HPCC Systems®

ECL Plug-in for the Eclipse IDE

Boca Raton Documentation Team

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Introduction

Eclipse is an alternative Integrated Development Environment (IDE) which can be used with the HPCC Systems Platform. Eclipse is open-source, and multi-platform. It can be used instead of the ECL IDE to write and execute queries into data on an HPCC cluster .

The ECL plug-in is also open source.

The following sections cover how to install and use the ECL plug-in for Eclipse.

Prerequisites and Requirements

These are the basic requirements to run the Eclipse plug-in.

Windows Prerequisites:

- The HPCC Client Tools (available from http://hpccsystems.com/download/free-community-edition/client-tools)

  This installs the ECL compiler, eclcc, command line tools, and related components

- The Graph Control (available from http://hpccsystems.com/download/free-community-edition/graph-control)
- Eclipse Indigo or later
- The ECL plug-in for Eclipse

	On a machine running Windows 7 (either the 32- or 64-bit), depending on your install location, you may need to start Eclipse with *administrator privileges* for plug-ins to install properly. This is necessary even if your account has administrator privileges. Right-click on the Eclipse shortcut, then select **Run as Administrator** from the pop-up menu. After installing the plug-in, you do not need to run as administrator in the normal course of your work. However, to install any future updates will require running as administrator.

Linux Prerequisites:

- The HPCC Client Tools (available from http://hpccsystems.com/download/free-community-edition/client-tools)

  This installs the ECL compiler, eclcc, command line tools, and related components

- The Graph Control (available from http://hpccsystems.com/download/free-community-edition/graph-control)
- 64-bit desktop edition of Linux
- Eclipse Indigo or later
- The ECL plug-in for Eclipse

Mac (Intel-based) Prerequisites:

- The HPCC Client Tools (available from http://hpccsystems.com/download/free-community-edition/client-tools)

  This installs the ECL compiler, eclcc, command line tools, and related components
- The Graph Control (available from http://hpccsystems.com/download/free-community-edition/graph-control)
- Mac OS X 64-bit (10.6.x or later)
- Eclipse Indigo or later
- The ECL plug-in for Eclipse

Installing Eclipse

This section describes how to install the Eclipse IDE. If you already have the Eclipse IDE installed, skip this section and go to *Installing the ECL Plug-In*.

Getting Eclipse

Download the Eclipse IDE from the site:

http://www.eclipse.org/downloads/

- Choose the Eclipse IDE for Java Developers package
- Download the appropriate Eclipse IDE for your platform
- The Eclipse IDE is delivered as a compressed (.zip or .tar.gz) file. Extract this file into the folder of your choice (for example, c:\Eclipse on Windows).
- You can optionally create a shortcut to the executable file (**eclipse.exe** on Windows, or **eclipse** on Linux).

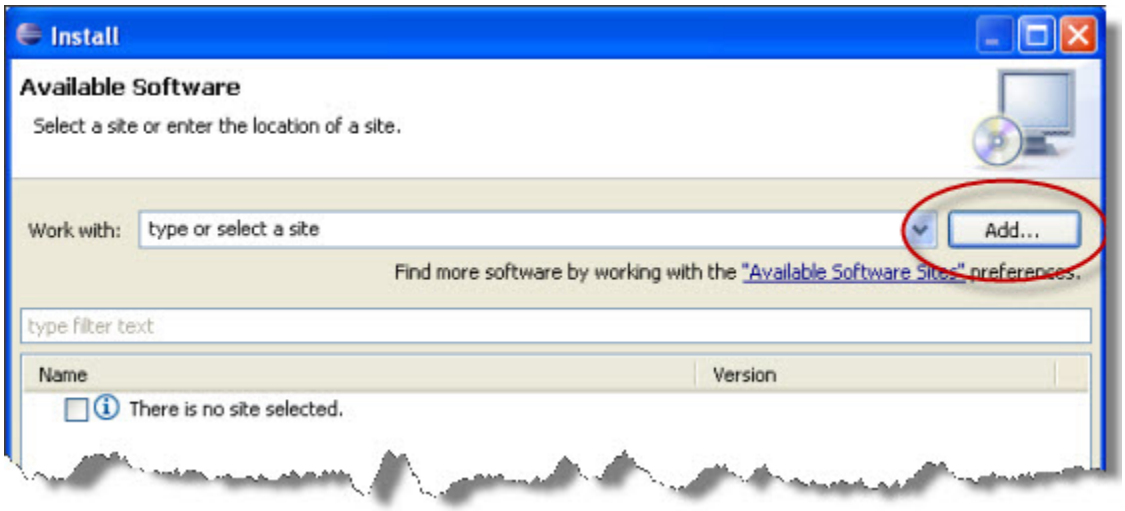
Installing the ECL Plug-in

To install the Eclipse plug-in:

1. In Eclipse IDE, select **Help >> Install New Software…**

2. Press the **Add** button.

Figure 1. Install Software: Add



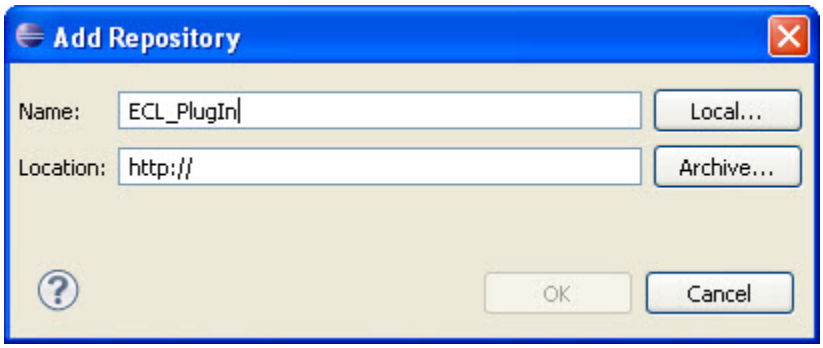
3. Provide a suitable name, for example, **ECL_PlugIn.**

4. Enter one of the locations below in the **Location** field.

Note: We recommend the latest stable build for production work.

http://eclipse.hpccsystems.com/stable	The latest stable build.
http://eclipse.hpccsystems.com/develop	The cutting-edge, untested development build.

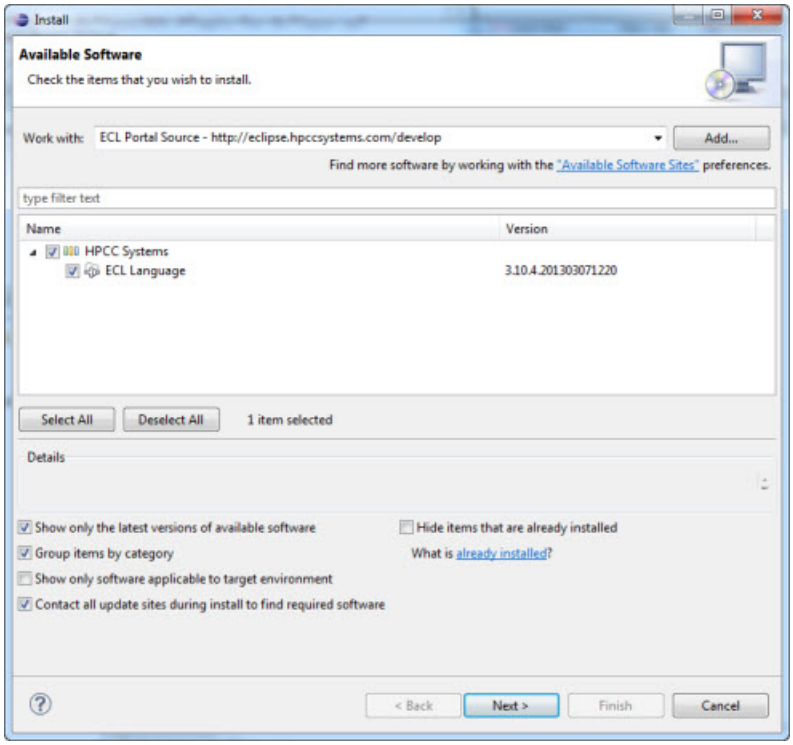
Figure 2. Enter Location



5. Select the **ECL Language** box then press the **Next >** button.

   Note: This can take a while before it appears.

Figure 3. Select ECL Language



6. Review the items to be installed and press the **Next >** button.

7. Accept the licensing agreement, then press the **Finish** button to complete the installation wizard.

8. After completing the wizard, it prompts you to restart eclipse. You should restart eclipse in order for the changes to take effect.

Updating the ECL Plug-in for Eclipse

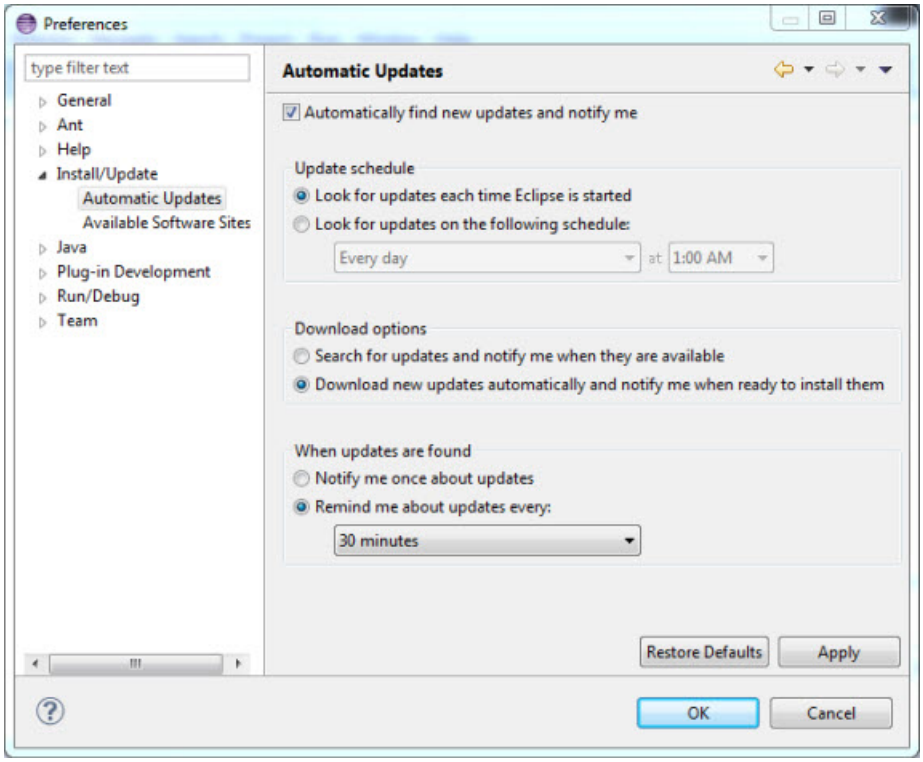
We recommend using the Eclipse Automatic Update feature.

