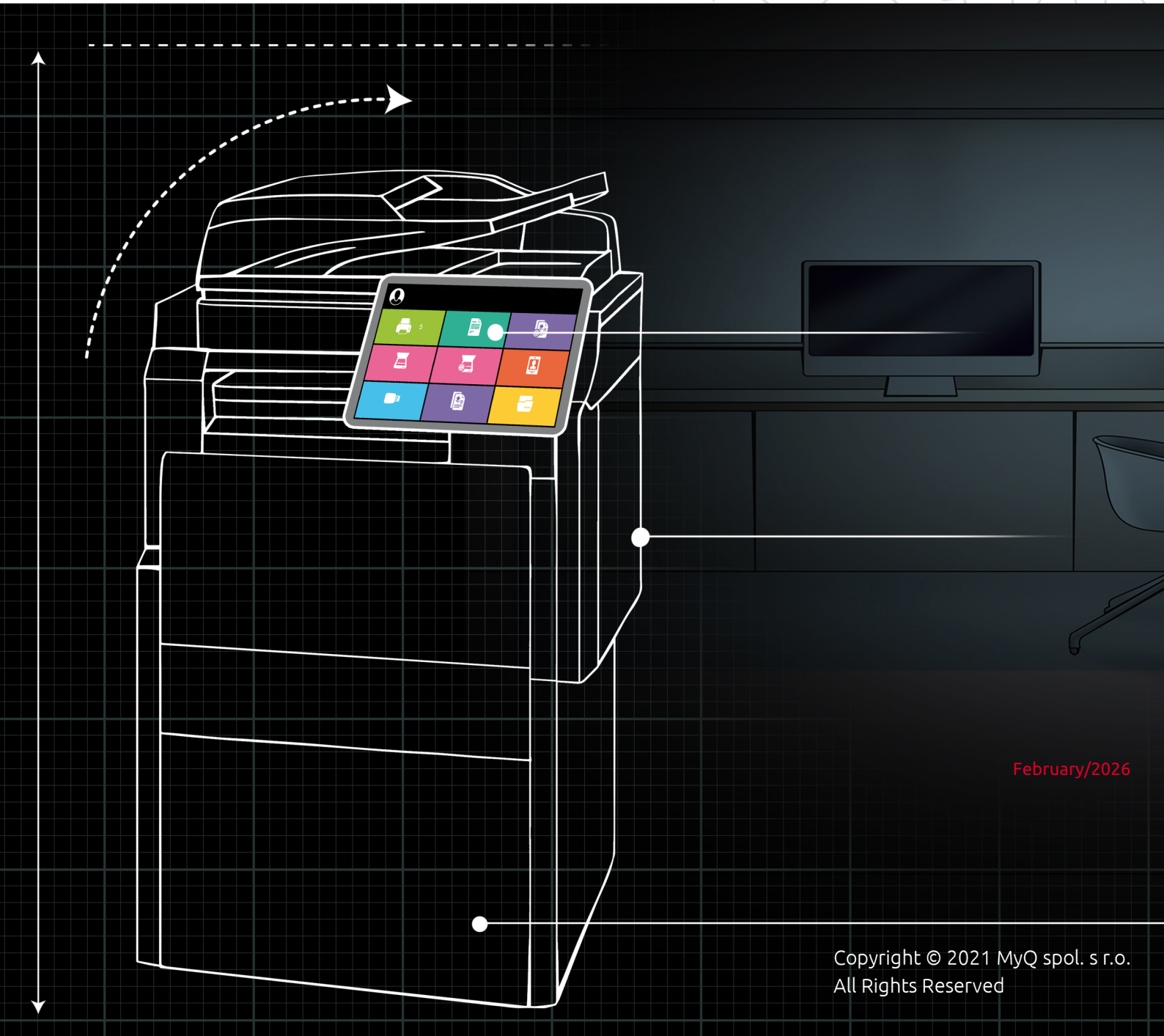
myQ X

Central Server 8.2



February/2026

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MyQ Central Server 8.2

> **MyQ Central Server 8.2** has reached End of Life. **MyQ Central Server 10.2** is now available.
> See the MyQ Product & Support End-of-Life Policy.

MyQ is a universal printing solution that provides a wide variety of services related to printing, copying, and scanning. All functions are integrated into a single unified system, which results in an easy and intuitive employment with minimal requirements for installation and system administration.

The main areas of application of the MyQ solution are monitoring, reporting and administration of printing devices; print, copy, and scan management, extended access to printing services via the MyQ Mobile application and the MyQ Web Interface, and simplified operation of printing devices via MyQ Embedded terminals.

Here you can find all the information needed to install, configure, upgrade, and uninstall the MyQ Central Server.

All changes compared to the previous version are listed in the release notes, available online and in PDF.

1 Basic Information

The Central/Site architecture consists of one Central server and multiple site servers. The Central server performs license management, central system management (the Central server administrator can access and manage all the site servers) and user management. In addition, it functions as a central reporting server for statistical data. It cannot be used as a print server and its options are restricted solely to its central management role. Therefore it is not possible to administer printing devices or print jobs there.

All of the Central server's data are stored to the MyQ Database, where they can be accessed and managed. The server contains an Embedded (Firebird) database, but can also be used with an external MS SQL database.

The site servers work as print servers and perform local management of printing devices and print jobs. Data from these servers are replicated to the Central server's database and can be displayed in reports on the Central server.

1.1 Database Setup

Within the installation of the MyQ Central Server, you can either use the Embedded (Firebird) database, or later set up a connection to your own MS SQL Server.

If you select to use the Embedded database, you can still choose between both options afterwards, while if you install the MyQ server without it, you have to use the MS SQL Server.

Unless you have already been using an MS SQL server within your company and want to connect MyQ to your MS SQL database, it is recommended to install and employ the Embedded Database.

1.1.1 Embedded Database Configuration

As the Embedded Database is fully integrated with the MyQ server, it does not require any further configuration.

1.1.2 MS SQL Server Configuration

To enable a connection to an MS SQL server, you need to make sure that the following options are set on there:

- Authentication has to be set to the **MS SQL Server and Windows Authentication** mode.
- A user account with the **public** fixed server role for access to the MS SQL Server; a user account with the **dbcreator** fixed server role, for creating the MyQ database. The default language of the user who creates the database must be set to **English (US)**.
- On MS SQL Server 2016 and older, the **common language runtime (CLR)** integration feature has to be enabled.
- **TCP/IP** protocol has to be enabled and the **IPAll** TCP Port has to be set to *1433*.

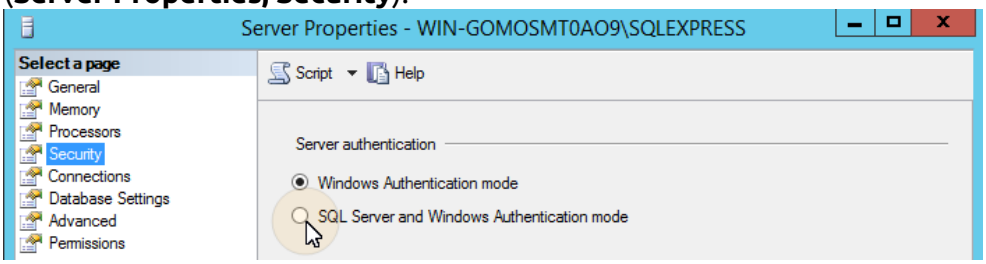
- A **TCP 1433** port inbound rule has to be created in the Firewall.

1.1.3 MS SQL Server setup example

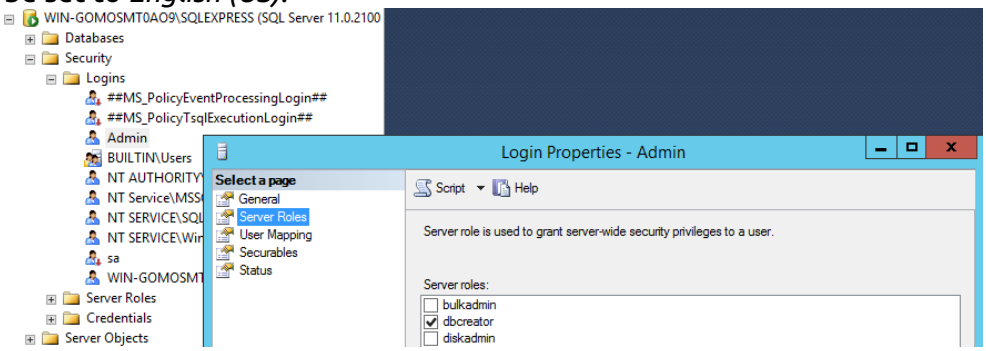
This is an example of an installation of a Microsoft SQL server (MS SQL Server 2012 is used) and the setup necessary for its connection to the MyQ Central server.

To install and set up the MS SQL server:

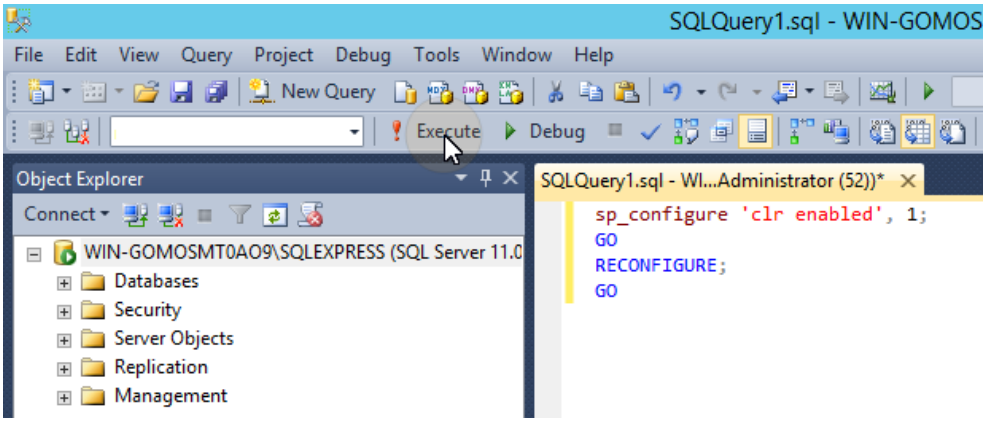
1. Install the MS SQL Server and the MS SQL Server Management Studio application.
2. Open the SQL Server Management Studio app (Windows Apps menu).
3. Change the **Server authentication** setting of the MS SQL Server from the *Windows Authentication mode* to *SQL Server and Windows Authentication mode* (**Server Properties, Security**).



4. Provide any user account (existing or new) with the **Database Creator** role. This account will be used to access the MS SQL server and manage the MyQ database there, which means that the MyQ administrator needs to know its credentials. The default language of the user who creates the database must be set to *English (US)*.



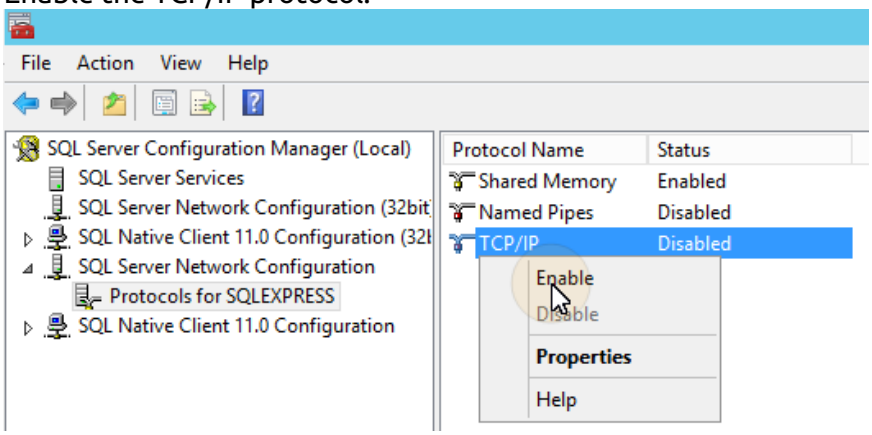
5. On MS SQL Server 2016 and older, you need to enable the common language runtime (CLR) integration feature. If you are using the MS SQL Server 2017 or newer, you can continue to the next step.



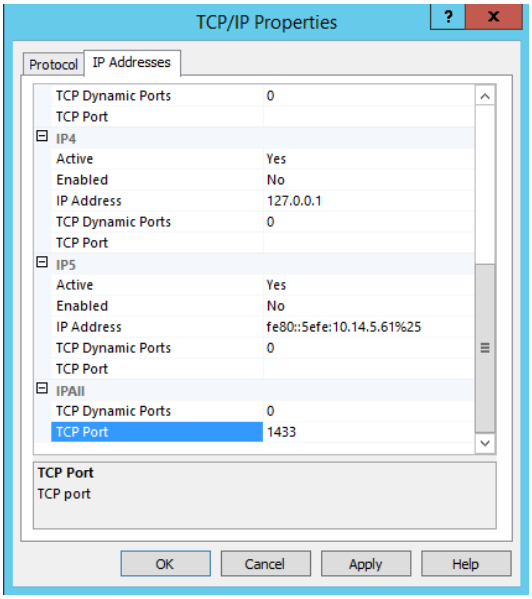
To enable the CLR, use the following script:

```
sp_configure 'clr enabled', 1;
GO
RECONFIGURE;
GO
```

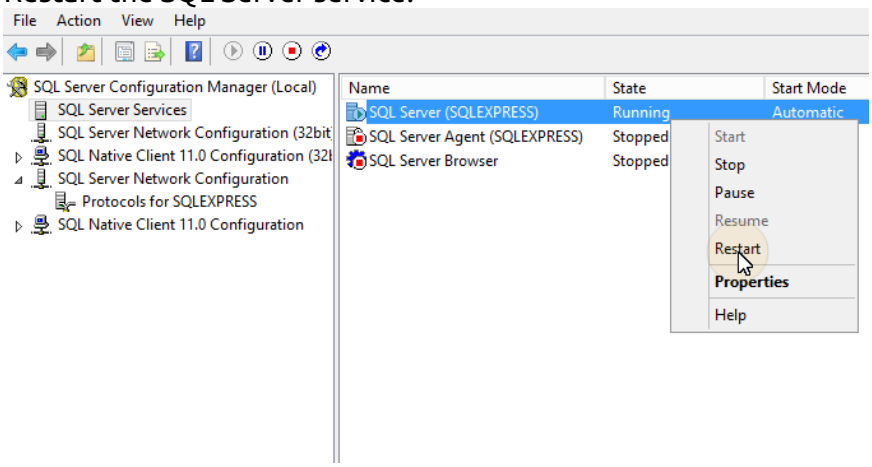
6. Leave the MS SQL Server Management Studio and open the SQL Server Configuration Manager app.
7. Enable the TCP/IP protocol.



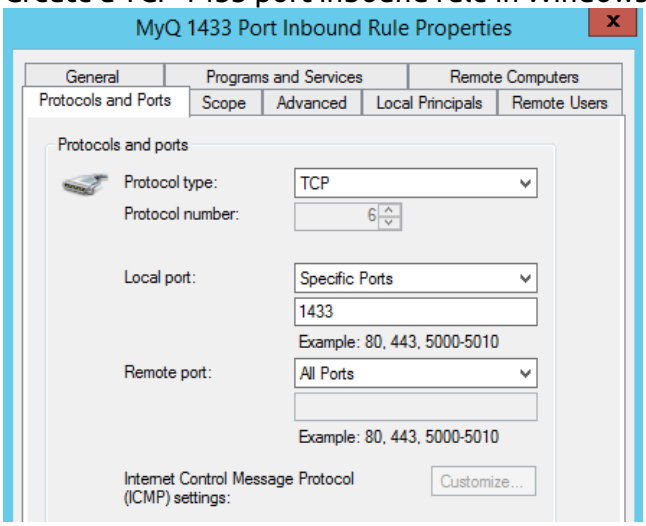
8. Open the TCP/IP properties and set the **IPAll TCP Port** to *1433*.



9. Restart the SQL Server service.



10. Leave the SQL Server Configuration Manager.
11. Create a TCP 1433 port inbound rule in Windows Firewall.



12. Exit the setup.

1.2 Central Server and MS Cluster

1.2.1 About

The MyQ MS Cluster high-availability solution consists of multiple nodes in the active/passive configuration with the MyQ server installed on each node. MS Cluster administrates the MyQ services and if the currently active node becomes unavailable, it switches to one of the available passive nodes.

1.2.2 System Requirements

The fully detailed MyQ Central Server system requirements can be found here.

- Compatibility with Windows Servers

The MyQ MS Cluster solution is supported by the following Windows Server versions and editions:

Windows Server	Editions
Windows Server 2012	Standard, Datacenter
Windows Server 2012 R2	Standard, Datacenter, Hyper-V® Server, Storage Server
Windows Server 2016	Standard, Datacenter
Windows Server 2019	Standard, Datacenter
Windows Server 2022	

- A prepared failover cluster with at least two nodes and storage for MyQ data is needed. Each node must meet the system requirements of the MyQ server and its components.
- The same time zone has to be set on each of the nodes.

If the MyQ Desktop Client, MyQ Smart Job Manager or the MyQ Smart Print Services applications are to be used on the MyQ users workstations, the IP address or hostname of the cluster has to be set in the applications (not the IP address or hostname of the nodes).

1.2.3 Licenses

With the new MyQ X licensing model with **Installation Keys** used in MS Cluster, there is only one installation key needed. The HW code is taken from the whole cluster, not individual nodes, so the license is activated against the cluster's HW, and not a single node.

With the old licensing model, when MS Cluster is used with the MyQ server, the amount of licenses needed depends on the number of nodes used, as the licenses need to be added and activated separately on each node.

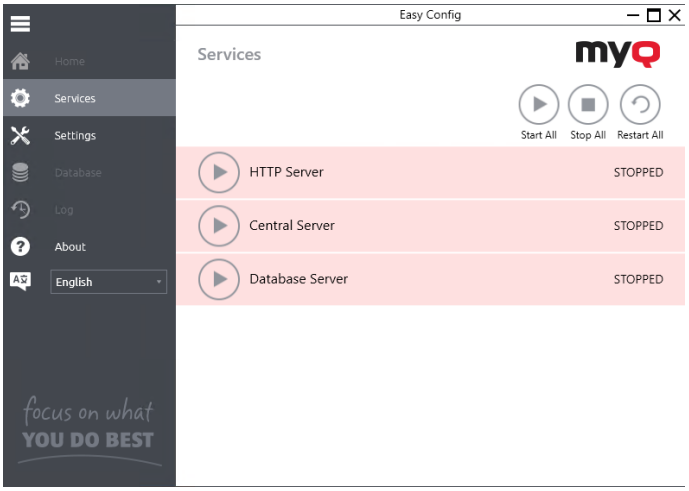
- MyQ server in Site mode - licenses are received from the Central server automatically every day or during MyQ service or Cluster Node restart.
- MyQ server in Standalone mode - needs an extra licenses set for each node; each licenses set must be activated only on one node.

1.2.4 Setup

Installing MyQ on the server in the cluster (all nodes)

On each cluster node, do the following:

1. Run the MyQ installation file and install MyQ (details can be found here).
2. Make sure that the time zone set on the MyQ server is the same as the time zone set on each node).
3. **Stop All** MyQ services in the MyQ Easy Config application.

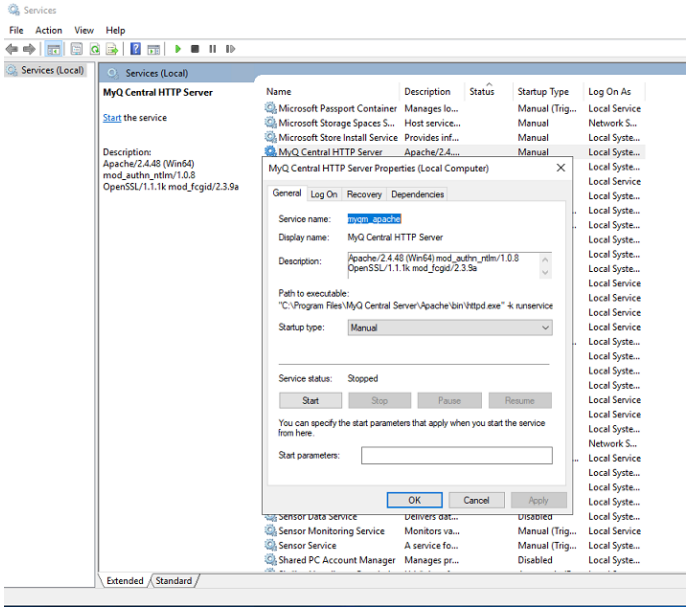


Setting services to manual startup (all nodes)

All services used by the MyQ server need to be set to manual startup, on every node.

The following services need to be changed this way:

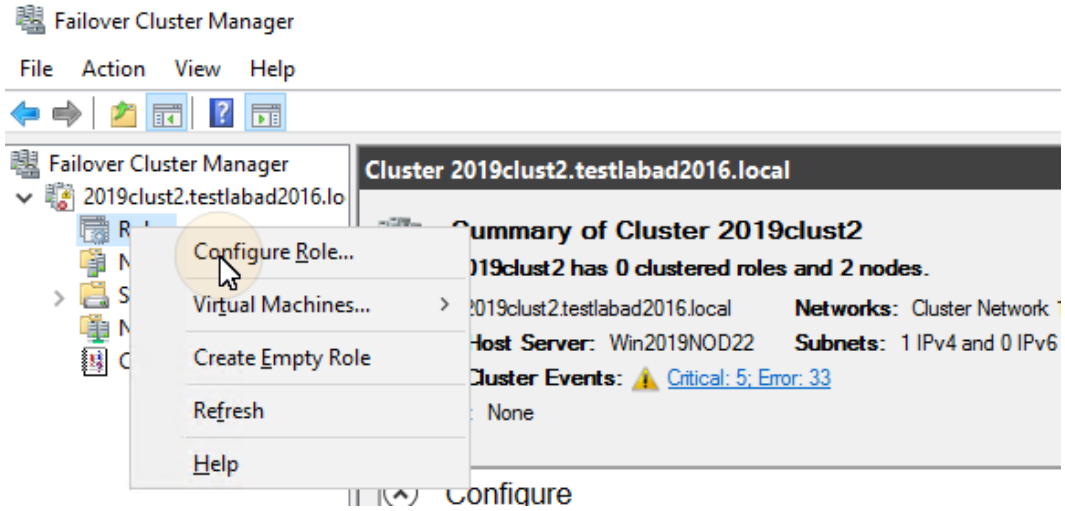
- MyQ Central HTTP Server
- Firebird Server - MasterInstance
- MyQ Central Server



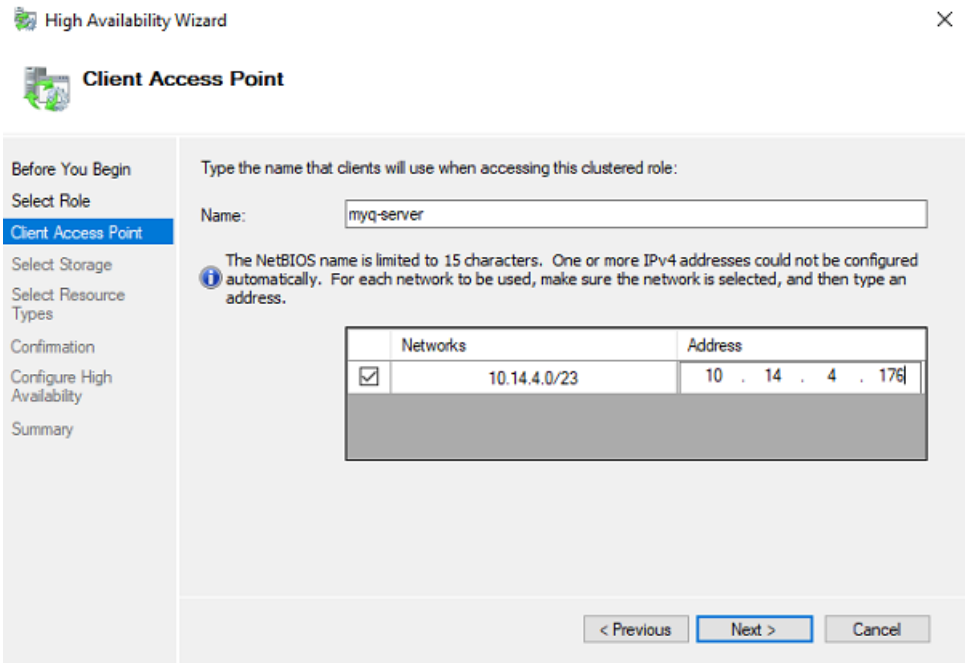
Creating the MyQ server MS Cluster role (Failover Cluster Manager)

Open Failover Cluster Manager and do the following:

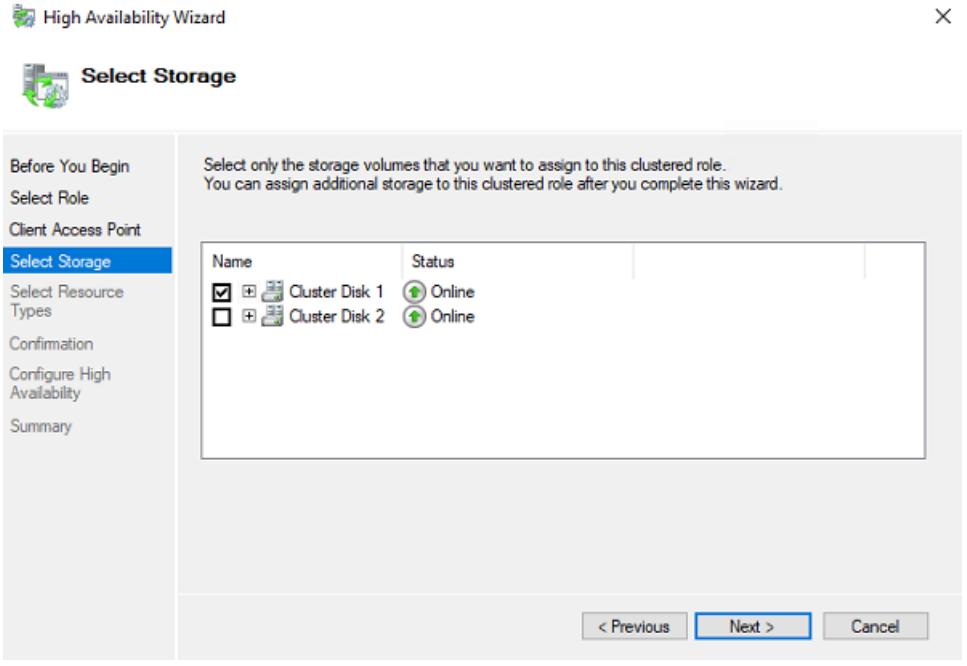
1. Right-click **Roles** and select **Configure Role** on the shortcut menu. The High Availability Wizard opens.



2. Click **Next**. The Select role tab opens.
3. On the tab, select **Other Server**, and click **Next**. The Client Access Point tab opens.
4. On the tab, type a new **Name** for the MyQ server cluster, for example *myq-server*, then enter an unoccupied IP address from the network to be used by the MyQ server role, and lastly click **Next**. The Select Storage tab opens. MyQ will use the hostname for communication with terminals, as the SMTP server in MFPs etc.



5. On the tab, select the storage volumes that you want to use for the MyQ server.



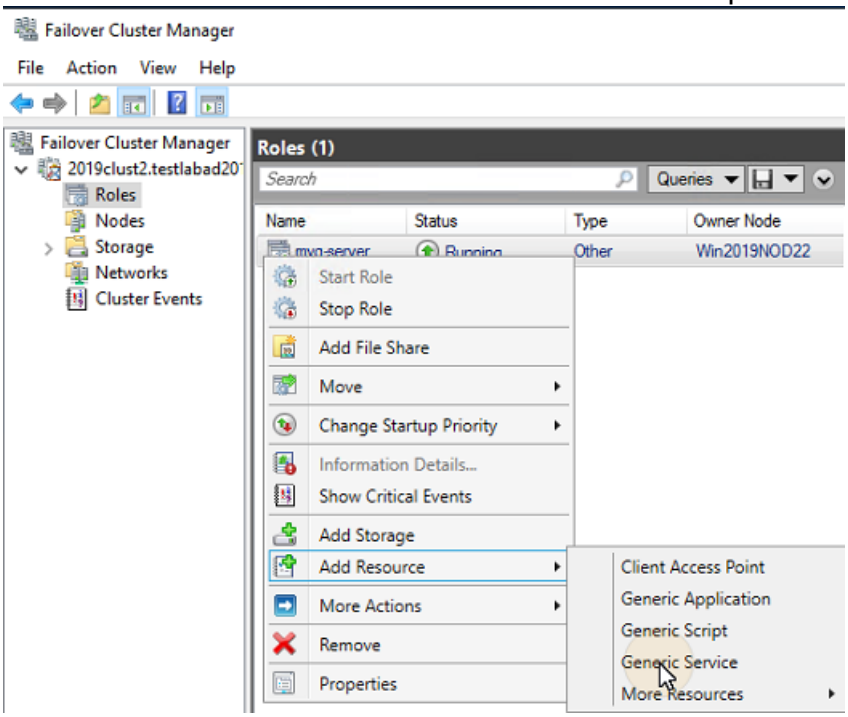
6. Click **Next** to finish the installation process.

Adding MyQ resources (Failover Cluster Manager)

Once the MyQ server role is created and configured, MyQ resources need to be configured as well, in the **Roles** tab in Failover Cluster Manager.

Add the Firebird server - MasterInstance service to the MyQ server role:

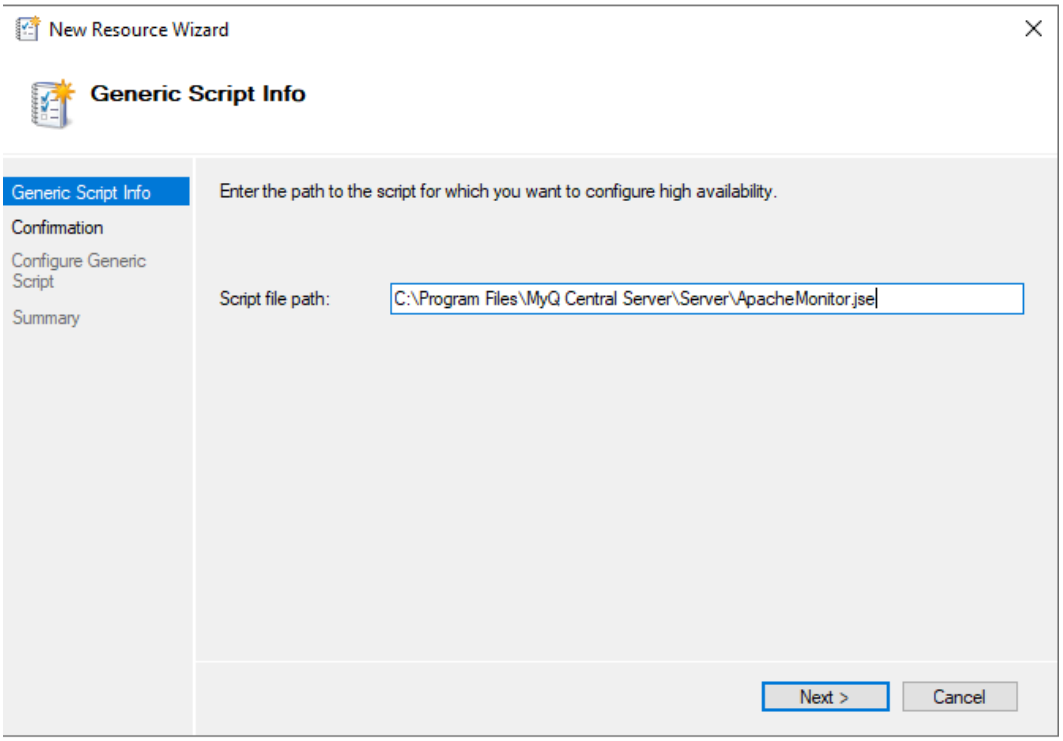
1. Right-click the MyQ server role, then click **Add resource** on the shortcut menu, and click **Generic Service**. The New Resource Wizard opens.



2. In the list of services, select **Firebird Server - MasterInstance**, and click **Next**.
3. On the **Confirmation** tab, click **Next** to create the service. The service is created and configured.
4. Click **Finish** to leave the setup.

Add the Apache Monitor script to the MyQ server role:

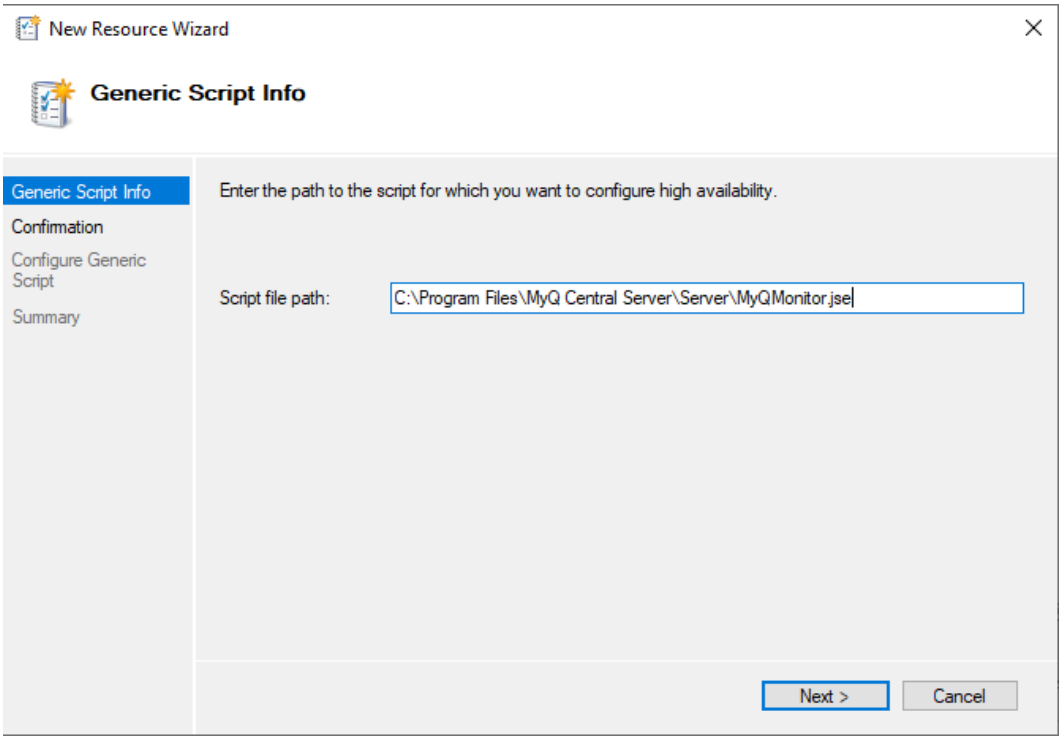
1. Right-click the MyQ server role, click **Add resource** on the shortcut menu, and click **Generic Script**. The New Resource Wizard opens.
2. Enter the path to the **ApacheMonitor.jse** script, located in the MyQ installation folder, and click **Next**. The Confirmation tab opens. The default path to the script is:
   C:\Program Files\MyQ Central Server\Server\ApacheMonitor.jse



3. On the tab, click **Next** to create the service. The service is created and configured.
4. Click **Finish** to leave the setup.

Add the MyQ Monitor script to the MyQ server role:

1. Right-click the MyQ server role, click **Add resource** on the shortcut menu, and click **Generic Script**. The New Resource Wizard opens.
2. Enter the path to the **MyQMonitor.jse** script, located in the MyQ installation folder, and click **Next**. The Confirmation tab opens. The default path to the script is:
   C:\Program Files\MyQ Central Server\Server\MyQMonitor.jse

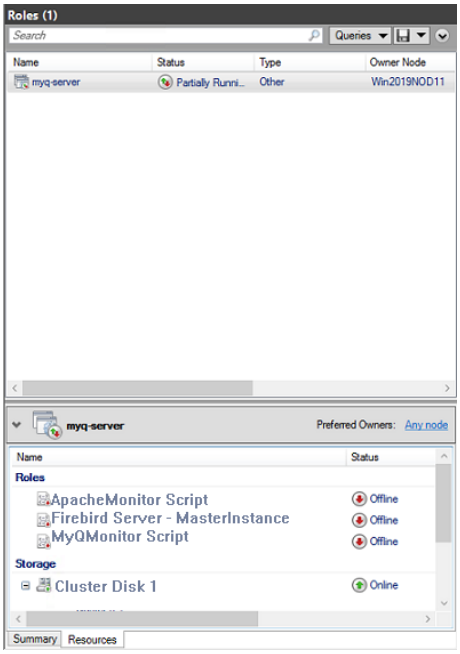


3. On the tab, click **Next** to create the service. The service is created and configured.
4. Click **Finish** to leave the setup.

If you are using an MS SQL database instead of the Embedded database, you don't need to add the Firebird server - MasterInstance service to the MyQ server role. You should only add the Apache Monitor script, and the MyQ Monitor script.

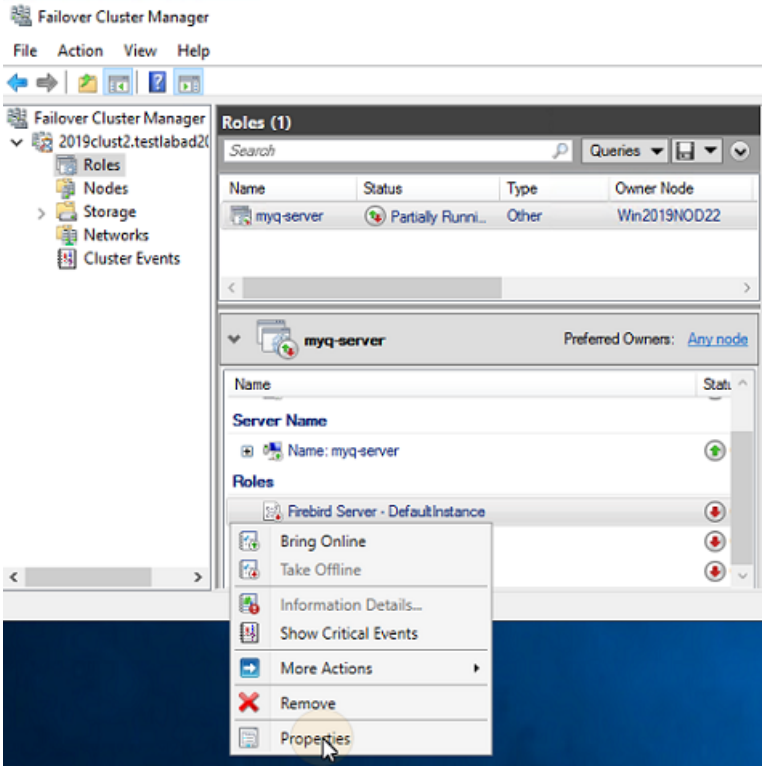
Setting resources dependencies (Failover Cluster Manager)

After adding the services and scripts to the MyQ server role, open the **Resources** tab of the MyQ server role at the bottom of the **Roles** tab and set the dependencies of the MyQ services and scripts.

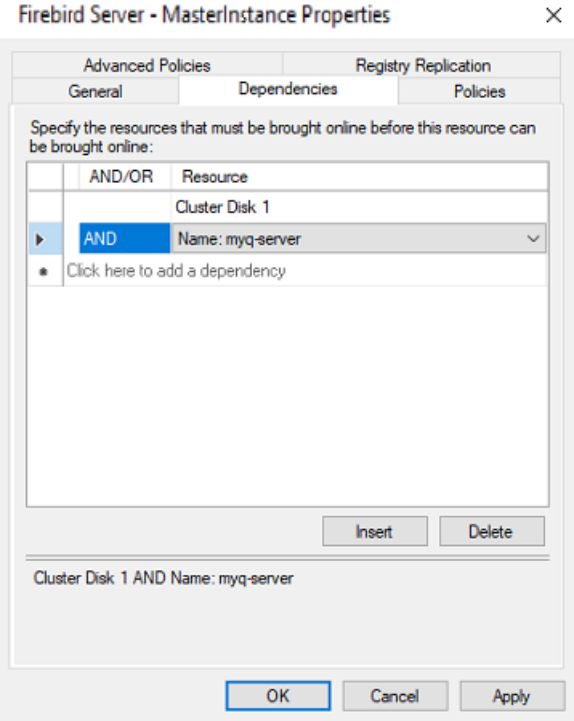


Set the Firebird Server - MasterInstance service dependency

1. In the list at the bottom of the tab, right-click **Firebird Server - MasterInstance**, and click **Properties**. The Firebird Server - MasterInstance Properties dialog box opens.



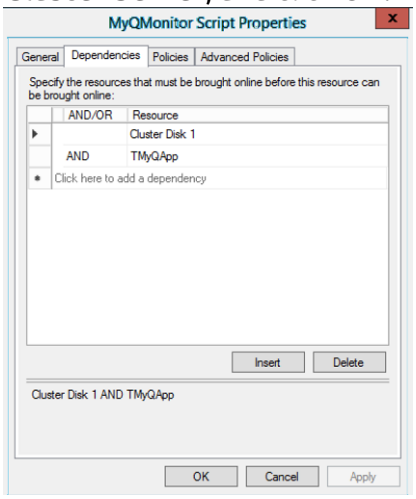
2. In the dialog box, open the **Dependencies** tab, add the shared disk drive (or NAS) where the system is supposed to work on, add the name of the MyQ server role, and click **OK**. The dependency is set.



Setting the Firebird Server - MasterInstance service dependency is not needed if you are using an MS SQL database.

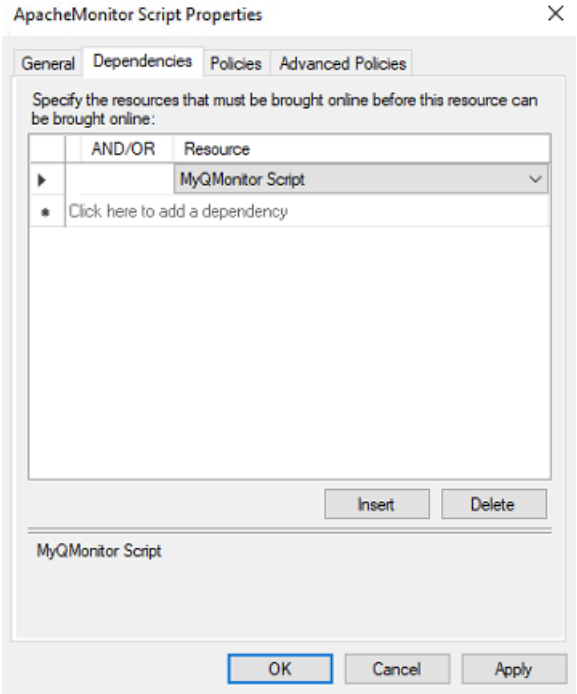
Set the MyQMonitor script dependency

1. In the list at the bottom of the tab, right-click **MyQMonitor Script**, and click **Properties**. The MyQMonitor Script Properties dialog box opens.
2. In the dialog box, open the **Dependencies** tab, add the **Cluster Disk** and the **Cluster Server**, and click **OK**. The dependency is set.



Set the ApacheMonitor script dependency

1. In the list at the bottom of the tab, right-click **ApacheMonitor Script**, and click **Properties**. The ApacheMonitor Script Properties dialog box opens.
2. In the dialog box, open the **Dependencies** tab, add the **MyQMonitor Script**, and click **OK**. The dependency is set.



To open the dependency report, right-click the MyQ server role on the **Roles** tab of the cluster in Failover Cluster Manager, click **More Actions**, and click **Show Dependency Report**.

1.2.5 Additional Setup

Even though the installation is finished, there are some additional steps needed to setup the environment before bringing the resources online.

Setting up the MyQ admin credentials (active node)

On the active node, open the MyQ Central Easy Config application:

1. On the **Services** tab, **Start All** services.
2. On the **Home** tab, set the **Server Administrator Account** password and the **Database Administrator Password** (if the passwords have been changed before, they can be changed again on the **Settings** tab).
3. On the **Services** tab, **Stop All** services, and close the MyQ Central Easy Config application.

Setting the location of the data folder (all nodes)

On each node of the cluster, you need to set the location of the **Data** folder, which requires access to the shared cluster disk, so the node has to be active. Therefore, you need to switch the active mode between all of the nodes (move the MyQ server role between the nodes).

To set the folder's location, open MyQ Central Easy Config on the currently active node and:

1. On the **Services** tab, **Start All** services.
2. On the **Settings** tab, under the **Data** folder, click **Change location**, and then define the path to the shared cluster disk. (For more information about how to do this, check here).
3. On the **Services** tab, **Stop All** services, and then close the MyQ Central Easy Config application.
4. In Failover Cluster Manager, move the MyQ server role to the next node and repeat the process.

Running MyQ in the MS Cluster environment

The following instructions have to be followed while MyQ runs in the MS Cluster:

- You should not start, stop or restart MyQ services while MyQ is controlled by the MS Cluster (cluster resources are online). The services should only be managed by Failover Cluster Manager.
- When switching to a different node, MyQ Central Easy Config should not be used on any node.
- When performing system maintenance (cluster resources are offline), but MyQ services are online on any node (activated manually), do not switch to a different node. By doing so, you risk corrupting the MyQ database.
- When switching to a different node, all services on the initial node are stopped by the MS Cluster.
- While MyQ runs in the cluster, the IP address of the MyQ server is the one that you have selected within the setup of the MyQ server role, and the hostname of the MyQ server is the one that you will set in the MyQ web administrator interface after you bring the resources of the MS Cluster online.
- It is strongly recommended to always keep the **Storage** and **Server Name** resources online. In case you need to take them offline, make sure that all MyQ services on the active node (the current owner of the MyQ server role) are stopped in the MyQ Central Easy Config application.
- After completing the setup (setup and additional setup) of the MyQ server role, and also after each crucial change on the cluster, it is recommended to test the cluster by moving the ownership of the MyQ server role between all nodes of the cluster.

Starting the system (Failover Cluster Manager)

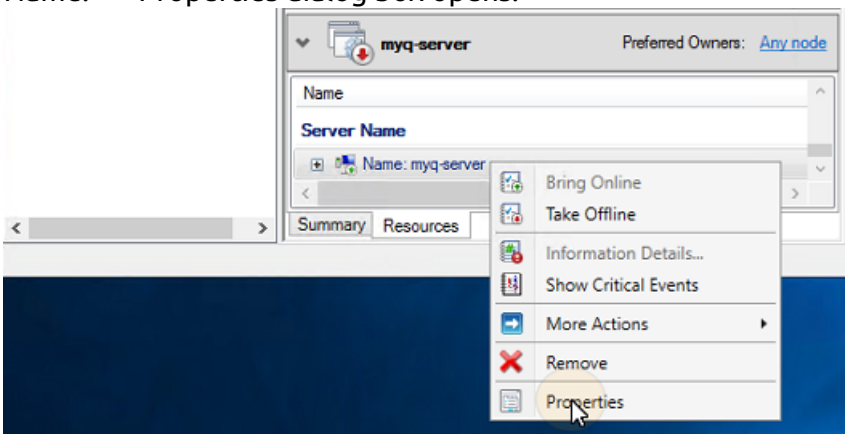
To start the system, you have to bring the resources of the MS Cluster online. For information on how to do this, check here.

Setting hostname of the MyQ server role

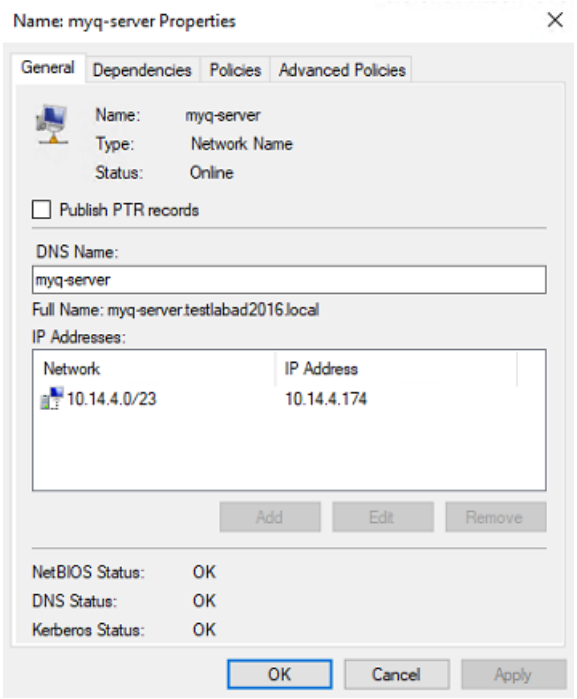
On the **Resources** tab of the MyQ server role in Failover Cluster Manager, you can see (and change) the DNS Name of the MyQ server role. The **Full name** of the role (DNS + domain) needs to be used as the server hostname and as the MyQ X Mobile Client server in MyQ.

To see or change the DNS name of the MyQ server role on the MS Cluster, do the following:

1. In the list at the bottom of the **Resources** tab of the MyQ server role, under **Server Name**, right-click the server's name, and then click **Properties**. The Name:*** Properties dialog box opens.



2. On the **General** tab , you can see (and change) the DNS Name of the MyQ server role.



To set the hostname of the MyQ server role on the MyQ cluster server, do the following:

1. On the **Network** settings tab of the MyQ web administrator interface of the MyQ cluster server, use the **Full name** (DNS + domain) of the MyQ server in the following setting:
   a. **This server hostname** under **General**.
2. Then click **Save** at the bottom of the tab.

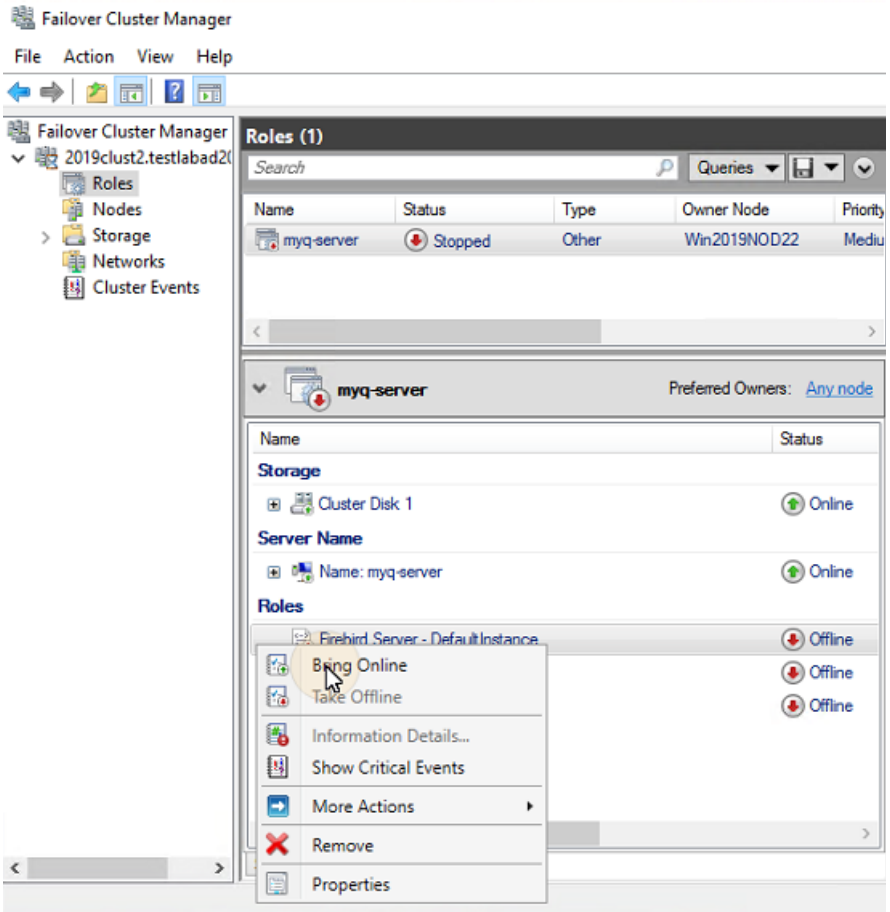
1.2.6 Configuration and Maintenance

The below chapters show additional configuration and maintenance steps.

Bringing the resources of the MS Cluster online (Failover Cluster Manager)

To start the system, you need to bring all the MS Cluster resources online - the **Firebird Server - MasterInstance** service, the **ApacheMonitor.jse** script, and the **MyQMonitor.jse** script.

To bring a service or script online, open the Failover Cluster Manager application, go to **Roles**, right-click the service or script, and click **Bring Online** on the shortcut menu.

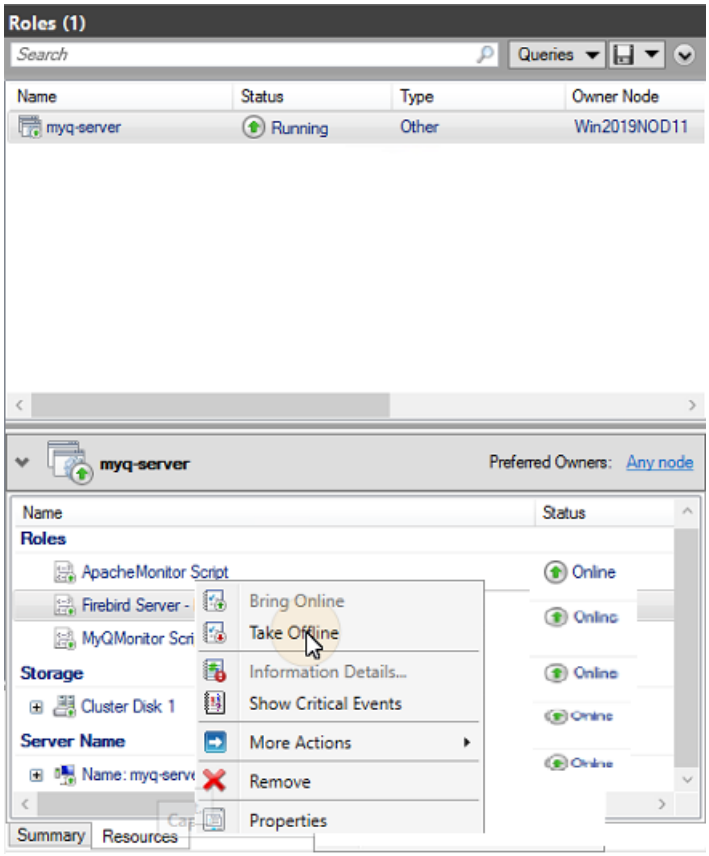


Taking the MS Cluster resources offline (Failover Cluster Manager)

To make sure that all the MS Cluster resources -except for **Storage** and **Server Name**- are offline, it is sufficient to take the **Firebird Server - MasterInstance** service offline; all of the scripts will be taken offline due to their dependency on this service.

> ⚠ The **Storage** and **Server Name** resources must stay online.

To take the **Firebird Server - MasterInstance** service offline, open Failover Cluster Manager, go to **Roles**, right-click the **Firebird Server - MasterInstance** service, and click **Take Offline** on the shortcut menu.



Restarting MyQ services via the MS Cluster (Failover Cluster Manager)

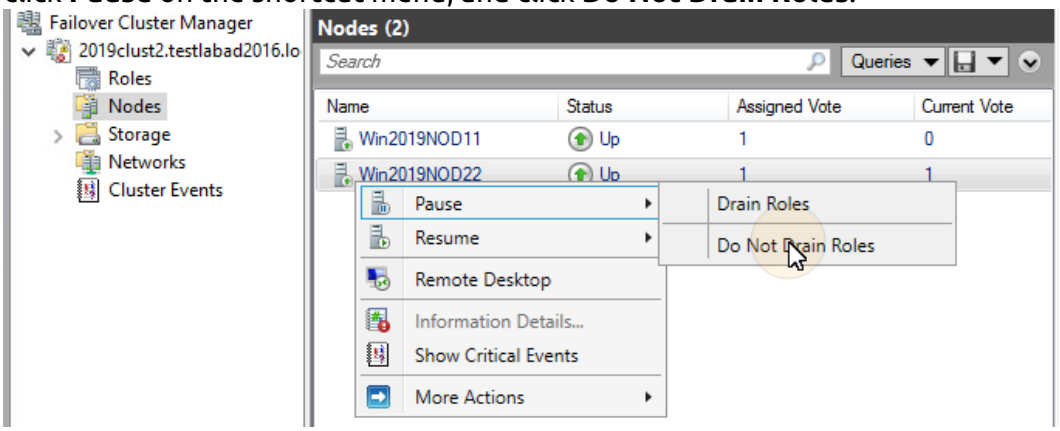
To restart MyQ services via the MS Cluster, take all the MS Cluster resources, except for **Storage** and **Server Name**, offline and then bring them online.

Changing the MyQ admin credentials (active node)

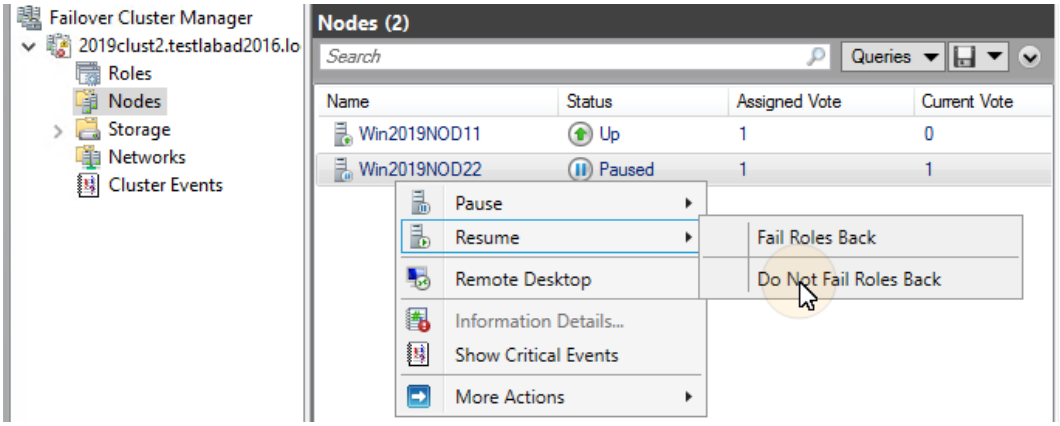
To change the **Server Administrator Account** and **Database Administrator** passwords, you need to do the following on the currently active node (the current owner of the MyQ server role):

1. Open the Failover Cluster Manager application.

2. Open the **Nodes** tab of the cluster, right-click the currently active node, right-click **Pause** on the shortcut menu, and click **Do Not Drain Roles**.



3. Take all the MS Cluster resources, except for **Storage** and **Server Name**, offline.
4. Open the MyQ Central Easy Config application, start all services, change the passwords, stop all services, and lastly close the application.
5. Bring the resources of the cluster online.
6. Open the **Nodes** tab of the cluster in Failover Cluster Manager, right-click the node, right-click **Resume** on the shortcut menu, and lastly click **Do Not Fail Roles Back**.



1.2.7 Backup and Restore

Backing up the MyQ database on the MS Cluster

The automatic and manual backup processes do not differ from the standard backup processes described in "Backing up MyQ Data". The only setting that requires special attention is the backup destination folder. It is recommended to save the backup files on the shared cluster disk.

Restoring the MyQ database on the MS Cluster (all nodes)

Before restoring the MyQ database, MyQ has to be installed and set up on all the MS Cluster nodes.

Now you need to restore the MyQ database and settings on the active node of the Cluster (the current owner of the MyQ server role) via the following steps:

1. **Start All** services via MyQ Central Easy Config.
2. Open the **Database** tab in MyQ Central Easy Config.
3. In the **Main Database** section, click **Restore...**. Select the *database_*.zip* file, and click **Open**. If the backup is password protected, there is a prompt to provide the password. The database is restored and, if needed, upgraded as well.
4. Repeat the process for all the other nodes.

Using Database Encryption

If you are using the **Database Encryption** feature in MyQ Central Easy Config, it is necessary to perform the following steps after encrypting or restoring your database:

1. Stop all Cluster resources except for **Storage** and **Server Name**.
2. Open MyQ Central Easy Config on the active node and start all services.
3. Enable DB encryption.
4. **Stop All** services in MyQ Central Easy Config.
5. Copy the DB encryption key to all the other nodes. The key is located by default in "*C:\Program Files\MyQ Central Server\Firebird\plugins\keyholder.conf*".
6. **Start All** MyQ services in MyQ Central Easy Config, and bring all the resources online via Failover Cluster Manager.

1.2.8 Upgrading MyQ

Necessary steps before the upgrade

Before starting the upgrade, make sure that you have an up-to-date and properly finished backup of the MyQ database. The database can be backed up either manually in MyQ Central Easy Config or automatically as a scheduled task in the MyQ web administrator interface. To make sure that the backup file is preserved, it is recommended to copy the database backup file to a different location.

Upgrading MyQ (all nodes)

The upgrade needs to be performed on each node of the cluster. To be able to upgrade MyQ on a node, you need to have access to the shared cluster disk, so the node has to be active. Therefore, you need to switch the active mode between all of the nodes (move the MyQ server role between the nodes).

Before upgrading MyQ on the nodes, take all the MS Cluster resources, except for Storage and **Server Name**, offline.

To upgrade MyQ on all nodes, start with the currently active node (the owner of the MyQ server role) and do the following:

1. **Start All** services via MyQ Central Easy Config.

