

# Qlik Sense April 2019 Patch 9

Release notes

Published: March 25, 2020

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# What's new in Sense April 2019

Please refer to the What's new sections of the online help for information about the new and updated features of the Qlik Sense April 2019 release:

[What's new in Qlik Sense April 2019](#)

[What's new in Qlik Sense April 2019 \(Developers\)](#)

## Sense April 2019 Patch 9

### Upgrade

April 2019 Patch 8 needs to be preinstalled before upgrade to April 2019 Patch 9. When installing patch 8, make sure to follow the update instruction for "Updated NodeJS version".

## Sense April 2019 Patch 8

### Updated NodeJS version

This patch for Qlik Sense updates the version of NodeJS to a currently supported version and addresses several security vulnerabilities announced by the NodeJS project.

### IMPORTANT NOTE:

Unfortunately, for Qlik Sense deployments originally installed with versions prior to the June 2019 release this requires recreating the Qlik Sense root CA certificate. After applying the patch please complete following steps:

- Recreating the Qlik Sense Root Certificate (Root CA)  
<https://support.qlik.com/articles/000094071> or
- Manually Recreating the Qlik Sense Root CA  
<https://support.qlik.com/articles/000097192>

For Qlik Sense deployments originally installed with the June 2019 or later releases, follow standard steps for patching Qlik Sense.

NOTE: You will also have to replace Qlik Sense root certificate with the newly created one in the following cases:

- Your Qlik Sense deployment is connected with Qlik NPrinting, Qlik multi-cloud setups, or any other external tools or configurations.
- You have configured QlikView Distribution Service for distribution of links to QlikView documents to the Qlik Sense hub.

## Sense April 2019 Patch 7

### Support for SameSite cookie.

Default behavior for https is to set SameSite=None. Default behavior for http is not to set SameSite attribute, neither the Secure attribute, just like it was before this change. Other behaviors can be configured. This change is available in all patches listed below. By default above applies. If you wish to configure other values, do the following:

## This document covers the following releases:

### Qlik Sense April 2019

Release: April 25, 2019

### Qlik Sense April 2019 Patch 1

Release: May 14, 2019

### Qlik Sense April 2019 Patch 2

Release: July 12, 2019

### Qlik Sense April 2019 Patch 3

Release: August 30, 2019

### Qlik Sense April 2019 Patch 4

Release: November 20, 2019

### Qlik Sense April 2019 Patch 5

Release: December 4, 2019

### Qlik Sense April 2019 Patch 6

Release: January 15, 2020

### Qlik Sense April 2019 Patch 7

Release: February 12, 2020

### Qlik Sense April 2019 Patch 8

Release: March 5, 2020

### Qlik Sense April 2019 Patch 9

Release: March 25, 2020

1. Open the Proxy.exe.config file, which by default is located in "C:\Program Files\Qlik\Sense\Proxy".
2. Add following strings in the section <appSettings> with the desired values, in example:

```
<add key="SessionCookieSettings.Https.HasSecureAttribute" value="true"/>
<add key="SessionCookieSettings.Https.SameSiteAttribute" value="Lax"/> <!-- Valid values are NoAttribute,
None, Lax and Strict -->
<add key="SessionCookieSettings.Http.HasSecureAttribute" value="false"/>
<add key="SessionCookieSettings.Http.SameSiteAttribute" value="Strict"/> <!-- Valid values are NoAttribute,
None, Lax and Strict -->
```

3. Restart Qlik Sense Proxy Service.
4. Repeat above actions on each node of the cluster running the Qlik Sense Proxy Service.

## Sense April 2019 Patch 5

### Improved HTTP connection handling and queuing of simultaneous identical requests

For simultaneous and identical GET requests (based on path, query and headers), response time has been improved by grouping them in the HTTP connection handler queue, only executing one call per group and using the result of that call to respond to all the requests in that group. This results in significantly improved performance on a loaded system. It decreases the load on the service and shortens the response time for subsequent simultaneous, identical and time-consuming requests. This change applies to any GET request and performance improvements are beneficial for all endpoints with that HTTP method.

This improvement is available in all patches listed below. It is disabled by default. If you wish to enable it, do the following:

1. Open the Repository.exe.config, which by default is located in: "C:\Program Files\Qlik\Sense\Repository"
2. Add the string <add key="UseResponseDuplication" value="true" /> in the section <appSettings>
3. Restart Qlik Sense Repository Service
4. Repeat these actions on each node of the cluster running the Qlik Sense Repository Service

Available in the following and later patches for Qlik Sense (when released):

- Qlik Sense November 2018 Patch 8
- Qlik Sense February 2019 Patch 5
- Qlik Sense April 2019 Patch 4
- Qlik Sense June 2019 Patch 4
- Qlik Sense September 2019 Patch 1
- Qlik Sense November 2019 Patch 1

### Handle "invalid cookie bursts" in the Qlik Sense Proxy (QPS) Service

When a multiple cookie request arrives to the Qlik Sense Proxy Service for the same user and authentication method within a small-time frame, QPS reuses the session from the first request. This behavior avoids the creation of additional sessions, and therefore prevents reaching the maximum number of allowed sessions, which would result in temporary lock of that user.

A known limitation coming with this change is that in a scenario with an invalid session cookie and a burst of appcontent requests in the hub or within the app, the rendering of app thumbnail, sheets, or stories fails until page is refreshed or the user navigates between the streams or app sections.

This improvement is available in all patches listed below with the default value of 2 seconds. If you wish to configure or disable it, do the following:

1. Open the Proxy.exe.config, which by default is located in: "C:\Program Files\Qlik\Sense\Proxy"

2. To configure add the string `<add key="InvalidSessionRequestBurstLimit" value="00:00:02"/>` in the section `<appSettings>` with the desired value
  3. To disable add the string `<add key="InvalidSessionRequestBurstLimit" value="00:00:00"/>` in the section `<appSettings>` with the value of 0. QPS will fall back to previous behavior with one difference – before it would initially overwrite the existing cookie with an empty one in the first request (Set-Cookie: X-Qlik-Session=, now Set-Cookie header will not be included.
  4. Restart Qlik Sense Proxy Service
  5. Repeat these actions on each node of the cluster running the Qlik Sense Proxy Service
- Available in the following and later patches for Qlik Sense (when released):

- Qlik Sense November 2018 Patch 8
- Qlik Sense February 2019 Patch 5
- Qlik Sense April 2019 4
- Qlik Sense June 2019 Patch 5
- Qlik Sense September 2019 Patch 1

## Sense April 2019 Patch 4

### New load balancing scheme

Qlik Sense November 2019 introduces a new load balancing scheme. In previous versions of Qlik Sense, the algorithm always chose the load-balancing node with the lowest CPU load. The CPU load of all nodes was updated every 5 seconds, which might have resulted in consecutive reloads being distributed to the same node. To improve the handling of frequent consecutive reloads, the algorithm has been now changed to select the node with the lower number of running tasks per "Max concurrent reloads" setting, tracking this value on the scheduler master node.

