



Install and upgrade Qlik Sense

Qlik Sense®

2.2

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1 Introducing Qlik Sense Installation Guide

This guide explains how to plan the deployment of a Qlik Sense site, how to set it up and make it operational. It also describes how to perform maintenance on your installation; for example, how to update, repair or modify your installation.

1.1 Architecture

Qlik Sense features a distributed architecture that consists of one or more nodes that together form a site. One node assumes the role of central node, which is used as the central point of control.

Site

A Qlik Sense site is a collection of one or more nodes (that is, servers) connected to a common logical repository or central node.

In a typical Qlik Sense installation, there is only one production site, which contains a single central node that contains data for the entire site and, optionally, one or more rim nodes that may be used to increase capacity and resilience. All rim nodes connect with the central node.

Node

A node in a Qlik Sense site runs a set of Qlik Sense services. By configuring which services to run on a node, it can be set up to perform a specific role (for example, as a proxy node or a reload node) within a site.

A Qlik Sense site consists of the following types of nodes:

- A central node: This is the minimum configuration; a site always includes a central node
- Zero or more rim nodes: Used to increase capacity and resilience

Repository database

The Qlik Sense Repository Service (QRS) manages persistence and synchronization of data on a node. The QRS is needed by all other Qlik Sense services and is therefore installed on all nodes in a site. The QRS attaches to the repository database, which is also installed on all nodes, and manages the synchronization of data between all repository databases in multi-node sites.

Ports

Qlik Sense uses ports for communication between web browsers (users) and proxies, and between services in both local and multi-node deployments.

1.2 System requirements for Qlik Sense

This section lists the requirements that must be fulfilled by the target system in order to successfully install and run Qlik Sense.

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Platforms	<ul style="list-style-type: none">• Microsoft Windows Server 2008 R2• Microsoft Windows Server 2012• Microsoft Windows Server 2012 R2 <p>For development and testing purposes only:</p> <ul style="list-style-type: none">• Microsoft Windows 7 (64-bit version only)• Microsoft Windows 8.1 (64-bit version only)• Microsoft Windows 10 (64-bit version only)
Processors (CPUs)	Multi-core x64 compatible processors
Memory	8 GB minimum (depending on data volumes, more may be required) Qlik Sense is an in-memory analysis technology. The memory requirements for the Qlik Sense products are directly related to the amount of data being analyzed.
Disk space	1 GB total required to install
Security	<ul style="list-style-type: none">• Microsoft Active Directory• Microsoft Windows Integrated Authentication• Third-party security <p>Local admin privileges are needed to run the Qlik Sense services.</p>
WebSockets	Web browsers and infrastructure components (such as proxies and routers) must support WebSockets.
.NET framework	4.5.2
Repository database	PostgreSQL (included) PostgreSQL, often referred to as Postgres, is an open source object-relational database management system. It is released under the PostgreSQL License, which is a free/open source software license.
Internet protocol	IPv4 IPv6 dual stack

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Qlik Management Console (QMC), supported browsers	<p>Microsoft Windows 7, Windows 8.1, Windows Server 2008 R2, Windows 2012:</p> <ul style="list-style-type: none">• Microsoft Internet Explorer 10 or higher• Google Chrome• Mozilla Firefox (requires hardware acceleration, not supported in virtual environments) <p>Microsoft Windows Server 2012 R2:</p> <ul style="list-style-type: none">• Microsoft Internet Explorer 11• Google Chrome• Mozilla Firefox (requires hardware acceleration, not supported in virtual environments) <p>Microsoft Windows 10:</p> <ul style="list-style-type: none">• Microsoft Internet Explorer 11• Microsoft Edge• Google Chrome• Mozilla Firefox (requires hardware acceleration, not supported in virtual environments) <p>Apple Mac OS X 10.10 and 10.11:</p> <ul style="list-style-type: none">• Apple Safari version 8 or higher• Mozilla Firefox (requires hardware acceleration, not supported in virtual environments)• Google Chrome
QMC, minimum screen resolution	<p>Desktops, laptops, and Apple Mac: 1024x768</p> <p>No mobile or small screen support.</p>

1.3 What is included in a Qlik Sense installation

This topic describes all items that are included in a typical Qlik Sense installation.

Desktop items and Start menu items

After having installed Qlik Sense, two shortcuts will be available from the desktop as well as from the **Start** button (**Start > All Programs**):

- Shortcut to Qlik Sense hub
The hub is the starting point when you run Qlik Sense. It is where you find all the Qlik Sense apps you have access rights to use.
- Shortcut to Qlik Management Console

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The Qlik Management Console (QMC) is a web-based application for configuring and administering your Qlik Sense site.

Features and services

The Qlik Sense Repository Service (QRS) is always included in a Qlik Sense installation. Other features are selected during the setup process. All features have their executable files installed to `%ProgramFiles%\Qlik`.

Repository database

In a default Qlik Sense installation, a Qlik Sense Repository Database (QRD) service is created specifically for use by the Qlik Sense Repository Service (QRS). The QRS connects to the QRD to read and write data in the repository database. A PostgreSQL database is used by default.

The QRD spawns the *PostgreSQL* executable that is located in `%ProgramFiles%\Qlik\Sense\Repository\PostgreSQL\[VersionNumber]\bin`.

Examples, apps and logs

There are some example files included in the Qlik Sense installation. These are installed to `%ProgramData%\Qlik\Examples`. For example, a number of extension code examples are installed to the *Extensions* sub-folder.

The default Qlik Sense installation comes with two example apps that you can use. They are installed to `%ProgramData%\Qlik\Sense\Repository\DefaultApps`, and you can also access them directly through the QMC:

- *License Monitor.qvf*
- *Operations Monitor.qvf*

Logs for the installed features are found in `%ProgramData%\Qlik\Sense\Log`. Installation logs are found in the *temp* folder which can be accessed with the environment variable `%temp%`.

Finding help

If you need help deploying, administering, working with or extending Qlik Sense, the Qlik Sense online help portal is the first place you should visit. It contains help topics about all aspects of Qlik Sense as well as basic tutorials.

➦ To access the Qlik Sense online help portal, point your browser to this URL: help.qlik.com

2 Installing Qlik Sense

Qlik Sense can be installed and configured in different ways to suit different needs.

