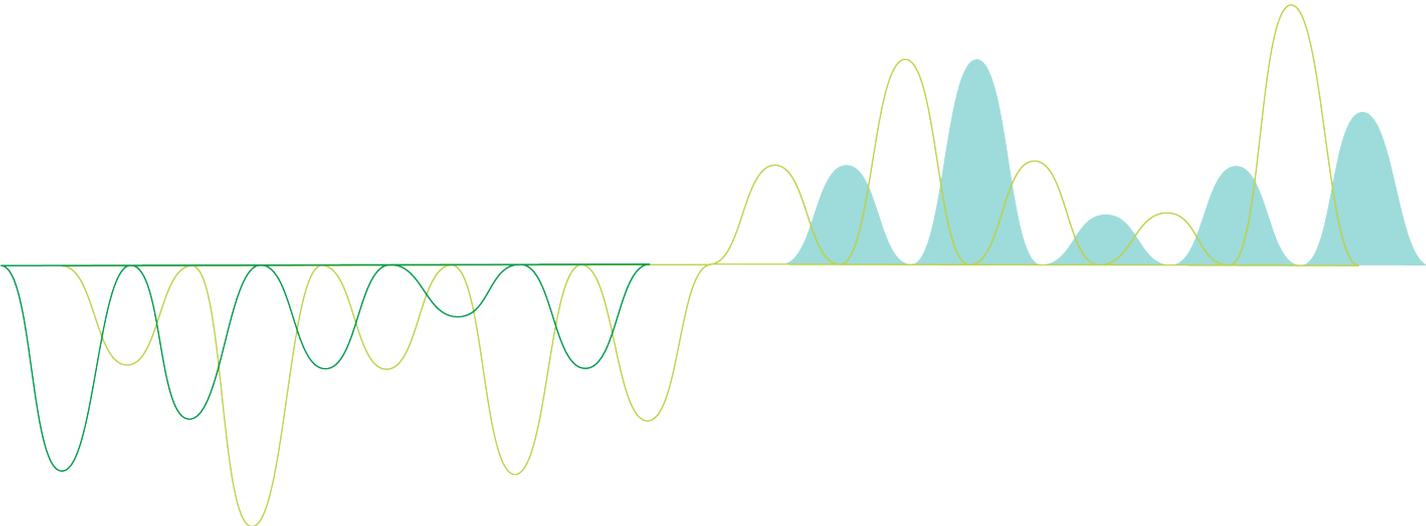


# Monitor Qlik Sense sites

Qlik Sense®  
April 2019  
Copyright © 1993-2019 QlikTech International AB. All rights reserved.



© 2019 QlikTech International AB. All rights reserved. Qlik®, Qlik Sense®, QlikView®, QlikTech®, Qlik Cloud®, Qlik DataMarket®, Qlik Analytics Platform®, Qlik NPrinting®, Qlik Connectors®, Qlik GeoAnalytics®, Qlik Core®, Associative Difference®, Lead with Data™, Qlik Data Catalyst™, Qlik Associative Big Data Index™ and the QlikTech logos are trademarks of QlikTech International AB that have been registered in one or more countries. Other marks and logos mentioned herein are trademarks or registered trademarks of their respective owners.

---

<b>1 About this document</b> .....	<b>5</b>
<b>2 Monitoring a Qlik Sense site</b> .....	<b>6</b>
2.1 Monitoring apps .....	6
2.2 Configuring the Monitoring apps .....	6
Configuring single node environments .....	6
Configuring multi-node environments .....	7
Default virtual proxy with prefix .....	8
Importing new Monitoring apps .....	9
Customizing the apps .....	9
2.3 Starting the Monitoring apps from the QMC .....	9
2.4 Upgrading the Monitoring apps .....	10
Upgrading from Qlik Sense 3.2.x to Qlik Sense June 2017 .....	10
Upgrading from Synchronized persistence to Shared persistence .....	10
<b>3 Operations Monitor</b> .....	<b>12</b>
3.1 Operations Monitor sheets .....	12
<b>4 License Monitor</b> .....	<b>13</b>
4.1 License Monitor sheets .....	13
<b>5 Log Monitor</b> .....	<b>15</b>
5.1 Importing the Log Monitor app to the Monitoring apps in the QMC .....	15
5.2 Log Monitor sheets .....	15
<b>6 Reloads Monitor</b> .....	<b>16</b>
6.1 Importing the Reloads Monitor app to the Monitoring apps in the QMC .....	16
6.2 Reloads Monitor sheets .....	16
<b>7 Sessions Monitor</b> .....	<b>17</b>
7.1 Importing the Sessions Monitor app to the Monitoring apps in the QMC .....	17
7.2 Sessions Monitor sheets .....	17
<b>7 Sense System Performance Analyzer</b> .....	<b>18</b>
7.3 Importing the Sense System Performance Analyzer app to the Monitoring apps in the QMC .....	18
7.4 Sense System Performance Analyzer sheets .....	18
<b>7 Sense Connector Logs Analyzer</b> .....	<b>19</b>
7.5 Importing the Sense Connector Logs Analyzer app to the Monitoring apps in the QMC .....	19
7.6 General configuration .....	19
Days of history .....	19
Historical data .....	19
7.7 Multi-node deployment configuration .....	20
7.8 Sense Connector Logs Analyzer sheets .....	20
<b>8 Troubleshooting - Monitoring a Qlik Sense site</b> .....	<b>22</b>
8.1 The Monitoring apps are not backed up correctly .....	22
8.2 I have accidentally deleted the Monitoring apps .....	22
8.3 The Monitoring apps have become corrupted .....	23
8.4 Reload of the Monitoring apps failed .....	23
Insufficient administration rights in the QMC .....	23

