IMQ09 - IBM MQ V9 for z/OS Wildfire Workshop

L01 – Using the MQ Explorer

Version V6.0

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IBM WSC Wildfire Team
IBM z Systems

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Overview

The intent of this exercise is to provide an opportunity to gain experience with using the MQ Explorer when working with z/OS queue managers. The exercise starts by performing the basic configuration steps required to connect to the z/OS queue managers used in subsequent exercises as continues by demonstrating some of the simpler functions provided by MQ Explorer.

General Lab Information and Guidelines

- Information required to complete this exercise will be provided on a 'worksheet' prior to the start of this exercise. Refer to this worksheet for which user identity and password are to be used and for other values, for example:

  - ✓ This exercise will be executed on the ***wg31.washington.ibm.com*** system and you should use user identity USER1.

  - ✓ If network connectivity is available, then systems MPX1 and MPX2 will also be used and the instructors will provide the user identity and password for these systems. If these systems are being used then any time a reference is made to TEAM##, team## or ## appears in the instructions; please replace the ## characters with your assigned user identifier number (01 – 20). Some of these occurrences of these strings with X's are case sensitive so be sure to not change the case of other characters.

  - ✓ As a reminder, when a value from your worksheet should be used, the values in the instructions will be in red rather than black.

  - ✓ ***Bold italicized*** text indicates values that need to be entered on a screen.

  - ✓ *Italicized* text indicates values that are constants or names that appear on a screen.

  - ✓ **Bold** text indicates the name of buttons or keyboard keys that need to be pressed.

- There are six queue managers for use in this workshop.

  - QMZ1
  - QML1 (when MPX1 is available)
  - QML2 (when MPX2 is available)
  - QML3 (when MPX1 is available)
  - QML4 (when MPX2 is available)

- After this exercise is complete you should have MQ Explorer connections to all available queue managers.

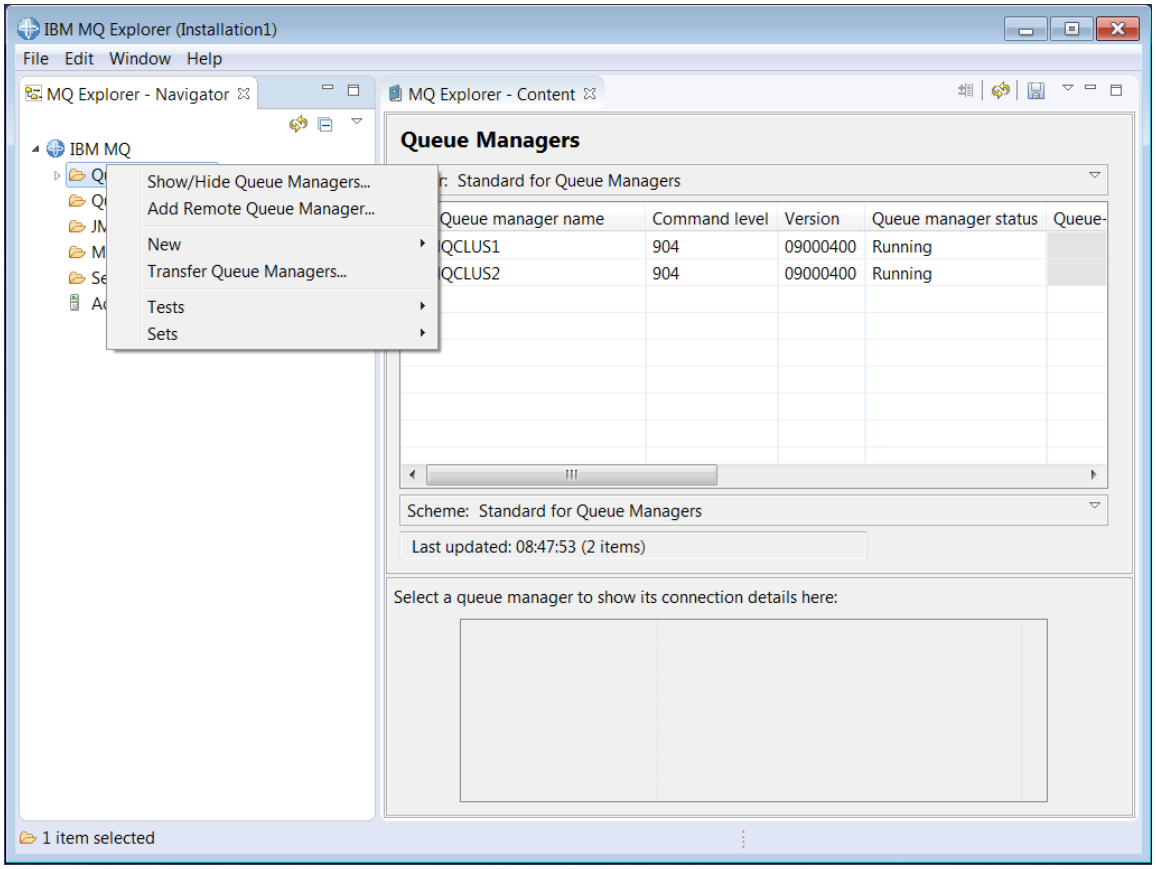
MQ Explorer Connectivity

The first step is to configure connections to the 6 queue managers using their names, host and port information.

____1. Double click the WebSphere MQ explorer icon on the desktop to start MQ Explorer.

It may take a while for the MQ Explorer to fully initialize, so please be patient

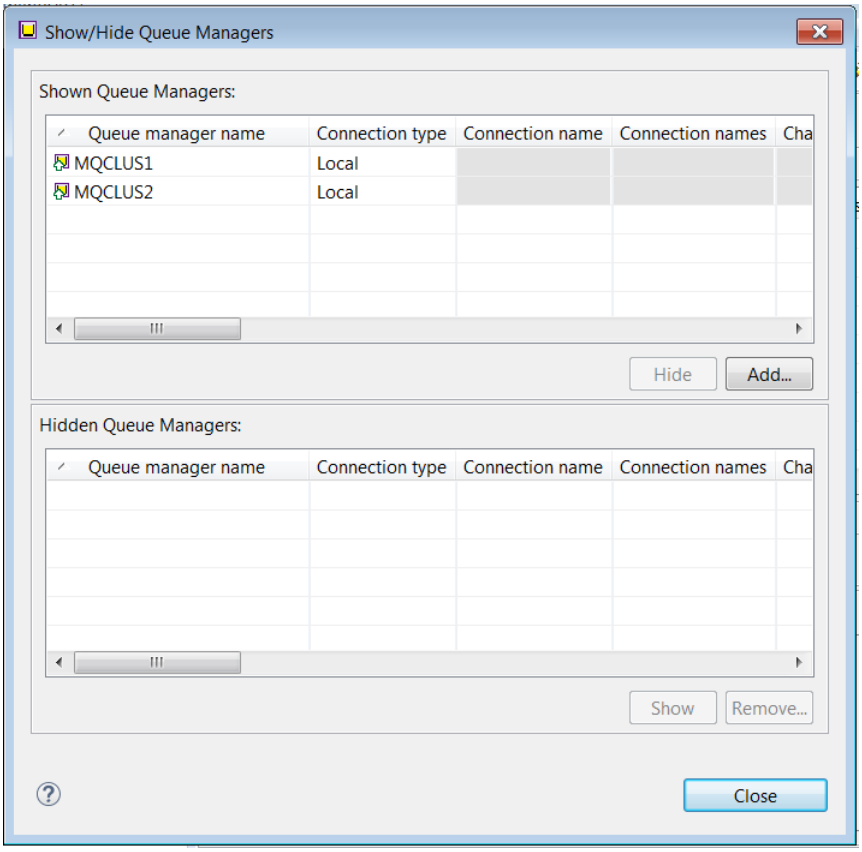
____2. Right click on *Queue Managers* and select *Show/Hide Queue Managers*.



Tech-Tip: Eclipse based development tools like MQ Explorer; provide a graphical interface consisting of multiple views within a window.