The installation procedure is as follows:

1. Check that your environment fulfills the system requirements.
See: *System requirements for Qlik Sense (page 5)*
 2. Download the Qlik Sense setup file.
See: *Downloading the Qlik Sense setup file (page 10)*
 3. Determine the user account that will be used to run the Qlik Sense services:
 - You can either use a dedicated service account (recommended) or the local system account. A dedicated service account is a user defined with the minimum privileges necessary and used only by the services of a given application.
 - If a dedicated service account is to be used, set it up before starting the installation. The service account must have local administrator rights.
 - On operating systems with User Account Control (UAC) disabled, make sure you have logged on with Administrator rights using an account that has an actual password defined (that is, not a blank password).
 4. Install the Qlik Sense software:
 - Quick install: This installs all program features/services to a default location, for both a central node and a rim node. This installation option is recommended for single node installation and for rim nodes where all services/features shall be included.
See: *Quick installation (page 10)*
 - Custom install: This installation type allows you to select the installation location for both a central node and a rim node. It also allows you to select which type of rim node to install. This installation option is recommended for advanced users and for nodes where not all features/services shall be included.
See: *Custom installation (page 14)*
- If you experience problems during the installation, consult the troubleshooting section.
- See: *Troubleshooting an installation (page 38)*
5. Perform an initial setup after the installation:
 - a. Activate the license in the Qlik Management Console (QMC). This will make you the root administrator for the Qlik Sense site.
 - b. Allocate user access to yourself.
See: *Assigning licenses to users (page 18)*
 - c. For a rim node, you must also go to the central node and identify the rim node.



For a quick setup, the steps above are the only ones needed. The Setup after installation topic contains more steps, but they can be ignored if you only want to get up and running.

See: *Setup after installation (page 18)*

6. Open your first app:
 - a. On the QMC start page, under **GOVERNANCE**, click **Monitoring apps**. The Qlik Sense hub is opened, displaying the **Monitoring apps** stream.
 - b. Click one of the apps to open it. Click one of the sheets to open it.

You have managed to install Qlik Sense and open an app.

2.1 Downloading the Qlik Sense setup file

The *Qlik_Sense_setup.exe* and *Qlik_Sense_update.exe* files are obtained from:

www.qlik.com

Log on with a registered customer or partner account, select **Support > Downloads** and then select the **Sense** tab. Select the required file and save it to a folder on your computer.

2.2 Quick installation

A quick installation installs all program components into default locations. This installation type is recommended for single node installation (a single server installation) and for central or rim nodes that will run all services.

During the installation .NET will be installed, if not previously installed. If there is an older installed version of .NET it will be updated.

You will need the following when you run the installation program:

- What Windows account and password Qlik Sense will use for the Qlik Sense services. For security reasons, this should usually be a dedicated service account (a user defined with the minimum privileges necessary and used only by the services of a given application). However, any account with administrator privileges can be used.

See: *System requirements for Qlik Sense (page 5)*

- What password you will use for the Qlik Sense repository database superuser. By default, the database is a PostgreSQL database installed with Qlik Sense.
- Your Qlik Sense license key.



Remember that after you install and start Qlik Sense, you will need access to any data that you plan to use. You will also need to know how you want users to connect to your installation. For example, if this is a test installation, you may want to create a Windows user to serve as the test user, or set up the installation so that any user in the same Windows domain has access to Qlik Sense.

Single server installation

These instructions are for a single server installation only.

Do the following:

1. Start the installation program (*Qlik_Sense_setup.exe*), select **QUICK INSTALL**, and accept the license agreement.
2. In the **Repository role** screen for the Qlik Sense Repository Service (QRS), select **CENTRAL**.
3. In the **Repository database superuser password** screen, enter a password for the Qlik Sense repository database superuser.
This user is created during installation for administering the repository database. It is possible, but not recommended, to proceed without creating a password.
4. In the **Service credentials** screen, select whether to use a dedicated service account to run the Qlik Sense services:
 - To use a dedicated service account, select the checkbox and enter the **Username** and **Password** for that Windows account. You must have a password for this user account type.
 - To use the local system account, leave the checkbox cleared. You can use this user account type without a password.



If a dedicated service account is not available at the time of installation, you can install Qlik Sense without starting the services at the end of the installation and change the account later.

5. In the **Host name** screen, accept the default name (the name of this computer).
6. In the **Ready to install** screen, select whether you want the installation to create desktop shortcuts and whether you want to automatically start the Qlik Sense services when the installation has completed.
Then click **Install**.



*If you selected local system as user account type in the **Service credentials** screen, but wish to use a dedicated service account to run the Qlik Sense services, clear the **Start the Qlik Sense services when the setup is complete** checkbox.*

7. If necessary, click **Yes** in the **User Account Control** box.

When the installation is complete, the **Installation summary** is displayed.

Select the checkbox to launch the Qlik Management Console (QMC) to enter the license key.

Click **Finish** to close the **Installation summary**.



If the installation did not complete successfully, the **Installation failed** screen is displayed. For more detailed information, see the installation log located in your **temp** folder accessed with the environment variable `%temp%`.



Sometimes there is a timeout when starting the Qlik Sense services. To avoid this, make sure that the `ServicesPipeTimeout` setting in the Registry Editor in Windows is set to two (2) minutes. This is needed to give the Qlik Sense Repository Service (QRS) enough time to start.

You have now successfully installed Qlik Sense on your computer.

After the installation, you need to perform an initial setup.

See: *Perform an initial setup after the installation: (page 9)*

Rim or central node with all services in a multi-node installation

These instructions are for the installation of a central node in a multi-node installation or a rim node that will run all services. To install nodes that will run selected services, use the custom installation.

Do the following:

1. Start the installation program (`Qlik_Sense_setup.exe`), select **QUICK INSTALL**, and accept the license agreement.
2. In the **Repository role** screen for the Qlik Sense Repository Service (QRS), choose whether to install a **CENTRAL** or a **RIM** node in your deployment.
3. In the **Repository database superuser password** screen, enter a password for the Qlik Sense repository database superuser.
This user is created during installation for administering the repository database. It is possible, but not recommended, to proceed without creating a password.
4. In the **Service credentials** screen, select whether to use a dedicated service account to run the Qlik Sense services:
 - To use a dedicated service account, select the checkbox and enter the **Username** and **Password** for that Windows account. You must have a password for this user account type.
 - To use the local system account, leave the checkbox cleared. You can use this user account type without a password.



If a dedicated service account is not available at the time of installation, you can install Qlik Sense without starting the services at the end of the installation and change the account later.

If **RIM** was selected, the **Ready to install** screen is displayed (see step 6). If you selected **CENTRAL**, you will be prompted for the host name.

