



Qlik[®] Sense 3.1 SR2 – Release notes

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What's new in Qlik Sense 3.1 SR2?

This section lists highlights of the new and updated features of the Qlik Sense 3.1 SR2 release.

- **Support for shared persistence in a multi-node environment**
In addition to using synchronized persistence in a **multi-node** installation, there is now an option to use shared persistence. This means that nodes share a single repository database and a network folder for the application files. You can either share the central node repository and application storage, or setup dedicated machines for repository and application storage. For full information about shared persistence, please log in to the Portal and read Knowledgebase article 000025817, "Shared Persistence in Qlik Sense 3.1 SR2".
- **Support for disabling user access to the hub**
Resource filters can be used to restrict user access to the hub.
- **Additional chart types are time-aware**
Bar charts and combo charts are now time-aware. Time-aware charts are visualizations that use a continuous scale to provide a complete and accurate view of time-based data. That is, when you enable continuous scaling on the x-axis in a chart with date fields, data points are separated from each other by a distance relative to their associated time. As well, the axis labels are evenly separated whether or not there is data for that point and the chart view is compressed to avoid scrolling.

- **Information about visualizations is made available**
Description about visualizations as well as descriptions about dimensions and measures used in a visualization is now available by selecting Show details in sheet view.
- **Hyperion Essbase Connector**
The Hyperion Essbase Connector is now supported in Qlik Sense.
- **SAP BEX connectivity**
SAP data can now be loaded into Qlik Sense using the BEX interface.
- **Keyboard shortcut support in the data load editor**
Common keyboard shortcuts for actions such as copy, paste, undo and redo, can now be used in the data load editor.

Bug fixes

Qlik Sense 3.1 SR2 comes with fixes for the issues described below.

Unable to access licensed content

Jira issue ID: DS-2314

Description: Licensed Data Market data could not be accessed.

Getting an error when exporting story to pdf or PowerPoint

Jira issue ID: QLIK-48002

Description: When exporting a story to pdf or PowerPoint, an error would sometimes be produced.

Error when setting "variable name" using a name of an object ID on a UI element (extensions)

Jira issue ID: QLIK-48104

Description: When a user tried to get a variable through the capability API right after opening an app, an error would be produced.

Exporting sheet to pdf does not include images

Jira issue ID: QLIK-50036

Description: When exporting a sheet with a "Text and image" object containing an image (jpg) to pdf in Qlik Sense Enterprise, the image would be replaced with a small picture icon.

Charts in full screen with high dpi can't be exported to pdf

Jira issue ID: QLIK-51004

Description: Exporting some charts in high resolution (300 dpi) to pdf would result in a blank pdf or that visualizations were incomplete.

Temporary file will remain in the temp folder when exporting app from QMC

Jira issue ID: QLIK-51902

Description: When starting to export an app from the QMC and then cancelling the export operation, temporary files would not be cleared from the Temp folder.

Random failure of reload

Jira issue ID: QLIK-55489

Description: LOAD statements using Exists function could randomly fail a reload when processing loaded data in large scale parallel mode.

Export story to pdf does not show all rows in a table from snapshot

Jira issue ID: QLIK-55859

Description: When a snapshot of a table with a number of rows was included in a story, the last couple of rows would not be included when the story was exported to pdf.

Exporting story creates an error 404 (Not Found)

Jira issue ID: QLIK-57218

Description: Under some circumstances, exporting stories to pdf or PowerPoint would result in an error.

Unhandled error when a user has create access but no read access to an entity

Jira issue ID: QLIK-58492

Description: A security configuration of a system could be set up to give users create access but no read access to entities. This configuration caused unhandled errors.

Can't clear selection in one field

Jira issue ID: QLIK- 58527

Description: Selecting or clearing a field would sometimes not be possible just after a reload.

Export story to pdf is clipping table boxes

Jira issue ID: QLIK-59096

Description: When a story with table boxes was exported to pdf, the table box would be truncated.

Export story to pdf adding mini chart to bar charts

Jira issue ID: QLIK-59097

Description: When a story with a bar chart without mini chart was exported to pdf, a mini chart would be displayed in the pdf.

Pivot table using "Indent rows" renders with truncation

Jira issue ID: QLIK-59104

Description: When "Indent rows" was used for a pivot table, columns would be truncated and a scrollbar would be displayed. Now it's possible for the user to adjust the ratio to a desired value.