This improvement is available in all patches listed below. It is disabled by default. If you wish to enable it, do the following on each node of the cluster running the Qlik Sense Scheduler Service:

1. Open the Scheduler.exe.config, which by default is located in: "C:\Program Files\Qlik\Sense\Scheduler\Scheduler.exe.config"
2. Add the string `<add key="DisableLegacyLoadBalancingBehavior" value="true" />` in the section `<appSettings>`
3. Restart Qlik Sense Scheduler Service

Available in the following and later patches for Qlik Sense (when released):

- Qlik Sense November 2018 Patch 7
- Qlik Sense February 2019 Patch 5
- Qlik Sense April 2019 4
- Qlik Sense June 2019 Patch 4
- Qlik Sense September 2019 Patch 1

## Sense April 2019

## Improvement of Hub load time

We have improved the responsiveness of the Qlik Sense Hub Client by improving the way security rules, database access, and hub service work together.

The results of these improvements are the following:

- Initial time required to access the Hub is significantly reduced. This is particularly noticeable in Qlik Sense installations with a high number of apps, streams, security rules, and custom properties.
- Subsequent access time is reduced.
- Stream navigation and access times is now faster.

Qlik Sense installations that currently have long access times will especially benefit from these improvements. If the time required to access the Hub for your installation is currently high (over 30 seconds), it is supposed to be reduce to a few seconds following these improvements. If the time required to access the Hub for your installation is already reasonably short (under 30 seconds), these improvements will be less noticeable.

Note: with this fix it is no longer possible to share unpublished apps. To read how you can reinstate the previous behavior see, the “Security rules cause the hub to load slowly” section in the following documentation: [Troubleshooting - Managing QMC resources](#).

## Improper Access Control Issue

This release addresses a security weakness filed with Jira issue ID: QLIK-94388. For more information, read the following [security bulletin](#).

## Qlik Licensing Service Reference Guide

With the introduction of the Qlik Licensing Service in Qlik Sense February 2019, Qlik has developed an alternative process for product activation. To allow for Customers to make the decision when to move, Qlik has introduced the use of a Signed License Key to determine which activation method to use.

For detailed information on the Qlik Licensing Service, read the [Qlik Licensing Service Reference Guide](#).

## Bug fixes

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Qlik Sense April 2019 comes with fixes for the issue described below.

### April 2019 Patch 9

#### Fetching list of extensions is taking too long

Jira issue ID: QLIK-97301

Description: When loading certain extensions, an additional call to the QRS was being made that caused the extension to take longer to load. This issue has been fixed by making sure only one call is made.

### April 2019 Patch 6

**Deselect in a layer in a map having another layer using calculated dimension and calculation condition cause error**

Jira issue ID: QB-543

Description: If two layers were used in a map where one layer had a calculated dimension and a calculation condition that failed (was always false), this would cause a error dialog to appear stating that an error occurred with the following error message: "invalid hypercube object state".

## April 2019 Patch 4

### **Publish and Replace time is much longer with applications that have a lot of AppContent**

Jira issue ID: QLIK-97206

Description: Publishing via replacing an app with lot of AppContent would take long time to complete due to unnecessary for that operation generation of virtual properties.

### **Improve redirect URL validation**

Jira issue ID: QB-189

It was possible to bypass URL validation by using HTML encoding, allowing redirection to arbitrary URLs.

### **Unhelpful error message when uploading a file with a long name**

Jira issue ID: QLIK-97165

Description: The error response sent to a user trying to upload a filename longer than 260 characters was not helpful to the user and included unnecessary information from the server.

## April 2019 Patch 3

### **Section Access application works poorly with large key fields**

Jira issue ID: QLIK-96840

Description: Section Access application works poorly with large key fields.

### **Resource Distribution Service does not use the Windows s channel configuration**

Jira issue ID: QLIK-95374

Description: Fix for service to pick up Windows TLS settings. This resolves issues where TLS 1.0 was disabled, but service was still enabled to use it.

### **Deployment Based Warnings Service does not use the Windows s channel configuration**

Jira issue ID: QLIK-95368

Description: Fix for service to pick up Windows TLS settings. This resolves issues where TLS 1.0 was disabled, but service was still enabled to use it.

### **Support for TLS override added to precedents service**

Jira issue ID: QLIK-94285

Description: Support for the -ssl flag is now enabled for precedent service to override ssl/tls protocols.

### **Button for navigation extension fails to open email links in IE11**

Jira issue ID: QLIK-94037

Description: When using IE 11, the navigation button extension was unable to open email links.

### **X Axis set as Duration has stopped working after upgrade.**

Jira issue ID: QLIK-96025

Description: Fixed box plot and distribution plot charts which would not work when using a measure formatted as duration.

### **Qlik Sense uses vulnerable version of jQuery**

Jira issue ID: QLIK-95556

Description: Qlik Sense hub upgraded to use jQuery 3.4.0.

### **Unable to create rule for Analyzer Capacity based license in QMC**

Jira issue ID: QLIK-96864

Description: If a license did not have any Analyzer passes, the section would not display in the QMC. Users were unable to create a Security rule for the users using the Analyzer Time.

### **Lost added scripts in Data load editor**

Jira issue ID: QLIK-96986

Description: In Qlik Sense April 2019, changes in Data load editor were not saved when closing the window.

### **Button extension email not working as expected**

Jira issue ID: QLIK-96964

Description: The "Open a website/email" button would not open email client as expected.

## **April 2019 Patch 2**

### **Wrap text issue in straight table**

Jira issue ID: QLIK-93399

Description: Straight Table extension did not respect turning of "Wrap text in headers" and "Wrap text in cells" settings.

### **Objects not rendered in full screen**

Jira issue ID: QLIK-94369

Description: Objects are rendered blank in "full screen" mode in some cases. This fix makes sure the object gets rendered properly in full screen mode.

### **NPrinting OnDemand extension limited to first 50 Apps**

Jira issue ID: QLIK-95688

Description: The limit for 50 apps has been removed by this fix which looks at how many NPrinting apps there are on the NPrinting server and requests all of them (100 per request) to make sure none is missed. This fix does the same for connections and reports.

### **Excessive /qrs/license/requestaccesstype calls with capacity-based license**

Jira issue ID: QLIK-96326

Description: With capacity-based license proxy service would make excessive calls to /qrs/license/requestaccesstype when evaluating access type.

### **Spaces in database password causing InternalServerError**

Jira issue ID: QLIK-96329

Description: The Qlik License Service does not support spaces in database password. The Qlik License Service uses the same user as the repository service to contact the database. If the password for that user contains special characters, licenses wont function properly.



## **KPI Objects inconsistent with selections in exported Story live data sheet**

Jira issue ID: QLIK-96511

Description: Exporting stories with embedded sheets sometimes leads to incorrectly applied selections in the exported slides.

## **April 2019 Patch 1**

### **Sensitive Information Disclosure**

Jira issue ID: QLIK-93156

Description: Responses to following /qrs endpoints have been restricted for unprivileged users - /filereference, /<name>service, /servernodeconfiguration/local.

