

CodingSpectator's User Guide

CodingSpectator Team
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February 8, 2011

Contents

1 Prerequisites

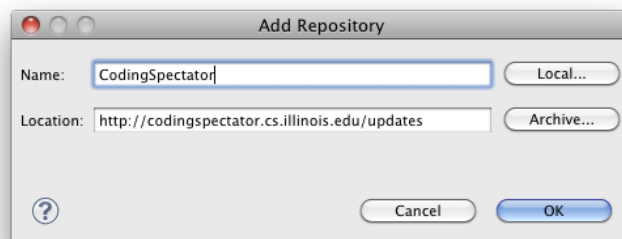
You should be using Eclipse 3.6 Helios. You may check which version you have installed by looking at the logo that appears during startup; it should say Eclipse Helios.

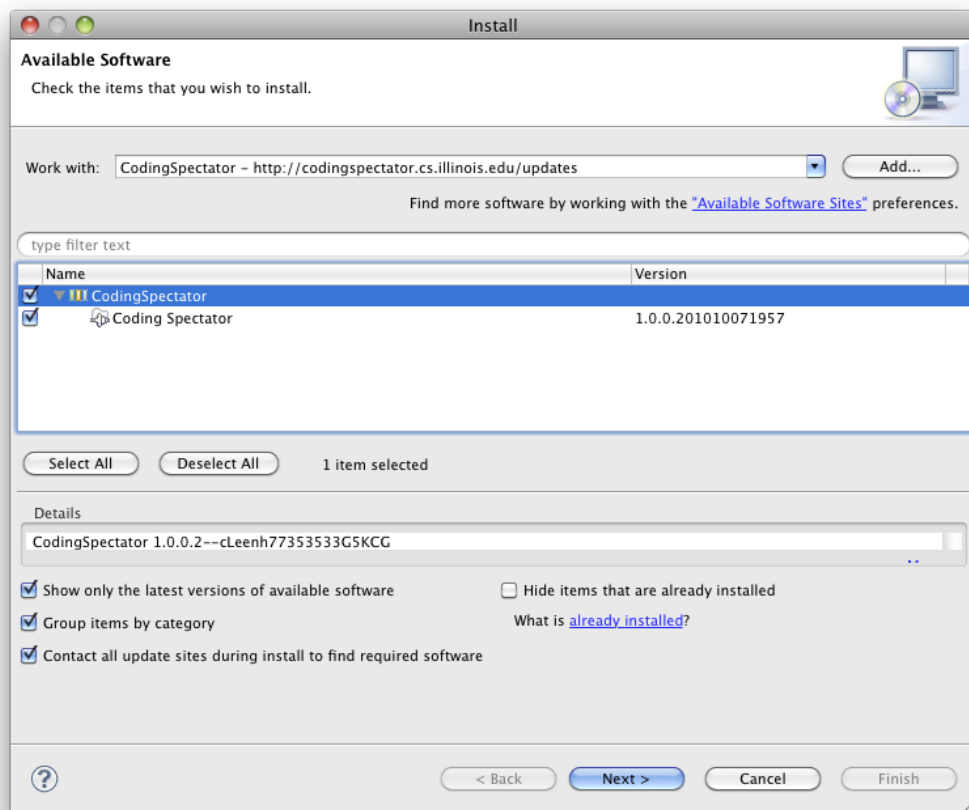
Note: Please note that the plug-in cannot be installed on an older version of Eclipse e.g. Eclipse 3.5 Ganymede. It only works with Eclipse 3.6 Helios. If you are using Helios but are still having problems please contact us.

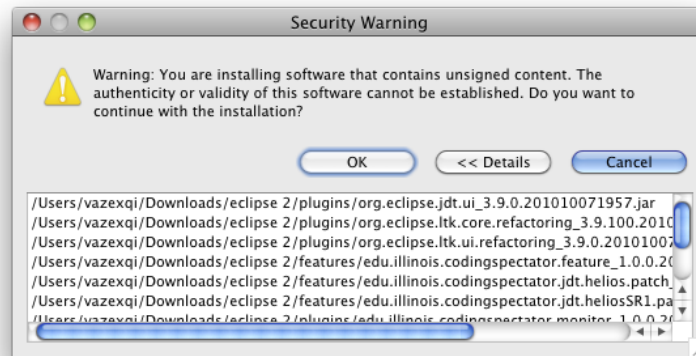
2 Installing our plug-in

After installing Eclipse, you need to install our plug-in by following the steps below:

1. In Eclipse, go to **Help > Install New Software....**
2. Click the **Add** button on the top right corner of the dialog.
3. Add a new update-site. Set the **Name** to CodingSpectator and the **Location** to `http://codingspectator.cs.illinois.edu/updates` as shown below. Then, click **OK**.
4. After adding our update-site, select the CodingSpectator features:
5. Click **Next** to proceed.
6. You will now be presented with the **Install Details** dialog window listing the items that will be installed. Ensure that our CodingSpectator plug-in and all its components are selected. Click **Next**.







7. You will now be presented with the **Review Licenses** dialog window detailing the licenses of the plug-ins that will be installed. Take a moment to review them, and if you agree, proceed by clicking **Finish**.
8. There will be a dialog (like the one below) warning you that you are installing unsigned content. Do not be alarmed by this; our plug-ins are simply not signed for this research study. Click **OK**.
9. A dialog will pop-up asking you to restart Eclipse after the software updates. Click **Restart Now**. Please do **not** use the other options on that dialog.
10. You have successfully installed our plug-in.

3 Running our plug-in

Our plug-in is a non-intrusive extension that monitors your coding activities inside Eclipse. It will run in the background and will not interfere with your coding routines except for the occasional dialog asking you to upload your data. Your data will be uploaded to a secure TSG server that only the researchers have access to.

Note: Our plug-in will monitor for programming behavior in **all** workspaces that you create using that particular Eclipse instance. As detailed in the consent form (<https://illinois.edu/fb/sec/9663171>), the plug-in will record certain code development activities that are performed in the workspace and store that information. In addition, the plug-in might collect some code snippets to provide more context to the activities that are being performed.

If you have sensitive data that you do not wish the plug-in to collect, you would need to install two instances of Eclipse: one with our plug-in and one **without** our plug-in.

Please feel free to talk to us if you have any questions and concerns about your privacy. We can work out a suitable compromise.

4 Automatic upload of data

Once a day (at most), during the initial startup of Eclipse, you might be presented with the dialog box below asking you to upload your data. Please provide your UIUC netid and AD password when prompted.

If you provide the wrong username/password, our plug-in will prompt you again:

If you wish, you may also click on the **Save password (could trigger secure storage)** checkbox. This will ask Eclipse to store your username and password using its underlying Secure Storage mechanism.

Login required for CodingSpectator

! Please provide login details for CodingSpectator to upload data onto a secure TSG server.

UIUC netid:

AD Password:

☒ Save password (could trigger secure storage)

Cancel OK

Login required for CodingSpectator

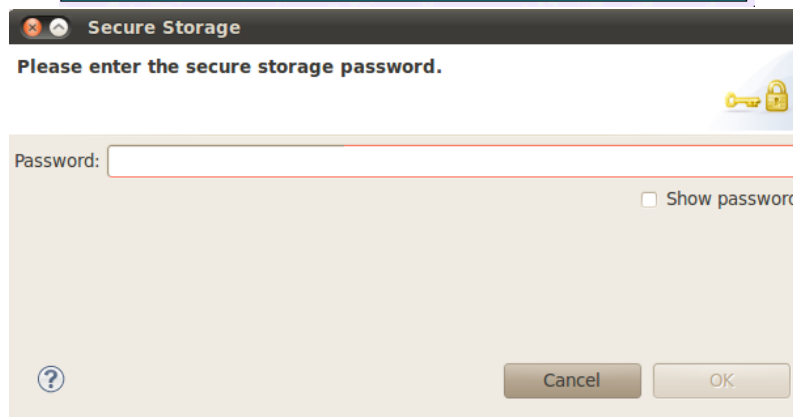
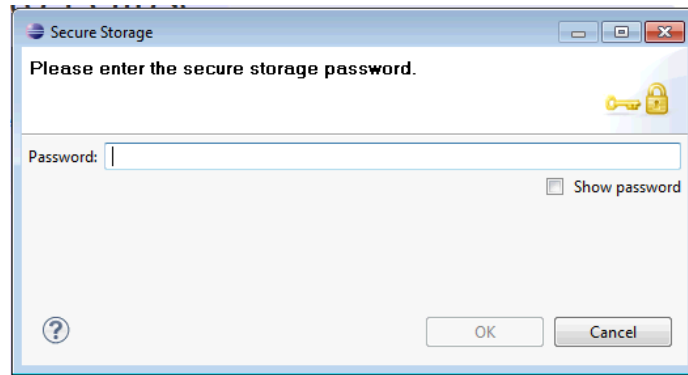
! Wrong authentication information.
Our experiment requires you to enter your authentication information so that we can collect your data.
Please provide login details for CodingSpectator to upload data onto a secure TSG server.