1. In Eclipse IDE, select **Window** >> **Preferences.**

2. Expand the **Install/Update** branch on the left, then select **Automatic Updates**.

   Check the **Automatically find new updates and notify me** button.

Figure 4. Automatic Update Settings



3. Set your options, then press the **OK** button.

To manually update the Eclipse plug-in:

1. In Eclipse IDE, select **Help** >> **Check for Updates…**

   A progress window displays as it checks for any available updates.

2. If an update is available, follow the prompts to install it.

Using Eclipse with HPCC

The following sections tell you how you can use Eclipse to interact with the HPCC Platform.

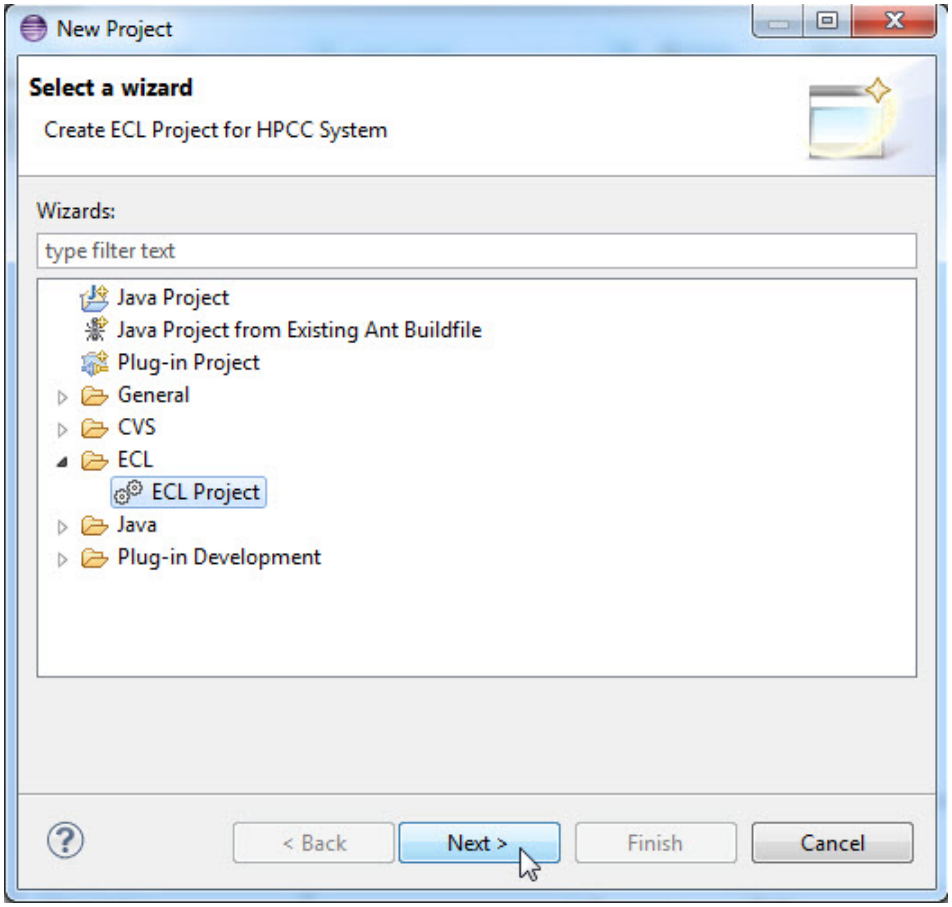
Creating an ECL Project

In order to use Eclipse with an HPCC Platform, you will need to be able to create, edit, and submit ECL projects. This is how to do that with a simple "Hello World" project.

