

# Unit 4. Using the WebSphere MQ Explorer

## What this unit is about

The previous unit described how to use MQSC commands to administer WebSphere MQ.

The WebSphere MQ Explorer is a graphical Interface available to administer WebSphere MQ.

This unit covers the use of the Eclipse-based WebSphere MQ Explorer utility. It covers how to use the WebSphere MQ Explorer to monitor and control the WebSphere MQ.

## What you should be able to do

After completing this unit, you should be able to:

- Use the WebSphere MQ Explorer utility
- Demonstrate how to navigate between queue managers and their objects

## How you will check your progress

Accountability:

- Checkpoint
- Machine exercises

## References

SC34-6584 *WebSphere MQ System Administration Guide*

SC34-6597 *WebSphere MQ Script (MQSC) Command Reference*

## Unit objectives

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After completing this unit, you should be able to:

- Use the MQ Explorer utility
- Demonstrate how to navigate between queue managers and their objects

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Figure 4-1. Unit objectives

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### **Notes:**

## 4.1. Introduction to WebSphere MQ Explorer

## Introduction to WebSphere MQ Explorer topic objectives

After completing this topic, you should be able to:

- Place WebSphere MQ Explorer in the big picture of WebSphere MQ administration
- Get a feel for the WebSphere MQ Explorer desktop

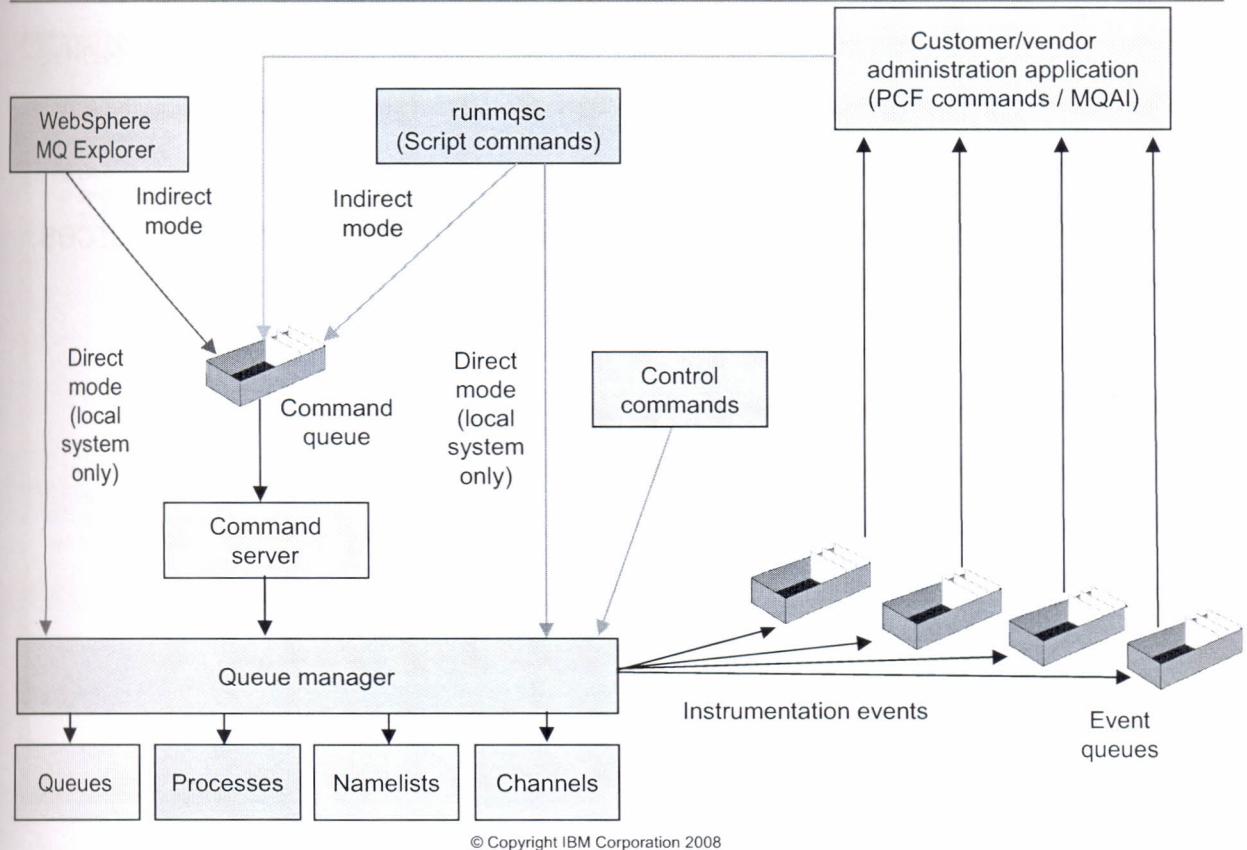
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Figure 4-2. Introduction to WebSphere MQ Explorer topic objectives

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### Notes:

## Administration interfaces



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Figure 4-3. Administration interfaces

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### Notes:

There are a number of different types of interfaces available to administer WebSphere MQ.

The administration interfaces include:

- WebSphere MQ Explorer
- WebSphere MQ commands (MQSC)
- Programmable command format (PCF) commands
- WebSphere MQ Administration Interface (MQAI)
- WebSphere MQ control commands
- Administration application on WebSphere MQ for HP NonStop Server
- Event messages put on an event queue by the queue manager and retrieved by an application

## WebSphere MQ

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- The WebSphere MQ Explorer is a graphical tool that enables you to configure and control your entire messaging backbone from a single console
- You can configure all WebSphere MQ objects and resources, including Java Message Service (JMS), and publish and subscribe

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Figure 4-4. WebSphere MQ

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### Notes:

WebSphere MQ Version 7 supports tasks achievable in previous WebSphere MQ Explorers and many usability enhancements. It also supports the following tasks:

- Advanced filtering through PCF
- Displays and manages application connections
- Grouping of queue managers
- WebSphere MQ Services merged into WebSphere MQ Explorer: one desktop to manage resources and processes
- Publish/subscribe administration

# WebSphere MQ desktop

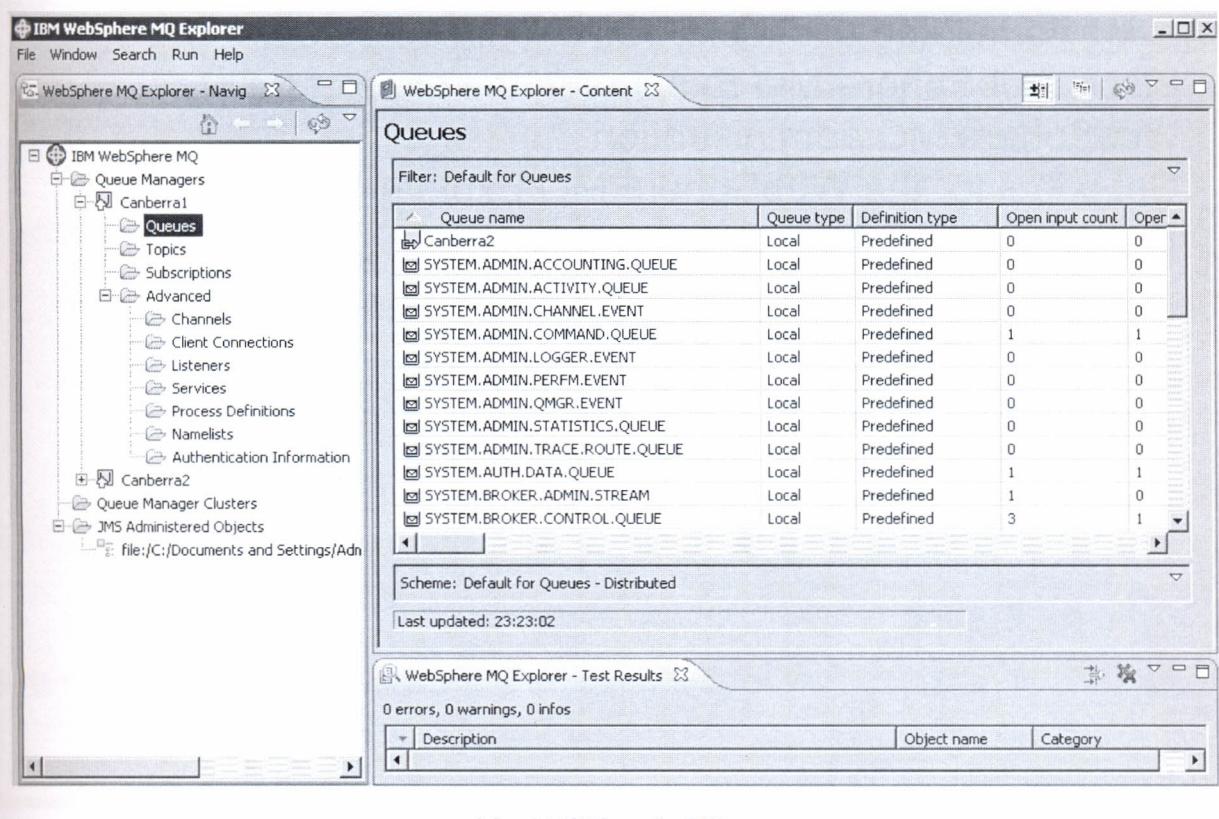


Figure 4-5. WebSphere MQ desktop

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## Notes:

WebSphere MQ Explorer is the graphical user interface in which you can administer and monitor WebSphere MQ objects, whether they are hosted by your local computer or on a remote system.