UIUC netid:

AD Password:

☐ Save password (could trigger secure storage)

Cancel OK



If you decide to save your password, it will proceed to ask you to create a master password. Please follow the instructions on screen as they are OS-dependent.

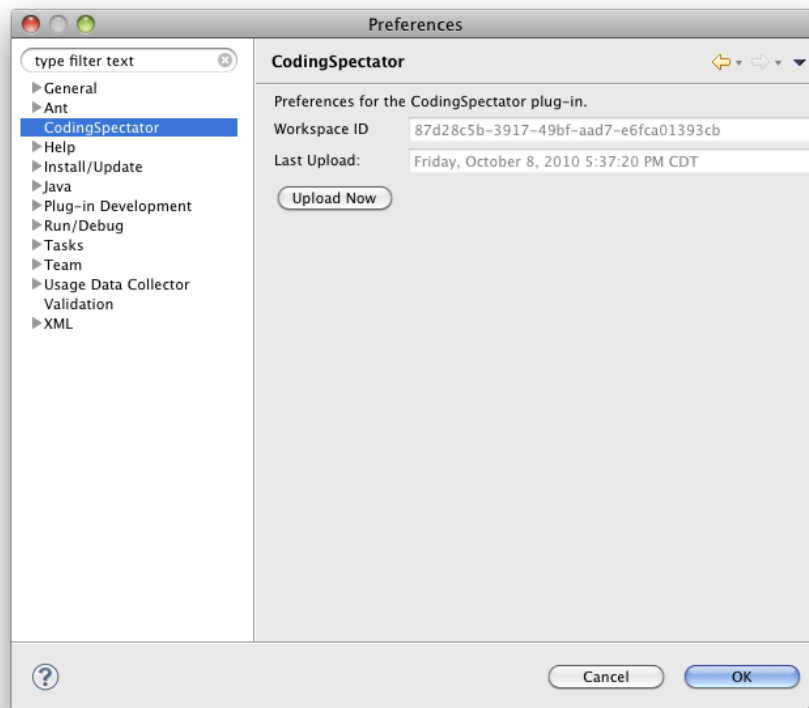
Additionally, if you decide to save your password, on subsequent uploads of our plug-in, you will no longer see the dialog above but one of the following ones:

Please enter the **master password** that you have created (**not** your AD password) when prompted by the Secure Storage dialog box.

5 Manual upload of data

You may also trigger the data upload manually. We provide this facility because, occasionally, it might not be convenient to upload the data during the startup of Eclipse.

To invoke the manual uploading of your data, you can go to **Window > Preferences** (on Linux and Windows) or **Eclipse > Preferences...** (on Mac OS X). Click on the **CodingSpectator** section.



In that preference pane, you will see:

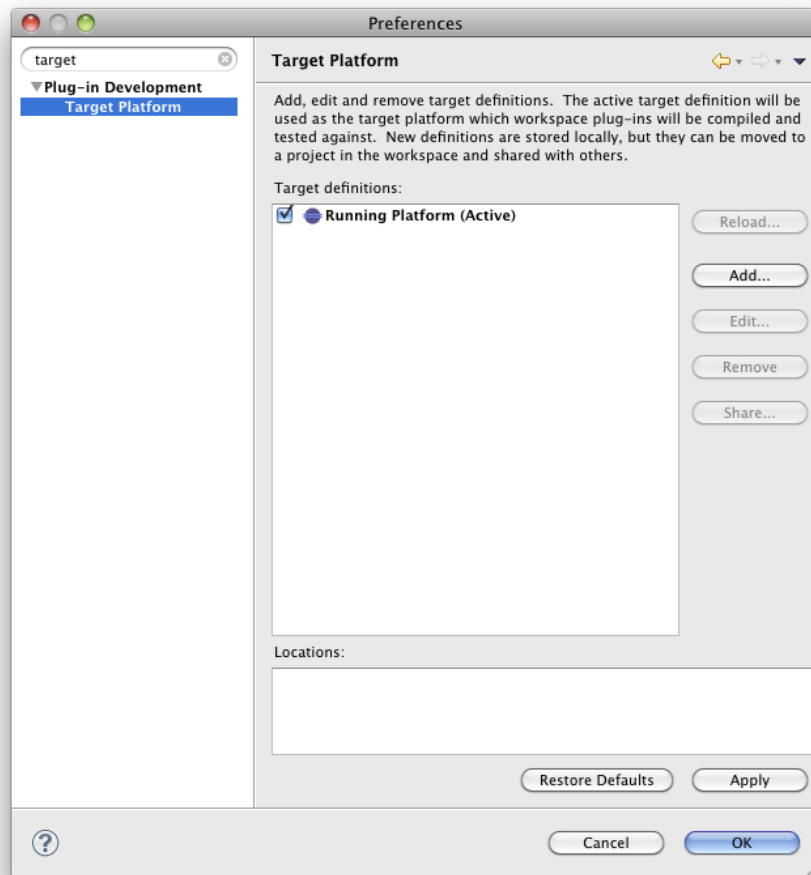
1. a special ID that we use to identify the workspace that you are working on
2. the date and time of your last upload
3. an Upload Now button that you can invoke to upload your data