Note: This fix introduces a limitation and a related workaround. See the limitation "Information disclosure in responses to `/qrs/filereference/` endpoints when called as an unprivileged user" listed under "Managing a Qlik Sense site" in the Known Issues and Limitations section.

### **Performance degrade in List object search and high impact on concurrent engine performance**

Jira issue ID: QLIK-93883

Description: List object search was performing poorly on large text fields due to excessive RAM memory usage in the parallelized field search. The intense memory usage caused other users on the engine node to experience poor responsiveness.

### **Scheduler can end up in a state where reloading tasks will fail with 'Engine not alive' error**

Jira issue ID: QLIK-94286

Description: Under certain circumstances scheduler could end up with a cached error causing some reload tasks to fail when triggered in batches.

### **Straight table columns could be miss-aligned after selections in RTL app**

Jira issue ID: QLIK-94371

Description: Using Chrome in an app set to Right-to-left and making selections in a scrolled Straight table would sometimes make the column content and column headers become miss-aligned.

### **Parsing lengthy library item expressions resulting in availability issues with cognitive rules engine**

Jira issue ID: QLIK-94635

Description: The cognitive rules engine now avoids parsing lengthy library item expressions to ensure availability.

### **ODAG - Create button is missing from App Navigation links in the Hub when using a professional license**

Jira issue ID: QLIK-94638

Description: Problem caused by an error in the object schema for OdagLinkUsage. Solved by changing the schema of OdagLinkUsage to remove the offending "\_reverseDirection": true attribute.

### **Qlik Sense self-signed root certificate missing basic constraint CA:true**

Jira issue ID: QLIK-95021

Description: "X509v3 Basic Constraints: critical CA:TRUE" extension has been added to root.pem certificate. Can be disabled via "Certificates.SelfSignedRoot.BasicConstraintsCA" setting in Repository.exe.config file.

## April 2019

### Enabling "Show totals" affects values shown

Jira issue ID: QLIK-87315

Description: Solves a problem where enabling or disabling "Show totals" could affect the result.

### Browser crashes after opening a particular tab in Data load editor

Jira issue ID: QLIK-87604

Description: Debug flag for Qlik Sense server can turn off syntax highlighting in Data Load Editor which will allow deeply nested IF statements to parse correctly.

### "Distribute" option in QMC triggers no action

Jira issue ID: QLIK-90867

Description: Removed "Distribute" action from QMC from Security Rules.

### Qlik Sense: KPI Conditional Color issue

Jira issue ID: QLIK-91846

Description: In this scenario the ValueExpression evaluation is aborted by AbortListObjectSearch, but we do not propagate the abort signal so the Color condition is not evaluated.

### Vulnerable version of Handlebars.js

Jira issue ID: QLIK-91971

Description: Depthed paths are now conditionally pushed on to the stack. If the helper uses the same context, then a new stack is not created. This leads to behavior that better matches expectations for helpers like if that do not seem to alter the context. Any instances of ../ in templates will need to be checked for the correct behavior under 4.0.0. In general templates will either reduce the number of ../ instances or leave them as is.

### Publishing an app does not prevent other users from using the Script Editor

Jira issue ID: QLIK-92112

Description: If two users are using an application and the application is published the Script Editor UI does not raise a message to state that script can no longer be edited. Instead, it only fails when a save or reload is attempted.

### Synchronizing tables can cause auto-concatenation of tables resulting in invalid generated script

Jira issue ID: QLIK-92121

Description: Attempting to auto concatenate two tables previously synchronized from DLE script with the same fields names, resulted in tables auto concatenating and producing incorrect load script. Temporary fields are now used to prevent concatenation in such scenarios.

### No access to DLE in navigation bar and no possibilities to reload via Fields in assets panel

Jira issue ID: QLIK-92165

Description: Intermittent loss of access to DLE and Data manager in navigation menu and no possibilities to reload via Fields in assets panel.

### Backslash used instead of forward slash in the file connector

Jira issue ID: QLIK-92204

Description: Both backslash and forward slash will work in the script, but this change brings us in line with the documentation.

### **Text image object renders intermittently in Sense June 2018**

Jira issue ID: QLIK-92351

Description: Fix the focus problem of the Text&Image object when it is used in a mashup.

### **NULL values for some NOT NULL fields when trying to load a XML file**

Jira issue ID: QLIK-92614

Description: Fixed issue where Engine thinks ':' is a separator so XML fields like x::y get unintentionally divided.

### **Operations Monitor "Reload CPU Heatmap" displays "No activity associated with current selections"**

Jira issue ID: QLIK-92630

Description: Operations Monitor sheet "Task Planning" includes a pivot table "Reload CPU Heatmap" which might display "No activity associated with current selections" even when no selections are made or reloads are indeed associated with current selections.

Note: This fix properly displays Reload CPU data by correcting logic in the app load script which identifies the underlying CPU data for reloads.

### **Pie charts not visible in November 2018**

Jira issue ID: QLIK-92636

Description: Fixed issue where pie chart did not render in case it was converted from an auto-chart that had 'color by measure' enabled.

### **Export functionality in Qlik Sense Enterprise generates errors in Windows event logs**

Jira issue ID: QLIK-92703

Description: Image exports in Qlik Sense Enterprise caused the Windows event log to be flooded with entries stating "ERROR: null value in column "payload" violates not-null constraint".

Note: This fix removes the failing Windows event log entries.

### **Qlik Sense Nprinting Ondemand extension is not able to pass specific selections**

Jira issue ID: QLIK-92723

Description: if a selection is made on a value >200 the extension cannot pass the selection(s) to NPrinting

Note: This fix enables the extension to pass any selection, or number of selections, to NPrinting.

### **Qlik Sense default area map is showing the words 'color expression' in hover text**

Jira issue ID: QLIK-92749

Description: In the map chart tooltip there was a line with "Color expression" if using color by expression and a color code. This was not the case for other charts. That line has now been removed in the map chart tooltip.

Note that when using color by expression which is not a color code the line is still displayed in all charts.

### **Filter box within Single Configurator**

Jira issue ID: QLIK-92786

Description: Fix the styling of the filter pane object when it is used in the Single configurator mode.

### **Repository keeps on restarting with 'Cannot load Counter Name data because an invalid index " was read from the registry'**

Jira issue ID: QLIK-92800

Description: Qlik Sense Repository Service would keep on restarting while trying to load corrupt performance counters. Now exception is caught and information to rebuild performance counters is logged.

### **Script Editor accessible via URL when it should be inaccessible**

Jira issue ID: QLIK-92814

Description: Although the menu items are correctly hidden, manually typing the URL brings up the Script Editor. Proper permissions are now checked in this case and an error message is displayed.

### **For sheets in Single Integration API, the selection menu ends up under nearby charts**

Jira issue ID: QLIK-92819

Description: The chart selection menu was shifted under nearby charts, which made the menu hard to use. This is now fixed.

### **NPrinting tasks failing with multiple errors after upgrading September 2017 to June 2018**

Jira issue ID: QLIK-92824

Description: An error in Qlik's Engine could make Excel exports in NPrinting fail with the error code -128 when several exports are made in a quick succession. This is now fixed.