---

Reload is performed on rim nodes .....	23
Message: "Error: HTTP protocol error 403 (Forbidden): The server refused to fulfill the request" .....	24
Message: "Error: Field not found..." .....	24
Message: "Error: Table 'tempDateTimeList' not found..." .....	24
Message: "Error: QVX_UNEXPECTED_END_OF_DATA..." .....	25
8.5 The Monitoring apps fail to reload in a multi-node environment .....	26
The central node is not a reload node .....	26
The repository database is on a separate machine .....	27
8.6 Operations Monitor App fails to reload after turning off database logging .....	27
8.7 Failed to connect to the QRS via the Qlik REST Connector .....	28

# 1 About this document

This guide documents the *Operations Monitor*, *License Monitor*, *Log Monitor*, *Sessions Monitor*, and *Reloads Monitor*, the apps used to monitor a Qlik Sense site. This document is derived from the online help for Qlik Sense. It is intended for those who want to read parts of the help offline or print pages easily, and does not include any additional information compared with the online help. Use the online help or the other documents to learn more.

The Monitoring apps are accessed from the QMC start page. The **Monitoring apps** link under **GOVERNANCE** in the navigation panel takes you to the **Monitoring apps** stream where you can start the individual apps.

The *Operations Monitor* app provides information about hardware utilization, such as server memory and CPU usage, active users, and reload task activity. It also provides summary and detailed information about errors, warnings, and log activities in the Qlik Sense server environment that can be used for troubleshooting.

The *License Monitor* app tracks license usage, and it facilitates monitoring changes to license allocation.

The *Log Monitor* app presents nearly all log data available and enables trend analysis and troubleshooting.

The *Sessions Monitor* app shows log data about usage of apps.

The *Reloads Monitor* app presents detailed information about reload data, both from the QMC and apps open in the hub.

The Monitoring apps provide historical status and trending data. Real-time status is provided by QMC management resources. Actions taken in response to issues revealed by the Monitoring apps are also performed in the QMC.

## 2 Monitoring a Qlik Sense site

### 2.1 Monitoring apps

The Qlik Management Console (QMC) provides apps for monitoring system performance and usage on Qlik Sense server nodes and for monitoring license usage.

The *Operations Monitor* and *License Monitor* apps are accessed from the QMC start page. The **Monitoring apps** link under **GOVERNANCE** in the navigation panel takes you to the **Monitoring apps** stream where you can start the individual apps.

The *Operations Monitor* app provides information about hardware utilization, such as server memory and CPU usage, active users, and reload task activity. It also provides summary and detailed information about errors, warnings, and log activities in the Qlik Sense server environment that can be used for troubleshooting.

The *License Monitor* app tracks license usage, and it facilitates monitoring changes to license allocation.

Additional *Monitoring apps* can be imported from `%ProgramData%\Qlik\Sense\Repository\DefaultApps\`. See *Importing new Monitoring apps (page 9)*.

The additional *Monitoring apps* include:

The *Log Monitor* app presents nearly all log data available and enables trend analysis and troubleshooting.

The *Sessions Monitor* app shows log data about usage of apps.

The *Reloads Monitor* app presents detailed information about reload data, both from the QMC and apps open in the hub.

The *Sense System Performance Analyzer* app displays Qlik Sense performance across all nodes.

The *Sense Connector Logs Analyzer* app provides insights into usage and errors of specific Qlik connectors.

The Monitoring apps provide historical status and trending data. Real-time status is provided by QMC management resources. Actions taken in response to issues revealed by the Monitoring apps are also performed in the QMC.

### 2.2 Configuring the Monitoring apps

All installations of Qlik Sense require some level of configuration of the Monitoring apps.

#### Configuring single node environments

Do the following:

1. Update the data connections *ArchivedLogFolder* by replacing `C:\ProgramData\Qlik\Sense` with the fully-qualified domain name (FQDN) path to the shared folder for Qlik Sense:  
`\\<FQDN>\<QlikShare>\ArchivedLogs.`

2. Update the `monitor_apps_REST_data` connections by replacing `localhost` in the connection strings URL and `trustedLocation` parameters with the FQDN of the node.
3. The Monitoring apps require Windows authentication to be used on the virtual proxy it uses to connect. If this is not the default virtual proxy, replace `\qrs\` with `\<prefix>qrs\` where `<prefix>` is the prefix of a virtual proxy with Windows authentication enabled.  
See: *Default virtual proxy with prefix (page 8)*

### Configuring multi-node environments

The configuration of multi-node environments differs depending on whether you use centralized logging or file logging.