5. In the **Host name** screen, enter or accept the name of this machine.
The central node uses certificates to communicate with the other servers securely. Specify the name of your machine in the same format that other machines will use to connect to it. This address (host name) will later be used for exporting certificates to other nodes.
6. In the **Ready to install** screen, select whether you want the installation to create desktop shortcuts and whether you want to automatically start the Qlik Sense services when the installation has completed.
Then click **Install**.



*If you selected local system as user account type in the **Service credentials** screen, but wish to use a dedicated service account to run the Qlik Sense services, clear the **Start the Qlik Sense services when the setup is complete** checkbox.*

7. If necessary, click **Yes** in the **User Account Control** box.

When the installation is complete, the **Installation summary** is displayed.

Select the checkbox to launch the Qlik Management Console (QMC) to enter the license key.

Click **Finish** to close the **Installation summary**.



*If the installation did not complete successfully, the **Installation failed** screen is displayed. For more detailed information, see the installation log located in your **temp** folder accessed with the environment variable `%temp%`.*



Sometimes there is a timeout when starting the Qlik Sense services. To avoid this, make sure that the `ServicesPipeTimeout` setting in the Registry Editor in Windows is set to two (2) minutes. This is needed to give the Qlik Sense Repository Service (QRS) enough time to start.

You have now successfully installed a node of a Qlik Sense deployment on your computer.

After the installation, you need to perform an initial setup.

See: *Perform an initial setup after the installation: (page 9)*

Change the user account used for the Qlik Sense services

If you selected local system as user account type in the **Service credentials** screen and cleared the **Start the Qlik Sense services when the setup is complete** checkbox in the **Ready to install** screen, you can change the setup so that a dedicated service account is used to run the services instead of the local system account:

1. Create a dedicated service account (a user defined with the minimum privileges necessary and used only by the services of a given application).
2. Select **Start>Administrative Tools>Services**.
3. Proceed as follows for each Qlik Sense service in the list:
 - a. Right-click the service and select **Properties**.
 - b. Select the **Log On** tab and then **This account**.
 - c. Enter the credentials for the dedicated service account and click **OK**.

The services are as follows: Qlik Sense Repository Service, Qlik Sense Proxy Service, Qlik Sense Engine Service, Qlik Sense Scheduler Service, Qlik Sense Printing Service, and Qlik Sense Service Dispatcher



Depending on your setup some of the services may not be available. In addition, the Qlik Sense Repository Database service must always run as local system.

4. Start the services manually.

2.3 Custom installation

Custom installation allows you to select the installation location. If you are installing a rim node it also allows you to select which type of Qlik Sense node to install. Custom installation is only recommended for advanced users and for nodes where not all services/features are to be included.

During the installation .NET will be installed, if not previously installed. If there is an older installed version of .NET it will be updated.

You will need the following when you run the installation program:

- What Windows account and password Qlik Sense will use for the Qlik Sense services. For security reasons, this should usually be a dedicated service account (a user defined with the minimum privileges necessary and used only by the services of a given application). However, any account with administrator privileges can be used.

See: *System requirements for Qlik Sense (page 5)*

- What password you will use for the Qlik Sense repository database superuser. By default, the database is a PostgreSQL database installed with Qlik Sense.
- Your Qlik Sense license key.



Remember that after you install and start Qlik Sense, you will need access to any data that you plan to use. You will also need to know how you want users to connect to your installation. For example, if this is a test installation, you may want to create a Windows user to serve as the test user, or set up the installation so that any user in the same Windows domain has access to Qlik Sense.

Do the following:

1. Start the installation program (*Qlik_Sense_setup.exe*), select **CUSTOM INSTALL**, and accept the license agreement.
2. Select a role for the Qlik Sense Repository Service (QRS).

Click **CENTRAL** if you want to install as a central node or click **RIM** if you want to install as a rim node.

- **CENTRAL** selected (default):
 - You are installing a single node configuration or
 - your installation is considered to be the master in a multi-machine setup. The master has direct access to the central repository database. The master QRS synchronizes the central repository database with the local repository databases so that they all contain the same information. All the Qlik Sense services are installed as default.
- **RIM** selected: A local QRS instance in a multi-machine setup. The QRS instance on a rim node only has access to the local repository database on the server where it is running. Select which Qlik Sense rim node type to install:
 - **COMPLETE**: A complete node containing all the Qlik Sense services.
 - **PROXY**: A node managing Qlik Sense authentication, session handling and load balancing. The QRS and Qlik Sense Proxy Service (QPS) are installed.
 - **ENGINE**: A node providing the analytical power of Qlik Sense to the client. The QRS and Qlik Sense Engine Service (QES) are installed.
 - **PROXY** and **ENGINE**: A combined node containing both the QPS and QES.
 - **SCHEDULER**: A node managing scheduled reloads of Qlik Sense apps and other types of reload triggering. The QRS, Qlik Sense Scheduler Service (QSS), and QES are installed.

In order to perform reloads the QSS requires the QES to be running on the same node.

3. Define the **Installation path** either by entering the installation location, or click to browse for the location or leave it to be installed at the predefined location.

If an invalid installation path is defined, **UNC paths are not allowed** is displayed.



You cannot install onto a mapped network location.



Only the following characters can be used in the installation path: a-z, A-Z, and 0-9

4. In the **Repository database superuser password** screen, enter a password for the Qlik Sense repository database superuser.
This user is created during installation for administering the repository database. It is possible, but not recommended, to proceed without creating a password.
If the repository database superuser password has already been created, you are asked to enter the password.
5. In the **Service credentials** screen, select whether to use a dedicated service account to run the Qlik Sense services:
 - To use a dedicated service account, select the checkbox and enter the **Username** and **Password** for that Windows account. You must have a password for this user account type.
 - To use the local system account, leave the checkbox cleared. You can use this user account type without a password.



If a dedicated service account is not available at the time of installation, you can install Qlik Sense without starting the services at the end of the installation and change the account later.

If **RIM** was selected, the **Ready to install** screen is displayed (see step 7). If **CENTRAL** was selected, the **Host name** screen is displayed.

6. In the **Host name** screen, enter or accept the name of this machine.
The central node uses certificates to communicate with the other servers securely. Specify the name of your machine in the same format that other machines will use to connect to it. This address (host name) will later be used for exporting certificates to other nodes.
7. **CENTRAL**: Select if you want the installation to create desktop shortcuts and if you want to automatically start the Qlik Sense services when the installation has completed.
RIM: Select if you want to automatically start the Qlik Sense services when the installation has completed.



