



Nastel Navigator Classic (apodwmg) User's Guide

Version 6

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Chapter 1: Introduction

Welcome to the *Nastel Navigator Classic (apodwmq) User's Guide*. This guide will introduce the user to basic functionality issues and describe the dialog windows that they encounter while working with Nastel Navigator. Please review this guide carefully before installing the product.

Nastel Navigator was formerly called AutoPilot M6 On-Demand for Middleware, AutoPilot M6 On-Demand for WebSphere MQ and identified as APODWMQ. This designation appears numerous times in this document and has not been changed.

1.1 How This Guide is Organized

- [Chapter 1:](#) Identifies the users and history of the document, as well as additional and alternate documents. System requirements are outlined in addition to supplying support and reference information.
- [Chapter 2:](#) Contains a brief functional description of APODWMQ.
- [Chapter 3:](#) Provides system access and use of the APODWMQ.
- [Appendix A:](#) Provides a detailed list of all reference information required for the installation of APODWMQ.
- [Appendix B:](#) Contains conventions used in this document.
- [Appendix C:](#) Contains a sample message parser file.
- [Glossary:](#) Contains a listing of unique and common acronyms and words and their definition.
- [Index:](#) Alphabetical index.

1.2 History of This Document

Release Date	Document Number	Version	Summary
May 2008	M6WMQ-WMM 600.002	M6-WMQ 6.0.2	Initial Release for M6
August 2010	M6WMQ-WMM 620.001	M6-WMQ 6.2	Updated for M6-WMQ 6.2
August 2011	M6WMQ-WMM 620.002	M6-WMQ 6.2	Errata
October 2011	M6WMQ-WMM 620.003	M6-WMQ 6.2	Rename Web Message Manager to AutoPilot On-Demand for WebSphere MQ and add restrictions/permissions
March 2012	M6WMQ-WMM 620.004	M6-WMQ 6.2	Updates to support APOD for WebSphere MQ Security Manager
May 2012	M6WMQ-WMM 620.005	M6-WMQ 6.2.1	Provide Favorites folder option for object shortcuts (Mantis 5838) and "Copy as" for all object types (Mantis 6611)
July 2012	M6WMQ-WMM 620.006	M6-WMQ 6.2.2	Provide Search capability, confirmation message when creating remote connection (Mantis 6131), and errata (Mantis 6887)
July 2012	M6WMQ-WMM 620.007	M6-WMQ 6.2.2	Errata (Mantis 4095)
March 2013	M6WMQ-WMM 650.001	M6-WMQ 6.5	Add topology view
November 2013	M6WMQ-WMM 651.001	M6-WMQ 6.5.1	Mantis 6815, 7389, 7785, 7871, 7952, 8099, 8555, 8681, 8682, 8756, 8892

Table 1-1. Document History

Release Date	Document Number	Version	Summary
May 2014	M6WMQ-WMM 652.001	M6-WMQ 6.5.2	Mantis 8474, 8946, 8957, 9177, 9184, 9185, 9187, 9195, 9232, 9267, 9297, 9345, 9510
September 2014	M6WMQ-WMM 653.001	M6-WMQ 6.5.3	Mantis 9680, 9830
September 2014	M6WMQ-WMM 653.002	M6-WMQ 6.5.3	Mantis 9861 (errata)
January 2015	M6WMQ-WMM 654.001	M6-WMQ 6.5.4	<ul style="list-style-type: none"> • Search function for MQ Objects • Display filter settings at higher levels in the console • Show InquireMetrics data on the Workgroup Server Properties dialog box • Limit the attribute list by creating a customized attribute scheme • Events tab – If the object name is listed in the tree, the object name will contain a link which when clicked will position in the tree • Automate XML and Decompile message options • Provide queue manager properties • User Settings – display object attributes on select
March 2016	M6WMQ-WMM 656.001	M6-WMQ 6.5.6	Mantis 12345 (topology) and 13607 (save results of MQSC Apply from File)
August 2016	M6WMQ-WMM 657.001	M6-WMQ 6.5.7	Mantis 13823 (shared environment on z/OS MQ) and 9529 (Figure 3-80)
January 2017	M6WMQ-WMM 658.001	M6-WMQ 6.5.8	Mantis 14728 (Figure 3-80A)
July 2017	M6WMQ-WMM 658.002	M6-WMQ 6.5.8	Update Nastel's phone number and street address
August 2017	M6WMQ-WMM 660.001	M6-WMQ 6.6	Update for APWMQ 6.6
June 2018	M6WMQ-WMM 661.001	M6-WMQ 6.6.1	EMS update and errata (Mantis 17475)
February 2019	M6WMQ-WMM 661.002	M6-WMQ 6.6.1	Errata
May 2019	M6WMQ-WMM 661.003	M6-WMQ 6.6.1	Update Figure 1-1
September 2019	M6WMQ-WMM 661.004	M6-WMQ 6.6.1	Update Figure 1-1
March 2020	NAVCLAS-UG 667.001	M6-WMQ 6.6.7	Update version and copyright year.
August 2020	NAVCLAS-UG 667.002	M6-WMQ 6.6.7	Update Figure 1-1
September 2020	NAVCLAS-UG 667.003	M6-WMQ 6.6.7	Update Figure 1-1

1.2.1 User Feedback

Nastel encourages all Users and Administrators of M6 for WMQ to submit comments, suggestions, corrections, and recommendations for improvement for all AutoPilot documentation. Please send your comments via Post/Mail, or by e-mail. Send messages to: support@nastel.com. You will receive a written response, along with status of any proposed change, update, or correction.

1.3 Related Documents

The complete listing of related and referenced documents is listed in [Appendix A](#) of this guide.

1.4 Release Notes

See README files on installation media or M6 for WMQ installation directory.

1.5 Intended Audience

This User's Guide is intended for use by installers and administrators of Nastel's AutoPilot and AutoPilot/WebSphere Business Integrator. There are three user groups defined for the purpose of installation and use.

- **Installer:** The installer should be familiar with Java Run Time Environment 1.6.x (JRE 1.6.x) or higher. Procedures for installing software on the target platform such as Windows and/or UNIX. Basic understanding of TCP/IP and WebSphere MQ.
- **Administrator:** The administrator should have a working knowledge of middleware, TCP/IP, and system management. The Administrator should also have an understanding of Java Runtime Environment (JRE) and TCP/IP. Installation procedures for the platform where AutoPilot is installed (for example, Windows, Linux, UNIX, etc.)
- **User:** Requires only local operating system operations knowledge and basic knowledge of AutoPilot.

1.6 System Requirements

APODWMQ has no special or unique requirement which exceeds the requirements of M6-WMQ.

1.7 Terms and Abbreviations

A list of Terms and Abbreviations used in this document is located in the [Glossary](#).

1.8 Technical Support

If you need additional technical support, you can contact Nastel Technologies by telephone or by e-mail. To contact Nastel technical support by telephone, call **800-963-9822 ext. 1**, if you are calling from outside the United States dial **001-516-801-2100**. To contact Nastel technical support by e-mail, send a message to support@nastel.com. To access the Nastel automated support system (user id and password required), go to <http://support.nastel.com/>. Contact your local AutoPilot Administrator for further information.

1.9 Conventions

Refer to [Appendix B](#) for conventions used in this guide.

1.10 Nastel Navigator Installation Support (32-bit/64-bit)

See [Figure 1-1](#) for Nastel Navigator Installation Support. This platform is for the workgroup server and databases supported. Agents may be available for other versions of operating systems and middleware versions. You should contact their support representatives if your platform is not listed.

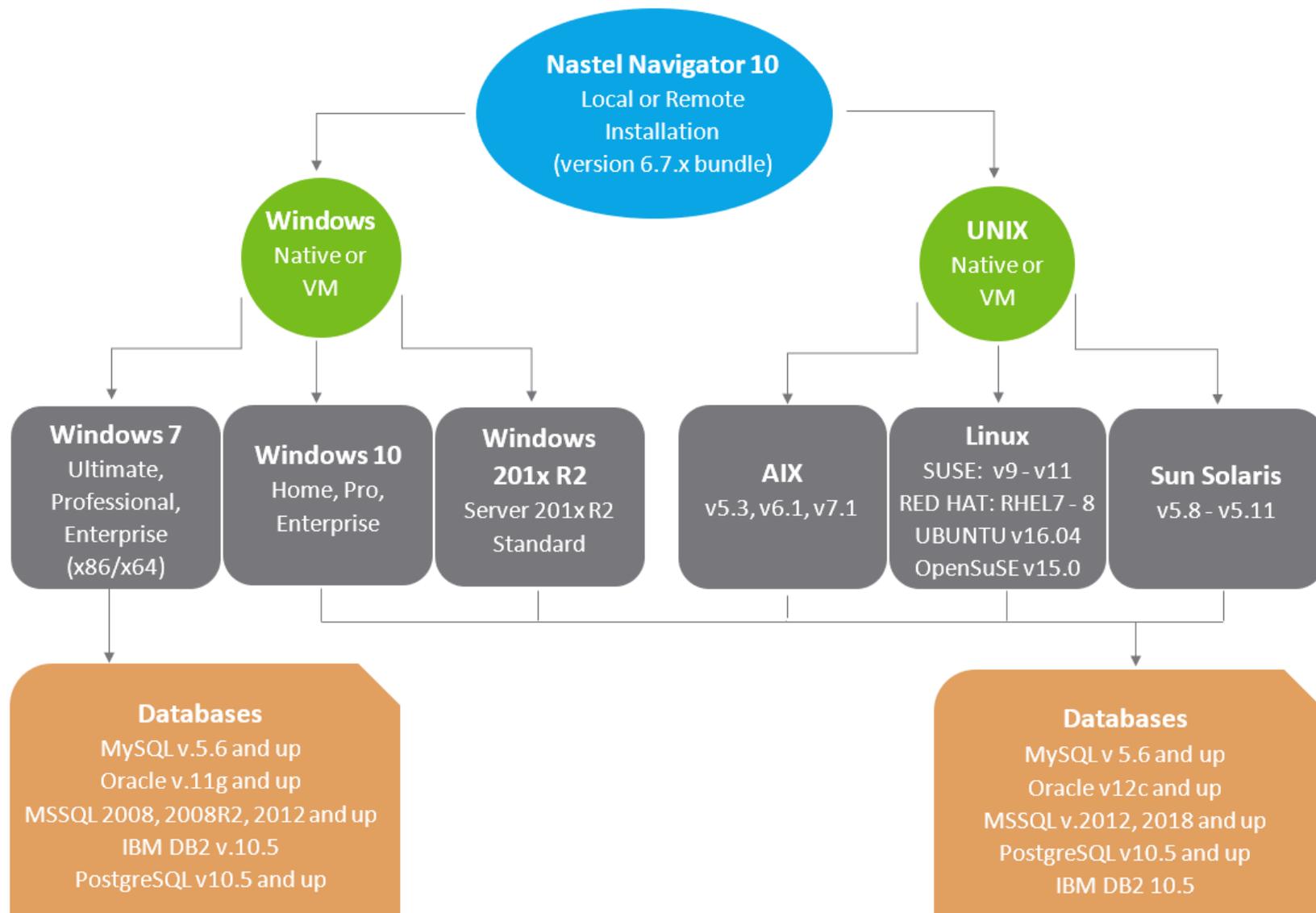


Figure 1-1. Nastel Navigator Installation Support (32-bit/64-bit)

Chapter 2: About AutoPilot On-Demand for WebSphere MQ

2.1 AutoPilot On-Demand for WebSphere MQ

The purpose of this guide is to familiarize the users and administrators of M6-WMQ with the AutoPilot On-Demand for WebSphere MQ (APODWMQ) application, introduce them to basic functionality issues, and describe all the dialog windows that they will encounter when working with APODWMQ.

APODWMQ system consists of two main parts:

- Server side components: reside within Jakarta-Tomcat JSP container
- Client application consists of a tree view applet, configuration applets, and HTML pages, which are served by the server side components.

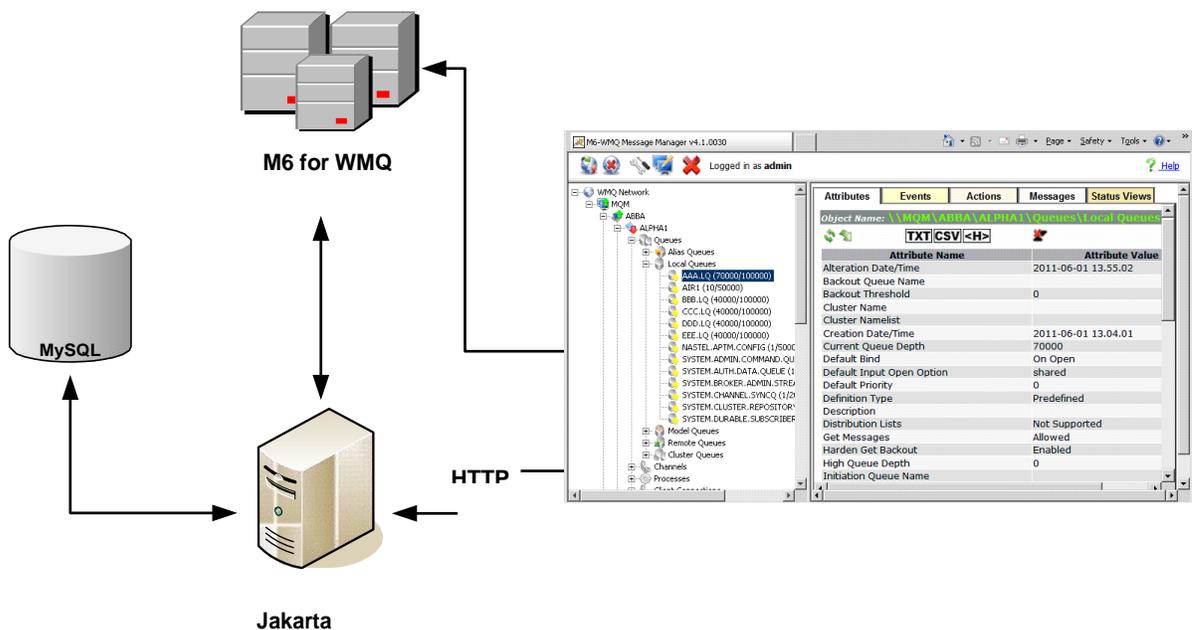


Figure 2-1. Message Management Flow Chart

AutoPilot On-Demand for WebSphere MQ Security Manager must be installed and configured at a minimum to use AutoPilot On-Demand for WebSphere MQ.

	NOTE:	The internal version of the web application is 4.1.XX, but externally as AutoPilot On-Demand for WebSphere MQ 6.5.
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Chapter 3: Using APODWMQ

3.1 System Access

After successful deployment, the web application can be accessed using the following URL:

```
http://<machine_name>:8080/apodwmq/
```

APODWMQ does not use application server authentication when logging into the application. The user can access the application using any login/password, but to connect to workgroups, the login/password pair must be valid.

Enter your assigned **User ID** and **Password**, click **Login**.

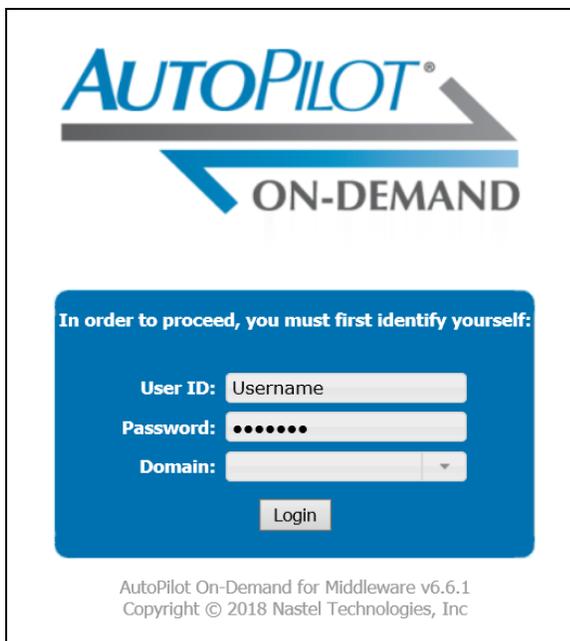


Figure 3-1. APODWMQ Login

Table 3-1. Login Window	
Property	Description
User ID	Enter admin assigned user ID.
Password	Enter admin assigned password.
Domain	Enter admin assigned domain.

3.2 User Authentication

The user and credential that you enter will depend on how security is defined in M6-WMQ. APODWMQ has three user authentications:

- **+a1** – authenticate user via local system security (OS-based)
 - Enter your OS user and password
- **+a2** – authenticate user via AutoPilot M6 security
 - Enter a user defined in AutoPilot Domain Server

3.2.1 OS-Based User Authentication

If M6 for WMQ starts with OS-based user authentication +a1, insert the local system user name and password in *APODWMQ Work Group Authentication* window for login.

3.2.2 AutoPilot M6-Based User Authentication

If M6 for WMQ starts with AP M6-based user authentication +a2, login with existing AP M6 user name.

3.3. Viewing and Managing Objects

The system default screen for APODWMQ (Figure 3-2) is displayed at login and may not be connected to the M6-WMQ network. To start APODWMQ, connect to the system by using the toolbar described in the next paragraph.

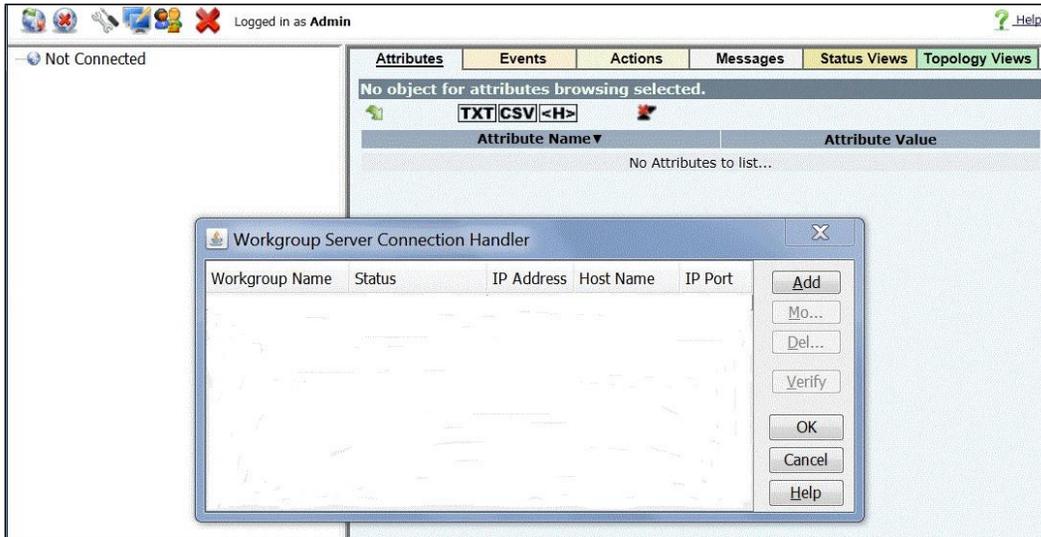


Figure 3-2. Connection Handler Pop-up

3.3.0 User Interface

The user has a choice of two interface styles which features either flat or classic style icons. New installations will default to the flat style, while upgrades will default to the classic style. The user can switch between styles at any time. Refer to section 3.3.1.3, User Settings for details on selecting the preferred style. Both icon styles for the tool bar are shown in Table 3-2. The screen shots in this document show both styles. For examples of the flat style, see Figure 3-3.

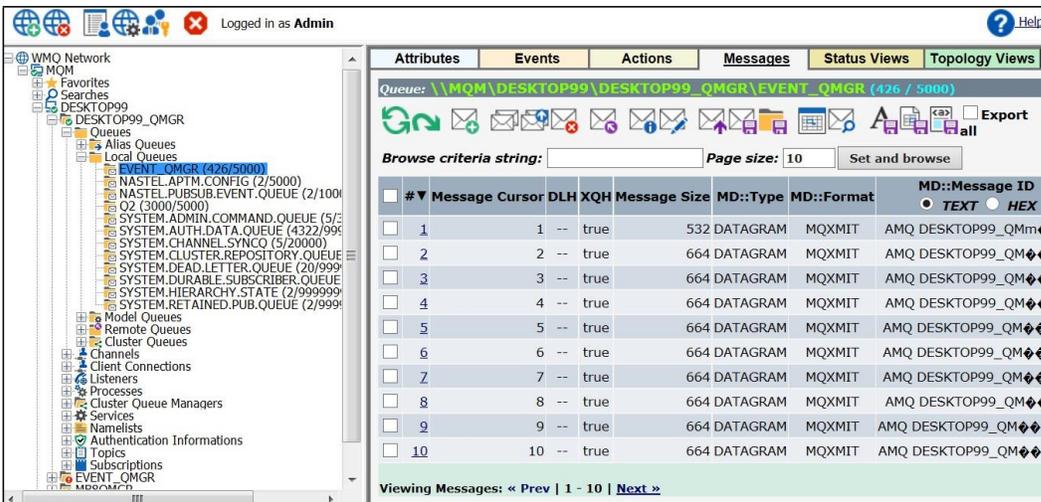


Figure 3-3. Typical APODWMQ Screen with Flat Icons

3.3.1 AutoPilot On-Demand for WebSphere MQ Toolbar

The icons on the APODWMQ toolbar allow the user to carry out some of the general commands. The user can choose between two interface styles – classic and flat.

Table 3-2. APODWMQ Toolbar

Classic Icon	Flat Icon	Operation
		Connect: Connects to M6-WMQ network and M6-WMQ workgroup agents provided in <i>Workgroup Agent Connection handler</i> .
		Disconnect: Disconnects from M6-WMQ network. Collapses Workgroup agents' tree view.
		User Settings: Opens the <i>User setting</i> tab (Figure 3-8) of the <i>Edit User Settings</i> dialog box to set refresh interval and status filters. Refresh interval automatically refreshes the displayed information at a specified interval. User can choose to list channels by type in tree node (Sender, Receiver, etc.), as is done for queues. User can switch between classic and flat style icons.
		Configure Connection: Opens the <i>Workgroup Server Connection Handler</i> dialog box (Figure 3-6), which allows you to configure connections to M6-WMQ Workgroup agents.
		Administrator: Allows you to administer default configuration. Requires login credentials. (See Figure 3-118 .)
		Logout: Logs out from the APODWMQ system.
 Help	 Help	Help: Opens the Help file.

3.3.1.1 Connect to Network

If the connection settings have not been configured, *Workgroup Agent Connection Handler* window will pop-up (Figure 3-2); otherwise, the system will automatically connect to the M6-WMQ network based on the settings (Figure 3-4). Once you are connected, expand the node tree on the left and you should see a screen similar to Figure 3-5.

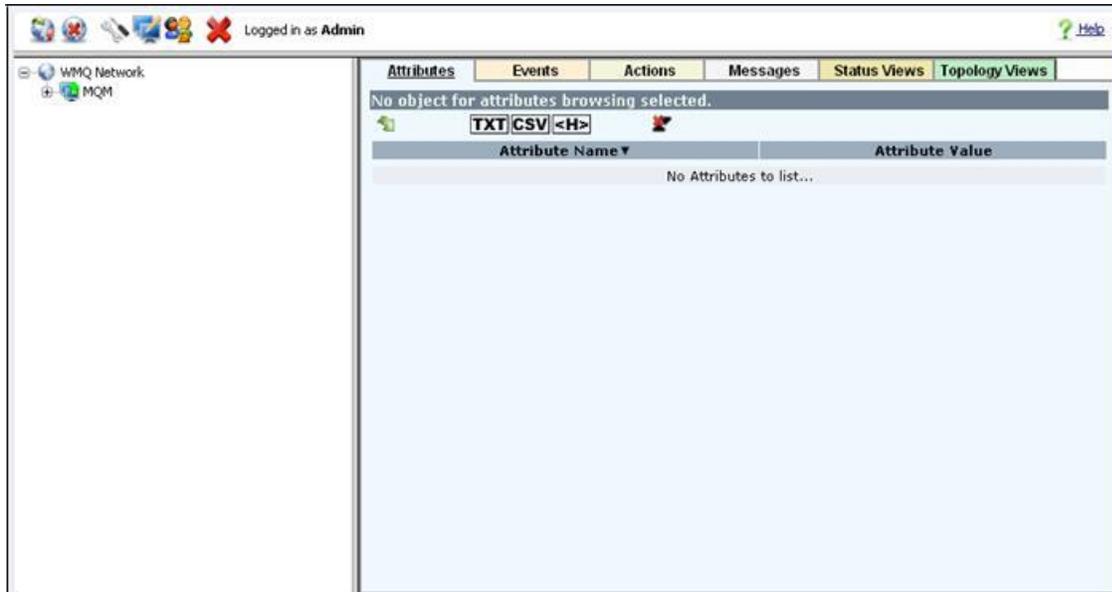


Figure 3-4. Auto-connect to M6-WMQ Network with Previous Setting

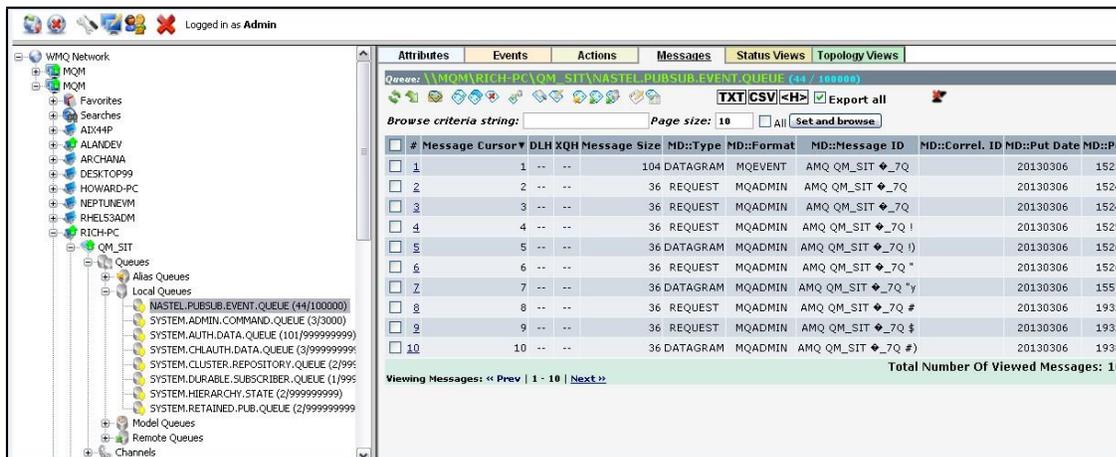


Figure 3-5. Typical APWQMOD Screen – Expanded Tree View

3.3.1.2 Workgroup Server Connection Handler

Click the **Configure Connection** icon  to display the *Workgroup Server Connection Handler* dialog box (Figure 3-6). The *Workgroup Server Connection Handler* is used to set up connections to those workgroup agents on M6-WMQ network that the user wants to monitor via the APODWMQ application.

The *Workgroup Server Connection Handler* table provides information about a registered workgroup server connection.

Table 3-3. Workgroup Server Connection Handler	
Control	Description
Add	Displays the <i>Add/Modify Connection</i> dialog box (Figure 3-7) to add a new workgroup agent connection. Select a connection to enable this option.
Modify	Displays the <i>Add/Modify Connection</i> dialog box (Figure 3-7) to modify IP address, host name and IP port. Select a connection to enable this option.
Delete	Deletes selected workgroup agent connection. Select a connection to enable this option.
Verify	Verifies selected workgroup agent connection. Select a connection to enable this option.
OK	Submits the workgroup agent connections list changes and closes dialog box.
Cancel	Discards the workgroup agent connections list changes and closes dialog box.



Figure 3-6. Workgroup Server Connection Handler

Table 3-4. Workgroup Server Connections	
Column	Description
Workgroup Agent Name	Provides Workgroup agent's name.
Status	Provides Workgroup agent's connection status (Connected, Not-Connected, Verified, Not-Verified).
IP address	Provides IP address of the node where Workgroup agent is running.
Host Name	Provides Host Name of the machine where Workgroup agent is running. The same host name can be used for more than one connection as long as the port number is different.
IP Port	Provides Workgroup agent's IP port number.

Add/Modify Connection

To add or modify connection information, click **Add** or **Modify**, from the *Workgroup Server Connection Handler* (Figure 3-6) to display the *Add/Modify Connection* dialog box (Figure 3-7). Use this screen to input the workgroup server's connection information. When **Add** is selected, the connection defaults are shown. To modify an existing connection, select the connection in the connection handler and then click **Modify**.

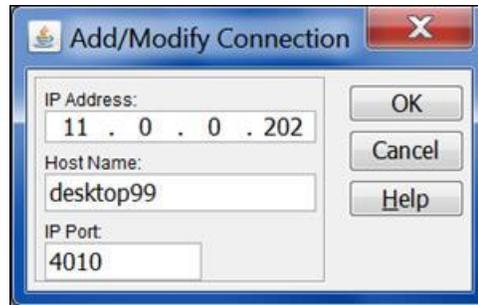


Figure 3-7. Add/Modify Connection Dialog Box

Table 3-5. Add/Modify Connections

Control	Description
IP Address	IP address of the node where Workgroup agent is running. (Required)
Host Name	Host name of the machine where Workgroup agent is running.
IP Port	User must enter Workgroup agent's IP port number. (Required)

3.3.1.3 User Settings

Click the **User settings** icon  to display the *Edit User Settings* dialog box (Figure 3-8). The *User Settings* dialog box saves a single user preferences record, which contains the default settings to use when executing operations. Refer to Table 3-6 for an explanation of all the tabs in this dialog box.

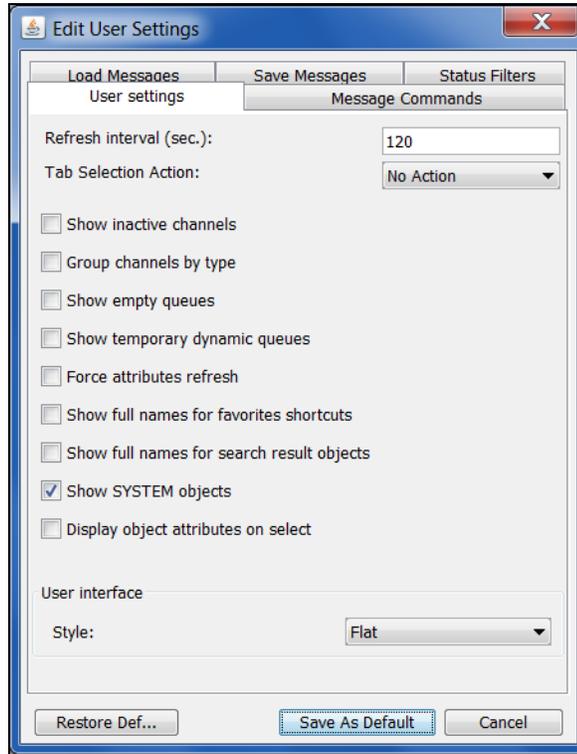


Figure 3-8. User Settings Dialogue Box

Table 3-6. Edit User Settings			
Control	Description		States and Conditions
User Settings (Figure 3-8)	Refresh interval (sec.)	Automatically refreshes the displayed information at a specified interval.	Available if the <i>User settings</i> button is clicked.
	Tab Selection Action	<p>No Action – no action when going to a new tab.</p> <p>Refresh – provides automatic refresh when going to a new tab. Automatic refresh is not applicable to the Messages and Topology tabs.</p> <p>Synchronize – provides automatic synchronization when going to a new tab.</p>	
	Show inactive channels	Select to show all inactive channels in the tree.	
	Group channels by type	Select to group and list all channels by type in the tree node (sender, receiver, etc.)	
	Show empty queues	Select to display all queues that have current depth = 0.	