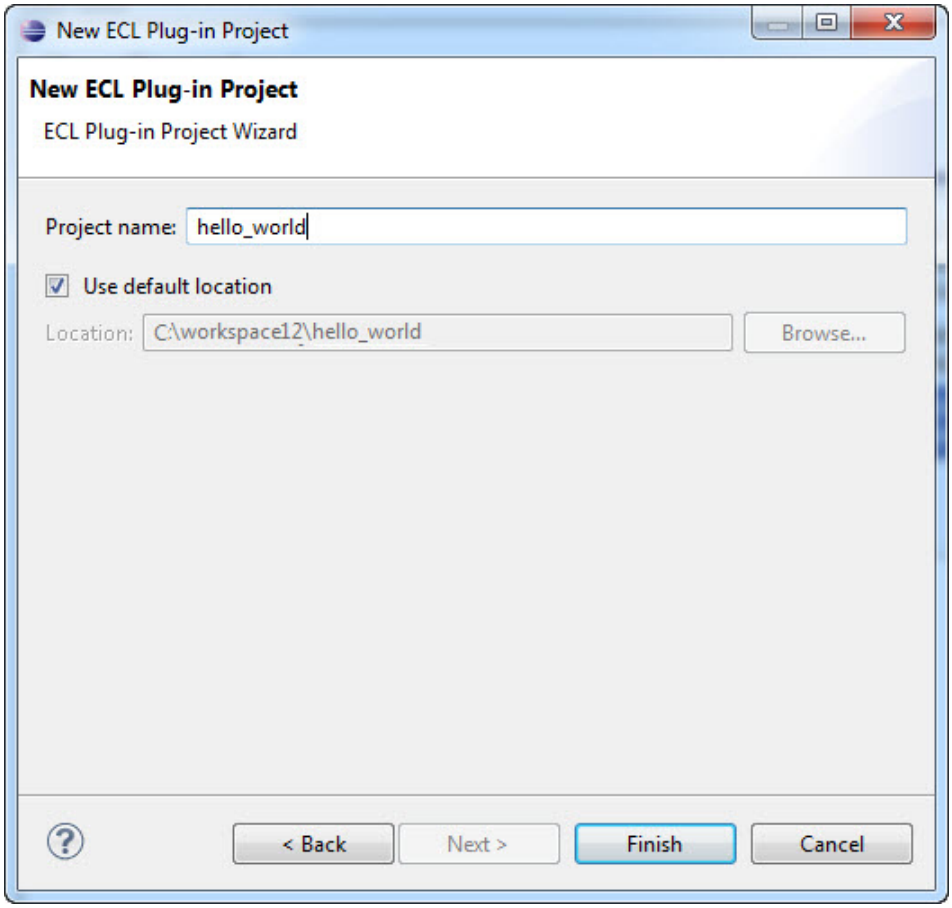
1. Open the Eclipse IDE

2. From the Workbench File menu, select **File** >> **New** >> **Project…**

   This launches a **New Project** window which prompts you to Select a wizard



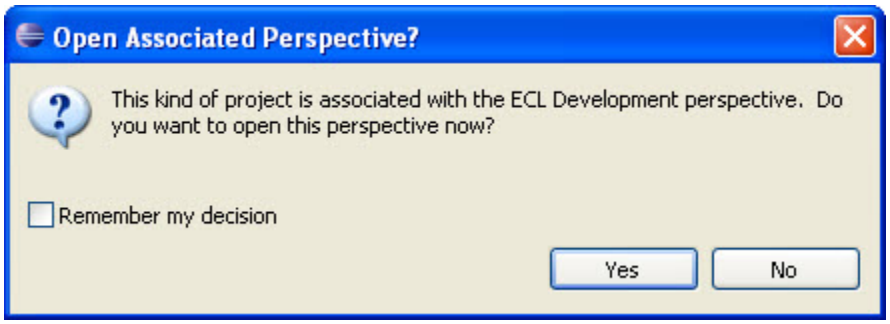
3. Expand the **ECL** folder, select **ECL Project**, then press the **Next** button.



4. In the **Project** window, give it an appropriate name. For example, **hello_world.**

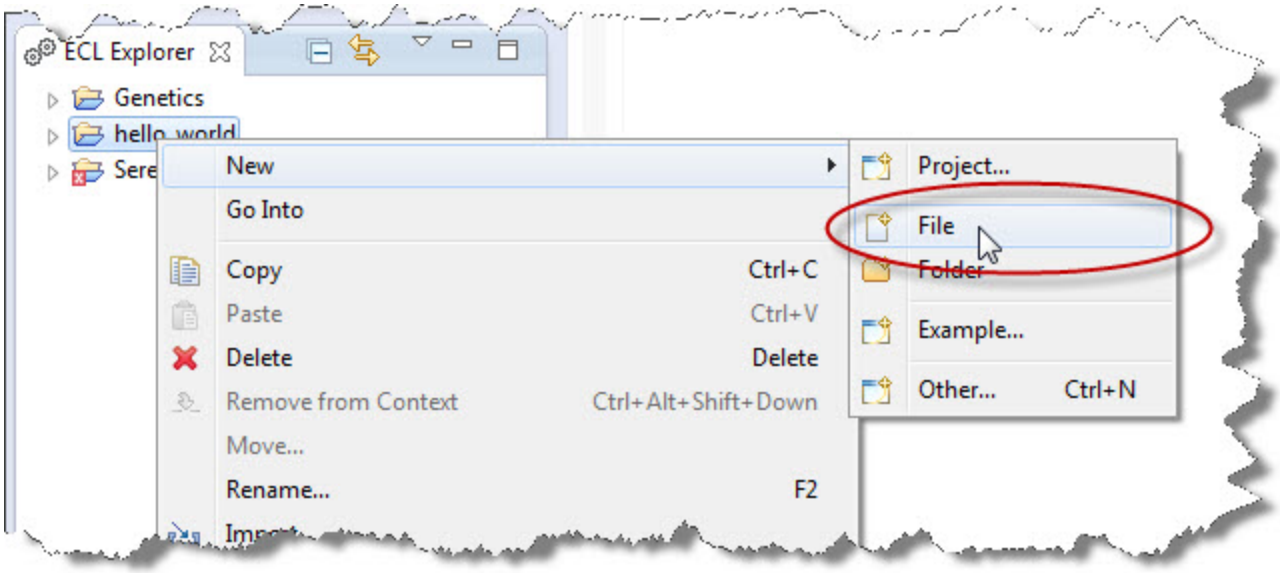
5. Press the **Finish** button.