WebSphere MQ Explorer is now a perspective in WebSphere Eclipse Platform. The WebSphere Eclipse Platform is based on Eclipse technology. Eclipse is an award-winning, open source platform for the construction of powerful software development tools and rich desktop applications. For more information, refer to <http://www.eclipse.org>.

## Introduction to WebSphere MQ Explorer topic summary

Having completed this topic, you should be able to:

- Place WebSphere MQ Explorer in the big picture of WebSphere MQ administration
- Get a feel for the WebSphere MQ Explorer desktop

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Figure 4-6. Introduction to WebSphere MQ Explorer topic summary

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### Notes:

## 4.2. Queue display features

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## Queue display features topic objectives

After completing this topic, you should be able to:

- Display queue status information
- Describe the use of filters to select queues
- Use the COMPARE feature to see the difference between two queues

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Figure 4-7. Queue display features topic objectives

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### Notes:

## WebSphere MQ queue display

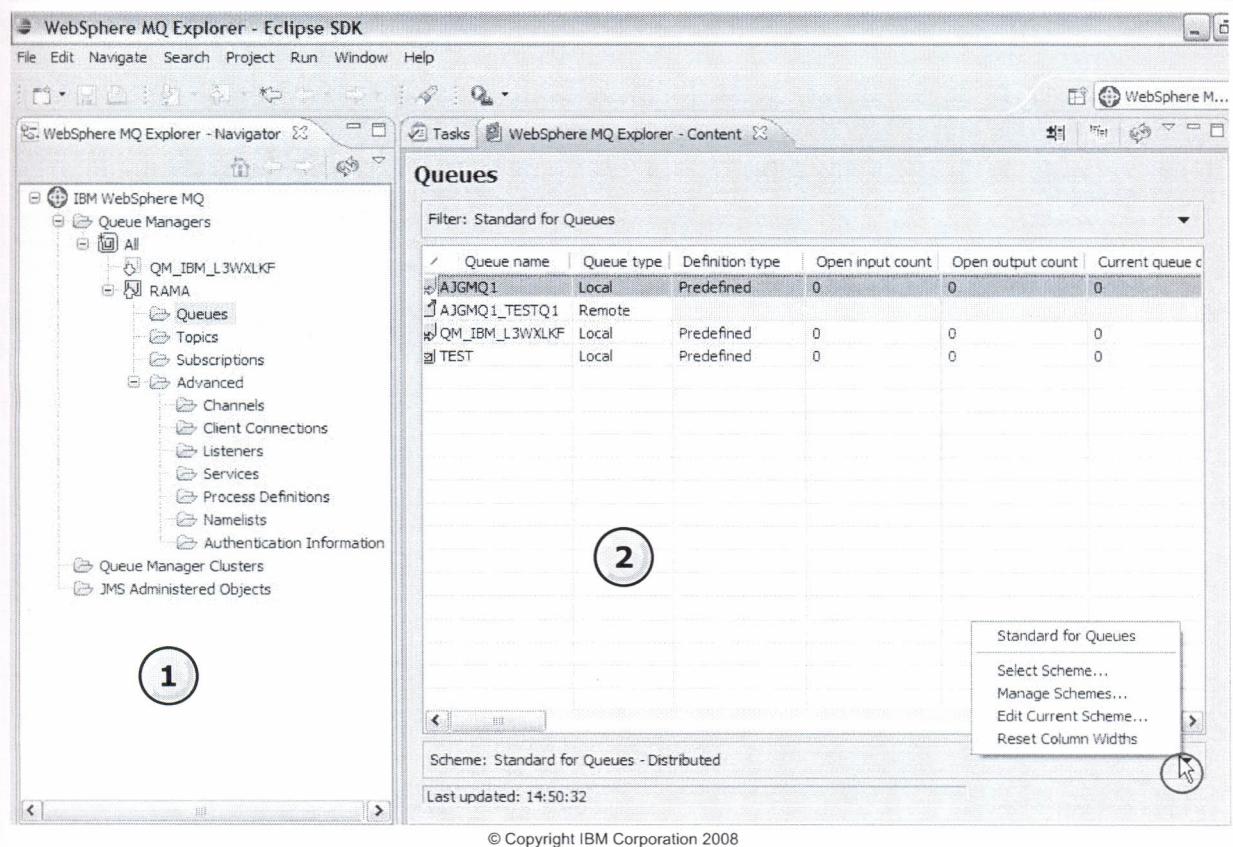


Figure 4-8. WebSphere MQ queue display

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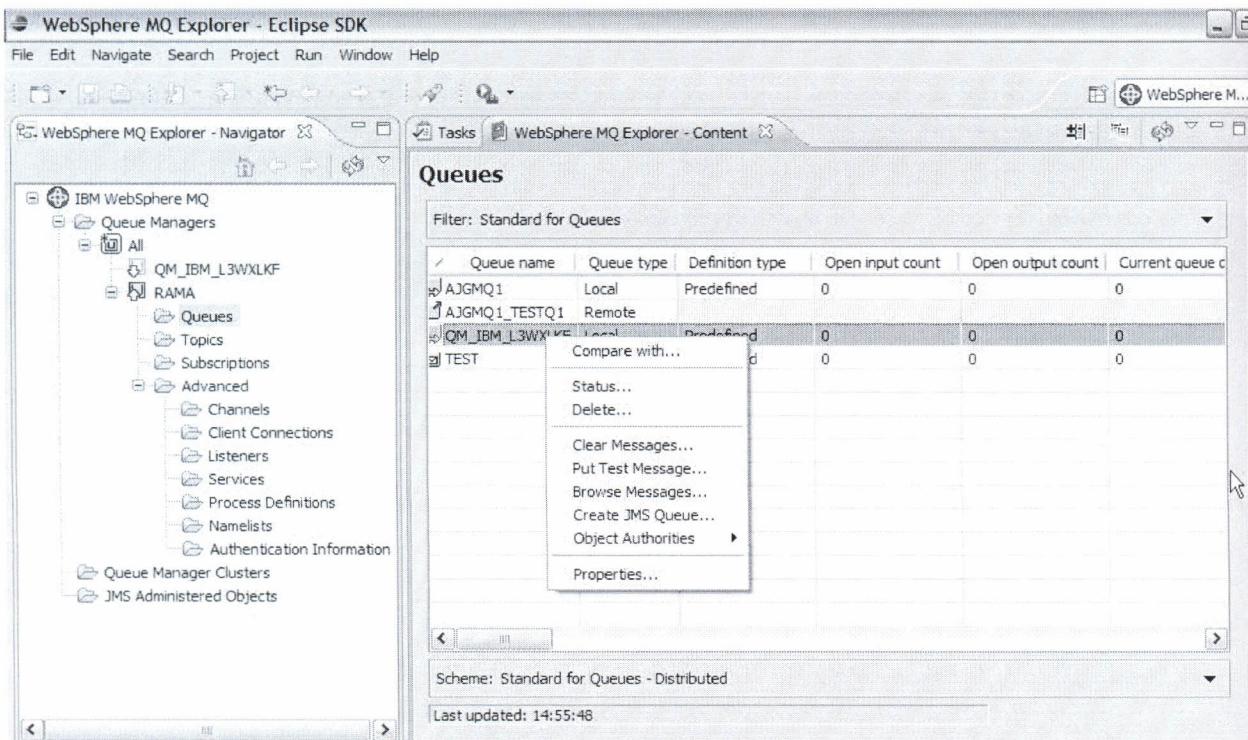
### Notes:

To display information about queues in general or about a specific queue:

Click the word queues, located in the navigator pane underneath the correct queue manager name.

Information about the queues is displayed in the content pane on the right.

