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MS0S – WebSphere MQ Explorer MQSC Editing Plug-in

Version 1.2.0

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1 Introduction

This SupportPac provides a mechanism in the WebSphere MQ Explorer to work with script files written using the MQSC language. Existing MQSC files are automatically discovered in the Eclipse workspace and appear in the MQExplorer Navigator view under a new folder called "MQSC Script Files".

This SupportPac allows you to manage your WebSphere MQ environment with the MQ Script Command language (MQSC). All MQSC commands are supported, and any queue manager that the MQ Explorer connects to can be managed with this Support Pac, regardless of platform.

Smart editing features allow for syntax checking, code assistance, and rapid identification and navigation to code problems.

MQSC files can be created, imported, deleted, opened, and run against any active queue manager known to MQ Explorer.

The standard Eclipse Team support can be used to store and retrieve MQSC files from Version Control Systems.

1.1 Changes/enhancements/updates for the 1.2 release

The 1.2 release of MS0S is an upgrade release that provides support for MQ Version 7 Explorer. It also includes enhanced functionality for running scripts against multiple queue managers and for capturing script results into text files. There are bug fixes from the 1.1 release, and the 1.2 release no longer forces the user into the Resource Perspective in the Eclipse workbench.

1.2 Changes/enhancements/updates for the 1.1 release

The 1.1 release of MS0S is a maintenance release, consisting of performance enhancements, bug fixes, and very minor usability tweaks. The performance enhancements and bug fixes are significant, and all users of 1.0 should update to this version.

In addition, the 1.1 release will allow a base install in any MQ Explorer, regardless of what national language it is running under – although no national language features or translations are included with this package.

2 Installation

This SupportPac ships as an Eclipse Update Site that can be installed into any Eclipse runtime that has the WebSphere MQ Explorer installed.

2.1 Updating to 1.2

MS0S requires MQ Explorer version 7, so you must upgrade your MQExplorer to that before you can use version 1.2. Depending on how you do that upgrade, you may need to do a new install of MS0S, rather than an upgrade. You have several choices for updating an installed MS0S to 1.2.

1. You can completely uninstall the old version. **THIS IS THE RECOMMENDED OPTION**. This is done either by manually removing it, and restarting or by using the **Help > Software Updates > Manage Configuration** tool to uninstall the feature. Then you can follow the below instructions to install the new version. Some discussion of how to use Manage Configuration is included in the uninstallation section at the end of this manual.
2. You can unpack the new version into the same location as you had unpacked the original version, and then use the "Search for updates of the currently installed features" choice from **Help > Software Updates > Find and Install**. This will replace the features in place.
3. You can simply follow the instructions below to create a new install site (and likely remove the old one), and install "on top of" the old version. Eclipse and the MQ Explorer will only ever load the most recent version of installed versions and plugins.

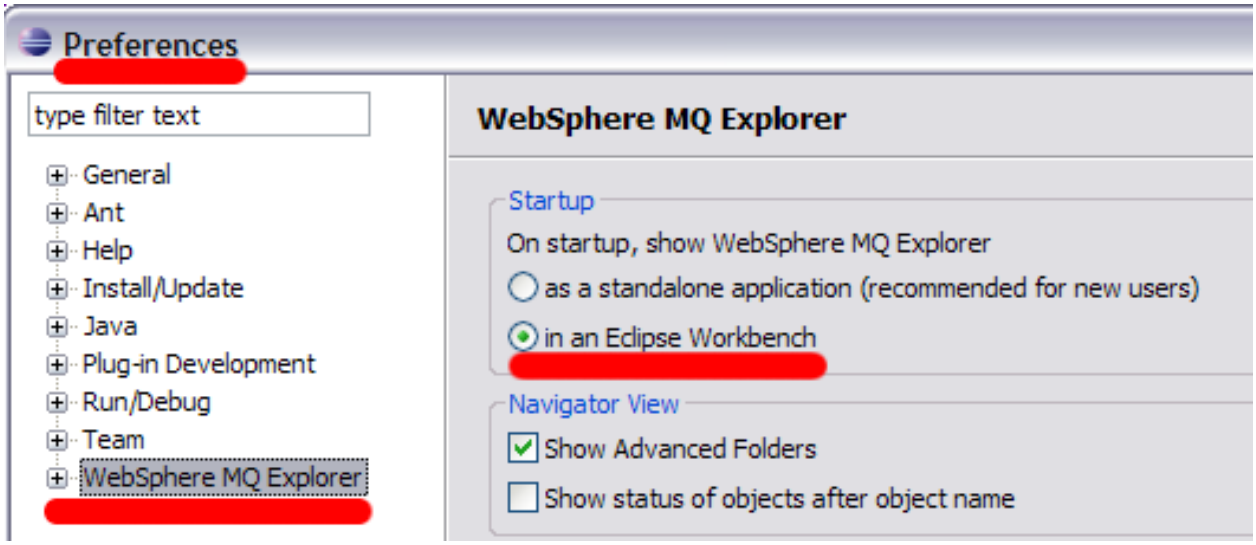
2.2 Unpacking the Distribution

Decide on a location where you wish to unpack the Installer site. Use your normal platform tools for unpacking a zip file.

2.3 Change how WebSphere MQ Explorer starts up

The MQSC Editor plug-in uses the Eclipse 'Resource' perspective quite a lot. In order to make best use of this perspective, as well as to perform the complete install, it is necessary to change the WebSphere MQ Explorer to launch as an Eclipse workbench, rather than the way it starts up by default.

1. Start **WebSphere MQ Explorer**.
2. From the **Window** menu, click **Preferences**. The Preferences dialog opens.
3. On the WebSphere MQ Explorer page of the Preferences dialog, in the Startup section, click "in an Eclipse Workbench".

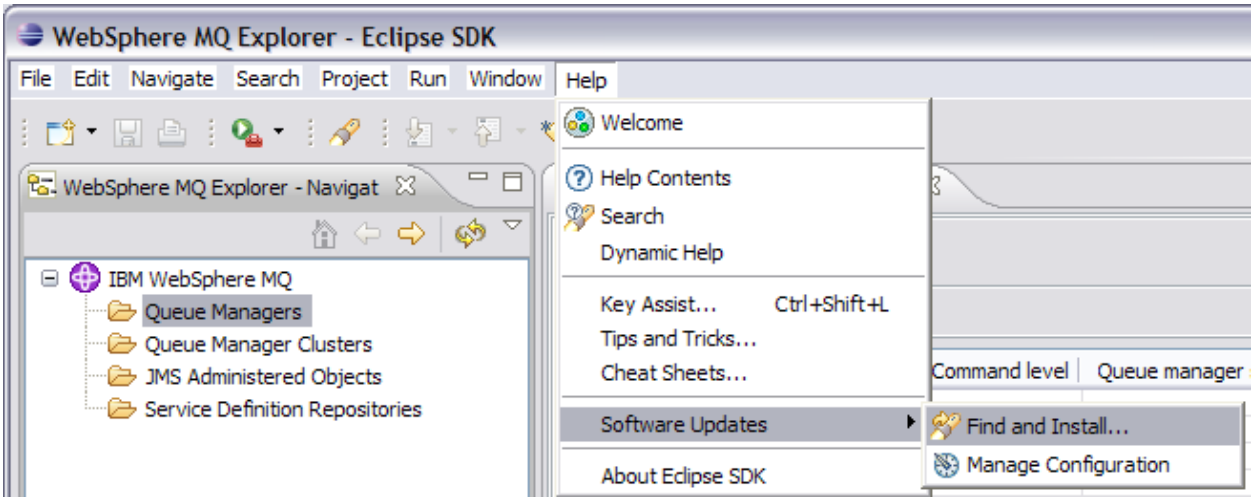


2.4 Installing from the Update Site

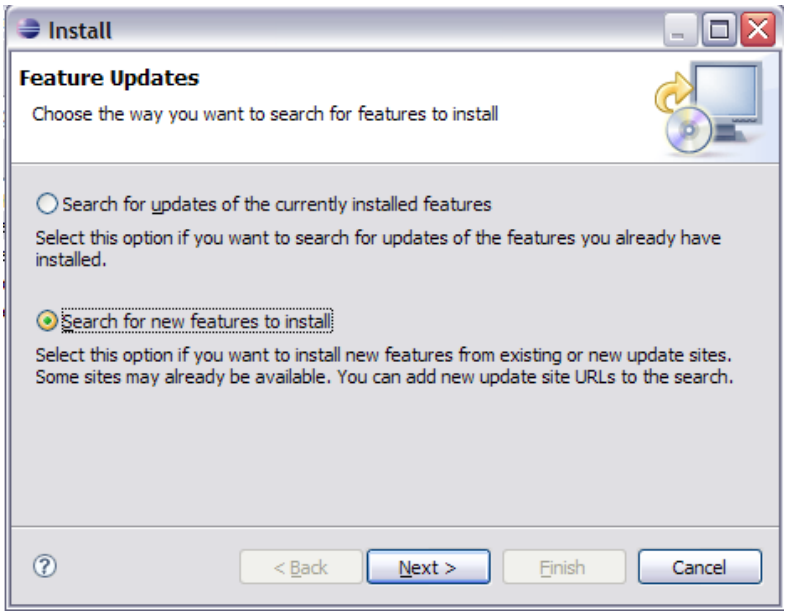
The only other step is to actually use the Update Site that was unpacked earlier to install the SupportPac into the MQ Explorer.

