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HOW TO: CONRAD Installation for DMIP

This tutorial describes how to install the open-source package of CONRAD.

Installation of CONRAD

First, you need to check-out the open-source repository from https://github.com/akmaier/CONRAD

To successfully do this, you will require

- Your own **Github Account**, Username <GitHubAccountName>, on https://github.com/

In the top right on https://github.com/akmaier/CONRAD you should see a button labeled „Fork". Click this button to generate your own personal copy of the repository. Afterwards you will find your repository at https://github.com/<GitHubAccountName>/CONRAD .

Using git on a Linux Shell:

Now, we create a new folder on the disk that will be used as a workspace for **Eclipse**. Open a shell and go to /proj/i5dmip ("cd") and create a new folder for your workspace ("mkdir"). You may call this folder e.g. „/proj/i5dmip/<YourCIPLoginName>/Reconstruction/". Clone the repository using "git clone https://github.com/<GitHubAccountName>/CONRAD.git /proj/i5dmip/<YourCIPLoginName>/Reconstruction/CONRAD".
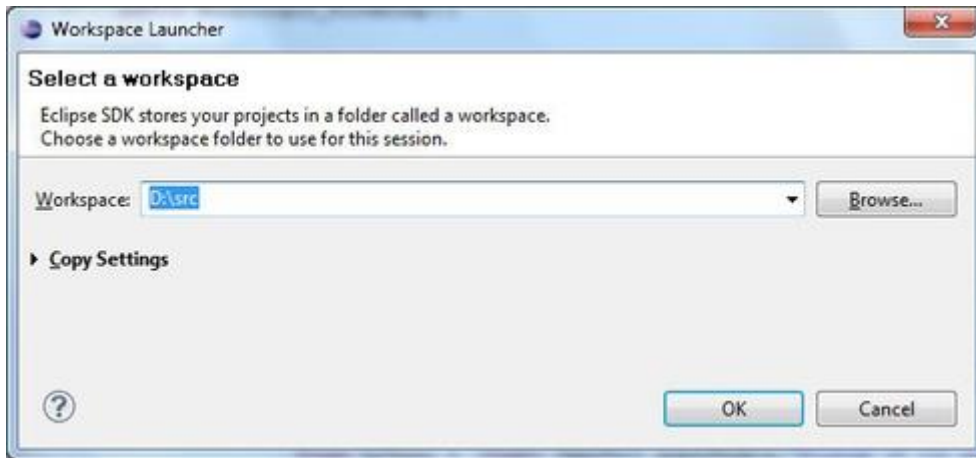
Installing CONRAD:

Now, you should be able to start CONRAD as an Eclipse project.

In order to setup a CONRAD installation, a computer is required that is able to run ↗eclipse and a current ↗Java installation (Version > Java 1.7.0). If this is available and you already cloned your personal Git Fork, simply start eclipse and choose the CONRAD directory as your workspace during the startup of eclipse.