Table 3-6. Edit User Settings

Control	Description		States and Conditions
User Settings (continued) (Figure 3-8)	Show temporary dynamic queues	Select to display temporary dynamic queues.	
	Force attributes refresh	Select to refresh all attributes of all objects.	
	Show full names for favorite shortcuts	Select to show full path name for Favorites shortcuts.	
	Show full names for search result objects	Select to show full path names for Searches results.	
	Show SYSTEM objects	Select to show SYSTEM objects.	
	Display object attributes on select	Select to show object attributes when selecting an object in the tree; that is there is no need to right-click and select Show Object Attributes .	
	User Interface Style	Select Flat or Classic icon style.	
	Restore Default	Select to restore to default settings (undoes changes).	
Save as Default	Select to save settings as the default.		
Status Filters (Figure 3-8)	Channel status	Filters for <i>Channel Status</i> screens specifying the objects and status elements to display.	
	Channel status types	Filters for <i>Channel Status</i> screens specifying the type of channels to display.	
	Queue status types	Filters for <i>Queue Status</i> screens specifying the type of queues to display.	
Message Commands	Global settings for browsing messages. Refer to Queue Browse Options , section 3.3.2.1 and Figure 3-34 .		Available if the <i>Browse Options/Copy/Move/Delete</i> buttons are pressed.
Load Messages	Global settings for loading messages. Refer to Load Messages section (Figure 3-100) .		Available if <i>Load From File</i> button is pressed and the <i>Configure</i> button from the <i>Command Settings</i> dialog box is selected.
Save Messages	Global settings for saving messages. Refer to Save Messages section (Figure 3-102) .		Available if <i>Save</i> button is pressed and <i>Configure</i> button from <i>Command Settings</i> dialog box selected.



Figure 3-9. Status Filters Dialogue Box

3.3.1A Remote Queue Manager Configuration

1. Right-click the workgroup manager, select **Create > Remote Queue Managers** from the short-cut menu.

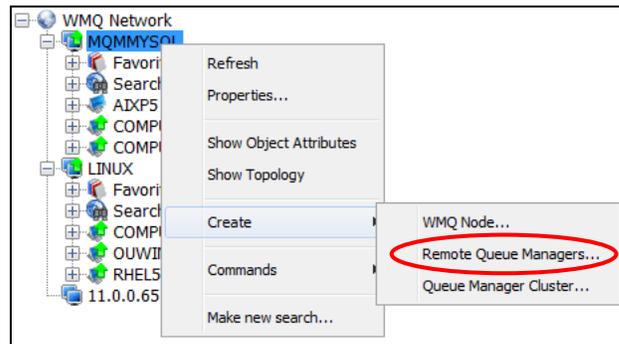


Figure 3-10. Remote Queue Managers Menu

The *Remote Queue Manager Connections* dialog box is displayed.



Figure 3-11. Remote Queue Manager Connections Dialog Box

2. Click **Add**. The *Change Queue Manager Connection* dialog box is displayed. Refer to the table below for an explanation for the input fields.



Figure 3-12. Remote Queue Manager Connection Dialog Box – General

Table 3-7. Add Queue Manager Connection – General Tab	
Control	Description
Connection Manager Instance name	Enter the instance name. Default is REMOTE_QMGRS.
Queue Manager name	Enter the name of the new queue manager. Default is QMGR_NAME.
Project name	Not an input field.

3. Click the **Communication** tab. Refer to the table below for an explanation for the input fields.

Figure 3-13. Remote Queue Manager Connection Dialog Box - Communication

Table 3-8. Add Queue Manager Connection – Communication Tab	
Control	Description
Connection name	Enter the new connection name.
Command queue name	Enter the command queue name. The default is SYSTEM.ADMIN.COMMAND.QUEUE
Channel name	Enter the name of the server-connection (svrconn) channel to be used for connecting to the remote queue manager in the <i>Channel name</i> field. The default is SYSTEM.DEF.SVRCONN.
Security Exit Name	Specifies the descriptive name of the Channel Security Exit – parameter of MQCD channel definition structure which controls execution of a channel. It is passed to channel exit that is called from a Message Channel Agent (MCA).
Security Exit Data	Specifies the Exit user area. It is specific to the expected data by channel security exit. This is a field that is available for the exit to use.
Command conversion (zOS systems)	Select if this is a zOS queue manager connection.

- Click the **SSL** (secure socket layer) tab and fill in required fields for your connection.



Figure 3-14. Remote Queue Manager Connection Dialog Box – SSL

- Click **OK**. A confirmation dialog box is displayed.



Figure 3-15. Remote Queue Manager Connection Dialog Box – Confirmation

- Click **Yes** to complete the setup.
- Click **No** to return to the dialog box.
- Click **Help** to go to online Help.

3.3.1B Create Queue Manager Cluster

A queue manager cluster is a group of two or more queue managers that are logically associated and can share information with each other. This means that an application can put a message on a cluster queue from any queue manager in the cluster and the message is automatically routed to the queue manager where the cluster queue is defined. The amount of system administration is reduced because the cluster channels that the cluster queue managers use to exchange application messages are automatically defined as required.

WebSphere MQ Explorer treats queue manager clusters as objects so that you can create and administer them like other MQ objects. All the queue manager clusters that are known to WebSphere MQ Explorer are displayed in the Queue Manager Clusters folder.

Before you can create a new queue manager cluster:

- Create two queue managers that will have the full repositories for the cluster.
- Each full repository queue manager in the cluster must have a running listener.
- You must know the connection details of each full repository queue manager in the cluster because you are asked to enter these details in the wizard.

Note that you cannot use the Create Cluster wizard if the full repository queue managers already belong to another cluster. If you want to use queue managers that already belong to another cluster, you must configure the cluster using the MQSC commands.

To create a new cluster:

1. Right-click the workgroup manager, select **Create > Queue Manager Cluster** from the short-cut menu.

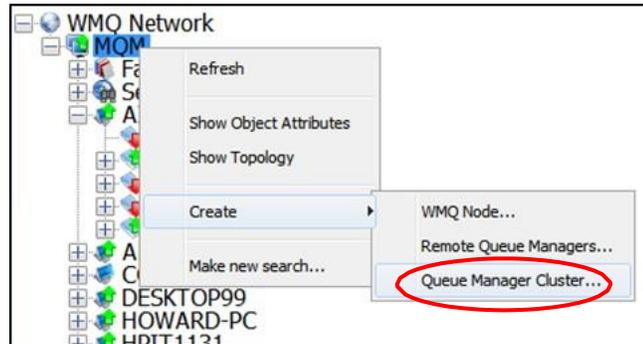


Figure 3-16. Create Queue Manager Cluster

2. Enter the name of the new cluster. This name must be unique. Click **Next**.

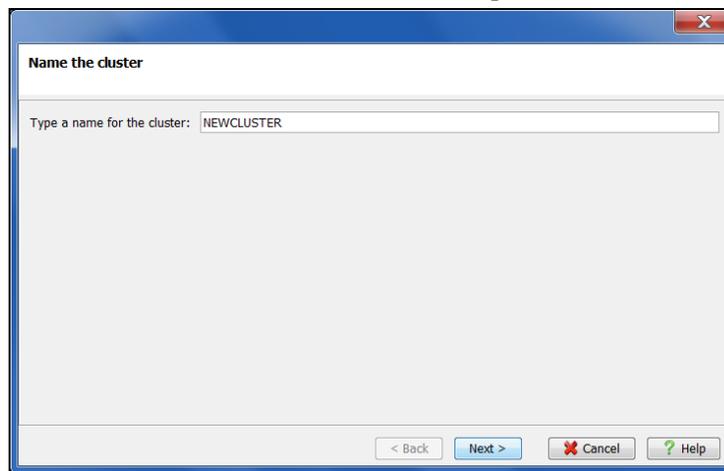


Figure 3-17. Cluster Wizard – Name the Cluster

3. Use the drop-down list to enter the name of a queue manager that will have a full repository of information about the cluster. The queue manager must already exist. Click **Next**.

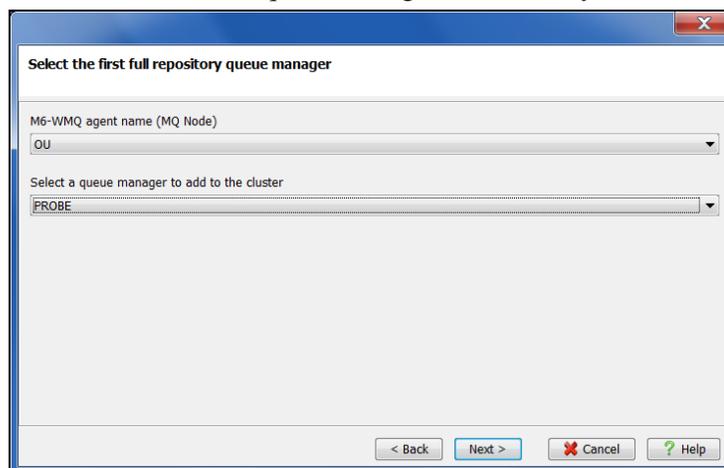


Figure 3-18. Cluster Wizard – Select First Repository

4. Use the drop-down list to enter the name of a second queue manager that will have a full repository of information about the cluster. Click **Next**.

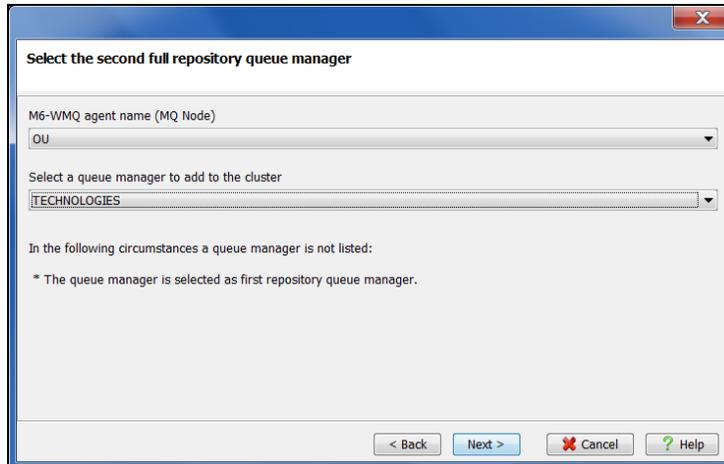


Figure 3-19. Cluster Wizard – Select Second Repository

5. Read the important information on this screen and click **Next**.

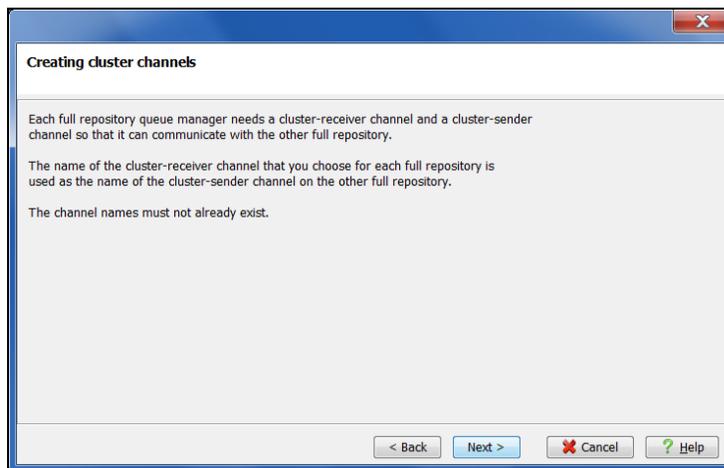


Figure 3-20. Creating Cluster Channels

6. The fields in this screen will automatically populate. If the cluster-receiver channel connection name is not correct, use the drop-down list to choose the correct one. Click **Next**.

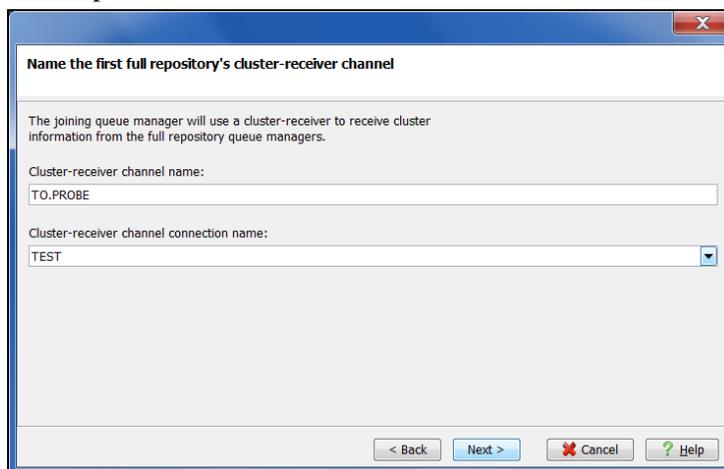


Figure 3-21. Cluster Wizard – Name the First Channel

- The fields in this screen will automatically populate. If the cluster-receiver channel connection name is not correct, use the drop-down list to choose the correct one. Click **Next**.

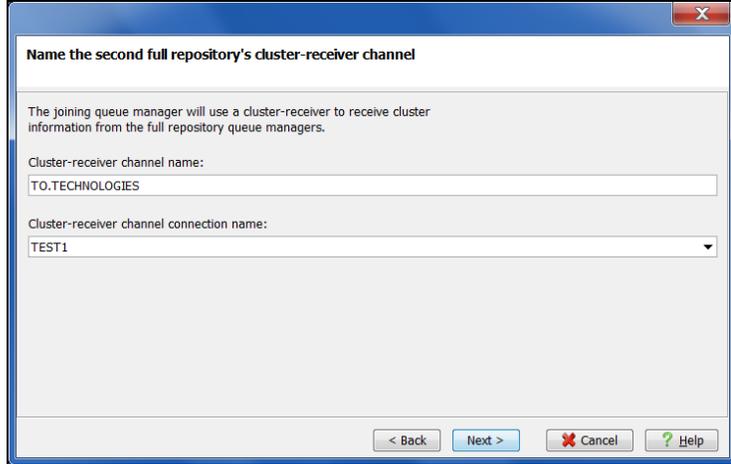


Figure 3-22. Cluster Wizard – Name the Second Channel

- Review the cluster summary information. If it is correct, click **Finish**.

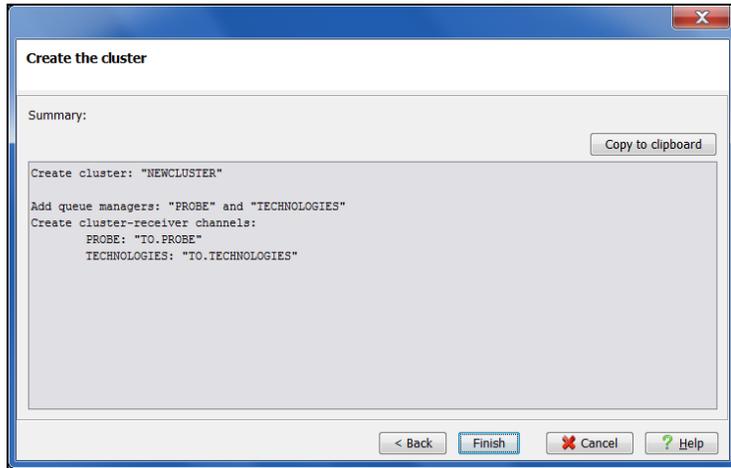


Figure 3-23. Cluster Wizard – Summary

- The newly created cluster is shown on the network tree.

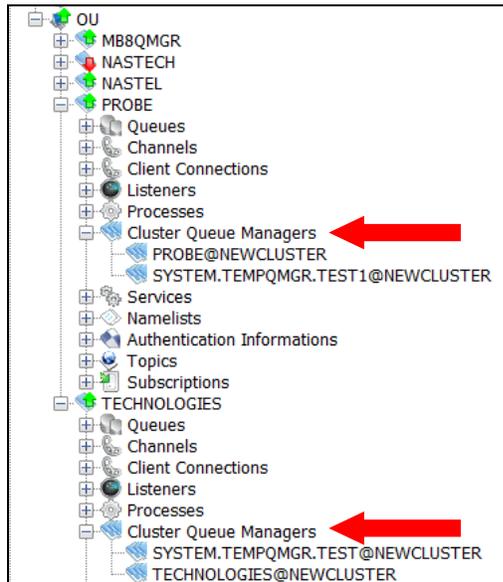


Figure 3-24. Cluster Created

3.3.1C Start/Stop Queue Manager Objects

1. Right-click the queue manager, select **Commands > Start all WMQ objects** or **Commands > Stop all WMQ objects** from the short-cut menu.

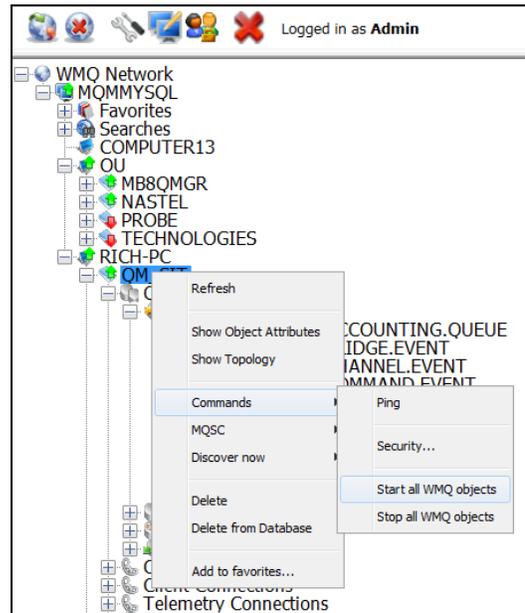


Figure 3-25. Start/Stop all WMQ Objects Menu

2. If **Start all WMQ Objects** was selected, a confirmation window will display.

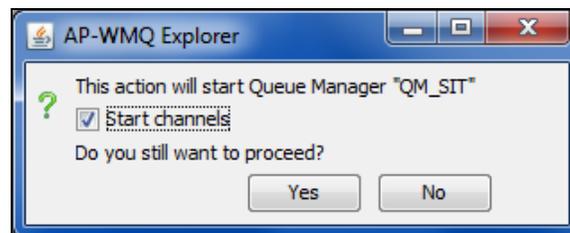


Figure 3-26. Start all WMQ Objects Confirmation

3. Click **Yes** to start or **No** to cancel the action.
4. If **Stop all WMQ Objects** was selected, a dialog box will display where you can select the shutdown method.

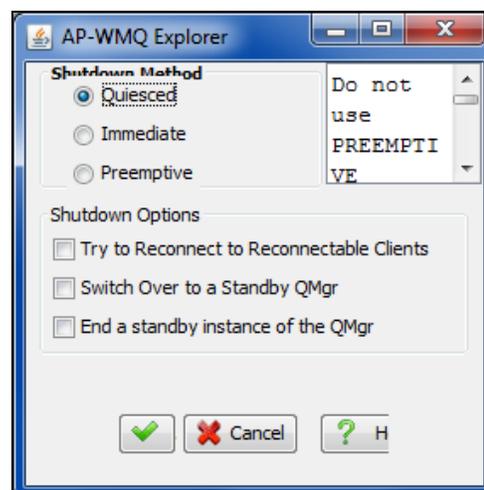


Figure 3-27. Stop all WMQ Objects

3.3.2 Tree View

M6-WMQ network is presented in a hierarchical tree view.

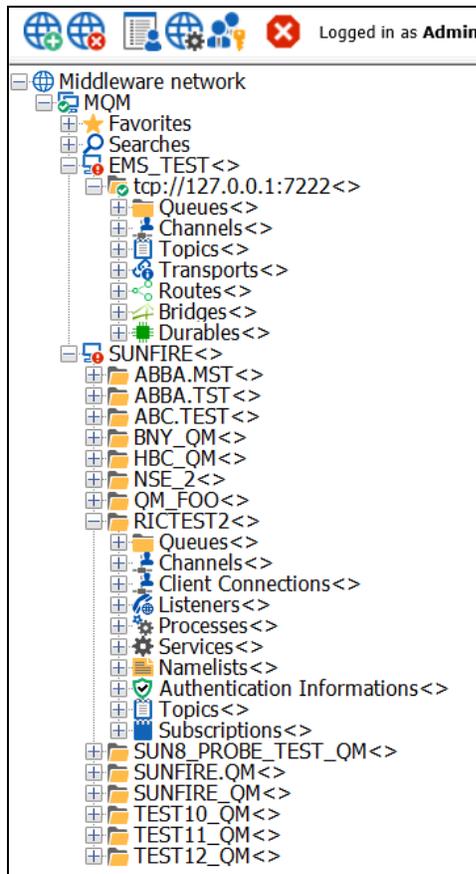


Figure 3-28. M6-WMQ Hierarchical Tree View

Workgroup Server Properties

To view the properties of the workgroup server, right-click it and select **Properties** from the pop-up menu to open the *Workgroup Server Properties* dialog box. Click the various tabs to view the workgroup server properties.

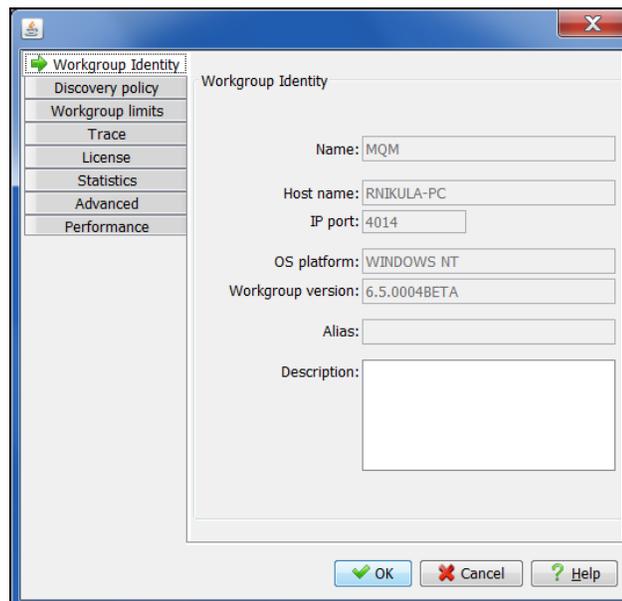


Figure 3-29. Workgroup Server Properties Dialog Box

Queue Parameters

The name of the queue is user defined when the queue is deployed. Queues are displayed below the selected agent as shown in [Figure 3-30](#).

Example:  SYSTEM.ADMIN.COMMAND.QUEUE (19/3000)

where: (19/3000) means the queue contains 19 messages and has a maximum of 3000 messages.

Individual queue status is defined by the queue icon preceding the name:

-  The queue is empty.
-  The queue contains messages, but not full.
-  The queue is full.

Right-clicking an object opens a pop-up menu ([Figure 3-30](#)). The menu lists the actions that are available for that object. Refer to [Table 3-9](#) for a description of the menu selections.

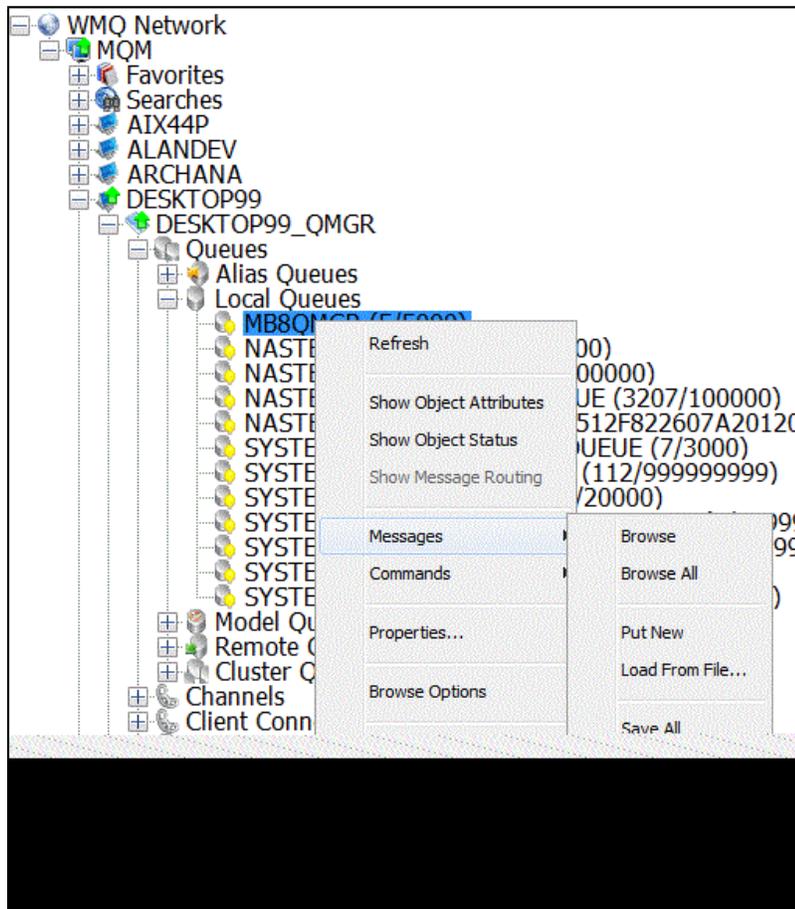


Figure 3-30. Object Pop-up Menus

Right-clicking **Local Queues** opens a pop-up menu (Figure 3-31). The menu lists the actions available for Local Queues. Refer to Table 3-9 for a description of the menu selections. The menu lists the actions available for Local Queues.

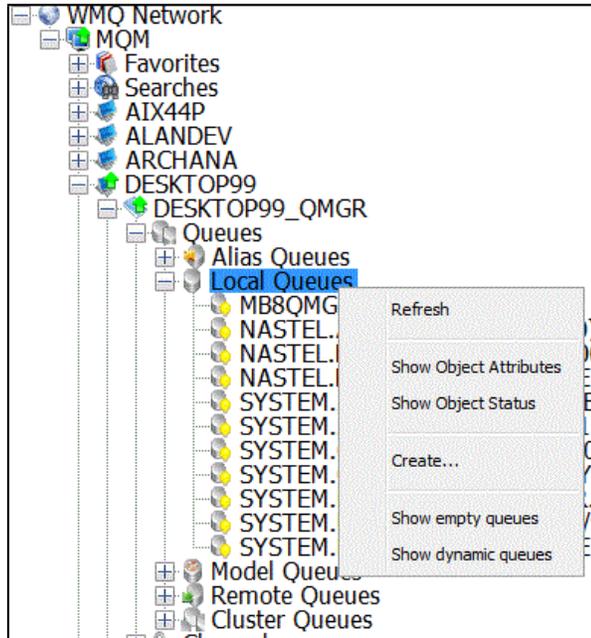


Figure 3-31. Local Queues Pop-up Menu

Table 3-9. M6-WMQ Hierarchical View Menus

Control	Description		States and Conditions
Refresh	Refreshes selected queue in an M6-WMQ network tree.		Available if any alias, local, model, or remote queue in an M6-WMQ network tree is selected.
Show Object Attributes	Lists attributes of selected M6-WMQ object in an Attributes tab (Figure 3-81).		Available if any M6-WMQ object in an M6-WMQ network tree is selected.
Show Object Status	Displays an expandable tabular view, with M6-WMQ object name labels for rows and configurable attribute columns. Each object name row has several child rows, each displaying a different status type (Figure 3-115).		Available if “Local Queues” in an M6-WMQ network tree is selected.
Create	Enables an authorized user to create a new Local Queue		Available if “Local Queues” in an M6-WMQ network tree is selected.
Show empty queues	Uncheck the item to only show queues that have a depth > 0.		Available if “Local Queues” in an M6-WMQ network tree is selected.
Show dynamic queues	Displays dynamic queues		Available if “Local Queues” in an M6-WMQ network tree is selected.
Messages	Browse	Lists the contents (messages) of selected queue in a Messages tab based on the Page size setting.	Available if any alias, local, or remote queue in an M6-WMQ network tree is selected and current depth of the queue is greater than 0.
	Browse All	Lists the contents (messages) of selected queue in a Messages tab ignoring the Page size setting. All messages are listed on one page.	
	Put New	Displays the <i>Put New Message(s)</i> dialog box (Figure 3-48) to create and put new message(s) into selected queue.	
	Load From File	Loads the contents (messages) from .mmf / .txt file into selected queue based on default user settings.	
	Save All	Save contents (messages) of selected queue into .mmf / .txt file based on user settings.	
	Copy All	Displays the <i>Copy All Messages from</i> dialog box (Figure 3-51) and copies contents of selected queue to a selected destination queue.	
	Move All	Displays the <i>Move All Messages from</i> dialog box (Figure 3-52) and moves contents of selected queue to a selected destination queue.	
	Delete All	Displays the <i>Delete Messages from</i> dialog box (Figure 3-54) and deletes contents of the selected queue.	
	Clear All	Clears the contents of the selected queue.	

Table 3-9. M6-WMQ Hierarchical View Menus			
Control	Description		States and Conditions
Commands	Delete	Allows you to delete the object. A delete confirmation is displayed.	
	Copy As	Creates a new object based on the definition of the currently selected object.	Available for any object in the network tree. Requires copy permission (controlled in Security Manager) for the object type. If the user does not have copy permission, the object can be copied and renamed, but the attributes cannot be changed.
	Security	Displays the <i>Display Or Set Authority</i> dialog box (Figure 3-45).	Available for any object in the network tree.
Browse Options	Displays the <i>Edit User Settings</i> dialog box (Figure 3-34) for user to set message browse options for selected queue.		Available if any alias, local, or remote queue in an M6-WMQ network tree is selected.

Refresh Remotely Configured Queue Managers

1. Right-click the Connection Manager Instance name (**REMOTE_QMGRS** in this example) to display a pop-up menu.

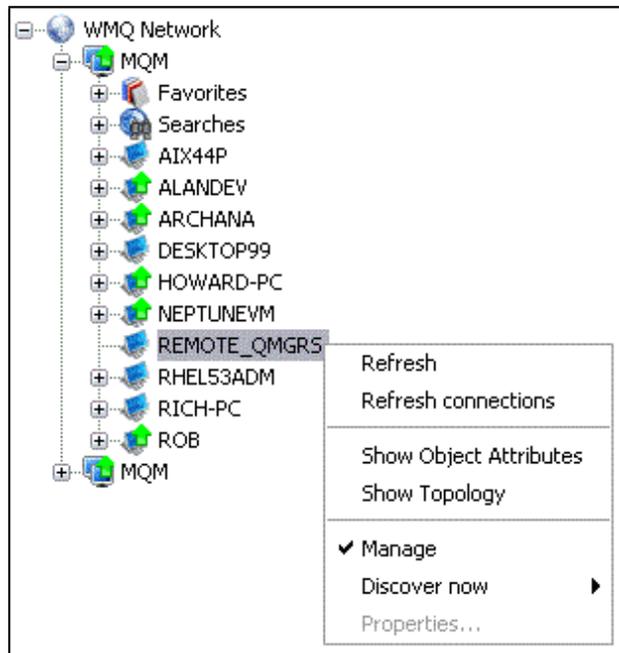


Figure 3-32. Refresh Remotely Configured Nodes

2. Select **Refresh connections**. A progress bar displays showing the update status.

3.3.2.1 Queue Browse Options

Right click on a queue to display a pop-up menu (Figure 3-33). Select **Browse Options** to display the *Message Commands* tab of the *Edit User Settings* dialog box (Figure 3-34) that allows you to set Message Criteria and Browse Settings. These settings are used to specify browse options for the queue selected. Refer to Table 3-10.