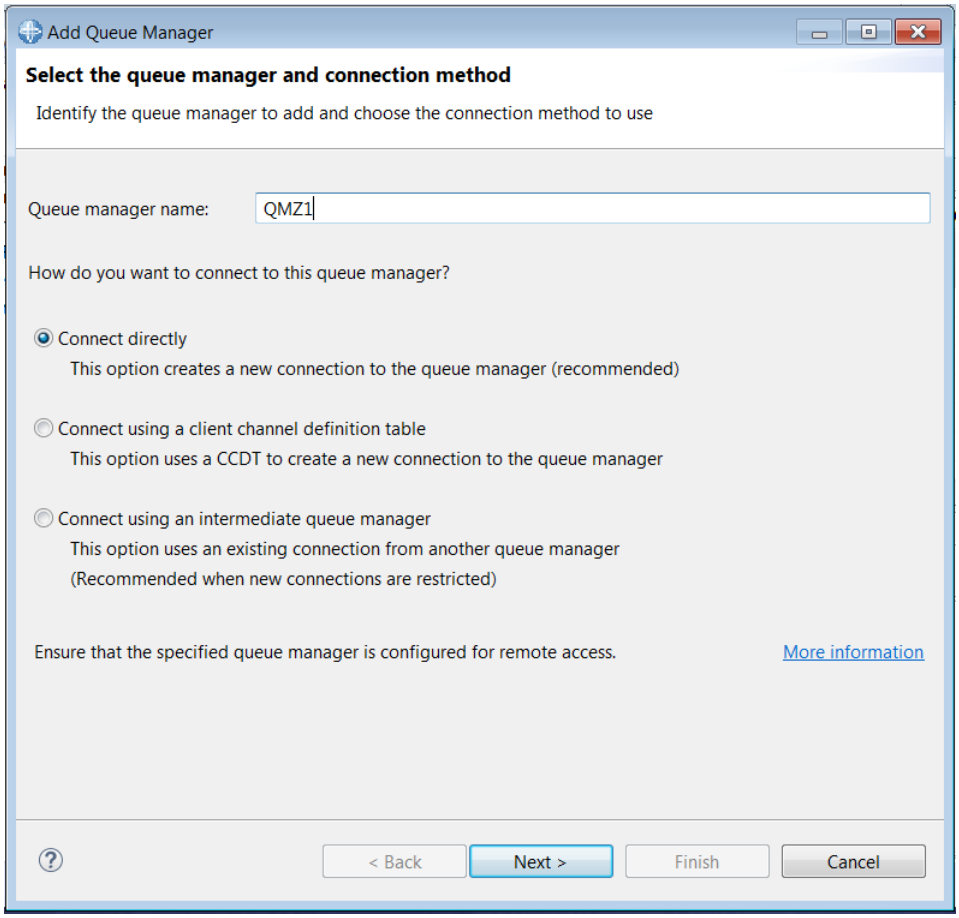
A view is an area in the window dedicated to providing a specific tool or function. For example, in the window above, *MQ Explorer - Navigator* and *MQ Explorer - Content Repositories* are views that use different areas of the window for displaying information. At any time, a specific view can be enlarged to fill the entire window by double clicking in the view's title bar. Double clicking in the view's title bar will be restored the original arrangement. If a MQ Explorer view is closed or otherwise disappears, the original arrangement can be restored by selecting Windows → Reset Perspective in the window's tool bar.

____3. The *Show/Hide Queue Manager* widow will now be displayed. Click on the **Add** button to continue.

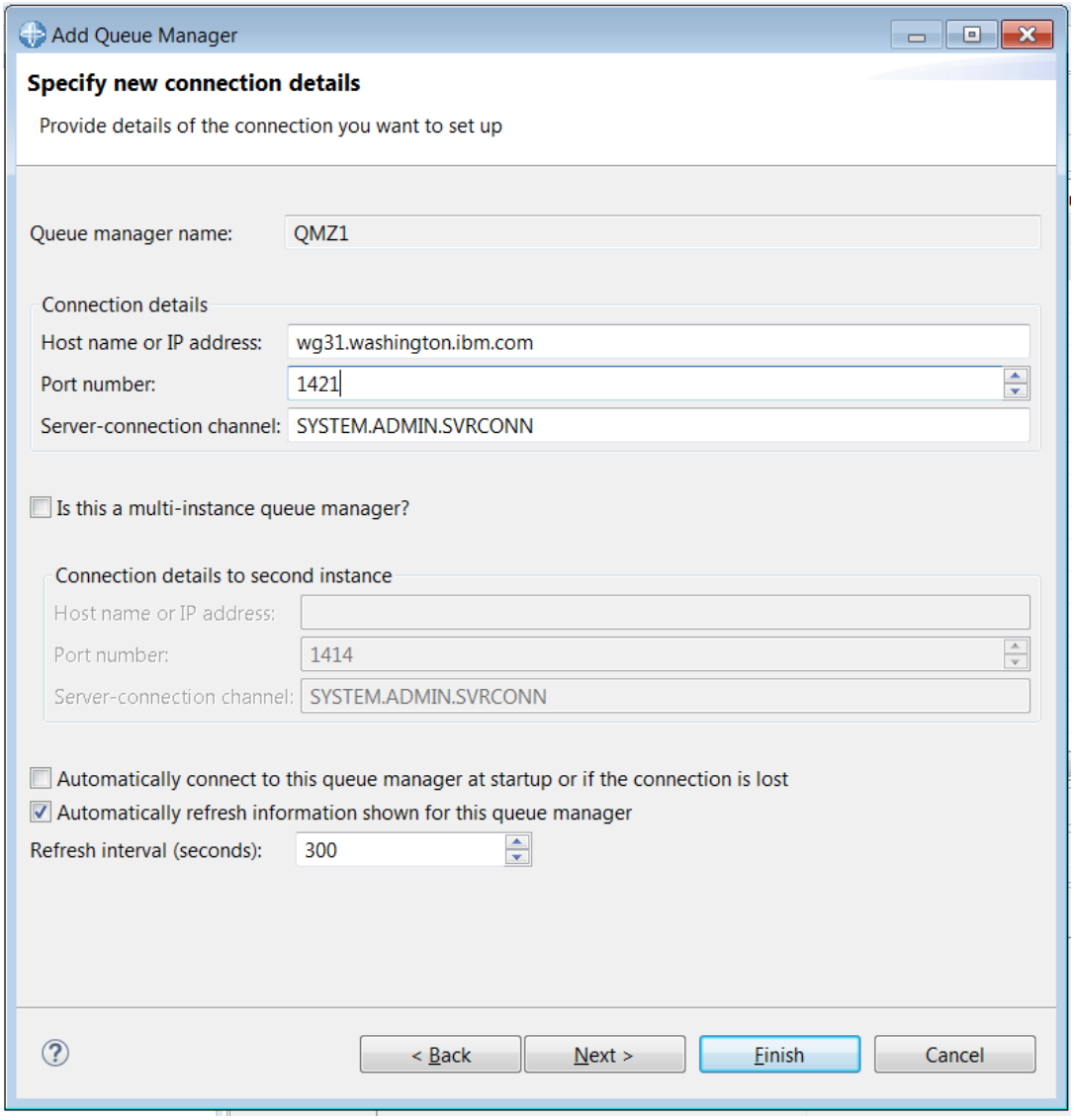


Note: You will be now connecting to all queue managers being used for this workshop in this exercise. Start by adding queue manager QMZ1. Click the **Add** button.