NOTE: On Linux this task may be performed by a non-root user, but you will have to create a new plug-in location for the SupportPac feature to be installed into. Instructions for doing that are not included here.

1. If you did not restart WebSphere MQ Explorer after changing the startup preference, then close and restart it.
2. In WebSphere MQ Explorer, click **Help > Software Updates > Find and Install**.

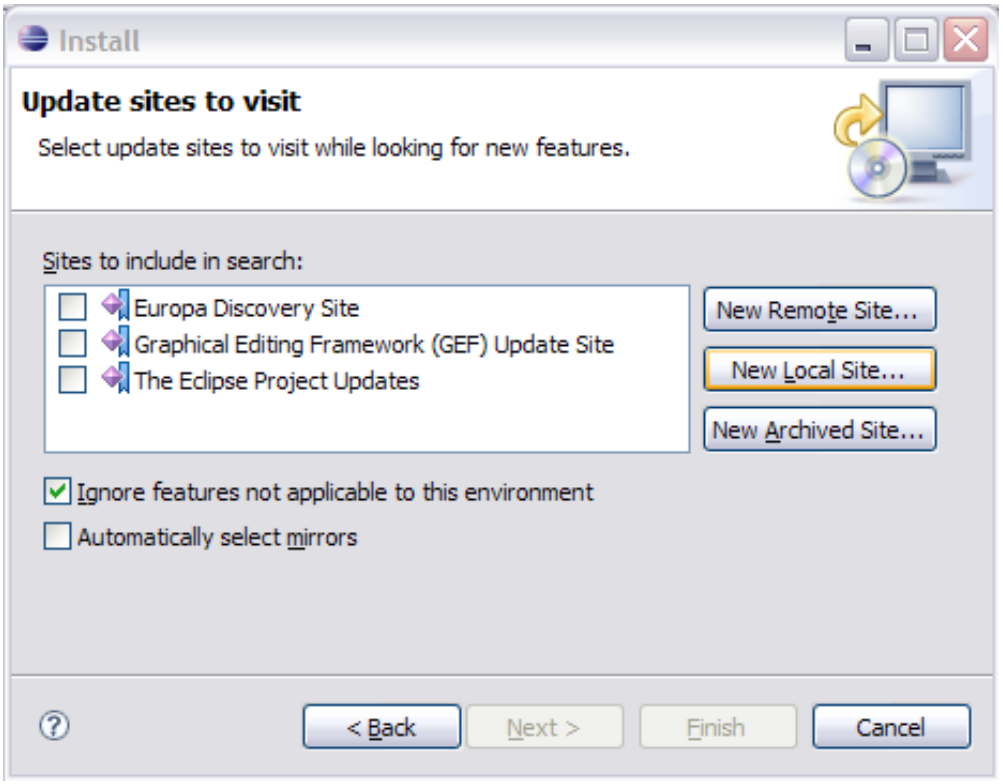


3. The Install/Update wizard opens

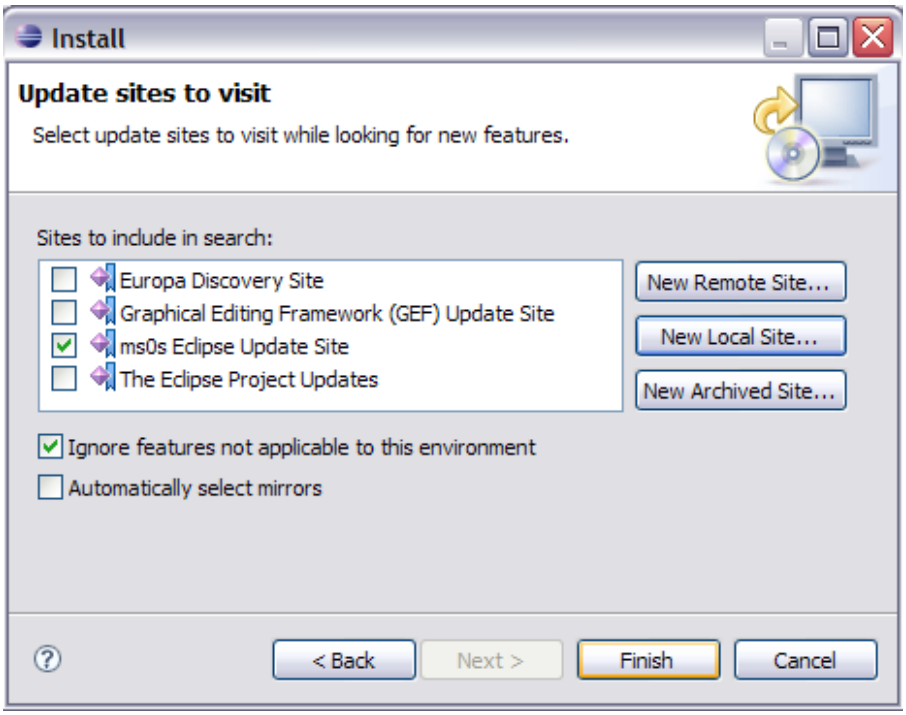


4. Choose **Search for New Features to Install**, then click **Next**

5. Choose **New Local Site…**

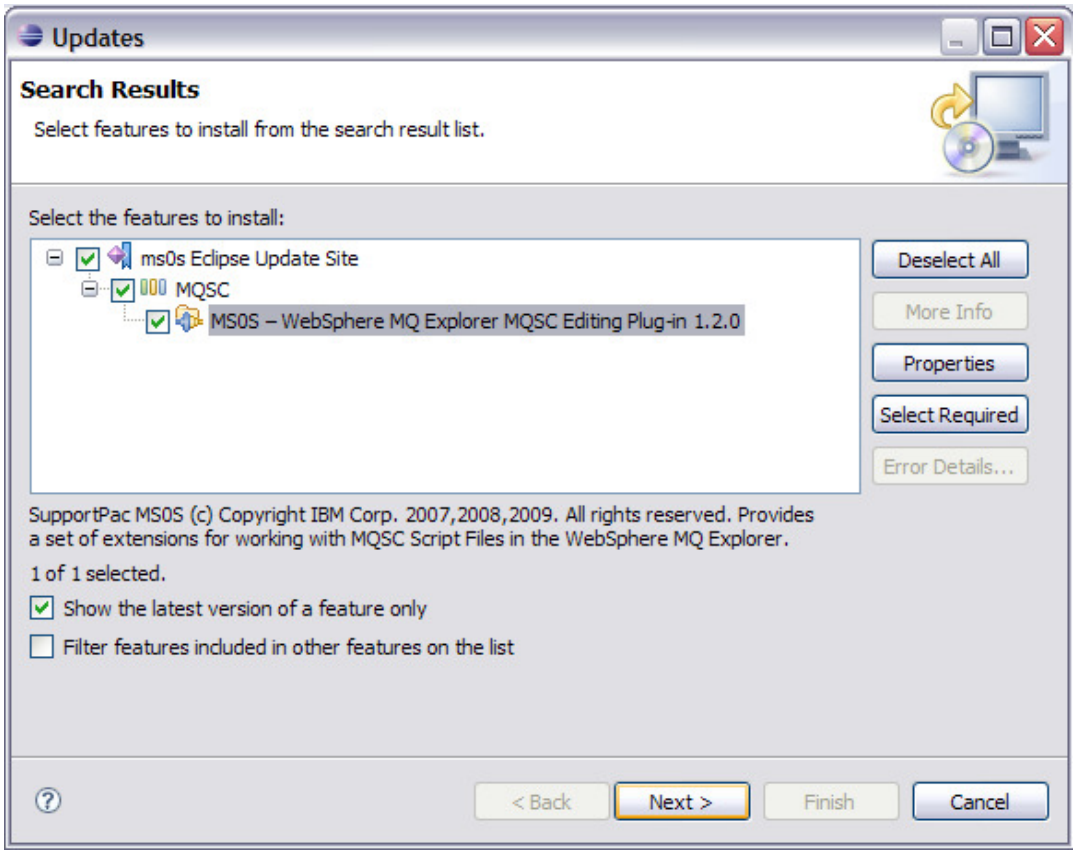


6. Navigate to the Update Site located in the folder **ms0s Eclipse Update Site** folder found where you unpacked the SupportPac distribution, and choose **Okay**



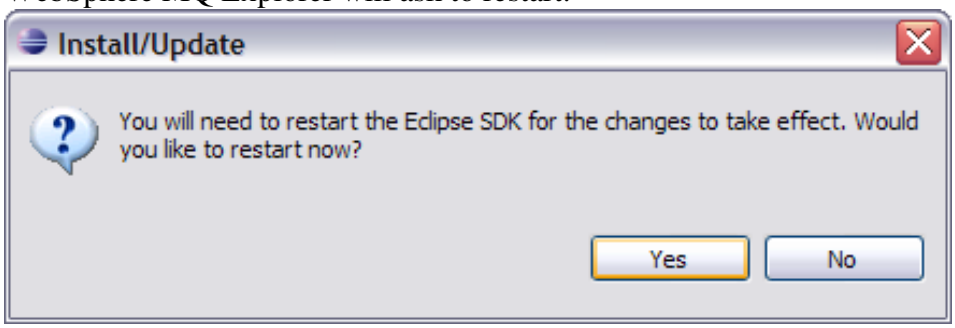
7. Ensure that the new Update Site has a checkmark next to it, and select Next.