#### Configuring when using centralized logging

Do the following:

1. Update the data connections `ServerLogFolder`, by replacing `C:\ProgramData\Qlik\Sense\Log` with the FQDN path to the central node: `\\<FQDN>\<UNC_Share>\Log`.
2. Update the `monitor_apps_REST_data` connections by replacing `localhost` in the connection strings URL and `trustedLocation` parameters with the FQDN of the node where the central Qlik Sense repository service is running.
3. If the virtual proxy uses a prefix, the `monitor_apps_REST_data` connections must be updated to include the prefix used.  
See: *Default virtual proxy with prefix (page 8)*
4. Update the `qLogs` data connection by replacing `localhost` in the connection string URL with the FQDN of the machine where the centralized logging database resides.



The centralized logging database may or may not be enabled and may or may not be in the same PostgreSQL database as the Qlik Sense Repository Database.

#### Configuring when using file logging (centralized logging not enabled)

1. Update the data connections `ServerLogFolder`, by replacing `C:\ProgramData\Qlik\Sense\Log` with the FQDN path to the central node: `\\<FQDN>\<UNC_Share>\Log`.
2. Update the `monitor_apps_REST_data` connections by replacing `localhost` in the connection strings URL and `trustedLocation` parameters with the FQDN of the node where the central Qlik Sense repository service is running.
3. If the virtual proxy uses a prefix, the `monitor_apps_REST_data` connections must be updated to include the prefix used.  
See: *Default virtual proxy with prefix (page 8)*
4. Share the Qlik Sense log folder (`C:\ProgramData\Qlik\Sense\Log`) on each RIM node.
5. Update the data connections `ArchivedLogFolder` by replacing `C:\ProgramData\Qlik\Sense` with the fully-qualified domain name (FQDN) path to the shared folder for Qlik Sense:  
`\\<FQDN>\<QlikShare>\ArchivedLogs`.
6. Add a new data connection to the `Log` folder for each rim node. This can be accomplished by opening an

app, accessing the data load editor, and creating a new data connection. If you have five RIM nodes, you need to create five data connections.

For example, the data connection for RIM1 points to folder `\\rim_node_1\<UNC_Share>\Log` and is called RIM1.

7. Rename the new data connections in the QMC to remove the *(username)*, which is appended to the data connection name. Example: *RIM1 (user\_183)* is changed to *RIM1*.
8. Update the load script of the *Operations Monitor* in section *logFolderList* on line 5 by adding the names of all the new data connections created in step 6 and 7.

Do the following:

- i. Duplicate the *Operations Monitor* app in the QMC.
  - ii. Open the duplicate app in the Qlik Sense hub.
  - iii. Edit the load script: Each new data connection name needs to be enclosed in single quotes ('') and separated by a comma.  
Example: *FOR each node in 'ServerLogFolder','RIM1','RIM2'*.
  - iv. Save the app.
  - v. Replace the existing *Operations Monitor* app by publishing the duplicate app to the **Monitoring apps** stream and selecting **Replace existing app**.
9. Perform step 8 in the *License Monitor*.



If you encounter problems when the central node is not a reload node, see: *The Monitoring apps fail to reload in a multi-node environment (page 26)*.

### Default virtual proxy with prefix

For the *Operations Monitor* and *License Monitor* to reload correctly when the default virtual proxy uses a prefix, you need to manually add the prefix to the qrs data connections. The default URL is `https://<FQDN>/qrs/app/full`, where the FQDN refers to the node where the repository resides. If the virtual proxy prefix is "qlik", the URL needs to be as follows: `https://<FQDN>/qlik/qrs/app/full`.

The following data connections need to be updated:

- monitor\_apps\_REST\_app
- monitor\_apps\_REST\_appobject
- monitor\_apps\_REST\_event
- monitor\_apps\_REST\_license\_overview
- monitor\_apps\_REST\_license\_login
- monitor\_apps\_REST\_task
- monitor\_apps\_REST\_user
- monitor\_apps\_REST\_license\_user

### Importing new Monitoring apps

The five new Monitoring apps: Log Monitor, Reloads Monitor, Sessions Monitor, Sense System Performance Analyzer and Sense Connector Logs Analyzer are not by default available in the QMC. You need to import them to make them appear in the QMC.

Do the following:

1. From the QMC start page, open **Apps**.
2. Click  **Import** in the action bar.
3. Click **Choose File** and navigate to `%ProgramData%\Qlik\Sense\Repository\DefaultApps\`
4. Select the app to import and click **Import**.  
The app is imported and can be published to the *Monitoring apps* stream.
5. Repeat steps 2-4 for the remaining apps.



*The Sessions Monitor, Log Monitor, Reloads Monitor, Sense System Performance Analyzer and Sense Connector Logs Analyzer apps are not automatically updated during a Qlik Sense upgrade. You must manually import them after an upgrade.*

### Customizing the apps

It is possible to extend the Monitoring apps with visualizations you find useful in your particular environment. The Monitoring apps provide assets panels with the dimensions and measures they use. You can use those dimensions and measures to create customized visualizations on separate sheets that you can add to the apps.

The assets panels may also include extra visualizations that are not used on any of the apps' sheets, but which can be useful in a particular environment.



