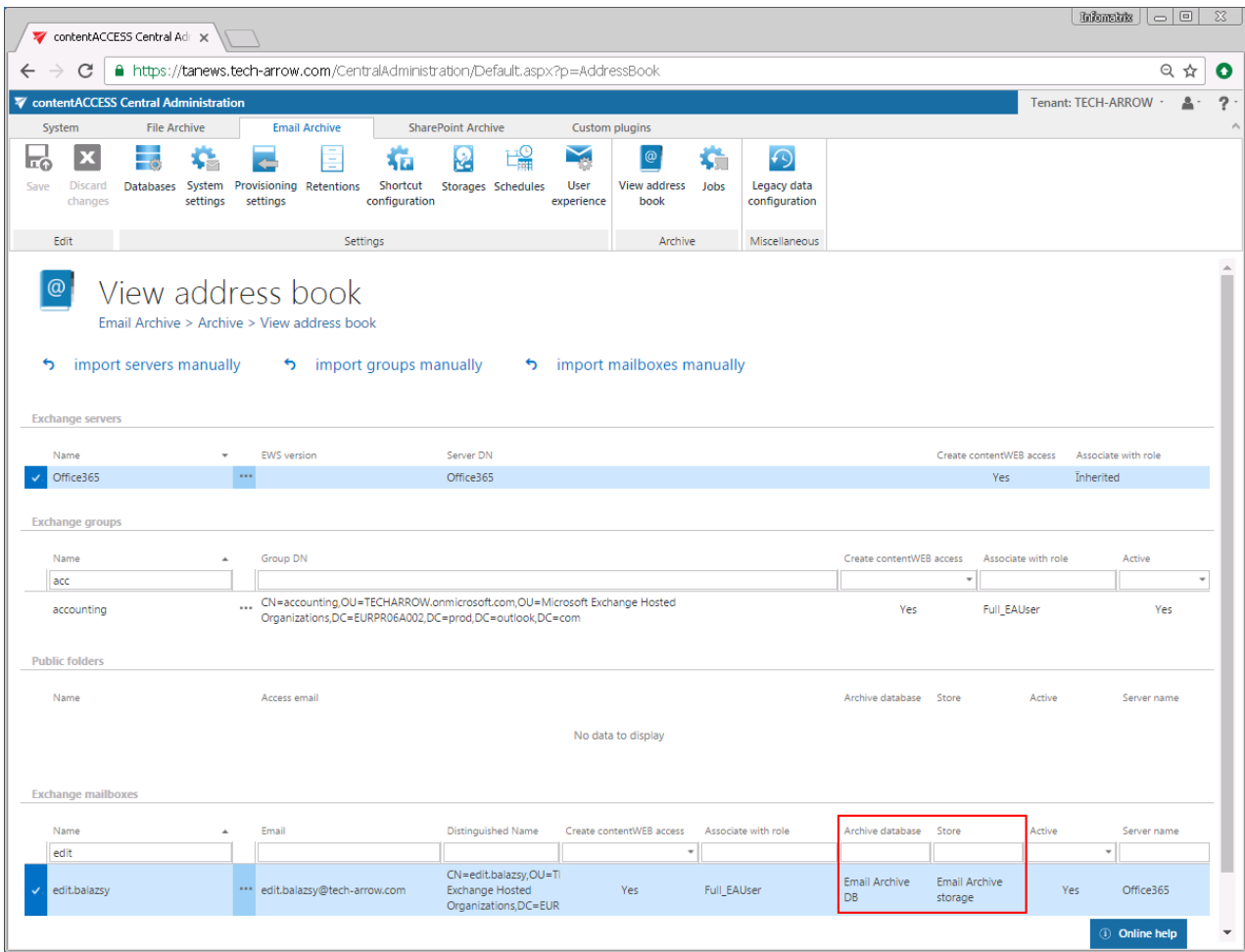
No data to display

Exchange mailboxes

Name	Email	Distinguished Name	Create contentWEB access	Associate with role	Archive database	Store	Active	Server name
edit.balazsy	edit.balazsy@tech-arrow.com	CN=edit.balazsy,OU Exchange Hosted Organizations,DC=E	Yes	Full_EAUser	Email Archive DB	Email Archive storage	No	Office365

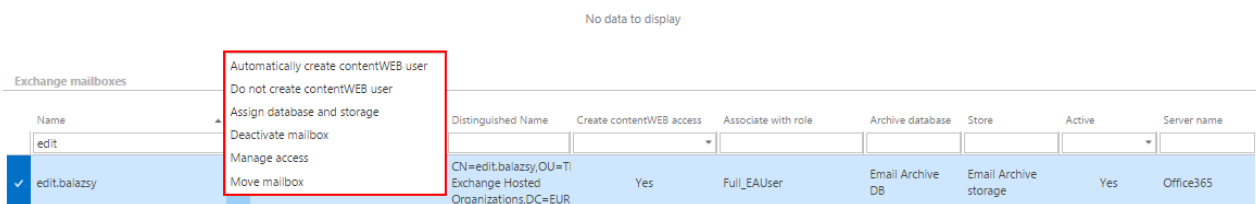
Online help

The email archive database and storage to be assigned/assigned to the Exchange mailbox(es) is displayed in the **Archive database** and **Store** columns. Database and storage is assigned automatically either by the provisioning job or by the first running archive job, or manually using the mailbox context menu.



Using the server's/group's/mailbox's context menu the administrator with the necessary permissions is allowed to

- Automatically create contentWEB user also with custom permissions (read more [here](#))
- Assign database and storage for Exchange groups and mailboxes (read more [here](#))
- Activate/deactivate mailboxes
- Manage access for second users to the selected archive mailbox(es) (read more [here](#))
- Move mailbox (read more [here](#))
- Change server settings (read more [here](#))





The **search textboxes** (Screenshot A) and **page listing** (Screenshot B) options at the top and bottom of each section ensure an easier handling with the address book objects:

Exchange mailboxes

Name	Email	Distinguished Name	Create contentWEB access	Associate with role	Archive database	Store	Active	Server name
edit								
edit.balazsy	*** edit.balazsy@tech-arrow.com	CN=edit.balazsy,OU=TI Exchange Hosted Organizations,DC=EUR	Yes	Full_EAUser	Email Archive DB	Email Archive storage	Yes	Office365

Screenshot A: Search function

Exchange groups

Name	Group DN	Create contentWEB access	Associate with role	Active
techarrow_all	... CN=techarrow_all,OU=TECHARROW.onmicrosoft.com,OU=Microsoft Exchange Hosted Organizations,DC=EURPR06A002,DC=prod,DC=outlook,DC=com	No		Yes
techarrow_sales	... CN=techarrow_sales,OU=TECHARROW.onmicrosoft.com,OU=Microsoft Exchange Hosted Organizations,DC=EURPR06A002,DC=prod,DC=outlook,DC=com	No		Yes
tech-arrowgroup_8c3db9d495	... CN=tech-arrowgroup_8c3db9d495,OU=TECHARROW.onmicrosoft.com,OU=Microsoft Exchange Hosted Organizations,DC=EURPR06A002,DC=prod,DC=outlook,DC=com	No		Yes
TenantAdmins_2092c	... CN=TenantAdmins_2092c,OU=TECHARROW.onmicrosoft.com,OU=Microsoft Exchange Hosted Organizations,DC=EURPR06A002,DC=prod,DC=outlook,DC=com	No		Yes
Test01	... CN=Test01,OU=TECHARROW.onmicrosoft.com,OU=Microsoft Exchange Hosted Organizations,DC=EURPR06A002,DC=prod,DC=outlook,DC=com	No		Yes
UM Management	... CN=UM Management,OU=TECHARROW.onmicrosoft.com,OU=Microsoft Exchange Hosted Organizations,DC=EURPR06A002,DC=prod,DC=outlook,DC=com	No		Yes
View-Only Organization Management	... CN=View-Only Organization Management,OU=TECHARROW.onmicrosoft.com,OU=Microsoft Exchange Hosted Organizations,DC=EURPR06A002,DC=prod,DC=outlook,DC=com	No		Yes
WinShortcutter	... CN=WinShortcutter,OU=TECHARROW.onmicrosoft.com,OU=Microsoft Exchange Hosted Organizations,DC=EURPR06A002,DC=prod,DC=outlook,DC=com	No		Yes

Page 4 of 4 (38 items) 1 2 3 4

Screenshot B: Page listing

## Granting access rights for mailbox users and explicit users to view the mailbox archive

The archived emails can be viewed by an end user in contentWEB, which is the user interface for contentACCESS archive.

There are 2 ways how a contentWEB access can be created. The administrator can 1) Create a **contentWEB user for one mailbox user or for multiple mailbox users** of the selected Exchange server/group, or 2) He can **give explicit rights to any contentACCESS user to access any archive mailbox(es)** associated with one main mailbox user on the Exchange server. The following chapters of the guide will show for the reader how to manage access to contentWEB using these options.

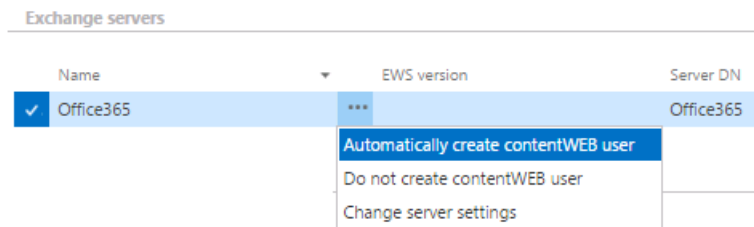
### Creating contentWEB users (option 1):

The **Create contentWEB user** method should be used, if the administrator would like to grant access rights **for multiple mailbox users** to access their own associated mailbox archives. contentWEB

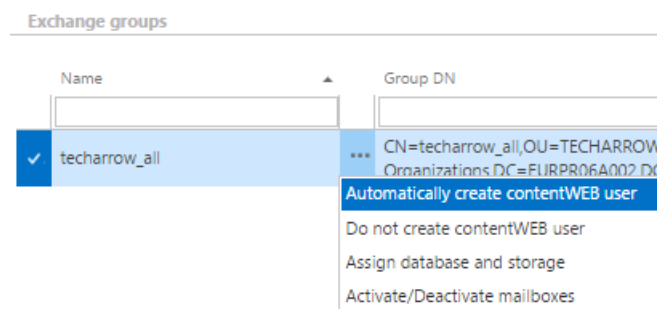


users (with permissions to access the associated email archives in contentWEB) can be created on 3 levels. It is possible to:

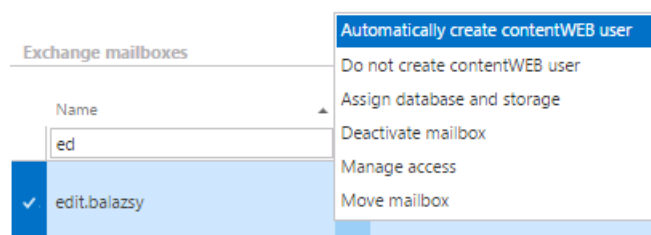
- create contentWEB users to all mailbox users of the Exchange server with selecting **Automatically create contentWEB user** option from the server's context menu;



- create contentWEB users to mailbox users of the selected Exchange group with selecting **Automatically create contentWEB user** option from the group's context menu;



- create one contentWEB user to one selected mailbox with selecting **Automatically create contentWEB user** option from the context menu of the selected mailbox;



When you allow to create a contentWEB user, the **contentWEB user role** pop-up dialog opens, where you need to specify the contentWEB user role (containing user permissions) to be assigned for the contentWEB user. There are 2 options which role to define here:

- you can use the (default) role (e.g. with read-only permissions only) defined in the email archive provisioning job (read more in section [Email Archive Provisioning settings](#))



- or you can assign a custom role (e.g. Standard user role with more permissions like manual recovery, preview etc.) for the user in the **Role to assign** section of the **contentWEB user role** dialog.

Standard user role is a system level role, it is present in contentACCESS (and therefore in the contentWEB user role dialog's dropdown list) by default. Other types of Email archive user roles must be created manually based on the steps described in section "[Roles](#)".

**Important:** If there are multiple roles assigned for the same Exchange object (e.g. one role with less permissions in the provisioning settings, another role with more permissions in the Address book), then the rule is, that always the role with more permissions wins.

**Now, in this use case, we will create contentWEB users with default Standard user permissions in the archive for the whole O365 server, but our mailbox user "edit.balazsy" will have also full rights on all archive mailboxes of TECH-ARROW tenant in contentWEB. We presume, that Standard user role is selected in the email archive provisioning job.**

1. First we need to create a role with "All allowed" permissions on our tenant's email archive (read more is section "Roles"). This role will be later assigned for "edit.balazsy".

### Role details ✕

Role display name:

#### Permissions

---

**Plugin.Datengut**

View Datengut DDCs:  Not allowed  All allowed ?

---

**Plugin.EmailArchive**

View mailboxes:	<input type="radio"/> Not allowed	<input checked="" type="radio"/> All allowed	<input type="radio"/> Specific allowed	?
Export:	<input type="radio"/> Not allowed	<input checked="" type="radio"/> All allowed	<input type="radio"/> Specific allowed	?
Manual recovery:	<input type="radio"/> Not allowed	<input checked="" type="radio"/> All allowed	<input type="radio"/> Specific allowed	?
Manual restore:	<input type="radio"/> Not allowed	<input checked="" type="radio"/> All allowed	<input type="radio"/> Specific allowed	?
Preview:	<input type="radio"/> Not allowed	<input checked="" type="radio"/> All allowed	<input type="radio"/> Specific allowed	?
View all public folders:	<input type="radio"/> Not allowed	<input checked="" type="radio"/> All allowed	<input type="radio"/> Specific allowed	?

---

**Plugin.FSArchive**

View folders:  Not allowed  All allowed  Specific allowed ?

---

**Plugin.Legacy**

View mailboxes:  Not allowed  All allowed  Specific allowed ?

---

**Plugin.Perceptive**

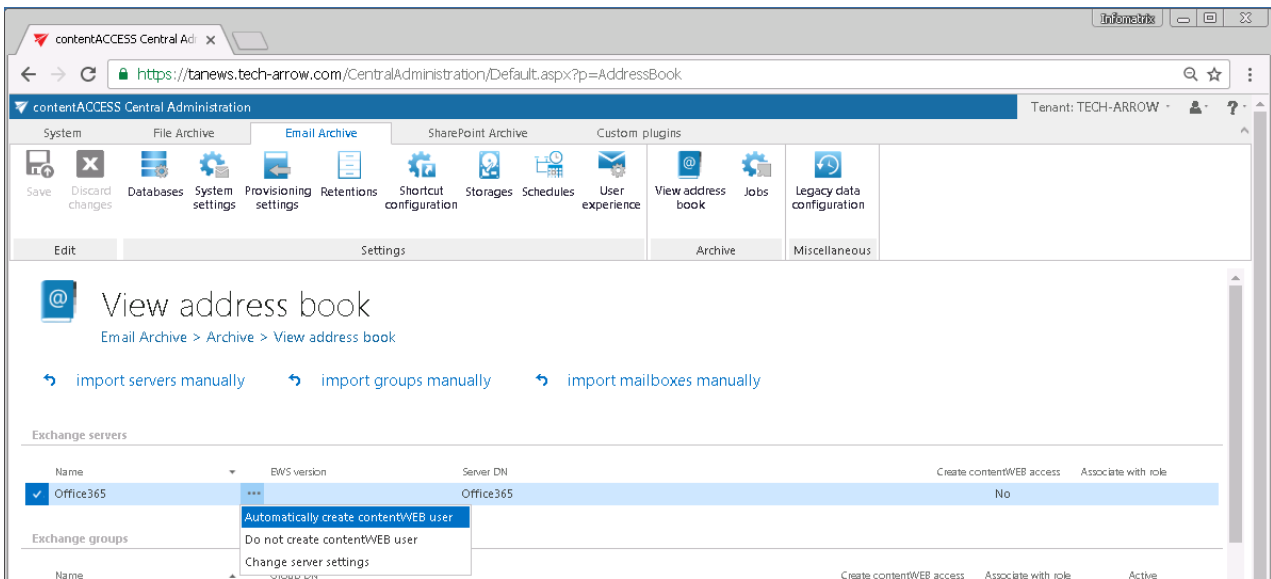
---

Select a tenant, where the role will be available

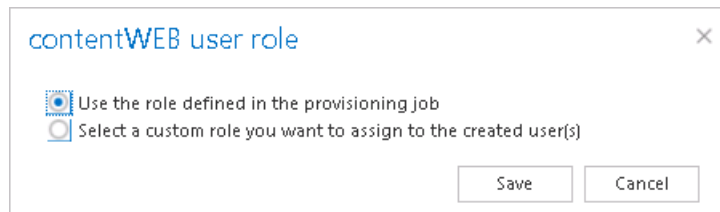
Tenant:

### Now we go the Address book:

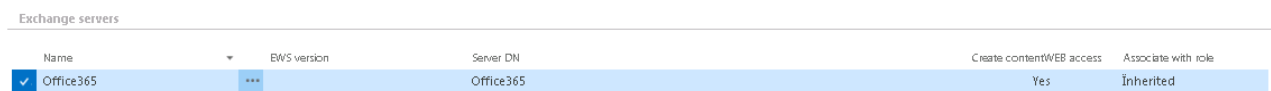
- We open the server's context menu with a click on the ellipses, and choose **Automatically create contentWEB user** from the list.



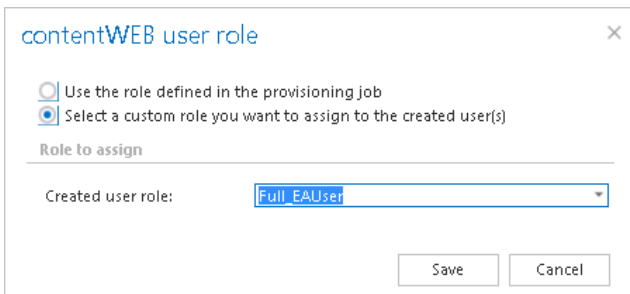
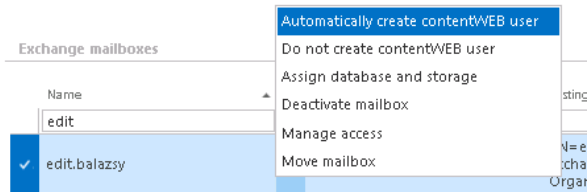
3. The **contentWEB user role** dialog opens, where we select “Use the role defined in the provisioning job” option. As already mentioned above, in the provisioning job the Standard role is defined.



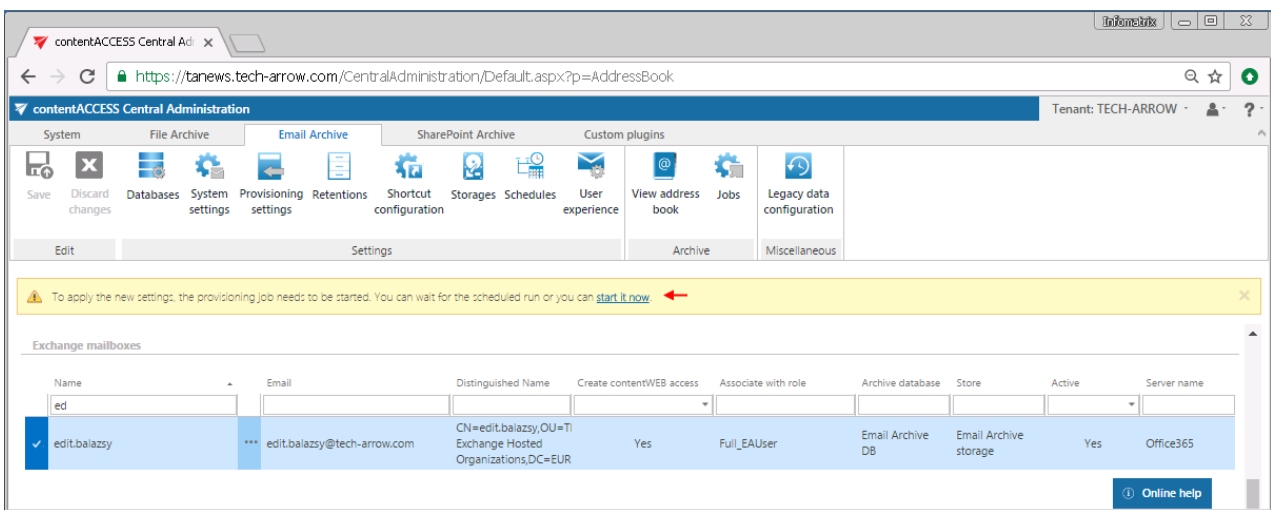
4. There will appear a “YES” command in the “Create contentWEB access” column, which means, that contentWEB users to all mailboxes of the server will be created at next provisioning running. Associate with role is “Inherited”, i.e. the (default) role defined on server level is inherited from the email archive provisioning job.



5. Now we search for our mailbox “edit.balazsy...”, and create contentWEB user for her as well. This user will have full permissions on all archive mailboxes of the tenant. These permissions are defined in role “Full\_EAUser” from the first step, so we select it in the pop-up window.

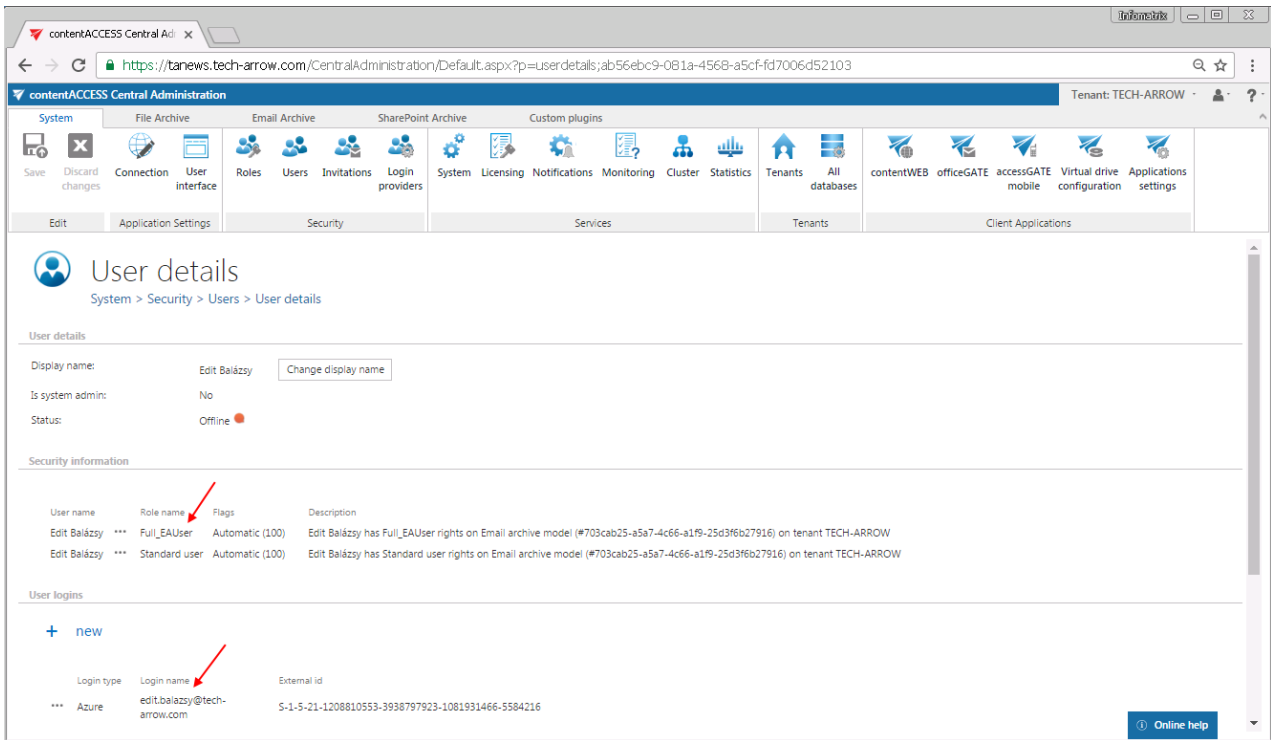


6. Now we start the provisioning job, which will create our contentWEB users with the assigned roles (or we wait until it begins to run according to the provisioning scheduler).



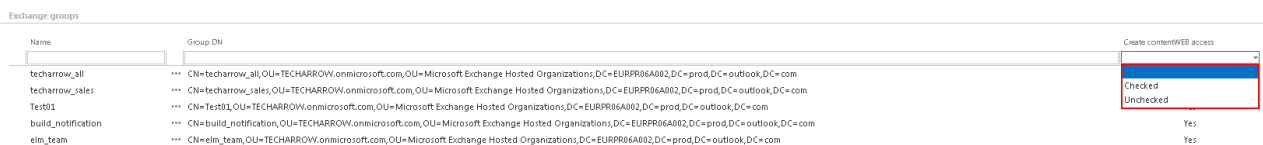
Provisioning job points out, which mailbox user to which mailbox(es) is associated on the Exchange server, and synchronizes these permissions with contentACCESS. The rights on the Exchange server will be synchronized with contentACCESS, and new contentWEB users will be created to each mailbox users on the server. Each contentWEB user will have an Automatical flag. In case of O365 an Azure user login will be created, in case of on-premise Exchange server a Windows user login will be created to each mailbox users on the server. With these accounts contentWEB email archive will be accessible for these mailbox users. The contentWEB user created for “edit.balazsy” will access the archive mailboxes of the assigned tenant as defined in her role.





What happens, if you select **Do not create contentWEB user** from the context menu? If formerly it was set to **Automatically create contentWEB user**, and the administrator changes these settings to **Do not create contentWEB user**, then the already existing contentWEB user will NOT be deleted. However, if new mailbox users will be added on the Exchange server, then they will not get contentWEB access rights on the mailbox archive.

**How to find Exchange groups/Exchange mailboxes with or without contentWEB users?** In the Exchange groups/Exchange mailboxes section unroll the Create contentWEB user dropdown list, which is located at the right side of the address book's page, and select "Checked" to filter out all groups/mailboxes, for which contentWEB users will be/were created. If you would like to find all groups/mailboxes without contentWEB users, select "Unchecked" from the list.



### Manage access to a mailbox archive (option 2)

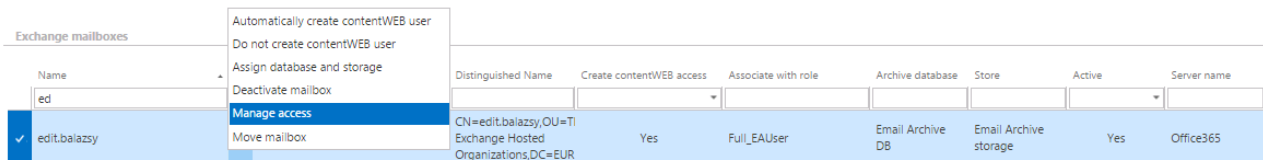
It can happen, that the administrator is asked to grant access permissions to the mailbox archive for a second (explicit) user. An explicit user can be anybody – a user who has never used

contentACCESS before and now he has to view the archived emails, a colleague who stood in for somebody else during vacation time and needs to access the archive, somebody from the company who got a claim regarding an older stuff and needs to access the already archived email attachments, invoices etc. In such cases, this (second) user must get rights to the mailbox archive(s) associated with the main mailbox user.

In this use case we will show you how to grant explicit rights to the archive mailboxes associated with mailbox "[edit.balazsy@tech-arrow.com](mailto:edit.balazsy@tech-arrow.com)" for a user. To achieve this, the administrator should follow the next steps:

Navigate to the Email Archive tab → Archive → View Address book control on the ribbon. Under **Exchange mailboxes** section choose the desired mailbox, click "..." (ellipsis mark), select **Manage access** option in the context menu.

**Note:** This "manage access" option is available for the logged on administrator, if his role assignment contains Manage tenant permission on the tenant, and also contains View archive mailbox – All allowed rights on the tenant. Read more in [Managing access to contentACCESS objects](#).



Name	Distinguished Name	Create contentWEB access	Associate with role	Archive database	Store	Active	Server name
ed							
edit.balazsy	CN=edit.balazsy,OU=TI Exchange Hosted Organizations,DC=EUR	Yes	Full_EAUser	Email Archive DB	Email Archive storage	Yes	Office365

On the **Manage access** page click on **+ new**. The **Create new role association** dialog will open. Select a role (Standard user role or any explicit role created on the **Roles** page) that this user will have. Further select the invitation type (invite new user/search for existing contentACCESS user/create new user), specify the login type and the login credentials (if required).



### Create new role association ✕

**Tenant information**

Role:

Invitation type:

---

Create new user

Display name:

Login type:

Login name:

Login password:

Confirm password:

As this user was created manually, he got a **Manual flag**, which can be viewed on his **User details** page. It is also possible to edit the user's login data, or to delete the user login. If the administrator deletes the user login, the user won't be able to log in to contentWEB with this user login any more. These actions are accessible from the context menu of the provider, under **User logins** section.

The screenshot shows the 'User details' page in the contentACCESS Central Administration interface. The breadcrumb trail is 'System > Security > Users > User details'. The user's display name is 'ECSO's archive user' and their status is 'Offline'. Under the 'Security information' section, a table lists the user's details:

User name	Role name	Flags	Description
ECSO's archive user	Standard user	Manual	ECSO's archive user has Standard user rights on Email archive model (#703cab25-a5a7-4c66-a1f9-25d3f6b27916) on tenant TECH-ARROW

The 'User logins' section shows a single login entry with the following details:

Login type	Login name	External id
Forms	Walter	Walter



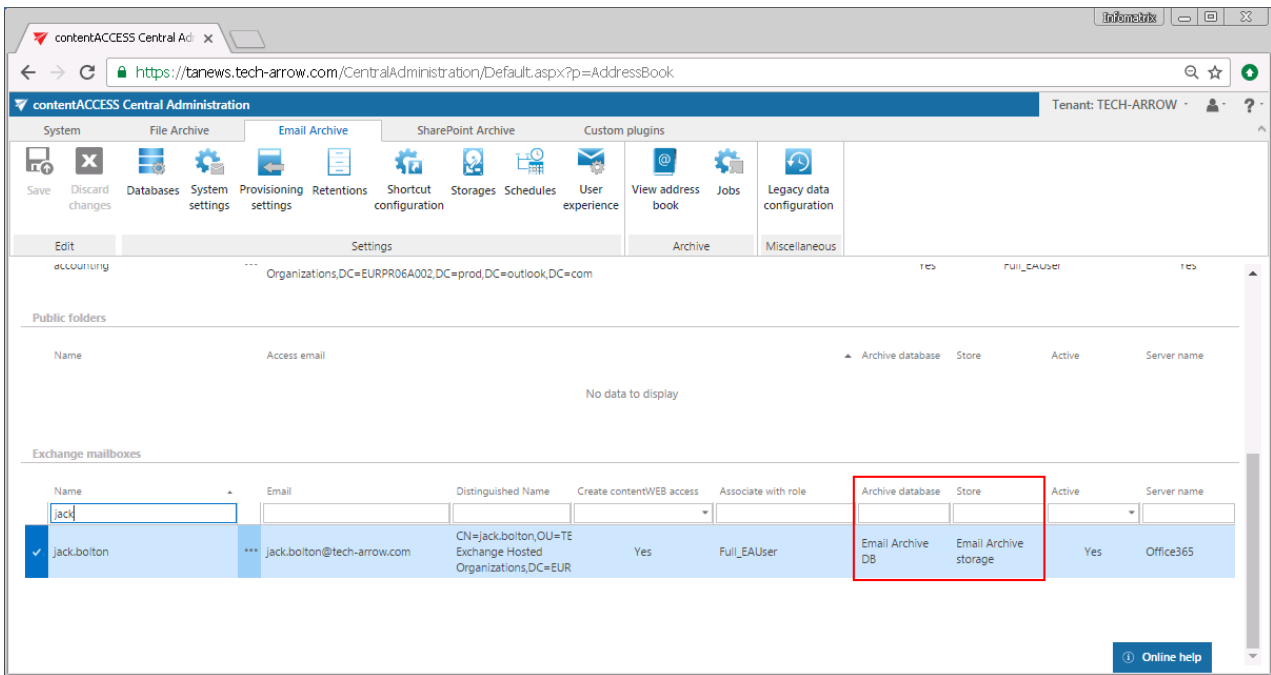
## Database and store assignment in email archiving

What is the meaning of “mailbox assigned to a database and storage”? When the provisioning job synchronizes contentACCESS with the Exchange server, it adds the mailboxes to the contentACCESS's address book. In this moment these mailboxes are unassigned, i.e. they do not belong to any archive – they are not archived yet. If the database and storage fields are empty, this indicates, that these mailboxes have never been archived by contentACCESS. Before the email archiving process is started, a database and storage should be assigned to the mailbox. There are multiple possibilities how to assign a mailbox:

- Go to the jobs and start the jobs (it will assign the mailboxes associated with the job to the store and database which is configured in this job);
- Navigate to Email Archive → Archive → View address book, and manually assign the mailboxes to databases/storages.

When something is archived from the mailbox for the very first time, the first job automatically assigns the mailbox to the database and to the storage which is configured in this job. From this point onward the mailbox will belong to the database/storage and anything newly archived will go to the same database/storage. It does not matter if the job settings are changed later on: the mailbox is already assigned and will always go to the assigned database/storage, no matter how the job is configured. This might be confusing for the administrator, but contentACCESS is preventing here a disaster: the mailbox should not have half the data in different database/storage. This also means, that it is possible now to safely move the mailboxes between the groups without a possibility, that the same mailbox will be archived into two different databases/storages. You can associate database and storage for Exchange groups (or for a single mailbox as well).

The administrator can review which mailbox is in which database/storage in the address book. This information can be found at the right side of the particular mailbox row.



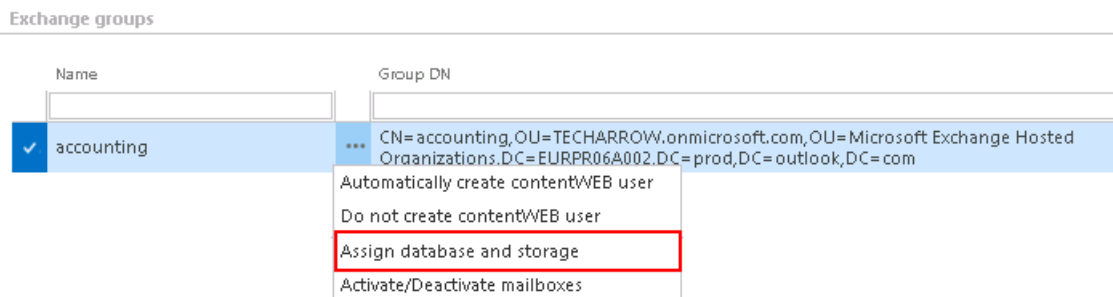
It is also possible to change this assignment as it is described below, but it is not recommended!

The reasons why the reassignment of mailboxes is still allowed are the following:

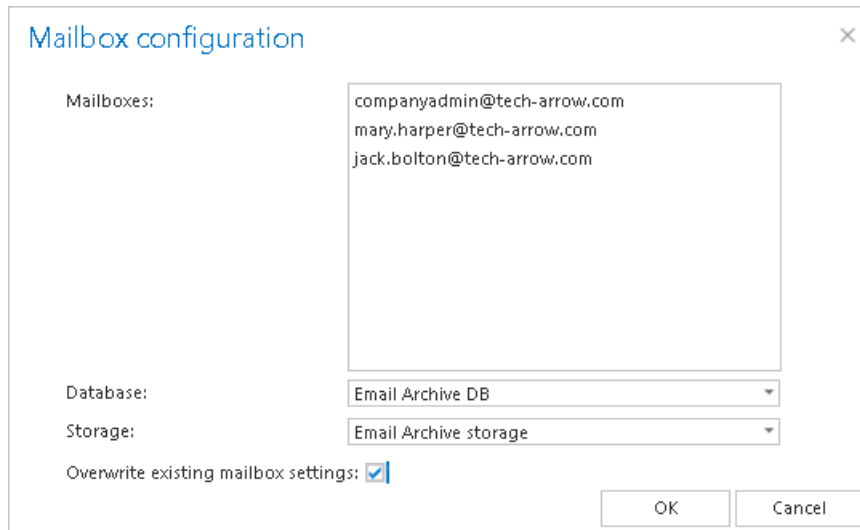
- ✓ It makes possible to manually set the unassigned mailboxes, if an archiving job is not currently running.
- ✓ It is a must-have tool if you would like to select one (or just a few) mailbox(es) from a group, which will be associated to another database. In this case (before starting the archiving process) you can assign one database to the whole Exchange group, and select a mailbox (or a few mailboxes) from this group and assign it to another database manually.

