KNIME Server Release Notes and Update Guide

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Version 4.8 (last updated on 2020-10-30)
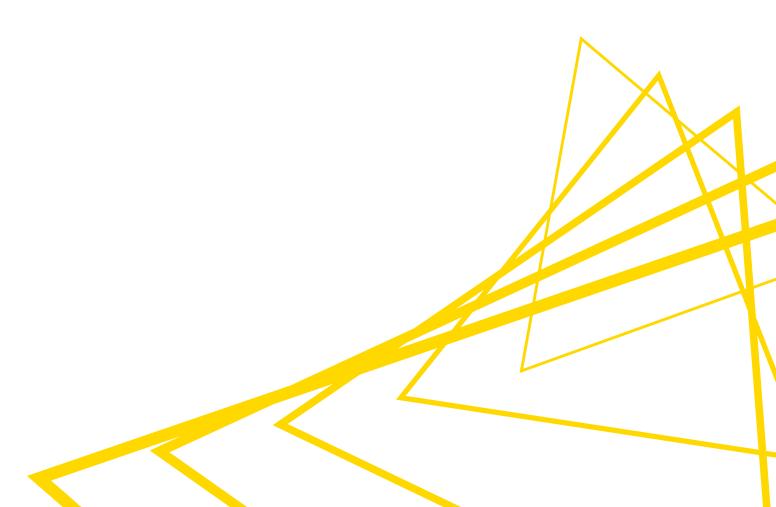
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Release Notes

KNIME Server 4.8 is a feature release of the 4.x release line. All clients that have worked with KNIME Server 4.7 will continue to work with KNIME Server 4.8 without restrictions.

New Features

You can find highlighted new features here. For a list that includes the new Analytics Platform 3.7 features see here. A detailed changelog is also available.

For details on configuring the new customization features see the relevant section of the KNIME Server Administration Guide. For details on the configuration of distributed executors see here.

Security enhancements

In line with generally accepted security recommendations for Tomcat-based applications, we applied several common hardening techniques to the server installation, see the changelog for a complete list. None of them affect normal usage of the KNIME Server, except:

- It's no longer possible to start the KNIME Server as the root user under Linux. If you have previously been running KNIME Server using the root user, you need to create a new user and change the ownership of all KNIME Server (and executor) files to belong to this user.

- The server now sends the *Content-Security-Policy* header to the browser which restricts from where JavaScript and stylesheets can be loaded. By default, they must originate from the same server as the page. In case you have written your own JavaScript view nodes that load external resources then you must either adapt the *Content-Security-Policy* header to allow the remote location (using the new `com.knime.server.webportal.csp` server configuration option) or change your node implementation to include all required files and not rely on external resources (recommended).

SOAP Services Removed

As announced before the release of KNIME Server 4.7. The KNIME Server's SOAP API has been fully removed from the code base of KNIME Server 4.8. All functionality is available via the KNIME Server REST API.

Configuration options

For new installations of the KNIME Server the Linux Runlevel service names have changed from apache-tomee.service to knime-server.service. Full details are available in the KNIME Server Installation Guide. Existing KNIME Server installations of KNIME Server that are updated will not be affected by this change.

The following new configuration options have been added:

- `com.knime.server.csp-report-only`

- `com.knime.server.webportal.csp`

- `com.knime.server.job.discard_after_timeout`

- `com.knime.server.job.max_execution_time`

See the KNIME Server configuration file options for details.

The following configuration options have been removed:

- `com.knime.server.webportal.enable_x_xss_protection` (the corresponding functionality is covered by the new Content-Security-Policy support)

All other configuration options are unchanged.

Preview Functionality

Details of updates to preview functionality features can be found in the KNIME Server Preview Guide.

Update

This document guides you through the steps that are needed to update an existing KNIME Server installation from version 4.7 to 4.8 or apply a bugfix for version 4.8. You will find a complete guide to installing KNIME Server in the KNIME Server Installation Guide, and a complete description of all configuration options in the KNIME Server Administration Guide. If you have any questions or need assistance with the update process, please contact your dedicated KNIME support specialist.

Prerequisites

Server

- This guide assumes you already have either KNIME Server 4.7.x or KNIME Server 4.8.x running. If you wish to update from a previous version you must study the intermediate update guides to identify configuration changes that may apply, and you may wish to consider a fresh installation in order to update the underlying TomEE application server.

> **i** A recent update of Java to version 8u272 will cause KNIME Server installations to no longer be able to connect to a secured LDAP authentication system. we recommend not updating the Java installation to version 8u272 on your KNIME Server. If you have already done this, we suggest you revert it. If you run into any issues or need further information please contact the KNIME support team at support@knime.com.

Client & Executor

- KNIME Analytics Platform clients need at least KNIME ServerSpace 4.0 otherwise it will not be able to talk to the server.

- KNIME Server 4.8 requires at least KNIME Analytics Platform 3.7 as executor with the corresponding *KNIME Executor Connector* version 4.8 installed on the server side.

- New KNIME WebPortal features are available with any supported web browser.

Backup

Even though all the data on the server should be preserved during the update it is highly recommended to create a backup of all important data (see KNIME Server Administration Guide for backup information).

Application server

Before performing an update, make a backup of `<tomee-folder>/conf/Catalina/localhost/knime.xml`. The name of the file might be different if the `.war` file had a different name (e.g. `com.knime.enterprise.server.xml`)

Then

1. Download the updated war file `com.knime.enterprise.server_4.8.x.war` from the download page. If updating from 4.4 or lower, then you will also need to download the supplementary `knime-tomcat.jar`.