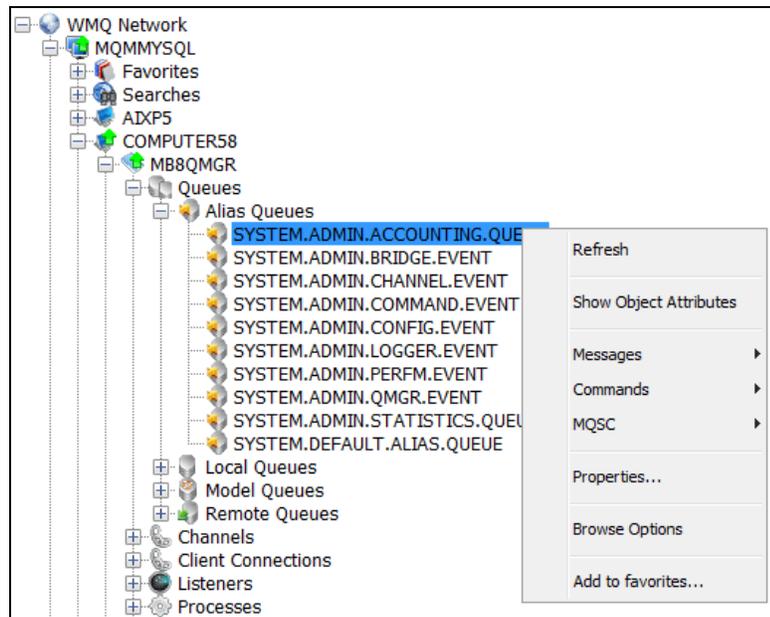


Figure 3-33. Queue Pop-up Menu

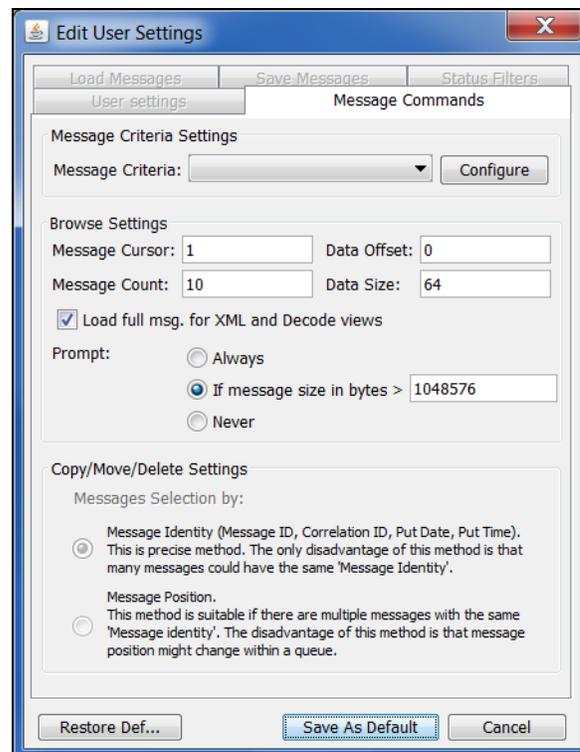


Figure 3-34. Queue Browse Options Dialog Box

Table 3-10. Queue Browse Options

Control	Description	States and Conditions
Message Criteria field	Name of message browse criteria. Select from the drop-down list or create by clicking the Configure button.	Always enabled.
Configure button	Displays the <i>Message Criteria</i> dialog box (Figure 3-35) to create or select existing message criteria.	
Message Cursor field	Enter message cursor; that is, where to start reading the message. Range: 1 – 999999999. Default: 1 (Required)	
Message Count field	Enter the number of messages to be displayed in the Message tab. The default setting is 500, but the Administrator can change this to any value from 1 to 1,000. (Refer to section 3.4.3.2 , Configure Application Settings.) However, if the user enters a value that is greater than the default, it will not be saved. The value will revert to the default. (Required)	
Data Offset field	Enter message data offset. (Required)	
Data Size field	Enter message data size. (Required)	
Load full msg. for XML and Decode views	If selected, the full message is loaded. Select prompt criteria.	
Restore Defaults button	Restores the default settings.	
Save As Default button	Submits the queue browse options and closes the dialog box.	
Cancel button	Closes dialog box without saving any changes.	
Messages Selection by radio buttons	Provides Copy/Move/Delete options.	

	NOTE:	Browse options are set only for browsing and only for the queue that you opened the pop-up menu. These browse settings can be saved per user.
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3.3.2.1.1 Message Criteria

The *Message Criteria* dialog box displays when the **Configure** button  is pressed on the *Message Commands* tab ([Figure 3-34](#)). Use the *Message Criteria* screen to create or select existing message criteria.

To create new Message Criteria:

1. Click the *New*  icon.
2. Enter a name for the message criteria.
3. Click **OK**. You are returned to the *Message Commands* tab.

When the criteria are specified, they can be used to browse, copy, move, re-route, and delete messages. Only those messages which conform to the specified criteria will be affected.



Figure 3-35. Message Criteria

Table 3-11. Message Criteria		
Control	Description	States and Conditions
New	Creates new criteria.	Always enabled.
Delete	Removes selected criteria.	
MD	Displays the <i>Message Descriptor Properties</i> dialog box, (Figure 3-36) enabling user to edit MD header of selected message criteria.	
MD1	Displays the <i>Message Descriptor Properties</i> dialog box, (Figure 3-36) enabling user to edit MD1 header of selected message criteria.	
MDE	Displays the <i>Message Descriptor Extension</i> dialog box (Figure 3-41) , enabling user to edit MDE header of selected message criteria.	
DLH	Displays the <i>Dead Letter Queue Header</i> dialog box (Figure 3-42) , enabling user to edit DLH header of selected message criteria.	
XQH	Displays the <i>Transmission Queue Header</i> dialog box (Figure 3-43) , enabling user to edit XQH header of selected message criteria.	
Data	Displays the <i>Message Data Criteria</i> dialog box (Figure 3-44) , enabling user to edit data of selected message criteria.	
Criteria list	Provides a list of existing message criteria.	If the criteria list is not empty, user can select a criterion.
OK button	Submits changes in message criteria list and closes the dialog box.	Always enabled.
Cancel button	Discards changes in message criteria list and closes the dialog box.	

3.3.2.1.2 Message Descriptor Properties

Message Descriptor Properties screen is displayed when **MD** or **MD1** button is pressed on the *Message Criteria* dialog box (Figure 3-35). Message Descriptor Properties are used to edit MD and MD1 message headers. There are five tabs:

- **General** – Refer to [Figure 36](#) and [Table 3-12](#).
- **Identity** – Refer to [Figure 37](#) and [Table 3-13](#).
- **Origin** – Refer to [Figure 38](#) and [Table 3-14](#).
- **Reports** – Refer to [Figure 39](#) and [Table 3-15](#).
- **Groups** – Refer to [Figure 40](#) and [Table 3-16](#).

The screenshot shows the 'Message Descriptor Properties' dialog box with the 'General' tab selected. The dialog has a title bar with a close button (X) and a tab bar with 'General', 'Identity', 'Origin', 'Reports', and 'Group'. The main area contains the following fields:

- MD**: A text field containing 'MD'.
- Version**: A dropdown menu set to 'VERSION 1'.
- Message Type**: A dropdown menu set to 'DATAGRAM'.
- Application Message Type**: A text field containing '65536'.
- Message Format**: A dropdown menu set to 'NONE'.
- FeedBack**: A dropdown menu set to 'NONE'.
- Application Feedback Code**: A text field containing '65536'.
- Expiry(1/10sec)**: A text field containing '-1'.
- Priority**: A text field containing '-1'.
- Persistent**: A group box containing three radio buttons: 'No', 'Yes', and 'As Queue'. 'As Queue' is selected.
- Put Date**: A text field.
- Put Time**: A text field.
- Encoding**: A text field containing '546'.
- CCSID**: A text field containing '0'.
- Backout Count**: A text field containing '0'.
- Reply to queue**: A text field.
- Reply to queue manager**: A text field.

At the bottom of the dialog are three buttons: 'OK', 'Cancel', and 'Help'.

Figure 3-36. Message Descriptor Properties: General

Table 3-12. Message Descriptor Properties: General Tab

Control	Description	States and Conditions
Version combo box	Select MD version from the list.	Always enabled.
Message Type combo box	Select message type from the list.	
Message Format combo box	Select message format from the list.	
FeedBack combo box	Select message feedback code from the list.	
Application Message Type field	Input application message type.	Editable only if APPLICATION message type is selected in Message Type combo box.
Application Feedback Code field	Input application feedback code.	Editable only if APPLICATION feedback code is selected in FeedBack combo box.
Expiry field	Input message expiry.	Always enabled.
Priority field	Input message priority.	
Persistent radio buttons	Set message persistence.	
Put Date field	Provides date when message was put.	Read only.
Put Time field	Provides time when message was put.	
Encoding field	Provides message data encoding.	
CCSID field	Provides message coded character set identifier.	
Backout Count field	Provides backout counter.	
Reply to queue field	Input name of a message queue to which the reply or report message should be sent.	Always enabled.
Reply to queue manager field	Input name of the queue manager to which the reply or report message should be sent.	

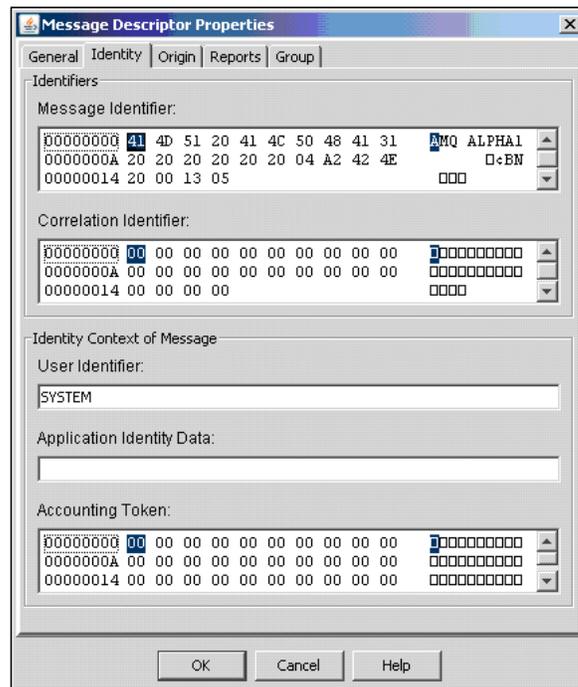


Figure 3-37. Message Descriptor Properties: Identity

Table 3-13. Message Descriptor Properties: Identity Tab

Control	Description	States and Conditions
Message Identifier	Edit message identifier.	Always enabled.
Correlation Identifier	Edit message correlation identifier.	
User Identifier field	Enter user identifier.	
Application Identity Data field	Enter application identity data.	
Accounting Token	Edit message accounting token.	

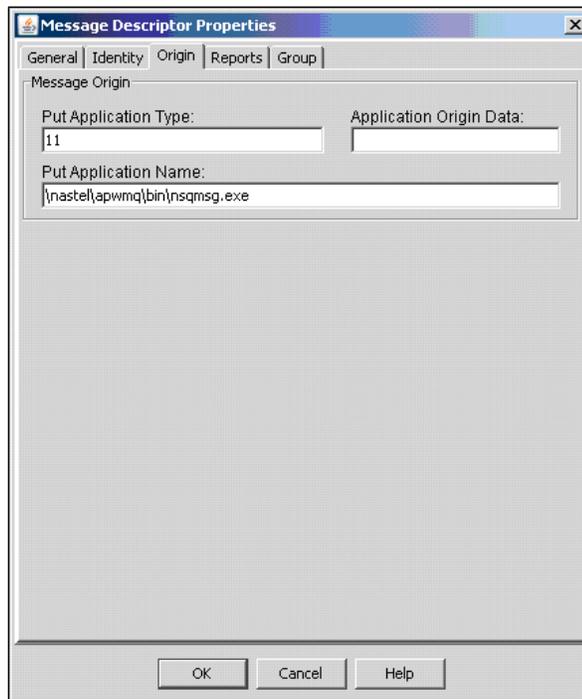


Figure 3-38. Message Descriptor Properties: Origin

Table 3-14. Message Descriptor Properties: Origin Tab

Control	Description	States and Conditions
Put Application Type field	Input put application type.	Always enabled.
Application Origin Data field	Input application origin data.	
Put Application Name field	Input put application name.	

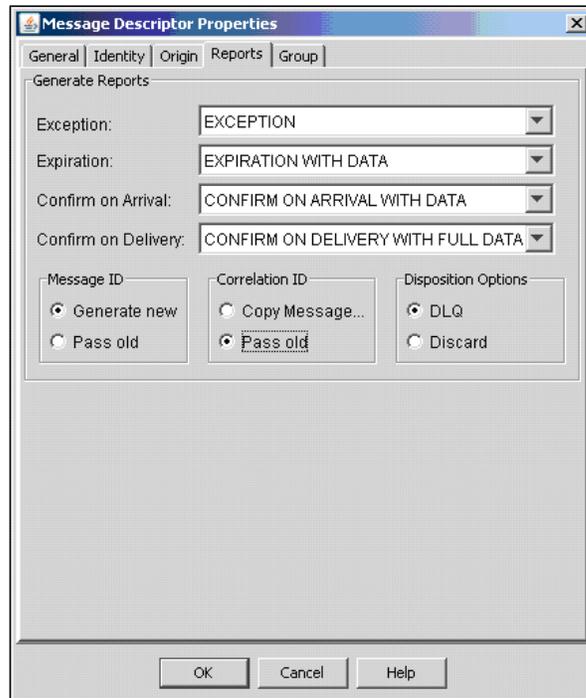


Figure 3-39. Message Descriptor Properties: Reports

Table 3-15. Message Descriptor Properties: Reports Tab

Control	Description	States and Conditions
Exception combo box	Select an exception report message type from the list.	Always enabled.
Expiration combo box	Select an expiration report message type from the list.	
Confirm on Arrival combo box	Select a confirm-on-arrival report message type from the list.	
Confirm on Delivery combo box	Select a confirm-on-delivery report message type from the list.	
Message ID radio buttons	Specify how the Message ID of the report message (or of the reply message) is to be set.	
Correlation ID radio buttons	Specify how the Correlation ID of the report message (or of the reply message) is to be set.	
Disposition Options radio buttons	Specify message disposition type when a message cannot be delivered to its destination queue.	

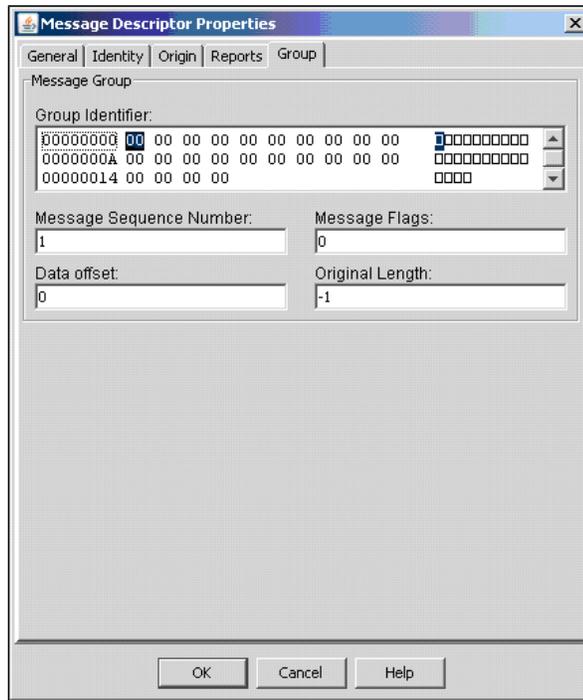


Figure 3-40. Message Descriptor Properties: Group

Table 3-16. Message Descriptor Properties: Group Tab		
Control	Description	States and Conditions
Group Identifier	Edit group identifier.	Always enabled.
Message Sequence	Input the sequence number of logical message within a group.	
Data offset field	Input the offset of data in physical message from start of logical message.	
Message Flags field	Input message flags.	
Original Length field	Input length of original message.	

3.3.2.1.3 Message Descriptor Extension

The *Message Descriptor Extension Properties* dialog box is displayed, when the **MDE**  button is pressed from *Message Criteria* (Figure 3-35). The *Message Descriptor Extension Properties* dialog box is used to edit the MDE message header.

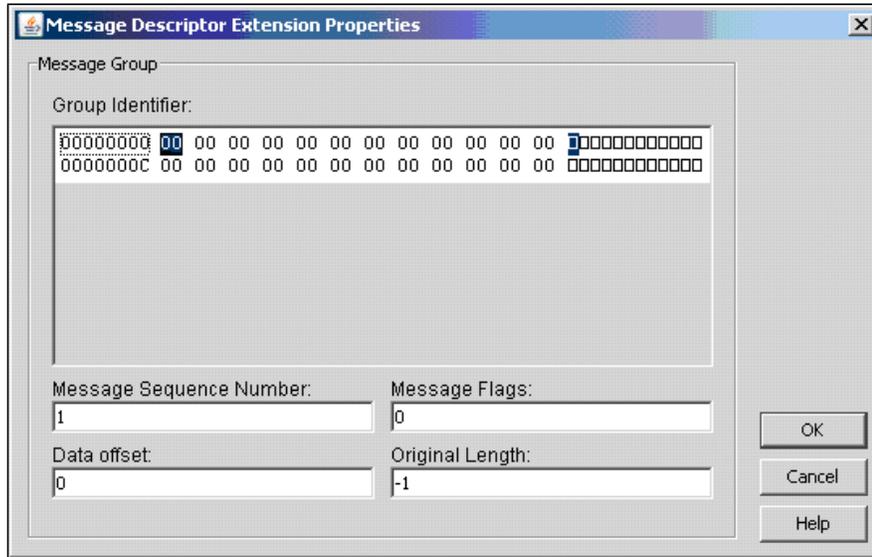


Figure 3-41. Message Description Extension Properties

Table 3-17. Message Descriptor Extension		
Control	Description	States and Conditions
Group Identifier field	Edit group identifier.	Always enabled.
Message Sequence Number field	Input sequence number of logical message within group.	
Data offset field	Input offset of data in physical message from start of logical message.	
Message Flags field	Input flags that specify attributes of the message.	
Original Length field	Input length of original message.	
OK button	Submits MDE properties and closes the dialog box.	
Cancel button	Discards MDE properties and closes the dialog box.	

3.3.2.1.4 Dead Letter Queue Header

The *Dead Letter Queue Header (DLH)* dialog box is displayed when the **DLH**  button is pressed from *Message Criteria* (Figure 3-35). The *Dead Letter Queue Header (DLH)* dialog box is used to edit DLH message header.

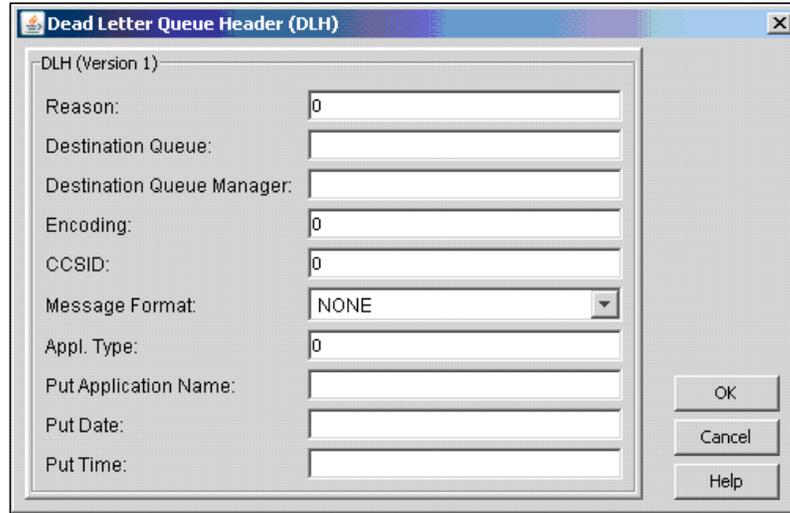


Figure 3-42. Dead Letter Queue Header

Table 3-18. Dead Letter Queue Header		
Control	Description	States and Conditions
Reason field	Input reason code.	Always enabled.
Destination Queue field	Input name of destination queue.	
Destination Queue Manager field	Input name of destination queue manager.	
Encoding field	Specify message data encoding.	
CCSID field	Specify message coded character set identifier.	
Message Format combo box	Select message format from the list.	
Appl Type field	Input put application type.	Always enabled.
Put Application Name field	Input put application name.	
Put Date field	Provides date when message was put.	
Put Time field	Provides time when message was put.	
OK button	Submits DLH properties and closes the dialog box.	
Cancel button	Discards DLH properties and closes the dialog box.	

3.3.2.1.5 Transmission Queue Header

The *Transmission Queue Header (XQH)* dialog box is displayed when the **XQH**  button is pressed from *Message Criteria* (Figure 3-35). *Transmission Queue Header* dialog box is used to edit XQH message header.

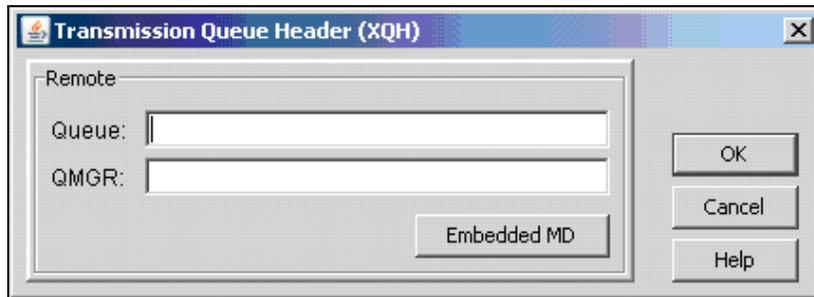


Figure 3-43. Transmission Queue Header

Table 3-19. Transmission Queue Header		
Control	Description	States and Conditions
Queue field	Input name of destination queue.	Always enabled.
QMGR field	Input name of destination queue manager.	
Embedded MD button	Displays the Message Descriptor Properties and edits embedded message descriptor.	
OK button	Submits XQH properties and closes the dialog box.	
Cancel button	Discards XQH properties and closes the dialog box.	

3.3.2.1.6 Message Data Criteria

Message Data Criteria dialog box is displayed when the **Data**  button is pressed from *Message Criteria* (Figure 3-35). The *Message Data Criteria* dialog box is used to edit message data criteria.

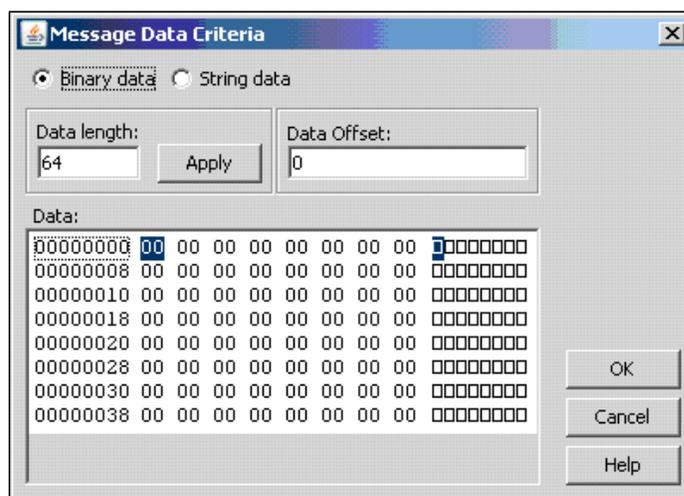


Figure 3-44. Message Data Criteria Dialog Box

Table 3-20. Message Data Criteria		
Control	Description	States and Conditions
Binary data/String data option	Choose browse by binary data or string data	Always enabled.
Data length	Choose data length	
Data Offset field	Input message data offset.	
Data	Input message data.	
OK button	Submits message data criteria and closes the dialog box.	
Cancel button	Discards message data criteria and closes the dialog box.	

Message Criteria is a filtering template that allows the messages that are browsed to be filtered based on specific fields, like values from the headers, or information in the message body. The Message Data Criteria box above is a data filter that allows specifying data at a particular offset in the message and allows specifying a string that can be anywhere in the message.

3.3.2.1A Display or Set Authority (MQ Only)

Use the Security command to display or change object authorization settings. To display or edit object authorization settings:

1. Right-click on the object (Queue) and select **Commands > Security**. The Display or Set Authority dialog box is displayed. Each object type has the same basic screen, but the contents of the WMQ Authorizations box are different for each object type. The object type is included in the menu bar. In this example, Queue is the object type.

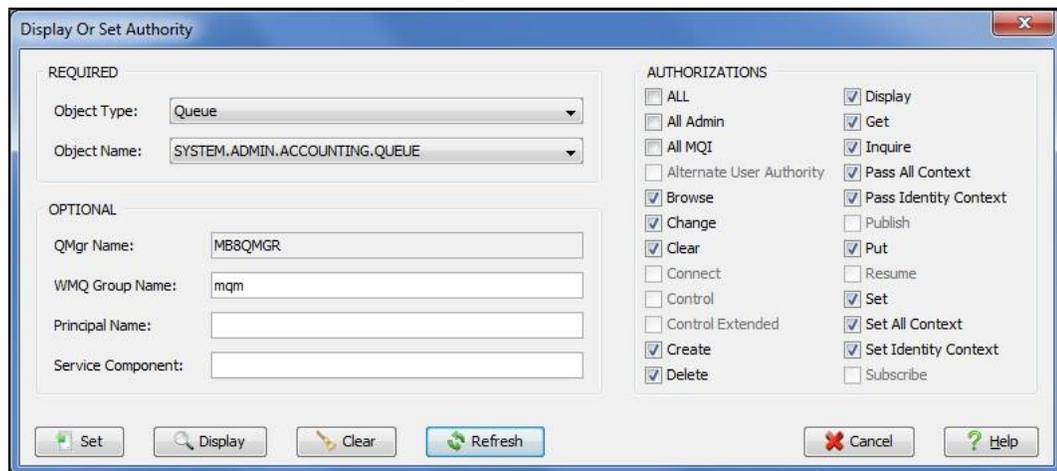


Figure 3-45. Display or Set Authority Dialog Box

2. In the **Object Type** field, use the drop-down list to select an object type.
3. In the **Object Name** field, use the drop-down list to select a name. The drop-down list contains names of entities that have authority records for the object type selected. You can create a record by entering a new object name here.
4. In the **Authorizations** box, make any necessary changes by clicking a box to select or clear it.
5. Click **Set** to save your changes or **Cancel** to exit without saving any changes.

3.3.2.2 Queue Properties

Right click on a queue to display a pop-up menu (Figure 3-46). Select **Properties**. The properties dialogue boxes for the selected object type are displayed. Figure 3-47 is the *Local Queue Properties* dialog box. The other object type dialog boxes are similar in look and feel. For detailed descriptions of the various input fields:

- For MQ go to the IBM Knowledge Center, http://www-01.ibm.com/support/knowledgecenter/SSFKJSJ_7.5.0/com.ibm.mq.explorer.doc/e_properties_queues.htm
- For EMS go to https://docs.tibco.com/pub/ems/8.4.0/doc/pdf/TIB_ems_8.4_users_guide.pdf.

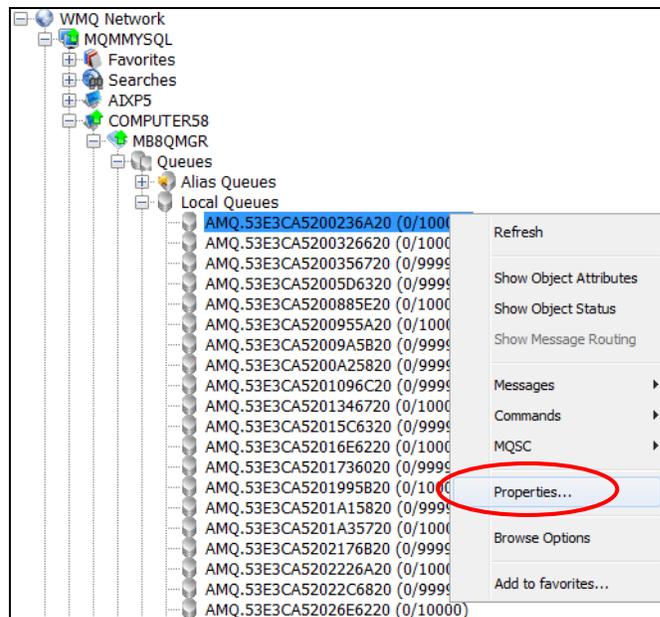


Figure 3-46. Queue Properties Pop-up Menu

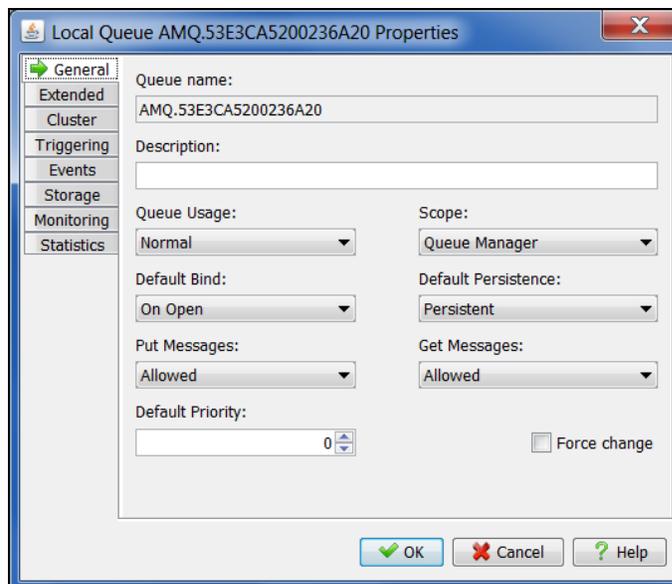


Figure 3-47. Local Queue Properties Dialog Box

3.3.2.3 Put New Message(s)

The *Put New Message(s)* dialog box is displayed when **Put New** is selected from the pop-up menu ([Figure 3-30](#)) after a right click on a queue. It is used to create new messages and put them into one or more destination queues.

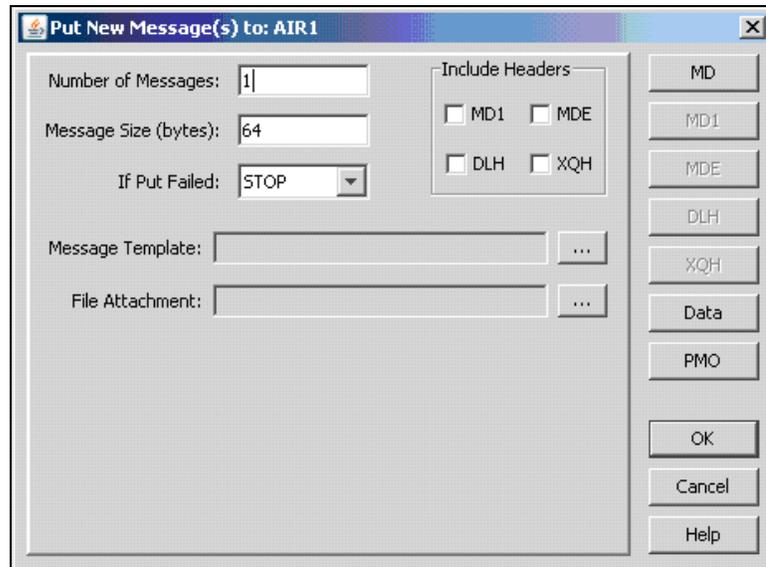


Figure 3-48. Put New Message(s)

Table 3-21. Put New Message(s)

Control	Description	States and Conditions
Number of Messages field	Enter the number of messages to put into a queue.	Always enabled.
Message Size field	Enter message size.	
If Put Failed combo box	Select what action should be taken if Put command fails.	
Message Template field	The name of the message template. Click the Select Message Template button to select a template.	Read only.
Select Message Template button 	Displays the <i>Message Criteria</i> dialog box (Figure 3-30) to create or select a message template.	Always enabled.
File Attachment field	Enter the path of the file to attach to the message.	
Select File Attachment button 	Displays the <i>Open File</i> dialog box to select the file to attach to this message.	
Include Headers checkboxes	Select the header(s) in the message.	
MD button	Displays the <i>Message Descriptor Properties</i> dialog box (Figure 3-36) where the user can edit MD header of the message.	Enabled only if MD1 checkbox isn't selected.
MD1 button	Displays the <i>Message Descriptor Properties</i> dialog box (Figure 3-36) where the user can edit MD1 header of the message.	Enabled only if MD1 checkbox is selected.
MDE button	Displays the <i>Message Descriptor Extension</i> dialog box (Figure 3-41) where the user can edit MDE header of the message.	Enabled only if MDE checkbox is selected.
DLH button	Displays the <i>Dead Letter Queue Header</i> dialog box (Figure 3-42) where the user can edit DLH header of the message.	Enabled only if DLH checkbox is selected.
XQH button	Displays the <i>Transmission Queue Header</i> dialog box (Figure 3-43) where the user can edit DLH header of the message.	Enabled only if XQH checkbox is selected.
Data button	Displays the <i>Message Data</i> dialog box (Figure 3-49) where the user can edit the message data.	Always enabled.
PMO button	Displays the <i>Message Put Options</i> dialog box (Figure 3-50) where the user can set <i>put message</i> options.	
OK button	Creates new messages, puts them into the selected queue, and closes the dialog box.	
Cancel button	Closes the dialog box and discards all selections and entered data.	