### How to assign database and storage to an Exchange group?

Navigate to **Email Archive** → **Archive** → **View address book**, select a group, click on ... (ellipses) and click **Assign database and storage** (Screenshot A) in the context menu. Fill the database and storage into the **Mailbox configuration** repository window (Screenshot B).



Screenshot A

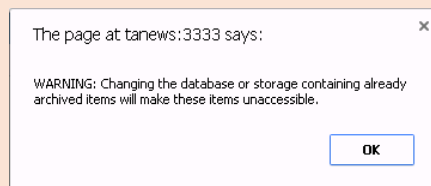


Screenshot B

Next to **Mailboxes** can be seen all mailboxes falling under this certain Exchange group.

**Database, Storage:** Assign a database and storage to the mailboxes of the Exchange group.

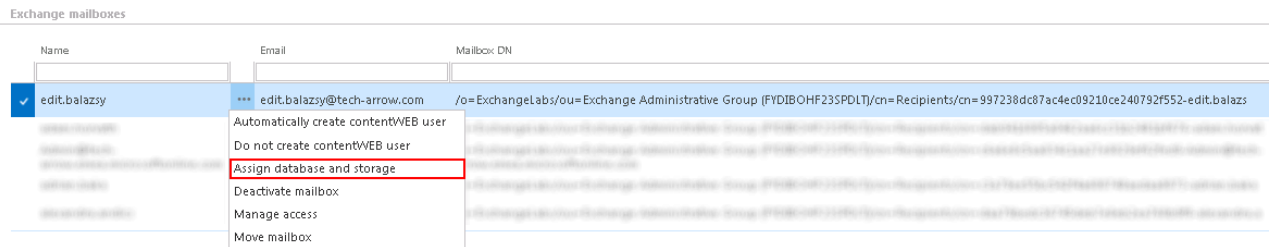
**Overwrite existing settings:** It is very important to keep in mind, that with checking this checkbox the mailboxes (who already have their own database and storage settings) will not have an access to the items that were previously archived into another database and storage. A contentACCESS pop-up window (like the one below) will warn the administrator about this fact. If you leave the “Overwrite existing mailbox settings” checkbox unchecked, then the newly assigned database and storage will be assigned only to those mailboxes, which are not associated with any DB and storage.



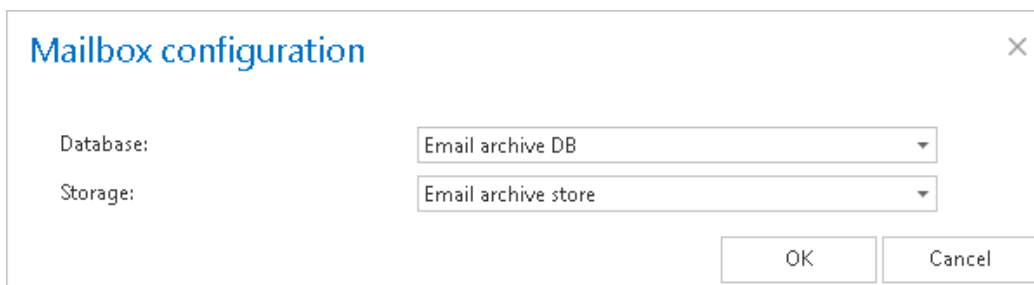
**Note:** If the mailbox database and storage **has not been selected manually** in the View address book, then **by the next running** of an email archive job the database and storage will be automatically assigned to the mailbox according to the settings of this job.



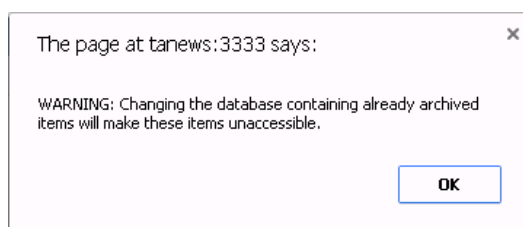
**How to assign database and storage to a mailbox?** It is also enabled to assign a database and storage to a single mailbox. Select a mailbox under the **Exchange mailboxes**, click on ... and select **Assign database and storage** option from the list.



Fill out the **Mailbox configuration** window (Screenshot A). If you want to edit these settings in the future, a pop-up window will warn you that changing the database containing already archived items the user will not have access to these archived items (Screenshot B).



Screenshot A



Screenshot B

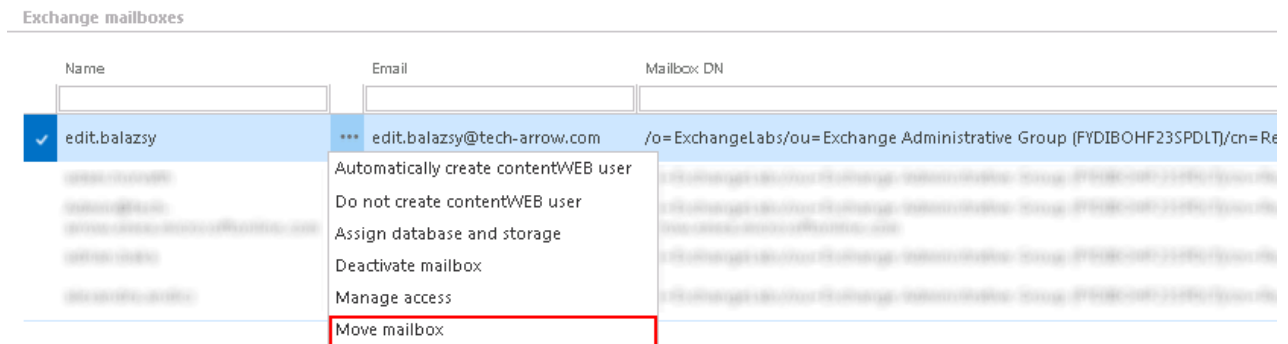
The information about the assigned database and storage will be allocated on the right side of the address book window, in the last columns:



**How to move data from source database/storage into a second (target) database/storage?**



The mailbox mover feature allows to move one or more mailboxes into different database and different storage. This is possible with creating a new job directly from the address book. On the **View address book** page (Email Archive → Archive → View address book) click on the ellipses (...) of the particular mailbox of which archive data need to be moved, and select **Move mailbox** from the context menu.



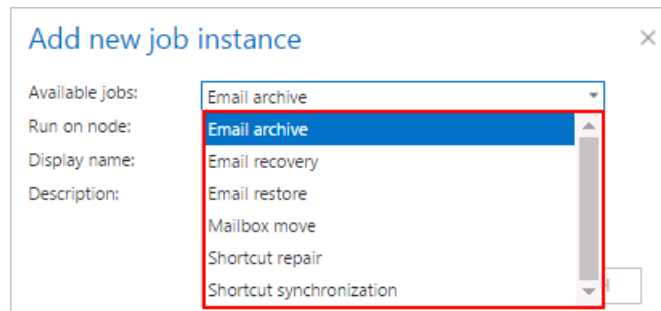
For more information how to set a mailbox move job refer to section **Mailbox move** in section [“Creating Email archive jobs: archive, restore, recovery, mailbox move”](#).

## Creating Email archive jobs: archive, restore, recovery, mailbox move, shortcut synchronization, shortcut repair

As previously mentioned, automated archiving is managed by automated jobs that are configured on the job’s configuration page. Here you can define the exact configurations (i.e. database, schedulers, storage, address book objects to process etc.) to an archive/restore/recovery/mailbox move/shortcut synchronization/ shortcut repair job.

**Creating jobs from email archive plugins:** Navigate to **Email archive → Archive** on the ribbon, and click on the **Jobs** button. The **Jobs** page of Email Archive will open. Click here on **+ new** option. In the **Add new job instance dialog** choose one from the list of available jobs (Email archive/Email restore/Email recovery/Mailbox move/Shortcut synchronization/Shortcut repair), select the node where the job will run (option **Run on node**) and fill a **Display name** into the **Add new job instance** popup-window. Then click on **Add**.





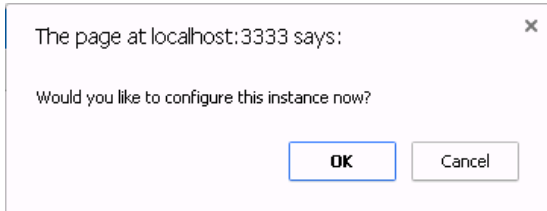
If you want to configure the job immediately, then click **OK** in the pop-up window and the job configuration page opens immediately. The configuration page is accessible any time using the “Configure” menu item in the given job’s context menu (2<sup>nd</sup> picture below).



+ new    ↻ refresh    ⏸ disable auto refresh

Filter: Active jobs

ID	Display Name	Type	Status
91	JohnBrown_archive job	Email archive	Idle
114	Restore job	Start	Idle
115	Recovery job for Test folder	Stop	Idle
127	Mailbox move for edit.balazsy@tech-arrow.com	Configure	Idle
135	Email archive job for EBA	Show last logs	Idle
		Edit	
		Deactivate	
		Delete	



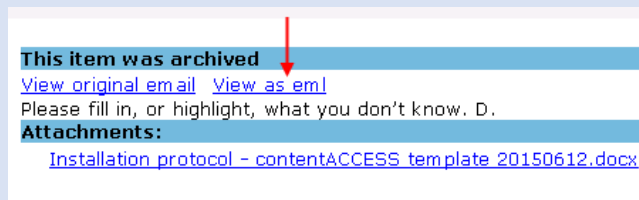
The following subchapters will describe the functionality and configuration of the following email archive job types in more details:

- Email archive job
- Email restore job
- Email recovery job
- Mailbox move job
- Shortcut synchronizer job and
- Shortcut repair job

## Email archive job

This job type archives the configured mailbox items into the selected archive storage. The items which are archived with shortcuts or with the “Keep original” method will be retrievable from the respective mailboxes; items archived with the journal shortcut will be accessible in the archive only. Automated email archive jobs are usually running out of working hours.

**Note:** The HTML shortcut which replaces the archived email also contains a link in .eml format, which is compatible with MAC OS, too.



### Email archive job configuration

In this use case we will configure an email archive job, which will archive the mailbox items of mailbox “[edit.balazsy@tech-arrow.com](mailto:edit.balazsy@tech-arrow.com)” that are older than 1 year but younger than 2 years. The archived items will be replaced with HTML shortcuts. The archive process will run each working day from 5 PM CET till midnight. By this processing type it is a must to configure the following sections on the job's configuration page:

#### ✓ Processing settings:

The administrator may select here, if he would like to use MAPI protocol to communicate with the Exchange server. EWS (Exchange Web Services) connection is selected by default, if MAPI is not selected here. It is important to know, that O365 Exchange server does not support MAPI connection. Another requirement to use MAPI is to have Exchange server 2013 or earlier version. Since some other functions might still use EWS, the EWS connection must be configured in any cases.



With checking **Split attachments** option the attachment will be stored separately from the email body. By default this (recommended) option is always turned on.

On this use case we will use EWS and we will split the attachments, too.

#### Processing settings

- Use MAPI to communicate with Exchange Server (Supported only for versions up to Exchange 2013)
- Split attachments

#### ✓ Database settings:

For database settings select an already configured connection from the dropdown list, where the metadata will be stored. We have configured for our archived emails database “Email Archive DB”, so we set it here. (For further information how to set database connections please refer to section [Databases.](#))

#### Database settings

Database connection:

#### ✓ Scheduling settings:

In this step the running time(s) of the Email archive job must be selected. It is possible either to select a scheduler from the list or to create a new scheduler via **create new ...** option from the dropdown list. For an email archive job it is recommended to set a **Week** schedule with repeat, which will start the job running at the same time on every day. In our use case we set a scheduler which starts the archive job each day after the business hours (starts at 5 PM CET and ends at midnight). (For more information about how to set schedulers refer to the section [Schedules](#) above.)

#### Scheduling settings

Scheduled in:

#### ✓ Storage settings:

For storage settings choose an already configured storage from the dropdown list. The processed binaries will be stored here. On the screenshot below we selected our already configured disk type store: “Email Archive store”). (For more information how to set storages check section [Storage](#) above.)



### Storage settings

Storage name:

- ✓ **Shortcut settings.** In the mailbox the archived emails will be replaced with the shortcuts that is set here. You will be able to select from the shortcuts that you have previously configured in section **Shortcut configuration** above. If the mailbox items have not been archived yet (are archived for the 1<sup>st</sup> time), check the “Apply to NOT ARCHIVED items” checkbox. It is recommended to use HTML shortcut for emails/attachments that are 1 to 2 years old, so we select the “HTML\_emails in age 1-2 years” shortcut here.

### Shortcutting

Shortcut types:

Apply to NOT ARCHIVED items

Use shortcut  for items where sent date is **from the interval 1 - 2 years** [\[Change\]](#) and size is **anything** [\[Change\]](#)

Apply to ALREADY ARCHIVED items

Use shortcut  Keep original shortcutting method

Use shortcut  for items where sent date is **anything** [\[Change\]](#) and size is **anything** [\[Change\]](#)

**Note:** If the items are already archived (e.g. with the “Keep original” method), but they need to be replaced with shortcuts, check the second checkbox and specify a shortcut that should be used (Journal shortcuts cannot be used for ALREADY ARCHIVED items). It should be mentioned, that these 2 processes will always run in 2 stages (even if both processes are configured within one job). By the 1<sup>st</sup> job running the items will be archived, by the 2<sup>nd</sup> job running the (archived) items will be replaced with the selected shortcuts.

You can also set the age and size of the emails to be archived. For Age filter and Size filter settings click on the corresponding “Change” button and set the age of the emails that should be archived and the size of the items to be archived. The maximum size that can be set is 1024, and the available size units are: KB, MB, GB, TB. It is important to keep in mind that the sent date of the emails is the determinative date in case of the age filtering.

**Note:** Email archive size filter is limited to 2 GB (gigabytes). Size filter uses the message size acquired from EWS (Exchange web service). This message size can be different from the value displayed in Outlook.

In this use case we will process all emails regardless of the file size, so we set the value to “0”.



### Age Filter

Select filtration type:

Sent date is younger than  
 Sent date is older than  
 Sent date is in interval

Use Dates

---

From:

To:

From:  To:

Days  
  Months  
  Years

Clear      OK      Cancel

### Size Filter

Select filtration type:

Bigger than  
 Smaller than  
 Between values

---

Bigger:

Clear      OK      Cancel

**Note:** Shortcutting methods can be also combined when configuring an Email Archive job. For more information refer to section “Combining the shortcutting methods”.


#### ✓ Retention settings:

Under Retention settings choose an already configured retention time from the dropdown list. The archived emails will be stored during this time in the storage, and it will be impossible to delete them from there. It is highly recommended to select a retention time which is required by the law of your country. (For more information how to set retentions check section [Retentions](#) above.)

#### Retention settings

Retention:

#### ✓ Address book objects to process

Here the administrator may select the mailboxes, groups or the entire Exchange server which will be processed by the archive job. Click on the  **select** option and check the desired groups or servers in the **Mailbox selection** window, then click on **OK**.

In this use case we will archive mailbox “edit.balazsy@tech-arrow.com”, so we select it from the list:



Mailbox selection

refresh

<input type="checkbox"/>	Name	Type
<input type="checkbox"/>	Office365	Server
<input type="checkbox"/>	techarrow_all	Group
<input type="checkbox"/>	techarrow_sales	Group
<input type="checkbox"/>	Test01	Group
<input type="checkbox"/>	build_notification	Group
<input type="checkbox"/>	elm_team	Group
<input type="checkbox"/>	emailarchive	Group
<input type="checkbox"/>	Administrators notification	Group
<input type="checkbox"/>	TenantAdmins_2092c	Group
<input type="checkbox"/>	HelpdeskAdmins_3ffa9	Group
<input type="checkbox"/>	RIM-MailboxAdmins87a5acd646e1460	Group
<input type="checkbox"/>	Compliance Management	Group
<input type="checkbox"/>	Hygiene Management	Group
<input type="checkbox"/>	Discovery Management	Group
<input type="checkbox"/>	Records Management	Group

Page 1 of 4 (52 items) 1 2 3 4

OK Cancel

Mailbox selection

refresh

<input checked="" type="checkbox"/>	Name	Type
<input type="checkbox"/>	ed	
<input checked="" type="checkbox"/>	edit.balazsy	Mailbox

Begins with(Name, 'ed') Clear

OK Cancel

**Note:** It is also possible to archive journal mailboxes as well. Just select this option in the Mailbox selection window, and in the “Include folders” configuration section set %INBOX%.

- When a journal message is retrieved in the mailbox, the inner message is retrieved;
- When a journal message is restored, the whole envelope is restored;
- When a journal message is previewed (in contentWEB archive), the inner message is displayed;
- When a journal message is exported to PST, the inner message is exported.

✓ **Include folders:**

Email archive job is crawling the entire mailbox or recursive folder structures from the mailbox for further processing. Before you enter the folder name(s) to be crawled, it is necessary to select the folder filtering type.

Include folders

Folder filtering type:

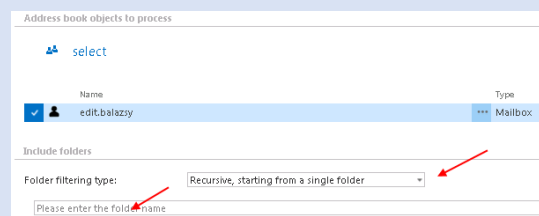
- One single folder
- Entire mailbox
- One single folder
- Recursive, starting from a single folder
- Multiple folders
- Multiple recursive, starting from a single folder



If you set **Entire mailbox**, then the whole mailbox including all folders will be processed. If you set **One single folder** type, then only one pre-selected folder will be processed (e.g. if you set %INBOX%\Subfolder1, then only Subfolder1 will be processed). If you set **Recursive, starting from a single folder** filtering type, then all folders starting from the defined folder will be processed (e.g. if you set %INBOX%\Subfolder1, then starting from Subfolder1 every subfolder will be processed in the structure). The same rule applies to the **Multiple folders**, and to the **Multiple recursive, starting from a single folder**, too, but in this case we can work with more folders simultaneously (e.g.: %INBOX%, %OUTBOX%\Folder name 5...or...%TASKS%, %CALENDARS%\Folder name 6).

**Important:** It is highly recommended to specify the root mailbox folders using wildcards (%). Wildcards ensure, that the given mailbox folder (e.g. the “INBOX” folder) will be processed regardless of the language settings of the mailbox. This is important mainly for companies who archive mailboxes using different languages. Subfolders must be added to a root folder with a backslash (\).

**Note:** It is important to bear in mind, that with selecting “Recursive, starting from a single folder” filtering type under “Include folders” section, and leaving the folder path textbox empty the whole selected mailbox will be archived:



In our use case we select the whole “INBOX” to archive:

**Include folders**

Folder filtering type:

### ✓ Exclude folders

With this function you may set, which folders/subfolders should not be archived. If you would not like to exclude any folder from the archive process, you can skip these settings.



The folders may be excluded using one of the available methods: a) They may be **added manually** via the **+ new** option; b) they may be **imported** in one of the available file formats via the **import** option.

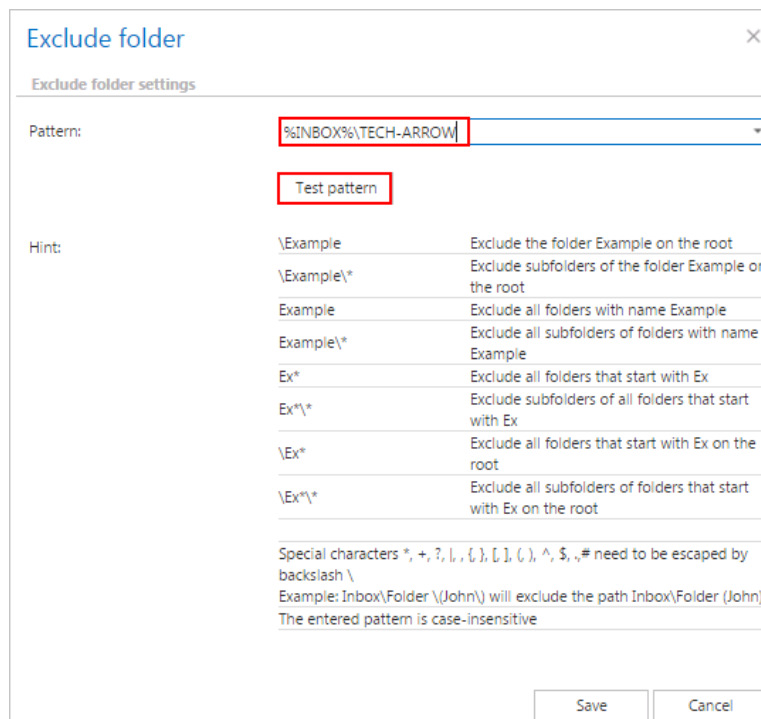
**Important:** Due to different language settings in the user mailboxes, it is highly recommended to specify the root folders using wildcards (%). Subfolders must be added to a root folder with a backslash (\).

#### Exclude folders

a) **+** new    b) **↩** import

#### a) Add exclude folders manually:

Click on **+ new** option. In the **Exclude folder** dialog's textbox specify the folder(s) to be excluded. Use the hints that are featured in the same dialog. `%INBOX%\TECH-ARROW` pattern on the picture below means that "TECH-ARROW" folder on the "INBOX" root folder will be excluded.



#### Test pattern button

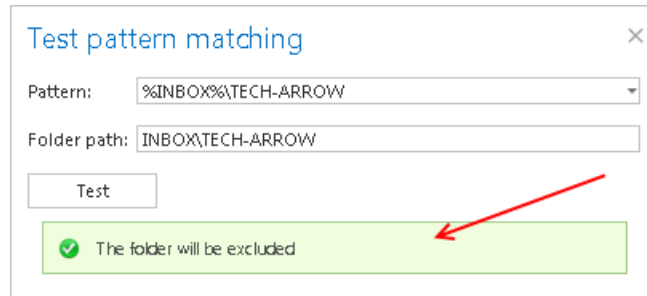
This button is used to check, if the entered pattern will be suitable for the path that the user would like to exclude from the archiving process. With clicking on the **Test pattern** button, open the **Test**





**pattern matching** window. Enter the folder path into the **Folder path** field (this time without the % sign), and click on **Test** button.

The test will be successful, if the **Pattern** was entered correctly into the **Exclude folder** window.



### c) Import the list of exclude folders:

Exclude folders may be imported from files in one of the available formats: CSV, XML, Tab delimited files or Space delimited file. The file to be imported must contain the list of exclude folders. **Important:** Root folders must be specified in wildcards (%) in the import files. Subfolders must be added to a root folder with a backslash (\). To import such a file with the list of folders refer to chapter [Importing contentACCESS configurations from files](#) of this guide.

### Excluding folders with special characters

Also the folders including special characters like brackets, hyphens, question marks etc. can be excluded from the archiving process. To exclude such folders from the archiving process, the special characters included in the folder(s) must be excluded **using the backslash “\” escape character**. The **escape character must be added before the special character** to be excluded, in the **Exclude settings** of the archive job's configuration page.

E.g. you have such a structure in the mailbox: `INBOX\Important (folder)`

and the “**Important (folder)**” must be excluded (the special characters are the brackets), then you must specify the folder to be excluded like this: `INBOX\Important\(folder\)`

This information is available at the bottom of the **Exclude folder** window:



**Exclude folder** ✕

Exclude folder settings

Pattern:

Hint:

\Example	Exclude the folder Example on the root
\Example\*	Exclude subfolders of the folder Example on the root
Example	Exclude all folders with name Example
Example\*	Exclude all subfolders of folders with name Example
Ex*	Exclude all folders that start with Ex
Ex*\*	Exclude subfolders of all folders that start with Ex
\Ex*	Exclude all folders that start with Ex on the root
\Ex*\*	Exclude all subfolders of folders that start with Ex on the root

Special characters \*, +, ?, [, ], {, }, (, ), ^, \$, %, # need to be escaped by backslash \

Example: Inbox\Folder \John\ will exclude the path Inbox\Folder (John)

The entered pattern is case-insensitive

✓ **Item filtering**

This configuration enables filtering among your items by their message class. Using this filter the user will be allowed to select different document types, such as mails, documents, contacts etc. to archive.

**Note:** The message classes excluded in the [Email archive System settings](#) take always priority over the **Item filtering** settings defined in the archive job.

**Important:** In case of **custom Exchange solution(s)** used for emails the **custom email properties will not be archived!** The recommended solution: do not archive these emails and/or use the exclude feature (in [Email archive System settings](#)) for these custom message classes.

To set message class filters in the archive job activate the **Message class filter** button by checking the checkbox next to it, then click on the active button.

**Item filtering**

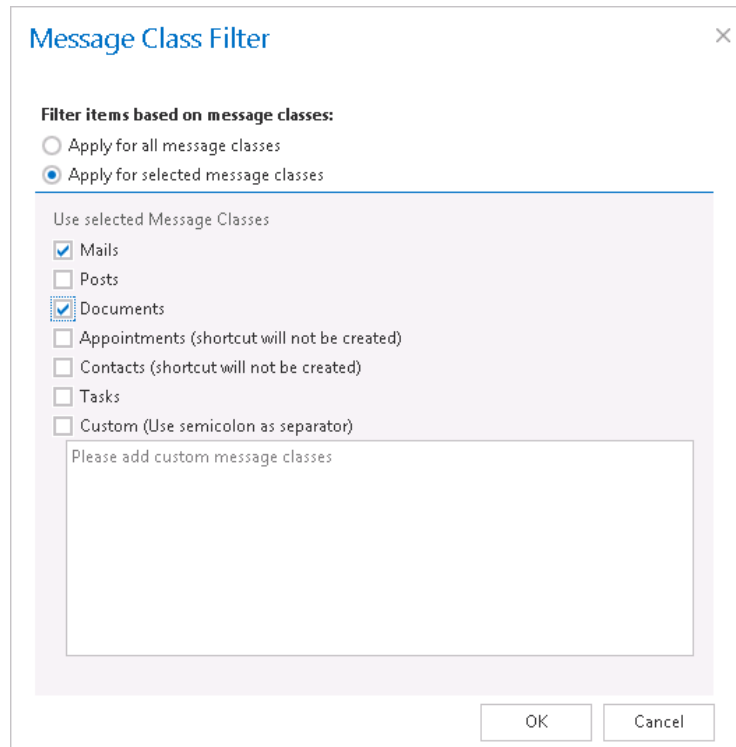
---

Filtering type:   Message Class filter

In the **Message class filter** dialog it is possible to choose if the filter will be applied for all message classes (choose radio button **Apply for all message classes**) or only for many selected classes



(Apply for selected message classes). It is also allowed to add Custom message classes to the already existing ones. In this use case we will archive emails and documents only:



### ✓ Exclude addresses

With the “Exclude addresses” feature you may exclude certain

- user mailboxes (e.g. [john.arrow@tech-arrow.com](mailto:john.arrow@tech-arrow.com)) or
- domains (e.g. @microsoft.com) from the list of archivable messages.

The filtering option is configurable and it filters emails based on

- recipient(s),
- sender(s) or
- both (recipients and sender).

The list of objects to be excluded may be

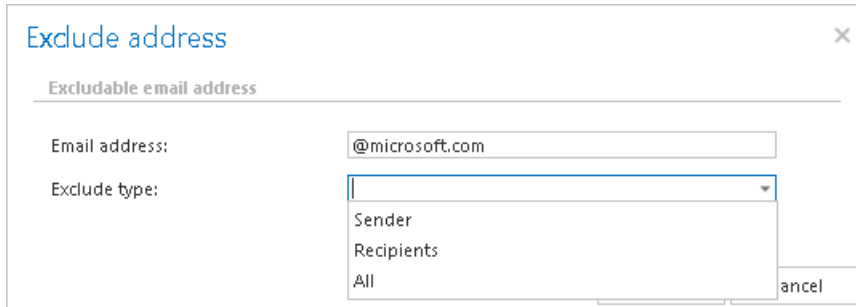
- Added to contentACCESS manually using the **+new** option;

Exclude addresses

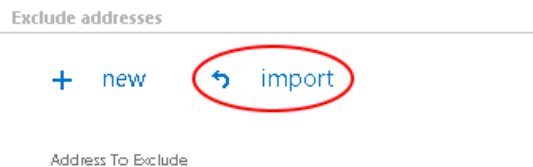


Address To Exclude

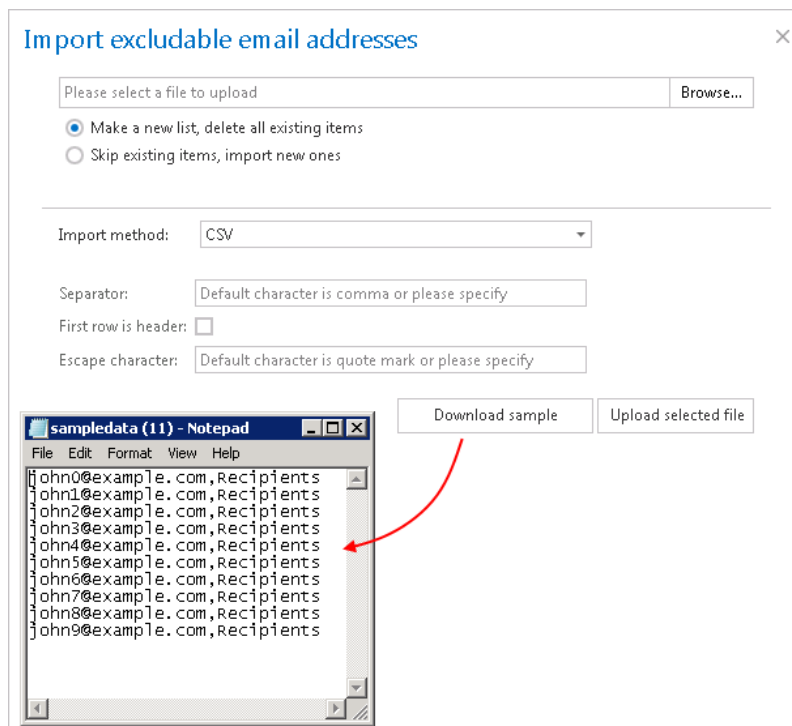
Click on **+new** to open the **Exclude address** dialog. Enter the object to be excluded, and select the **Exclude type** (Sender, Recipient, All) to be applied.



b) Imported into contentACCESS from a file using the **import** option.



The file to import usually contains 2 columns: first column with the email addresses (or domains), 2<sup>nd</sup> column with the information if the object is sender, recipient or can be both. A sample import file may be viewed using the “Download sample” button. (For more information refer to chapter [Importing contentACCESS configurations from files.](#))





- ✓ **Notification settings.** Select here, when you will need to get notification emails from the Email archive job. It is possible to set here, if you need such a notification email always/never, or, you need it only in case when an error/warning occurred during the archiving process – for example, if the archive of one or more items failed, then you may get a notification email about this error. Into the **Recipient list** textbox insert the email address(es) of the person(s), who will get such notifications. Notifications should be used if the administrator does not use the monitoring feature.

**Notification settings**

---

Send when:

Recipient list:

- ✓ **Resource settings.** Set the value, which will determine how many items will be processed simultaneously by the email archive job. The recommended value is “2”.

**Resource settings**

---

Worker thread count:

- ✓ **Save your changes!!**

### **Combining the shortcutting methods in an Email archive job**

#### **What are the advantages of combining the shortcutting methods for the user?**

Companies use the “Keep original” archiving method on a daily base. This archive method ensures, that the emails and its attachments are ready at hand during the time when they are still in use. After certain time period (usually after 6 months) it is redundant to keep these emails in the mailbox(es), as they take up too much space. However, these emails must be still easily accessible at any time. From this reason, it is recommended to replace them with shortcuts, which save space in the mailboxes but guarantee easy access to the older mailbox items. With combining the shortcut methods the end user will easily achieve the demanded result.

This use case will demonstrate how to configure an Email Archiving job, which will archive the items older than 10 days, while keeping them in the original file location. The job will also replace these items with shortcuts after 6 months. The job combines the “Keep original” archiving method with the shortcutting after the item reaches a certain age (6 months in this use case). The size of the items to be archived and shortcutted can be set as well.

**Note:** If two archive processes are combined (as in this use case), then the archive process will run in two stages, too. By the first job running the emails will be archived while keeping the original, by the 2<sup>nd</sup> job running these items will be replaced with shortcuts.

The following steps should be executed to set up an email archive job using the advantages of this method:

- ✓ **Set up a new Email Archiving job and open its configuration page.**
- ✓ **Set all required sections on the job's configuration page.**
- ✓ On the configuration page of the Email Archiving job **navigate to the “Shortcutting”** section, and check the **“Apply to NOT ARCHIVED items”** checkbox.

Shortcutting

---

Shortcut types:

Apply to NOT ARCHIVED items  
 Use shortcut:  for items where sent date is **older than 10 days** [\[Change\]](#) and size is **anything** [\[Change\]](#)

Apply to ALREADY ARCHIVED items with keep original shortcutting method  
 Use shortcut:  for items where sent date is **older than 6 months** [\[Change\]](#) and size is **larger than 100 KB** [\[Change\]](#)

- ✓ **Set the “Keep original” archive method for items which are older than 10 days.** Choose the “Keep original” option from the dropdown menu and set that all items older than 10 days will be archived.

Shortcutting

---

Shortcut types:

Apply to NOT ARCHIVED items  
 Use shortcut:  for items where sent date is **older than 10 days** [\[Change\]](#) and size is **anything** [\[Change\]](#)

Apply to ALREADY ARCHIVED items with keep original shortcutting method  
 Use shortcut:  for items where sent date is **older than 6 months** [\[Change\]](#) and size is **larger than 100 KB** [\[Change\]](#)

- ✓ **Apply the shortcutting to the items archived with the “Keep original” method, which are older than 6 months and larger than 100 kB.** Choose HTML shortcut type, which will be used by the job.

Check the “Apply to ALREADY ARCHIVED items with keep original shortcutting method” checkbox. Choose the already configured “HTML” shortcut from the dropdown list. Set the sent date to 6 months and the size to “larger than 100 kB”.



Shortcutting

Shortcut types:

Apply to NOT ARCHIVED items  
 Use shortcut  for items where sent date is **older than 10 days** [\[Change\]](#) and size is **anything** [\[Change\]](#)

Apply to ALREADY ARCHIVED items with keep original shortcutting method  
 Use shortcut  for items where sent date is **older than 6 months** [\[Change\]](#) and size is **larger than 100 KB** [\[Change\]](#)

**Note:** Please keep in mind that the sent date of the email is the determinative date. The age and size of the emails to be archived/shortcutting can be modified anytime by using the “Change” buttons.

Shortcutting

Shortcut types:

Apply to NOT ARCHIVED items  
 Use shortcut  for items where sent date is **older than 10 days** [\[Change\]](#) and size is **anything** [\[Change\]](#)

Apply to ALREADY ARCHIVED items with keep original shortcutting method  
 Use shortcut  for items where sent date is **older than 6 months** [\[Change\]](#) and size is **larger than 100 KB** [\[Change\]](#)

**USE CASE: How to set up the shortcutting if all items should be archived and items under 100 kB should be kept in the original location, while items over 100 kB should be replaced with shortcuts?** In this use case set the size filter in the 2<sup>nd</sup>!!!! row only (refer to screenshot above) to >100 kB and do not set a size filter in the 1<sup>st</sup> row.