8. Select the MQSC Editor Feature



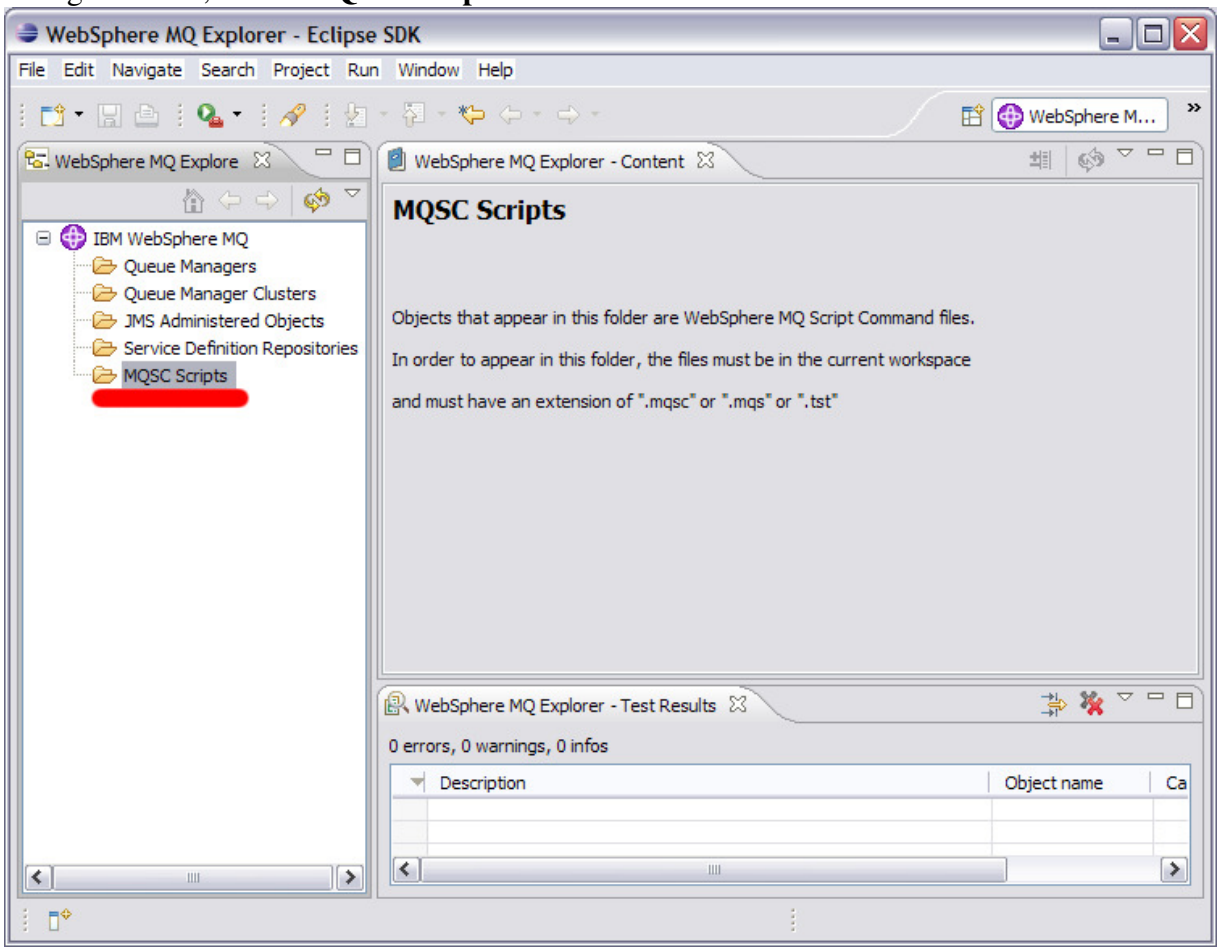
9. Accept the licenses, and confirm the install.

10. WebSphere MQ Explorer will ask to restart.



2.4.1 Verify the Installation

After WebSphere MQ Explorer restarts, if the installation is successful, there will be only one visible change. There will now be an additional folder in the WebSphere MQ Explorer Navigator view, called **MQSC Scripts**



A second method of verification is to confirm that there is an entry in the **WebSphere MQ Explorer** Preferences under **Enable Plug-ins** for the **MQSC Scripts Plug-in**

3 Working with Script Files

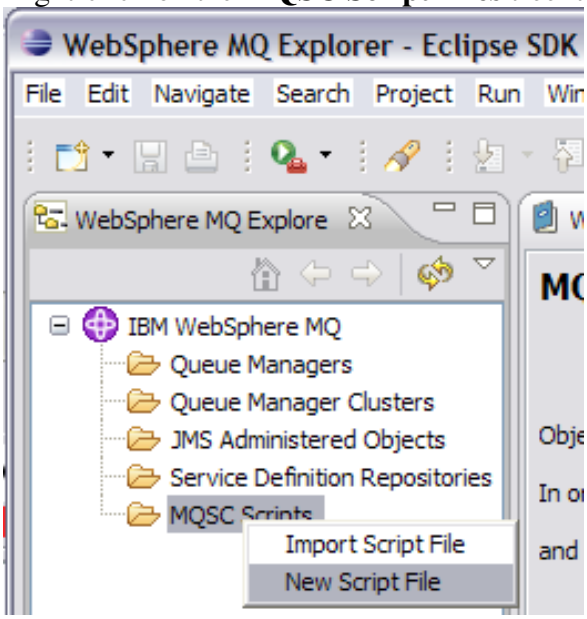
The five basic options that this SupportPac provides are to create, import, delete, edit, and run MQSC Script files. MQSC Script files are text files that contain commands in the MQSC language.

MQSC Script Files are identified in the WebSphere MQ Explorer and Eclipse using file extensions of ".mqsc", ".mqs" or ".tst". The ".tst" file extension is for historical purposes only, and should not be used for new script files. This SupportPac will not recognize or be able to work with any files, regardless of content, that do not have one of those three extensions.

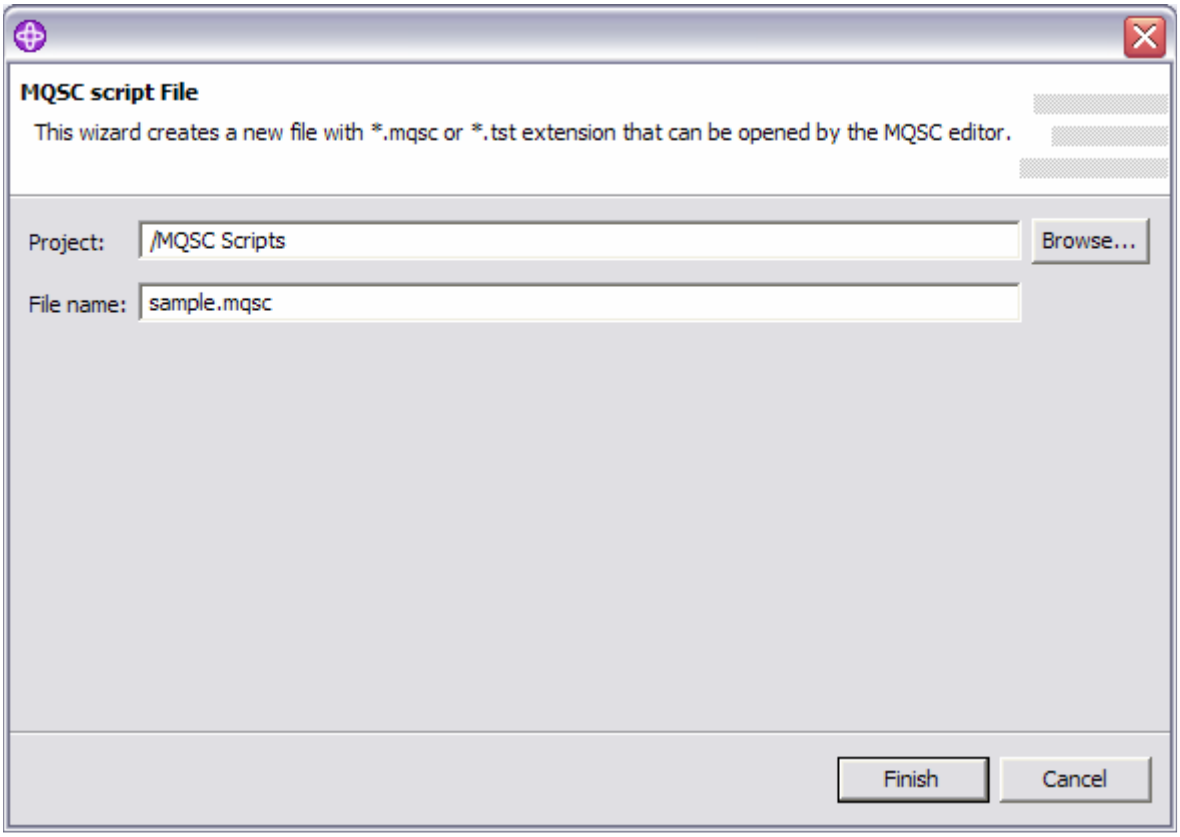
3.1 Creating a New MQSC Script File

To create a new MQSC Script file, first switch to the WebSphere MQ Explorer perspective.

