



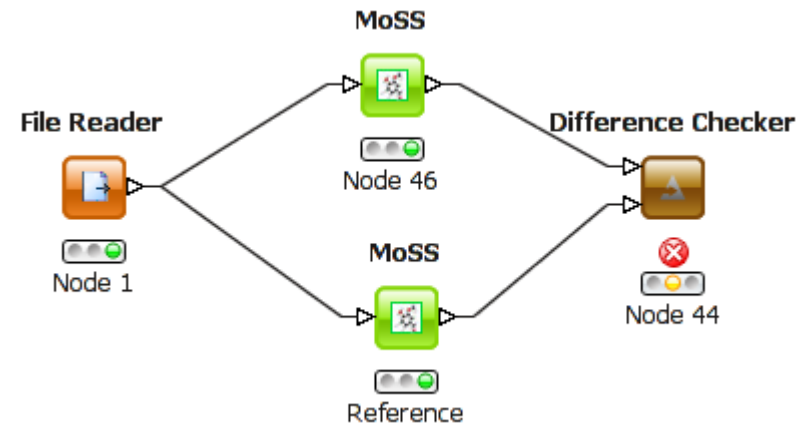
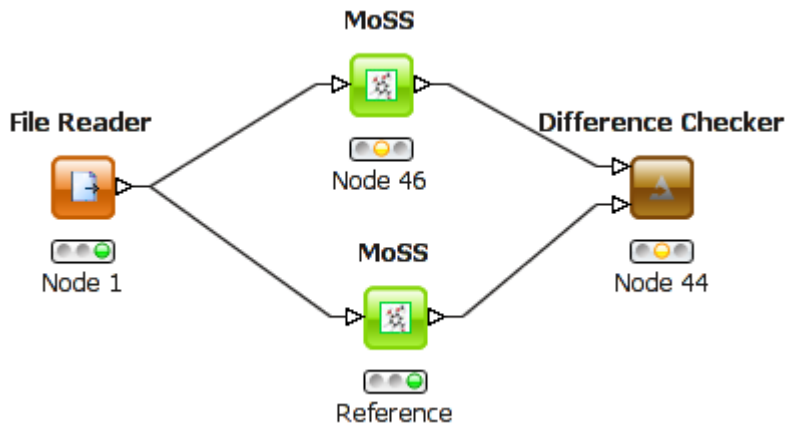
Noding guidelines  
Node testing

# Noding guidelines

- Detailed list of expected node behaviour
  - Missing value handling
  - Auto-configuration of nodes
  - Auto-guessing of settings
  - Deprecating old nodes
  - ...

# Testworkflows I

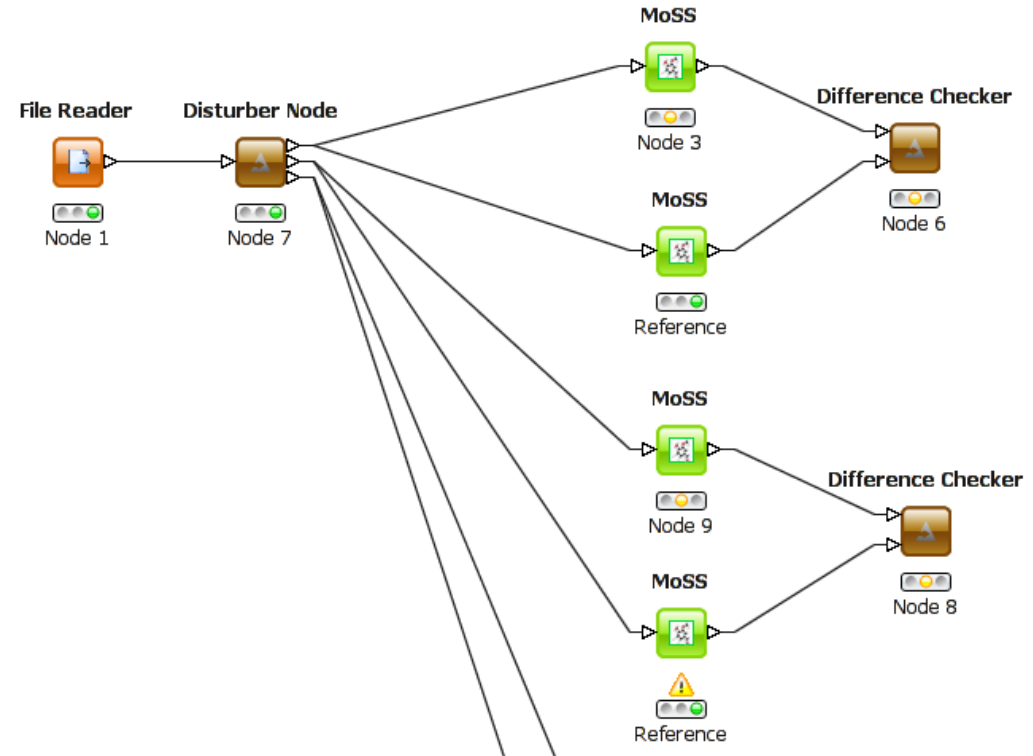
- Simple tests for basic node functionality
- Reference table is compared with results of current execution
  - Reference node is saved in executed state