Shortcutting

Shortcut types:

Apply to NOT ARCHIVED items  
 Use shortcut  for items where sent date is **older than 10 days** [\[Change\]](#) and size is **anything** [\[Change\]](#)

Apply to ALREADY ARCHIVED items with keep original shortcutting method  
 Use shortcut  for items where sent date is **older than 6 months** [\[Change\]](#) and size is **larger than 100 KB** [\[Change\]](#)

✓ **Save your settings** and wait until the job starts to run according to the configured scheduler.



## Email restore job

This job type is used to restore the original mailbox items from the shortcuts back into the mailbox. A restore job relocates the already archived original back into the original location only in case, if it was archived with the shortcutting method (i.e. it has a shortcut in the mailbox with the same parameters). The age filter and message class filter settings will be considered as well. If the restore job finds in the source location (mailbox):

1. the original mailbox item – it will not touch it;
2. a shortcut with the same parameters – it will restore the original item to the source folder;
3. nothing (neither a shortcut, nor the original) – nothing will happen, the source folder will remain empty.

There are 2 restore methods that can be used by the restore job. The administrator may decide if

1. the data will be restored to the existing shortcut.
2. a new item will be created and the shortcut will be replaced by this new item.

The default restore method can be set on the [Email archive System settings](#) page (**Email Archive** tab → **Settings** group → **System settings** button, section “**General settings**”).

Restore jobs are run rarely, so it is recommended either to set a “One time scheduler” for them, or to start to run them manually from the grid.

### **Email restore job configuration**

By this processing type the following sections must be configured:

#### ✓ **Scheduling settings:**

In this step the running time(s) of the restore job must be selected. It is possible either to select a scheduler from the list or to create a new scheduler via create new option. Restore jobs are usually scheduled with “one time schedulers”. Our restore job will run on 1<sup>st</sup> of October, with a start date 6 PM CET and will run until it finishes the restore process. (For more information about how to set schedulers refer to the section “[Schedules](#)” above.)

#### Scheduling settings

Scheduled in:

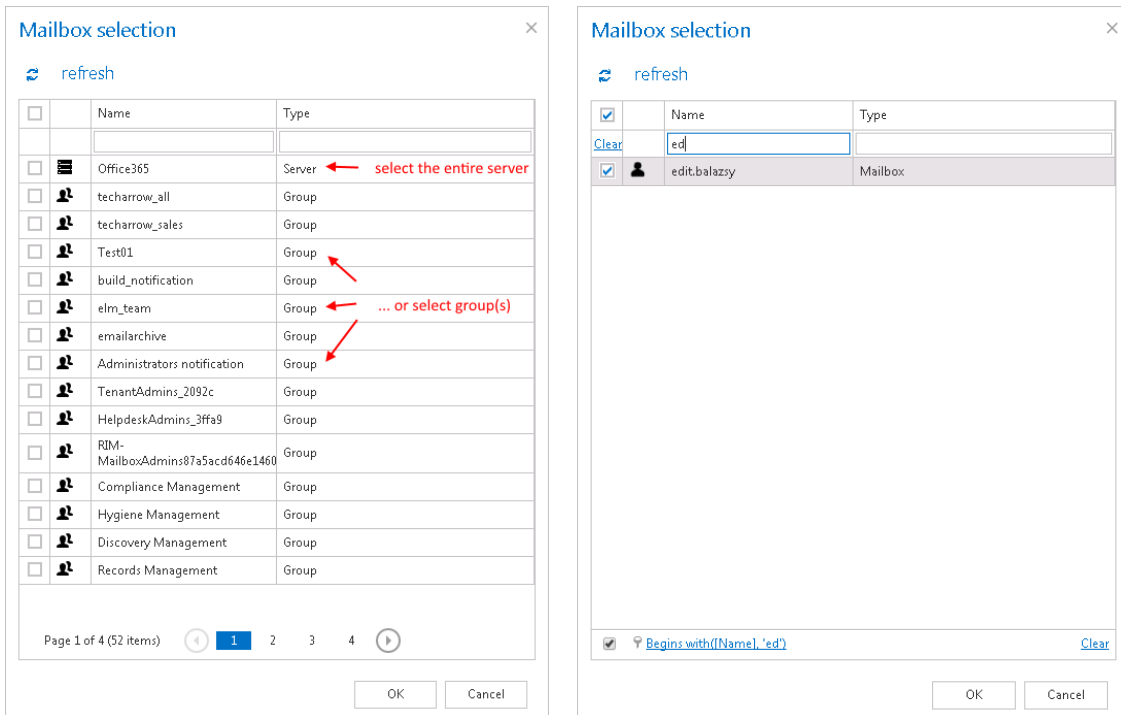
1st of OCT\_6 PM





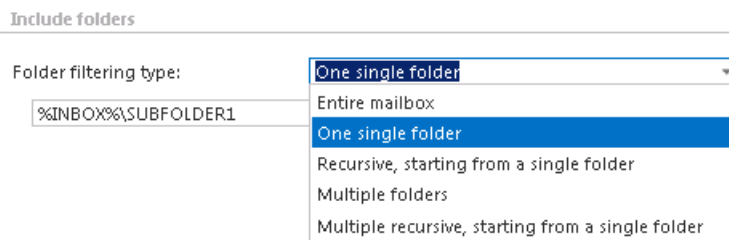
✓Address book objects to process

Here you can select the mailboxes, groups or the entire Exchange server which will be processed by the restore job. In this use case we will restore the mailbox of “edit.balazsy”, so we select it from the list. To find it, we click on the **select** option and start to write the mailbox name into the **Mailbox selection** search field:



✓Include folders:

Email restore job is crawling the entire mailbox or recursive folders from the mailbox. Before you enter the folder name(s) to be crawled, it is necessary to select the folder filtering type.



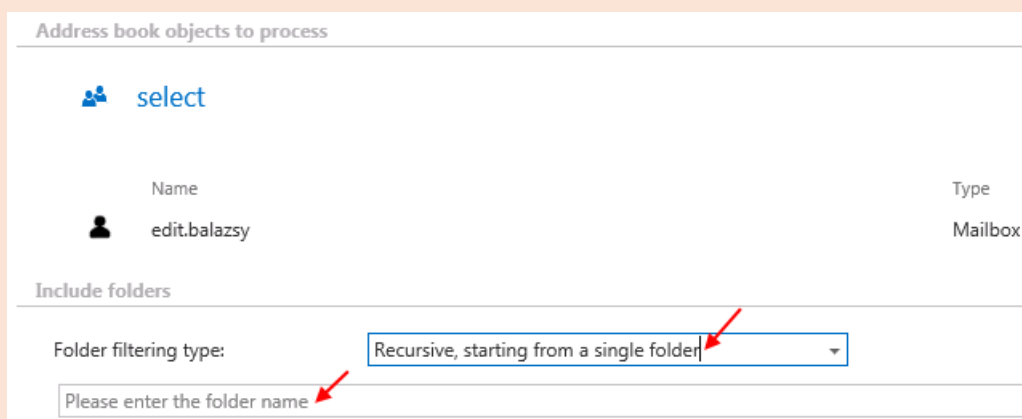
If you set **Entire mailbox**, then the whole mailbox including all folders will be restored. If you set **One single folder** type, then only one pre-selected folder will be processed (e.g. if you set %INBOX%\Subfolder1, then only Subfolder1 will be processed). If you set **Recursive, starting from a single folder** filtering type, then all folders starting from this folder will be processed (e.g. if you



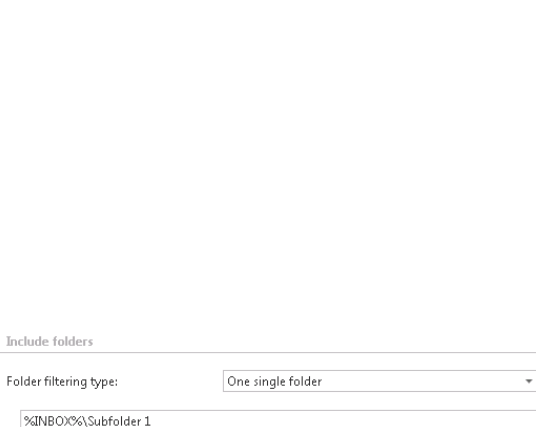
set %INBOX%\Subfolder1, then starting from Subfolder1 every subfolders will be processed in the structure). The same rule applies to the **Multiple folders**, and to the **Multiple recursive, starting from a single folder**, too, but in these cases we can work with more folders simultaneously (e.g.: %INBOX%, %OUTBOX%\Folder name 5...or...%TASKS%, %CALENDARS%\Folder name 6.

**Important:** Due to different language settings in the user mailboxes, it is highly recommended to specify the root folders using wildcards (%). Subfolders must be added to a root folder with a backslash (\).

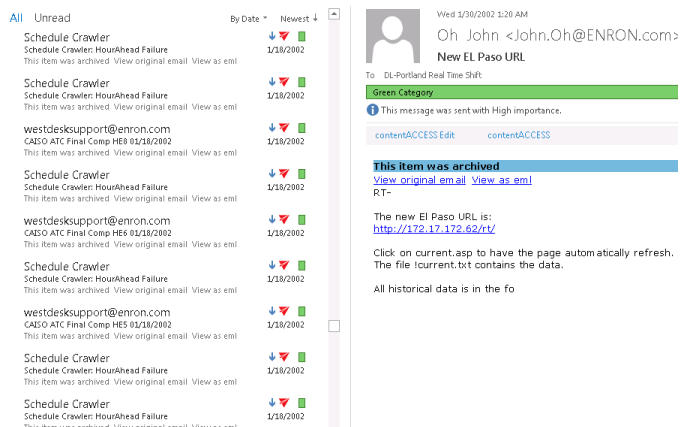
**How to restore whole mailbox?** It is important to bear in mind, that with selecting “Recursive, starting from a single folder” filtering type under “Include folders” section, and leaving the folder path textbox empty the whole selected mailbox will be restored:



Now we will restore the contents of single folder “Subfolder 1” on the “INBOX” root (check screenshot).



Screenshot A: Folder filter of the restore job



Screenshot B: Contents of “Subfolder 1” before restore



## ✓ Exclude folders

With this function you may set, which folders/subfolders should not be restored. The same rules apply for the restore job as for the archive job. The folders may be

- a) **added (via the + new option)** as it is described by the Email archive job configuration or
- b) **imported (via the import option).**

To learn more about these settings refer to chapter [Importing contentACCESS configurations from files](#) of this guide.

### Exclude folders

a) + new    b) ↶ import

**Important:** Due to different language settings in the user mailboxes, it is highly recommended to specify the root folders using wildcards (%). Subfolders must be added to a root folder with a backslash (\).

## ✓ Item filtering

This configuration enables for you to filter among your items according to age and message class. Only emails with the predefined filtering criteria will be processed. It is also enabled to use more filters simultaneously. To activate any of these filters, check the corresponding checkbox first, then click on the button to open the filter dialog:

- **Age filter:** If you wish to process items with a specific sent date, select an option from the **Select filtration type** list, and check the **Use Dates** checkbox. Now you can specify a date or date interval, which will determine, how old items will be processed by the job. This age filtering type should be used if you would like to restore items with a specific sent date. Examples of **using dates:**



**Age Filter** ✕

items younger than the specified date will be processed

Select filtration type:

Sent date is younger than  
 Sent date is older than  
 Sent date is in interval

Use Dates

Younger  
 2/1/2015 12:00 AM

Days  Months  Years

OK Cancel

**Age Filter** ✕

items older than the specified date will be processed

Select filtration type:

Sent date is younger than  
 Sent date is older than  
 Sent date is in interval

Use Dates

Older  
 2/3/2015 12:00 AM

Days  Months  Years

OK Cancel

**Age Filter** ✕

items between dates "From-To" will be processed

Select filtration type:

Sent date is younger than  
 Sent date is older than  
 Sent date is in interval

Use Dates

From: 2/1/2015 12:00 AM To: 2/3/2015 12:00 AM

From:  To:   Days  Months  Years

OK Cancel

**Examples of filtering using days/months/years:**

If the **Use dates** checkbox is not selected, then the date selection option becomes inactive. In this case it is allowed to filter between items older than/younger than a certain number of days/month/years. Enter the value into the **From, To** checkboxes. This age filtering type should be used if you would like to restore items “on the fly”, which are older/younger than a certain number of days/months/years. Now we will restore the items younger than 1 year (Screenshot A). If the Age filter has been set click **OK**.

**Age Filter** ✕

Select filtration type:

Sent date is younger than  
 Sent date is older than  
 Sent date is in interval

Use Dates

Younger

Days  Months  Years

OK Cancel

Screenshot A

**Age Filter** ✕

Select filtration type:

Sent date is younger than  
 Sent date is older than  
 Sent date is in interval

Use Dates

From: 2/1/2015 12:00 AM To: 2/3/2015 12:00 AM

From:  To:   Days  Months  Years

OK Cancel

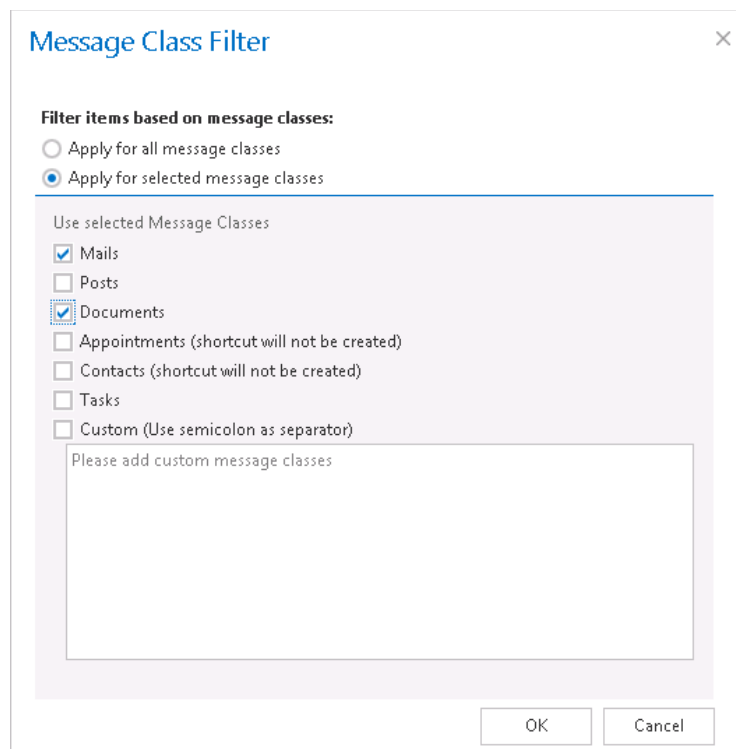
Screenshot B



- **Message class filter:** This filter was improved to select certain message classes to be restored. Using this filter the user will be allowed to select different message types to restore; mails, tasks, contacts etc. For filtering emails according to this criteria activate **Message class filter** button by checking the checkbox next to it, then click on the active button.

In this use case we will restore only mails and documents, so we check the **Apply for selected message classes** option and select Mails and Documents from the list.

**Note:** It is also allowed to add **Custom message classes** to the already existing ones.



### ✓ Exclude addresses

With the “**Exclude addresses**” feature you may exclude the desired

- ✓ domain(s) (e.g. *@microsoft.com*) or
- ✓ email address(es) (e.g. *john.arrow@tech-arrow.com*) from the list of messages to be restored.

You may filter between recipients, senders or both, and the objects to be excluded from the restore may be imported from a file (using option **import**) or added manually (using option **+ new**). The settings are the same as we described in the email archive job above.



#### Exclude addresses

+ new ↶ import

Address To Exclude

- ✓ **Notification settings.** The user may select here, when to send notification emails from the restore job regarding the successfulness of the restore process. It is possible to set here, if you need a notification email always/never, or, you need it only in case when an error/warning occurred during the restoring process. Into the **Recipient list** textbox insert the email address(es) of the person(s), to whom such notifications will be sent. Notification emails may be useful, if the monitoring feature is not used to detect possible failures of job running.

#### Notification settings

Send when:

Recipient list:

- ✓ **Processing settings:** The administrator may select here, if he would like to use MAPI protocol to communicate with the Exchange server. EWS (Exchange Web Services) connection is selected by default, if MAPI is not selected here. It is important to know, that O365 Exchange server does not support MAPI connection. Another requirement to use MAPI is to have Exchange server 2013 or earlier version. Since some other functions might still use EWS, the EWS connection must be configured in any cases.

#### Processing settings

Use MAPI to communicate with Exchange Server (Supported only for versions up to Exchange 2013)

- ✓ **Resource settings.** Set the value, which will determine how many items will be processed simultaneously by the email archive job. The recommended value is "2".
- ✓ **Save your changes!**
- ✓ **Wait until the job starts to run according to the schedule.** If the job finished processing, the shortcuts linking to the matching items will be replaced by originals in your "Subfolder 1" folder.



## Email recovery job

The function of this job is to re-generate the Exchange mailbox from the archive. This processing type is useful in the following cases:

- The entire mailbox was deleted,
- One or more folders were deleted,
- One or more items were deleted,

and the user would like to get back these already archived items from the archive storage.

The mailbox recovery is able to reconstruct the mailbox from the archive: the items already archived will be put back to the mailbox exactly into the source location. The mailbox recovery will also create the folder if this no longer exists in the mailbox. It will try to keep the folder type as well (if the information is available in the archive). Since all filtering options are active, it is possible to recover any part of the mailbox:

- One folder
- Multiple folders
- Recursive folder structure
- Whole mailbox (structure)
- Mails older then/Younger then/Between dates ...
- Different message classes (mails, documents, contacts etc.)

This processing type is also checking for duplicates, (so it is safe to run the same job multiple times, as duplicates will not be created):

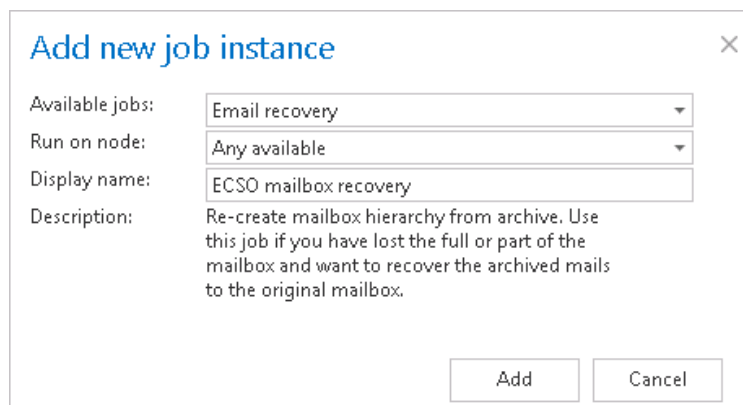
- If there is a shortcut (for the recovered mail) in the folder – the mail will not be recovered.
- If the same mail is already in the folder – the mail will not be recovered.
- If the same mail was archived multiple times to the same folder (archive-restore-archive) – only the youngest mail will be recovered.

**Note:** It is important to bear in mind, that duplicate checking is active only on folder level. Mails without internet message ID might be duplicated.

**Note:** There are also some limitations of the recovery technology, namely:

- Contacts can be recovered only into a contacts folder;
- Appointments can be recovered only into an appointment folder;
- Tasks can be recovered only into a tasks folder.

To create a new Email system recovery job click on **+ new** on the page of the email archive jobs. The **Add new job instance** dialog opens. Select “Email recovery” from the dropdown list, enter the job’s name, select a node where it should run and click **OK**.



### **Email recovery job configuration**

On the job’s configuration page the user is required to configure the following settings:

#### **✓ Processing settings.**

The administrator may select here, if he would like to use MAPI protocol to communicate with the Exchange server. EWS (Exchange Web Services) connection is selected by default, if MAPI is not selected here. It is important to know, that O365 Exchange server does not support MAPI connection. Another requirement to use MAPI is to have Exchange server 2013 or earlier version. Since some other functions might still use EWS, the EWS connection must be configured in any cases.

There are multiple options what to recover with a recovery job; the user may recover the original item, or he can get back the shortcut only. The user has the chance to select one of these 2 radio buttons:





### Processing settings

- Use MAPI to communicate with Exchange Server (Supported only for versions up to Exchange 2013)  
 Recover shortcut  
 Recover original

- ✓ **Shortcut settings.** If the administrator would need to recover items as shortcuts, then the already configured shortcut selected right here will be used to recover them. If the administrator selected above to recover the original item, this configuration option will be then hidden.

### Shortcut settings

Shortcut name:

- ✓ **Scheduling settings:**

Specify a scheduler to determine, when the recovery job will run. It is possible either to select a scheduler from the list or to create a new scheduler via **Create new** option. (For more information about how to set schedulers refer to the section [Schedules](#) above.) It is recommended to set here a **One time** scheduler, or to start the job manually.

### Scheduling settings

Scheduled in:

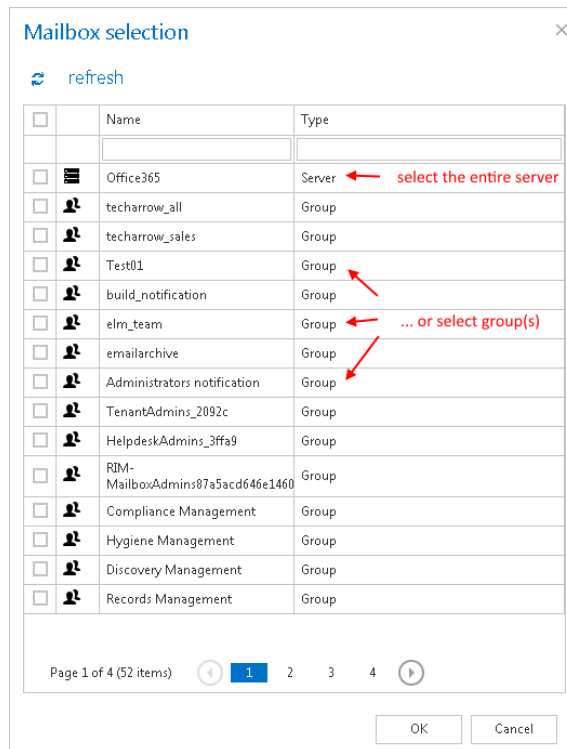
- ✓ **Notification settings.** Select here, when you will need to get notifications from the job regarding the successfulness of the recovery process. It is possible to set here, if you will get a notification email always/never, or you get it only in case when an error/warning occurred during the archiving – for example, if the recovery of one or more items failed, then you may get a notification email about this error. Into the **Recipient list** textbox insert the email address(es) of the person(s), to whom these emails should be sent.

### Notification settings

Send when:   
 Recipient list:

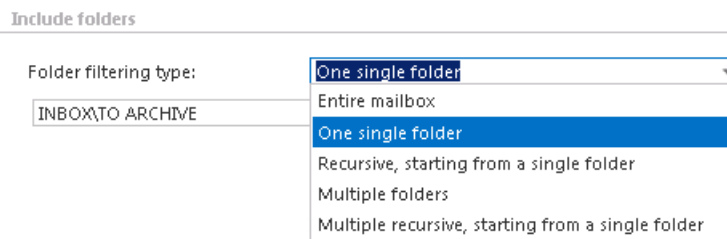
- ✓ **Address book objects to process**

Here you can select the mailboxes, groups or the entire Exchange server which will be processed by the recovery job. Click on the **select** option and check the groups or servers in the **Mailbox selection** window, then click on **OK**:



✓ **Include folders:**

Recovery job is able to recover any folders of the mailbox; the entire mailbox, one single folder, multiple folders, recursive folder structures etc. Before you enter the folder name(s) to be crawled, it is necessary to select the folder filtering type.

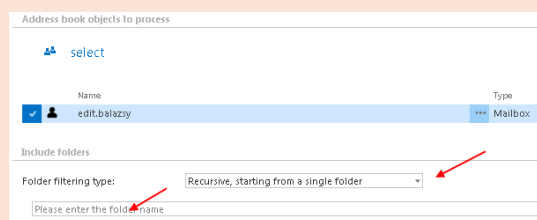


If you set **Entire mailbox**, then the whole mailbox including all folders will be recovered. If you set **One single folder** type, then only one predefined folder will be processed (e.g. if you set INBOX\Subfolder1, then only Subfolder1 will be processed). If you set **Recursive, starting from a single folder** filtering type, then all folders starting from this folder will be processed (e.g. if you set INBOX\Subfolder1, then starting from Subfolder1 every subfolders will be processed in the structure). Subfolders must be added to a root folder with a backslash (\).

The same rule applies to the **Multiple folders**, and to the **Multiple recursive, starting from a single folder**, too, but in this case we can work with more folders simultaneously (e.g.: INBOX, OUTBOX\Folder name 5...or...TASKS, CALENDARS\Folder name 6

**Important!!** By the recovery processing type it is **not required to specify the root folder with wildcards** (percent signs). If any wildcard is specified, the recovery process will not be successful. E.g. instead of %INBOX% use form INBOX, instead of %TASK% use form TASK etc. The same rule applies to **Exclude folder** configurations, too.

**How to recover whole mailbox?** It is important to bear in mind, that with selecting “Recursive, starting from a single folder” filtering type under “Include folders” section, and leaving the folder path textbox empty the whole selected mailbox will be recovered:



### ✓ Exclude folders

With this function you may set, which folders/subfolders should not be recovered. The folders that should not be recovered may be

- a) Added via the “+ new” button – The settings are the **same as by the Email archive job with ONE EXCEPTION:** by the Email recovery job you can’t use %INBOX% to use the language independent default folders.
- b) Imported from a file via the **import** button - For more information refer chapter [Importing contentACCESS configurations from files](#) of this guide.

#### Exclude folders

a) **+** new    b) **↶** import

### ✓ Item filtering

This configuration enables for you to filter among your items for recovering by 2 types of criteria: by age and message class. Only emails with the predefined filtering criteria will be processed. It is also enabled to use more filters simultaneously. To activate any of these filters, check the corresponding checkbox first, then click on the button to open the filter dialog:



Item filtering

---

Filtering type: No filters set

Age filter  
  
 Message Class filter

- **Age filter:** To filter out recoverable items with specific send dates choose an option from the **Select filtration type** list, and check the **Use Dates** checkbox. Now specify a date/date interval to filter out items, of which sent date match with the search criteria entered here. The items falling under this sent date interval will be selected to recover. Examples of **using dates**:

**Age Filter** items younger than the specified date will be processed

**Select filtration type:**

Sent date is younger than  
 Sent date is older than  
 Sent date is in interval

Use Dates

Younger

Days  Months  Years

OK Cancel

**Age Filter** items older than the specified date will be processed

**Select filtration type:**

Sent date is younger than  
 Sent date is older than  
 Sent date is in interval

Use Dates

Older

Days  Months  Years

OK Cancel

**Age Filter** items between dates "From-To" will be processed

**Select filtration type:**

Sent date is younger than  
 Sent date is older than  
 Sent date is in interval

Use Dates

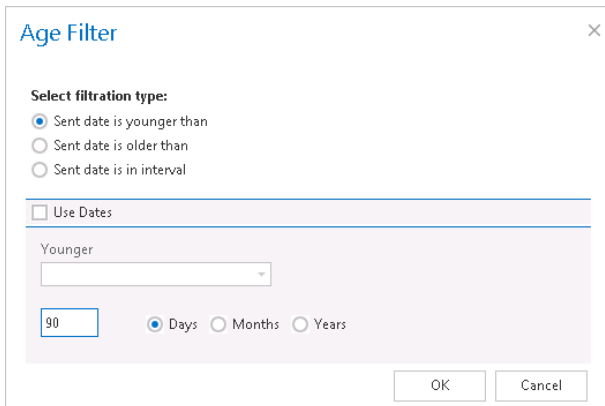
From:  To:

From:  To:   Days  Months  Years

OK Cancel

**Examples of filtering using days/months/years:**

If the **Use dates** checkbox is not selected, then the date selection option becomes inactive. In this case it is allowed to filter between items older than/younger than a certain number of days/month/years. This age filtering type should be used if you would like to recover those items, which are older/younger than a certain number of days/months/years (i.e. items younger than 1 year). Enter the desired value into the **From, To** checkboxes. Then click **OK**.



**Age Filter**

Select filtration type:

Sent date is younger than

Sent date is older than

Sent date is in interval

Use Dates

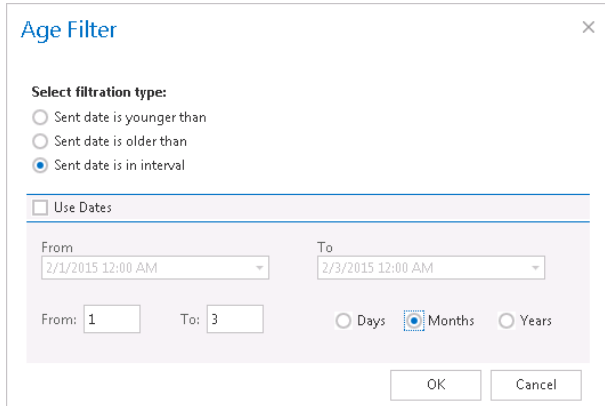
Younger

90

Days  Months  Years

OK Cancel

Screenshot A: Filtering items younger than 90 days



**Age Filter**

Select filtration type:

Sent date is younger than

Sent date is older than

Sent date is in interval

Use Dates

From: 2/1/2015 12:00 AM To: 2/3/2015 12:00 AM

From: 1 To: 3

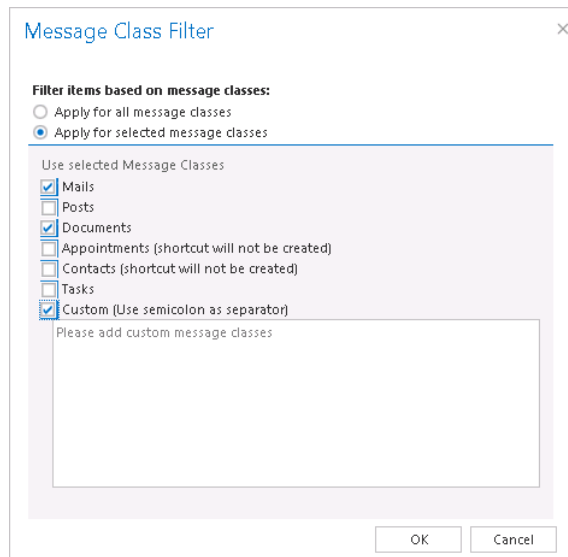
Days  Months  Years

OK Cancel

Screenshot B: Filtering out up to 3 months old items

- **Message class filter:** Using this filter the user will be allowed to filter out different message types, such as mails, documents, contacts etc. that he would like to recover. For filtering emails according to this criteria activate **Message class filter** button by checking the checkbox next to it, then click on the active button.

In the **Message class filter** dialog select all (choose radio button **Apply for all message classes**) or specify certain message classes (**Apply for selected message classes**). It is also allowed to add **Custom message classes** to the already existing ones. After all necessary custom classes have been checked click on **OK**.



**Message Class Filter**

Filter items based on message classes:

Apply for all message classes

Apply for selected message classes

Use selected Message Classes

Mails

Posts

Documents

Appointments (shortcut will not be created)

Contacts (shortcut will not be created)

Tasks

Custom (Use semicolon as separator)

Please add custom message classes

OK Cancel

### ✓ Exclude addresses

With the “**Exclude addresses**” feature you may exclude the desired

- ✓ domain(s) (e.g. *@microsoft.com*) or
- ✓ email address(es) (e.g. *john.arrow@tech-arrow.com*) from the list of messages to be recovered.



You may filter between recipients, senders or both, and the objects to be excluded from the recovery process may be imported from a file (using option **import**) or added manually (using option **+ new**). The settings are the same as we described in the email archive and email restore jobs above.

Exclude addresses

+ new ↶ import

Address To Exclude

- ✓ **Resource settings.** Set the value, which will determine how many items will be processed simultaneously by the recovery job. The recommended value is “2”.
- ✓ **Save your changes!!**
- ✓ **Wait until the scheduler starts the job.**

## Mailbox move job

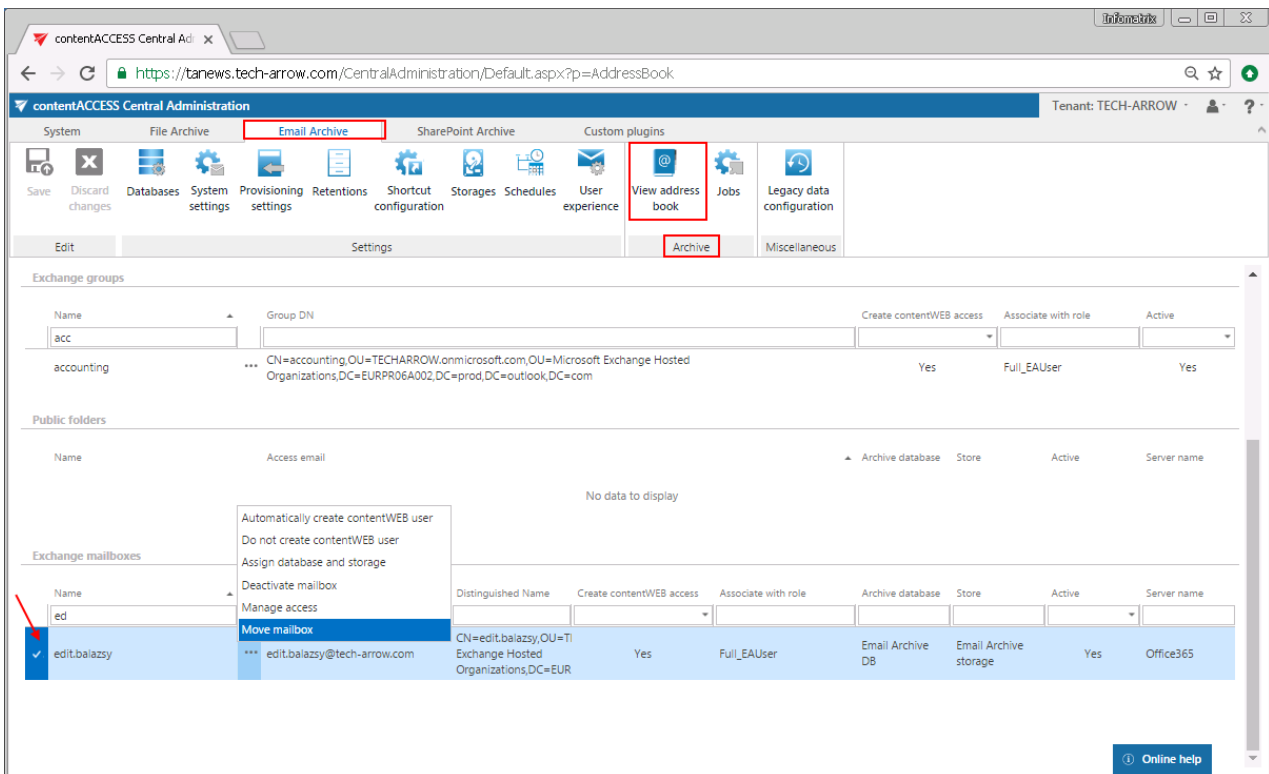
This job allows to move archived mailbox data (archived emails) between stores and databases.