3.3.2.3.1 Message Data

The *Message Data* dialog box is displayed when the **Data** button is pressed on the *Put New Message(s) to* dialog box (Figure 3-48). The *Message Data* dialog box is used to edit message data. Messages can be presented in ASCII or EBCDIC format. Users can also view a message as plain text.

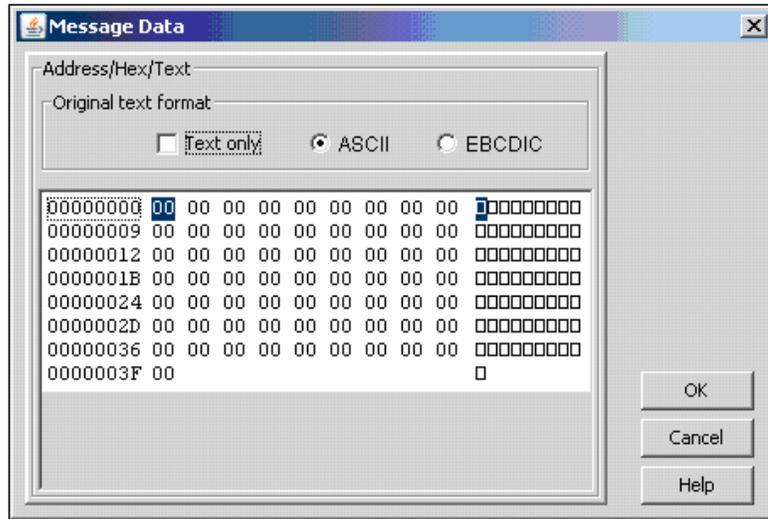


Figure 3-49. Message Data

Table 3-22. Message Data		
Control	Description	States and Conditions
Original text format buttons	Select text format and text representation.	Always enabled.
Message data field	Edit message data.	
OK button	Submits message data changes and closes the dialog box.	
Cancel button	Discards message data changes and closes the dialog box.	

3.3.2.3.2 Message Put Options

The *Message Put Options* dialog box is displayed when **PMO** button on the *Put New Message(s)* dialog box (Figure 3-48) is pressed. The *Message Put Options* dialog box is used to specify any options the user wants to use when putting a message onto a queue.

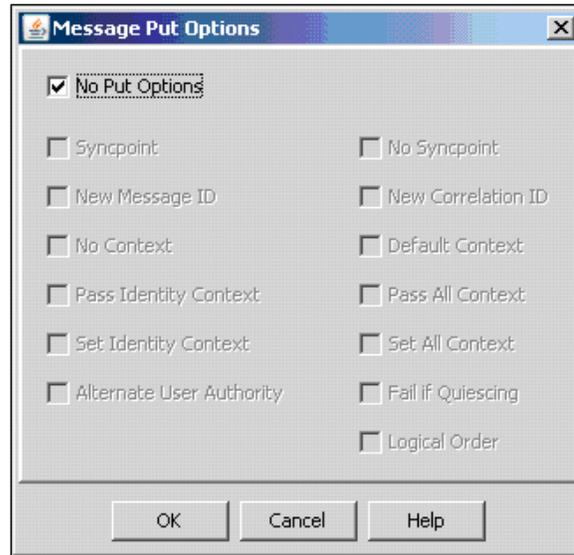


Figure 3-50. Message Put Options

Table 3-23. Message Put Options		
Control	Description	States and Conditions
No Put Options checkbox	Specifies that no options are used.	Disabled if another entry is selected.
Syncpoint Checkbox	Operate within the normal unit-of-work protocols.	Enabled only when No Put Options is not selected.
New Message ID checkbox	Used to identify a new message identifier.	
No Context checkbox	Context field in MQMD are set to blanks, nulls, and zeros.	
Pass Identity Context checkbox	Passes identity context information from the original message to a new message.	
Set Identity Context checkbox	Sets identity context information from the original message to a new message.	
Alternate User Authority checkbox	User identifier to validate authority to messages on the queue.	
No Syncpoint checkbox	Operate outside the normal unit-of-work protocols.	
New Correlation ID checkbox	Used to identify a new correlation identifier.	
Default Context checkbox	Message will have default context associated with it.	
Pass All Context checkbox	Passes identity and origin context information from the original message to a new message.	
Set All Context checkbox	Sets identity and origin context information from the original message to a new message.	
Fail if Quiescing checkbox	Forces MQPUT or MQPUT1 call to fail if queue manager in quiescing state.	
Logical Order checkbox	Puts groups and segment information in logical order rather than physical order.	

3.3.2.4 Copy or Move

The *Copy All Messages from* or *Move All Messages from* dialog boxes are displayed when **Move All** or **Copy All** is selected from the Object pop-up Menu (Figure 3-30). Messages can be copied or moved into all queues available in the Destination Queue list. Message Copy All/Move All settings can be edited by clicking **Configure** which opens the **Message Commands** tab of the *Edit User Settings* dialog box (Figure 3-53).

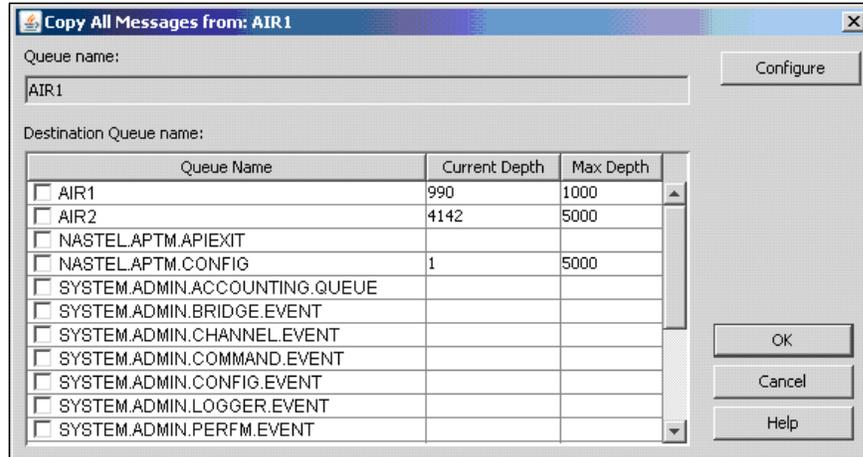


Figure 3-51. Copy All Messages

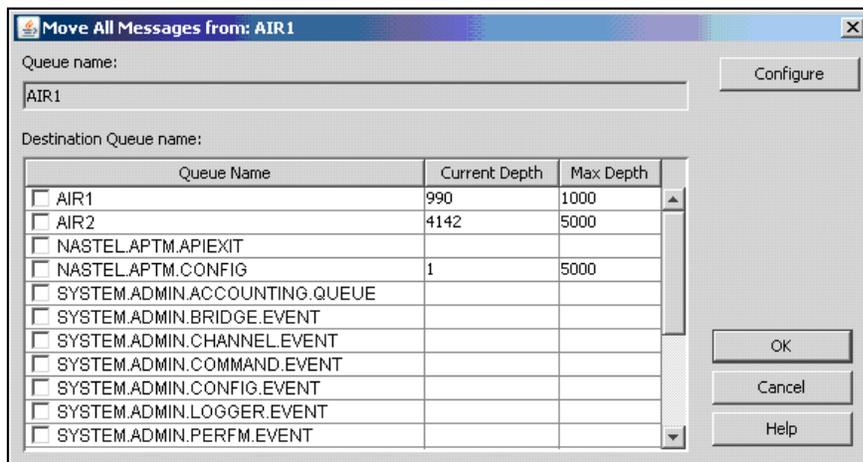


Figure 3-52. Move All Messages

Control	Description	States and Conditions
Queue name field	The name of the original queue.	Always enabled.
Destination queue name table	A list of all alias, local, and remote queues under the queue manager. The user can select one or more destinations queues.	
Configure button	Displays the Message Commands tab of the <i>Edit User Settings</i> dialog box (Figure 3-53), refer to Table 3-10.	
OK button	Submits the destination queue and operation criteria and closes the dialog box	
Cancel button	Discards selections and closes the dialog box.	

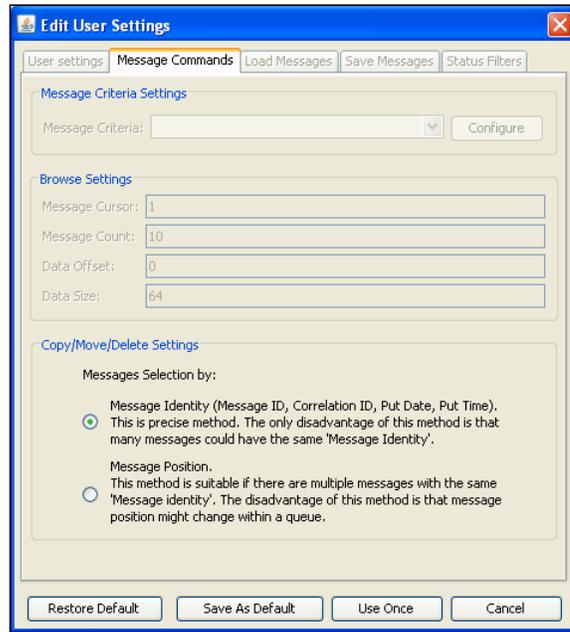


Figure 3-53. Message Commands

3.3.2.5 Delete Messages

The *Delete Messages* dialog box is displayed when **Delete All** is selected from the Object pop-up Menu (Figure 3-30). It is used to delete messages from queue using delete criteria. Delete settings can be edited by clicking **Configure** which opens the **Message Commands** tab of the *Edit User Settings* dialog box (Figure 3-53).

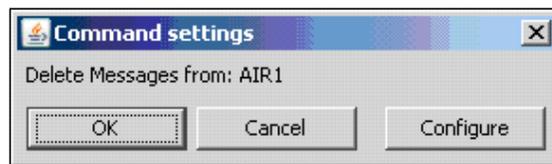


Figure 3-54. Delete Messages

Table 3-25. Delete Messages		
Control	Description	States and Conditions
OK button	Deletes messages from the queue using the selected criteria and closes the dialog box.	Always enabled.
Cancel button	Closes the dialog box without deleting the selected messages.	
Configure button	Opens the Message Commands tab of the <i>Edit User Settings</i> dialog box (Figure 3-34) which allows you to edit the delete messages settings.	

3.3.2.6 Clear All Messages

The *Clear All Messages* screen is displayed when **Clear All** is selected from the Object pop-up Menu (Figure 3-30). It is used to delete messages from the selected queue using the delete criteria.



Figure 3-55. Clear All Messages

Table 3-26. Clear All Messages		
Control	Description	States and Conditions
Yes button	Deletes all messages from the queue using the selected criteria and closes the dialog box.	Always enabled.
No button	Closes the dialog box without deleting the selected messages.	

3.3.3 Favorites

You can create subfolders in the **Favorites** folder to hold shortcuts to entire queue managers (that is, the queue manager along with all its subfolders) or objects in the M6-WMQ network hierarchical tree view (Figure 3-28). Rather than expanding the tree to drill down to the objects you access regularly, you can create a shortcut to it and store it in the **Favorites** folder. Multiple subfolders holding multiple shortcuts can be created. Since you are creating shortcuts, you can put the shortcut in more than one folder. Hover over the file name or select **Show full names** from the *Favorites* pop-up menu (Figure 3-56) to see the shortcut’s complete path.

Favorites are intended for small lists of objects. There is no limit to the number of shortcuts you can add to a **Favorites** subfolder, but for large lists, operations to open and refresh can take a long time.

	NOTE: The Favorites functionality is controlled by Security Manager/Role Management. If you do not see the Favorites folder, contact your system administrator.
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3.3.3.1 Favorites Subfolders

There are three ways to create a Favorites subfolder:

1. **Right click Favorites folder:**
 - a. Right-click **Favorites** and select **Create new folder** from the pop-up menu to open an input dialog box (Figure 3-57).

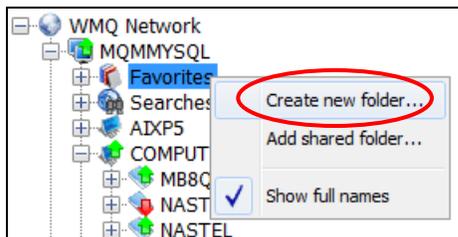


Figure 3-56. Create New Folder

- b. Enter the name for the new folder.



Figure 3-57. Enter Name for New Folder

- c. Click **OK**. The new folder is displayed under **Favorites**. You can now left-click an object and drag it to the new folder.

2. Right-click the object:

- a. Right-click the object and select **Add to favorites** from the pop-up menu.

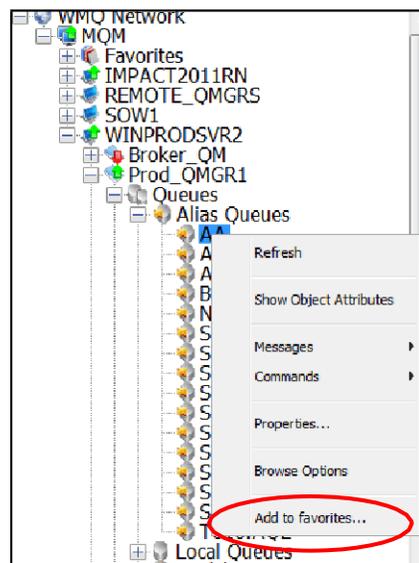


Figure 3-58. Add to Favorites

- b. Enter a new file name in the dialog box or select an existing file name from the drop-down list.

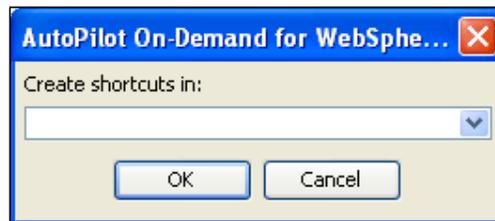


Figure 3-59. Create Shortcuts In

- c. Click **OK**. The shortcut is displayed in the designated folder.

3. Right-click and drag the object:

- Right-click the object and drag to the **Favorites** folder.
- Enter a new file name in the dialog box or select an existing file name from the drop-down list.
- Click **OK**. The shortcut is displayed in the designated folder.

To select multiple objects, hold down the **Ctrl** key and left-click the objects to select them. Release the **Ctrl** key, then right-click and drag the selections to **Favorites** or a subfolder. If one or more of the objects are already in the folder, drag will not work.

To select contiguous objects, hold down the **Shift** key and left-click the objects to select them. Release the **Shift** key, then right-click and drag the selections to **Favorites** or a subfolder. If one or more of the objects are already in the folder, drag will not work.

To delete a shortcut:

1. Right-click the shortcut.
2. Select **Delete shortcut** from the menu.

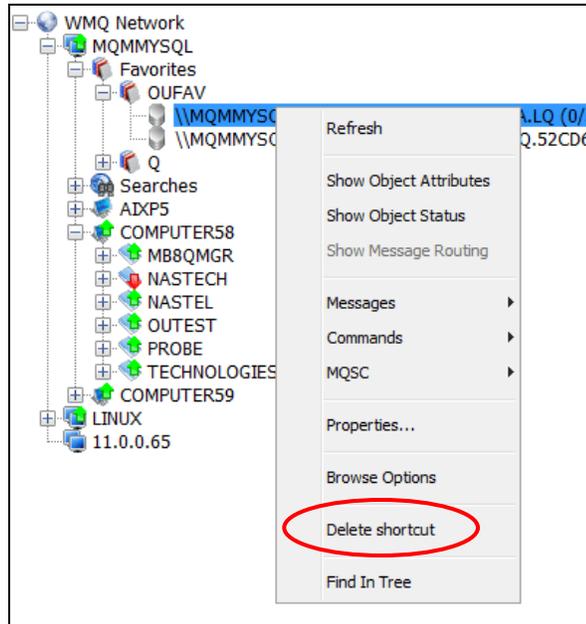


Figure 3-60. Delete Shortcut

3. A confirmation window is displayed. Click **Yes** to delete or **No** to cancel.

3.3.3.2 Shared Folders

Favorites can be marked as “shared” so that other users can add it to their list. When a folder is marked shared, it is added to the list in the **Select shared folders** dialogue box (Figure 3-63).

Marking a folder as shared:

1. Right-click the folder shortcut.
2. Select **Shared** from the menu.

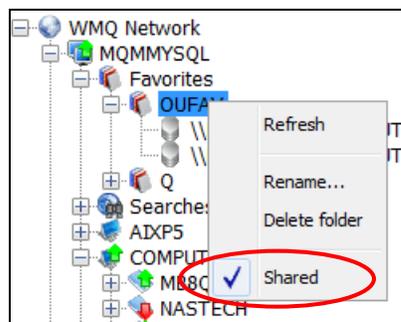


Figure 3-61. Mark as Shared

Adding shared folders:

1. Right-click **Favorites**.
2. Select **Add shared folder** from the menu.

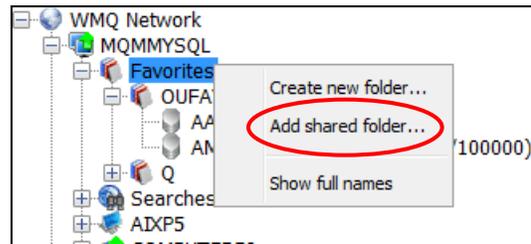


Figure 3-62. Favorites Menu

3. Select one or more folders from the **Select shared folders** dialog box.



Figure 3-63. Select Shared Folders

4. Click **OK**. The selected folders are added to **Favorites**. Notice that the shortcut name is preceded by the owner's username (for example, DEVELOPER.CM Folder where DEVELOPER is the username and CM Folder is the folder name).

	NOTE:	Access to a shared folder does not guarantee the user has access to all the objects in the folder. Security Manager controls the functionality a user can access. For example, an Administrator may have a shared folder with a shortcut to a listener. A Developer can add the shared folder, but will not see the listener shortcut unless access is granted in Security Manager/Role Manager.
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Removing shared designation from a folder:

1. Right-click the folder shortcut.
2. Deselect **Shared** from the menu ([Figure 3-61](#)).

	NOTE:	Removing the shared designation does not delete it from users that have added it to their Favorites. It will remain as is until the user synchronizes the folder. The synchronization process will delete the objects in the folder and the shortcut name will change from black to red indicating the folder is no longer shared.
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Synchronizing shared folders:

The owner of a shared folder may make changes to it; that is, add or delete objects. To update your shared folder with any changes the owner has made to it, you must “synchronize” it.

1. Right-click the shared folder.
2. Select **Synchronize** from the menu.

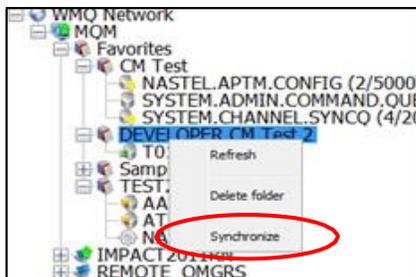


Figure 3-64. Synchronize Shared Folder

3. A confirmation dialogue box displays. Click **OK** to synchronize your folder with the owners. This process deletes your folder and recopies the shared folder so any changes that you made to the folder (added or deleted objects) will be overwritten.



Figure 3-65. Synchronize Shared Folder Confirmation

	<p>NOTE:</p>	<p>If the owner of a shared folder has removed the shared designation and you synchronize the folder, the objects in the folder will be deleted and the shortcut name will change from black to red indicating the folder is no longer shared.</p>
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Show Full Names

1. Right-click **Favorites** and select **Show full names** from the drop-down menu ([Figure 3-62](#)).
2. A checkmark appears on the left indicating the option is selected and the full path name displays in the search tree.

3.3.4 Searches

You can create custom searches for Objects. The queries can be run on a one time basis or saved for use during other sessions. Searches can also be shared with other users.

	NOTE:	The Search functionality is controlled by Security Manager/Role Management. If you do not see the Searches folder, contact your system administrator.
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3.3.4.1 Make a New Search

1. Right-click **Searches** and select **Make new search** from the drop-down menu to open the *Search For MQ Object* dialog box.

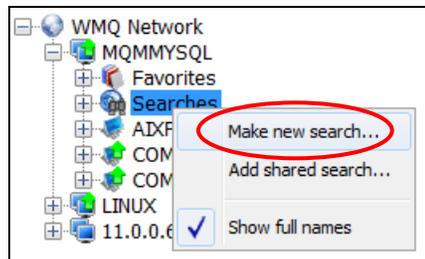


Figure 3-66. Search Options Menu

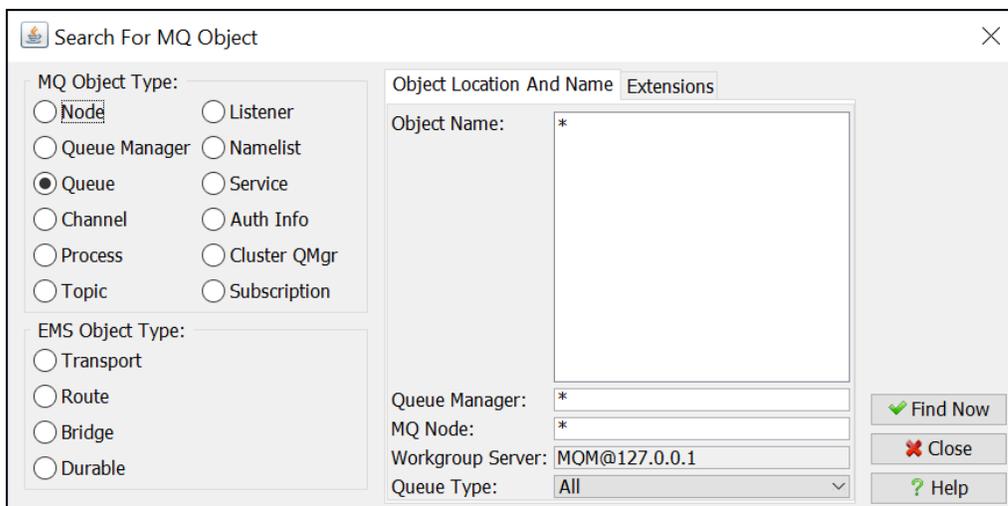


Figure 3-67. Search Dialog Box – Object Location and Name Tab (for Queue)

2. Specify your search:
 - a. **MQ Object Type or EMS Object Type**– select object type.
 - b. **Object Location and Name** – fill in one or more fields. These fields will vary slightly based on the object type selected. This example is for **Queue**.
 - **Object Name** – Enter one or more object names or use an asterisk (*) as a wildcard.
 - **Queue Manager** – Enter the queue manager name or use an asterisk (*) as a wildcard.
 - **MQ Node** – Enter the node name or use an asterisk (*) as a wildcard.
 - **Workgroup Server** – This is not an input field.
 - **Queue Type** – Use the drop-down list to select a queue type.
3. Click **Find Now**. The results of the search query are displayed in the tree under **Searches**.

Create Custom Query Based on Object Attributes

You can refine your search based on object attribute values by selecting the **Extensions** tab. You can add one or more attribute values and specify the search criteria has to match all the values or just one.

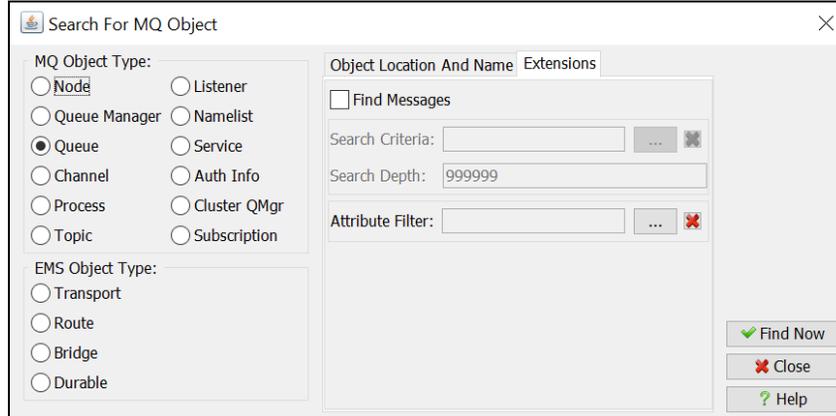


Figure 3-68. Search Dialog Box – Extensions Tab (for Queue)

1. Click the  button to display the *Message Criteria* dialog box.

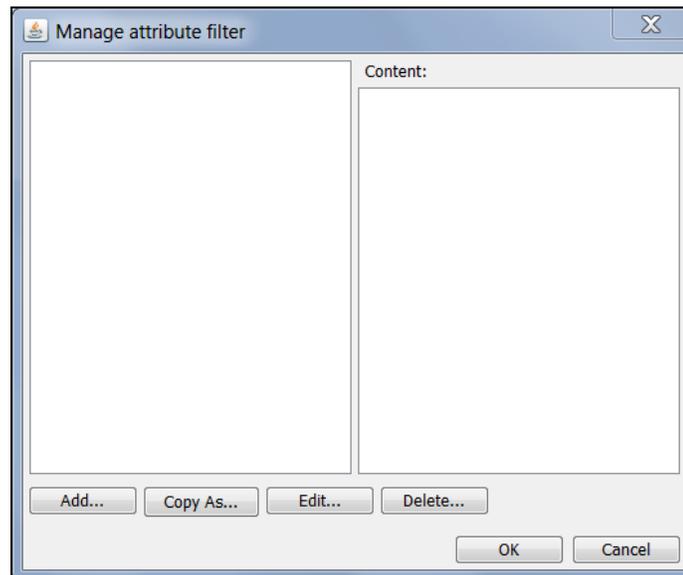


Figure 3-69. Manage Attribute Filter Dialog Box

2. Click **Add** to display the filter dialog box.

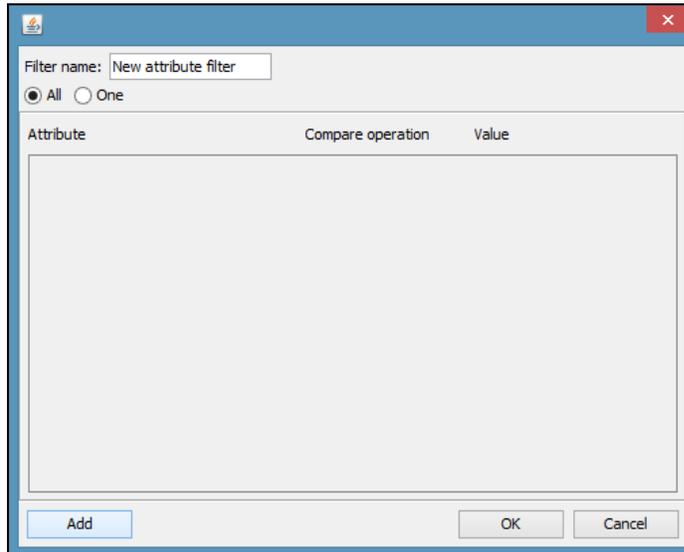


Figure 3-70. Filter Dialog Box

3. Enter a descriptive name for your filter in the **Filter name** field. The default is **New attribute filter**.
4. Select **All** or **One** to specify the search has to match **All** the attribute values entered or just one.
5. Click **Add** to go to the *Select Attribute* dialog box.

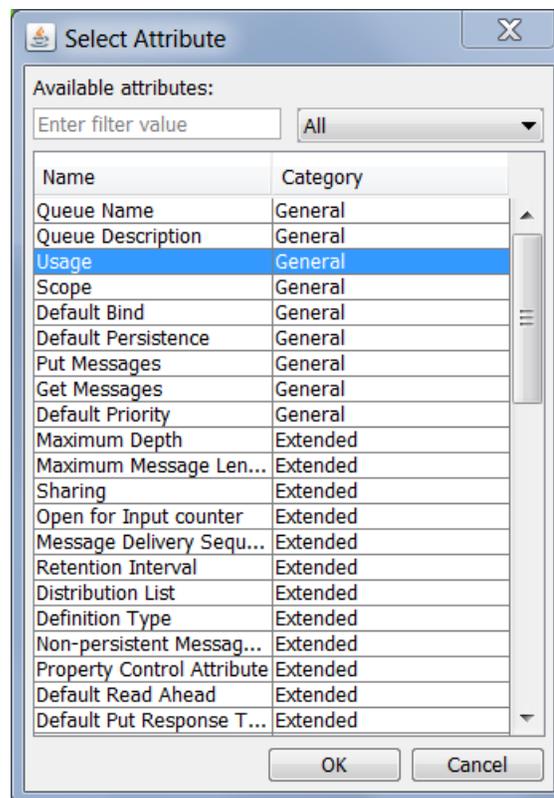


Figure 3-71. Select Attribute Dialog Box

	NOTE:	There are two attributes that are unique to z/OS. They are QSG Disposition (for queue) and Default Channel Disposition (for channel).
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6. Select an attribute and click **OK**.

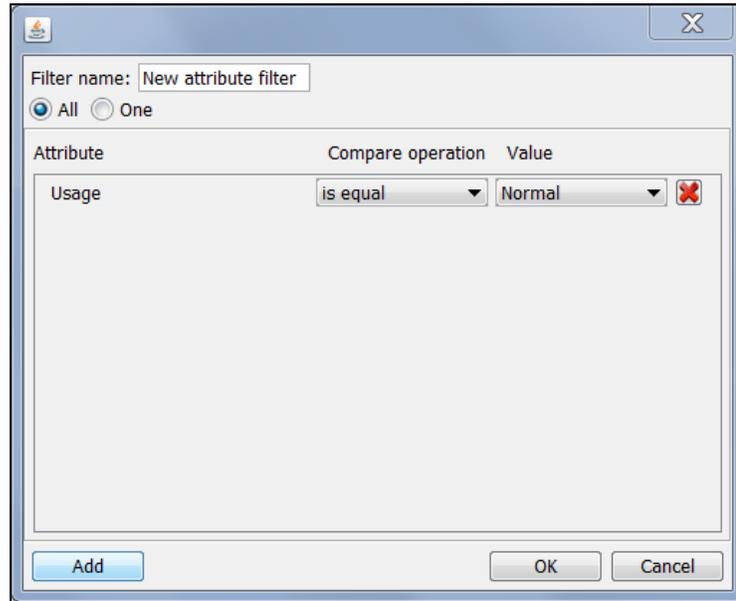


Figure 3-72. Select Attribute Value Dialog Box

7. Use the drop-down lists to select a value. Click **Add** to select another attribute.
8. Click **OK** after all attributes have been added to the search criteria. You are returned to the *Manage attribute filter* dialog box where you see your query listed.