Execute failed: Cell content differs in row #0('Row0') column #0('Fragment'):  
CellPort0='N-C(-C-O)-C' vs. CellPort1='O-C-C-C(-C-C-C-C)-C'

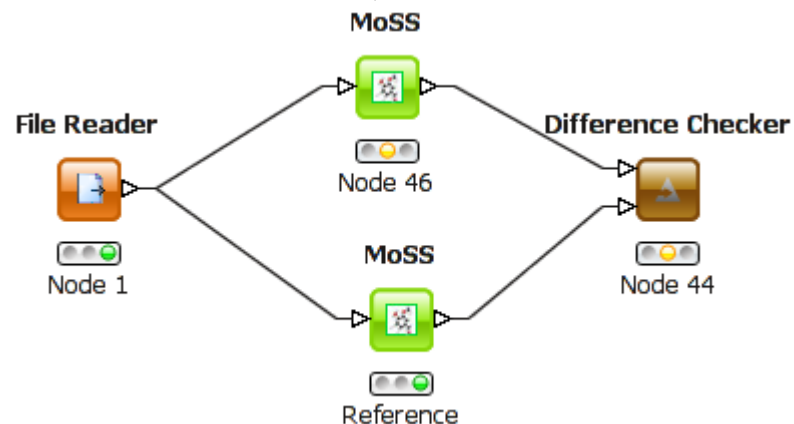
# Testworkflows II

- Disturber node
  - Inserts random missing values
  - Outputs an empty table
- Node to test must not fail
- All nodes must be executed in the end