6. If your ECL Development perspective is not already open, you are prompted to **Open Associated Perspective?** Press the **Yes** button.



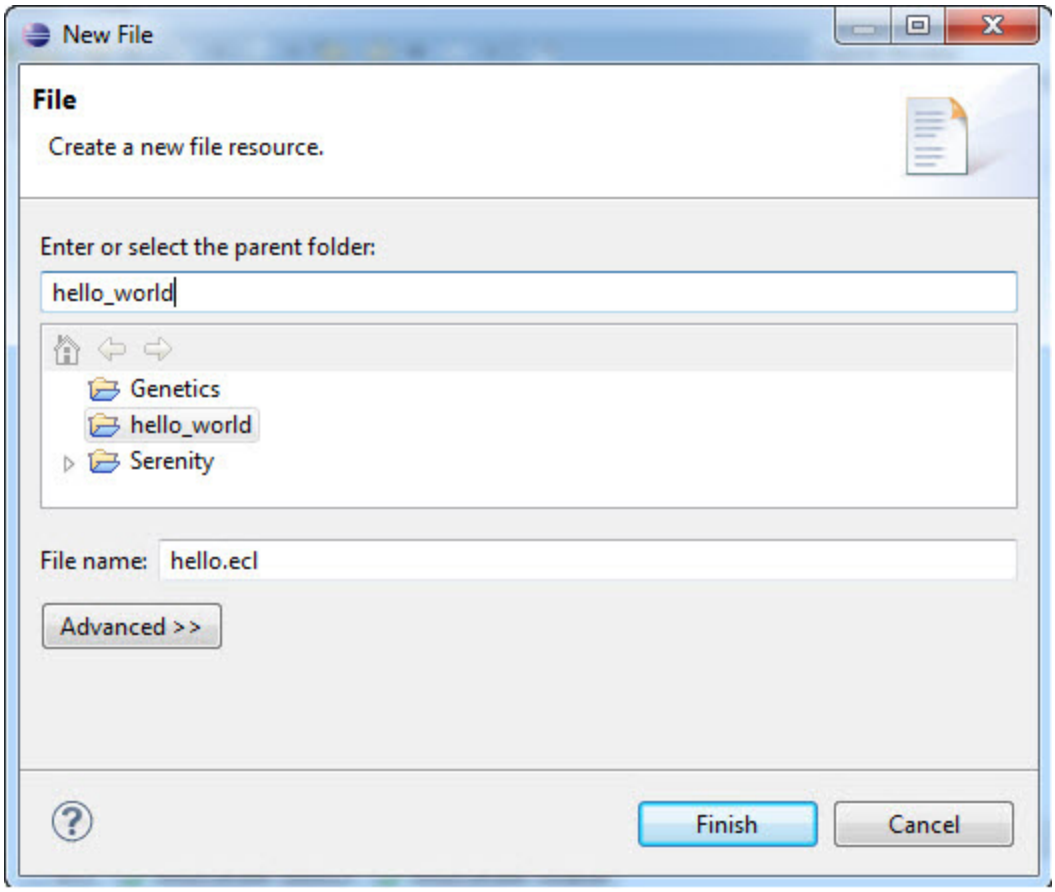
Tip: If you check the **Remember my decision checkbox**, you won't have to do this every time.

7. In the **ECL Explorer** panel, right-click on the newly created project, then select **New >> File.**



The **New File** window displays.