Eclipse crashes on startup: Go to your home directory and remove your .eclipse settings folder:
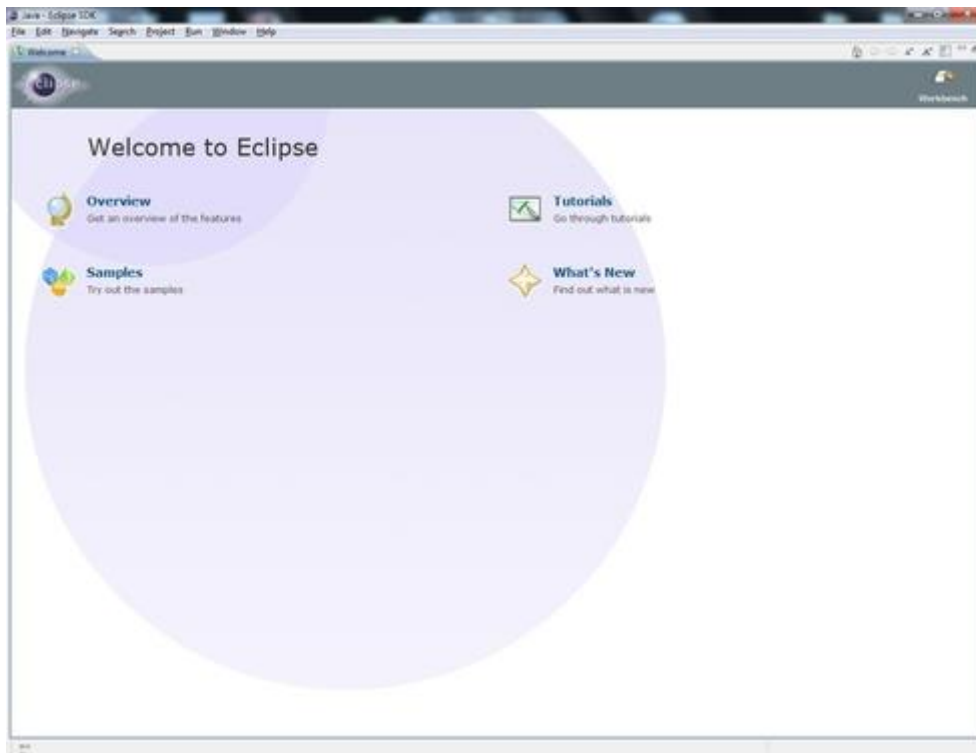
"rm –r .eclipse/"

Workspace Selection

Start eclipse. If used for the first time, it will ask for a workspace location as shown in the figure on the right. Please select /proj/i5dmip/<YourCIPLoginName>/Reconstruction/ in this dialogue. If you already have an eclipse workspace set up, you either need to change the present workspace to /proj/i5dmip/<YourCIPLoginName>/Reconstruction/ or you need to move the CONRAD folder to your present workspace.
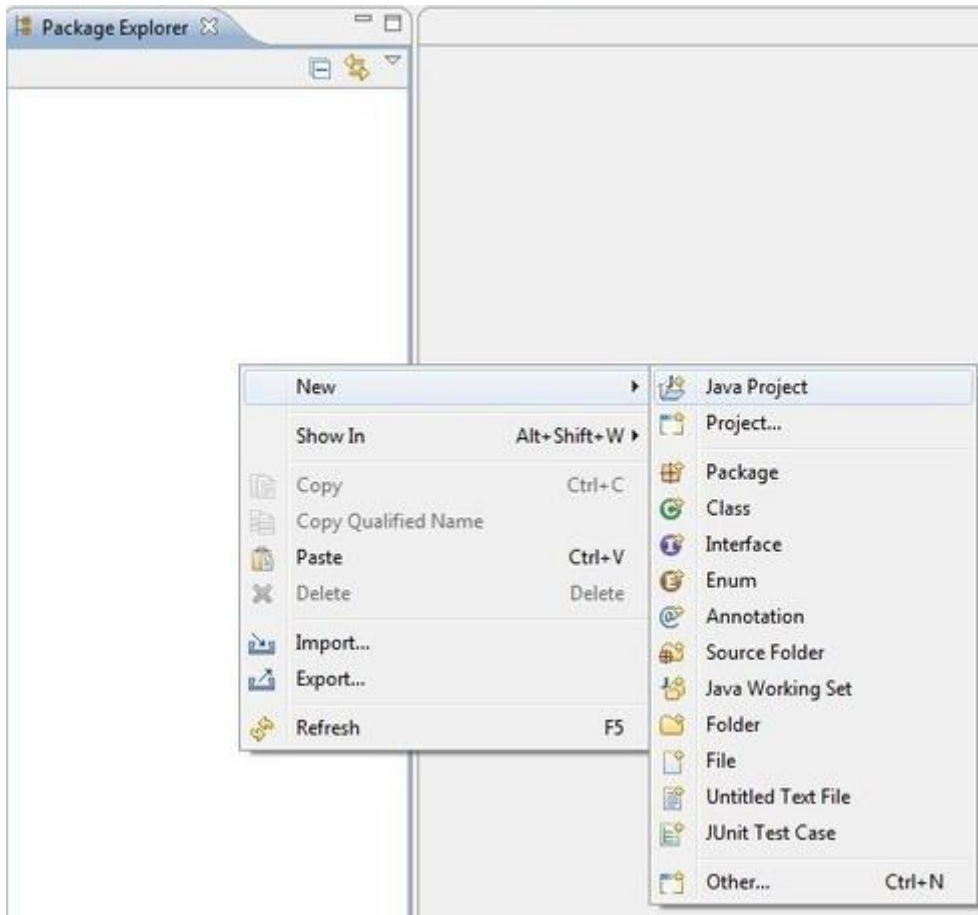
New Workspace