2. Run the MyQ installation file.
3. Finish the installation process.
4. **Stop All** services via MyQ Central Easy Config, and then close the MyQ Central Easy Config application.
5. Move the MyQ server role to the next node and repeat all the steps.

After MyQ is upgraded on all the nodes, bring all the MS Cluster resources online.

During the installation, you might encounter a warning message about a problem related to updating the MyQ database. In such cases, continue with the setup, as the problem does not impact the installation.

1.2.9 Recommended Troubleshooting

The MS Cluster solves issues on the currently active node which might affect the availability of the MyQ server, by switching to one of the available passive nodes.

Problems related to the MyQ server need to be treated manually. In case you encounter such problems, it is recommended to restart MyQ services in the Failover Cluster Manager application. If the problem persists, contact MyQ support.

In case the MS Cluster does not start, try taking all the MS Cluster resources, except for **Storage** and **Server Name**, offline, and then try to manually start MyQ services. If successful, it is likely that the problem is on the cluster side; otherwise the problem is probably related to the MyQ server, in which case contact MyQ support.

2 System Requirements

> ⚠ The operating system and other software require their own additional system resources. The system requirements described below are only for MyQ solution.

2.1 MyQ Central Server mode with integrated Firebird database

MyQ Central Server	1 - 10,000 users	10,001 - 50,000 users	50,001 - 100,000 users
Physical Core*	6	6	6
RAM	8GB	12GB	16GB

Valid for a typical user case:

- Integrated Firebird database - installed automatically.
- Data Replications from Site servers.
- User synchronization.
- Up to 500 Sites (for the Site servers HW requirements, see MyQ Print Server - Site mode) managed by the Central Server (license distribution, user synchronization, and data replication between Central Server and Site servers).
- Up to 30,000 printers total on MyQ Central Server.

2.1.1 Recommendations

- Install Windows updates out of the replication or user synchronization time.
- Always monitor the server performance during peak usage hours and adjust the settings accordingly.
- Changing the power plan of Windows Server in *Control Panel – Hardware – Power Options* from Balanced (the default setting) to **High performance** is recommended to utilize the maximum performance. This may help speed up database operations.

2.2 MyQ Central Server mode with an external MS SQL database

MyQ Central Server	1 - 10,000 users	10,001 - 50,000 users	50,001 - 100,000 users
Physical Core*	4	4	4

MyQ Central Server	1 - 10,000 users	10,001 - 50,000 users	50,001 - 100,000 users
RAM	4GB	6GB	6GB

MS SQL server (database)	1 - 10,000 users	10,001 - 50,000 users	50,001 - 100,000 users
Physical Core*	6	6	6
RAM	12GB	24GB	32GB

*number of physical cores with 3,5GHz frequency (calculated with AMD Ryzen Threadripper 1920X 3,5GHz).

Valid for a typical user case:

- External MS SQL database used.
- Data Replications from Site servers.
- User synchronization .
- Up to 500 Sites (for the Site servers HW requirements, see MyQ Print Server - Site mode) managed by the Central Server (license distribution, user synchronization, and data replication between Central Server and Site servers).
- Up to 30,000 printers total on MyQ Central Server.

2.2.1 Recommendations

- Install Windows updates out of the replication or user synchronization time.
- Always monitor the server performance during peak usage hours and adjust the settings accordingly.
- Changing the power plan of Windows Server in *Control Panel – Hardware – Power Options* from Balanced (the default setting) to **High performance** is recommended to utilize the maximum performance. This may help speed up database operations.

2.2.2 Operating System

Windows Server 2012/ 2012 R2/ 2016/ 2019/ 2022, with all the latest updates; only 64bit OS supported.
Windows 8.1/ 10/ 11 **, with all the latest updates; only 64bit OS supported. Be aware of the connection limit of up to 20 clients (Windows EULA).

**For the trouble-free running of the machine, it is strongly recommended using a server operating system.

2.2.3 Additional software required

- Microsoft .NET Framework (any version recommended by Microsoft).
- For Windows Server 2022, it is necessary to install Server Core App Compatibility Feature on Demand (FOD) (https://docs.microsoft.com/en-us/windows-server/get-started/server-core-app-compatibility-feature-on-demand).
  It can be installed from PowerShell as a Windows Update using this command: "`Add-WindowsCapability -Online -Name ServerCore.AppCompatibility~~~~0.0.1.0`" and then restart.

2.2.4 Storage sizing

The MyQ Central Server installation files are approximately 300MB.

Minimum 10GB dedicated disk for MyQ Data storage (jobs, main database and log database) is recommended; see the below tables for more details.

Data storage with integrated Firebird database (included users, replications):

	10k jobs	**100k jobs**	**1M jobs**
MYQ database	30MB	200MB	1,5GB
MYQLOG database	30MB	300MB	3GB

MyQ data folder storage counted for 1 year.

Data storage on external MS SQL database (include users, replications):

	10k jobs	**100k jobs**	**1M jobs**
MYQ database	500MB	700MB	7GB
MYQLOG database	1GB	1,5GB	3GB

MyQ data folder storage counted for 1 year.

Storage performance

- minimum 100 IOPS required.
- RAID data storage supported.

2.2.5 Database

- Microsoft SQL Server 2012 or newer.
  - Microsoft SQL Server 2017 or newer is recommended.
- On MS SQL Server older than 2017:
  - CLR must be enabled (https://docs.microsoft.com/en-us/sql/relational-databases/clr-integration/clr-integration-enabling).
  - User with owner privileges for Main and Log database.
- User (Server user/login) used to connect to the DB must have their default language set to *us_english*.

2.2.6 Web browser

- Microsoft Edge 91 or higher (Recommended)
- Google Chrome 91 or higher
- Mozilla Firefox 91 or higher
- Apple Safari 15 or higher
- Opera 82 or higher
- Internet Explorer and MS Edge Legacy are no longer supported

2.2.7 Security

DigiCert Global Root CA certificate (required for Installation Key license activation)
→ https://www.digicert.com/kb/digicert-root-certificates.htm#roots.
It should be included by default in the latest updated Windows versions.
Supported Public Key Infrastructure for asymmetric cryptography.

⚠ **Limitations:**

- To make sure that the MyQ system runs smoothly, you need to set an exception for MyQ in your antivirus setup.
- MyQ should not be installed on a Domain Controller.

2.3 MyQ installation in Private Cloud

MyQ can also be installed in Private Cloud. For requirements and further details, see Installation in Private Cloud.

For the Print Server requirements, check the MyQ Print Server guide.

2.4 Main Communication Ports

If you need to adjust your firewall, it is recommended to allow MyQ processes in the firewall and not particular ports. If you allow particular ports, MyQ may stop working if:

1. you change port settings in MyQ, or
2. you upgrade to a newer version and the port specification has changed.

2.4.1 Incoming Ports

The server is listening on the following ports (does not include private ports):

Protocol	Port	Configurable	Description
TCP	8083	Yes (MyQ Easy Config)	HTTP protocol for accessing the MyQ Web interface and REST API.
TCP	8093	Yes (MyQ Easy Config)	HTTPS protocol for accessing the MyQ Web interface and REST API.

2.4.2 Outgoing Ports

The server is connecting to the following ports (does not include localhost connections):

Protocol	Port	Description
TCP	443	• License activation server. The MyQ license server address is license2.myq.cz. The old MyQ license server address is license.myq.cz. • Other enabled services from Settings → External Systems (Microsoft Exchange Online)

You can also set up additional services that require further configuration and their port will often differ:

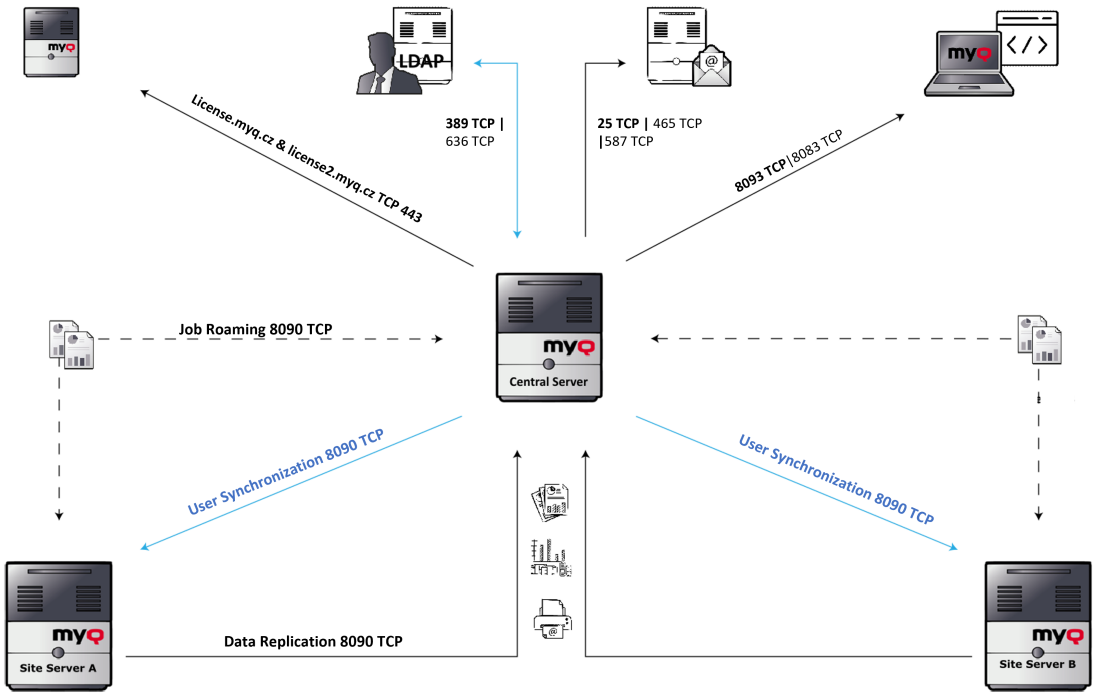
Protocol	Port	Default	Description
TCP	Custom	25/465/587	Connection to SMTP server for sending outgoing emails from MyQ.

Protocol	Port	Default	Description
TCP	Custom	389/636/1812	Connection to Authentication server(s) (LDAP, Radius, ...) for user authentication/ synchronization.
TCP	Custom	8090	Site server(s) connection.
TCP	Custom	-	Connection to External credit account.

For a complete list of the ports used by Site servers, check Main communication ports in the MyQ Print Server guide.

2.5 Network Communication Architecture

The image below depicts an overview of the components and main network communication channels between MyQ Central server and MyQ Site servers.



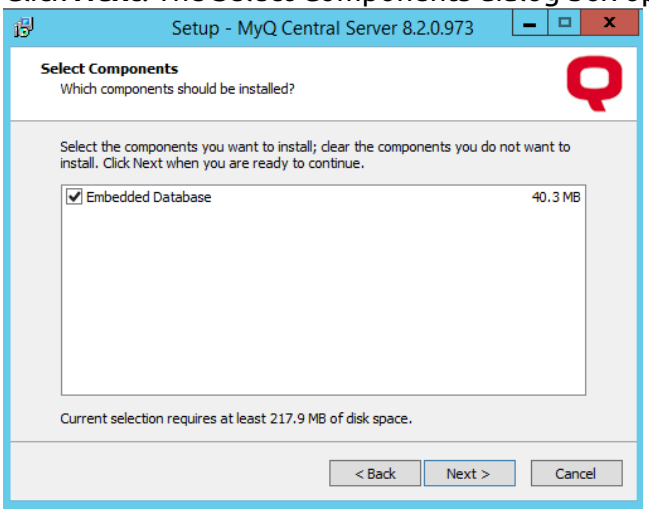
3 Installation

This topic shows you how to install the MyQ Central server and how to connect it to a database.

> Before you start the installation, make sure your system is up to date and meets the requirements as described in System Requirements.

MyQ Central server is installed simply by running the executable file and following the instructions of the installation wizard.

1. Download the latest available MyQ Central Server version from the MyQ Community portal (*MyQ Central Server X.X.X.X*).
2. Run the executable file. The Select Setup Language dialog box appears.
3. Select your language, and then click **OK**. The License Agreement dialog box appears. Select **I accept the agreement** and click **Next**. The Accessibility mode dialog box appears.
4. Select between the *Standard* or *Enhanced* accessibility mode, and click **Next**. The Select Destination Location dialog box appears.
5. Select the folder where you wish to install MyQ Central server. The default path is:
   C:\Program Files\MyQ Central Server.
6. Click **Next**. The Select Components dialog box opens.



7. If you want to use the MyQ Embedded database server, keep the **Embedded Database** option selected (default setting). If you want to use an MS SQL database server, you should clear the selection. Click **Next**. The Ready to Install window opens, with an overview of your selections.
8. Click **Install**. MyQ Central server is installed on your computer. Depending on the OS settings on the server, you might be asked to restart the computer. If you are asked to restart the computer, you need to do so in order to finish the installation. After the restart, the MyQ Central Server Easy Config application opens and you can continue with the setup there.

3.1 Central Server database setup

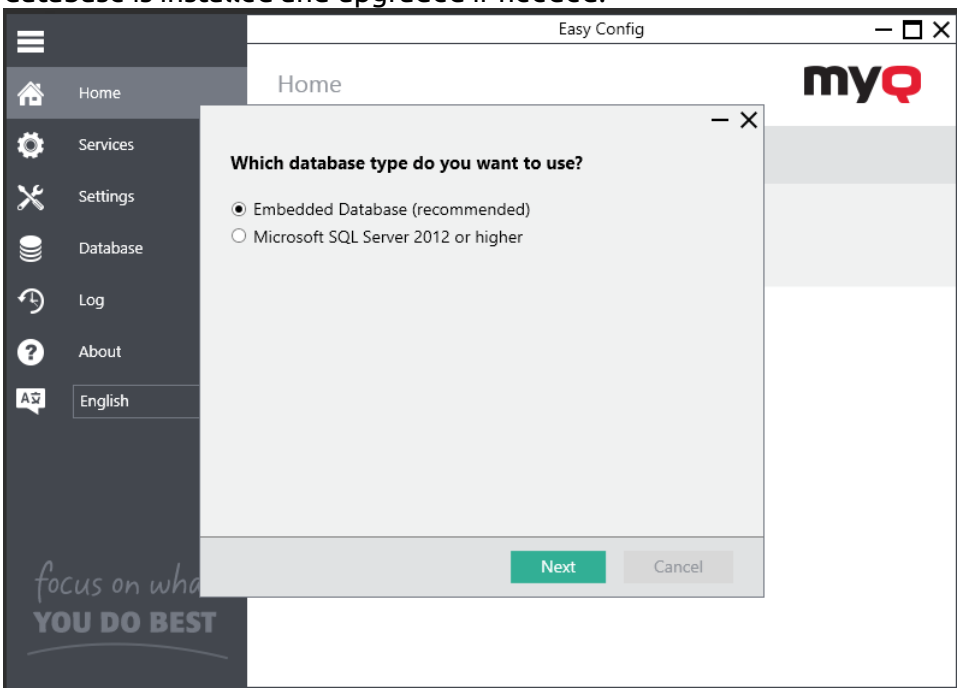
Once the MyQ Central server is installed, the MyQ Central Server Easy Config application opens and you are asked to select and set the MyQ database. The two following sections describe the setup of the database after the installation.

If you have deselected the **Embedded Database** option during the installation, the MyQ Embedded database option is no longer available on the MyQ server.

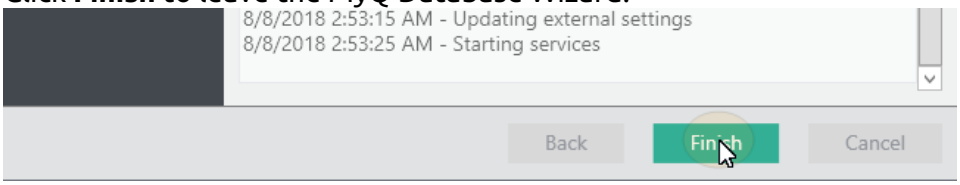
3.1.1 Setting up the Embedded Database

To set up the Embedded database:

1. Select the **Embedded Database (recommended)** option, and click **Next**. The database is installed and upgraded if needed.



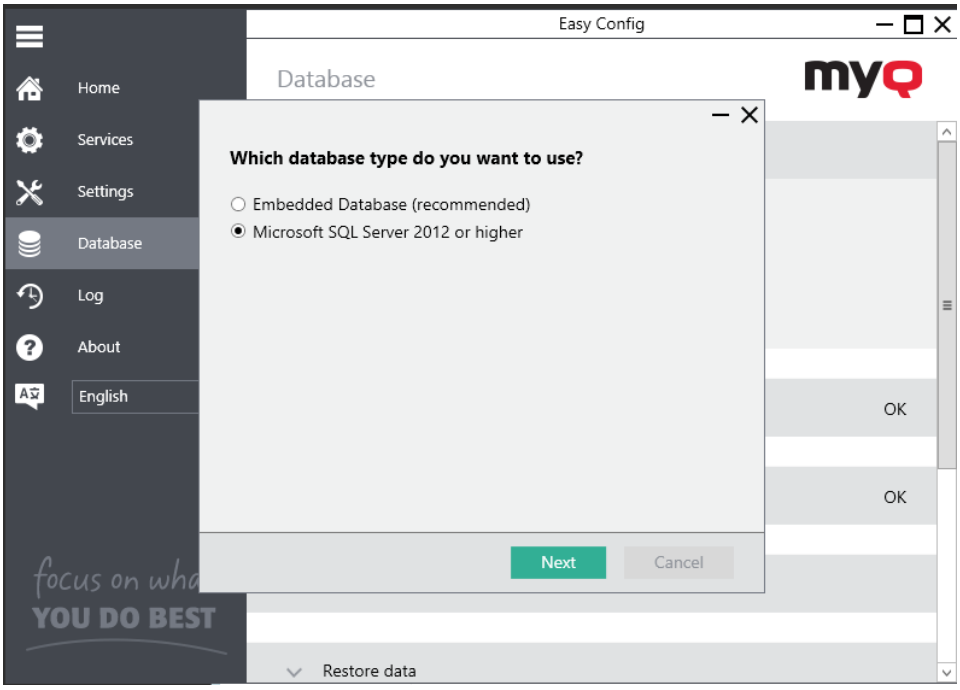
2. Click **Finish** to leave the MyQ Database Wizard.



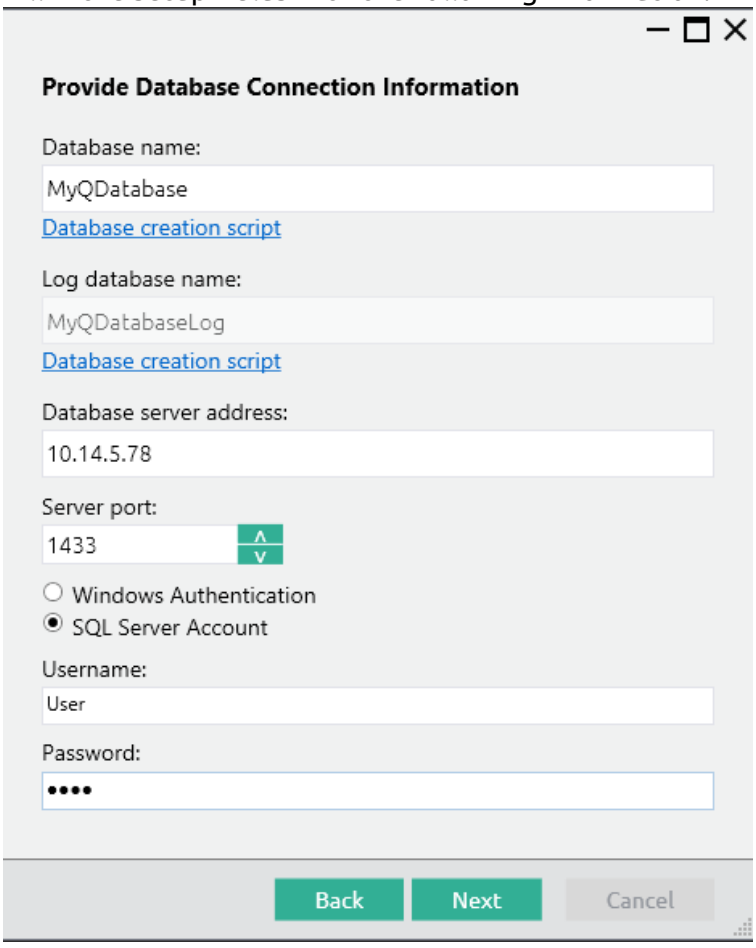
3.1.2 Setting up an MS SQL Database

To set up an MS SQL database:

1. Select the **Microsoft SQL Server 2012 or higher** option and click **Next**.



2. Fill in the setup fields with the following information:



a. **Database name**: name of the new MyQ MS SQL database (for example *MyQDatabase*)
b. **Log database name**: this automatically filled according to the Database name
c. **Database server address**: the IP address or the hostname of the MS SQL server
d. **Server port**: TCP port used for communication with the MS SQL server; by default it is *1433*. In case of a Local database, the Server port field must be left empty.
e. **Username/Password**: Login credentials for accessing the MS SQL database management. The login account has to have the **public** fixed server role for access to the MS SQL database. You can alternatively use **Windows Authentication**.

3. Before you can continue, it is necessary to manually create the main and log databases MyQ will be using. You can use the creation scripts that are available to you under the 'Database name' and 'Log database name' fields. Run the scripts on your MS SQL server and they will create databases using the names you have provided in Step 2.
4. Once the databases are successfully created, click **Next** to continue. MyQ Central Server Easy Config will run the Database Prerequisites Check.
5. Click **Finish** to leave the MyQ Database Wizard.

3.2 Installation in Private Cloud

MyQ Central Server can be installed and run, besides on-premise servers, also on an Azure Virtual Machine, with a VPN tunnel connecting the physical network and Azure's virtual network.

Environment Requirements:

- The minimum recommended virtual machine is B4ms, with a dedicated (not system disk) standard HDD.
  - The recommended CPU, RAM and HDD resources are the same as a standard installation and can be found in system requirements.
- VPN tunnel (100mbps line is recommended) connecting the physical network and Azure's virtual network where the MyQ Central Server is installed.
- It is required to open ports used by MyQ or make sure they are not blocked on Azure's Network security group .

For more information about *Azure - Extend an on-premises network using VPN*, see: https://docs.microsoft.com/en-us/azure/architecture/reference-architectures/hybrid-networking/vpn#architecture

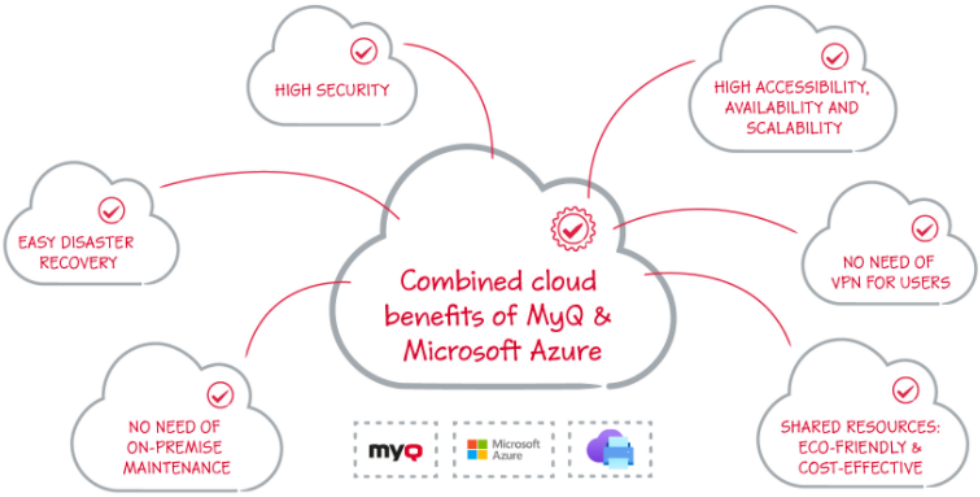
Once you set up the Azure virtual environment, follow the Installation instructions to install MyQ.

About MyQ in Private Cloud

Customers using Microsoft 365 as a private cloud hosting their internal systems can add MyQ to the list of IT services they no longer need to have installed on an on-premise server.

Part of the leased private cloud space can be dedicated to MyQ server(s), and MyQ running in Azure can make use of Azure Active Directories.

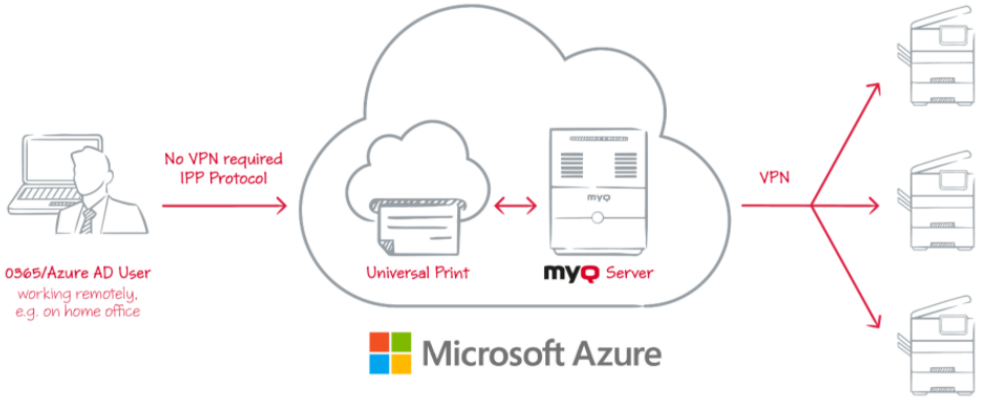
The single sign-on feature already used by users to access applications in the Microsoft cloud can also cover cloud printing with MyQ, without the need to use a VPN connection.



MS Universal Print is also fully integrated in MyQ, offering mobility, quick printer discovery, and no need for a VPN connection.

What is more, MyQ's Universal Print connector can work with older devices, so there's no need to invest into upgrading your fleet with more recent models which would natively support Universal Print.

For more information, see **Microsoft Universal Print** in the MyQ Print Server guide.



A VPN tunnel connecting the physical network and Azure's virtual network is also required when using Microsoft Universal Print. Thanks to this VPN tunnel, there is no need for a VPN connection from the client's side to the MyQ Central Server.

4 MyQ Central Server Easy Config

The MyQ Central Easy Config application is the basic environment for setup of the essential parts of the MyQ Central server, such as the MyQ database and log.

It automatically opens during the installation of the server. Otherwise, you can find it on the Apps screen in Windows 8.1+, Windows Server 2012 and newer. After you open the application, you see its menu on the left side of the dialog box. From this menu, you can access the following settings:

- On the **Home** tab, you can quickly change the default passwords for access to the Server Administrator account and the Database Administrator account. You can generate data needed by MyQ Support, and you can also log in to the MyQ Web Administrator Interface from there.
- On the **Services** tab, you can control the run of the MyQ Central server's services.
- On the **Settings** tab, you can change both the Server administrator and the Database administrator passwords, setup the Windows Services account, unlock the Server administrator account, change file paths of the MyQ system data files, change the port of the web server and clean up your Cache and Temp folders.
- On the **Database** tab, you can change the type and settings of the MyQ database.
- On the **Log** tab, you can overview all operations executed by the MyQ system.
- On the **About** tab, you can see the information about the current version of the MyQ Central server.

4.1 Home

Once you open the MyQ Easy Config application on the Home tab for the first time, you will be prompted to create passwords for the Server Administrator Account and Database Administrator as these will be important for the server management access and database security.

Database Administrator Account

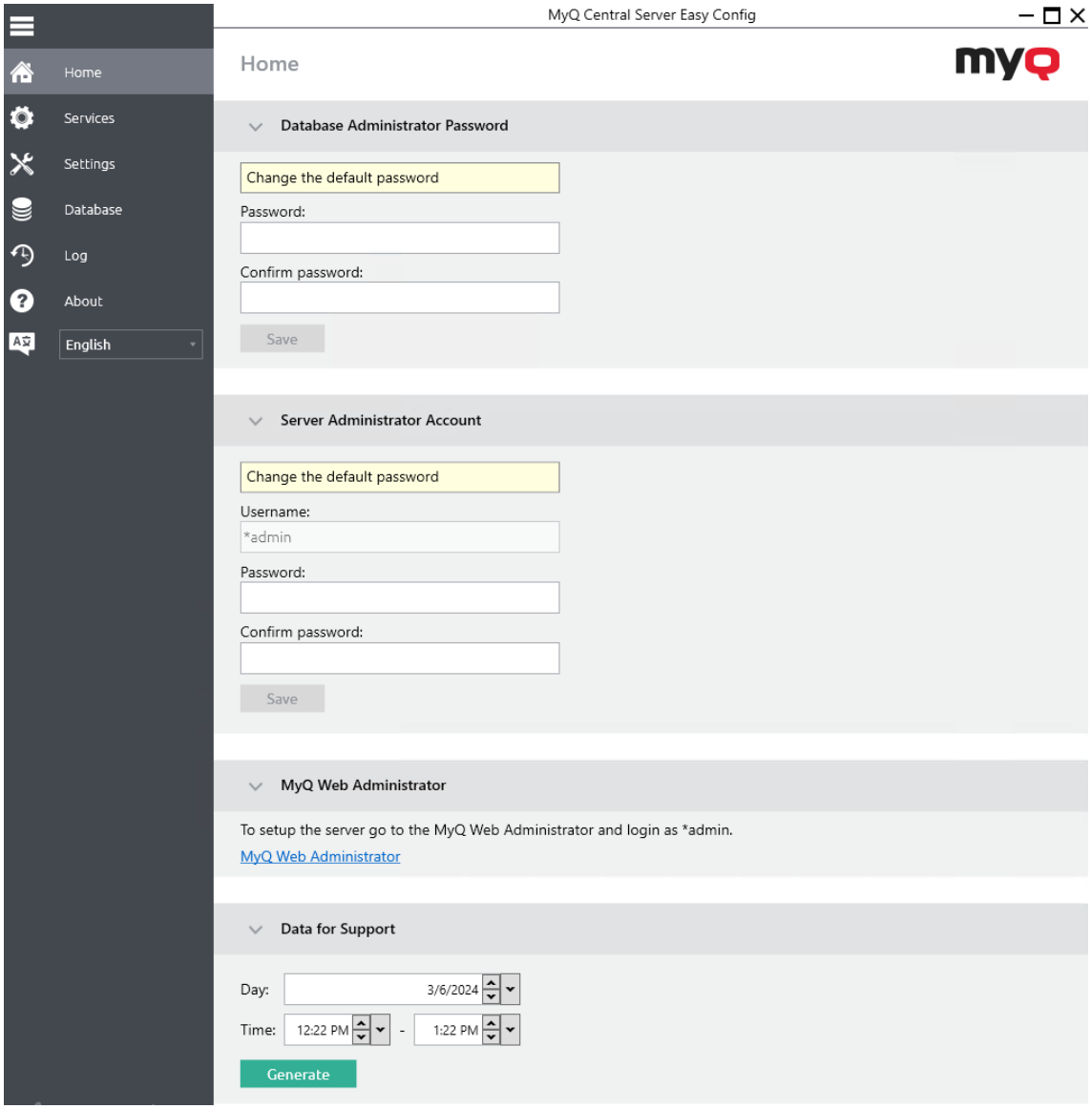
This is the SYSDBA account used for accessing the Firebird database. It is strongly recommended to create a strong and secure password for this account.

Server Administrator Account

This is the *admin account which is used for the initial MyQ configuration. Once you create a password for this account, you can continue to the MyQ Web Interface, use it for logging in as the administrator, and start configuration. It is generally recommended to later disable this account once you have created dedicated administrator accounts.

The Server administrator user name is **admin* and its default password is *1234*.
The MyQ database administrator user name is *SYSDBA* and its default password is *masterkey*.

The first time you open the application, on the **Home** tab, you can see the **Server Administrator Account**, and the **Database Administrator Password** sections. In each of the two sections, type the new password, confirm the password, and then click **Save**.

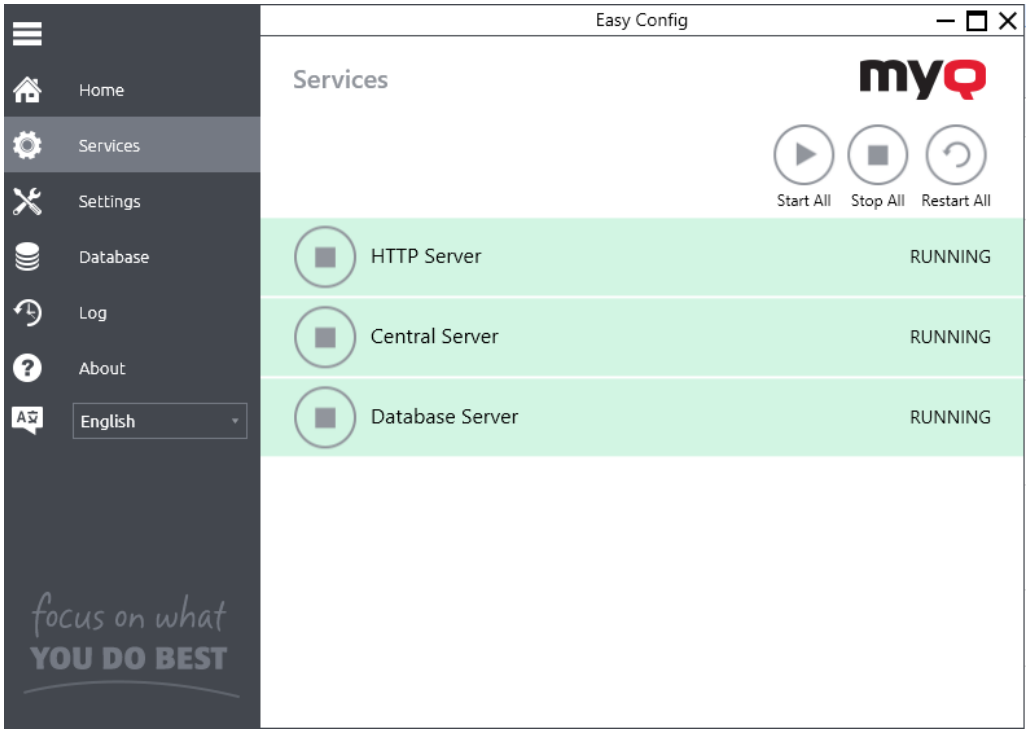


After you change Database Administrator the password for the first time, its initial setup section disappears from the **Home** tab.

Additional options are available on the **Home** tab to access the **MyQ Web Administrator** account, and generate **Data for Support**.

4.2 Services

On the **Services** tab you can stop, start and restart the services of the MyQ Central server.



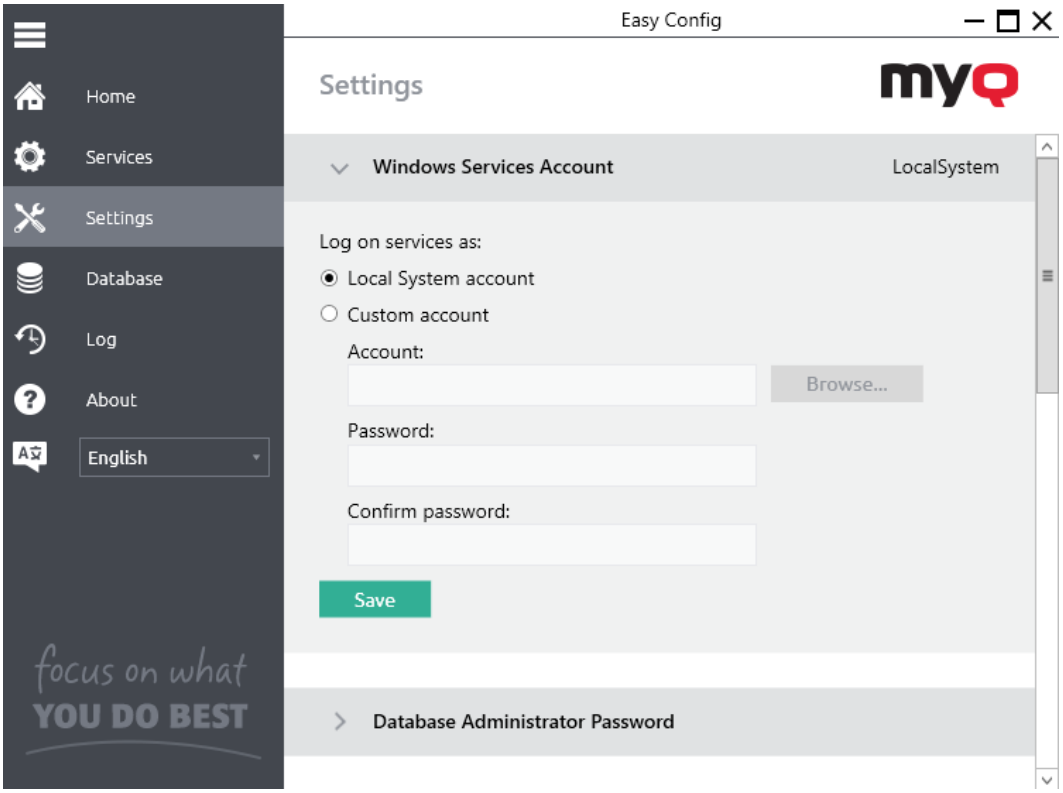
4.3 Settings

4.3.1 Windows Services Account

MyQ Services run, by default, under the *Local System* account, meaning the account that was used during the installation.

This can be changed in the **Settings** tab, in the **Windows Services Account** section:

- Under *Log on services as*, select **Custom account**.
- Click on **Browse,** select the user account to be used for MyQ services and click **OK**. The selected user account should have "Local administrator" rights or be a member of the Local Administrators Group. It should also already have rights to "Log on as service".
- Type the account's password and then confirm it in the next field.
- Click **Save**. MyQ Services are automatically stopped and restarted.



- To change back to the default account, select **Local System account**, and click **Save**. MyQ Services are automatically stopped and restarted.

4.3.2 Changing passwords on the Settings tab

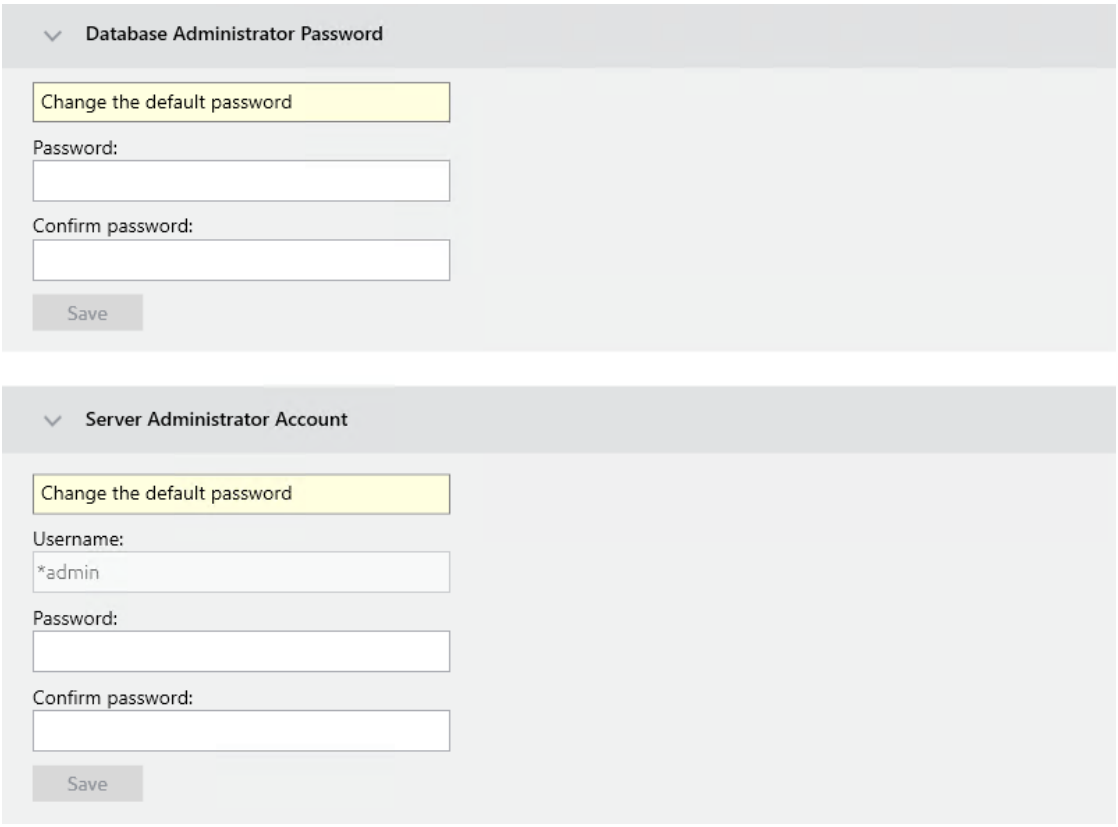
As soon as you replace the default passwords, the passwords sections disappear from the **Home** tab and they can no longer be changed there.

Database Administrator Account

This is the SYSDBA account used for accessing the Firebird database. It is strongly recommended to create a strong and secure password for this account.

Server Administrator Account

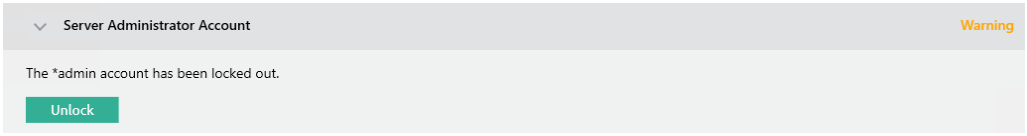
This is the *admin account which is used for the initial MyQ configuration. Once you create a password for this account, you can continue to the MyQ Web Interface, use it for logging in as the administrator, and start configuration. It is generally recommended to later disable this account once you have created dedicated administrator accounts.



Unlocking the Server Administrator account

After 5 consecutive failed login attempts to the Server administrator account, the account is locked.

The admin can see a warning that the *admin account is locked, and unlock it, in the **Server Administrator Account** section on the **Settings** tab. Once they click **Unlock**, the account is unlocked.



The administrator can also check their account's status via the Windows command line, using the following command:

```
C:\Program Files\MyQ Central Server\PhpApps\MasterServer\src\EasyConfig>"C:\Program Files\MyQ Central Server\PHP\PHP\php.exe" confcli.exe.php cmdConfig adminUnlock check
```

To **Unlock** the account via the Windows command line, they can use the following command:

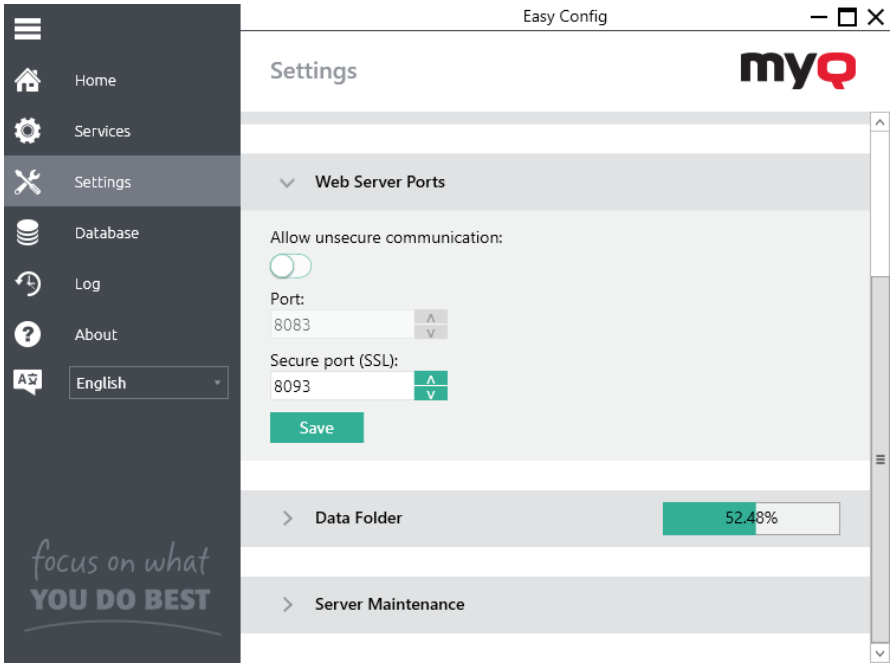
```
C:\Program Files\MyQ Central Server\PhpApps\MasterServer\src\EasyConfig>"C:\Program Files\MyQ Central Server\PHP\PHP\php.exe" confcli.exe.php cmdConfig adminUnlock SET unlock
```

4.3.3 Web Server Ports

On the **Settings** tab, under **Web Server Ports**, you can choose between secure/unsecure communication, and change the ports for the connection to the MyQ Web server:

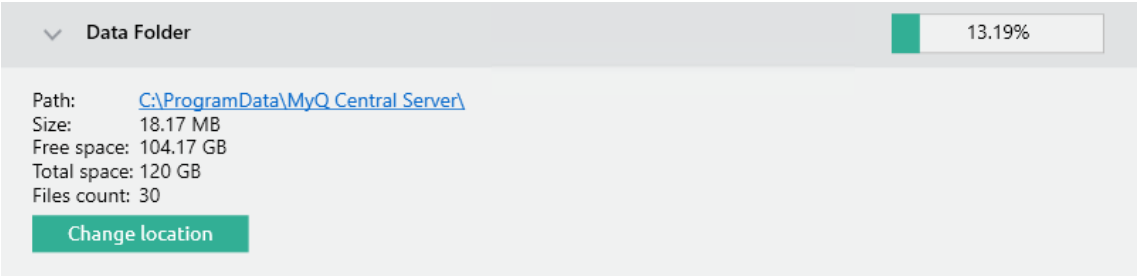
- **Allow unsecure communication**: If enabled, the communication is not secure, and the **Port** field becomes editable (disabled by default, unless you are upgrading from a version already using unsecure communication).
  - **Port**: communication port for the MyQ HTTP server; the default value is *8083*.
- **Secure port (SSL)**: communication port for the MyQ HTTPS server; the default value is *8093*.

Use the up/down arrows to select the new port, and click **Save** to apply the changes.



4.3.4 Data Folder

On the **Settings** tab, you can see the MyQ database folder location.

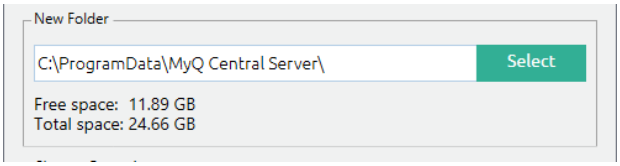


Depending on the type of the database, the Data folder either does, or does not contain the MyQ database: the MyQ Embedded database is part of the folder, whereas the SQL database is stored on the SQL server. Besides the MyQ database, the folder contains additional files with data used by the MyQ system, such as reports, certificates or the *config.ini* file.

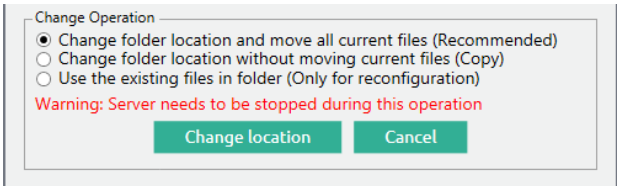
The default folder path is:
C:\ProgramData\MyQ Central Server

Under normal circumstances, there is no need to change the location. In case you have to do it, for example when there is not enough space on the system disk, follow the instructions below:

1. On the **Settings** tab, in the respective section, click **Change Location**. The **Change folder location** dialog box appears.
2. In the dialog box, under **New folder**, enter the path to the new folder or click **Select** to browse and find the new folder location.



3. Under **Change Operation**, select the required method of existing data relocation, and then click **Change Location**. The folder is moved to the new location.

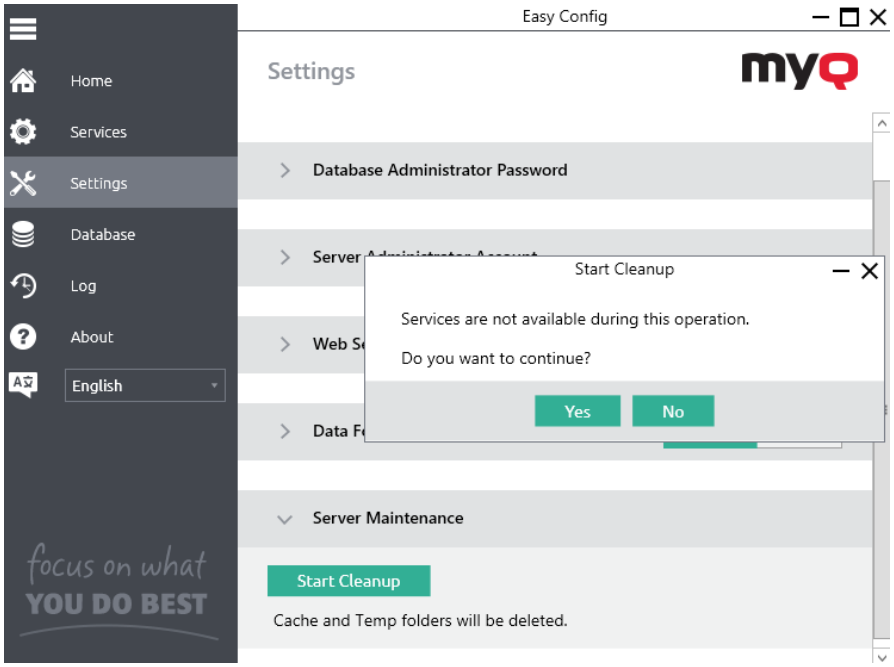


If you relocate your Data folder to a network drive, be aware that Apache or Firebird service cannot access network drives created by the Administrator or other users. The network drive needs to be created by the "**nt authority\system**" user. You can do this using this guide: https://stackoverflow.com/questions/182750/map-a-network-drive-to-be-used-by-a-service/4763324#4763324 or it should work when you mount the drive on Windows startup.

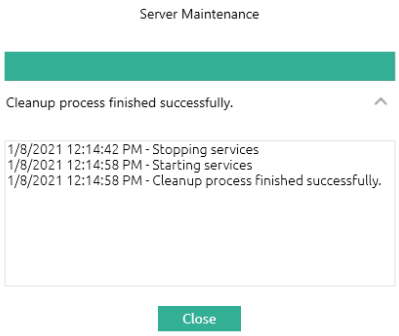
4.3.5 Server Maintenance

In the **Server Maintenance** section of the **Settings** tab, you can clean up your Cache and Temp folders. This might be necessary in cases when problems with the temporary files affect the MyQ system.

To delete the two folders, click **Start Cleanup**. A pop-up window informs you that services are not available during the cleanup. Click **Yes** to continue or **No** to cancel.

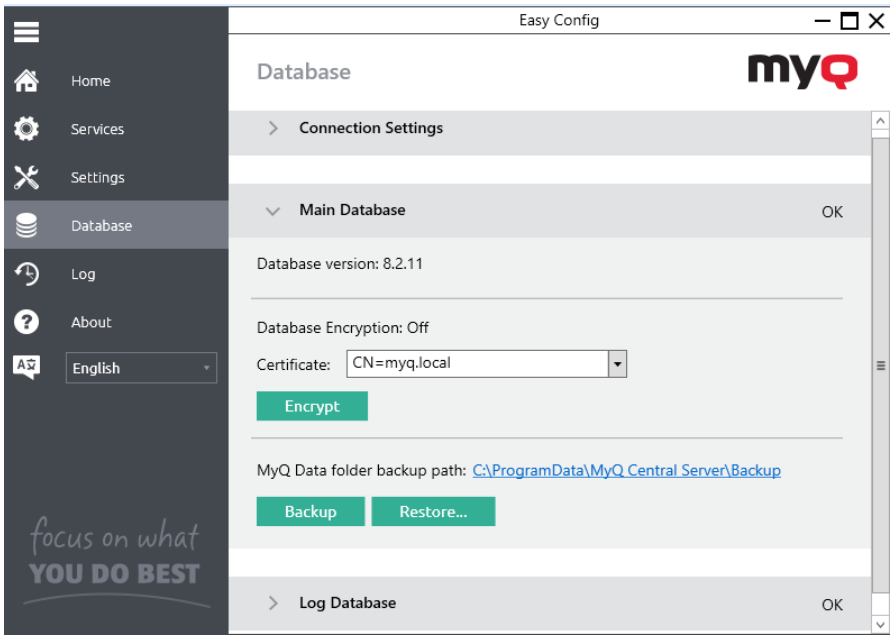


A busy indicator window lets you follow the cleanup process, and informs you when it ends.



4.4 Database

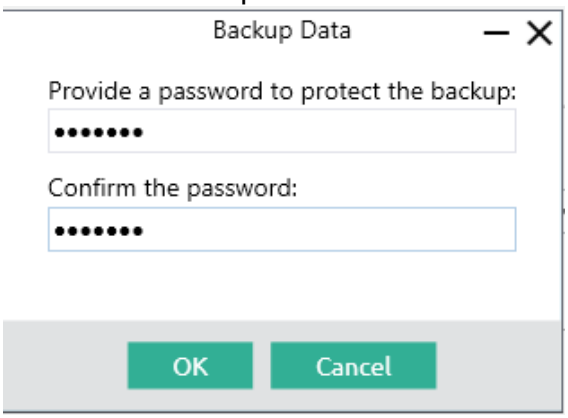
On the **Database** tab, you can change the database connection settings, check the main and log database's status and perform backup and recovery, and encryption. You can also see information about the current version of the database, available updates, and also a warning in case there is a need for an upgrade.



4.4.1 Backing up MyQ data

To back up your MyQ data:

1. Open the **Database** tab.
2. In the **Main Database** section, click **Backup**.
3. Provide and confirm a password to protect the backup. If skipped, the backup will be created unprotected.

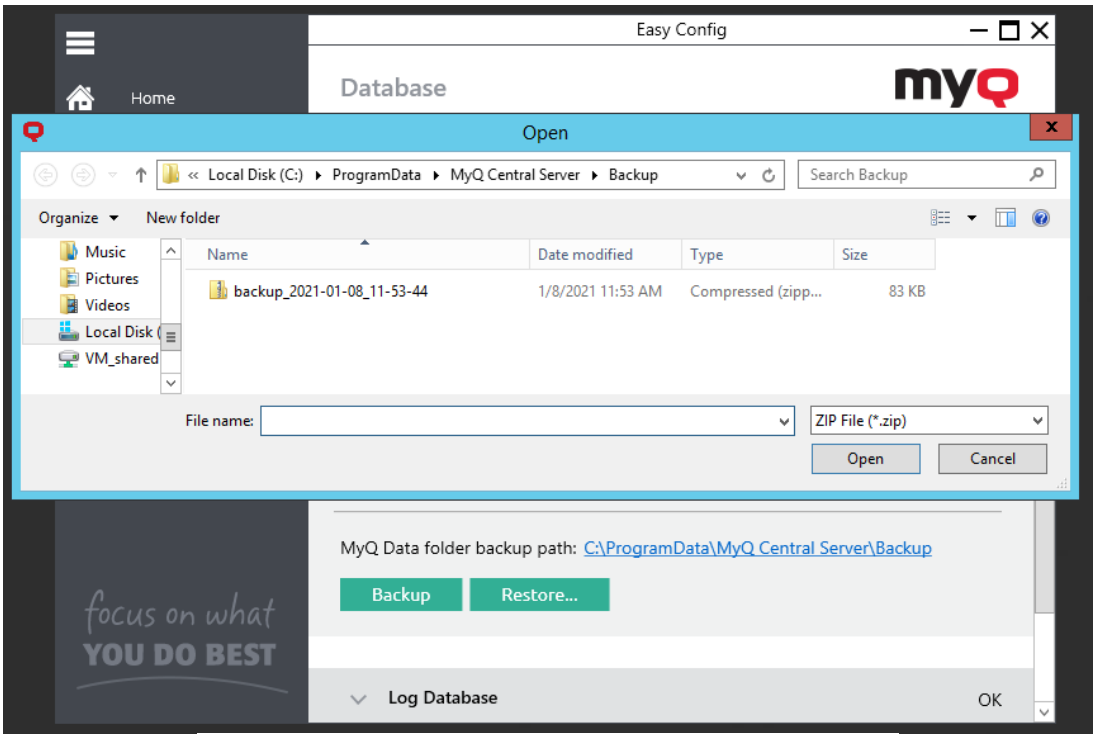


4. A new backup file is created, called *backup_*.zip*. Depending on the database type, the *backup_.*zip* either does or does not contain the MyQ database file (MyQ.FDB): the MyQ Embedded database is part of the folder, whereas the SQL database is stored on the SQL server. Besides the MyQ database, the folder contains additional files with data used by the MyQ system, such as reports, certificates, the *metadata.backup* file or the *config.ini* file.

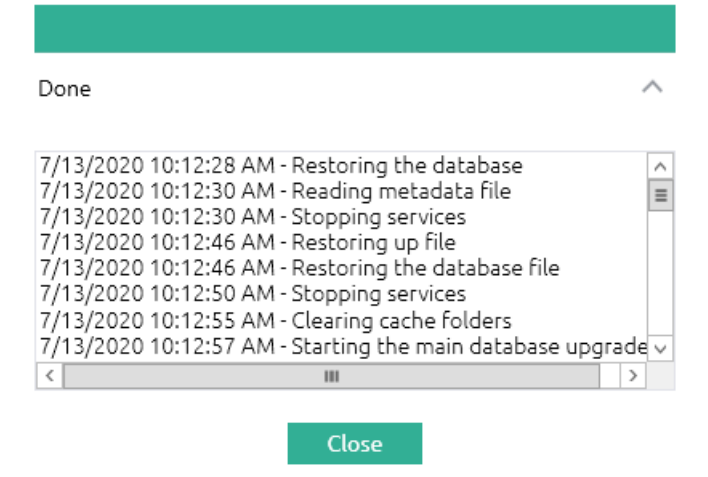
4.4.2 Restoring MyQ Data

To restore your MyQ data:

1. Open the **Database** tab.
2. In the **Main Database** section, click **Restore...**. Select the *backup_*.zip file to restore MyQ Data,* and click **Open**. If the backup is password protected, there is a prompt to provide the password. The database is restored and, if needed, upgraded as well.



Restore Data



4.4.3 Encrypting the main database

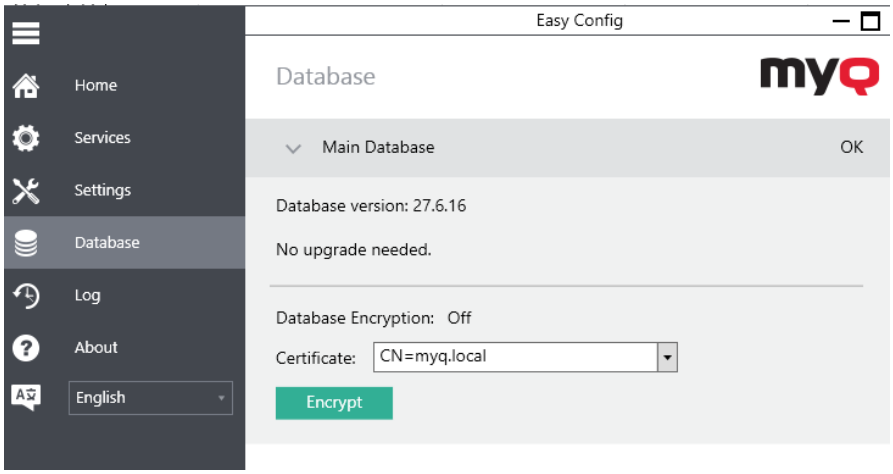
For better security, you can encrypt the main database using a certificate. MyQ does not provide these certificates. You should install and use your own. The certificate used for the encryption needs to have the “Encrypting File System” Enhanced Key

Usage (EKU) and it must be located in one of the following computer certificate stores:

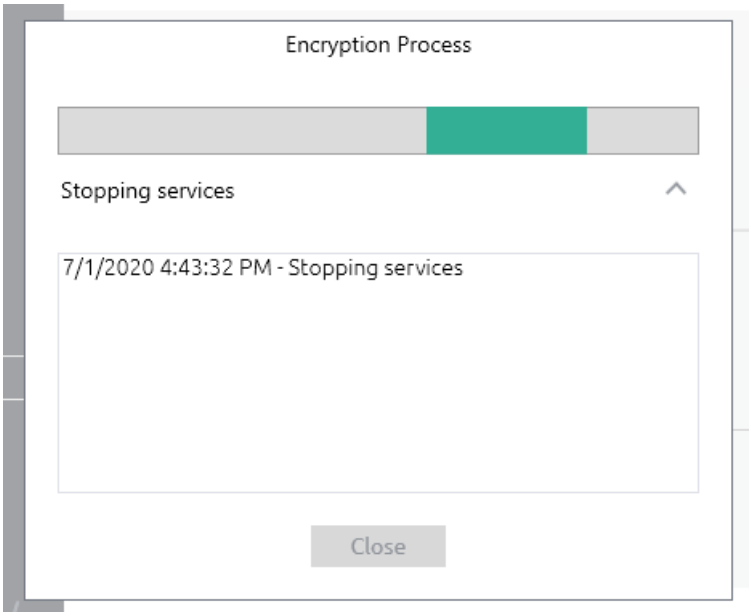
- Personal
- Trusted Publishers
- Third-Party Root Certification Authorities
- Other people

Once installed, it will be visible in the **Certificate** drop-down.

This functionality is only available for MyQ Embedded Databases. If you have an SQL Server, this section for encryption/decryption is not displayed.