Layer fidelity / opacity not maintained on export to pdf or PowerPoint

Jira issue ID: QLIK-59605

Description: Layer fidelity/ opacity in a story would not be maintained when exporting to pdf or PowerPoint.

Direct Discovery Count Distinct giving unexpected results

Jira issue ID: QLIK-60628

Description: A count distinct on a text field in a database using direct discovery would show incorrect results.

Disabled tasks get logged as ERRORS in the Service_Scheduler logs

Jira issue ID: QLIK-60665

Description: A disabled task would under certain circumstances generate errors about failed reloads in the service scheduler logs.

Not possible to click inside the integrated hub

Jira issue ID: QLIK-61807

Description: It wasn't possible to click on anything when using a Microsoft web browser control integration.

Unspecific error message when load-balancing fails

Jira issue ID: QLIK-61861

Description: When load-balancing failed because no engine services were running/broker service did not respond/the requested app did not exist, a generic error message would be displayed instead of a helpful error message.

Conditions removed when changing resource filter

Jira issue ID: QLIK-61986

Description: When editing an existing resource filter, conditions would be removed.

App size does not reduce after resident load and drop table

Jira issue ID: QLIK-62909

Description: When dropping a table after running a resident load, the size of the app would not decrease.

Export story to PowerPoint via presentation mode drops several columns

Jira issue ID: QLIK-62923

Description: When exporting a story to PowerPoint from presentation mode, several columns would be excluded.

Authentication with .username does not allow to logout and does not show user name in the hub

Jira issue ID: QLIK- 63237

Description: When specifying a dot as directory instead of ServerName (form login), it wasn't possible to log out and the username wouldn't be displayed.

Reload not properly notified to clients

Jira issue ID: QLIK-63361

Description: When reloading an app, connected clients were not properly notified.
Issue revealed by using reload-intense client extensions (i.e. not our regular clients).

Not possible to define data connection when password includes "+" character

Jira issue ID: QLIK-63479

Description: When using a "+" character in the password while connecting to a PostgreSQL database via the ODBC driver, access to the data source was denied when attempting to create the connection in the load script.

User Directory sync + creation of users on the fly can possibly create duplicate user entry in database

Jira issue ID: QLIK-63501

Description: Performing User Directory sync at same time as opening the hub could cause the user to exist twice in the database.

Qlik Sense Desktop shows unknown error after installation

Jira issue ID: QLIK-63575

Description: Under some circumstances, unknown error would be displayed upon starting Qlik Sense Desktop, and Qlik Sense Desktop wouldn't start.

Layout of sheets were corrupted

Jira issue ID: QLIK-63664

Description: Some existing sheets and dashboards were affected in a bad way because of a new card layout.

App size is wrong when exporting from QMC

Jira issue ID: QLIK-63683

Description: When the script was modified in the data load editor, the correct app size would not be displayed in the QMC.

Table scrollbar disappears

Jira issue ID: QLIK-63869

Description: When scroll bar was used to scroll up and down a table couple times, the scroll bar would disappear, and it became impossible to move up and down the table.

Mashup: Scrollbar and selection bar don't work as expected

Jira issue ID: QLIK-63956

Description: The right-hand scrollbar and the selection bar at the top of the page would sometimes not be available for mashups.

Default monitor apps don't reload

Jira issue ID: QLIK-64507

Description: Under some circumstances, the default apps License Monitor and Operations Monitor wouldn't reload.

Cannot open external URLs from Qlik Sense Desktop

Jira issue ID: QLIK-64514

Description: When using Google Chrome as a web browser and attempting to open links to external URLs from Qlik Sense Desktop, the web browser would under certain circumstances terminate.

Unable to download script log in QMC task

Jira issue ID: QLIK-64609

Description: The button for downloading the script log was greyed out in a shared persistence multinode cluster.

Story with custom object is exported as "Invalid visualization"

Jira issue ID: QLIK-64659

Description: Exporting stories with custom objects to PowerPoint would sometimes result in invalid visualizations.

Non-existing user created when logging in from a non-Windows device

Jira issue ID: QLIK-64707

Description: It was possible to create a user in a non-existing domain when logging in from a non-Windows device.

Error message for failing app import not relevant

Jira issue ID: QLIK-64754

Description: When import of an app failed, the error message did not provide relevant reference to the root cause.

Cannot export app containing comma character in the app name

Jira issue ID: QLIK-64823

Description: When using Google Chrome as a web browser, it would not be possible to export an app if there was a comma character in the app name.