*Data in the Operations Monitor and License Monitor is not live, it is updated when the apps are reloaded. Reload frequency can be changed by editing the triggers for the task.*

## 2.3 Starting the Monitoring apps from the QMC

The apps for operations and license monitoring are started by going to the QMC start page. The Monitoring apps are accessed from the **Monitoring apps** link under **GOVERNANCE** in the navigation panel.

Do the following:

1. Start the QMC.
2. Allocate user access to users who will use QMC apps or allocate login access to groups whose users can use apps with login passes.
3. Click the **Monitoring apps** link under **GOVERNANCE** in the navigation panel.  
This takes you to the **Monitoring apps** stream where you can start the individual apps.



The first time the Monitoring apps are started, they may not contain data to display because they have not yet been reloaded. In the case of the License Monitor, it has no data until at least one license token has been allocated or an access denial has taken place, so it might display no data even if it has been reloaded. To get fresh data for the apps before their next scheduled reload, return to the Apps overview in the QMC and click **More actions > Reload now**.

## 2.4 Upgrading the Monitoring apps

### Upgrading from Qlik Sense 3.2.x to Qlik Sense June 2017

When you upgrade from Qlik Sense 3.2.x to June 2017, or later releases, eight new REST data connections are introduced (monitor\_app\_REST\_). The existing qrs\_ data connections will no longer function due to functional changes to the REST connector. These qrs\_ data connections therefore can be removed.

### Upgrading from Synchronized persistence to Shared persistence

If you upgrade from Synchronized persistence to Shared persistence, you may need to move the archived logs from the earlier version to the Shared persistence ArchivedLogs share.

Do the following:

1. Create a new folder called *OlderLogs* (or the name of your choice) in the Service Cluster *ArchivedLogs* folder. You can find this in QMC > Service cluster.
2. Move or copy the following subfolders from *Archived Logs* (in the older version) to this new *OlderLogs* folder in step 1.
  - a. Default *Archived Logs* folder is `c:\programdata\qlik\sense\repository\archived logs`.
  - b. Copy the following folders to the new location:
    - i. Engine
    - ii. Repository
    - iii. Proxy
    - iv. Scheduler
    - v. Printing



The reason to just move/copy these folders is that other log folders (like *AppMigration* and *Script*) are not loaded into the Monitoring apps and can be quite large in size.

3. Verify in the *ArchivedLogs* folder (for the service cluster) that this *OlderLogs* folder is present, as well as folders for each node in your environment.
4. Update the *ArchivedLogsFolder* data connection in QMC to point to the *ArchivedLogs* folder (as defined in QMC > ServiceCluster).
5. Versions prior to 7.x of the governance\*.QVDs located in `c:\Programdata\Qlik\Sense\Log` can be

removed if wanted (optional).

6. Reload the *new* Monitoring apps from the QMC.

## 3 Operations Monitor

The *Operations Monitor* loads service logs to populate charts covering performance history of hardware utilization, active users, app sessions, results of reload tasks, and errors and warnings. It also tracks changes made in the QMC that affect the *Operations Monitor*.



For a more detailed description of the sheets and visualizations, visit the story *About the Operations Monitor* that is available from the app overview page, under **Stories**.

The log files are located in `%ProgramData%\Qlik\Sense\Log\Repository\Trace`.

With the *Operations Monitor*, you can track system performance and investigate activity that might adversely affect it. For example, by analyzing reload tasks and sessions, you can find bottlenecks that might be alleviated by rescheduling reloads or redistributing sessions. Or you can use the **QMC Change Log** sheet to review changes that might explain changes in system performance.

### 3.1 Operations Monitor sheets

The *Operations Monitor* sheets display Qlik Sense performance on the current node, and, when properly configured for multi-node (as described in *Configuring multi-node environments (page 7)*), the app includes information across all nodes.

<b>Session Overview</b>	Provides summary information about apps, app sessions, and app users over selected periods to show which users use which apps when.
<b>Daily Sessions</b>	Provides details about apps accessed and the number of users.
<b>Session Details</b>	Provides details about individual user and app sessions, including number, average duration, days since last session, start and end times, reasons for ending sessions, and the type of client on which the app was run.
<b>Sheet Usage</b>	Provides summary and detailed information about users accessing sheets – and which sheets in which apps are not accessed.
<b>Task Details</b>	Provides details about the success and failure of individual app reloads, including execution details about duration and start and end times.
<b>Export Overview</b>	Provides summary information about apps, app objects, and app users to show which users export which app objects when.
<b>Apps</b>	Provides details about the apps in the Qlik Sense Repository Service (QRS), including name and ID of app objects, owners, publishing, and streams.
<b>Log Details</b>	Provides details about reloads of the <i>Operations Monitor</i> , including the time of reloads, results, error messages and warnings, and log entries.



Data in the *Operations Monitor* is updated when the app is reloaded. Data is not live.

## 4 License Monitor

The *License Monitor* loads service logs to populate charts and tables covering token allocation, usage of login and user passes, and errors and warnings.



For a more detailed description of the sheets and visualizations, visit the story *About the License Monitor* that is available from the app overview page, under **Stories**.

The log files are located in `%ProgramData%\Qlik\Sense\Log\Repository\Trace`.



If you have a user-based license with professional and analyzer access, you will instead see figures relevant to that license type.