During the encryption, other services will not be available. A busy indicator will let you follow the encryption/decryption process:



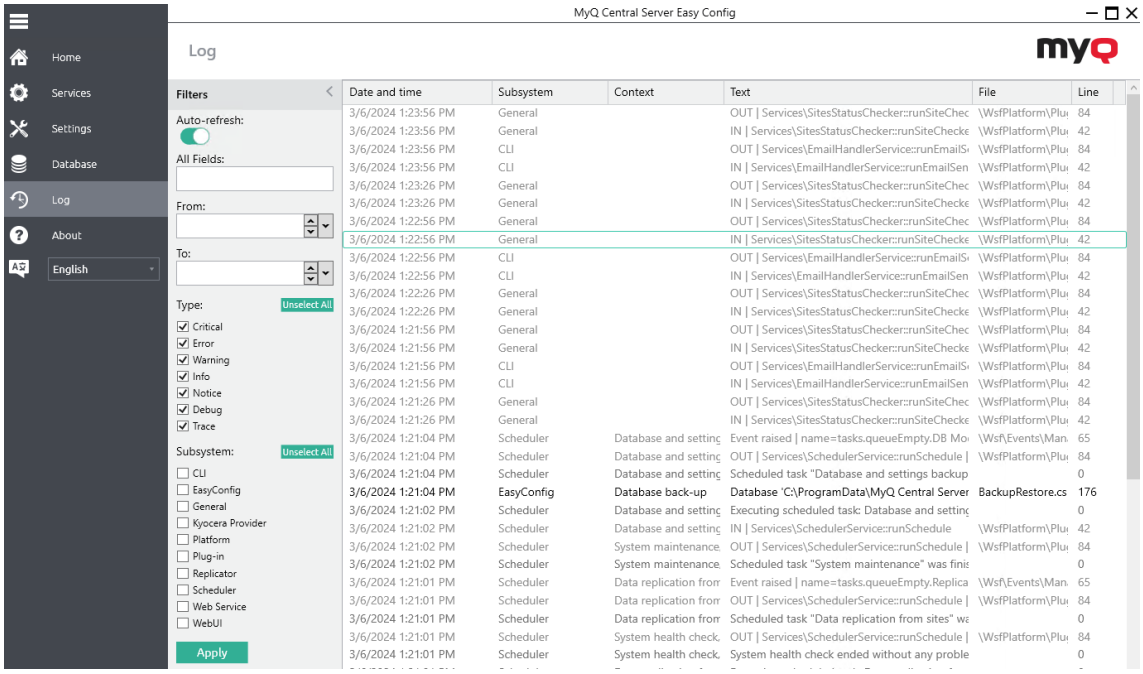
After the encryption, the **Encrypt** button will change to **Decrypt** so you can reverse the action.

4.4.4 Database Connection Settings

In the Connection Settings section, you can view database information, such as the name, server address, server port, username, and password. If you click **Change**, you can set up a new MyQ Embedded database or an SQL database. This change is only available if you selected the MyQ Embedded database during the installation.

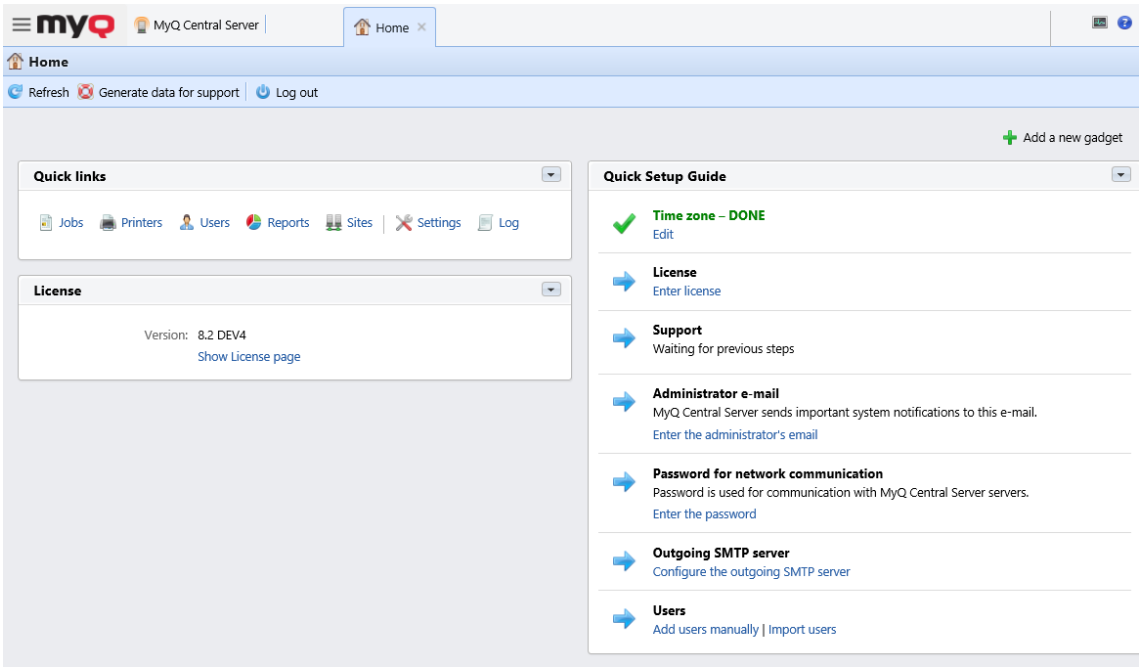
4.5 Log

The **Log** tab of Easy Config allows you to view all operations being executed by the MyQ system. These can be filtered by **Field**, **Date**, **Type**, and **Subsystem**.



5 MyQ Central Web Interface

This topic describes the MyQ Central Web Interface where you manage most of MyQ functions. It shows you how to access the web interface and the two menus where you can access all settings and functions on the web interface: the **Main** menu, and the **Settings** menu. Furthermore, it describes the web interface's **Home** dashboard and shows you how to perform the initial MyQ setup. The last two sections introduce two MyQ logs: the **MyQ Log** and the **MyQ Audit Log**.



5.1 Accessing the MyQ Central Web Interface

To access the MyQ Central Web Interface, you need to open it in your web browser and log in as an administrator:

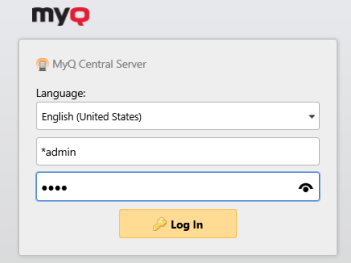
There are three ways to open the MyQ Central Web Interface:

1. Open your web browser, and then enter the web address in the form: *https://*MyQCentralserver*:8083*, where *MyQCentralserver* represents the IP address or the host name of your MyQ Central server, and *8083* is the default port for access to the server.
2. Log on to the interface from the MyQ Central Easy Config application, by clicking the *MyQ Web Administrator* link on the **Home** tab, in the **MyQ Web Administrator** section.
3. Open the MyQ Central Web Administrator application. You can find this application on the Apps screen in Windows 8.1+, Windows Server 2012 and newer.

5.2 Logging in as an administrator

Enter the MyQ administrator name (**admin*) and the password that you have set in the MyQ Central Easy Config application, and then click **Log In**. If you have not changed the default password yet (not recommended), enter the default one: *1234*.

In the drop-down at the top of the login window, you can select your preferred language.



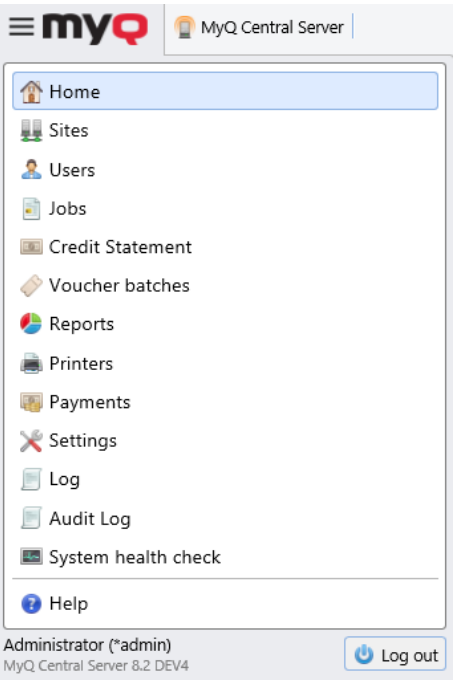
5.3 Main menu and Settings menu

There are two menus where you can access all the features and settings of the MyQ Central server: the **Main** (MyQ) menu and the **Settings** menu.

Main menu

To open the **Main** menu, click the MyQ logo at the upper-left corner of the screen. From there, you can access the **Home dashboard**, the **Settings** menu and a number of tabs where you can manage and use MyQ functions.

In this guide, all the tabs accessed from the Main menu, except for the **Home** screen and **Settings** menu, are called main tabs, as opposed to settings tabs that are accessed from the **Settings** menu.



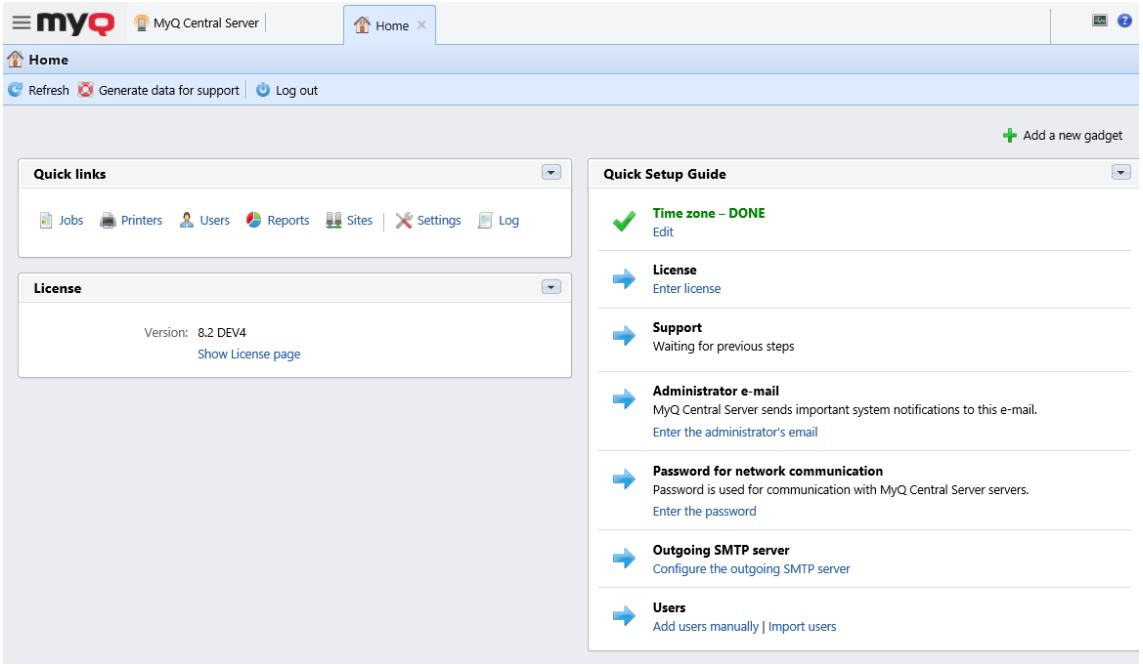
Settings menu

To open the **Settings** menu, click **Settings** on the **Main** menu.

The tabs that are accessed from the **Settings** menu serve for the global setup of the MyQ server.

5.4 Home Dashboard

On the **Home** dashboard, you can perform the initial MyQ setup. After the setup, you can use the dashboard to directly access MyQ key features, to display statistics and to generate data for support.



The dashboard is fully adjustable; it consists of multiple building blocks (gadgets) that can be added and removed from the screen. You can use the blocks to customize both the layout and functionality of the dashboard.

By default, there are three gadgets on the dashboard: **Quick links**, **License**, and **Quick Setup Guide**.

From the **Quick links** gadget, you can directly access the most important tabs of the MyQ Web Interface: *Jobs, Printers, Users, Reports, Sites, Settings,* and *Log.*

The **License** gadget shows license information and can redirect you to the **License** settings tab.

The **Quick Setup Guide** walks you through the initial MyQ setup.

5.4.1 Quick Setup Guide

On the **Quick Setup Guide** gadget, you can set the basic and most important features of the MyQ system:

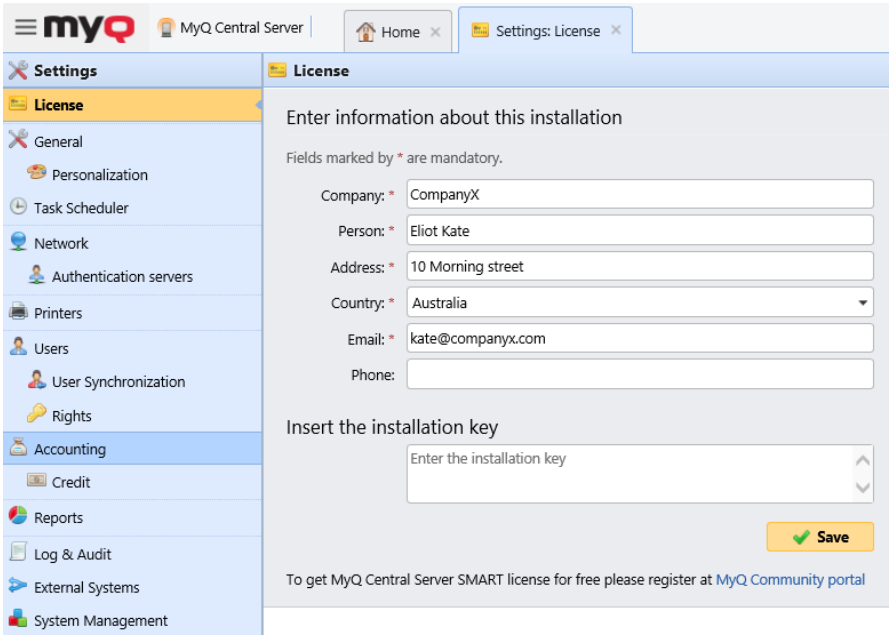
Time zone

- Here you can see if the time zone set in MyQ matches the Windows system time set on the server.
- By clicking **Edit**, you open the **General** settings tab, where you can adjust the time zone.

License

Adding and activating licenses

Click **Enter License**. The **License** settings tab opens. You are asked to enter information about your installation and insert your installation key.



Support

With active software assurance licenses, you have access to MyQ technical support and free MyQ products upgrades.

Adding or Extending software assurance licenses

Click **+Add support license**. The dialog box appears where you can add the software assurance license.

Administrator email

By clicking **Enter the administrator's email**, you open the **General** settings tab, where you can set the administrator email. Important system messages (disk space checker warnings, license expiration etc.) are automatically sent to this email.

Password for network communication

To communicate with your site servers you must set a password. By clicking **Enter the password**, you open the **General** settings tab, where you can set the password for network communication, in the **Security** section..

Outgoing SMTP server

By clicking **Configure the outgoing SMTP server**, you open the **Network** settings tab, where you can set the outgoing SMTP server.

Users

- By clicking **Add users manually**, you open the **Users** main tab, where you can manually add users.
- By clicking **Import users**, you open the **User synchronization** settings tab, where you can import users from LDAP servers, or from a CSV file.

5.4.2 Generate data for support

In case you encounter a problem that requires help from the MyQ support team, you may be asked to provide more information about your MyQ system configuration, licenses, printer devices, terminals, etc. In such case, you need to generate a *MyQ-helpdesk.zip* file, which contains multiple files with all the necessary information, and send it to the MyQ support team.

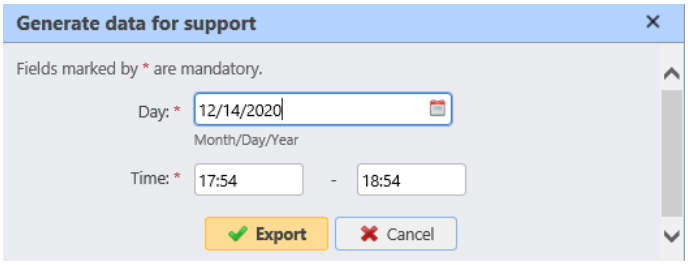
The *.zip* file contains:

- the Logs folder with error logs from Apache and PHP,
- the MyQ log file *log_dateandtime.xlsx*,
- the Windows Event log,
- and the *MyQ-helpdesk.xml* file with MyQ system information.

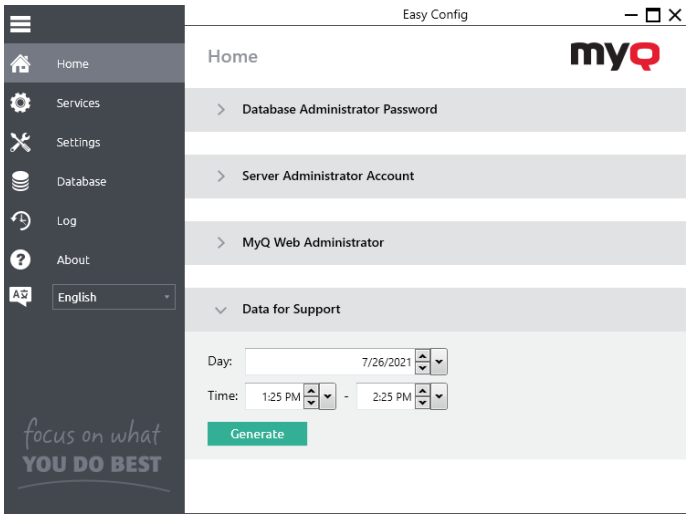
The MyQ log file corresponds to the MyQ log that can be displayed on the MyQ Central Web Interface or in the MyQ Central Easy Config application, and contains attachments with detailed information.

To generate the *MyQ-helpdesk.zip* file:

1. Click **Generate data for support** on the bar at the top of the **Home** dashboard. The Generate data for support dialog box appears.
2. In the dialog box, specify the **Day** and the exact **Time** span of the MyQ events to include in the *MyQ-helpdesk* file, and then click **Export**. The file is generated and saved to your *Downloads* folder.



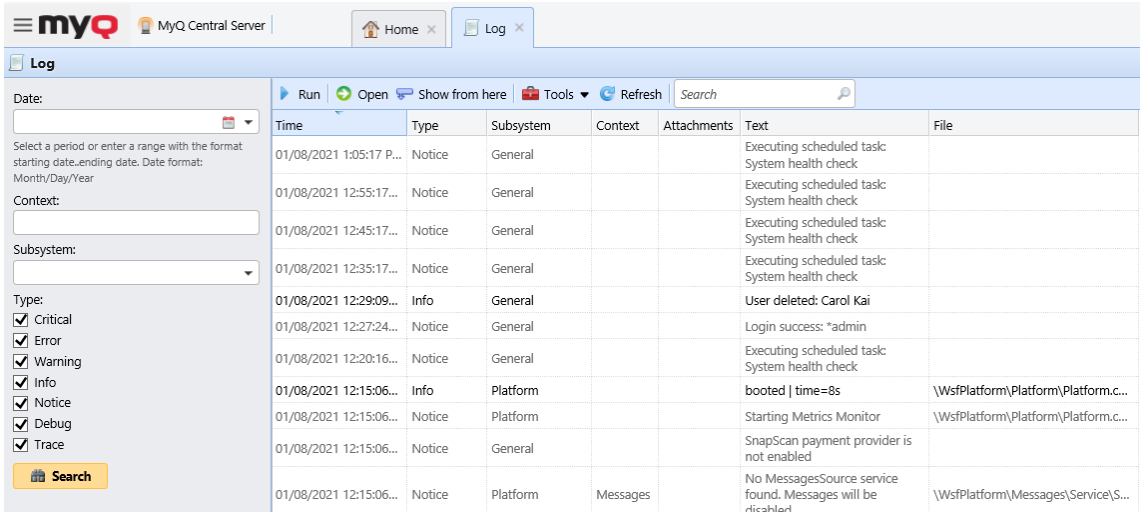
You can also generate data for support in the MyQ Central Easy Config application. In the **Home** tab, under the **Data for Support** section, set the date and time for the data, and click **Generate**. The file is generated and you can select where to save it.



5.5 MyQ Log

In the MyQ Central server log, you can find information about all parts of the MyQ Central server: the MyQ Central server, MyQ Web UI, etc. Log messages are sorted into these types *Critical, Error, Warning, Info, Notice, Debug, Trace* and you can select the types that you want to be displayed.

You can also set the log to display only messages informing about specific MyQ subsystems, such as the Web UI, Replicator or Schedulers, and also about a specific context, for example Email sender or Disk space checker.



The log is updated in real time, but you can pause it and select to show messages from a specific time period, such as yesterday, this week, last week, last X hours, last X weeks, etc.

Opening the MyQ Log

On the MyQ Web User Interface, go to **MyQ**, **Log**, or on the **Home** dashboard, click **Log** on the **Quick links** gadget.

Pausing/Refreshing the log

To pause or resume the real time run of the log, click **Run** on the bar at the top of the **Log** tab. To refresh the log up to the current moment, click **Refresh** on the same bar.

Filtering the log: selecting time period, types of information, subsystem or context

You can filter the log on the panel:

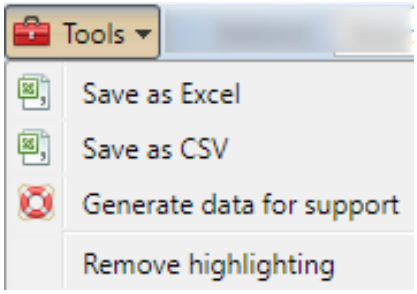
- After you pause the log, you can select the period in the **Date** combo box.
- The types can be selected and deselected on the panel at the right side of the **Log** tab.
- On the **Subsystem** combo box, you can select/type one or more subsystems to be displayed in the log.
- In the **Context** text box, you can type the context you want to be displayed.

After the filters are set, click **Search** to submit them.

Exporting the log/Generating data for support

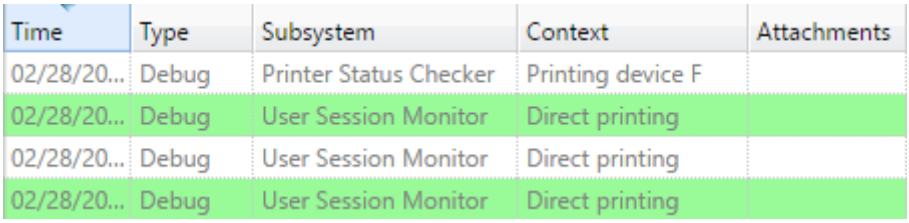
Click **Tools** on the bar at the top of the **Log** tab, and then select one of the following export options:

- **Save as Excel** — export the log as an Excel file
- **Save as CSV** — export the log as a CSV file
- **Generate data for support** — generates a *.zip* file with multiple files for MyQ support.



Highlighting log messages

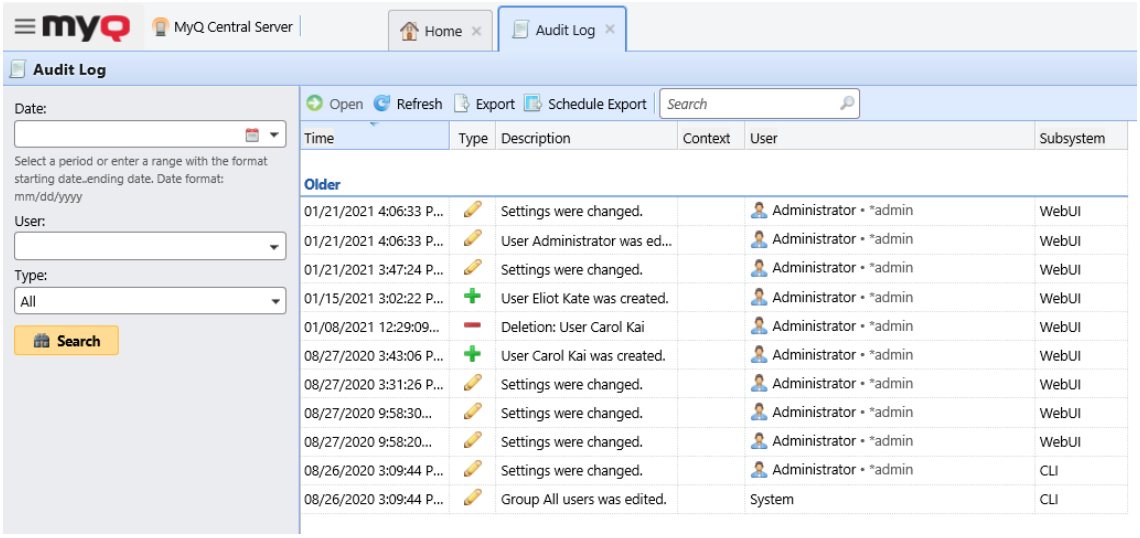
You can highlight particular log messages. To do so, select the message that you want to highlight and then press the **SHIFT + SPACE** keyboard shortcut.



To remove all highlights, click **Tools** on the bar at the top of the **Log** tab, and then click **Remove highlighting**.

5.6 MyQ Audit Log

In the **MyQ Audit Log**, you can view all the changes of MyQ settings, along with information about who made the changes, the time when they were made and which subsystem of MyQ was affected by them.



Opening the MyQ Audit Log

On the MyQ Web User Interface, click **MyQ**, and then click **Audit Log**.

Filtering the Audit Log: selecting time period, user and type of event

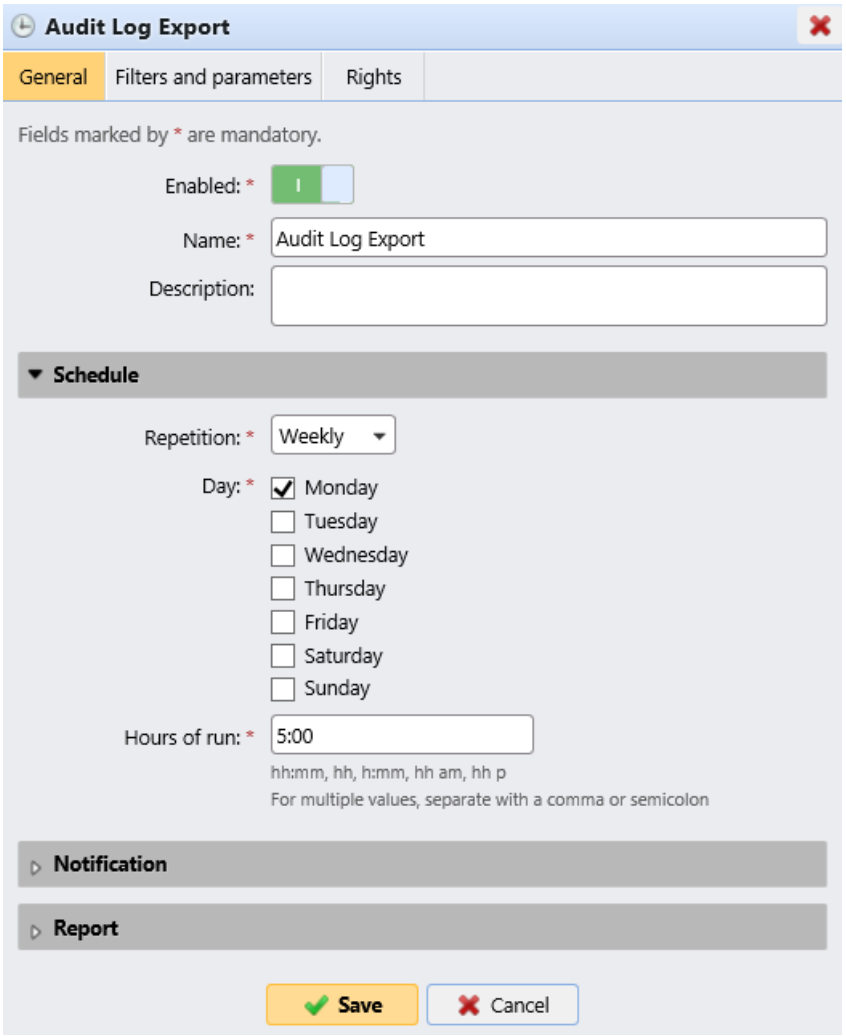
The displayed data can be filtered by a time period, the user who made the changes and the type of the event.

To display additional information about a particular change, double-click the change. A panel with the detailed information opens on the right side of the **Audit Log** tab.

Exporting the Audit Log

You can export the **Audit Log** by clicking **Export** on the main ribbon. The log is instantly generated and downloaded.

You can also click **Schedule Export** to have the log regularly exported. The schedule's properties panel open to the right, where you can set its parameters.


Audit Log Export
General
Filters and parameters
Rights
Fields marked by * are mandatory.
Enabled: *
Name: *
Audit Log Export
Description:
Schedule
Repetition: *
Weekly
Day: *
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday
Hours of run: *
5:00
hh:mm, hh, h:mm, hh am, hh p
For multiple values, separate with a comma or semicolon
Notification
Report
Save
Cancel

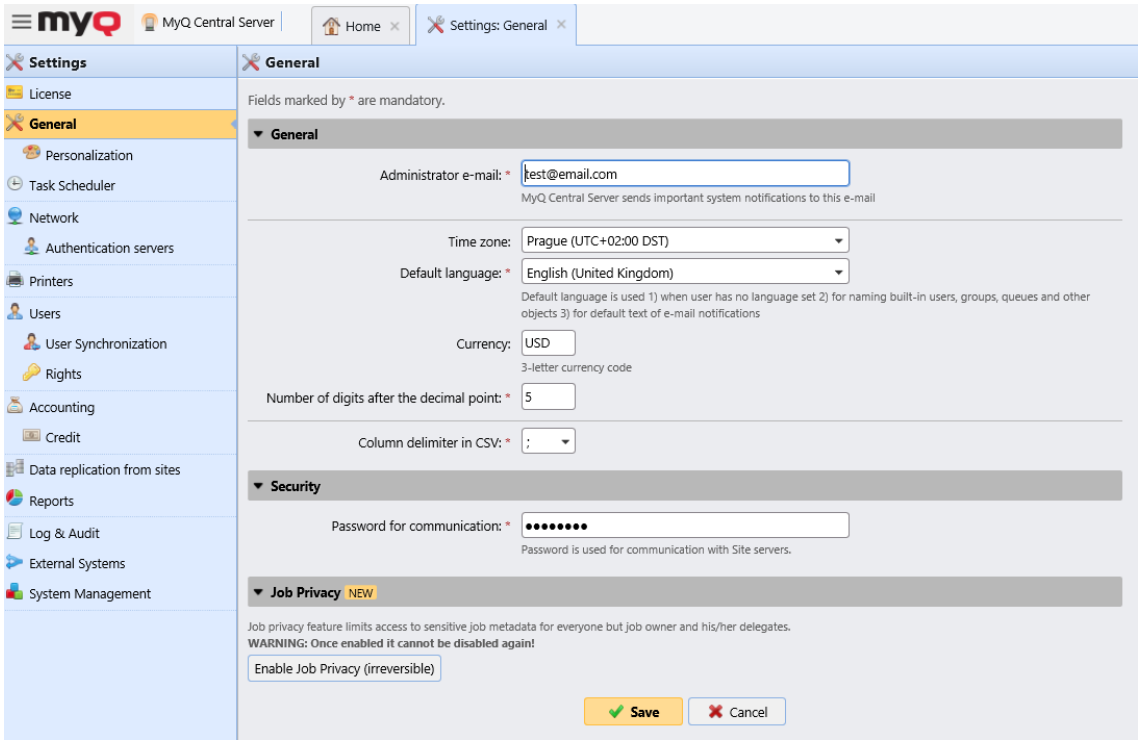
6 MyQ Central System Settings

This topic discusses basic system settings of the MyQ system. The settings are located on separate tabs, accessed from the Settings menu:

- On the General settings tab, you can set the administrator email, change regional settings, and other general settings.
- On the Personalization settings tab, you can add custom help links and custom logos to be used in various parts of the MyQ system.
- On the Network settings tab, you can modify network settings such as certificates, server ports, etc.
- On the Printers settings tab, you can set the duration of the temporary cards validity in hours.
- On the Authentication servers settings tab, you can add LDAP and Radius servers for user authentication.
- On the Task scheduler settings tab, you can add new task schedules, change their settings and run scheduled tasks.
- On the Log & Audit settings tab, you can set the Log notifier feature, which enables sending notifications about selected log events to the administrator and/or any number of MyQ users.
- On the System management settings tab, you can change settings of the MyQ history, set the maximum size of files that can be uploaded on the MyQ Web Interface, delete data from the MyQ database, and also reset MyQ components to apply settings previously made on other tabs.

6.1 General Settings

The **General** settings tab contains the **General**, **Security**, and **Job Privacy** sections.



In the **General** section, you can set the administrator email, time zone, default language, currency and the column delimiter in CSV files.

- **Administrator email**: The administrator email receives important system messages (disk space checker warnings, license expiration, etc.) automatically sent from MyQ.
- **Time zone**: For the proper functioning of the MyQ system, make sure that the time zone set here is the same as the time zone set in the Windows operating system. After changing the time zone, you will be asked to restart the web server.
- **Default Language**: The default language setting determines the language of all emails that are automatically sent from MyQ and the language used on all connected terminals and interactive readers.
- **Currency**: In the currency setting, you can enter the 3-letter currency code of the currency that you want to use in your pricelist.
  - The **Number of digits after the decimal point** option can be set from *0* to *5* (default is *2*).
- **Column delimiter in CSV**: The column delimiter in CSV files setting determines the delimiter in source and destination files used for all the import and export operations to and from the CSV file format. The default value is based on the regional settings of your operating system.

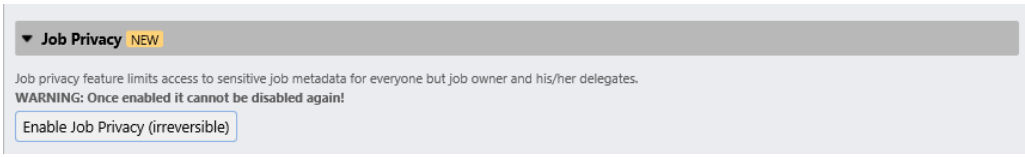
In the **Security** section, you can set the **Password for communication** between the MyQ Central server and Site servers. The same password has to be set on your Site servers to ensure the communication between your Central server and Site servers.

In the **Job Privacy** section, you can enable the **Job privacy** feature. The Job privacy feature limits access to sensitive job metadata for everyone, except for the job

owner and their delegates. If **Job Privacy** is enabled at your Central server, it will be automatically enabled on all the connected site servers.

> ⚠ Once enabled, it cannot be disabled again!

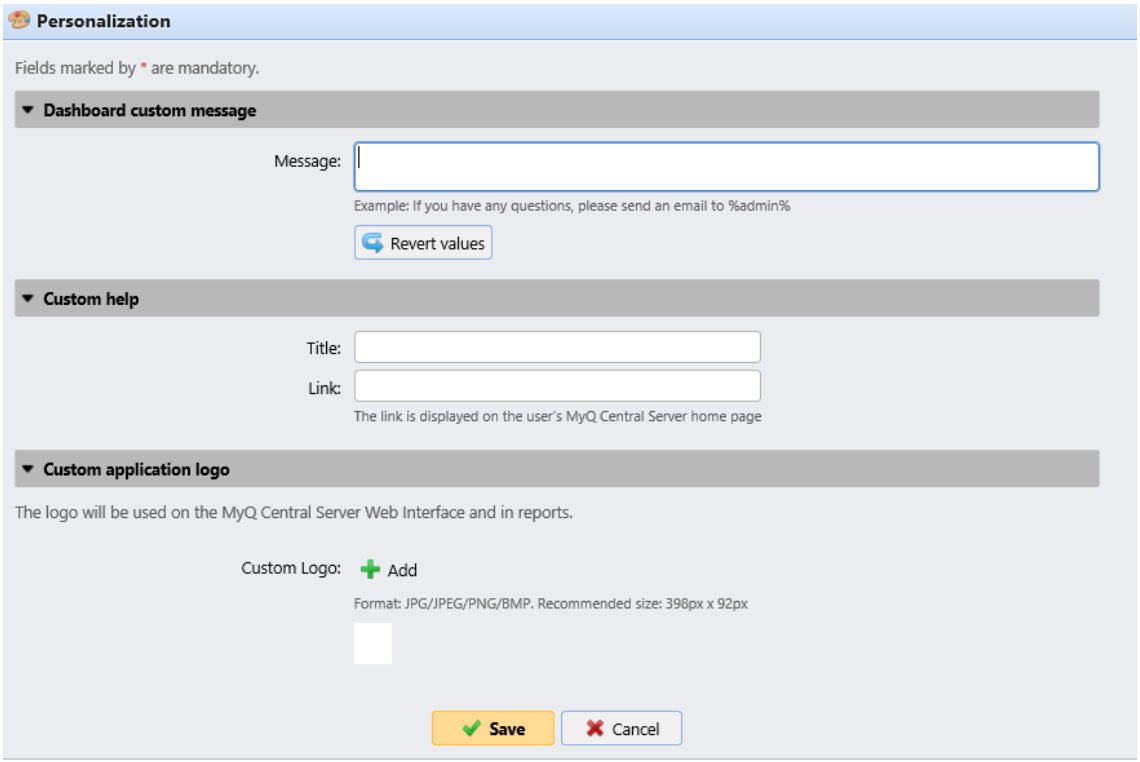
To use the feature, click on the **Enable Job Privacy (irreversible)** button.



In the confirmation pop-up, type your Server administrator password in the **Password** field, and click **Enable Job Privacy (irreversible)**.

6.2 Personalization Settings

On this tab, you can set a custom message to be shown on the Web accounts of MyQ users, add links to your own custom help, and custom application logos to be used in MyQ.



6.2.1 Dashboard custom message

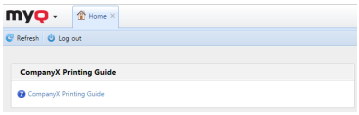
Here you can enter a message to be displayed on the MyQ users web accounts. After you change the message, click **Save** at the bottom of the **Personalization** settings tab.

The *%admin%* parameter can be used to display the email address of the MyQ administrator within the message (the Administrator email set on the General settings tab).

6.2.2 Custom help

Here you can add a link to your own web based help that will be displayed as a gadget on the user's MyQ home page.

To add a custom help link, enter the title and the link of your custom help, and then click **Save** at the bottom of the tab.

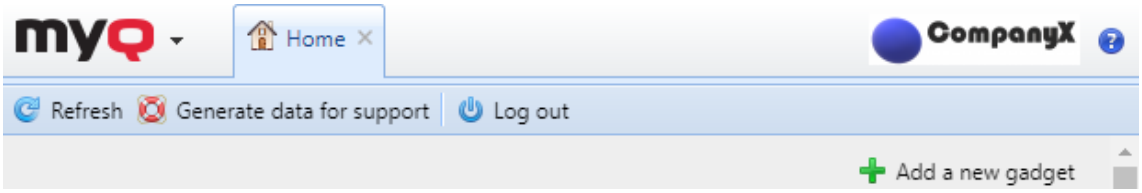


6.2.3 Custom application logo

Here you can add your company's logo to be used in the MyQ system. The logo will appear on the upper right corner of the MyQ Web Interface, on MyQ credit vouchers, and on reports.

Supported picture formats are *JPG/JPEG/PNG/BMP* and the recommended size is *398px* x *92px*.

To import the logo, click **+Add**, **Browse** for the file and **Open** it, and then click **Save** at the bottom of the tab. A preview of the new logo is displayed on the tab.



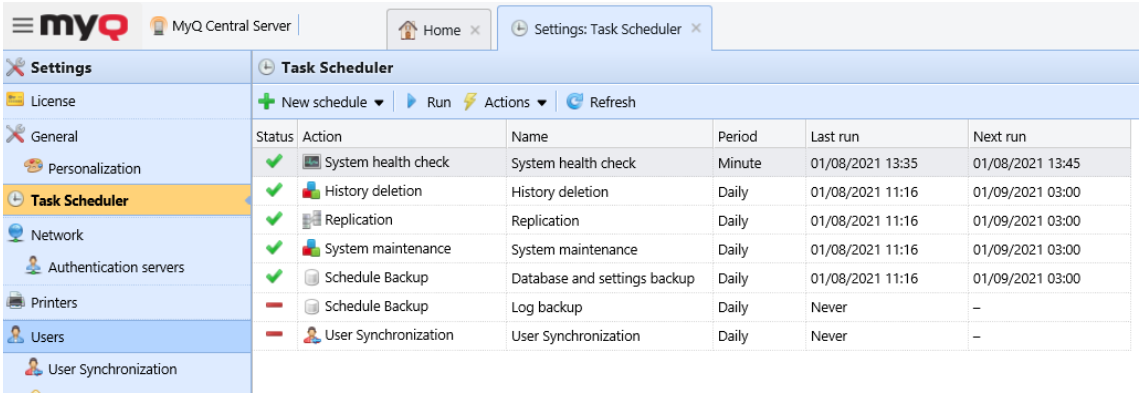
6.3 Task Scheduler Settings

The **Task Scheduler** settings tab serves as an interface for planning regular tasks in MyQ. There are seven predefined tasks:

System health check, History deletion, Replication, System maintenance, Database and settings backup, Log backup, and **User Synchronization**.

Apart from these, you can import projects from CSV files, and execute external commands.

External commands are disabled by default. To enable them, switch the **scheduleExternalCommand** parameter in the *config.ini* file from *0* (disabled) to *1* (enabled).



6.3.1 Running and setting task schedules

To manually run a task schedule:

- Select the task schedule that you want to run.
- Click **Run** on the **Task Scheduler** toolbar.

Or

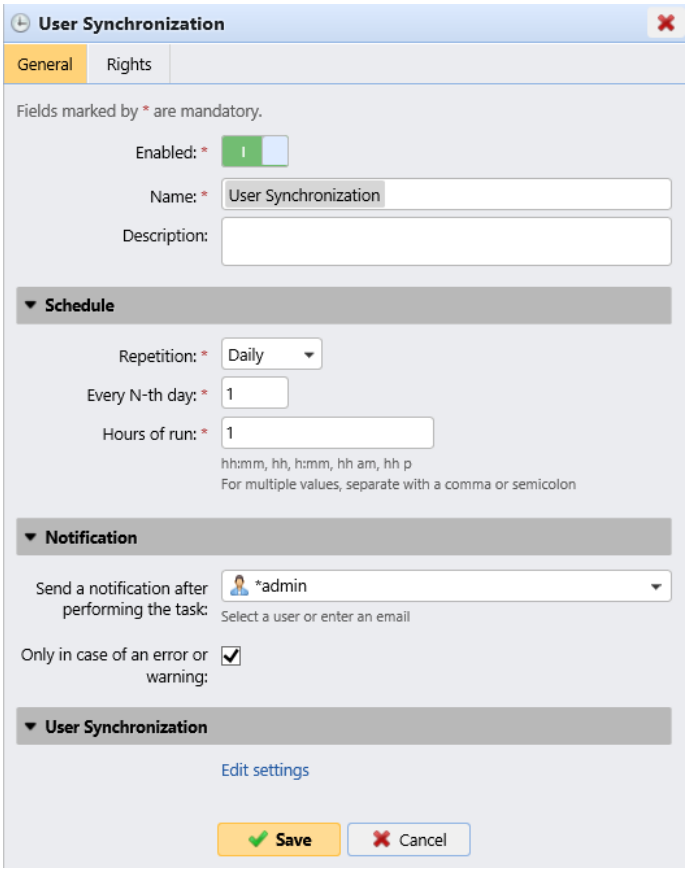
- Right-click the task schedule.
- Click **Run** on the shortcut menu.

To set a task schedule:

Double-click the task schedule that you want to set (Or right-click it, and then click **Edit** in the actions shortcut menu). The respective task schedule properties panel opens on the right side of the screen.
The task schedule properties panel is divided into four sections:

- In the uppermost section, you can enable or disable the schedule, enter its **Name** and write its **Description**.
- In the **Schedule** section, you must set a period of **Repetition** for the task run and change the exact time of the task run start.
- In the **Notification** section, you can select to send an email notification. You must also choose if you want to send the notification every time or just in case of an error.
- The bottom section, if present, is particular to the type of task.

After you set the schedule, click **Save**.



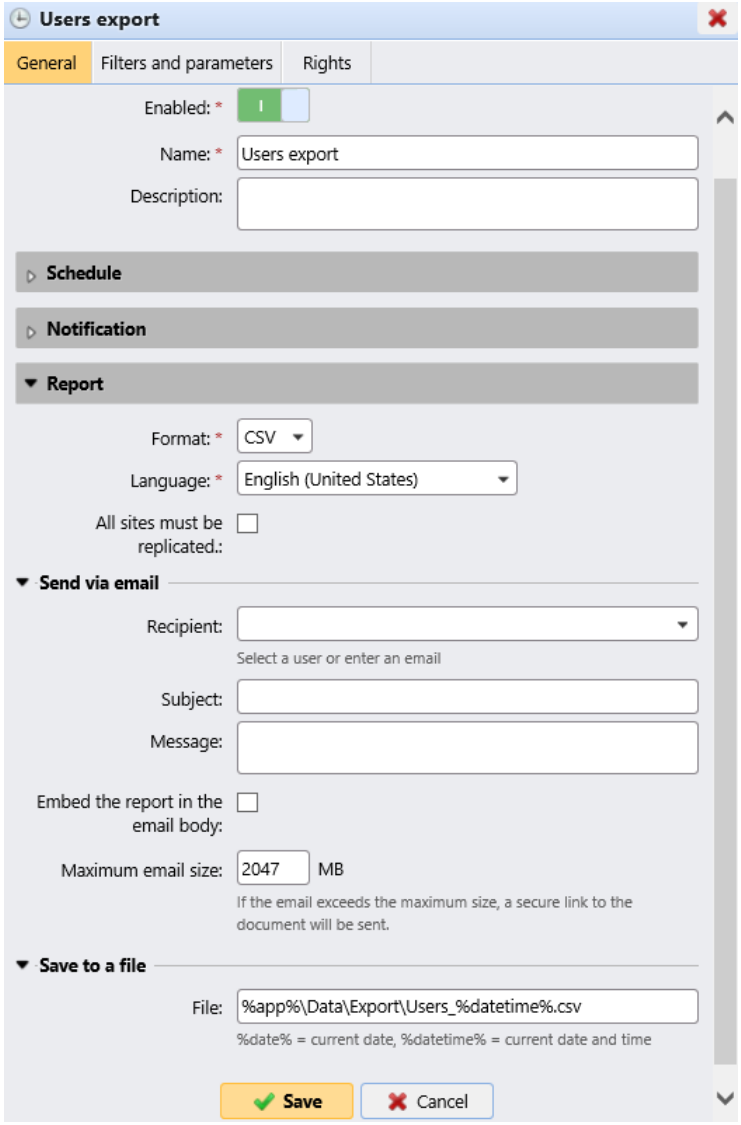
Adding a new schedule:

You can add two kinds of new schedules, related to reports: **Users export** and **Printers export**.

On the main ribbon, click **New schedule** and select **Users export** or **Printers export**. The task schedule properties panel opens on the right side of the screen and it is divided into four sections like the rest of the schedules. The last section, **Report**, is present only on these two schedules and contains the following settings:

- **Format** - Select the report's format from the list: *CSV, XLSX, ODS, XML*.
- **Language** - Select the report's language from the list.
- **All sites must be replicated** - If enabled, all sites are replicated and included in the report.
- **Send via email**
  - **Recipient** - Select the recipient from the list of users.
  - **Subject** - Type a subject for the email.
  - **Message** - Type the body of the email.
  - **Embed the report in the email body** - If enabled, the report is included in the email body.
  - **Maximum email size** - Set the maximum email size from *0* to *2047* MB. If the email exceeds the set size, a secure link to the document is included instead.
- **Save to a file**

- **File** - Set the path where the file is stored. The default path is *%app%\Data\Export\Users_%datetime%.csv* where *%app%* is the MyQ Data folder and *%datetime%* is the current date and time.



6.4 Network Settings

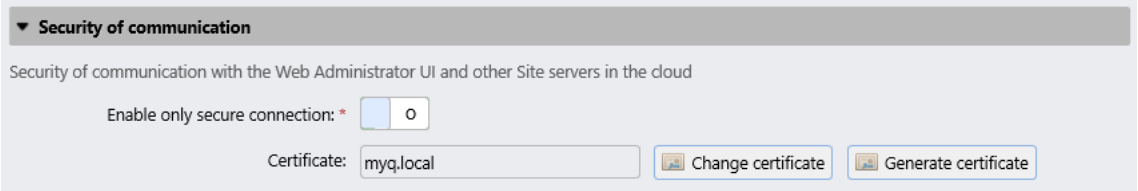
On the **Network** settings tab, you can manage the network communication between the MyQ Central server and other parts of the MyQ solution. It is divided into the following sections: **General, Security of communication Security, Outgoing SMTP server, HTTP Proxy server,** and **Firewall**.

6.4.1 General

In this section, you can enter the hostname of the MyQ Central server. This hostname is used by external components of the MyQ system, such as the MyQ Replicator or Site servers, for communication with the MyQ Central server.

6.4.2 Security of communication

In this section, you can **Enable only secure connection**, and upload your security certificate.



To upload a certificate:

1. Click **Change certificate**. The Change Certificate dialog box appears.
2. In the respective column, click **Choose files**. The Open dialog box appears. You can select from the *PEM* format and the *PFX (P12)* format.
3. **Browse** and select the certificate that you want to upload, and then click **OK**.

```
# OpenSSL configuration file for creating a CSR for a server certificate
# Adapt at least the CN, DNS.1, C and O lines, and then run
# "c:\Program Files (x86)\MyQ\Apache\bin\openssl.exe" req -new -config CSR.conf -keyout myserver.key -out myserver.csr
# on the command line.

[req]
default_bits = 2048
default_md = sha256
prompt = no
encrypt_key = no
distinguished_name = req_distinguished_name
req_extensions = v3_req

[req_distinguished_name]
# Country Name
C = US
# State or Province Name, not required un-comment if needed
#ST = VA
# Locality Name, not required un-comment if needed
#L = SomeCity
# Organization Name
O = MyCompany
# Organizational Unit Name, not required un-comment if needed
#OU = MyDivision
# FQDN of the MyQ server
CN = www.company.com

[v3_req]
keyUsage = keyEncipherment, dataEncipherment
extendedKeyUsage = serverAuth
subjectAltName = @alt_names

[alt_names]
# Please note: all DNS names must resolve to the same IP address as the FQDN.
# DNS.1 should be same as CN
# Edit and un-comment rows 2+ as needed
DNS.1 = www.company.com
#DNS.2 = company.com
#DNS.3 = www.company.net
#DNS.4 = company.net
```

Click **Generate Certificate** to recover the default MyQ test certificate (MyQ.local). The files *server.cer* , *server.key* and *server.pfx* are stored in *C:\ProgramData\MyQ Central Server\Cert*.

6.4.3 Outgoing SMTP server

To send email reports, send error messages to users, send automatically generated PIN to users, and forward scanned documents, you have to configure the email server where all the emails are forwarded to.
To configure the server, do the following:

Select a **Type** from *Classic SMTP Server* or *or SMTP Server with OAuth login*.

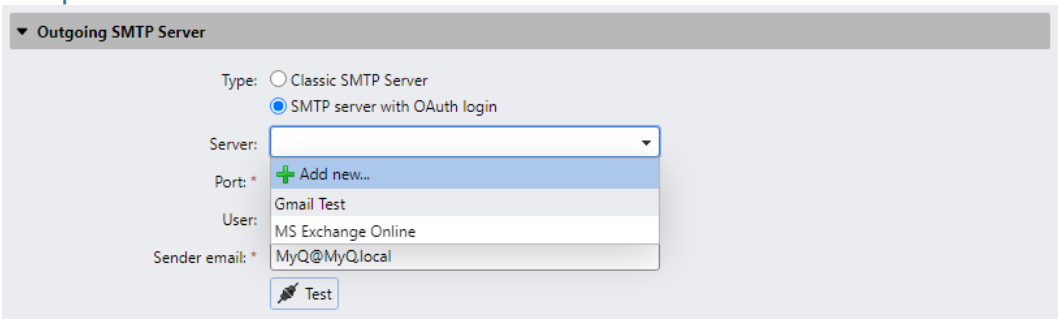
For *Classic SMTP Server*:

1. Enter the server hostname or IP address in the **Server** text box. If the email server listens to other than the *25* TCP port, change the **Port** setting to the correct value.
2. Choose between the *None*, *SSL* and *STARTTLS* **Security** options.
3. Optionally choose to **Validate certificate** or not.

4. If credentials are required, enter the **User** and **Password**.
5. Enter the address that you want to be displayed as the **Sender e-mail** on PIN, alert and report messages.
6. After you enter the data, you can click **Test** to test the connection to the email server.

For *SMTP Server with OAuth login*:

1. If you have already set up a Microsoft Exchange Online server or a Gmail with OAuth2 server in the **External Systems** settings, those servers are available in the **Server** field drop-down. If not, you can click on the **Server** field and then click **Add** to add your Microsoft Exchange Online or Gmail server. For more information, check Microsoft Exchange Online Setup and Gmail with OAuth2 setup.



2. If the email server listens to other than the other than the 25 TCP port, change the **Port** setting to the correct value.
3. **Security** is *STARTTLS* by default and cannot be changed.
4. If credentials are required, enter the **User**.
5. Enter the address that you want to be displayed as the **Sender email** on PIN, alert and report messages.
6. After you enter the data, you can click **Test** to test the connection to the email server, and click **Save** to save your changes.

6.4.4 HTTP Proxy Server

In this section, you can set up a MyQ Proxy server which can be used for activating a license. Mandatory fields are **Server** (name) and **Port**. After changing ports, restart all MyQ services.

6.4.5 Firewall

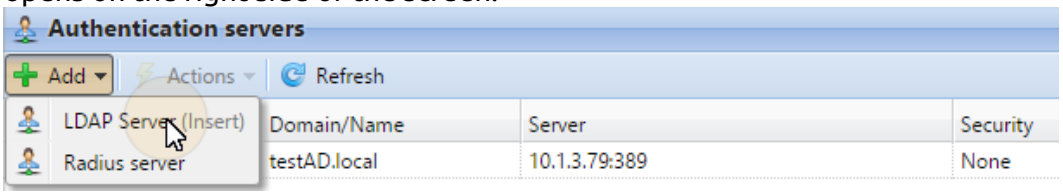
In this section, you can automatically open all the ports on the Microsoft Windows Firewall that are necessary to run the MyQ application.

6.4.6 Authentication Servers settings

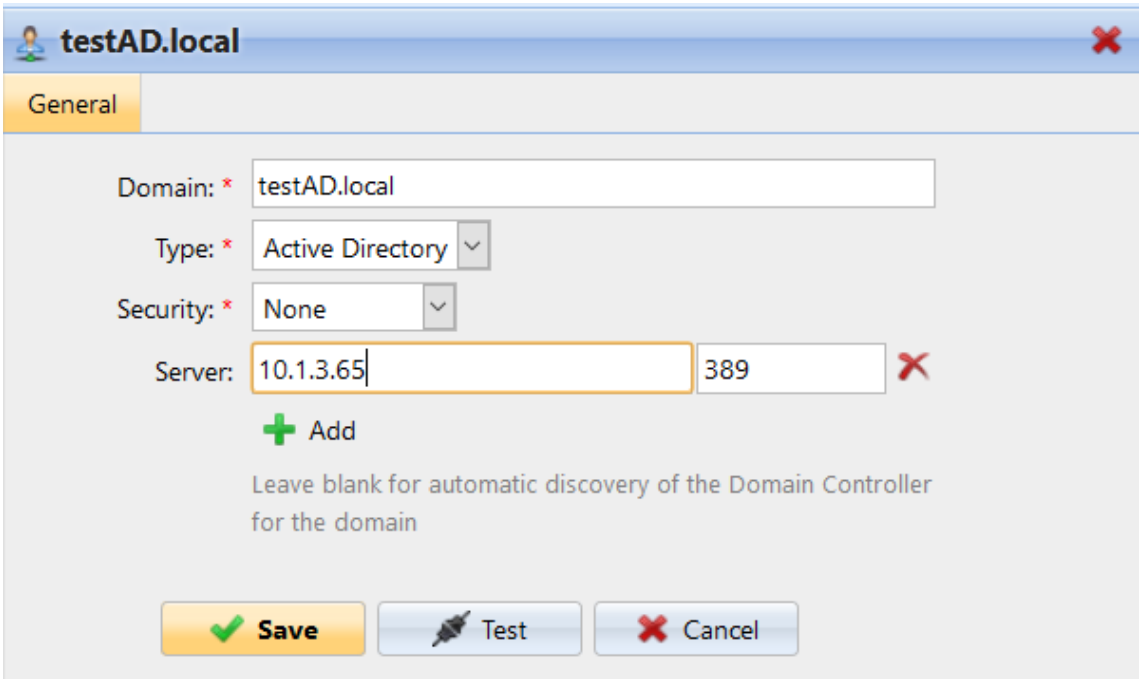
If you want to authenticate users against an LDAP server, synchronize users from an LDAP server or authenticate users against a Radius server, you have to add all the servers on this tab.

Adding a new LDAP server:

1. Click **+Add** and select **LDAP server**. The new LDAP server properties panel opens on the right side of the screen.

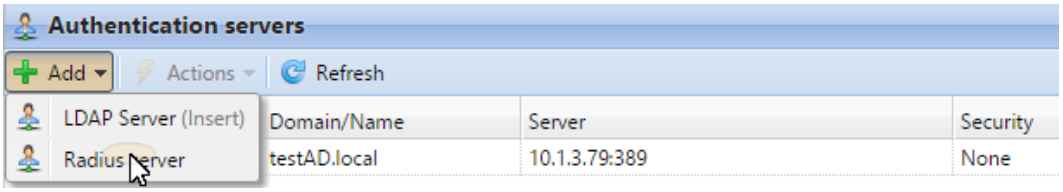


2. Enter the LDAP domain.
3. Select the LDAP **Type**. You can select from *Active Directory, Novell, OpenLDAP,* and *Lotus Domino*. (For *Active Directory* you must select *SSL* in the **Security** field and the **Server** port must be *636*)
4. If you want the communication with the LDAP to be secured, select the **Security protocol** that you want to use.
5. Enter the **Server** IP address or hostname and the communication port. (For *Active Directory* you can leave the IP address or hostname empty if you do not know them. The server will then be saved as Auto-discover)
6. If you have more addresses related to one LDAP server, you can add them by clicking **Add**.
7. Click **Save**. The LDAP server now appears on the list of servers.

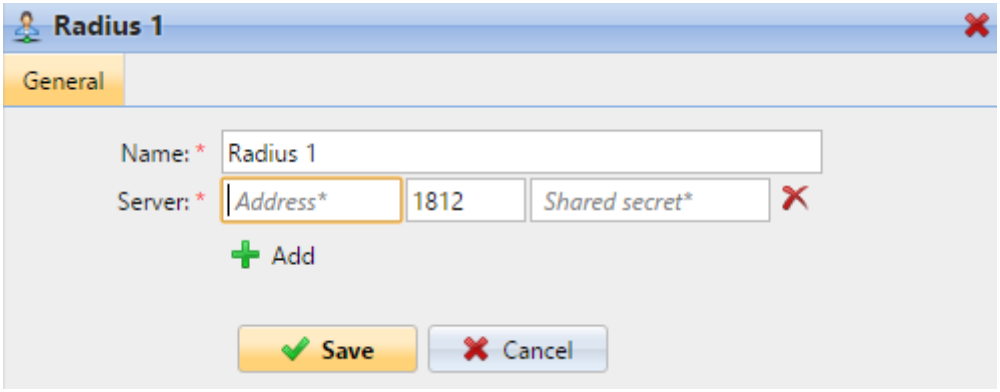


Adding a new Radius server:

1. Click **+Add** and select **Radius server**. The new Radius server properties panel opens on the right side of the screen.



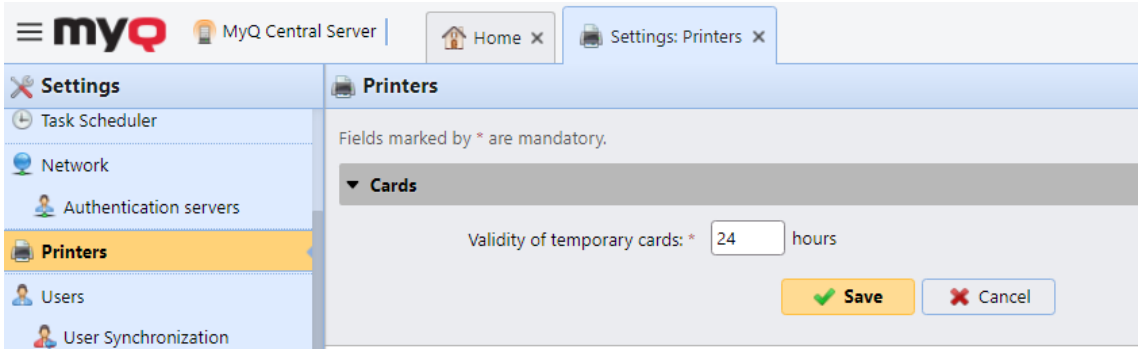
2. Enter the Radius server **Name**.
3. Enter the **Server** IP address or hostname, the communication port and the Shared secret.
4. If you have more addresses related to one Radius server, you can add them by clicking **Add**.
5. Click **Save**. The Radius server now appears on the list of servers.



