Module 2: Installation

✦ Objective
- ✦ To learn how to install Eclipse and PTP

✦ Contents
- ✦ System Prerequisites
- ✦ Eclipse Download and Installation
- ✦ PTP Installation from an Update Site
- ✦ Installation Confirmation

About the Tutorial Installation

✦ The PTP Tutorial will assume you already have Eclipse installed on your laptop. Please use these slides to install Eclipse and PTP on your laptop before attending.

✦ Note: up-to-date info on installing PTP and its pre-reqs is available from the release notes:

  ✦ http://wiki.eclipse.org/PTP/release_notes/5.0

  ✦ This information may supersede these slides

✦ Questions? Please ask on the ptp-users mailing list: http://dev.eclipse.org/mhonarc/lists/ptp-user/

System Prerequisites

✦ **Local system (running Eclipse)**
- ✦ Linux (just about any version)
- ✦ MacOSX (10.5 Leopard or 10.6 Snow Leopard)
- ✦ Windows (XP on)

✦ **Java: Eclipse requires Sun or IBM Java**
- ✦ Only need Java runtime environment (JRE)
- ✦ Java 1.5 or higher
  - ✦ Java 1.5 is the same as JRE 5.0
- ✦ Note: The GNU Java Compiler (GCJ), which comes standard on Linux, will not work!
- ✦ Note 2: OpenJDK, distributed with some linux distributions, has not been tested with Eclipse.
- ✦ See http://wiki.eclipse.org/PTP/installjava

Eclipse Packages

✦ Eclipse is available in a number of different packages for different kinds of development
  - ✦ http://eclipse.org/downloads
  - ✦ This is Eclipse 3.7, also known as "Indigo"

✦ With Indigo, there is a new package directly relevant for HPC:
  - ✦ Eclipse IDE for Parallel Application Developers
    - ✦ Base Eclipse distribution plus
      - ✦ C/C++ Dev Tools (CDT)
      - ✦ Parallel Tools Platform (PTP)
      - ✦ Fortran Dev Tools (Photran)
      - ✦ Linux Tools
      - ✦ ...
    - ✦ Recommended
  - ✦ Can also augment existing Eclipse (eg, Eclipse CDT) with relevant Parallel Tools components

Eclipse Installation

- ✦ Download the appropriate package
- ✦ If your machine is Linux or Mac OS X, untar the file
    - ✦ On Mac OS X you can just double-click in the Finder
- ✦ If your machine is Windows, unzip the file
- ✦ This creates an **eclipse** folder containing the executable as well as other support files and folders

Starting Eclipse

- ✦ **Linux**
  - ✦ From a terminal window, enter "<eclipse_installation_path>/eclipse/eclipse &"

- ✦ **Mac OS X**
  - ✦ From finder, open the **eclipse** folder where you installed
  - ✦ Double-click on the **Eclipse** application
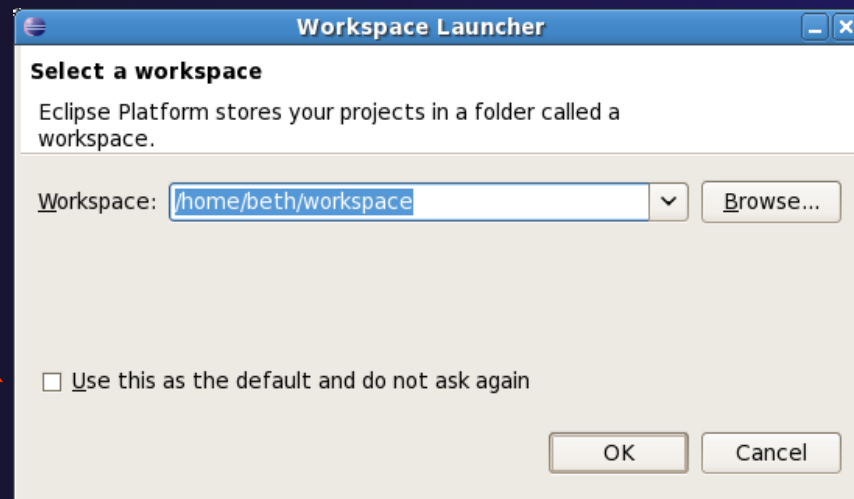 - ✦ Or from a terminal window
- ✦ **Windows**
  - ✦ Open the **eclipse** folder
  - ✦ Double-click on the **eclipse** executable