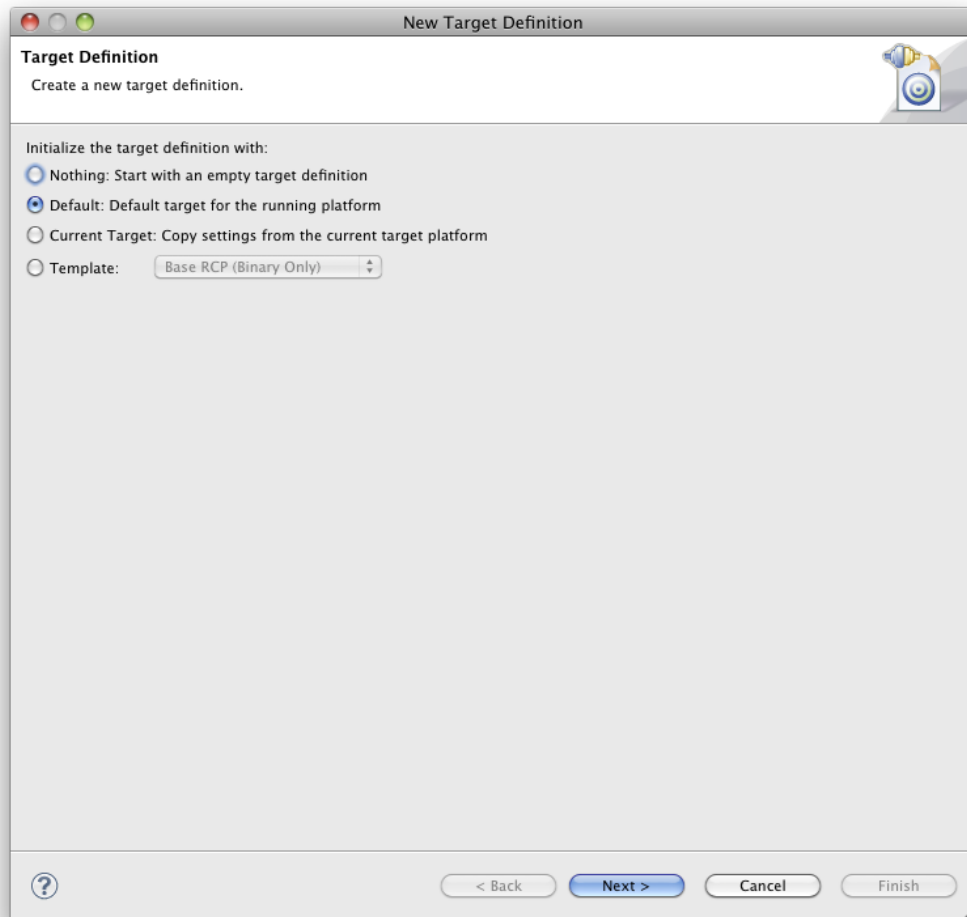
6 Developing Photran plug-ins

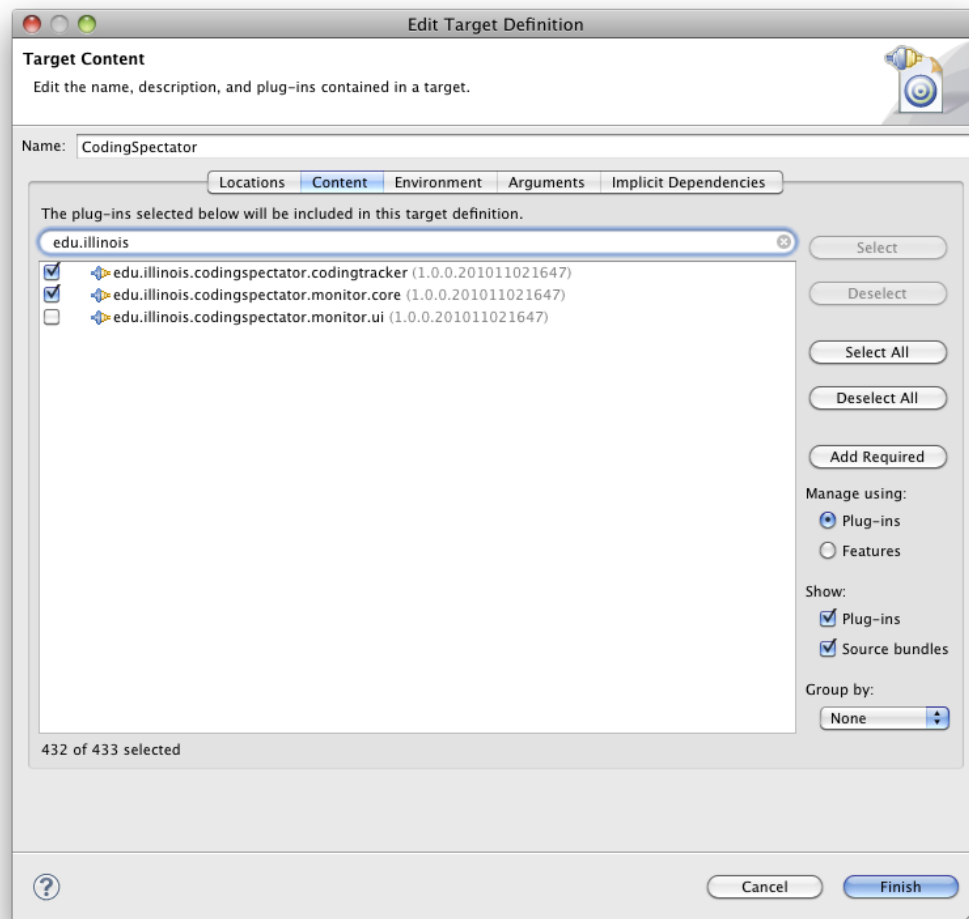
Note: This section **Developing Photran plug-ins** is important. Please read and follow the instructions carefully. The mechanism for doing this might seem complicated at first but it is a direct result of the Eclipse ecosystem and its conventions. If you have any questions, we are available to help.

As part of the final project for CS427, you will be expected to develop a plug-in for Photran. There is an additional step that you need to perform before **running/debugging/testing** your Photran instance: you need to modify your launch configuration so that it does **not** launch our CodingSpectator plug-in. This prevents it from popping-up the dialog window each time you run/debug/test Photran and prevents it from spuriously logging your data.

1. Create a new **Target Platform** configuration. Go to **Window > Preference** (on Linux and Windows) or **Eclipse > Preferences...** (on Mac OS X). Type in **target** in the search dialog to shorten the list to bring up the **Target Platform** preferences.
2. Click on **Target Platform** on the list on the left.
3. Click **Add** on the right hand side of the window.