Typical use cases:

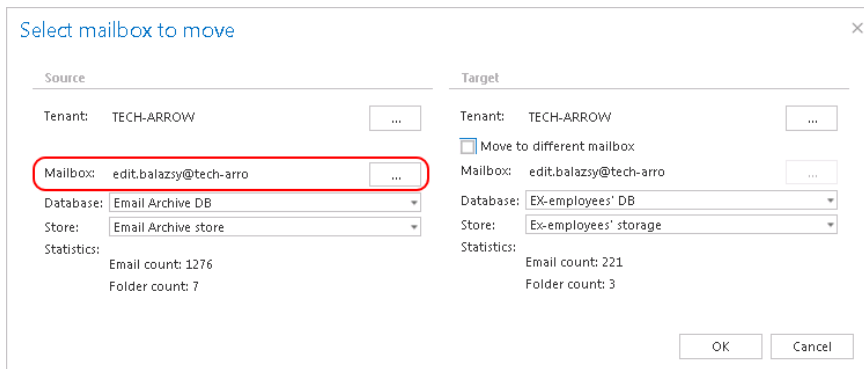
- **If you did a mistake and you've archived the same mailbox into 2 different databases**, then you will be able to access only the archived items of the actually associated database (configured in **Email Archive → Archive → View address book**). You can easily troubleshoot such a problem with using the “consolidate” option of the Move mailbox job. This moves the items from the wrong database to the correct one.
- A typical use case of a database/storage move can be, if one company **employee was dismissed, and his mailbox archive data need to be moved** into another storage/database.
- If the already associated database/storage has **no more storage capacity thanks to the big volume of the archived items**, then the administrator may move the archive mailbox data somewhere else.
- The **mailbox move is also enabled on the level of tenants** (cross-tenant move), e.g. if one company affiliate will be closed and its mailboxes (archived emails) need to be moved into the database/storage of another affiliate (tenant) etc.

## Mailbox move job configuration

There are multiple options how a mailbox move job can be created; you can add it as a new job from the Email archive's **Jobs** page, or you can create a mailbox mover job directly from the address book, with selecting the "Move mailbox" option from the desired mailbox's context menu. On the screenshot below can be seen, how a mailbox move job is created for mailbox "[edit.balazsy@tech-arrow.com](mailto:edit.balazsy@tech-arrow.com)" directly from the address book.



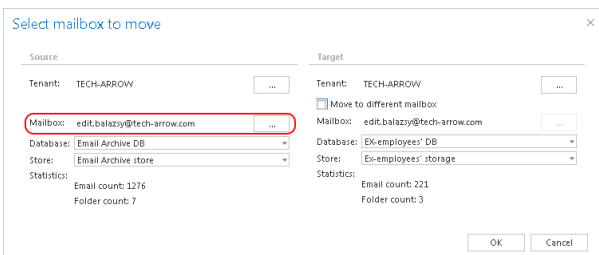
With clicking on the "Move mailbox" option in the mailbox's context menu, the **Select mailbox to move** dialog will automatically open. The desired source mailbox will be already preselected in this dialog. The new mailbox mover job will be created with the name of the selected mailbox. By default, the job will be able to run on any available node.



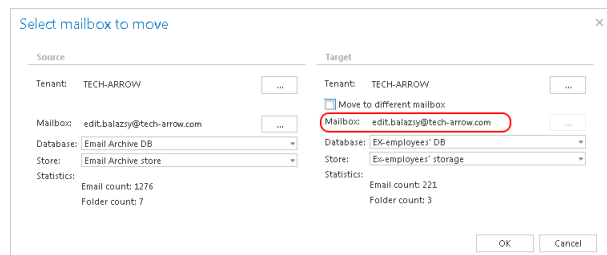
**Note:** The same dialog can be opened on the job's configuration page, with clicking on "add" under Mailboxes to move section.

In the **Select mailbox to move** dialog the administrator may set the following:

- A) The source mailbox, of which archived data should be moved: if the job has been created from the address book, the source mailbox will be preselected; if the job has been created from the jobs page, the source mailbox has to be configured manually.
- B) The target mailbox; in special cases the source mailbox archive data may be moved to a target mailbox archive. To achieve this, check the "Move to different mailbox" option on the target side and specify a new target mailbox. If you would not like to move the source mailbox archive data to a target mailbox archive, select the source mailbox on the target side, too (by default it is configured like this).



Screenshot A  
the target side



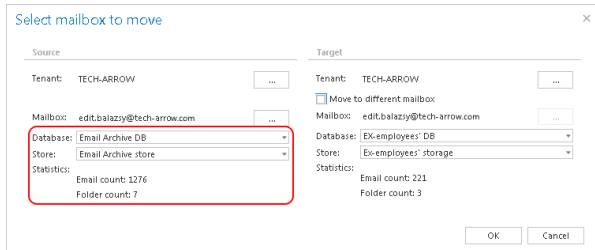
Screenshot B: Source mailbox archive selected on

- C) The source database and storage: by default the already associated database and storage of the source mailbox are set here. The source mailbox statistics (email count, folder count) can be seen in the source column.
- D) The target database and storage: the user may select here the target destinations, where the archive data of the source mailbox should be moved. On Screenshot D we have selected Ex-

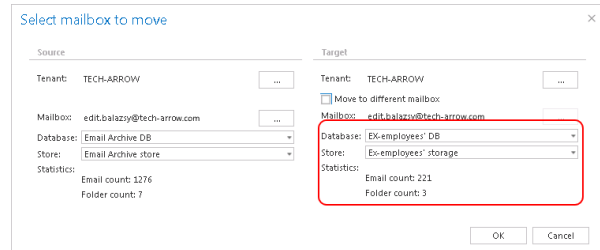




employees' DB and Ex-employees' storage. The target mailbox statistics (email count, folder count) can be seen in the target column as well.

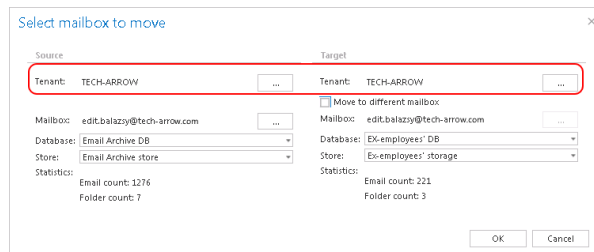


Screenshot C: Associated DB and store



Screenshot D: Target DB and store

E) An across tenant move is also supported:



You have some configuration options based on what the behavior of the Mailbox move job will be a bit different.

If you:

- **Select DIFFERENT databases but the same store**, then the records will be moved (copied and then deleted) from the source database into the new target one, but the binary will be kept in the same store
- **Select same databases but DIFFERENT store**, then the records in the database will be updated only with the new storeID. The source storage data will be copied into the new storage and the old files will be removed from the source store if the source store supports deletion. Deletion is actually supported in Disk store and HybridStore. If the store does not supports deletion, then the binary will be kept in the source store
- **Select DIFFERENT database and DIFFERENT store**, then the combination of the above will happen, so the database records and binaries will be moved.
- **Move into different mailbox**, then the original mailbox record will also be deleted from the database if all entries were successfully moved.



When configuring a Mailbox move job the administrator is also required to set the running time of the job, notification settings and the resource settings on the job's configuration page:

- ✓ **Scheduling settings:** the administrator may select a scheduler from the dropdown list, which will determine, when the moving process will run. By this plugin type it is recommended to set one time scheduler, or to start the job manually. For more information how to set up schedulers please refer to section [Schedules](#).

Scheduling settings

---

Scheduled in:

- ✓ **Notification settings:** if you want to use notification emails to be informed about potential failures of the mailbox move process, then select a) in which cases such notifications need to be sent, b) who will be the recipient of such emails. It is recommended to set here **Errors or warning occur** option (or to check the job events on the monitoring page).

Notification settings

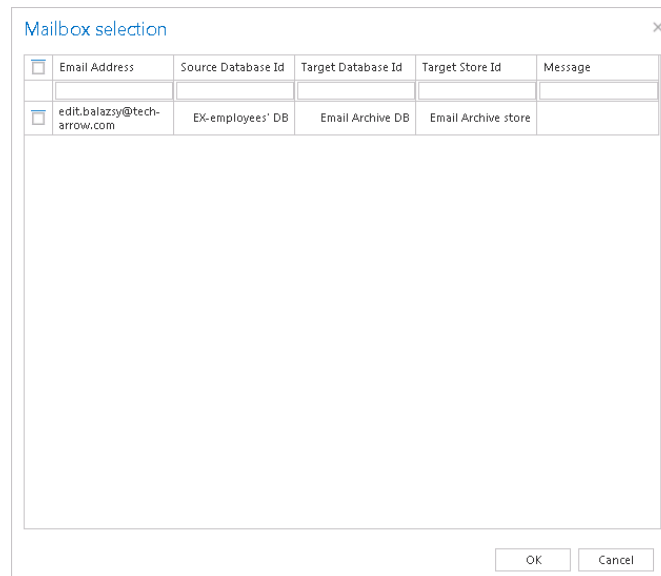
---

Send when:

Recipient list:

- ✓ **Resource settings.** Set the value, which will determine how many items will be processed simultaneously by the mailbox move job.

**Option “consolidate” on the job’s configuration page:** Consolidation option is the fastest way of how to correct your mistake, if you have archived the same mailbox into multiple databases. By clicking the consolidate button the system will find all mailboxes which are in two or more databases and will list them on the **Mailbox selection** page. The target database/target store are the already assigned ones based on the **View address book**. So, once you have the list, you just select one or more mailboxes and click **OK**.



If this dialog is empty, it means that all your metadata are in one database only, there is nothing to correct.

**How to check if the mailbox move was finished successfully?** The user may check on the monitoring page, if the mailbox move job successfully moved the selected mailbox archive to the desired database/storage. To check this, navigate to the email archive jobs' page on the ribbon (**Email Archive** tab → **Archive** → **Jobs**). Open the context menu of the mailbox move job, and click on "Show last logs". This will redirect the user to the monitoring page, where the last run of the selected job will be preselected, and the correspondent job events can be viewed.

### Shortcut synchronization job

The shortcut synchronization is a process of keeping live emails in sync with the archive.

When an item is archived, the item location is stored in the archive. The user can later delete, move or copy the archived item in the mailbox – but the archive does not follow these changes.

The main function of shortcut synchronization is to update the location of the item in the archive based on the current location of the item in the live mailbox. Secondary functions of the shortcut synchronization are:

- Detection of foreign shortcuts and restore of such items
- Shortcut cleanup – removal of expired shortcuts

To start the shortcut synchronization, the prerequisites are the following:

- **Configured Email Archive** (based on the Email Archive settings described [here](#))



- **The mailbox must be assigned to a store and database**

**Details:** If the mailbox is not assigned to a database, the following error message will be logged:

*x mailboxes synchronized (1 failed), 0 shortcuts updated (xx folders skipped, xx unchanged)*

The monitoring will contain the following error: *Unable to open database as it is not configured!*

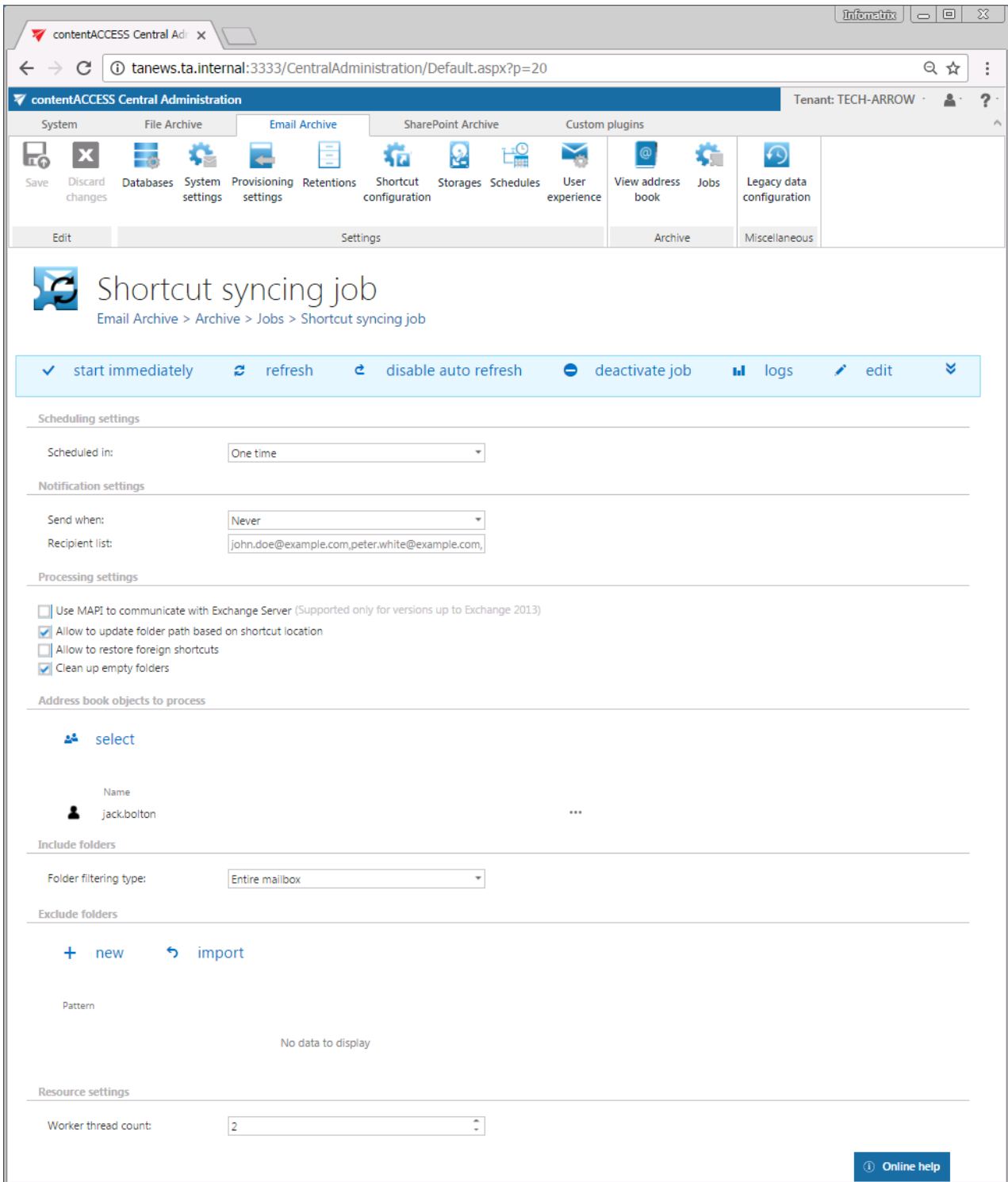
- **Configured Shortcut synchronization job**

**Note:** If the shortcut synchronization needs to restore a shortcut, the globally defined restore method will be used (which is either an in-place restore or restoring using a new item). These settings are defined in the [Email Archive System settings](#) described earlier.

### ***Shortcut synchronization job configuration***

Create a new job instance and open its configuration page. In this use case we will create a configuration job with name “My sync job” that will synchronize Jack Bolton’s archive. We know, that some shortcuts in this user’s mailbox have been moved to another mailbox folder. The job will update the location of these items in the archive based on the items location in the mailbox. It will run only once.

The configuration of this job consists of the following sections:



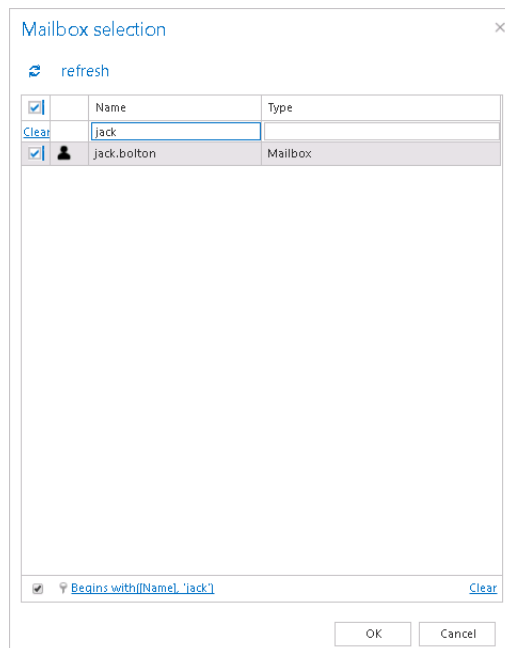
- ✓ **Scheduling setting:** Defines the time slots of the job running. Our synchronization job will run only once, so we have configured a one time running scheduler for that. For more information about schedulers refer to section [Schedules](#).



- ✓ **Notification settings:** In case that you want to get notification emails if any errors or warnings occurred you can set it here.
- ✓ **Processing settings:** The processing settings specify the functions which should be executed inside one job. Performing multiple functions inside one job is optimizing the Exchange access: the mailbox is only read once, but multiple functions are performed on the same set of data.
  - It is possible to use MAPI instead of EWS.
  - The “Allow to update folder path based on shortcut location” checkbox turns on/off the folder path synchronization.
  - The “Allow to restore foreign shortcuts” checkbox turns on/off the automatic restore of shortcuts not belonging to the mailbox.
  - The “Clean up empty folders” function deletes the empty archive folders in contentWEB.

In this use case we set the folder update allowance option only like shown on the picture above.

- ✓ **Address book objects to process:** Allows to set the whole Exchange server, Exchange groups or mailboxes to be involved in the job. In this use case we will synchronize Jack Bolton's mailbox, so we set his email address here. Click on “select” and search for his mailbox in the pop-up dialog:



- ✓ **Include folders:** Set the folders (in our use case the entire mailbox) that the job needs to process.



- ✓ **Exclude folders:** Exclude the folders that should not be touched by the synchronization job. The list of folders can be imported from files, too (more information about this option [here](#)). Only folders allowed by the include/exclude filters are processed.

**Note:** it is recommended to process the entire mailbox to receive the best coverage.

In this case we wouldn't like to exclude any mailboxes, so we skip these settings.

- ✓ **Resource settings:** The selected mailboxes are processed on multiple threads defined here. Each thread is processing one folder from any mailbox at any time.

Save your settings and wait until the scheduler starts the job (or start it manually from the header bar).

**The synchronization process** is running based on the following rules:

Once the live mailbox folder items are loaded, the corresponding archive folder is located in the database. If there is no such folder yet, the folder is created in the archive (refer to option "Allow to update folder path" in the Processing settings).

The items from the archive folder are loaded from the database.

If the touched item (touched item = item with custom message properties and/or tagged with a custom category) and archived item are matching – the item is skipped (reported as skipped).

If the touched item is not found in the archive folder but the item belongs to the mailbox – the folder path is updated in the archive (reported as updated).

If the touched item is not found in the archive folder but the item does not belong to the mailbox – the item is restored if "Allow to restore foreign shortcuts" is allowed. (Reported as restored).

If the touched item is not found in the database at all, the item is reported as failed (details describing the reason).

#### **Feature limitations - Multiple copies of the same shortcut**

If the user has multiple copies of the same shortcut in the mailbox, the shortcut synchronization will not be able to determine the correct location. In such cases the last writer will win (the folder which was processed as the last will win).

## Shortcut repair job

There are situations when mails are archived with a shortcut type which turns out to be incorrect. This is usually because of incorrect planning or bad decisions.

If there are already shortcuts created and they need to be replaced, the Shortcut repair job type can easily solve this problem, while keeping the database and storage size under control.

The shortcut repair job is a mailbox crawler – it scans the live mailboxes and locates contentACCESS shortcuts. It is able to locate all types of shortcuts: Keep original, HTML and Normal shortcuts as well.

The whole mailbox is scanned, but the administrator can define which folders should be included and excluded.

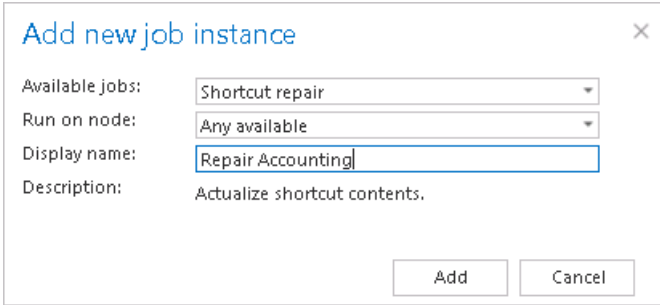
**Note:** You can't use "%INBOX%" in the Include folders section and use the language independent default folders.

### Shortcut repair job configuration

In this use case we will configure a shortcut repair job, which will repair the shortcuts of David Collins's mailbox folder called "Projects". The mailbox contains different types of shortcuts: keep original, html, normal shortcut, journal shortcut.

We want to change all HTML and Normal shortcuts from the interval 01.01.2016 – 31.10.2016 to Html shortcuts.

First create a Shortcut repair job with an optional name:



**Add new job instance** [X]

Available jobs:

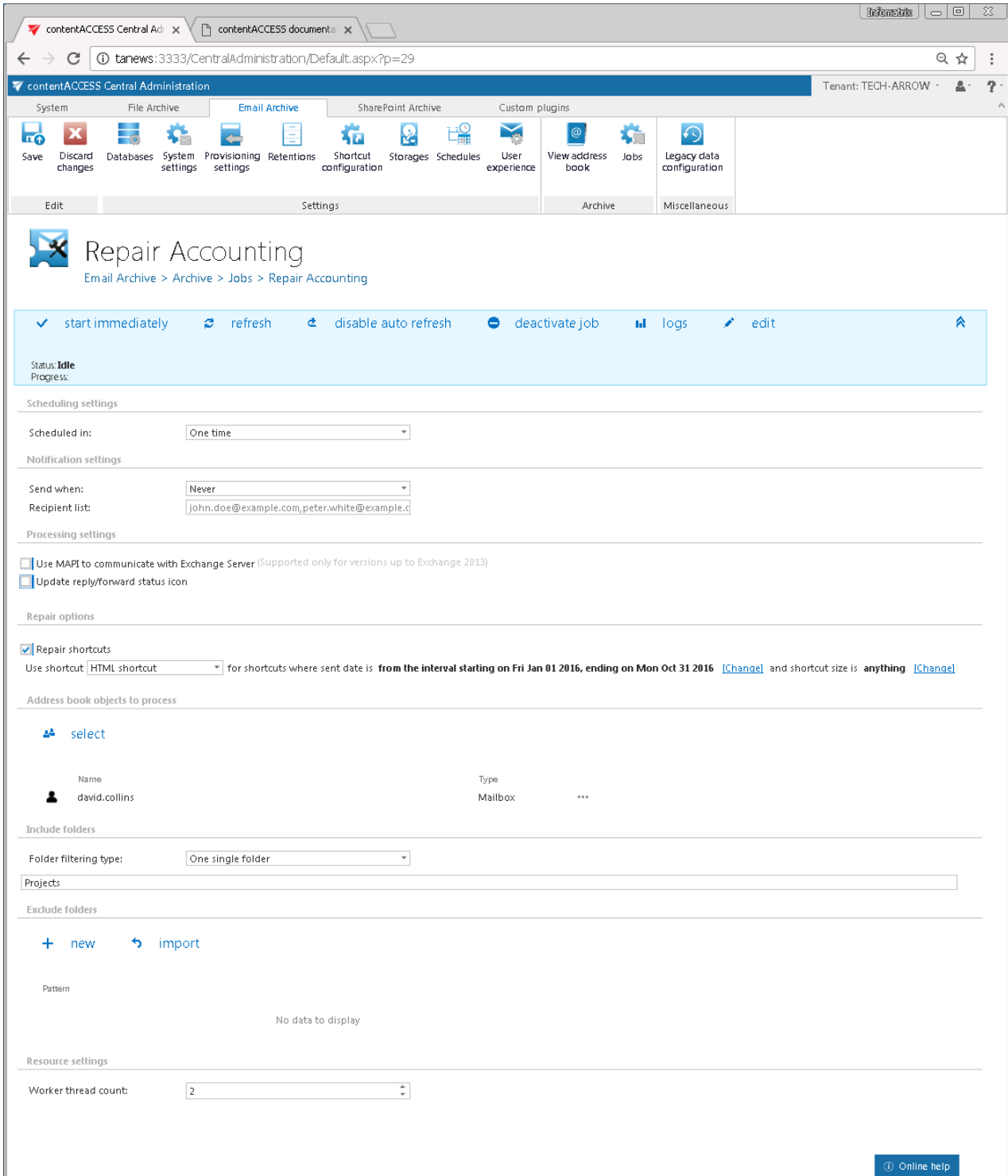
Run on node:

Display name:

Description: Actualize shortcut contents.



Further we configure the job on the configuration page:



The screenshot shows the 'Repair Accounting' configuration page in the contentACCESS Central Administration interface. The page is titled 'Repair Accounting' and is located under the path 'Email Archive > Archive > Jobs > Repair Accounting'. The status is 'Idle' and the progress is shown as a bar. The page is divided into several sections for configuration:

- Scheduling settings:** 'Scheduled in:' is set to 'One time'.
- Notification settings:** 'Send when:' is set to 'Never'. 'Recipient list:' is 'john.doe@example.com,peter.white@example.com'.
- Processing settings:** 'Use MAPI to communicate with Exchange Server' is unchecked. 'Update reply/forward status icon' is checked.
- Repair options:** 'Repair shortcuts' is checked. 'Use shortcut' is 'HTML shortcut'. The interval is 'from the interval starting on Fri Jan 01 2016, ending on Mon Oct 31 2016'. 'Shortcut size' is 'anything'.
- Address book objects to process:** A table shows one object:
 

Name	Type
david.collins	Mailbox
- Include folders:** 'Folder filtering type:' is 'One single folder'. 'Projects' is entered in the 'Include folders' field.
- Exclude folders:** 'Pattern' is empty. 'No data to display' is shown.
- Resource settings:** 'Worker thread count:' is set to '2'.

An 'Online help' button is located at the bottom right of the page.

The job configuration page requires to set the

- **Scheduling settings** – the time when the job will run; in this use case a One time scheduler
- **Notification settings** – email notifications about the job running; in this use case skipped



- **Address book objects to process** – the Exchange object(s) with the mailbox(es) to be repaired; in this use case mailbox “david.collins@tech-arrow.com”
- **Include folders** – the mailbox folder(s) with the shortcuts to be repaired; in this use case folder “Projects”
- **Exclude folders** – exclude mailbox folders from the repair process; in this use case skipped
- **Resource settings** – number of thread workers running in parallel; in this use case default settings are applied
- **Processing settings** – possibility to use MAPI to communicate with the Exchange server and to update the reply/forward status of the contentACCESS icon I the user mailbox  
 The “Update reply/forward status icon” should be used if upgrading from older contentACCESS versions to version 3.1. In the 3.1 version the reply/forward status of the mail is reflected into the shortcut icon – there is a different shortcut icon for replied and forwarded mails. If the customer wants to update the existing shortcuts, use this function. The job will search for all Normal and HTML shortcuts which have the incorrect icon and will update it. Please note that this function only makes sense for shortcuts where the message class was changed (i.e. the shortcuts are having a different icon).
- **Repair options** – the option can be used to completely regenerate the shortcuts with new settings. Set the shortcut type to be applied (in this use case “HTML shortcut”).  
 In this function it is possible to filter by age (sent date) and size (size of the shortcut, not the original mail) and apply a new type of shortcut for existing shortcuts. We want to change all HTML and Normal shortcuts from the interval 01.01.2016 – 31.10.2016 to HTML shortcuts in the mailbox, so we set the age filter like this:



## Repair options

 Repair shortcuts

 Use shortcut  for shortcuts where sent date is **from the interval starting on Fri Jan 01 2016, ending on Mon Oct 31 2016** [\[Change\]](#) and shortcut size is **anything** [\[Change\]](#)

The job will scan the mailbox and repair based on the following logic:

Located shortcut	After repair
Keep original	Not modified
Normal shortcut	HTML
HTML	HTML
Journal shortcut	Not found

**Note:** the shortcuts are completely re-created with the actual settings.



## Public folder archiving

### Definition of terms:

**Public folder** – one folder in the public folder hierarchy

**Public folder hierarchy** – the tree of all public folders in the organization

**Public folder database** – special Exchange database (2007, 2010) holding public folders

**Public folder mailbox** – special Exchange mailbox (2013, 2016) holding public folders

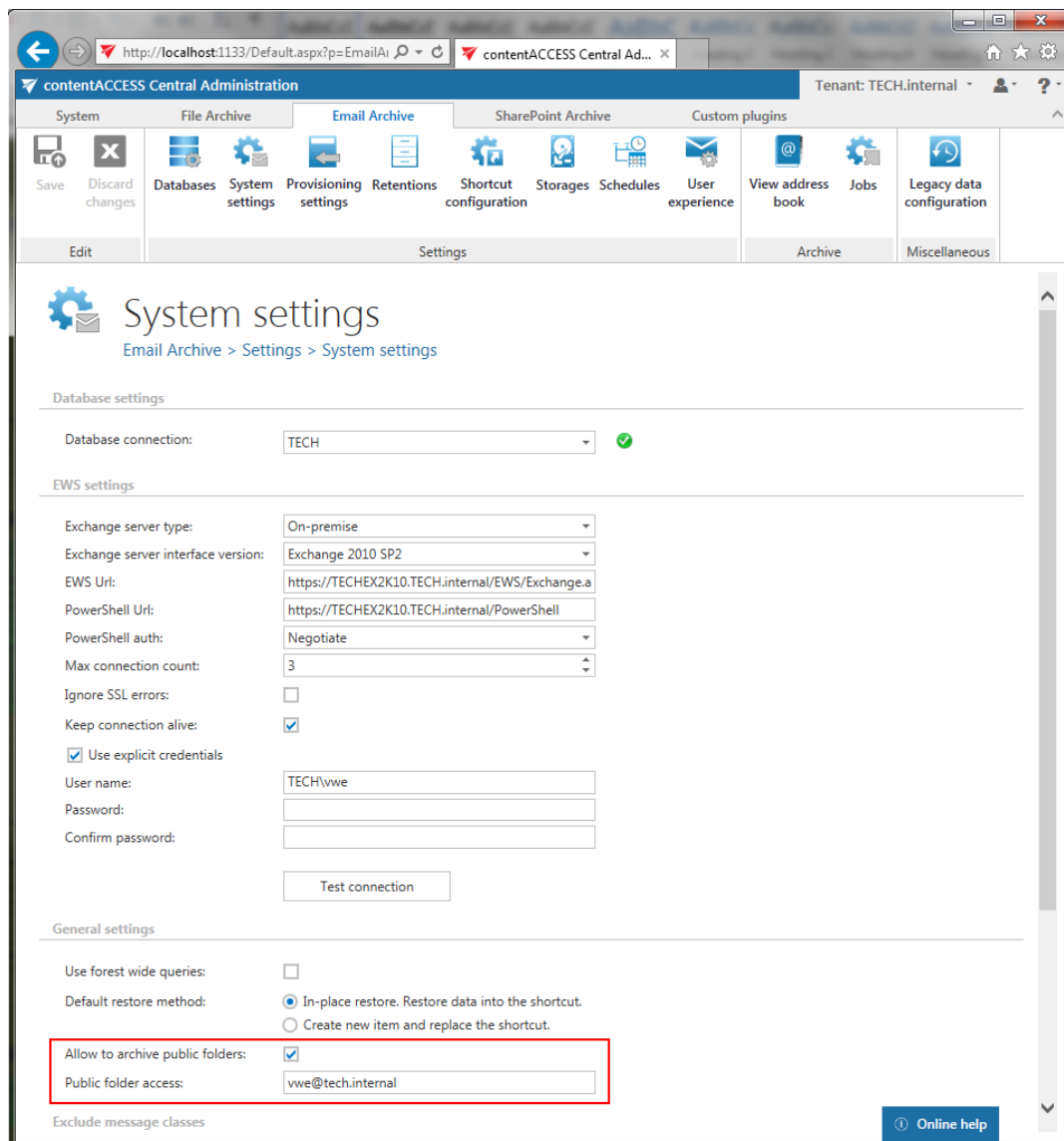
**Archive public folder mailbox** – contentACCESS representation of public folder (virtual mailbox)

contentACCESS allows to archive public folders in an organization. Individual public folders or folder hierarchies can be archived just as any other mailbox items, and they can be replaced by shortcuts as well. Archiving the public folders with contentACCESS offers many advantages. You can archive using shortcuts and save storage space, still ensuring quick access to the desired items directly from your mailbox. The items can be restored from shortcuts, and they can also be recovered if they have been deleted. You can browse for your public folder items in the archive using contentWEB. User-access to the archived content is comfortable and extremely fast.

contentACCESS is supporting a wide range of Exchange Servers, starting from Exchange 2007 SP1 up to Exchange 2016. Public folders can be hosted on as many servers as desired. Even the public folders can be hosted by multiple servers, contentACCESS treats them as one entity (i.e. on mailbox).

**Note:** If you have a hybrid Exchange environment (e.g. both Exchange 2010 and Exchange 2016) and want to archive public folders, set the highest Exchange server version containing the public folders on the [Email Archive System settings](#) page, in section **EWS settings**. On the same page, in section **General settings**, the **Public folder access** must be set to an email address from the **highest Exchange server containing public folders**.

The default contentACCESS setting is not to archive public folders, because not every organization has public folder on the Exchange server. Public folder archiving must be set individually in **Email Archive → Settings → System settings**, under section **General settings**.



**Allow to archive public folders:** If you want to archive public folders, this option must be selected, otherwise the provisioning job will ignore them and they won't be archived. If public folder archiving is turned on and later off, the existing archive public folder mailbox is not removed (nor disabled). It will be simply not archived further, but the existing data remain in the archive.

**Note:** Restore and recover will also not work if public folders are turned off.

**Public folder access:** The "Public folder access" is an email address. It is recommended to set this value to the SMTP (Simple Mail Transfer Protocol) address of the superuser. If this value is changed, it is necessary to run the email provisioning job.



The public folders are synchronized to the contentACCESS address book by the email archive provisioning job. If public folder archiving is **turned off in the System settings**, the public folders are completely ignored:

- If there is no archive public folder mailbox yet, it will not be created
- If there is already an archive public folder mailbox, it is not actualized

If public folder archiving is **turned on**, the provisioning will do the following after all mailboxes are processed:

- Search for public folder mailboxes (Exchange 2013-2016) using PowerShell
- Search for public folder databases (Exchange 2007-2010) using PowerShell
- If there is no public folder found at all, the process is cancelled
- If there are more public folders found, it always picks the newest ones (if there is Exchange 2013/2016 public folder mailbox found, that will be used)
- If there is no “archive public folder mailbox” yet, it is created
- If there is already an “archive public folder mailbox”, the email address is updated from the **System settings** (if the system settings were changed, this step actualizes the value)

As the last step, all contentACCESS users (belonging to the same domain) are granted the “User” role on the public folder mailbox (the users will be able to select the “Public folders” in contentWEB).