Specifying A Workspace

✦ Eclipse prompts for a workspace location at startup time
✦ The workspace contains all user-defined data
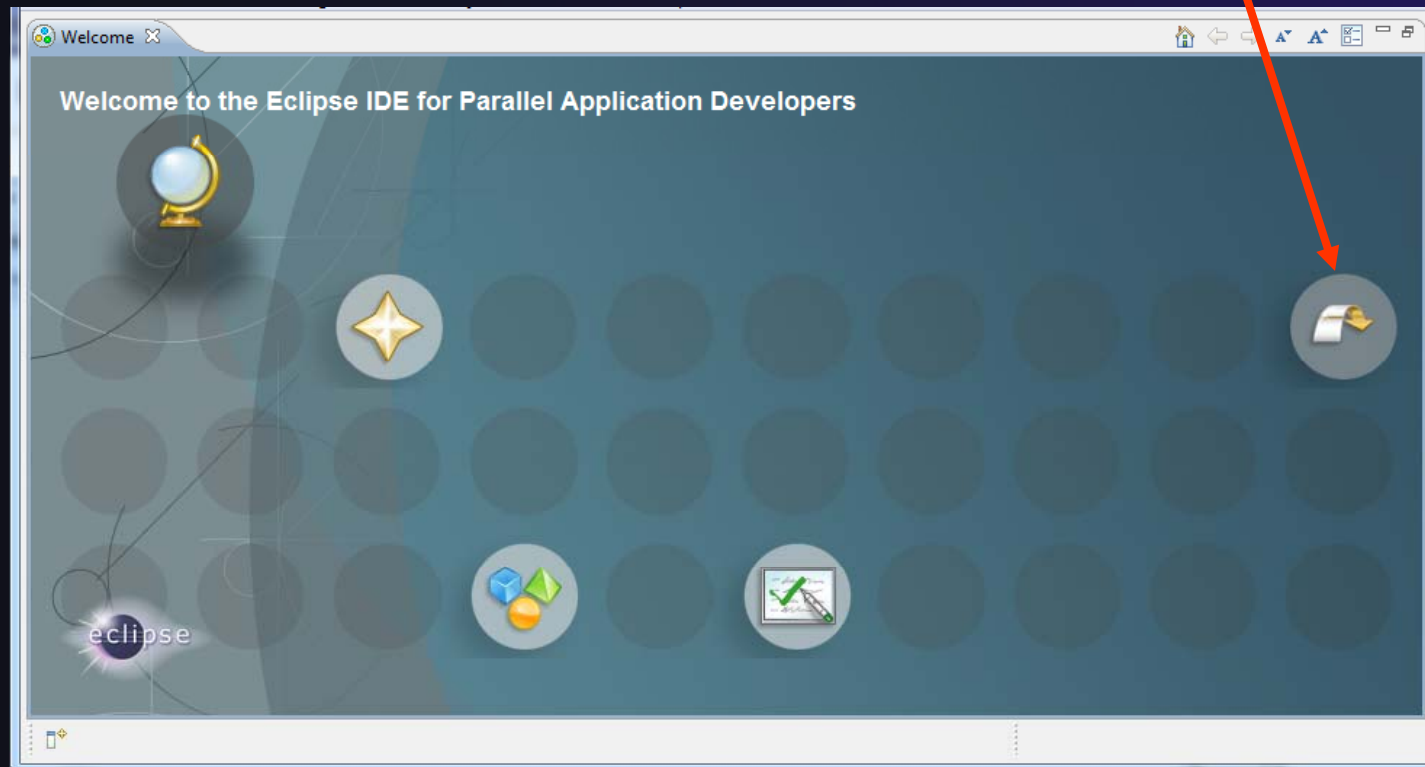 ✦ Projects and resources such as folders and files

The prompt can be turned off

Workspace Launcher

Select a workspace

Eclipse Platform stores your projects in a folder called a workspace.