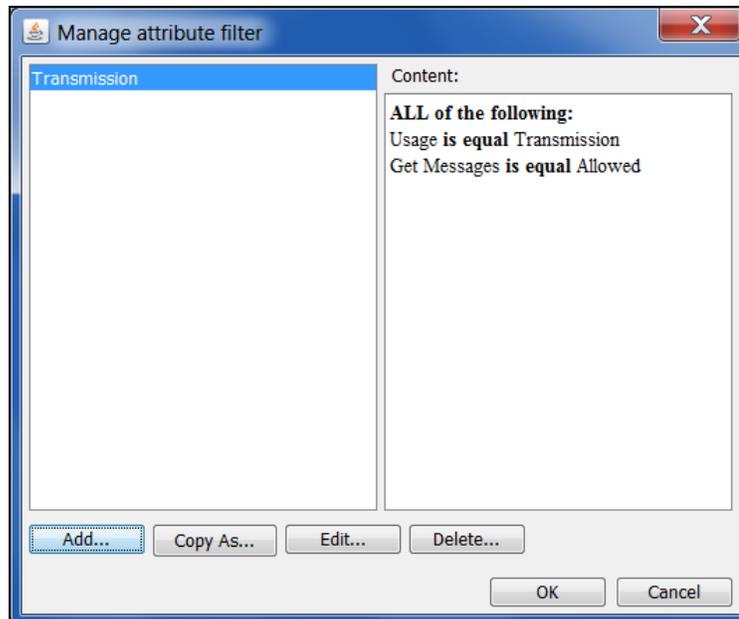


Figure 3-73. Manage Attribute Filter Dialog Box

9. Click **OK**. You are returned to the *Search For MQ Object* dialog box.

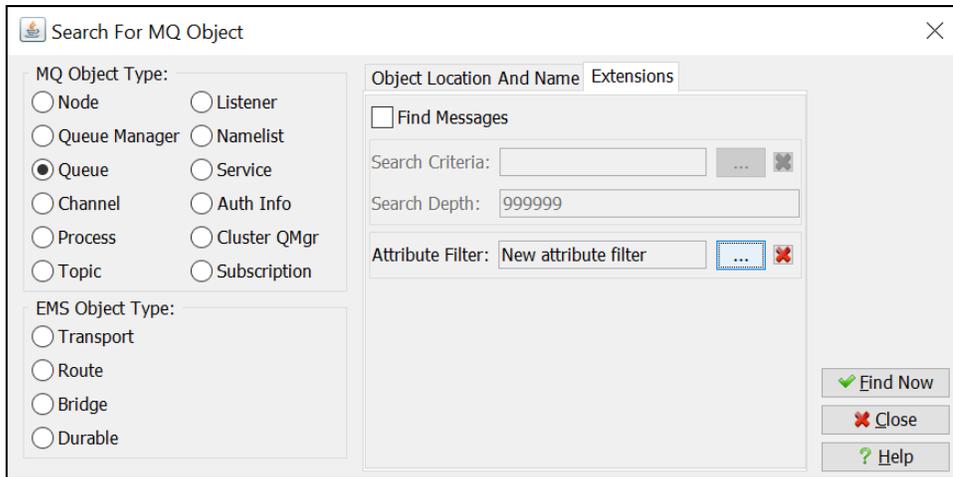


Figure 3-74. Search for MQ Object Dialog Box – Run Query

10. Click **Find Now** to run the search query.

Working with a Search Query

1. Right-click the search name to display the Search Options drop-down menu. The selections are described in the table below.

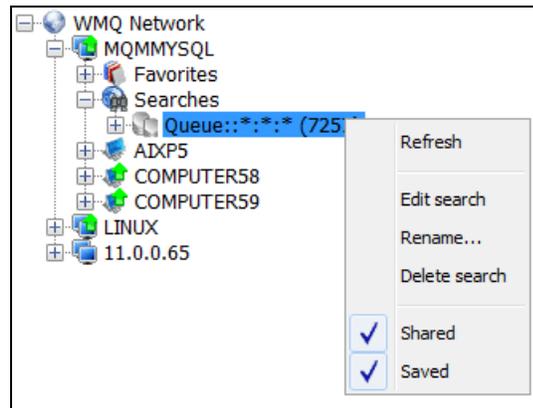


Figure 3-75. Search Options Menu

Table 3-27. Search Menu Options	
Menu Option	Description
Refresh	Runs the search query and updates the results. You can also run the query by expanding the search; that is, clicking the plus sign.
Edit search	Opens the <i>Search For MQ Object</i> dialog box (Figure 3-67) allowing you to change the search criteria.
Rename	Allows you to rename the search. A dialogue box opens where you can overwrite the existing search name. Click OK to save the new name. The owner of the search can rename a shared search. However for users who have already selected the search, the search name will not be updated in their tree. The new name will be reflected in the <i>Select shared searches</i> dialog box.
Delete search	Allows you to delete the search. After selecting this option, a confirmation dialog box opens. Click Yes to delete or No to cancel.
Shared	Select to share the search with other users. If selected a checkmark displays to the left of the Shared option as well as the Saved option. Selecting Shared automatically saves it.
Saved	Select to save the search, otherwise it will be deleted with you log off. If selected a checkmark displays to the left of the option. Saved cannot be deselected. To “un-save” a search use the Delete search option.

3.3.4.2 Add Shared Search

1. Right-click **Searches** and select **Add shared search** from the drop-down menu (Figure 3-66) to open the *Select shared searches* dialog box.

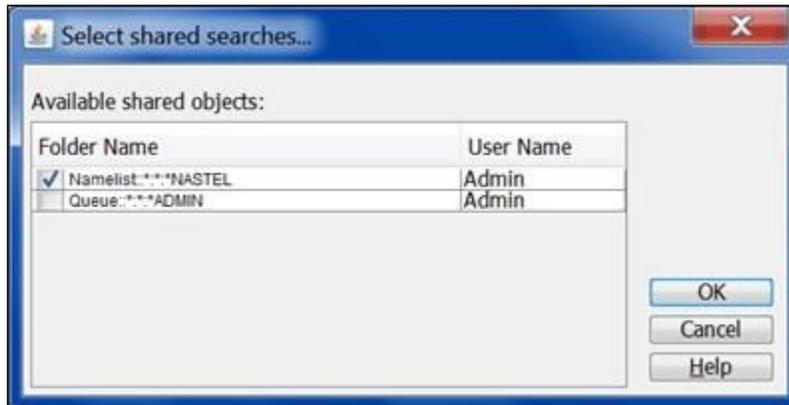


Figure 3-76. Select Shared Searches

2. Select the searches you want to add and click **OK**. The searches are now listed in the Search tree and are marked as **Saved**.

	NOTE:	All shared folders are listed in the Select shared searches dialog box. If you select a search that you already have, it will not be copied to your Searches folder again. It is possible for the search owner to rename a search you have already selected. If you select it again, with the new name, it will NOT be added to your tree.
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Working with a Shared Search

1. Right-click the search name to display the Shared Search Options drop-down menu. The selections are described in the table below.

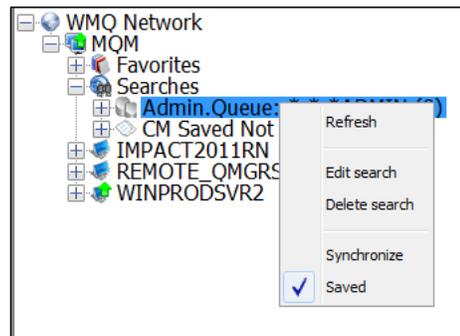


Figure 3-77. Shared Search Option Menu

Table 3-28. Shared Search Menu Options

Menu Option	Description
Refresh	Runs the search query and updates the results.
Edit Search	Opens the <i>Search For MQ Object</i> dialog box (Figure 3-67) allowing you to change the search criteria. Changes will not affect the owners search.
Delete Search	Deletes the search from your tree. It does not delete the owners search.
Synchronize	Updates the search with any changes the owner made and runs the search query.
Saved	A shared search is “saved” by default.

3.3.4.3 Show Full Names

1. Right-click **Searches** and select **Show full names** from the drop-down menu.
2. A checkmark appears on the left indicating the option is selected and the full path name displays in the search tree.

3.3.4A Queue Manager

Right-click the queue manager name to display the drop-down menu. The drop-down menu for EMS is shown on the right and contains fewer options. The selections for both menus are described in the table below.

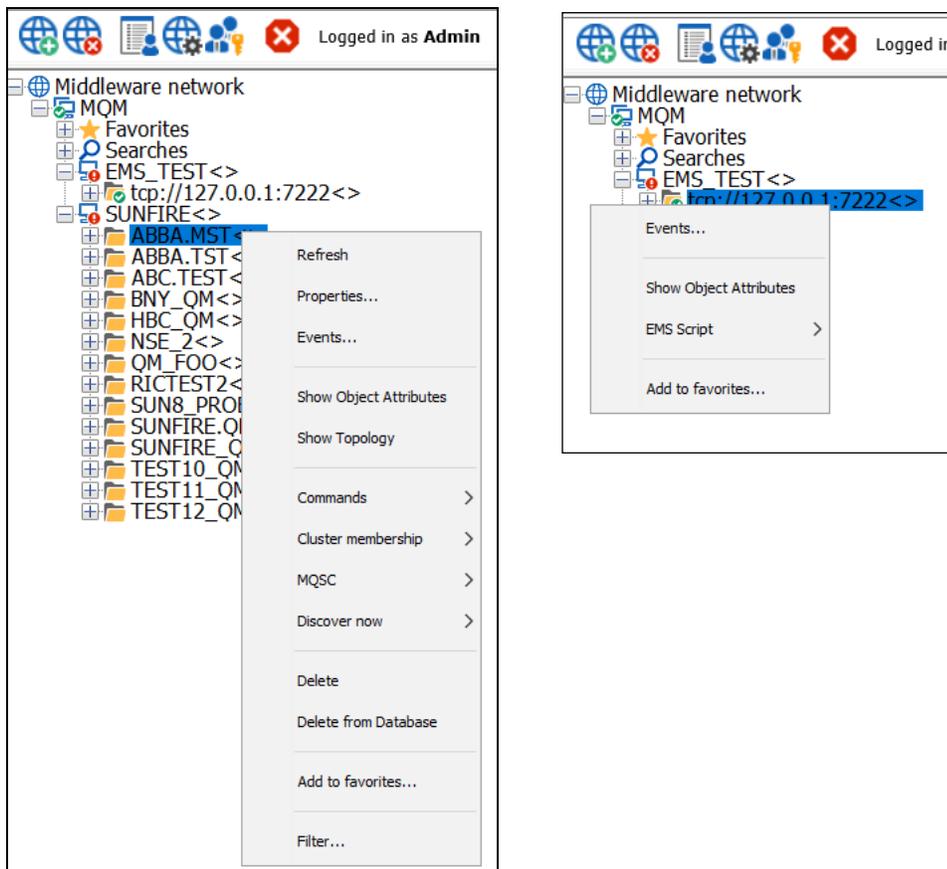


Figure 3-78. Queue Manager Menus

Table 3-29. Queue Manager Menu Options	
Menu Option	Description
Refresh	Refreshes the selected queue manager.
Properties	Displays the <i>Queue Manager Properties</i> dialog box. (See Figure 3-79 .)
Events	Displays the <i>Events</i> tab. (See Figure 3-86 .) (This option is for both MQ and EMS.)
Show Object Attributes	Displays the object attribute. (See Figure 3-81 .) (This option is for both MQ and EMS.)
Show Topology	Displays the <i>Topology Views</i> tab. (See Figure 3-116 .)
EMS Script	Select Apply from > File to apply a script from a file Select Apply from > Clipboard to apply a script from your clipboard Select Console to apply a script from the console. (This option is for EMS only.)

Table 3-29. Queue Manager Menu Options

Menu Option	Description
Commands	<p>Select Commands > Ping to ping the object.</p> <p>Select Commands > Security to display the <i>Display or Set Authority</i> dialog box. (See Figure 3-45.)</p> <p>Select Commands > Security > Browse Authority Records to display authorization records for the queue manager. (See Figure 3-80A.)</p> <p>Select Commands > Start all WMQ objects to start all WMQ objects (section 3.3.1C).</p> <p>Select Commands > Stop all WMQ objects to stop all WMQ objects (section 3.3.1C).</p>
Cluster membership	
MQSC	<p>Select MQSC > Apply from > File or Clipboard. Results can be saved to .out file.</p> <p>Select MQSC > Save to > File or Clipboard</p> <p>Select MQSC > Console. A dialog box (Figure 3-80) opens that allows you to run MQSC commands to the queue manager.</p>
Discover now	<p>Select Incremental or Full.</p> <ul style="list-style-type: none"> • Incremental – The workgroup server maintains the last discovery time for each queue manager and sends this time with each discovery command. Incremental discovery logic will work only if initial discovery is completed and qmgrs fully discovered. • Full – When the Workgroup Server starts up, it sends a query on every object to the agent. The Workgroup Server re-connects to each agent and sends an EXCMD_MQ_DISCOVER command. Since the agent thread or process for a given qmgr has just started, while servicing the discover command, the agent allows every inquire object reply from the IBM WMQ command server to be sent to the Workgroup Server.
Delete	Allows you to delete the queue manager. A confirmation box displays. Select Yes or No .
Delete from Database	Allows you to delete the queue manager from the database. BE VERY CAREFUL AS THERE IS NO DELETE CONFIRMATION DIALOG BOX.
Add to Favorites	Allows you to create a shortcut. (See Figure 3-59 .) (<i>This option is for both MQ and EMS.</i>)
Filter	Allows you to apply a filter. The filter will also be applied to all folders under the folder the filter was applied to.

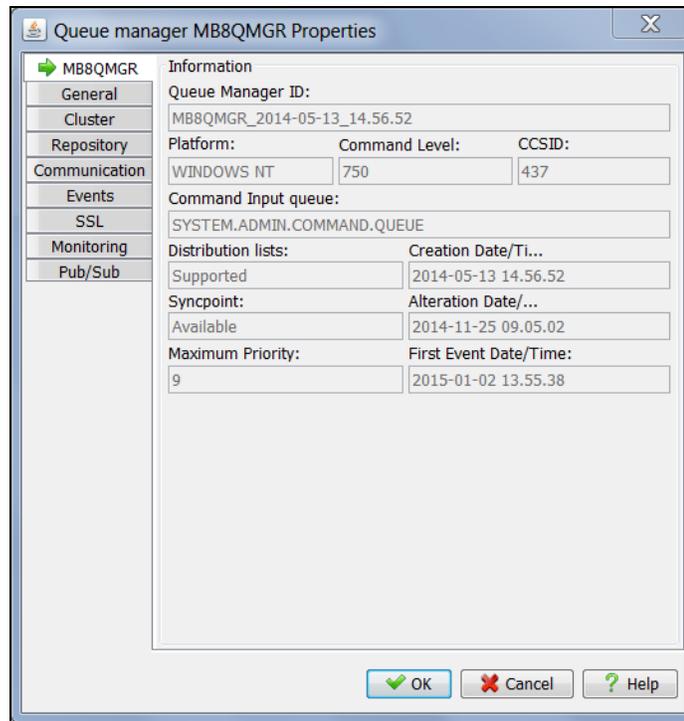


Figure 3-79. Queue Manager Properties

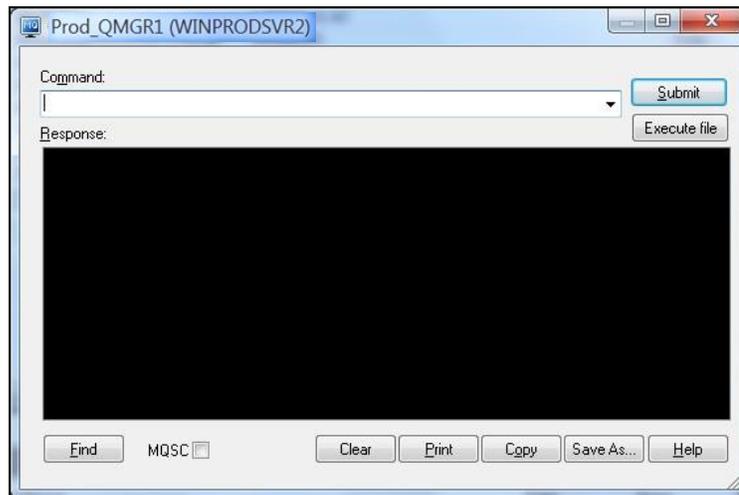


Figure 3-80. Run MQSC Commands

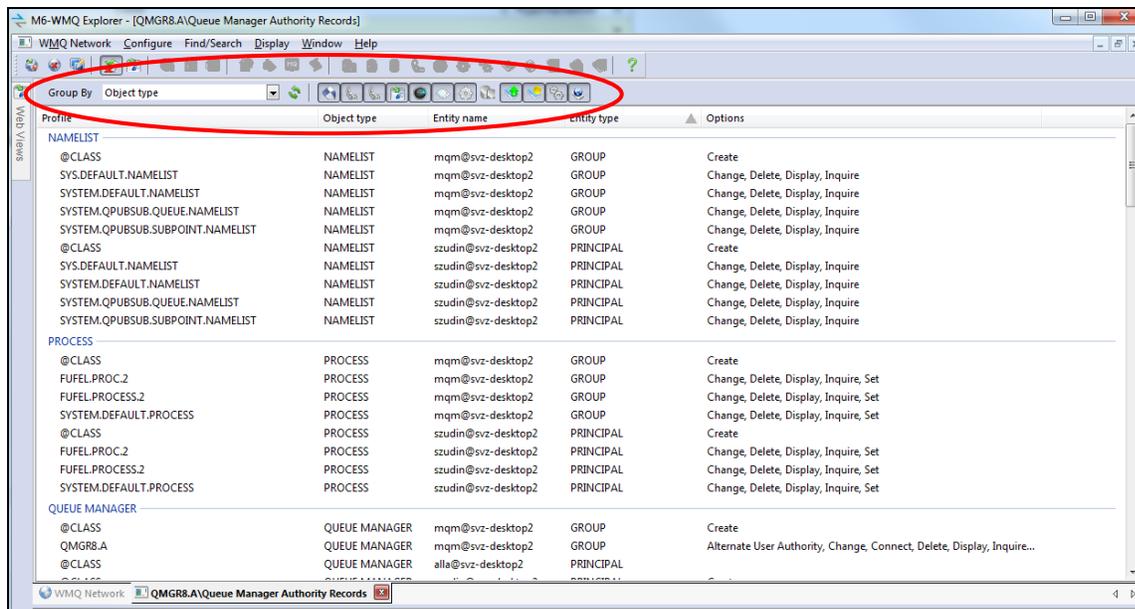


Figure 3-80A. Queue Manager Authority Records

The records can be sorted by any column in ascending or descending order by clicking the column heading. The following commands are available on the toolbar:

- **Change grouping** – Use the **Group By** drop-down menu, to group records by profile name, object type, entity name, and entity type or disable grouping by selecting **No group**.
- **Reload** – Click the **Reload**  button.
- **Filter** – You can show/hide the following attributes by selecting/deselecting the buttons on the toolbar:



- Authentication information objects
- Channels
- Client connection channels
- Communication information objects
- Listeners
- Namelists
- Processes
- Queues
- Queue managers
- Remote queue managers
- Services
- Topics.

3.3.5 Attributes

The **Attributes** tab displays the properties of the objects selected in the network tree. The set of attributes listed depends on the type of object you select. If an attribute value is an object listed in the tree, the value will contain a link which when clicked will position in the tree.

Attributes		Events	Actions	Messages	Status Views	Topology Views
Object Name: \\MQM\RNRIKULA-PC\MB8QMGR						
    Attribute schema: Default Queue Mana; 						
Attribute Name	Attribute Value					
Queue Manager Identifier	MB8QMGR_2014-05-13_14.56.52					
OS Platform	11					
Command Level	750					
CCSID	437					
Command Input Queue Name	SYSTEM.ADMIN.COMMAND.QUEUE					
Distribution List	Supported					
Syncpoint	Available					
Maximum Priority	9					
Creation Date	2014-05-13					
Alteration Date	2014-11-25					
Last Event Time	12/23/2014 00:33:00 PM					
Queue Manager Name	MB8QMGR					
Queue Manager Description	DEMO					
Dead Letter Queue	SYSTEM.DEAD.LETTER.QUEUE					
Maximum Message Length (bytes)	104857600					
Maximum Uncommitted Messages	10000					
Command Server Control	QMGR					
Mark-browse Interval	5000					
Maximum Handles	256					
Trigger Interval	999999999					
Channel Initiator Control	QMGR					
Maximum Properties Length	-1					
WebSphere MQ Code Version	07050002					
Expiry Interval (sec.)						
Queue Manager Name Type for Shared Queue						
Max. current channels	223					
Active Channels	113					
Maximum Current Channels using TCP/IP						
Maximum Current Channels using LU6.2						
Adopt MCA						

Figure 3-81. Attributes

You can limit the attribute list by creating your own customized attribute scheme.

1. Click the **Manage Schemes** icon  to display the *Manage Schemes* dialog box. Note that the default scheme name is displayed in a cursive font and cannot be edited or deleted.

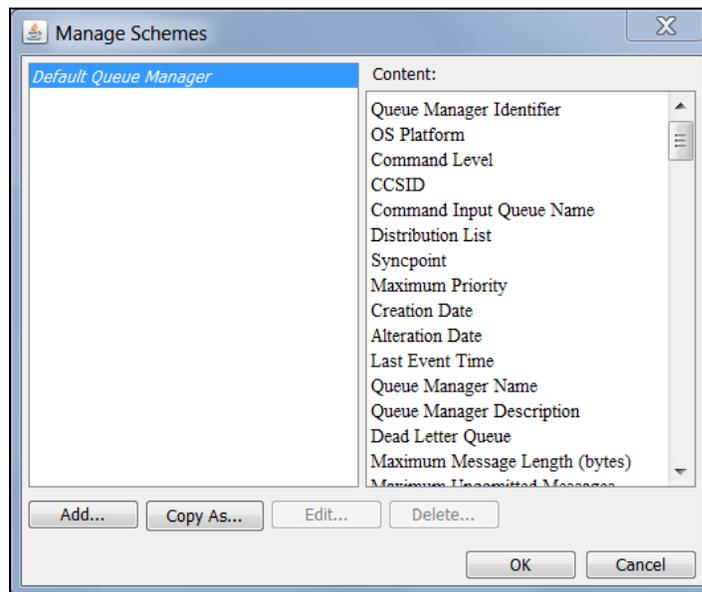


Figure 3-82. Manage Schemes

2. Click **Add** to display the *Edit Scheme* dialog box.

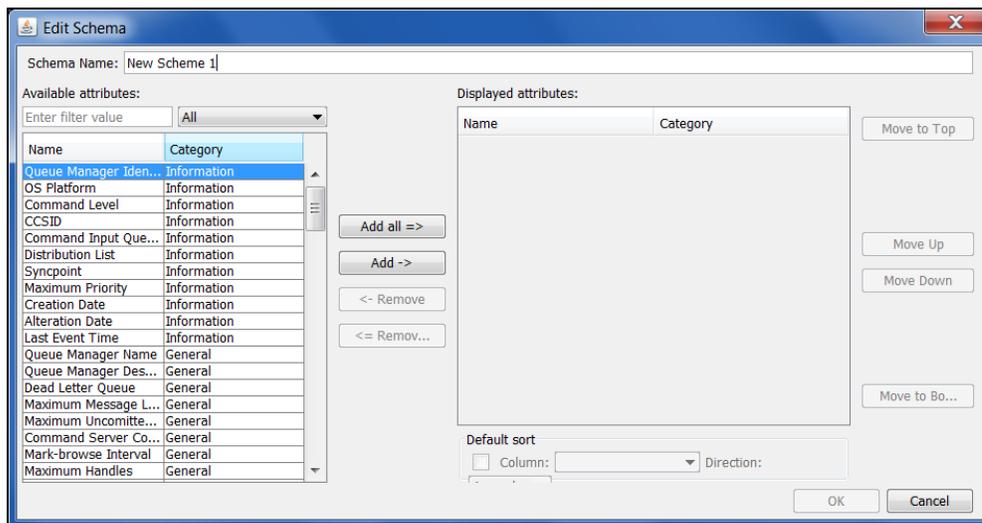


Figure 3-83. Edit Scheme

3. In the **Scheme Name** field, enter a name for your scheme.
4. Select the attributes you want and click **Add** to move them to the **Displayed attributes** box on the right. You can filter the **Available attributes** list by category by using the drop-down list. Use the other buttons to add/remove attributes and to move the attributes in the order you want them displayed. Then click **OK**. You are returned to the previous screen where your new scheme is listed.

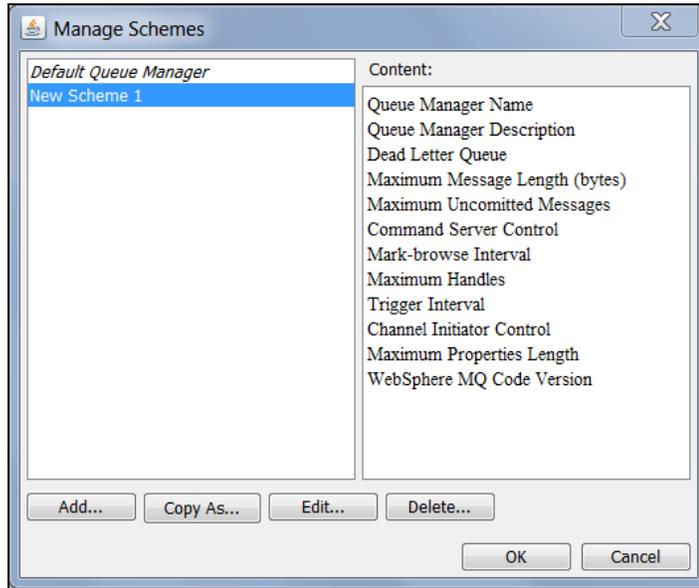


Figure 3-84. New Scheme is Listed

5. Click **OK**. You are returned to the **Attribute** tab. Only the attributes in the new scheme are listed.

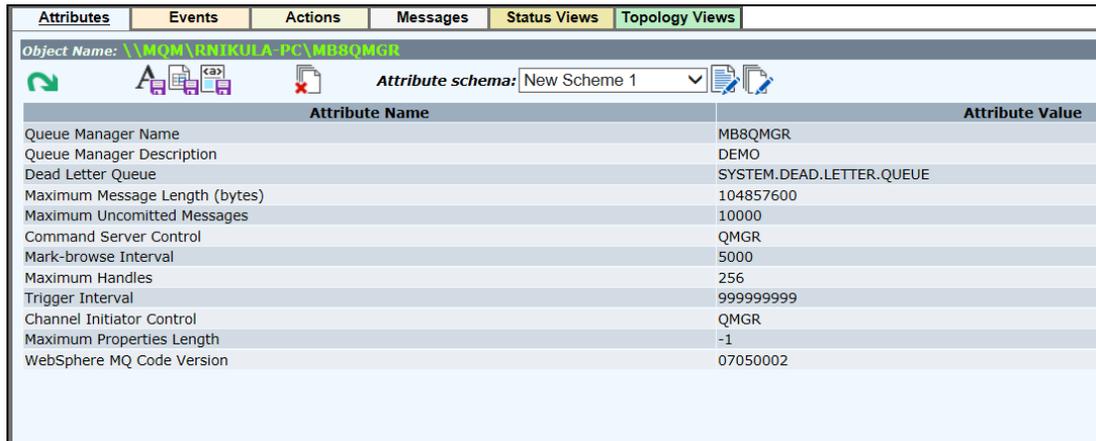


Figure 3-85. New Scheme Attributes are Listed

You can change the attribute list by selecting from the **Attribute scheme** drop-down list.

Click  to edit the current scheme or  to manage all schemes.

3.3.6 Events

The **Event** tab displays events, in real-time.

Attributes	Events	Actions	Messages	Status Views	Topology Views
<div style="display: flex; justify-content: space-between; align-items: center;"> TXT CSV <H> 🔍 </div>					
Event #	Date/Time	Category	Event ID	Object	
486	10:19:16, Mar, 12, 2013	Queue Manager	Auto-Discovery Stopped	\\MQM\DESKTOP99\DESKTOP99_QMGR\	
485	10:19:15, Mar, 12, 2013	Queue Manager	Auto-Discovery Started	\\MQM\DESKTOP99\DESKTOP99_QMGR\	
484	10:18:12, Mar, 12, 2013	Queue Manager	Auto-Discovery Stopped	\\MQM\DESKTOP99\MB8QMGR\	
483	10:18:11, Mar, 12, 2013	Queue Manager	Auto-Discovery Started	\\MQM\DESKTOP99\MB8QMGR\	
482	10:09:16, Mar, 12, 2013	Queue Manager	Auto-Discovery Stopped	\\MQM\DESKTOP99\DESKTOP99_QMGR\	
481	10:09:15, Mar, 12, 2013	Queue Manager	Auto-Discovery Started	\\MQM\DESKTOP99\DESKTOP99_QMGR\	
480	10:08:12, Mar, 12, 2013	Queue Manager	Auto-Discovery Stopped	\\MQM\DESKTOP99\MB8QMGR\	
479	10:08:11, Mar, 12, 2013	Queue Manager	Auto-Discovery Started	\\MQM\DESKTOP99\MB8QMGR\	
478	09:59:16, Mar, 12, 2013	Queue Manager	Auto-Discovery Stopped	\\MQM\DESKTOP99\DESKTOP99_QMGR\	
477	09:59:15, Mar, 12, 2013	Queue Manager	Auto-Discovery Started	\\MQM\DESKTOP99\DESKTOP99_QMGR\	
476	09:58:12, Mar, 12, 2013	Queue Manager	Auto-Discovery Stopped	\\MQM\DESKTOP99\MB8QMGR\	
475	09:58:11, Mar, 12, 2013	Queue Manager	Auto-Discovery Started	\\MQM\DESKTOP99\MB8QMGR\	
98	09:55:52, Mar, 12, 2013	Alter	Object Changed	\\MQM\DESKTOP99\DESKTOP99_QMGR\MB8QMGR@Cluster1	
97	09:55:52, Mar, 12, 2013	Alter	Object Changed	\\MQM\DESKTOP99\DESKTOP99_QMGR\DESKTOP99_QMGR@Cluster1	
474	09:49:16, Mar, 12, 2013	Queue Manager	Auto-Discovery Stopped	\\MQM\DESKTOP99\DESKTOP99_QMGR\	
473	09:49:15, Mar, 12, 2013	Queue Manager	Auto-Discovery Started	\\MQM\DESKTOP99\DESKTOP99_QMGR\	
472	09:48:12, Mar, 12, 2013	Queue Manager	Auto-Discovery Stopped	\\MQM\DESKTOP99\MB8QMGR\	
471	09:48:11, Mar, 12, 2013	Queue Manager	Auto-Discovery Started	\\MQM\DESKTOP99\MB8QMGR\	
96	09:39:40, Mar, 12, 2013	Alter	Object Changed	\\MQM\DESKTOP99\DESKTOP99_QMGR\MB8QMGR@Cluster1	
95	09:39:40, Mar, 12, 2013	Alter	Object Changed	\\MQM\DESKTOP99\DESKTOP99_QMGR\DESKTOP99_QMGR@Cluster1	
470	09:39:16, Mar, 12, 2013	Queue Manager	Auto-Discovery Stopped	\\MQM\DESKTOP99\DESKTOP99_QMGR\	
469	09:39:15, Mar, 12, 2013	Queue Manager	Auto-Discovery Started	\\MQM\DESKTOP99\DESKTOP99_QMGR\	
468	09:38:12, Mar, 12, 2013	Queue Manager	Auto-Discovery Stopped	\\MQM\DESKTOP99\MB8QMGR\	
467	09:38:11, Mar, 12, 2013	Queue Manager	Auto-Discovery Started	\\MQM\DESKTOP99\MB8QMGR\	
94	09:35:38, Mar, 12, 2013	Alter	Object Changed	\\MQM\DESKTOP99\DESKTOP99_QMGR\MB8QMGR@Cluster1	
93	09:35:38, Mar, 12, 2013	Alter	Object Changed	\\MQM\DESKTOP99\DESKTOP99_QMGR\DESKTOP99_QMGR@Cluster1	
Total Number Of Events: 26					

Figure 3-86. Events

Table 3-30. Events

Control	Value
Event #	Provides the event number within its category number. Click the event number to display the <i>Event Details</i> dialog box (Figure 3-87).
Date/Time	Provides date and time the event occurred.
Category	Provides event category (one of five types of events: Workgroup agent, Queue Manager, Performance, Alter or Channel).
Event ID	Provides Event identifier.
Object	Provides the name of the MQ object on which the event occurred. If the object name is listed in the tree, the object name will contain a link which when clicked will position in the tree.