### 4.1 License Monitor sheets

The License Monitor sheets display Qlik Sense performance on the current node, and, when properly configured for multi-node (as described in *Configuring multi-node environments (page 7)*), the app includes information across all nodes.

<b>Overview</b>	Displays an overview of unallocated access versus total access, the available and total analyzer capacity (in minutes), summary data about login and user access sessions over the last 7, 28, and 90 days, changes in the allocation of license tokens over the last 7 days, and license usage over time.
<b>User Detail</b>	Allows the user to select a time period over which to display user access pass sessions, the number of users starting sessions, and the individual users starting sessions.
<b>Usage by App</b>	Allows the user to select a time period over which to display the apps for which access passes are being used and the number of tokens consumed by each app.
<b>Timeline</b>	The <i>Timeline</i> sheet displays token usage over time so administrators can monitor usage and anticipate future token allocation needs.
<b>User Access History</b>	Allows the user to select a time period over which to display user access pass sessions, the number of users starting sessions, and the individual users starting sessions.

Only valid for token-based license.

<b>Login Access History</b>	<p>Allows the user to select a time period over which to display login pass utilization, login access users, and denials of login access.</p> <div data-bbox="507 331 1390 439" style="border: 1px solid #ccc; padding: 5px;"> <i>Only valid for token-based license.</i></div>
<b>Allocation History</b>	<p>Displays the latest changes and changes over selected times to the allocation of license tokens to login and user access passes.</p>
<b>Log Details</b>	<p>Lists servers in the cluster and provides details about license usage entered in server's logs.</p>



*Data in the License Monitor is updated when the app is reloaded. Data is not live.*

## 5 Log Monitor

The *Log Monitor* loads and visualizes almost all available Qlik Sense log data. This gives you the possibility to discover trends and analyze and troubleshoot issues in your Qlik Sense environment. Compared to the Operations Monitor, the Log Monitor loads more log files, but for a shorter period of history (default seven days).



For a more detailed description of the sheets and visualizations, visit the story *About the Log Monitor* that is available from the app overview page, under **Stories**.

The log files are located in `%ProgramData%\Qlik\Sense\Log\Repository\Trace`.

### 5.1 Importing the Log Monitor app to the Monitoring apps in the QMC

The Log Monitor is not available by default from the QMC. To make it available, you need to import the app.

Follow the instructions in the section *Importing new Monitoring apps (page 9)*

### 5.2 Log Monitor sheets

The Log Monitor sheets display Qlik Sense performance on the current node, and, when properly configured for multi-node (as described in *Configuring multi-node environments (page 7)*), the app includes information across all nodes.

<b>Overview</b>	Summarizes the activities during the last couple of hours and days and enables you to quickly identify irregularities.
<b>Timeline</b>	The Activity Timeline bar chart gives an overview of the logging activities during the last week. Use the alternative dimensions to see how the measures vary over time and find diverging values that may require investigation.
<b>Trends</b>	Shows a collection of timelines displaying performance (CPU and RAM), usage (apps and users), as well as errors and reload status.
<b>Errors &amp; Warnings</b>	Shows a timeline together with a summary and a detailed view of errors and warnings.
<b>Filters</b>	Contains filter panes with a large number of key fields from the logs. Make selections to make discoveries in your data.
<b>Log Details</b>	Shows errors, warnings, and information log entries for the servers in the deployment.



Data in the Log Monitor is updated when the app is reloaded. Data is not live.

## 6 Reloads Monitor

The *Reloads Monitor* loads and presents log data about reloads. Reload data is collected both from QMC tasks and apps open in the hub. You can see which apps are updated, and details about when, where, and how often they are updated.



For a more detailed description of the sheets and visualizations, visit the story *About the Reloads Monitor* that is available from the app overview page, under **Stories**.

The log files are located in `%ProgramData%\Qlik\Sense\Log\Repository\Trace`.

### 6.1 Importing the Reloads Monitor app to the Monitoring apps in the QMC

The Reloads Monitor is not available by default from the QMC. To make it available, you need to import the app.

Follow the instructions in the section *Importing new Monitoring apps* (page 9)

### 6.2 Reloads Monitor sheets

The Reloads Monitor sheets display Qlik Sense performance on the current node, and, when properly configured for multi-node (as described in *Configuring multi-node environments* (page 7)), the app includes information across all nodes.

<b>Dashboard</b>	Gives an overview of the reload task history. Get different views by using the alternative dimensions and measures that are available for the Reloads by Hour bar chart and the Reload Count and Duration Trend combo chart.
<b>Task Planning</b>	Shows when tasks are reloaded and the associated duration and failure rate. Use the data to re-schedule reloads and thereby optimize performance.
<b>Reload Summary</b>	Gives detailed information about reload history statistics and recently completed reloads.
<b>Log Details</b>	Shows details about specific log events and times.
<b>Intermediate Details</b>	Presents the intermediate states of a task reload, such as Triggered, Started, and Queued.



Data in the Reloads Monitor is updated when the app is reloaded. Data is not live.

## 7 Sessions Monitor

The *Sessions Monitor* loads and displays log data about users' app sessions.



For a more detailed description of the sheets and visualizations, visit the story *About the Sessions Monitor* that is available from the app overview page, under **Stories**.