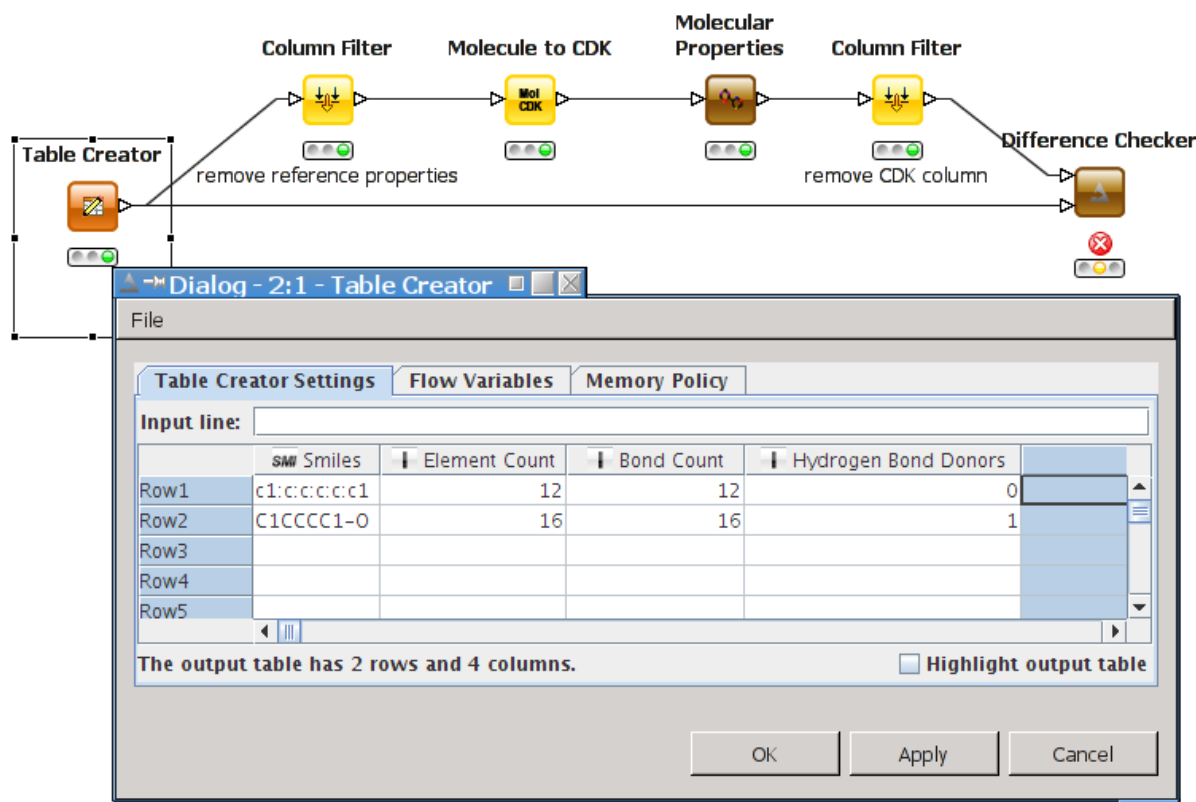
# Compatibility Tests

- Check if new node version computes same results as previous versions
- Easy setup with two copies of the same node, the reference node is saved executed (i.e. with data)




# Correctness Tests

- Check if node computes correct results
- Use manually created reference table



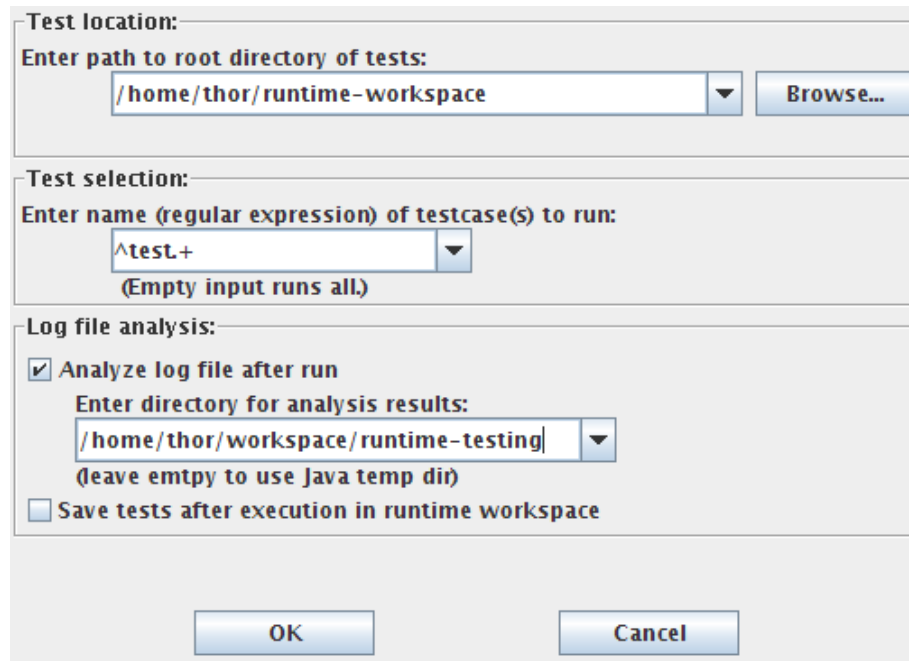
# Testing nodes

- Several other useful nodes in the Testing category
  - Install „KNIME Testing Application“