Map visualization export file without map background

Jira issue ID: QLIK-64984

Description: When disconnected from Internet, exporting a map visualization to pdf or PowerPoint would result in the map background not being included in the file.

Duplicate extension in Dev Hub does not duplicate all files/folders

Jira issue ID: QLIK-65044

Description: When duplicating an extension from the Dev Hub, if the original extension included a 'js' folder, this folder wasn't included in the duplicate.

Import of apps failed after upgrade

Jira issue ID: QLIK-65190

Description: After upgrading from an earlier Qlik Sense version, an app could not be imported under certain circumstances.

POST request does not work

Jira issue ID: QLIK-65192

Description: The POST method would not work when using the Qlik REST connector with a certain version of Qlik Sense.

Engine stops if its port is changed

Jira issue ID: QLIK-65327

Description: Changing the default port (4747) to another port in the QMC would cause the engine to stop.

Adding data to an app fails while offline

Jira issue ID: QLIK-65335

Description: When the computer running Qlik Sense was disconnected from the network, it would not be possible to add data to the app, and Qlik Sense became unresponsive.

Widgets causing slow performance

Jira issue ID: QLIK-65370

Description: When using Internet Explorer 11, and adding widgets to a sheet, performance would get slow.

App table in QMC showing less apps than should be in the table

Jira issue ID: QLIK-65382

Description: When using a rule to filter a large amount of apps (more than 200), not all apps would show in the QMC under some circumstances.

Different group names from the same domain

Jira issue ID: QLIK-65438

Description: Some Active Directory groups would in some cases be displayed with the simple domain name, but others in the same domain would be displayed with the full domain name (as if it belonged to another domain).

500 Internal Engine Error when using Virtual Proxy Prefix of /engine/

Jira issue ID: QLIK-65451

Description: When using “engine” as a virtual proxy prefix, the user would be prompted with a 500 Internal server error.

Dynamic rendering of visualizations in 3.0.1 no longer working

Jira issue ID: QLIK-65680

Description: Using a ng-repeat command within Visual Studio no longer worked when creating mashups.

Table is showing duplicated fields sometimes

Jira issue ID: QLIK-65708

Description: Tables would sometimes show duplicated fields when using a tablet.

Ghost rows containing NULL values added to visualizations

Jira issue ID: QLIK-65843

Description: When using section access in an app, charts would sometimes show unexpected null values.

qvf*.tmp and qvf*.tmp.qvf in temp folder

Jira issue ID: QLIK-66011

Description: Some temporary files would not be cleared from the temp folder after apps being created.

Unable to use views in ODBC UDCs

Jira issue ID: QLIK-66064

Description: Not possible to use a combination of tables and views in SQL for synchronizing of users.

Custom Properties truncates long values in the QMC with no way to see the full actual value when set to its property

Jira issue ID: QLIK-66065

Description: Custom Properties values in the QMC were truncated if the length of the string/value was more than 15 characters. The full value could not be seen when set to a property as there was no tool tip.

Qlik Sense does not verify the incoming SAML Assertion

Jira issue ID: QLIK-66464

Description: It was possible to insert a custom certificate in the SAML assertion.

Pie chart pop up is sometimes not shown

Jira issue ID: QLIK-66490

Description: When selecting negative/zero values duplicated fields and hovering the mouse over a pie chart, the pop up is sometimes not shown.

Qlik Sense Desktop app size keeps growing

Jira issue ID: QLIK-66493

Description: The size of an app created with Qlik Sense Desktop would keep growing when data was added, but the app size wouldn't decrease when data was removed.

Table rename is not reflected on bubble

Jira issue ID: QLIK-66522

Description: When existing tables were renamed, the table name in the Associations view of the data manager would not be updated.

ProductVersion() function returns wrong version information

Jira issue ID: QLIK-66619

Description: The ProductVersion() script or chart function would return a version number other than the actual version number of Qlik Sense.

Pressing Alt or F10 freezes Qlik Sense Desktop

Jira issue ID: QLIK-66653

Description: When pressing Alt or F10 while running Qlik Sense Desktop in Qlik Sense Browser, the user interface would freeze, and had to be terminated using the task manager.

Qlik Sense Desktop freezes when adding data to app with Japanese name

Jira issue ID: QLIK-66907

Description: When data was added to an app with a Japanese app name, Qlik Sense Desktop would freeze.

Legend does not show format values

Jira issue ID: QLIK-67064

Description: In Qlik Sense Desktop, some format values of legend would not show for library measures.