### **HTML Injection in hub dialogs**

Jira issue ID: QLIK-92829

Description: This fix prevents HTML injection in Hub dialogs.

### **Script generation improvements**

Jira issue ID: QLIK-92838

Description: Auto concatenate detection improved to prevent invalid generated script.

### **Warning! Setting "Cores to allocate" to 0 will disable the selected engines**

Jira issue ID: QLIK-92858

Description: Correct warning messages when configuring the "cores to allocate" setting.

### **Selection pass through URL do not get applied if it has special characters [ ]**

Jira issue ID: QLIK-92865

Description: Straight Table extension url-encoded brackets unnecessarily which broke passing selections to the App Integration URL.

### **Qlik Sense November 2018, when you Export Without Data you lose Alternative State Master Items**

Jira issue ID: QLIK-92928

Description: Added the state names property when exporting App without data.

### **The exportData method in Capability API is not working in IE11**

Jira issue ID: QLIK-92955

Description: The exportData method in Capability API was not working at all in IE11, the download didn't start and a console error was shown. This is now fixed.

### **Create bookmark on an app freezes the app and HUB**

Jira issue ID: QLIK-93017

Description: This fix improves the performance when handling large number of bookmarks

### **Chart from App-story gets distorted after it is exported to power-point**

Jira issue ID: QLIK-93018

Description: Bar charts are scrolled too far on the axis in Powerpoint exports. This occurs when a bar chart is scrolled to the end (or near end) and exported in a larger screen resolution than it has on the screen.

### **Adding calculated fields after auto concatenating tables not possible**

Jira issue ID: QLIK-93072

Description: Autoconcatenation of two tables incorrectly prevents users from adding a calculated field to the concatenated table, even though it is possible to do so through manual concatenation.

### **NYSE ARCA added to DataMarket Stocks and Indices package**

Jira issue ID: QLIK-93074

Description: The NYSE ARCA stock exchange has been added to the DataMarket Stocks and Indices package.

### **Repository keeps on restarting every x minutes defined by 'PerformanceLoggerIntervalInSeconds' ('PerformanceLogger.Interval' from Feb19)**

Jira issue ID: QLIK-93208

Description: Qlik Sense Repository Service would keep on restarting while trying to log performance data. Now exception is caught, error is logged and repository service continues to work as expected.

### **Qlik Sense November 2018 Pie chart error related to- qliktech.jfrog.io**

Jira issue ID: QLIK-93251

Description: Disabled source maps on js-files to prevent Internet Explorer 11 from opening unexpected login prompt.

### **Line chart with set analysis using implicit set operators does not show selected values**

Jira issue ID: QLIK-93266

Description: Fix calculating the number of dimension values when set analysis is used and affect the selection.

### **Filter pane selection menu is displayed in wrong position when scrolling in a Mashup**

Jira issue ID: QLIK-93297

Description: This issue only occurred for Mashups with one or more HTML element with the class 'qvobject' or 'qvplaceholder' as direct children to the body element. This is now fixed.

### **It's not possible to scroll in extended sheet in Single Integration API.**

Jira issue ID: QLIK-93317

Description: It was not possible to scroll in an extended sheet in Single Integration API. This is now fixed.

### **Field Headers and Columns not properly aligned in the Data Manager table view**

Jira issue ID: QLIK-93406

Description: The heading columns could get out of alignment with the table content, leading to unexpected behavior when setting a column type or other operations. They are now properly aligned again, and actions should work only on the intended column.

### **Join of large and a small table can result in null suppressed rows showing**

Jira issue ID: QLIK-93450

Description: If a dimension picked from the larger table is set to NOT include Null values, but the key dimension is not matched in the small table, the unmatched row is shown with null values.

### **Binary reload from QVF failed**

Jira issue ID: QLIK-93499

Description: Doing a binary reload from a QVF with more alternate states than the target document failed, and otherwise mixed up unrelated alternate states. The binary reload now only load the default state from the source, as it has done historically.

### **Selections in Single Integration API is not accepting leading zeros**

Jira issue ID: QLIK-93532

Description: If the field value was starting with a zero, and trying to select that value in Single Integration API the selection didn't apply. This is now fixed.

### **Qlik Sense On Demand sends wrong connection ID when there is more than one connection in a single NPrinting App**

Jira issue ID: QLIK-93565

Description: Users with more than one NPrinting App Connection for an NPrinting App were unable to select what Connection to use. This resulted in either failed reports or reports using a set up that the user did not intend.

Note: This fix adds the possibility for the users to select what Connection to use when setting up the on-demand reporting extension. Users that doesn't select a Connection, will use the first valid Connection associated with the current Qlik Sense App.

### **Labels in filter box incorrectly displayed**

Jira issue ID: QLIK-93566

Description: Fix the title of the filter pane.

### **Geo data (City) when using Insights Advisor not mapped with correct Country**

Jira issue ID: QLIK-93572

Description: When information about Geo-Data entered by user in data manager, DPS is not utilizing this location field, instead it relies on Geo-resolver to set the location field. So we made a fix to utilize those geo-field inserted by user.

### **The color of some KPIs is changed after an upgrade to Qlik Sense February 2019**

Jira issue ID: QLIK-93574

Description: Fixed issue where apps using master measure colors on a KPI created before June 2018 got the incorrect color in Feb 2019.

### **Unable to enter decimal values in Segment Color on master measures**

Jira issue ID: QLIK-93623

Description: It's now possible to enter a decimal value when setting segment colors with percentage limits.

### **Association analysis threshold's modified**

Jira issue ID: QLIK-93627

Description: Association detection thresholds have been increased, allowing associations to be detected in more scenarios.

### **Unable to move Pivot table columns after cancelling filter without selections**

Jira issue ID: QLIK-93654

Description: Fix so one can still reorder dimensions in pivot table after having closed the dimension filter without selecting any values.

### **Unable to disable process and platform performance integration**

Jira issue ID: QLIK-93680

Description: The fix addresses the case when leaving CentralizedLoggingPlatformPerformanceCounters and CentralizedLoggingProcessPerformance blank does not turn off the collection of the performance metrics.

### **Incorrect behavior when dragging objects in a pivot table**

Jira issue ID: QLIK-93726

Description: Correct placement of labels when drag and dropping dimensions in pivot table.

### **Qlik Sense February 2019 shortcut keys Ctrl + Shift + Enter to load data not working**

Jira issue ID: QLIK-93730

Description: In Qlik Sense February 2019 release, shortcut key Ctrl + Shift + Enter to load data stopped working. This has now been fixed.

### **App Integration API cannot read/decode HTML encoded brackets '['**

Jira issue ID: QLIK-93757

Description: App Integration API cannot read/decode HTML encoded brackets '['. This is now fixed.

### **The property panel in Widget editor is missing the settings button**

Jira issue ID: QLIK-93785

Description: The property panel in Widget editor is missing the settings button. This prevents from editing the property panel. This is now fixed.