Right-click on the **MQSC Script Files** tree item in the Explorer Navigator perspective.

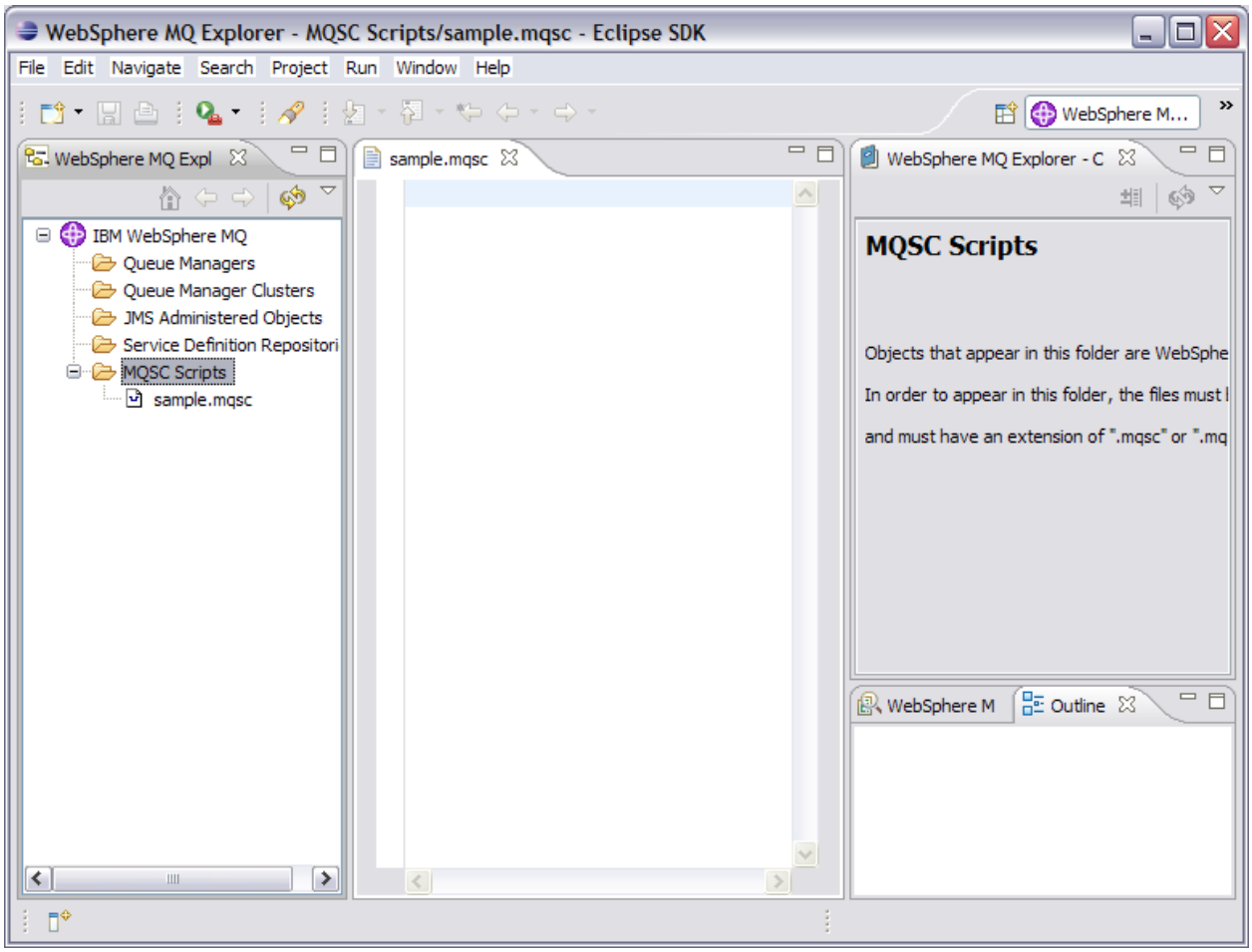


Enter a file name, like **test.mqsc** into the New File dialog



In this dialog box, you can also choose which Eclipse project will receive the new file. You can not create a new Eclipse Project from this dialog box, you must do that separately. You can only create new MQSC Script Files in existing Eclipse Projects. The project "MQSC Scripts" is created for you, as a convenience. It is a good idea to organize your MQSC scripts into separate projects for each queue manager or application or type of change or etc, depending on the nature of the files. Each file will show up in the Navigator view, regardless of which project they belong to in the workspace.

Click **Finish** to create the file, and open it. Note that the Resource Perspective is *not* opened in the 1.2 release of MS0S. You can still manually switch to it if you prefer.

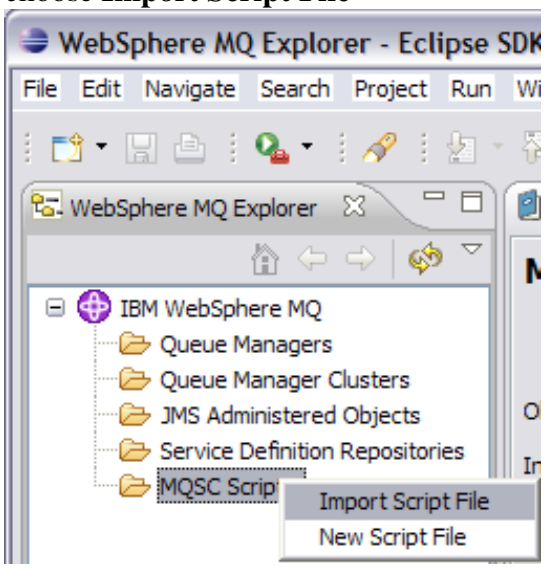


See the section on how to **Edit an MQSC Script** for more information on this view and how the MQSC Editor works.

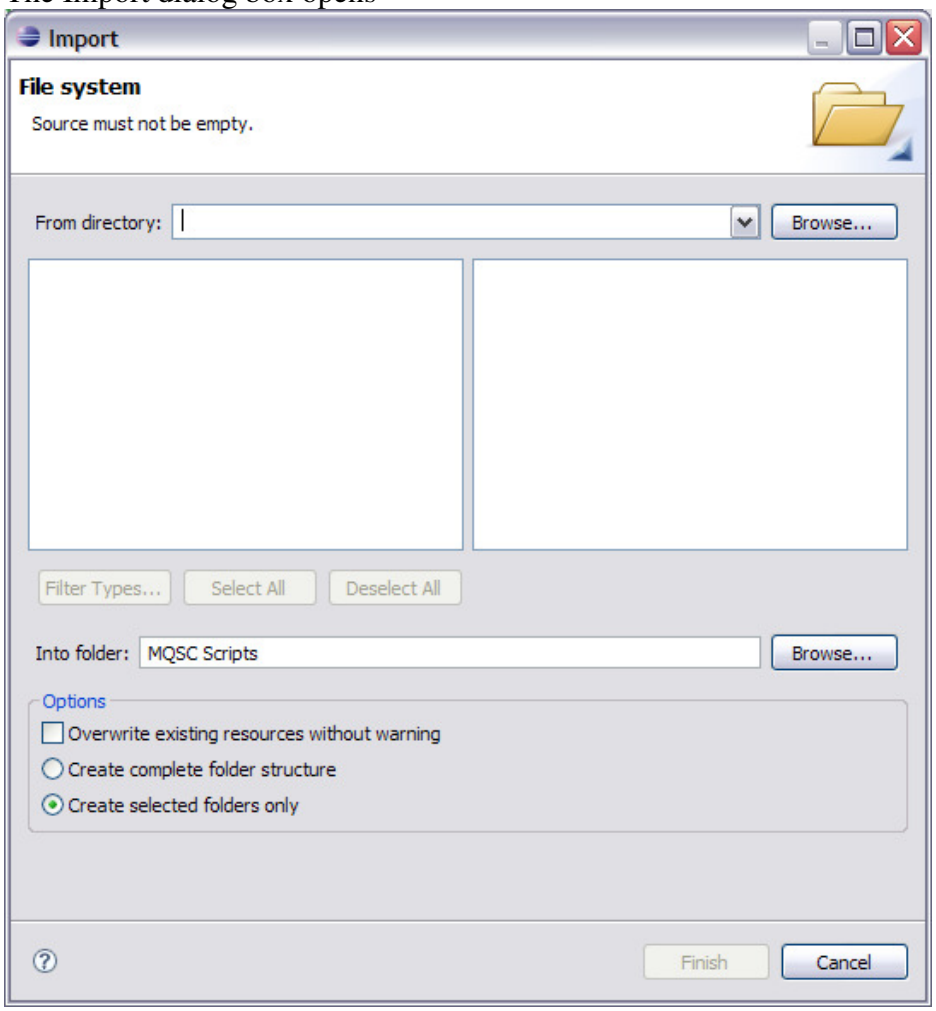
3.2 Importing an existing MQSC Script File

To import a MQSC Script file, first switch to the WebSphere MQ Explorer perspective.