- ▼  Testing
  - ▲ Block Programmatically
  - ▲ Count Execution Programmatically
  - ▲ Difference Checker
  - ▲ Disturber Node
  - ▲ Fail in execution
  - ▲ File Difference Checker
  - ▲ Model Content Difference Checker
  - ▲ Test Data Generator

# Running testflows I

- Special Testing application
  - ./knime -application org.knime.testing.KNIME\_TESTING\_APPLICATION
  - Or select the application in the run configuration of the IDE



The screenshot shows a dialog box for configuring test runs. It is divided into three main sections:

- Test location:** A text field contains the path `/home/thor/runtime-workspace`, followed by a dropdown arrow and a `Browse...` button.
- Test selection:** A text field contains the regular expression `^test.+`, followed by a dropdown arrow. Below the field, it says `(Empty input runs all.)`.
- Log file analysis:** A checkbox labeled `Analyze log file after run` is checked. Below it, a text field contains `/home/thor/workspace/runtime-testing`, followed by a dropdown arrow. Below the field, it says `(leave empty to use Java temp dir)`. At the bottom of this section, there is an unchecked checkbox labeled `Save tests after execution in runtime workspace`.

At the bottom of the dialog box, there are two buttons: `OK` and `Cancel`.

# Running testflows II

Regression run on Oct03\_16\_10\_24

Tests run: 2, failing: 1, succeeding: 1

Success rate: 50%

-----  
-----  
Failing tests: (see individual logs for details)  
-----  
-----

Test 'testMoSS' failed.(Owner: Thorsten.Meinl@uni-konstanz.de).

-----  
-----  
Succeeding tests: (no individual log exists)  
-----  
-----

Test 'testNewJoiner' succeeded (Owner: Thorsten.Meinl@uni-konstanz.de).

# Running testflows III

```
INFO main KnimeTestCase : Result -----
INFO main TestingConfig : Got error: Node Difference Checker 0:0:44 is not executed.
(node's status message: RESET: )
INFO main TestingConfig : Got error: Node MoSS 0:0:46 is not executed. (node's status
message: RESET: )
INFO main TestingConfig : Got error: Node MoSS 0:0:47 is not executed. (node's status
message: RESET: )
ERROR main TestingConfig : Unexpected error messages during test run.
FATAL main TestingConfig : Unexpected error messages -> failing test!
```

# Errors and warnings

- Expected errors and warnings must be specified in a configuration file
  - `node_status` in workflow root directory
  - One line for each node, given by its id
  - Specify expected message

```
9,WARN : Node created an empty data table.
```

```
12,WARN : Unable to parse molecules in row 'Row1'
```