## Queue content view



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Figure 4-9. Queue content view

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### Notes:

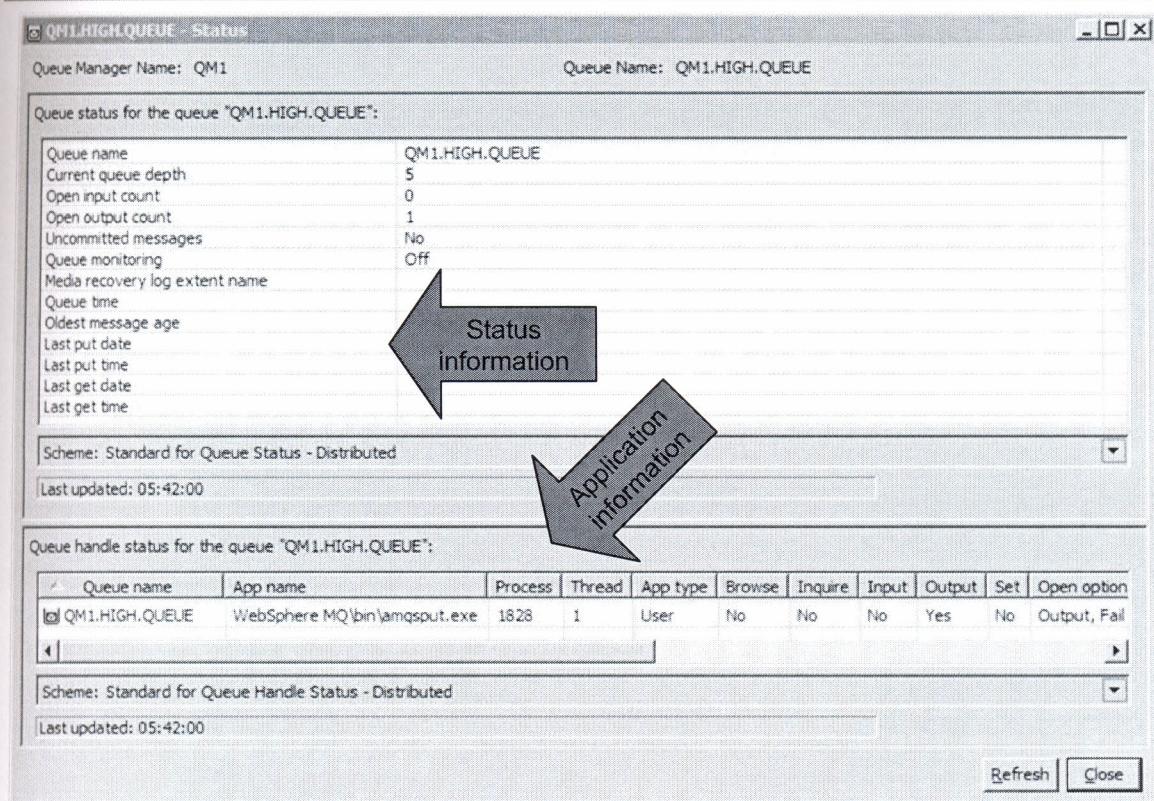
The content view provides action functionality to view, clear, put messages, and obtain status information regarding the queue selected. You can double-click the required queue to open the Properties view, or right-click to see actions.

### Work with Queues

Select the queue folder in the navigator perspective.

- Click the required queue to audit.
- Right-click while queue is highlighted to view the action functionality pop-up window.
- Compare, status, delete, clear messages, put test message, browse messages, create JMS queue, object authorities, and properties can now be selected.

## Queue status information



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Figure 4-10. Queue status information

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### Notes:

Status information can be obtained by right clicking the Queue and then selecting *Status*. It describes the following queue attributes:

- Oldest message information
  - Number of uncommitted messages
  - Last put and get times.
- Queue connection information
- Application usage information

## Queue connection information

Queue handle status for the queue "QM1.LOCAL.QUEUE"											
Queue name	App name	Process	Thread	App type	Browse	Inquire	Input	Output	Set	Open options	User
QM1.LOCAL.QUEUE	\amqspput.exe	2444	1	User	No	No	No	Yes	No	Output, Fail if quiescing	davidth@DAVIDTH

Scheme: Standard for Queue Handle Status - Distributed

Last updated: 12:52:03

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Figure 4-11. Queue connection information

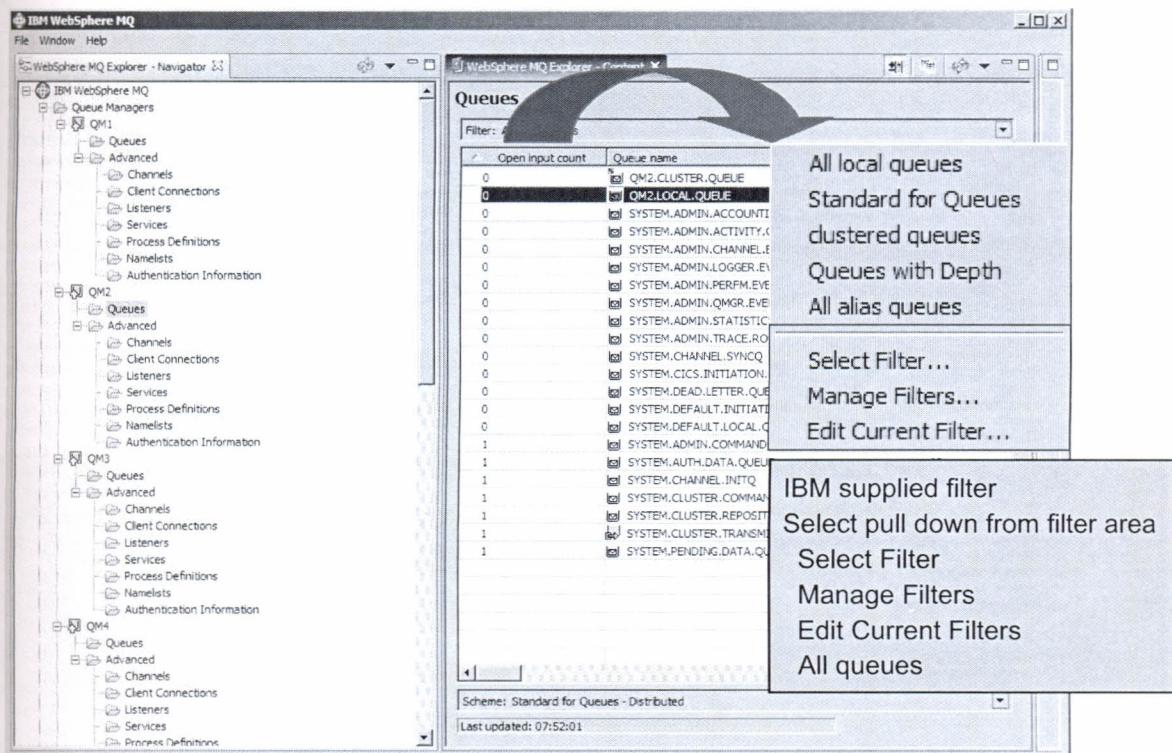
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### Notes:

This panel reflects active applications that are using the queue. It shows the process ID, number of threads, open options (input (mqget) or output (mqput)). It also reflects what open options are requested and the user ID the process is running under. This information can be instrumental in assisting application area testing.

The example shows an amqspput application with process # 2444 using one thread with Fail if quiescing open option running under user ID davidth.

## Viewing filters



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Figure 4-12. Viewing filters

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### Notes:

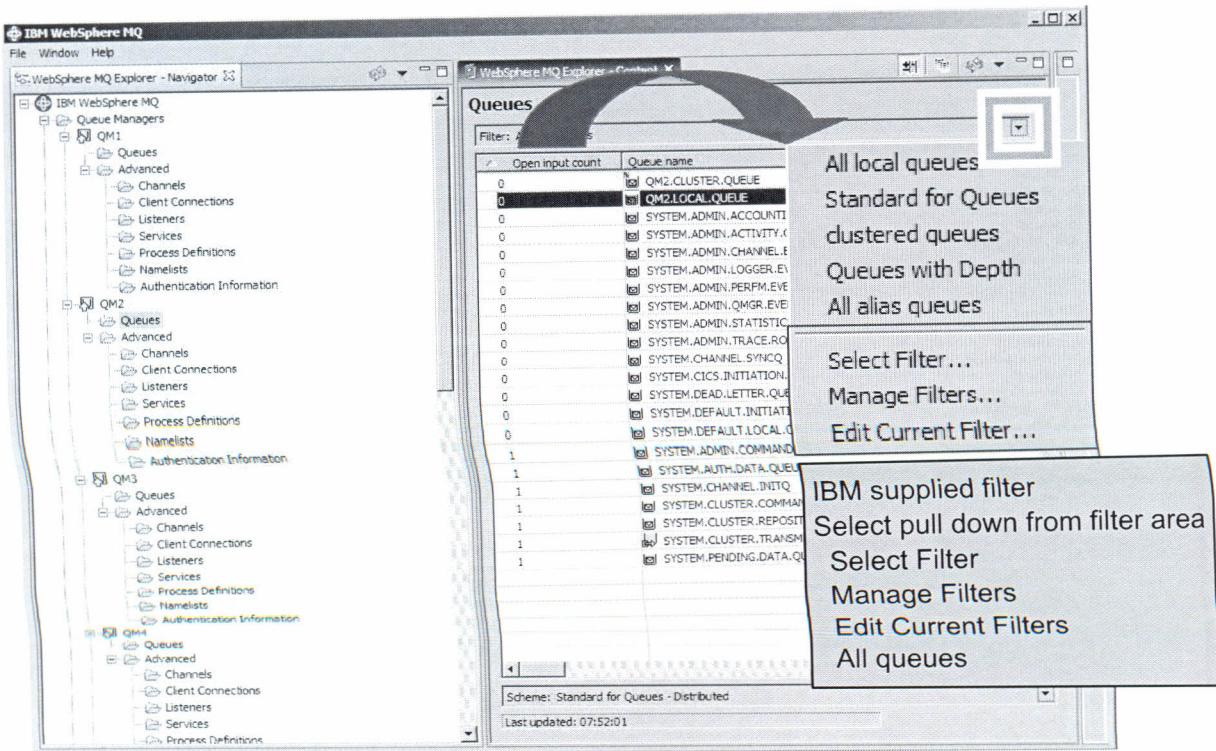
Filters are a way of selectively viewing queues that meet certain criteria such as queues with depth. A filter allows the display of queues that meet the filter criteria and hides queues that do not conform to the selection criteria.