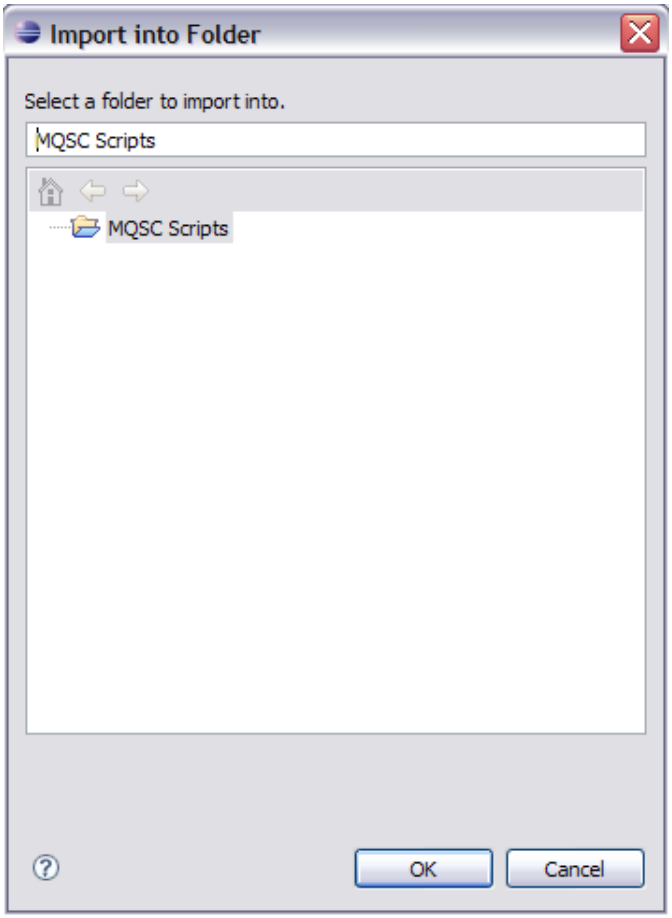
Right-click on the **MQSC Script Files** tree item in the Explorer Navigator perspective, and choose **Import Script File**



The Import dialog box opens

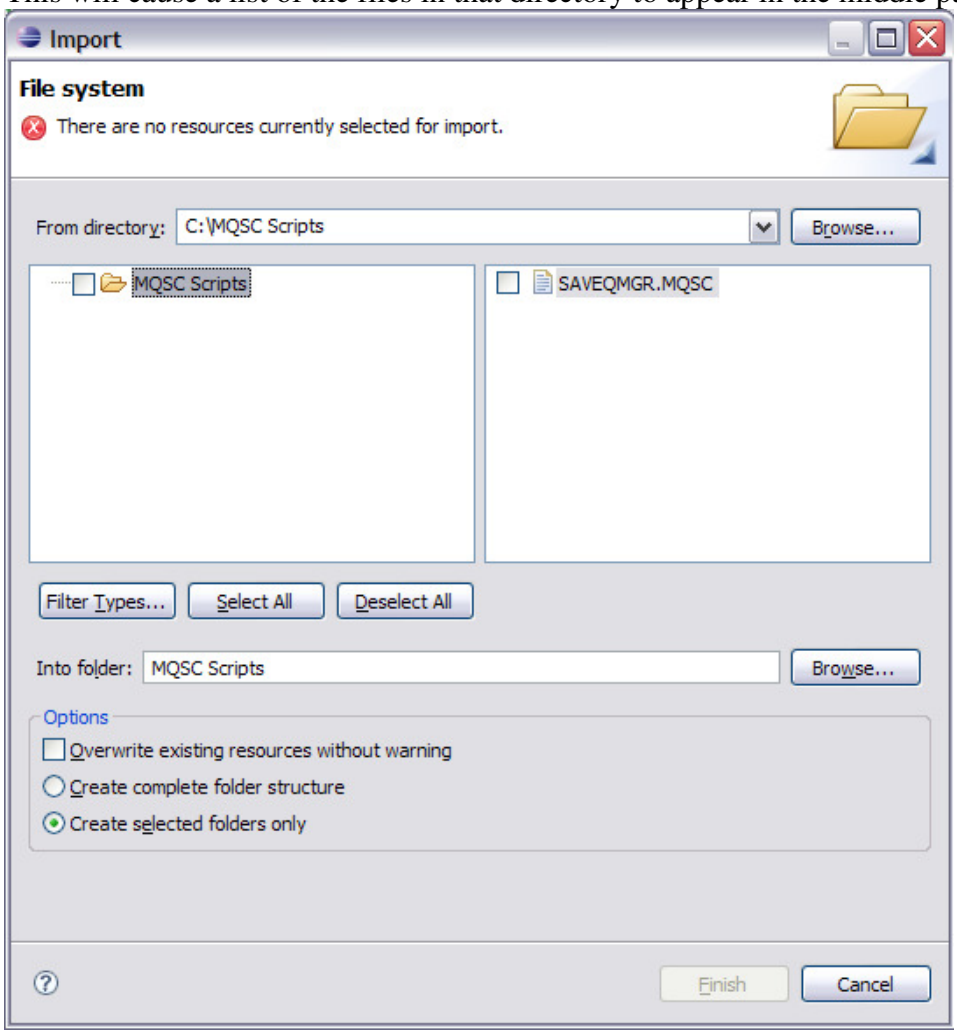


Use the **Browse** button next to **Into folder** to choose the project you want to import the files into.



Use the **Browse** button next to **From Directory** to locate the folder that holds the file you want to import.

This will cause a list of the files in that directory to appear in the middle panes.

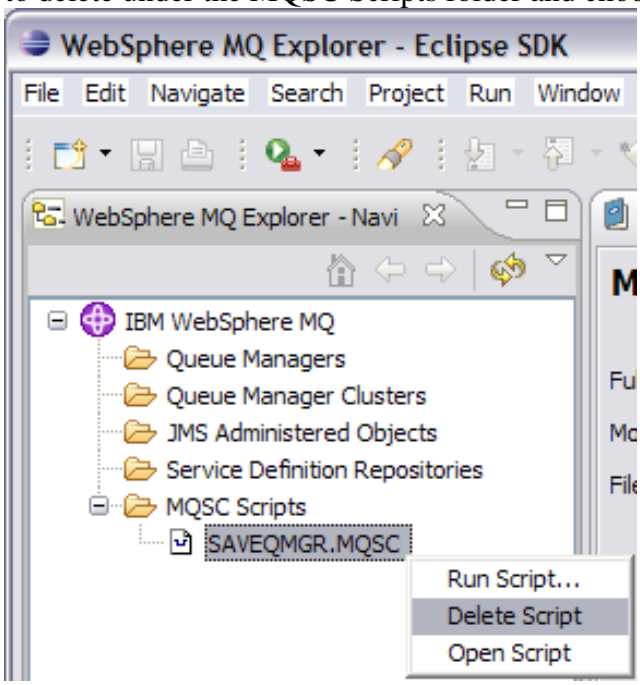


Put a check mark next to the file or files you wish to Import and click Finish to complete the Import. The file or files will be loaded into the specified project in the workspace and opened.

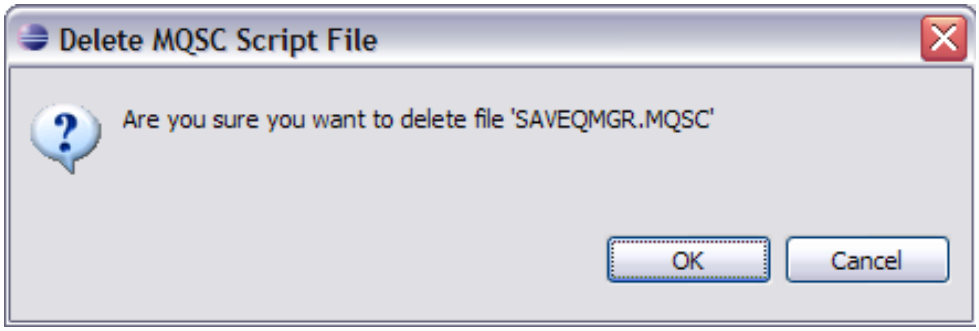
3.3 Delete a MQSC Script File

To delete a given file from the workspace, you can either delete it from the project in the Resources view, or you can delete the file in the WebSphere MQ Explorer Navigator.