The log files are located in `%ProgramData%\Qlik\Sense\Log\Repository\Trace`.

### 7.1 Importing the Sessions Monitor app to the Monitoring apps in the QMC

The Sessions Monitor is not available by default from the QMC. To make it available, you need to import the app.

Follow the instructions in the section *Importing new Monitoring apps* (page 9)

### 7.2 Sessions Monitor sheets

The Sessions Monitor sheets display Qlik Sense performance on the current node, and, when properly configured for multi-node (as described in *Configuring multi-node environments* (page 7)), the app includes information across all nodes.

<b>Dashboard</b>	Gives an overview of the session activity. Get different views by using the alternative dimensions and measures that are available for the Sessions Over Time bar chart and the User and App Count Trend combo chart.
<b>Session Heatmap</b>	Shows when session activity is at its highest and lowest. Use the data to understand peak usage times or optimal times for server maintenance.
<b>Session Details</b>	Gives a more detailed view of the session activity and helps identifying unused apps and extensive users of apps.
<b>Apps</b>	Shows metadata about apps and app objects.
<b>Log Details</b>	Shows details about specific log events and times.



Data in the Sessions Monitor is updated when the app is reloaded. Data is not live.

# 7 Sense System Performance Analyzer

The *Sense System Performance Analyzer* pulls platform and process performance data as well as Windows event data from the logging database.



*This app requires Qlik Sense version February 2019, or later, with default Centralized Logging configuration.*



*For a more detailed description of the sheets and visualizations, visit the story *About the Sense System Performance Analyzer* that is available from the app overview page, under **Stories**.*

## 7.3 Importing the Sense System Performance Analyzer app to the Monitoring apps in the QMC

The Sense System Performance Analyzer is not available by default from the QMC. To make it available, you need to import the app.

Follow the instructions in the section *Importing new Monitoring apps (page 9)*

## 7.4 Sense System Performance Analyzer sheets

The Sense System Performance Analyzer sheets display Qlik Sense performance across all nodes.

Visit the story *About the Sense System Performance Analyzer* for details about the sheets, available from the app overview page, under **Stories**.



*Data in the Sense System Performance Analyzer is updated when the app is reloaded. Data is not live.*

## 7 Sense Connector Logs Analyzer

The *Sense Connector Logs Analyzer* app lets you investigate patterns of activity and errors to troubleshoot connector performance.

The app relies on log files generated by REST connector version 1.7 or later and ODBC connector version 5.12 or later.

Log files from older versions of REST and ODBC connectors may not include the necessary column header names which will cause the *Sense Connector Logs Analyzer* app to fail during reload. It is recommended that these older connector log files are removed or moved to a separate folder.



*For a more detailed description of the sheets and visualizations, visit the story [About the Sense Connector Logs Analyzer](#) that is available from the app overview page, under **Stories**.*

### 7.5 Importing the Sense Connector Logs Analyzer app to the Monitoring apps in the QMC

The Sense Connector Logs Analyzer is not available by default from the QMC. To make it available, you need to import the app.

Follow the instructions in the section *Importing new Monitoring apps* (page 9)

### 7.6 General configuration

No configuration is needed for single-node deployments but it is possible to modify the days of log history to load in the load script. You can also include Engine, Repository, Scheduler and Proxy logs in the app.



*The configuration is done in the Configuration section of the load script.*

#### Days of history

The days of history is set as a variable, **vu\_days\_of\_history**, in the load script.

Default is **14** and it is not recommended to exceed 90 days of history due to potential volume of data.

#### Example:

```
SET vu_days_of_history = 14;
```

#### Historical data

You can include Sense Engine, Repository, Scheduler and Proxy logs in the app setting the **vu\_load\_operations\_monitor\_qvd** variable.

This gets the Operations Monitor historical QVD from the ServerLogFolder data connection.



*You must enter the name of the QVD to load without the .qvd extension.*

**Example:**

```
SET vu_load_operations_monitor_qvd = 'governanceLogContent_7.10.2_db';
```

### 7.7 Multi-node deployment configuration

Multi-node environments require the creation of new data connections to `\\FQDN\C$\ProgramData\Qlik\Custom Data\` of each node. The data connections are then defined in the `vu_data_connection_list` variable in the load script.



*The configuration is done in the Configuration section of the load script.*

1. Add a new data connection for each rim node. Use the Fully-Qualified Domain Name (FQDN) of each node.

**Example:**

Create a data connection called `connector_logs_rim2` to point to folder `\\rim_node_2\C$\ProgramData\Qlik\Custom Data\`.

2. In the QMC > Data Connections section, rename the new data connections created in the previous step to remove the user name which is appended to the data connection name.

**Example:**

`connector_logs_rim2 (my_domain\my_user1)` should be renamed to `connector_logs_rim2`.

3. Update the load script to add the data connections created and renamed in the previous steps. The data connections are defined in the `vu_data_connection_list` variable. Each data connection is enclosed within the existing single quotes and separated with a comma.

**Example:**

```
SET vu_data_connection_list = 'monitor_apps_connector_logs,connector_logs_rim2,connector_logs_rim3';
```

4. Save the updated app.
5. Reload the app.  
You can reload the app from the QMC or from the data load editor.

### 7.8 Sense Connector Logs Analyzer sheets

The Sense Connector Logs Analyzer sheets display usage and errors for Qlik connectors across all nodes.