Workspace: /home/beth/workspace ▾ Browse...

☐ Use this as the default and do not ask again

OK   Cancel

Eclipse Welcome Page

✦ Displayed when Eclipse is run for the first time

Select "Go to the workbench"

Eclipse
Parallel
App

Confirm PTP Installation

- ✦ If you pre-installed Eclipse for Parallel Application Developers
  - ✦ This will check that it is installed correctly
  - ✦ Skip to "Check Installation Details", slide 2-14
- ✦ If you have pre-installed Eclipse but not PTP
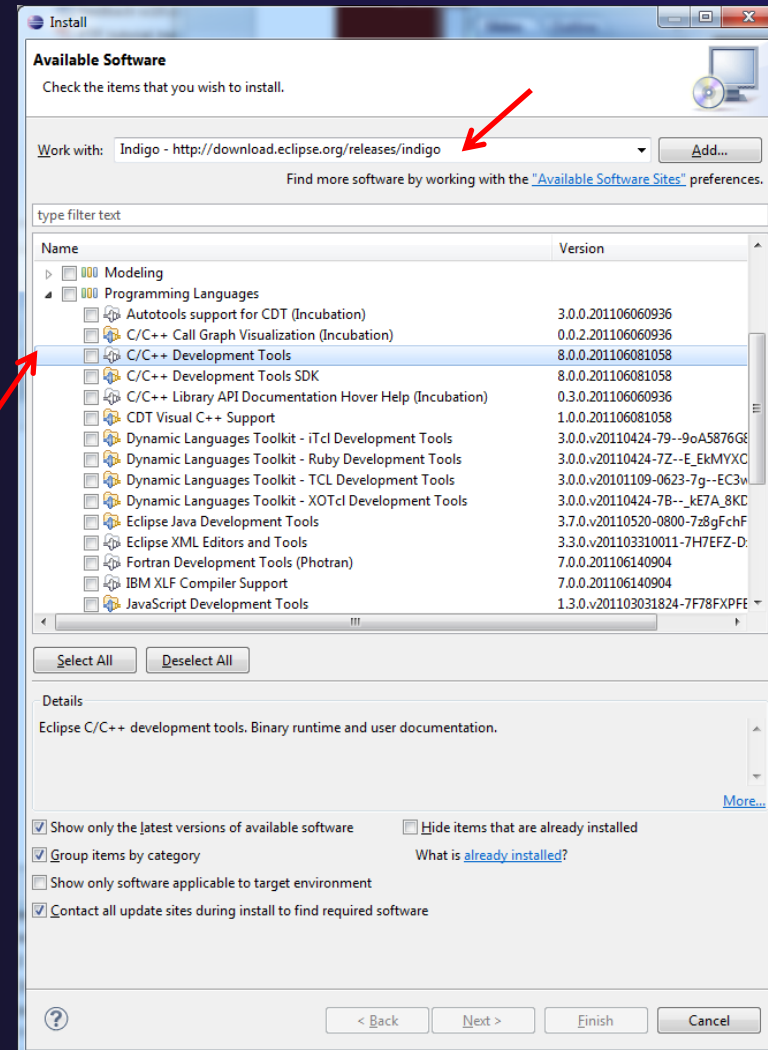 - ✦ Continue following these slides

PTP Installation

✦ New functionality is added to Eclipse using *features*

✦ Features are obtained and installed from

   ✦ An update site on a web server, or

   ✦ A local archive

✦ Eclipse 3.7 comes preconfigured with a link to the
  Indigo Update Site

   ✦ This is a remote site that contains a large number of
     official features

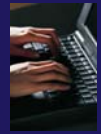   ✦ Indigo projects are guaranteed to work with Eclipse 3.7

Indigo Update Site

✦ From the **Help** menu, choose
 Install New Software...