To delete the file using the WebSphere MQ Explorer Navigator right-click on the file you want to delete under the MQSC Scripts folder and choose **Delete Script**



You will then be asked to confirm your delete



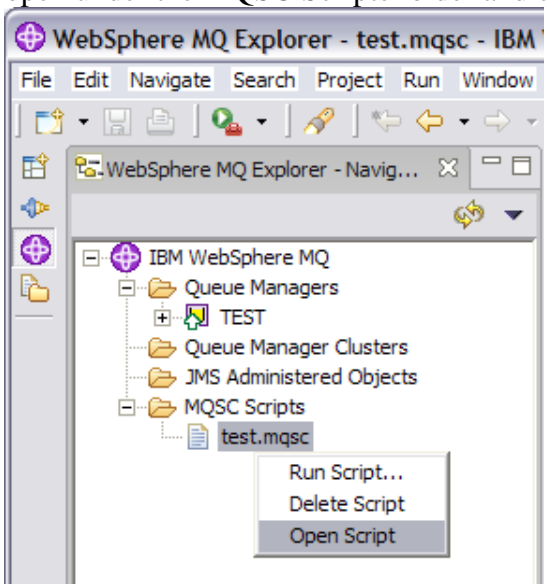
Once you say OK, the file is deleted from the workspace and the file system and deleted from the WebSphere MQ Explorer Navigator View

3.4 Edit a MQSC Script File

3.4.1 Open the File

To edit an MQSC Script file, you can either open it from the Resource Perspective, or you can open the file in the WebSphere MQ Explorer Navigator.

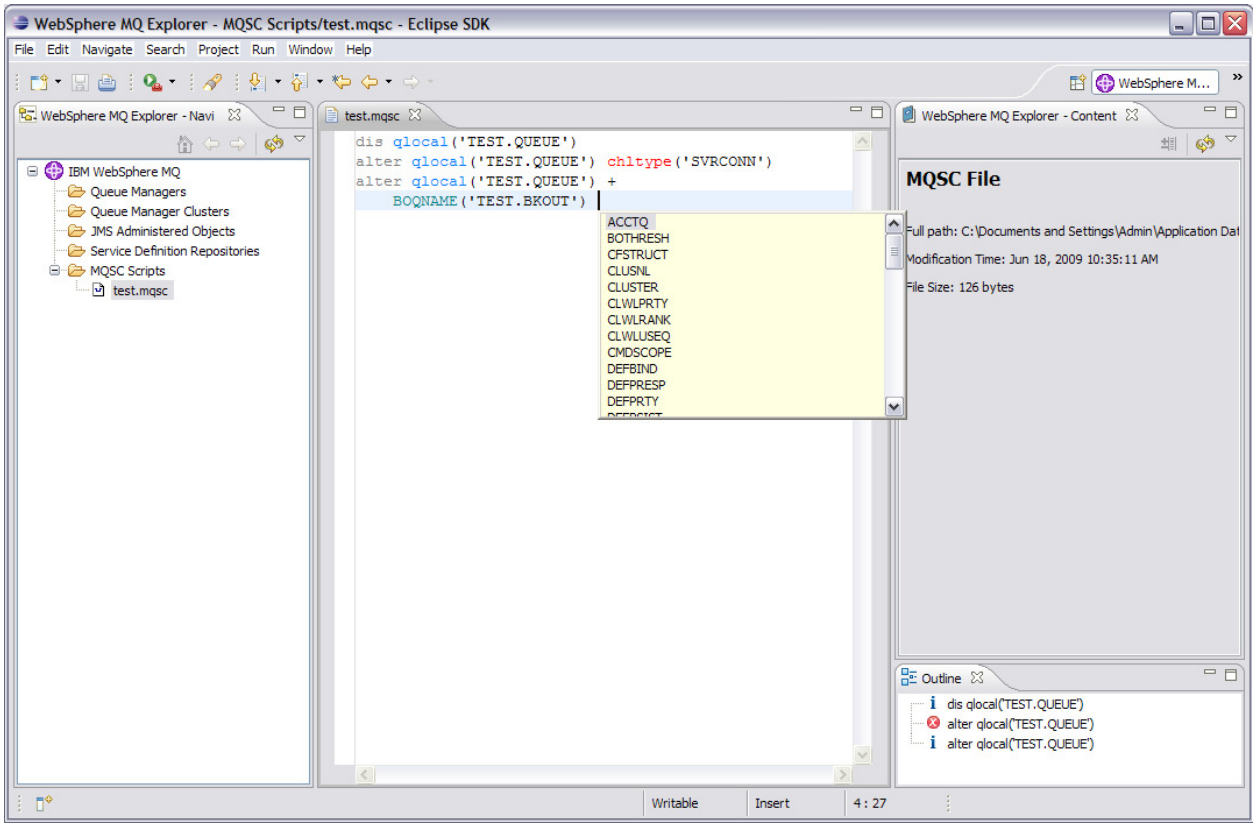
To open the file using the WebSphere MQ Explorer Navigator right-click on the file you want to open under the MQSC Scripts folder and choose **Open Script**



Or you can double-click on the file in the view, and it will open.

The Resource Perspective will automatically be opened, with the file now ready to be edited.

3.4.2 Parts of the MQSC Editor in the MQ Explorer Perspective



This picture shows the major parts of the MQ Explorer Perspective clockwise from top-left the Editor window, and Outline View.

The Editor window shows the active content of an MQSC file, with syntax coloring in full effect, and marked problems. It also shows the code completion window active for the third command. Edit the script here as if it was any other Eclipse code.

The Outline View provides a quick overview of all the commands in the file, and allows you to click on an item and navigate to the command in the file.

The Problems View shows a description of every syntax problem in the document. In this case, it would show that **chltype** is not a valid parameter for the **alter qlocal** command. The Problems View is not open by default, but can be simply opened from Window->Show View.

3.4.3 Editing a Script using Eclipse

The MQSC Editor is built using the Eclipse standard mechanisms for code editing. Commands are typed into the editor window as text, and syntax coloring is applied as you type to provide assistance.

Code assistance is also available through the standard code-completion mechanism. To activate code-completion at the current insertion point, hit Ctrl-Space. This will provide a pop-up menu of suggestions for completing the current word or adding an additional term or parameter or starting an entirely new command. These features allow for rapid development of new MQSC scripts, with minimal typing.

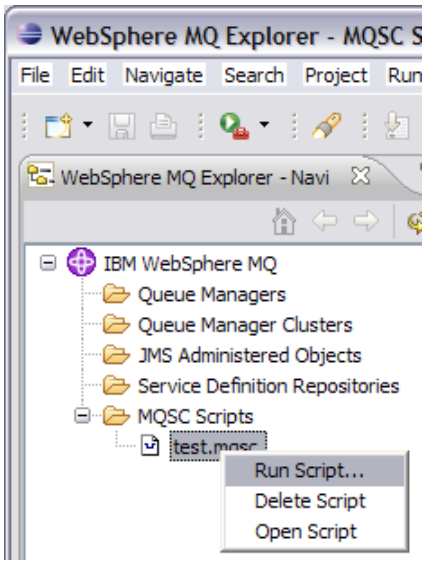
Syntax problems are quickly apparent from syntax coloring. In addition, syntax problems are logged in the Problems view and commands with bad syntax are marked with red X's in the Outline view. The items in both the Problem View and the Outline View can be used to navigate to a particular problem or command by simple clicks of the mouse.

Script files can be imported or exported from Eclipse in the Resource view, using standard Eclipse functions. Files can easily be shared between different WebSphere MQ Explorer installations or workspaces, and MQSC files created by other tools can be edited and executed using this SupportPac.

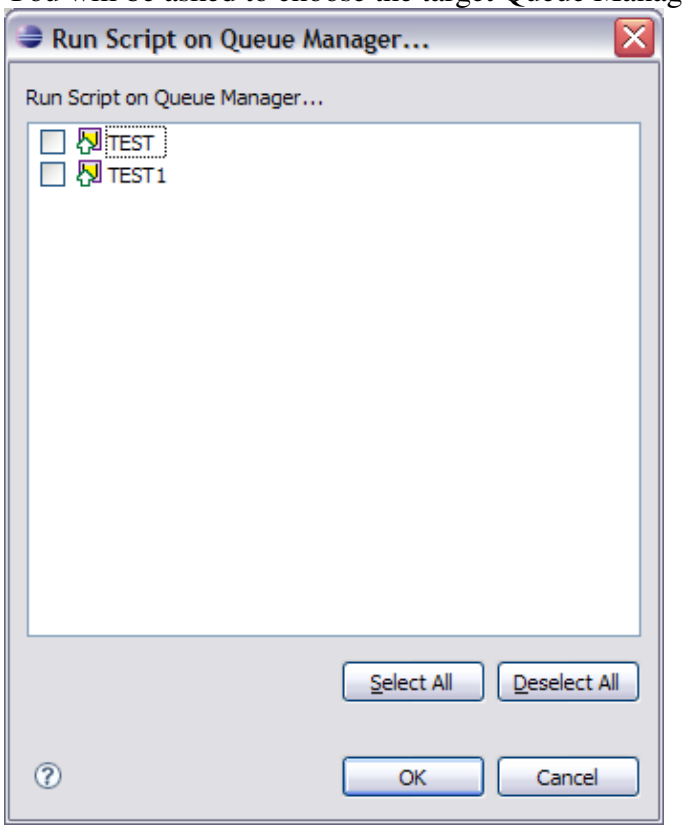
In addition, files and projects can be managed using Source Control or Version Control Systems using the Eclipse standard Team Sharing mechanisms. The WebSphere MQ Explorer ships with the base Eclipse plug-ins for working with CVS repositories. In addition, any Eclipse plug-ins that are compatible with the 3.3 release of the Eclipse SDK can be installed into the WebSphere MQ Explorer Eclipse, and used.