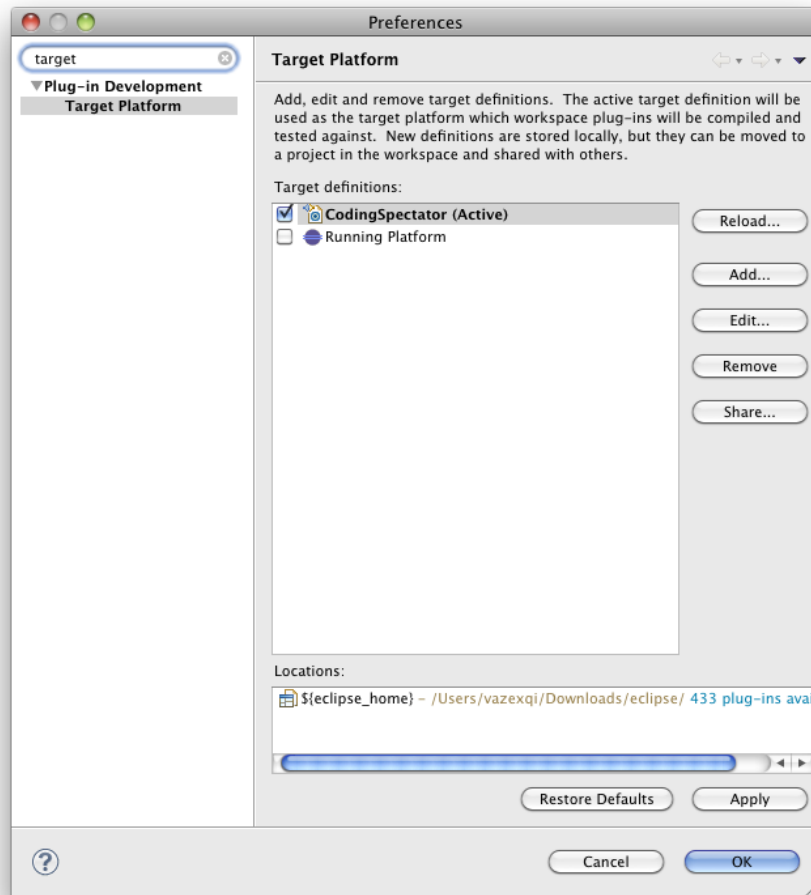


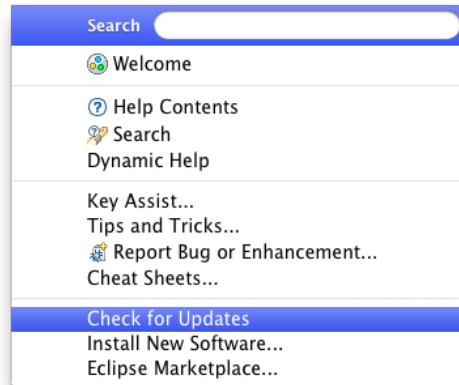


4. In the dialog that appears, select the second option **Default: Default target for running platform**.
5. Click **Next**.
6. In the dialog that appears, put **CodingSpectator** for the new name in textfield at the top.
7. Click on the **Content** tab. Type in "edu.illinois" to narrow down the list of plug-ins. **Deselect** the following (and only the following):
 - (a) edu.illinois.codingspectator.monitor.ui
 - (b) Click **Finish**.
 - (c) In the preferences window, **check** the **CodingSpectator Target Platform** that you have just created.
 - (d) Click **OK**.

7 Updating our plug-in

During this research study, we might require you to update our plug-in. Should this become necessary, we will contact you via e-mail to upgrade the plug-in. This is a simple process that you can perform by going





to **Help > Check for Updates** in the Eclipse application.

8 Uninstalling our plug-in

1. You can uninstall our plug-in through the **About Eclipse...** dialog. You can invoke this dialog (shown below) by going to **Eclipse > About Eclipse...** on OS X or through **Help > About Eclipse...** on Linux and Windows.
2. In that dialog, click on the **Installation Details** button. A new dialog (shown below) should appear. The list of plug-ins installed might be different from the image below depending on what other plug-ins you have installed.
3. Click on **CodingSpectator** from the list to select it. Then click on the **Uninstall...** button.
4. Eclipse will calculate the dependencies and uninstallation validity. After a while, it will show the dialog below.
5. Click **Finish**
6. Eclipse will proceed to uninstall CodingSpectator. After a while, a dialog will pop-up asking if you would like to restart Eclipse for the changes to take effect. Click **Restart Now**.