- Description in the plug-ins doc-folder

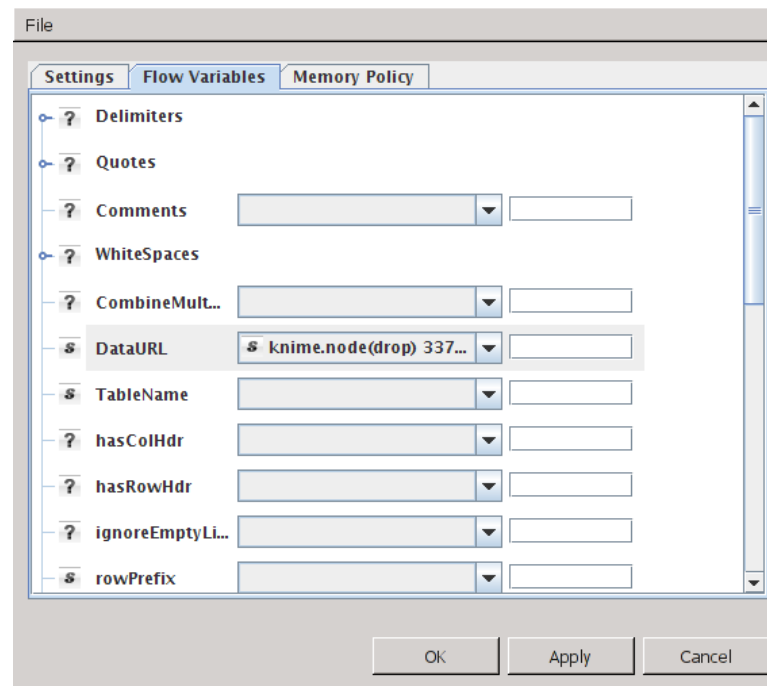
# File Handling

- Put files for the testflow in the reader's „drop“-directory
  - Must be created manually
- Specify location of file in the flow variables tab

# File Handling

```
meinl@localhost ~/runtime-workspace/testMoSS/File Reader (#1) $ ll
drwxr-xr-x  2 meinl users 4096  3. Okt 15:50 drop
drwxr-xr-x  2 meinl users 4096  3. Okt 15:53 internal
-rw-r--r--  1 meinl users 4782  3. Okt 15:53 node.xml
drwxr-xr-x  2 meinl users 4096  3. Okt 15:53 port_1
-rw-r--r--  1 meinl users  777  3. Okt 15:53 settings.xml
```

```
meinl@localhost ~/runtime-workspace/testMoSS/File Reader (#1) $ ll drop/
-rw-r--r--  1 meinl users 39384 30. Mär 2011 337PTEsmile.txt
```

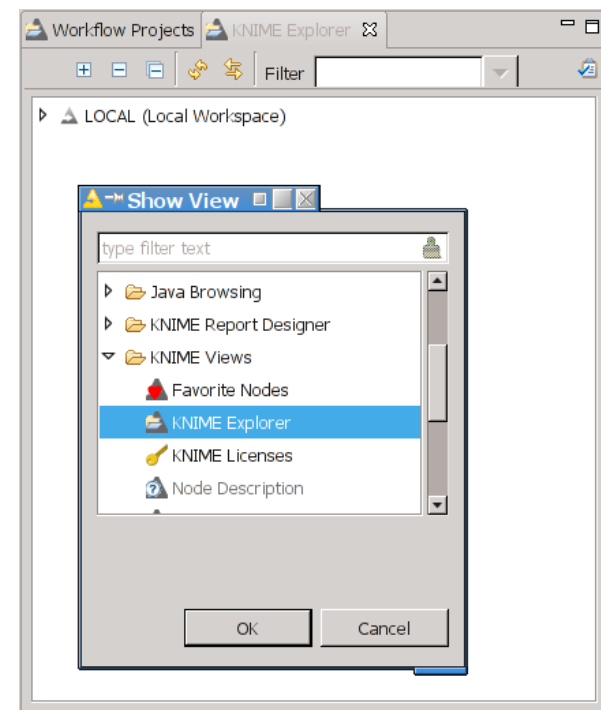


# Testflow server

- KNIME testflows are run every night after the nightly builds
  - Workflows stored on a KNIME server
- New: Testflow server for community nodes
  - Testflows run every night
  - Upload with new KNIME Explorer