✦ The Indigo site comes
 already configured with Eclipse

✦ We are going to install:
 ✦ C/C++ Development Tools (CDT)*
 ✦ Parallel Tools Platform (PTP)
  End-User Runtime
 ✦ PTP Remote Development Tools (RDT)

 *If you installed the C/C++ IDE,
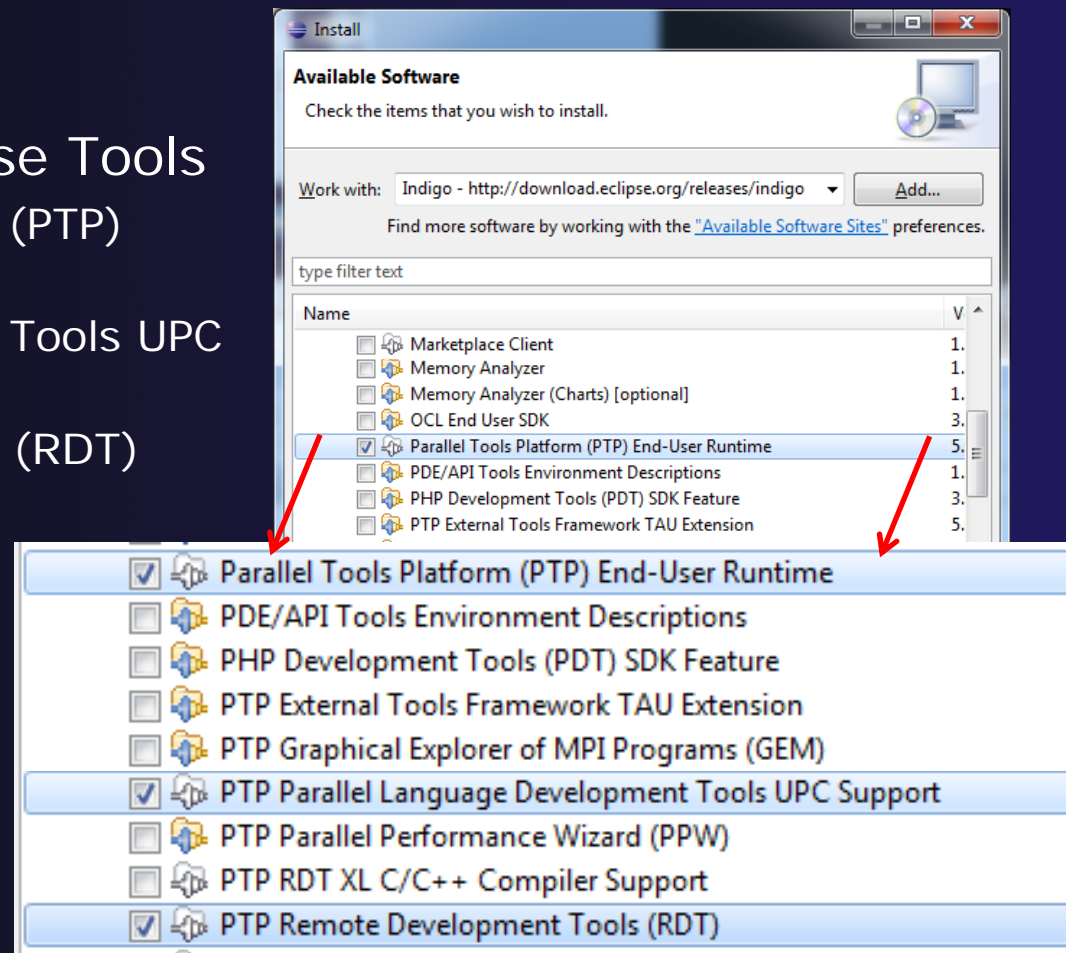 you already have CDT in your Eclipse
  installation and you can omit this.