3.3.6.1 Event Details

Event Details screen is used to display more information about a particular event. It displays when a user clicks on an event number in the events table (Figure 3-86). There are two tabs: **General** (Figure 3-87 and Table 3-31) and **Diagnostic** (Figure 3-88 and Table 3-32).

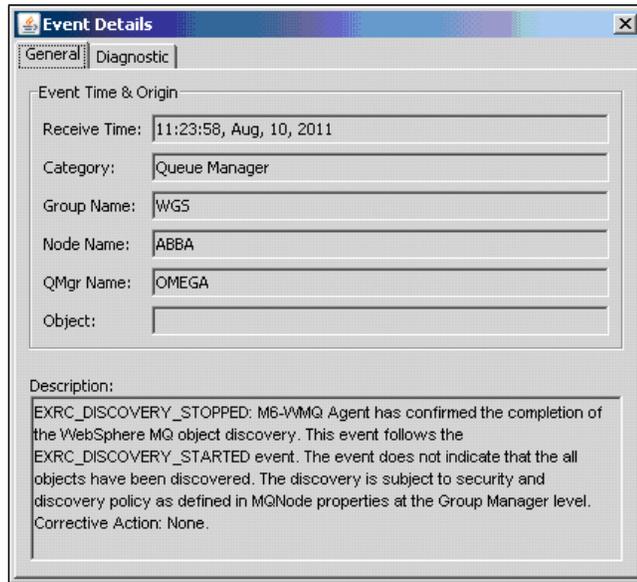


Figure 3-87. Event Details: General

Table 3-31. Event Details: General	
Control	Description
Receive Time field	Provides date and time the event occurred.
Category field	Provides event category – one of five types of events: Workgroup agent, Queue Manager, Performance, Alter, or Channel.
Group Name field	Provides the name of the Workgroup agent under which the event occurred.
Node Name field	Provides the name of the node under which the event occurred.
QMgr Name field	Provides the name of the WebSphere MQ queue manager under which the event occurred.
Object field	Provides name of the MQ object (queue, channel, etc.) on which the event occurred.
Description field	Provides a brief description of the event and a suggested corrective action.

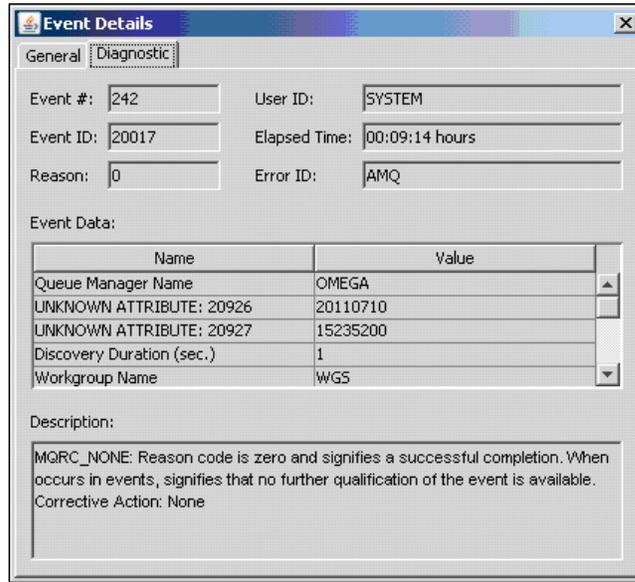


Figure 3-88. Event Details: Diagnostic

Table 3-32. Event Details: Diagnostic	
Control	Description
Event # field	Provides the event number within its category.
Event ID field	Provides event identifier.
Reason field	Provides the M6-WMQ reason code.
User ID field	Provides user identifier.
Elapsed Time field	Provides time elapsed since the event occurred (hh:mm:ss).
Error ID field	Provides error identifier.
Event Data	The name of the event and its value.
Description field	Provides a brief description of the causes of an event.

3.3.7 Actions

The *Actions* screen displays the status of commands as they are executed.

Attributes	Events	Actions	Messages	Status Views	Topology Views
<div style="display: flex; justify-content: space-between; align-items: center;"> TXT CSV <H> </div>					
Command Status	Origin	Destination	Date	Time	Reason
(RC - 0), CMD - UNKNOWN COMMAND NAME: 0 - OK!			Aug 10 2011 11:29:57		
(RC - 0), CMD - MQCMD_INQUIRE_Q_NAMES - OK!			Aug 10 2011 11:24:56		
(RC - 0), CMD - MQCMD_INQUIRE_Q_NAMES - OK!			Aug 10 2011 11:24:56		
(RC - 0), CMD - EXCMD_INQUIRE_SUBSCRIPTION_NAMES - OK!			Aug 10 2011 11:24:56		
(RC - 0), CMD - MQCMD_INQUIRE_TOPIC_NAMES - OK!			Aug 10 2011 11:24:56		
(RC - 0), CMD - MQCMD_INQUIRE_AUTH_INFO_NAMES - OK!			Aug 10 2011 11:24:56		
(RC - 0), CMD - EXCMD_INQUIRE_LISTENER_NAMES - OK!			Aug 10 2011 11:24:56		
(RC - 0), CMD - EXCMD_INQUIRE_SERVICE_NAMES - OK!			Aug 10 2011 11:24:56		
(RC - 0), CMD - EXCMD_INQUIRE_CLUSQMGR_NAMES - OK!			Aug 10 2011 11:24:55		
(RC - 0), CMD - MQCMD_INQUIRE_NAMELIST_NAMES - OK!			Aug 10 2011 11:24:55		
(RC - 0), CMD - MQCMD_INQUIRE_CHANNEL_NAMES - OK!			Aug 10 2011 11:24:55		
(RC - 0), CMD - MQCMD_INQUIRE_PROCESS_NAMES - OK!			Aug 10 2011 11:24:55		
(RC - 0), CMD - MQCMD_INQUIRE_Q_MGR - OK!	\\WGS\ABBA\ALPHA1		Aug 10 2011 11:24:55		
(RC - 0), CMD - EXCMD_INQUIRE_Q_MGR_NAMES - OK!			Aug 10 2011 11:24:55		
(RC - 0), CMD - EXCMD_INQUIRE_MQNODE - OK!	\\WGS\ABBA		Aug 10 2011 11:24:55		
(RC - 0), CMD - EXCMD_INQUIRE_MQNODE_NAMES - OK!			Aug 10 2011 11:24:55		
(RC - 0), CMD - EXCMD_INQUIRE_MQNODE_NAMES - OK!			Aug 10 2011 11:24:55		
(RC - 0), CMD - EXCMD_INQUIRE_ACTIVE_MANAGER - OK!	\\WGS\abba		Aug 10 2011 11:24:55		
(RC - 0), CMD - EXCMD_INQUIRE_ACTIVE_MANAGER - OK!	\\WGS\abba		Aug 10 2011 11:24:55		
(RC - 0), CMD - EXCMD_INQUIRE_MQNODE_NAMES - OK!			Aug 10 2011 11:24:55		
(RC - 0), CMD - EXCMD_INQUIRE_ACTIVE_MANAGER - OK!	\\WGS\abba		Aug 10 2011 11:24:55		
(RC - 0), CMD - EXCMD_INQUIRE_ACTIVE_MANAGER - OK!	\\WGS\abba		Aug 10 2011 11:24:55		
(RC - 0), CMD - MQCMD_INQUIRE_Q - OK!	\\WGS\ABBA\ALPHA1\AAA.LQ		Aug 10 2011 11:21:36		
(RC - 0), CMD - MQCMD_INQUIRE_Q_NAMES - OK!			Aug 10 2011 11:18:52		

Figure 3-89. Actions

Control	Value
Command Status	Provides command status.
Origin	Provides command origin.
Destination	Provides command destination.
Date	Provides date when command was submitted.
Time	Provides time when command was submitted.
Reason	Provides reason code if command failed.

3.3.8 Messages

The **Messages** tab displays messages of a particular queue. Information is displayed as a paged table. The user can select what information to show about the message using table columns selector button. By marking checkboxes next to messages names, the user makes them available for copying, moving, deleting, re-routing and saving to file. (Refer to [Table 3-34](#).)

Queue: \\MQM\DESKTOP99\DESKTOP99_QMGR\EVENT_QMGR (1229 / 5000)										
Browse criteria string: <input type="text"/> Page size: 10 <input type="button" value="Set and browse"/>										
#	Message Cursor	DLH	XQH	Message Size	MD::Type	MD::Format	MD::Message ID	MD::Correl. ID	MD::Put Date	MD::Put Time
6	6	--	true	664	DATAGRAM	MQXMIT	AMQ DESKTOP99_QMGR 0!	AMQ DESKTOP99_QMGR 0	20131016	01073923
7	7	--	true	664	DATAGRAM	MQXMIT	AMQ DESKTOP99_QMGR 0	AMQ DESKTOP99_QMGR 0+	20131016	13073994
8	8	--	true	664	DATAGRAM	MQXMIT	AMQ DESKTOP99_QMGR 09	AMQ DESKTOP99_QMGR 08	20131016	14213266
9	9	--	true	664	DATAGRAM	MQXMIT	AMQ DESKTOP99_QMGR 0H	AMQ DESKTOP99_QMGR 0G	20131016	14310445
10	10	--	true	664	DATAGRAM	MQXMIT	AMQ DESKTOP99_QMGR 0[AMQ DESKTOP99_QMGR 0Z	20131016	16300519
1	1	--	true	532	DATAGRAM	MQXMIT	AMQ DESKTOP99_QMGR]R	AMQ DESKTOP99_QMGR]R	20131015	19250529
2	2	--	true	664	DATAGRAM	MQXMIT	AMQ DESKTOP99_QMGR]R	AMQ DESKTOP99_QMGR]R	20131015	19260658
3	3	--	true	664	DATAGRAM	MQXMIT	AMQ DESKTOP99_QMGR]R	AMQ DESKTOP99_QMGR]R	20131015	19262513
4	4	--	true	620	DATAGRAM	MQXMIT	AMQ DESKTOP99_QMGR]R +	AMQ DESKTOP99_QMGR]R +	20131015	20252273
5	5	--	true	756	DATAGRAM	MQXMIT	AMQ DESKTOP99_QMGR]R +	AMQ DESKTOP99_QMGR]R +	20131015	22052574

Viewing Messages: < Prev | 1 - 10 | Next > Total Number Of Viewed Messages: 10

Figure 3-90. Messages

The information line displays data about the messages in the browsed queue.

Information format: Queue: [*queue name*] (messages quantity in queue/queue depth)

The # column displays the message index in a queue. By clicking on the index number, the user can view all message properties and information ([Figure 3-95](#)). The same dialog box is displayed when selecting a message and clicking the **View Messages** button from the tool bar.

The table content can be sorted on any of the table columns ascending or descending. Clicking a column heading displays a down arrow. Click the down arrow to change the sort order. This becomes the default sort for all objects. To return to the default sort, click the **Remove table sorting** button .

At the bottom of the page is a paging row. By clicking **Next**, user can view next *n* messages and by clicking **Prev**, user can view previous *n* messages, where *n* is message count in one page. Message count value can be set in *Queue Browse Options* dialog box (right click on a queue and click **Browse Options**).

3.3.8.1 Toolbar

Buttons toolbar on the **Messages** tab is designed for performing some general commands:

Table 3-34. Messages Toolbar	
Operation	Purpose
 Refresh for displayed object	Refreshes the displayed object.
 Refresh for selected object	Refreshes the selected object.
 Put New	Calls out the <i>Put New Message(s) to</i> dialog box where the user can create new messages and put them into one or more destination queues (Figure 3-48).
 Copy	Calls out <i>Copy messages</i> dialog box where a user can define how and where messages should be copied (Figure 3-51).
 Move	Calls out <i>Move messages</i> dialog box where a user can define how and where messages should be moved (Figure 3-52 and Figure 3-53).
 Delete	Calls out <i>Delete messages</i> dialog box where a user can define how messages should be deleted (Figure 3-54).
 Re-route	Calls out <i>Re-route messages</i> dialog box where a user can define messages re-routing policy (Figure 3-91).
 View Message	Calls out dialog box to view message (Figure 3-95).
 Edit Message	Calls out dialog box to edit message (Figure 3-95).
 Load from file	Calls out dialog box to load single or multiple messages from .mmf or .txt file (Figure 3-98).
 Save selected to file	Calls out dialog box to save selected messages to a file (Figure 3-101).
 Save all to file	Calls out dialog box to save all messages to a file (Figure 3-101).
 Select columns	Select which fields (columns) of message information will be available when browsing messages (Figure 3-104).
 Browse options	Configure queue browse options.
Export all	Exports all message information to a .txt, .csv, or .html file.
 Remove table sorting	Refreshes the table display to the default sorting order.
Browse criteria string	Allows you to input and browse a criteria string.
Page size	Allows you to specify the number of messages to display per page or select All to display all messages.
Set and browse	Sets message browse criteria string and performs message browse for selected queue.

	NOTES:	<ol style="list-style-type: none"> 1. Copy messages action generates a copy of the messages in a selected destination queue. 2. Move messages action removes messages from their present location and places them in the elected destination queue.
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Reroute Messages

To re-route messages from one queue to another, select one or more messages. Then click the **Re-route**  button from the *Messages* tab ([Figure 3-90](#)) to display the *Reroute Messages* dialog box ([Figure 3-91](#)). The re-routing function is intended for moving messages off the Dead Letter Queue. However, the user can use it for any queue and for any message.

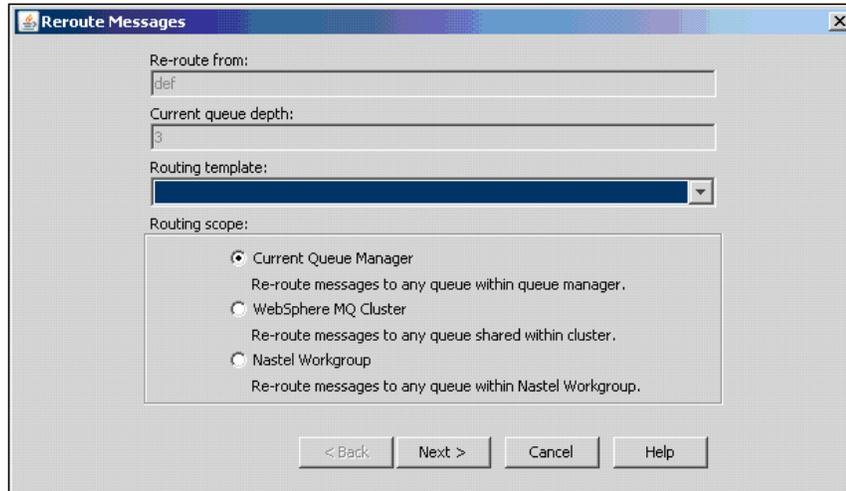


Figure 3-91. Reroute Messages

Table 3-35. Re-Route Messages

Control	Description	States and Conditions
Re-route from	Show current selected queue.	Disabled
Current queue depth	Show current queue depth.	
Routing template	Select the name of a previously saved routing template. These templates are created when specifying a name in the Save options as routing template field that is displayed on the final screen before confirming the routing operation.	Always enabled
Routing scope	Used when there is a need to re-route messages into some location not described in the headers of the message.	
Back button	Go back to previous page.	Enabled if not it first page
Next button	Go to next page.	Enabled if not last page
Cancel button	Cancel operations.	Always enabled

Re-routing instructions are associated with specific queues or with selected messages. For a particular queue or messages selected in the Message Window, you create a Routing Policy that states how you want the messages re-routed. You can re-route messages:

- To their original destination
- Back to sender
- To a new destination queue

Figure 3-92. Reroute Messages – Select Destination

Select your Routing destination (enables **Next** button) and click **Next**.

Figure 3-93. Reroute Messages – Options

Fields are enabled according to options selected on previous screens. Review the screen for accuracy. If you want to make any changes click **Back**; otherwise, click **Finish**.

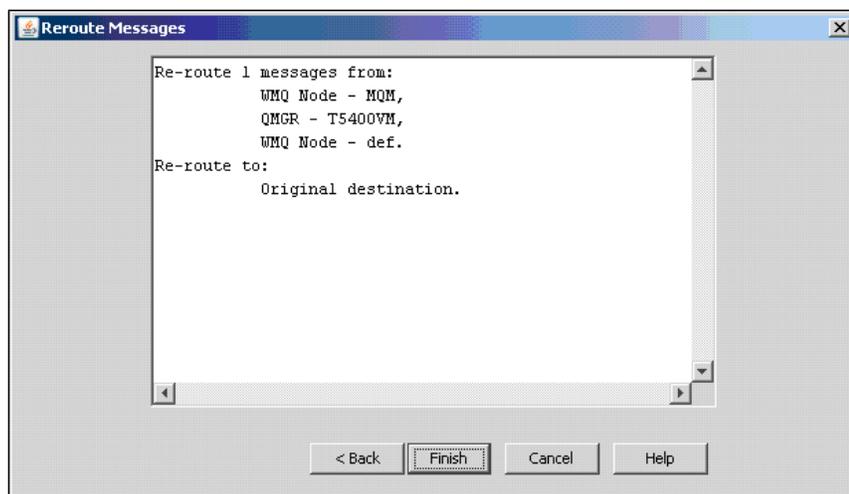


Figure 3-94. Reroute Messages – Finish

The messages will be re-routed according to the routing policy you specified.



Figure 3-97. View Message - Decompile

Edit Messages Called Out from Messages Tab

Refer to [Figure 3-105](#), Edit Message.

Load Messages Rules

To load a message, click the **Load from file**  button from the *Messages* tab ([Figure 3-90](#)). A message displays ([Figure 3-98](#)) allowing you use the default settings or configure new settings.

- Click **OK**, opens an *Open* screen ([Figure 3-99](#)), where you can select one or more source files.
- Click **Configure** opens the *Edit Using Settings* dialog box ([Figure 3-100](#)) where you can set the load rules. After specifying the *Load Message Rules* and clicking **OK**, an *Open* screen ([Figure 3-99](#)) opens. The user can set a path and choose where the message will be loaded.



Figure 3-98. Load Message Rules

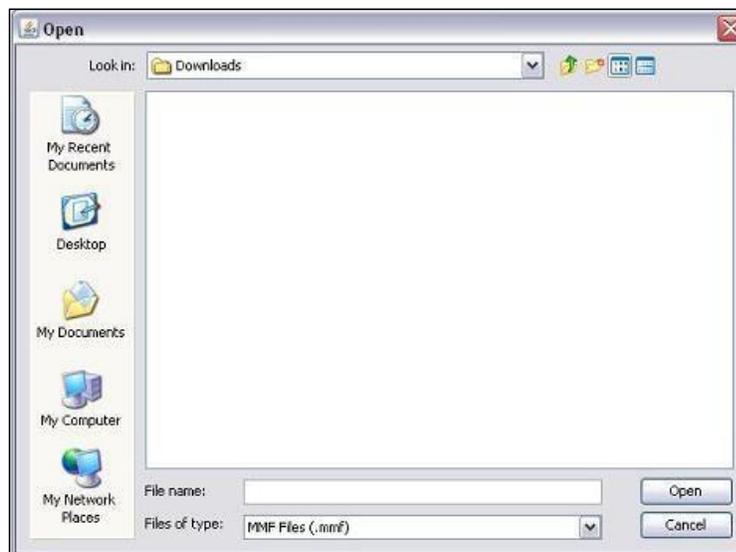


Figure 3-99. Open

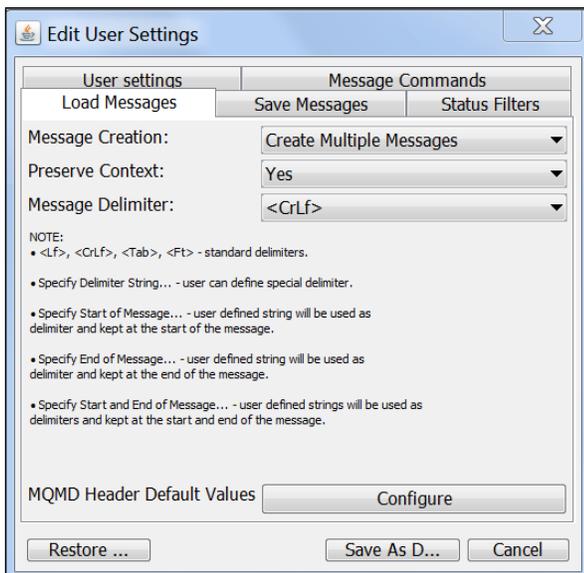


Figure 3-100. Load Messages Tab

Table 3-37. Load Messages		
Control	Description	States and Conditions
Message Creation	Specified Create Singe Message or Create Multiple Messages.	Always enabled.
Preserve Context	Allows the user to load messages preserving context or not.	
Message Delimiter	Allows the user to choose a message delimiter. The user can: <ul style="list-style-type: none"> • Specify a standard delimiter (<Lf>, <CrLf>, <Tab>, <Ft>) • Define a new delimiter • Specify a delimiter for the start of the message • Specify a delimiter for the end of the message • Specify delimiters for the start and end of the message 	
MQMD Header Default Values	See Figure 3-106 through Figure 3-110 .	
Restore Default	Restores the default settings.	
Save as Default	Submits the queue browse options and closes the dialog box.	
Cancel	Closes dialog box without saving any changes.	

Save Message Rules

To save a message, click the **Save selected to file**  button or **Save all to file**  from the *Messages* tab ([Figure 3-90](#)) to display the *Command settings* dialog box ([Figure 3-101](#)). The *Save Message Rules* dialog box guides the user through saving messages to file process. This action consists of three dialog boxes:

- *Command settings* dialogue box ([Figure 3-101](#)) to save messages using the default settings
- *Save Messages* tab of *Edit User Settings* ([Figure 3-102](#)) to set the save rules,
- *Save* window ([Figure 3-103](#)) for creating/choosing a destination file.



Figure 3-101. Command Settings – Save Messages

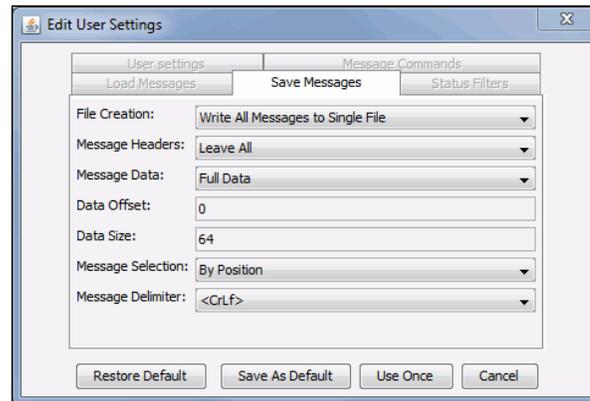


Figure 3-102. Save Message Rules

Table 3-38. Save Message Rules		
Control	Description	States and Conditions
File Creation	Specifies Write All Messages to Single File or Write Each Message to Separate File	Always enabled.
Message Headers combo box	Specifies if message headers should be saved to the file or not.	
Message Data combo box	Defines if all message data will be saved to a file or only part of it.	
Data Offset field	Specifies data offset position.	Enabled only when Message Data combo box is set to SELECTED_ DATA value.
Data Size field	Specifies maximum data sizes that have to be saved to a file.	
Message Selection	By Position or By Identity Message Identity (Message ID, Correlation ID, Put Date, Put Time) – This is precise method. The only disadvantage of this method is that many messages could have the same Message Identity. Message Position – This method is suitable if there are multiple messages with the same Message Identity. The disadvantage of this method is that message position might change within a queue.	Always enabled.
Message Delimiter	Allows the user to choose a message delimiter.	

After specifying *Save Message Rules* and clicking **OK**, a customary *Save* screen ([Figure 3-103](#)) opens. The user can set a path and choose or create a file where the message will be saved. The user must provide a name for the file and can select a file format (if message will be saved in a new file).

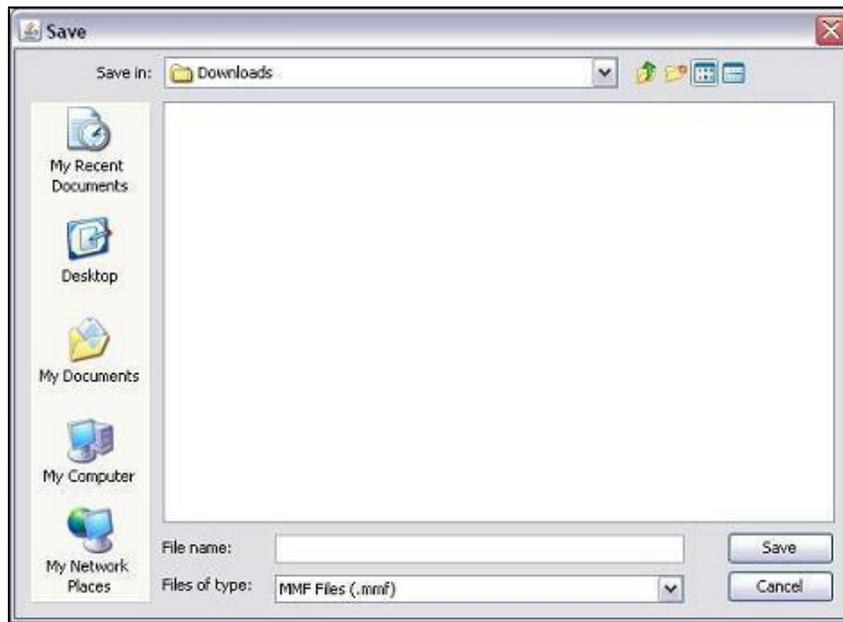


Figure 3-103. Save Dialog Window

Configuring Messages Information Table Columns

The *Columns Selector* window is displayed when the **Select Columns**  button in the *Messages* tab (Figure 3-90) is clicked. This window enables the user to select the preferred messages information table columns. Column names that are placed on the *Shown columns and order* list become available in the **Messages** tab.

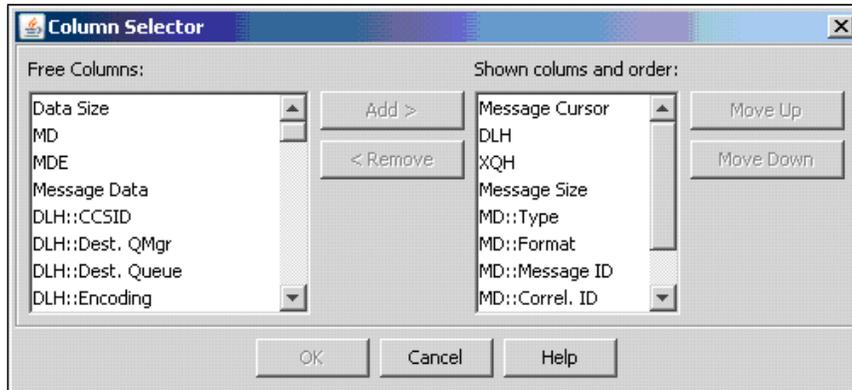


Figure 3-104. Column Customizer Detail Box

Table 3-39. Column Customizer		
Control	Description	States and Conditions
Free columns	Lists all hidden, but available to view, table column names in alphabetical order.	Always enabled.
Shown columns and order	List user selected table column names and column order in table.	
Add button	Adds selected columns to <i>Shown columns</i> list and removes column from <i>Free columns</i> list. User can select more than one column by holding CTRL or SHIFT key and selecting desired columns names.	Enabled when at least one list item in <i>Free columns</i> list is selected.
Remove button	Removes selected columns from <i>Shown columns</i> list and adds them to <i>Free columns</i> list. User can select more than one column by holding CTRL or SHIFT key and selecting desired columns names.	Enabled when at least one list item in <i>Shown columns</i> list is selected.
Move Up button	Moves selected column up in <i>Shown columns</i> list. Column index in list defines column place in table.	Enabled when <u>only</u> one <i>Shown columns</i> list item is selected and selected item isn't the first one in list.
Move Down button	Moves selected column down in <i>Shown columns</i> list.	Enabled when <u>only</u> one <i>Shown columns</i> list item is selected and selected item isn't the last one in list.

Edit Message Details

The *Edit Message* dialog box is displayed when the user selects a message and clicks the **Edit Message** button  on the **Messages** tab (Figure 3-90). This window allows the user to edit the information and data of the message.

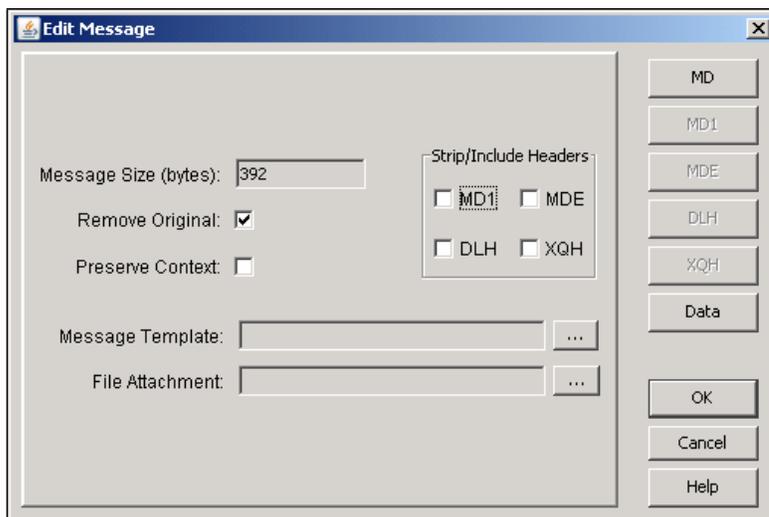


Figure 3-105. Edit Message

Table 3-40. Edit Message		
Control	Description	States and Conditions
Message size field	Displays size of message without headers.	Always enabled.
Remove Original checkbox	If checked, removes all original message headers when submitted.	
Message Template field	Provides name of message template	
File Attachment field	Input file name to attach to this message.	
Strip/Include Header checkboxes	Selects which header(s) will be available in the message.	
MD button	Displays <i>Message Descriptor Properties</i> dialog box where user can view/edit MD header of message (Figure 3-106 through Figure 3-110).	Enabled only if MD1 checkbox is <i>not</i> selected.
MD1 button	Displays <i>Message Descriptor Properties</i> dialog box where user can view/edit MD1 header of message (Figure 3-106 through Figure 3-110).	Enabled only if MD1 checkbox is selected.
MDE button	Displays <i>Message Descriptor Extension</i> dialog box where user can edit MDE header of message (Figure 3-111).	Enabled only if MDE checkbox is selected.
DLH button	Displays <i>Dead Letter Queue Header</i> dialog box where user can view/edit DLH header of message (Figure 3-112).	Enabled only if DLH checkbox is selected.
XQH button	Displays <i>Transmission Queue Header</i> dialog box where user can view/edit DLH header of message (Figure 3-	Enabled only if XQH checkbox is selected.
Data button	Displays <i>Message Data</i> dialog box where user can view/edit message data (Figure 3-114).	Always enabled.

Message Descriptor Properties

Message Descriptor Properties dialog box is used to view/edit MD and MD1 message headers. Window appears when **MD** or **MD1** buttons are pressed on the *Edit Message* screen and when **Configure** is pressed from the *Edit User Settings – Load Messages* tab ([Figure 3-100](#)).

The screenshot shows the 'Message Descriptor Properties' dialog box with the 'General' tab selected. The dialog has a title bar with a close button (X) and a tabbed interface with 'General', 'Identity', 'Origin', 'Reports', and 'Group' tabs. The 'MD' section contains the following fields:

- Version: VERSION 1 (dropdown)
- Message Type: DATAGRAM (dropdown)
- Application Message Type: 65536 (text)
- Message Format: NONE (dropdown)
- FeedBack: NONE (dropdown)
- Application Feedback Code: 65536 (text)
- Expiry(1/10sec): -1 (text)
- Priority: 0 (text)
- Persistent:
 - No
 - Yes
 - As Queue
- Put Date: 20091008 (text)
- Put Time: 13573559 (text)
- Encoding: 546 (text)
- CCSID: 437 (text)
- Backout Count: 0 (text)
- Reply to queue: (empty text field)
- Reply to queue manager: ALPHA1 (text)

At the bottom of the dialog are three buttons: OK, Cancel, and Help.