### **Users getting Invalid Parameter after making a number of selection**

Jira issue ID: QLIK-93840

Description: Add handling for the "Invalid parameter" error.

### **Ignore failure when attempting to retrieve tenantId**

Jira issue ID: QLIK-93868

Description: When attempting to retrieve the tenantId, fail silently. This call is only necessary in the QSCB environments.

### **Unable to pass selection state by URL**

Jira issue ID: QLIK-94294

Description: This issue was solved by QLIK-93757, and QLIK-92865.

### **Data layer disappears from map**

Jira issue ID: QLIK-94695

Description: Data layer disappears from map when we change "Weight by" setting of the Density layer in the Map Chart.

### **Performance decrease of the Oracle ODBC connector version 5.12.0**

Jira issue ID: QVXODBC-1615

Description: The fix addresses the performance slowdown experienced when loading data from Oracle database with November 2018 release. The Fetch Buffer Size can now be controlled using MEMLIM parameter.



# Known issues and limitations

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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.

## Non-functional mash-up after SameSite upgrade

With the introduction of support for SameSite cookie, due to bugs in browsers following limitations become applicable and will result in non-functional mashups:

- Chrome versions 51-66 and Android releases before 12.13.2 will reject SameSite=None cookie
- Safari on MacOS 10.14 and all browsers on iOS 12 will treat SameSite=None cookie as SameSite=Strict

## Clients

- Third-party extensions are currently not supported on mobile devices, and the Qlik Trusted Extension Developer program does not accredit extensions for use on mobile devices. Depending on individual device specifications, mobile OS, and size of the Qlik Sense app, items generated using a third-party extension might fail to be visualized properly on a mobile device.
- Calculated dimensions is not supported by NPrinting when generating reports.
- When consuming Qlik Sense apps using Microsoft Edge browser, touch screen mode is activated by default even when it is run on a non-touch device.  
**Workaround:** turn 'touch screen mode' off from the navigation menu.
- When consuming Qlik Sense apps using Microsoft Edge browser on touch/hybrid devices, the long-press action does not work. This limitation prevents from accessing functions such as an object's context menu, which on touch mode requires a long-press. This is a Microsoft Edge's issue.  
**Workaround:** if using an hybrid device, turn the touch mode off and turn it back on again.
- In Qlik Sense February 2019 or later, the Date Range Picker extension allows for a maximum of 10.000 date selections. In Qlik Sense November 2018, the limit was 5.000 selections. To use the new limit of 10.000 selections, you must delete any Date Range Picker created with previous releases (Sense November 2018 and relative patches) and create a new date picker object in Sense February 2019.
- When using a wildcard with selectmatch, the selection is found but the selection is not rendered on a chart.
- Column values swapped in a table.
- When selecting excluded values, the associated values are also cleared.
- Alternate states are not supported for Qlik Sense Mobile.
- Export as Anonymous does not work for mashups deployed in a domain that is different from the domain in which Qlik Sense is installed. Export only works for Anonymous if the mashup is deployed in the same domain as Qlik Sense.
- When changes are made to sheets in Qlik Sense Desktop, some unspecified changes are sometimes also made. Most often happens when drawing objects.
- Cannot add a deep link to a text and image object. For example, the following link does not work:  
qliksenselink://rd-bda-deep1.rdlund.qliktech.com/windows/sense/app/28637e5c-ec17-44b2-bd52-03ecf79d7c29/sheet/4b040373-1a3b-44ca-926c-3c43d4155e33/state/analysis
- When using the new "Load Extension" syntax in the load script, the **Data load editor** syntax completion does not work well after the keyword "Extension" when trying to write the call to an SSE function (AAI function). Nevertheless, the script executes correctly.
- Connecting to a web page through a web file fails in **Data load editor**.  
**Workaround:** Open Settings.ini file and change "WebFileUseWinAPI = 0" to "WebFileUseWinAPI = 1".
- Creating and editing of On-demand app navigation links on published apps is not currently supported.



- Legend does not show dimension values that are after row number 3000.
- The Exists function now requires the field\_name to be loaded before its values are evaluated with the exists function. If the field\_name you are evaluating is not yet loaded, you will receive a script error. The previous behavior was that the function returned neither TRUE nor FALSE, but NULL instead, so the result was dependent on the NULL handling of the surrounding context/expressions.  
**Workaround:** Use FieldNumber('field ') to check the existence of the field before you use the field in an Exists.
- Coloring does not work for alternative dimensions in Qlik Sense 3.1 and later. The color is grayed out.
- Color schemes on charts with multiple measures, such as bar charts, that use the Multicolored setting cannot be changed.
- Exporting a chart as an image, using a DPI setting different from the default, may result in an unexpected output.
- 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).
- Moving sheets with the mouse is not supported for hybrid devices with Internet Explorer or Edge.
- 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.  
**Workaround:** Fixed in later version, so use Google Chrome version 55.
- 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 Qlik Browser 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:
  - 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 Data manager, date and timestamp field classification is disabled 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.
- Due to a degrade introduced in Mozilla Firefox versions 52 and 53, those versions are not supported to use together with Qlik Sense 3.2 SR1 or later.

- Generating a new on-demand app – or reloading with new selections – may fail with "Payload too large" error if the overall number of selected values on bound fields is very large (i.e. many hundreds of distinct values).

## Multi-node

- 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.
- 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.

## 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.

## Managing a Qlik Sense site

- **Information disclosure in responses to `/qrs/filereference/` endpoints when called as an unprivileged user**

This limitation and the related workaround have been introduced following the fix for QLIK-93156 introduced in April 2019 Patch 1 release. This is a change in database seeding, which cannot be applied to Sense April 2019 release.

**Workaround:** remove `ReadFileReference` security rule. Since this is a `Read only` rule, it is done by removing a corresponding database entry through an SQL Delete operation. Following query should be executed while all the services except for the `Qlik Sense Repository Database` are shutdown:

```
DELETE FROM "SystemRules"
WHERE "Category" = 'Security' AND "Type" = 'ReadOnly' AND "Name" =
'ReadFileReference' AND "ModifiedByUserName" = 'INTERNAL\bootstrap';
```

- If you set up your REST data connections with a regular user account and not a service account (not meaning Qlik Sense internal service accounts, but an AD/LDAP/other user directory service account), the maximum number of parallel sessions for a single user account (5) will be consumed, and the user will be locked out.  
**Workaround:** Use a service account instead, and do not allocate any user/professional/analyzer access to that account.
- The QMC Custom Property Edit page can currently handle a limited number of custom properties. If you want to edit custom property values in the QMC, we recommend keeping the amount of custom property

values to a maximum of 500. If you want to just apply values without modifying them, the QMC can handle up to 10.000 custom property values.

- The Qlik Logging Service handles communication outages with PostgreSQL by retrying three times to establish the connection and displays an error if unsuccessful. Communication outages with PostgreSQL can occur for a number of reasons and are not always recoverable in the limited time window of three tries.
- 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 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.

