

KNIME Server Release Notes and Update Guide

KNIME AG, Zurich, Switzerland
Version 4.10 (last updated on 2020-10-30)



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Release Notes

KNIME Server 4.10 is a feature release of the 4.x release line. All clients that have worked with KNIME Server 4.9 will continue to work with KNIME Server 4.10 without restrictions.



To find out which version of KNIME Server you are currently running, you can check the [Administration pages](#) on the WebPortal.

New Features

For a list that includes the new Analytics Platform 4.1 features see [here](#).

Highlighted new functionality is:

- OAuth authentication ([preview](#))
- Call workflow action ([what's new](#))
- Configuration dialogs ([what's new](#))
- Execution via [embedded message broker](#)
- Improvements to [Server Managed Customizations](#)

A detailed changelog for [KNIME Server 4.10](#) is also available.

Configuration options

Since KNIME Server 4.10 it is possible to configure workflows before execution. Starting with KNIME Server 4.10.1 these configurations are encrypted using the secret key defined in

```
<tomee-folder>/conf/Catalina/localhost/knime.xml
```

While the behavior remains the same as for KNIME Server 4.10 and is backward compatible, downgrading from KNIME Server 4.10.1 to a previous version will result in losing job and scheduled job information and thus is not recommended. This information will also be lost in case the secret key changes.

New options in knime-server.config

The following new options are available in the knime-server.config. Full details can be found at [KNIME Server configuration file options](#).

- `com.knime.enterprise.executor.embedded-broker=<true|false>`

Changes to default executor rotation

In previous releases, the KNIME Server executor was rotated once a day by default. This means that after 24 hours, an executor would not accept any new jobs, after which a new executor starts up and takes its place. After a transitional period, the old executor was retired.

This overlap during the transitional period comes with a few undesired side effects, most notably a lack of efficiency when it comes to resource usage. For this reason, we decided to deactivate this function by default. By doing so, there is no need to factor in an additional executor when allocating available memory.

Note that we did not remove the rotation functionality, but instead only deactivated it by default. If needed, you can still activate it by adjusting the parameter `com.knime.server.executor.max_lifetime` in `knime-server.config`.

Server Managed Customizations

Controlling the available update sites via Server Managed Customizations has been extended. It's now possible to add multiple update sites and also disable the default update sites.

The options for adding a single update site have been deprecated and will be removed in the future. You can easily adjust your templates by simply adding an "s" to the property names (`updateSite.uri` to `updateSite.uris` and `updateSite.name` to `updateSite.names`). See [Client customization](#) for details.

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Local file system access by KNIME workflows

Several KNIME nodes have been revised to use a new shared framework for file access (see below for a list of nodes). When executing on KNIME Server, a new preference controls whether those nodes can access the local file system of the KNIME Server Executor or not. Currently local file system access is allowed by default, however the default will change with the next release (KNIME Server 4.11).

To disallow local file system access, add the following line to the `preferences.epf` or customization profile used by your KNIME Server Executor(s):

```
/instance/org.knime.filehandling.core/allow_local_fs_access_on_server=false
```

This preference currently only affects the following KNIME nodes: Excel Reader (XLS), Excel Writer (XLS), Excel Sheet Appender (XLS), Line Reader. More nodes will follow over the next releases.

Update

This document guides you through the steps that are needed to update an existing KNIME Server installation from version 4.9 to 4.10 or apply a bugfix for version 4.10. 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 4.9.x or KNIME Server 4.10.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.



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 4.10 requires at least KNIME Analytics Platform 4.1 as executor with the corresponding *KNIME Executor Connector* version 4.10 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

Backup existing configuration



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` or `ROOT.xml`).

Failure to backup this file will result in scheduled jobs failing to run.

1. Download the updated war file `war-4.10.x.y.war` from the download page.
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 `war-4.10.x.y.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. 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.
7. 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 4.1 and the KNIME Executor connector to version 4.10.

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.