Close the welcome screen when opening eclipse for the first time.

In case you switched your workspace to /proj/i5dmip/<YourCIPLoginName>/Reconstruction/ or in case you have a new installation of eclipse, the screen on the right will appear. Please close the welcome screen.
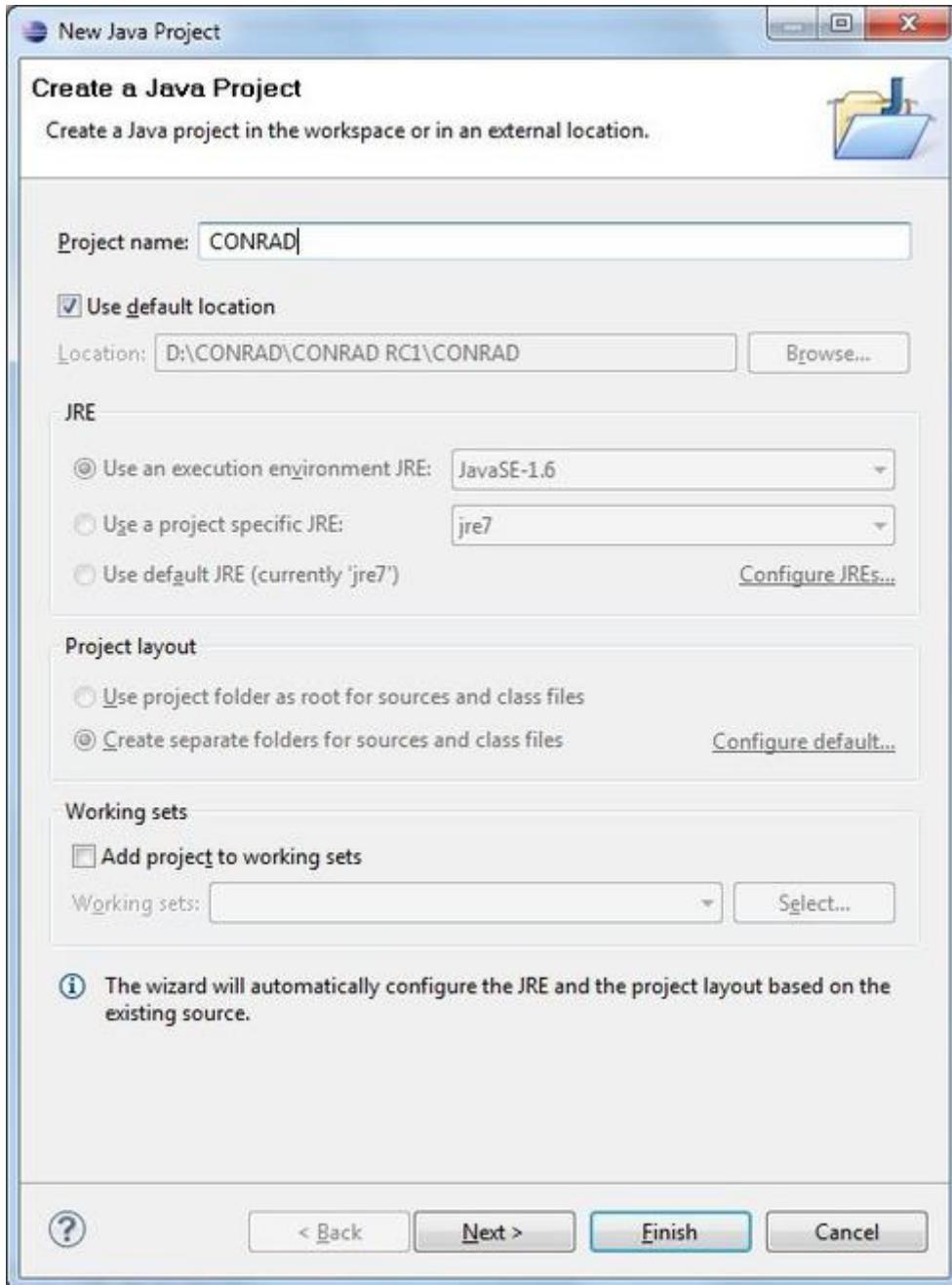
New Java Project