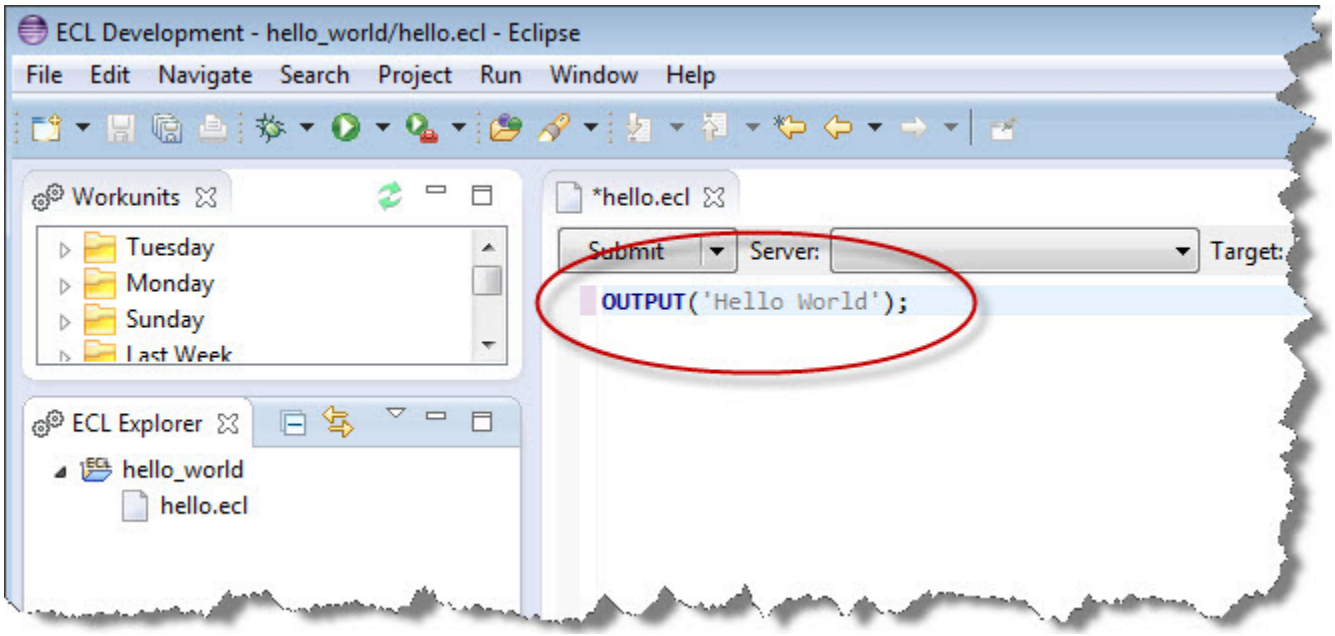
8. If necessary, select the parent folder, then provide a name for the file. For example, **hello.ecl**.



	No matter what you name your file, be sure you ALWAYS include the .ecl extension. The extension is required for the project to work correctly with the HPCC compiler.

9. Add the following code (including the quotes):

```
OUTPUT('Hello world');
```



10. Save your code by pressing the **Save** button on the toolbar, or selecting the **File** >> **Save** from the menu.

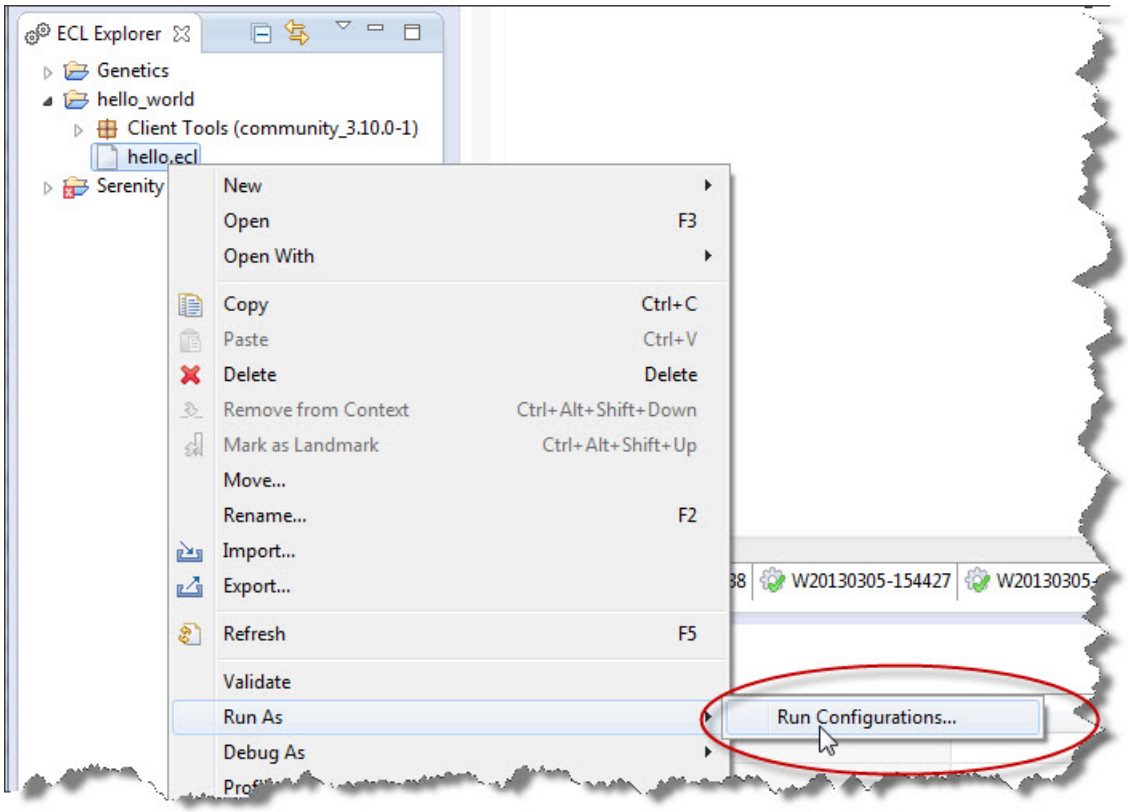
	Saving an ECL file automatically invokes a syntax check. If there is an error, it is indicated by a red X next to the line containing the error.