If your executor version is 4.0 or lower and you have the KNIME Reporting extension installed (which very likely you have) you must replace the existing `update-rmi.sh` with a more recent version that you can get from the download page! Otherwise the reporting extension won't be updated correctly and your workflows cannot create reports any more.

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 https://update.knime.com/analytics-platform/4.1
```

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 4.1 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.

Changelog (KNIME Server 4.10)

KNIME Server 4.10.6 (released November 8, 2021)

Bugfixes

- [SRV-3612] - Directory path traversal when requesting client profiles^[1]
- [WEBP-876] - Cross-Site-Scripting vulnerability in old WebPortal login^[2]

KNIME Server 4.10.5 (released November 4, 2020)

Enhancements

- [SRV-3123] - RabbitMQ HA support

KNIME Server 4.10.4 (released August 26, 2020)

Enhancements

- [SRV-2580] - Allow re-connecting to existing jobs after server restart
- [SRV-2712] - Executor should retry connections to message queue
- [SRV-2974] - Add hidden setting to use localhost instead of 127.0.0.1 as Oauth callback URL
- [SRV-2979] - Suppress warnings about missing metainformation for simple files during workflow group upload
- [SRV-3064] - Improve Explorer performance for many jobs
- [SRV-3110] - Increase maximum number of in-memory jobs in local queue-based executor

Bugfixes

- [SRV-2934] - Wrong error message when loading workflow failed in executor
- [SRV-2942] - Edit mount point dialog doesn't show address to REST path
- [SRV-2943] - server_logs.zip sometimes contains folders with incomplete executor ID
- [SRV-2965] - Stackoverflow in Qpid breaks message queue connections

- [SRV-2978] - Regular job status updates may prevent job swapping in distributed executors
- [SRV-3025] - Account settings of KNIME server are not applied on runtime
- [SRV-3046] - ETag when fetching the repository item is null
- [SRV-3052] - Server sends multiple Status Emails for loops in workflows
- [SRV-3054] - No different font for disabled schedules visible via REST connection to the server
- [SRV-3069] - Potential deadlock when modifying scheduled job on old workflows
- [SRV-3117] - Reading files from the server repository randomly fails with 403

KNIME Server 4.10.3 (released April 6, 2020)

Enhancements

- [SRV-2705] - Remove info message about node recommendation update checkup

Bugfixes

- [SRV-2910] - Scheduled Jobs not persisted fully when created with EJB
- [SRV-2918] - Starting KNIME Server with wrong secret will delete all schedules
- [SRV-2718] - Closing KNIME OAuth Pop-Up (ESC Key) Will Block Port Used For Redirect
- [SRV-2895] - Workflows cannot be copied when scheduled job from other user exists
- [SRV-2901] - Long node messages lead to communication errors between RMI executor and server
- [SRV-2917] - Server installer doesn't set JAVA_HOME properly in automated installations

KNIME Server 4.10.2 (released March 5, 2020)

Enhancements

- [SRV-2750] - Improve execute dialog in case workflow configuration cannot be loaded

Bugfixes

- [SRV-2579] - Job requirements are ignored when restoring swapped job
- [SRV-2787] - Edit Mount Point dialog resizes if password is entered
- [SRV-2851] - Nondeterministic behavior when setting input for job in job-pool
- [SRV-2859] - Executing a pooled job with two identical parameter names leads to duplicate key error.
- [SRV-2854] - An updated scheduled job fails to skip execution if an older job is still running
- [SRV-2865] - KNIME Explorer hangs when trying to disconnect from the server after it was just restarted
- [SRV-2879] - NullPointerExceptions from executor during swapping are not handled in server
- [SRV-2742] - Certain wizard execution jobs cannot be found via REST any more
- [SRV-2875] - EJB explorer cannot connect to server when scheduled job exists

KNIME Server 4.10.1 (released February 5, 2020)