Right click the package explorer to create a new Java project.

Package Explorer ⊠			

New	►	Java Project
Show In	Alt+Shift+W ►	Project...
Copy	Ctrl+C	Package
Copy Qualified Name		Class
Paste	Ctrl+V	Interface
Delete	Delete	Enum
		Annotation
Import...		Source Folder
Export...		Java Working Set
		Folder
Refresh	F5	File
		Untitled Text File
		JUnit Test Case
		Other... Ctrl+N

Once the normal layout of eclipse was loaded, the CONRAD project needs to be created. In a new workspace, the package explorer will show up empty. Right click the package explorer and create a new Java Project as shown on the right.
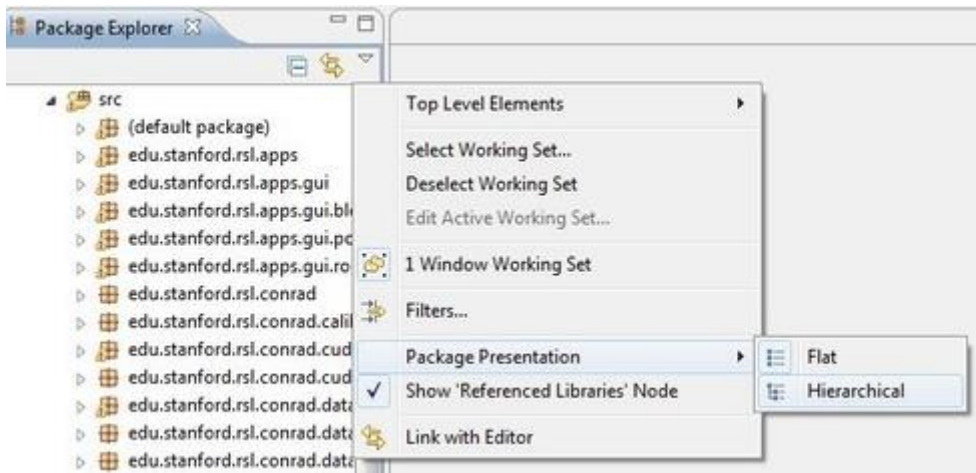
Project Import

Enter "CONRAD" as project name to import the project from disk.

A dialogue called "New Java Project" will appear. Enter "CONRAD" as Project name. Next, the message "The wizard will automatically configure the JRE and the project layout based on the existing source." will appear. Click "Finish" to import the project.
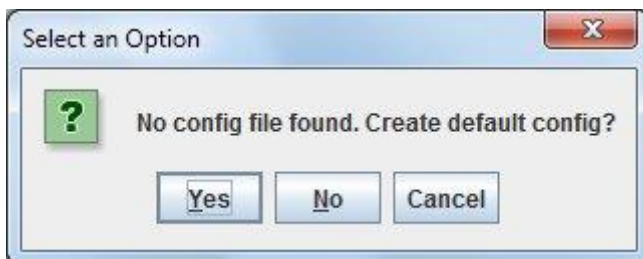
Package Representation

We recommend "Hierarchical" package representation.