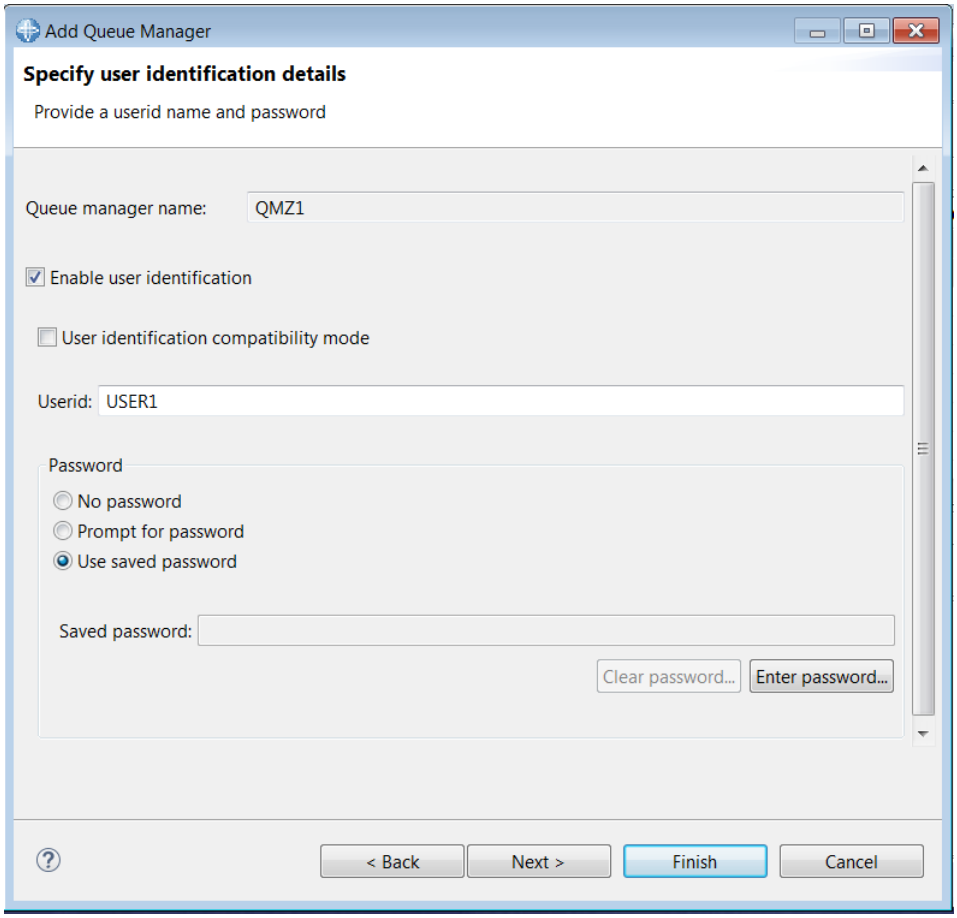
____4. Enter ***QMZ1*** as the queue manager name on the *Add Queue Manager – Select the queue manager and connection method* window and click **Next** to continue.



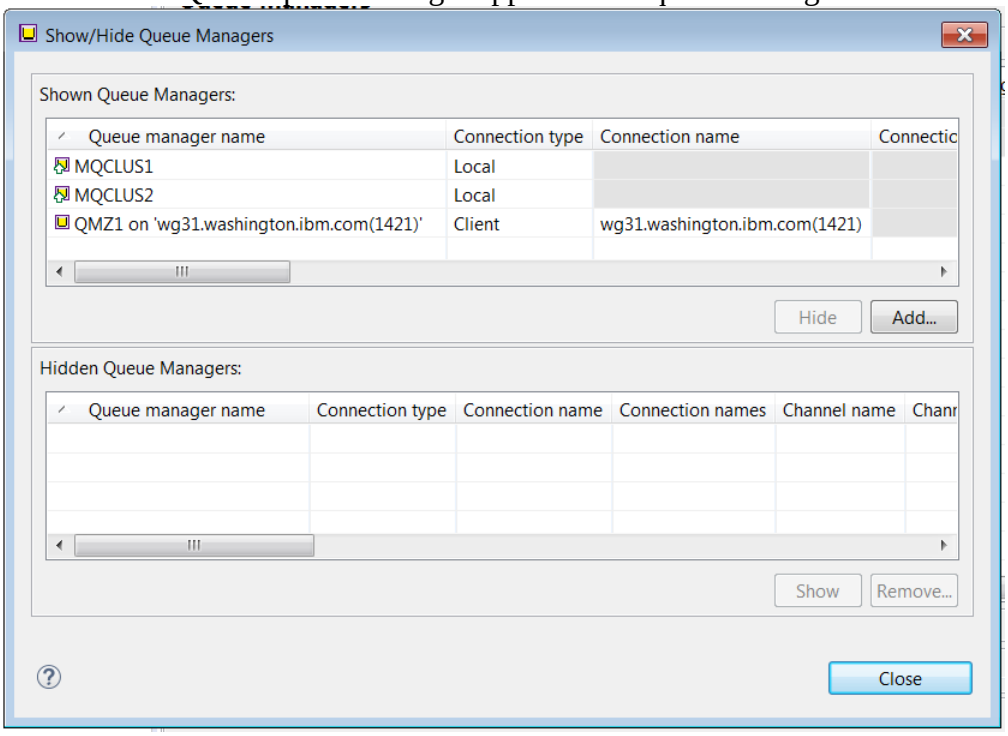
____5. Enter ***wg31.washington.ibm.com*** as the *Host name or IP address* and ***1421*** as the *Port number* on the *Add Queue Manager – Specify new connection details* window. Click the **Next** button twice to continue.



____6. You should now see the *Add Queue Manager – Specify security identification details* window. Check to box beside *Enable user identification* and enter in upper case your assigned Userid (e.g. ***USER1)*** in the *Userid* field and click the **Use saved password** and **Enter password** buttons. Enter your password in upper case and click the **OK** button. Click the **Finish** button to continue.



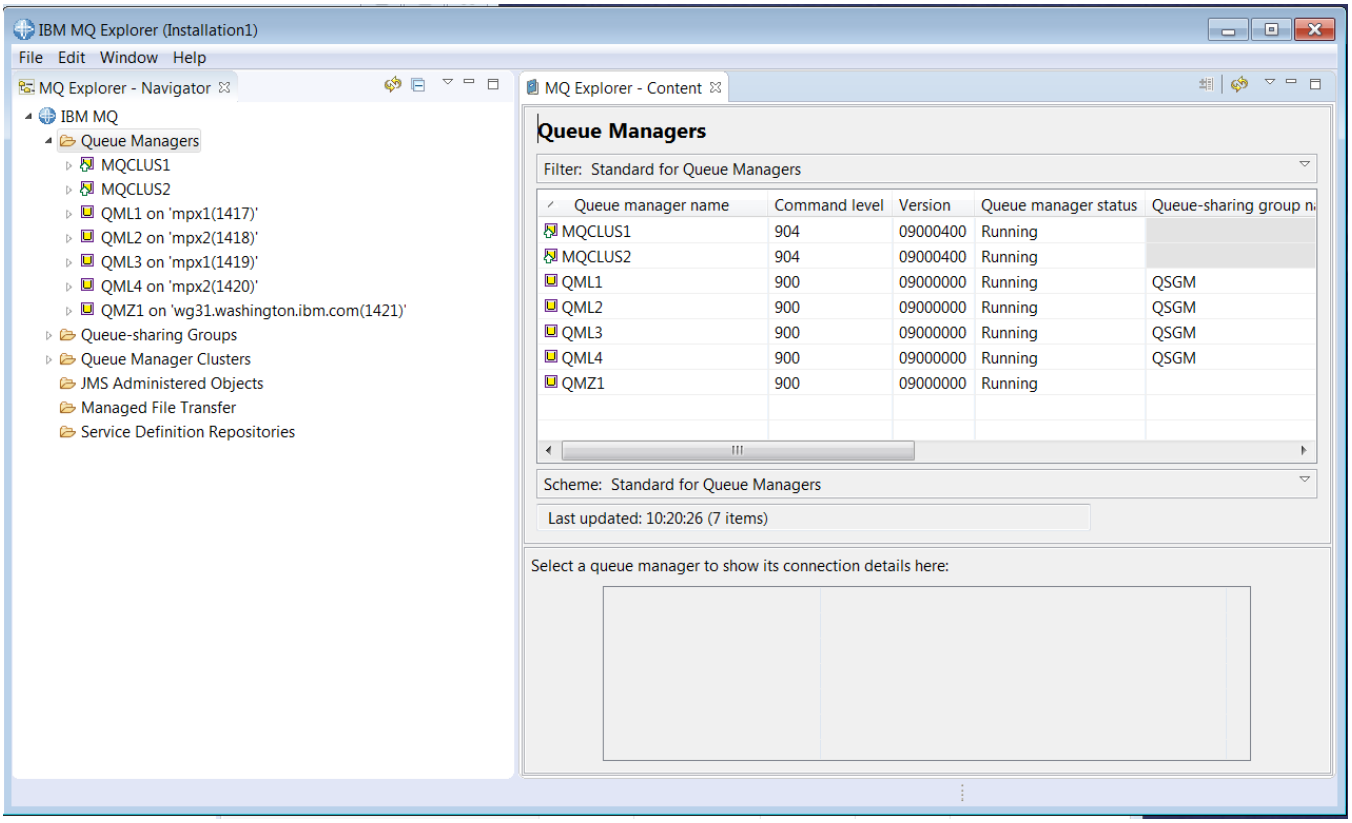
____7. You should see the QMZ1 queue manager appear in the queue manager list as shown below.