3.5 Run a MQSC Script File

To run a MQSC Script file, first switch to the WebSphere MQ Explorer perspective. Then right-click on the file you want to delete under the MQSC Scripts folder and choose **Run Script..**

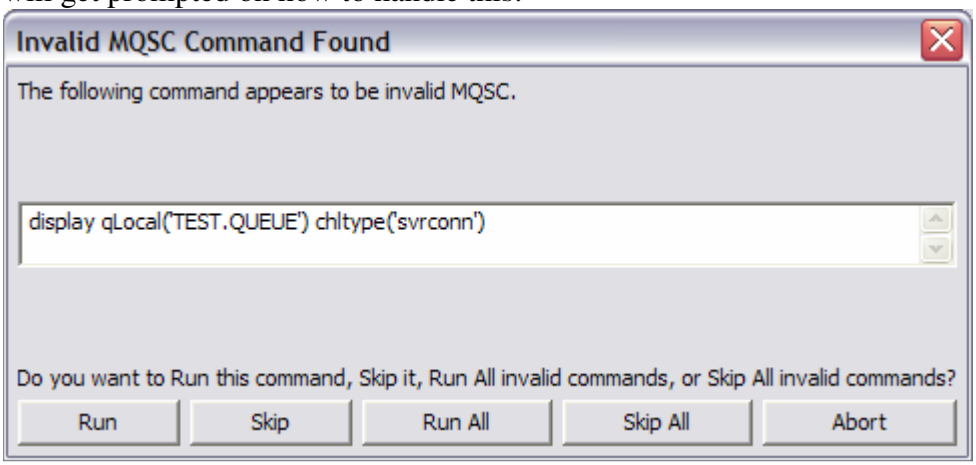


You will be asked to choose the target Queue Manager for the script.



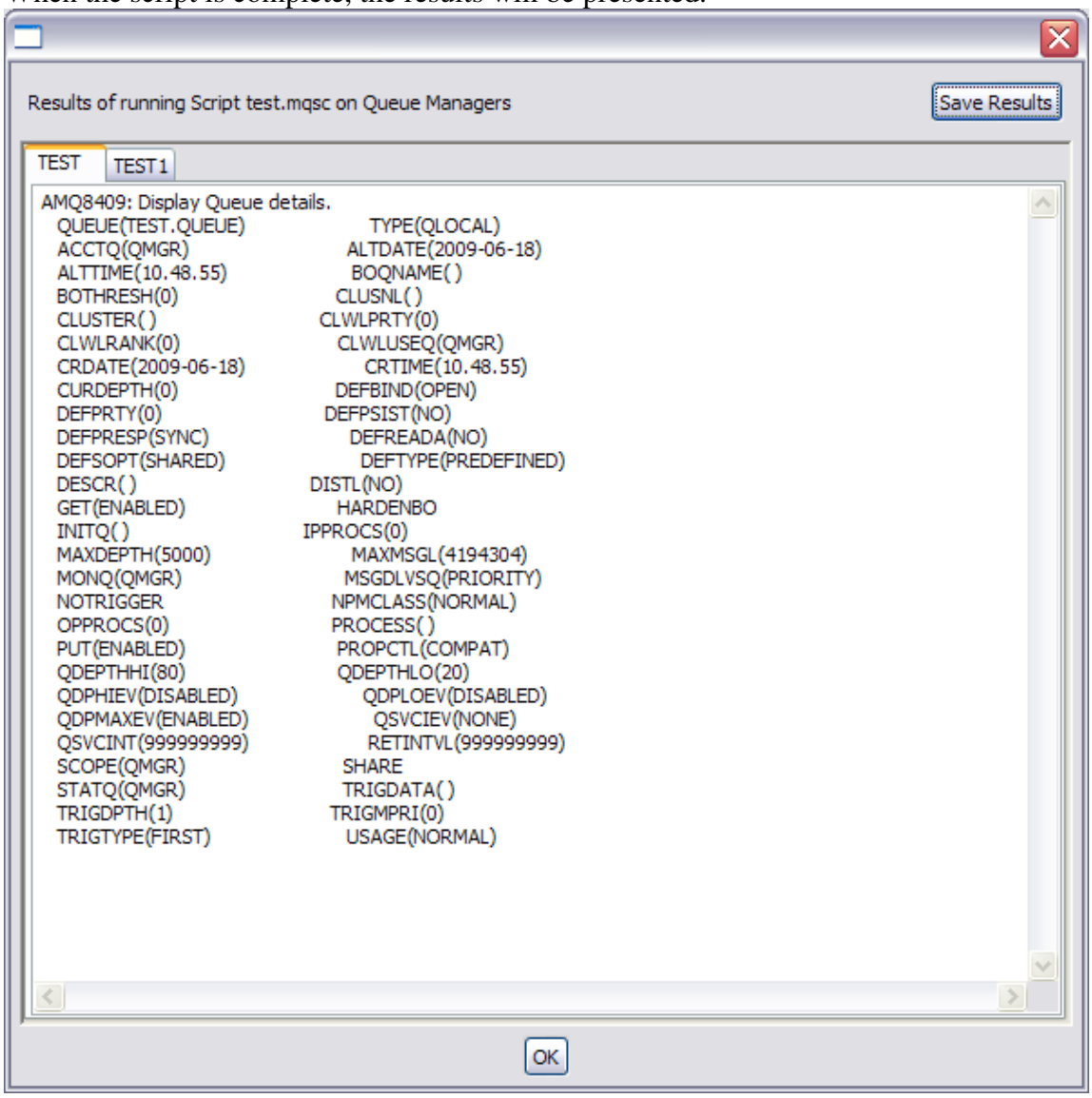
This will only show queue managers that are currently connected in MQ Explorer. All queue managers that MQ Explorer can connect to are supported, including zOS platform queue managers.
Note that in version 1.2 and later of MS0S, you can now run the same script on multiple queue managers at once.

Choose OK to start the execution of the script. If the MQSC Script has any errors in it, then you will get prompted on how to handle this:



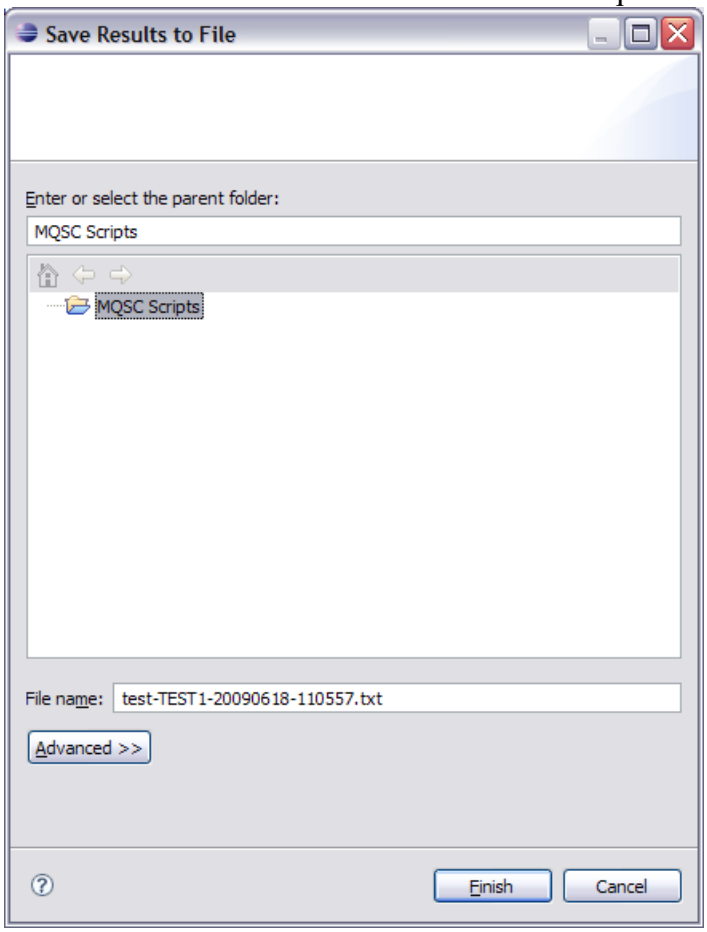
You can choose to run this command anyway, skip it, run all bad commands, skip all bad commands and only run good ones, or stop processing now.

When the script is complete, the results will be presented.



The format of the output may differ based on the platform the queue manager is running on. There are now two results shown, one for each queue manager the script was run on. Each of these results can be viewed individually by selecting the tab named after the queue manager.

There is also now a Save Results button at the top of the pane. This button will allow you to save the contents of the results for the selected queue manager into a file in the workspace.