When an authentication server is renamed, a server with the old name will still appear in the Authentication server settings of a user profile, alongside the server with the new name. The old server is removed after the following user synchronization propagates changes.

6.5 Printers Settings

On the **Printers** settings tab, in the **Validity of temporary cards** field, you can set the duration of the temporary cards validity in hours. The default value is *24* hours.



6.6 Accounting Settings

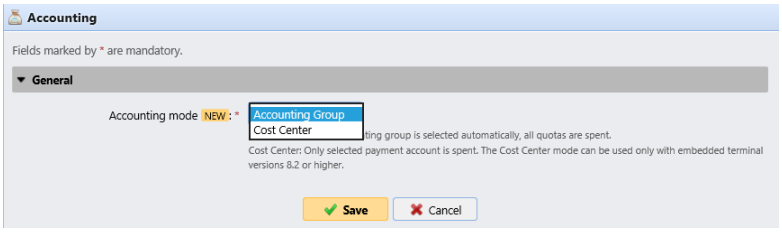
In the **Accounting** settings tab, in the **General** section, the MyQ administrator selects the **Accounting mode** MyQ will be using:

- **Accounting Group** - This is selected by default. In this mode, all quotas are available and can be spent.
- **Cost Center** - In this mode, only the selected (cost center) payment account is spent.

It is possible to switch between the modes anytime.

Limitations:

- The **Cost Center** mode does not work on printers without a terminal.
- **The Cost Center mode can be used only with embedded terminal versions 8.2 or higher.**
- In the **Cost Center** mode, if a user has more than one account, the job is paused and the account must be selected via MyQ Desktop Client (v.8.2 or higher). If there is only one account, the account is assigned automatically.



If you use the **Cost Center** mode on embedded terminals with a version older than 8.2, the terminals activation fails. The following error message can be found in the log: "*Terminal is incompatible | reason=Terminal version must be at least 8.2 in cost center mode*".
If you switch to the **Cost Center** mode on embedded terminals with a version older than 8.2, the following warning can be found in the log: "*This terminal is not supported in cost center accounting mode. Upgrade terminal at least to version 8.2*".
Switch to the **Accounting Group** mode or upgrade your embedded terminals to version 8.2 for the terminals to be successfully activated and work properly.

Comparison between Accounting Group and Cost Center

Accounting group	Cost center
Max 1 accounting group per user	Multiple cost centers can be assigned to a user
If multiple quotas are assigned to a user, all of them are spent.	Only one quota is spent. If credit, or a cost center without quota is selected, no quota is used.

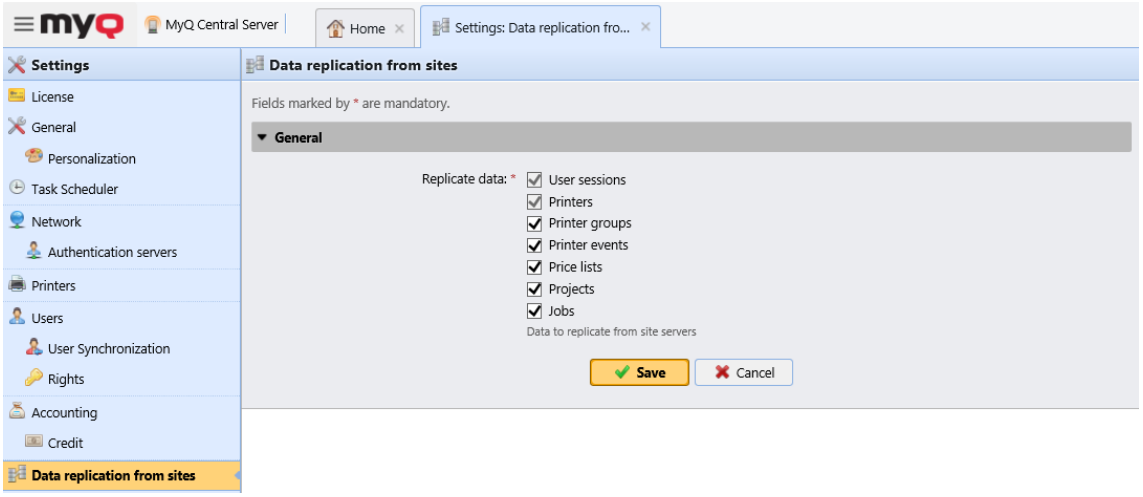
Accounting group	Cost center
If credit or personal quota is selected, the job is still accounted to the accounting group	If credit or personal quota is used, no cost center is accounted.
Every job performed by user is accounted to their Accounting group	A job is accounted to the cost center only if selected, or if it is the only account the user has.

6.7 Data replication from sites Settings

In the **Data replication from sites** settings tab, in the **General** section, the MyQ administrator selects the data to replicate from Site servers. This option was added in MyQ Central Server 8.2 (Patch 6) and requires MyQ Print (Site) Server 8.2 (Patch 7).

Check the checkbox next to an option to enable the data replication and uncheck it to disable it (all options are selected by default). Click **Save** to apply any changes. The available options are:

- User sessions (non-editable)
- Printers (non-editable)
- Printer groups
- Printer events
- Price lists
- Projects
- Jobs



- When data are excluded from the replication settings, they are not replicated to the MyQ Central server.
- If an older MyQ Print Server version is used, then segmentation settings on MyQ Central server don't take effect.

- If job-related data (Jobs, Projects) were skipped during replication, then including the data again doesn't lead to replication of already skipped data; only new data are replicated.
- If printer-related data (Printer groups, alerts, Price lists) were skipped during replication, then including the data again also replicates previously skipped data.

6.8 External Reports

By default, the only access to the MyQ Firebird database is via the *SYSDBA* account. Since this account has full read/write rights, it is not secure to use it for accessing the database from 3rd party software (for example BI tools for reporting). A read-only access account is needed to avoid unintentional database corruption.

In the **External Reports** settings tab, the administrator can enable a **database read-only account** to be used with external reports.

Activating the **Enabled** switch automatically creates a read-only access account to the MyQ Firebird database with the following settings:

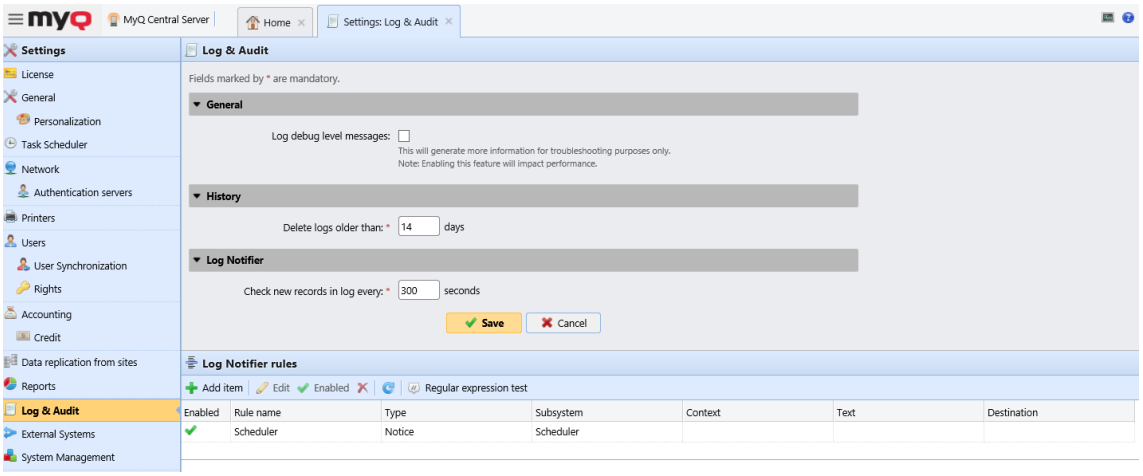
- **Account name**: *db_datareader*. This is the newly created read-only database user. The account name cannot be changed.
- **Password**: password for the *db_datareader* account, set by the administrator. A new password must be set every time when switching from the **Disabled** to **Enabled** state.
- **Confirm password**: confirmation of the above password.

Enabling the database read-only account automatically enables a Windows Firewall rule to allow incoming connections to the MyQ Firebird database. If disabled, the rule is deleted.

After restoring a backup using **MyQ Easy config**, the Windows Firewall rule and the *db_datareader's* account password will be restored if the account state was **Enabled** when the backup was created. If the account state was **Disabled**, then the existing Windows Firewall rule will be deleted and the user account will be dropped in the restored Firebird database.

6.9 Log and Audit Settings

On this tab, you can set general settings for the MyQ Log, and the **Log notifier** feature, which enables sending notifications about selected log events to the administrator and/or any number of MyQ users. The notifications can be sent via email or they can be sent to Windows Event Viewer.



General – If you select the **Log debug level messages** option, the system will generate more information for troubleshooting. The information will be shown in the MyQ Log.

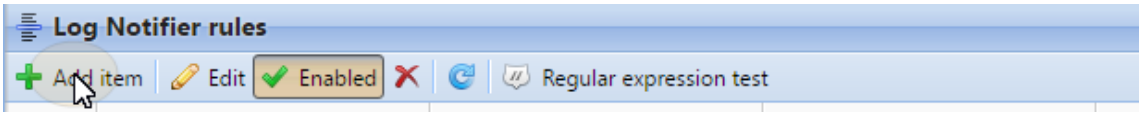
However, this feature will impact your system's performance. Therefore, we recommend you enable it only in case of a system malfunction or if it is requested by MyQ support.

History – Here you can set when the logs should be deleted (in days).

Log Notifier – The notifications and their destinations are both specified by log notifier rules. Here you can set the period after which the log is checked for new events in the **Check new records in log every: ... seconds** text box (*300* by default).

6.9.1 Management of the Log Notifier Rules

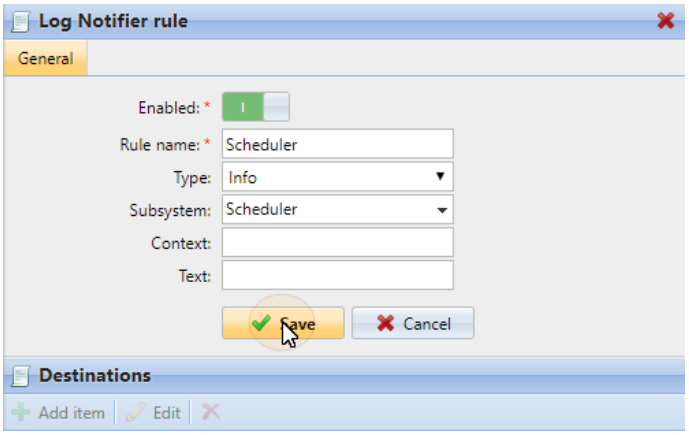
To add a new rule, click **+Add item** at the upper-left corner of the **Log Notifier rules** widget. The properties panel of the new rule opens on the right side of the tab. On the tab, edit and save the rule.



To open the editing options of a rule, double-click the rule (or right-click the rule, and then click **Edit** on the shortcut menu). The following settings can be changed:

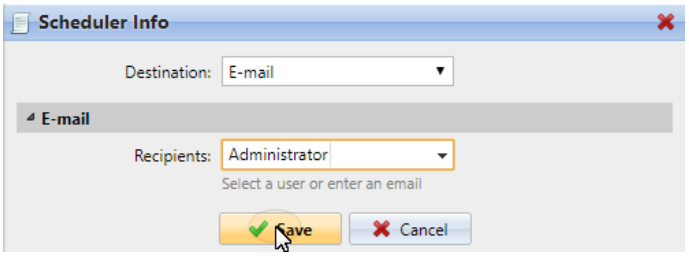
- **Enabled**: activate, deactivate the rule
- **Rule name**: name of the rule
- **Type**: the available event types - *Info, Warning, Error, Notice, Debug, Critical*
- **Subsystem**: subsystems of the MyQ application (*Terminal, SMTP Server, CLI,* etc.)
- **Context**: specific part of the subsystem
- **Text**: text of the log event message; you can use Regular expressions to search for specific patterns

After you set the notification rule, click **Save**. The rule is saved and you can select its destinations.



To add the destination, click **+Add item** under **Destinations**.

You can select between two destination options: **E-mail** and **Windows Event Log**. If you select the **E-mail** destination, you need to add one or more recipients; you can either select them from the list of MyQ users in the **Recipients** drop-down or directly type the addresses there. After you set the destination, click **Save**.
The new rule is displayed on the tab.



To enable/disable Log Notifier rules:

1. Right-click on the rule.
2. Select **Enabled** (or **Disabled**) on the shortcut menu.

6.10 External Systems

In **MyQ, Settings, External Systems**, there are two sections:

- **External Systems**, and
- **REST API applications**

The **External Systems** section is used for setting up Microsoft Exchange Online and setting up Gmail (with OAuth2).

In the **REST API applications** section, you can add REST API applications.

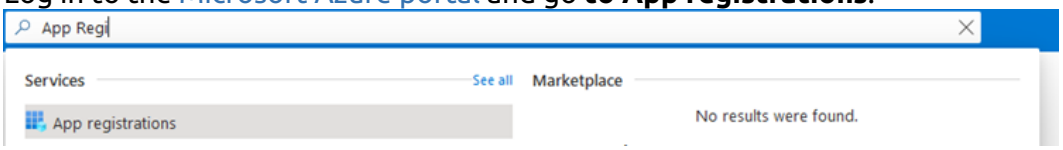
Click **+Add** and fill in the **Title, Client ID, Secret,** and **Scope** of the application and click **OK**.

6.10.1 Microsoft Exchange Online Setup

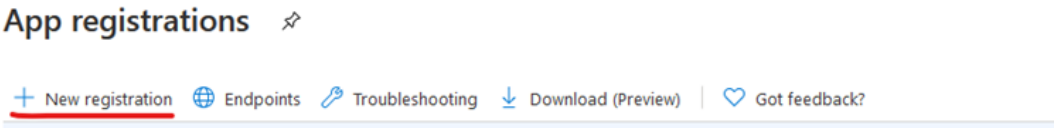
It is first needed to set up Microsoft Exchange Online in Microsoft Azure, and then configure it in MyQ.

Microsoft Exchange Online setup in Microsoft Azure

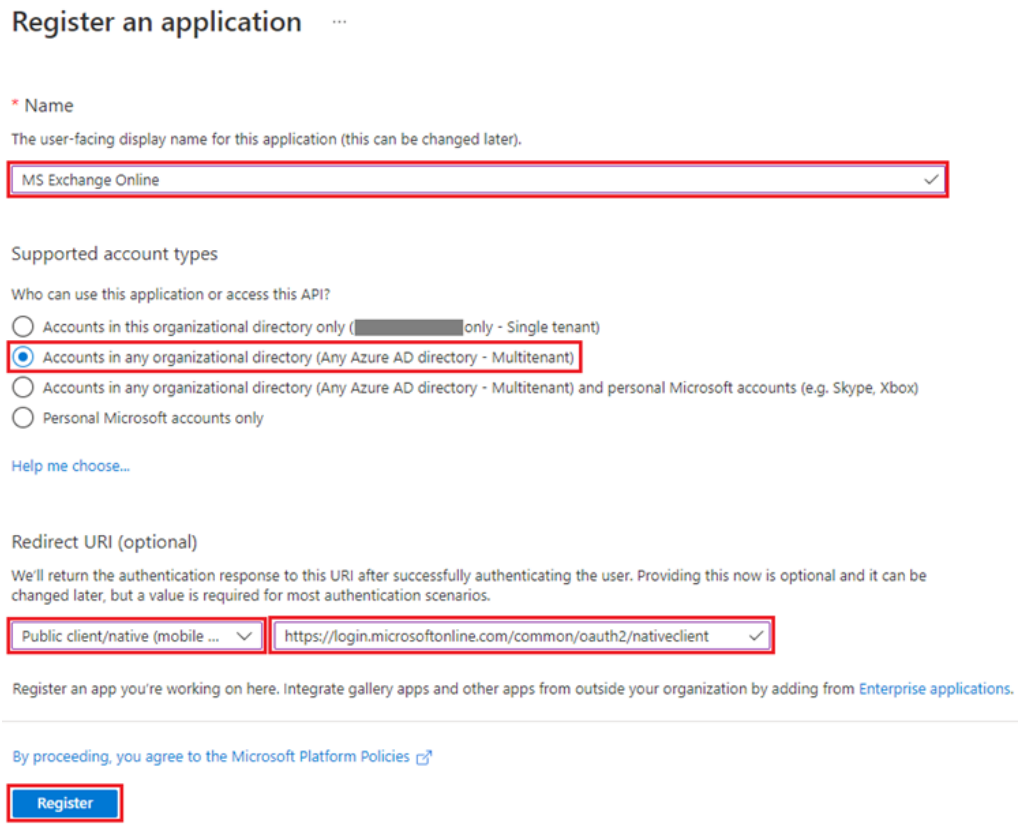
1. Log in to the Microsoft Azure portal and go **to App registrations**.



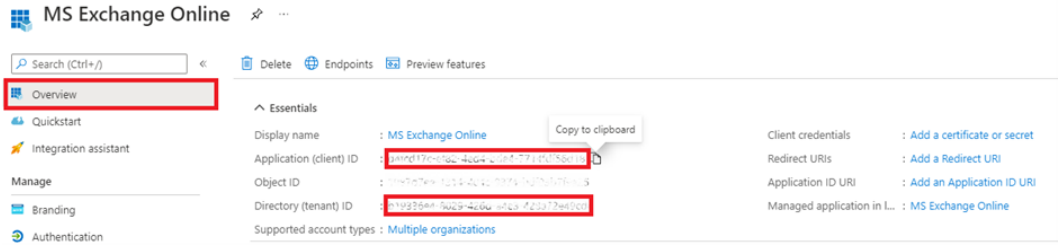
2. Create a **New registration**:



3. Create a **multitenant app**:
   a. **Name** - The name for this application (this can be changed later). For example, *MS Exchange Online*. It is important to use the same name as the one used in MyQ under External Systems
   b. **Supported account types** - Who can use this application or access this API? Select the *Accounts in any organizational directory (Any Azure AD directory - Multitenant)* option.
   c. **Redirect URI (optional)** - The authentication response is returned to this URl after successfully authenticating the user. Select the *Public client/native (mobile&desktop)* option from the drop-down and fill in https://login.microsoftonline.com/common/oauth2/nativeclient as the redirect URI.
   d. Click **Register**.



4. The new app overview page opens. Copy the **Application (client) ID** and the **Directory (tenant) ID**, as they are needed for the connection to MyQ.

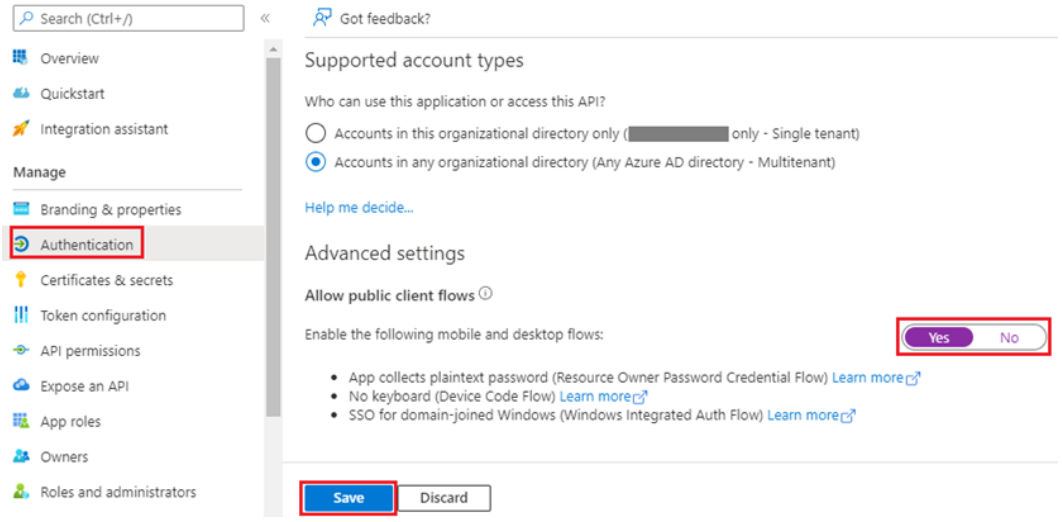


5. On the left-hand menu, click **Manifest** and modify and **Save** the JSON with the following:

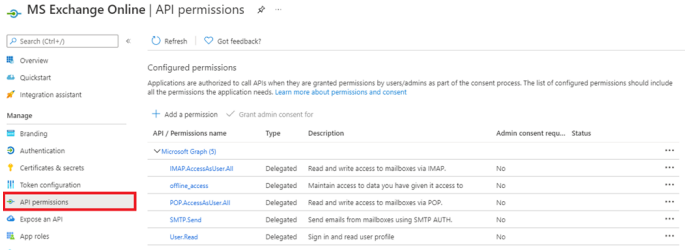
```
"allowPublicClient": true,
    "replyUrlsWithType": [
        {
            "url": "https://login.microsoftonline.com/common/oauth2/
nativeclient",
            "type": "InstalledClient"
        }
    ],
    "requiredResourceAccess": [
        {
            "resourceAppId": "00000003-0000-0000-c000-000000000000",
            "resourceAccess": [
```

```
                {
                    "id": "258f6531-6087-4cc4-bb90-092c5fb3ed3f",
                    "type": "Scope"
                },
                {
                    "id": "d7b7f2d9-0f45-4ea1-9d42-e50810c06991",
                    "type": "Scope"
                },
                {
                    "id": "652390e4-393a-48de-9484-05f9b1212954",
                    "type": "Scope"
                },
                {
                    "id": "7427e0e9-2fba-42fe-b0c0-848c9e6a8182",
                    "type": "Scope"
                }
            ]
        }
    ],
```


6. On the left-hand menu, click **Authentication**. In Advanced settings, under Allow public client flows, select **Yes** next to Enable the following mobile and desktop flows, and then click **Save** at the top.



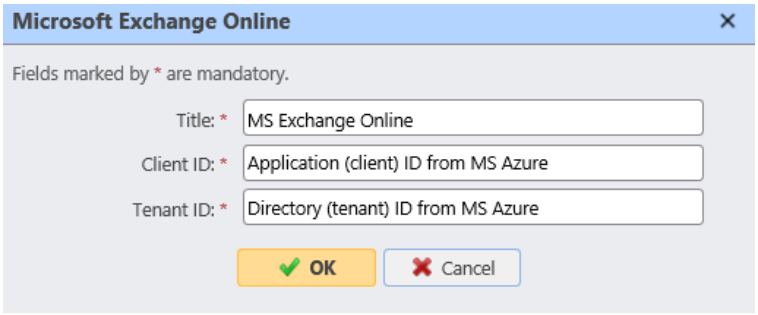
7. On the left-hand menu, click **API permissions** and add the additional permissions required for the correct functionality, described in the table below.



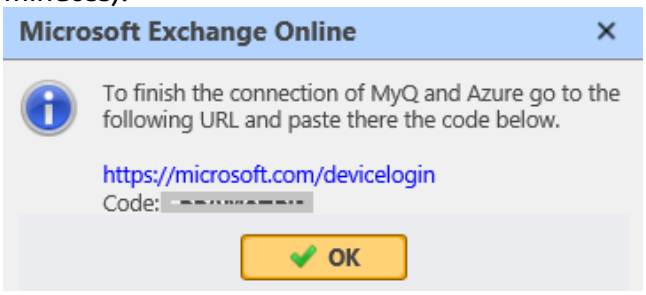
Scope ID	Description
7427e0e9-2fba-42fe-b0c0-848c9e6a8182	Microsoft Graph: **offline_access** Allows the app to see and update the data you gave it access to, even when you are not currently using the app. This does not give the app any additional permissions.
e1fe6dd8-ba31-4d61-89e7-88639da4683d	Microsoft Graph: **User.Read** Sign in and read user profile
652390e4-393a-48de-9484-05f9b1212954	Microsoft Graph: **IMAP.AccessAsUser.All** Allows the app to read, update, create and delete email in your mailbox. Does not include permission to send mail.
d7b7f2d9-0f45-4ea1-9d42-e50810c06991	Microsoft Graph: **POP.AccessAsUser.All** Allows the app to read, update, create and delete email in your mailbox. Does not include permission to send mail.
258f6531-6087-4cc4-bb90-092c5fb3ed3f	Microsoft Graph: **SMTP.Send** Allows the app to send emails on your behalf from your mailbox.

Microsoft Exchange Online setup in MyQ

1. Log in to the MyQ web administrator interface, and go to **MyQ, Settings, External Systems**.
2. In the External Systems section, click **+Add** and select *Microsoft Exchange Online*.
3. In the pop-up window, fill in the required fields:
   a. **Title** - add the name you chose during App registration in MS Azure; for example, *MS Exchange Online*.
   b. **Client ID** - the **Application (client) ID** you copied during the MS Azure setup.
   c. **Tenant ID** - the **Directory (tenant) ID** you copied during the MS Azure setup.
4. Click **OK**.



5. After setting up the external system in MyQ, you are requested to confirm a **code** through the Microsoft website (https://microsoft.com/devicelogin). The code you need to confirm is shown in the pop-up window, just below the link to the Microsoft website. There is timeout for confirming the code (usually it is 15 minutes).



The email functionality will not work until the confirmation is successfully completed.
***This confirmation must be done with the Microsoft account that owns the email box (email address), which is used to connect to the exchange (Sender email** in the MyQ, Settings, **Network** tab).*
For example, if you use the sender email "print@somedomain.com", then you need to authenticate on the Microsoft website as this user during this step.

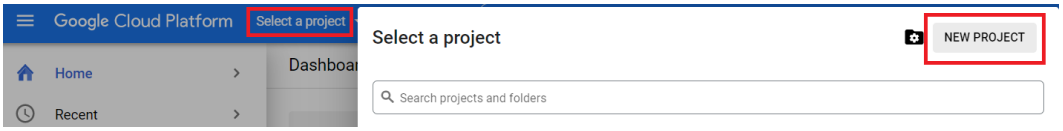
Microsoft Exchange Online is now connected to MyQ and is ready to be used in the **Network** settings tab as an Outgoing SMTP server.

6.10.2 Gmail with OAuth2 setup

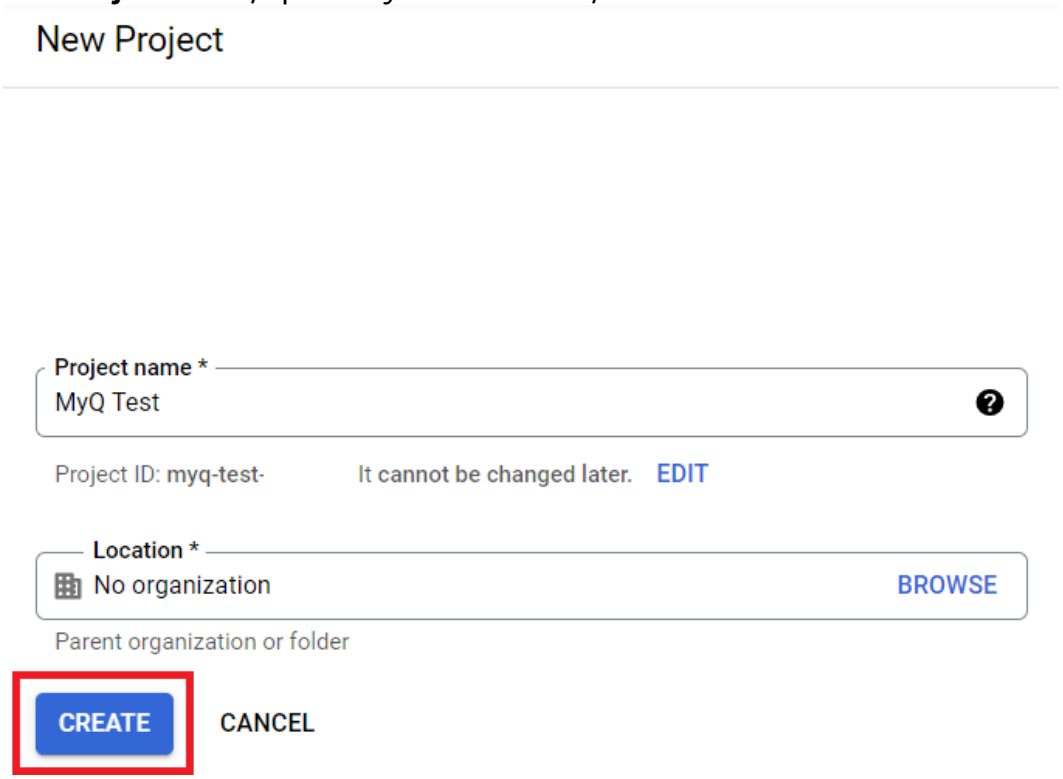
It is first needed to set up Gmail with OAuth2 in Google Cloud Platform, and then configure it in MyQ.

Gmail with OAuth2 setup in Google Cloud Platform

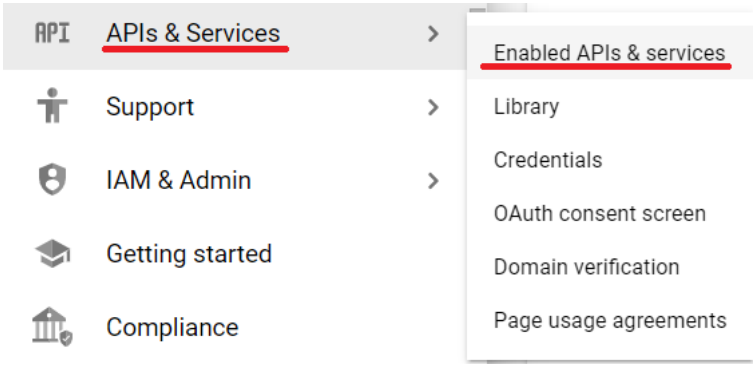
1. Log in to Google Cloud Platform and click on **Select a project** to create a new project.



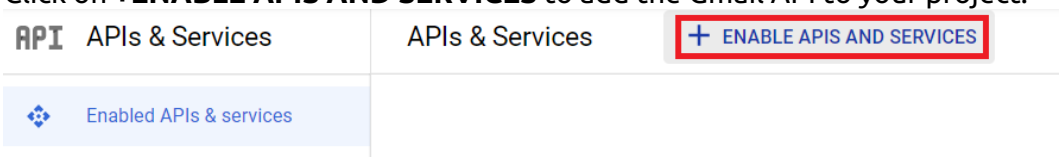
2. Add **Project name**, optionally add a location, and click **Create**.



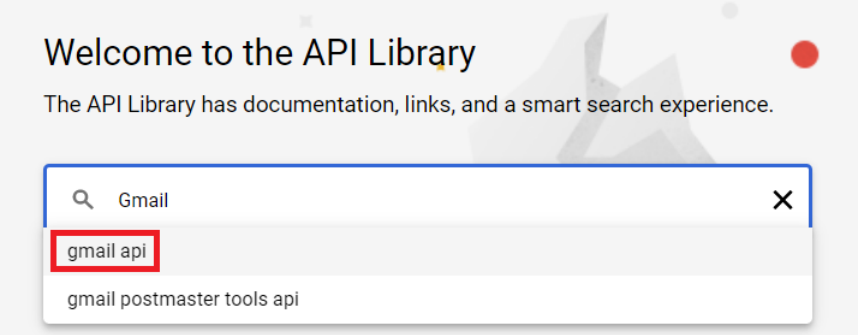
3. On the left-side menu, hover over **APIs & Services** and click on **Enabled APIs & services**.



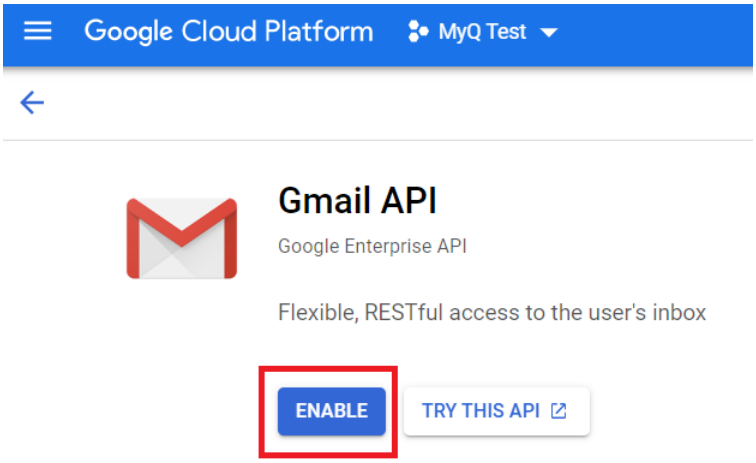
4. Click on **+ENABLE APIS AND SERVICES** to add the Gmail API to your project.



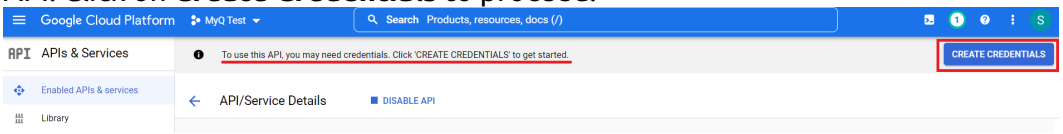
5. Type Gmail in the search field and click on the Gmail API result.



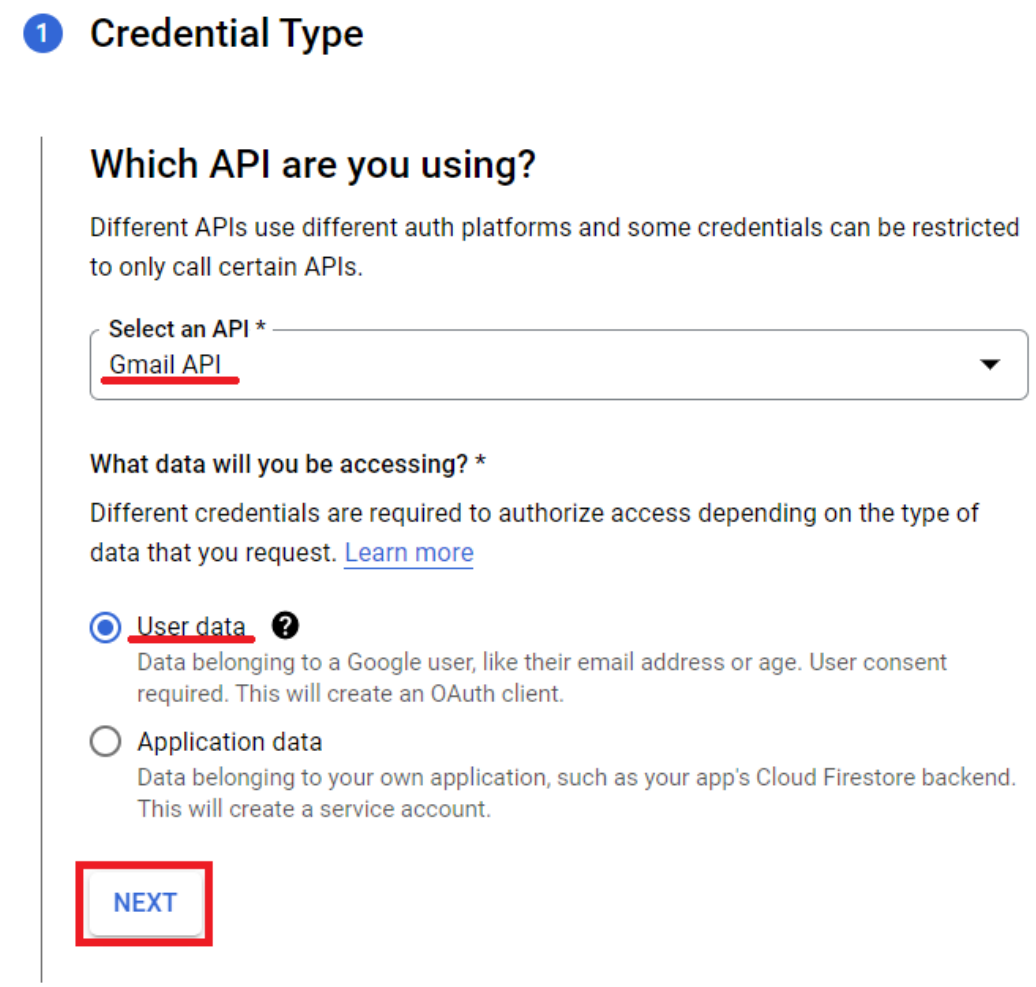
6. Click **Enable** under the Gmail API.



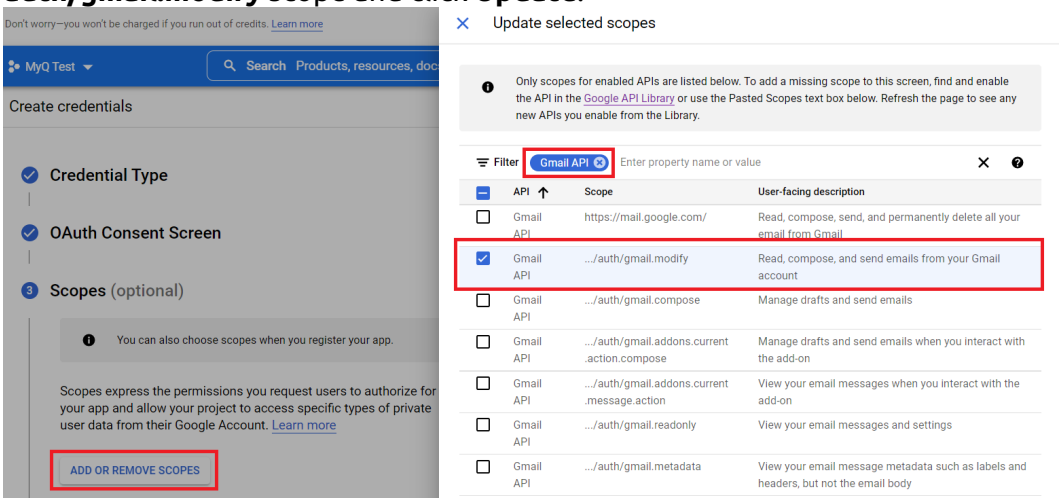
7. Once enabled, you are prompted to create credentials in order to use the Gmail API. Click on **Create Credentials** to proceed.



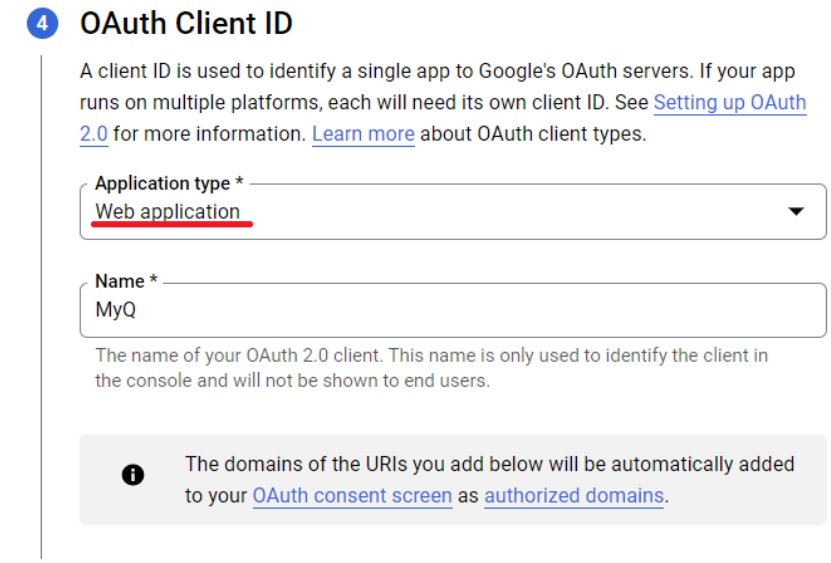
8. In the create credentials window, in the Credential Type section, choose *Gmail API* in the **Select an API** field, choose *User data*, and click **Next**.



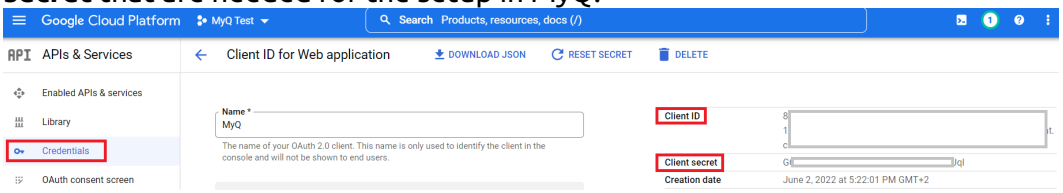
9. In the Scopes section, click **Add or Remove Scopes**. In the Update selected scopes windows, type Gmail API in the search field, select the **Gmail API .../auth/gmail.modify** scope and click **Update**.



10. In the OAuth Client ID section, select *Web application* in the **Application type** field, and add a **Name** for your OAuth2 client.

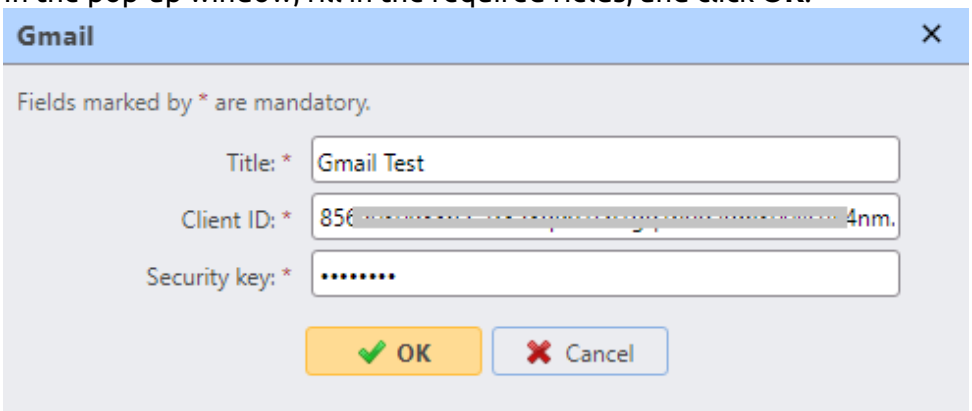


11. In the OAuth consent screen section, click **Add Users** and add the users' email addresses used for sending emails and/or receiving print jobs via email.
12. Once done with all the sections, click **Create**.
13. Navigate to APIs & Services, Credentials, to view your **Client ID** and **Client secret** that are needed for the setup in MyQ.



Gmail setup in MyQ

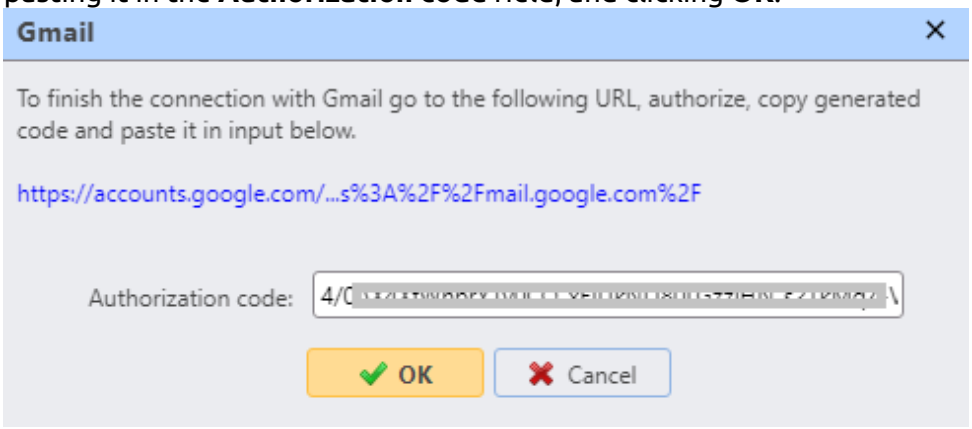
1. Once you are finished in Google Cloud Platform, log in to the MyQ web administrator interface, and go to **MyQ, Settings, External Systems**.
2. In the External Systems section, click **+Add** and select *Gmail*.
3. In the pop-up window, fill in the required fields, and click **OK**:



a. **Title** - Add a title for your Gmail external system.

b. **Client ID** - Add the **Client ID** from the Google Cloud Platform credentials.
c. **Security key** - Add the **Client secret** from the Google Cloud Platform credentials.

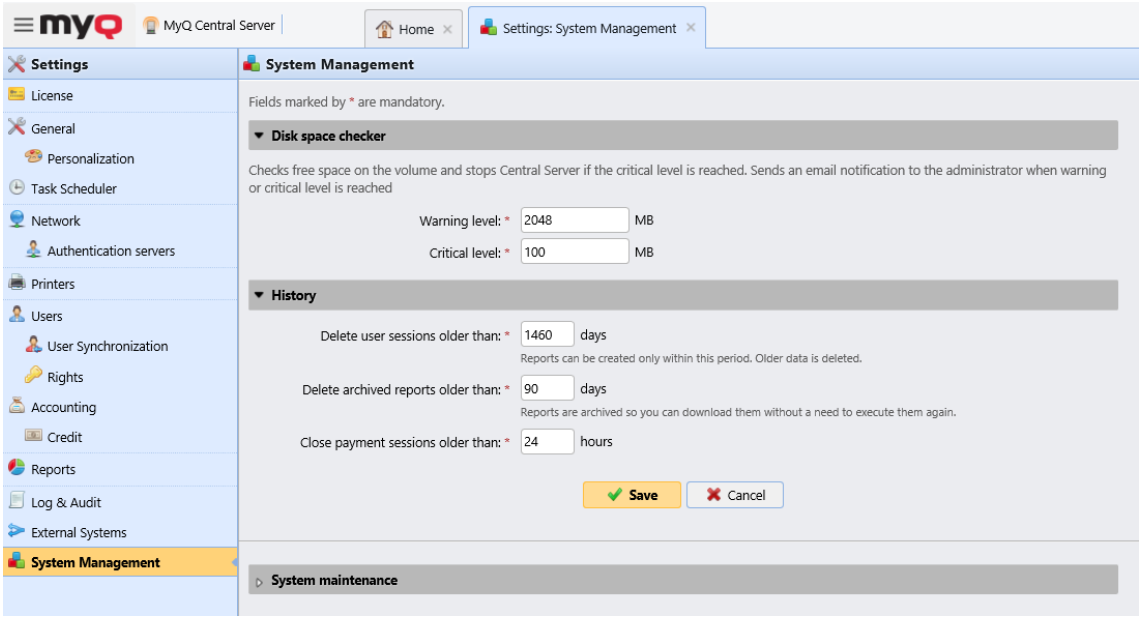
4. After setting up the external system in MyQ, you are requested to authorize the connection by going to the provided URL, copying the generated code, pasting it in the **Authorization code** field, and clicking **OK**.



Gmail is now connected to MyQ and is ready to be used in the **Network** settings tab as an Outgoing SMTP server.

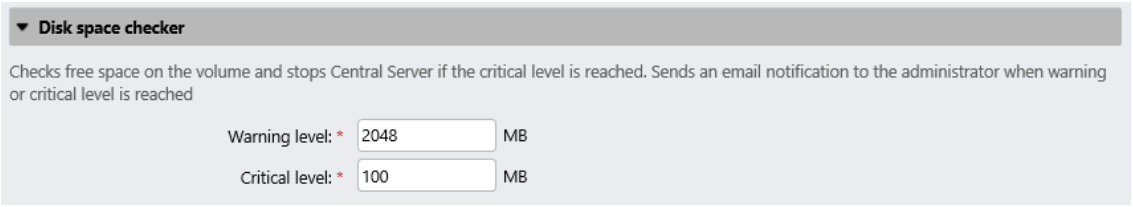
6.11 System Management Settings

On the **System Management** settings tab, you can set warning levels for the disk space checker, change the settings of the MyQ history, and also delete data from the MyQ database.



6.11.1 Disk space checker

In the Disk space checker section, you can set the **Warning level** and the **Critical level** (in MB) for the free disk space where the MyQ Central server is stored. Once one of these levels is reached, an email notification is sent to the MyQ administrator. If the critical level is reached, services are also stopped.

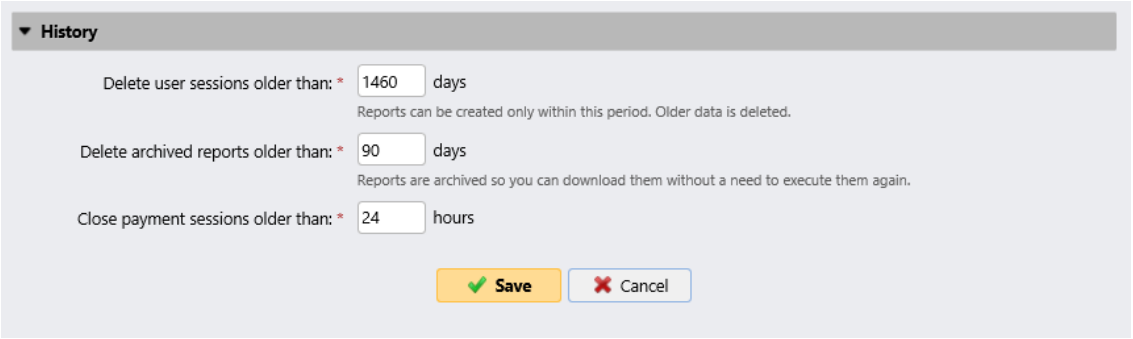


6.11.2 History

In the **History** section, you can change the periods after which data stored on the MyQ server is deleted. You can set time periods for the following data:

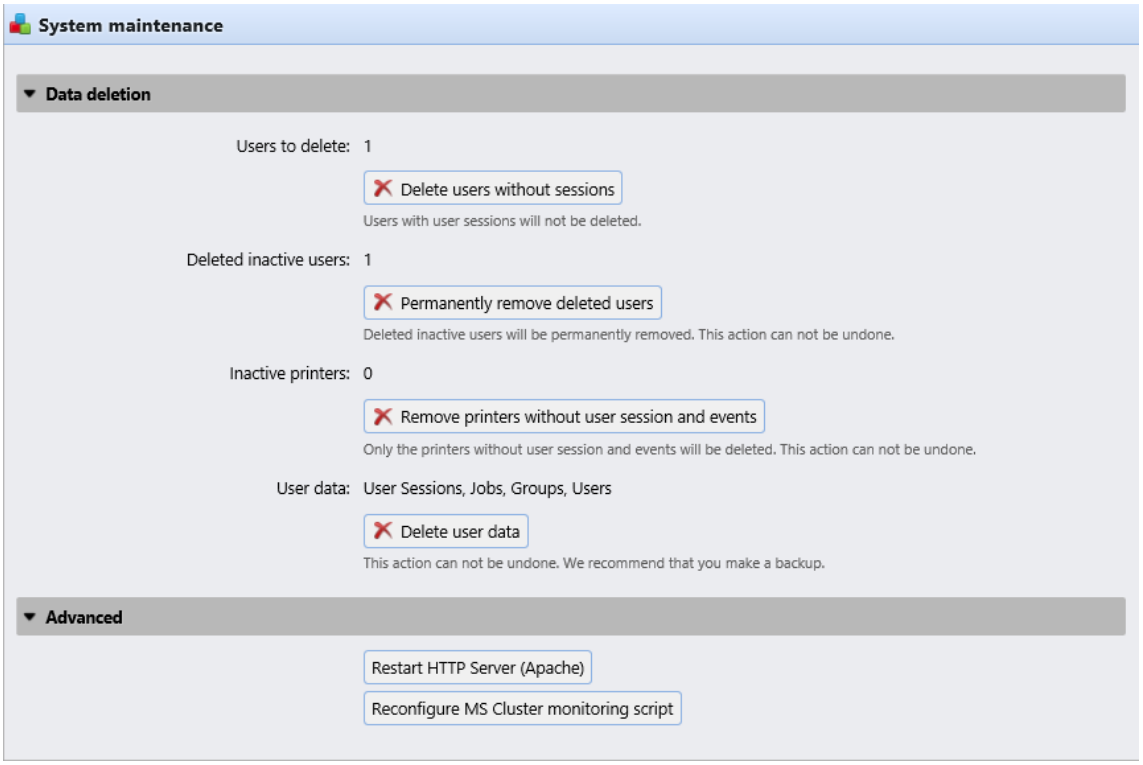
- **Delete user sessions older than**: User sessions remain on the MyQ Central server for the period set here. Older ones are deleted.
- **Delete archived reports older than**: Reports are archived for the period set here. Older reports are deleted.
- **Close payment sessions older than**:

To change the values, enter new values to the particular text box, and then click **Save**.



6.11.3 System Maintenance

In the **System maintenance** section, you can delete data from the MyQ database, and manage advanced options.



Data Deletion section

The delete/remove buttons perform the following actions. These actions cannot be undone. It is recommended you backup your data before performing any of them.

- **Users to delete**: Deletes all users without user sessions.
- **Deleted inactive users**: Removes all inactive users from the MyQ database.
- **Inactive printers** : Removes all printers without a user session from the MyQ database.
- **User data**: **User Sessions, Jobs, Groups, Users**: Removes all user related data from the MyQ database.

Advanced section

- Click the **Restart HTTP Server (Apache)** button, to restart the HTTP server.
- Click the **Reconfigure MS Cluster monitoring script** button to reconfigure the MS Cluster monitoring script.

6.12 Central and Site administration

As opposed to the MyQ Print server standalone model, where all parts of the MyQ system run on one server, the MyQ Central/Sites model consists of one Central server and multiple site servers.

The Central server cannot be used as a print server and its options are restricted to its central management role. Therefore it is not possible to administer printing devices or print jobs there. The site servers work as the print servers and perform local management of printing devices and print jobs. Their function and management options are similar to those of a standalone server.

After you setup your Central server and add and activate your licenses, you should setup your Site servers as well. In a Site server's MyQ web interface, go to **MyQ, Settings, Server type** and fill in the following information:

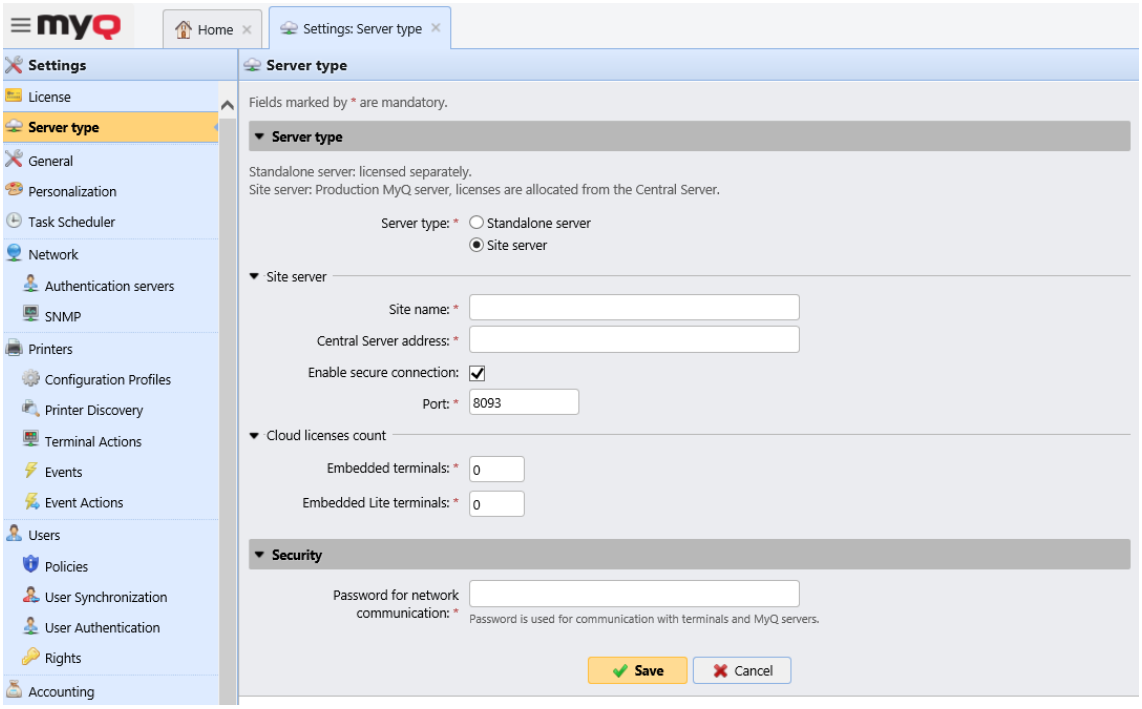
In the **Server type** section, choose **Site server.** This can only be used within a MyQ Central server installation and the change is permanent. You cannot switch back to standalone mode afterwards.

In the **Connection settings** section:

- **Site name** - add a name for your site server
- **Central Server address** - add the Central server's host name or IP address
- **Enable secure connection** - enabled by default. The connection between the Central server and the site servers is secured.
- **Port** - *8093* by default.
- **Password for communication** - password used for the communication between the MyQ Central server and Site servers.

In the **Licenses** section:

- **Embedded terminals** - add the number of embedded terminal licenses to be used on this site (distributed by the Central server)
- **Embedded Lite terminals** - add the number of embedded lite terminal licenses to be used on this site (distributed by the Central server)



Once the site servers are connected to your Central server, you can manage them via the Central's server MyQ web interface, in **MyQ, Sites**.

In the **Sites** main page, select a Site server and click **Edit** on the main ribbon (or double-click or right-click and select **Edit** on the Site server) to modify it. The Site server's properties panel opens on the right side.

- On the **General** tab, you can view the Site's name, port, and if the connection is secure. You can also add a description for the Site server.
- On the **User Synchronization** tab, you can select the user groups that you want to synchronize.
- On the **Client** tab, you can add IP ranges for the client PCs that will be used with MyQ Desktop Client (mandatory if you are using the Central server API to obtain the server address for MDC. You can also exclude IP ranges on the tab.
- On the **Rights** tab, you can manage user rights for the Site server.

After any modification, click **Save**. Any changes are then distributed during the User Synchronization.

6.12.1 Site server data replication

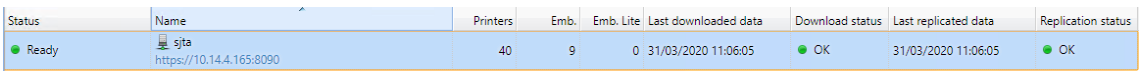
The replication is set as a scheduled task on the Central server. You can change the time and period of its run on the **Task Scheduler** settings tab.

In case you want to run the task outside of the schedule, you can do so on the **Sites** main tab.

The replication consists of two stages: at the first stage, the data are downloaded from the site server to a folder on the Central server, and at the second stage, they are uploaded to the Central server's database. Only data that are already uploaded to the database are included in the reports on the Central server.

On the **Sites** main tab, you can check the current state of replications for all site servers:

- The **Status** column gives you the following information:
  - green - Ready
  - yellow - Unknown, http 404
  - red - error; this can be an http 5xx or http 200 with body '0' error
  - gray - unreachable, a timeout. As an admin you can set the timeout and the period in the *config.ini*.
- The **Last downloaded data** column displays date and time of the last successful download of the site server data.
- The **Download Status** column shows either a green (OK) or a red (error) icon.
- The **Last successfully replicated data** column shows if any error happened during the replication. The displayed date and time represent the last record replicated before the error.
- The **Replication status** shows you any of three colored icons:
  - green icon - OK; all the downloaded data were successfully replicated
  - yellow icon - pending; there are downloaded data waiting to be replicated
  - red icon - error; replication was not finished due to errors (not warnings!)



To manually run a replication of a site servers' data:

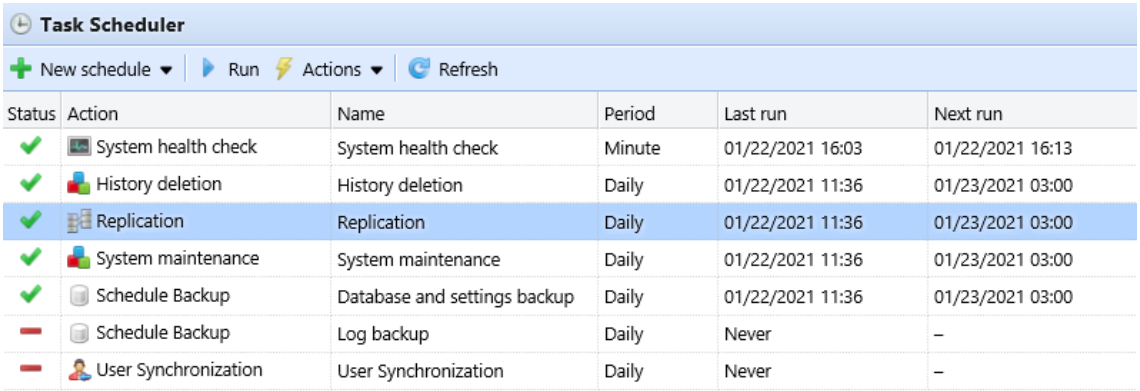
1. Open the **Sites** main tab (**MyQ, Sites**).

2. On the **Sites** main tab, select a Site, click **Actions** on the toolbar, and then click **Download data**.

Scheduled run of replication

By default, the replication is set to run once per day.

To change the **Replication** schedule, open the **Task Scheduler** settings tab (**MyQ, Settings, Task Scheduler**), and then double click the Replication schedule to open its properties panel, where it can be set. For more information, see Task Scheduler.