Validation needed for virtual proxy prefix

Jira issue ID: QLIK-67126

Description: The QMC/hub could not be accessed when http:// or https:// was included as a virtual proxy prefix.

Memory not released when navigating in app

Jira issue ID: QLIK-67129

Description: Memory was sometimes still consumed even though objects were no longer used.

Texts and widgets misplaced on sheet

Jira issue ID: QLIK-67140

Description: Some objects had too much white-spacing.

Variable definition is removed on chart dimension after reload

Jira issue ID: QLIK-67251

Description: When using an expression for a visualization, where the expression was defined without a preceding "=" and referring to a field, the expression would be replaced with the name of the referred field after a reload.

Word wrap doesn't work with long column names

Jira issue ID: QLIK-67348

Description: For pivot tables, word wrap didn't work properly.

Performance affected when using custom connector

Jira issue ID: QLIK-67371

Description: When sending requests through a custom connector, performance would slow down .

An authentication popup is displayed when accessing load editor with ticket authentication

Jira issue ID: QLIK-68468

Description: An authentication popup would be displayed when accessing the data load editor with ticket authentication, even though the user was already authenticated.

Condition calculation not working on tree chart

Jira issue ID: QLIK-67954

Description: Even if the calculation condition for a tree chart was set to false() the calculation was done.

Qlik Sense .Net SDK loads all assemblies

Jira issue ID: QLIK-68497

Description: Performance and memory consumption was affected.

SAP extractor Err Error : could not retrieve the connection handle

Jira issue ID: SAP-823

Description: SAP Extractor version 6.1.2 also extracting a few number of rows lost the connection handle.

DSO Connector doesn't recognize the native SAP Field "0DATEFROM"

Jira issue ID: SAP-832

Description: It was not possible to read the field "0DATEFROM" (a native field from SAP) from a SAP Business Warehouse through the DSO connector.

SAP BAPI connector truncating special characters

Jira issue ID: SAP-870

Description: SAP BAPI connector would truncate data and omit the special characters for some columns, while in other cases, columns with the same special characters would be dropped.

Known issues and limitations

The following issues and limitations were identified at release time. The list is not comprehensive; it does however list all known major issues and limitations. We expect to have the issues fixed in future versions.

Clients

- Exporting a chart as an image, using a DPI setting different from the default, may result in an unexpected output.
- If you change the orientation of a Gauge chart from Custom > horizontal to Auto, and then export to PDF, the exported version might be depicted in vertical orientation.
- If using the on screen touch keyboard within the Add Data Wizard in docked mode on a Windows Tablet, the keyboard may cover much of the screen making it impossible to edit.
Workaround: Use the keyboard in standard mode (not docked).
- It might not be possible to scroll to the beginning or to the end in the Expression editor when using an Android tablet.
- If running Qlik Sense on a Nexus 5 phone using Google Chrome version 41, input fields will not work as expected.
- On iPhone, it is not possible to use the toolbar in landscape because the iOS user interface covers/hides it.
- Generation of the test script by pressing Ctrl+00 does not work in Qlik Sense Desktop environment when using Google Chrome or the QlikBrowser on hybrid devices.
Workaround: Launch Qlik Sense Desktop in Internet Explorer.
- Maps may take a long time to display if the association between the first dimension and the geographical field results in a large number of items.
- Internet Explorer supports a maximum of six web socket connections.
Workaround: See [https://msdn.microsoft.com/library/ee330736\(v=vs.85\).aspx](https://msdn.microsoft.com/library/ee330736(v=vs.85).aspx)
- If you convert an existing visualization to another type of visualization, the thumbnail in the App overview may not be updated to depict the new visualization type.
- It is not possible to upload more than one image file at a time from a device running IOS 8.
- You need to enter username and password to download an Export image/pdf on Windows phone devices
- If dimension limits (others) is set in a straight table or pivot table, the subtotals and totals are incorrectly calculated.

- Exporting a story to PowerPoint limitations:
 - There is a limit to the maximum number of slides that can be exported for a single story. The limit depends on the computer hardware resources.
 - The first story export after a printing service restart may stop.
Workaround: You need to cancel the export and run it again.
 - Titles are not rescaled as HTML, font settings are not yet exported.
 - Storytelling effects are not applied.
 - Exported charts may show fixed scroll bars, depending on the export resolution.
- It is not possible to pivot dimensions in a pivot table on devices using IOS 8.4.1.
- If you select data from web files with UTF-8 decoding and non-ASCII characters in the caption, data may be garbled.
- In Windows 10 Edge browser, it is not possible to use drag-and-drop when attaching a data file.
Workaround: Use the button at the bottom of the Attach files dialog to select file to attach.
- In Data manager, date and timestamp field classification is disabled in some cases:
 - If the table is updated from source, that is, you update the selection of fields.
 - If the table is a result of concatenation of two or more tables.
- It is not possible to select values in the search box of filter panes that are set to select one and only one field value.
- It's not possible to insert breakpoints in the data load editor on an iPad, as tapping the line number activates the virtual keyboard.
- The hub doesn't work properly when using Internet Explorer 11 and IPv6.