____8. When available, repeat these steps to add connections to queue managers QML1, QML2, QML3 and QML4 and using the host name, port number and user information below.

Queue Manager	Host Name	Host Port	Host Userid
QML1	***mpx1***	***1417***	***TEAM##***
QML2	***mpx2***	***1418***	***TEAM##***
QML3	***mpx1***	***1419***	***TEAM##***
QML4	***mpx2***	***1420***	***TEAM##***

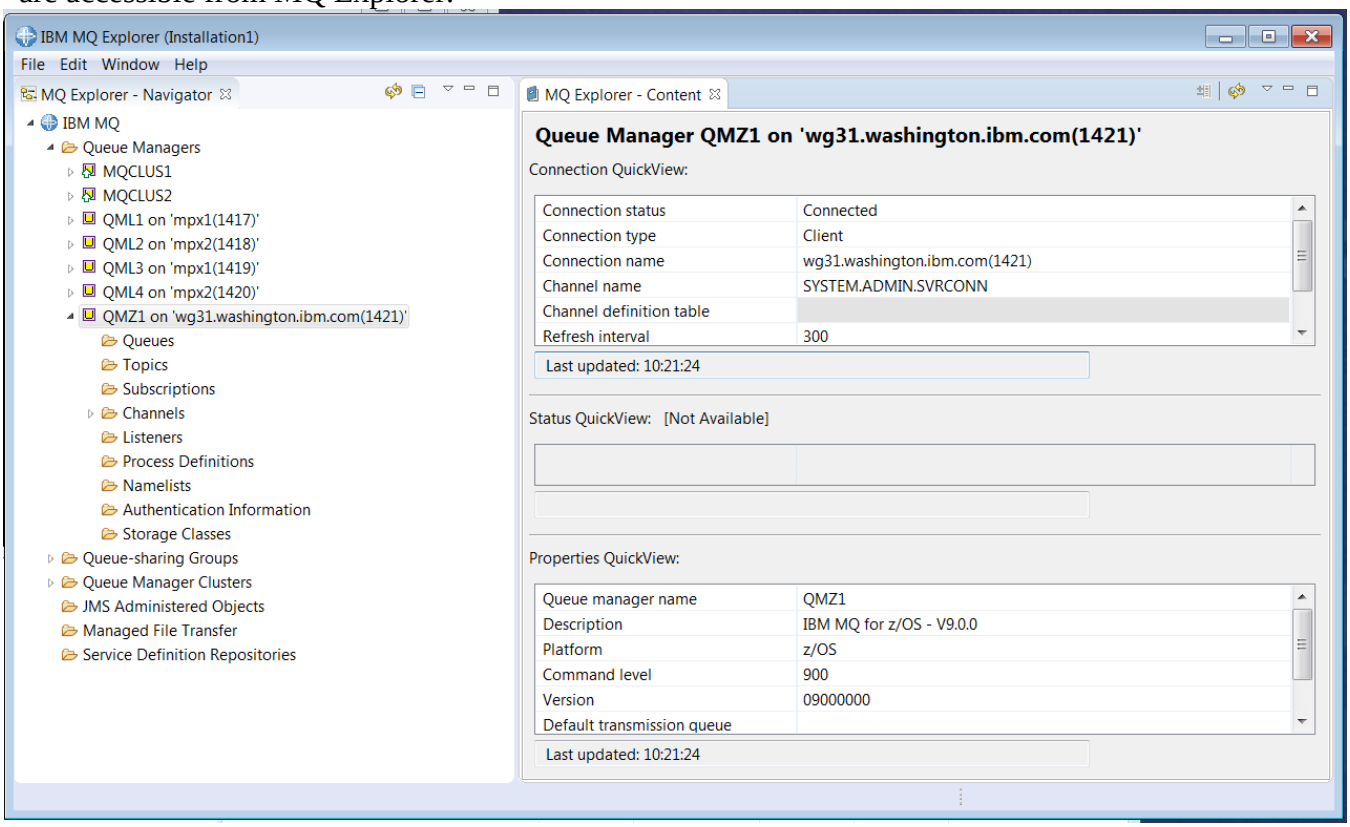
____9. When finished, close the *Show/Hide Queue Manager* window and you should see all queue managers as being connected.



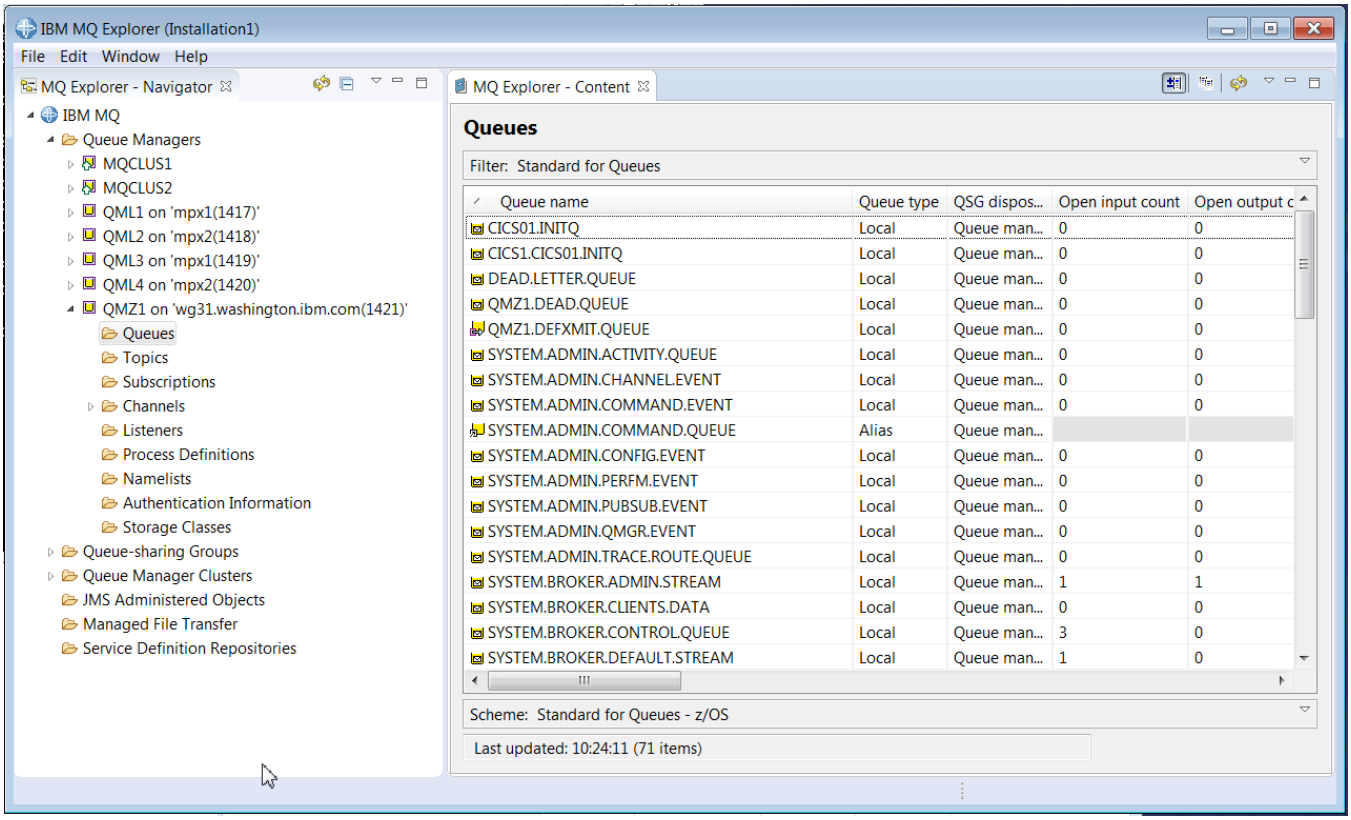
Setting up Filters

For this workshop, limiting the number of queue managers objects displayed can help response time and reduce confusion. In this section you will set a filter to limit the queues displayed to those you are directly using. Later on, you may want filters for other queues as well.