2. Stop TomEE.

3. Delete the existing folder `<tomee-folder>/webapps/knime` (or similar if the `.war` file had a different name).

4. Copy the new `com.knime.enterprise.server_4.8.x.war` over the existing war file (usually `<tomee-folder>/webapps/knime.war`). Please note that it needs to be the same file name as this is what is referred to as context in the application.

5. Check if the `knime.xml` file that you backed up before still exists. If not copy the backup to the previous location.

6. Copy the downloaded file `knime-tomcat.jar` to `<tomee-folder>/lib`

7. Follow the steps below on updating the KNIME Server Executor, specifically watch out to merge changes to the `knime.ini` in the workflow repository (`<server repository>/config/knime.ini`), if any.

8. Start TomEE.

Note that it is **not** possible to run multiple KNIME Server instances in one TomEE installation.

KNIME Server Executor

You must update the KNIME Server Executor to at least version 3.5 and the "KNIME Executor connector" to version 4.8.

If possible, start the executor installation in graphical mode (using the correct installation user!). If you have internet access, go to *File → Update KNIME…* and it will suggest updating to the new version. Follow the steps in the wizard. If you don't have direct internet access, you must download the zipped update sites from the commercial downloads page (contact the KNIME support team if you don't have access to this page). Then register the ZIP files in *File → Preferences → Install/Update → Available Software Sites* and go to *File → Update KNIME…*

If you cannot start the graphical user interface, under Linux you can use the `update-rmi.sh` script that is in the root of the executor installation. Call the script on the command line and provide a list of update sites that contain the new versions of the installed extensions and all installed extension will be updated (given that an update is available):

```
./update-rmi.sh http://update.knime.org/analytics-platform/3.7
```

If you get error messages when executing `update-rmi.sh` about missing "installable units", make sure that you have provided all necessary update sites.

Preference file and knime.ini file

Make sure the preference file is valid and merge your changes from the old `knime.ini` file to the new `knime.ini` file!

Installing a new KNIME Server Executor

You can also install a completely new KNIME Server Executor instead of updating an existing executor. To install KNIME Analytics Platform 3.7 from scratch you will need to run it as the user that owns the Installation.

Once logged in as the correct user, install KNIME Analytics Platform together with all the extensions needed for the workflows that will be executed on the server. Also install all "KNIME Server-Side Extensions" from the KNIME.com update site (you may need to enable this update site in the KNIME preferences under "Available Update Sites"). If you use the KNIME WebPortal, also install the KNIME Report Designer extensions.

Set relevant preferences in KNIME and export to `<server repository>/config/preferences.epf`.
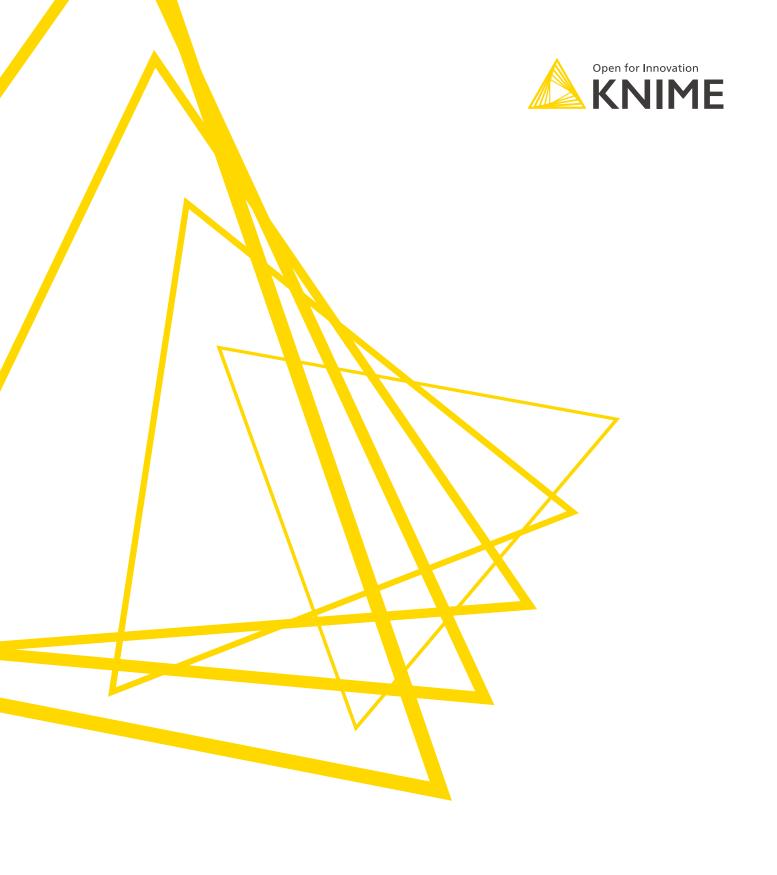
Similarly, be sure to copy your new `knime.ini` file (from the KNIME Analytics Platform installation folder) to your server repository (`<server repository>/config/knime-rmi.ini`).

Please refer to the KNIME Server Administration Guide for more details about installing a KNIME Server Executor.

After installation, you need to point the KNIME Server to the new installation location. If you have a symbolic link on a Linux system that is used to start the KNIME Server Executor, simply remove this link and re-define it pointing to the new installation folder. If you do not have a symbolic link, you need to change the value of the `com.knime.server.executor.knime_exe` configuration option.

KNIME Server license

The KNIME Server license continues working with the new server. If you haven't received a license file or if it is not working correctly, please contact KNIME or your dedicated KNIME support partner.