Multi-node

- If the available disk space on a node is low, synchronized apps may become corrupt or they may not be fully synchronized but still appear on the Hub. These problems may still be present even after memory has become available.
- Multi-node only synchronizes log files when they roll from .txt to .log files. The monitor apps will not receive the data before the log has rolled.
- If you duplicate an app on a rim node, it may take up to 30 seconds to display app content, and the page may need to be manually refreshed.
- You may not be able to connect to a RIM node if the usage of FIPS compliant algorithms has been enabled on that RIM node.
- If the Security policy "System cryptography: Force strong key protection for user keys stored on the computer" is enabled, RIM nodes lose connection to the central node.
- When using shared persistence, it's not possible to connect to a remote database on IPv6 stack.

Globalization

- Some Operating Systems have not been updated with the new Russian currency symbol. Apps created in Qlik Sense installed on an Operating System that has the updated currency symbol will show as square or scrambled when the app is opened on an Operating System that does not have the updated currency symbol.

- When creating a web-file connection, Qlik Sense cannot decode UTF-8 tables with non-ASCII characters in the caption.
- When using Internet Explorer or Chrome, and if the App name is defined with Japanese characters, you may experience the app name on browser tab being defined with Chinese characters.
- When having PC locale as Turkish, the currency symbol for Lira might be displayed as a square in the Data Load Editor instead of the actual currency symbol.
Workaround: Set the monospace font in the browser.
- The use of Chinese, Japanese and Korean input methods in the data load editor and extension editor might not behave entirely as expected.
Workaround: Should you run into any difficulty, you can always use a desktop editor, and copy/paste into the data load editor or extension editor.

Qlik Management Console (QMC)

- If you change the name of an unpublished app that is currently open in the Hub from the QMC or by using the QRS API, the new app name will not be visible until the Hub is refreshed and some errors may occur in the log.
- If you create your own Content library, the images imported to that library will not be visible when choosing an image for Story, App or Text & Image.
- If you upgrade a Qlik Sense 1.0 server that had task executions, the status codes may show incorrectly due to improvements to task handling.
- If several apps with a large number of objects are imported at the same time, the import operations may fail due to timeout issues between the repository service and the database.
Workaround: Stop all services, change the setting of `seq_page_cost` to 2.0 in the PostgreSQL configuration file (`postgresql.conf`), and restart the services.

Qlik Sense APIs

- If you add a dimension by dragging and dropping it onto the Horizontal listbox visualization extension example, or any other custom visualization extensions based on a ListObject, you may receive a *Replace invalid dimension* error message.
Workaround: Use the Add dimension button inside the visualization extension instead.
- Using the .NET SDK `importApp` method will not trigger any migration of the imported app. Apps imported with the `importApp` method will not be displayed in the hub and cannot be opened.
Workarounds:
 - Migrate the app to the correct version in a Qlik Sense Desktop environment before importing it to a server installation.
 - Trigger a manual migration in the QMC of the app that was imported with the .NET SDK `importApp` method. Alternatively, use the REST API.

Installation

- If an invalid superuser password is entered, a validation error message is shown after the installation process is complete.

- Qlik Sense (server) cannot be installed if a machine also hosts QlikView Server (12.x or earlier). Uninstall QlikView Server before proceeding with the new Qlik Sense installation.
- On a machine with a server operating system, it is only possible to install Qlik Sense (server), not Qlik Sense Desktop.
- In IPv6-only server environment, it is not possible to access data sources that are IPv4-only.
- In a silent installation, “=” sign cannot be included in the value of any argument.
Note: This is not a limitation if *deprecated command line arguments* are being used.
- Upgrading from Qlik Sense 2.x to 3.x will modify the repository database. The upgraded 3.x database is no longer compatible with Qlik Sense 2.x. It is important that you take a backup of the Qlik Sense 2.x site *before* upgrading to Qlik Sense 3.x, so that a rollback can be carried out if required.
- Qlik Sense is not FIPS compliant. You may get error messages related to encryption algorithms not being FIPS compliant.
Workaround: Disable FIPS checking for Qlik Sense. Contact Qlik Support for more information.