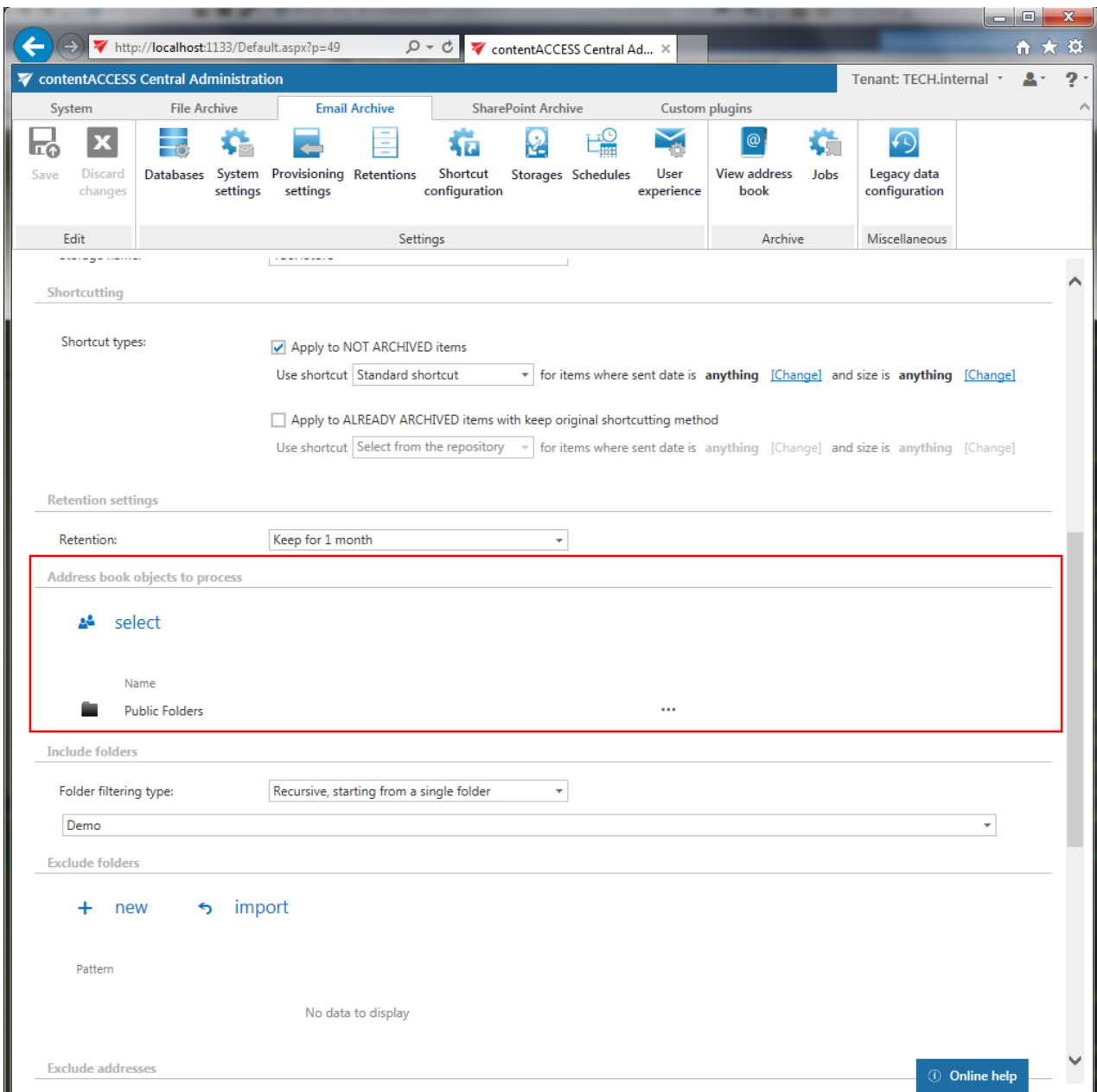
The provisioned public folders have a separate section in the contentACCESS Address book.

Public folders					
Name	Access email	Archive database	Store	Active	
✓ Public Folders	*** vve@tech.internal	TECH	TECHStore	Yes	
Exchange mailboxes					
Name		Mai	Create contentWEB access	Archive database	Store
					Act

The context menu options allow to assign a database and storage to the public folders to be archived as for Exchange groups or mailboxes. It's also possible to activate/deactivate the public folders on the license server, to set contentWEB permissions to them (option “Manage access”) or to move the content to a mailbox. The “Access email” column displays the value from the System settings page (section “General settings”) and is actualized by the provisioning job if has been changed.

## How to configure an archive job to archive public folders?

To archive public folders you will need to create a standard email archive job. Every job configuration option is the same as by the standard email archive job – you can decide about the shortcut type, time periods when the job will run, the retention time etc. The only difference is the configuration section “Address book objects”. Here the public folder is selected.



When you click select, the **Mailbox selection** dialog opens – you need to select the “Public folders” item from the list. If the public folders haven’t been provisioned yet, then this item is not included in the list.



**Mailbox selection** ✕

refresh

<input type="checkbox"/>		Name	Type
		<input type="text"/>	<input type="text"/>
<input type="checkbox"/>		TECHEX2K10	Server
<input type="checkbox"/>		MIGRATION	Server
<input type="checkbox"/>		TECH only	Group
<input type="checkbox"/>		pfi2010	Mailbox
<input checked="" type="checkbox"/>		Public Folders	PublicFolder

Further you can specify, which folders will be archived in the public folder hierarchy (sections “Include folders”/“Exclude folder”). In the “Include folders” it is necessary to specify the exact folder path which needs to be archived. Same rules are applying as for mailboxes with one exception: it is not possible to use the placeholders like %INBOX% and similar.

The public folders can be selected in other Email archive jobs – Email archive restore job, Email archive recovery job, Mailbox move job, Shortcut synchronization job – as well.

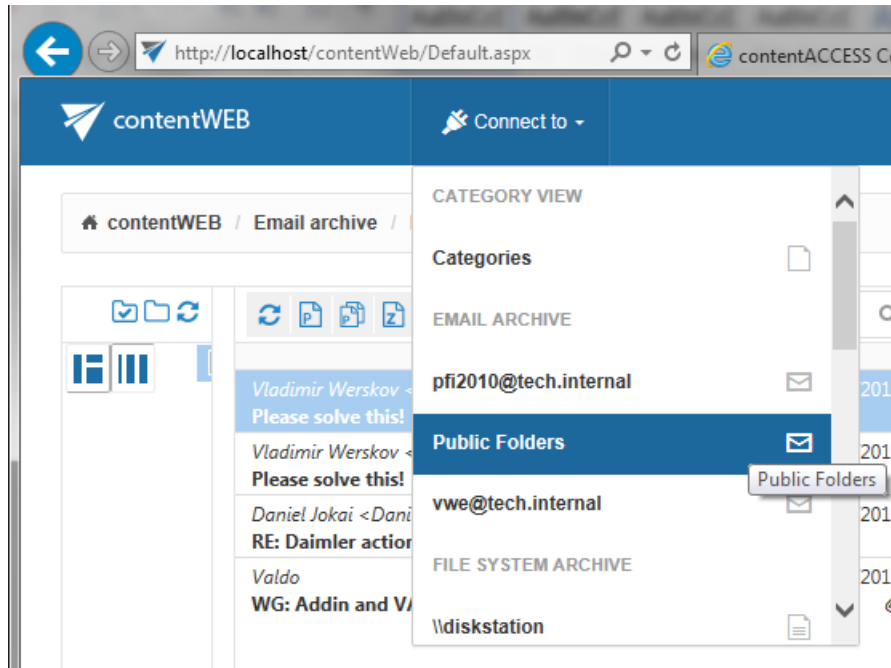
### ***Public folders in the contentWEB archive***

The archive public folder mailbox can be accessed from contentWEB just like a regular mailbox – the logged on user needs to have permission on the public folders – then the public folder permissions are evaluated on each folder and only the correct ones can be accessed.





The public folders are displayed like “Public Folders” in the connection list:



The contentWEB user has the possibility to manually recover the archived public folder items in contentWEB back into the original location. When folders are recovered, the top level folders must exist.

### ***User permissions to public folders***

During the provisioning job running the users are automatically getting the permission to access the public folders:

## Manage Access to Object

Object > Manage access

[+ new](#)

User name	Role name	Flags
vwe	*** Public folder admin	Manual
vettel	*** Normal user	Automatic (100)
vettel	*** Normal user	Automatic (100)
alonso	*** Normal user	Automatic (100)
vettel	*** Normal user	Automatic (100)
alonso	*** Normal user	Automatic (100)
button	*** Normal user	Automatic (100)
button	*** Normal user	Automatic (100)
alonso	*** Normal user	Automatic (100)
button	*** Normal user	Automatic (100)
vettel	*** Normal user	Automatic (100)
alonso	*** Normal user	Automatic (100)
button	*** Normal user	Automatic (100)

[Go back](#)

The assigned role is “Normal user” which allows for the user to see public folders as a separate entity in contentWEB:

The screenshot shows a file explorer window with a 'Connect to' dropdown at the top. Below it is a list of users and folders. The 'Public Folders' entry is highlighted in a dark blue bar. A tooltip labeled 'Public Folders' is visible next to this entry. Other users listed include messi@cg.local, pfi2010@tech.internal, ronaldo@cg.local, rosberg@cg.local, schumacher@cg.local, vladimir.werskov@tech-arrow.com, and vwe@tech.internal. Each user entry has a small envelope icon to its right.



The “Public Folders” are visible but it does not mean that any data will be displayed to the user. Everything else depends on the folder permissions that the given user has – if the user can read the folder, the folder will be visible. Otherwise the folder will not be displayed at all.

### Granting administrator access to all public folders

There are situations when you want to grant an administrator access to all public folders in the contentWEB archive. In this case you need to create a new role, add the permission “**View all public folders**” to this role and then assign the role (on the public folder mailbox) to the future public folder administrator. To create such a user, follow these steps:

- Create the role on the “**Roles**” page and add the permission “View all public folders” to the role (option Specific allowed).

The screenshot shows a 'Role details' dialog box with the following content:

Role display name:

**Permissions**

Permission	Not allowed	All allowed	Specific allowed	Help
View mailboxes:	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Export:	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Manual recovery:	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Preview:	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
View all public folders:	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	?

A red arrow points to the 'All allowed' radio button for the 'View all public folders' permission.

- Go to the contentACCESS address book (Email Archive → Archive → View address book), and manage access on public folders:

**Public folders**

Name	Access email
✓ Public Folders	*** vwe@tech.internal

**Exchange mailboxes**

Name

Context menu for Public Folders:

- Assign database and storage
- Deactivate
- Manage access**
- Move mailbox



- Grant the role to the user/administrator

### Create new role association ✕

**Tenant information**

Role:

Invitation type:

---

Search for existing user\*:

The user “**pfi**” was granted “Public folder admin” permissions on the “Public Folders” mailbox. This allows for this “**pfi**” user to see all public folders regardless of the Exchange permissions.



## Manage Access to Object

Object > Manage access

+ new

User name	Role name	Flags
vwe	*** Public folder admin	Manual
vettel	*** Normal user	Automatic (100)
vettel	*** Normal user	Automatic (100)
alonso	*** Normal user	Automatic (100)
vettel	*** Normal user	Automatic (100)
alonso	*** Normal user	Automatic (100)
button	*** Normal user	Automatic (100)
button	*** Normal user	Automatic (100)
alonso	*** Normal user	Automatic (100)
button	*** Normal user	Automatic (100)
vettel	*** Normal user	Automatic (100)
alonso	*** Normal user	Automatic (100)
button	*** Normal user	Automatic (100)
pfi	*** Public folder admin	Manual

### Public Folder archiving in hybrid Exchange environments



Many organizations use a hybrid Exchange environment, and also have Public folders on an Exchange server, which also need to be archived. E.g. the standard mailboxes are hosted by Exchange server 2013 (in this use case “TECHEX2K13”), but Public folders are on Exchange 2010 (in this use case “TECHEX2K10”), and both need to be archived. In such cases the system must be configured accordingly:

- 1) On the **Email Archive → Settings → System settings** page, under **EWS settings**, set the Exchange version to the highest Exchange version that you use, and specify an EWS user, who has the necessary rights on this Exchange server.

**System settings**  
Email Archive > Settings > System settings

**Database settings**

Database connection: MyTenantDB

**EWS settings**

Exchange server type: On-premise

Exchange server interface version: Exchange 2013 or higher

EWS Uri: https://TECHEX2K13/ews/exchange.asmx

PowerShell Uri: https://TECHEX2K13/powershell

PowerShell auth: Negotiate

Max connection count: 3

Ignore SSL errors:

Keep connection alive:

Use explicit credentials

User name: tech\eba

Password: .....

Confirm password: .....

- 2) On the same **Email Archive System settings** page, in section **General settings** allow to archive public folders, and set the public folder owner's email address. This is the email address of a user, who is hosted by the Exchange server containing public folders.

**General settings**

Use forest wide queries:

Default restore method:  In-place restore. Restore data into the shortcut.  
 Create new item and replace the shortcut.

Allow to archive public folders:

Public folder access: eba@tech.internal



- 3) Set the email archive provisioning standardly, and start the provisioning job - all the Exchange server mailboxes will be read and written to the contentACCESS Address book. First the higher versions are synchronized, then the lower versions follow.

## Provisioning settings

Email Archive > Settings > Provisioning settings

✓ start immediately ↻ refresh ↺ disable auto refresh ⏻ deactivate job 📄 logs ✎ edit

Status: **Idle**  
Progress:

(Click to maintain a full crawl for the next provisioning run.)

**Scheduling settings**

Scheduled in:

**Notification settings**

Send when:

Recipient list:

**Exchange servers**

Please choose servers or groups you decided to process by provisioning job. If a server is selected, all the groups in it will be processed.

Servers: 👤 select

Name	Server DN
TECHEX2K10	*** /o=TECH-ARROW/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Configuration/cn=Servers/cn=TECHEX2K10
TECHEX2K13	*** /o=TECH-ARROW/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Configuration/cn=Servers/cn=TECHEX2K13

[Online help](#)

- 4) Go to the Address book. The Exchange server section features all synchronized servers.
- 5) By default the system uses the default EWS URL previously set on the **System settings** page (**EWS settings** section) to connect with the respective Exchange mailboxes. Set the right EWS URL for all your Exchange servers using the "Change server settings" context menu option.

## View address book

Email Archive > Archive > View address book

↻ import servers manually
↻ import groups mar

**Exchange servers**

Name	EWS version
TECHEX2K13	*** Exchange2013
✓ TECHEX2K10	*** Exchange2010_SP2

Automatically create contentWEB user  
Do not create contentWEB user  
Change server settings

A screenshot of a "Server configuration" dialog box. It has a title bar with a close button (X) in the top right corner. The dialog contains two fields: "EWS version:" with a dropdown menu showing "Exchange 2010 SP2", and "Custom EWS Url:" with a text input field containing the text "If empty, the default uri will be used." The text input field is highlighted with a red border. At the bottom right, there are two buttons: "OK" and "Cancel".

6) Configure the archive job and archive both your standard mailboxes (from Exchange server 2013) and public folders (from Exchange server 2010).



## SharePoint archive plugin

Organizations use SharePoint to make information more accessible to end users and to enhance collaboration among work groups. The benefits that SharePoint delivers are undeniable: better and more efficient team collaboration, version control for documents edited by multiple team members, and faster access to information through searches. SharePoint brings a new level of structure to high-volume, user-generated content.

When choosing the reliable software to archive these crucial data, the following questions must be answered:

- ***How does the archiving solution enable end-users to access SharePoint content?***

When the users go to SharePoint and want to get the desired documents, they don't want to search multiple repositories for data. Rather, the right solution will make access seamless. In contentACCESS the user may choose between more shortcut types: the item that has been already archived can be kept in the original SharePoint file container, but if it's no more in use, it can be also deleted from there. E.g. items younger than 2 years can be kept in SharePoint so they remain directly accessible, but items older than 2 years can be deleted and will be accessible using the archive interface only.

- ***How does the solution enable retention management?***

A unified content archive allows a company to quickly implement retention policies and to preserve all archive data that may be extremely important e.g. in a legal action that the company is involved in. With contentACCESS SharePoint Archive, you can define the required retention time for the archived items, and you can also set different retention times for different set of data.

- ***Is the solution part of an integrated content archiving platform?***

An intelligent and efficient archiving solution unifies email, file, and SharePoint archiving in one, ensuring unified access to any content.

- ***What scope of SharePoint content and metadata is captured?***

Some solutions capture only a portion of SharePoint content. contentACCESS from TECH-ARROW captures **not only document-type content, but also calendar items, tasks, custom lists, contacts, document libraries, picture libraries, and their attachments**. All of this content and metadata is important to be accessed at any time.





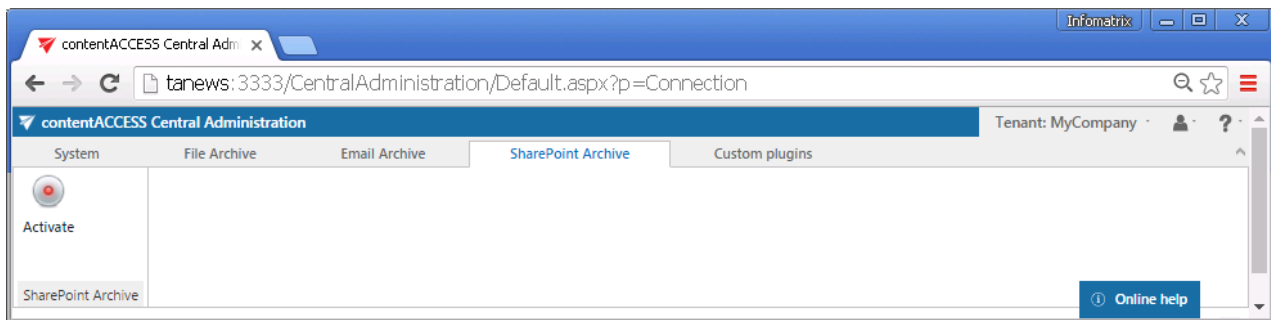
With contentACCESS, you can automatize the archiving process. The periodic data processing is solved with automatically running jobs. The time periods when such an archive job runs are determined by schedulers.

contentACCESS SharePoint Archive guarantees an oversimple access to your crucial data. You can still reach your (already archived) files through the SharePoint user interface, and you can browse for them in the contentWEB archive. Archived files that have been deleted from the original SharePoint location can be recovered, too. You can define multiple SharePoint sites to archive and set own retention categories, filtering options to them. Do you need to publish data into SharePoint from a third-party storage? SharePoint Publishing job solves this scenario as well.

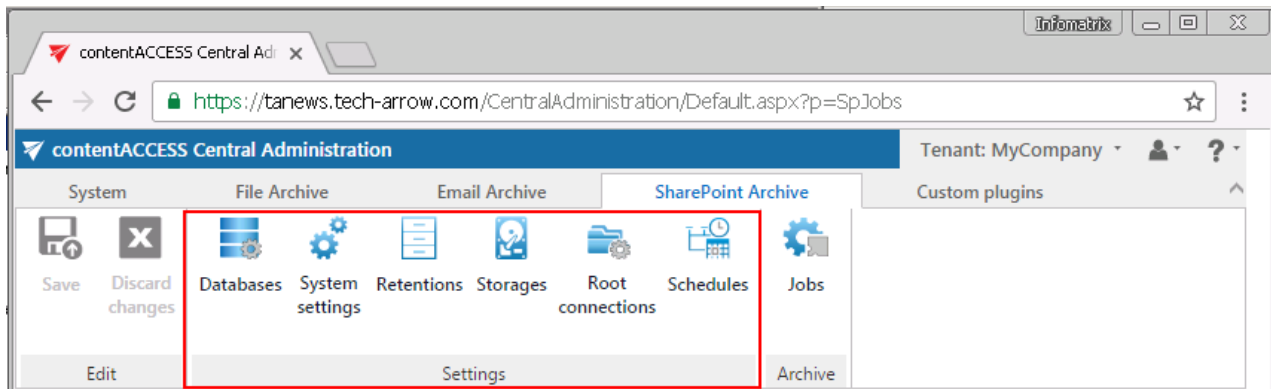
In the following subchapter we will learn about the necessary settings to be done before creating a SharePoint job.

## SharePoint Archive settings

When the SharePoint setting are configured in the contentACCESS Central Administration for the very first time, SharePoint Archive must be activated:



All necessary SharePoint settings that are necessary to create a SharePoint archive job can be found on the SharePoint **Settings** page (SharePoint Archive tab → **Settings** group).



The administrator configures here the:

- **Databases**

This is a list of MS SQL database connections configured for your tenant. These databases can be further selected on the archive job's configuration page. You can either configure an already existing database connection (option "configure existing") or add a new database on the "All databases" page (System tab → Tenants group → All databases)

- **System settings**

The main system database for the SharePoint Archive is selected here. All the root connections (and its settings) are kept in this database.

Select the database connection to be applied from the dropdown list (, deploy it by clicking "Deploy" in the warning message if needed) and save your settings.

- **Retentions**

Retentions define the time period of storing the data in the archive storage; for more information how to create retentions to be applied refer to chapter [Retentions](#) of this guide.

- **Storages**

The administrator must set here the SharePoint Archive storage for the binaries; for detailed information how to create a new storage connection refer to chapter [Storages](#) of this guide.

- **Root connections**



In this section the administrator configures the connections to the SharePoint sites that will be archived. **The root connections define the start point of the SharePoint site to be archived.** Every item in the SharePoint hierarchy that can be archived can be defined as a root connection as well. These archivable SharePoint items and their sample URLs (to be defined in the root connection) are:

- a **site collection** – with URL like: <http://sharepointserver.com/sites/testcompany>
- a **subsite of the site collection** like <http://sharepointserver.com/sites/testcompany/hr>
- a **SharePoint library** (SharePoint document libraries, picture libraries, lists, tasks, contacts etc.) like <http://sharepointserver.com/sites/testcompany/hr/testlibraryA>
- a **SharePoint folder** like  
<http://sharepointserver.com/sites/testcompany/hr/testlibraryA/testfolderA>

The URL cannot be a parent URL or a sub URL of an existing connection. Example: If you've got a root connection with URL <http://sharepointserver.com/sites/testcompany/hr> then you're not allowed to add another root connection with URL <http://sharepointserver.com/sites/testcompany> or <http://sharepointserver.com/sites/testcompany/hr/division1>. This feature prevents the users from archiving the same content into two different databases/storages. If the user wants to add a root which already exists in the system database, he will be prompted about this.

When you're adding a new root connection you need to specify the following parameters:

- **Url:** URL of the site collection, subsite, library or folder you want to archive
- **User name:** The name of the user who's got the rights to access the site collection, subsite, library or the folder
- **Password:** The password of the above specified user
- **Confirm password:** Re-enter the password
- **Database connection:** The database where the archived data will be stored
- **Storage name:** The storage where the binaries will be stored

Site connection
✕

---

Url:

User name:

Password:

Confirm Password:

✔ Connection successful!

Test

Database connection:  Change ✔

Storage name:  Change

**Note:** It is recommended to add a site collection or subsite as a root connection, the libraries, folders etc. can be specified later as a relative URL on the respective archive jobs' configuration page.

- **Schedules:** The schedules automatizing the archive process must be set here.

There are 3 available SharePoint job types in contentACCESS:

- ✓ SharePoint Archive job
- ✓ SharePoint recovery job
- ✓ SharePoint Publishing job

Each job types together with their configurations will be detailed in the following chapters of the guide.

## SharePoint Archive job configuration

After you have configured all necessary settings, you can create and configure a SharePoint Archive job. Click **" + new "** on the **Jobs** page (**SharePoint Archive** tab → **Archive** group → **Jobs**), fill the required settings (Run on node, Display name) in the pop up window and click on **"Add"**.



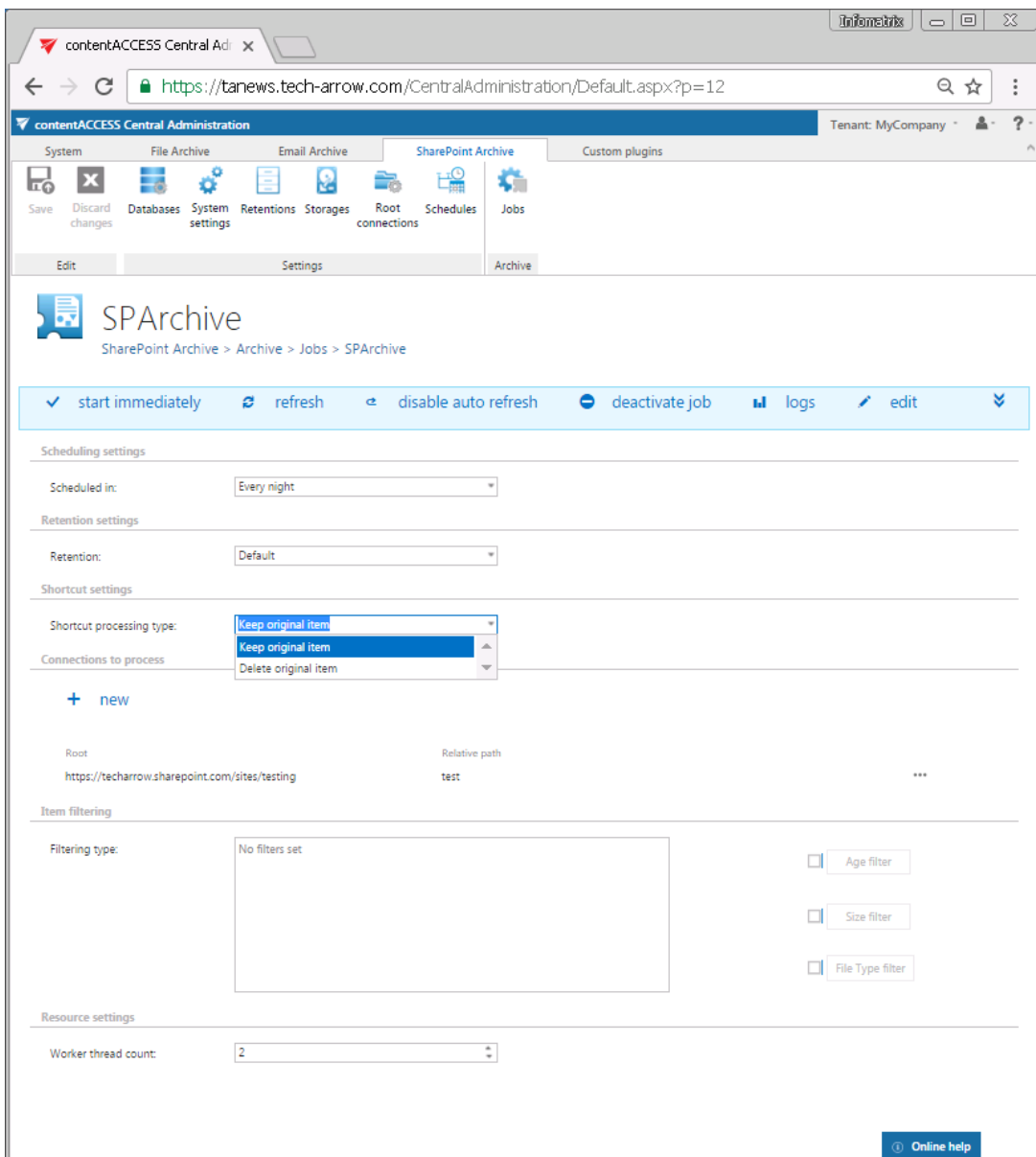
To configure the job immediately, click “Yes” in the next pop up window, or configure it later on (using the “Edit” option in the job’s context menu). On the job’s configuration page set the:

- **Scheduling settings** – time slots of the job running
- **Retention settings** – time period of keeping the archived item in the storage
- **Shortcut settings** – the administrator can decide, if the archived item
  - will remain in the original location, and will be directly accessible from there – option “Keep original item”, or
  - it will be deleted and will be accessible from the archive interface only – option “Delete original item”. With this option only the items are deleted, folder, libraries etc. are kept untouched.
- **Connections to process** – Click “+new”, and specify the root connection and the relative URL in the pop-up window. A root can be a site collection, a subsite, a library or folder already defined in the **Root connections** section. In this use case we will archive our items on subsite <https://techarrow.sharepoint.com/sites/testing/test>, where the root is a site collection.

- **Item filtering** – Set the age, size and/or file type filters to be used by the archive job. These filtering settings are the same like in a File system archive job.

**Important!!!:** When the user changes the file content of an already archived item, e.g. deletes a picture from the file and saves it to the original location, (and thus the file size will be reduced e.g. from 110 to 85 kB) and file size filter is set on >100 kB, then SharePoint archive job will not archive the newly created item by the next processing. The newly created item will be saved in the original location. From this reason, it is recommended to always check the size filter settings first, if a file has not been archived by the archiving process.

- **Resource settings** – The number of worker threads responsible for the archive processes can be set here; by default this value is set to 2.



The screenshot displays the 'SPArchive' configuration page in the contentACCESS Central Administration interface. The page is titled 'SPArchive' and is part of the 'SharePoint Archive > Archive > Jobs > SPArchive' navigation path. The interface includes a top navigation bar with tabs for 'System', 'File Archive', 'Email Archive', 'SharePoint Archive', and 'Custom plugins'. The 'SharePoint Archive' tab is active, showing various settings for the archive job.

Key settings visible in the screenshot include:

- Scheduling settings:** Scheduled in: Every night
- Retention settings:** Retention: Default
- Shortcut settings:** Shortcut processing type: Keep original item
- Connections to process:** Delete original item
- Item filtering:** Filtering type: No filters set. Checkboxes for Age filter, Size filter, and File Type filter are present.
- Resource settings:** Worker thread count: 2

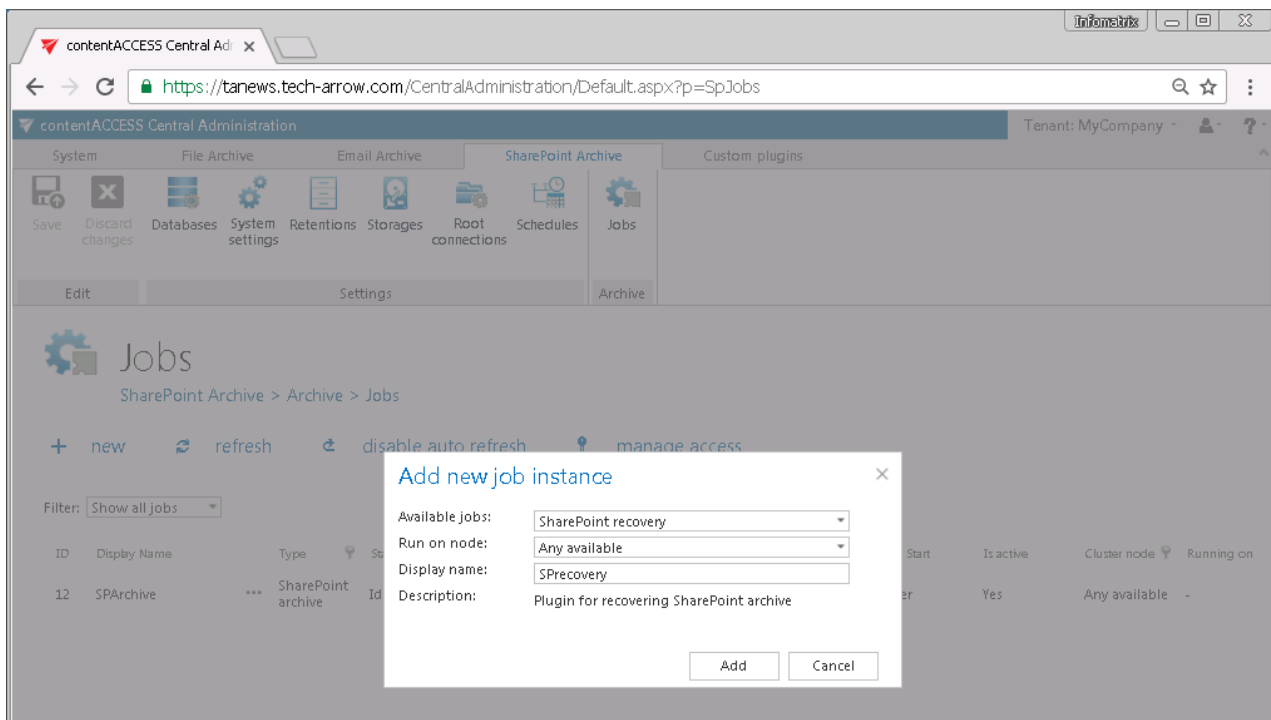
An 'Online help' button is located at the bottom right of the page.

If the job is configured, save your changes and wait until it is started based on the defined schedule (or start it manually from the status bar).

## SharePoint archive recovery

SharePoint recovery is used to recover already archived SharePoint items, that have been deleted from the original SharePoint location. All items that can be archived by contentACCESS (so are recoverable, Recovery is working only in case, if the (empty) root libraries, folders etc. that have been previously archived still exist in the SharePoint system. If they have been deleted (manually) then the structure where the archived items need to be recovered must be manually created in SharePoint again.

To create a SharePoint recovery job, create a SharePoint recovery job instance first on the SharePoint archive's **Jobs** page:



Further configure this job as follows:



- **Scheduling settings:** set the time when the recovery job should run; this is usually a one-time action, so a one-time scheduler is set in this use case.
- **Connections to process:** Set the path that should be recovered (root connection and relative path-if any); this location must exist in the SharePoint source system, otherwise the recovery will fail.
- **Resource settings:** the number of workers threads running in parallel.

Save your settings and wait until the scheduler starts the recovery process (or start it immediately using the status bar).

The screenshot displays the 'contentACCESS Central Administration' web interface. The browser address bar shows the URL: <https://tanews.tech-arrow.com/CentralAdministration/Default.aspx?p=28>. The page title is 'contentACCESS Central Administration' and the tenant is 'MyCompany'.

The navigation menu includes: System, File Archive, Email Archive, SharePoint Archive, and Custom plugins. The 'SharePoint Archive' section is active, showing options for Save, Discard changes, Databases, System settings, Retentions, Storages, Root connections, Schedules, and Jobs. The 'Jobs' sub-section is selected, showing 'Edit', 'Settings', and 'Archive' options.

The main content area is titled 'SPrecovery' and shows the breadcrumb path: 'SharePoint Archive > Archive > Jobs > SPrecovery'. The status is 'Idle' and the progress is empty. The interface includes several action buttons: 'start immediately', 'refresh', 'disable auto refresh', 'deactivate job', 'logs', and 'edit'.

The 'Scheduling settings' section shows 'Scheduled in:' set to 'one time'. The 'Connections to process' section has a '+ new' button and a table with the following data:

Root	Relative path
<a href="https://techarrow.sharepoint.com/sites/testing">https://techarrow.sharepoint.com/sites/testing</a>	test

The 'Resource settings' section shows 'Worker thread count:' set to '2'. An 'Online help' button is located at the bottom right.





## SharePoint archive Provisioning settings

### The provisioning job

- Creates and updates contentACCESS users and assigns contentACCESS roles to them based on information gathered from SharePoint

**Note:** The contentACCESS technical user account performing the provisioning job reads the permissions set on the archived SharePoint objects. Therefore it needs to read the SharePoint users, groups, group membership information. To achieve this, please add the contentACCESS technical user account to the list of Site Collection Administrators.

In contentACCESS, a provisioning job is created automatically when activating SharePoint archive for the first time.

The process is similar for on-premises SharePoint and SharePoint online. The differences are as follows:

### On-premises SharePoint

- Scans SharePoint groups and users, then they are snapshotted in the SharePoint archive database
- Picks users with Windows login and creates these users in contentACCESS (see more in [SharePoint Archive settings](#), section System settings) together with Windows login
- Grants permissions to access the given SharePoint connection (archive only)

The on-premises SharePoint is working with the Active Directory and using its users and groups to grant them access to sites, folders and items.

SharePoint defines SharePoint groups, which is a collection for AD users, AD groups and other users (Azure, etc.).

The provisioning job also collects information about AD groups and their members. This is important when permissions are evaluated, because they are configured through AD groups.

Snapshot means that a copy of the user/group is created in the archive which remains even after the user or group is deleted from SharePoint. This allows to use the last known permissions for the user when working with the archive.

At the end of the provisioning job, the archive has collected the following information:



- Collected all AD groups which are somehow related to SharePoint
- Collected all AD users which are somehow related to SharePoint
- Collected AD group memberships
- Collected SharePoint groups for the given root site connection
- Collected members of the SharePoint groups

To access the folders and documents the user requires individual permissions which is synchronized by the SharePoint archive job.

**Note:** The user will only see those folders and items to which it really has access.

## SharePoint online

The users and SharePoint groups from Office 365 are also synchronized by the provisioning job.

Azure users, together with Azure logins, are also created automatically by the provisioning job.