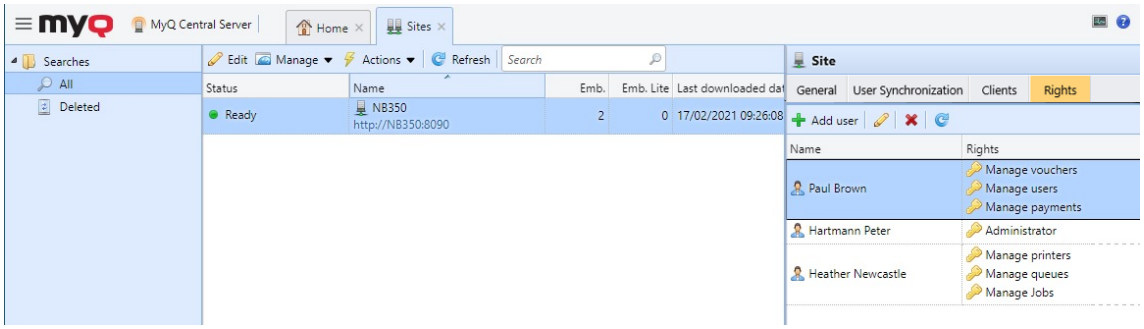
Status	Action	Name	Period	Last run	Next run
✓	System health check	System health check	Minute	01/22/2021 16:03	01/22/2021 16:13
✓	History deletion	History deletion	Daily	01/22/2021 11:36	01/23/2021 03:00
✓	Replication	Replication	Daily	01/22/2021 11:36	01/23/2021 03:00
✓	System maintenance	System maintenance	Daily	01/22/2021 11:36	01/23/2021 03:00
✓	Schedule Backup	Database and settings backup	Daily	01/22/2021 11:36	01/23/2021 03:00
–	Schedule Backup	Log backup	Daily	Never	–
–	User Synchronization	User Synchronization	Daily	Never	–

The statistical data on Site servers are stored for the period of time that is set on the **System Management** settings tab of the site server MyQ Web Interface, under **History**. To maintain the data, make sure that the time intervals between replications are shorter than these periods. Furthermore, the time periods for storing the data on Site servers should be long enough to avoid losing data, in case the scheduled replication is delayed, for example due to lost connection between the Central server and a Site server.

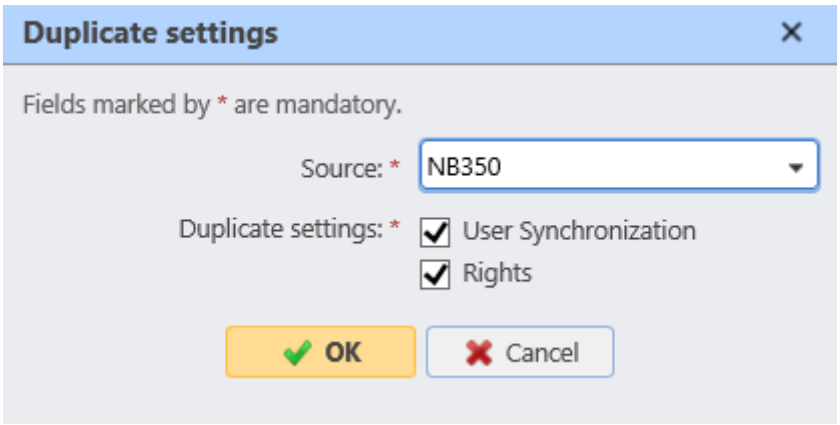
6.12.2 Site server rights management

Once a Site server is connected to the Central server, the MyQ administrator can manage the user rights for that server. Any changes are then distributed during the User Synchronization. As soon as the changes are synchronized, the previous user rights settings in the Site server are overwritten and the new rights are read-only in the Site server's rights settings.

To manage a Site server's rights in the Central Server, go to **MyQ, Sites**, select the Site server and click **Edit** on the main ribbon (or double-click or right-click and select **Edit** on the Site server). The Site server's properties panel opens on the right side. Go to the **Rights** tab, click on **Add user** to select the user (or user group), and then assign rights to them.



There is also the option to copy these settings to another Site server. Select the Site server that you want to copy the settings to, and click **Actions** - **Duplicate settings** on the main ribbon (or right-click and **Duplicate settings**). On the Duplicate settings pop-up, select the **Source** of the settings from the drop-down, and in **Duplicate settings**, mark the checkbox next to the settings that you want to duplicate, *User Synchronization* and/or *Rights*. Click **OK** and the changes are copied to the selected Site server.



6.12.3 Job Roaming

The Job Roaming feature enables users to transfer their jobs from one location to another: jobs sent to one Site can be printed on printing devices at another Site.

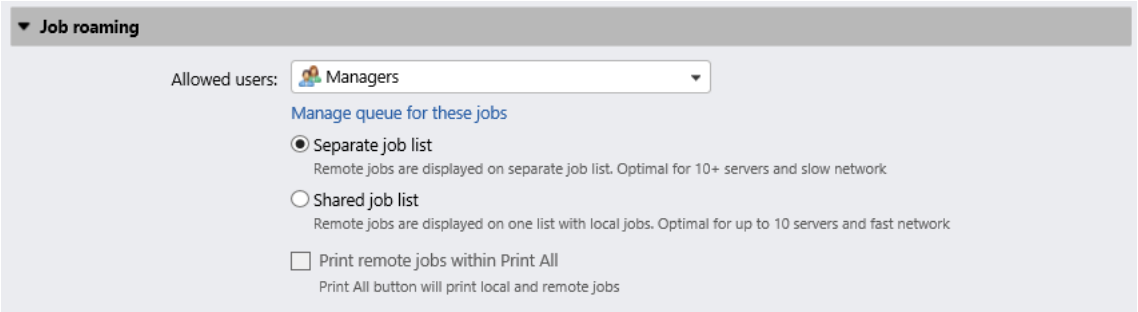
The feature only works in the Central/Site mode, however, it does not have to be centrally managed; Job Roaming between two locations depends exclusively on the settings of the locations Site servers.

The print job is stored on the original Site server until the user logs in at another Site, where they download the job to the **Job Roaming** queue. Thanks to the fact that the files are not unnecessarily transferred between servers, this method guarantees the lowest possible network load.

On a Site's server MyQ web interface go to **MyQ, Settings, Jobs**. In the **Job roaming** section:

- **Allowed users** - Select from the list which users are allowed to use job roaming.

- **Manage queue for these jobs** - Click to open and manage the job roaming queue's properties.
- **Separate job list** - With this option, the remote jobs are displayed on a separate job list. This is optimal for 10+ servers and a slow network connection.
- **Shared job list** - With this option, the remote jobs are displayed on the same job list as the local jobs. This is optimal for up to 10 servers and a fast network connection.
  - **Print remote jobs with Print All** - This option is only available with a shared job list. If you select it, the **Print All** terminal action prints both local and remote jobs.

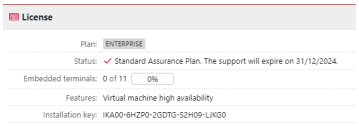


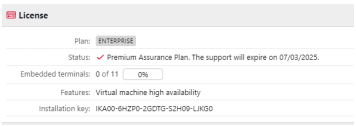
7 Licenses

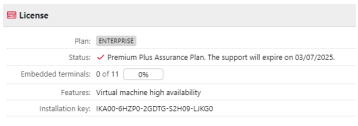
A MyQ Enterprise or MyQ Ultimate license is required. You can purchase the license with rights to a certain number of printers.

For information about the differences between the two types of licenses, see http://myq-solution.com/products.

You can view your current license in the License Settings of you MyQ User Interface, or in the Licences widget shown on your dashboard. Three types of assurance plan are available, Standard, Premium, and Premium Plus. More information on assurance plans is available here.







There are two ways of licensing in MyQ. The one that has been used so far (old licensing model), with separate keys for each license, and the new MyQ X licensing model -in use since MyQ Server 8.1 (patch 2), that introduced the use of an **Installation Key** per MyQ setup.

This chapter covers the following topics:

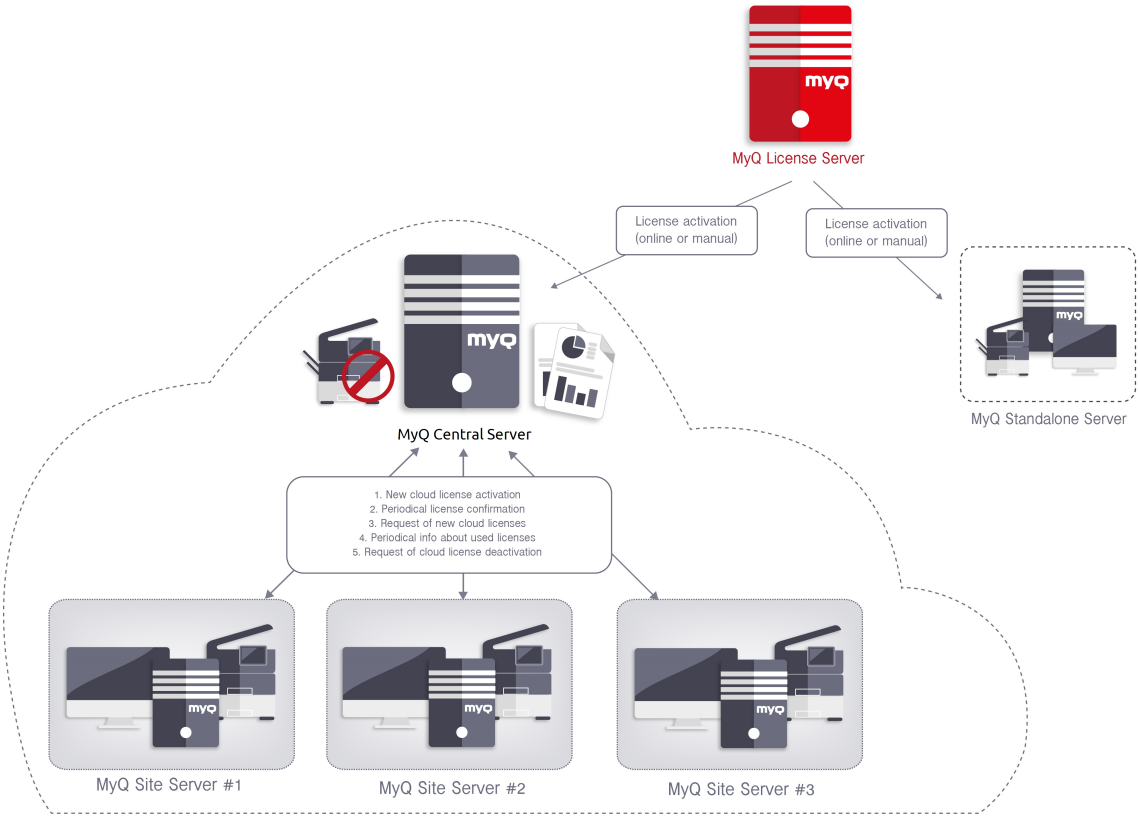
- adding, activating and deleting licenses
- extending software assurance licenses

7.1 License distribution to Site servers

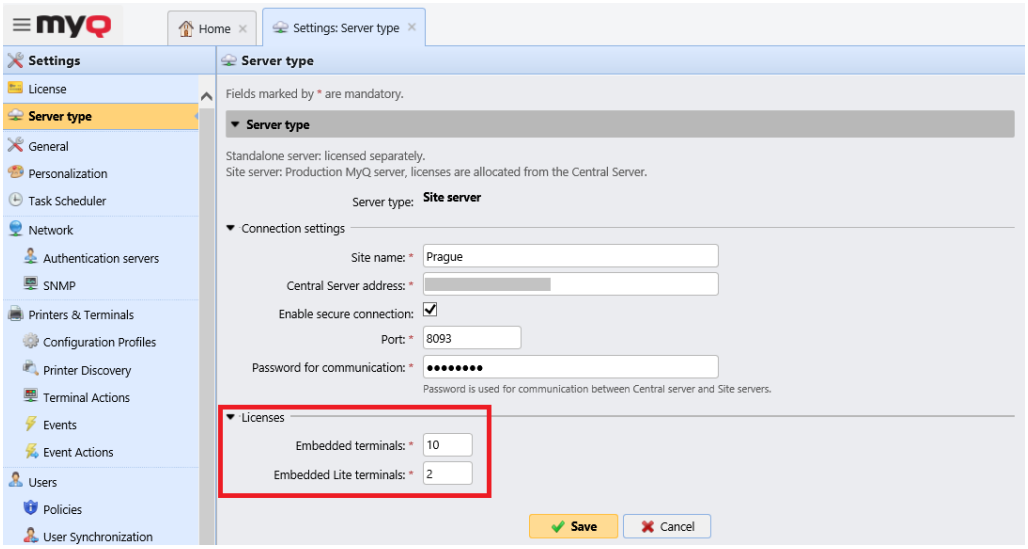
When using a MyQ Central Server, licenses are first added to the Central server and then distributed to Site servers; no licenses are added directly to Site servers. On each Site server, you set parameters of the Site licenses (exact number of embedded and embedded lite terminals that will be available on the Site server). The Central server generates corresponding Site server licenses (Embedded terminals, Embedded Lite terminals) and accordingly subtracts the number of items from its own licenses.

When you add licenses to the Central server, make sure that you cover the needs of all the Site servers that are used together with the Central server. For example, if you run two Site servers, one with 12 activated printing devices and one with 17 activated printing devices, you need to add and activate a license supporting at least 29 printing devices. If there are 23 embedded terminals used with these printing devices, you need to add and activate a license supporting at least 23 embedded terminals, etc.

Non-MFPs printers are automatically assigned with an Embedded lite license (2x non-MFPs printers = 0,5 EMB lite + 0,5 EMB lite = 1xEMB license).



Once the installation key is added and activated on your Central Server setup, you can go to each Site server's MyQ web interface and allocate licenses. Go to **MyQ, Settings, Server type**, in the **Licenses** section, add the number of licenses for **Embedded terminals** and/or **Embedded Lite terminals** and click **Save**.



7.2 Adding licenses

You can add new licenses either on the **Home** dashboard during the initial setup of MyQ, or any time on the **License** settings tab.

After activation, the license is linked with the hardware configuration of the server where MyQ is installed. If the configuration changes (for example, after you reinstall MyQ on a different server, or after you change any of the hardware components of the server), the license becomes invalid and you have to reactivate it within seven days.

The total number of devices allowed to be activated at the same time is equal to the number allowed by individual licenses (for example: a license allowing ten printing devices + a license allowing one printing device + a license allowing five printing devices = sixteen printing devices allowed to be activated).

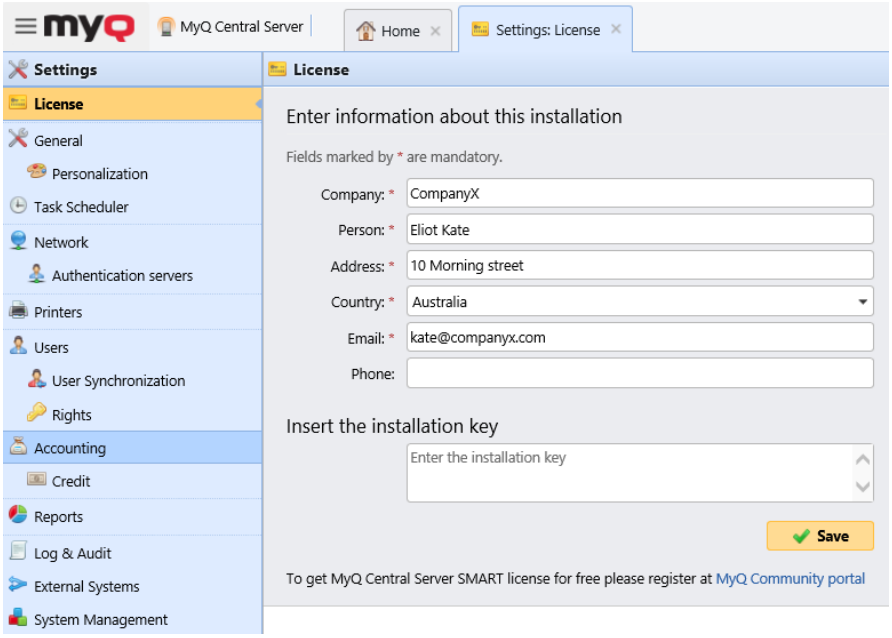
Adding licenses on the Home dashboard

The first time you set up the system, you can add new licenses on the **Home** dashboard. In the **License** section, click **Enter License**. You are redirected to the **License** Settings tab, where you can add your license information.

Adding licenses on the License settings tab

On the **License** settings tab, you are asked to enter the following information about your installation:

- **Company** - Your company's name
- **Person** - Your full name (e.g. the MyQ administrator's name)
- **Address** - The company's address
- **Country** - Select the country from the drop-down
- **Email** - Your email address
- **Phone** - Your phone number (optional)

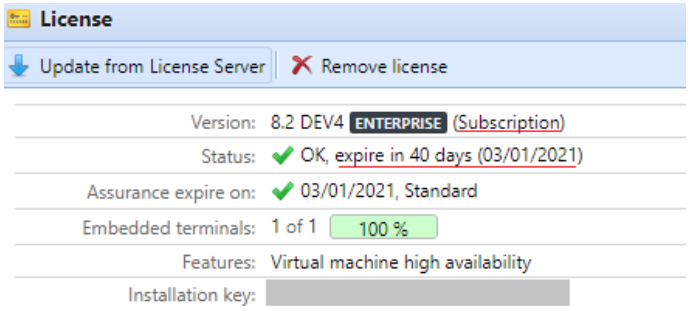


Then, enter your Installation keys in the **Insert the installation key** field and click **Save,** and then **Activate**.

- If you are connected to the internet and you have used an Installation key, your licenses are now added and activated.
- If you have used license keys, your licenses are added but need to be activated. Follow the activation steps below.
- If you want to manually activate your licenses, see the steps below.
- If you haven't purchased any license or installation keys yet, you can register in the MyQ Community portal and request for the free **MyQ SMART** license.

You can see the newly added licenses on the **License** settings tab, under **License.**

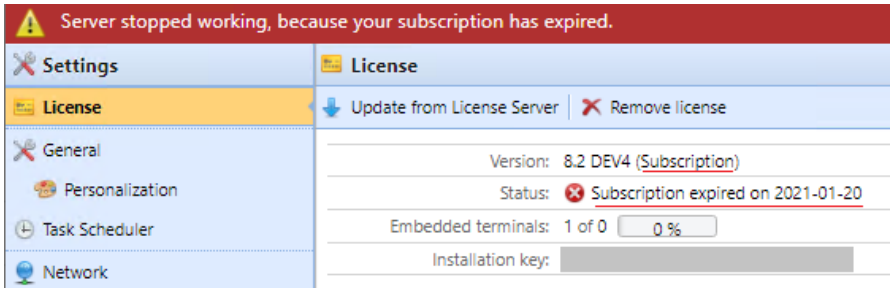
If you are using a subscription license, you can see when the subscription is expiring:



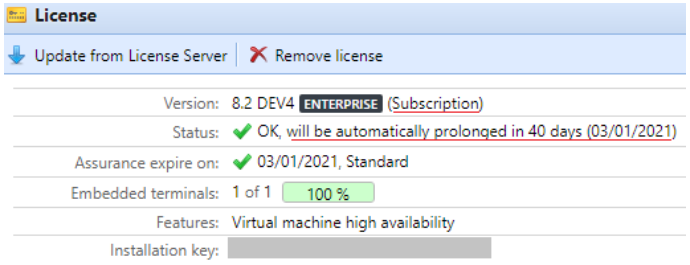
10 days before the expiration, a banner message appears on the interface, reminding you to prolong your subscription:

"*Your subscription is about to expire soon, all services will stop in 10 day(s). Please prolong your subscription"*

If you don't prolong it on time, your licenses will expire and MyQ will stop working. The following banner message is displayed: "*Server stopped working, because your subscription has expired.*"

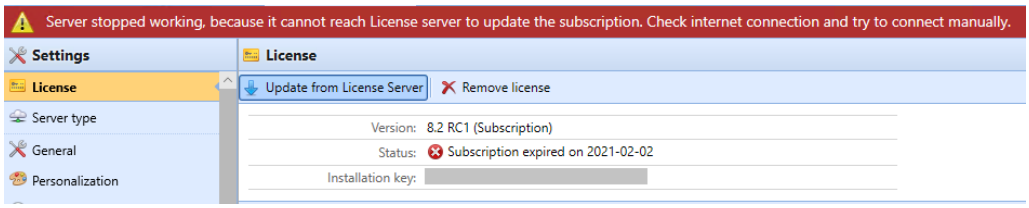


If you have auto-prolongation for your subscription on, you can see when it will be renewed:



If the MyQ server cannot connect to the License server :

- After the first unsuccessful connection, the MyQ server starts displaying the alert banner "*MyQ server cannot connect to License server, subscription cannot be prolonged and all services will stop in X days. Check internet connection and try to connect manually*". X = number of days until the expiration + 10.
- If the MyQ server can't connect to the License server for 10 subsequent days after the subscription has expired, the MyQ server will stop working and display the alert banner "*Server stopped working, because it cannot reach License server to update the subscription. Check internet connection and try to connect manually.*"



7.3 Activating licenses

7.3.1 To automatically activate a selected license:

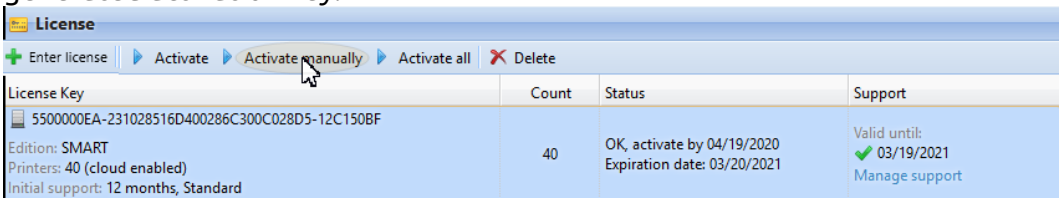
The HTTP Proxy Server setting for license activation is not supported for License Keys generated on the MyQ X Partner portal. Manual (offline) activation must be used instead.

Installation Keys are automatically activated as soon as they are added (if connected to the Internet).

7.3.2 To manually activate a license:

If you are using the old licensing model (with license keys):

1. Generate the *MyQ-helpdesk .zip* file. For information about how to do this, see "Generate data for support".
2. Send a request for an activation key to license@myq-solution.com with the *MyQ-helpdesk.zip* file attached. You will get an email response with the generated activation key.

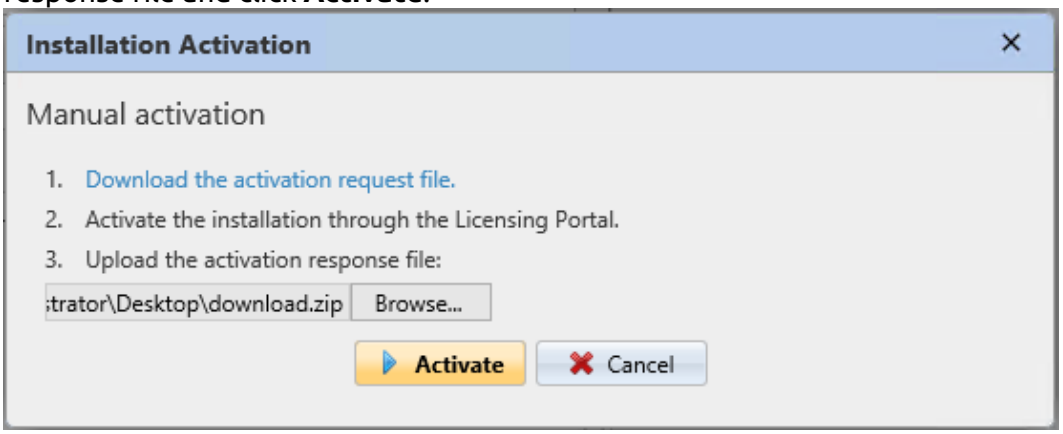


3. Go to the **Licenses** settings tab (**MyQ, Settings, Licenses**). Under **License**, click **Activate manually** (or right-click the license, and then click **Activate manually** on the shortcut menu.) A dialog box for entering the activation key appears.
4. In the dialog box, enter the received activation key, and then click **OK**.

If you are using the new licensing model (with Installation Keys):

1. Go to the MyQ Web Administrator interface, in **MyQ, Settings, Licenses**. Add your Installation Key and click **Next**. The online activation fails and you get the following message. Click on **Manual Activation**.

2. In the newly opened window, click on **Download the activation request file**.
3. Upload the file in the MyQ X Partner portal and download the activation response file.
4. Go back to the MyQ Web Administrator interface, upload the activation response file and click **Activate**.



7.3.3 Reactivating Licenses in case of Hardware change

When moving a MyQ installation from an old server to a new server, a Support task needs to be created with the MyQ License department (Support task - Type license issue) for license installation key reactivation

Steps:

1. Prepare the **new server** with a clean MyQ installation.
2. Create a backup of MyQ (MyQ Easy Config\Database\Backup) on the **old MyQ server**.
3. Restore the backup file from step 2 on the **new MyQ server** (MyQ Easy Config\Database\Restore).
4. With the Installation key now in MyQ Web UI\Settings\License on the **new MyQ server**, you should request for license installation keys activation in 10 days.
5. Generate the Helpdesk support file from the new MyQ server installation (MyQ Web UI\Log\Tools\Generate data for support).

6. Create a Support request (type License issue) for reactivating the installation key with attached Helpdesk support file on the **MyQ Helpdesk partner portal**.
7. When reactivation is confirmed in the task, activate the installation key in MyQ Web UI\Settings\License on the **new MyQ server**.

Notes:

- A valid Software Assurance is required for the period when these changes are made.
- In case of offline activation, provide the Helpdesk support file from the old MyQ server as well.
- Be sure that you are not using 2 MyQ servers with the same database at the same time.
- Licenses on the old MyQ server will no longer be activated (there is a 10 days period from deactivation).

When significant hardware changes are done on the MyQ server and MyQ installation key required activation in 10 days (MyQ Web UI\Settings\License), a Support task needs to be created with the License department (Support task - Type license issue) for license installation key

Steps:

1. Check MyQ Web UI\Settings\License in case any HW changes are done on MyQ server.
2. If the installation key in MyQ Web UI\Settings\License requires activation in 10 days or less, continue with the next steps.
3. Generate the Helpdesk support file (MyQ Web UI\Log\Tools\Generate data for support).
4. Create a Support request (type License issue) for reactivating the installation key with the Helpdesk support file attached on the **MyQ Helpdesk partner portal**.
5. When reactivation is confirmed in the task, activate the installation key in MyQ Web UI\Settings\License.

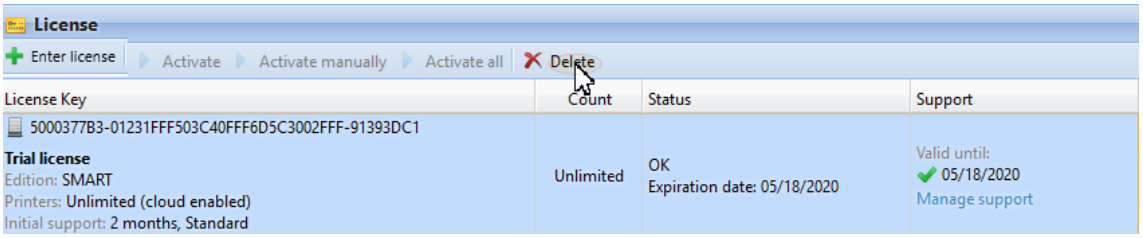
Notes:

- A valid Software Assurance is required for the period when these changes are made.

7.4 Deleting licenses

To delete a license:

1. Select the license that you want to delete.
2. On the **Licenses** settings tab, under **License**, click **Delete**.

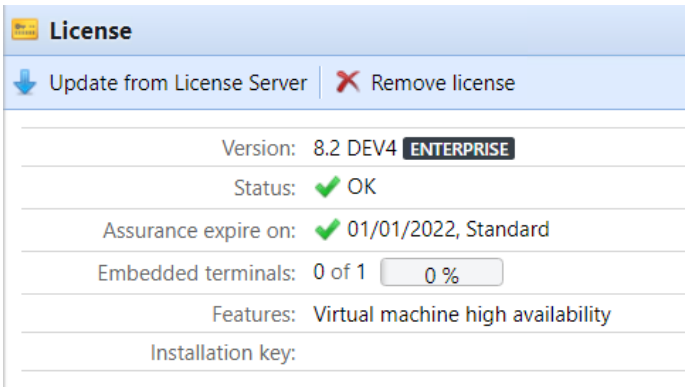


7.5 Extending software assurance licenses

You can extend the support period by assigning a support license to the particular main license. This can be done at any time, even before your current support period expires. In this case, the service is extended from the last day of validity of the current support.

7.5.1 New licensing model (with Installation keys)

You can order to prolong your support on the MyQ X Partner portal. Once your order is approved, go to the MyQ Web Administrator interface, in **MyQ, Settings, License** and click the **Update from License Server** button to update your prolonged Software Assurance license. If the new date is not displayed, refresh the web page.



Manual activation

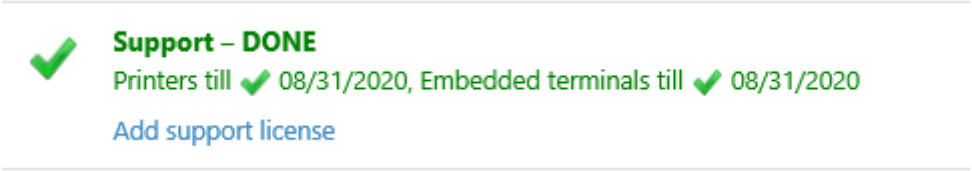
1. Once your additional licenses order is approved, go to the MyQ Web Administrator interface, in **MyQ, Settings, License** and click the **Update from License Server** button. Since there is no network, you will be prompted to **Download** the activation request file.
2. After you download the file, go to the MyQ X Partner portal, under your Project, in the Installations tab. Click **Offline activation**.
3. In the pop-up window, upload the *offlineActivation.zip* file you downloaded from the MyQ Web Administrator interface and click **OK**. The activation response file is then automatically downloaded.
4. Go back to the MyQ Web Administrator interface, upload the activation response file and click **Activate**. Your additional licenses are added and activated.

7.5.2 Old licensing model (with license keys)

The licenses can be extended either on the **Home** screen or on the **License** settings tab.

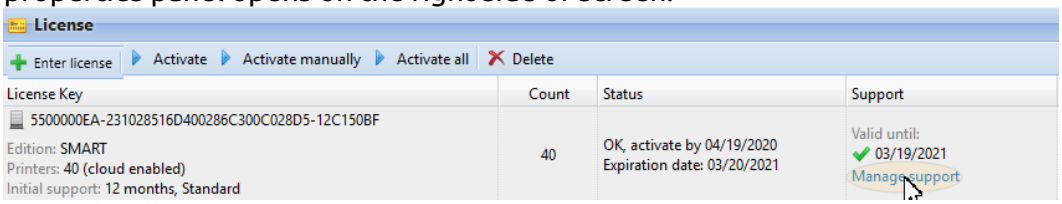
To extend a support license on the Home screen:

On the **Home** screen, under **Support**, click **+Add Support license**. The Add support license dialog box appears. You have to manually activate the license, as described below.

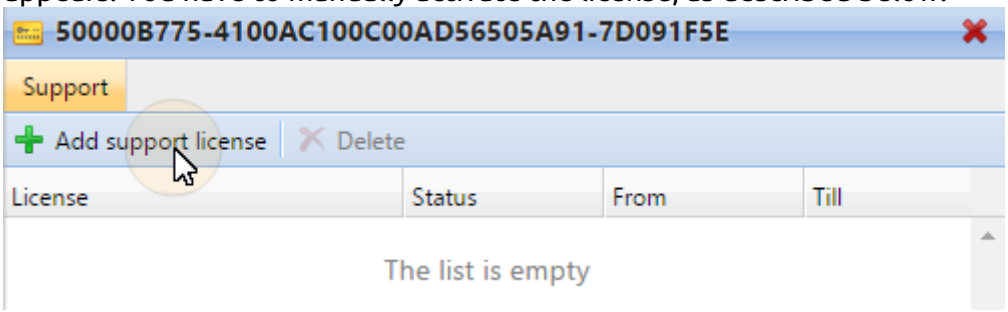


To extend a support license on the License settings tab:

1. On the **License** settings tab, under **License**, click **Manage Support**. The license properties panel opens on the right side of screen.

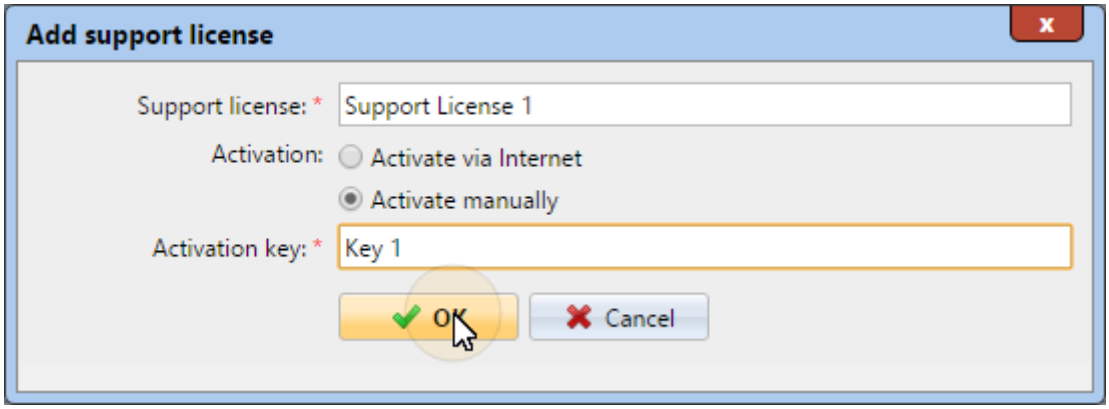


2. On the panel, click **+Add Support license**. The Add support license dialog box appears. You have to manually activate the license, as described below.



Manual activation

1. Generate the *MyQ-helpdesk.zip file*.
2. Send a request for an activation key to license@myq-solution.com with the *MyQhelpdesk.zip* file attached. You will get an email response with the generated activation key.
3. Add the support license key in the Activate support license dialog box, select the **Activate manually** option, enter an activation key, and then click **OK**.



7.6 Migrating old licenses to MyQ X

If you are using older MyQ editions, it is recommended to migrate your licenses to MyQ X.

Compared to older editions, MyQ X offers a new price list with updated and new functionalities, one Installation key containing all the license information instead of multiple license keys, a fast and automated license ordering process, and a complete overview in the MyQ X Partner portal of all the products and their software assurance.

Moreover, if you use embedded lite licenses, during the license migration to MyQ X, their price is halved (two embedded lite = one embedded license). If you have an odd number of embedded lite licenses, the total is rounded up, and then halved (eleven lite = twelve lite = six embedded licenses).

The software assurance expiration date is recalculated during the migration:

1. Expiration dates are converted to a real number and the average is computed. *(for example, you have 100 x Embedded (E) and 200 x Embedded Lite (EL) | so 100 x 'expiration date' of (E) + 200/2 x 'expiration date' of (EL)) / count of ((E) + (EL/2))*
2. The computed average is a real number and, converted back to the date format may produce, for example, *23h:56min* - for this reason 1 day is added.
3. From the average corrected date, only the month + year are used, without day + time, and one month is added to the final date.

License Type	Pcs	Software Assurance Expiration	SA Days till Expiration (from today, 5.10.2020)	SA Days of all Pcs
Embedded	40	04.11.2020	30,00	1 200,00
Embedded	10	28.07.2021	296,00	2 960,00
Embedded	8	19.12.2021	440,00	3 520,00
Embedded	1	20.02.2022	503,00	503,00
TOTAL of Embeddeds	**59**			**8 183,00**
Lite	10	04.11.2020	30,00	300,00
Lite	1	19.12.2021	440,00	440,00
TOTAL of Lites	11			740,00
Round up to an even number of Pcs	12			807,27
Coversion of Lites to Embeddeds (2-in-1)	**6**			**403,64**
TOTAL Enterprise & Support	65	14.02.2021	132,10	8 586,64
FINAL Enterprise & Support	**65**	**01.03.2021**		

The prerequisites for license migration are:

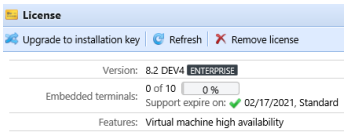
- MyQ Print Server or MyQ Central Server 8.2 or higher installed (valid support required).
- Valid support required; support date for version 8.2 is 15 January 2021, but it is recommended having valid support all the time, especially when there are planned system changes and MyQ Helpdesk would be contacted.
- Access to the MyQ X Partner portal (Partner ID and password. If you do not have access, contact your Sales representative).

With the above prerequisites fulfilled, you can start the Migration Process.

7.6.1 Migration Process

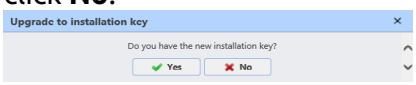
You can start the license migration process in the MyQ web administrator interface.

Go to **MyQ, Settings, License**. At the top bar, click **Upgrade to installation key**.

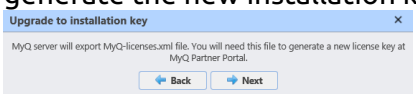


The Upgrade to installation key wizard starts, guiding you through the upgrade:

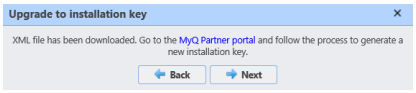
1. If you already have an Installation Key, click **Yes** and continue to step 4. If not, click **No**.



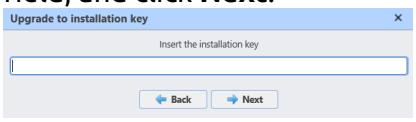
2. The MyQ server will now export the *MyQ-licenses.xml* file. You need this file to generate the new installation key at the MyQ X Partner Portal. Click **Next**.



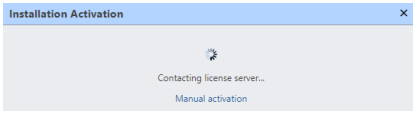
3. The *MyQ-licenses.xml* file has been downloaded. Go to the MyQ X Partner portal and follow the process to generate a new installation key. Once you generate it, your old license keys cannot be used again.



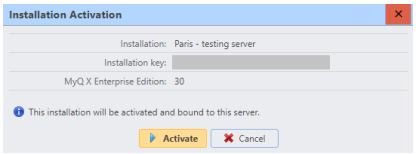
4. Back in the MyQ web administrator interface, insert the installation key in the field, and click **Next**.



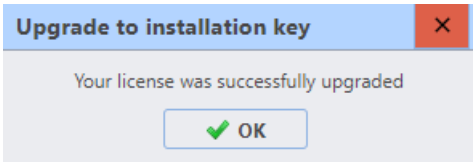
5. MyQ is contacting the License server to get the license information. In case you have no internet connection, click **Manual activation** to manually activate the license.



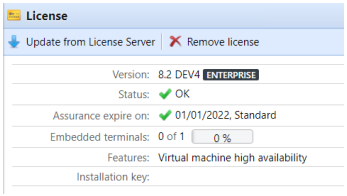
6. Check the overview and if everything is correct, click **Activate**; otherwise, click **Cancel**.



7. Your license keys were successfully upgraded to an installation key and are now activated.



You can see your new licenses overview in the **License** settings tab.



> ⚠ If the activation fails due to connection issues, or for any other issues with the migration, contact MyQ Support.

7.7 VMHA License

Normally, the hardware signature of the server hosting MyQ is occasionally verified to make sure that the license is still installed on the same server and isn't misused. In certain scenarios, the underlying hardware may change and so a license reset is required to re-activate the license. If the hardware changes often (which is common

when the server is hosted in a virtual environment), the Virtual Machine High Availability (VMHA) feature may be required.

The VMHA license is included free of charge in MyQ Enterprise and MyQ Ultimate 8.0+ licenses. Discover our licensing options to find out more.

For the VHMA feature to function, a domain environment is mandatory - the server running MyQ must be a member of a domain. For MyQ installed in an MS Azure environment, a domain is not required. Changing the domain or migrating to a completely different server will still require a license reset.

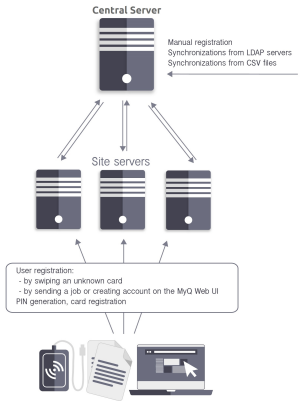
To verify that the VHMA feature is available, go to **MyQ, Settings, License**.

With old license keys, once the VMHA license is registered and activated, you can enable the VMHA feature in **MyQ, Settings, Network**. Once enabled, the license verification mechanism will no longer check for changes in the hardware when checking the HW license signature key.

With the new licensing model, with installation keys, VHMA is enabled by default in a Print Server or Central Server setting. If you are using Site servers, you have to enable the feature in each Site server.

8 Users

Each Site server connected to your MyQ Central server can synchronize users directly from the Central server and be almost entirely dependent on the changes made there, described below.



There are, however, a few exceptions:

- Users can register themselves by swiping an unknown ID card, on the Web user interface, by sending a job via LPR protocol, or by sending a job via email. The newly created user is automatically replicated to the Central server. If the connection to the Central server is working, the user is automatically added to the server database and also replicated to the Central server database. From there, the accounts are
  imported to all other sites using the Central server as a synchronization source during the scheduled process of synchronization. If there is no online connection to the Central server, the registration of the new user fails.
- Users that are already in the system can change their language and generate PIN on the Web User Interface. In addition, they can register their cards on MyQ terminals. Every such change has to be authorized by the Central server. If there is no connection to the Central server, the registration of the new PIN/card fails.
- The administrator can add a new card, and add or generate a new PIN for users that are already in the system. Every change has to be authorized by the Central server. If there is no connection to the Central server, the registration of the new PIN/card fails.

In the following sections, you can find information on user management options on the MyQ Central server:

- Overview, registration, adding, importing, synchronizing and deleting users: List of users, Manually adding and deleting users, Users synchronization from LDAP servers.
- PIN generation: Generating PIN

- Individual users settings: Editing user accounts, Groups of users, Exporting users
- Special administrative rights: Rights

8.1 List of users

On the **Users** main tab, you can see users and information about them. With the **All users** search option selected, you see a list of all the users that are currently in the system.

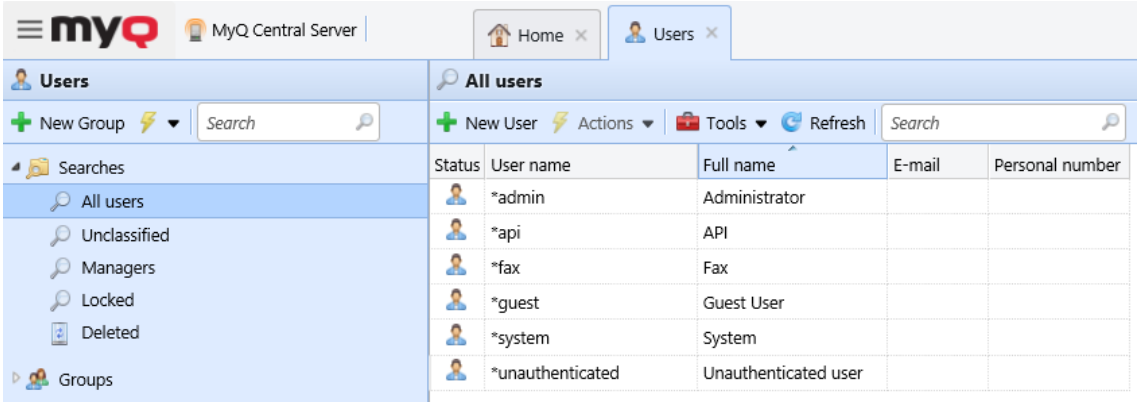
Apart from this search option, you can also choose from:

- **Unclassified** - select to display only the users that do not belong to any group
- **Managers** - select to display only group managers
- **Locked** - select to display users whose accounts have been locked
- **Deleted** - select to display only deleted users

8.1.1 Default system users

The database of every installation of MyQ contains six default system users. These users are used for administration of the MyQ system and cannot be deleted.

1. ***admin** - This is the MyQ administrator account. It is used for administration of the MyQ system on the Web Administrator User Interface.
2. ***api** - MyQ uses this account to connect to external applications.
3. ***fax** - All printed faxes are charged to this account.
4. ***guest** - This is the Guest User account.
5. ***system** - All the actions performed by the MyQ system are charged to the ***system** user.
6. ***unauthenticated** - If there are any printed, copied or scanned pages that for some reason cannot be assigned to concrete users, they are charged to this account. This can happen, for example, if the print server is not available and users print in an emergency, offline mode on a printing device. It can also happen if someone prints directly on a printing device, bypassing the MyQ system. In such cases, you might need to check the printing device security settings.

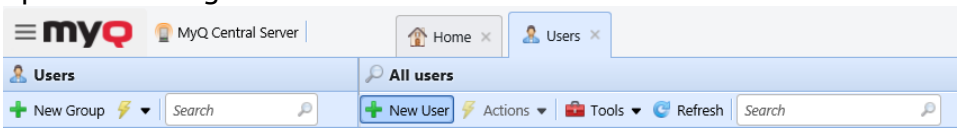


8.2 Adding and Deleting users Manually

8.2.1 Adding Users

To manually add a new user, follow these steps:

1. On the **Users** main tab, click **+New User**. The properties panel of the new user opens on the right side of the screen.



2. On the panel, enter the username and full name of the user, and eventually set other data of the user account (see User information and settings), and then click **Save**.

8.2.2 Deleting Users

When you delete a user, they are removed from all groups (including **All users**) and are marked **Deleted**. They are not completely removed from the MyQ database and can be undeleted.

8.2.3 Deleting users

To delete a user:

1. On the **Users** main tab, select the users that you want to delete, and then click **Actions**. The Actions drop-down box appears.
2. In the **Actions** drop-down box, click **Delete**. You can find the deleted users under the **Deleted** search option.

8.2.4 Undeleting users

To undelete a user:

1. On the **Users** main tab, under searches, select the **Deleted** search option. The list of deleted users appears.
2. On the list, select the users that you want to undelete, and then click **Actions**. The **Actions** drop-down box appears.
3. Click **Undelete**.

8.3 Editing user accounts

Each individual user has their own properties panel. To open the panel, double-click the user on the list on the **Users** main tab (or right-click the user, and then click **Edit**). The properties panel opens on the right side of the screen. The panel is divided into three tabs: **General**, **Groups**, and **Delegates**.

8.3.1 User information and Settings

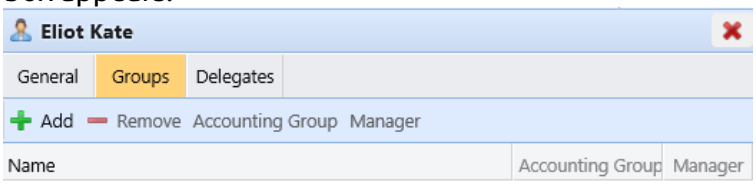
- **User name** - Here you can enter or change the user name. This entry is mandatory. It is unique and is used to identify the user. It is compared to the parameter obtained from the **User detection method**.
- **Aliases** - In addition to their user name, each user can have a number of aliases. MyQ treats the aliases as alternative user names.
- **Card** - Here you can set the number of the user's identification card.
- **PIN** - Here you can manually create or automatically generate new PIN code for the user and remove existing ones. An unlimited number of PINs can be added.
- **Full name** - Here you can enter or change the user's full name. This entry is mandatory.
- **E-mail** - Here you can enter or change the user's email.
- **Phone** - Here you can set the user's phone number
- **Personal number** - The personal number can be used as the user ID in MyQ. The primary ID is the **user name** property.
- **Default language** - Here you can select the language of the user's sessions on MyQ embedded terminals.

- **User's scan storage** - Here you can set the folder or email, where scanned documents are saved.
- **Use authentication server** - If you select this option, an LDAP server is used for the user authentication. The user uses their LDAP credentials to authenticate to MyQ instead of having a password set in MyQ. Select the domain for the authentication on the setting below.
- **Authentication server** - Here you can select the LDAP domain for user authentication.

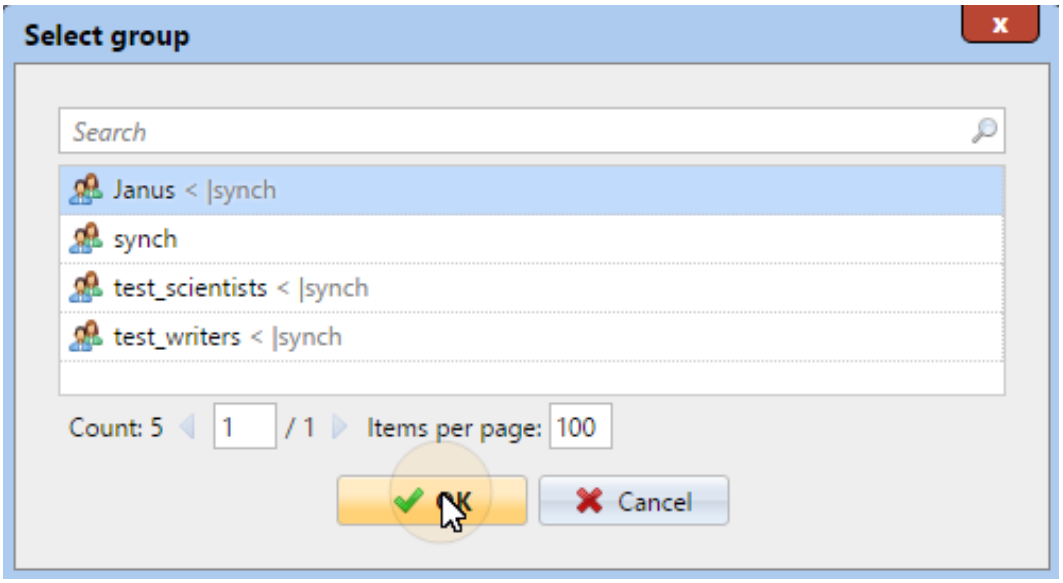
8.3.2 Adding users to and removing them from groups

To add a user to a group on the user properties panel, in the **Groups** tab:

1. On the bar at the top of the **Groups** tab, click **+Add**. The Select group dialog box appears.



2. In the Select group dialog box, select the groups where you want to add the user to.
3. Click **OK**.



A user can also be added to a group on the **Users** main tab using drag and drop. Drag the user and drop it on the group icon, on the groups tab on the left side of the screen.

Default group and Group manager options

On the bar at the top of the **Groups** tab, you can see two options: **Accounting** and **Manager**.

The **Accounting** group is the group where the user is counted in reports and it is set to every user by default.

If you make a user the **Manager** of a certain group, the user can see jobs and reports of all the users from the group. To make the user a manager of a group, select the group and click **Manager**.

To remove a user from a group:

On the bar at the top of the **Groups** tab, click **–Remove**. The group disappears from the **Groups** tab.

To remove selected users from a group on the **Users** main tab, select the group there, select the users that you want to remove, click **Actions**, and then click **Remove from group** in the **Actions** drop-down box.

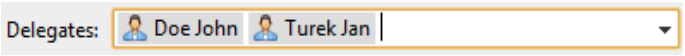
8.3.3 Selecting user delegates

On the **Delegates** tab, you can select delegates (users or groups) who are able to print all of the delegating user jobs sent to a **Delegate** printing type of queue. The delegate will see the jobs on the embedded terminal. The print jobs are displayed in the form: (*Sending user**Name of the print job*).

Users need to have rights to a delegate printing type queue to be able to select delegates.

To select delegates:

On the bar at the top of the **Delegates** tab, in the **Delegates** combo box, enter the user (or the group of users), and then click **Save**. This way, you can add multiple users (or groups of users).



To deselect delegates:

On the bar at the top of the **Delegates** tab, in the **Delegates** combo box, point to the user (or group of users) that you want to deselect, and then click the remove button (**X**) on the right side of the user (or group of users).

8.4 User groups

On the **Users** main tab, you can create new user groups.

8.4.1 Creating user groups

To create a group, do the following:

1. On the group tab on the left side of the **Users** main tab, point on the group under which you want to create the new group. A drop-down box appears to the right.
2. On the drop-down box, click **+New Group**. The new group properties panel opens on the right side of the screen.
3. Enter a **Name** for the new group, and optionally add a **Description**.

4. Click **Save**.

To select delegates for the group:

1. Open the group properties panel by double-clicking on the group.
2. On the bar at the top of the **Delegates** tab of the group properties panel, in the **Delegates** combo box, enter or select the user (or the user group).
3. Click **Save**. This way you can add multiple users (or the user group).

To deselect delegates for the group:

On the bar at the top of the **Delegates** tab, in the **Delegates** combo box, point to the user (or user group) that you want to deselect, and then click the remove button (**X**) on the right side of the user (or user group).

8.4.2 Deleting user groups

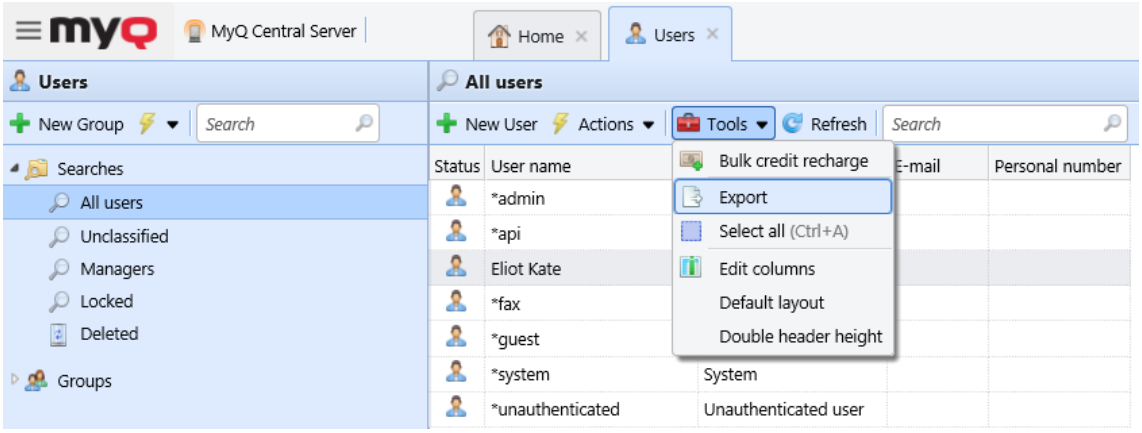
1. On the group tab on the left side of the **Users** main tab, right-click the group that you want to delete.
2. Click **Delete**.

8.5 Exporting users

In case you need to export the list of MyQ users to a CSV file — for example if you want to use the CSV file for user synchronization — you can do so on the **Users** main tab of the MyQ Web Interface.

To export the list of users:

1. Click **Tools** on the toolbar at the top of the **Users** main tab.
2. Click **Export** in the **Tools** drop-down box. The Users Export dialog box appears.
3. In the dialog box, select the group you want to export and click **OK**. The file is downloaded to your default *Downloads* folder.



8.6 User import and synchronization

User synchronization is a method of synchronizing user related data in the MyQ database with data in external sources, such as LDAP servers or CSV files. Importing new users is an optional part of the synchronization process. Within the

synchronization setup, you can activate or deactivate the new users import; if you deactivate it, MyQ only updates accounts of users that already are in its database. You can read more about how user synchronization works here.

This topic provides detailed information about the synchronization. It fully describes the methods of import and synchronization available in MyQ, and presents two options of running the synchronizations:

- User synchronization from LDAP servers
- User synchronization from CSV files
- Manual and scheduled synchronization run
- User synchronization from Azure Active Directory
- User synchronization from Google Workspace
- Using external authentication servers

User passwords are not synchronized/stored in the MyQ Database in case of LDAP/Azure synchronizations.

8.6.1 User Properties in MyQ

- **User name**: Name of the user account in MyQ. In Active directory and Open LDAP, this property corresponds to the **samaccountname** user attribute on the LDAP server.
- **Full name**: This is the full name of the user. In Active directory and Open LDAP, this property corresponds to the **cn** user attribute on the LDAP server. Usually, it is the given name and the surname of the user.
- **Alias**: In addition to their user name, each user can have a number of aliases. MyQ treats aliases as alternative user names. You can use aliases, for example, if you need to enable one user to send jobs to MyQ from different OS accounts.
- **Card**: The number of the user's identification card. It can be either imported from LDAP or added to MyQ on the user's properties panel. Also, it can be registered by an administrator on a card reader connected to a USB slot or registered by the user on an embedded terminal.
- **PIN**: The MyQ personal identification number is used for access to MyQ Web Interface and MyQ terminals.
- **Personal number**: The personal number can be used as the user ID in MyQ. The primary ID is the user name property. If you select the **Pair by the personal number** property during the user synchronization, the personal number is used instead.
- **Email**: The user's primary email address.
- **Notes**: You can use this text box to enter additional notes concerning the user.
- **Language**: The language used on the user's MyQ Web Interface and their home screen on the embedded terminal.
- **User's storage**: You can select a folder or one or more email addresses where MyQ sends the user's scans. Depending on the scanning setup, scans can be sent here, to the user primary email set in the **Email** property text box, or to other sources defined in MyQ or entered by the scanning users.

8.6.2 User synchronization from LDAP servers

An LDAP server contains a database that stores all user accounts, passwords and other user related data of an organization. On the **LDAP Synchronization** settings tab on the MyQ Web Interface, you can synchronize users directly from the server database.

MyQ can communicate with as much as five LDAP servers at the same time. It supports Active Directory, OpenLDAP, Novell, Lotus Domino and Google Workspace. To synchronize the users, you need to add the synchronization source first, and then setup the synchronization. After the synchronization is set up, you can either run it manually on the **User Synchronization** settings tab or set it as a regular task on the **Task Scheduler** settings tab.

The settings described here apply only to Active Directory, although the settings for OpenLDAP, Novell, Lotus Domino and Google Workspace are similar.

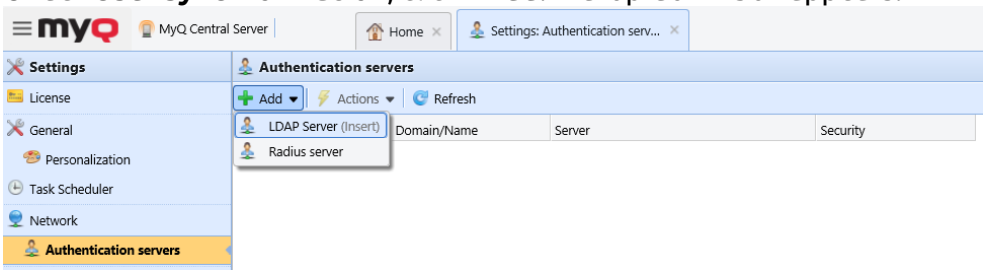
OpenLDAP, with its default settings, limits the number of returned entries and the maximum total time for a query. The default size limit is 500 entries and the default time limit is one hour. In case of a larger customer installation with OpenLDAP, you must adjust these limits appropriately in the OpenLDAP settings, otherwise the user sync will give incomplete results.
For more details see: https://www.openldap.org/doc/admin24/limits.html

Creating an LDAP synchronization

Before creating the synchronization, you have to add the LDAP server to MyQ. You do this on the **Authentication servers** settings tab (**MyQ, Settings, Authentication servers**).

To create a new LDAP synchronization:

1. Add the new synchronization:
   Under **User synchronization**, click **+Add**. A drop-down box appears.

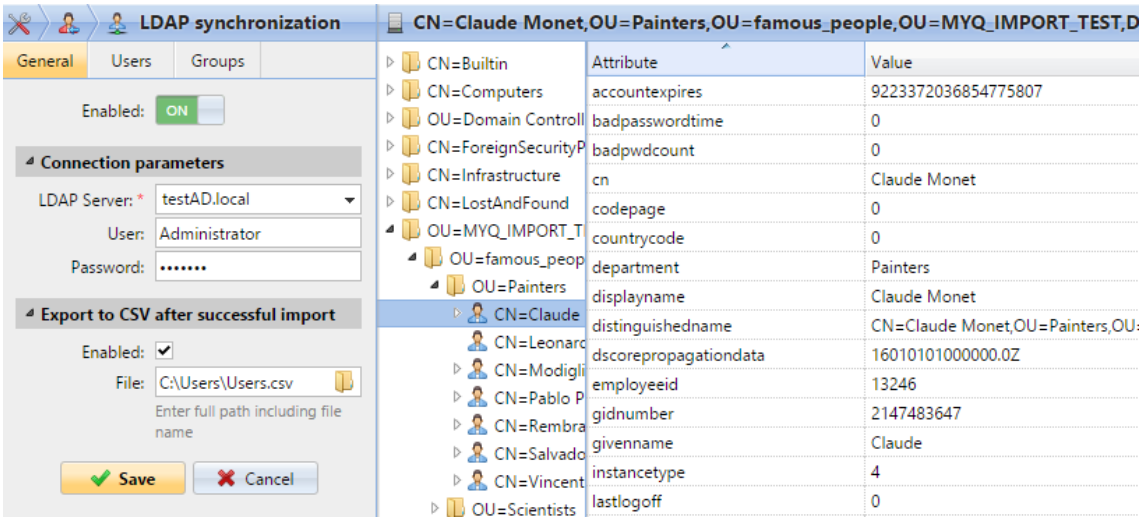


   In the drop-down, click **LDAP Server**. The LDAP synchronization properties panel opens. On the panel, you can set up the synchronization.
2. Set up the synchronization on the LDAP synchronization properties panel:
   Set up the synchronization on all three tabs on the LDAP synchronization properties panel. On each of the tabs, click **Save** after changing the settings. For information about the synchronization setup, see "Setting up the LDAP synchronization " on the next page.