____1. Expand the QMZ1 queue manager to see the MQ resources (e.g. queues, topics, channels, etc.) that are accessible from MQ Explorer.

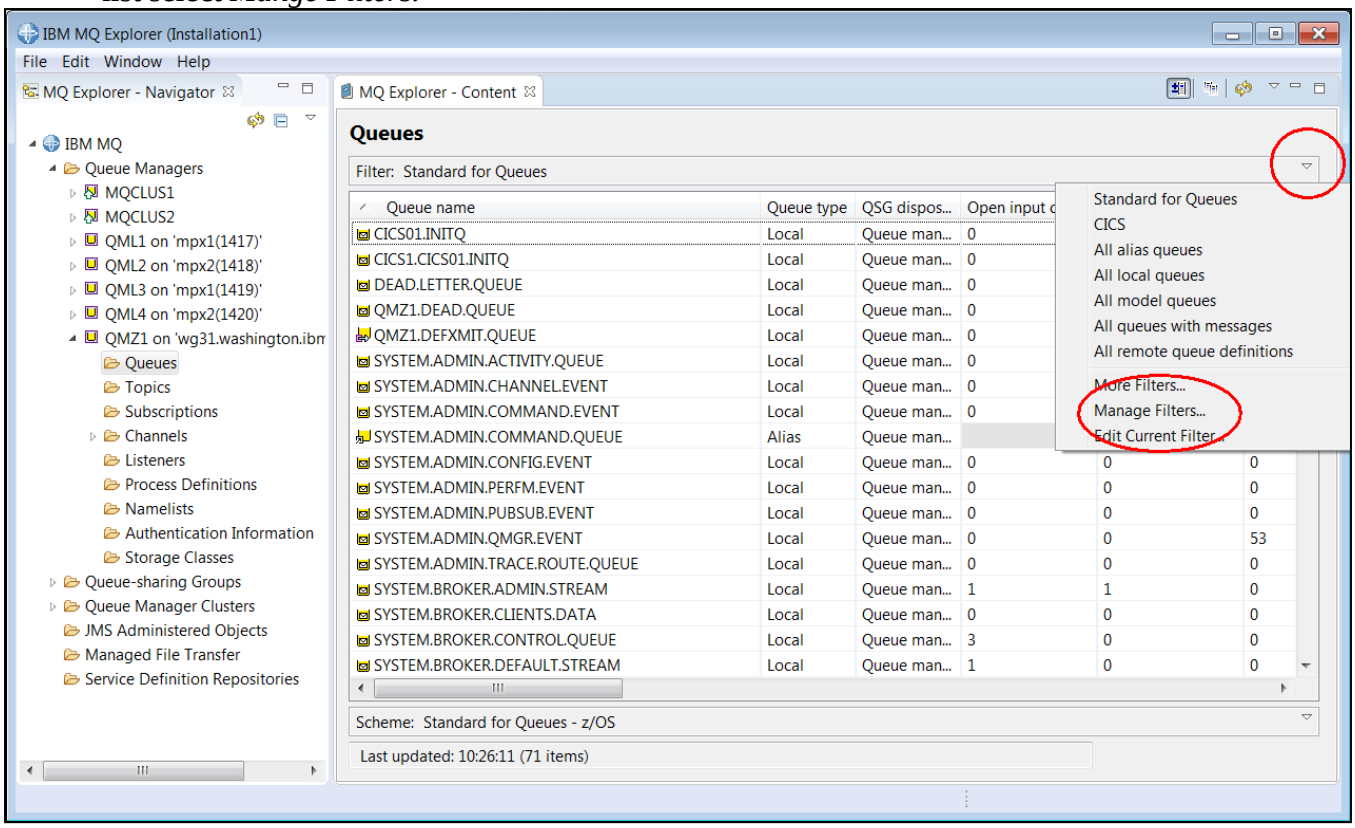


____2. Listing all the queues defined to the queue manager that is your primary (see list of primary queue manager based on team ID above) is done by clicking on the *Queues* folder. Note that depending on the number of queues and the connection speed, this list can take some time to build. The display will look something like what is shown (there may be many more queues than shown below).

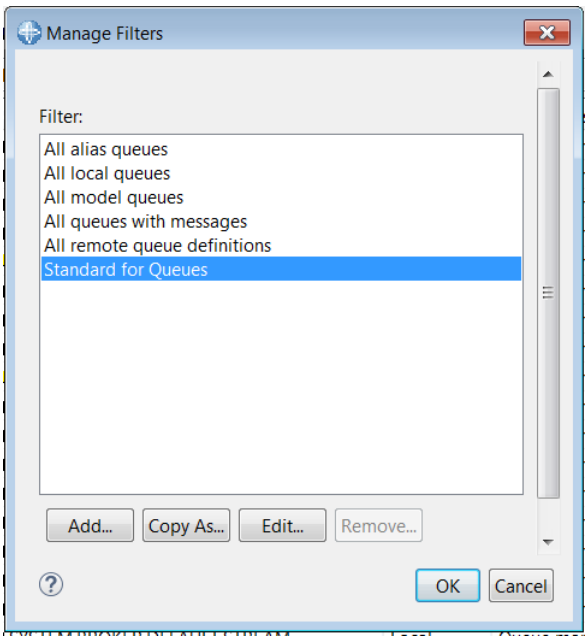


Tech-Tip: Filters can be created for other MQ resources like Channels, Process Definitions, and Storage Classes etc.

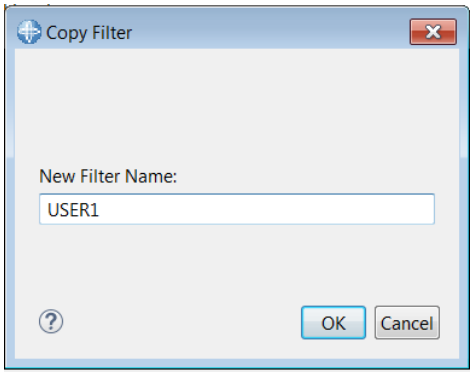
____3. To create or manage filters, select the pull-down arrow (circled in red below) and in drop-down list select *Mange Filters.*



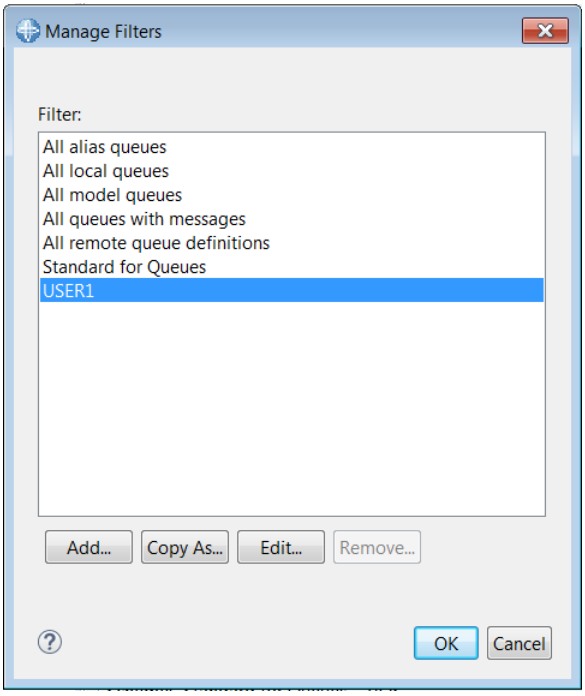
____4. This will display the *Manage Filters* window, select Standard for Queues and click the **Copy As** button to clone this filter.