## 7 Sense Connector Logs Analyzer

---

Visit the story *About the Sense Connector Logs Analyzer* for details about the sheets, available from the app overview page, under **Stories**.



*Data in the Sense Connector Logs Analyzer is updated when the app is reloaded. Data is not live.*

# 8 Troubleshooting - Monitoring a Qlik Sense site

This section describes problems that can occur when monitoring a Qlik Sense site.

## 8.1 The Monitoring apps are not backed up correctly

When upgrading Qlik Sense, the Monitoring apps are not backed up correctly.

Normally, when upgrading Qlik Sense, the existing version number of the Monitoring apps is replaced by the corresponding version number appended to the app name. Then, the latest Monitoring apps are also available under **Apps**.

### Possible cause

The upgrade process of the Monitoring apps was unsuccessful.

### Proposed action

Manually import the latest apps from *%ProgramData%\Qlik\Sense\Repository\DefaultApps\*.

Do the following:

1. In the QMC, open **Apps**.
2. Click **Import** and select License Monitor.qvf from *%ProgramData%\Qlik\Sense\Repository\DefaultApps\*. If prompted, do not rename the app.
3. Publish the newly imported License Monitor app to the Monitoring apps stream, replacing the existing License Monitor.
4. Repeat step 2 for the Operations Monitor.qvf.
5. Publish the newly imported Operations Monitor app to the Monitoring apps stream, replacing the existing Operations Monitor.
6. Repeat steps 2 and 3 for Log Monitor, Reloads Monitor, and Sessions Monitor.

## 8.2 I have accidentally deleted the Monitoring apps

I accidentally deleted the Monitoring apps and cannot find them in the QMC.

### Possible cause

Accidental or intentional removal of the Monitoring apps.

### Proposed action

Do the following:

1. In the QMC, open **Apps**.
2. Click **Import** and select License Monitor.qvf from *%ProgramData%\Qlik\Sense\Repository\DefaultApps\*. If prompted, do not rename the app.

3. Publish the newly imported License Monitor app to the Monitoring apps stream.
4. Repeat step 2 and 3 for any of the affected Monitoring apps.

### 8.3 The Monitoring apps have become corrupted

The Monitoring apps have become corrupted and are no longer functional.

#### Possible cause

Technical failure.

#### Proposed action

Do the following:

1. In the QMC, open **Apps**.
2. Click **Import** and select License Monitor.qvf from `%ProgramData%\Qlik\Sense\Repository\DefaultApps\`. If prompted, do not rename the app.
3. Publish the newly imported License Monitor app to the Monitoring apps stream, replacing the existing, corrupt License Monitor.
4. Repeat step 2 for Operations Monitor.qvf.
5. Publish the newly imported Operations Monitor app to the Monitoring apps stream, replacing the existing, corrupt Operations Monitor.

### 8.4 Reload of the Monitoring apps failed

There is more than one possible cause when the reload fails.

#### Insufficient administration rights in the QMC

##### Possible cause

The service account running the Qlik Sense services does not have the required RootAdmin role in the QMC.

##### Proposed action

For the Monitoring apps to successfully retrieve all data, the service account running the Qlik Sense services needs sufficient privileges. The easiest way to achieve that is to give the service account the role of RootAdmin in the QMC. Alternatively, you can change the data connections to use a different account/user which is RootAdmin.

#### Reload is performed on rim nodes

##### Possible cause

The load balancing rule *ResourcesOnNonCentralNodes* causes the reloads to fail on rim nodes.

##### Proposed action

Edit the load balancing rule *ResourcesOnNonCentralNodes*.

Do the following:

1. From the QMC start page, open **Load balancing rules**.
2. Select *ResourcesOnNonCentralNodes* and click **Edit**.
3. Under **Advanced**, edit the **Conditions**, so that they read as follows:  
`((node.iscentral=false))`
4. Click **Apply**.

### Message: “**Error: HTTP protocol error 403 (Forbidden): The server refused to fulfill the request**”

#### Possible cause

The user configured in *monitor\_apps\_REST\_license\_overview* data connection does not have read access to the license and access type entities.

#### Proposed action

Do the following:

1. Open the **Data connections** overview page in the QMC.
2. Select the *monitor\_apps\_REST\_license\_overview* data connection, click **Edit** and enter user ID and password credentials of a user with correct access rights.
3. Save the changes.

### Message: “**Error: Field not found...**”

#### Possible cause

Some fields that are used by the Monitoring apps are missing in the log files.

#### Proposed action

Upgrade to 2.1.1 or later.

### Message: “**Error: Table 'tempDateTimeList' not found...**”

This error can occur after an upgrade, especially if the environment changes from synchronized persistence to shared persistence, or if the Qlik Sense cluster share where Archived Logs are stored is changed.

#### Possible cause

The app cannot find license history data in the log files because the *ArchivedLogsFolder* data connection is incorrect.

#### Proposed action

Fix the *ArchivedLogsFolder* data connection to point to the correct folder location.

### Message: "**Error: QVX\_UNEXPECTED\_END\_OF\_DATA...**"

This error can have different causes.