Install PTP Features

- ✦ **Under General Purpose Tools**
  - ✦ Parallel Tools Platform (PTP) End-User Runtime
  - ✦ PTP Parallel Lang Dev. Tools UPC Support*
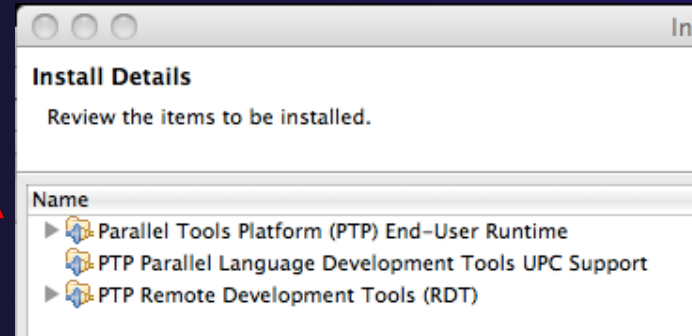 - ✦ PTP Remote Dev Tools (RDT)

- ✦ **Check these and click 'Next'**

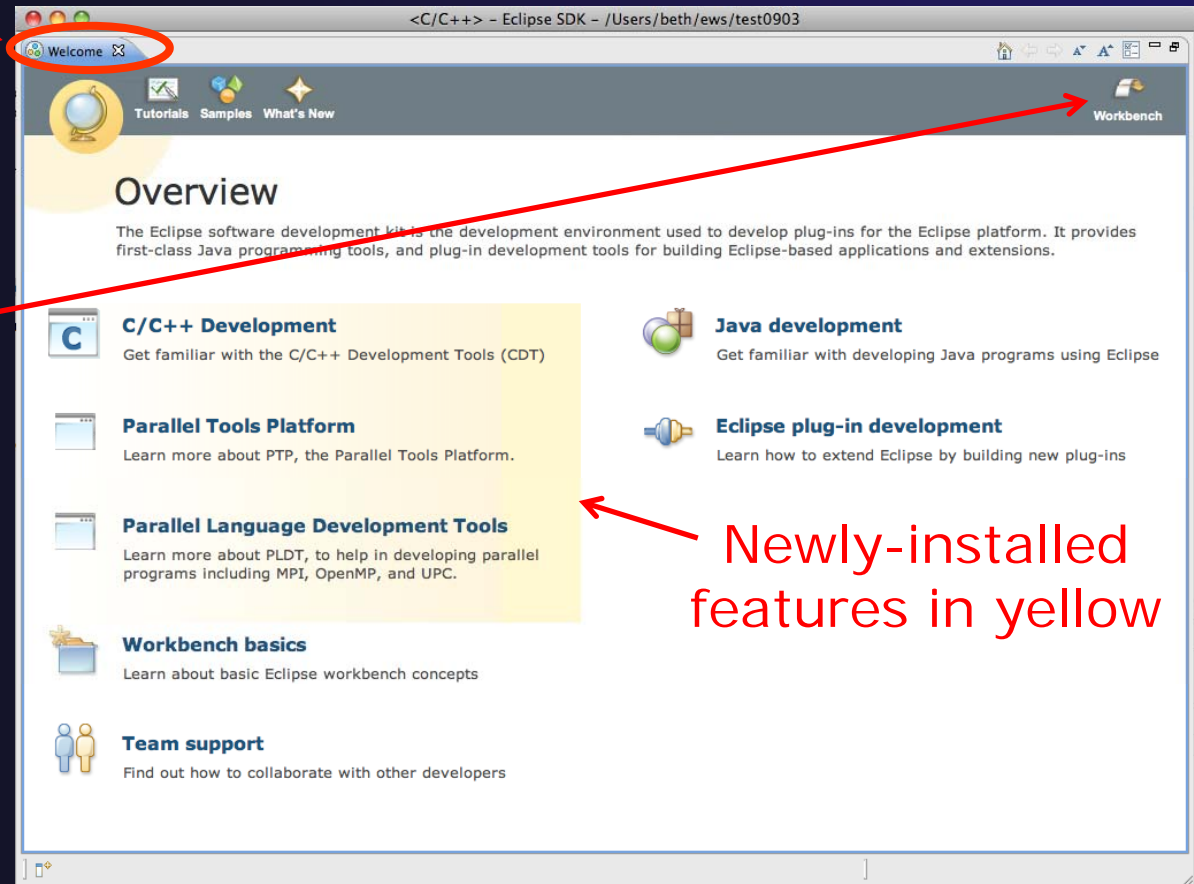* pre-req pulls in optional CDT UPC feature