Enhancements

- [SRV-2433] - Allow updating linked components from EXAMPLES on KNIME Hub
- [SRV-2729] - Allow blacklisting of nodes to prevent execution on server
- [SRV-2789] - Remove checkbox from job configuration dialog
- [SRV-2806] - [OAuth] Show message when trying to login to KNIME Server/Hub via OAuth and server is unreachable
- [SRV-2856] - Encrypt workflow configuration for scheduled jobs
- [SRV-2796] - Improve *Deploy to server* dialog

Bugfixes

- [SRV-2857] - Java 8u242 breaks execution with RMI executors
- [SRV-2836] - Remote Workflow Editor: Ignore server version qualifier when comparing versions
- [SRV-2845] - Cannot rename components via EJB explorer

- [SRV-1463] - Server installer fails when used with Java 9+
- [SRV-2751] - Load timeout while retrieving job configuration may lead to orphaned job in executor
- [SRV-2766] - [OAuth] Server Restart While Being Logged in via AP Using Basic Auth Leads To Unexpected Redirect
- [SRV-2803] - [OAuth] Logging in Through AP With User Not Present in Tomcat Realm Spams Log With "Cannot determine roles for..."
- [SRV-2804] - Log Parser and Usage Reporting workflow fails when no uploads are present in log
- [SRV-2842] - RMI update script does not update reporting extension
- [SRV-2852] - Scheduled job does not save password of credentials configurations
- [SRV-2855] - Permissions panel hides first line on macOS

KNIME Server 4.10.0 (released December 6, 2019)

Enhancements

- [SRV-1828] - Support for multiple update sites in Management: Client Preferences/Personalisation
- [SRV-2037] - Core license file for individual executors
- [SRV-2172] - Action on Call Workflow Dialog for job execution dialog
- [SRV-2224] - Create primitive dialog to edit job configuration inputs
- [SRV-2225] - Create advanced dialog to edit job configuration inputs via gateway API
- [SRV-2274] - Examples: Add REST workflow to swap owners to installer
- [SRV-2382] - Improved error message in Explorer when no server license available
- [SRV-2432] - Configure retries for KNIME Server to attempt to connect to queue
- [SRV-2518] - License order of precedence
- [SRV-2570] - Frontend: Setup WebPortal API layer
- [SRV-2571] - Frontend: repository tree prototype
- [SRV-2572] - Frontend: workflow page prototype
- [SRV-2573] - Frontend: job page prototype
- [SRV-2587] - Fetch Identity Provider Endpoints on Login
- [SRV-2588] - Provide Identity Provider Endpoints Before Login When Using OAuth

- [SRV-2594] - Add OIDC Authentication to KNIME Server
- [SRV-2595] - Add Redirect Page For KNIME Server Authentication
- [SRV-2610] - Additional meta information for wizard page
- [SRV-2629] - Load Pagebuilder from executor
- [SRV-2648] - Add workflow configuration for Call Workflow action
- [SRV-2649] - Set actions on job creation
- [SRV-2666] - Infer 'user friendly' job status from job-response
- [SRV-2687] - Add http cache headers to gateway web-resource responses
- [SRV-2709] - Server report endpoint to serve content 'inline'
- [SRV-2716] - Turn off executor rotation as default
- [SRV-2719] - Add documentation to the Admin Guide on how to customize the node repository
- [SRV-2727] - Add embedded queue to knime-server.config

Bugfixes

- [SRV-2371] - Reset problem in remote workflow editor
- [SRV-2479] - Gateway API: wizard page endpoints return escaped string instead of json
- [SRV-2633] - Workflow cannot be overridden when scheduled job of another user exists
- [SRV-2658] - Applying new preferences requires restarting twice on Windows
- [SRV-2694] - mail.smtp.from parameter not set by installer
- [SRV-2701] - ETags should include authenticated username for filtered resources
- [SRV-2728] - Local File Chooser throws a nullpointer exception on execute dialog
- [SRV-2737] - Failure to load workflow may kill executor
- [SRV-2753] - Fix wrong color inherit on user-icon in header in edge
- [SRV-2772] - Local groups with spaces cannot be deleted on KNIME Server Small

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