



KNIME Analytics Platform Installation Guide

KNIME AG, Zurich, Switzerland
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Installing KNIME Analytics Platform



For step-by-step **videos** on how to install KNIME Analytics Platform, please take a look at our [KNIMETV YouTube channel](#).

1. Go to the [download page](#) on the KNIME.com website to start installing KNIME Analytics Platform.
2. The download page shows three tabs which can be opened individually:
 - *Register for Help and Updates*: here you can optionally provide some personal information and sign up to our mailing list to receive the latest KNIME news
 - *Download KNIME*: this is where you can download the software
 - *Getting Started*: this tab gives you information and links about what you can do after you have installed KNIME Analytics Platform
3. Now open the *Download KNIME* tab and click the installation option that fits your operating system. KNIME Analytics Platform can be installed on Windows, Linux, or macOS.

Notes on the different options for Windows:

- The Windows installer extracts the compressed installation folder, adds an icon to your desktop, and suggests suitable memory settings.
- The self-extracting archive simply creates a folder containing the KNIME installation files. You don't need any software to manage archiving.
- The zip archive can be downloaded, saved, and extracted in your preferred location on a system to which you have full access rights.

Windows		
KNIME Analytics Platform for Windows (installer)	64 Bit	(441.03 MB)
<i>The installer adds an icon to the desktop and suggests suitable memory settings</i>	32 Bit	(437.42 MB)
KNIME Analytics Platform for Windows (self-extracting archive)	64 Bit	(444.58 MB)
<i>The self-extracting archive only creates a folder holding the KNIME installation</i>	32 Bit	(441.15 MB)
KNIME Analytics Platform for Windows (zip archive)	64 Bit	(529.54 MB)
	32 Bit	(525.59 MB)

Linux		
KNIME Analytics Platform for Linux	64 Bit	(554.2 MB)

Mac		
KNIME Analytics Platform for Mac OSX (10.11 and above)	64 Bit	(522.98 MB)

Figure 1. KNIME Analytics Platform versions

4. Read and accept the privacy policy and terms and conditions. Then click *Download*.
5. Once downloaded, proceed with installing KNIME Analytics Platform:
 - *Windows*: Run the downloaded installer or self-extracting archive. If you have chosen to download the zip archive instead, unpack it to a location of your choice. Run `knime.exe` to start KNIME Analytics Platform.
 - *Linux*: Extract the downloaded tarball to a location of your choice. Run the `knime` executable to start KNIME Analytics Platform.
 - *Mac*: Double click the downloaded dmg file and wait for the verification to finish. Then move the KNIME icon to *Applications*. Double click the KNIME icon in the list of applications to launch KNIME Analytics Platform.



Also check the [KNIME Quickstart Guide](#) and the [KNIME Workbench Guide](#).

Configuration settings and `knime.ini` file

When installing KNIME Analytics Platform, configuration settings are set to their defaults, and they can later be changed in the `knime.ini` file. The configuration settings, i.e. options used by the Java Virtual Machine when KNIME Analytics Platform is launched, range from memory settings to system properties required by some extensions.

You can find `knime.ini` in the installation folder of KNIME Analytics Platform.



On MacOS: To locate `knime.ini` on MacOS, open Finder and navigate to your installed Applications. Next, right click the KNIME application, select *Show Package Contents* in the menu, and navigate to `Contents` → `Eclipse`.

The `knime.ini` file can be edited with any plaintext editor, such as Notepad (Windows), TextEdit (MacOS) or gedit (Linux).

Allocating memory in `knime.ini` file

The entry `-Xmx1024m` in the `knime.ini` file specifies how much memory KNIME Analytics Platform is allowed to use. The setting for this value will depend on how much memory is available in your machine. KNIME recommends setting it to approximately one half of your available memory, but you can modify the value based on your needs. For example, if your computer has 16 GB of memory, you might set the entry to `-Xmx8192m`.

Installing Extensions and Integrations

If you want to add capabilities to KNIME Analytics Platform, you can install extensions and integrations. The available extensions range from free open source extensions and integrations provided by KNIME to free extensions contributed by the community and commercial extensions including novel technology nodes provided by our partners.

The KNIME extensions and integrations developed and maintained by KNIME contain deep learning algorithms provided by Keras, high performance machine learning provided by H2O, big data processing provided by Apache Spark, and scripting provided by Python and R, just to mention a few.