3. Return to the **User synchronization** overview**:**
   The new LDAP synchronization is displayed on the list of synchronizations.

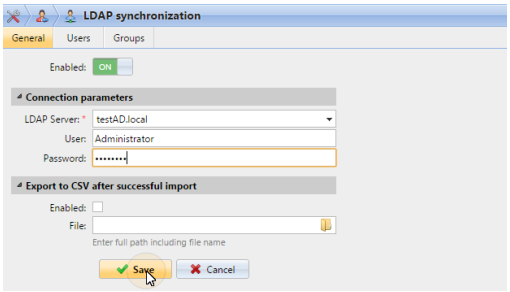
Setting up an LDAP synchronization

The setup consists of three parts: creating the synchronization on the **General** tab, setting import of users on the **Users** tab and setting import of groups on the **Groups** tab. You can swap between these tabs on the bar at the upper-left corner of the LDAP synchronization properties panel.



General Tab

On the **General** tab, set the general properties of the synchronization: enable or disable the synchronization, select the LDAP server domain, enter user name and password for access to the server, eventually select to export the imported users to a CSV file. See the list below for a description of individual settings.



- **Enabled**: Here you can enable or disable the synchronization.
- **LDAP Server**: Here you can select the domain that you want to synchronize from.
- **User**: Enter the user name for access to the LDAP domain server.
- **Password**: Enter the password for access to the LDAP domain server.
- **Enabled**: If you enable the **Export to CSV after successful import** option, MyQ creates a CSV file with the imported users after the synchronization.
- **File**: Select the folder where you want to save the created file.

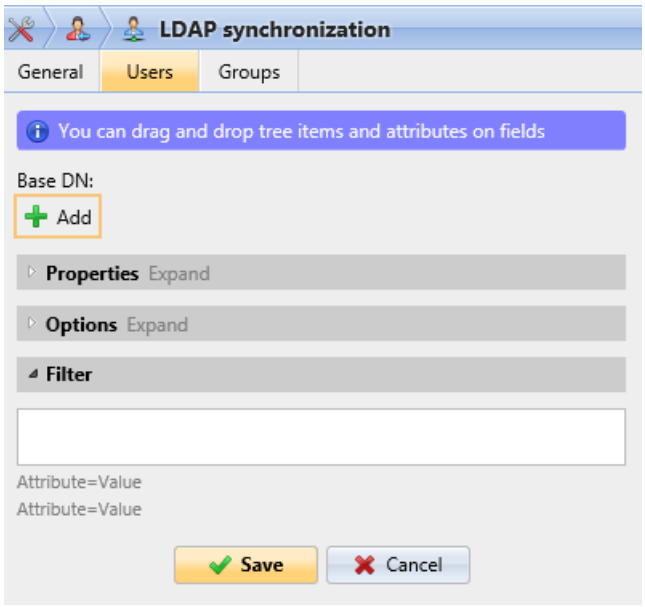
After you correctly set the connection parameters (LDAP server, username and password) and save the settings, the LDAP browser opens on the right side of the screen.

In the **User** setting, a sub-domain user account with enough rights can also be used for authentication, but the sub-domain has to be specified in the username.

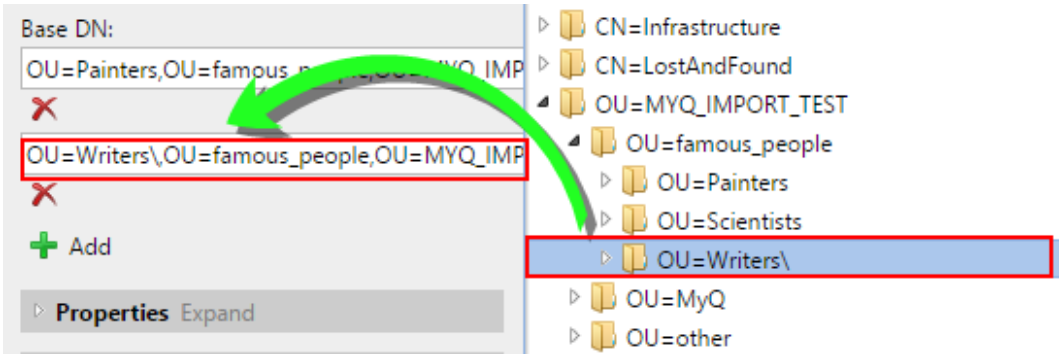
For example, the user *Administrator* connects to the *testAD.local* LDAP server, but their account is in the *cz.testAD.local* sub-domain. For successful authentication, the filled in username should be: *Administrator@cz.testAD.local*

Users Tab

On the **Users** tab, pick one or more base DNs (distinguished names) from which you import the users. In addition, you can assign user attributes from the LDAP server to user properties in MyQ and select additional options concerning the synchronization.



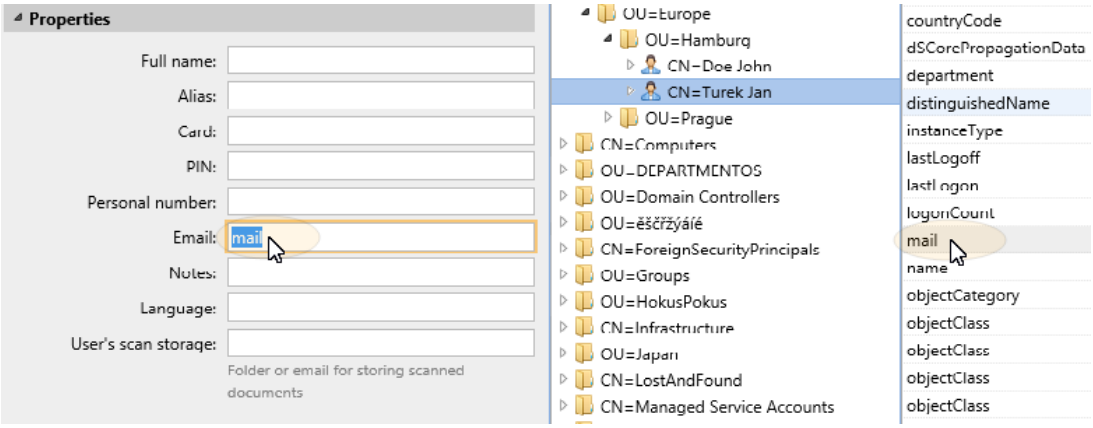
- **Base DN**: Here you can pick the base domain or domains from which you import users. Click **+Add** to add a text box for the new base DN, and then drag a group from the database browser and drop it in the text box. You can add multiple domains this way.



- **Properties**: These are the properties of every individual user. MyQ will automatically find and assign the user's **SAM account name** to **user name**, **cn** to **full name** and **mail** to **Email** (this applies to Active directory and OpenLDAP only). The user name property is the only one that cannot be changed. To assign an attribute to a property, write the name of the attribute in the property text box or drag it from the attributes of any individual user and drop it in the text box. The following properties support adding multiple values to them, separated by a semicolon (;):
  - **Alias**
  - **PIN**
  - **Card**

For example, in the **Alias** property, you could add *alias1;alias2;alias3*.

The AD attribute name should not contain the semicolon (;) character. If a semicolon is part of the attribute's name, that attribute will not be synchronized in MyQ.

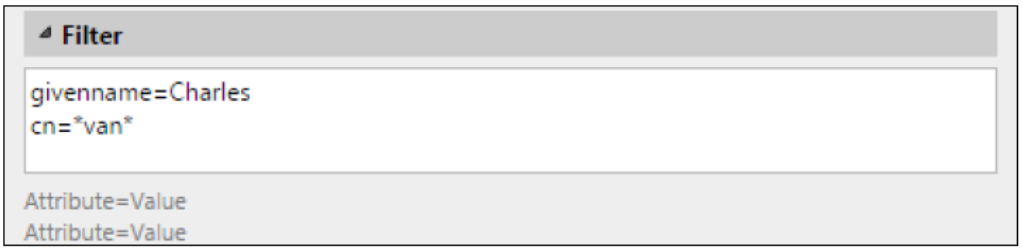


For assigning default languages to users, you have to use an attribute from the LDAP server that has the language abbreviations as its values. For example, you can create and use an attribute called **lang** with the values *en* for English, *hr* for Croatian, etc. The list of the abbreviations used in MyQ can be found here.

- **Options**: For a description of the common synchronization options, see User information and settings. The basic options that are common for both the synchronization from LDAP servers and for synchronization from CSV files are:
  - **Deactivate missing users**: If you select this option, MyQ deletes users that are imported from the current synchronization source and that are not in

the source anymore. To delete users that were added from different sources, select the **Ignore synchronization source** option together with this option.
    - **Add new users**: If you select this option, MyQ adds new users from the current synchronization source. If you do not select it, MyQ updates the user accounts of the users who are already in MyQ, but does not add any new users.
    - **Convert user name to lowercase**: Unlike some other systems that do not differ between two words with the same letters but different cases (such as "Pear", "pear"), MyQ is case sensitive. You can use the **Convert user name to lowercase** option to prevent creating multiple accounts for one user.
    - **Use authentication server**: If you select this option and a user logs in by entering their username and password, the credentials are not authenticated against the MyQ database, but instead against an LDAP or Radius server. If you synchronize users via LDAP, the source LDAP server is automatically assigned as
    the authentication server. If you synchronize users via CSV, you can select the authentication server from the list of predefined authentication servers.
    - **Pair by the personal number**: If you select this option, MyQ identifies users by their personal number instead of their user names. This way you can keep track of a single user with different names in different sources or a user whose name has changed for some reason. For example, if this option is activated and a username in LDAP changes from *cat.stevens* to *yusuf.islam*, MyQ does not create a new user account, but recognizes the old user by their personal number.
    - **Ignore synchronization source**: If this option is not selected, MyQ recognizes two users from different synchronization sources as two different entities. This can cause conflicts during synchronizations from multiple sources. If it is selected, MyQ ignores the synchronization sources and treats all users the same, regardless of their synchronization source. For example, if you run a synchronization and MyQ would import/update a user that has been already added from a different synchronization source, it does not update the user. Instead, it shows the message *The name/alias "X" is already used by the user "X"* among the synchronization results. After you select the **Ignore synchronization source** option, the user is updated by the latest synchronization.
    If you select this option together with the **Deactivate missing users** option, all users that were added from different sources and are not in the current synchronization source are deleted during the synchronization.
    - **Append the domain name to the username** (*username@domain.local*): With this option selected, the name of the domain can be retrieved from the MyQ username. The information about the domain may be needed for example, when scanning to users' home folders is used on an embedded terminal.
- **Filter**: You can filter the users import by specifying the values of attributes. Add the conditions in the form: **Attribute=Value**. Users with a different value on this attribute are not accepted and are filtered out of the import.
  For attributes where the values are strings, such as the **cn** attribute, you can use the ***** symbol to search for substrings. The symbol can be appended from

both sides. For example, if you add a cn=*in* condition, only users whose common name attribute contains "*in*" are accepted.
Add one condition per raw. Users are accepted if they satisfy at least one condition.

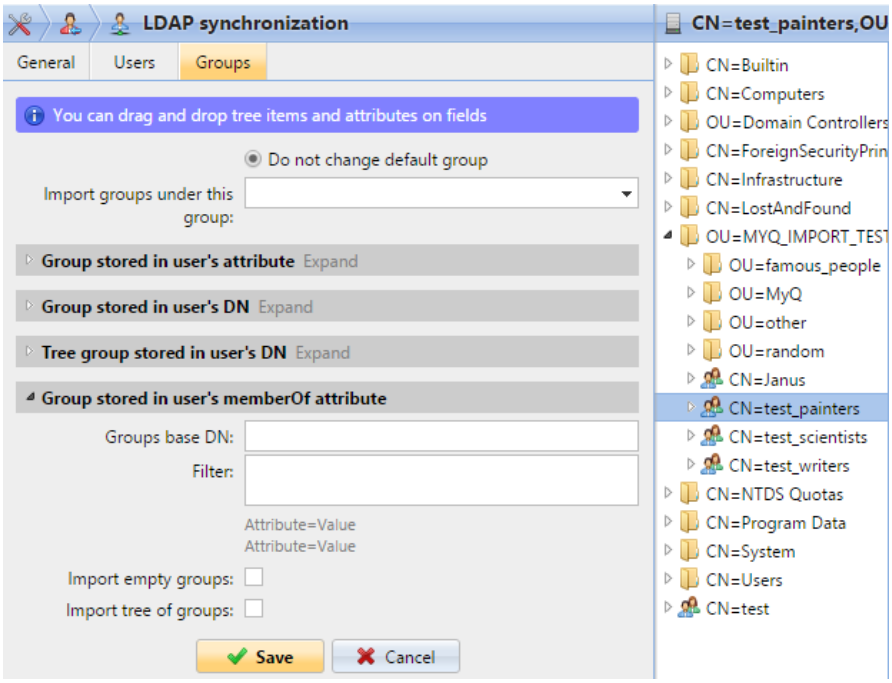



```
Updating users...
1: Charles Dickens added (Dickens |  |  |  | synch/test_writers)
2: Rembrandt van Rijn added (Rembrandt |  |  |  | synch/test_painters)
3: Vincent Van Gogh added (VanGogh |  |  |  | synch/test_painters)
0.063sec.

0.002 sec.
```

Groups Tab

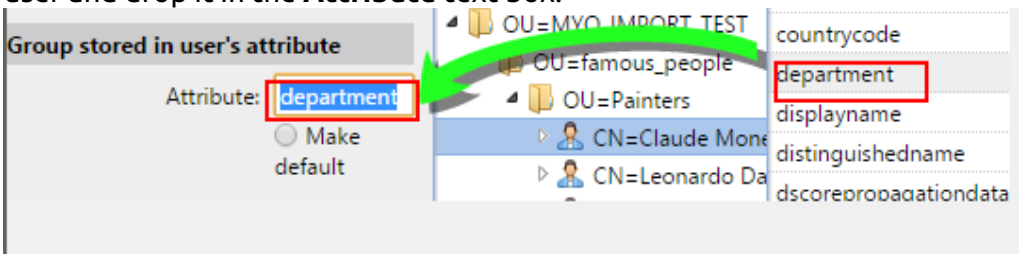
On this tab, you can import groups and the group structure from the LDAP source. There are four different ways of specifying which groups are imported. You can use multiple different methods together and by each method, you can create different groups of users. You can also select to import the groups under an existing group in MyQ.



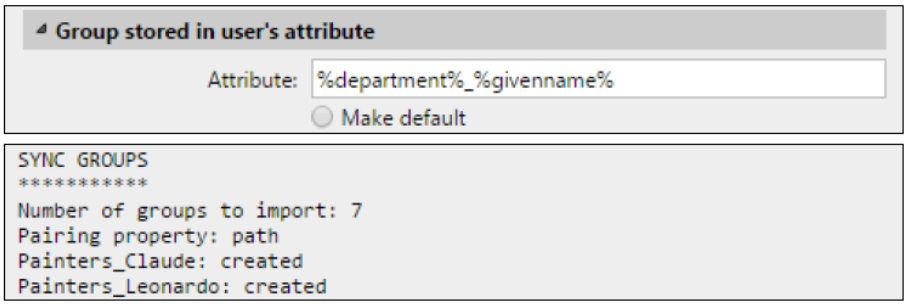
- **Do not change default group**: A user can be a member of multiple groups but all their prints, copies and scans are accounted to only one group: the default

(accounting) group of the user. If you select this option, the default group of the selected user does not change during the synchronization.

- **Import groups under this group**: You can select an existing group in MyQ under which you import the groups from the LDAP database.
- **Groups stored in user's attribute**:
  - **Attribute**: You can select this option if you want to use an attribute that defines groups in the LDAP database. To add it, type the name of the attribute in the property text box or drag the attribute from any individual user and drop it in the **Attribute** text box.



You can also create groups by combining multiple attributes. To create such groups, put each of the attributes between two percentage signs (%). For example, the combination of attributes *%attribute1%_%attribute 2%* , imports a new group named *value1_value2*.



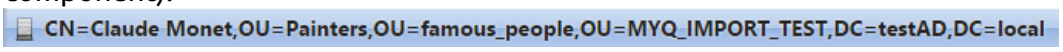
Furthermore, you can create tree structures of groups by separating the attributes with vertical bars. For example, the combination of attributes *%attribute1%|%attribute2%*, imports a group *value1*, and its sub-group *value 2*.

  - **Make default**: If you select this option, the group becomes the default group of the imported user.
- **Group stored in user's DN**:
  - **OU component index**: Here you can select a group by its OU (organizational unit) index among the DN components. The index is counted from right to left: the first OU group from the right has index *1*, the second from the right has index *2* and so on.

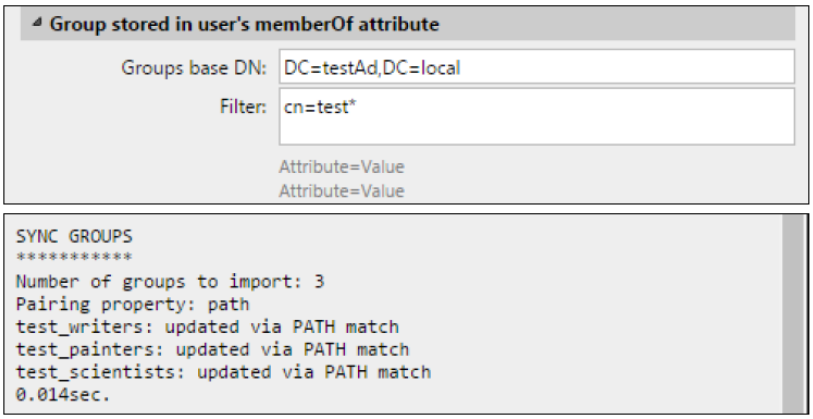
On the image above, there are three OU groups: *MYQ_IMPORT_TEST* has index *1* (as it is the first OU group from the right), *famous_people* has index *2* and *Painters* has index *3*. The other components are not OU and therefore have no index.

  - **Make default**: If you select this option, the group becomes the default group of the imported user.

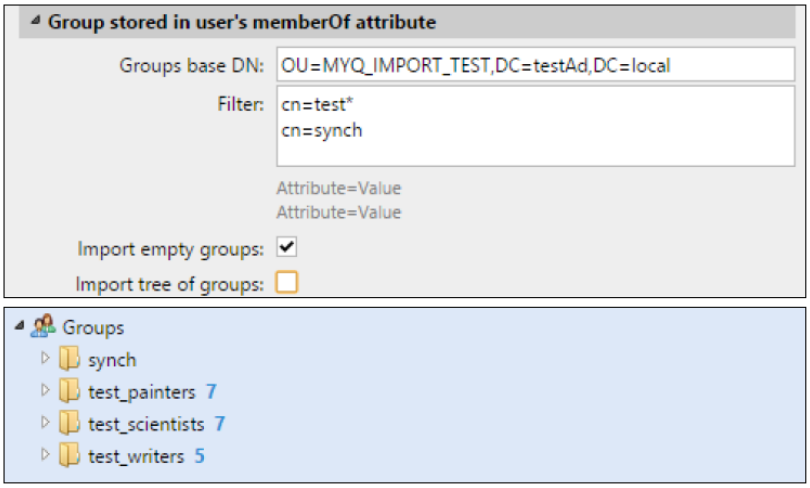
- **Tree group stored in user's DN**: Here you can import the whole tree structure of groups. You can restrict the import to any part of the structure by striping the DN components from the left and from the right. In the respective text boxes, enter the amount of components to be striped from the left and from the right side. You have to strip at least one component from the left (the user CN component) and one component from the right (the right-most DC component).

  On the image above, there are six components. If you strip one component from the left
  and one from the right, you import the following structure of groups: *testAD > MYQ_IMPORT_TEST > famous_people > Painters*. By stripping components from the left, you remove the groups from the bottom to the top of the structure. By stripping components from the right, you remove the groups from the top to the bottom of the structure.
  - **Make default**: If you select this option, the bottom group of the imported structure becomes the default group of the imported user.
- **Group stored in user's memberOf attribute**:
  - **Group base DN**: MyQ can import security and distribution groups stored in the user's **memberOf** attribute. The security groups are used to define access permissions granted to their members. Distribution groups can be used for sending emails to a group of users. To specify which groups should be taken into consideration during the import, you have to insert the groups base DN. MyQ imports only groups that are included in the base DN; other groups stored in the **memberOf** attribute are ignored. The group base DN does not have to be in the same organizational unit as the users base domain. If a user is member of more than one group on the LDAP server, all the groups are stored in the **memberOf** attribute. Therefore, the **Make default** option, which requires a single value, is not available for this method of import.
    To add the groups base DN, drag it from the database browser and drop it in the **Group base DN** text box.
  - **Filter**: You can filter this import by specifying the values of attributes. Add the conditions in the form: *Attribute=Value*. Groups with a different value on this attribute are not accepted and are filtered out of the import. You can use the ***** symbol to search for substrings. The symbol can be appended from both sides. For example, if you add a *cn=*in** condition, only users whose common name attribute contains "*in*" are accepted. You can add one condition per raw. Groups are accepted if they satisfy at least one condition.



- **Import empty groups**: If you select this option, groups from the **Group base DN** are imported even if there is no user having them in their **memberOf** attribute.
- **Import tree of groups**: If you select this option, the whole tree structure is imported. Otherwise all groups are added separately; not as a part of a tree structure.



8.6.3 User synchronization from CSV files

To synchronize users from a CSV file, you have to create a new CSV synchronization on the **User Synchronization** settings tab and on the synchronization properties panel, add the source file and set properties of the synchronization.

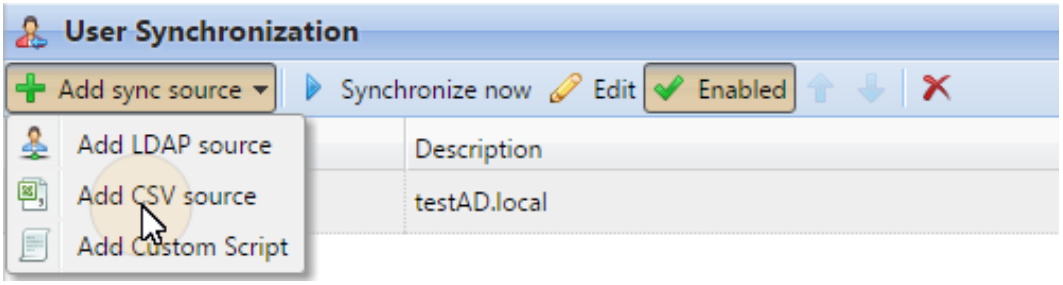
After the synchronization is set up, you can either manually run it on the **User Synchronization** settings tab or set it as a regular task on the **Task Scheduler** settings tab.

Creating a new CSV synchronization

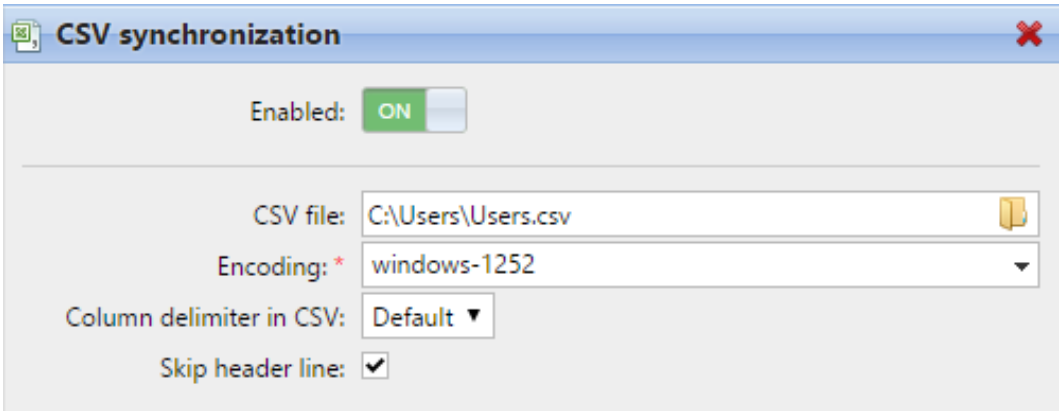
To create a new synchronization:

1. **Open the new synchronization**: On the bar at the top of the **User synchronization** settings tab, click **+Add Sync source**, and then click **+Add**

CSV source. The CSV synchronization properties panel appears on the right side of the screen.



2. **Set up the synchronization**: On the CSV synchronization properties panel, set the **path** to the CSV file and configure the synchronization. For information about the synchronization options, see "CSV synchronization setup options" below.



3. **Save** the setup.

CSV synchronization setup options

These are the CSV synchronization setup options:

- **Enabled**: Here you can enable or disable the synchronization.
- **CSV file**: Here you can set the path to the CSV file on the MyQ server.
- **Encoding**: Select the encoding that is used in the CSV file. The default value depends on the OS settings of the computer where you access the MyQ Web Interface on.
- **Column delimiter in CSV**: Select the delimiter that is used in the CSV file. If you select the **Default** option, MyQ scans for the delimiter set on the **Column delimiter in CSV** drop-down list box on the **General** settings tab.
- **Skip header line**: In case the CSV file contain a header line, you need to select this option and skip the first line of the file during the synchronization. All lists of users exported from MyQ contain the header line.
- **Import groups under this group**: Here you can select an existing group in MyQ under which you import the groups from the CSV file.
- **Synchronization source**: Here you can specify a different source than the CSV to be marked as the synchronization source by the MyQ system. For example, you can insert an LDAP server domain.

- **Ignore synchronization source**: If you select this option together with the **Deactivate missing users option**, all users that are not in the current synchronization source are deleted.
- **Use authentication server**: If you select this option, an LDAP or Radius server is used for the authentication of the imported users.
- **Authentication server**: Here you can select the LDAP or Radius domain for the user authentication.
- **Deactivate missing users**: If you select this option, MyQ deletes users that are imported from the current synchronization source and that are not in the source anymore. To delete users that were added from different sources, select the **Ignore synchronization source** option together with this option.
- **Add new users**: If you select this option, MyQ adds new users from the current synchronization source.
- **Pair users by personal number**: If you select this option, multiple accounts with a single personal number are paired.
- **Convert user name to lowercase**: If you select this option, all letters in user names are converted to lowercase.
- **Cards/PIN/Groups/Delegates**: In each of the mandatory drop-down boxes, you can select from these synchronization options for the respective parameter (Cards, PIN, Groups):
  - **Do not synchronize**: The value of the respective parameter in MyQ is not changed.
  - **Full synchronization**: The value of the respective parameter in MyQ is always replaced by the value in the CSV file. If the value in the source file is empty, the value in MyQ is erased.
  - **Synchronize if not empty**: If the respective field in the CSV file is not empty, the parameter value in MyQ is replaced by the value in the CSV file. Otherwise, the parameter value remains unchanged. This is the default setting.
  - **Add new**: If the parameter is already set in MyQ, it is not replaced. Only new values are added.

CSV file syntax

In the list below, you can find information about individual fields of the CSV file.

A single word or a plain number can be put in the CSV fields as they are, while more complex strings, such as full name or email address, have to be bounded by quotes.

- **FULLNAME**: Name of the user in double quotation marks, for example "*Thomas Pineapple*".
- **USERNAME_ALIASES**: Login of the user and eventually their aliases. The login should be the same as the user's domain login name, for example *Tom*. When you import multiple aliases, separate them with commas, for example "*Tom,Tomy,Apple*".
- **EMAIL**: Email of the user, for example "*t.pinapple@domain.com*".
- **CARDS**: Number of the user's authentication card/chip. It has to be inserted in the form in which it is read by the card/chip reader, for example *7E9700C9*.
- **GROUPS**: Here you can add user groups. You can import a whole branch of the groups tree structure. The groups on the imported branch have to be

separated by vertical bars. If you want to import multiple groups (or groups tree branches), separate them by commas. For example, if you add two branches separated by a comma: "*Activities|Outdoor|Swimming,Activities|Outdoor|Birdwatching*", MyQ
imports a single parent group *Activities* with a single child group *Outdoor*, with two
child groups *Swimming* and *Birdwatching*
(*Activities>Outdoor>Swimming,Birdwatching*). Commas and vertical bars cannot be used in group names as they are used as group delimiters.

- **CODE**: The personal number of the user. The ID number must be unique for each user. This parameter is very useful when using multiple sync sources.
- **SCANSTORAGE**: The folder or email where the user wants their scans to be sent to, for example "*\Users\Tomy*".
- **PIN**: You can define one or more PINs to be assigned to users within the synchronization process. It is not absolutely necessary, as PINs may also be generated later within the setup of the user account. The PINs should be in the hashed MD5 format, for example *14BFA6BB14875E4*.
- **MANAGED_GROUPS**: You can make the user the manager of a particular group by adding the group or path to the group here in the way in which you would import the group. If you want the user to be a manager of a child group, enter a whole branch ending with this group. For example, enter the branch "*Activities|Outdoor|Swimming*" to make the user a manager of the *Swimming* group. If there are no parents of the group in the group structure, enter just the group name, e.g. *Activities*. Commas and vertical bars cannot be used in group names as they are used as group delimiters.
- **AUTHSERVER**: In this field you may define the domain for user authentication, for example "*testAD.local*".
- **PHONE**: The user's phone number, for example *080008020*.
- **LANG**: Default language of the user, for example *en*.
- **PWD**: If you want to use the MyQ password, insert the password in the hashed MD5 format, for example *18BFA6BB14875E8*. If you are using a different authentication server (i.e. LDAP server), you can leave it empty.
- **EXTID**: EXTID is an internal MyQ parameter. This field has to be left empty.
- **DELEGATES**: For each user, you can import any number of delegates. If you import multiple delegates, separate them with commas, for example "*Carol,Kohei,Eliot*".

```
“FULLNAME”; ”USERNAME_ALIASES”; “EMAIL”; “CARDS”; “GROUPS”; “CODE”;
“SCANSTORAGE”; “PIN”; “MANAGED_GROUPS”; “AUTHSERVER”; “PHONE”;
“LANG”; “PWD”; “EXTID”; “DELEGATES”

“Thomas Pineapple”; “Tom, Tommy, Apple”; “t.pinapple@domain.com”;
7E9700C9;”Imported Users, Activities|Outdoor|Swimming,
Activities|Outdoor|Birdwatching”;22212;”\\Users\Tomy”;
14BFA6BB14875E4;Birdwatching;testAD.local;080008020;en; 18BFA6BB14875E8; ;“Carol,Kohei,Eliot”;
```

8.6.4 User synchronization from Azure Active Directory

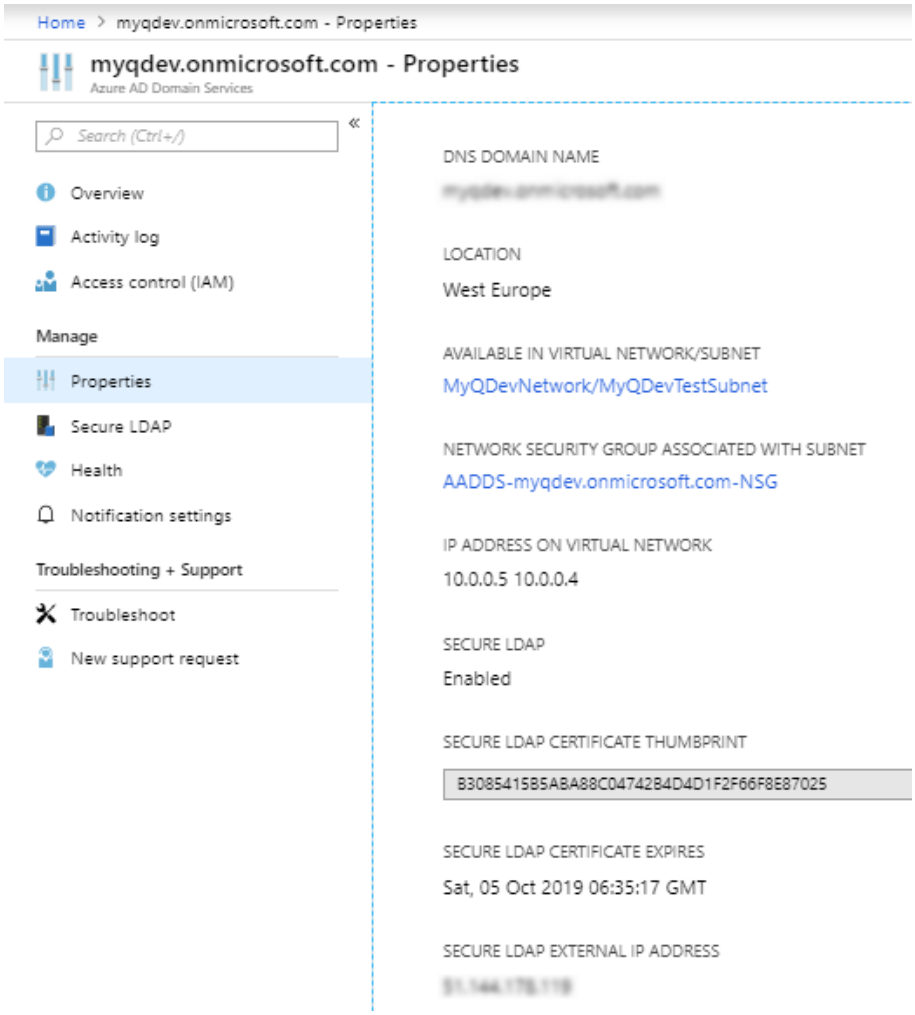
Azure Active Directory is a service accessed from the Microsoft Azure Portal. It has to be enabled and configured in Azure Active Directory Domain Services.

The activation and setup of the service are described in the following Microsoft guides:

- To enable and configure Azure Active Directory Domain Services: https://docs.microsoft.com/en-us/azure/active-directory-domain-services/tutorial-create-instance
- Configure Azure AD Domain Servers to use SLDAP: https://docs.microsoft.com/en-us/azure/active-directory-domain-services/tutorial-configure-ldaps

After you activate the Azure Active Directory, you need to add it to MyQ and set up the synchronization in the standard way (see User Import and synchronization). When setting up the **Authentication server** in MyQ, you need to make sure that the LDAP server parameters are set to the following values:

- **Domain** = *DNS DOMAIN NAME* of the Azure AD Domain
- **Security**: *SSL*
- **Server** = *SECURE LDAP EXTERNAL IP ADDRESS* of the Azure AD Domain



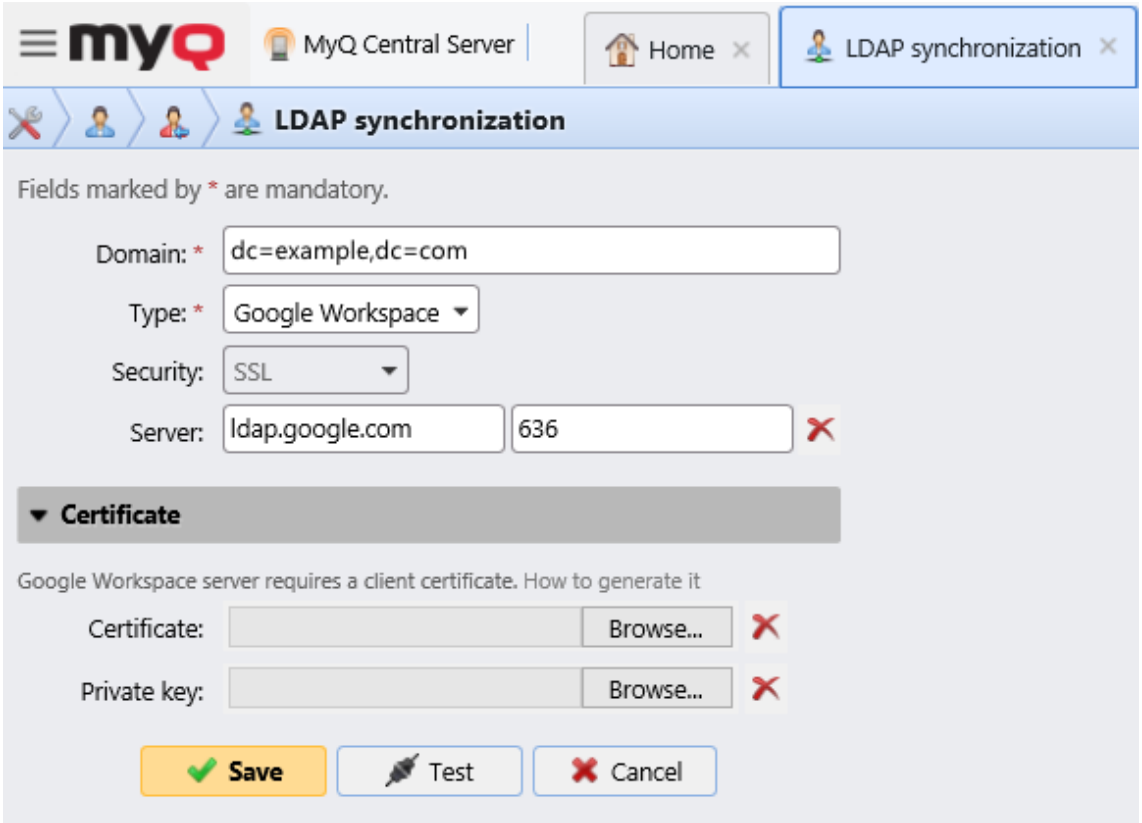
8.6.5 User synchronization from Google Workspace

Google Workspace (previously named G-Suite), a set of cloud computing, productivity and collaboration tools, software and products developed by Google Cloud, can be used with MyQ Central Server (versions 8.0+). For setting up the connection to MyQ follow the short procedure below.

- Go to https://support.google.com/a/answer/9048541?hl=en to configure your Google Workspace Environment for working with MyQ as an LDAP Client.
  - Turn service status on or off
  - Edit access permissions
- Go to https://support.google.com/a/answer/9048541#generate-certificateauthentication to get a private key and a certificate.
  - Generate certificate authentication
  - Generate access credentials.
    The downloaded file is a **zip* file containing the private key and the certificate you need for connecting to MyQ.
- After the above procedure, you need to set up the user synchronization from Google Workspace in the standard way. When setting up the **Authentication**

server in MyQ, you need to make sure that the LDAP server parameters are set to the following values:

- **Domain** - add your Google Workspace domain; the name of the domain component must be used (for example, **dc=example,dc=com**)
- **Type** - select *Google Workspace* from the drop-down
- **Certificate** - click **Add** and browse to upload the downloaded certificate file (*.crt*)
- **Private key** - click **Add** and browse to upload the downloaded private key file (*.key*)



Find out more about Google Workspace's Secure LDAP scema.

8.6.6 Using external authentication servers

In addition to the internal MyQ authentication methods (password, PIN or ID card), you can use two types of external authentication servers: LDAP and Radius.

With the two external methods, MyQ does not use the internal MyQ PIN or password for user authentication, but instead authenticates users against an LDAP or Radius server. After the user enters their credentials during the authentication, the credentials are sent to be verified directly by the external server. If there is no online connection with the LDAP or Radius server, users cannot log in.

To enable this method of authentication, you have to take two steps:

1. register the external authentication servers in MyQ
2. select to use them for user authentication

To register external authentication servers in MyQ, see Authentication Servers Settings.

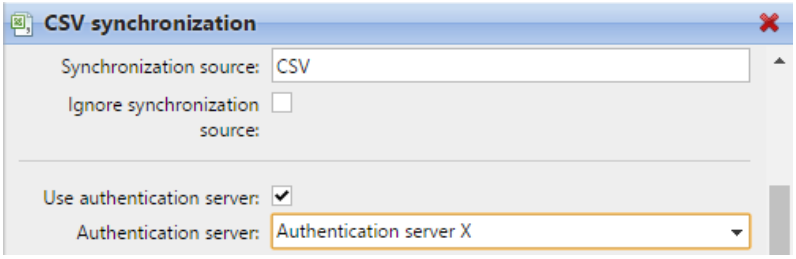
Selecting to use the registered external authentication servers for user authentication, can be done either automatically during the user import from an LDAP server or a CSV file, or manually on the properties panels of individual users.

Automatically selecting the external authentication option

Importing users from a CSV file

When you import users from a CSV file, you have two options of selecting the authentication server for the users:

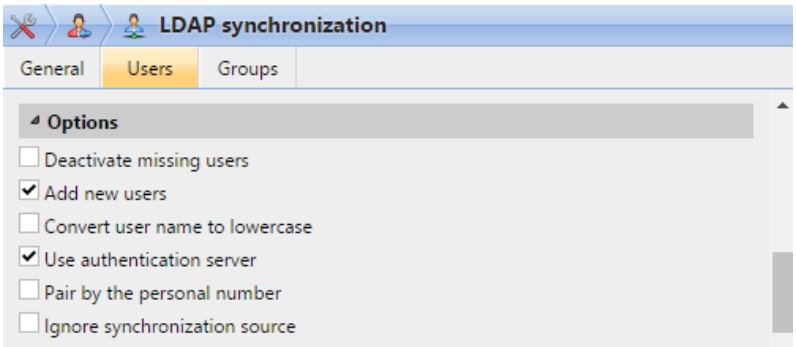
1. You can select the **Use authentication server** option and select the server during the synchronization setup on the synchronization properties panel.
2. You can specify the **Authentication server** for a particular user in the **AUTHSERVER** field of the CSV file. If the field is not empty, its value has priority over the value selected on the properties panel.



For more information about importing users from CSV files, see User synchronization from CSV files.

Importing users from an LDAP server

During the users import from an LDAP server, you can select the **Use authentication server option**, to use the current synchronization source server for users authentication. For information about importing users from LDAP servers, see User synchronization from LDAP servers.



Unlike the **Use authentication server** setting for the import from a CSV file, which allows you to select the authentication server, the **Use authentication server** setting here gives you a single option — users will be authenticated against the LDAP server where they are imported from.

Manually selecting the external authentication option

To manually select the external authentication option

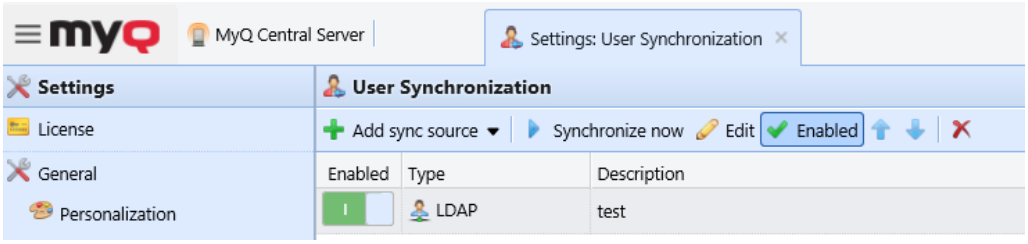
1. Open the **Users** main tab and double-click the user. The user's properties panel opens on the right side of the screen.
2. On the panel, select the **Use authentication server** option. The Authentication server setting becomes available.
3. On the Authentication server drop-down, select the server you want to use, and then click **Save** at the bottom of the panel.

8.6.7 Manual and scheduled synchronization run

The synchronization can be manually run on the **User Synchronization** tab of the MyQ Web Interface, or it can be set as a scheduled task on the **Task Scheduler** tab.

Manual synchronization run

On the **User synchronization** settings tab, enable the synchronizations that you want to run, and then click **Synchronize now** on the bar at the top of the tab.

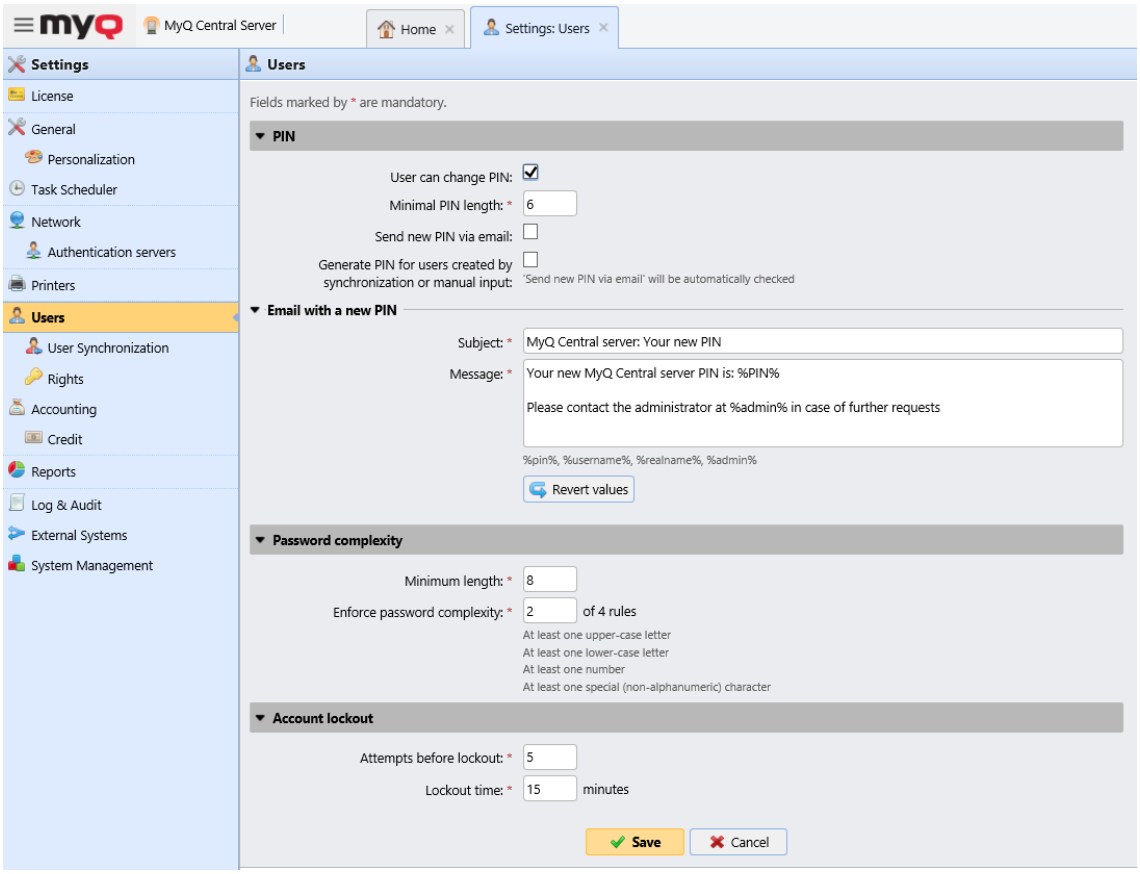


Scheduled synchronization run

On the **Task scheduler** settings tab, you can setup a scheduled run of the synchronization. For more information about this option, see Task scheduler.

8.7 Users Settings

In the **Users** settings tab (**MyQ, Settings, Users**), the MyQ administrator can manage the MyQ users **PIN** options, the MyQ accounts **Password complexity**, and the MyQ **Account lockout** options.



PIN section

With the **User can change PIN** option selected, the users can generate a new PIN on their account on the MyQ Web User interface, by clicking **Generate PIN** on the **Home** screen of their user account.

The **Minimal PIN length** option determines the mandatory minimum PIN length. The number can be set between *4* and *16*. If the administrator creates the PIN manually, it cannot be shorter than the value set in this field. If the PIN is generated by the system, it cannot be shorter than the value in this field, and also cannot be shorter than the minimal value enforced by the number of users, described below.

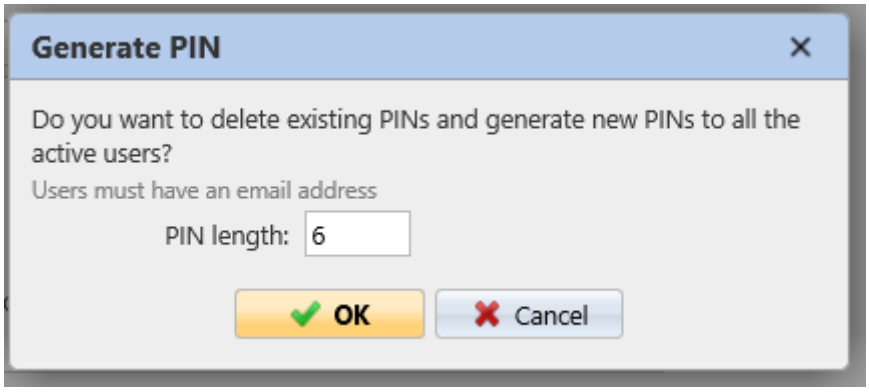
The required minimal PIN length that depends on the number of MyQ users is:

- < 1000 — 4-digit pin is required
- 1000 - 10 000 — 5-digit pin is required
- 10 000 - 100 000 — 6-digit pin is required

The required minimal length lowers the chance of randomly guessing the PIN. Also, trivial PINs, such as *1111* or *22222*, are excluded from the automatic PIN generation process.

If the administrator increases the **Minimal PIN length** value, a pop-up will prompt them to generate new PINs for all the active users. If the administrator chooses to generate new PINs, the old PINs will be deleted and new PINs will be automatically

sent via email to all the active users. Otherwise, the old, potentially shorter PINs will be kept.



With the **Generate PIN for users created in synchronization or manual input** option selected:

- A new PIN is generated for new, manually created users.
  - A manually created user without an email address will not receive the new PIN via email.
- During **User synchronization**, a new PIN is generated for every user that does not already have a PIN.
  - PINs are generated only for users with an email address. Users without an email address are skipped.

With the **Send new PIN via email** option selected, users are sent an email informing them about the new PIN every time a new PIN is generated. This is automatically checked if the above option (**Generate PIN for users created in synchronization or manual input**) is selected.

There is also an email template you can use for informing the users about their new PIN (**Email with a new PIN**). The template is editable and the values can be reset to their defaults if needed, by clicking **Revert values**.

Password Complexity section

In this section, the MyQ administrator manages the password complexity of MyQ users accounts.

- **Minimum length** - set the minimum character length for the password, in range *1-100* (*8* by default).
- **Enforce password complexity** - set how many of the four password complexity rules are to be enforced (*2* by default):
  - At least one upper-case letter
  - At least one lower-case letter
  - At least one number
  - At least one special (non-alphanumeric) character

Account lockout section

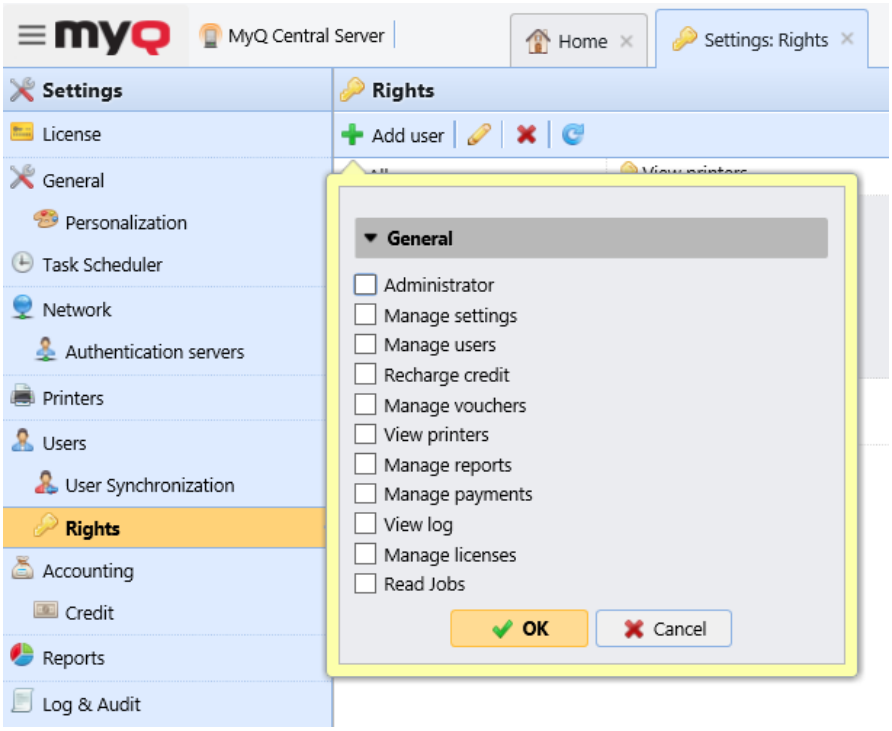
In this section, the MyQ administrator can set the number of failed login **Attempts before lockout**, and the **Lockout time** (in minutes).

8.8 Rights

On the **Rights** settings tab, you can provide users or groups of users with administrator rights or provide them with rights to run one or more of the MyQ agendas: they can perform actions, change settings or see information that are inaccessible under a standard user account. On the tab, you can add users or groups and provide them with the rights.

To add a new user or a group of users to the list on the **Rights** settings tab:

1. On the **Rights** settings tab, click **+Add User**. The Select user or group dialog box appears.
2. In the dialog box, select the user (or group) and click **OK**. The new user (or group) properties panel opens on the left side of the screen.
3. Select the user (or group) rights.
4. Click **OK**. The user (or group) appears on the list on the **Rights** settings tab.



To edit a user's rights:

Double-click the user (or the group) on the list of users and groups on the **Rights** settings tab. The panel appears on the left side of the screen.

In the user rights panel, under the **General** section, you can change the user's rights. These rights are described below:

- **Administrator** - The user is provided with administrator (*admin) rights.
- **Manage settings** - The user gets access to management of all settings on the **Settings** tab of the MyQ Web interface except for the settings on the **Rights** tab.
- **Manage users** - The user gets access to the **Users** main tab, the **Users** settings tab and the **Policies** settings tab, can add users and change their settings and

rights. The user also gets access to the **Accounting** settings tab, but cannot change the settings. Access to the **Credit** settings tab is granted, but the user is only allowed to change Users and Groups
- **Recharge credit** - The user gets access to the **Recharge credit** main tab.
- **Manage vouchers** - The user can get access to the **Voucher Batches** main tab.
- **View printers** - The user gets access to the **Printers** main tab, to monitor printers.
- **Manage reports** - The user can manage all reports.
- **Manage payments** - The user gets access to the **Payments** main tab.
- **View log** - The user can view the MyQ log.
- **Manage licenses** - The user can view and manage MyQ licenses on the **License** settings tab.
- **Read Jobs** - The user can see other users' jobs.
- **Delete Cards** - The user has the **Delete all ID cards** button available on their User profile widget in the MyQ web UI and they are able to delete all their ID cards.

9 Credit

With the credit accounting feature activated, users can copy, print, and scan only if they have enough credit on their account in MyQ. Printing is allowed only for print jobs that do not exceed the credit, and copying is terminated immediately after the credit is exceeded. The credit system can be restricted to selected users and groups.

Users can view the current amount of credit on their accounts on the MyQ Web Interface and in the MyQ mobile application. If a printing device is equipped with an embedded terminal or a reader with an LCD display, the logged users check the current state of their credit there and are allowed to select only those jobs that do not exceed their credit.

Based on the setup and properties of the printing environment, a variety of recharge methods may be employed. The MyQ administrator can manage the credit on the MyQ Web Interface, and also provide the users with the option to recharge the credit themselves on embedded terminals, on recharging terminals, in the MyQ mobile application, via recharging vouchers, or via a third-party payment method.

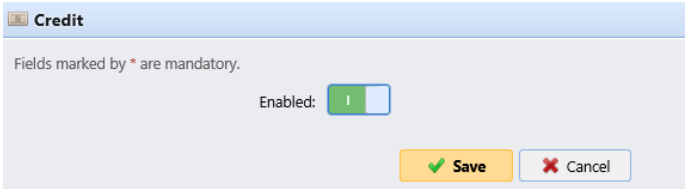
The MyQ Administrator (and authorized MyQ users) can also reset the credit to a specific amount on the MyQ Web Interface.

9.1 Activation and setup

The activation and setup of credit accounting is managed on the **Credit** settings tab (**MyQ, Settings, Credit**).

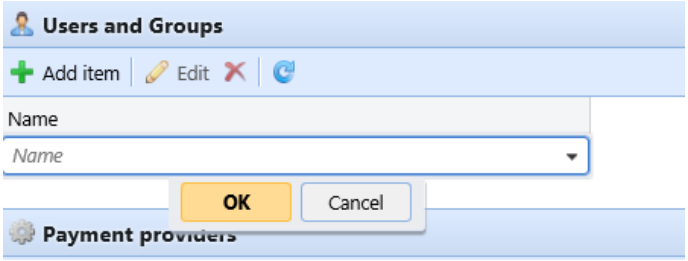
To set up credit accounting:

Enable credit accounting on the **Credit** settings tab:



Activate credit for a user or for a group of users:

- Under **Users and Groups**, click **+Add item**. A new item appears on the list of users and groups on the **Credit** settings tab. Select a **Name** (user or group) from the drop-down.
- Click **OK** to save the settings.

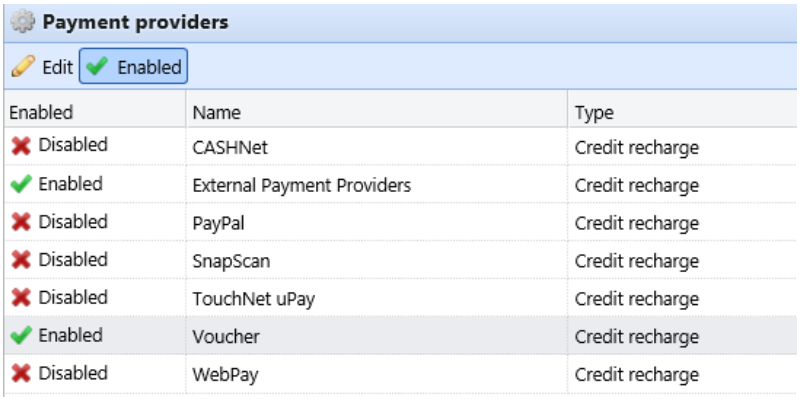


Enable/disable methods of payment for credit recharge

Available payment methods:

- CASHNet
- External Payment Provider
- PayPal
- SnapScan
- TouchNet uPay
- Voucher
- WebPay

To enable any of these options (if disabled), select it in the **Payment providers** section, and then click **Enabled** on the bar at the top of the section (or right-click the item, and then click **Enabled** on the shortcut menu).



9.2 Manual Credit recharge

The administrator (and users authorized to recharge credit) can manually recharge the credit of each user to a specific value. This can be done either on the **Credit Statement** main tab, or on the **Users** main tab in the MyQ Web administrator interface.

On the **Credit Statement tab**, you first open the credit recharge action, and subsequently select the users and groups to recharge credit.

On the **Users tab**, first select the users or group, and then recharge their credit.

Users' credit can be reduced by entering a negative number in the recharge credit dialog box. By entering *-100*, the credit is decreased by 100.

9.2.1 Providing users with rights to recharge credit

By default, the only person who can recharge credit is the administrator. However, the administrator can authorize a MyQ user to recharge credit as well. The user needs to be provided with the rights to access the credit settings and to recharge credit. This is done on the **Rights** settings tab of the MyQ Web Interface.

To authorize a user to recharge credit on the **Credit Statement** tab, you need to provide them with the right to **Recharge credit**.

To authorize a user to recharge credit on the **Users** tab, you need to provide them with the right to **Recharge credit**, and the right to **Manage Users**.

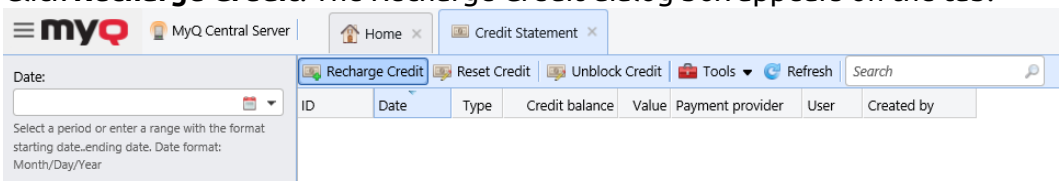
The authorized user can then recharge credit on their MyQ Web interface in the same way as the MyQ administrator.

9.2.2 Recharging credit on the Credit Statement tab

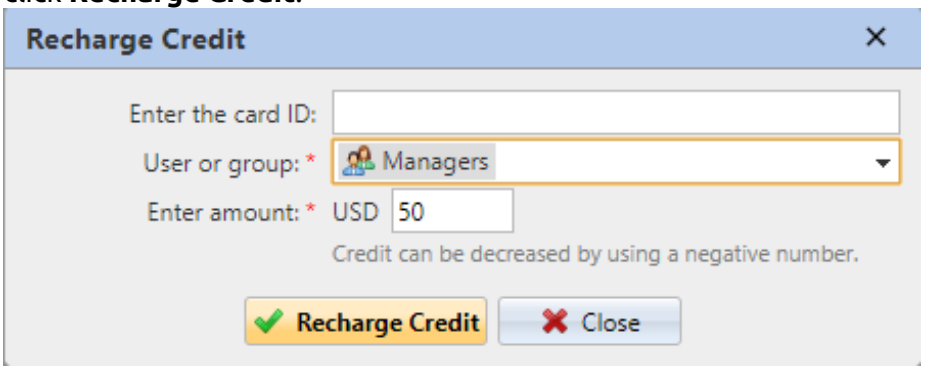
On the **Credit Statement** tab, you can overview the changes in the credit balance of MyQ users, and also recharge credit to users and groups. To open the tab on the MyQ Web administrator interface, go to **MyQ, Credit Statement**.