SharePoint Archive provisioning settings are available on the **Provisioning settings** page (**SharePoint Archive ⇒ Settings ⇒ Provisioning settings**):

The screenshot shows the 'contentACCESS Central Administration' interface. The top navigation bar includes 'System', 'File Archive', 'Email Archive', 'SharePoint Archive', and 'Custom plugins'. The 'SharePoint Archive' section is active, showing 'Provisioning settings' under 'Settings'. The main content area displays the 'Provisioning settings' page with a status bar and configuration options:

- ✓ start immediately
- refresh
- ◀ disable auto refresh
- ⏸ deactivate job
- 📄 logs
- ✎ edit

Status: **Idle**  
Progress:

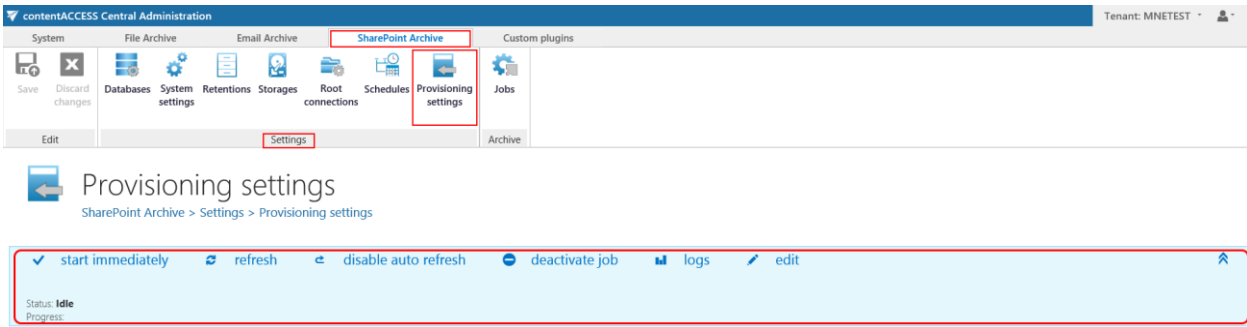
a) Role to assign  
Created user role: Standard user

b) Scheduling settings  
Scheduled in: MANUAL

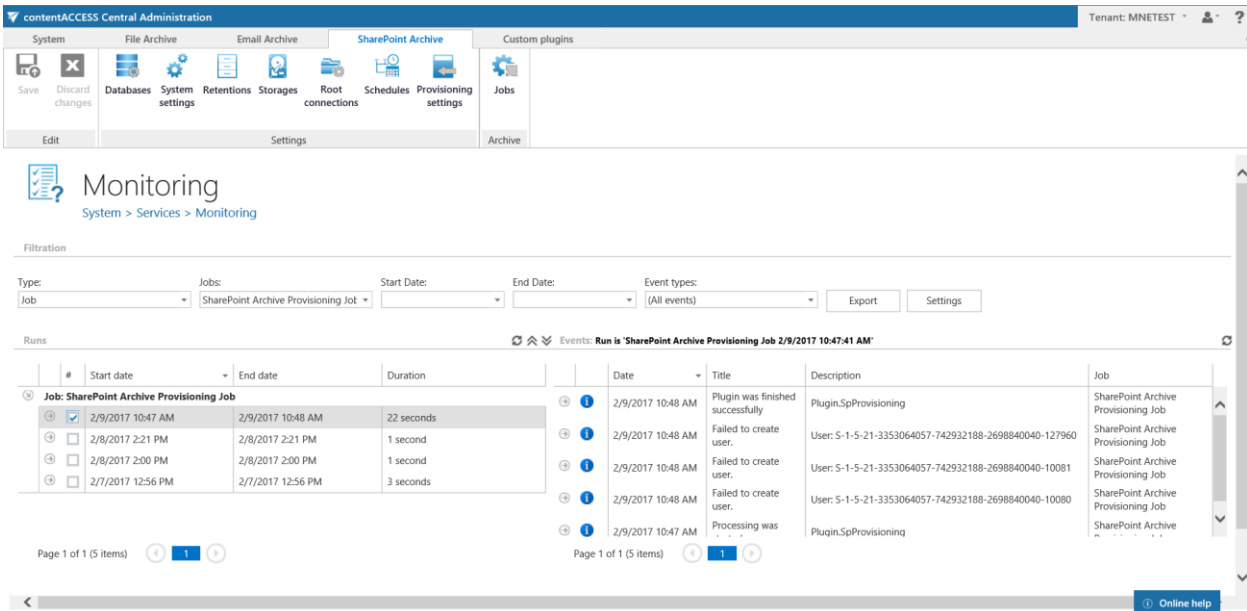
c) Notification settings  
Send when: Never  
Recipient list: john.doe@example.com,peter.white@example.com

Online help

The **status bar** of the provisioning job offers the following options:



If a scheduler has not been selected, the provisioning job can be started/stopped manually with the “**start immediately/stop**” control button. For manual refresh of provisioning progress information, click on “**refresh**” button. To enable/disable auto refresh in every 5 seconds, click on “**enable auto refresh**”/“**disable auto refresh**” button. The provisioning job can be also deactivated with the “**deactivate job**” button. A deactivated job will not start neither automatically, nor can be started manually. The “**edit**” button is used to select the node, where provisioning job will be run. The user may also rename the provisioning job here. To view further event details of provisioning job (and also to detect any potential failures/errors in the provisioning events) click on “**logs**” button. This will redirect you to the monitoring page, where the last run of the provisioning job will be preselected, and the last events will be shown in the events table.



Screenshot.1. Monitoring page with logs

The following configuration sections are available on the **Provisioning settings** page:



- a. **Role to assign:** This configuration section allows to assign default contentWEB user roles. It is recommended to specify here a default role with less contentWEB permissions. The roles to be assigned must be created on the [Roles](#) page.

**Note:** Roles containing Manage system and/or Manage tenant permissions are unavailable in the default roles' dropdown list.

- b. **Scheduling settings:** Select the running times of the provisioning job or create a new scheduler. For more information how to configure scheduler settings please refer to section [Schedules](#).
- c. **Notification settings:** If the provisioning job could not run properly due to some reasons, contentACCESS can send a warning about the problem. The notification email message will be sent to the email address that is set here under **Recipient list** option. Here you can also choose, when these email messages should be sent: only if errors occur, or when errors or warnings occur, or always, regardless of the faultless running of the provisioning job.

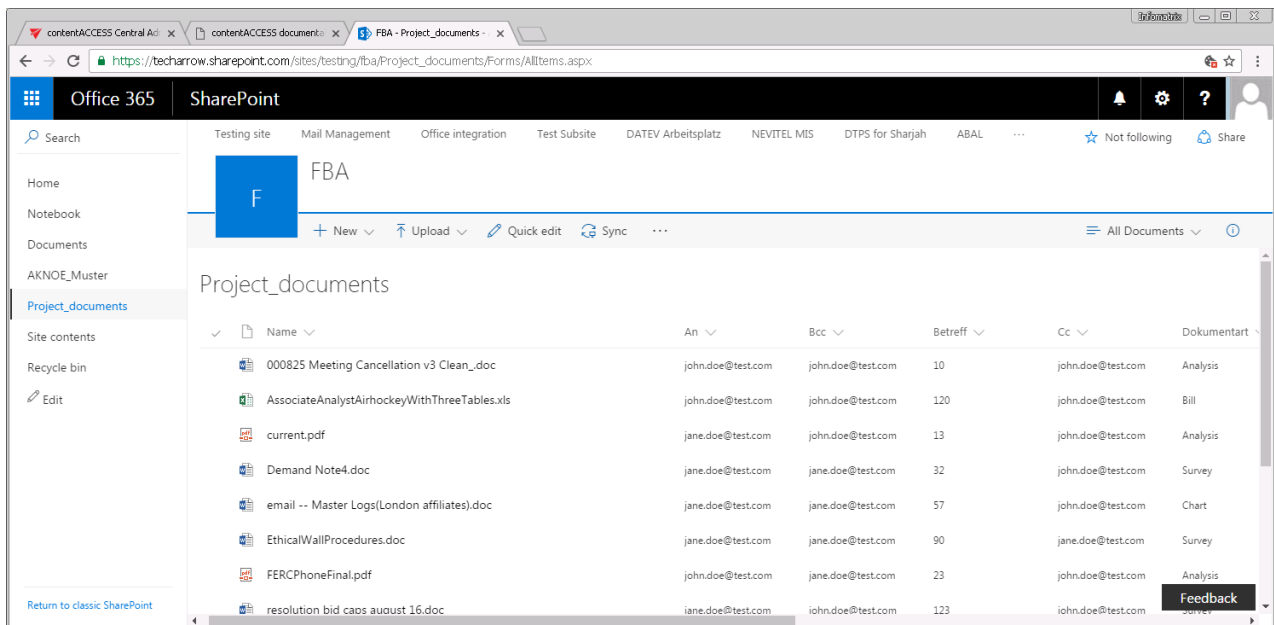
## SharePoint publishing job

The purpose of the job is to publish data into SharePoint from a third party store.

**Note:** Currently the Kendox store type supports this. Read more in chapter [Storages](#).

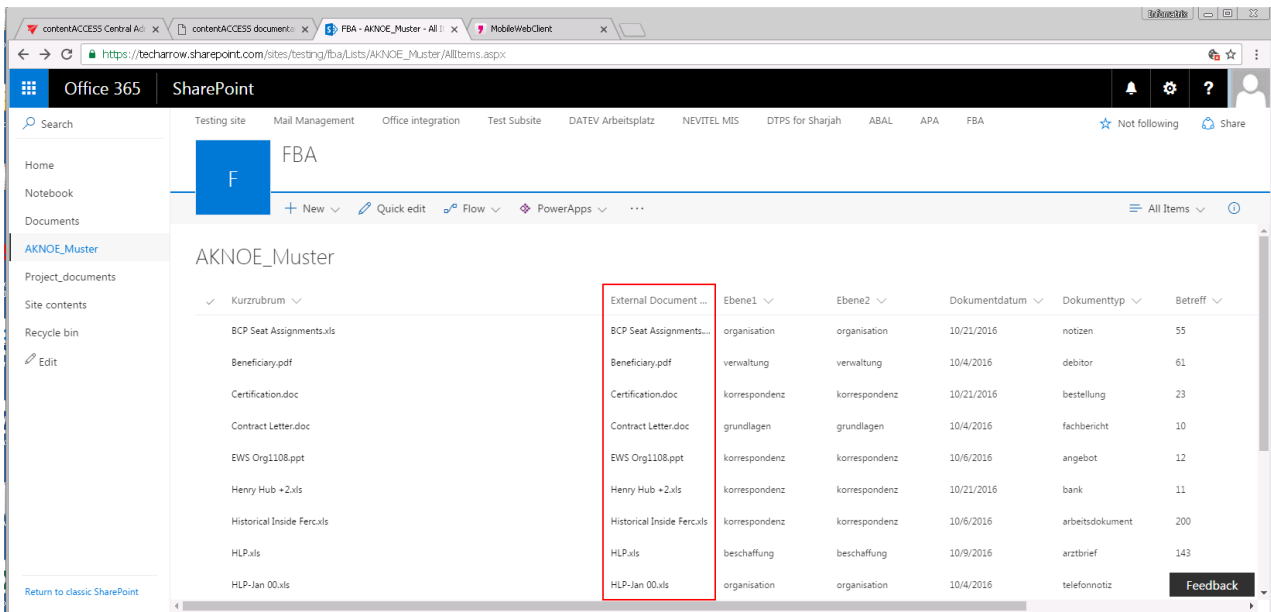
There are 2 publishing methods to be used:

- a) The job can **create a document library with real documents** or



Screenshot A: Project\_documents library with real documents

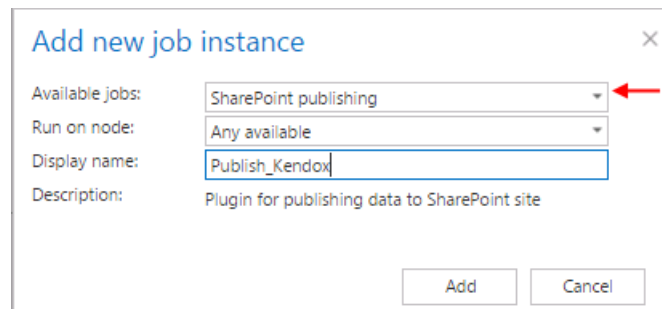
- b) It can create a **custom list** with “placeholder” items which have got an **extra metadata field with an URL pointing to the document residing in the 3rd party document system** (column “External Document URL”). The custom list using the link option is like a shortcut, there’s no real binary data stored in SharePoint. Only the metadata of the original documents are available, and the links to access them.



Screenshot B: AKNOE\_Muster custom list with links

The document library/custom list names (“Project\_documents” and “AKNOE\_Muster” on the pictures above) are inherited from the source folder.

To create a new SharePoint Publishing job, click **+ new** on the **Jobs** page (**SharePoint Archive** tab → **Archive** group → **Jobs**) and select this job type in the **Add new job instance** dialog:



When a new job is created, the user is asked to configure the job immediately. On the SharePoint Publishing job’s configuration page the following must be set:

- **Scheduling settings:** Set the time when the job should run.
- **Document source:** Select the configured 3rd party storage from where we want to publish the documents into SharePoint. The storage must be first configured on the “Storages” page. (Read more in [SharePoint Archive settings.](#))



- **SharePoint configuration:** Set there the URL of the site collection or sub web where you want to create the document library/custom list based on the folder from the 3rd party storage. The URL must be a site collection, or a subweb, it cannot be an existing document library/list or a subfolder of a document library/list.
  
- **Publishing method:** The documents from the source storage can be either published as a
  - a) document – option “Create documents” or
  - b) as a link – option “Create link”.

If the “Create documents” option is selected, then the publishing job will create a document library based on the source folder, with a content type created by the source folder’s content type. The documents will be uploaded to this document library.

If the “Create links” option is selected, then a custom list will be created with a content type based on the source folder’s content type, and for each document in the source folder a new list item will be created. The new list item will have the original metadata and an additional column will be added to it with name “External Document URL”. This column will contain the link pointing to the actual document in the 3rd party system (refer to Screenshot B above).

- **Resource settings:** set here the number of workers threads running in parallel during the publishing process.



contentACCESS Central Administration

System | File Archive | Email Archive | **SharePoint Archive** | Custom plugins

Save | Discard changes | Databases | System settings | Retentions | Storages | Root connections | Schedules | Jobs

Edit | Settings | Archive



# SharePoint publishing

SharePoint Archive > Publishing > Jobs > SharePoint publishing

start immediately    refresh    disable auto refresh    deactivate job    logs    edit

**Scheduling settings**

Scheduled in:

---

**Document source**

Document source:

---

**Sharepoint configuration**

Sharepoint site URL:

Username:

Password:

---

**Publishing method**

Create documents  
 Create links

---

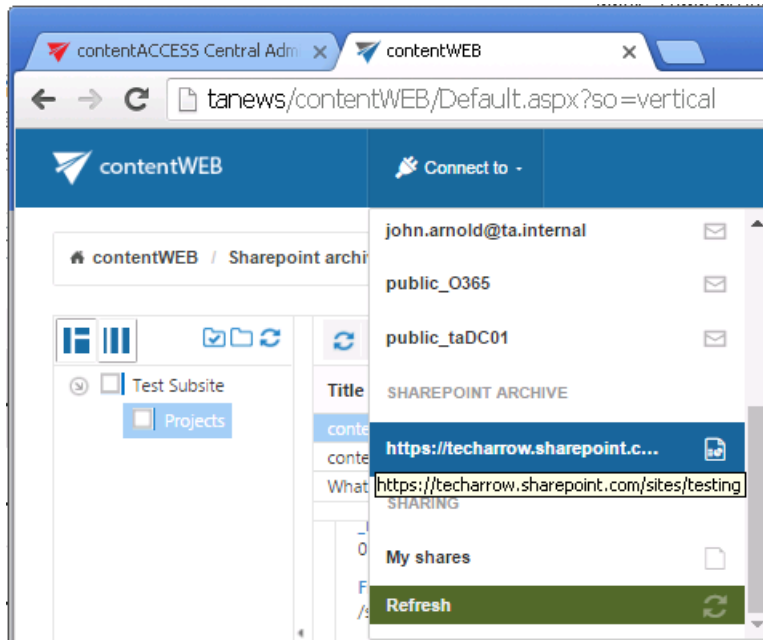
**Resource settings**

Worker thread count:



## SharePoint in the contentWEB archive

The archived SharePoint items can be easily accessed from contentWEB:





## Custom plugins

Many companies require to archive, access and collaborate on documents residing in their own data management systems (e.g. on the Exchange servers, SharePoint sites, Datengut storages etc.). This requires to have a custom solution that connects the respective data management system(s) with the central archive. contentACCESS uses its custom plugins to manage these scenarios in an organization.

contentACCESS custom plugins enable to categorize, replicate, archive, protect, access, search for your data, or to connect them to your MS Outlook (using [officeGATE](#)) and collaborate on them from your mailbox directly. With custom plugins you can categorize the desired data into certain SharePoint libraries, share links to files residing in different DMSs directly from the mailbox, replicate the storages to protect your data etc.

The following chapters of this guide will introduce the configuration steps of the most used contentACCESS Custom plugins.

## Email management job configuration

This plugin is used to scan the mailboxes and process & archive the email messages and its contents into a specific storage.

After you have successfully created a new job to Email management plugin (for more information how to create a new job please refer to section [Creating new jobs in contentACCESS](#)) you can start to configure it. Navigate to the **Custom plugins** → **General** → click on **Jobs** button and choose the job from the list. Click on ellipsis (...) and choose **Configure** option from the context menu as on Screenshot A (or double click on it in the grid). It is also possible to open the job for further configuration with a double click on the corresponding job icon in the **Jobs** ribbon group (Screenshot B).



## Jobs

Custom plugins > General > Jobs

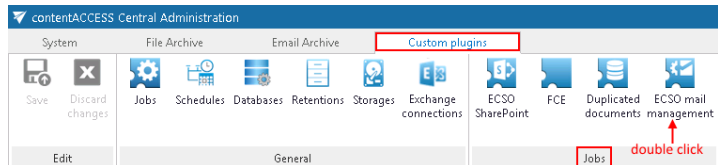
+ new refresh disable auto i

Filter: Show all jobs

ID	Display Name	Type
31	ECISO mail management	Email management

- Clone
- Start
- Stop
- Configure
- Show last logs
- Edit
- Deactivate
- Delete

Screenshot A



Screenshot B

The job's configuration page will open, where the following section must be configured:

### ✓EWS Settings

As first step it is necessary to select the previously configured Exchange connection from the dropdown list. Using these connection settings the user will be allowed to operate over the mailboxes (check section **Mailbox settings** below). For further information how to perform **EWS** (Exchange Web Services) settings please refer to section "[Exchange connections](#)".

#### Exchange connection settings

Exchange connection name:

**Note:** The user set in the "[Exchange connections](#)" must have full access permission to all mailboxes.

### ✓Database settings:

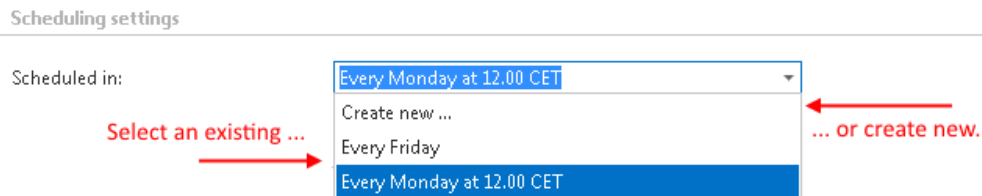
Select a connection from the dropdown list where the metadata will be stored. (For further information how to set database connectors please refer to section "How to create/configure databases – All databases".)

#### Database settings

Database connection:  ✔

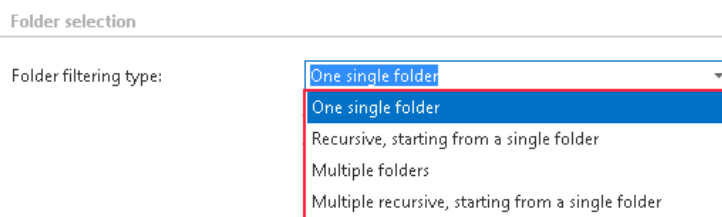
### ✓ Scheduling settings:

In this step the running times of the Email management plugin instance must be selected. It is possible either to select a scheduler from the list or to create a new scheduler via create new option. (For more information about how to set schedulers refer to the section [Schedules](#) above.)



### ✓ Include folders:

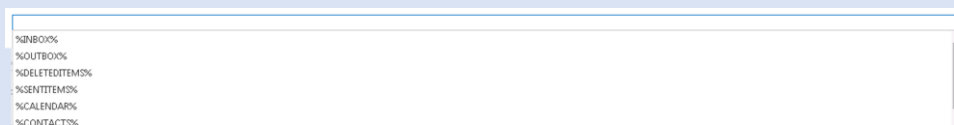
Email management plugin is crawling in one single or in multiple mailbox folders, and also in recursive folder structures. Before you enter the folders to be crawled, it is necessary to select the folder filtering type.



If you set **One single folder** type, then only one predefined folder will be processed (e.g. if you set %INBOX%\Subfolder1, then only Subfolder1 will be processed). If you set **Recursive, starting from a single folder** filtering type, then all folders starting from this folder will be processed (e.g. if you set %INBOX%\Subfolder1, then starting from Subfolder1 every subfolders will be processed in the structure).

The same rule applies to the **Multiple folders** and to **Multiple recursive, starting from a single folder** types, too, but in this case we can work with more folders simultaneously (e.g.: %INBOX%, %OUTBOX%\Folder name 5...or...%TASKS%, %CALENDARS%\Folder name 6)

**Note:** It is possible to either select an item type from the dropdown list or to enter the item type to the textbox manually. If crawling more item types/folders always put item types between percent signs and also separate them with a comma.



✓ **Storage settings:**

In this section choose an already configured storage from the dropdown list. The processed emails will be stored here. (For more information how to set storages check section “[Storage](#)” above.)

**Storage settings**

---

Storage name:

✓ **Item filtering:**

This configuration enables for you to filter among your mailbox-items by 3 types of criteria: by age, size or message class. It is also enabled to use more filters simultaneously. To activate any of these filters, check the corresponding checkbox first, then click on the button to open the filter dialog:

**Item filtering**

---

Filtering type:

Age filter  
 Size filter  
 Message Class filter

- **Age filter:** If you select an option from the “Select filtration type” list, and check the **Use Dates** checkbox, and specify a date, then the age filter will filter out all items, of which sent date is younger/older than this specific date. It is also possible to specify certain time interval with the **Use Dates** function. In this case the items falling under this sent date interval will be filtered out. This age filtering type should be used if you would like to process emails with a specific sent date.

**Examples of using dates:**

**Age Filter** ✕

items younger than the specified date will be processed

**Select filtration type:**

Sent date is younger than  
 Sent date is older than  
 Sent date is in interval

Use Dates

Younger

Days  Months  Years

**Age Filter** ✕

items older than the specified date will be processed

**Select filtration type:**

Sent date is younger than  
 Sent date is older than  
 Sent date is in interval

Use Dates

Older

Days  Months  Years



Examples of **filtering using days/months/years**: If the **Use dates** checkbox is not selected, then the date selection option becomes inactive. In this case it is allowed to filter between items which are **Younger/Older than** a certain number of days/month/years. Enter the number into the checkbox next to the **Days/Months/Years** radio button (screenshot A). It is also allowed to filter items which belong to a certain period of time, e.g. between items from months 1 to 3 (screenshot B). This age filtering type should be used if you would like to process items, which are older/younger than a certain number of days/months/years (e.g. items older than 1 year). If the Age filter has been set click **OK**.

Screenshot A: processing items younger than 90 days

Screenshot B: processing items in age 1-3 months

- **Size filter**: This filter can be very useful because it enables to find the biggest emails for further processing. If these large emails (and large attachments) are permanently processed, the Exchange server will be relieved from redundant megabytes which causes its slowness in many cases. For filtering emails according to this criteria activate **Size filter** button by checking the checkbox next to it, then click on the active button. In the **Size filter** dialog choose from the filtering types (**Bigger then**, **Smaller then**, or **Between values**), enter the size (in kilobytes) and click **OK**.



- **Message class filter:** This filter was improved to select certain message classes to be processed. Using this filter the user will be allowed to filter out different document types, such as mails, documents, contacts etc. For filtering emails according to this criteria activate **Message class filter** button by checking the checkbox next to it, then click on the active button.

In the **Message class filter** dialog it is possible to choose if the filter will be applied for all message classes (choose radio button **Apply for all message classes**) or only for some selected classes (**Apply for selected message classes**). It is also allowed to add **Custom message classes** to the already existing ones. After all necessary custom classes have been checked click on **OK**.

After all settings have been done a summary of filter settings the filter settings will be displayed under section **Item filtering** as it is shown on the screenshot below:

## ✓ Processing settings



The user can choose from 3 main types of how to store emails and attachments. It is possible either to archive the entire email message (in .msg format) with the attachment together (**Simple archive**), or just the attachment (**Archive attachment**). It is also enabled to archive the entire email and copy to the Public folder (**Archive and copy to Public folder**). This function helps to share the document with other users. Everyone with a user account and password on the Exchange server can access the Public Folder.

Processing settings

Processing type:	<input type="text" value="Simple archive"/>
<input type="checkbox"/> Custom categories to process	
<input type="checkbox"/> Split attachments	
<input type="checkbox"/> Create tag view	
Public Folder user email:	<input type="text"/>
Public Folder base folder:	<input type="text"/>

Insert Public Folder data into the below displayed textboxes to establish the connection between the Public Folder and the archive management system:

Processing settings

Processing type:	<input type="text" value="Please choose one processing type"/>
<input type="checkbox"/> Custom categories to process	<input type="text" value="Please enter the category name(s)"/>
<input type="checkbox"/> Split attachments	
<input type="checkbox"/> Create tag view	<input type="text" value="Tag view root name"/>
Public Folder user email:	<input type="text" value="tesztellek@gmail.com"/>
Public Folder base folder:	<input type="text" value="Folder name"/>

**Custom categories to process** function enables to restrict searching in the mailbox to the categories that are selected here. E. g. if Red Category is set this will mean that only those emails will be processed which were labeled with Red Category.

**Split attachments:** by checking this checkbox the email message in .msg format and the corresponding attachments will be stored separately from each other. Both will be stored in the selected storage, but separately from each other. This helps to save storage space. Let's assume, that emails of more users (for example 5 users) will be stored at the same storage. **Split attachments** function will recognize duplicate attachments and they will be stored only once (not 5x). However email bodies will be stored 5 times, as emails in different mailboxes have different metadata.

**Note:** With splitting attachments it is possible to spare more storage space for the company documents. It is obligatory that the selected storage supports single instancing.






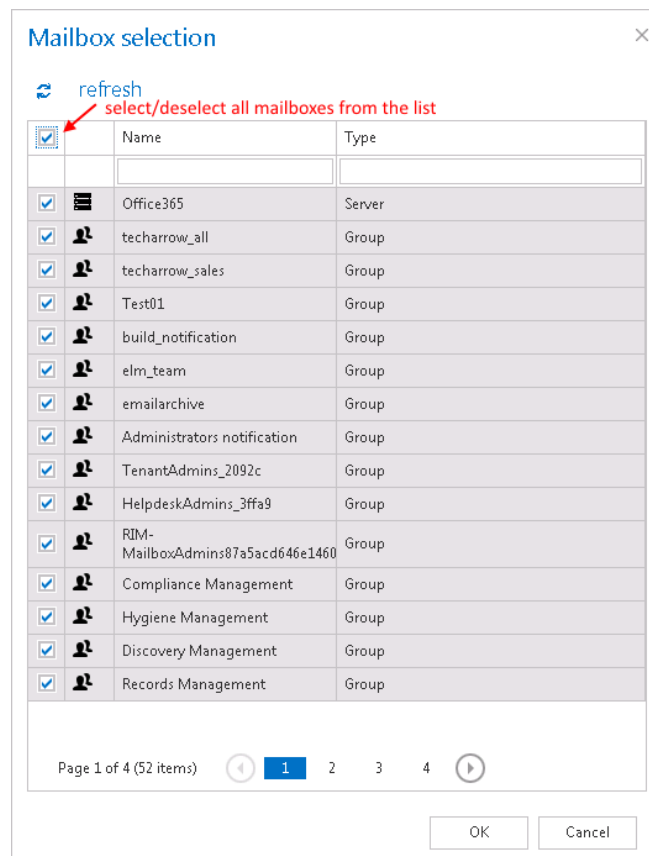
**Create tag view:** contentWEB and officeGATE are both associated with contentACCESS. Thus emails and attachments processed in contentACCESS can be easily found in contentWEB and officeGATE, too. By creating tag view the items falling under more custom categories will be gathered together under a main folder, which is set here in the **Create tag view** textbox. This main folder will be displayed under this “tag view root name” both in contentWEB and officeGATE systems. Subfolders under this main folder will gather together all items falling under a certain custom category.

### ✓ Mailbox settings

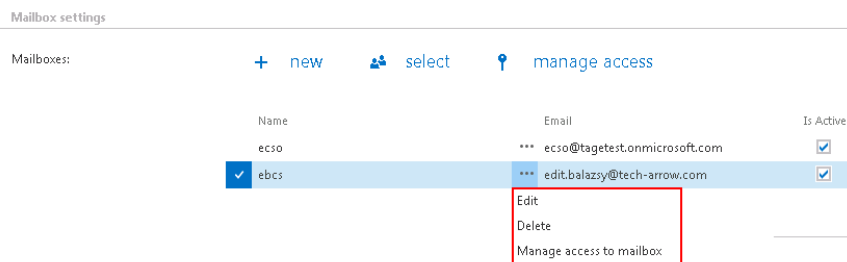
In this section a new mailbox can be added which need to be processed. Click on **+ new** and fill in the **Name** and **Email** into the popup window. Also check **Is Active** checkbox, otherwise the added mailbox will not be crawled (crawling of the mailbox will be in sleeping mode). Click on **OK**:

The screenshot shows a dialog box titled "Edit mailbox" with a close button (X) in the top right corner. It contains two text input fields: "Name" with the value "XY" and "Email" with the value "X.Y@tech-arrow.com". Below these fields is a checkbox labeled "Is Active" which is checked. At the bottom right of the dialog are two buttons: "OK" and "Cancel".

contentACCESS enables for you to crawl more mailboxes the same time. For selecting mailboxes to be crawled navigate to  **select** option and enter mailboxes into the **Mailbox selection** dialog box. With checking the checkbox next to **Name** you can select/deselect all mailboxes for further processing:



Under Mailbox settings you can also edit/delete or manage access to the selected mailbox(es). Click with left mouse on the ... (ellipsis) and choose an option from the dropdown list.



It is also possible to grant access to this mailbox for other users of contentWEB, officeGATE or who log in the mailbox through an online web application from mobile devices. By granting access to these users they will have an access to the archived messages of the selected mailbox. Click on **Manage access to mailbox** from the context menu. Then click on **+ new** and fill the **Create new role association** dialogue box.

There are multiple options how to grant access to a mailbox for a user in the **Create new role association** window. You can **Create new** user, you can **Search for existing** worker from the company or you can also **Send an invitation** to somebody who is not a contentACCESS user yet.



In each case you must select the “Standard user” role type from the dropdown list (a standard user has only the right to check the mailbox). On the below displayed screenshot we give access rights to the mailbox for an already existing contentACCESS user.

A screenshot of a web application dialog box titled "Create new role association". The dialog has a close button (X) in the top right corner. Under the heading "Tenant information", there are two dropdown menus: "Role" set to "Standard user" and "Invitation type" set to "Search for existing". Below these is a search field labeled "Search for existing user\*" with the text "att" entered. A dropdown list is open below the search field, showing two results: "Attila Balazsy" and "Attila Fogas".

### ✓ Resource settings

Under resource settings you can define the number of items that will be simultaneously crawled. It is not advisable to set here a value higher than the duplex number of cores of the processor as this will might extremely slow down the whole processing.

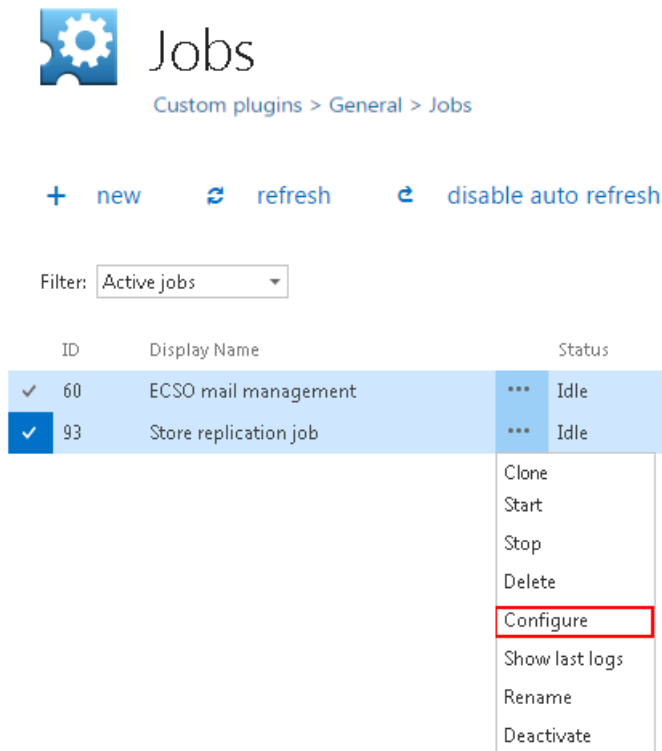
A screenshot of the "Resource settings" section in a web application. It features a label "Worker thread count:" followed by a dropdown menu currently displaying the value "2".

At the end never forget to save your job configurations: click on **Save** in the left upper corner of the Central Administration ribbon.

## Storage replication plugin

A storage replication service is a managed service in which stored or archived data is duplicated in real time. A storage replication service provides an extra measure of protection that can be invaluable if the main storage backup system fails. Immediate access to the replicated data minimizes downtime and its associated costs. The service, if properly implemented, can streamline disaster recovery processes by generating duplicate copies of all backed-up files on a continuous basis. It can also speed up and simplify recovery from a disaster such as a fire, flood, hurricane or a virus.

After you have successfully created a new job to Store replication job (for more information how to create a new job please refer to section [Creating new jobs in contentACCESS](#)) you can start to configure the storage replication job. Navigate to the **Custom plugins** → **General** → **Jobs**, choose the job from the list. Click on ellipses (...) and choose **Configure** option from the context menu.



Jobs

Custom plugins > General > Jobs

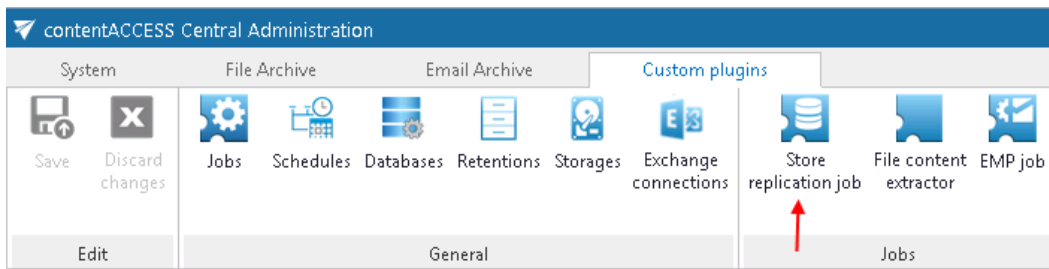
+ new refresh disable auto refresh

Filter: Active jobs

ID	Display Name	Status
60	ECSO mail management	Idle
93	Store replication job	Idle

- Clone
- Start
- Stop
- Delete
- Configure
- Show last logs
- Rename
- Deactivate

The same job configurations can be done with a simple click on the icon of the job in **Custom plugins** → **Jobs** group in the ribbon:



- ✓ **Database settings:** For database settings select an existing connection from the dropdown list, or create a new one, where the job will save the metadata. (For further information how to set database connections please refer to section [Databases](#).)

**Database settings**

Database connection:

A database by the Store replication job will contain the mapping data between the source storage and the target storage items. This means, that by a failover of the main (source) storage this database will remember the mapping data between the source item and the target item, and a successful recovery from the backup (target) storage will be ensured.

- ✓ **Scheduling settings:** The store replication job will run in times, which is set in its selected scheduler. On the screenshot below we have selected the “Always” scheduler, which will run the job without interruption. For more information how to configure scheduler settings please refer to section [Schedules](#) described above.