As CONRAD contains a lot of classes and packages, it is difficult to gain an overview for a beginner. Thus, we recommend to switch the package representation to "Hierarchical" as shown on the right. Click the small triangle on the top right of the package explorer to do so.
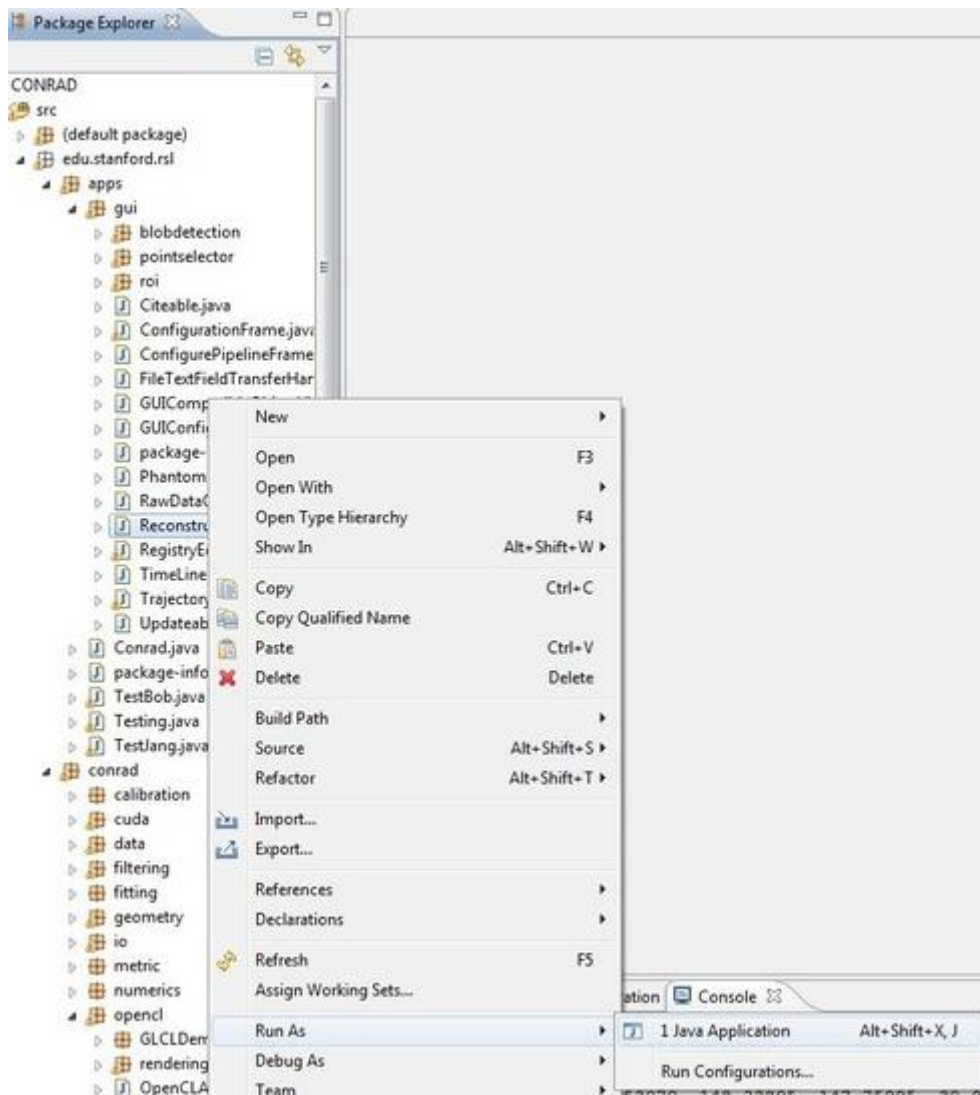
Creation of a Default Config File

Click "Yes" to create a default config file.