To recharge credit to users or groups:

1. Click **Recharge Credit**. The Recharge Credit dialog box appears on the tab.



2. In the dialog box, either **Enter the card ID** of a user card, or select the **User or group** to recharge the credit to, then **Enter amount** to be recharged, and lastly click **Recharge Credit**.



You can also **Reset Credit** and **Unblock Credit** to users or groups, by clicking the relevant button, selecting the user or group, and the credit amount.

Depending on the administrator and device settings, when the server blocks credit on the account, it temporarily decreases the available balance until the user session finishes. This prevents spending the same credit multiple times resulting in a negative balance. Credit may also be blocked when there is a server or account failure while the user's session is active.

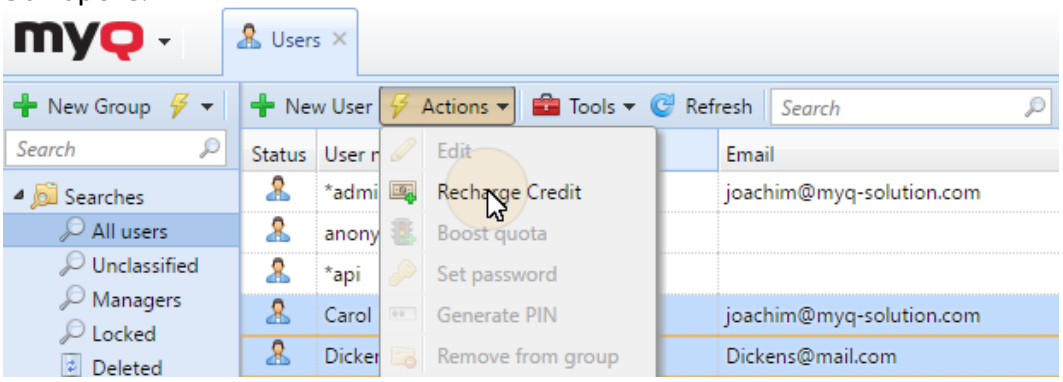
9.2.3 Recharging credit on the Users main tab

To open the **Users** main tab on the MyQ Web administrator interface, go to **MyQ, Users**.

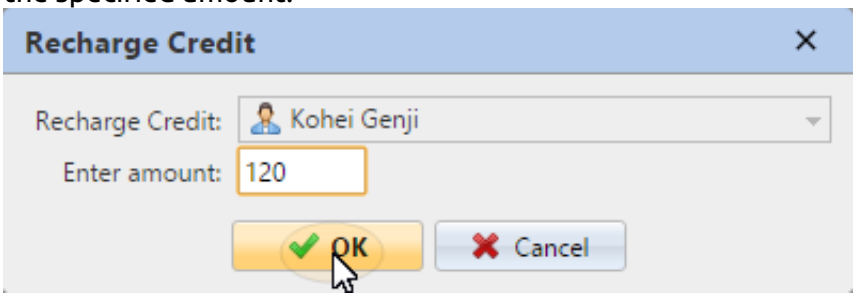
To recharge credit to selected users:

1. Select the users.

2. Click **Actions**.
3. Click **Recharge Credit** in the **Actions** drop-down. The Recharge Credit dialog box opens.

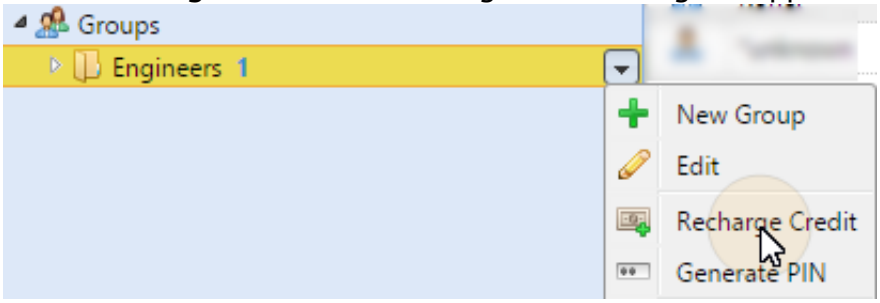


4. **Enter amount** to be recharged, and then click **OK**. The credit is increased by the specified amount.



To recharge credit to a group of users:

1. In the panel on the left side of the **Users** main tab, right-click the group, and select **Recharge Credit**. The Recharge Credit dialog box appears.



2. In the dialog box, **Enter amount** to be recharged and click **OK**. The credit is increased by the specified amount.

9.3 Recharging credit via CASHNet

The **CASHNet** payment gate enables customers to directly pay for their credit via a payment card or via a digital wallet.

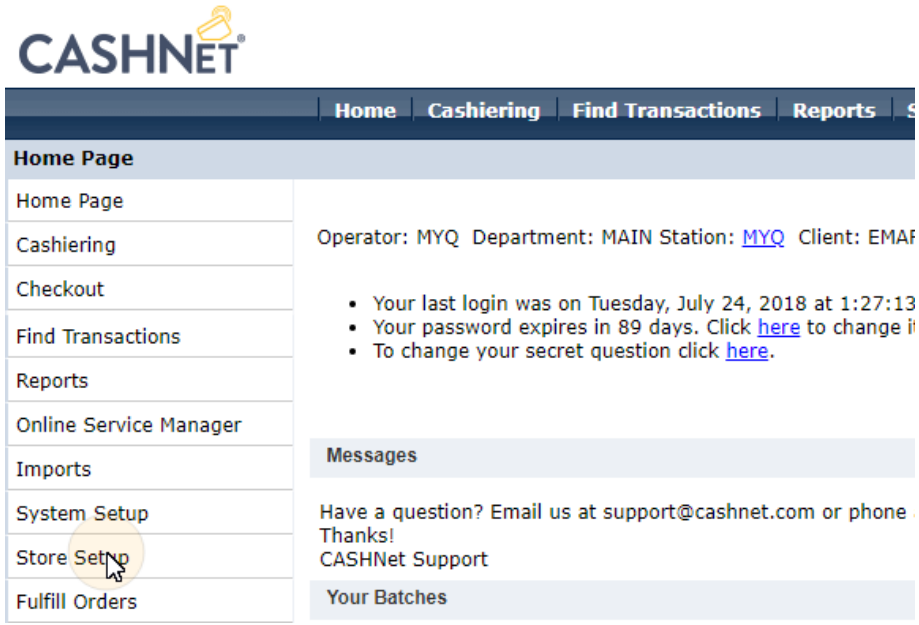
To be able to integrate the **CASHNet** payment gate into MyQ, you need to have a **Checkout store** created by the service provider. For the correct setup and MyQ integration, you need to save the following data:

- **Operator ID**, **Password**, **Station**, and **Client Code** are necessary for logging in to the CASHNet Web User Interface.
- **Merchant name**, **Station**, **Store URL**, and **Item code** of the **Checkout store** are necessary for the integration into MyQ.

9.3.1 Setting up CASHNet

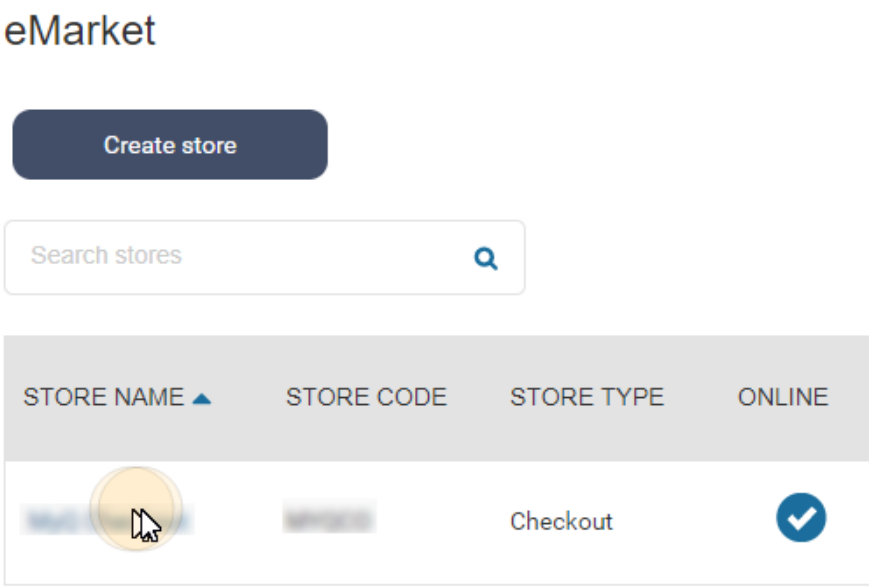
Set up the eMarket store on the CASHNet Web User Interface

1. Log in to the **CASHNet** Web User Interface.
2. Open the **Store Setup** tab.

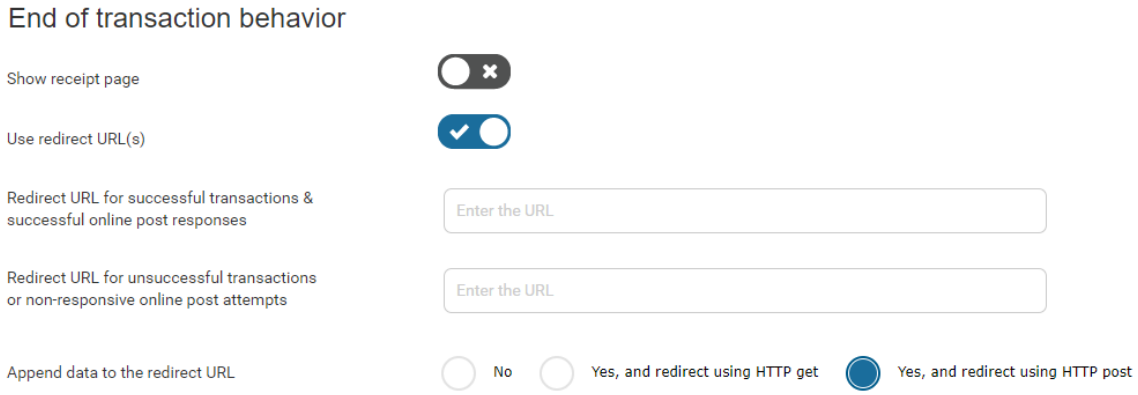


3. On the tab, click the dark blue button with the text **Click here to use new eMarket store setup for Storefronts&Checkouts**. The eMarket store setup page opens.

4. On the page, double-click the **Checkout store** button to open its setup page.



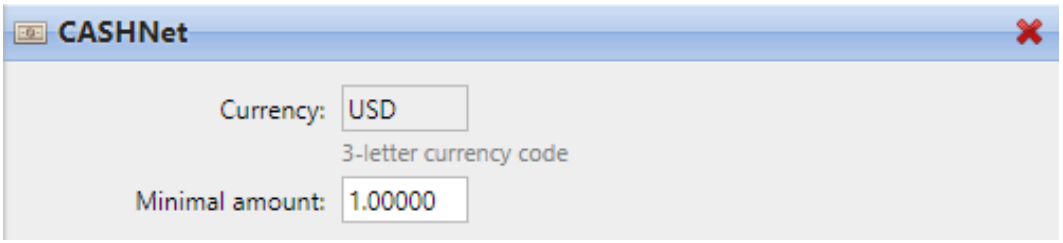
5. On the Checkout setup page, under **End of transaction behavior**, configure the following options:
   a. **Show receipt page**: *disable*
   b. **Use redirect URL(s)**: *enable*
   c. **Redirect URL for successful transactions & successful online post responses**: leave empty
   d. **Redirect URL for unsuccessful transactions or non-responsive online post attempts**: leave empty
   e. **Append data to the redirect URL**: set to *Yes, and redirect using HTTP post*



You can now leave the CASHNet Web User Interface.

Set up the CASHNet payment option on the MyQ Web Interface

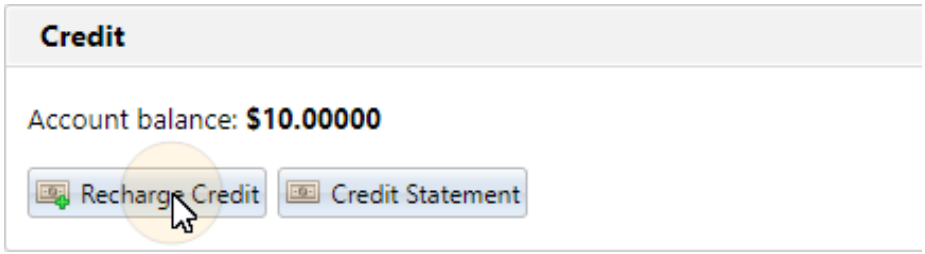
1. Open the **Credit** settings tab (**MyQ, Settings, Credit**).
2. On the tab, under **Payment providers**, double-click the **CASHNet** payment provider (or right-click the **CASHNet** payment provider, and then click **Edit** on the shortcut menu). The **CASHNet** properties panel opens on the right side of the tab.
3. The value of the **Currency** setting corresponds to the currency set on the **General** settings tab of the MyQ Web Interface.
4. Type the **Minimal amount** that users will have to pay when they buy credit.



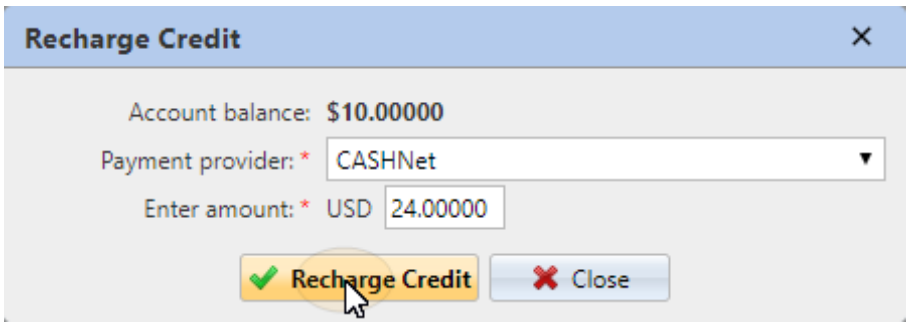
5. Enter the **Merchant name**, **Station**, **Store URL**, and **Item Code** of the Checkout store, and then click **Save**.

9.3.2 Recharging credit via CASHNet on the user's account on the MyQ Web Interface

First of all, the user needs to log in to their account on the MyQ Web Interface. To recharge the credit there, the user has to click **Recharge credit** under **Credit**. The Recharge credit dialog appears.



In the dialog box, the user has to select the **CASHNet** payment provider, **enter the amount** of credit that they want to buy, and then click **Recharge Credit**.



A window with the **CASHNet** payment options opens in the web browser; the rest of the steps correspond to the standard **CASHNet** payment process.

After the payment is successfully sent to MyQ, the **Payment successful** dialog box appears.

CASHNet tries to connect to the MyQ server via the hostname or IP address that is set on the **Network** settings tab of the MyQ Web Interface. In case a hostname is set on the tab and paying users receive the "*This site can't be reached / XYZ's server DNS address could not be found. / DNS_PROBE_FINISHED_NXDOMAIN*" message. Try to replace the hostname with the IP address of your server.

9.4 Recharging credit via PayPal

Another way of recharging credit in MyQ is to let users directly buy the credit via PayPal on their accounts on the MyQ Web interface.

A PayPal Business account is required to receive the payments.

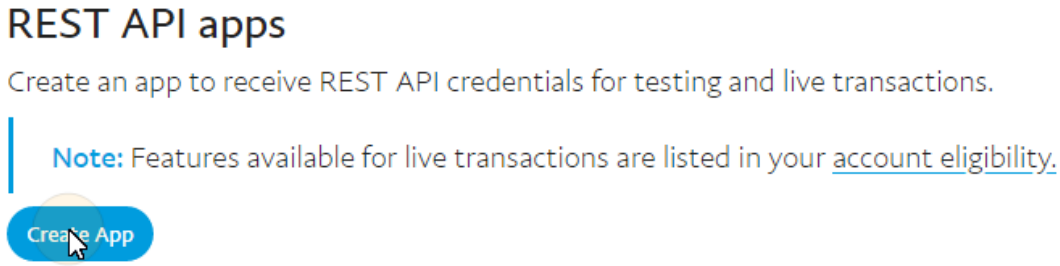
The currency used on the PayPal account of the paying users has to match the currency set on the MyQ server. In case someone pays in a different currency, the payment does not go through and stays in the pending transactions of the receiving PayPal account. In order to receive the payment, the administrator has to approve the transaction on the PayPal account. After this, the credit must be manually recharged on the MyQ server as the information about the payment is not sent to MyQ.

9.4.1 Setting up PayPal

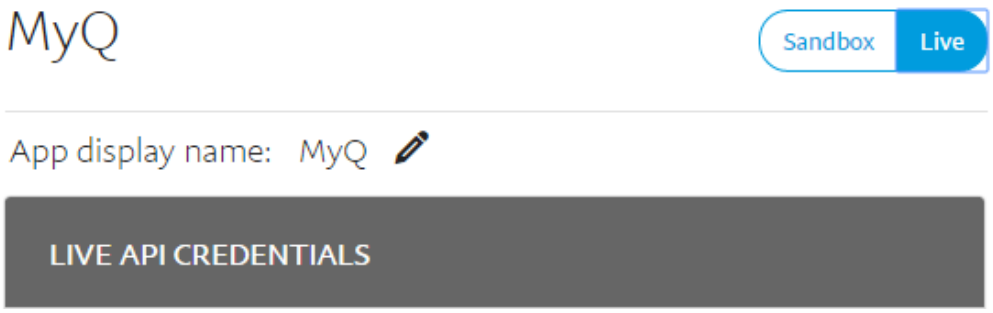
To set up PayPal as a payment option, you have to create a new App to link your company's PayPal business account with MyQ, and then set up the PayPal payment option on the MyQ Web Interface.

Create a new REST API app in the PayPal Developer environment

1. Log in to the PayPal Developer environment (https://developer.paypal.com/) with your PayPal Business account's credentials, and then open the **Dashboard**.
2. On the **Dashboard**, under **MyApps & Credentials**, create a new REST API app. The new app's settings tab opens.

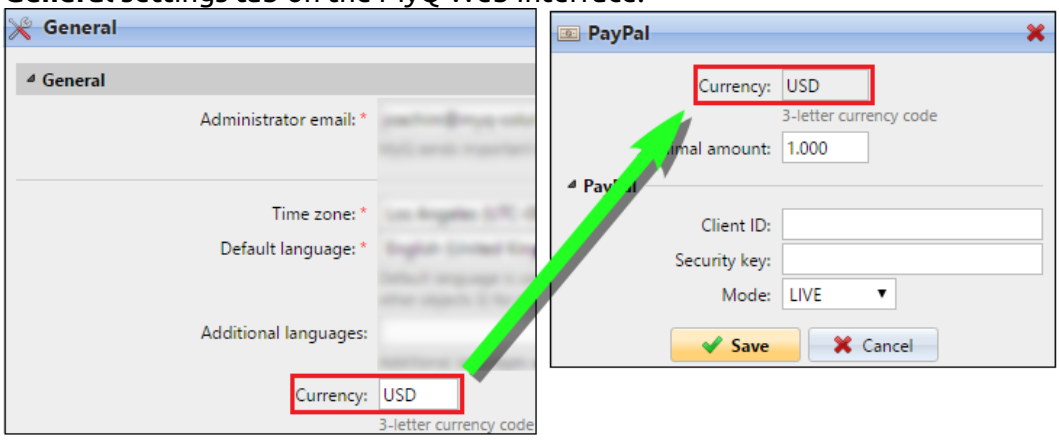


3. Select **Live** at the upper-right corner of the tab, and remember (copy) the app's **Client ID** and **Secret**. The credentials will be used to connect the account to MyQ.

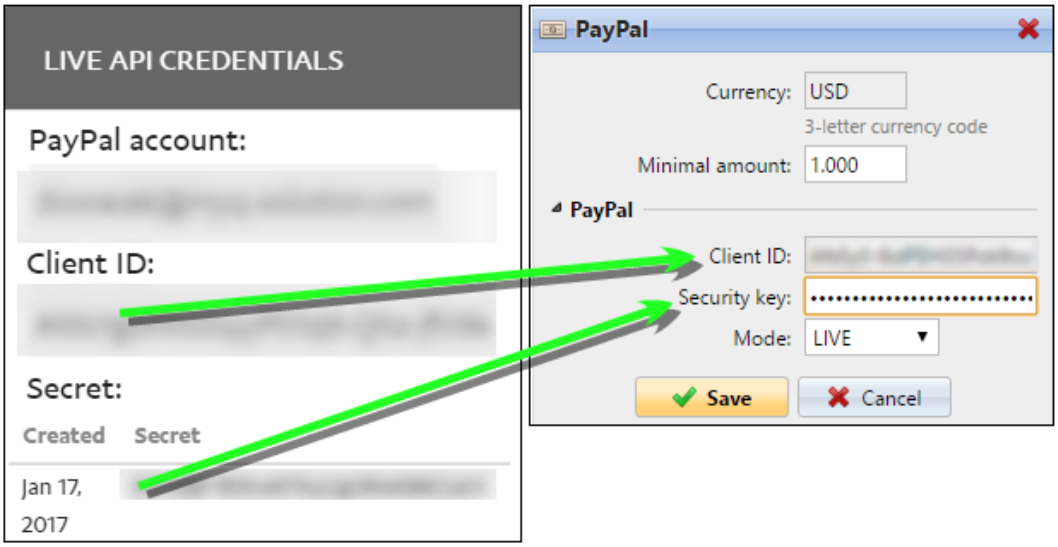


Set up the PayPal payment option on the MyQ Web Interface

1. Open the **Credit** settings tab (**MyQ, Settings, Credit**).
2. On the tab, under **Payment providers**, double-click the **PayPal** payment provider. The **PayPal** properties panel opens on the right side of the tab.
3. The value of the **Currency** setting corresponds to the currency set on the **General** settings tab on the MyQ Web Interface.



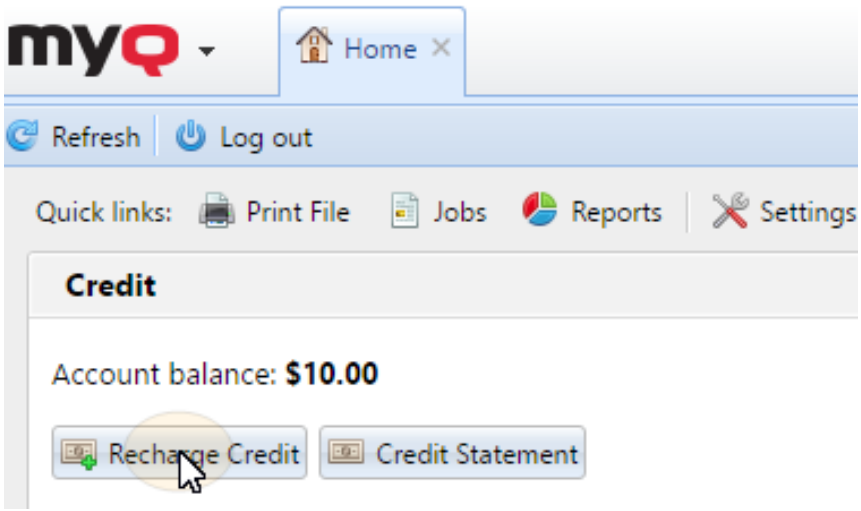
4. Type the minimal amount that users will have to pay when they buy credit.
5. Enter the **Client ID** of the REST API app into the **Client ID** text box on the PayPal properties panel and the **Secret** into the **Security key** text box below it.



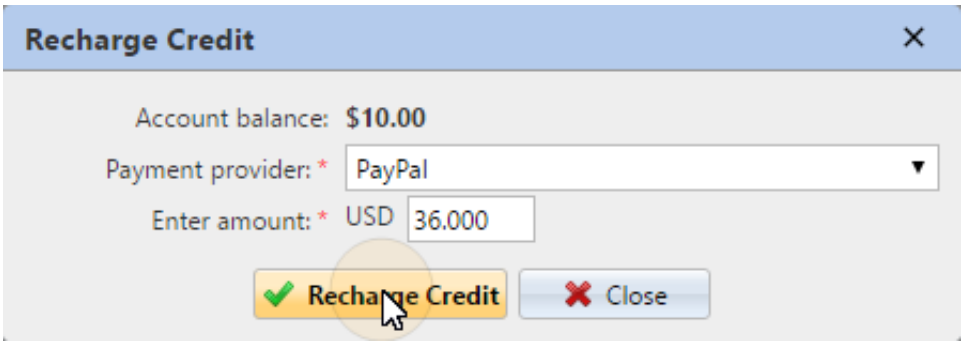
6. Make sure that the *LIVE* **Mode** is selected, and then click **Save**. (The *SANDBOX* mode is used only for testing purposes).

9.4.2 Recharging credit via PayPal on the user's account on the MyQ Web Interface

First of all, the user needs to log in to their account on the MyQ Web Interface. To recharge the credit there, the user has to click **Recharge credit** under **Credit**. The Recharge credit dialog appears.



In the dialog box, the user has to select the **PayPal** payment provider, enter the amount of credit that they want to buy, and then click **Recharge Credit**.



A window with the PayPal payment options opens in the web browser; the rest of the steps correspond to the standard PayPal payment process.

After the payment is successfully sent to MyQ, the **Payment successful** dialog box appears.

PayPal tries to connect to the MyQ server via the hostname or IP address that is set on the **Network** settings tab of the MyQ Web Interface. In case a hostname is set on the tab and paying users receive the "*This site can't be reached / XYZ's server DNS address could not be found. / DNS_PROBE_FINISHED_NXDOMAIN"* message, try to replace the hostname with the IP address of your server.

9.5 Recharging credit via SnapScan

With the **SnapScan** app, users can pay for their MyQ credit via a QR code displayed in the app on their mobile phones.

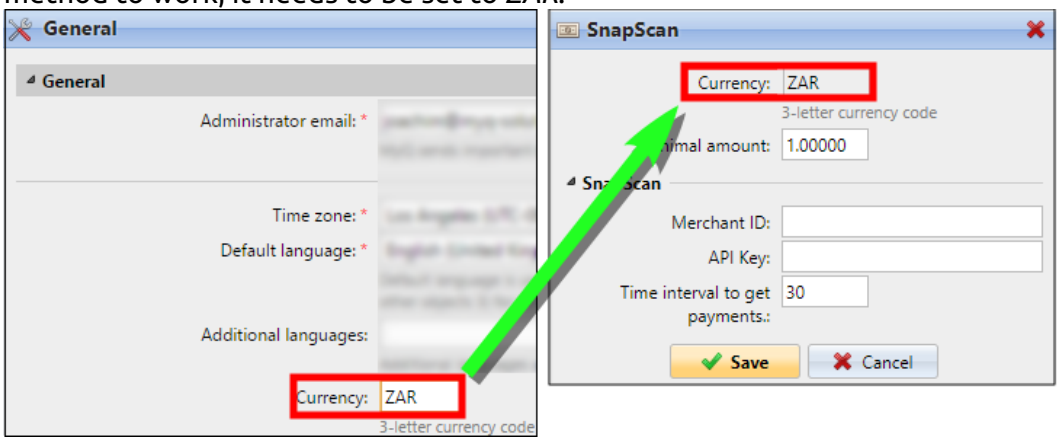
To be able to connect **SnapScan** to MyQ, you need to create a **Merchant SnapScan Account** and obtain the **Merchant Account API**. Within the setup of the connection on the MyQ Web Interface, you must enter the **Merchant ID** and the **API key** of the account.

As **SnapScan** is a South African service, users need to use a phone with a South African Mobile number (*+27*) to be able to scan the QR code and pay for the credit.

9.5.1 Setting up the SnapScan payment option

To set up the SnapScan payment option on the MyQ Web Interface:

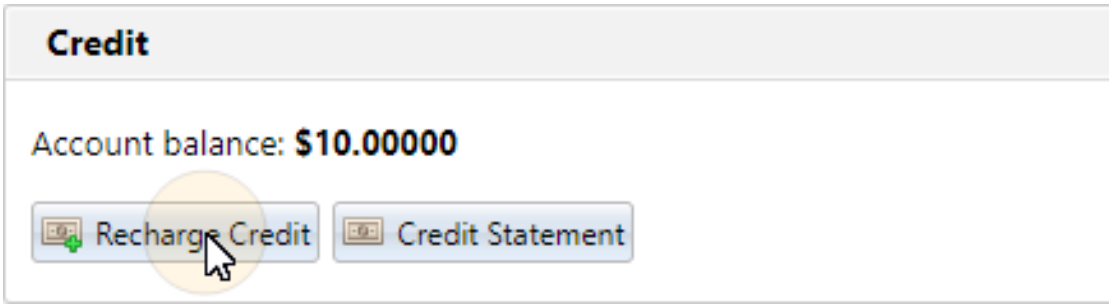
1. Open the **Credit** settings tab (**MyQ, Settings, Credit**).
2. On the tab, under **Payment providers**, double-click the **SnapScan** payment provider. The **SnapScan** properties panel opens on the right side of the tab.
3. The value of the **Currency** setting corresponds to the currency set on the **General** settings tab of the MyQ Web Interface. For the SnapScan payment method to work, it needs to be set to *ZAR*.



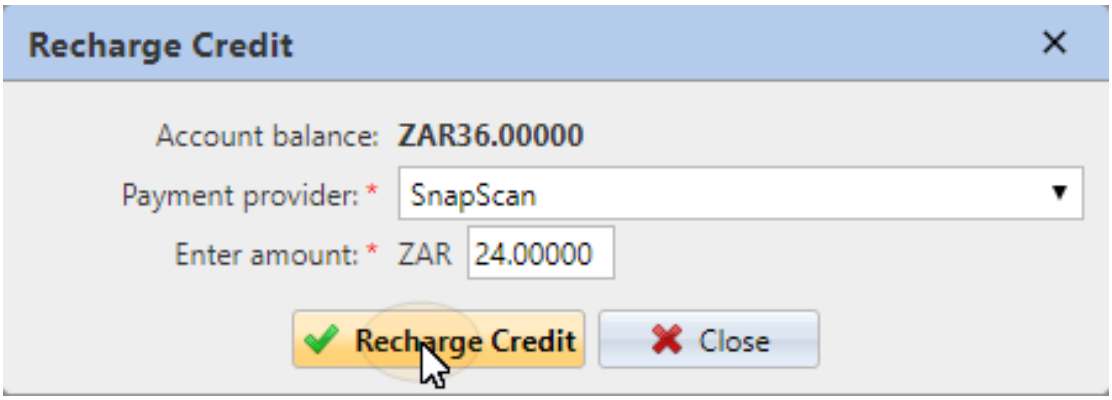
4. Type the **Minimal amount** of money that has to be paid when a user buys the credit.
5. Enter the **Merchant ID**(Company Name) and the **API key** provided by SnapScan.
6. Set the **Time interval to get payments** (in seconds), and click **Save**. The **Time interval to get payments** setting limits the time for the recharge action; if MyQ does not receive confirmation of the payment within the interval, the credit recharge is canceled. If the payment is successful but MyQ does not receive the response within the time limit, the user has to contact the MyQ administrator, who can manually recharge the credit.

9.5.2 Recharging credit via SnapScan on the user's account on the MyQ Web Interface

First of all, the user needs to log in to their account on the MyQ Web Interface. To recharge the credit there, the user has to click **Recharge credit** under **Credit**. The Recharge credit dialog appears.



In the dialog box, the user has to select the **SnapScan** payment provider, **enter the amount** of credit that they want to buy, and then click **Recharge Credit**.



A window with the SnapScan payment options opens in the web browser; the rest of the steps correspond to the standard SnapScan payment process.

After the payment is successfully sent to MyQ, the **Payment successful** dialog box appears.

SnapScan tries to connect to the MyQ server via the hostname or IP address that is set on the **Network** settings tab of the MyQ Web Interface. In case a hostname is set on the tab and paying users receive the "*This site can't be reached / XYZ's server DNS address could not be found. / DNS_PROBE_FINISHED_NXDOMAIN*" message, try to replace the hostname with the IP address of your server.

9.6 Recharging credit via TouchNet uPay

With partner driven recurring payments, the TouchNet Ready Partner application is the recurring engine controlling when payments take place, as well as the amount of each payment. The TouchNet Ready Partner's application links the user to the uPay payment pages where the user enters their payment information. This can be either a

credit card or a bank account. This solution is widely used on American campuses for making payments.

9.6.1 Setting up TouchNet uPay

To use this option in MyQ you must be a partner of TouchNet.

MyQ only supports SSL, so your MyQ application must use a secure port. The default is *8093*.

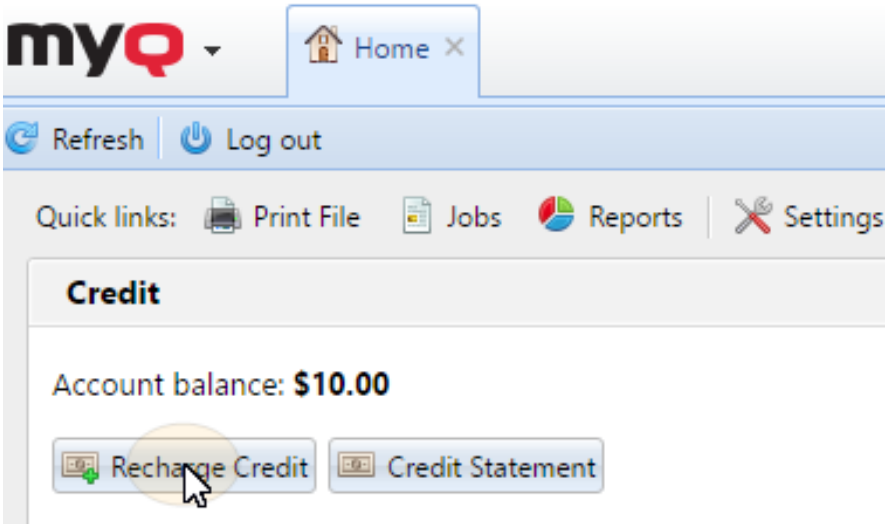
You also need to copy the following information **Client ID**, **API Key** and **uPay Site ID**.

To setup TouchNet uPay in MyQ:

1. Open the **Credit** settings tab (**MyQ, Settings, Credit**).
2. On the tab, under **Payment providers**, double-click the **TouchNet uPay** payment provider. The **TouchNet uPay** properties panel opens on the right side of the tab.
3. The value of the **Currency** setting corresponds to the currency set on the **General** settings tab on the MyQ Web Interface. TouchNet uPay uses USD as currency.
4. Type the **Minimal amount** that users will have to pay when they buy credit. Leaving it blank will accept every payment.
5. Enter the information you got from TouchNet into the mandatory fields **Client ID**, **API Key** and **uPay Site ID**.
6. Use *TEST* as **Mode** when you are not yet in production, otherwise use *PRODUCTION*.
7. Click **Save** to store your settings.

9.6.2 Recharging credit via TouchNet uPay on the user's account on the MyQ Web Interface

First of all, the user needs to log in to their account on the MyQ Web Interface. To recharge the credit there, the user has to click **Recharge credit** under **Credit**. The Recharge credit dialog appears.



In the dialog box, the user has to select the **TouchNet uPay** payment provider, enter the amount of credit that they want to buy, and then click **Recharge Credit**.

A window with the TouchNet uPay payment options opens in the web browser; the rest of the steps correspond to the standard TouchNet uPay payment process.

After the payment is successfully sent to MyQ, the **Payment successful** dialog box appears.

TouchNet uPay tries to connect to the MyQ server via the hostname or IP address that is set on the **Network** settings tab of the MyQ Web Interface. In case a hostname is set on the tab and paying users receive the "*This site can't be reached / XYZ's server DNS address could not be found. / DNS_PROBE_FINISHED_NXDOMAIN"* message, try to replace the hostname with the IP address of your server.

9.7 Recharging credit by vouchers

The MyQ administrator (and users authorized to manage vouchers) can generate and print any number of vouchers of a defined value to be distributed to users.

The vouchers can be sold to MyQ users through any standard distribution channel. Once the user has the credit voucher, they can recharge their credit on their account on the MyQ Web Interface, on embedded terminals, on MyQ TerminalPro terminals and in the MyQ mobile application.

All generated and used vouchers are logged in the MyQ database. The information about which voucher was used and for which user can be accessed on the MyQ Web administrator interface. This ensures full control and transparency and enables the administrator to prevent possible misuse.

To enable users to manage vouchers on the **Voucher Batches** main tab, provide them with the **Manage Vouchers** rights. For more information about rights and how to provide them, see **Rights**.

9.7.1 Setting the voucher format

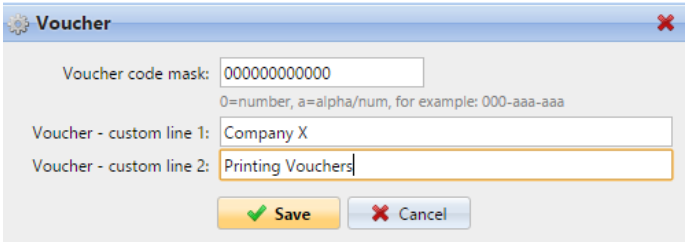
Before the vouchers are generated, it is necessary to set the format of the voucher unique code and define the text printed on the voucher. These parameters can be set and modified on the **Credit** settings tab, under **Payment providers**. Double-click the **Voucher** item (or select the item and click **Edit**) to open the **Voucher** properties panel.

The unique code format can be defined by creating a **Voucher code mask** – a predefined code template consisting of zeroes and lower case a's. Zeroes are substituted by numbers and a's are substituted by upper case letters or numbers. For example, the *00a0000aaa* mask will generate numbers such as *86D9841POE, 03E8976E67,* etc.

Always set the code format adequate to the number of users and the frequency of the voucher generation process, to ensure a sufficient variety of codes. If the amount

of the currently valid codes is large and the variety not sufficient, the chance of randomly guessing the valid code number is high and the credit system can be easily bypassed.

The text entered in the **Voucher-custom lines 1 and 2** fields is displayed on the printed vouchers. You
can enter, for example, the name of your company and additional information.



Do not forget to set the currency on the **General** settings tab, if you have not set it earlier. The currency on the printed voucher is the same as the one set in MyQ.

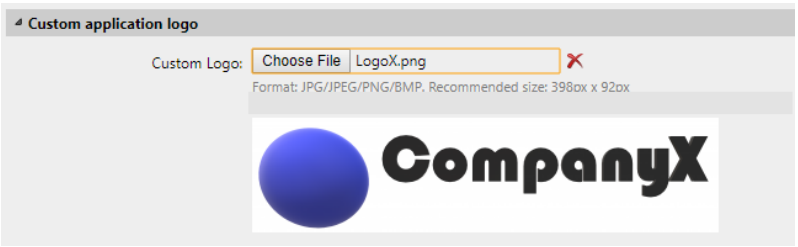
9.7.2 Custom logo for Credit Vouchers

If you want to use your own logo on MyQ credit vouchers instead of the default MyQ logo, you can import the new logo on the **Personalization** settings tab in the MyQ Web Administrator Interface.

The file with the logo has to be in the *JPG, JPEG, PNG* or the *BMP* format; the recommended size of the logo is *398px* x *92px*.

To import the logo:

1. On the MyQ Web administrator interface, open the **Personalization** settings tab. (**MyQ, Settings, Personalization**).
2. On the tab, under **Custom application logo**, click **+Add**, browse and upload the file with the logo, and lastly click **Save** at the bottom of the tab. A preview of the new logo is displayed on the tab.

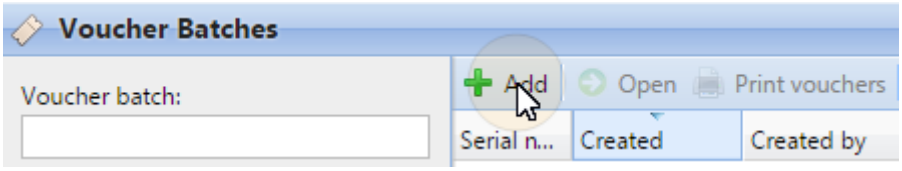


9.7.3 Voucher Batches

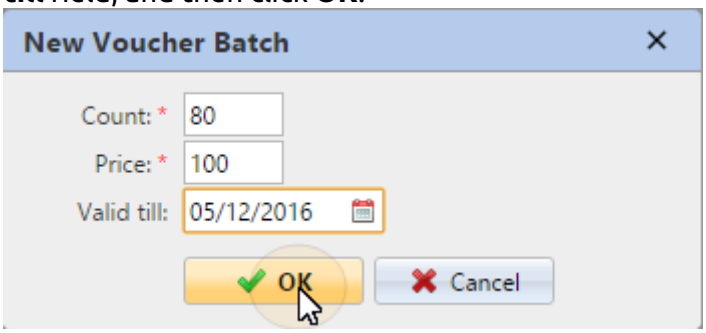
Vouchers can be generated on the **Voucher Batches** tab of the MyQ Web Interface. To open this tab, go to **MyQ, Voucher Batches**.

To generate new vouchers:

1. On the bar at top of the **Voucher Batches** tab , click **+Add**. The New Voucher Batch dialog box appears.



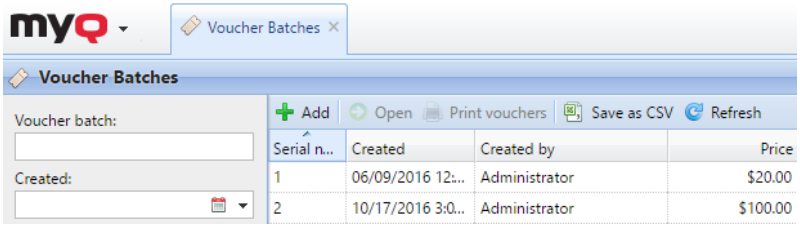
2. In the dialog box, enter the number of vouchers to be generated in the **Count** field, the **Price** of the vouchers in the batch, add the validity period in the **Valid till** field, and then click **OK**.



The new voucher batch record is displayed in the voucher batches list. You can overview all of the vouchers by double-clicking this record.

Managing Voucher Batches

Voucher batches can be filtered by serial number, date, creator, price and expire date. From the **Voucher Batches** main tab, you can export the list of voucher batches to a CSV, and display and print vouchers included in particular batches.

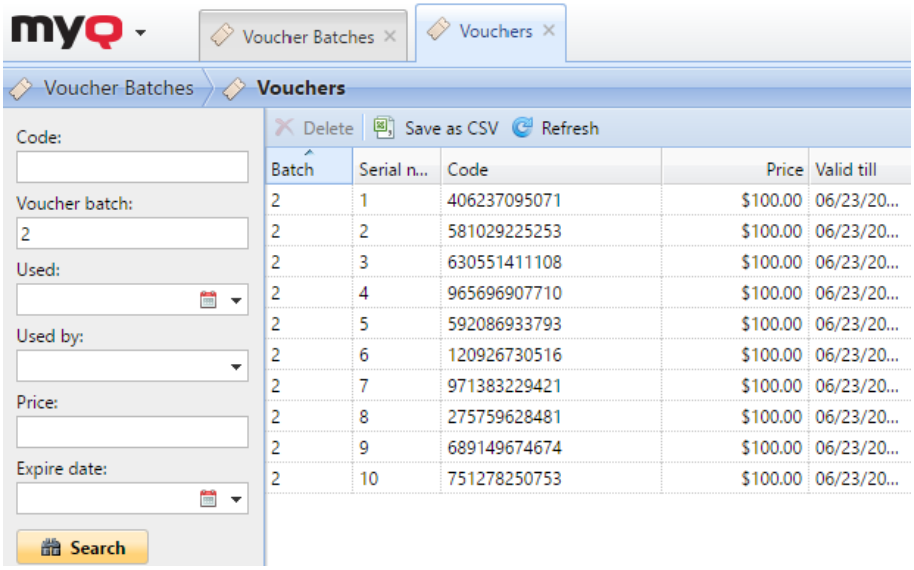


9.7.4 Vouchers usage overview

To open the table of all the vouchers generated in one batch, double-click the batch on the **Voucher Batches** main tab (or select the batch, and then click **Open** on the bar at the top of the tab).

In the table, you can see records of all of the generated vouchers with information such its unique code, price, validity, the current status of the voucher usage, etc. If the number of records is too high to be displayed clearly, you can filter them by using filters on the left side. Vouchers can be filtered by code, voucher batch, price, etc.

To delete a voucher, select it in the table and click **Delete** on the bar at the top of the tab. When a voucher is deleted, the code on the voucher becomes invalid.

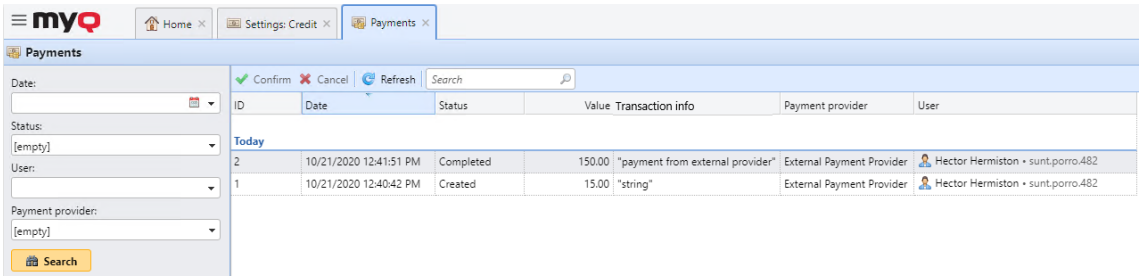


9.8 Recharging credit via external payment providers

The external payment provider option is used for managing credit via a Recharge Terminal.

For information on how to set it up, please check the *MyQ Recharge Terminal Guide*.

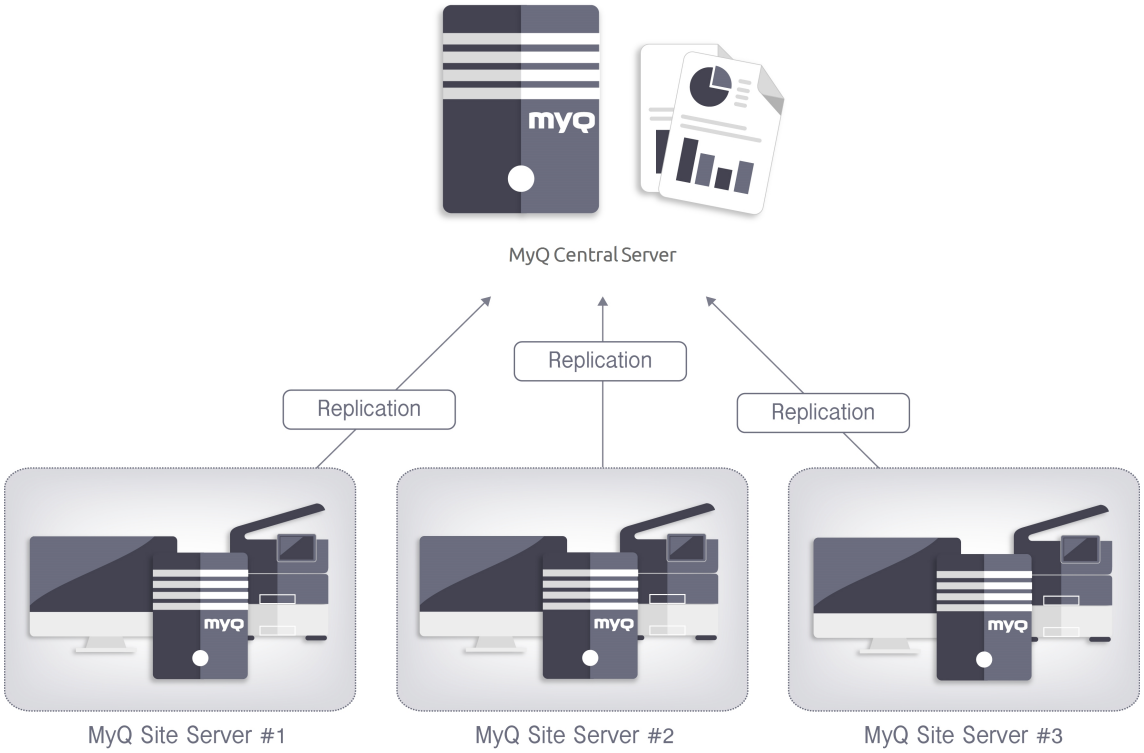
If a Recharge Terminal is used, you can view the transaction info in **MyQ, Payments**.



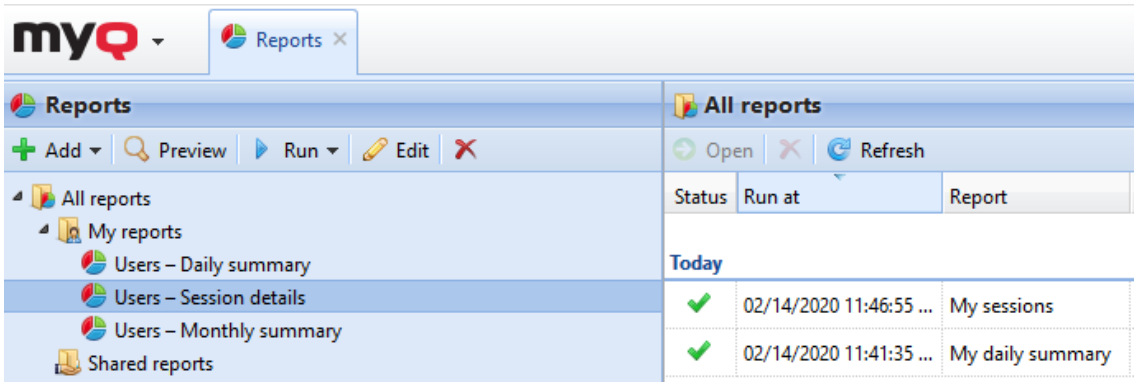
10 Central Server Reports Management

On the MyQ Central server, you can create and run reports which include all sorts of information that are downloaded from the site servers and stored on the Embedded or MS SQL database. Running reports on the Central server is useful, especially if you have several branch offices and want to access overall statistics.

The process of downloading data from site servers and storing them on the MyQ Central server's database is called **Replication**. It is essential for central reporting, as all site servers that are included in reports have to be fully replicated to ensure that the data in the reports are correct and up-to-date.



10.1 Reports



In the MyQ web interface, on the **Reports** main tab (**MyQ, Reports**), you can create and generate reports with a variety of data concerning your printing environment. The reports can be related to users, printing devices, print jobs, etc.

Reports in MyQ are divided into two main categories: **My Reports** and **Shared reports**. **My Reports** show
users reports created by themselves, while **Shared reports** show them reports created by the administrator or by other users.

There are three default reports: **My daily summary**, **My sessions** and **My monthly summary**. These are displayed in the **My Reports** folder of the MyQ administrator, who can modify them, delete them or change their design. For all the other users, the default reports are displayed in the **Shared Reports** folder and cannot be changed in any way.

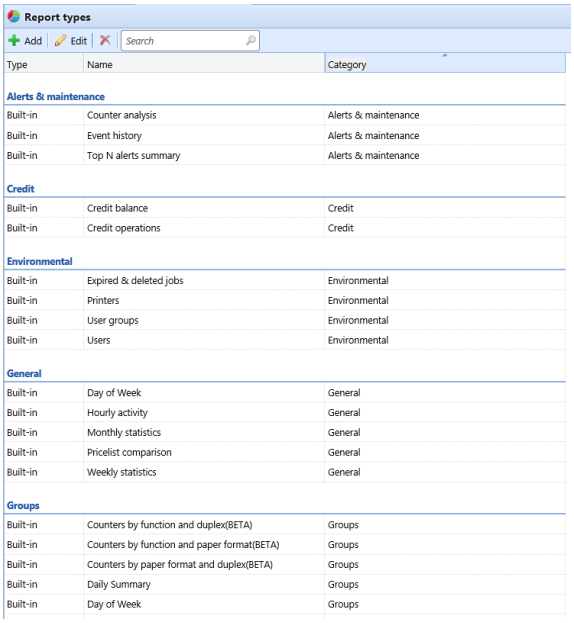
In addition to the three default reports, the administrator can create an unlimited number of reports and sort them into sub-folders of the **My Reports** folder. Users can create their own reports but they are limited to use only certain report types depending on the rights granted by the administrator.

Each report can be directly displayed on the web interface and saved in any of the following formats: *PDF, CSV, XML, XLSX* and *ODS*. The reports can be automatically generated and stored in a predefined folder. There is no data limitation for the generated report, it includes all the data from the specified period.

All the reports have the MyQ logo displayed by default, but it can be replaced by your company's logo. To upload a custom logo go to **MyQ, Settings, Personalization**. In the **Custom application logo** section, click **+Add** next to **Custom logo** and upload your own file (supported formats - *JPG, JPEG, PNG, BMP* and recommended size - *398px* x *92px*).

10.1.1 Report Types

When you are creating reports on the **Reports** main tab, you can choose from a large number of built-in report types that are sorted into multiple categories. Some of the types are included in more categories (for example, *Groups: Daily Summary, Print Jobs: Daily Summary*, etc.), while some of the types are particular to only one category (for example, *Device Alerts in Alerts Maintenance or Credit Balance in Credit*). You can overview all of the report types on the **Reports** settings tab, under **Report types** (in **MyQ, Settings, Reports**).



Type	Name	Category
Alerts & maintenance		
Built-in	Counter analysis	Alerts & maintenance
Built-in	Event history	Alerts & maintenance
Built-in	Top N alerts summary	Alerts & maintenance
Credit		
Built-in	Credit balance	Credit
Built-in	Credit operations	Credit
Environmental		
Built-in	Expired & deleted jobs	Environmental
Built-in	Printers	Environmental
Built-in	User groups	Environmental
Built-in	Users	Environmental
General		
Built-in	Day of Week	General
Built-in	Hourly activity	General
Built-in	Monthly statistics	General
Built-in	Pricelist comparison	General
Built-in	Weekly statistics	General
Groups		
Built-in	Counters by function and duplex(BETA)	Groups
Built-in	Counters by function and paper format(BETA)	Groups
Built-in	Counters by paper format and duplex(BETA)	Groups
Built-in	Daily Summary	Groups
Built-in	Day of Week	Groups

Providing users with rights to use a report

The administrator can run all the built-in reports and provide other users and groups with rights to run them as well. In **MyQ, Settings, Reports**, right-click on a report and click **Edit**. On the **General** tab, in the **Permission** for running the report field, choose users and groups from the list and click **Save**.

You can also add custom report types developed by the MyQ development team. To do so, just click **+Add**, upload the custom report definition file, select users or groups to access it, and click **OK.** For more information about custom report types, contact MyQ support.

Report Categories

- Alerts and Maintenance - These reports provide information about device alerts and unusual changes on device counters.
- Credit - These reports contain information concerning credit, for example the remaining credit of selected users.
- Environmental - These reports inform about the environmental impact of printing. They show how many trees needed to be harvested, how much energy was spent and how much carbon dioxide was emitted during the production of the paper used for printing and copying within your company's printing environment. Data sources vary in their estimations. MyQ calculations in the report are based on the following data estimates:
  - **Carbon dioxide for paper production**: 12,7 gram per paper sheet
  - **Energy used for production**: 48 Wh per paper sheet or 32Wh for a recycled paper sheet
  - **Trees**: 8333 paper sheets are counted as 1 tree.
- General - These reports provide general information about the MyQ system, such as total counters statistics and printing peaks or comparison of price lists used for printers.

- Groups - These reports inform about groups of users. They can contain information about membership, printed pages, weekly stats etc.
- Print Jobs - These reports contain information about jobs printed in MyQ, such as the list of all expired and deleted jobs over a certain period.
- Printers - These reports inform about all the printing devices in the MyQ system (both local and network). Generated reports can contain graphs of the device usage, daily, weekly and monthly counters, etc.
- Projects - These reports contain information regarding projects and project accounting in MyQ, such as daily summary of projects or projects assigned to selected users over a certain period.
- Users - These reports can contain various information about users. They can concern their print jobs, credit statements, printed pages etc.

Alerts and Maintenance Reports

The following reports are included in the **Alerts and Maintenance** category:

Counter Analysis

This report shows the page counts per session, covering B&W pages, color pages, total pages, and scans by the user. It shows sessions where the counters reached or exceeded the predefined value.

The report is not available when Job Privacy is enabled.

Event History

This report shows the occurrence of predefined device errors and alerts. It only shows alerts that are turned on in **Settings** > **Events** in the MyQ Web UI.

Top N Alerts Summary

This report shows the most common errors and alerts. The number of alerts shown can be customized.

Charts are available for this report.

Credit Reports

The following reports are included in the **Credit** category:

Credit Balance

This report shows the current Credit balance.

Credit Operations

This report shows a list of credit transactions (top-up and spent).

Environmental Reports

The information in these reports is based on the following data:
1 tree = 8333 pages / 1 page = 12.7g of CO2 / 1 page = 48Wh of energy / 1 recycled page = 32Wh of energy

The following reports are included in the **Environmental** category:

Expired and Deleted Jobs

This report shows a list of expired/deleted jobs and the environmental impact of not printing them. They are sorted by print queue.

The report is not available when Job Privacy is enabled.

Printers

This report shows the environmental impact of each printer.

User Groups

This report shows the environmental impact of each User Group.

Users

This report shows the environmental impact of each User.

The report is not available when Job Privacy is enabled.

General Reports

The following reports are included in the **General** category:

Day of the Week

This report shows the output volume by day of the week.

Charts are available for this report.

Hourly Activity

This report shows the output volume by time of day.

Charts are available for this report.

Monthly Statistics

This report shows the output volume by month.

Charts are available for this report.

Price List Comparison

This report shows the price lists applied to various printer groups.

Weekly Statistics

This report shows the output volume by week.

Charts are available for this report.

Groups Reports

The following reports are included in the **Groups** category:

Counters by Function and Duplex(BETA)

This report shows counters per group by print/copy, color, and duplex.
The function field refers to whether a page was printed or copied.

Reports marked as BETA only contain data from Embedded Terminals running MyQ 8+. If some of your Embedded Terminals run earlier versions of MyQ, their data will not be included in the report.

The report is not available when Job Privacy is enabled.

Counters by Function and Paper Format(BETA)

This report shows counters per group by print/copy, color, and paper format.

The function field refers to whether a page was printed or copied.

Reports marked as BETA only contain data from Embedded Terminals running MyQ 8+. If some of your Embedded Terminals run earlier versions of MyQ, their data will not be included in the report.

The report is not available when Job Privacy is enabled.

Counters by Function Paper Format and Duplex(BETA)

This report shows counters per group by color, duplex, and paper format.

The function field refers to whether a page was printed or copied.

Reports marked as BETA only contain data from Embedded Terminals running MyQ 8+. If some of your Embedded Terminals run earlier versions of MyQ, their data will not be included in the report.

The report is not available when Job Privacy is enabled.

Daily Summary

This report shows a summary of the daily output by group.

Day of the Week

This report shows a summary of the daily output based on the day of the week by group.

Monthly Summary

This report shows a summary of the monthly output by group.

> This report supports aggregated columns.

Top N

This report shows the groups sorted by largest output volume.
Charts are available for this report.

> It will show the top 5 by default, but this can be changed in the **Design** section of the report, under **Filters and Parameters**, by changing the number for **N**.

Total Summary

This report shows the total output volume per group for a predefined period.

> This report supports aggregated columns.

> The report is not available when Job Privacy is enabled.

User Group Membership

This report shows the list of members of the group and their membership options.

> The report is not available when Job Privacy is enabled.

Printers Reports

The following reports are included in the **Printers** category:

Counters by Function and Duplex(BETA)

This report shows counters per device by print/copy, color, and duplex.
The function field refers to whether a page was printed or copied.

> Reports marked as BETA only contain data from Embedded Terminals running MyQ 8+. If some of your Embedded Terminals run earlier versions of MyQ, their data will not be included in the report.

> The report is not available when Job Privacy is enabled.

Counters by Function and Paper Format(BETA)

This report shows counters per device by print/copy, color, and paper format.

The function field refers to whether a page was printed or copied.

Reports marked as BETA only contain data from Embedded Terminals running MyQ 8+. If some of your Embedded Terminals run earlier versions of MyQ, their data will not be included in the report.

The report is not available when Job Privacy is enabled.

Counters by Function Paper Format and Duplex(BETA)

This report shows counters per device by color, duplex, and paper format.

The function field refers to whether a page was printed or copied.

Reports marked as BETA only contain data from Embedded Terminals running MyQ 8+. If some of your Embedded Terminals run earlier versions of MyQ, their data will not be included in the report.

The report is not available when Job Privacy is enabled.

Daily Summary

This report shows the list of print jobs printed by device on a daily basis.

This report supports aggregated columns.

Day of the Week

This report shows a summary of the daily output based on the day of the week by device.

This report supports aggregated columns.

Meter Reading via SNMP

This report shows the device's total output volume.

This report (unlike the rest of MyQ reports) includes accounting data of the jobs bypassing MyQ server.

Monthly Summary

This report shows a summary of the monthly output by device.

Top N

This report shows the printers sorted by largest output volume.

> Charts are available for this report.

Print Jobs Reports

> Reports in this category should not be used for accounting purposes. Print Job reports display print jobs either as received by MyQ (for devices without an embedded terminal) or they reflect the printing parameters selected on the embedded terminal, rather than the final printed outcome.

The following reports are included in the **Print Jobs** category:

Daily Summary

This report shows the list of print jobs printed by user on a daily basis.

> The report is not available when Job Privacy is enabled.