Finishing Installation

✦ Review the items to be installed

✦ Finish installing:
  ✦ Choose **Next>**
  ✦ Accept license terms
  ✦ Choose **Finish**
  ✦ Features are downloaded and installed
  ✦ Any pre-requisites are also installed if available

✦ Restart Eclipse when prompted

Install Details

Review the items to be installed.

Name
▶ Parallel Tools Platform (PTP) End–User Runtime
  PTP Parallel Language Development Tools UPC Support
▶ PTP Remote Development Tools (RDT)

Restart after Install

- Welcome page informs you of new features installed
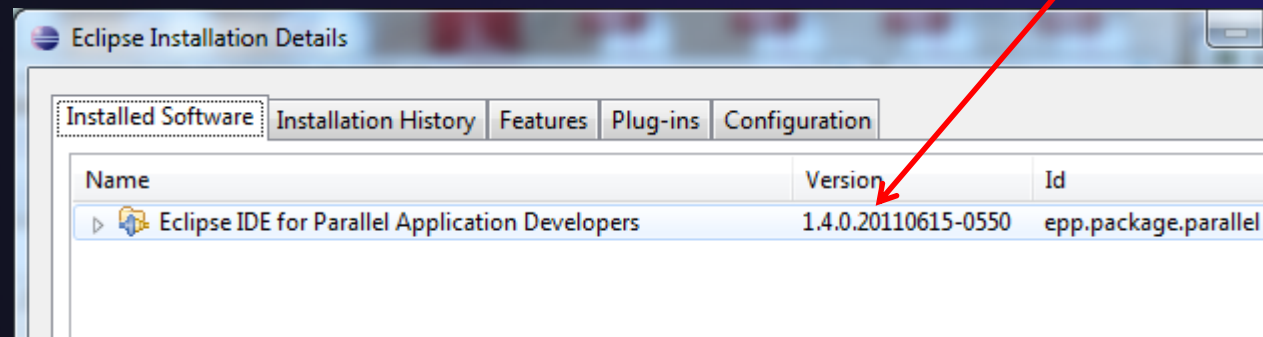- Click to learn more, or…
- Select workbench icon to go to workbench

Newly-installed features in yellow

Check Installation Details

✦ To confirm you have installed OK
  ✦ Mac: **Eclipse>About Eclipse**
  ✦ Others: **Help>About**
✦ Choose **Installation Details**
✦ Confirm you have the following installed software

Differs depending on base download

Checking for PTP Updates

✦ From time-to-time there may be newer PTP releases than the Indigo release

  ✦ Indigo updates are released only in Sept and February

✦ PTP maintains its own update site with the most recent release

  ✦ Bug fix releases can be more frequent than Indigo'

✦ You must enable the PTP-specific update site before the updates will be found

Updating PTP

- ✦ Enable PTP-specific update site
    - ✦ **Help>Install new software**
    - ✦ Click **Available Software Sites** link
    - ✦ Enable/Check the PTP site:
        http://download.eclipse.org/tools/ptp/updates/indigo
        - ✦ (should be enabled by default)
    - ✦ Choose **OK**
    - ✦ Choose **Cancel** (to return to Eclipse workbench)
- ✦ Now select **Help>Check for updates**
    - ✦ Follow prompts like a normal installation