Execute the ECL Code

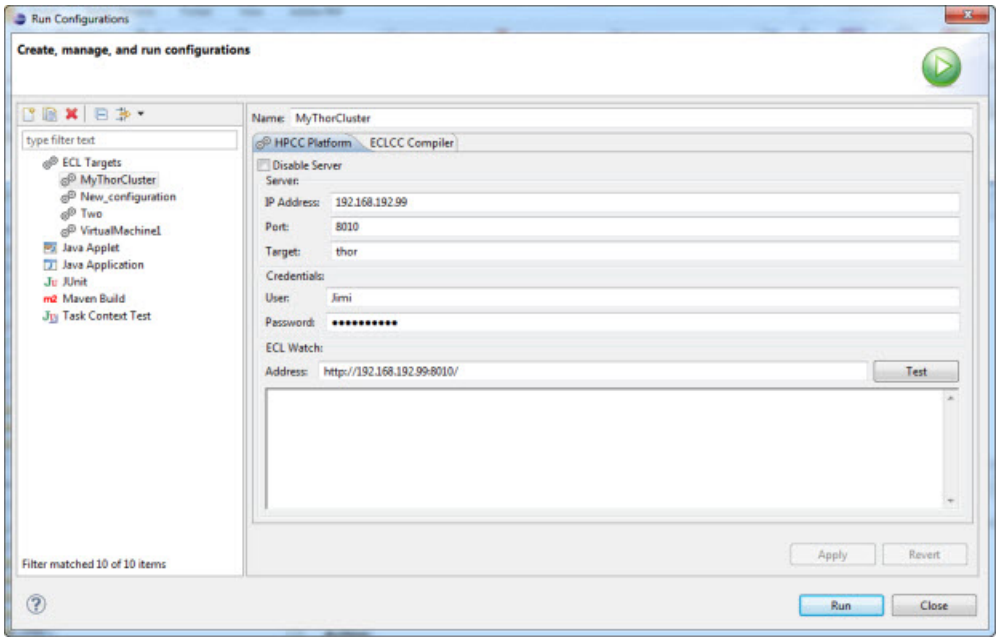
You can choose where to execute your ECL Code. Each target is defined in a **Run Configuration**.

Execute your ECL Code Remotely on a Server.

1. Expand your project (hello_world), then rt-click on hello.ecl, and select **Run As >> Run Configurations…**



2. Double click **ECL Targets** to create a new **Run As** configuration.

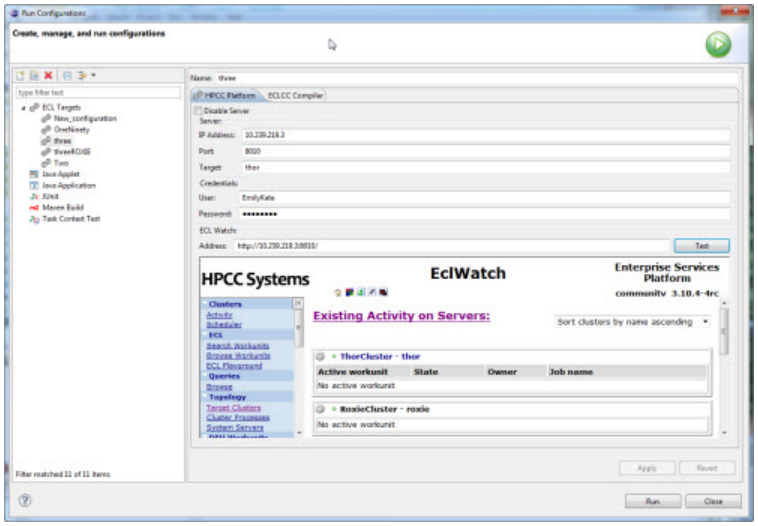


3. On the **HPCC Platfom** tab enter the following:

Name	Give it an appropriate name, for example: **ThorCluster**
IP address	IP address or DNS name of your ESP server
Port	The port to use (default is 8010)
Target name	The name of the cluster (for example, hthor, thor, or roxie)
Credentials	Optional Username and Password to use (required if security is enabled on the cluster)
ECL Watch / Address	This is autofilled from the Server IP Address above; however, if your ECL Watch service is running on a different IP or port, you can modify it here.

Tip: Press the test button and you will see its current ECL Watch page. This lets you know you have the correct configuration.