CONRAD stores an XML-based configuration file in the user's home directory to save the current configuration. If the file is not found the system will prompt whether the file should be created or not. If this dialogue appears, please select "Yes".
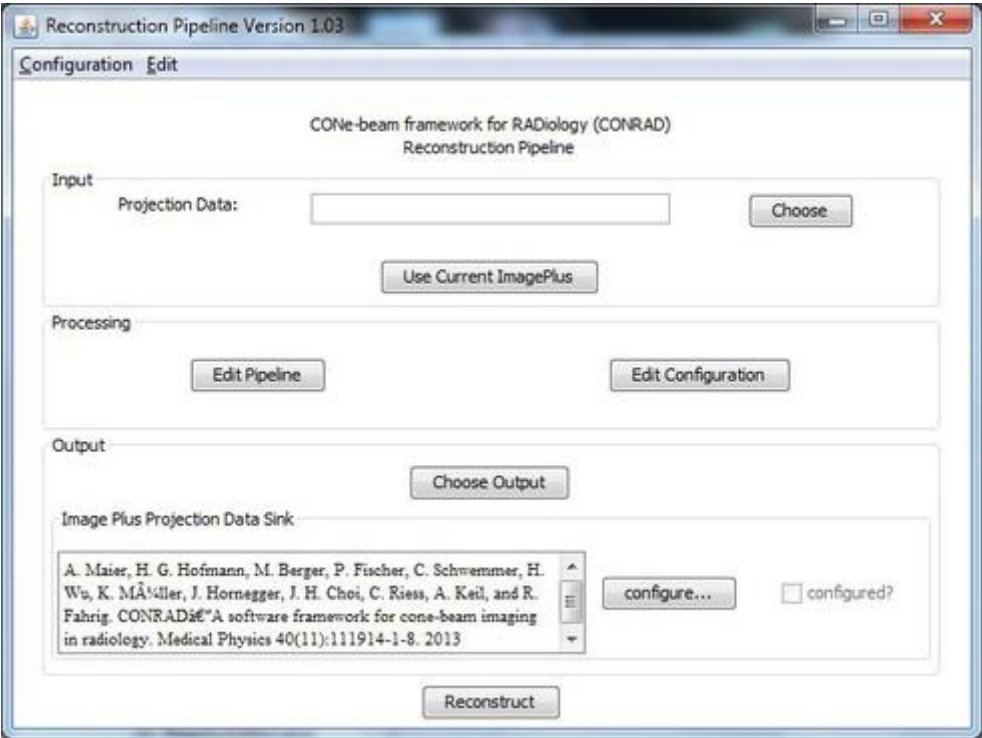
Running the Main GUI

Select the ReconstructionPipelineFrame to run the main GUI

The main GUI of CONRAD is called Reconstruction Pipeline frame. It can be executed from the package explorer as shown on the right. Browse to the package "edu.stanford.rsl.apps.gui" and select the ReconstructionPipelineFrame. Right click it and select "Run As/Java Application".

Main GUI

The reconstruction pipeline frame.

If everything was set up correctly, you should now be able to run the main GUI shown on the right. It is the main application to use most of CONRAD's functionality.

Further GIT commands

Save work locally on disk:

Execute "git commit -a" and enter a meaningful commit message + save

Save work to your Github fork:

Do a commit first (see above) then execute "git push", enter your account details. This updates your personal fork on Github.

Updating locally in case your fork changed from somewhere else, e.g. at home:

Execute "git pull" before you start working

Syncing with the original CONRAD repository:

In order to sync your own repository with „akmaier/CONRAD" you need to do the following steps:

If you do this for the first time you need to tell your git where the original CONRAD is. Therefore, set a new remote repository: "git remote add akmaierConrad https://github.com/akmaier/CONRAD.git"

To perform the synching, simply apply the next three commands:

1) Fetch the branches from the remote: "git fetch akmaierConrad"
2) Checkout your forks master branch: "git checkout master"
3) Merge the changes: "git merge akmaierConrad /master"