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## Advanced filters (1 of 4)



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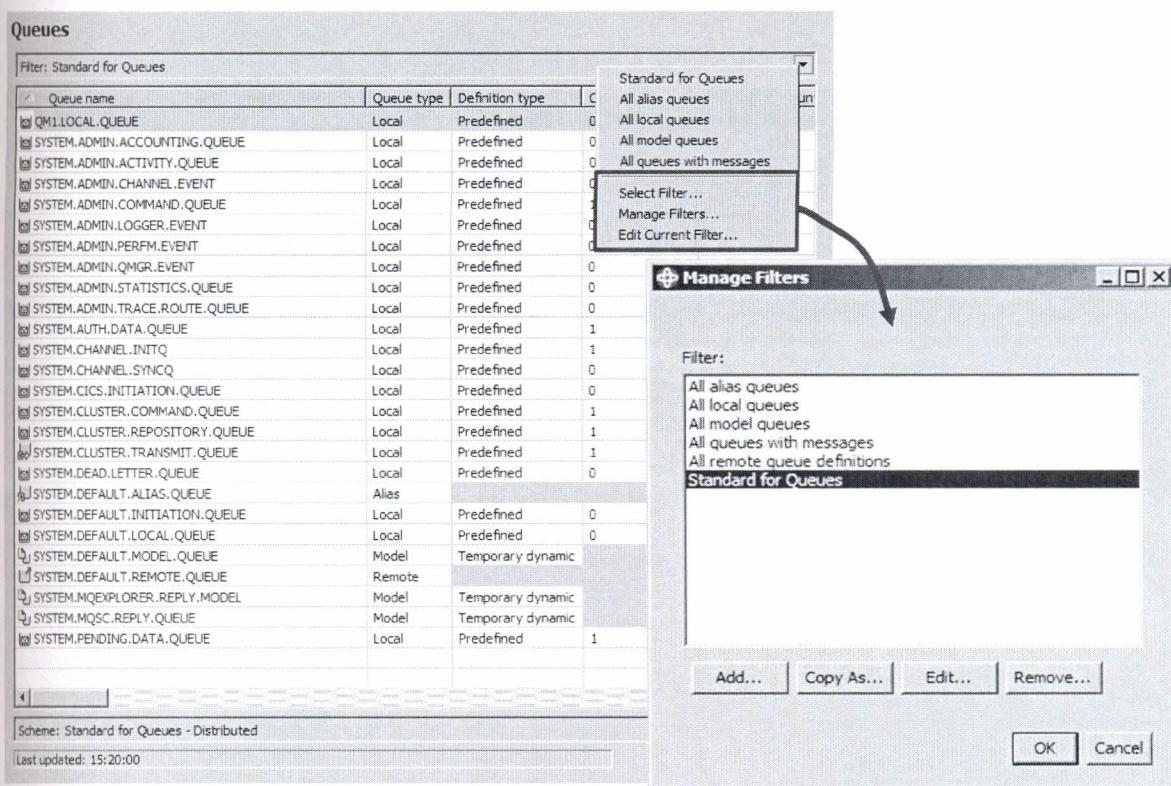
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Figure 4-13. Advanced filters (1 of 4)

Figure

### Notes:

## Advanced filters (2 of 4)



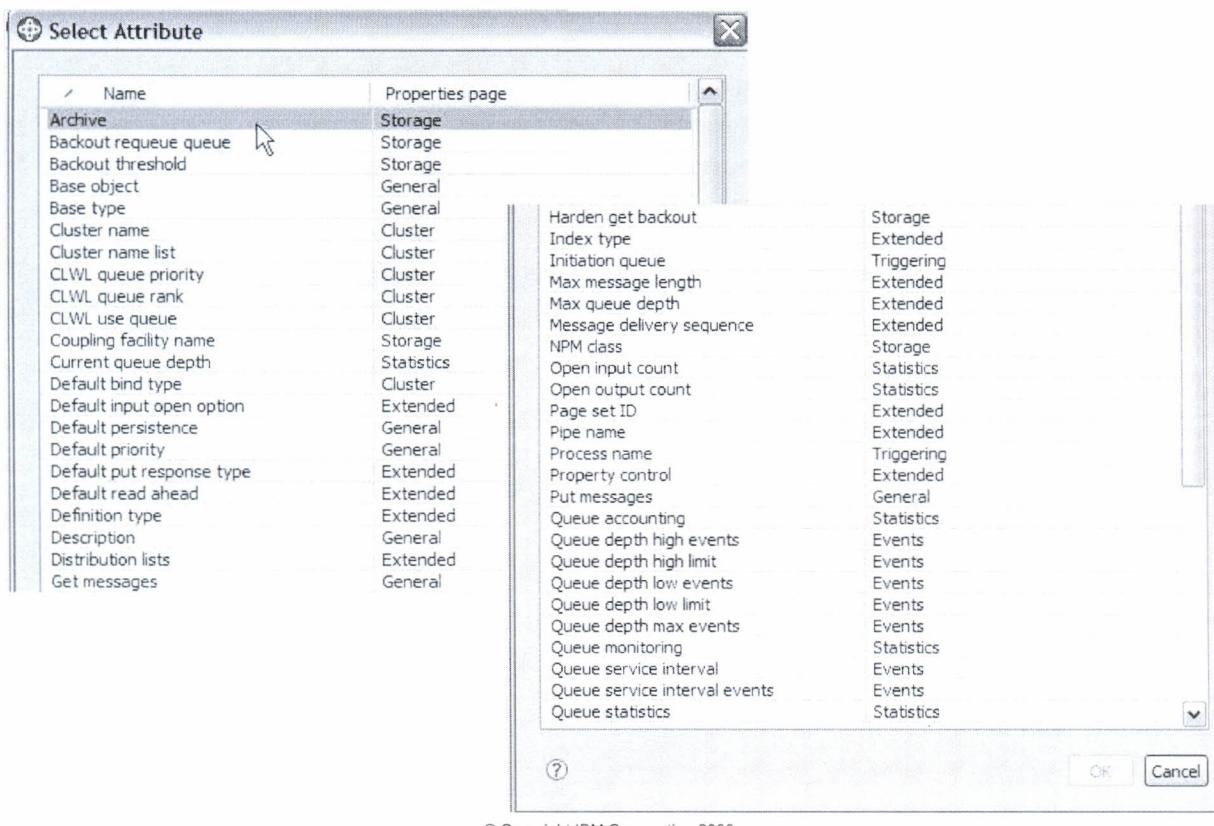
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Figure 4-14. Advanced filters (2 of 4)

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### Notes:

## Advanced filters (3 of 4)



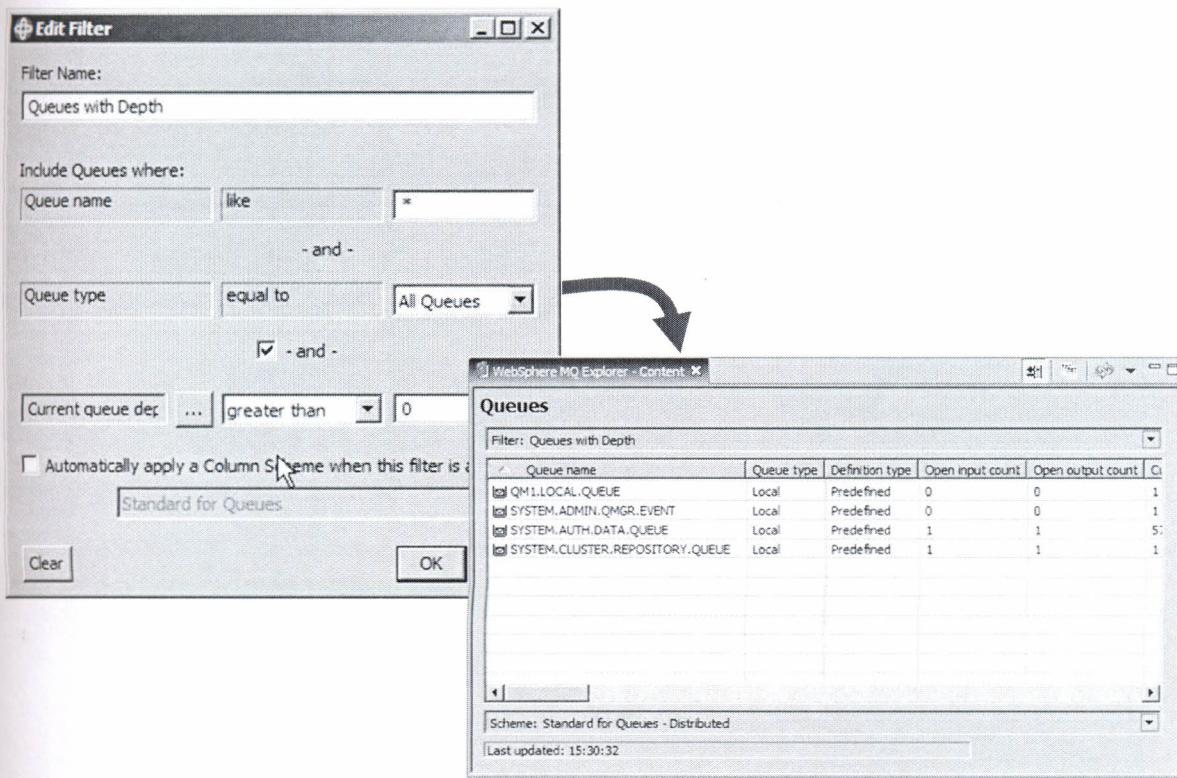
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Figure 4-15. Advanced filters (3 of 4)