Qlik Sense Analytics Platform (QAP)

- For performance reasons, it is not advisable to use less than 4 cores per node in a QAP deployment.

Qlik Sense Desktop

- Export as an image and Export to PDF will not work from Qlik Sense Desktop if you have Qlik Sense (server) installed on the same machine.
- In Qlik Sense Desktop, you have access to the Basic data through Qlik DataMarket.
- Sorting by expression in a Pivot table may not work as expected.
- When opening Qlik Sense Desktop, the Welcome message may be displayed even though it has previously been selected not to display the message again.
- The first time Qlik Sense Desktop is started, a security alert may be shown regarding Evented I/O for V8 JavaScript and dataprepservice.exe.

Connectors

- DataMarket connector: Numbers may be loaded as strings if the locale has ‘,’ (comma) set as decimal separator.
- Database connectors: Limited support for proxy users on Oracle SQL Servers. There is a known problem for user names with special characters when connecting to an Oracle SQL Server. This affects mainly proxy users with identifiers such as “user[PROXY]”. The problem affects connections with “OLE DB” and “Qlik ODBC Connector Package”.
Workaround: Configure an ODBC DSN in Windows and use “ODBC” connections in Qlik Sense.
- EssBase connector: The EssBase connector is not compatible with the SAP BEX connector 6.3.0.
Workaround: Upgrade the SAP BEX connector to version 6.3.2.

Upgrade notes

Backup recommendations

It is important that you make a backup of the site before upgrading, to be able to recover the site if the upgrade fails.

Upgrade may fail if services are in Disabled state

If a service is in the Disabled state prior to an upgrade, it may lead to the service not being completely uninstalled, and a subsequent failure to install the new version of the service. The rollback of the service upgrade will also fail, which means that the service is not available anymore, and cannot be repaired. The most likely cause of this problem is that other processes are scanning the state of the service during uninstall or upgrade, hence preventing it from becoming completely uninstalled. Examples of such processes are **Process Explorer** and the built-in **Control Panel > Administrative Tools > Services** snap-in. This bug in Windows is documented here: <https://support.microsoft.com/en-us/kb/287516>

To minimize the risk of this occurring, do the following in order, before upgrading:

1. Stop all Qlik Sense services manually.
2. Verify that no service is in the Disabled state. This can be done by the **Services** snap-in, or another program that polls service state.
3. Ensure that all service state polling applications are closed, including applications you used in step 2.

Setting all Qlik Sense services to Manual start, and then restarting the system is the most reliable way of making sure that all service state polling applications are closed.

Perform a database cleaning before migrating to 3.1

We recommend that customers with a large number of users or applications perform a database cleanup before migrating from 2.0.x to 3.1.

After performing an upgrade in a multi-node environment, it can take a very long time for newly created database items (such as sheets, applications, bookmarks, or tags) to appear on all nodes. This is caused by long synchronization queues between the nodes, as a result of the upgrade. All new items will be at the end of these queues. From Sense 2.2, the repository database is stored in RAM to improve the performance, for users with very large databases the database can become larger than the available RAM on the server which results in an error during startup. If you are running a large installation (users or apps) we recommend that you perform the steps described below before performing the upgrade.

Workaround: Synchronization queues will eventually finalize by themselves, but in very large environments this can take several hours. If you import a large Active Directory, it is recommended to do the following before upgrade to reduce upgrade synchronization queues:

- Make sure that you applied best practices for User Directory connectors:
<https://community.qlik.com/docs/DOC-14708>
- If a large Active Directory has been imported without filters, do the following:

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1. Setup LDAP import filters, according to the best practice guide, to reduce size of imported user attributes.
2. Remove users and perform a new import of the Active Directory.
3. Run the Database Cleanup Script, provided by Qlik, to clean the repository database before upgrading. To acquire the Database Cleanup Script, log in to the Support Portal and search for article "17620". The title of the article is "Qlik Sense Database Cleanup Script 2.x and 3.x".
4. Restart the system and start the upgrade.

System requirements notes

- From Qlik Sense 3.1 SR2 and forward, you need to start the Qlik Sense Service Dispatcher (QSD) service before starting the Qlik Sense Repository Service (QRS).
- Support for Windows Server 2008 R2 is scheduled to be removed in the third quarter of 2017.