- If you want to use a sorting in the QMC that is different than the regional setting, you must create a new user account with the desired regional setting before installing the QMC. After installation, you cannot change sorting by changing regional setting.
- Users and groups in an environment with nested groups spread over different domains do not get synchronized.
- “Next execution” time will not be updated to show correct time if the time was altered under Date&Time on the server machine.

**Workaround:** If the time is changed on server machine, restart the Scheduler service.

## 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

- When upgrading to February 2019 or later, if you already have an extension on your environment with the same name as one of the Bundle extensions packages, the installation completes successfully, but the bundle that contains the matching extension is not installed. This failed installation occurs without any error message, and with no error being recorded in the installation log.
- In Qlik Sense February 2019 or later, a new License Service component is delivered together with Qlik Sense. This service is used when the signed keys are used for product activations. This activation process is required for Multi Cloud deployments using Qlik Sense Enterprise on Kubernetes or Qlik Sense Enterprise on Cloud Services as deployment methods. The new activation process is also required to use the Analyzer Capacity license introduced with Qlik Sense February 2019. For more information, see “New product activation method using the License Service component for Qlik Sense February 2019 and later” in the “Upgrade notes” section of this document.

**Workaround:** Use the standard key with a serial and a control number product activation instead of the

signed key method. To use the standard key activation method, you must run Qlik Sense November 2018 in your Multi-Cloud installation.

- After installing or upgrading to Qlik Sense February 2019, 'License management' section in QMC might not be showing all its subsections. The 'Site license' section might not present the user with the ability of switching between LEF ('Use serial number and control number') and signed-key ('Use signed license key') based licenses.

**Workaround:** To resolve that state refresh QMC, restart your browser, or restart all the services.

- In Qlik Sense November 2018 it is not possible to install Qlik Sense Extension bundles through a silent installation. Qlik Sense Extension bundles can only be installed via the regular install procedure, or separately, once Qlik Sense November 2018 is installed. To install Qlik Sense Extension bundles separately, see "Installing and removing Qlik Sense Extension bundles from a Qlik Sense installation" in this document.

**Workaround:** If you are installing Qlik Sense November 2018 by performing a silent installation, install Qlik Sense Extension bundles separately at a later moment.

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

## 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 only through Qlik DataMarket. To access other data packages, you have to purchase a license key.
- 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.
- Adding desktop authentication links from the enterprise hub will not work if the following conditions are met at the same time:
  - You are logged in as the built-in administrator in Windows 10.
  - Qlik Sense Desktop is not running in the background.
  - You are using Google Chrome or Mozilla Firefox to click the desktop authentication link.

**Workaround:** To make the authentication link work when you are logged in as built in administrator you have to do the following:

1. Navigate to your local security policy on your Windows 10 workstation.
2. Under Local Policies/Security Options navigate to "User Account Control Admin Approval Mode for the Built-in Administrator Account"
3. Set the policy to Enabled.
4. Restart computer.

## Connectors

- REST connector: The Next token pagination option does not work when the pagination token has the same value for each page.
- For connectors in the ODBC Connectors Package, only the data types listed as supported in the online help have been verified to work correctly in the Preview and Script editor. However, ODBC Connector Package does not prevent the loading of other data types, so in some cases unsupported data types can be loaded with the load script.
- Google BigQuery Connector in ODBC Connector Package: If a user selects Standard SQL as a Language dialect in the **Create connection** dialog, queries written or views created using Legacy SQL dialect will not work.

- DataMarket connector: Numbers may be loaded as strings if the locale has ‘,’ (comma) set as decimal separator.
- DataMarket connector: When upgrading Qlik Sense Desktop from version 2.2 or earlier to version 3.x, Qlik DataMarket may function incorrectly.  
**Workaround:** Repair the installation using Control Panel/Programs/Programs and Features/Qlik Sense Desktop/Change/Repair.
- 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.
- ODBC connector: If the user name on the Microsoft Windows system running Qlik Sense Desktop contains letters that are not English alphanumeric characters, database connectors in the ODBC Connector Package do not work properly.  
**Workaround:** Change the Windows system locale to the match the character set that contains the characters used in the user name. For example, if the System locale on the system running Qlik Sense Desktop is set to English and a user name contains Swedish characters, the System locale setting must be changed to Swedish for the ODBC connector to work properly.
- The Qlik Salesforce Connector does not support PK chunking on sharing objects. PK chunking is supported only on parent objects.

## Multi-Cloud

- Apps exported from Qlik Sense Enterprise on Cloud Services or Qlik Sense Enterprise on Kubernetes may have limitations when being used in Qlik Sense Desktop. Opening the data load editor can for some apps result in an error.
- When exporting an app from a cloud hub using Firefox web browser, the app is correctly exported, but the file misses the .qvf file extension, and any word of the app title preceded by a blank space.
- A Qlik Sense Enterprise with Multi-Cloud environment can currently include only one Qlik Sense Enterprise for Windows deployment connected to Qlik Sense Enterprise for elastic deployments and/or Qlik Cloud Services (QCS).
- Collections with names that are more than 150 characters long are not properly displayed in the cloud hub. In a Qlik Sense Enterprise hub (Windows deployment), collection values (in the custom property) can contain up to 256 characters.  
**Workaround:** make sure that app collections you want to distribute from Qlik Sense Enterprise for Windows to the multi-cloud environment have values with no more than 150 characters.
- When multiple applications are distributed in parallel from Qlik Sense Enterprise for Windows to Qlik Sense Enterprise for elastic deployments and/or Qlik Cloud Services (QCS), the distribution might fail partially, with only some of the apps being successfully distributed. Check Application Distribution Service log in from Qlik Sense Enterprise for Windows for details on the distribution process.  
**Workaround:** identify which applications failed to be distributed and try distributing them one-by-one instead of as a group. For example, execute a reload on individual applications.
- In a Qlik Sense Enterprise with Multi-Cloud environment, if you delete apps included in a collection that has been previously distributed to the cloud environment, (QSE for elastic deployments and/or QCS), the collection remains visible in the cloud hub, though it is empty.  
**Workaround:** the Qlik Sense administrator must manually delete the empty collection.
- If you try to access the Multi-Cloud Setup Console without read access on license information, an error message appears stating: “Failed to read the license. The Qlik Sense Repository service returned an unexpected error.”  
**Workaround:** access the Multi-Cloud Setup Console once you are granted read access or rootAdmin rights.