Install extensions from:

- **KNIME Hub:**
 - Search for the Extension or Integration you want to install in the search bar
 - Click Extensions on the results page
 - Click the extension you want to install, and from the extension page and drag and drop the squared yellow icon, shown in [Figure 2](#), to the workbench of KNIME Analytics Platform. A window will open asking if you want to search and install the extension or integration. Click Yes and follow the instructions.

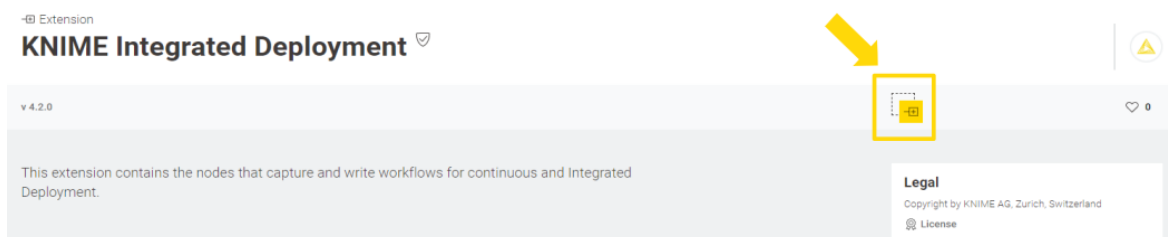


Figure 2. Install the KNIME Integrated Deployment Extension from KNIME Hub

- Restart KNIME Analytics Platform.
- **KNIME Analytics Platform:**
 - Click *File* on the menu bar and then *Install KNIME Extensions...*. The dialog shown in [Figure 3](#) opens.

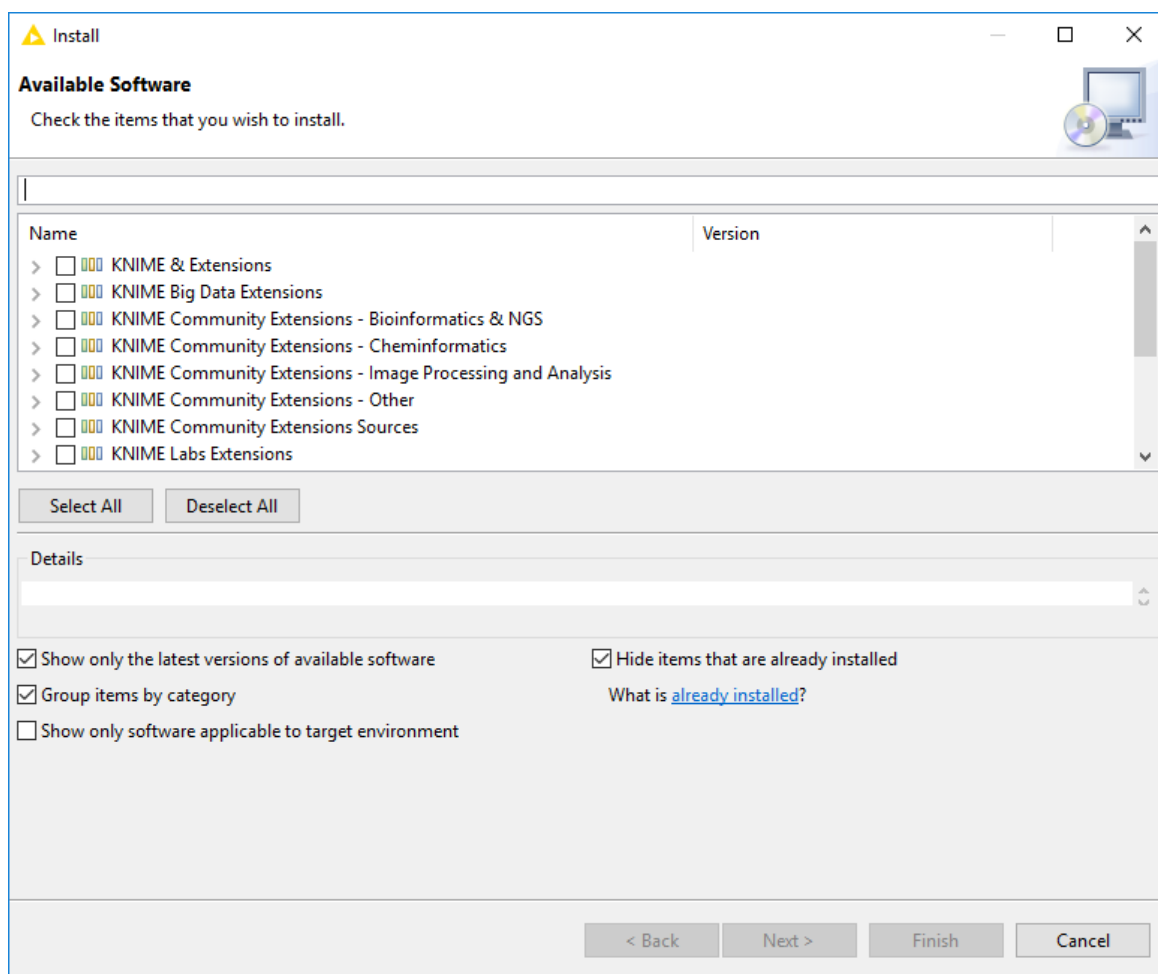


Figure 3. Installing Extensions and Integrations from KNIME Analytics Platform

- Select the extensions you want to install
- Click *Next* and follow the instructions
- Restart KNIME Analytics Platform.

The *Install KNIME Extensions* menu provides the extensions that are available via the **update sites** you have enabled.



For more information, take a look at our video on [How to Install Extensions in KNIME Analytics Platform](#). Also see the [Extensions and Integrations Guide](#).

To uninstall an extension, click *Help, About KNIME Analytics Platform*, and then *Installation Details*. A dialog shown in [Figure 4](#) opens. Now, select the extension that you want to uninstall, and click *Uninstall...*

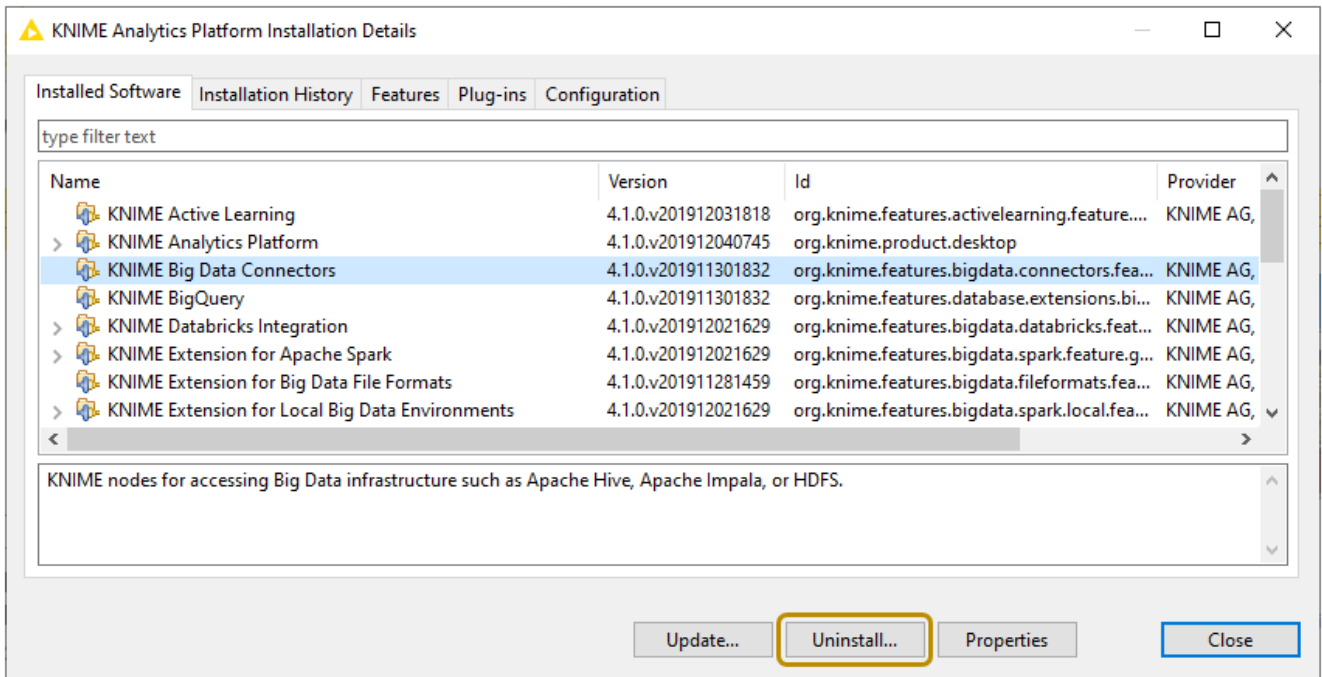


Figure 4. Uninstalling Extensions and Integrations

Updating KNIME Analytics Platform and Extensions

It is good to make sure that you always use the latest version of KNIME Analytics Platform and its extensions.

Do this by:

1. Clicking *File* → *Update KNIME...*. In the dialog that opens, select the available updates you want to install and then click *Next*.
2. Proceed by following the instructions. KNIME Analytics Platform has to be restarted in order to apply the updates.

Update Sites

The Update Sites are where KNIME retrieves additional software in the form of extensions as well as updates. To see or edit the available update sites, select *File* → *Preferences* → *Install/Update* → *Available Software Sites*.

Default Update Sites

These four updates sites are provided by KNIME and are always available:

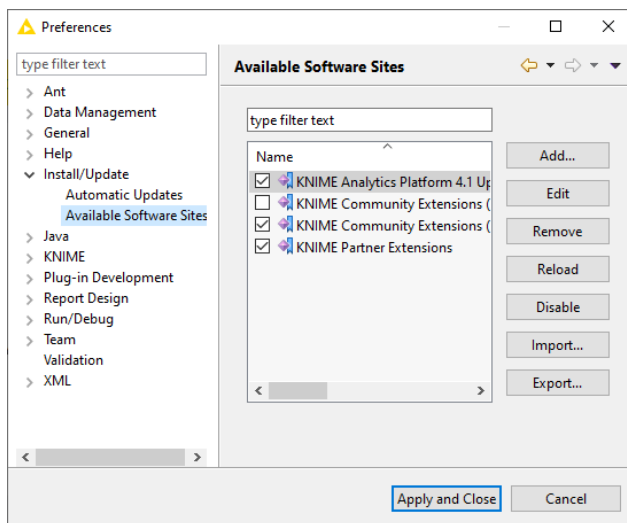


Figure 5. Available Update Sites

KNIME Analytics Platform 4.5 Update

Site: Provides all extensions and integrations maintained by KNIME: R, Python, H2O Machine Learning, Apache Spark for big data, and many more. Contains KNIME Labs Extensions, which are extensions that are not yet part of the set of stable KNIME extensions because their functionality may not yet be finalized.

KNIME Community Extensions (Trusted):

Provides trusted community extensions, i.e. extensions created by the KNIME community, which have been tested for backward compatibility and compliance with KNIME quality standards.

KNIME Partner Extensions: Provides extensions created by KNIME partners.

Community Extensions (Experimental):

Provides additional extensions created by the KNIME community.

KNIME Analytics Platform 4.5 Update Site and *KNIME Community Extensions (Trusted)* are enabled by default.

Adding External Update Sites

To install extensions that are not part of the above update sites, click *Add* to manually add the relevant update site, inserting the Name and Location as shown in [Figure 6](#).

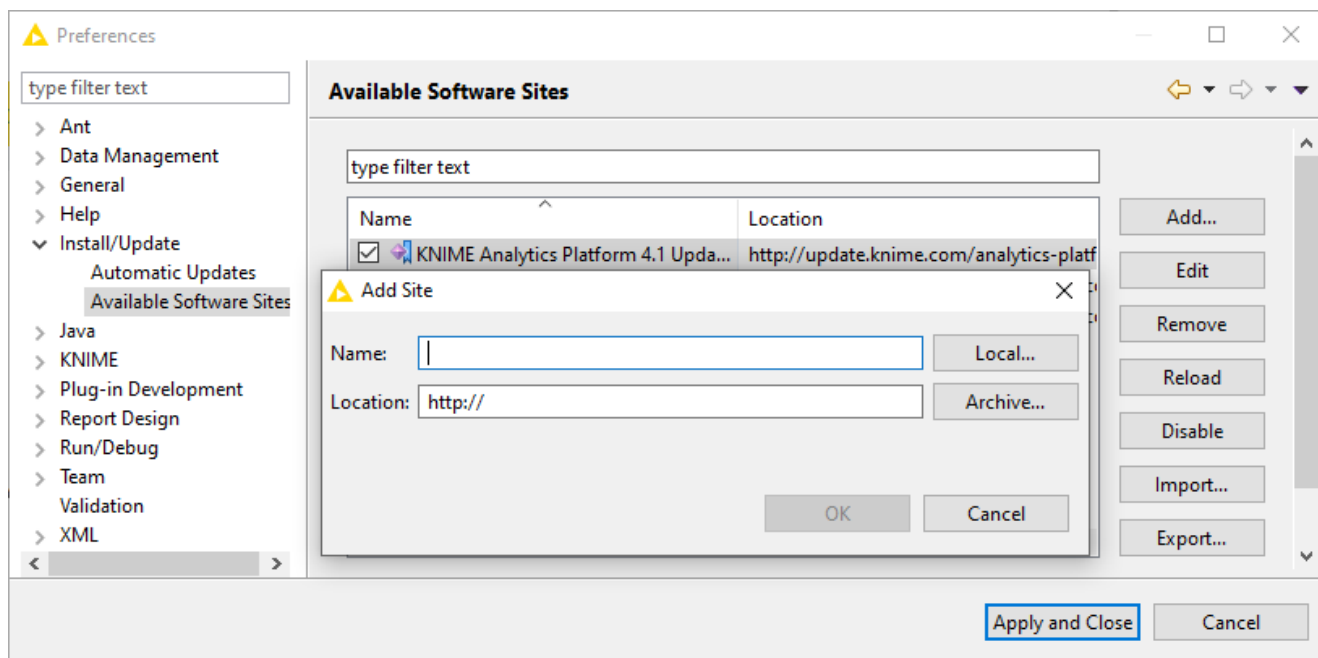


Figure 6. Add Update Sites

After adding a new update site you will see it listed in the *Available Software Sites*. You must now enable it by selecting it from the list.

Adding Local Update Sites

If your working environment has limited internet access or you receive an error message “Proxy Authentication Required” when connecting to a remote update site (provided by a URL), you can install extensions from a local zip file.

1. Download KNIME update sites as zip files at the following links:
 - [KNIME Analytics Platform Update Site](#)
 - [KNIME Community Extensions](#)
 - [KNIME Partner Extensions](#)
2. Save the zip file containing the extensions to your local system
3. Select *File* → *Preferences* → *Install/Update* → *Available Software Sites* and enter the path to the zip file by clicking *Add* → *Archive...* as shown in [Figure 7](#).

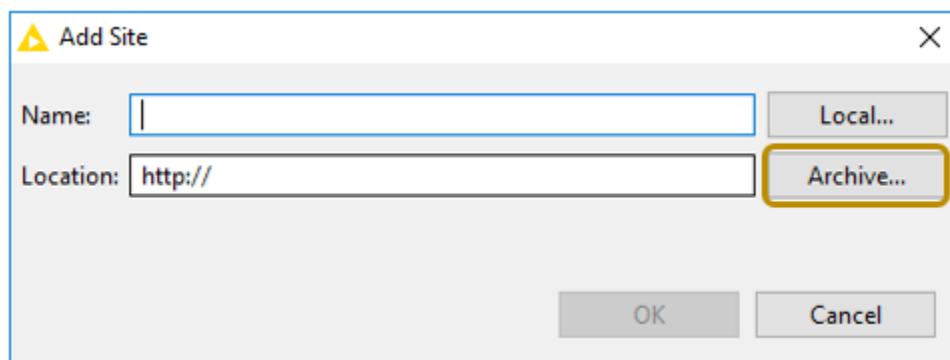


Figure 7. Adding Update Sites from Zip Archive



If the same extensions are provided by a URL, you will first have to disable the update site by disabling it in the list.

4. Now click *Apply and Close*



If the same extensions are also provided by a remote update site, you will first have to disable that update site by deselecting its entry in the *Available Software Sites* dialog and confirming via *Apply and Close*.

Working with the Nightly Builds

Once a night, a new version of KNIME Analytics Platform is created directly from our development branch. The Nightly Build versions available [here](#) provide insight into what's coming up in the next regular release. However, for real work, always use a version of a standard KNIME release. Also read the following disclaimer before proceeding:

Really, really, *really* important disclaimer



This is most definitely not production quality code. These nightly builds are what we use internally to validate and test recent developments, so they are not tested as thoroughly as standard KNIME releases. Furthermore new nodes or functionality may change substantially (or disappear entirely) from one build to the next. It's even possible that workflows you edit or create with nightly builds stop being readable by future (or past) versions...

These nightlies are a great way to get a sneak peek at what may be coming in the next version of KNIME and provide feedback and suggestions. They are not a particularly safe way to do real work.

Changelog (KNIME Analytics Platform 4.5)

Detailed changelog for v4.5.x releases

KNIME Analytics Platform 4.5.0

(see [highlights summary](#))

Release date: December 06, 2021

New nodes

- AP-17909: Python Script (Labs) ("zero copy" data exchange giving significant performance improvements)
- AP-17836: Workflow Service: New nodes to build and call (remote) workflows, incl. support for dynamic and large data (Labs)
- AP-17834: Set Files/Folders Permissions
- AP-17829: MongoDB Run Command
- AP-17806: KNIME Mountpoint Connector
- AP-17540: MongoDB Aggregation node
- AP-17433: KNIME Workflow Data Area Connector
- AP-17316: SharePoint Online List Reader
- AP-17239: Local File System Connector
- AP-16826: Binary Object to Model and Model to Binary Object nodes
- AP-16621: Excel Cell Updater
- AP-11960: Parameter Optimization Loop Start with table input
- AP-8824: Generic S3 Connector

Enhancements

- AP-18048: "Column Backend" table storage format moved out of KNIME Labs (ready for production use)
- AP-17833: Add option to read POSIX attributes to Files/Folders Meta Info node
- AP-17675: Support code completion in MongoDB nodes

- AP-17674: Support bulk execution in MongoDB for better performance
- AP-17661: Support Azure AD login in Snowflake Connector
- AP-17660: Support Azure AD login in MS SQL Server Connector
- AP-17525: WEKA models should not be kept in memory
- AP-17513: Support Kerberos authentication in PostgreSQL Connector node
- AP-17478: Add node decorator for single selection widgets with active re-execution setting
- AP-17477: Configure re-execution in single selection widget node
- AP-17475: Feature Request: Add "Reply to" field in Send Email node
- AP-17419: Support database connection initialization statement on KNIME Server
- AP-17418: JDBC parameter type DELEGATED_GSS_CREDENTIAL to support Kerberos constrained delegation for Microsoft SQL Server
- AP-17229: Deprecation of "Pipeline Pilot Connector" (users instructed to consume Pipeline Pilot's REST API)
- AP-17223: Recursive Loop Start and End Node to support dynamic ports
- AP-17216: Power BI: Improve error message in dialog if the authentication is not working
- AP-17194: Add dynamic port support to Counting Loop Start, Interval Loop Start and Generic Loop Start nodes
- AP-17030: Numeric Scorer: add adjusted R Square
- AP-17028: Cleanup Views available in the AP
- AP-16719: Support Java-based constrained delegation in DB Connector nodes
- AP-16552: Configure re-execution in widgets with clear defined action
- AP-16205: REST nodes: Additional column with error cause
- AP-16150: Support more recent Python version(s)
- AP-16136: Sunburst Chart with Option to show Tool tip text
- AP-15801: Platform-aware fuzzy logic / heuristics for Conda Env Prop node
- AP-15647: Option to check for missing values in a DB WHERE clause
- AP-15563: Store time zone with component/metanode template
- AP-15521: Case Switch (replacing old "Case Switch (...) " nodes, now with dynamic ports)
- AP-14911: Add option to append rows to an existing sheet in Excel Writer

- AP-14631: Add option to update/remove links on linked components/metanodes in captured Workflow Segments
- AP-14354: Add dynamic port support to Loop End and Variable Condition Loop End nodes
- AP-14254: Microsoft SQL Server driver updated to version 9.4.0
- AP-13000: Pattern Filter Panel with option to exclude items that match the pattern
- AP-12028: Redshift support for DB Loader
- AP-11612: Table Editor (JavaScript): Support dropdown selection for string columns
- AP-11442: Add Kerberos authentication support to REST Client Nodes (GET, POST, ...)
- BD-1139: (Big Data Extensions): Add support for new type annotations in Parquet Reader
- BD-1136: (Big Data Extensions): Support legacy LIST format in Parquet Reader

Bug Fixes

- AP-18005: Workflow Executor does not apply new port configuration when configured in executed/green state
- AP-17990: Azure Blob Storage Connection does not allow listing/browsing container root despite SAS token permission
- AP-17970: Threads for shuffling the training data have no NodeContext
- AP-17969: Python Serializers create tables in threads without NodeContext
- AP-17949: AbstractDataInputDelegator does not fulfill InputStream#read(byte[],int,int) contract
- AP-17907: UpdatedColumnarValueSchema doesn't preserve table spec name
- AP-17906: Index Query node (knime-lucene) doesn't catch DuplicateKeyException on BufferedDataContainer#close
- AP-17905: SHAP and Shapley Values Loop fail because of already closed resources
- AP-17861: Document Parsers don't support KNIME URLs
- AP-17841: Class Cast exception when materializing Table for Python3
- AP-17817: Re-execution does not show error although workflow execution failed
- AP-17795: "Regression Tree" appears twice in any port type selector (one is deprecated and should be hidden)
- AP-17790: NPE when releasing MappedByteBuffer

- AP-17730: External XML entity injection in workflow.knime files (CVE-2021-45096)
- AP-17728: IllegalArgumentException in Testworkflows
- AP-17725: Unnecessary call exceptions spam log
- AP-17724: Error when attempting to close open closeable
- AP-17710: Memory leak with Fast Tables and "Add Empty Rows"
- AP-17687: MongoDB manipulation nodes do not check column name in configure
- AP-17662: Memory leak in Voting Loop End causes hanging workflows
- AP-17646: Polynomial Regression Learner: Multiple R-Squared is incorrect
- AP-17638: Division by zero when creating cursor of empty AbstractColumnarContainerTable
- AP-17565: NER Tag set lacks PERCENT tag value
- AP-17541: Wait... node should not block a worker thread from the thread pool when waiting for file
- AP-17480: R conda environment: Handle different capitalization of PATH on Windows
- AP-17473: Text Output node throws NPE for string flow variables with null value
- AP-17274: Division by zero leads to "NaN" in the scorer
- AP-17222: "Interval Loop Start" can cause infinite loops due to floating point precision problems
- AP-17177: Suboptimal estimation of default thread count ($\#cores + 2$) – new default to be $3 / 2 * \#cores$
- AP-17163: Allow leaving R preference page with invalid R home
- AP-17103: Component could not be updated if name contains a special character
- AP-16879: Error when opening views (most likely CEF only)
- AP-16545: String Manipulation logic breaks if KNIME open too long
- AP-16374: Deep learning still relying on long-deprecated pandas.DataFrame.convert_objects method
- AP-16134: Donut Chart shows title in the middle with weird default color
- AP-15908: Keybinding conflicts when starting KNIME AP
- AP-14994: Relative to current mountpoint/workflow and should allow to delete/copy/move workflows within the mountpoint
- AP-13895: Python model size is limited by serializer buffer size
- AP-13838: Workflow temp directory deleted while workflow is running

- BD-1149: (Big Data Extensions): Hive Loader should fail with a human readable error message if the file system connection is not supported

KNIME Analytics Platform 4.5.1

Release date: January 19, 2022

Enhancements

- AP-18049: Add support to Column Expressions for creating standard file system paths

Bug Fixes

- AP-18252: Bundled Chromium Browser cannot show interactive view of Composite Views in AP
- AP-18190: Incorrect handling of spaces in UNC paths (windows)
- AP-18153: Deprecated Table Reader and File Reader nodes should not have dots for dynamic input ports
- AP-18139: Creation of DeepLearning Environment (on preferences page) fails in 4.5.0
- AP-18100: Generic Web Services Client fails on certain WSDLs with the 4.4 update
- BD-1154: (Big Data Extensions): Metadata browsing fails with Local Big Data Environment database
- AP-18253: LZ4 initialization deadlock
- AP-18232: Excel Writer fails to append to existing file using SMB Connector
- AP-18227: NPE in NodeContainerEditPart on Component Update
- AP-18216: Maximum batch size in Python is way too large
- AP-18211: XML Reader leaks input streams when using XPath with invalid reader settings
- AP-18196: Update log4j version used by xmlbeans to 2.17.1; prevents CVE-2021-44228 and others (though not exploitable in KNIME)
- AP-18147: Excel Cell Updater in Wrong Repository Group
- AP-18140: Columnar Table Backend not part of default Mac installation
- AP-18136: SinkManager and BatchProcessors are not synchronized during Python kernel close

- AP-18132: Workflow Service Output doesn't include the data of 'static inputs' when writing Workflow Port Objects
- AP-18126: Custom/KNIME URL file system does not properly handle HTTP responses with compressed Content-Encoding
- AP-18121: Index Reader node does not use connected file system
- AP-18107: Array flow variables are exposed as Py4J objects
- AP-18090: DB Connectors apply default value of new parameter instead of backward compatible value when restoring existing connection
- AP-18074: Sorting tables containing DictEncoded DataCells fails in view
- AP-18069: Python Script (Labs) node converts conda environment variable to string
- AP-18067: Python Table with Void Column (all values are None) throws error
- AP-18042: Python: knio.write_table throws error, if cell type is not supported by PyArrow
- AP-17793: Displaying errors in the map view of the Open Street Map extension
- AP-17559: Excel Writer fails when writing to XLSX with Evaluate Formulas option enabled
- AP-17541: Wait... node should not block a worker thread from the thread pool when waiting for file
- AP-17072: Salesforce Simple Query node does not properly URLencode the where clause
- BD-1153: (Big Data Extensions): PySpark: Invalid Python code inserted when clicking on input column

KNIME Analytics Platform 4.5.2

Release date: March 23, 2022

New nodes

- AP-18428: Snowflake H2O MOJO Predictor (Dimension Reduction)
- AP-18427: Snowflake H2O MOJO Predictor (Autoencoder)
- AP-18400: Snowflake H2O MOJO Predictor (Isolation Forest)
- AP-18399: Snowflake H2O MOJO Predictor (Cluster Assigner)
- AP-18358: Snowflake H2O MOJO Predictor (Regression)

- AP-18357: Snowflake H2O MOJO Predictor (Classification)

Enhancements

- AP-18486: Support advanced FTPS settings in FTP Connector
- AP-18456: Support constrained delegation in Oracle Connector node
- AP-18391: Allow to specify endpoint URL for Interactive and Username/Password authentication in Microsoft Authentication node
- AP-18321: Default "max thread count" too small: adjust to 2x #(v)CPUs - yields higher CPU utilization on I/O intense workflows (and reverts back to 4.4 behavior)
- AP-18305: Microsoft Authentication: Add User.Read scope to allow listing of group membership when selecting Sharepoint group sites
- AP-18217: Support advanced Parquet settings in Snowflake DB Loader

Bug Fixes

- AP-18694: R nodes not working because of incompatible plugins after update from 4.4.x to 4.5.x
- AP-18603: Birt reporting: Palette view no longer part of default perspective (it's hidden)
- AP-18554: NullPointerException on component update under special circumstances
- AP-18479: Composite view doesn't load if layout references a nested component without any view-nodes
- AP-18349: Pre-signed S3 URLs fail with Custom/KNIME URL file system
- AP-18665: Workflow Comparison fails on workflows containing metanodes/components that pass connections through
- AP-18593: Potentially scrambled output in blob columns with old table backend when reading from Table Reader node
- AP-18488: SharePoint Online Connector sometimes fails with NullPointerException when writing files larger 4MB
- AP-18435: (Very) rare deadlock if multiple 'image generating' js-view nodes are run in parallel
- AP-18419: Cannot read an Excel file from SMB when it is concurrently open in Excel
- AP-18361: BufferedRowContainer#finish does not commit the last row
- AP-18296: Memory leaks in loops with wide tables

- AP-18280: SAP integration (Theobald) registers invalid update sites to KNIME's update site manager (though disabled)
- AP-18279: DynamoDB integration registers invalid update sites to KNIME's update site manager (though disabled)
- AP-18278: Snowflake integration registers invalid update sites to KNIME's update site manager (though disabled)
- AP-18268: Transfer Files (Table) cant handle two connected Filesystems
- AP-18207: Python Script (Labs): Deadlock on cancel
- AP-18198: Excel Writer Unhides Hidden Sheets
- AP-18192: CSV Reader: NPE if files in folders regex results do not exist
- AP-18141: Parallel Coordinates Plot does not Plot Curved Lines in SVG Image
- AP-17993: Python auto-completion opens in comments
- AP-17965: Transfer Files (Table) and other file handling utility nodes fail during configure if path column does not contain metadata
- AP-17785: Interplay between selection translators and re-execution logic seems not to work
- BD-1176: (Big Data Extensions): Code completion in PySpark nodes does not work
- BD-1155: (Big Data Extensions): DB Metadata browser on Local Big Data Environment JDBC connection shows only objects in default schema
- NXT-896: Flow variable and port object spec changes aren't reflected in the dialog when opened for the second time (remote workflow editor)
- UIEXT-112: CEF: Refreshing changes character encoding

KNIME AG
Hardturmstrasse 66
8005 Zurich, Switzerland
www.knime.com
info@knime.com