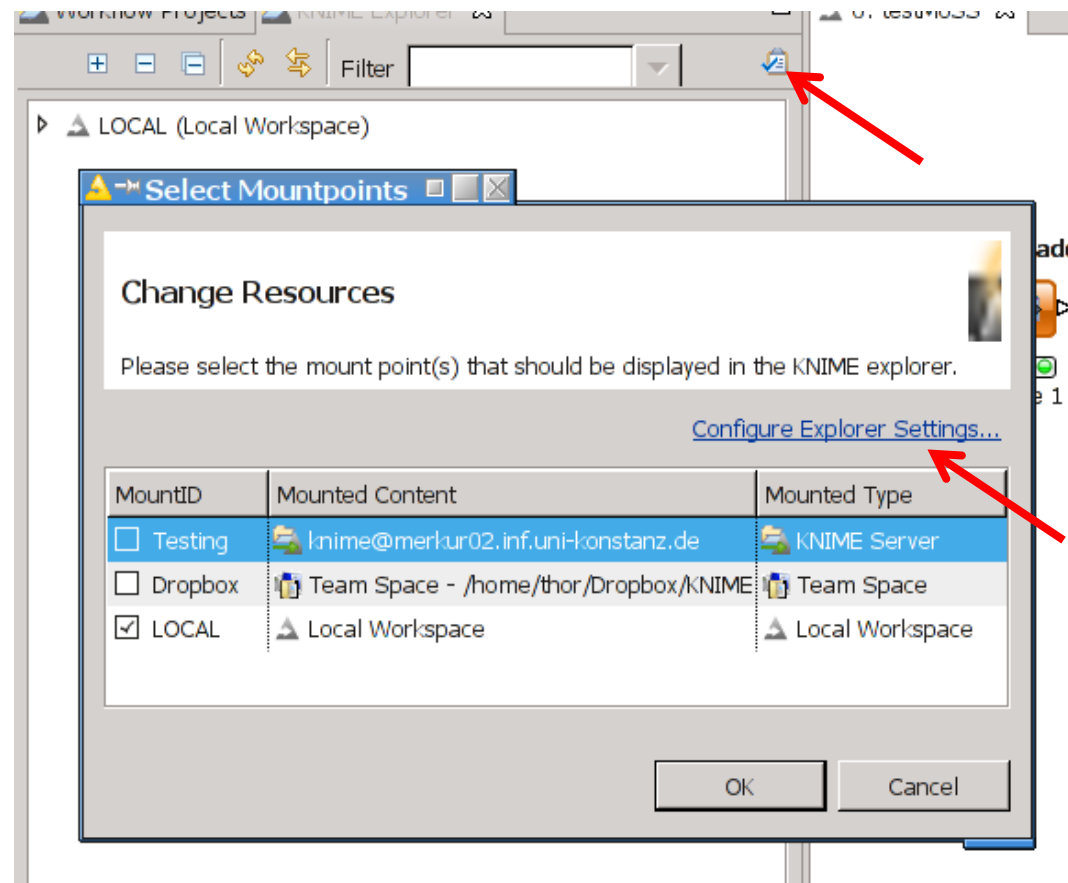
# KNIME Explorer I

- New workflow view starting with 2.5
- Central access to local, shared, and server workflows
- Preview available in the private workshop area
  - KNIME Desktop
  - KNIME SDK
  - No warranty!