**Scheduling settings**

Scheduled in:

- ✓ **Storage settings:** Within these settings it is necessary to perform the settings of the source folder on the one hand and of the target folder(s) on the other hand. The source folder will be the primary folder. In case of any technical troubles the required documents will be recovered from the secondary (target) folder with the assistance of mapping data saved in contentACCESS.

**Storage settings**

Source storage name:

Target storage name:



- ✓ **Resource settings:** Under resource settings can be defined, how many items /source folders/ will be simultaneously crawled. It is not advisable to set here a value higher than the duplex number of cores of the processor as this will extremely slow down the whole processing.

#### Resource settings

---

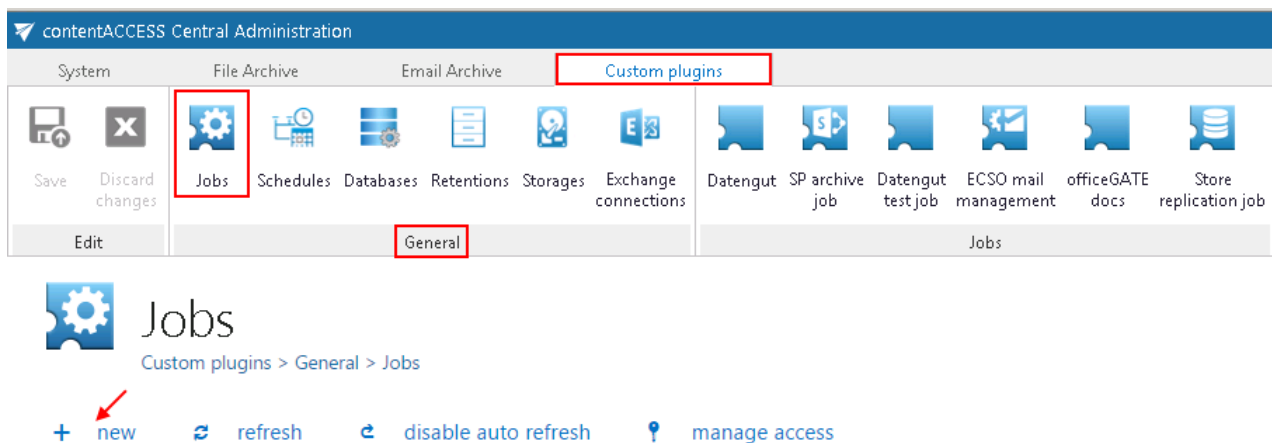
Worker thread count:

## Sharing plugin

The Sharing job is used to collect files (e.g. big files that cannot be sent as email attachments) and enable to share them with other users. The job only collects these documents. The sharing process is done by [officeGATE](#), TECH-ARROW's genuine MS Outlook add-in. This section provides the user with the information how to set up a Sharing job in contentACCESS. After the job is well configured, the plugin appears in the officeGATE's navigation pane, in MS Outlook.

### Sharing job configuration

Navigate to **Custom plugins** → **General** → **Jobs** on the Central Administration web interface to open the **Jobs** page. Here, on this page, click on **+ new**.



In the “Add new job instance” window select “Sharing” from the list of Available jobs, name it and add it to the jobs’ list.

### Add new job instance ✕

Available jobs:

Run on node:

Display name:

Description: Sharing files using contentACCESS

contentACCESS will prompt you to configure the job instance now.



On the job's configuration page configure a database and a storage for the Sharing job and save your settings.

contentACCESS Central Administration

System File Archive Email Archive Custom plugins

Save Discard changes Jobs Schedules Databases Retentions Storages Exchange connections Datengut SP archive job Datengut test job ECSO mail management officeGATE docs Store replication job

Edit General Jobs

officeGATE  
Custom plugins > Jobs > officeGATE

start immediately refresh disable auto refresh deactivate job logs

Status: **Idle**  
Progress:

Storage settings

Storage name: File archive store Change

Database settings

Database connection: File Archive DB

Now the user can use the sharing function in officeGATE, directly from his MS Outlook.

## Datengut plugin

This custom plugin enables to connect the Datengut Document Management System with officeGATE. Based on the exact configurations of a Datengut job the officeGATE user is allowed to

- a) Collaborate on the Datengut files using officeGATE
- b) Collaborate on the Datengut files using officeGATE + Synchronize email categories in multiple mailboxes if the same email is assigned to one Datengut project using officeGATE

If the Datengut job is already created (for more information about creating jobs refer to [Creating new jobs in contentACCESS](#)), open its page to configure it.

- ✓ **Login provider configuration settings**





Select the Datengut login provider that you have already configured in section **System** → **Security** → **Login providers** (refer to chapter [contentACCESS users in third-party systems](#) how to create it).

✓ **Access management**

If you want to grant access to Datengut for more contentACCESS users, click on “Edit user permissions” button and configure a new user.

If you wish synchronize email categories in multiple mailboxes, check the “Enable mailbox synchronization” checkbox. If you would not like to synchronize emails, left it unchecked and save your configurations above.

If email synchronization is enabled, the Datengut job updates the Email synchronizer job’s queue with the information, if the given category should be added/deleted on the given email. The user drag&drops (assigns) an email to a Datengut project in officeGATE, and the Datengut job periodically updates the necessary data in the queue.

To enable email synchronization the following extra settings need to be configured:

- **Database connection** - select a database where the Datengut job will write the metadata
- **Plugin job** - select the Email synchronizer job that is already configured (more information [here](#))
- **Username, Password:** specify the user credentials to be used to connect with the Datengut system
- **Scheduled in:** set the scheduler which will trigger the job in the given time periods
- **Notification settings:** if you need to get emails about any possible warning or errors, configure it with the recipient list [here](#)



Enable email synchronization

start immediately

---

Database settings

Database connection:

---

Plugin configuration

Plugin job:

---

User credentials

Username:

Password:

---

Scheduling settings

Scheduled in:

---

Notification settings

Send when:

Recipient list:

## Email synchronizer plugin

Email Synchronizer plugin's function is to synchronize properties of the same email in multiple mailboxes. Currently the following actions are available:

- Add category: adds one or more categories to an email,
- Remove category: removes one or more categories from an email.

The email synchronizer job has a queue that the job checks periodically for new actions to be executed on emails. This queue is filled up by other plugins.

This chapter describes how an Email synchronizer job is configured.

### Setting up an Email synchronizer job

After an Email synchronizer job is created on page **Custom plugins** → **General** → **Jobs** you may start to configure it. For more information how to create jobs refer to section [Creating new jobs in contentACCESS](#) of this guide.

On the configuration page of the given job the user is required to specify the following settings:

#### ✓ Exchange connection settings

First the connection with the Exchange server must be established. Before processing, the job builds a list of all mailboxes and mailbox groups found on the specified Exchange server. Only those queue items will be processed which mailbox is handled by the Exchange server.



The process how an Exchange connection can be set is described in section [Exchange connections](#) of this guide. Further select this Exchange connection on the synchronizer job's configuration page.

✓ **Database settings**

Set a database where the job will write the necessary data. For more information how to create databases refer to section [Databases](#).

✓ **Scheduling settings**

Using schedulers the administrator may automatize the running times of the given job. The mailboxes are periodically synchronized with the categories written into the queue in time intervals which is set here. For more information how to set schedulers refer to section [Schedules](#) above.

✓ **Processing configurations**

There are 2 available methods how to speed up the synchronization process:

- **Use email archive database to enhance performance:** After processing emails with EntryId, the plugin continues with processing emails which have InternetMessageId only. Using this option the process can be speeded up if contentACCESS is used for email archiving. The plugin first searches for the queue item's EntryId in the archive. If it finds it, the queue item is added to the list of queue items with EntryId.
- **Search only for one email with MessageID in mailbox:** In case that the same email message exists in the mailbox multiple times, only the first email will be processed (marked with the given category) and all other emails in the given mailbox will be ignored. The first email will be marked in the recipient mailboxes, too (if exists).

✓ **Notification settings**

Using this option the administrator may set when the notification emails need to be sent (always, only when errors occur, when both errors and warnings occur, or never) by the job. The recipient list of such emails is set in this section as well.

✓ **Resource settings**

The number of threads running in parallel is set here. The value is set to "2" by default.



contentACCESS Central Administration

System | File Archive | Email Archive | **Custom plugins**

Save | Discard changes | Jobs | Schedules | Databases | Retentions | Storages | Exchange connections | Perceptive | Datengut test job | officeGATE | SP archive job | Store replication inh | Datengut | ECSO mail management | **Email synchronizer plugin**

Edit | General | **Jobs**

# Email synchronizer plugin

Custom plugins > Jobs > Email synchronizer plugin

✓ start immediately | ↻ refresh | ⏸ disable auto refresh | ⏹ deactivate job | 📊 logs | ✎ edit

Status: **Idle**  
Progress:

Exchange connection settings

Exchange connection name: O365 connection

Database settings

Database connection: Email Archive DB ✓

Scheduling settings

Scheduled in: Daily at 5 PM

Processing configuration

Use email archive database to enhance performance  
 Search only for the first email with MessageId in mailbox

Notification settings

Send when: Never  
Recipient list: john.doe@example.com,peter.white@example.com

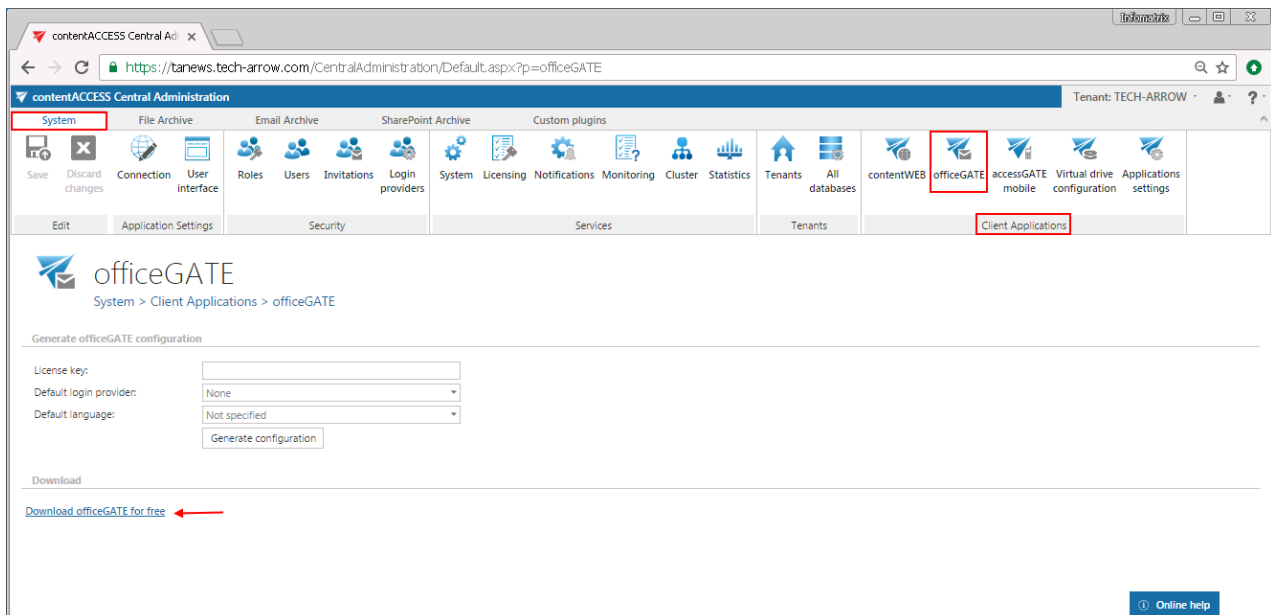
Resource settings

Worker thread count: 2

## officeGATE

officeGATE is an MS Outlook add-in connecting the email client with the local file-system and with SharePoint Online, contentACCESS, OneDrive, Dropbox, fileNshare and many other providers. With officeGATE it is not needed to switch to other applications when the user would like to access his files. It can be done directly from Outlook. The user can also easily access the archived documents in contentACCESS directly from here.

officeGATE can be downloaded for free from the respective page of contentACCESS Central Administration. Navigate to **System** → **Client applications** → **officeGATE** button on the ribbon and download a free version of officeGATE from the link.



### Installing officeGATE with Group policy (GPO)

officeGATE can be globally installed using Group policy. This simplifies the installation process of the product in a distributed company environment. Group policy installation of officeGATE is applied on 2 levels:

- 1. First the officeGATE XML files are distributed** to each user in the domain. This XML file contains the global configurations of officeGATE listed below.



This XML file containing global officeGATE settings is generated on the **officeGATE** page of Central Administration. The following global settings are specified:

**License key** – enter here the officeGATE license key

**Default login provider** – select the desired login method that should be applied when establishing connection between officeGATE and contentACCESS

**Default language** – select here the default language of the application. If a language is not specified here, then the language of MS Outlook will be automatically used.

Click **Generate configuration** and save the distributable XML file.

officeGATE  
System > Client Applications > officeGATE

Generate officeGATE configuration

License key:

Default login provider: Windows

Default language: English  
Deutsch

Generate configuration

2. Further the **officeGATE setups are distributed** for each domain user and the product is automatically installed.

For more information about the XML distribution and installation using Group policy check [this](#) guide.



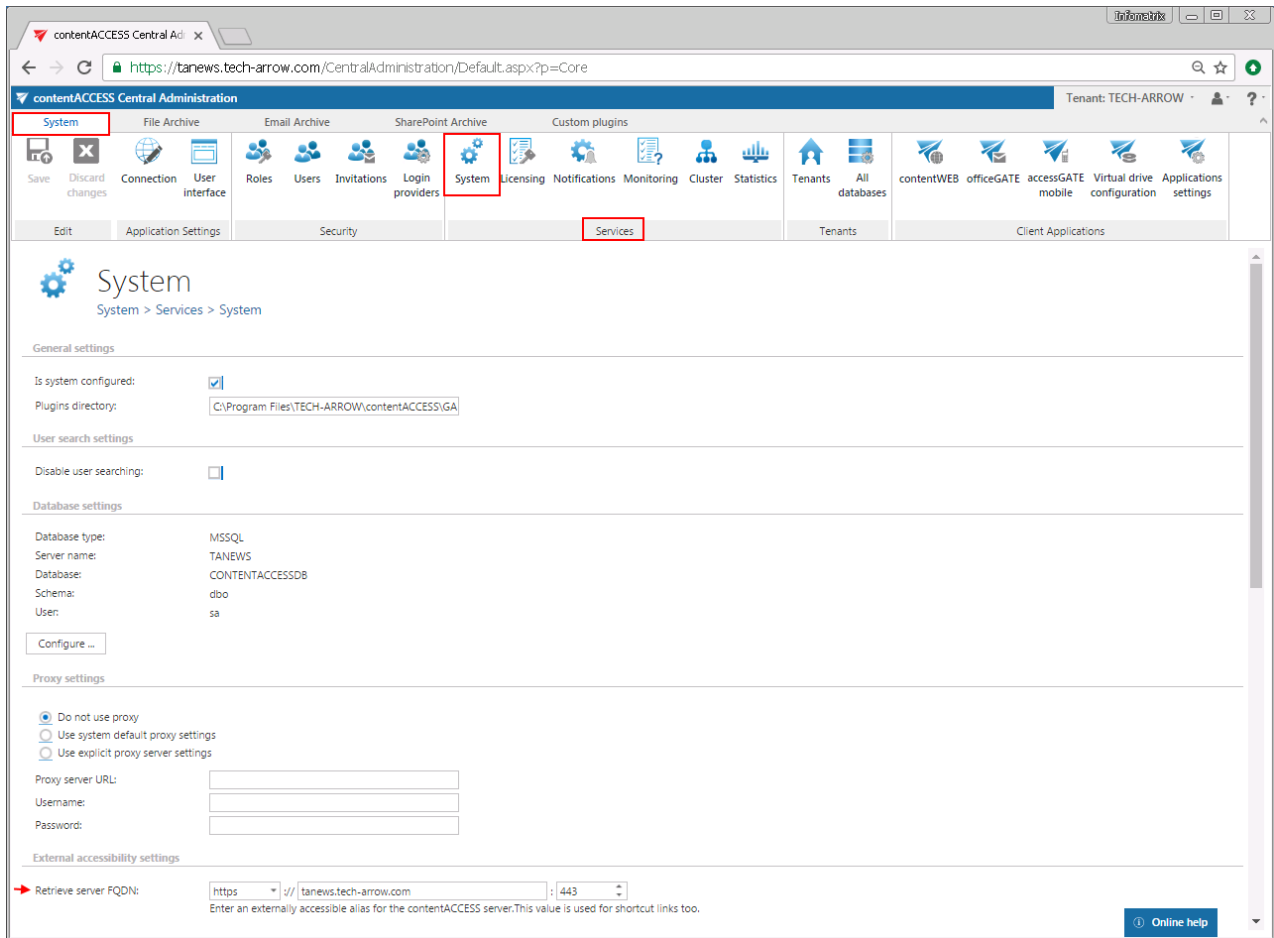
## accessGATE Mobile

accessGATE Mobile is a native mobile device application over which the user can easily access his archived documents from contentACCESS. An offline access is also ensured for read-only use. To be able to open the application from a mobile device, **the administrator needs to perform the following steps in contentACCESS:**

1. It is mandatory to **install the proxy server over HTTPS** connection from the actual contentACCESS setup package.
2. The proxy server must be **published over HTTPS connection in the IIS** (Internet Information Services) Manager.
3. On the system page of contentACCESS Central Administration, under the external accessibility settings the **proxy server must be configured to use HTTPS connection.**

**Note:** if the FQDN settings are configured to use HTTP connection, the administrator will be warned about it on the accessGATE mobile page in Central Administration:

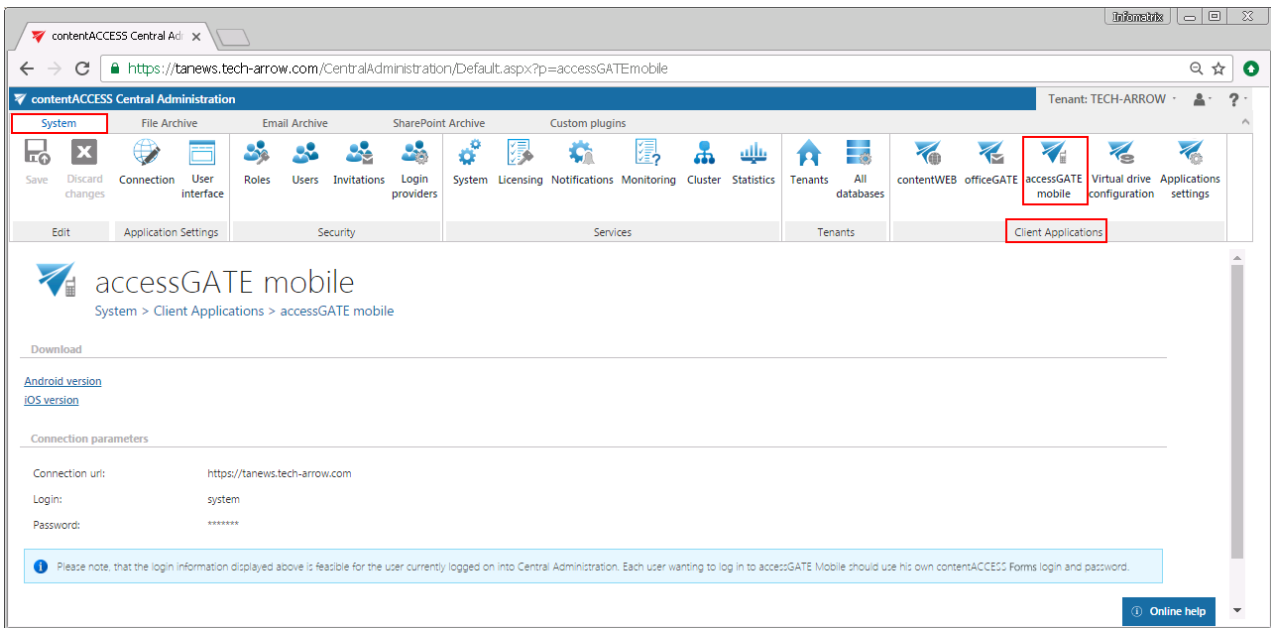
The screenshot shows the 'Download' section of the accessGATE mobile page. It includes links for 'Android version' and 'iOS version'. Below this is the 'Connection parameters' section, which contains fields for 'Connection url:', 'Login:', and 'Password:'. A red-bordered warning box is overlaid on the 'Connection url:' field, containing the text: 'Mobile access requires 'https' protocol. Please change it in 'System/System' under 'External accessibility settings''. At the bottom of the form, there is a blue information box with a note: 'Please note, that the login information displayed above is feasible for the user currently logged on into Central Administration. Each user wanting to log in to accessGATE Mobile should use his own contentACCESS Forms login and password.'



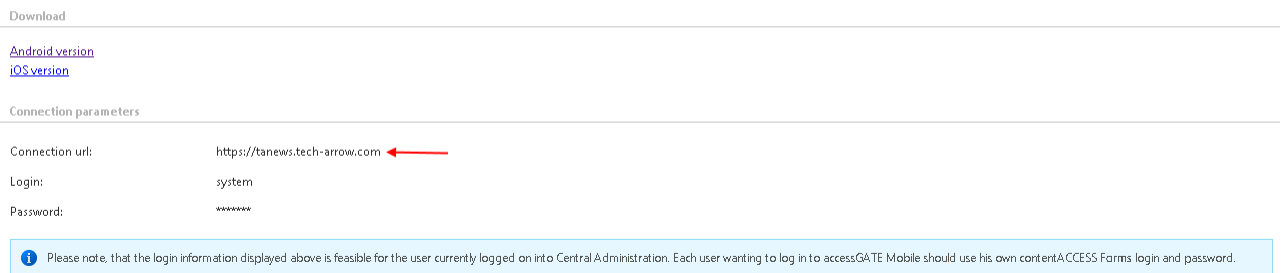
4. The administrator has to create a new Forms user login for the already existing contentACCESS user (if the accessGATE mobile access must be granted to an already existing user), or to create a new user with Forms provider in contentACCESS (if the new user is not currently present in contentACCESS); over these credentials will the end user log in to accessGATE mobile:

The accessGATE mobile application can be downloaded on a mobile device (either on android or iOS) from contentACCESS Central Administration, from the accessGATE mobile page (**System** tab → **Client applications** → **accessGATE Mobile**). You can also search for accessGATE mobile in Play store or Apple store to install the app on your mobile device.

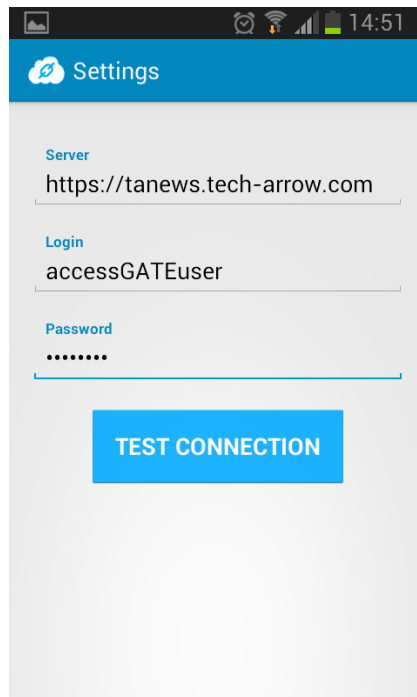




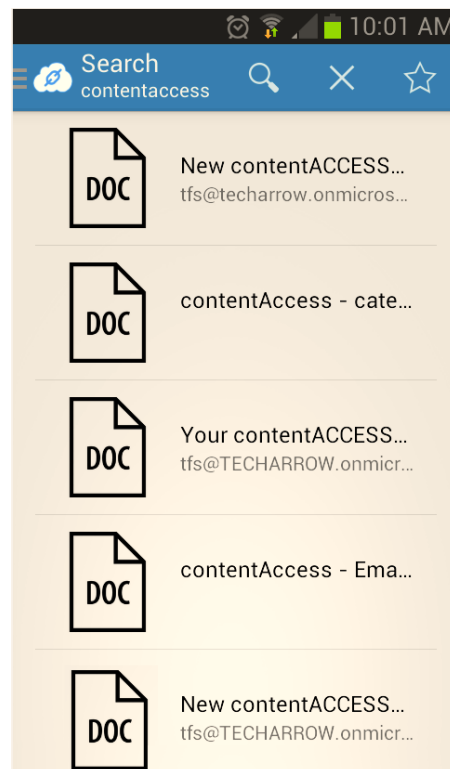
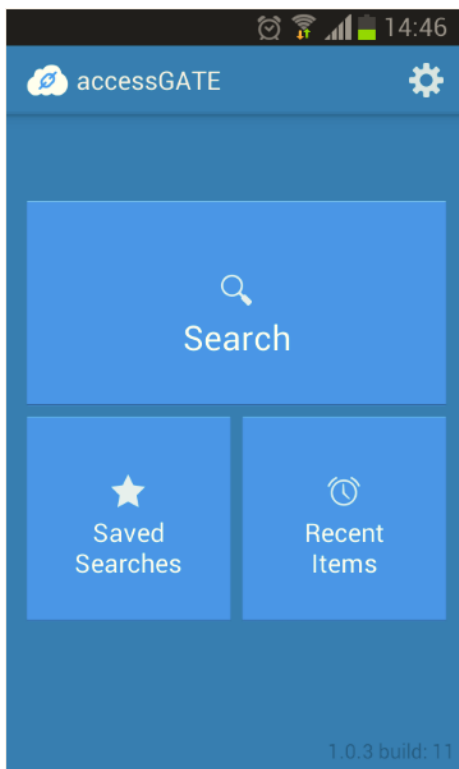
Once the user has successfully downloaded the application on the mobile device and opens the application, he will be asked to type in the server name (connection URL) and the login credentials. The server name (connection URL) is accessible (for the administrator) on the accessGATE mobile's page in the contentACCESS Central Administration.



The user will need to log in with the credentials of the Forms user that has been created above (in step "4/c").



Once the connection is established, the search page opens and end user will be able to search in the archive on which he has permissions.





## Virtual drive configurations

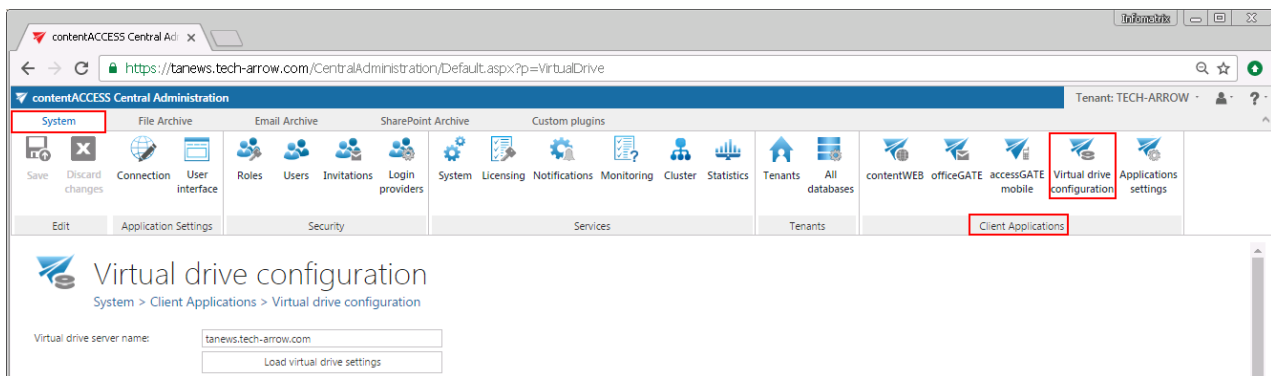
**What is a virtual drive?** It is a virtual file system that presents/virtualizes any data (files and folders of an actual disk) to the end-user. Virtual drive is a non-existing drive that does not physically exist in the computer, but it contains the exact structure of the items that have been processed by contentACCESS.

The contentACCESS Virtual Drive was developed by TECH-ARROW and serves as a key access point between the end user and the contentACCESS File Archive. Virtual Drive is a must-to application for users who have File system Archive and would like to use shortcutting. The user can view their archived files from here. A file opened through the Virtual drive is opened in read-only mode. By default only the active items can be viewed on the virtual drive (active items = items in the archive, which have an original file or shortcut in the file system, too). To enable inactive view, the "Show inactive view" checkbox must be selected on the Virtual drive configuration page. This drive can be also shared with another users, so they can easily browse for their associated archived files in case of need. The original folder/ item permissions are also applied for the files/ folders in virtual drive. A user can access only the items on which he has access permissions in the original file system.

**Note:** If the shortcut pointing to the archive file is opened and edited through the Virtual drive, it must be saved back to the original file location. For more information refer to section [Editing of already archived files, file versions in File system archive](#).

After the Virtual drive was installed (link to the Virtual drive setup is accessible in the Tools of the contentACCESS setup package), it is necessary to configure its settings on the Virtual drive configuration page.

In contentACCESS Central Administration navigate to **System** tab → **Client Applications** → **Virtual drive configuration** control to open this page:



Enter the server name - where virtual drive (henceforth “VD”) is installed – into the **Virtual drive server name** textbox. To load the actual settings of VD click **Load virtual drive settings** button.



### contentACCESS server connection

It is possible to connect the Virtual drive to contentACCESS either through **net.pipe** connection or through the **contentACCESS proxy** with a secure (**HTTPS**) or insecure (**HTTP**) connection, or **directly**, over HTTP connection.

The **net.pipe** communication is the fastest way of the communication between the Virtual drive and contentACCESS and it is using shared memory for the communication. The disadvantage is, that this type is possible only if the Virtual drive and contentACCESS server is installed on the same machine. In such cases this is the recommended communication type.

The connection through the **proxy** is recommended, if the virtual drive is installed somewhere in the cloud, or on a server which differs from the contentACCESS server. It is recommended to use a direct connection (without using the proxy), if the virtual drive and contentACCESS are installed on the same server.

# Virtual drive configuration

System > Client Applications > Virtual drive configuration

Virtual drive server name:

---

**contentACCESS server connection**

contentACCESS server name:  //  :    
 Use windows authentication (using user 'NT AUTHORITY\SYSTEM')   
contentACCESS user:    
contentACCESS password:    
Model types to show:

---

**Virtual drive settings**

Cache size limit(MB):    
Cache timer interval(ms):    
Debug:    
Download locally:    
Folder refresh interval(s):    
Root mount point:    
Temp path:    
Timeout:    
Show inactive items:

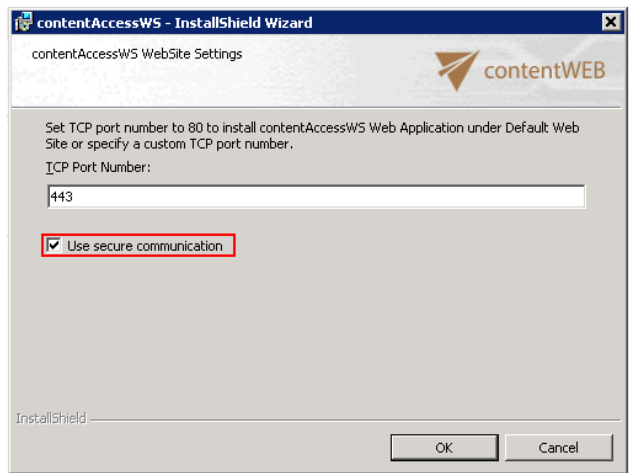
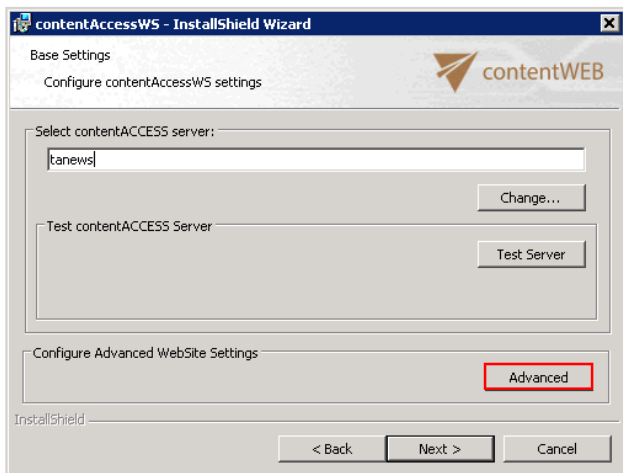
---

**Virtual drive management**

Virtual drive status: **Started**

➤ **Virtual drive configurations, if secure communication should be used (over the proxy):**

The proxy must be installed over HTTPS connection (HTTPS connection must be selected during the installation process of the proxy);





In Central Administration, on the **Virtual drive configuration** page: The connection of the Virtual drive to contentACCESS must be established over a HTTPS connection; port 443 must be entered into the connection URL.

#### contentACCESS server connection

contentACCESS server name:  :

- **Virtual drive configurations, if the virtual drive will connect to the contentACCESS server directly:**

In Central Administration, on the **Virtual drive configuration** page: By a direct connection select HTTP connection when specifying the contentACCESS server name URL. The virtual drive and contentACCESS are installed on the same server, so the “localhost” URL can be configured. Enter 8736 for the port number.

#### contentACCESS server connection

contentACCESS server name:  :

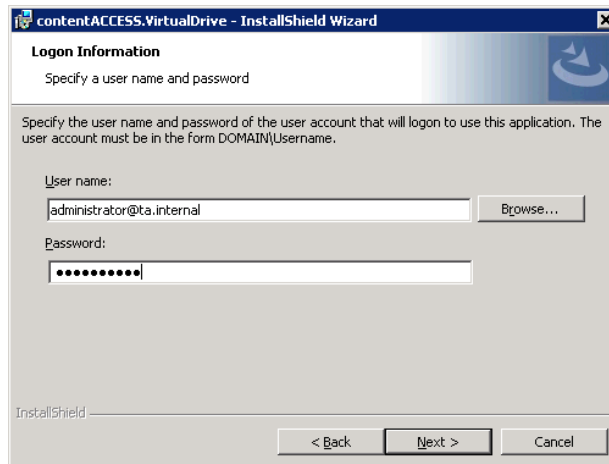
- **Virtual drive configurations using net.pipe for communication, if Virtual drive and contentACCESS are installed on the same machine:**

#### contentACCESS server connection

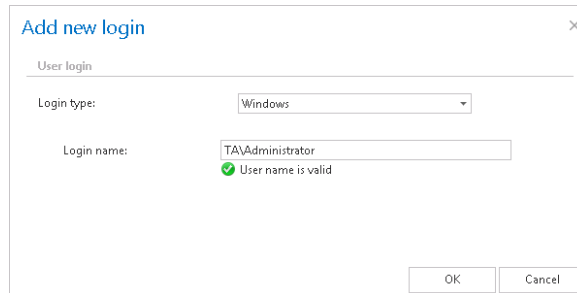
contentACCESS server name:  :

**In the next steps it is required to specify the user, over which VD will connect to contentACCESS.** To establish the connection with the contentACCESS server, the system user, or a Windows user can be used. The Virtual drive will connect to contentACCESS over these credentials. By default, the contentACCESS system user is used for this connection. If you do not want to change these connection settings, leave the “Use Windows authentication checkbox” unchecked. To enable the connection with Windows account the following steps must be performed:

- When installing the Virtual drive the Windows user credentials should be specified. This VD service (GATE.contentAccess.VirtualDrive.Service) user will be taken to log in to contentACCESS.



- In contentACCESS the corresponding Windows user login needs to be created (under System → Security → Users...double click on the user...add Windows user login in the User logins section...fill required fields in the **Add new login** dialog).



- On the configuration page of virtual drive, the “Use Windows authentication” checkbox must be selected:

Use windows authentication (using the service user 'TA\Administrator')

contentACCESS user:

contentACCESS password:

**The main advantage of a Windows user is:** if the system user credentials are changed by the user and he forgot to change it in the Virtual drive settings, Virtual drive will be disabled to connect to contentACCESS. If a Windows user is used, such problems can be avoided.