*If you selected local system as user account type in the **Service credentials** screen, but wish to use a dedicated service account to run the Qlik Sense services, clear the **Start the Qlik Sense services when the setup is complete** checkbox.*

Then click **Install**.

8. If necessary, click **Yes** in the **User Account Control** box.

When the installation is complete, the **Installation summary** is displayed.

Select the checkbox to launch the Qlik Management Console (QMC) to enter the license key.

Click **Finish** to close the **Installation summary**.



If the installation did not complete successfully, the **Installation failed** screen is displayed. For more detailed information, see the installation log located in your **temp** folder accessed with the environment variable **%temp%**.



Sometimes there is a timeout when starting the Qlik Sense services. To avoid this, make sure that the **ServicesPipeTimeout** setting in the Registry Editor in Windows is set to two (2) minutes. This is needed to give the Qlik Sense Repository Service (QRS) enough time to start.

You have now successfully installed Qlik Sense on your computer.

After the installation, you need to perform an initial setup.

See: *Perform an initial setup after the installation: (page 9)*

Change the user account used for the Qlik Sense services

If you selected local system as user account type in the **Service credentials** screen and cleared the **Start the Qlik Sense services when the setup is complete** checkbox in the **Ready to install** screen, you can change the setup so that a dedicated service account is used to run the services instead of the local system account:

1. Create a dedicated service account (a user defined with the minimum privileges necessary and used only by the services of a given application).
2. Select **Start>Administrative Tools>Services**.
3. Proceed as follows for each Qlik Sense service in the list:
 - a. Right-click the service and select **Properties**.
 - b. Select the **Log On** tab and then **This account**.
 - c. Enter the credentials for the dedicated service account and click **OK**.

The services are as follows: Qlik Sense Repository Service, Qlik Sense Proxy Service, Qlik Sense Engine Service, Qlik Sense Scheduler Service, Qlik Sense Printing Service, and Qlik Sense Service Dispatcher



Depending on your setup some of the services may not be available. In addition, the **Qlik Sense Repository Database** service must always run as local system.

4. Start the services manually.

3 Setup after installation

This section guides you through the process of setting up your Qlik Sense site, including procedures for managing the licenses and user access.

After you have installed Qlik Sense, the next step is to add a license to make the server operational.

See the following sections in the *Manage Qlik Sense sites* guide:

- Managing license and tokens

After that you can configure the server to fit with your organization's particular needs. Below are the common items most deployments will need to configure.

3.1 Connecting Qlik Sense to your user directory

Qlik Sense has a range of methods for authenticating users. Windows authentication is the default method.

When a user connects to Qlik Sense for the first time a user record is created to identify that user. Once this record is created, the administrator can track the user's activity and assign her a license and permissions.

Administrators can also connect to a user directory (for example, Active Directory or LDAP) to obtain further information about that user (such as user groups). The user information can be fetched in advance and then kept in sync with the user directory. This is optional but recommended since it will provide you with the best management experience.

See the following sections in the *Manage Qlik Sense sites* guide:

- Setting up a user directory connector and schedule by task
- Managing users

3.2 Assigning licenses to users

Users need a license to open an app. Qlik Sense offers a token-based system that allows the administrator to assign the most suitable license type to each user. Licenses can be allocated on an individual basis or automatically by using rules to define who is allowed to obtain a license, for example, all users in a specific department.

See the following sections in the *Manage Qlik Sense sites* guide:

- Managing license and tokens
- Allocating user access
- Creating new login access

3.3 How Qlik Sense uses HTTPS and certificates

Qlik Sense deploys securely by default when it is installed. It uses self-sign certificates to ensure that data is transferred to users in a secure way. When users access the system they by default receive a warning that the certificate used by the site is not trusted. The user can then accept the certificate and proceed to use Qlik Sense securely.

There are two options to prevent the warning; one is to use a trusted certificate from either a trusted provider or an internal corporate source. The other option is to run the site using HTTP only. Both options are available as settings on the Qlik Sense Proxy Service.

Regardless of which option you choose, the services in Qlik Sense always uses encryption when communicating.

See the following sections in the *Manage Qlik Sense sites* guide:

- Changing proxy certificate
- Editing proxies

3.4 Creating and opening apps

To create and open apps on the server users must browse to the Qlik Sense hub using their web browser. The hub lists two areas: **My work** contains the apps belonging to the user who has logged in, and **Streams** contains the other apps the user has access to. After the installation the administrators see two built-in monitoring apps, while all other users do not see any apps. Click on an existing app to open it. To create a new app, click **Create new app**.

3.5 Working with streams, apps and publishing

A stream is a way to group together apps that have similar permissions. Once an app has been created, an administrator can publish it to a stream. The app then becomes visible to users who have access to that stream. Apps, streams and publishing are managed in the Qlik Management Console (QMC).

See the following sections in the *Manage Qlik Sense sites* guide:

- Managing streams
- Managing apps
- Publishing app

See also:

- The following section in the *Manage Qlik Sense sites* guide: Managing nodes and services

4 Maintaining Qlik Sense

After installing Qlik Sense you can perform a number of maintenance tasks from the **Programs and Features** option on the **Control Panel**. This includes modifying, repairing and uninstalling Qlik Sense.

When updates are distributed and applied, they can be maintained from the **Installed Updates** option on the **Control Panel**.

4.1 Modifying an installation

The **Modify** option allows you to change the rim node type of your Qlik Sense installation. However, you cannot change a rim node into a central node or the other way around. In addition to the rim node being changed, the installed features are repaired without any credentials being changed.

See: *Repairing an installation (page 21)*



If an update has been applied to Qlik Sense since installation, the Modify option reapplies the update at the end of the process.

Do the following:

1. To start modifying the installation, open the **Control Panel** and select **Uninstall a program**. Then select **Qlik Sense** from the list of programs and click **Change**.


The **Qlik Sense Setup Maintenance** screen is displayed.




You can also perform this action by double-clicking the `Qlik_Sense_setup.exe` file. In that case, you must use the correct version of the setup file when modifying your Qlik Sense installation, that is, the same version used when installing Qlik Sense.