Figure 3-106. Message Descriptor Properties: General

Table 3-41. Message Descriptor Properties: General Tab

Control	Description	States and Conditions
Version combo box	Select MD version from the list.	Always enabled.
Message Type combo box	Select message type from the list.	
Message Format combo box	Select message format from the list.	
FeedBack combo box	Select message feedback code from the list.	
Application Message Type field	Input application message type.	Editable only if APPLICATION message type is selected in Message Type menu.
Application Feedback Code field	Input application feedback code.	Editable only if APPLICATION feedback code is selected in FeedBack menu.
Expiry field	Input message expiry.	Always enabled.
Priority field	Input message priority.	
Persistent radio buttons	Set message persistence.	
Put Date field	Provides date when message was put.	Read only.
Put Time field	Provides time when message was put.	
Encoding field	Provides message data encoding.	
CCSID field	Provides message coded character set identifier.	
Backout Count field	Provides backout counter.	
Reply to queue field	Input name of a message queue to which the reply or report message should be	Always enabled.
Reply to queue manager field	Input name of the queue manager to which the reply or report message should be sent.	

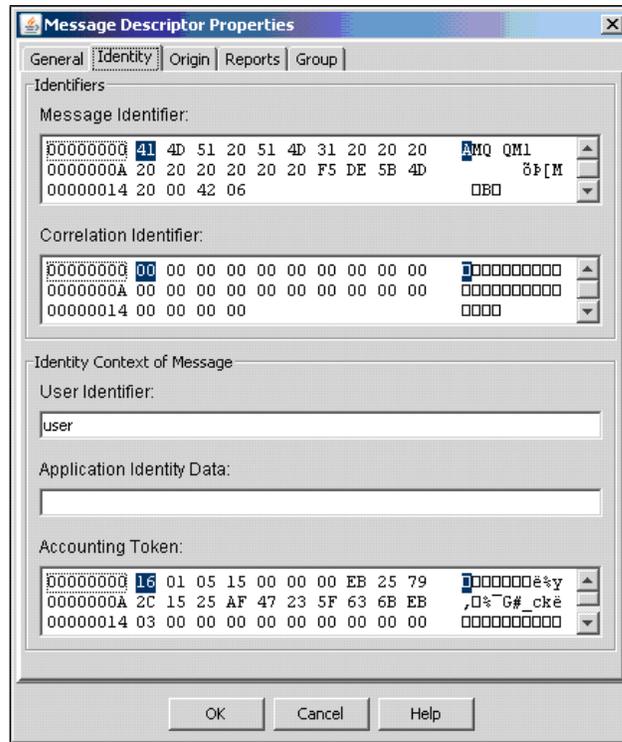


Figure 3-107. Message Descriptor Properties: Identity

Table 3-42. Message Descriptor Properties: Identity Tab

Control	Description	States and Conditions
Message Identifier	Edit message identifier.	Always enabled.
Correlation Identifier	Edit message correlation identifier.	
User Identifier field	Enter user identifier.	
Application Identity Data field	Enter application identity data.	
Accounting Token	Edit message accounting token.	

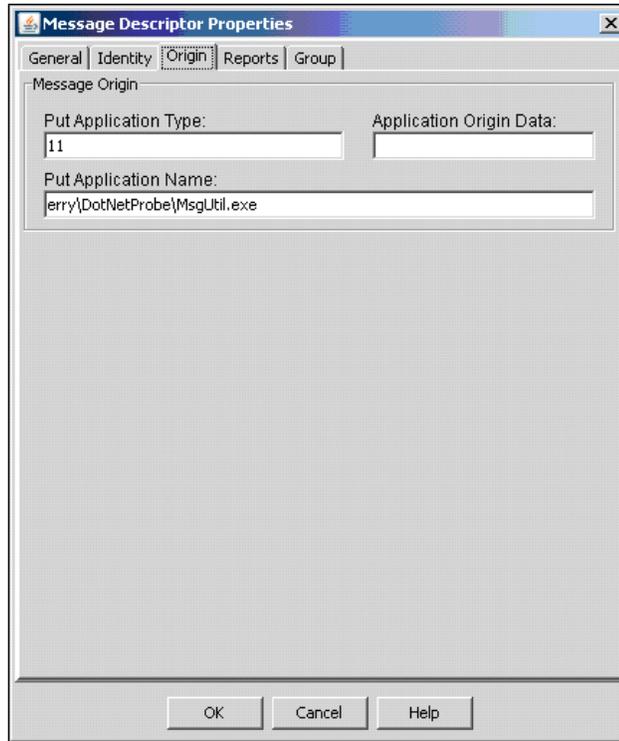


Figure 3-108. Message Descriptor Properties: Origin

Table 3-43. Message Descriptor Properties: Origin Tab		
Control	Description	States and Conditions
Put Application Type field	Input put application type.	Always enabled.
Application Origin Data field	Input application origin data.	
Put Application Name field	Input put application name.	

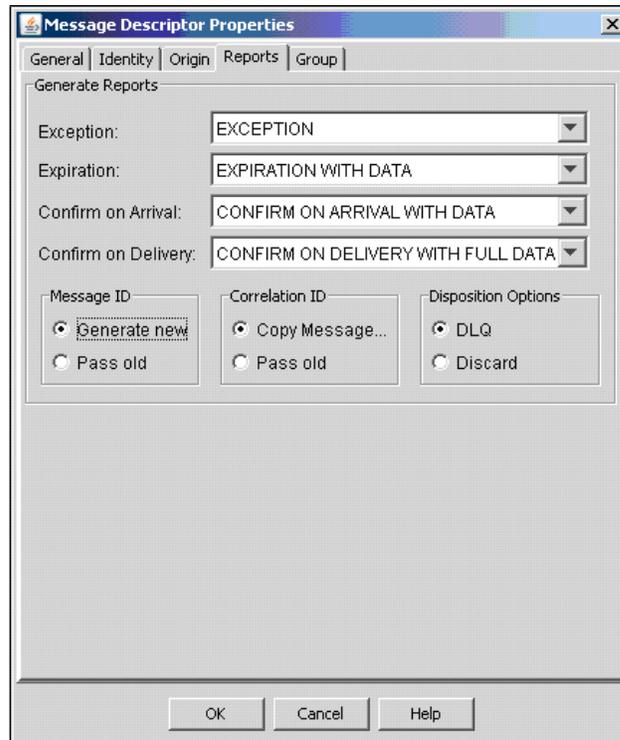


Figure 3-109. Message Descriptor Properties: Reports

Table 3-44. Message Descriptor Properties: Reports Tab

Control	Description	States and Conditions
Exception combo box	Select an exception report message type from the list.	Always enabled.
Expiration combo box	Select an expiration report message type from the list.	
Confirm on Arrival combo box	Select confirm-on-arrival report message type from the list.	
Confirm on Delivery combo box	Select confirm-on-delivery report message type from the list.	
Message ID radio buttons	Specify how the Message ID of the report message (or the reply message) is to be set.	
Correlation ID radio buttons	Specify how the Correlation ID of the report message (or the reply message) is to be set.	
Disposition Options radio buttons	Specify message disposition type when a message cannot be delivered to its destination queue.	

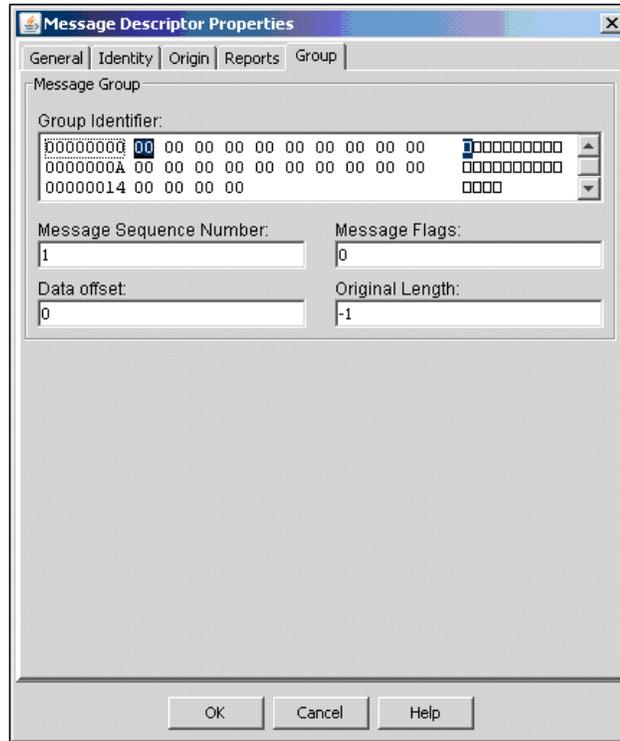


Figure 3-110. Message Descriptor Properties: Group

	NOTE:	If it is MD1 or XQH::EMD header, then the Group tab is removed.
--	--------------	---

Table 3-45. Message Descriptor Properties: Group Tab		
Control	Description	States and Conditions
Group Identifier	Edit group identifier.	Always enabled.
Message Sequence Number field	Input sequence number of logical message within group.	
Data Offset field	Input offset of data in physical message from start of logical message.	
Message Flags field	Input message flags.	
Original Length field	Input length of original message.	

Message Descriptor Extension

Message Descriptor Extension screen is used to view/edit MDE message header. The screen is displayed when **MDE** button is pressed.

Figure 3-111. Message Descriptor Extension

Table 3-46. Message Descriptor Extension		
Control	Description	States and Conditions
Flags field	Input general flags.	Always enabled.
Message Format combo box	Select message format from list	
Encoding field	Provide message data encoding.	
CCSID field	Provide message coded character set identifier.	
User Message Format field	Input custom message format.	Editable only if <i>User message format</i> is selected in Message Format combo
Group Identifier field	Edit group identifier	Always enabled.
Message Sequence Number field	Input sequence number of logical message within group.	
Data Offset field	Input offset of data on physical message from start of logical message.	
Message Flags field	Input flags that specify attributes of the message.	
Original Length field	Input length of original message.	

Dead Letter Queue Header

Dead Letter Queue Header dialog box is used to view/edit the DLH message header. The screen is displayed when the **DLH** button is pressed.

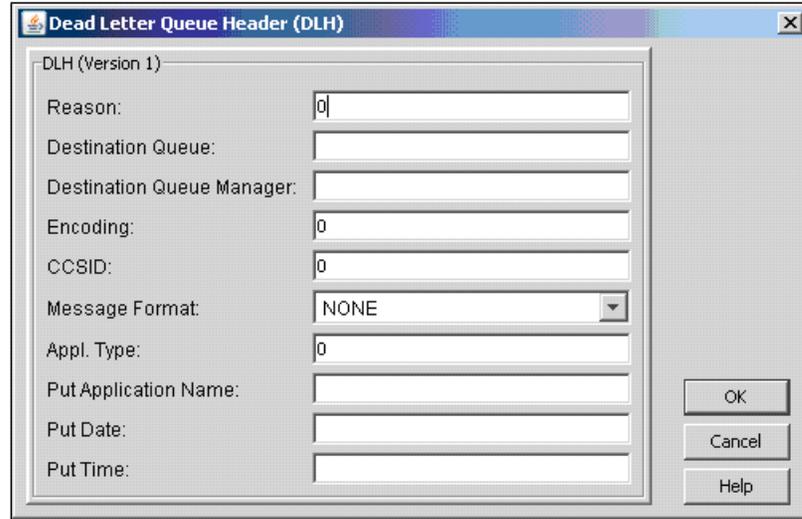


Figure 3-112. Dead Letter Queue Header

Table 3-47. Dead Letter Queue Header		
Control	Description	States and Conditions
Reason field	Input reason code.	Always enabled.
Destination Queue field	Input name of destination queue.	
Destination Queue Manager field	Input name of destination queue manager.	
Encoding field	Specify message data encoding.	
CCSID field	Specify message coded character set identifier.	
Message Format combo box	Select message format from the list.	
Appl. Type field	Input put application type.	Always enabled.
Put Application Name field	Input put application name.	
Put Date field	Provides date when message was put.	
Put Time field	Provides time when message was put.	

Transmission Queue Header

Transmission Queue Header screen is used to view/edit the XQH message header. This screen is displayed when the **XQH** button is pressed.

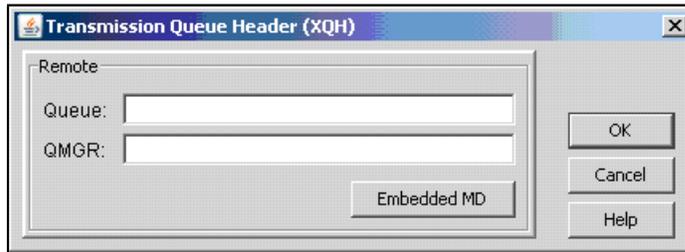


Figure 3-113. Transmission Queue Header

Table 3-48. Transmission Queue Header		
Control	Description	States and Conditions
Queue field	Input name of destination queue.	Always enabled.
QMGR field	Input name of destination queue manager.	
Embedded MD button	Displays <i>Message Descriptor Properties</i> dialog box in order to edit embedded message descriptor. (See Figure 3-106 through Figure 3-110 .)	

Message Data

Message Data screen is used to view/edit the message data and is displayed when **Data** button is pressed on the *Edit Message* screen.

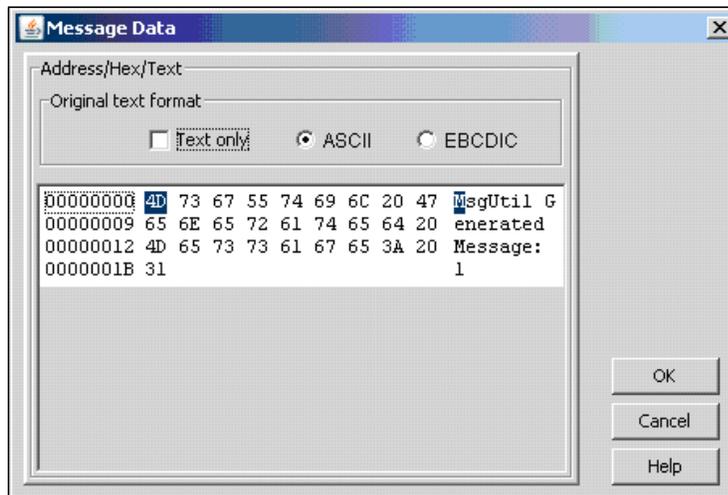


Figure 3-114. Message Data

Table 3-49. Message Data		
Control	Description	States and Conditions
Original text format buttons	Select text format.	Always enabled.
Text only button	Select plain text.	
Message data	Edit message data.	

3.3.9 Status Views

The *Status Views* tab displays the properties of the selected queue in the M6-QMP network tree.

Attributes										Events										Actions										Messages										Status Views										Topology Views									
Object Name: \\MQM\DESKTOP99\DESKTOP99_QMGR\Queues\Local Queues																																																											
TXT CSV <H>																																																											
#	Name	Curr. Queue Depth	Uncommitted Messages	Open Input Count	Open Output Count	Application Tag																																																					
1	MBSQMGR Queue	0	NO	0	0																																																						
2	NASTEL.APTM.CONFIG Queue	2	NO	0	0																																																						
3	NASTEL.EVENT.QUEUE Queue	0	NO	0	0																																																						
4	NASTEL.MMF.ADMIN.COMMAND.QUEUE Queue	0	NO	1	0	\nastel\apwmq\bin\nsqmsg.exe	SYS																																																				
5	NASTEL.MMF.AUDIT.QUEUE Queue	0	NO	0	0																																																						
6	NASTEL.PUBSUB.EVENT.QUEUE Queue	0	NO	1	0	:\nastel\apwmq\bin\nsqmq.exe	SYS																																																				
	Handle					:\nastel\apwmq\bin\nsqmq.exe	SYS																																																				
	Handle					:\nastel\apwmq\bin\nsqpub.exe	SYS																																																				
7	RRR1 Queue	0	NO	0	0																																																						
8	RRR2 Queue	0	NO	0	0																																																						
9	RRR3 Queue	0	NO	0	0																																																						
10	SYSTEM.ADMIN.ACTIVITY.QUEUE Queue	0	NO	0	0																																																						
11	SYSTEM.ADMIN.COMMAND.QUEUE Queue	0	NO	1	0																																																						
	Handle					ebSphere MQ\bin\amqpcsea.exe	MUSR																																																				
12	SYSTEM.ADMIN.TRACE.ROUTE.QUEUE Queue	0	NO	0	0																																																						
13	SYSTEM.AUTH.DATA.QUEUE Queue	112	NO	1	1																																																						

Figure 3-115. Status Views

3.3.10 Topology Views

The *Topology Views* tab (Figure 116) displays a view-only graphic representation of the environment. It shows how the queues are connected. Hover your mouse over the graphic to view popup labels. The diagram can be exported to Visio by clicking the export button.

Please note that the **Name Mask** field defaults to “*” meaning everything. However, when using this filter field, an asterisk can NOT be used in conjunction with other characters. If an asterisk is used, unexpected results will occur.

	<p>NOTES:</p>	<ol style="list-style-type: none"> 1. Topology Views is a work in progress and changes/improvements are being made. Nastel looks forward to your comments and suggestions on how to improve this tool. 2. Topology uses SVG graphic images. Therefore you should use a recent browser such as IE9, Chrome, or Firefox. For IE8, you can download a third-party SVG package, such as the Adobe SVG Viewer, which while no longer supported by Adobe has been certified for topology.
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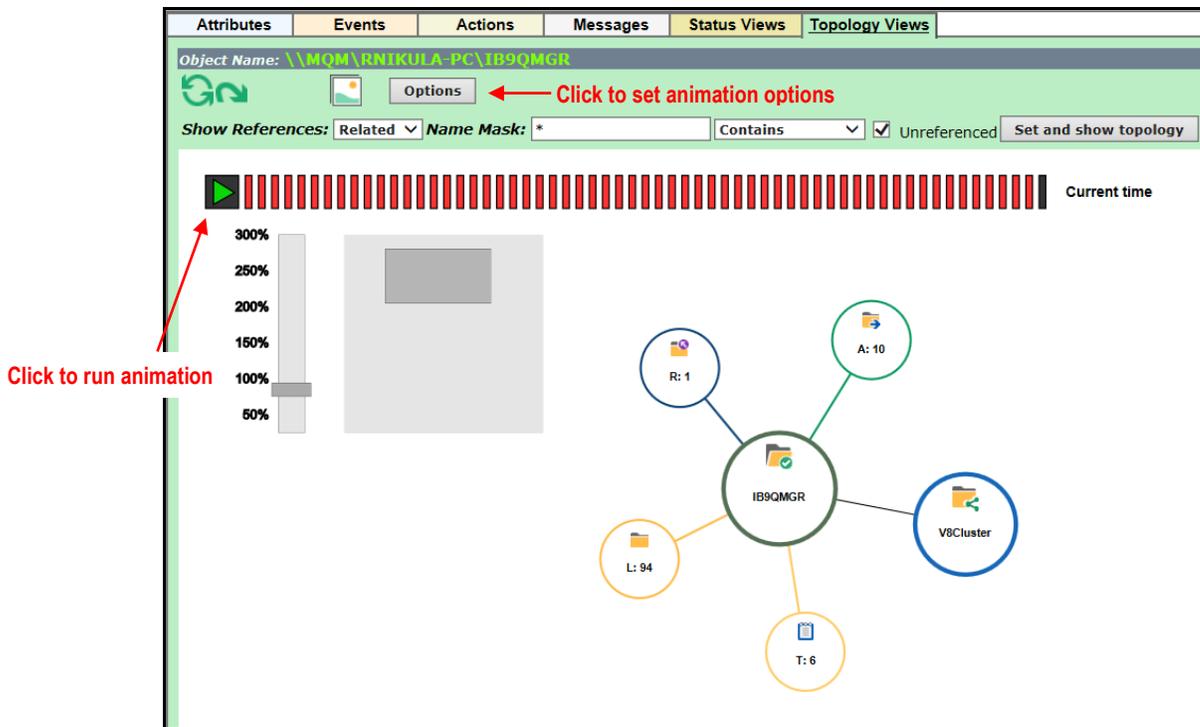


Figure 3-116. Topology Views

Queues and topics are indicated by the following letters:

- A = alias queue
- L = local queue
- R = remote queue
- T = topics.

The number of queues or topics is indicated by the number to the right of the colon. For example **A:14** means there are 14 alias queues.

To highlight the message path, press **Shift** + click on a queue. The message path is highlighted in yellow as shown in the figure below.

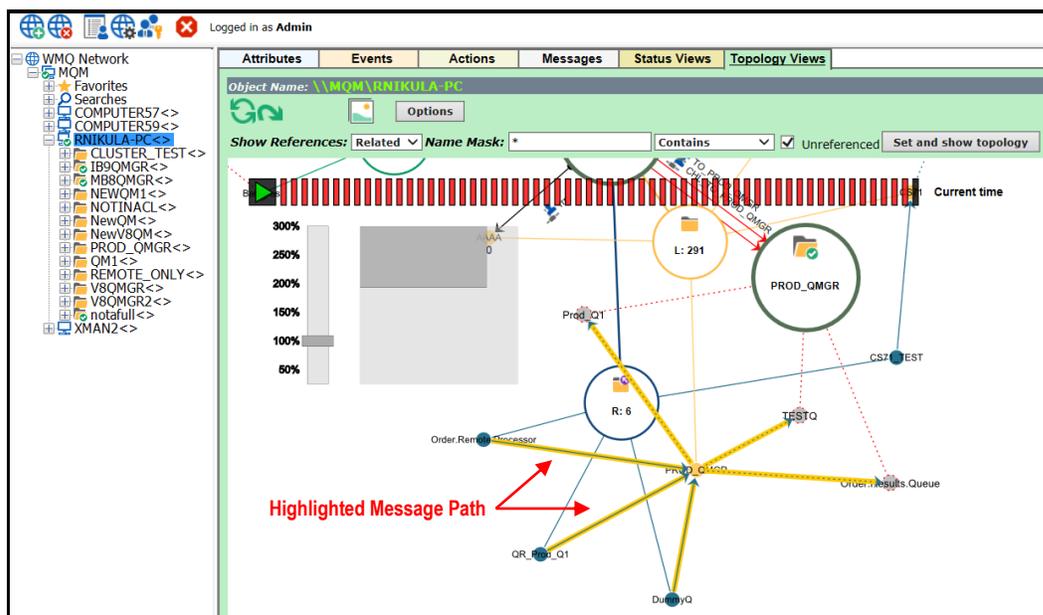


Figure 3-117. Message Path Highlighted

Animation

The topology animation is based on the options the user selects. To set options, click the **Options** button to display the *Topology animation options* dialog box. After options are set, click the start button to run the animation.

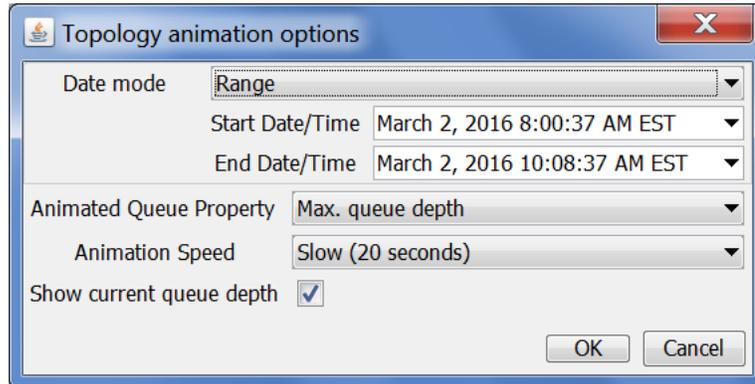


Figure 3-117A. Topology Animation Options Dialog Box

Table 3-50. Topology Animation Options	
Control	Description
Date mode	From the drop-down list select Last hour , Last 3 hours , Last 6 hours , or Range . If Range is selected, the Start and End Date/Time fields are displayed and you can select a custom range.
Start Date/Time	Select start date from the calendar widget and use the up/down arrows to set the time.
End Date/Time	Select end date from the calendar widget and use the up/down arrows to set the time.
Animated Queue Property	From the drop-down list, select what you want to animate: Max. queue depth , Puts count (messages arrived), or Put get delta (difference between the messages read and the messages arrived; that is the absolute value between the puts and the gets).
Animation Speed	Select Fast , Normal , or Slow from the drop-down list.
Show current queue depth	If selected, current queue depth is shown (recommended).

3.3.11 z/OS Reports

For z/OS queue managers, you can generate reports about the selected queue manager. To generate a report:

1. Right-click the queue manager, then select **Commands > z/OS Reports**.

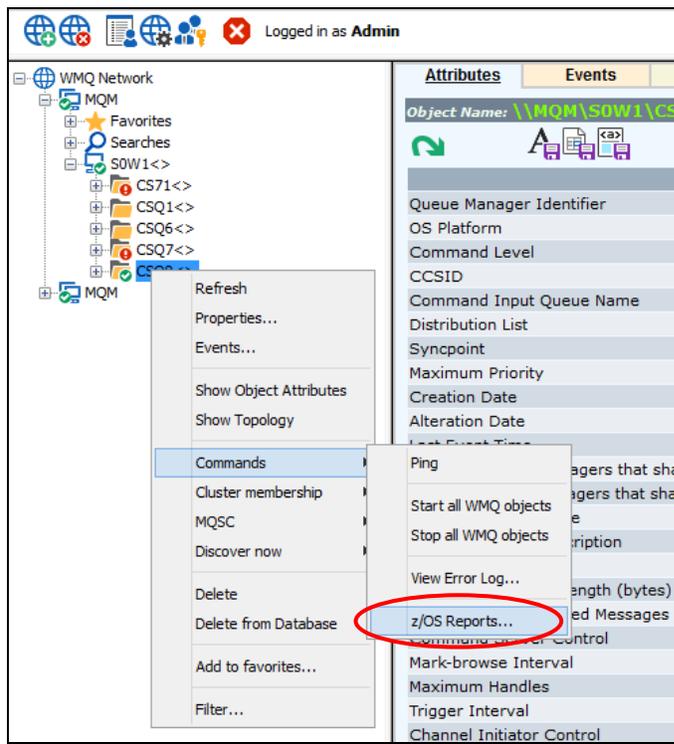


Figure 3-117B. z/OS Reports Menu

2. A z/OS Reports screen for the queue manager is displayed.

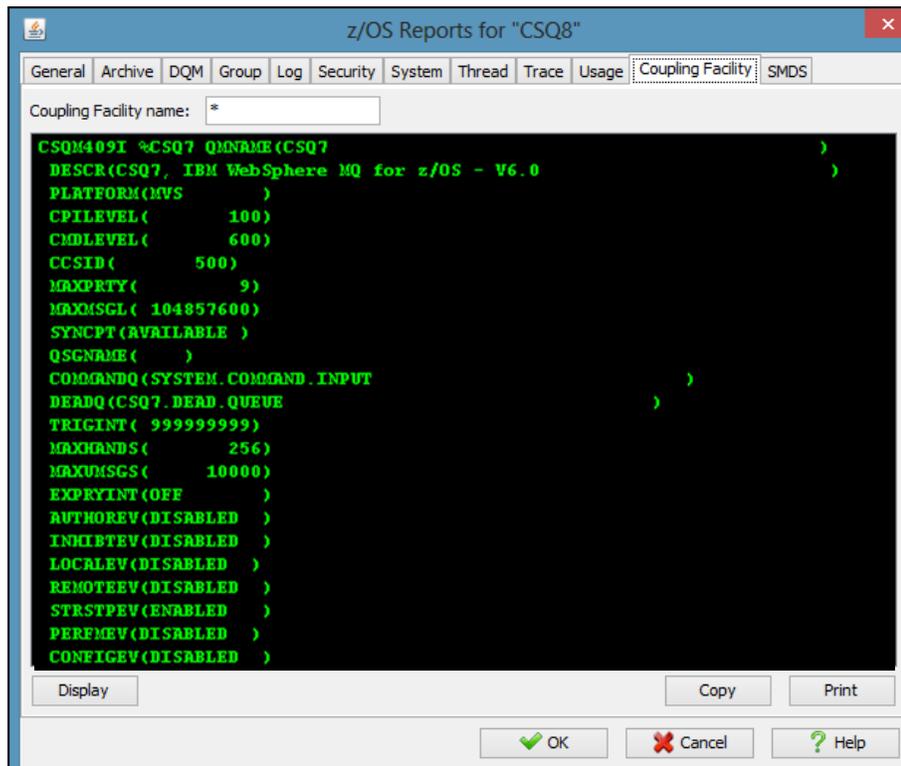


Figure 3-117C. z/OS Reports Screen – General Tab

There are 12 tabs, each displaying a report as described in Table 3-51. The buttons at the bottom of each screen allow you to **Print** the contents of the screen or to **Copy** it to a file.

Table 3-51. z/OS Reports	
Report (Tab)	Description
General	Displays the parameters of the selected queue manager.
Archive	Displays archived information.
DQM	<p>Displays information about the channel initiator. The DISPLAY DQM command publishes a report about the current status of the channel initiator:</p> <ul style="list-style-type: none"> • Whether the channel initiator is running or not • Which listeners are started and information about them • How many dispatchers are started and how many were requested • How many adapter subtasks are started and how many were requested • How many SSL subtasks are started and how many were requested • The TCP system name • How many channel connections are current and whether they are active, stopped, or retrying • The maximum number of current connections
Group	<p>Displays information about the queue-sharing group to which the queue manager is connected. The DISPLAY GROUP command publishes a report about the queue-sharing group to which the queue manager is connected:</p> <ul style="list-style-type: none"> • The name of the queue-sharing group • Whether all the queue managers that belong to the group are active or inactive • The names of all the queue managers that belong to the group
Log	<p>Displays archive log information. The DISPLAY LOG command publishes a report that shows the initial log parameters, and the current values as changed by the SET LOG command:</p> <ul style="list-style-type: none"> • Length of time that an allowed archive read tape unit remains unused before it is deallocated (DEALLCT). • Size of input buffer storage for active and archive log data sets (INBUFF). • Size of output buffer storage for active and archive log data sets (OUTBUFF). • Maximum number of dedicated tape units that can be set to read archive log tape volumes (MAXRTU). • Maximum number of archive log volumes that can be recorded (MAXARCH). • Whether archiving is on or off (OFFLOAD). • Whether single or dual active logging is being used (TWOACTV). • Whether single or dual archive logging is being used (TWOARCH). • Whether single or dual BSDS is being used (TWOBSDS). • Number of output buffers to be filled before they are written to the active log data sets (WRTHRSR). <p>It also returns a report about the status of the logs.</p>
Security	<p>Displays the current settings for the security parameters:</p> <ul style="list-style-type: none"> • Timeout – the timeout value • Interval – The time interval between checks • Switches – Displays the current setting of the switch profile. If the subsystem security switch is off, no other switch profile settings are displayed.