To finalize the VD configuration continue with configuring the following settings. Some of them are set by default, these can be left as they are:



### Virtual drive settings

Cache size limit(MB):	<input type="text" value="1"/>
Cache timer interval(ms):	<input type="text" value="10000"/>
Debug:	<input checked="" type="checkbox"/>
Download locally:	<input checked="" type="checkbox"/>
Folder refresh interval(s):	<input type="text" value="10"/>
Root mount point:	<input type="text" value="G:"/>
Temp path:	<input type="text" value="C:\Users\ADMINI~1.TA\AppData\Local\Temp\content\"/>
Timeout:	<input type="text" value="0"/>
Show inactive items:	<input type="checkbox"/>

### Virtual drive management

Virtual drive status:	Started
	<input type="button" value="Start virtual drive"/> <input type="button" value="Stop virtual drive"/>

**Cache size limit (MB):** When opening archived data, the processed data are cached to unburden virtual drive from unnecessary operations, or to shorten access time to this data. This function helps to unburden the VD server. Here we can define the maximum size of data, which will be downloaded and stored by the virtual drive. In our case we set this limit on 1,000 MBs (=1 GB).

**Cache timer interval (ms):** The time set here will define the intervals when the cache is “cleaned”. At the intervals which are set here, the cache will check if the cache size limit has not been exceeded.

**Debug:** If you check this textbox, then all errors, warnings that have been noticed will be written into the .log file or into the debug view. It is recommended to turn on this function only if the user notices some problems with running of virtual drive, otherwise these notifications might slow down the operations.

**Download locally:** contentACCESS data can be stored a) as files in the cache, or b) as content in the memory. If you check option “Download locally”, then files will be stored in the cache.

**Folder refresh interval(s):** The virtual drive folder will be refreshed in time intervals which is set here. At these intervals the newly archived files will become visible in the virtual drive folder.

**Root mount point:** Here you can choose an available disk for the Virtual drive. By default it is disk “Z”, but it is allowed to change it.

**Temp path:** Any files that are opened through virtual drive will be stored temporarily here.

**Timeout:** The duration of running of all operations can be determined here. After this time period the operation will be interrupted. Value “0” means that the operation will be waiting to infinity.





**Show inactive items:** the user may set here, if he wants to see the inactive items (items in the archive, which do not have an original or shortcut in the file system) in the virtual drive, or not. In default view, the active items are shown only.

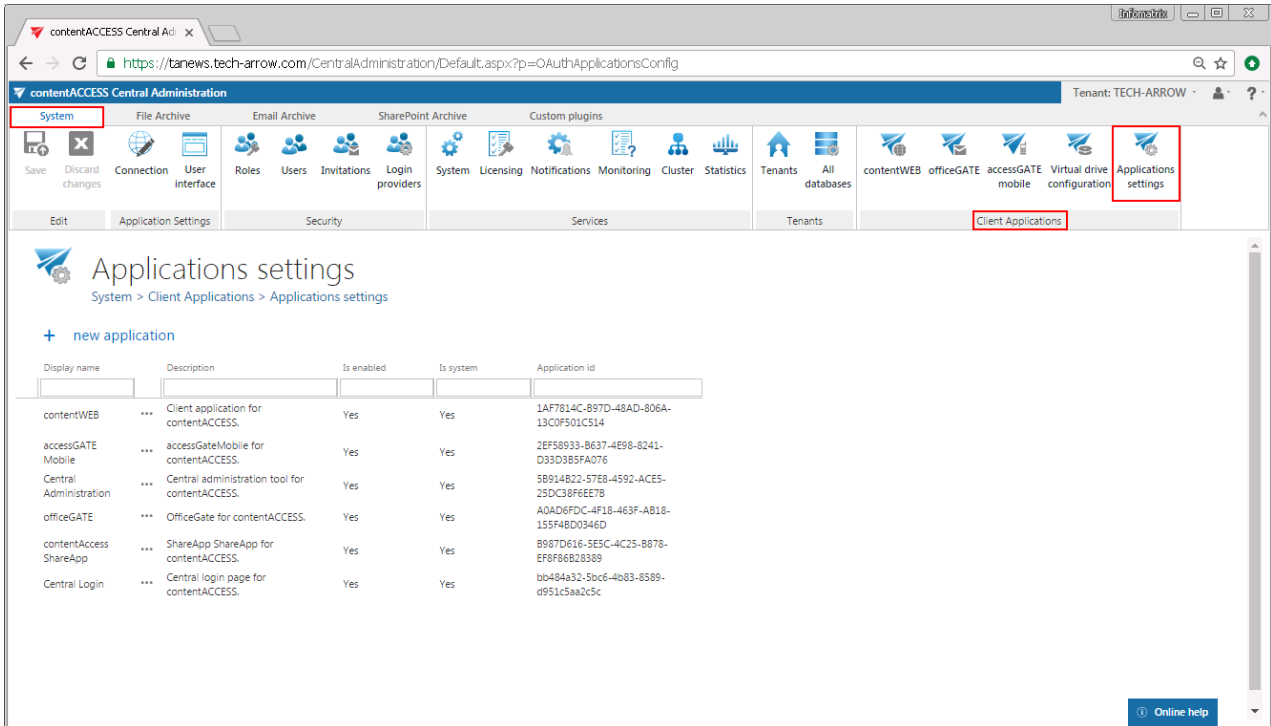
**Virtual drive status:** This will show the current state of the virtual drive. With the buttons below you can start/stop the virtual drive. To connect to the G drive and start the virtual drive click on **Start virtual drive**.

Do not forget to save the configurations.

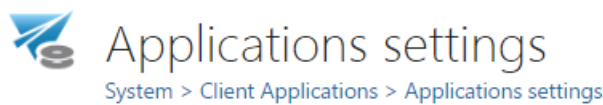


## Application settings

The list of the contentACCESS client applications is available for the system and/or tenant administrator on the **Application settings** page (System tab → Client applications group → **Application settings** button).



The settings of the client applications listed on this page can be managed using the given application's context menu options:



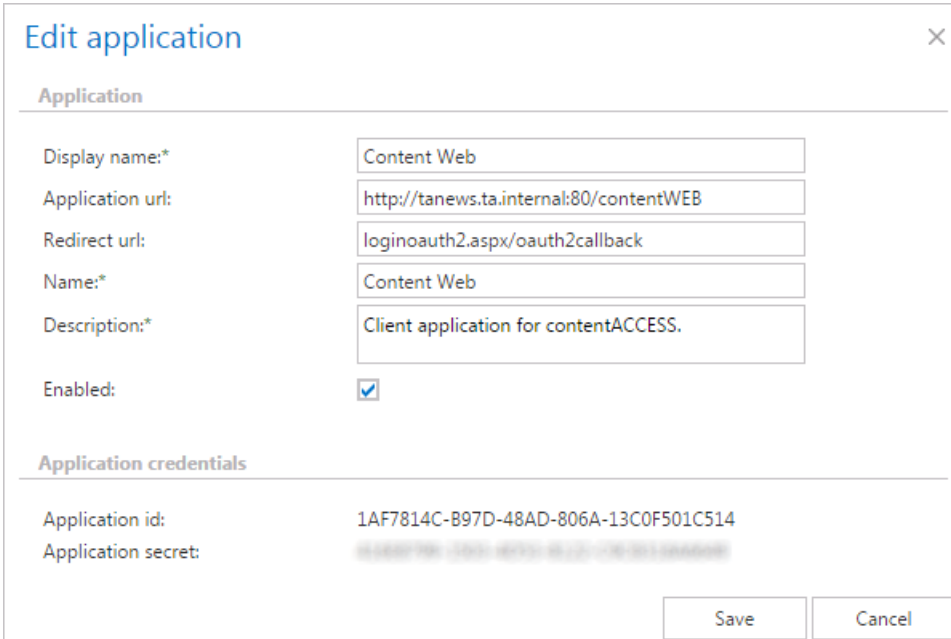
+ new application

Display Name	Description	Is Enabled	Is System	App Id
Content Web	Client application for contentACCESS.	No	Yes	1AF7814C-B97D-48AD-806A-13C0F501C514
accessGateMobile	ssGateMobile for entACCESS.	Yes	Yes	2EF58933-B637-4E98-8241-D33D3B5FA076
Central Administration	Central administration tool for contentACCESS.	Yes	Yes	5B914B22-57E8-4592-ACE5-25DC38F6EE7B
OfficeGate	OfficeGate for contentACCESS.	Yes	Yes	A0AD6FDC-4F18-463F-AB18-155F4BD0346D
contentAccess ShareApp	ShareApp ShareApp for contentACCESS.	Yes	Yes	B987D616-5E5C-4C25-B878-EF8F86B28389
Central Login	Central login page for contentACCESS.	Yes	Yes	bb484a32-5bc6-4b83-8589-d951c5aa2c5c

The context menu options allow to:

- **Delete** the application – applications with “Is system” flag cannot be deleted.
- **Edit** the application settings – the user can change the application URL, modify the application name and description, **enable/disable the given application** (the disable option is not allowed in case of Central Administration, and the configuration of the Central login page URL is also disabled here – it can be changed on the System → Services → System page).

If an application is disabled, then the user cannot login to this application on the central login page. E.g. if contentWEB is disabled, the contentWEB login option won't be available on the central login page for the users, and nobody will be allowed to log in to the archive.



**Note:** In **Central Administration** contentWEB URL is taken from **Application settings** table. The following locations are using the contentWEB link: „**System => contentWEB**“ and „**User menu** (upper right corner in contentWEB)“.

At first install of the product, the **Application URL** is written to the given application's window by the contentACCESS setup. It is highly recommended to create an alias, and to use an FQDN form in the application URL, because using this URL the end user should be able to access the given application from everywhere (from home, from office etc.). By each update of the product the setup



reads the application URL from the **Application settings**, i.e. from the settings specified in the **Edit application** window.

It is also possible to add new applications using the “+ new application” button on the same page. By clicking the option the “**Add new application**” dialog opens. Fill the fields, generate application credentials and add it to the list.

### Add new application ×

---

**Application**

Display name\*:

Application url:

Redirect url:

Name\*:

Description\*:

Enabled:

---

**Application credentials**

Application id: e8b97dc8-758d-4995-b566-c3e5154171aa

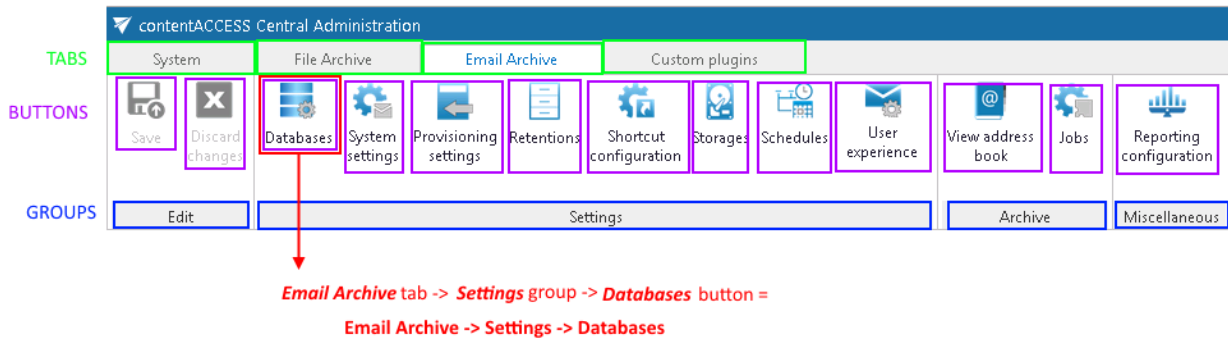
Application secret:

## Terms of use

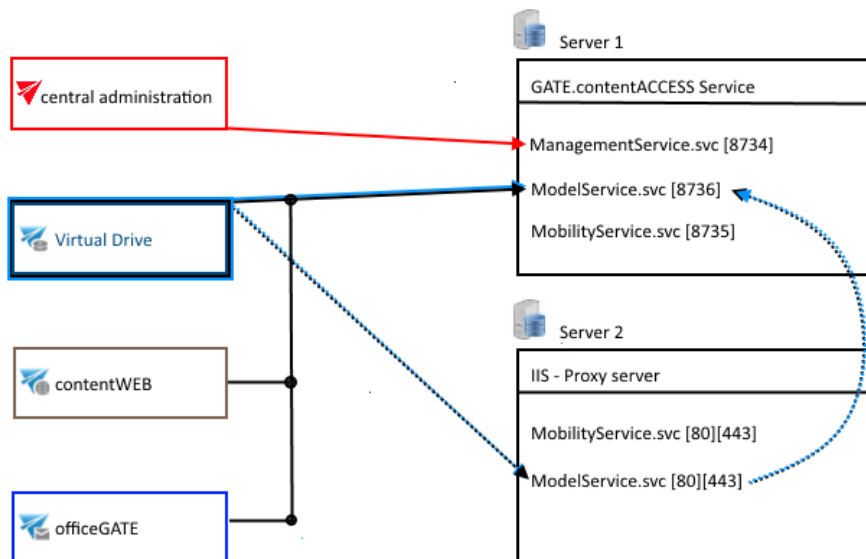
Definition of terms:

### TAB, GROUP, BUTTON

contentACCESS Central Administration user interface is divided into tabs, groups and buttons. Each tab contains several groups, which also contain several buttons. When the reader of the manual encounters with a path containing 3 levels, e.g. **Email Archive** → **Settings** → **Databases**, then this path will navigate the user through the following levels: TAB → GROUP → BUTTON.



### Schema of services used by the products of TECH-ARROW





## FAQ

If you have any problems with configuring the system, the following chapters may help you to solve the problems:

- [Download sample for the file to be imported does not work](#)
- [Archiving is not working, if MAPI is set to communicate with the Exchange server](#)
- [Virtual drive is still appearing after the uninstall](#)
- [Outlook forms problem](#)
- [Unable to open shortcuts of archived file on the server side](#)
- [Samples are not shown using "Show sample" option in the Import dialog](#)
- [Do I need to create separate tenants for file archiving and email archiving](#)
- [What is the recommended database size for email, file and SharePoint archiving](#)
- [The TEMP folder is running out of space when archiving big files](#)
- [The attachment could not be opened](#)
- [After updating Exchange 2013, the EWS connection might not work in contentACCESS](#)
- [If Windows authentication is not working in contentACCESS and an alias was created for contentACCESS](#)

### Download sample for the file to be imported does not work

#### PROBLEM

The sample file for the file to be imported into contentACCESS cannot be downloaded:

### Import folders to process ✕

Please select a file to upload Browse...

Make a new list, delete all existing items  
 Skip existing items, import new ones

---

Import method: CSV

Separator: Default character is comma or please specify

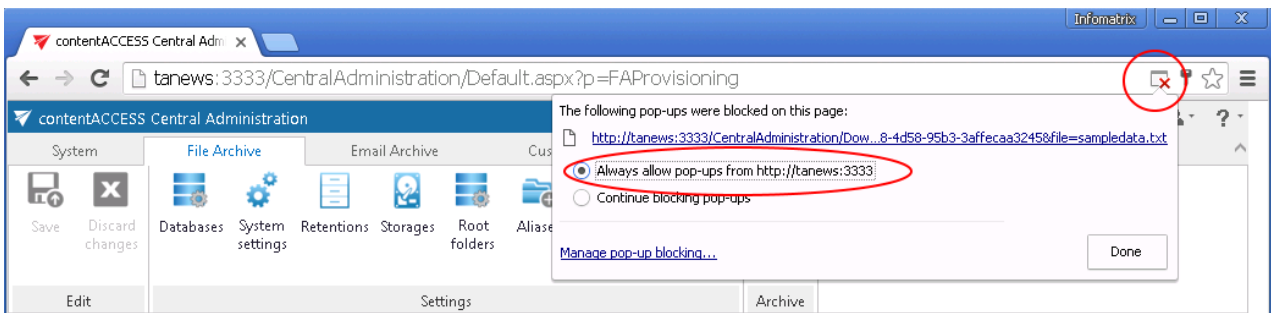
First row is header:

Escape character: Default character is quote mark or please specify

Download sample
Upload selected file

## SOLUTION

Pop-ups must be allowed in your browser.



Archiving is not working, if MAPI is set to communicate with the Exchange server

## PROBLEM

Using option “Use MAPI to communicate with Exchange Server” the archiving does not work. In the logs are errors, like:



“Exception 80040111 (null) Failed to connect to admin mailbox. >> Exception 80040111 Failed to open default message store. 80040111 MAPI\_E\_LOGON\_FAILED.”

## SOLUTION

What you should do:

- log on to Windows with the service account (superuser)
- start Outlook with the service account
- check CGMAPICConnector service identity – it must be the service account
- start CGMAPICConnector – is it starting without error?

Try to run the job again. The profile with the following template should be created: `_<SERVERNAME>..`

This corresponds to the name of the Exchange Server as seen in the address book.

If the profile is not created automatically, that means that contentACCESS is not able to log on with the superuser at all. In this case it is necessary to create the profile manually:

- find your mailbox in address book
- find the Exchange server to which the mailbox belongs (Example: “TECHEX2K10”)
- log on with superuser to Windows and create a new Outlook profile
- name the profile: `_TECHEX2K10`
- configure the profile with the superuser as the primary mailbox
- turn off cached mode
- start Outlook with the profile
- close Outlook

If works, restart the CGMAPICConnector service and start the job again.

Now it should reuse the existing profile. The profile is not deleted by contentACCESS. You need to repeat these steps for each Exchange Server in your address book.

## Virtual drive is still appearing after the uninstall

### PROBLEM

Virtual drive is still appearing even it has been uninstalled.



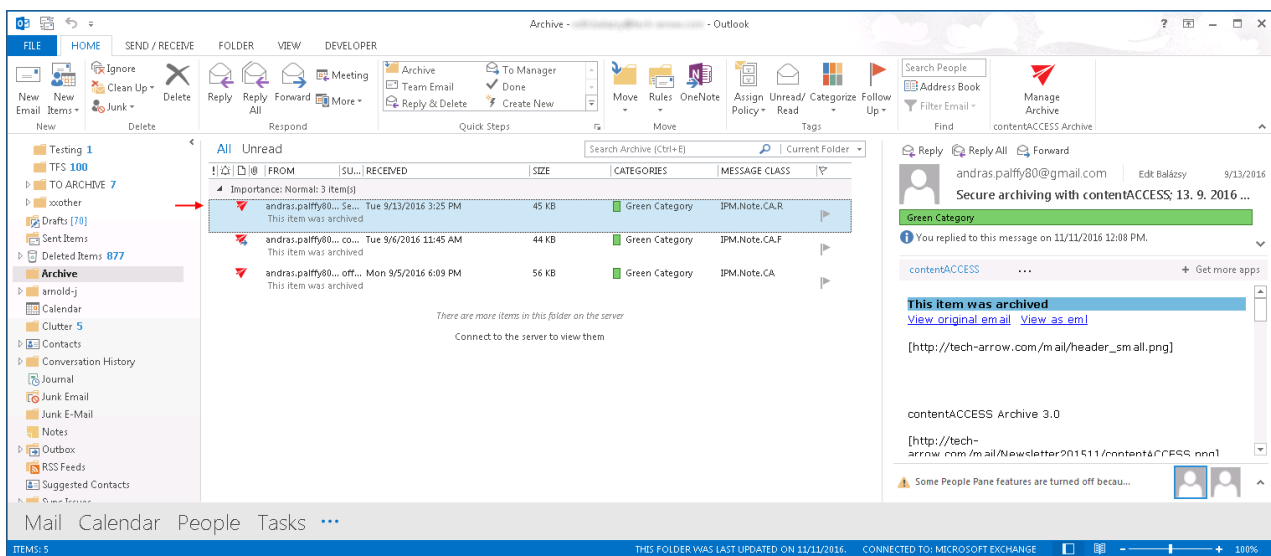
## SOLUTION

The Windows system needs to be restarted.

## Outlook forms problem

### PROBLEM 1

Not the right icons are appearing on the archived email messages in MS Outlook. E.g. if the message is replied, the standard icon (✘) is displayed (the right should be this: ✉)



### SOLUTION 1:

Clean up the Outlook cache. (For more help how to clean the cache refer to this link: <http://www.slipstick.com/developer/custom-form/clean-outlooks-forms-cache/>.)

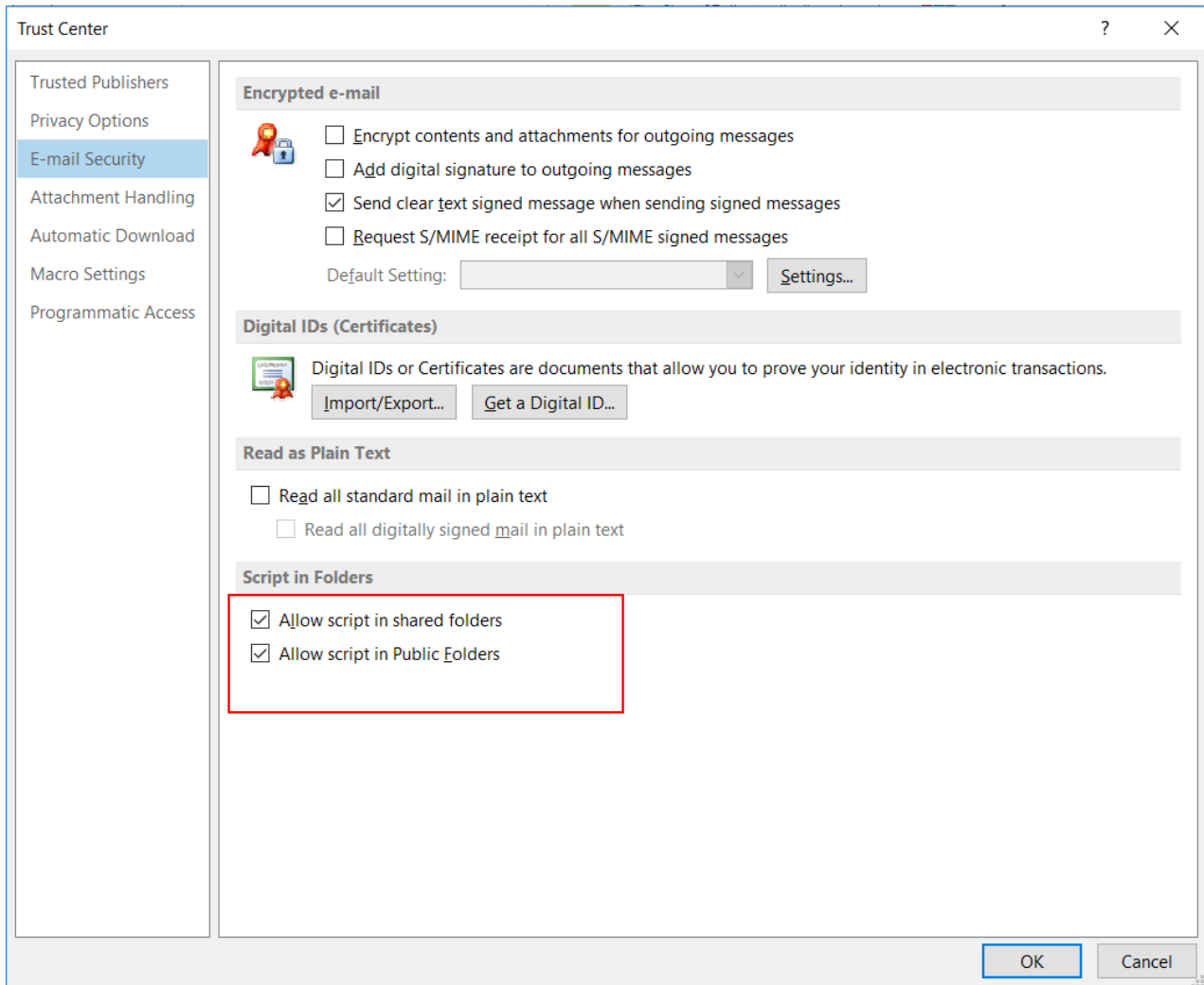
### PROBLEM 2:

Outlook forms are not working with shared folders and/or public folders.

### SOLUTION 2:

If the Outlook forms are not working with shared folders and/or Public Folders, allow these scripts in the **Trust center** of MS Outlook. These settings are available in File → Options → Trust center

→Trust center settings → Email security: options “Allow script is shared folders”; “Allow script in Public Folders”.



Unable to open shortcuts of archived file on the server side

PROBLEM:

On the server it is not possible to open Shares with Alias names.

SOLUTION:

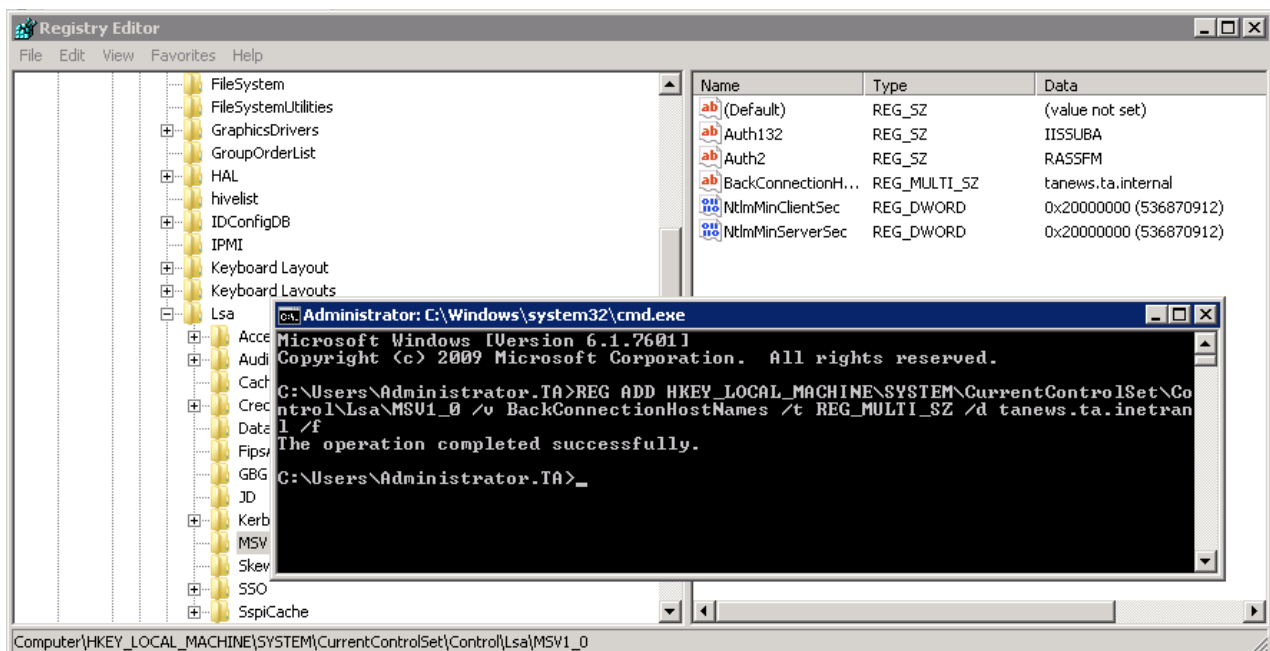
We needed to set at least the Registry key. Steps to follow:

- open cmd prompt as administrator
- type here

```
REG ADD HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Lsa\MSV1_0 /v
BackConnectionHostNames /t REG_MULTI_SZ /d [MycontentACCESSServerName.domain.com] /f
```

and click Enter

- the Registry key will be written to the Registry editor
- restart your system



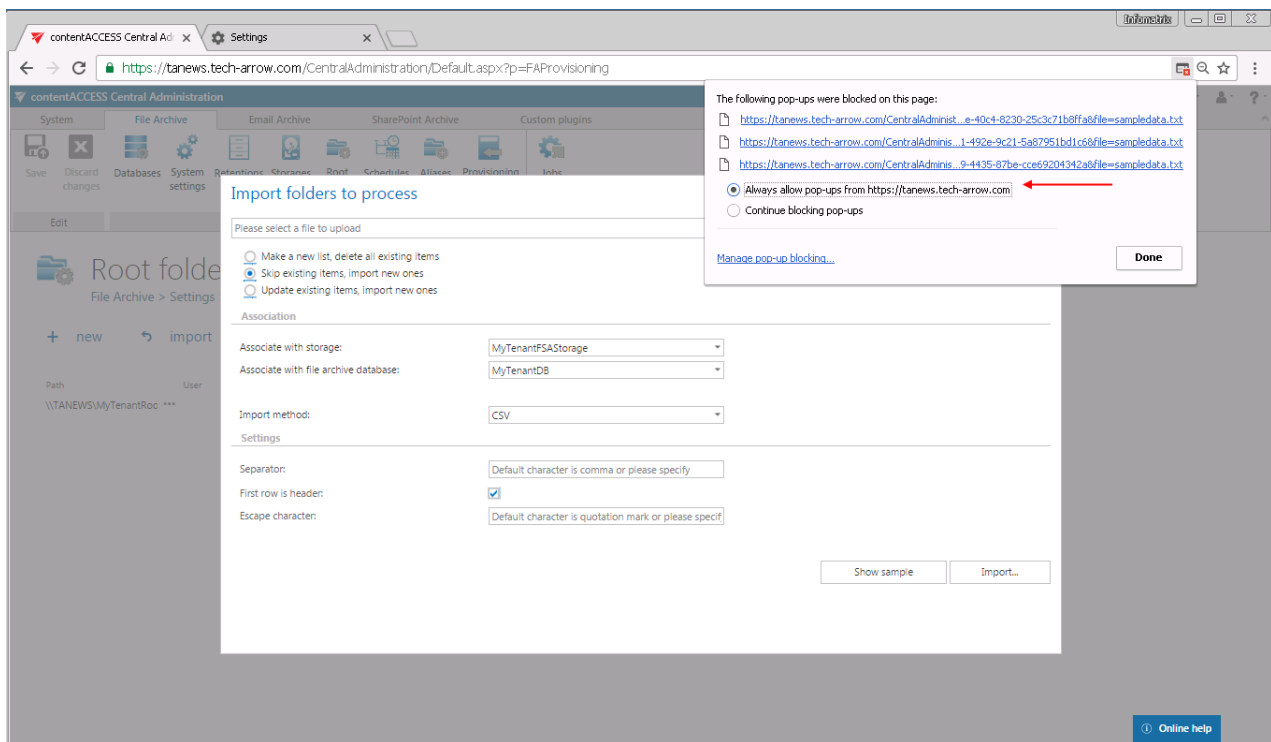
Samples are not shown using “Show sample” option in the import dialog

PROBLEM:

"Show sample" is not working in the **Import** dialog

SOLUTION:

Verify in your browser, if the pop-ups are blocked...if blocked → allow pop-ups:



## Do I need to create separate tenants for File archiving and Email archiving?

**PROBLEM:** Do I need a separate tenant for file archiving, and a separate tenant for email archiving?

**SOLUTION:** It is not a must to create separate tenants for email and file archiving. You can just simply create separate databases – one for file archiving, and second for email archiving. The recommended database count depends on the archivable mailbox count (in case of email archiving) / archivable root count (in case of file archiving). For more information about the database-size recommendations refer to section **“What is the recommended database size for email, file and SharePoint archiving.”**

## What is the recommended database size for Email, File and SharePoint archiving

The recommended database size for email, file and SharePoint archiving depends on the size of the organization. Up to 1000 mailboxes (email archiving), 1 (max. 2) root folders with up to 60 million files (file archiving), 1 (max. 2) root connections with up to 60 million items (SharePoint archiving) the organization is considered as small-and medium sized company. Over these limits the company



is large sized. If emails, files and SharePoint contents are all archived within your organization, the structure and size of the databases to be created should be as follows:

- 1) Regardless of the size of your company first create a database for the system (known as "contentACCESSDB").
- 2) Considering the size of your company, create the following archive databases:
  - a) **Medium and small customers: <1000 mailboxes (email archive) and/or <60 million files (file archive, SharePoint archive)**
    - Create a separate database for **email archiving** (EA system + email contents)
    - Create a separate database for **file archiving** (FS system + file contents)
    - Create a separate database for **SharePoint archiving** (SP system + SP contents).
  - b) **Medium and large customers: >1000 mailboxes (email archive) and/or >60 million files (file archive, SharePoint archive)**
    - Create a database for the **email archive system** (MailArchive)
    - Split mailboxes to groups (per 1000 or 2000 mailboxes per group) and **create separate databases for each group** (MailArchive01, MailArchive02). These databases will be then assigned to groups (you can do it in address book or within the archive jobs) and the archived emails will be put into these databases.
    - Create a database for the **file archive system** (FileArchive).
    - Create file archive databases (FileArchive01, FileArchive02) and **split the root folders to these individual databases (1 root folder per 1 database recommended)**. The databases are assigned to root folders in the **Root folders** settings (**File Archive** tab → **Settings** group → **Root folders** option on the Central Administration ribbon). The archived root contents will be put into these databases.
    - Create a database for the **SharePoint archive system** (SPArchive).
    - Create SharePoint archive databases (SPArchive01, SPSArchive02) and **split the root connections to these individual databases (1 root connection per 1 database recommended)**. The databases are assigned to root connections in the **Root connections** settings (**SharePoint Archive** tab → **Settings** group → **Root connections** option on the Central Administration ribbon). The archived root contents will be put into these databases.



## The TEMP folder is running out of space when archiving big files

### PROBLEM:

When archiving big files, the TEMP folder on the C disk (partition) could run out of space.

### SOLUTION:

The only way to solve this issue is to change the Windows temp folder to a different disk (partition) with more storage space.

How can you do that:

1. Create a new TEMP folder on the disk (partition) where you want to have it.
  - ✓ Open the Control panel > System and Security > System > Advanced system settings.
  - ✓ In the **System Properties** window click on the **Advanced** tab and open the **Environment Variables** window.
  - ✓ Change the TEMP and TMP Variable values to the new folder which was created in the first point.
  - ✓ Restart your system.

This video can help you with setting the new temp folder:

<https://www.youtube.com/n264xQC6h3Q>

## The attachment could not be opened

### PROBLEM:

Encountering the following error: The attachment could not be opened.

### SOLUTION:

The reason is probably the size of the attachment. EWS is limiting access to large attachments but this limit can be extended.

In order to change the limit, edit the EWS configuration file on all CAS servers:



To change the maximum message size for Exchange Web Services clients, you need to change the value of `maxAllowedContentLength` and all instances of `maxReceivedMessageSize="67108864"` in `%ExchangeInstallPath%ClientAccess\exchweb\ews\web.config`

Also the update to Exchange 2013 SP1 should resolve the problem.

After updating Exchange 2013, the EWS connection might not work in `contentACCESS`

#### **PROBLEM:**

After updating Exchange 2013 to CU15 (maybe older CU as well), the EWS connection might not work in `contentACCESS`.

#### **SOLUTION:**

After updating the Exchange Server please test again the EWS connection on each Email archive. If you receive the error: **(413) Request Entity Too Large**, then it is necessary to update the EWS configuration on each CAS server:

##### 1. Back up file

`C:\Program Files\Microsoft\Exchange Server\V15\FrontEnd\HttpProxy\ews\web.config`

##### 2. Replace the "uploadReadAheadSize" 0 value with 1048576 (bytes)

```
<serverRuntime uploadReadAheadSize="1048576" />
```

If Windows authentication is not working in `contentACCESS` and an alias was created for `contentACCESS`

#### **PROBLEM:**

On the `inPoint /contentACCESS` File server Shares with Alias name can't be opened.

#### **SOLUTION:**

Update the registry key below on the server running IIS to fix the issue.

1. In Registry Editor, locate and then click the following registry key:

[HKEY\\_LOCAL\\_MACHINE\SYSTEM\CurrentControlSet\Control\Lsa\MSV1\\_0](#)

2. Right-click **MSV1\_0**, point to **New**, and then click **Multi-String Value**
3. Type **BackConnectionHostNames**, and then press **ENTER**
4. Right-click **BackConnectionHostNames**, and then click **Modify**
5. In the Value data box, type the host name or the host names for the site(s) that are on the local computer (i.e. myapp.mydomain.com), and then click **OK**