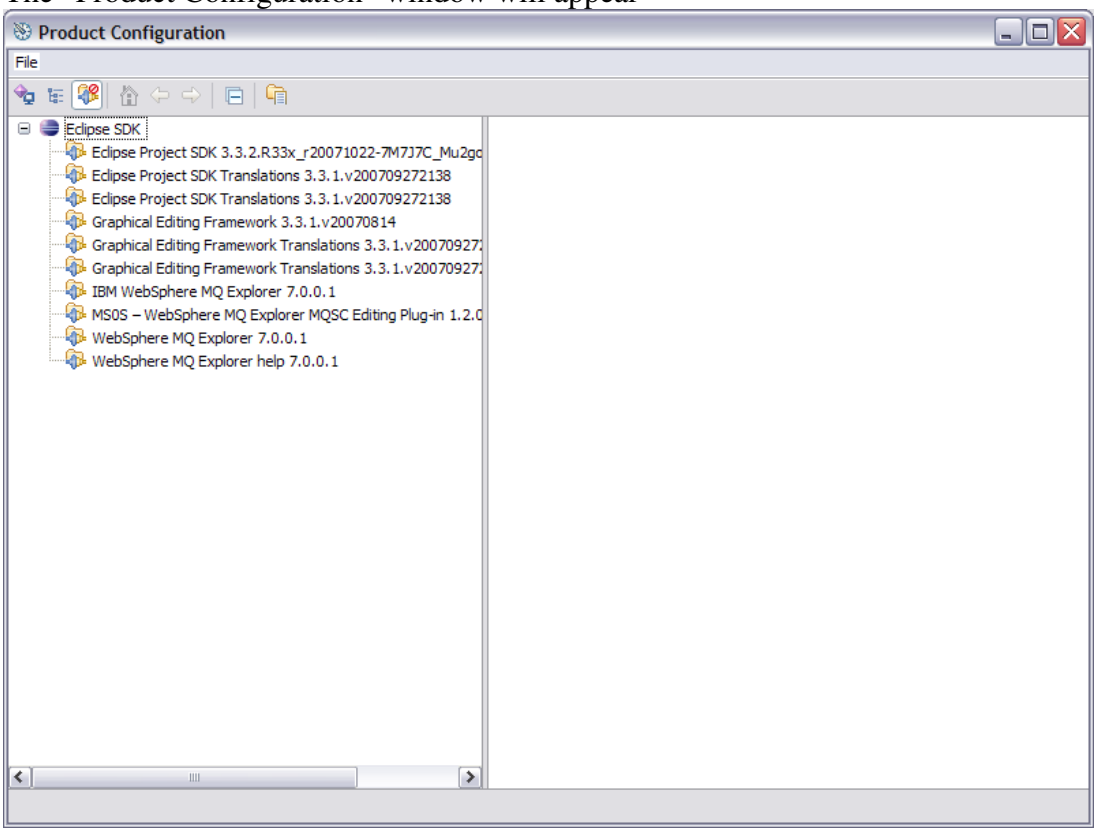


A name built from the name of the script file, the name of the queue manager, and a date and time stamp is selected, with a .txt extension. This name is merely a suggestion and can be changed.

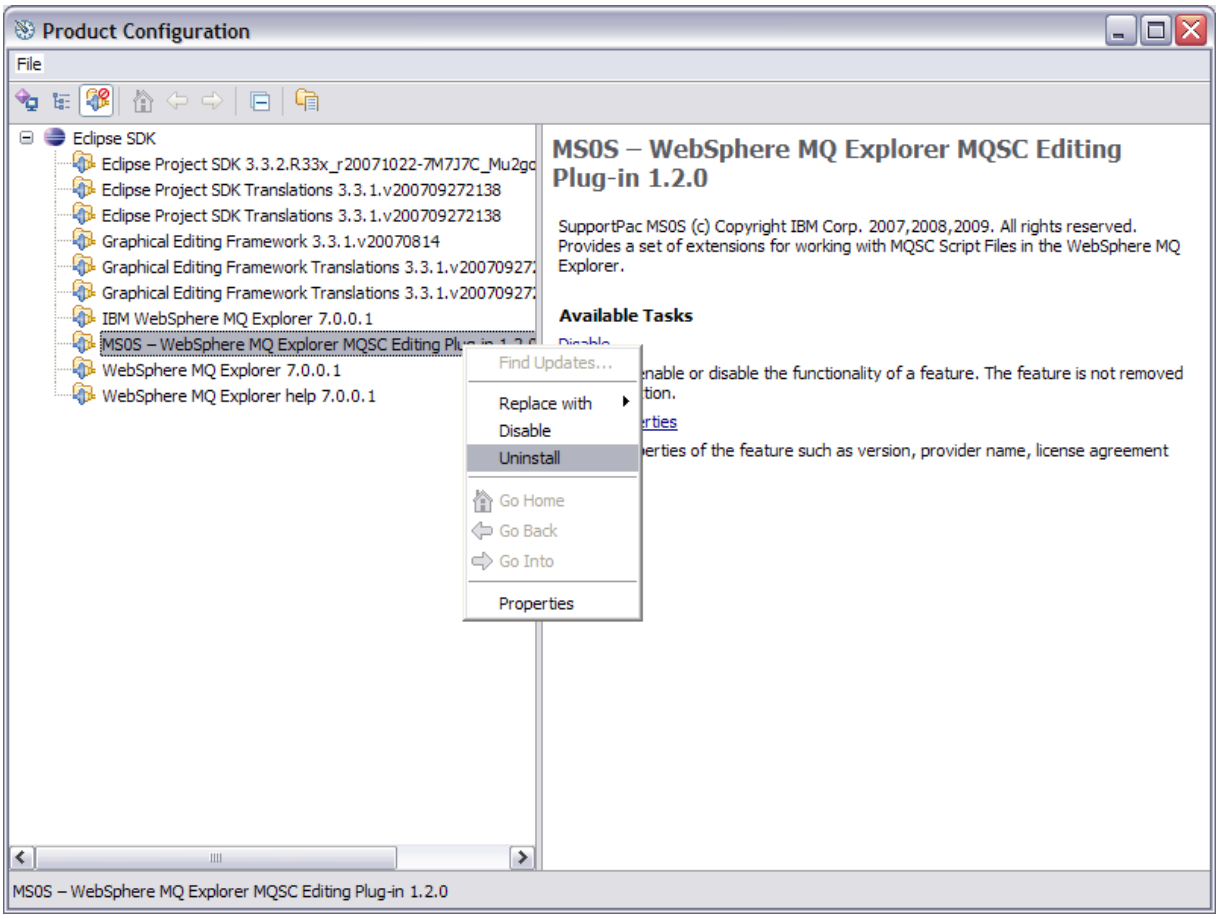
4 Uninstalling

There are a variety of mechanisms for uninstalling MS0S. The simplest mechanism is to use the Eclipse "Manage Configuration" tool.

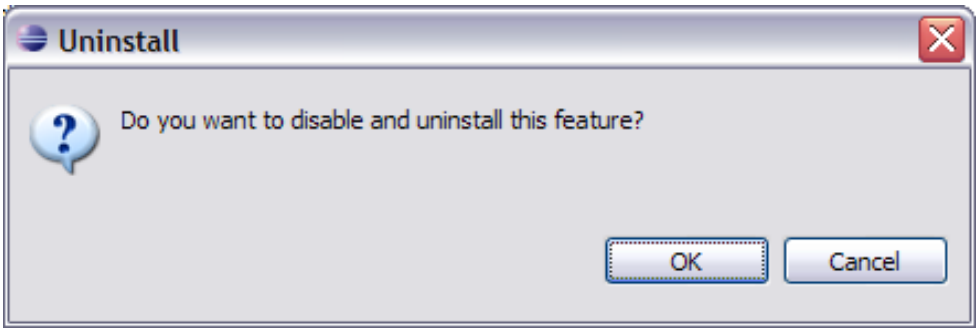
1. In WebSphere MQ Explorer, click **Help > Software Updates > Manage Configuration**.
2. The "Product Configuration" window will appear



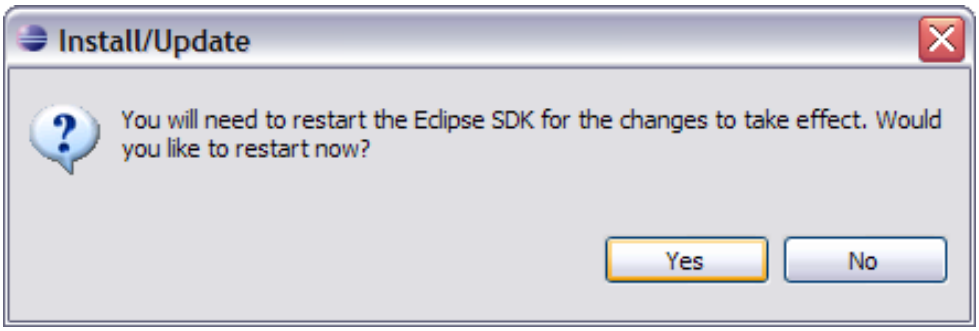
3. Select **MS0S – WebSphere MQ Explorer MQSC Editing Plug-in** (in older versions this may show up as "com.ibm.mq.explorer.ms0s.MQSCEditorFeature"). Right-click on it, and choose **Uninstall**.



4. Confirm that you want to uninstall.



5. Choose “Yes” to restart the workbench



Once the workbench is restarted, MS0S should be uninstalled.