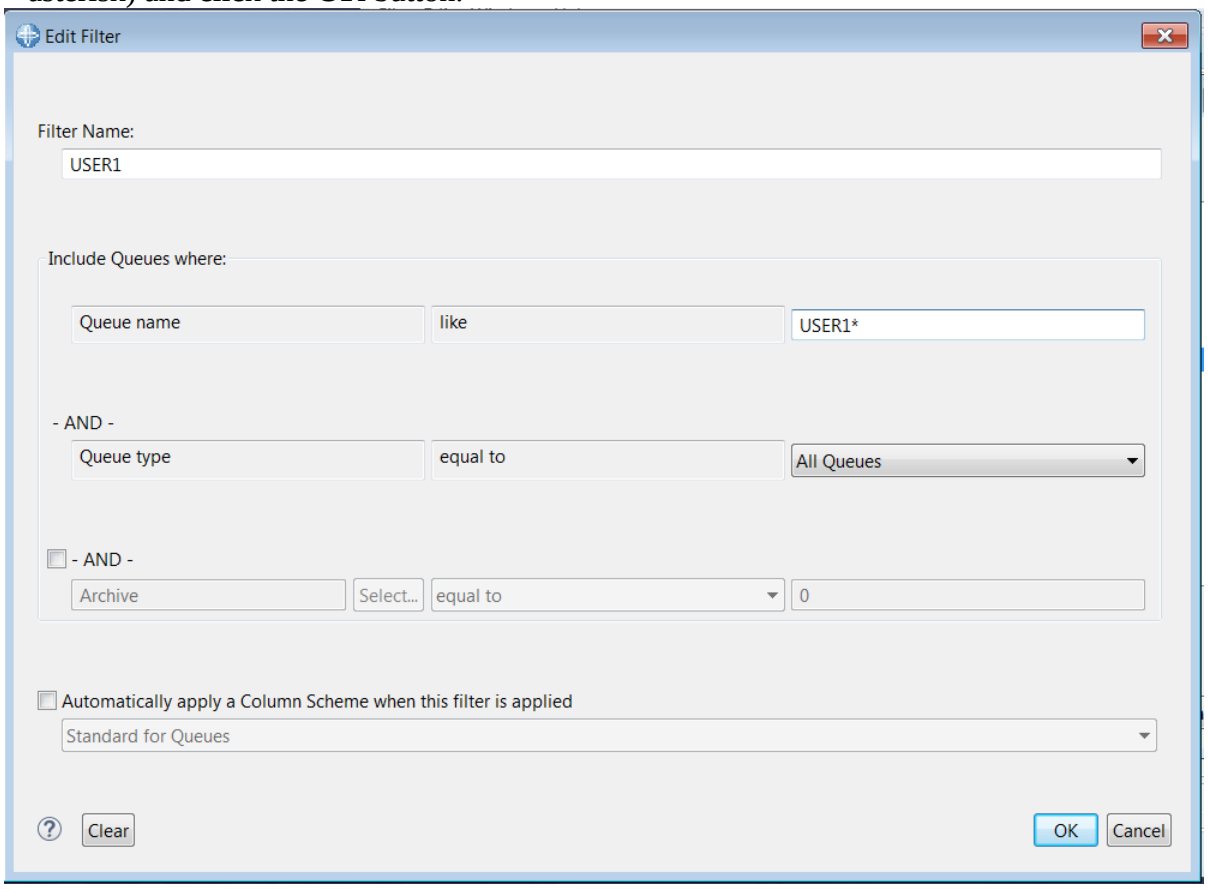
____1. On the *Copy Filter* window, enter your Userid as the *New Filter Name* and click the **OK** button.



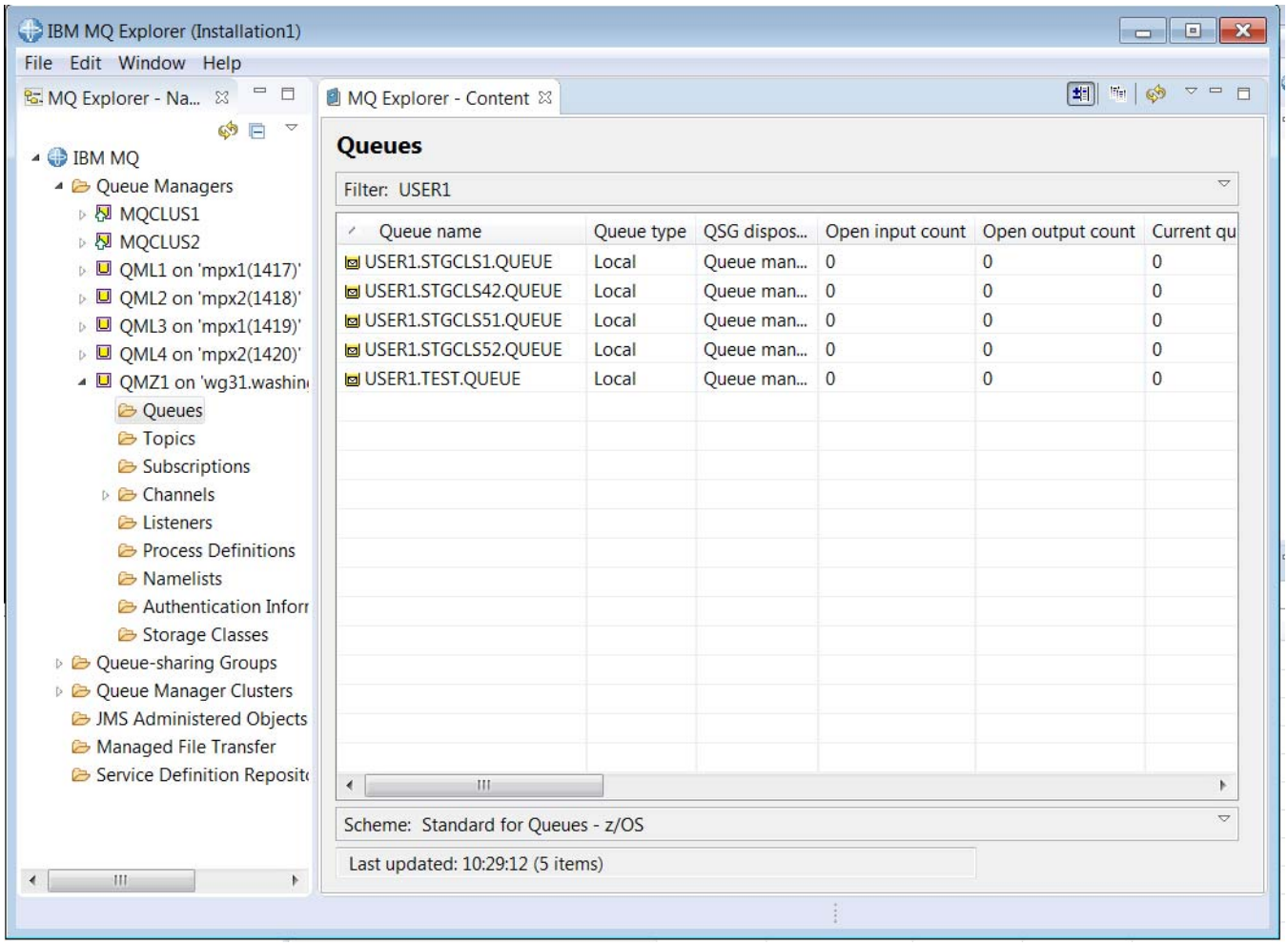
2. The new Filter will appear in the filters list. Select your filter and click on the **Edit** button



____2. On the *Edit Filters* window, set the *Queue Name like* value to ***USER1**** (be sure to include the asterisk) and click the **OK** button.