#### Customized proxy port

##### **Possible cause**

The proxy's HTTPS port has been customized.

##### **Proposed action**

Change all the `monitor_apps_REST_` data connections to use the customized port.

##### **Example:**

```
CUSTOM CONNECT TO "provider=QvRestConnector.exe;url=https://localhost:4443/qrs..."
```

Data connections affected include the following:

- `monitor_apps_REST_app`
- `monitor_apps_REST_appobject`
- `monitor_apps_REST_event`
- `monitor_apps_REST_license_access`
- `monitor_apps_REST_license_login`
- `monitor_apps_REST_task`
- `monitor_apps_REST_user`
- `monitor_apps_REST_license_user`

#### Changes made to the user account under which the Qlik Sense services are running

Error message: **Error: QVX\_UNEXPECTED\_END\_OF\_DATA: HTTP protocol error 401 (Unauthorized):**

**Requested resource requires authentication.**

##### **Possible cause**

During installation, a user account is created under which the Qlik Sense services run. If the credentials for that account changes, or a different account is selected for the Qlik Sense services to run under, the data connections must be updated accordingly.

##### **Proposed action**

Do the following:

1. Open the **Data connections** overview page in the QMC.
2. For each `monitor_apps_REST_` data connection, click **Edit** and enter the new **User ID** and **Password** credentials.
3. Save the changes.

### Reloads of License Monitor, Operations Monitor, or Session Monitor fail

Error message: **Error: QVX\_UNEXPECTED\_END\_OF\_DATA: HTTP protocol error 500 (Internal Server Error): Exception of type 'System.OutOfMemoryException' was thrown.**

#### Possible cause

The number of users and user attributes is too big.

#### Proposed action

Do the following:

- Clean your user list to reduce its size.
- In the QMC, in the user directory connectors settings, keep **Sync user data for existing users** selected to avoid syncing a large number of users and user attributes.

## 8.5 The Monitoring apps fail to reload in a multi-node environment

There is more than one possible cause when the reload fails.

### The central node is not a reload node

The Monitoring apps with default `monitor_apps_REST_data` connection strings fail to reload in a multi-node environment where the central node is not a reload node.

#### Possible cause

The reload node where the Monitoring apps are reloaded does not have any proxy set up.

#### Proposed action

Change all the `monitor_apps_REST_data` connections to point to the fully qualified domain name (FQDN) of the central node. This is accomplished by replacing `localhost` in the connection strings URL and `trustedLocation` parameters with FQDN of the central node.

#### Example:

CUSTOM CONNECT TO `"provider=QvRestConnector.exe;url=https://centralnodeserver.company.com/qrs..."`.

Data connections affected include the following:

- `monitor_apps_REST_app`
- `monitor_apps_REST_appobject`
- `monitor_apps_REST_event`
- `monitor_apps_REST_license_access`
- `monitor_apps_REST_license_login`
- `monitor_apps_REST_task`

- monitor\_apps\_REST\_user
- monitor\_apps\_REST\_license\_user

### The repository database is on a separate machine

#### Possible cause

The REST data connections point to the FQDN of the Qlik Sense Repository Database and not the Qlik Sense Repository Service.

#### Proposed action

In any multi-node or “remote” Qlik Sense Repository Database situation, you need to update the REST data connections to point to the FQDN of the Qlik Sense Repository Service, regardless of where the actual Qlik Sense Repository Database resides.

## 8.6 Operations Monitor App fails to reload after turning off database logging

The Operations Monitor reload task fails after the database logging is turned off.

The following error message is displayed:

```
Error: Table 'time_range_working' not found
```

#### Possible cause

The Monitoring apps continue to check for recent logs in the database and use these logs for approximately ten hours after the last log message is written in the database. If the database logging is turned off, no new log entries for the load script can be found, and this can cause the reload process to fail.

#### Proposed action

The reload fail can be prevented by manually updating the Operations Monitor app’s load script.

1. Make sure file logging is enabled.
2. Update the Operations Monitor load script. Because this is a published app, you need to duplicate it first. Do the following:
  - i. Duplicate the Operations Monitor app in the QMC.
  - ii. Open the duplicate app in the Qlik Sense hub.
  - iii. Update the load script at line 9 by changing the variable `db_v_file_override` from 0 (default value) to 1 as follows:

```
SET db_v_file_override = 1
```

By setting this variable to 1, the script will not check for log entries in the database logging.
  - iv. Save the app.
  - v. Replace the existing Operations Monitor app by publishing the duplicate app to the Monitoring apps stream and selecting **Replace existing app**.

3. Launch the Operations Monitor reload task again. If it does not work immediately, wait a few minutes and reload again.

By following this procedure, the database logging can be turned off safely.

### 8.7 Failed to connect to the QRS via the Qlik REST Connector



*This problem will only occur when you have apps that work with the Qlik REST Connector.*

An error message is displayed that there is a problem connecting to the QRS via the Qlik REST Connector.

#### **Possible cause**

The Qlik REST Connector is unavailable, because it has been uninstalled or corrupted.

#### **Proposed action**

If the error message appears during a reload, you need to verify that the Qlik Sense installation is working properly. Consider repairing or upgrading Qlik Sense.