Expired and Deleted Jobs

This report shows the list of expired and deleted jobs.

> This report supports aggregated columns.

> The report is not available when Job Privacy is enabled.

Printed Jobs Summary

This report shows the list of all the print jobs printed by the user for a predefined period.

> The report is not available when Job Privacy is enabled.

Projects Reports

The following reports are included in the **Projects** category:

Counters by Function and Duplex(BETA)

This report shows counters per project by print/copy, color, and duplex.
The function field refers to whether a page was printed or copied.

Reports marked as BETA only contain data from Embedded Terminals running MyQ 8+. If some of your Embedded Terminals run earlier versions of MyQ, their data will not be included in the report.

The report is not available when Job Privacy is enabled.

Counters by Function and Paper Format(BETA)

This report shows counters per project by print/copy, color, and paper format.

The function field refers to whether a page was printed or copied.

Reports marked as BETA only contain data from Embedded Terminals running MyQ 8+. If some of your Embedded Terminals run earlier versions of MyQ, their data will not be included in the report.

The report is not available when Job Privacy is enabled.

Counters by Function Paper Format and Duplex(BETA)

This report shows counters per project by color, duplex, and paper format.

The function field refers to whether a page was printed or copied.

Reports marked as BETA only contain data from Embedded Terminals running MyQ 8+. If some of your Embedded Terminals run earlier versions of MyQ, their data will not be included in the report.

The report is not available when Job Privacy is enabled.

Daily Summary

This report shows the list of print jobs printed by project on a daily basis.

This report supports aggregated columns.

Day of the Week

This report shows a summary of the daily output based on the day of the week by project.

This report supports aggregated columns.

Monthly Summary

This report shows a summary of the monthly output by project.

This report supports aggregated columns.

Print Jobs per Project

This report shows the list of print jobs assigned to each project.

The report is not available when Job Privacy is enabled.

Project Groups Total Summary

This report shows the total output volume per project for a predefined period.

Projects per User

This report shows the output volume per user and project. The data is grouped by user.

This report supports aggregated columns.

The report is not available when Job Privacy is enabled.

Top N

This report shows the projects sorted by largest output volume.

Charts are available for this report.

User Project Assignment

This report shows the list of projects assigned to each user.

The report is not available when Job Privacy is enabled.

Users per Project

This report shows the members of each project.

This report supports aggregated columns.

Users Reports

The following reports are included in the **Users** category:

Counters by Function and Duplex(BETA)

This report shows counters per user by print/copy, color, and duplex.
The function field refers to whether a page was printed or copied.

Reports marked as BETA only contain data from Embedded Terminals running MyQ 8+. If some of your Embedded Terminals run earlier versions of MyQ, their data will not be included in the report.

The report is not available when Job Privacy is enabled.

Counters by Function and Paper Format(BETA)

This report shows counters per user by print/copy, color, and paper format.

The function field refers to whether a page was printed or copied.

Reports marked as BETA only contain data from Embedded Terminals running MyQ 8+. If some of your Embedded Terminals run earlier versions of MyQ, their data will not be included in the report.

The report is not available when Job Privacy is enabled.

Counters by function paper format and duplex(BETA)

This report shows counters per user by color, duplex, and paper format.

The function field refers to whether a page was printed or copied.

Reports marked as BETA only contain data from Embedded Terminals running MyQ 8+. If some of your Embedded Terminals run earlier versions of MyQ, their data will not be included in the report.

The report is not available when Job Privacy is enabled.

Daily Summary

This report shows the list of print jobs printed by user on a daily basis.

The report is not available when Job Privacy is enabled.

Day of the Week

This report shows a summary of the daily output based on the day of the week by user.

The report is not available when Job Privacy is enabled.

Monthly Summary

This report shows a summary of the monthly output by user.

The report is not available when Job Privacy is enabled.

Session Details

This report shows the list of all user's interactions on the device.

The report is not available when Job Privacy is enabled.

Top N

This report shows the users, sorted by largest output volume.

Charts are available for this report.

The report is not available when Job Privacy is enabled.

Total Summary

This report shows the total output volume per user for a predefined period.

The report is not available when Job Privacy is enabled.

User Rights

This report shows the list of users with enhanced access rights.

The report is not available when Job Privacy is enabled.

Servers – User Rights

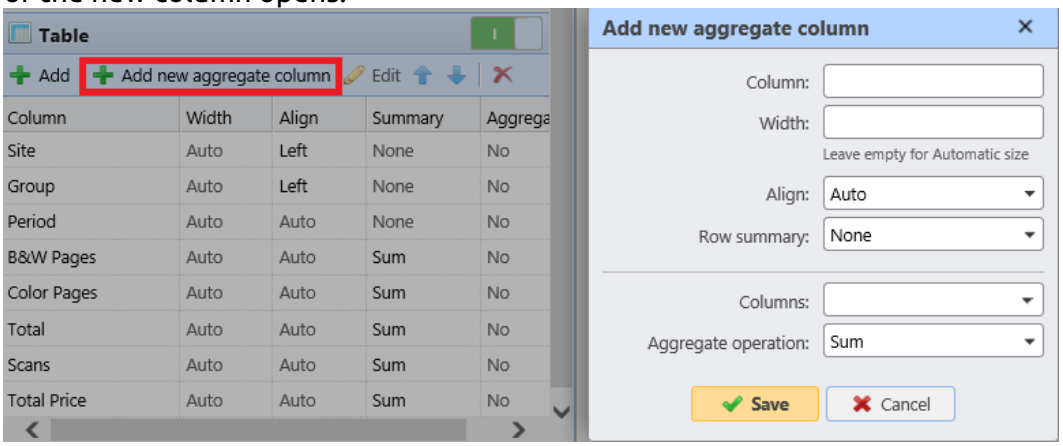
This report shows the rights assigned to users for each site server.

Creating new aggregate columns

For some types of reports, you can create any number of custom aggregate (summary) columns. An aggregate column can display either the sum or the average of a selection of any number of other columns available for the type.

To create a new aggregate column for a report:

1. Go to **MyQ**, **Reports**. On the list of reports on the right side, select the report and click **Edit** on the ribbon (or right-click, edit). The report properties panel opens on the right side of the screen.
2. Go to the **Design** tab on the properties panel.
3. In the **Table** section, click **+Add new aggregate column**. The properties panel of the new column opens.



4. In the panel, set the columns properties, select the **Aggregate operation** you want to use (*Sum* or *Average*), and click **Save**. The new aggregate column is listed with the other table columns, and you can double-click on it to edit it.

Supported types of reports for aggregate columns

The aggregate (summary) columns can be created for the following types of reports:

- From the **Groups** category: Monthly summary
- From the **Print jobs** category: Expired and deleted jobs
- From the **Printers** category: Daily summary, Day of the week, Meter reading via SNMP
- From the **Projects** category: Daily summary, Day of the week, Monthly summary, Project groups total summary, Projects per user, Users per project.

10.1.2 Reporting sources

Accounting in MyQ depends on the MyQ server version, the MyQ embedded terminal version and the printing device. MyQ 8.0+ currently uses the user-session architecture. The values in every report are based on user sessions (except for the **Meter reading via SNMP** printers report, described below).

- Counters are calculated in the following way:
  - B&W pages = B&W prints + B&W copies + Fax
  - Color pages = Color prints + Color copies + Single color copy
  - Total Pages = B&W pages + Color pages
  - Total prints = B&W prints + Color prints
  - Total copies = B&W copies + Color copies
- Price related columns include discounts.
- Any printers monitored via MyQ Desktop Client are included in the reports.
- Any non-MyQ users activity (*unauthenticated) is included in the reports.

- MyQ does not track deleted printers. If a deleted printer is later added and activated in MyQ, the reports will not include any activity during the time the device was deleted.
- If a printer is deactivated but not deleted, the reports include information about the period it was inactive only after it is reactivated. In that case, after the reactivation, all the activity is accounted to users not authenticated in a single session. The reports cannot include printers' data while they are deactivated.
- When an embedded terminal is installed on the printing device, accounting is also done for any direct/tandem print queues of the device.
- When an embedded terminal is not installed or a device is used with a MyQ Hardware terminal, accounting is done via SNMP by the MyQ Print Server (depends on provided data via SNMP from the device).

Values calculation in the Meter reading via SNMP printers report

The values in this report are based on counters read directly from the printers.

- Any printers monitored via MyQ Desktop Client are **not** included in the reports.
- The highest and lowest values are compared for a selected period and printer/group of printers.
- The total value displayed in the report is the summary of all the subtotal values, without *Pages printed* while the device was deactivated.

10.1.3 Report values description

Description of values in the reports' default and additional columns and how they are accounted.

These values are accounted as page counts in the following way: 2 clicks for the A3/Ledger page format and 1 click for the rest (A4 etc..); in case of Duplex, it is 4 clicks for the A3 / Ledger format and 2 clicks for the rest (A4 etc.). L formats are coverage counters.

- B&W prints
- B&W copies
- Color prints
- Color copies
- Single color copy
- Total prints
- Total copies
- Fax
- Color pages (L1)
- Color cost (L1)
- Color pages (L2)
- Color cost (L2)
- Color pages (L3)
- Color cost (L3)
- Print color pages (L1)
- Copy color pages (L1)

If discounts are used, they are not applied to all “cost” values in reports, e.g. *Color cost (L1)", "Color cost (L2)" or "Color cost (L3)*. However, "Total cost", "Color cost" do reflect discounts.

These values are accounted as paper sheets in the following way : 1x A3 / 1x A4 etc.

- A4 paper
- A3 paper
- A5 paper
- B4 paper
- B5 paper
- Other paper
- Folio paper
- Ledger paper
- Legal paper
- Letter paper
- Statement paper
- Rest of the paper formats

These values are accounted as paper sheets as well, however, when a printing device is used without an installed Embedded terminal, this counter is specified via SNMP and depends on the counter used from the printing device.

- Simplex
- Duplex

Terminals version 7 and lower might have reported Duplex values differently depending on the vendor – either as the number of images (e.g. 1 page printed duplex as Duplex=2) or the number of sheets (Duplex=1). Since Terminals 8.2, these values are unified as the number of sheets. The combination of data from older Terminals with Terminals 8.2 in Reports may cause an inconsistency in the Duplex values.

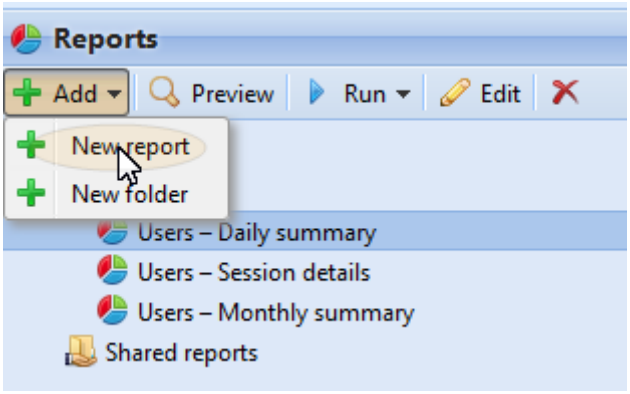
A job printed in 1x A3 monochrome sheet, on both sides in duplex mode, on a device where an Embedded terminal is installed, is accounted in MyQ as 1x A3 paper + 4x print monochrome and 1x duplex. In the MyQ log it will look like this:

PM=4, A3=1, Duplex=1

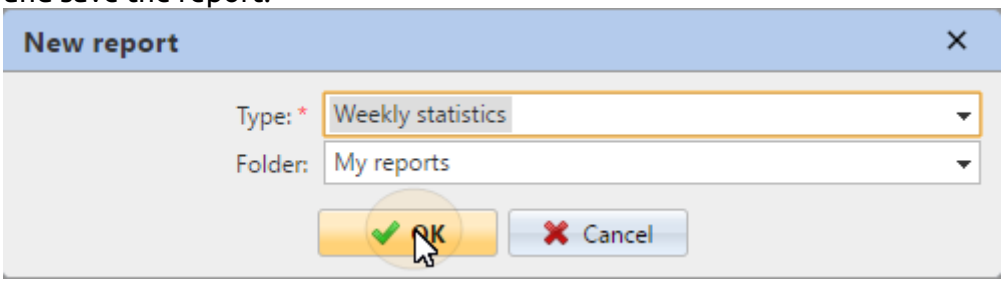
10.1.4 Creating and editing reports

You can create a new report in a few steps:

1. At the top-right corner of the **Reports** main tab, click **+Add**, and then click **+New report**. The New report dialog box appears.

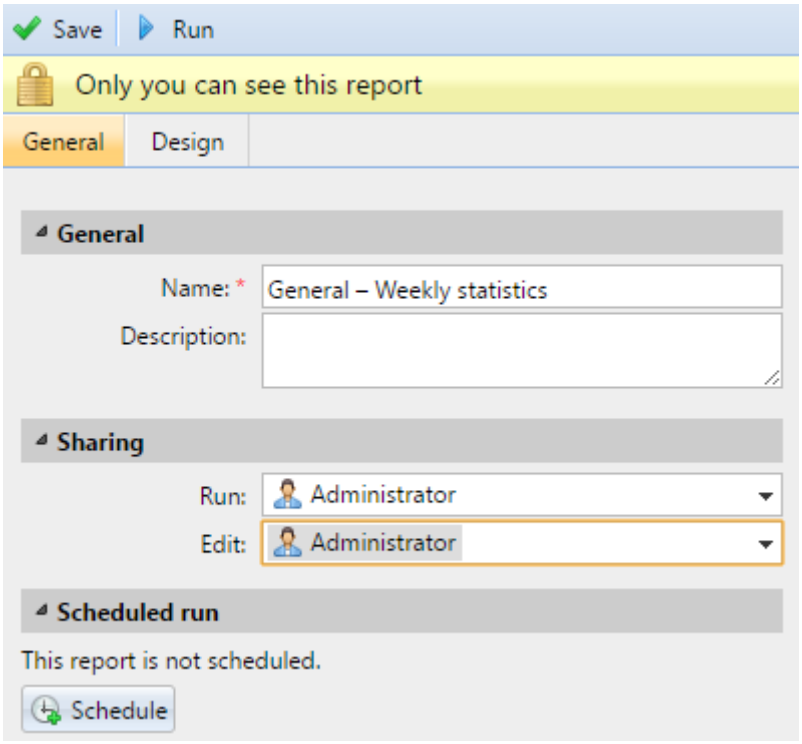


2. In the box, select the type of the new report and the folder to place it, and then click **OK**. The editing panel of the new report opens. On the panel, edit and save the report.



Editing a report

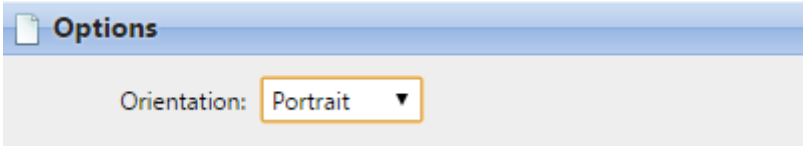
1. On the **General** sub-tab of the report's editing tab, you can change the report's **Name**, add a **Description**, select **Sharing** rights, meaning the users or groups who will have the rights to **Run** the report and those who will have the rights to **Edit** the report. You can also click **Schedule** to set its scheduled run. Once done, click **Design** to open the Design sub-tab of the report.



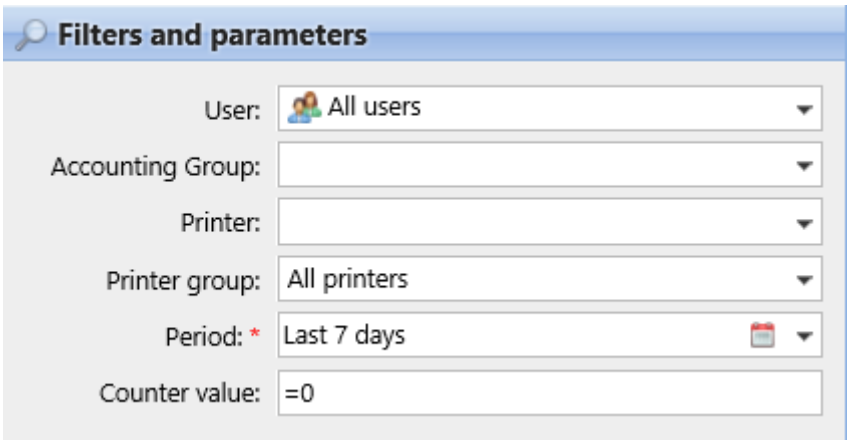
2. On the **Design** sub-tab, you can set the report's layout, select the items (Users, Printers, etc.) to be included in the report, add or remove columns and change their order.

Options

- **Orientation**: Select either the **Portrait**, or the **Landscape** orientation.



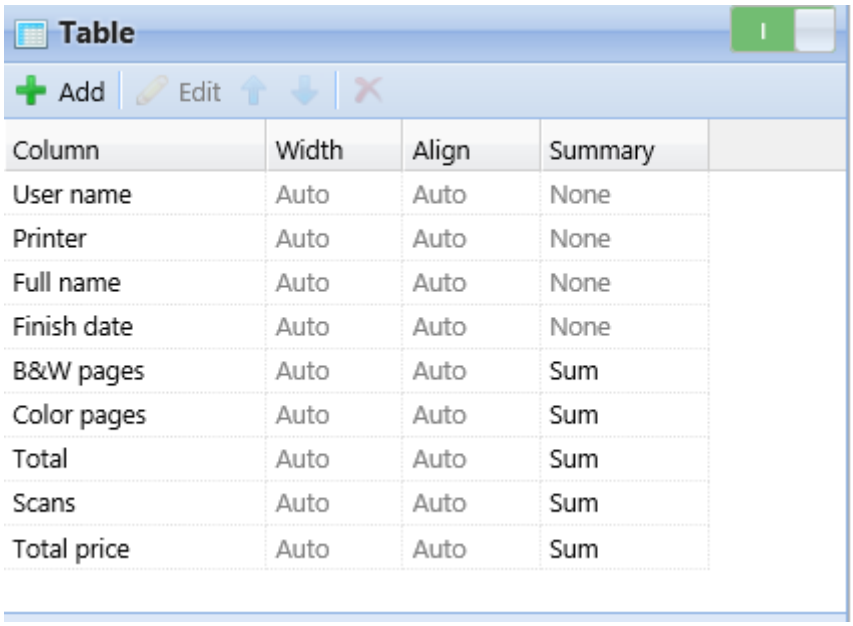
Filters and parameters



Available filters and parameters differ depending on the report type. These are the main parameters available for most of the standard reports types:

- **User**: Select the users to be included in the report. If you select the **Me** option and share this report with all users, each user can only see just the data that concern themselves; this way you can make personalized reports for each user.
- **Accounting Group**: Select the accounting groups of users to be included in the report.
- **Printer**: Select the printers to be included in the report.
- **Printer group**: Select the groups of printers to be included in the report.
- **Period**: Select the time period to be covered by the report.

Table



Here you can enable and disable the table option.

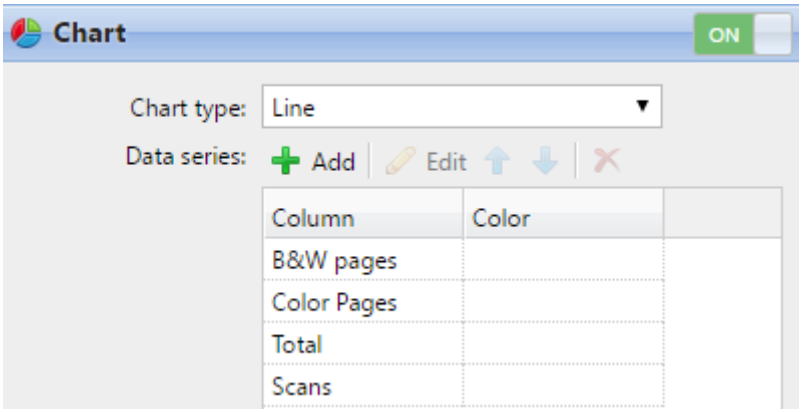
You can also add and remove columns to the table, edit them and change their order. For each column, you can change the width, alignment and the type of summary that will be shown on the final (bottom) row (Sum, Average or None).

To add a new column, click **+Add**. To open the editing options of an existing column, double-click it (or select it, and then click **Edit**). To remove a column, select it and click **X**. To move a column up or down the order, select it, and then use the up/down arrows.

Period	B&W pages	Color Pages	Total	Scans	Total price
2017-3	5,621	9,189	14,810	5,506	$5,440.000
2017-4	1,211	569	1,780	1,234	$7,072.000
Period	**B&W pages**	**Color Pages**	**Total**	**Scans**	**Total price**
	6,832	**9,758**	**16,590**	**6,740**	**$12,512.000**

Some reports do not include the option to use tables and their data can be displayed only in the chart form.

Chart

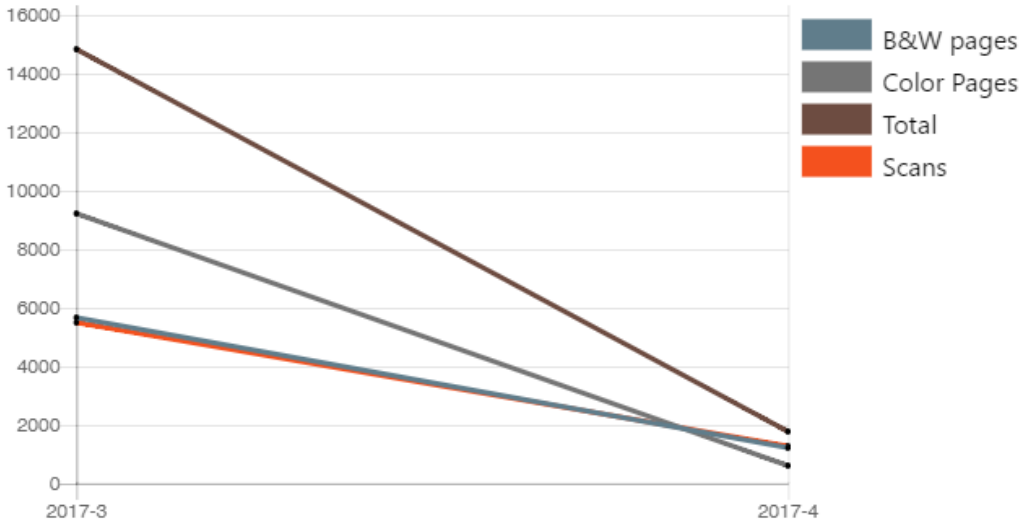


Here you can enable and disable the chart option.

You can also select from the **Bar, Line, Pie** and **Doughnut** chart types. Furthermore, you can add and remove data types to be shown on the chart and select colors for each data type.

To add a data type, click **+Add**. To open editing options of a data type, double-click it (or select it, and then click **Edit**). To remove a data type, select it and click **X**. To move a data type up or down the order, select it, and then use the up/down arrows.

Some reports do not include the option to use charts and their data can be displayed only in the table form.



Designing your own reports can be a bit tricky, since it always depends on many factors - amount of data included (columns), length of column names and values, report orientation etc. To get the best result, you can click **Preview** anytime during the report's creation to check what the new design will look like. Only after you are satisfied with the layout, click **Save** to save the report.

10.1.5 Generating reports

To preview a report

Select the report and click **Preview** (or right-click it and click **Preview** on its shortcut menu). The report is shown in HTML format and the number of included data is limited.

To run a report

Select the report and click **Run**. (Or right-click it and click **Run** on its shortcut menu). The report runs in the specified format (*PDF, CSV, XML, XLS* or *ODS*) with no data limitation.

To export the displayed report

After the report is generated, click one of the format buttons on the bar at the top of the report screen to download it.

There is a fixed limit of records of the reports that are generated on the **Reports** main tab of the MyQ Web Interface. It can be set in the **Limit results to:** text box on the **Reports** settings tab (**MyQ, Settings, Reports**). It is set to *1000* by default. This only applies to the reports run on the MyQ Web Interface; scheduled reports are always complete.

11 Connection to BI tools

Starting from version 8.1(patch 2), MyQ Central Server exposes data to be analyzed with external BI tools (Business Intelligence tools).

The below information refers to the setup and use of Power BI by Microsoft, along with a MyQ setup.

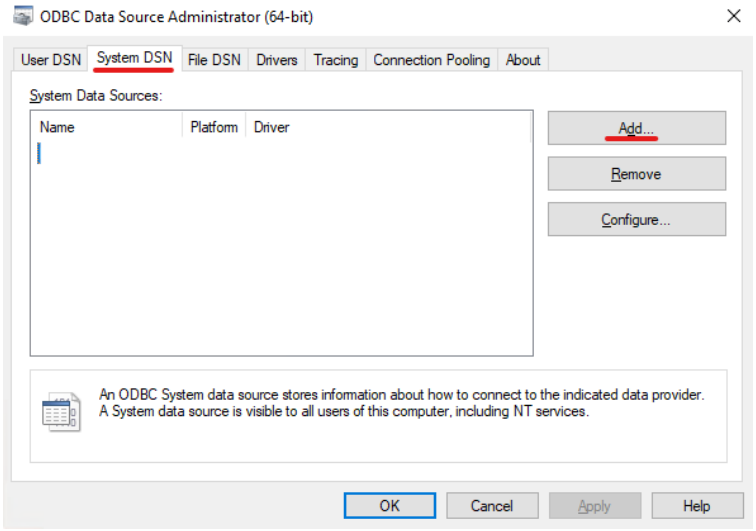
For further information about Power BI, visit:
https://docs.microsoft.com/en-us/power-bi/fundamentals/desktop-getting-started

11.1 Embedded Database Connection Configuration

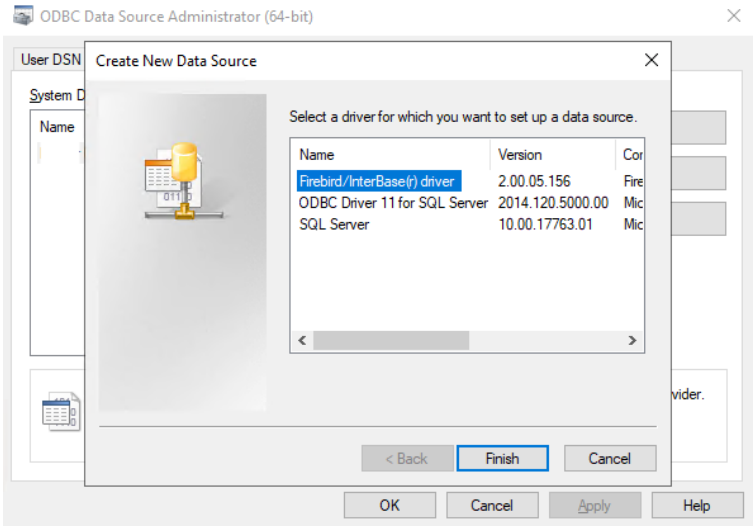
Power BI can access the MyQ Embedded Database via ODBC. In order to create an ODBC data source:

> Power BI will only let you connect to a ODBC data source that is available on the local PC it is running within. Your data source should be created on the same PC that Power BI desktop run.

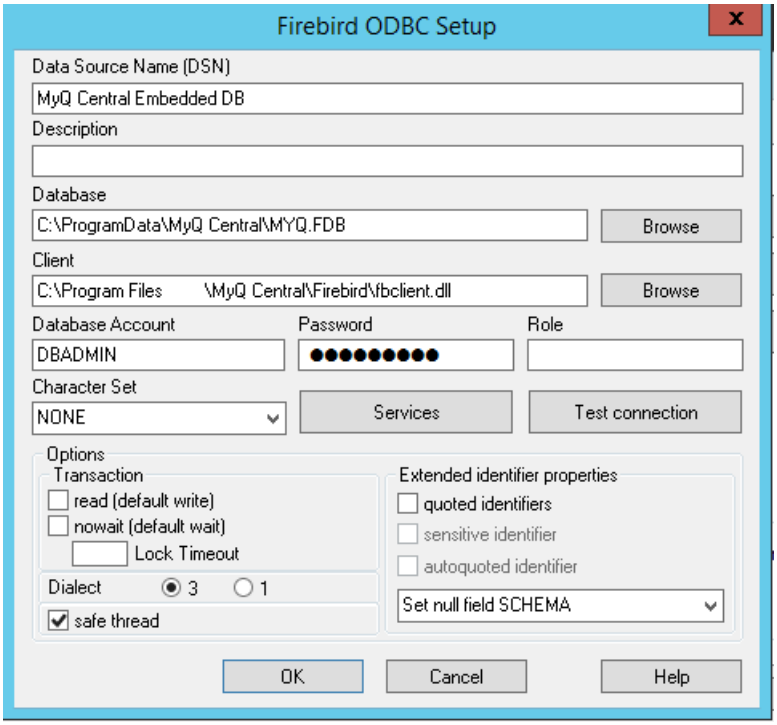
1. Download and install the latest ODBC driver for Firebird from:
   https://firebirdsql.org/en/odbc-driver/
2. Once installed, open the **ODBC Data Sources** application from the Windows Apps menu.
3. Go to the **System DSN** tab and click **Add**.



4. In the Create New Data Source window, select *Firebird/InterBase(r) driver* and click **Finish**.



5. In the Firebird ODBC Setup tab, enter the connection details:
   a. **Data Source Name (DSN)**: Add a name as an identifier for the connection
   b. **Database**: Add the path to your database file (*C:\ProgramData\MyQCentral\MYQ.FDB* by default)
   c. **Client**: Add the path to the Firebird library client used for the connection. It is recommenced to use the MyQ Central Server client, found in *C:\Program Files\MyQ Central\Firebird\fbclient.dll* by default
   d. **Database Account**: Add the Database Account user name. The default one is *SYSDBA*, but it is highly recommended not to use the default database account, but create a new database user with limited rights to only read required tables, described in the Database Views Description chapter.
   e. **Password**: Add the Database Account password. In case you are using the default database account (not recommended) and you haven't changed the password in MyQ Central Easy Config, the default one is *masterkey*.
   f. The rest of the fields can be left unchanged. Click **Test Connection** and if successful, click **OK**.



11.2 Creating Reports

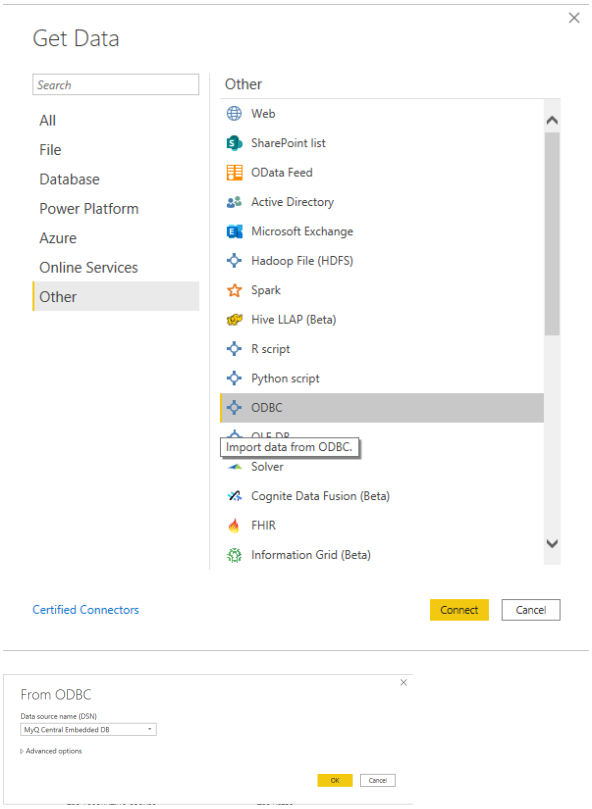
Reports can be created according to each customer's specific requirements. It is possible to create the reports manually, or use the Power BI template created by MyQ and available in the MyQ Community, in order to generate reports quickly.

- Manual reports creation
- Reports creation via template import
- Report examples
- Database Views description

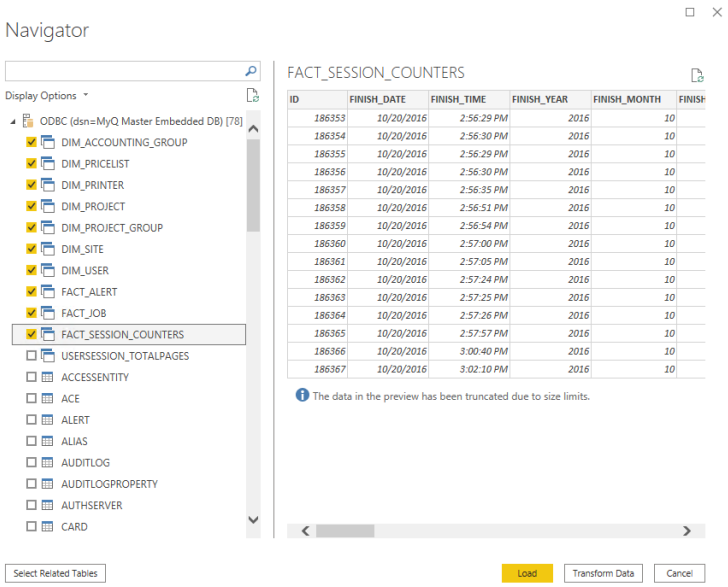
11.2.1 Manual Reports Creation

To manually create the reports, open Power BI and:

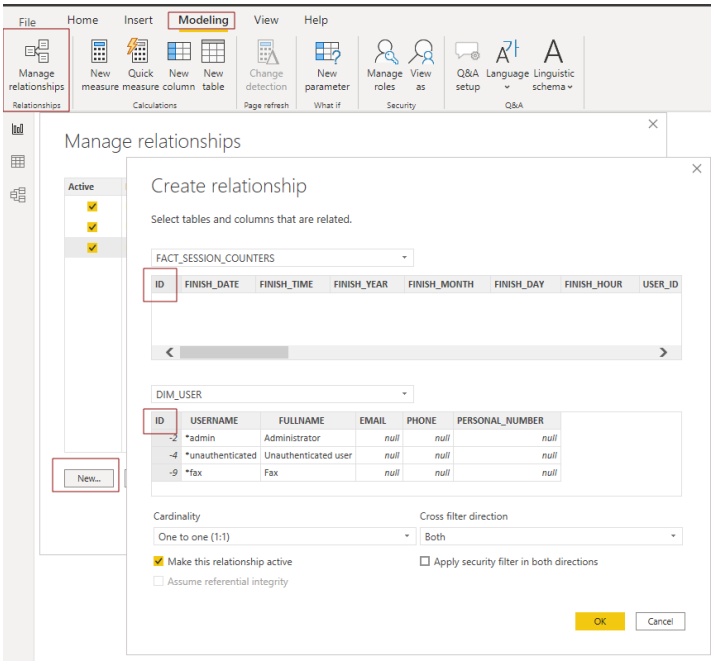
1. Establish the connection to your database:
   a. For direct connection (**only for MS SQL servers**), click **Get data, SQL Server** and add the server and database name.
   b. For ODBC, click **Get data, More...**. In the new window, select **Other**, click on **ODBC** on the list, and click **Connect**. In the new prompt, select the Data source name (DSN) you created in the ODBC Data Sources app and click **OK**.



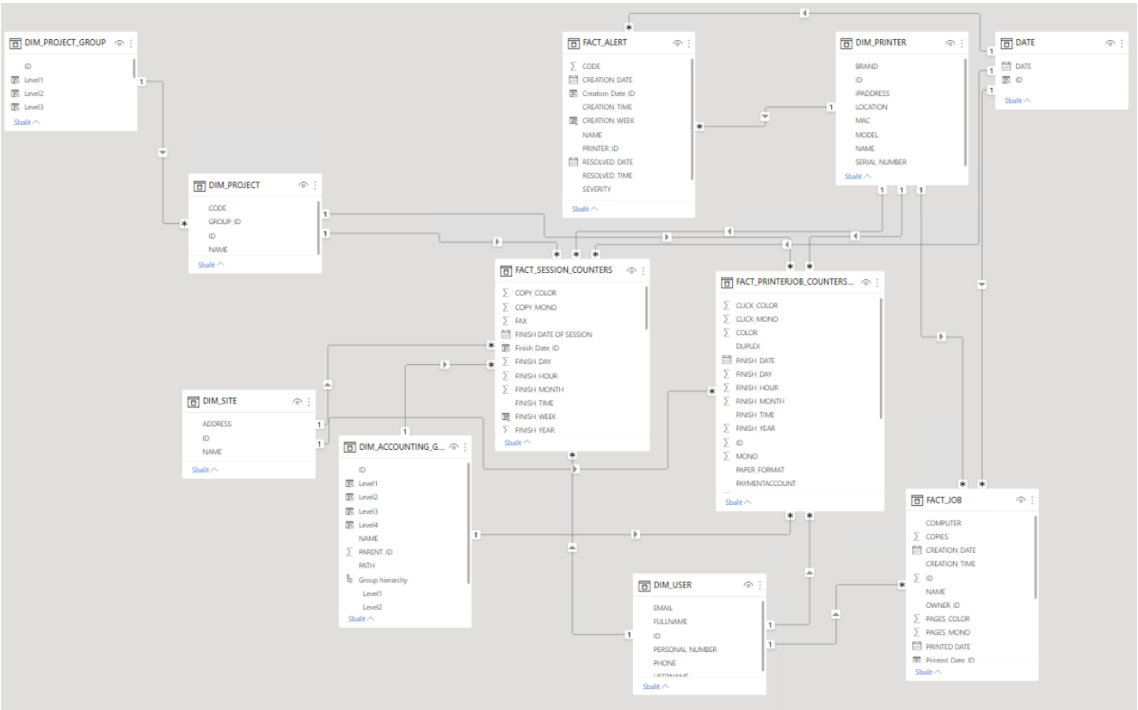
2. In the Navigator window, select all the options with the **DIM_** and **FACT_** prefixes and click **Load** (see Database Views description).



3. Power BI loads the data, however the relationships between them must be created manually, since Power BI cannot extract them:
   a. Go to the Modeling menu and click on **Manage relationships**
   b. Click **New...** and create the relationships between the views, selecting the IDs in each of them. Click **OK** once done.



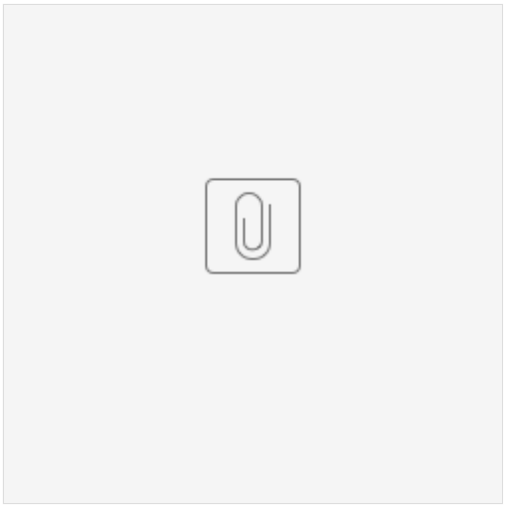
4. Your model has been created and you can add visualizations to the report.



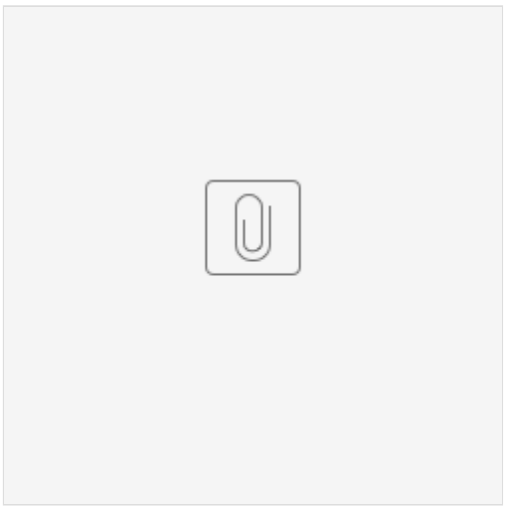
11.2.2 Reports creation via template import

There are two template versions, one to be used with an Embedded database and one to be used with an SQL server. An ODBC DSN for either an SQL Server or Firebird must be configured before using the template.

- ODBC template

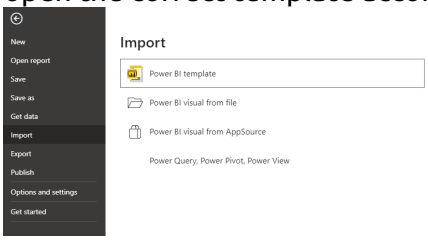


- SQL template

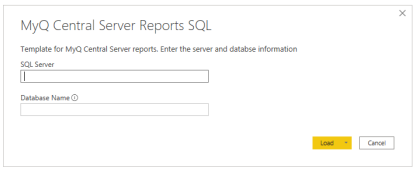


To import the template provided by MyQ, open Power BI and:

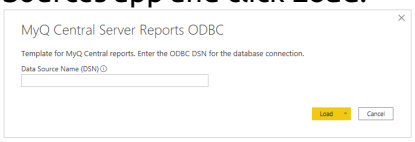
1. Open the **File** menu, select **Import**, and click on **Power BI template**. Find and open the correct template according to your database.



2. Establish the connection to your database:
   a. For direct connection to an MS SQL server, add the **SQL Server** and **Database name** and click **Load**.



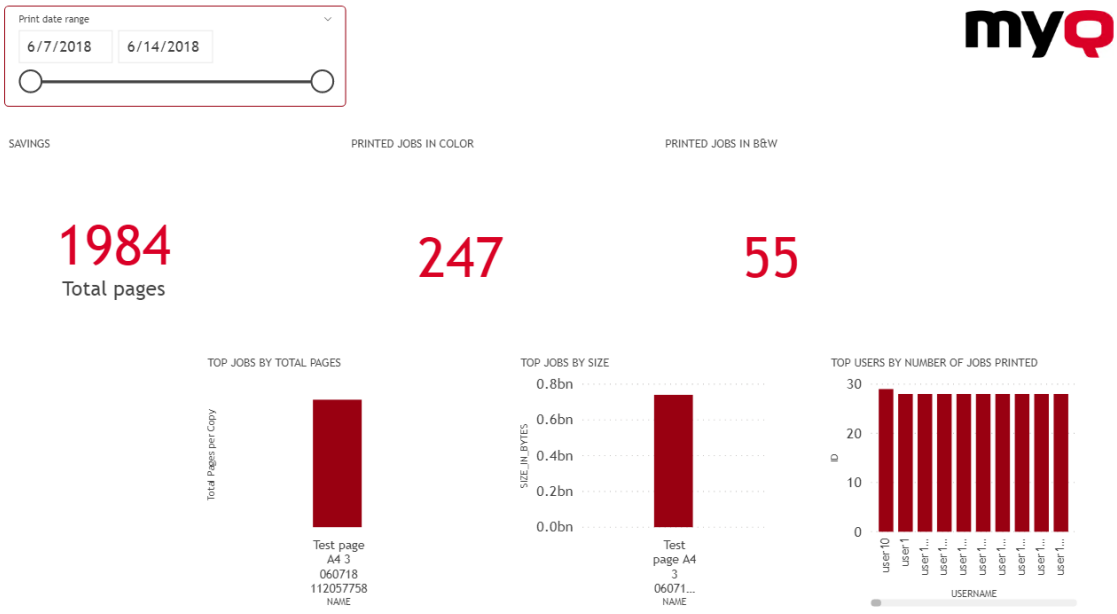
b. For ODBC, add the **Data source name (DSN)** you created in the ODBC Data Sources app and click **Load**.

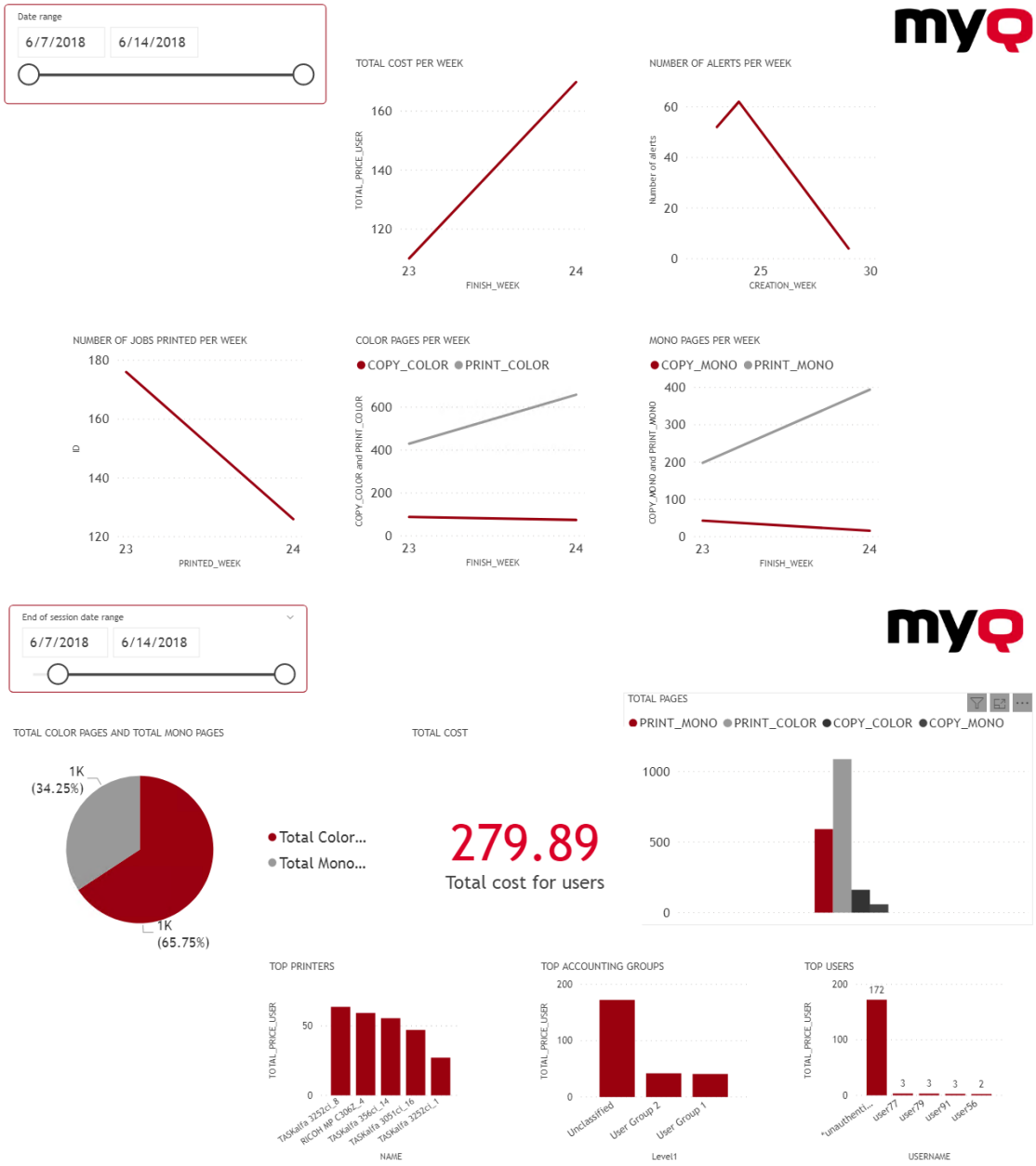


3. Power BI imports the data. The reports can be edited; the changes are saved in a different file so the template can be reused.

11.2.3 Report examples

The examples below were generated using the MyQ templates.





11.2.4 Database Views description

There are two groups of views; **dimensions** and **facts**. The fact views contain measures, numeric data which can be used in calculations for reports. The dimension views contain descriptive information used for the measures in the facts. Dimension views have the **dim_** prefix and fact views have the **fact_** prefix.

The IDs in the views are internal MyQ IDs and can be used to establish relationships between views.

Site Dimension (dim_ Site) - Information about the site where the sessions were registered.

Field Name	Description
ID	Site ID
Name	Site name
Address	Site URL

Printer Dimension (dim_Printer) - Information about the printer

Field Name	Description
ID	Printer ID
Name	Printer name
IPAddress	Printer IP address
MAC	Printer MAC address
Brand	Printer brand
Model	Printer model
Location	Printer location
Serial_Number	Printer serial number

User Dimension (dim_User) - Information about the user

Field Name	Description
ID	User ID
Username	MyQ username

Field Name	Description
Fullname	User's name and surname
Email	User's email
Phone	User's phone number
Personal_number	User's MyQ personal number

Accounting Group Dimension (dim_ Accounting_ Group) - Information about user groups

Field Name	Description
ID	Group ID
Name	Group name
Parent_ID	The parent group ID. Null if the group has no parent group.
Path	The path of the group, formed by the ID of the ancestor groups separated by the character "|". This can be used to build the hierarchy of user groups.

Project Dimension (dim_Project) - Information about projects

Field Name	Description
ID	Project ID
Name	Project name
Code	Project code
Group_ID	ID of the project group containing the project

Project Group Dimension (dim_Project_Group) - Information about project groups

Field Name	Description
ID	Project group ID
Name	Project group name
Parent_ID	The parent group ID. Null if the group has no parent group.
Path	The path of the group, formed by the ID of the ancestor groups separated by the character "|". This can be used to build the hierarchy of project groups.

Job Fact (fact_job) - Information about print jobs

Field Name	Description
ID	Job ID
Session_ID	Session ID
Name	Job name
Owner_ID	Job owner ID
Printer_ID	Printer ID where the job was printed. Null if not printed
Computer	Computer name or address where the job was sent from
Size_in_bytes	Job size in bytes
Pages_mono	Number of pages in black and white
Pages_color	Number of pages in color

Field Name	Description
Copies	Number of copies
State	Job state
Printed_date	Date when the job was printed
Printed_time	Time when the job was printed
Creation_date	Date when the job was created
Creation_time	Time when the job was created

Session Counter Fact (fact_Session_Counters) - Information about user sessions

Field Name	Description
ID	Job ID
Finish_date	Date when the session was closed
Finish_time	Time when the session was closed
Finish_year	Year when the session was closed
Finish_month	Month when the session was closed
Finish_day	Day when the session was closed
Finish_hour	Hour when the session was closed
User_ID	ID of the user who created the session
Printer_ID	Printer ID
Site_ID	Site ID

Field Name	Description
Project_ID	Project ID
User_group_ID	Accounting group ID
Total_price_user	Total price of the session for regular users
Total_price_admin	Total price of the session for users with admin rights
Total_pages	Total pages of the session
Print_mono	Number of pages printed in black and white
Print_color	Number of pages printed in color
Copy_mono	Number of pages copied in black and white
Copy_color	Number of pages copied in color
Copies	Number of copies
Fax	Number of pages printed due to fax, in black and white
Scan	Number of scanned pages
PaperA4	Number of A4 sheets used
PaperA3	Number of A3 sheets used
PaperA5	Number of A5 sheets used
PaperB4	Number of B4 sheets used
PaperB5	Number of B5 sheets used

Field Name	Description
PaperFolio	Number of Folio sheets used
PaperLedger	Number of Ledger sheets used
PaperLegal	Number of Legal sheets used
PaperLetter	Number of Letter sheets used
PaperStatement	Number of Statement sheets used
PaperOther	Number of sheets with other paper formats used

Printer job counters (fact_PRINTERJOB_COUNTERS_V2) - Information about printer job counters

Field Name	Description
ID	Session ID
Finish_date	Date when the session was closed
Finish_time	Time when the session was closed
Finish_year	Year when the session was closed
Finish_month	Month when the session was closed
Finish_day	Day when the session was closed
Finish_hour	Hour of the day when the session was closed
User_ID	ID of the user who created the session
Printer_ID	ID of the printer

Field Name	Description
Site_ID	ID of the site
Project_ID	ID of the project used for the session
User_group_ID	ID of the accounting group
Type	Type of the operation (print, copy, scan, fax)
Paper_format	Paper format
Price	Price for the job
Duplex	Yes if the job was printed in duplex mode No if the job was not printed in duplex mode
Mono	Number of pages printed in black and white
Color	Number of pages printed in color
Single_color	Number of pages printed in single color
Click_mono	Number of printed mono images
Click_color	Number of printed color images
Sheets	Number of used papers

Alert Fact (fact_Alert) - Information about printer alerts

Field Name	Description
Printer_ID	Printer ID where the alert was generated from

Field Name	Description
Severity	Alert severity
Training	Level of training required to handle the alert
Code	Alert code
Creation_Date	Date when the alert was generated
Creation_Time	Time when the alert was generated
Resolved_Date	Date when the alert was resolved
Resolved_Time	Time when the alert was resolved

There is a limitation that even if you are using a Job Privacy license, the data in the database are not changed by this feature and are still readable.

12 System health check

This option presents you with an overview of error messages with the level of severity added after some registered checks are done. The errors concern database health, disk space availability, PIN length settings and time zone configuration, etc. They are listed in the table below.

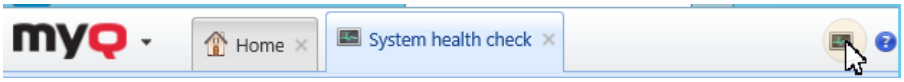
Code	Severity	Description
101	High	Main database health is not good; multiple messages can appear in the log
102	High	Log database health is not good; multiple messages can appear in the log
103	Medium	PIN length needs to be increased
104	High	Disk space is on warning level
105	Critical	Disk space is on critical level
106	High	Time zones misconfiguration
109	High	License subscription is going to expire
110	High	License Subscription expired
111	High	Contacting license server failed
112	High	HW code mismatch
113	High	License activation required
114	High	License expires soon

When the error message has a **Critical** severity, the administrator gets an email.

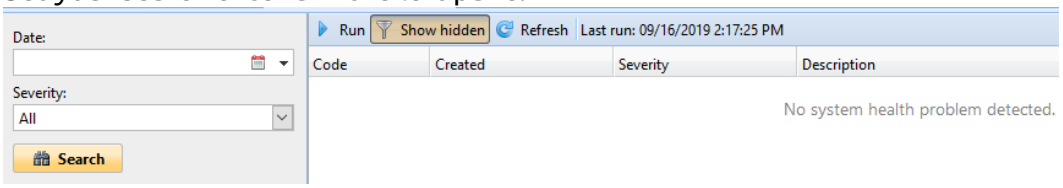
Every error message with a **Low** severity is logged in the MyQ main log.

12.1 Using system health check

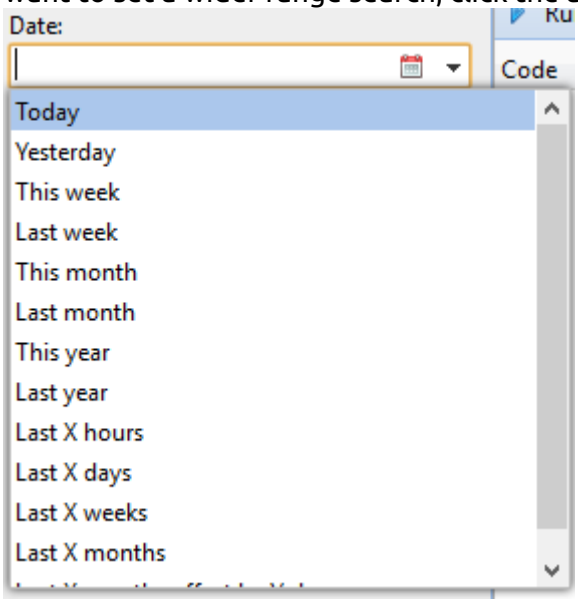
To access the system health check overview go to **MyQ, System health check**, or click on the system health check icon on the top-right side of the window.



1. Set your search criteria in the left pane.



You can search for errors on a specific **Date** by clicking the calendar icon. If you want to set a wider range search, click the arrow to choose a date:



Select a **Severity** from the drop down list.

2. Click **Search**. The search result is shown in the right pane.
3. Click **Run** to trigger the System health check **Task schedule** to perform a check with these date and severity settings.

13 Updating MyQ

The MyQ update to a higher version or reinstalling the same version is performed automatically after running the installation executable file.

Before a MyQ update on Windows Server 2012/2012 R2/2016/2019 (or on Windows 8.1/10), make sure that the latest Windows updates are downloaded and installed on the server.

When upgrading or updating MyQ, ensure all antivirus exclusions are made and that there are no running scan operations on the MyQ directories structure.

It is strongly recommend to backup your database before the update.

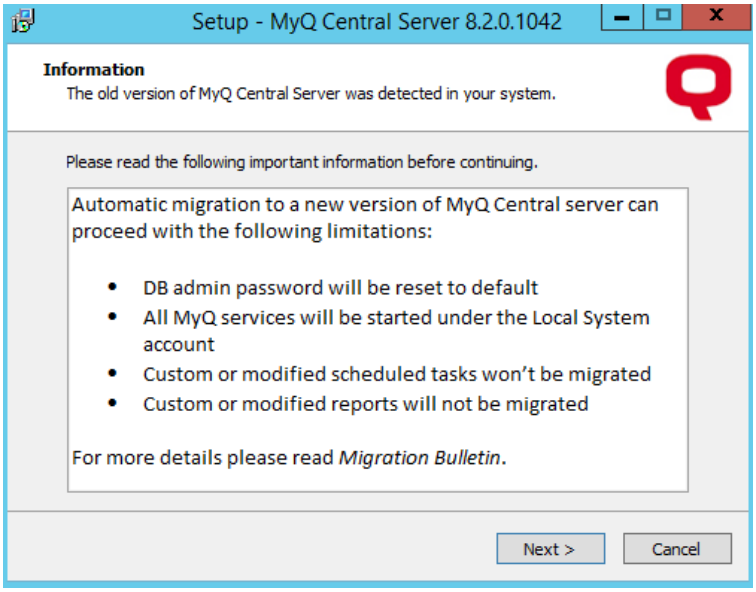
To update MyQ:

1. Run the MyQ software installation executable file. The Select Setup Language dialog box appears.
2. Select your language, and then click **Next**. The Setup dialog box appears. It informs you that there is an older version of MyQ and that the installer will start the update process.
3. Click **Yes**. The License Agreement dialog box appears.
4. Select **I accept the agreement** and click **Next**.
5. In the Ready to Install dialog, click **Install**. The rest of the update process is nearly identical to this of installing MyQ.

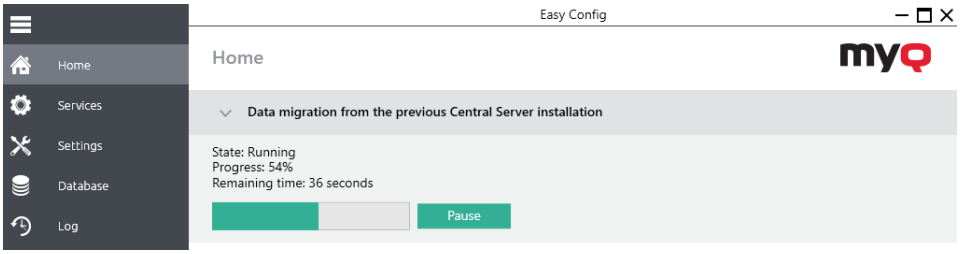
In older MyQ versions, it was possible to switch between a Standalone server, a Site server, or a Central server. This is no longer available, as the MyQ Print server and MyQ Central server are different products and use separate installers. If you have such a setup and plan to upgrade it to MyQ Central server 8.2, be advised that the upgrade will not be successful. It is required to upgrade your system to version 8.1, **back up your database**, download the latest MyQ Central server installer, and **migrate** your setup.

Migration Bulletin

1. Upgrade your system to version 8.1. If you are using an older version, the migration is not possible. It is recommended to update your database to the latest version as well. **Back up your database before continuing**.
2. Download and run the MyQ Central Server 8.2 installer.
3. The migration wizard informs you that the migration is possible, with some limitations. The database administrator password will revert to the default one, *masterkey*. You can change it after the migration in MyQ Central Server Easy Config. All MyQ Services will run under the Local System account. You can change that after the migration in MyQ Central Server Easy Config. Any custom or modified scheduled tasks are not migrated. You can set them up again after the migration in the Task Scheduler settings tab. Any custom or modified reports are not migrated. You can set them up again in the Reports tab. Click **Next** to start the migration.



4. Click **Yes** in the pop-up confirmation to start the migration.
5. In the License Agreement dialog, select **I accept the agreement** and click **Next**.
6. In the Options dialog, you can choose to backup your database before the migration starts (selected by default and highly recommended). Click **Next**.
7. The Ready to install dialog informs you of your previous options. Click **Install**.
8. The migration process begins. First, your database is backed up, then your previous installation is uninstalled, and lastly, the latest version of MyQ Central Server is installed. Click **Finish** to exit the migration wizard.
9. MyQ Central Server Easy Config opens, and your database is installed and upgraded automatically. Click **Finish** once done.
10. In the **Home** tab, in the **Data migration from the previous Central Server installation** section, you can see the progress of the migration, and you can also **Pause** it.



Until the data migration is finished, the following actions are not available:

In MyQ Central Server Easy Config:

- Encrypt
- Decrypt
- Backup
- Restore

In MyQ Central Server:

- Scheduled Tasks

- System Maintenance
- Generating Reports
- Replication

14 Uninstalling MyQ

To uninstall MyQ:

1. Run **unins000.exe**. You can find this file in your MyQ program folder (the default folder is: *C:\Program Files\MyQ Central Server*). The MyQ Uninstall dialog box appears.
2. Click **Yes**.

All parts of MyQ will be uninstalled except for the **Data Folder**. You can delete the folder manually. In case you install MyQ again, the installation program will ask if you want to use the old database files or replace them with new files.

15 Business Contacts

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Technical support	support@myq-solution.com
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