## EMM solutions for Qlik Sense Enterprise



- If you use BlackBerry Access to consume Qlik Sense Enterprise apps, the Access browser does not display <Title> information. This means that when opening a Qlik Sense app through BlackBerry Access, the app retains the title of the initial Tab instead of showing the App Name.  
**Workaround:** refresh the browser so to display the correct App title.
- If using BlackBerry Access instead on Qlik Sense Mobile app, the access browser does not provide any indication in case of loss of connection with Qlik Sense Enterprise. If trying to interact with a Sense App after the connection is lost, the app becomes unavailable.  
**Workaround:** refresh the browser so to trigger a new log-in request.
- If using BlackBerry Access, when a Qlik Sense Enterprise log-in session expires, the Access browser provides an error message stating that the content is no longer available. In such a case using the refresh button does not trigger a refresh, but it only closes the error message.  
**Workaround:** close the tab and access again Qlik Sense Enterprise from the link in the BlackBerry Dynamic environment.
- VMWare browser: session lost but refresh functionality not visible in browser.  
**Workaround:** Click the browser's Home button or restart the browser.
- When using the AirWatch browser to access Qlik Sense Enterprise, the refresh causes the content to be displayed in portrait mode even when the device is in landscape mode.  
**Workaround:** rotate the device so that the correct orientation is detected.
- When using the AirWatch browser to access Qlik Sense Enterprise, the header of the browser shows the Server name, occupying more space than needed especially in Landscape mode.

## Upgrade notes

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### New product activation method using the License Service component for Qlik Sense February 2019 and later

In Qlik Sense February 2019 or later, a new License Service component is delivered together with Qlik Sense. This service is used when the signed keys are used for product activations. The License Service will connect to a License Backend Service, hosted by Qlik, for product activations and Entitlement Management. This activation process is required for Multi Cloud deployments using Qlik Sense Enterprise on Kubernetes or Qlik Sense Enterprise on Cloud Services as deployment methods. The new activation process is currently optional for Qlik Sense Enterprise on Windows. The use of this activation process is also required if you want to use the new Qlik Sense Analyzer Capacity license introduced with Qlik Sense February 2019.

The Qlik Sense Master node needs access to an internet connection. Port 443 is used for accessing the endpoint at <https://license.qlikcloud.com> and retrieving license information.

You can continue using the standard key with a serial and a control number product activation instead of the signed key method. However, to keep using the standard key activation method you must run Qlik Sense November 2018 in your Multi-Cloud installation.

### “idpConfigs” moved to “identity-providers” in the values.yml file

The “idpConfigs” section in the *values.yml* file has been moved from “edge-auth” to “identity-providers”. In this release there is support for having the “idpConfigs” section either in “edge-auth” or “identity-providers”.

### Windows PowerShell 4.0 or higher required for installing Qlik Sense September 2018 or later

To install Qlik Sense September 2018 or later, you must upgrade Windows PowerShell to version 4.0 or higher.

### New Duplicate action is required to duplicate apps in Qlik Sense June 2018 and later

Duplicate action has been added to the list of actions that can be assigned to users. Until Qlik Sense April 2018, duplication privileges were included in the Create action. When upgrading to Qlik Sense June 2018, duplicate permission is disabled by default. To duplicate apps in Qlik Sense June 2018 and later, Duplicate actions must be assigned to users via the Security rule editor in the QMC.

## 5 GB total disk space required for installation

To install and run Qlik Sense November 2018, 5 GB of total disk space is required.

## Permissions required to call duplicate endpoint have changed

Behavior has changed for customers who upgrade and have previously changed the relevant default rule. The `/qrs/app/{id}/copy?name={name}` endpoint now requires “Read” and “Duplicate” permissions for App instead of “Read” and “Create.” The default rules for Qlik Sense September 2017 and later releases have been modified to ensure that the behavior is the same as in the earlier release as long as the rules have not been previously changed.

## 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.

## Previous upgrade notes

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### Licensing changes to the April 2018 release

Qlik Sense Enterprise now has two new user types: Professional and Analyzer. See:

[Overview of Qlik license usage](#)

If you continue to use Token allocation, there is no change in your licensing requirements in the April 2018 release.

If you adopt user-based licensing, then prior to upgrade, check your current LEF. In the QMC, navigate to the License usage summary, Site license properties, and look for LEF Access.

If your LEF contains one or more of the following lines, you should make sure you record your current user allocation because when you apply the new LEF, the current allocations will be removed. You have two options for adding users back:

- Manual allocation adding users to the correct user type.
  - Change your current rules for auto allocation to allocate to the new user types per your preference.
- PROFESSIONAL;NN;;  
 ANALYSER;NN;;  
 TOKENS;NN;; (sum of Professional and Analyzer)  
 IGNORE TOKENS;YES;; (The April 2018 release uses this to determine if it should continue to allocate Tokens to users or allocate the two new user types.)

### Applying Analyzer license requires users to log in again

Starting in the April 2018 release, the license check occurs when the user accesses the Hub. If an Analyzer pass is applied after a user has established a QPS session, the user will get the message: "You cannot access Qlik Sense because you have no access pass." User would have to log in again. To avoid this situation, allocate the Analyzer pass before the user accesses the Hub.

### Important notice

You cannot upgrade to Qlik Sense June 2017 from a Qlik Sense release earlier than 3.1 SR2. Make sure that you have upgraded to Qlik Sense 3.1 SR2 or later before starting an upgrade to Qlik Sense June 2017.

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.

### Starting with the February 2018 release, the following endpoints changed

/qrs/about/api/default/content	-> /qrs/about/api/default/app/content
/qrs/about/api/default/datasegment	-> /qrs/about/api/default/app/datasegment
/qrs/about/api/default/internal	-> /qrs/about/api/default/app/internal
/qrs/about/api/default/object	-> /qrs/about/api/default/app/object
/qrs/about/api/default/detail	->
/qrs/about/api/default/executionresult/detail	->
/qrs/about/api/default/analyzeraccessgroup	->
/qrs/about/api/default/license/analyzeraccessgroup	->
/qrs/about/api/default/analyzeraccesstype	->
/qrs/about/api/default/license/analyzeraccesstype	->
/qrs/about/api/default/analyzeraccessusage	->
/qrs/about/api/default/license/analyzeraccessusage	->
/qrs/about/api/default/loginaccesstype	->
/qrs/about/api/default/license/loginaccesstype	->
/qrs/about/api/default/loginaccessusage	->
/qrs/about/api/default/license/loginaccessusage	->
/qrs/about/api/default/professionalaccessgroup	->
/qrs/about/api/default/license/professionalaccessgroup	->
/qrs/about/api/default/professionalaccesstype	->
/qrs/about/api/default/license/professionalaccesstype	->
/qrs/about/api/default/professionalaccessusage	->
/qrs/about/api/default/license/professionalaccessusage	->
/qrs/about/api/default/useraccessgroup	->
/qrs/about/api/default/license/useraccessgroup	->
/qrs/about/api/default/useraccesstype	->
/qrs/about/api/default/license/useraccesstype	->
/qrs/about/api/default/useraccessusage	->
/qrs/about/api/default/license/useraccessusage	->

### Upgrading from Qlik Sense 3.1 SR2 to Qlik Sense June 2017 or later

Please refer to the online help for instructions: [Qlik Sense upgrades and updates](#)



## Change of supported characters for virtual proxy prefix

Starting with the Qlik Sense June 2017 release, a change has been introduced regarding which characters may be used in a virtual proxy prefix. This entails that some users may need to change virtual proxy prefixes in existing Qlik Sense installations

Qlik Sense supports all unreserved characters specified in <https://tools.ietf.org/html/rfc3986> in lower case as proxy prefix. "/" is allowed but not as start or end of the prefix.