2. Click **MODIFY** then click which Qlik Sense rim node type is required:
 - **COMPLETE**: A complete node containing all the Qlik Sense services.
 - **PROXY**: A node managing Qlik Sense authentication, session handling and load balancing. The Repository and Proxy services are installed.
 - **ENGINE**: A node providing the analytical power of Qlik Sense to the client. The Repository and Engine services are installed
 - **PROXY** and **ENGINE**: A combined node containing both Proxy and Engine services.
 - **SCHEDULER**: A node managing scheduled reloads of Qlik Sense apps and other types of reload triggering. The Repository, Scheduler and Engine services are installed.
In order to perform reloads the Scheduler requires the Engine service to be running on the same node.

The **Installation Location** screen is displayed.

3. Define the **Installation path** either by entering the installation location, or click  to browse for the location or leave it to be installed at the predefined location.

If an invalid installation path is defined, **UNC paths are not allowed** is displayed.

 *You cannot install onto a mapped network location.*

 *Only the following characters can be used in the installation path: a-z, A-Z, and 0-9*

Click **Next**.

The **Ready to Install** screen is displayed.

4. Select if you want the installation to automatically start the Qlik Sense services when the installation has completed. Then click **Modify** to start modifying your Qlik Sense installation.

The **User Account Control** screen is displayed.

 *This is only applicable if UAC is enabled.*

5. Click **Yes** to start modifying your Qlik Sense installation.

 *This is only applicable if UAC is enabled.*

The progress is displayed.


When finished, the **Modification Summary** screen is displayed to confirm that Qlik Sense has been modified successfully.

6. Click **Finish**.

You have now successfully modified your Qlik Sense installation.

4.2 Repairing an installation


The **Repair** option restores all missing files, shortcuts and registry values without any credentials being changed.

 *If an update has been applied to Qlik Sense since installation, the Repair option also repairs the update.*

Do the following:

1. To start repairing the installation, open the **Control Panel** and select **Uninstall a program**. Then select **Qlik Sense** from the list of programs and click **Change**.

The **Qlik Sense Setup Maintenance** screen is displayed.

 You can also perform this action by double-clicking the `Qlik_Sense_setup.exe` file. In that case, you must use the correct version of the setup file when modifying your Qlik Sense installation, that is, the same version used when installing Qlik Sense.

2. Click **REPAIR**.
The **Ready to Repair** screen is displayed.
3. Click **Repair**.
 - If UAC is enabled, the **User Account Control** screen is displayed.
 - If UAC is disabled, the repair process starts.
4. Click **Yes** to start repairing your Qlik Sense installation.

 This is only applicable if UAC is enabled.


The progress is displayed.

When finished, the **Repair Summary** screen is displayed to confirm that Qlik Sense has been restored successfully.

5. Click **Finish**.

You have now successfully repaired your Qlik Sense installation.


4.3 Uninstalling Qlik Sense

 If any updates have been applied to Qlik Sense since installation, the **Uninstall** option will also remove all the updates.

Do the following:

1. To start uninstalling, open the **Control Panel** and select **Uninstall a program**. Then select **Qlik Sense** from the list of programs and click **Uninstall**.

A confirmation screen is displayed asking if you are sure that you want to uninstall Qlik Sense from your computer. Select the **Remove Qlik Sense certificates and data folders** checkbox to remove all files from the machine ready for a new configuration.

 If the repository of this server is installed as **Central**, you may have other servers on other machines that require this repository to function properly.



You can also uninstall Qlik Sense by double-clicking the Qlik_Sense_setup.exe file and then selecting Uninstall from the Maintenance screen. In that case, you must use the correct version of the setup file when modifying your Qlik Sense installation, that is, the same version used when installing Qlik Sense.

2. Click **Uninstall** to start uninstalling Qlik Sense.

If User Account Control (UAC) is disabled, the uninstall starts.

If UAC is enabled, the **User Account Control** dialog is displayed.

Click **Yes** to start the uninstall.

The progress of the uninstall process is displayed. When finished the **Uninstall Summary** screen is displayed to confirm that Qlik Sense has been uninstalled successfully.

3. Click **Finish**.

You have now uninstalled Qlik Sense.

5 Upgrading Qlik Sense

The upgrade option is available when Qlik Sense has been previously installed and a major release (version x.x) of the software is available for installation. When upgrading, the previous version is completely replaced by the new version.

5.1 Migrating your apps

When you upgrade Qlik Sense all existing apps need to be migrated to ensure compatibility between the versions, this happens automatically when the system starts the first time after the upgrade.

If the migration step fails for one or more apps, these apps will not be available in the **Hub** after the upgrade. Apps that are not migrated are indicated in the **Apps** section of Qlik Management Console, where you can also perform a manual migration.

5.2 Upgrading a multi-node site

In a multi-node site, all nodes need to run the same version of Qlik Sense to be able to synchronize with each other. It is recommended to perform the upgrade with all nodes offline, starting with the central nodes.



When upgrading a rim node, ensure that you use the same log-in account as was used for the initial installation of that node. Failure to do so means that the central node will not find the certificates installed on the node and you will need to perform a clean installation of the node.

Do the following:

1. Take all Qlik Sense nodes offline, that is, stop the Qlik Sense services.
2. Upgrade the central node and start the Qlik Sense services.
3. Check that all apps have been migrated successfully on the central node. If migration has failed for one or more apps, resolve the issues before continuing.
4. Upgrade, start, and synchronize the remaining nodes one by one.

5.3 Upgrade prerequisites

Before you start upgrading Qlik Sense, there are a few requirements to consider:

- Consult *System requirements for Qlik Sense* (page 5) before proceeding with the upgrade process.
- Download the **Qlik_Sense_setup.exe** file from the download site.
- On Operating Systems with User Account Control (UAC) disabled, make sure you have logged on with Administrator rights using an account that has an actual password defined, that is, not a blank password.



Consider backing up the Qlik Sense site before performing an upgrade.

5.4 Upgrading

The upgrade installs new program features and upgrades existing features. Those features that were previously deselected are excluded from the upgrade.

Do the following:

1. To start the upgrade, double-click on *Qlik Sense_Server_setup.exe*.

The **Welcome** screen is displayed.

2. Click **Upgrade**.

The **License agreement** screen is displayed.

3. Read the license agreement and then tick the **I accept the license agreement** checkbox (if this is the case) and click **Next**.



You also have the option to print the license agreement.

The **Ready to upgrade** screen is displayed.

4. Select if you want the upgrade to create desktop shortcuts and if you want to automatically start the Qlik Sense services when the upgrade has completed.

Click **Upgrade**:

- If UAC is enabled, the **User Account Control** screen is displayed.
- If UAC is disabled, the upgrade starts.