Table 3-51. z/OS Reports

Report (Tab)	Description
System	<p>Displays system information. The DISPLAY SYSTEM command publishes a report that shows the initial values of the system parameters and the current values as changed by the SET SYSTEM command:</p> <ul style="list-style-type: none"> • Default user ID for command security checks (CMDUSER). • Maximum number of connections from batch, CICS, IMS, and TSO tasks to a single instance of WebSphere MQ (CTHREAD). • Time, in seconds, for which queue manager exits can execute during each invocation (EXITLIM). • How many started server tasks to use to run queue manager exits (EXITTCB). • Maximum number of connections to a single instance of WebSphere MQ from batch or TSO background tasks (IDBACK). • Maximum number of connections to a single instance of WebSphere MQ from TSO foreground tasks (IDFORE). • Number of log records written by WebSphere MQ between the start of one checkpoint and the next (LOGLOAD). • The OTMA connection parameters (OTMACON). • Whether queue manager restart waits until all indexes are built, or completes before all indexes are built (QINDXBLD). • Coded character set identifier for the queue manager (QMCCSID). • The queue-sharing group parameters (QSGDATA). • The RESLEVEL auditing parameter (RESAUDIT). • The message routing code assigned to messages not solicited from a specific console (ROUTCDE). • Whether SMF accounting data is collected when WebSphere MQ is started (SMFACCT). • Whether SMF statistics are collected when WebSphere MQ is started (SMFSTAT). • Default time, in minutes, between each gathering of statistics (STATIME). • Whether tracing is started automatically (TRACSTR). • Size of trace table, in 4 KB blocks, to be used by the global trace facility (TRACTBL). • Time, in minutes, between scanning the queue index for WLM-managed queues (WLMTIME).
Thread	<p>Displays information about active and in-doubt threads. The parameters are:</p> <ul style="list-style-type: none"> • Thread Type – The type of thread to display. This parameter is optional. • Active – Display only active threads. An active thread is one for which a unit of recovery has started but not completed. Resources are held in WebSphere MQ on its behalf. • Indoubt – Display only in-doubt threads. An in-doubt thread is one that is in the second phase of the two-phase commit operation. Resources are held in WebSphere MQ on its behalf. External intervention is needed to resolve the status of in-doubt threads. You might only have to start the recovery coordinator (CICS, IMS, or RRS), or you might need to do more. They might have been in doubt at the last restart, or they might have become in doubt since the last restart. • Regions – Display a summary of active threads for each active connection. • * (asterisk) – Display both active and in-doubt threads, but not regions. If, during command processing, an active thread becomes in doubt, it might appear twice: once as active and once as in doubt.

Table 3-51. z/OS Reports

Report (Tab)	Description
	<ul style="list-style-type: none">• Queue Manager Name – Specifies that WebSphere MQ should check whether the designated queue manager is INACTIVE, and if so, report any shared units of work that were in progress on the designated and inactive queue manager. This option is valid only for in-doubt type of threads.
Trace	Displays a list of active traces.
Usage	Displays information about the current state of a page set, or to display information about the log data sets.
Coupling Facility	Display the attributes of one or more CF application structures.
SMDS	Displays the parameters of existing WebSphere MQ shared message data sets associated with a specified application structure.

3.4 Administration

Login credentials are required to access this feature.

Click the **Administration** icon  to go to the *Administration* login screen.



Figure 3-118. Administration Login

1. Enter your assigned **Login ID** and **Password**. The default values are as follows, but should be changed. (See [Figure 3-126](#) to change.)
 - **Login** – Admin
 - **Password** – admin
2. Click **Login** to display the *AutoPilot On-Demand for WebSphere MQ Administration* screen.

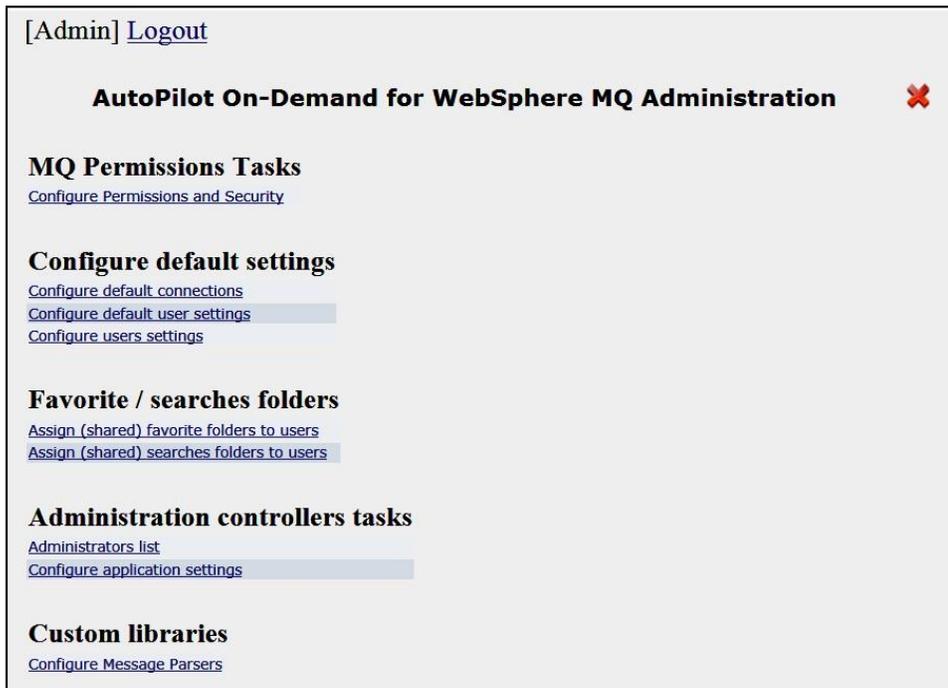


Figure 3-119. Administration

Refer to [Table 3-52](#) for a description of the options available on this screen.

Table 3-52. Permissions	
Control	Description
MQ Permissions Tasks	
Configure Permissions and Security	Launches the AutoPilot On-Demand for APWMQ Security Manager. This interface can be launched separately. (Refer to Table A-1 for user documentation.)
Configure default settings (section 3.4.1)	
Configure default connections	Allows you to set default connections.
Configure default user settings	Allows you to set default user settings.
Configure users settings	Allows you to reset user to the default user settings.
Favorite/searches folders (section 3.4.2)	
Assign (shared) favorite folders to users	Allows you to assign favorite folders to users.
Assign (shared) searches folders to users	Allows you to assign search folders to users.
Administration controllers tasks (section 3.4.3)	
Administrators list	Allows you to create or edit Admin users and reset passwords.
Configure application settings	Allows you to configure application settings.
Custom libraries (section 3.4.4)	
Configure message parsers	Allows you to configure message parser files.

3.4.1 Configure Default Settings

1. Click **Configure default connections** to go to the *Workgroup Server Connections Handler* dialogue box. See [section 3.3.1.2](#) for a description of this function.
2. Click **Configure default user settings** to go to the *Edit User Settings* dialog box. See [section 3.3.1.3](#) for a description of this function.
3. Click **Configure users settings** to go view the users that have connected to the application and the rights assigned. Their options can be reset to defaults or deleted. (See [Figure 3-120](#).)

When you click **Configure users settings** from the *Administration* screen ([Figure 3-119](#)), the *Users list* screen is displayed. This is a list of users who can login to APODWMQ. From here you can view the user record, reset the user to default settings, or delete a user.



Id	Login name	Assigned roles			
1	*		View		
2	ADMIN	Administrator	View	Reset	Delete
4	Charlotte	Administrator	View	Reset	Delete
3	User	Administrator, Message Browser	View	Reset	Delete

Figure 3-120. Users List

Click the green arrow  to return to the previous page.

3.4.2 Favorite/Searches Folders

3.4.2.1 Assign Favorites Folders

1. Click **Assign (shared) favorite folders** from the *Administration* screen ([Figure 3-119](#)), to go to the *Assign favorite folders* screen ([Figure 3-121](#)).

Figure 3-121. Assign Favorite Folders

2. From the **Users** list, select the user you want to assign one or more favorite folders to.
3. From the **Found shared folders** list, select one or more folders. Press the **Shift** key to select more than one folder.
4. Click **Save**.
5. Click the green arrow  to return to the previous page.

	NOTE:	To remove a favorite, click Clear .
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3.4.2.2 Assign Favorite Searches

1. Click **Assign (shared) favorite searches** from the *Administration* screen ([Figure 3-119](#)), to go to the *Assign favorite searches* screen ([Figure 3-122](#)).

Figure 3-122. Assign Favorite Searches

2. From the **Users** list, select the user you want to assign one or more searches to.
3. From the **Found shared searches** list, select one or more searches. Press the **SHIFT** key to select more than one search.

4. Click **Save**.
5. Click the green  to return to the previous page.

	NOTE: To remove a search, click Clear .
---	---

3.4.3 Administration Controllers Tasks

3.4.3.1 Administrators List

Click **Administrators list** from the *Administration* screen ([Figure 3-119](#)), to view the administrators that have connected to the application. (See [Figure 3-123](#).) Their descriptions and passwords can be reset or the record can be deleted. The default Admin record cannot be deleted.



Figure 3-123. Administrators Users List

Create Mode

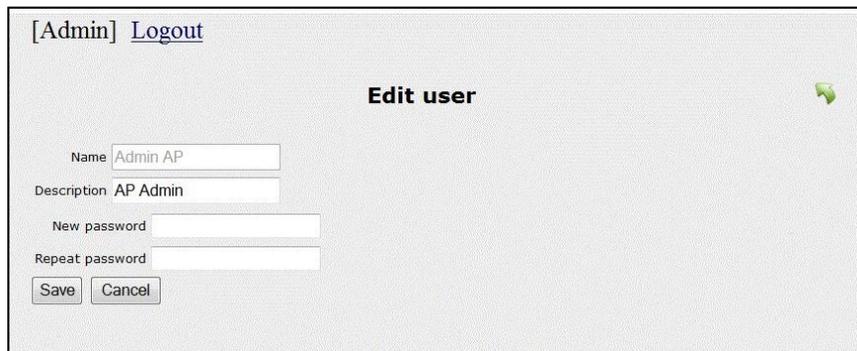
1. Click **Add new** to go to the *Add user* screen.

Figure 3-124. Administrators Add User

2. Enter the:
 - **Name** – the username
 - **Description** – a brief description of the user
 - **New password** – the password
 - **Repeat password** – enter the password again.
3. Click **Save**. You are returned to the previous screen where you will see the new user listed.

Edit Mode (for all users except default Admin)

Click **Edit** from the *Users list* screen ([Figure 3-123](#)), to go to the following screen.



The screenshot shows a web form titled "Edit user". At the top left, there is a link "[Admin] Logout". The form contains the following fields and buttons:

- Name: Admin AP
- Description: AP Admin
- New password: [text input]
- Repeat password: [text input]
- Buttons: Save, Cancel

Figure 3-125. Administrators Edit User

1. Change the **Description** if needed.
2. To change the password, enter the:
 - **New password** – enter the new password
 - **Repeat password** – re-enter the new password.
3. Click **Save**. You are returned to the previous screen.

Edit Mode (for default Admin)

Click **Edit** from the *Users list* screen ([Figure 3-123](#)), to go to the following screen.



The screenshot shows a web form titled "Edit user". At the top left, there is a link "[Admin] Logout". The form contains the following fields and buttons:

- Name: Admin
- Description: APODWMQ Administrator
- Old password: [text input]
- New password: [text input]
- Repeat password: [text input]
- Buttons: Save, Cancel

Figure 3-126. Administrators Edit Default Admin

1. Change the **Description** if needed.
2. To change the password, enter the:
 - **Old password** – enter the current password
 - **New password** – enter the new password
 - **Repeat password** – re-enter the new password.
3. Click **Save**. You are returned to the previous screen.

3.4.3.2 Configure Application Settings

Click **Configure application settings** to go to the default application settings screen ([Figure 3-127](#)). This screen allows you to set the following default values:

1. URL for Security Manager
2. Default domain shown on the login screen
3. Maximum limit for browse message options
4. Allowed time between workgroup server responses. If the time between responses is greater than this value, a dialog box is displayed saying the workgroup server is not responding and asking if you want to continue to wait.
5. Allowed time for **Move/Copy/Delete All** functions.

Figure 3-127. Edit Application Settings

3.4.4 Custom Libraries

This option allows you to add your own message parser. Once the parser file is added, you can update it by replacing the file or delete it. Parsers added here are available for use from the *View Message* dialog box ([Figure 3-95](#)).

	NOTE:	A sample message parser (jar file) is provided with the installation package. Refer to Appendix C for a sample file.
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Click **Configure Message parser** from the *Administration* screen ([Figure 3-119](#)) to go to the *Custom Message Parsers* screen.

Figure 3-128. Custom Message Parsers

3.4.4.1 Add New Mode

1. Click **Add new** to go to the *Add library* screen.

Figure 3-129. Add Library

2. Do the following:
 - a. **Description** – Add a name for the parser file.
 - b. **Browse** – Select the jar file that contains your parser.
 - c. Click **Save**. You are returned to the previous page where your parser is now listed.

File name	Description	Message Parsers		
message-parser-example.jar	Message Parser Simple Msg Parser;	Update	Delete	

Figure 3-130. Parser File Added

3.4.4.2 Update Mode

1. From the *Custom Message Parsers* screen, click **Update** to the *Edit Library* screen.

Figure 3-131. Edit Library

2. You can:
 - a. Change the **Description** by overwriting the existing name.
 - b. Select a new file by clicking **Browse**.
3. Click **Save** to save your changes or **Cancel** to abort the changes.

3.4.4.3 Delete

1. From the *Custom Message Parsers* screen (Figure 3-130), click **Delete**. A confirmation dialogue box displays.
2. Click **Yes** to delete the parser or **Cancel**.

3.5 System Timeout and Session Expiration

The system has some features embedded which tries to ensure the security of your account and the work you are doing. There is a countdown timer, which starts counting elapsed seconds each time you perform an action in the system. After system realizes that a user has been inactive for a long time (Tomcat timeout value), your session becomes inactive. In order to continue working user has to prove his identity by re-logging into the system.

If the user whose account is already in use (on some other computer) logs into the system, the session that is running in the other computer expires.

An attempt to perform any action with the system when session has expired activates the following message window:



Figure 3-132. Session Expiration Window

If you were in the middle of something (putting, copying, and moving messages, creating browse criteria) and the session expired before you pressed **OK** confirming your changes, your work will be lost.

Re-login can be done by clicking the **Logout** button  in the APODWMQ toolbar and re-entering your user name and password.

3.6 System Access Management

User authentication is ensured via user login name and password.

System ensures that the authorized user can only perform those actions, which are granted in his profile.

Authorization Editor (permits) – the separate application enables the management of user accounts and their permissions.

User rights are defined by assigning the user to a group, which has certain privileges. Default user groups available on the system are:

Group Name	Rights
Application administrator	Can manage user accounts (create, delete users; manage user rights; edit information about users)
Permits user	Can change password, work with Authorization Editor application, generate permits.ini file.
APODWMQ user	Can access APODWMQ application; connect and disconnect to/from a workgroup, browse queues, create, browse and edit messages inside them.

	NOTE: Application administrator cannot be a Permits or APODWMQ user and vice versa.
---	--

3.7 Additional Information and Useful Notes

- If you cannot login to APODWMQ, check if “Caps Lock” is off (user name and password are case sensitive). If you are sure that your password and user name are entered correctly, contact the system administrator.
- If you cannot expand nodes in the M6-WMQ network tree view, make sure that you are connected to the Workgroup agent, and that the information provided about the Workgroup agent in the Workgroup agent Connection handler is correct.
- If you performed some action on a queue (put, deleted messages) and the changes are not seen in the tree view interface (the number of messages in the queue did not change), try to refresh a queue by selecting *Refresh* command from the pop-up menu.
- If you inserted or deleted some messages into the queue and you cannot see them when browsing the queue, make sure that the Browse options of that queue do not filter out new messages.

Appendix A: References

A.1 Nastel Documentation

Table A-1. Nastel Documentation	
Document Number (or higher)	Title
APM6/INS 623.001	<i>Nastel AutoPilot M6 Installation Guide</i>
APM6/USR 623.001	<i>Nastel AutoPilot M6 User's Guide</i>
M6/WMQ 600.002	<i>Nastel AutoPilot M6 Plug-in for WebSphere MQ</i>
M6WMQ-ADM 656.002	<i>Nastel AutoPilot M6 for WebSphere MQ Administrator's Guide</i>
M6WMQ-INS 656.001	<i>Nastel AutoPilot M6 for WebSphere MQ Installation Guide</i>
M6-SM 656.001	<i>Nastel AutoPilot On-Demand for WebSphere MQ Security Manager User's Guide</i>

A.2 Tomcat

<http://jakarta.apache.org/tomcat/tomcat-4.1-doc/index.html>

A.3 Java™

<http://java.sun.com/products/JavaManagement/reference/docs/index.html>

<http://www.hp.com/products1/unix/java/infolibrary/index.html>

<http://developer.java.sun.com/developer/technicalArticles/Servlets/corba/>

A.4 MS Windows

<http://www.microsoft.com/windows/default.mspix>

A.5 UNIX

<http://www.unix.org/>

A.6 Solaris

<http://www.sun.com/software/solaris/>

A.7 HP-UX

<http://welcome.hp.com/country/us/en/welcome.html>

A.8 Linux

<http://www.linux.org/>

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Appendix B: Conventions

B.1 Typographical Conventions

Convention	Description
Blue/Underlined	Used to identify links to referenced material or websites. Example: support@nastel.com
Bold Print	Used to identify topical headings, glossary entries, and to identify toggle or buttons used in procedural steps. Example: Click EXIT .
<i>Italic Print</i>	Used to place emphasis on a title, menu, screen name, or other categories.
Monospaced Bold	Used to identify keystrokes/data entries, file names, directory name etc.
<i>Monospaced italic</i>	Used to identify variables in an address location. Example: [C:\AutoPilot_Home]\documents. Where the portion of the address in the brackets [] is variable.
Monospaced Text	Used to identify addresses, commands, scripts etc.
Normal Text	Typically used for general text throughout the document.
Table Text	Table text is generally a smaller size to conserve space. 10, 9, and 8 point type is used in tables throughout the AutoPilot product family of documents

B.2 Naming Conventions

Naming conventions have been adjusted to accommodate IBM's re-naming of MQSeries products to WebSphere MQ.

Nastel has adapted AutoPilot products to reflect IBM's product naming changes. In the redesign of AutoPilot, we have also better defined many elements within the AutoPilot product line.

Old Name	New Name
AutoPilot/MQSI	AutoPilot for WebSphere MQI
MQSeries Plug-in for AutoPilot	WebSphere MQ Plug-in for AutoPilot
MQControl	AutoPilot for WebSphere MQ
MQSeries	WebSphere MQ (IBM)

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Appendix C: Sample Message Parser File

The parser below shows the basics for a parser application. The java program requires these two methods:

- `String getName()` - Returns the name to be shown to the user for the parser.
- `byte[] decompile (byte[] messageBytes, String codePage)` - Given the message contents (messageBytes) returns the reformatted message to be displayed.

Example:

```
package com.nastel.parser.example;
import com.nastel.parser.MessageParser;
public class SimpleMessageParserExample implements MessageParser
{
    /**
     * This parser replace space symbols with new line symbols
     */
    public byte[] decompile(byte[] messageBytes, String codePage) throws Exception
    {
        String tempDecompiledString = "";
        String messageString = new String(messageBytes, codePage);
        tempDecompiledString = messageString.replaceAll(" ", "\n");
        return tempDecompiledString.getBytes(codePage);
    }
    public String getName()
    {
        /**
         * Must provide this method to identify parser name
         */
        return "Simple Msg Parser";
    }
}
```

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Glossary

Application: A logical collection of software components that perform a business function, running on a specific server.

AutoPilot M6: Nastel Technologies' Enterprise Application Management Platform. AutoPilot M6 is designed to monitor and control distributed IT services such as application servers, middleware, user applications, workflow engines, brokers, Service Oriented Architecture (SOA) and Enterprise Service Bus (ESB) based applications and their impact on business services.

AutoPilot M6 for WMQ: Nastel Technologies' WebSphere MQ management solution. Re-designated as M6 for WMQ with release 6.0, prior releases retain the AP-WMQ or MQControl trademark.

AutoPilot M6 Web: AutoPilot M6 Web is a browser-based interface that provides monitoring and operational control over managed resources and applications. It allows users to monitor health, recover from a failure, view historical performance graphs and visualize impacts of a failure.

AutoPilot M6/WebSphere Message Queue Integrator (AP/WMQI): Formerly AP/MQSI

AutoPilot/Message Tracking (AP/MT): Nastel's AutoPilot/Message Tracking plug-in that enables AutoPilot/IT to intercept message exits and forward the statistical data to an AutoPilot expert.

AutoPilot TransactionWorks (AP/TW): Nastel Technologies' transaction and application performance monitoring product.

AutoPilot/WebSphere (AP/WS): AutoPilot/WebSphere plug-in enables AutoPilot to monitor and manage eBusiness applications for continuous operations in addition to its standard features.

BCI: *See* Byte Code Instrumentation

Binary Large Object (BLOB): A collection of binary data stored as a single entity in a database management system. Blobs are typically images, audio or other multimedia objects, though sometimes binary executable code is stored as a blob. Database support for blobs is not universal.

BLOB: *See* Binary Large Object.

BSV: *See* Business View.

Business Transaction: A collection of related transactions that comprise a user-defined business function (e.g. purchase a book, return merchandise, purchase stock). Each of the business activities may be comprised of various workloads.

Business View (BSV): A collection of rules that define a desired state of an eBusiness environment. Business Views can be tailored to present information in the form most suited to a given user, as defined by the user.

Byte Code Instrumentation (BCI): The process of adding small portions of Java byte code around methods of a Java class. The added code performs tasks such as time spent or CPU utilization within the monitored class.

CEP (Complex Event Processing) Server: A container that can host any number of AutoPilot services such as experts, managers, policies, etc. (Called managed node prior to AutoPilot M6 Service Update 6.)

Client: Any programming component that uses the AutoPilot infrastructure; for example, the AutoPilot Console.

Common Object Request Broker Architecture (CORBA): A standard defined by the Object Management Group that enables software components written in multiple computer languages and running on multiple computers to work together. It can be invoked from a Web browser using CGI scripts or applets.

Composite Application: A collection of applications that collaborate or communicate with each other (have related sessions).

Console: The console acts as the graphical interface for AutoPilot.

Contacts: A subordinate to a given Manager or Expert.

CORBA: *See* Common Object Request Broker Architecture.

Data Source Name (DSN): The logical name that is used by Open Database Connectivity (ODBC) to refer to the drive and other information that is required to access data. The name is used by Internet Information Services (IIS) for a connection to an ODBC data source, (Example: Microsoft SQL Server database). The ODBC tool in Control Panel is used to set the DSN. When ODBC DSN entries are used to store the connection string values externally, you simplify the information that is needed in the connection string. This makes changes to the data source completely transparent to the code itself.

Data Space: A range of up to two gigabytes of contiguous virtual storage addresses that a program can directly manipulate. Unlike an address space, a data space can hold only data; it does not contain common areas or system data or programs.

Decision Support System (DSS): An AutoPilot-based service designed to monitor, store, and display any event information generated by AutoPilot enabled middleware and applications.

Deploy: To put to use, to position for use or action.

Domain Server: A specialized managed node that maintains the directory of managed nodes, experts etc. The domain server is also capable of hosting experts, managers etc

DSN: *See* Data Source Name.

DSS: *See* Decision Support System.

Event: An *Event* is something that happens to an object. Events are logged by AutoPilot and are available for use by AutoPilot Policies or the user.

EVT: Event Log file extension (for example: `sample.evt`).

Expert: Services that monitor specific applications such as an applications server, Web server or specific components within the applications (example, channels in MQSeries). Experts generate facts.

Fact: Single pieces of data that has a unique name and value. One or more facts are used to determine the health of the object, application or server.

Graphical User Interface (GUI): A type of environment that represents programs, files, and options by means of icons, menus, and dialog boxes on the screen. The user can select and activate these options by pointing and clicking with a mouse or, often, with the keyboard. Because the graphical user interface provides standard software routines to handle these elements and report the user's actions (such as a mouse click on a particular icon or at a particular location in text, or a key press); applications call these routines with specific parameters rather than attempting to reproduce them from scratch.

GUI: *See* Graphical User Interface.

HAQS: *See* High Availability Queuing Service.

Heap: In Java programming, a block of memory that the Java virtual machine uses at run time to store Java objects. Java heap memory is managed by a garbage collector, which automatically de-allocates Java objects that are no longer in use

High Availability Queuing Service (HAQS): A component of AutoPilot consisting of two policies that provide automatic queue fail-over for WebSphere MQ applications, provide high availability of WebSphere MQ resources such as queues and channels, and ensure automatic recovery of WebSphere MQ channels.

IIS: *See* Internet Information Services.

Independent Software Vendor (ISV): A business term for companies specializing in making or selling software, usually for niche markets.

Initial Program Load (IPL): The process of loading system programs and preparing a system to run applications.

Interactive System Productivity Facility (ISPF): An IBM licensed program that serves as a full-screen editor and dialog manager. Used for writing application programs. It provides a means of generating standard screen panels and interactive dialogues between the application programmer and terminal user.

Internet Information Services (IIS): Microsoft's brand of Web server software, utilizing HTTP to deliver World Wide Web documents. It incorporates various functions for security, allows CGI programs, and also provides for Gopher and FTP services.

IPL: *See* Initial Program Load.

ISPF: *See* Interactive System Productivity Facility.

ISV: *See* Independent Software Vendor.

Java: A platform-independent, object-oriented programming language developed and made available by Sun Microsystems.

Java Database Connectivity (JDBC): Provides universal data access from the Java programming language. Using the JDBC 2.0 API, you can access virtually any data source, from relational databases to spreadsheets and flat files. JDBC technology also provides a common base on which tools and alternate interfaces can be built. The *JDBC Test Tool* that was developed by Merant and Sun Microsystems may be used to test drivers, to demonstrate executing queries and getting results, and to teach programmers about the JDBC API.

Java Developer's Kit (JDK): A set of software tools developed by Sun Microsystems, Inc., for writing Java applets or applications. The kit, which is distributed free, includes a Java compiler, interpreter, debugger, viewer for applets, and documentation.

Java Management Extensions (JMX): An open technology for management and monitoring that can be deployed wherever management and monitoring are needed. By design, this standard is suitable for adapting legacy systems, implementing new management and monitoring solutions and plugging into those of the future.

Java Messaging Service (JMS): a Java Message Oriented Middleware API for sending messages between two or more clients.

Java Platform, Enterprise Edition (Java EE): The industry standard for developing portable, robust, scalable and secure server-side Java applications. Building on the solid foundation of Java SE, Java EE provides Web services, component model, management, and communications APIs that make it the industry standard for implementing enterprise class service-oriented architecture (SOA) and Web 2.0 applications.

Java Naming and Directory Interface (JNDI): Unified interface to multiple naming and directory services for applications based on Java technology.

Java Run-time Environment (JRE): The minimum core Java required to run Java programs.

Java Server Pages (JSP): Technology that enables rapid development of Web-based applications that are platform independent. Java Server Pages technology separates the user interface from content generation enabling designers to change the overall page layout without altering the underlying dynamic content. Java Server Pages technology is an extension of the Java Servlet technology.

Java Virtual Machine (JVM): The "virtual" operating system that Java-written programs run. The JVM is a hardware- and operating system-independent abstract computing machine and execution environment. Java programs execute in the JVM where they are protected from malicious programs and have a small compiled footprint.

JCL: *See* Job Control Language.

JDBC: *See* Java Database Connectivity.

JDK: *See* Java Developer's Kit.

JMS: *See* Java Messaging Service.

JMX: *See* Java Management Extensions.

JNDI: *See* Java Naming and Directory Interface.

Job Control Language (JCL): A control language that is used to identify a job to an operating system and to describe the job's requirements.

JRE: *See* Java Run-time Environment.

JSP: *See* Java Server Pages.

JVM: *See* Java Virtual Machine.

Logical Unit of Work (LUW): A collection of operations and messages within a session that should be considered to be a single unit of work (all or nothing property). These are generally delimited by BEGIN/COMMIT calls.

LUW: *See* Logical Unit of Work.

Managed Node: Containers that are capable of hosting any number of AutoPilot services, such as experts, managers, policies etc.

Manager: Managers are the home or container for policies. All business views must reside on managers, and manager must be deployed prior to deploying a business view or policy.

Message: A physical message being transported through the TPN.

Message-Oriented Middleware (MOM): A category of inter-application communication software that relies on asynchronous message passing as opposed to a request/response metaphor.

Message Queue Interface (MQI): Part of IBM's Networking Blueprint. It is a method of program-to-program communication suitable for connecting independent and potentially non-concurrent distributed applications.

MOM: *See* Message-Oriented Middleware.

MQI: *See* Message Queue Interface.

MQSeries: IBM's message queuing product. Renamed by IBM as WebSphere MQ.

Naming Service: A common server records "names" of objects and associates them with references, locations and properties.

Object Request Broker (ORB): In object-oriented programming, software that serves as an intermediary by transparently enabling objects to exchange requests and responses.

ORB: *See* Object Request Broker.

Orbix: CORBA product distributed by IONA Technologies.

Package Manager: The command line utility that allows users to list, install, uninstall, verify, and update AutoPilot installation on any Managed Node.

PKGMAN: *See* Package Manager Utility included in AutoPilot products.

Policy/Business Views: A collection of one or more sensors. Business views are used to visually present the health and status of the different systems as well as automatically issue remedial actions.

Resource: An entity on which transactions are executed or a medium of exchange. Examples include queue, DB table, file, JMS topic.

Resource Manager: An entity that is managing a collection of resources. Examples include a WMQ Queue Manager, Application Server, Database Server.

Sensor: A rule that is used to determine the health of an object or application based on one or more facts. Actions can then be issued, based on the health.

Server: A physical or virtual node within a TPN that hosts all transaction processing activity.

Service Level Agreement (SLA): A formal written agreement made between two parties: the service provider and the service recipient. The SLA itself defines the basis of understanding between the two parties for delivery of the service itself. The document can be quite complex, and sometimes underpins a formal contract. The contents will vary according to the nature of the service itself, but usually includes a number of core elements, or clauses.

Service-Oriented Architecture (SOA): An evolution of distributed computing and modular programming. SOAs build applications out of software services. Services are relatively large, intrinsically unassociated units of functionality, which have no calls to each other embedded in them. They typically implement functionalities most humans would recognize as a service, such as filling out an online application for an account, viewing an online bank statement, or placing an online book or airline ticket order. Instead of services embedding calls to each other in their source code, protocols are defined which describe how one or more services can talk to each other. This architecture then relies on a business process expert to link and sequence services, in a process known as orchestration, to meet a new or existing business system requirement.

Session: A specific period of execution of an application. Examples include the interval during which a database or queue manager connection is active.

Simple Mail Transfer Protocol (SMTP): A TCP/IP protocol for sending messages from one computer to another on a network. This protocol is used on the Internet to route e-mail. *See also* communications protocol, TCP/IP.

SLA: *See* Service Level Agreement.

SMTP: *See* Simple Mail Transfer Protocol.

SOA: *See* Service-Oriented Architecture.

TCP/IP: *See* Transmission Control Protocol/Internet Protocol.

Time Sharing Option (TSO): An option of the MVS operating system that provides interactive time sharing from remote terminals.

TPN: *See* Transaction Processing Network.

Transaction: A group of activities targeted at achieving a common goal or a task. Collection of related sessions and LUWs.

Transmission Control Protocol/Internet Protocol (TCP/IP): A protocol developed by the Department of Defense for communications between computers. It is built into the UNIX system and has become the de facto standard for data transmission over networks, including the Internet.

Transaction Processing Network (TPN): A collection of servers engaged in transaction processing activity

TSO: *See* Time Sharing Option.

Virtual Machine: Software that mimics the performance of a hardware device, such as a program that allows applications written for an Intel processor to be run on a Motorola chip. *Also see* Java Virtual Machine.

WebLogic: A Java EE compatible application server platform which enables support for multiple programming models, which includes advanced administration tools and is the ideal foundation for Service Oriented Architecture (SOA).

WebSphere MQ: IBM's message queuing product, formally known as MQSeries.

Websphere_MQ_Manager: A specialized manager capable of hosting one or more WebSphere MQ specific policies, apart from the regular policies.

Wireless Application Protocol (WAP): An open global specification that is used by most mobile telephone manufacturers. WAP determines how wireless devices utilize Internet content and other services. WAP enables devices to link diverse systems contents and controls.

Write to Operator (WTO): An optional user-coded service that allows a message to be written to the system console operator informing the operator of errors and unusual system conditions that may need to be corrected.

WTO: *See* Write to Operator.

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