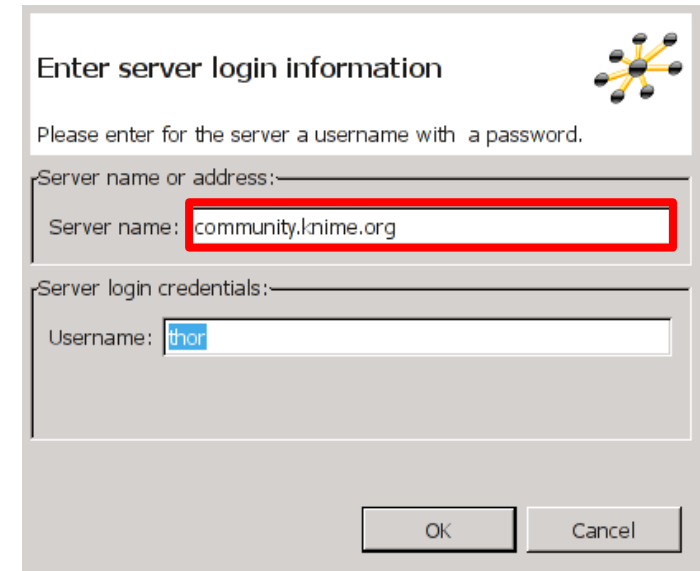
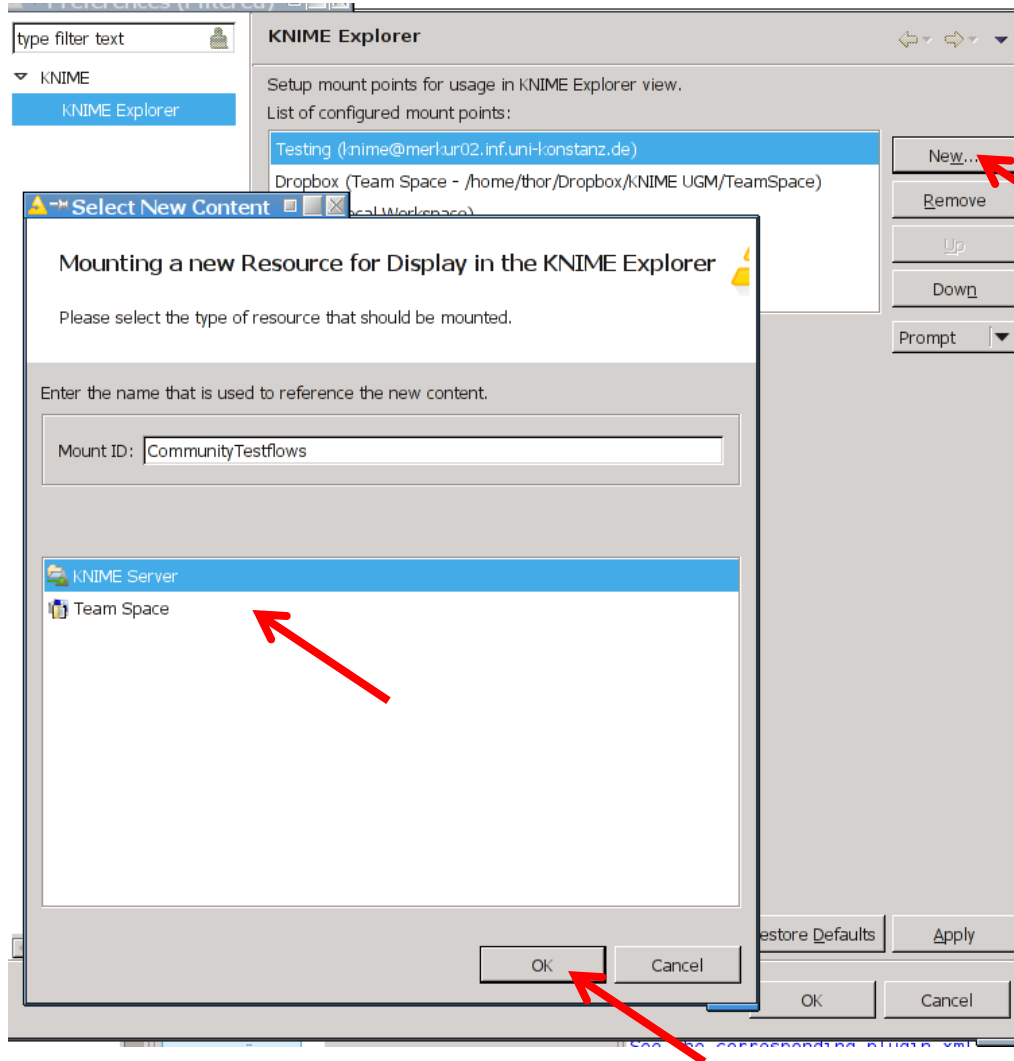


# KNIME Explorer II

- Create a mount point for community server



# KNIME Explorer III



# KNIME Explorer IV

- Up- and download via drap&drop between server and local workspace