5. Click **Yes** to start the upgrade.



This is only applicable if UAC is enabled.

The upgrade starts.

6. When the installation has completed the **Upgrade Summary** is displayed.
Click **Finish** to close the **Upgrade Summary**.



*If the upgrade did not complete successfully, the **Upgrade failed** screen is displayed. For more detailed information, see the installation log located in your **temp** folder accessed with environment variable `%temp%`.*

You have now successfully upgraded to a newer version of Qlik Sense.

See also:

Backing up and restoring in the *Plan Qlik Sense deployments*.

6 Updating Qlik Sense

The update option is available when Qlik Sense has been previously installed and a service release (version x.x.x) of the software is available for installation. A service release primarily includes software updates and fixes which are then applied to the existing version. Check the download site for available updates.



Updates are installed without the need to remove earlier updates or the major release (x.0) itself.

As well as installing an update, updates can be uninstalled:

- **UPDATE** applies the software updates and fixes to the installed version of Qlik Sense. For example, Qlik Sense version 2.0 would be updated to version 2.0.1.
- **UNINSTALL** removes individual updates from the installed version of Qlik Sense. Updates must be uninstalled sequentially, that is, the latest update must be uninstalled first. It is not possible to uninstall an earlier update without removing the later updates. The apps and database used with service release versions can still be used with the related major release version (backwards compatible).

6.1 Updating a multi-node site

In a multi-node site, all nodes need to run the same version of Qlik Sense to be able to synchronize with each other. It is recommended to perform the update with all nodes offline, starting with the central nodes.



When updating a rim node, ensure that you use the same log-in account as was used for the initial installation of that node. Failure to do so means that the central node will not find the certificates installed on the node and you will need to perform a clean installation of the node.

Do the following:

1. Take all Qlik Sense nodes offline, that is, stop the Qlik Sense services.
2. Update the central node and start the Qlik Sense services.
3. Update, start, and synchronize the remaining nodes one by one.



The same procedure should be followed when uninstalling updates.

6.2 Updating prerequisites

Before you start updating Qlik Sense, there are a few requirements to consider:

- The Qlik Sense major release that is referenced by the update must have been installed.
- Download the *Qlik_Sense_update.exe* file from the download site.
See: *Downloading the Qlik Sense setup file (page 10)*.
- On operating systems with User Account Control (UAC) disabled, make sure you have logged on with Administrator rights using an account that has an actual password defined (not a blank password).

For information on repairing and modifying the installation after updates have been applied see also:

- [Repairing Qlik Sense](#)
- [Modifying Qlik Sense](#)

6.3 Performing an update

A service release is provided to update Qlik Sense from one version to another, for example, version 2.0.1 to 2.0.2. When applied, each update will be visible under **Installed Updates** (*Control Panel > Programs > Installed Updates*).

Each new update contains all the previous updates to the installed version of Qlik Sense.



*Make sure that you have located and/or obtained the update file, *Qlik_Sense_update.exe*, before starting the update procedure.*

Do the following:

1. Double-click on the update file to start the update.
The **Welcome** screen is displayed.
2. Click **Update**.
 - If UAC is enabled, the **User Account Control** dialog is displayed.
 - If UAC is disabled, the update starts.
3. Click **Yes** to start the update.



This is only applicable if UAC is enabled.

The update starts.

4. When the installation has completed the **Update Summary** is displayed.
Click **Finish** to close the **Update Summary**.



*If the update did not complete successfully, the **Update Failed** screen is displayed and the Qlik Sense version will remain the same as before trying to apply the update. For more detailed information, see the installation log located in your **temp** folder accessed with environment variable **%temp%**.*

You have now successfully updated to a newer version of Qlik Sense. The update is visible under **Installed Updates** (*Control Panel > Programs > Installed Updates*).

6.4 Uninstalling an update

When uninstalling an update, the updated version of Qlik Sense will be reverted back to the previously installed service or major release version of Qlik Sense. Updates must be uninstalled sequentially, that is, the latest update must be uninstalled first. It is not possible to uninstall an earlier update without removing the later updates.

If you want to completely uninstall Qlik Sense, refer to *Uninstalling Qlik Sense (page 22)* instead.

Do the following:

1. To start uninstalling an update, open the **Control Panel** and select **Programs**. Then select **View installed updates**. All the installed updates are shown in the list.
2. Select the most recent Qlik Sense update from the list of updates and click **Uninstall**.

The **Qlik Sense Ready to Remove Update** screen is displayed.



You can also perform this action by double-clicking the update file.

3. Click **Uninstall**.
4. The progress of the uninstall process is displayed. When finished the **Update uninstall summary** screen is displayed to confirm that the update has been uninstalled successfully.
5. Click **Finish**.

You have now successfully uninstalled your Qlik Sense update. You must repeat the procedure to uninstall further updates.

7 Installing Qlik Sense in silent mode



The operations described below should only be performed by advanced users.

This section describes the unattended silent operations that can be performed. All setup options that are available in the user interface of the installer can be performed with silent operations.



The silent feature names are case sensitive. For example this command will not start the installation: `-s -a engine`. The correct command is: `-s -a Engine`.

7.1 Silent installation

When running a silent installation, Qlik Sense is installed with no dialogs at all. This means all features, properties and user selections have to be known before performing a silent installation. All setup options that are available in the user interface of the installer can be performed with silent operations.

Performing a silent installation

Do the following:

1. Select **Start > All Programs > Accessories > Command Prompt**.
The **Command Prompt** window is displayed.
2. In the **Command Prompt** window, navigate to the folder containing the *Qlik_Sense_setup.exe* file.
3. Enter *Qlik_Sense_setup.exe* followed by the silent installation syntax preferred.



Note that elevation will take place if run from an unelevated process and the UAC is on.

Syntax

```
Qlik_Sense_setup.exe [-silent] {-log "path\filename"} {layout="path"}  
{rimnode=1|0} {rimnodetype="NodeTypename"} {desktopshortcut=1|0}  
{skipstartservices=1|0} {installdir="path"} {userwithdomain="domain\user"}  
{userpassword="password"} {dbpassword="password"}  
{hostname="www.hosturlofyourmachine.com"}
```

Commands

-silent (or -s) Command line-driven setup without UI.(mandatory).

7 Installing Qlik Sense in silent mode

-log (or -l) [log file name with path] Log file directory and log file name.



The user must have access to this directory.