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### Notes:

## Advanced filters (4 of 4)



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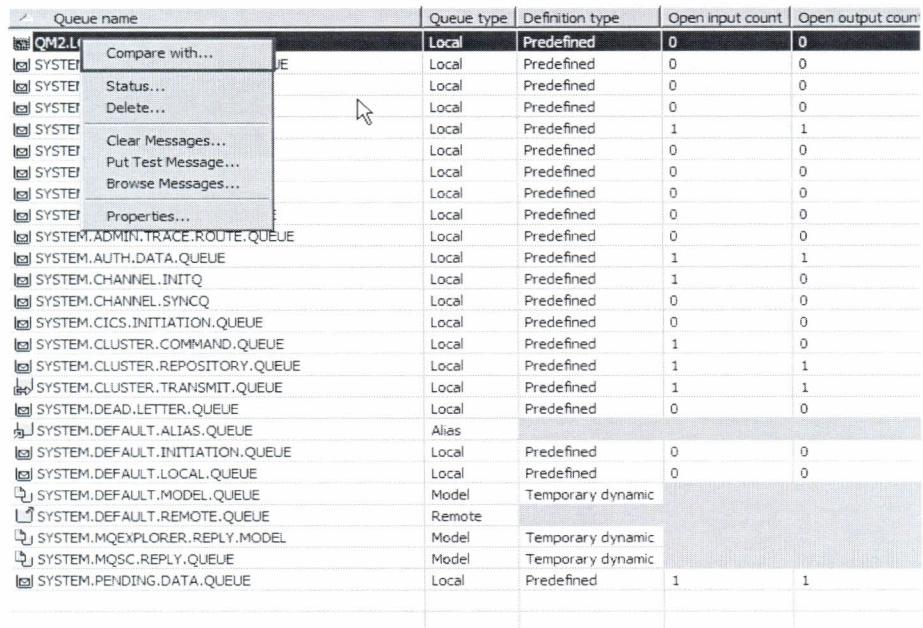
Figure 4-16. Advanced filters (4 of 4)

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### Notes:

## Queue compare functionality (1 of 3)

- Can compare two like resources
- Can compare resources across queue managers



Queue name	Queue type	Definition type	Open input count	Open output count
QM2.LI	Local	Predefined	0	0
SYSTEM	Local	Predefined	0	0
SYSTEM	Local	Predefined	0	0
SYSTEM	Local	Predefined	0	0
SYSTEM	Local	Predefined	1	1
SYSTEM	Local	Predefined	0	0
SYSTEM	Local	Predefined	0	0
SYSTEM	Local	Predefined	0	0
SYSTEM	Local	Predefined	0	0
SYSTEM.ADMIN TRACE.ROUTE.QUEUE	Local	Predefined	0	0
SYSTEM.AUTH.DATA.QUEUE	Local	Predefined	1	1
SYSTEM.CHANNEL.INITQ	Local	Predefined	1	0
SYSTEM.CHANNEL.SYNCQ	Local	Predefined	0	0
SYSTEM.CICS.INITIATION.QUEUE	Local	Predefined	0	0
SYSTEM.CLUSTER.COMMAND.QUEUE	Local	Predefined	1	0
SYSTEM.CLUSTER.REPOSITORY.QUEUE	Local	Predefined	1	1
SYSTEM.CLUSTER.TRANSMIT.QUEUE	Local	Predefined	1	1
SYSTEM.DEAD.LETTER.QUEUE	Local	Predefined	0	0
SYSTEM.DEFAULT.ALIAS.QUEUE	Alias			
SYSTEM.DEFAULT.INITIATION.QUEUE	Local	Predefined	0	0
SYSTEM.DEFAULT.LOCAL.QUEUE	Local	Predefined	0	0
SYSTEM.DEFAULT.MODEL.QUEUE	Model	Temporary dynamic		
SYSTEM.DEFAULT.REMOTE.QUEUE	Remote			
SYSTEM.MQEXPLORER.REPLY.MODEL	Model	Temporary dynamic		
SYSTEM.MQSC.REPLY.QUEUE	Model	Temporary dynamic		
SYSTEM.PENDING.DATA.QUEUE	Local	Predefined	1	1

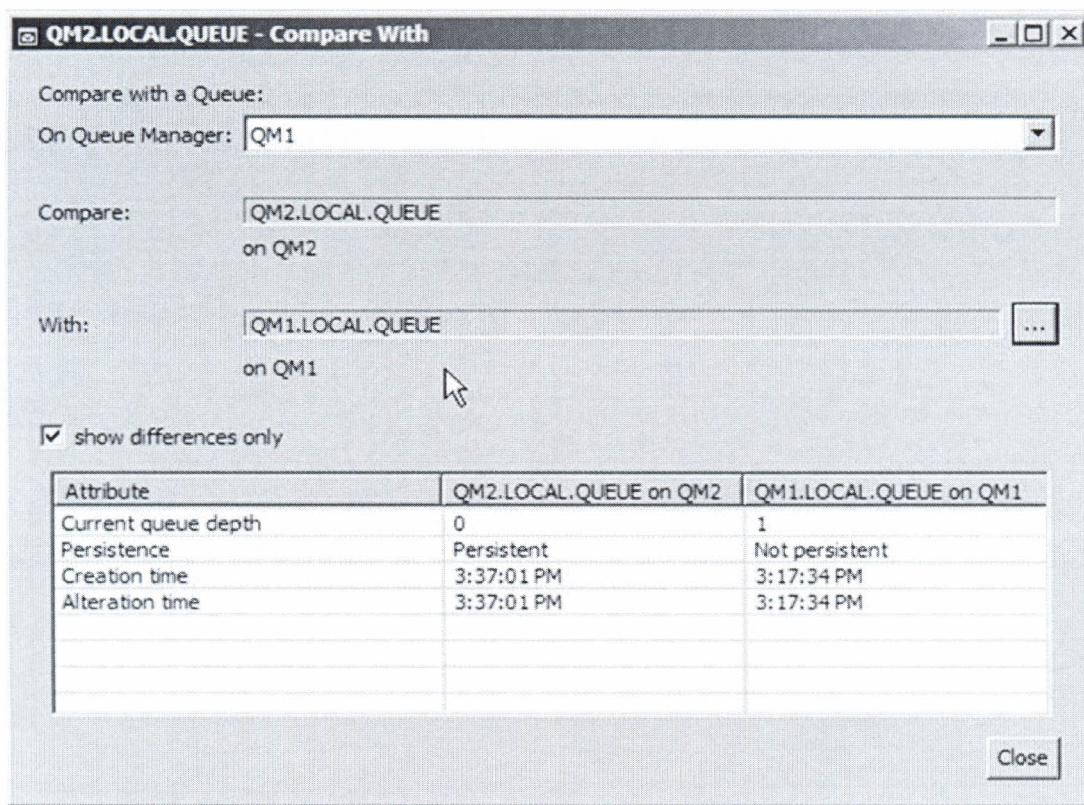
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Figure 4-17. Queue compare functionality (1 of 3)

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### Notes:

## Queue compare functionality (2 of 3)



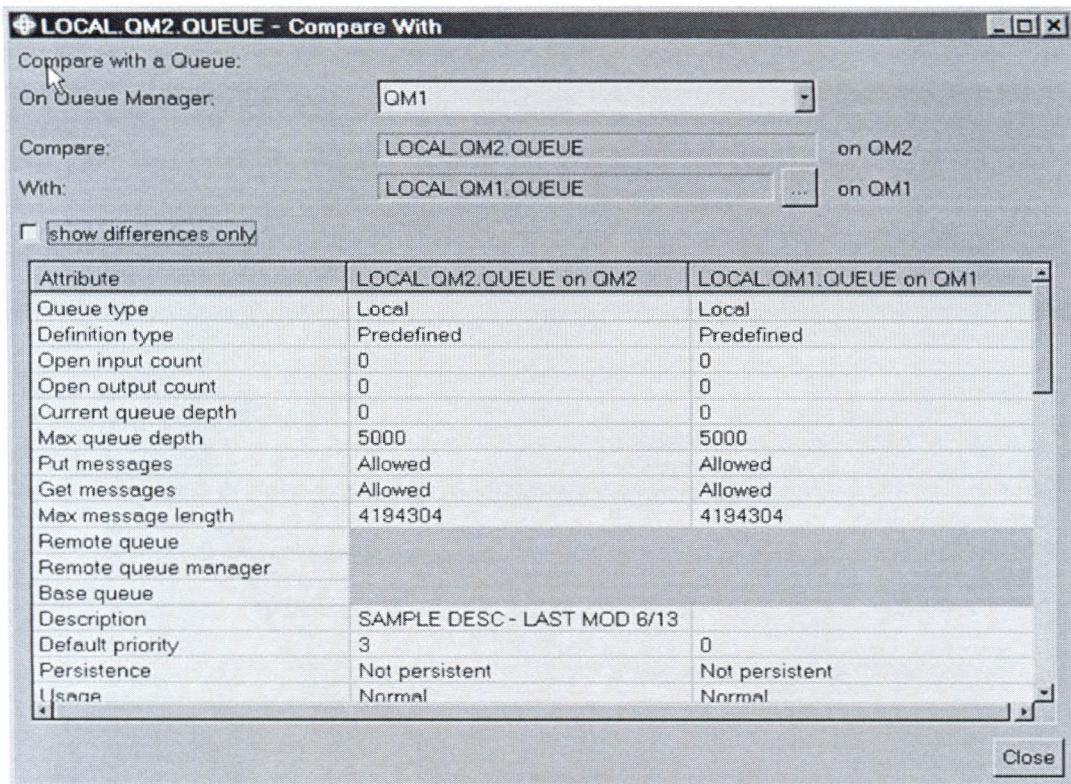
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Figure 4-18. Queue compare functionality (2 of 3)

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### Notes:

## Queue compare functionality (3 or 3)



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Figure 4-19. Queue compare functionality (3 or 3)

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### Notes:

The results show all the options compared between two queues across QM1 and QM2 queue manager. This tool can be useful in migrating queues to different queue managers.

## Queue display features topic summary

Having completed this topic, you should be able to:

- Display queue status information
- Describe the use of filters to select queues
- Use the COMPARE feature to see the difference between two queues

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Figure 4-20. Queue display features topic summary

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### Notes:

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## Eclipse features topic objectives

After completing this topic, you should be able to:

- Describe the features of the Eclipse workbench features that WebSphere MQ Explorer uses

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Figure 4-21. Eclipse features topic objectives

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### Notes:

## WebSphere MQ Eclipse icons

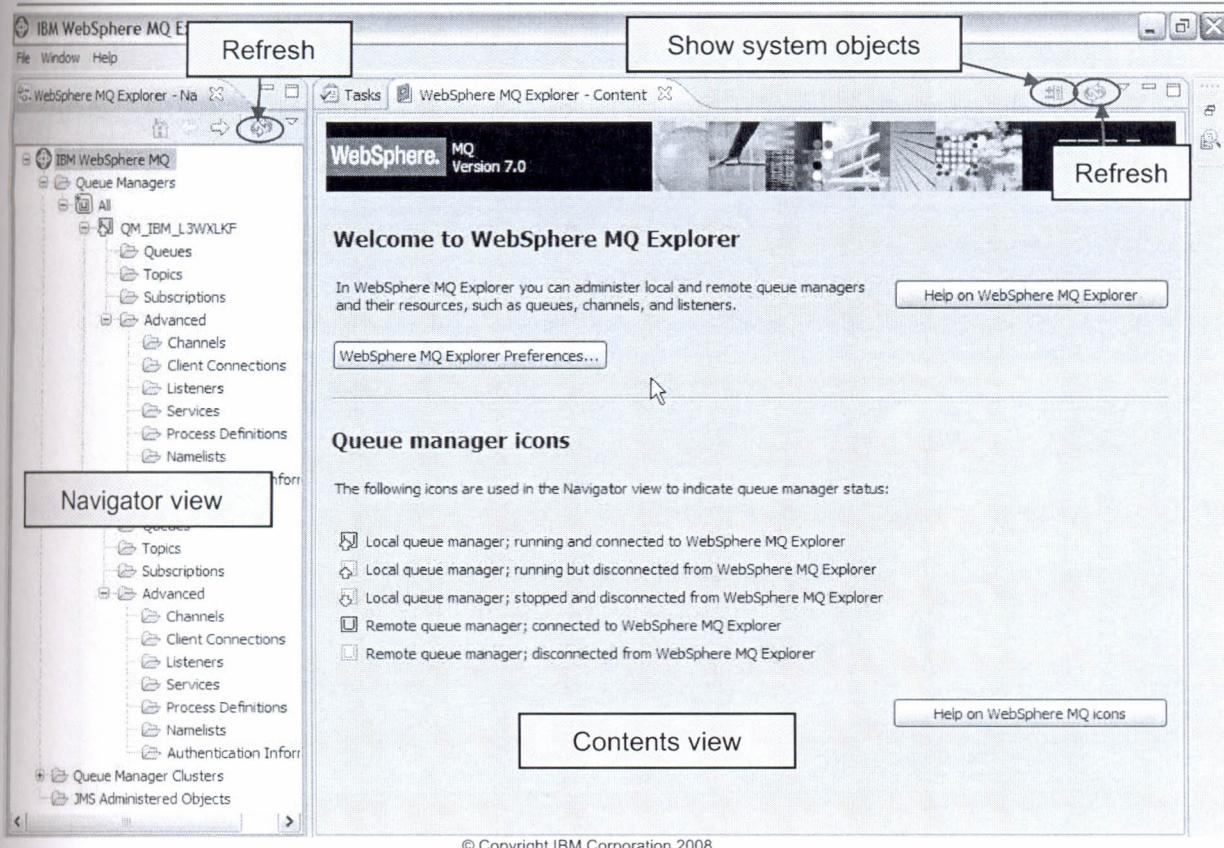
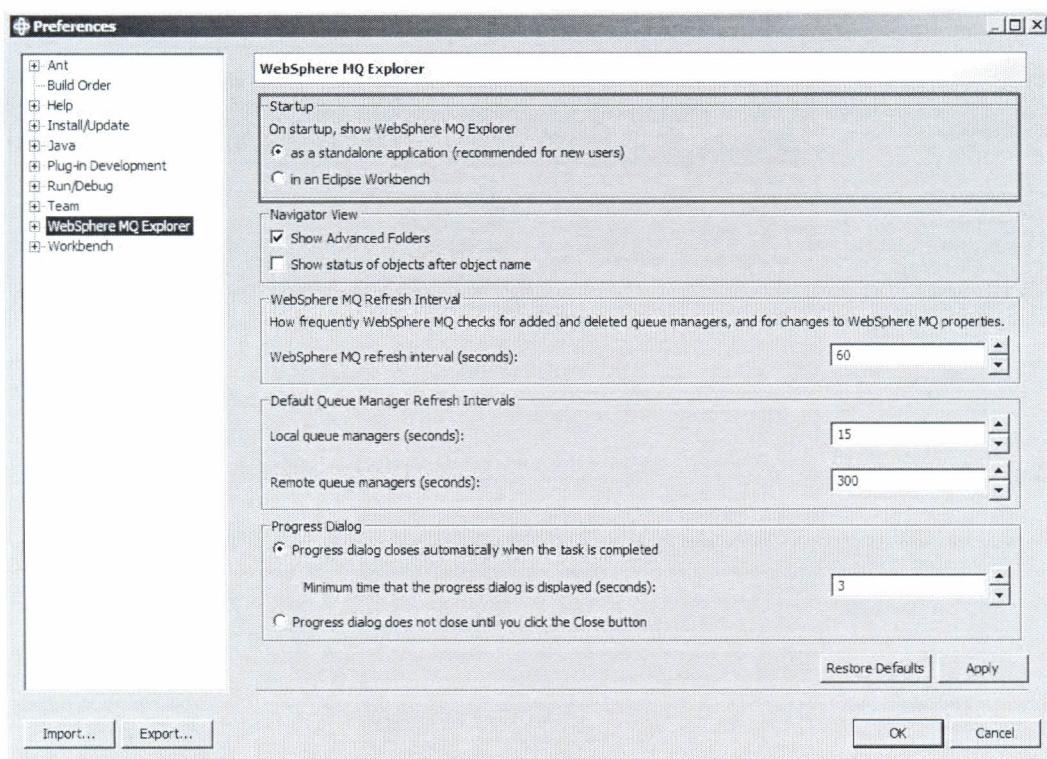


Figure 4-22. WebSphere MQ Eclipse icons

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### Notes:

# Workbench mode



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Figure 4-23. Workbench mode

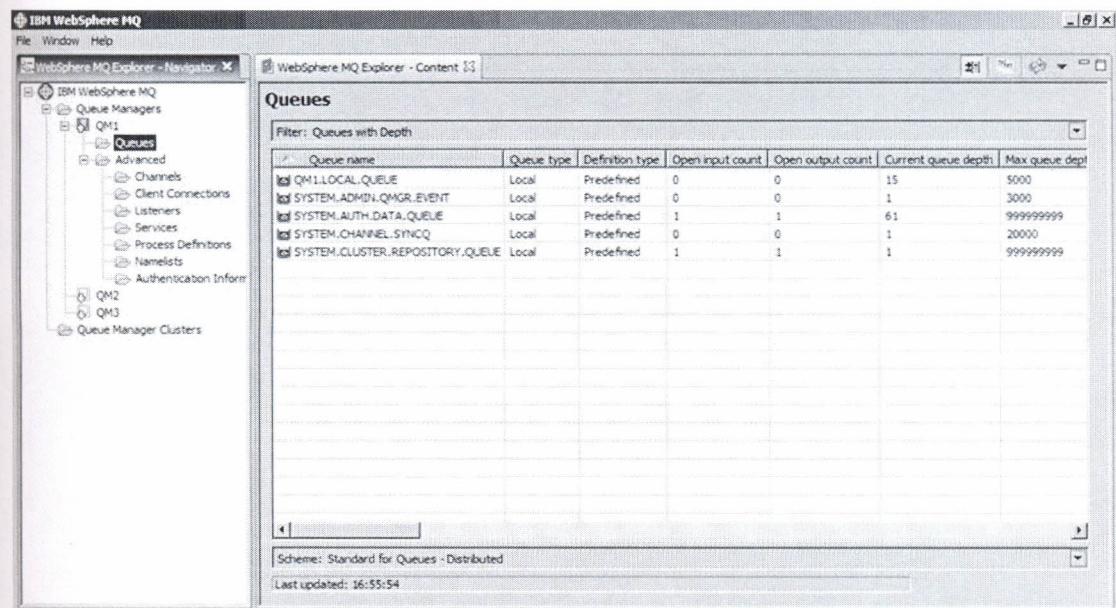
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## Notes:

Workbench mode is recommended for advanced users. It allows Explorer to be used with other products and perspectives in the same Eclipse Workbench. Developers can also create source code using the workbench mode.

## Standalone mode

- Standalone mode is for the users of WebSphere MQ who are familiar with the old version of the administrative tool.



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Figure 4-24. Standalone mode

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### Notes:

Stand-alone mode is good for administrator and new users of WebSphere MQ.

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## Eclipse features topic summary

Having completed this topic, you should be able to :

- Describe the features of the Eclipse workbench features that WebSphere MQ Explorer uses

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Figure 4-25. Eclipse features topic summary

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### Notes:

## Queue manager administration topic objectives

After completing this topic, you should be able to:

- Create a new queue manager
- Administer a remote queue manager

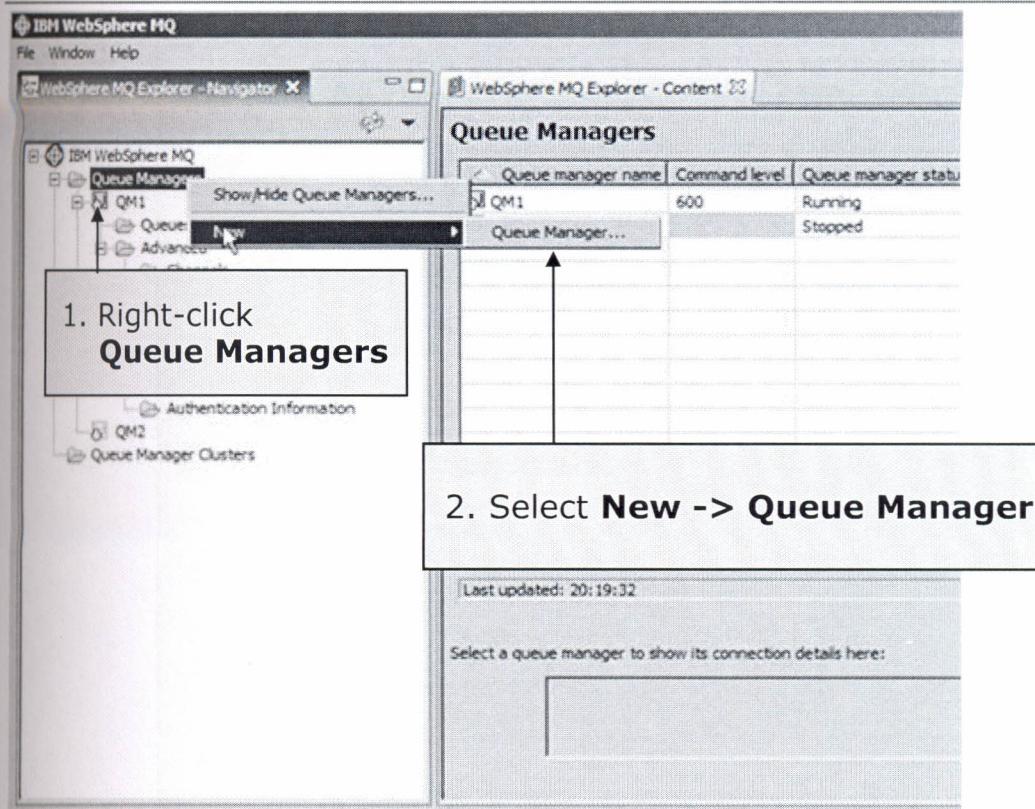
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Figure 4-26. Queue manager administration topic objectives

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### Notes:

## Creating a queue manager (1 of 5)



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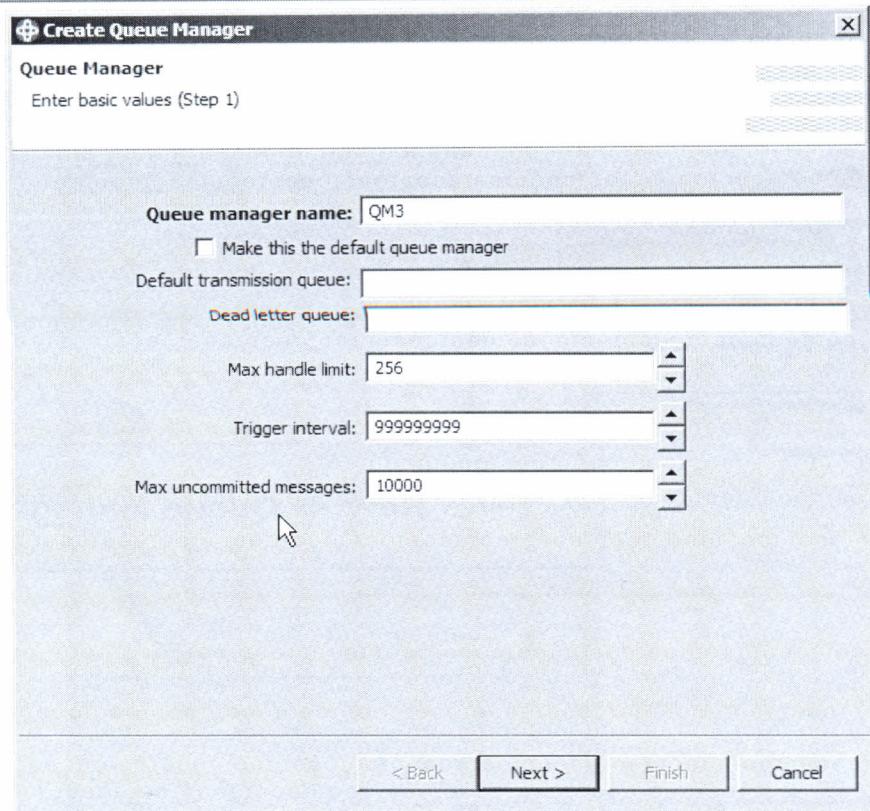
Figure 4-27. Creating a queue manager (1 of 5)

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### Notes:

The following screen outlines adding a queue manager to the server. The process has the same appearance of the previous release of WebSphere MQ Explorer.

