Technical Note:
Configure KNIME to use
TIBCO® Enterprise Runtime for R

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Configure KNIME to use TIBCO Enterprise Runtime for R

KNIME is an open-source data mining tool. You can configure it to work with the TIBCO® Enterprise Runtime for R (TERR) engine.

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We tested the following procedures using KNIME version 2.10.2 and 2.10.3, and using a special version of TERR-compatible rJava.

These instructions include the following:

- Installing TIBCO Enterprise Runtime for R 2.7 or later.

- Installing the TERR-compatible version of rJava for Windows.

- Configuring a working version of KNIME 2.10.2 or 2.10.3 on Windows (64-bit), on which the **KNIME Interactive R Statistics Integration** nodes, available from the KNIME labs under **KNIME & Extensions**, have already been installed.

- Troubleshooting your installation, if necessary.

Installing the required software

To use TIBCO Enterprise Runtime for R (TERR) with KNIME, first install the required software. Perform this task on a 64-bit Windows computer where KNIME is installed and that meets the requirements for running TERR.

Procedure

1. Install TIBCO Enterprise Runtime for R.

   You must install TERR 2.7 or later (Windows 64-bit). Earlier versions will not work with KNIME.

2. Install rJava for TERR on Windows 64-bit.
   a) Launch the TERR console.
   b) From the TERR console, run the following code.
   ```
   pkgfile <- tempfile("rJava")
       download.file(destfile=pkgfile,
         "https://raw.github.com/TIBCOSoftware/terr-rJava/master/inst/binary/
   rJava_0.9-6-0.zip")
       install.packages(pkgfile, repos=NULL)
   ```

Result

TERR and the custom rJava package are now installed and ready to be configured.

Configuring KNIME with TIBCO Enterprise Runtime for R

After installing TERR and rJava for TERR, change the KNIME configuration file to use TERR. Perform this task on a 64-bit Windows computer where KNIME and TERR are installed.

Prerequisites

You must have installed TERR and the custom rJava package for TERR on a 64-bit Windows computer.

Procedure

1. Using a text editor, open the file `knime.ini`.

2. Set `-Djava.library.path=`*TERR_HOME*`\library\rJava\jri\x64`.

   > 💡 *TERR_HOME* is the full path to your TERR installation. For example, `C:\Program Files\TIBCO\terr`.

   For more information about setting the system property `-Djava`, see http://tech.knime.org/faq#q25.

3. For TERR 2.7 only (not required for later releases), copy the file *TERR_HOME*`\bin\x64\TERR.exe` to *TERR_HOME*`\bin\x64\R.exe`.

   > 📝 Use the path to your copy of TERR .

4. Start KNIME.

5. On the menu set **Preferences** > **KNIME** > **R** > **Path to R Home** to *TERR_HOME*.

   > 📝 Use the path to your copy of TERR .

6. Check that you can run the **KNIME Interactive R Statistics Integration** nodes with TERR.
   a) Create a new KNIME worksheet .
   b) Create a **File Reader** node reading `KNIME_HOME/IrisDataset/data.all`.
   c) Create an **R Snippet** node.
   d) reading the output of the file node with the script `knime.out <- knime.in`.
   e) Run the whole network.

Result

Both nodes should run, and the **R Snippet** node should have Std output showing the TERR banner.

Troubleshooting your installation

If your installation and configuration of TIBCO Enterprise Runtime for R with KNIME does not work, try testing it with open-source R.

Prerequisites

You must have open-source R version 3.1.1 installed on your Windows 64-bit computer that is running KNIME. You can install it from your an R download site.

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Procedure

1. Start the R console.

2. Download and install the package rJava from the CRAN repository.

3. Set the library path as described in Step 1 and Step 2 in Configuring KNIME with TIBCO Enterprise Runtime for R.

   > 💡 Double-check to make sure the library path is set correctly.

4. Set the R path in the KNIME preferences to R_HOME as described in Step 5 in Configuring KNIME with TIBCO Enterprise Runtime for R.

5. Test the configuration as described in Step 6 in Configuring KNIME with TIBCO Enterprise Runtime for R.