-layout [destination directory] Extracts files (including .msi files) to the destination directory.



This argument should not be combined with other command line arguments.

Arguments

Arguments are separated by space and presented in the form [Argument]="[Value]". The double quotes can normally be omitted but may be needed, for example, when a path contains spaces.

The default values are the same as those used in the setup user interface.

rimnode	1 0	Determines the Repository role
rimnodetype (or rnt)	Complete Proxy Engine ProxyEngine Scheduler	Installs all the features required for the rim node type selected.
desktopshortcut	1 0 (defaults to 1 on clean installs)	Installs desktop shortcuts.
skipstartservices	1 0 (defaults to 0 on clean installs, otherwise the current state.)	To skip starting services after the installation has finished.
installdir (or i)	[path to custom install directory]	Need only be defined if the default install directory will not be used (%ProgramFiles%\Qlik\Sense).
userwithdomain	[domain\username]	The username used to run the Qlik Sense services.
userpassword	[password]	The password of the user used to run the services.
dbpassword (or dbp)	[password]	Password for the Repository database superuser that creates the user that runs the database.
hostname (or h)	[address of the central node]	The central node uses certificates to communicate securely with other servers. Leave blank to use default.

Example 1:

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```
Qlik_Sense_setup.exe -s rnt=Scheduler
```

Example 2:

```
Qlik_Sense_setup.exe -s userwithdomain="mydomain\myUser password=myPassword
```

Example 3:

```
Qlik_Sense_setup.exe -s -l "c:\mylogpath" installdir="c:\mycustompath"  
dbpassword=mydbpassword rimnode=1
```

Deprecated command line arguments

The use of the following command line arguments is no longer recommended.

-rimnodetype (or -rnt) Installs all the features required for the rim node type selected. The node type can be any one of:

Complete, Proxy, Engine, Scheduler.

-addfeatures (or -a) Install the named features. Can be all or any of:

Engine, Proxy, Scheduler, PostgreSQL



The silent feature names are case sensitive. For example this command will not start the installation: -s -a engine. The correct command is: -s -a Engine.



-a Engine Scheduler will also install mandatory features, such as repository.

-removefeatures Removes the named features
Or -r

-syncnode If you want to run the repository as a sync node. Default is central.

-desktopshortcut To add a desktop shortcut.

- To skip starting services after the installation has finished.

skipstartservices

-installdir (or -i) Path to custom install directory. Need only be defined if the default install directory will not be used (%ProgramFiles%\Qlik\Sense).

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-dbpassword (or -dbp) Password for the Repository database superuser that creates the user that runs the database.



Use carefully! The actual password will be visible in the log file. To mitigate this limitation please remove the installation log files after installation.

-hostname (or -h) Host name of the central node.

-userwithdomain (or -u) Dictates the account that runs the services: Domain\User

-password (or -p) Password for the account that runs the services.



Use carefully! The actual password will be visible in the log file. To mitigate this limitation please remove the installation log files after installation.

-cleanup When the uninstall has completed, the Qlik Sense certificates and any file in the *ProgramData\Qlik\Sense* folder will be deleted

7.2 Silent modify

You can silently modify the current Qlik Sense installation. All setup options that are available in the user interface of the installer can be performed with silent operations.

Performing a silent modification

Do the following:

1. Select **Start > All Programs > Accessories > Command Prompt**.
The **Command Prompt** window is displayed.
2. In the **Command Prompt** window, navigate to the folder containing the *Qlik_Sense_setup.exe* file.
3. Enter *Qlik_Sense_setup.exe* followed by the silent installation syntax preferred.



Note that elevation will take place if run from an unelevated process and the UAC is on.

Syntax

```
Qlik_Sense_setup.exe [-silent] [-modify] {-log "path\filename"}  
{rimnodetype="NodeTypename"} {desktopshortcut=1|0} {skipstartservices=1|0}  
{userpassword="password"} {dbpassword="password"}  
{hostname="www.hosturlofyourmachine.com"}
```


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Commands

-silent (or -s)		Command line-driven setup without UI. (mandatory).
-modify		Modifies the product .
-log (or -l)	[log file name with path]	Log file directory and log file name.



The user must have access to this directory.

Arguments

Arguments are separated by space and presented in the form [Argument]="[Value]". The double quotes can normally be omitted but may be needed, for example, when a path contains spaces.

The default values are the same as those used in the setup user interface.

rimnodetype (or rnt)	Complete Proxy Engine ProxyEngine Scheduler	Installs all the features required for the rim node type selected.
desktopshortcut	1 0 (defaults to 1 on clean installs)	Installs desktop shortcuts.
skipstartservices	1 0 (defaults to 0 on clean installs, otherwise the current state.)	To skip starting services after the installation has finished.
userpassword	[password]	The password of the user used to run the services.
dbpassword (or dbp)	[password]	Password for the Repository database superuser that creates the user that runs the database.
hostname (or h)	[address of the central node]	The central node uses certificates to communicate securely with other servers. Leave blank to use default.

Example: Changing installation to a Proxy node type

This example shows how to change the installation node type to a Proxy node.

```
Qlik_Sense_setup.exe -s -modify rnt=Proxy
```

Deprecated command line arguments

For a list of the command line arguments that are no longer recommended, see [Silent installation](#).

7.3 Silent repair

You can silently repair the current Qlik Sense installation. All setup options that are available in the user interface of the installer can be performed with silent operations.

Performing a silent repair

Do the following:

1. Select **Start > All Programs > Accessories > Command Prompt**.
The **Command Prompt** window is displayed.
2. In the **Command Prompt** window, navigate to the folder containing the *Qlik_Sense_setup.exe* file.
3. Enter *Qlik_Sense_setup.exe* followed by the silent installation syntax preferred.
See: *Syntax (page 34)*.

Syntax

```
Qlik_Sense_setup.exe [-silent] [-repair] {-log "path\filename"}
```

Commands

- silent (or -s)** Trigger the silent mode (mandatory).
- repair** Repair the product silently.
- log (or -l)** Log file directory and log file name.



The user must have access to this directory.

If this option is not defined, the log file will be stored with the default name in the default location.

Example:

This example shows how to silently repair the Qlik Sense installation.