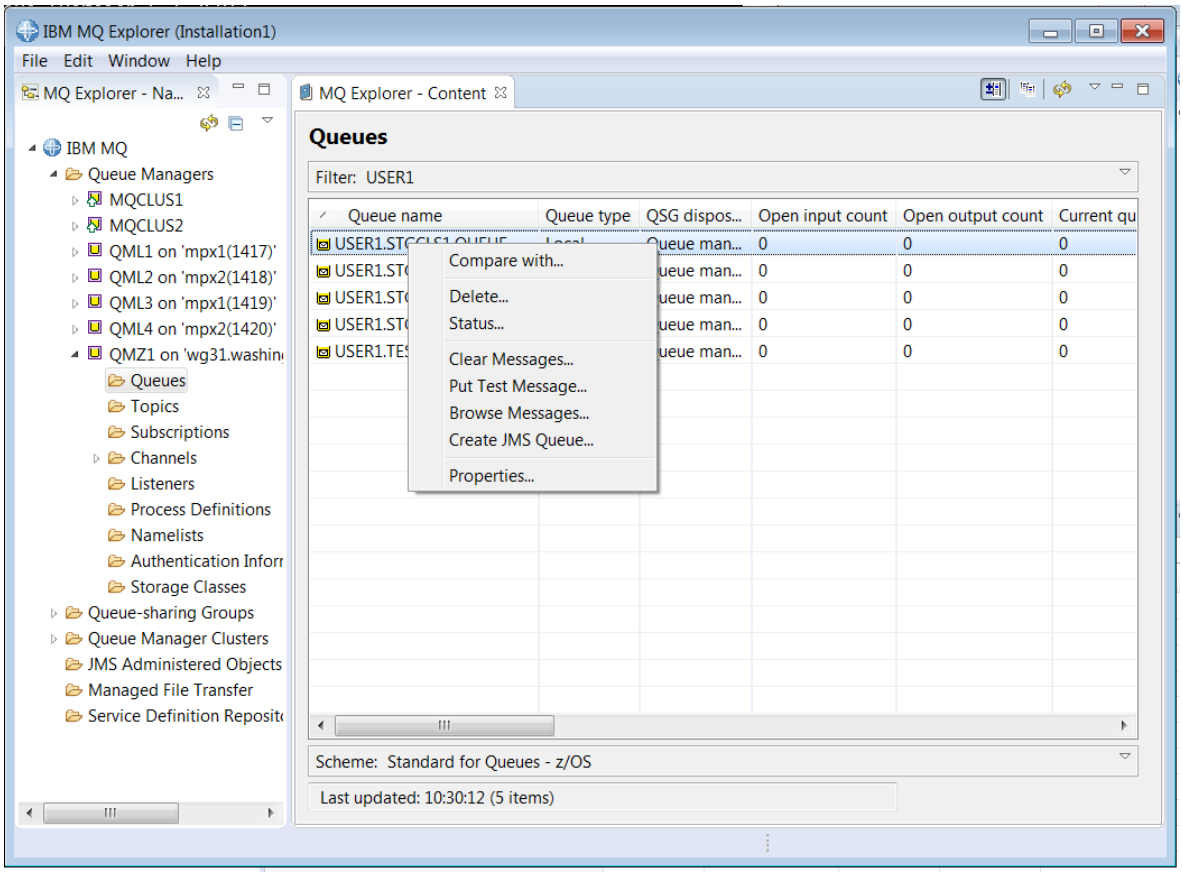
____7. This will return you to the *Manage Filters* window. With your new filter still highlighted, click **OK** to apply this filter. An updated list of queues, based on the selected filter will be displayed. You should see the moving green bar in the lower right of the queue list pane while the image it being refreshed.



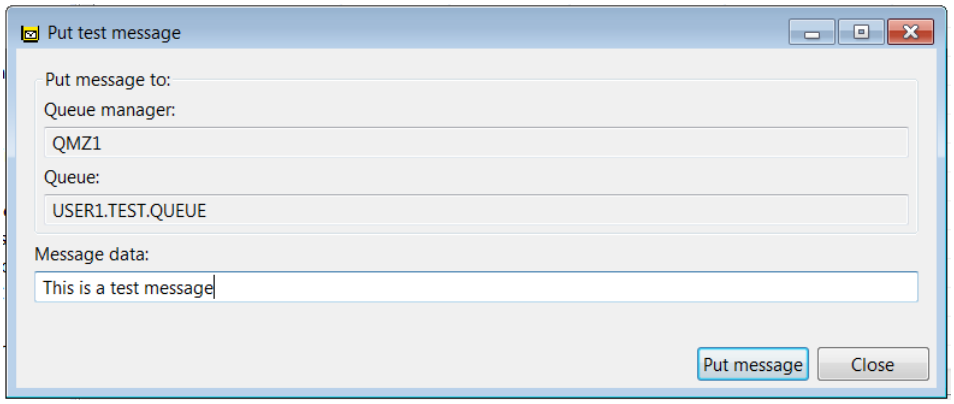
Additional MQ Explorer Features

MQ Explorer provides a set of robust administration and testing features for z/OS queue managers. This section will explore some these features.

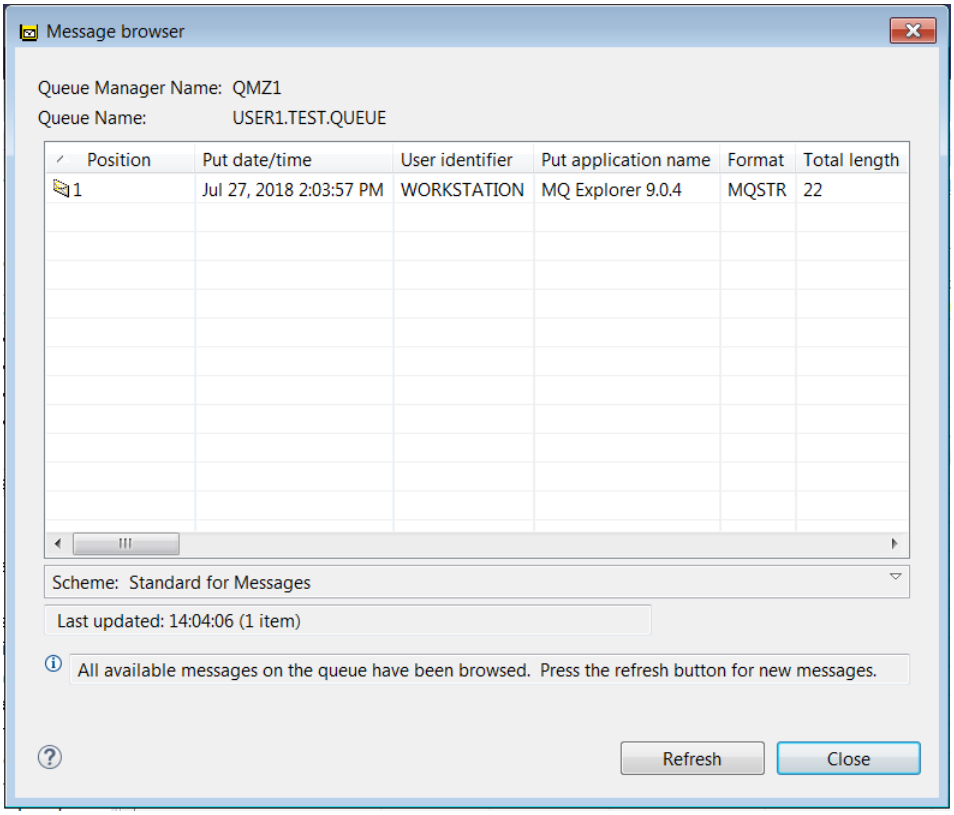
____1. Individual queues can be directly accessed for put and get requests. For example, select a queue in the *MQ Explorer - Content* view for Queues and right mouse button click. This will display a list of options (see below).