This means that the following characters are allowed:

"a-z", "0-9", "-", ".", "\_", "~" and "/"

This is enforced by a `_pattern` regex attribute in the object schema which means that both QMC and QRS use the same validation.

Please refer to the online help for instructions: [Editing a virtual proxy](#).

## Perform a database cleaning before migrating to 3.x

We recommend that customers with a large number of users or applications perform a database cleanup before migrating from 2.0.x to 3.x.

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:
  1. Setup LDAP import filters, according to the best practice guide, to reduce size of imported user attributes.
  2. Remove redundant 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.

## Qlik Sense 3.2 includes jQuery version 3.1.1.

Qlik Sense 3.2 includes jQuery version 3.1.1, which is the latest version. If an extension uses a version of JavaScript that does not support the latest version of jQuery, it will produce an error indicating that a jQuery version lower than version 3 is required. It is recommended that the Bootstrap used with extensions be upgraded to version 3.3.7.

## Deprecated functionality

### Deprecation notice for Qlik Sense - Synchronized Persistence

The synchronized persistence mechanism to share data in multiple server deployments was officially deprecated by the Qlik Sense June 2017 release.

## What does this mean?

Qlik Sense has had a synchronization mechanism for storing and sharing data in a multi-server deployment, which copied data to each machine (“Synchronized Persistence”). In Qlik Sense version 3.1, Qlik introduced a new architecture and additional method for storing and sharing data known as Shared Persistence, which is more scalable than the Synchronized Persistence method. Until now, both Synchronized Persistence and Shared Persistence methods have been available in the product.

## What is the impact?

Qlik has now retired the Synchronized Persistence method from Qlik Sense in the next feature release and later versions. Customers who wish to upgrade to Qlik Sense September 2017 from a version of Qlik Sense prior to June 2017 need to plan to reconfigure to use Shared Persistence first. For the majority of customers, the capabilities are the same. However, a small number of customers using geographically dispersed servers will be affected.

## What do I need to do?

Customers can move from Synchronized Persistence to Shared Persistence by following some simple steps. The transition to Shared Persistence is not automatically done by upgrading, but the process to transition is not complex. For questions or assistance, please go to <https://help.qlik.com> or contact Qlik Support.

## Repository Snapshot Manager tool removed

The automatic backup and restore tool Repository Snapshot Manager has been removed, as it was intended for deployments using synchronized persistence. Please refer to the online help for manual backup and restore procedures.

# Installing and removing Qlik Sense Extension bundles from a Qlik Sense installation

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In Qlik Sense November 2018 it is not possible to install Qlik Sense Extension bundles through a silent installation. Qlik Sense Extension bundles can only be installed via the regular install procedure, or separately, once Qlik Sense November 2018 is installed. You can install or remove Qlik Sense Extension bundles from your Qlik Sense deployment at any moment. If you have a multi-node installation, Qlik Sense Extension bundles are installed on the central node.

Do the following:

1. In **Control Panel**, open **Programs and Features**.
2. In the list of programs, double-click the extension bundle that you want to install or remove.
3. The Extension Bundle Setup Wizard opens. Click **Next**.
4. Select **Change**.
5. Accept the End-User License Agreement and click **Next**.
6. On the **Custom Setup** screen, click on the bundle icon to select how to modify the bundle installation:
  - If the bundle is installed, select **Entire feature will be unavailable** to uninstall it.
  - If the bundle is not installed, select **Entire feature will be installed on local hard drive** to install it.Then, click **Next**.
7. Click **Change**.
8. When the setup modification is complete, a message invites you to manually restart the Qlik Sense Repository Service.

9. Click **Finish** to close the Extension Bundle Setup Wizard.

10. Manually restart the Qlik Sense Repository Service to make the changes effective.

You can verify that the changes have been correctly applied by checking the Extensions section in the Qlik Management Console (QMC).

You can find the above procedure also on [help.qlik.com](http://help.qlik.com). See the “Modifying extension bundles installation” section in the following pages:

[Installing Qlik Sense on a single node](#)

[Installing Qlik Sense in a multi-node site](#)

## Change in privilege requirements for publishing apps from QMC

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Beginning in Qlik Sense September 2018, the privilege requirements for users publishing app objects in the Hub have been modified. Previously publish rights were required for both the app object and stream. With this change only publish rights for the app object are required.

To ensure backwards compatibility, the default security rule OwnerPublishAppObject has been adjusted. Previously, the Conditions for the security rule were:

```
resource.IsOwned()=user  
resource.owner=user  
resource.approved="false"
```

An addition has been made to the Conditions so that they now are:

```
resource.IsOwned()=user  
resource.owner=user  
resource.approved="false"  
resource.app.stream.HasPrivilege("publish")
```

The effect of the rule is that publish rights to the stream and app object are required. For customers who wish to segment the ability to publish an app object from publishing to a stream, it is recommended that the default rule be disabled and the needed adjustments to a new rule be made.

## BNF script reload mode

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A new script reload mode, BNF, has been introduced. In some unusual cases, users may need to disable the BNF reload mode using one of these methods:

- **Disabling BNF reload mode for the entire server:** Update the Settings.ini by adding the line `EnableBnfReload=0` under the [Settings 7] tag for the default reload setting "EnableBnfReload". Restart the engine.
- **Disabling BNF reload mode for individual apps:** Add the `///$bnf off` tag at the top of the script (it must be within the first 50 characters of the script). Reload the script.

## Search history in smart search

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Search history when using smart search is now implemented. Smart search history is not available for anonymous users. Smart search history is only visible for the user profile that performed the search.

## New security properties for the Qlik REST Connector

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The Qlik REST Connector has new security properties in the connection dialog. Existing connections must be modified to conform to the requirements of the new properties.

The Qlik REST Connector supports the ability to include HTTP headers in the response object. Starting with the November 2017 release (version 1.2 of the REST Connector), loading of the headers does not happen by default. It must be explicitly allowed. Existing connections that load the response headers must be reconfigured with the **Allow response headers** parameter.

## Translation of Bar Chart changed for French and Traditional Chinese

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The translation of Bar Chart has been altered for two languages. The new translations are for French: Graphique en barres, and for Traditional Chinese: 橫條圖.

## System requirements notes

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Please refer to the online help for information about the requirements for Qlik Sense:

### [System requirements for Qlik Sense](#)

Additional notes:

- On a machine with a server operating system, it is only possible to install Qlik Sense (server), not Qlik Sense Desktop.
- 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).

### IdevioMaps

IdevioMaps of version 5.7.5 is supported by Qlik Sense 3.2.



## About Qlik

Qlik is on a mission to create a data-literate world, where everyone can use data to solve their most challenging problems. Only Qlik's end-to-end data management and analytics platform brings together all of an organization's data from any source, enabling people at any skill level to use their curiosity to uncover new insights. Companies use Qlik to see more deeply into customer behavior, reinvent business processes, discover new revenue streams, and balance risk and reward. Qlik does business in more than 100 countries and serves over 48,000 customers around the world.

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