```
Qlik_Sense_setup.exe -s -repair
```

7.4 Silent uninstall

You can silently uninstall the current Qlik Sense installation. All setup options that are available in the user interface of the installer can be performed with silent operations.

Performing a silent uninstall

Do the following:

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1. Select **Start > All Programs > Accessories > Command Prompt**.
The **Command Prompt** window is displayed.
2. In the **Command Prompt** window, navigate to the folder containing the *Qlik_Sense_setup.exe* file.
3. Enter *Qlik_Sense_setup.exe* followed by the silent installation syntax preferred.



Note that elevation will take place if run from an unelevated process and the UAC is on.

Syntax

```
Qlik_Sense_setup.exe [-silent] [-uninstall] {-log "path\filename"} {-cleanup} {-password}
```

Commands

-silent (or -s)		Command line-driven setup without UI.(mandatory).
-uninstall		Uninstalls the product .
-log (or -l)	[log file name with path]	Log file directory and log file name.



The user must have access to this directory.

Arguments

Arguments are separated by space and presented in the form [Argument]="[Value]". The double quotes can normally be omitted but may be needed, for example, when a path contains spaces.

The default values are the same as those used in the setup user interface.

cleanup	1 0	When the uninstall has completed, the Qlik Sense certificates and any file in the <i>ProgramData\Qlik\Sense</i> folder will be deleted.
userpassword	[password]	The password of the user used to run the services. Only required if the cleanup argument is used and the services account is different to the local system user account.

Example:

This example shows how to silently uninstall Qlik Sense and remove all files.

```
Qlik_Sense_setup.exe -s -uninstall cleanup=1
```

Deprecated command line arguments

For a list of the command line arguments that are no longer recommended, see [Silent installation](#).

7.5 Silent upgrade

You can silently upgrade the current Qlik Sense installation. All setup options that are available in the user interface of the installer can be performed with silent operations.

Performing a silent upgrade

Do the following:

1. Select **Start > All Programs > Accessories > Command Prompt**.
The **Command Prompt** window is displayed.
2. In the **Command Prompt** window, navigate to the folder containing the *Qlik_Sense_setup.exe* file.
3. Enter *Qlik_Sense_setup.exe* followed by the silent installation syntax preferred.



Note that elevation will take place if run from an unelevated process and the UAC is on.

Syntax

```
Qlik_Sense_setup.exe [-silent] {-log "path\filename"} {desktopshortcut=1|0}  
{skipstartservices=1|0} {installdir="path"} {userpassword="password"}  
{dbpassword="password"}
```

Commands

<code>-silent</code> (or <code>-s</code>)	Command line-driven setup without UI.(mandatory).
<code>-log</code> (or <code>-l</code>)	[log file name with path] Log file directory and log file name.



The user must have access to this directory.

Arguments

Arguments are separated by space and presented in the form [Argument]="[Value]". The double quotes can normally be omitted but may be needed, for example, when a path contains spaces.

The default values are the same as those used in the setup user interface.

desktopshortcut	1 0 (defaults to 1 on clean installs)	Installs desktop shortcuts.
------------------------	---------------------------------------	-----------------------------

7 Installing Qlik Sense in silent mode

skipstartservices	1 0 (defaults to 0 on clean installs, otherwise the current state.)	To skip starting services after the installation has finished.
installdir (or i)	[path to custom install directory]	Need only be defined if the default install directory will not be used (<i>%ProgramFiles%\Qlik\Sense</i>).
userpassword	[password]	The password of the user used to run the services.
dbpassword (or dbp)	[password]	Password for the Repository database superuser that creates the user that runs the database.

The default values are the same as those used in the setup user interface.

Example: Upgrading the installation

This example shows how to silently upgrade an installation and add desktop shortcuts.

```
Qlik_Sense_setup.exe -s desktopshortcut=1
```

Deprecated command line arguments

For a list of the command line arguments that are no longer recommended, see [Silent installation](#).

8 Troubleshooting an installation

This section describes problems that can occur related to installation of Qlik Sense. The possible causes are described and you are presented with actions to solve the problems.

8.1 One or more Qlik Sense services did not start after installation

Possible cause

If the repository service is not running, none of the other services can start, and the repository service cannot start if there is no database.



The services are started automatically delayed. This means it can take a while for them all to start after the installation.

Proposed action

Restart the services, check the logs, or modify the installation.

Do the following:

1. Stop the service and start it again.
2. Check the log files for the service to see if there is any information regarding why the service has not started.
The log files are available in the `%ProgramData%\Qlik\Sense\Log\<Service>` folder.
3. Try repairing the installation.
4. Sometimes there is a timeout when starting the Qlik Sense services. To avoid this, make sure that the `ServicesPipeTimeout` setting in the Registry Editor in Windows is set to two (2) minutes. This is needed to give the Qlik Sense Repository Service (QRS) enough time to start.
5. If the actions above cannot remedy the problem, you need to uninstall and reinstall Qlik Sense.

8.2 Cannot access the hub or the QMC directly after installation

Possible cause

The Qlik Sense services are started automatically delayed. This means it can take a while for them all to start after the installation.

Proposed action

Check that the services have started and that the ports are available.

Do the following:

1. Open the Task Manager in Windows and check that all Qlik Sense services have started.
2. Check that the ports needed by Qlik Sense are available.

See: Plan Qlik Sense deployments

8.3 Multi-node site: Cannot communicate with a rim node that is outside of the domain

Possible cause

Normally, all nodes in a Qlik Sense multi-node site are within the same Windows domain. If one of the rim nodes is outside of the domain with no DNS available for hostname lookup, the nodes within the domain cannot communicate with the node outside the domain unless the Windows host file on each node is updated.

Proposed action

Do the following:

- All nodes within the domain: Update the Windows host file (typically `C:\Windows\System32\drivers\etc\hosts`) with information on how to find the rim node outside the domain.
Example: <IP address of the rim node outside the domain> <hostname of the rim node>
- Rim node outside the domain:
 - Update the Windows host file with information on how to find all the nodes within the domain.
Example:
<IP address of node 1 within the domain> <fully qualified domain name of node 1>
<IP address of node 2 within the domain> <fully qualified domain name of node 2>
Etc.
 - Update the Windows host file with information on the host name of the rim node itself so that the Qlik Sense services on the rim node can communicate with each other.
Example: <IP address of the rim node outside the domain> <hostname of the rim node>

8.4 SSL protocol error or connection refused

Possible cause

Qlik Sense uses the port 443. Other software running on the machine where Qlik Sense is installed, use the port 443. Therefore there is a conflict.

Proposed action

Do the following:

1. Check the ports that are used by the other software.
2. If a software other than Qlik Sense uses the port 443, disable this software or configure it to use another port than 443.