Figure 5. Correct Configuration



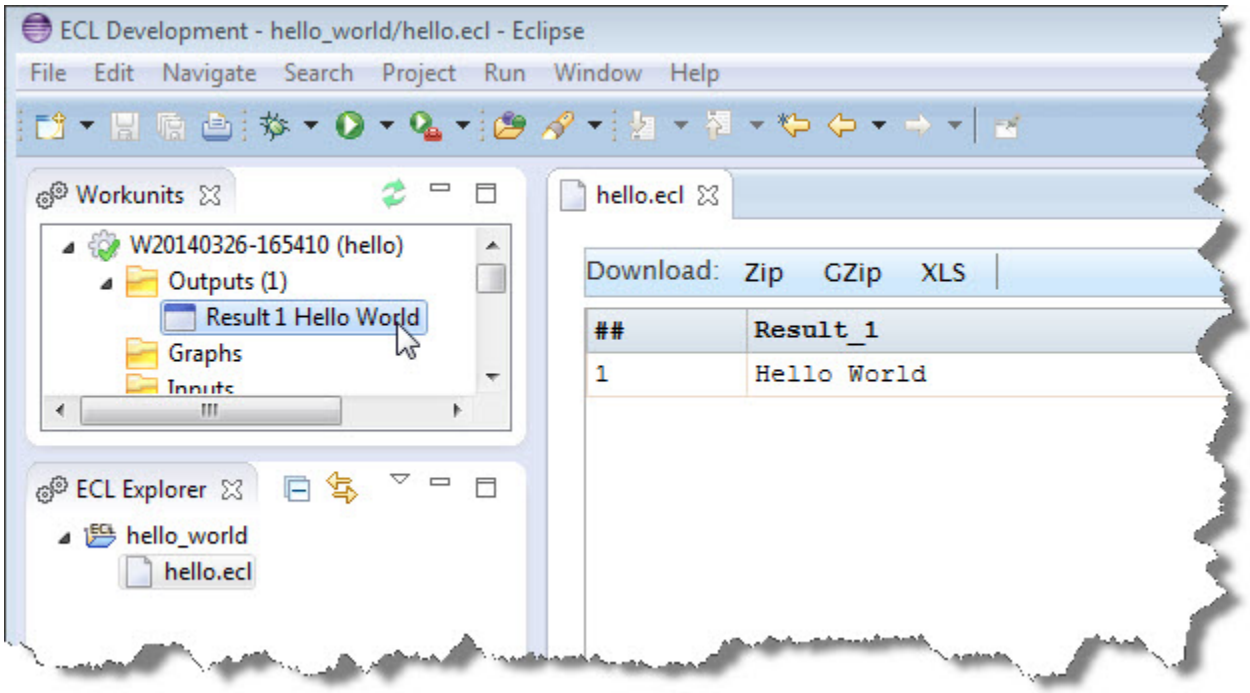
4. On the **ECLCC Compiler** tab check the settings. The location of your installed Client Tools should have been found and auto-completed. If they are not correct, check the Override Defaults box and fill in the location of your Client Tools.

5. Press the **Apply** button to save your configuration.

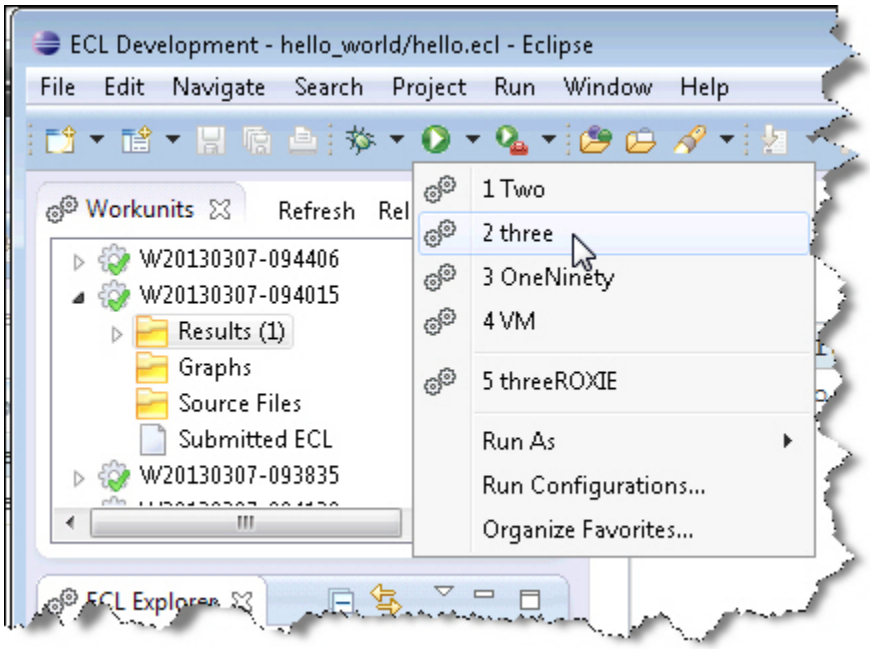
6. Press the **Run** button.

7. In the **Workunits** panel on the left, click and expand the **Workunit**, then click and expand the **Outputs** folder.

   The result(s) display in the center panel. (If your query has multiple results, then each result displays in a separate tab.)



8. Later you can use the drop list on the toolbar button to run on an established **Run Configuration**, as show below.



Next Steps

To familiarize yourself with the Eclipse IDE and the ECL Development perspective, we recommend working the following tutorials in Eclipse:

- The **HPCC Data Tutorial**
- **The Six Degrees of Kevin Bacon** example

To discuss this plug-in or get help using it, visit the forum on the HPCC System's portal at:

http://hpccsystems.com/bb/viewforum.php?f=33&sid=adddbd537294bf32e2c46c1d7d16134e