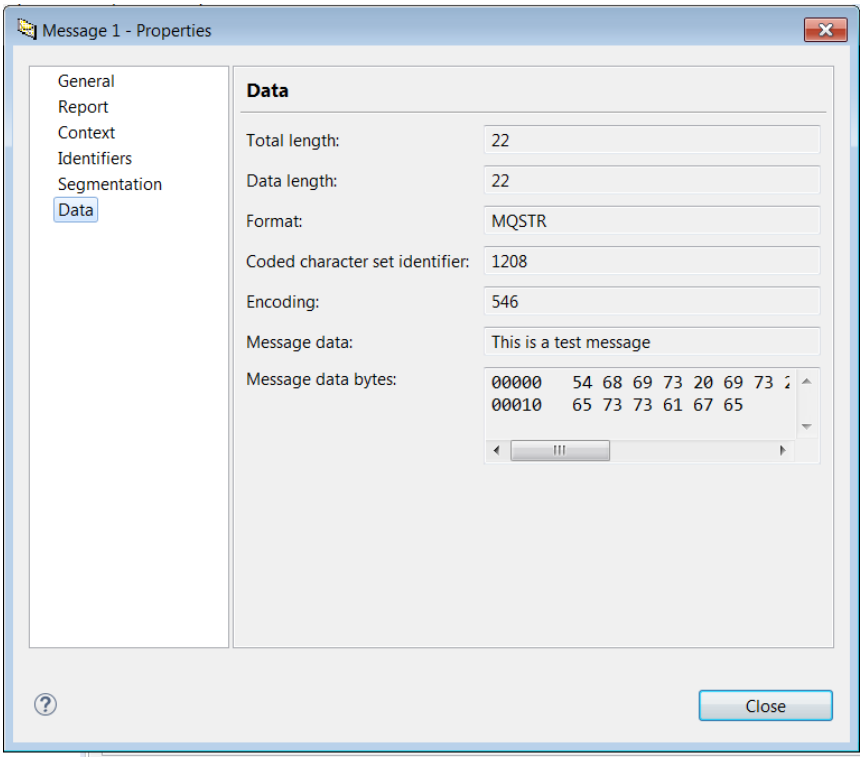
____2. If *Put Test Message* is selected a window will appear where you can enter a message either by typing it directly or using copy/paste. Pressing the **Put Message** button will put the message on the queue.



____3. If the *Browse Message* option is selected the current contents of the queue will be displayed.

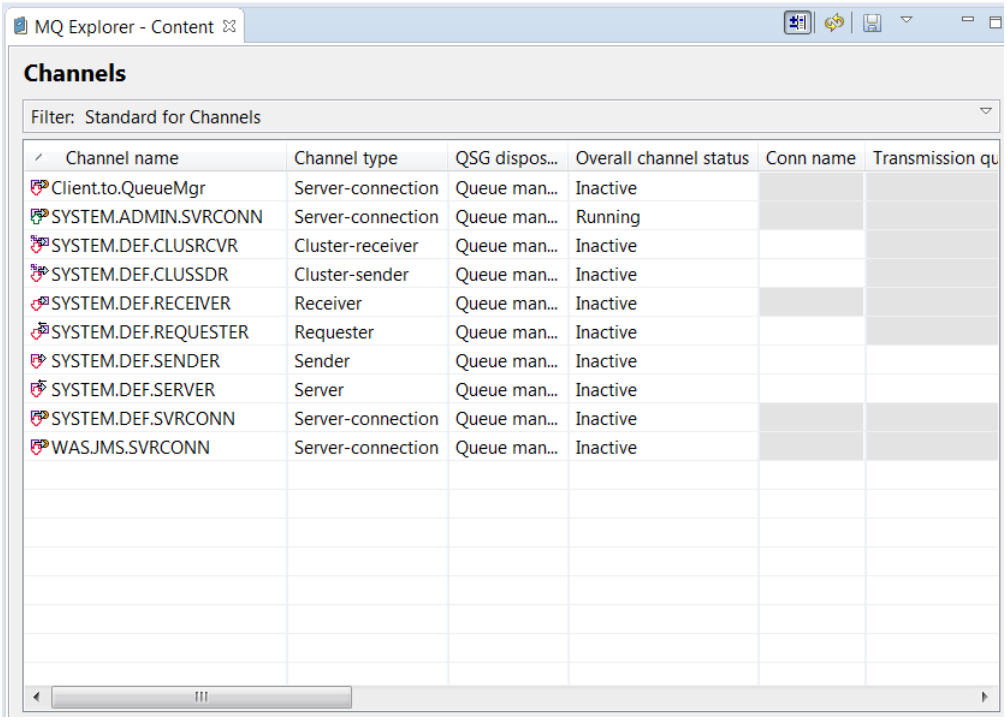


____4. Individual messages can be displayed by selecting a message, right mouse button clicking and selecting the *Properties* option.

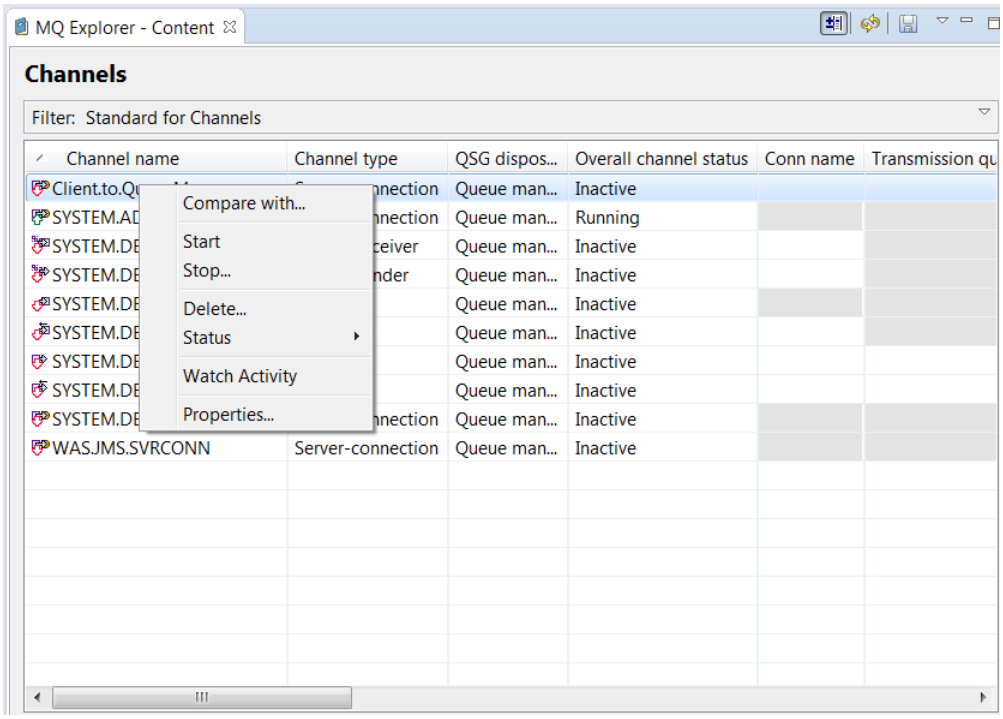


The remaining steps are for exploring; please do not make any changes to any resources.

____5. Channels can be displayed and managed with MQ Explorer. Select the Channels folder in the queue manager folder and a list of channels will be display in the *MQ Explorer - Content* view (see below).



____6. Selecting a channel and right mouse button clicking will provide a list of options for managing the channel.



Explore some of the other MQ resources accessible using MQ Explorer. For example:

- Review the existing *Channel Authentication Records*
- Review the existing *Process Definitions*
- Review the existing *Storage Classes*

When you have finished reviewing the resources and functions available in MQ Explorer you have completed this exercise.