## Creating a queue manager (2 of 5)



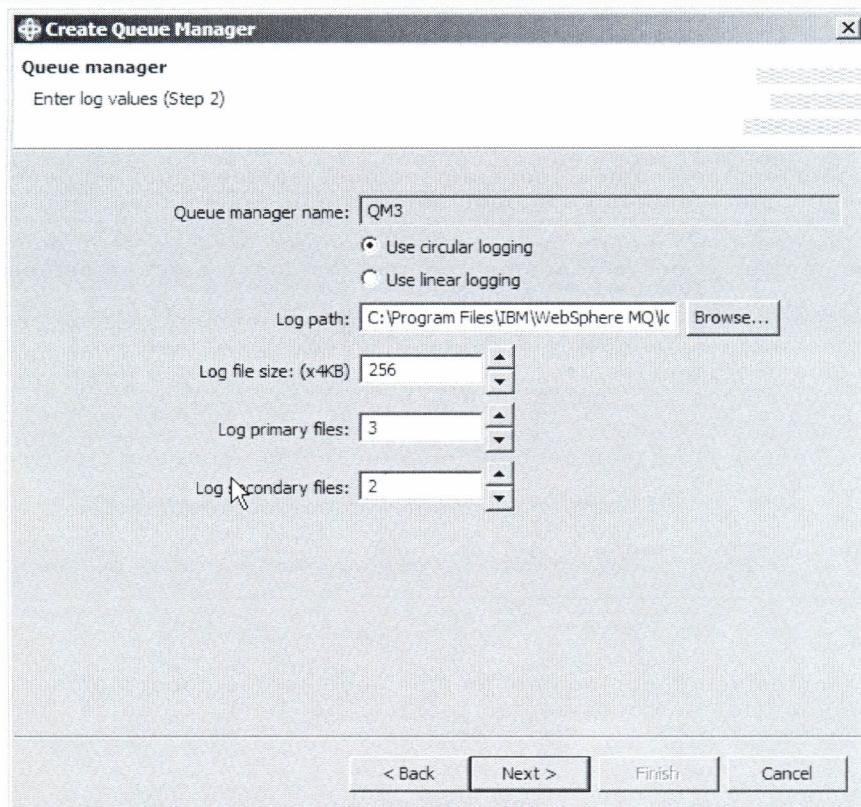
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Figure 4-28. Creating a queue manager (2 of 5)

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### Notes:

## Creating a queue manager (3 of 5)



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Figure 4-29. Creating a queue manager (3 of 5)

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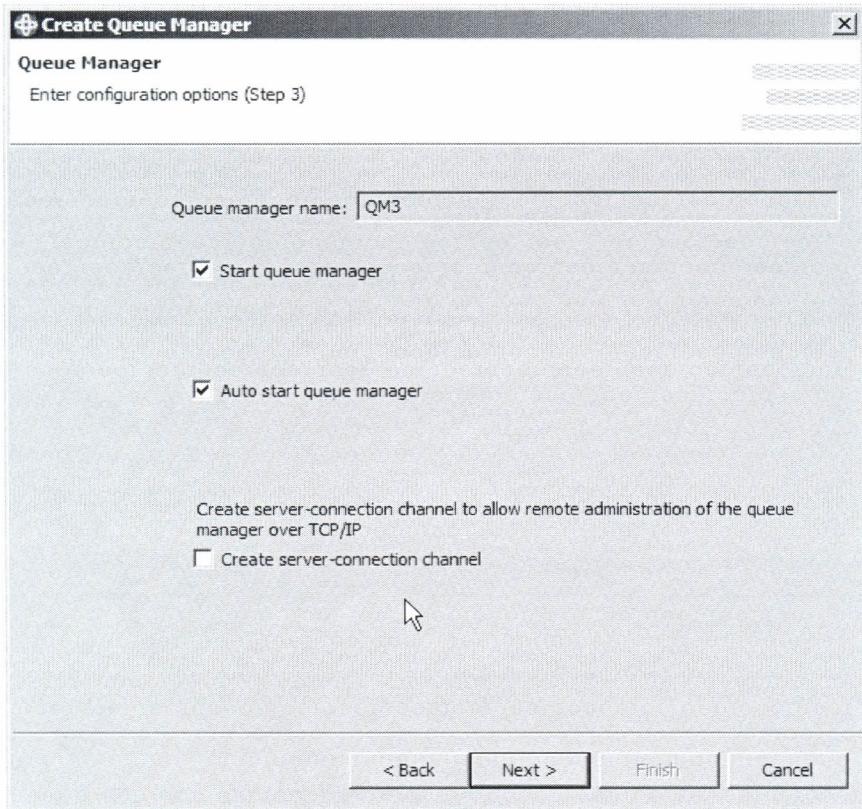
### Notes:

The log data is held in a series of files called log files. The log file size is specified in units of 4 KB pages.

In WebSphere MQ for UNIX systems, the default number of log file pages is 1024, giving a log file size of 4 MB. The minimum number of log file pages is 64 and the maximum is 65 535.

In WebSphere MQ for Windows, the default number of log file pages is 256, giving a log file size of 1 MB. The minimum number of log file pages is 32 and the maximum is 65 535.

## Creating a queue manager (4 of 5)



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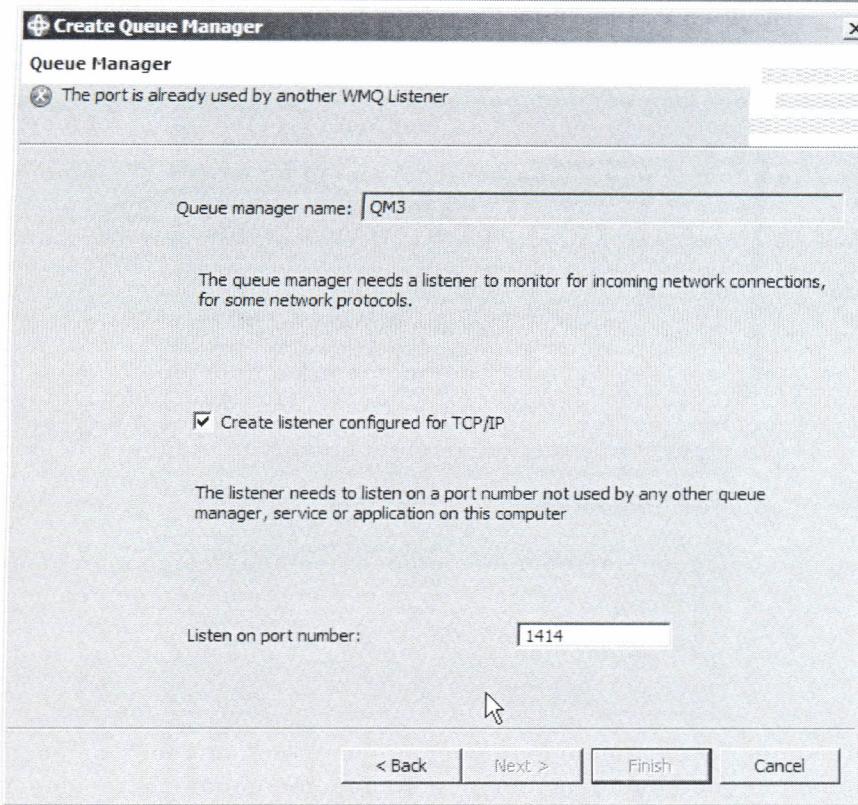
Figure 4-30. Creating a queue manager (4 of 5)

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### Notes:

Check **Create server-connection channel** to allow this queue manager on this computer to be administered by a user on a remote WebSphere MQ computer. This setting is independent of if this queue manager is joined to a cluster, but you would normally enable remote administration to enjoy the full benefits of single-point administration that clustering provides.

## Creating a queue manager (5 of 5)



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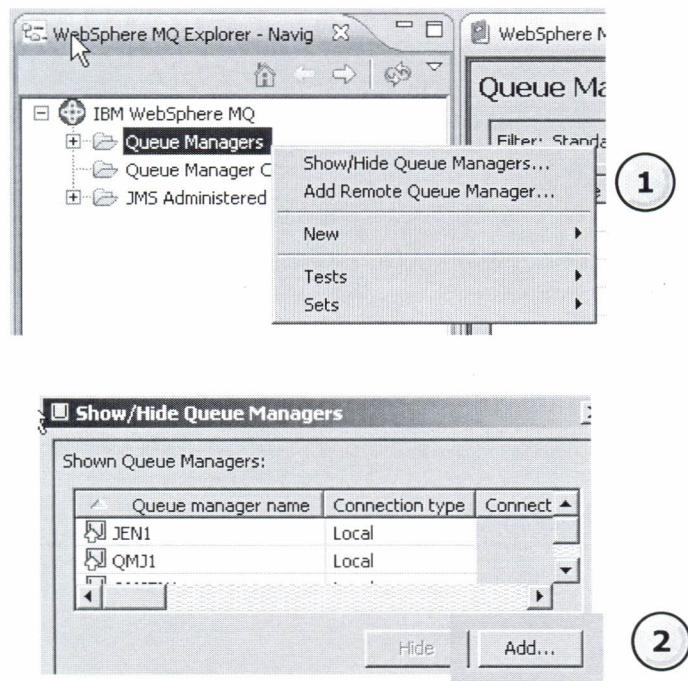
Figure 4-31. Creating a queue manager (5 of 5)

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### Notes:

Notice the error indicator in the upper left portion of the screen. WebSphere MQ V7 detects if the TCP/IP port number has been used previously.

## Add remote queue manager (1 of 3)



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Figure 4-32. Add remote queue manager (1 of 3)

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### Notes:

WebSphere MQ Explorer automatically discovers all of the queue managers on the computer on which WebSphere MQ Explorer is installed. However, WebSphere MQ Explorer does not automatically discover queue managers on other computers.

To administer remote queue managers, you must manually connect WebSphere MQ Explorer to the remote queue manager and show the queue manager in the Queue Managers folder in WebSphere MQ Explorer.

1. Right-click the Queue Managers folder, and then select **Show/Hide Queue Managers**.
2. Select **Add**.
3. Enter the Queue manager name, and then select **Next**.
4. Enter host name or IP address, port number, and server-connection channel, and then select **Finish**.

To be remotely administered, the queue manager must be running and must have the following objects: