

meshIQ Manage User's Guide

Version 11

Document Number: MM11.001

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Document Title: meshIQ Manage User's Guide Document Release Date: June 2024 Document Number: MM11.001

Published by:

Research & Development meshlQ 88 Sunnyside Blvd, Suite 101 Plainview, NY 11803

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Chapter 1: Introduction

Welcome to the *meshIQ Manage User's Guide*. This guide will introduce the user to basic functionality and describe the dialog windows encountered while working with meshIQ Manage. Please review this guide carefully before installing the product.

1.1 How this Guide is Organized

- <u>*Chapter 1:*</u> Document information.
- <u>*Chapter 2:*</u> Contains a brief functional description of meshIQ Manage.
- <u>Chapter 3:</u> Information on system access.
- <u>*Chapter 4:*</u> Detailed information on how to use meshIQ Manage.
- <u>Appendix A:</u> Provides a list of all reference information.
- <u>Appendix B:</u> Contains a list of objects and their icons.
- <u>Appendix C:</u> Descriptions of object menu options.
- Appendix D: MQ Statistics table attributes listed.
- *Index:* Contains document index.

1.2 History of this Document

		Table 1	.2-A. History of this Document
Release Date	Document Number	Product Version	Summary
January 2022	NN.10.021	10	Updated Message Commands, Message Criteria, and Load Messages Settings to reflect option to select a message criteria record or change default Message Descriptor properties. Added Load Messages Max loaded messages count. Updated Message Commands to add limitation on actions when the method of message selection is Message Position and multiple individual messages are selected. Renamed Inactivity section (now Updating the Configuration File) and reworked to remove obsolete content and add new configuration setting.
March 2022	NN.10.021	10	Dashboard Ownership Management; new User Settings for collapsed viewlets, minimum refresh interval; new global setting for session timeout; secondary column sorting in schemas; force refresh mode; Delete IIB Message Flows, Sub Flows, and Resources; attribute search in console.
April 2022	NN.10.021. 1	10	Manage Filtered Columns, Manage Frozen Columns; Kafka Schema, Schema Subject, and Schema Subject Version viewlets; Solace viewlets
October 2022	NN.10.022	10	Navigator version 10.5 updates. Statistics report; Attribute filters applies at workgroup server; Dashboard Ownership Permissions columns; User Views renamed User

		Table 1	.2-A. History of this Document
Release Date	Document Number	Product Version	Summary
			Perspectives; Request History Export; New Queue Manager fields; Global Settings Bulk selection Max limits.
			v10.x changes (Nov Dec 2022): Sorting behavior changes (v10.5.0.9); updated Reroute rights (v10.3.x fix).
October 2023	MM.11.000	11	v11 changes: meshIQ Manage and meshIQ Security names, logo updates throughout; Multiple Workgroup servers (User Settings, Color Settings tab, Creating New / Temporary Viewlets); Create RabbitMQ Remote Manager, RabbitMQ Viewlets; Remote connection manager actions (copy as, undo, verify); Kafka encryption (SSL connections) and import properties, Confluent Platform Metadata Service (MDS) Setup; Attribute filter variables; Result Limit affects total objects label; Retrieving Messages from an Inoperable Cluster Queue; Shared Storage options for messages; other v11 changes.
June 2024	MM.11.001	11.1	UI design changes in select areas; Manage ACLs; Put New message differentiation (IBM MQ, Kafka, and EMS/Solace/Rabbit); RabbitMQ Object Properties and status viewlets; manage Solace Remote Message VPNs; additional compare operations for attribute filters for custom attributes; Regex global setting to auto-apply DLQ Message Format.

1.2.1 User Feedback

meshIQ encourages all Users and Administrators of meshIQ Manage to submit comments, suggestions, corrections, and recommendations for improvement of all documentation. Please send your comments via e-mail to: support@meshiq.com. You will receive a 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 <u>Appendix A</u> of this guide.

1.4 Release Notes

See README files on installation media or the meshIQ Manage installation directory.

1.5 Intended Audience

This guide is intended for users of meshIQ Manage. There are three user groups defined for installation, use, and middleware management (diagnostics and administration):

- Middleware Team
- Application Support
- Development

1.6 Technical Support

If you need additional technical support, you can contact meshIQ by telephone or by email. To contact 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 meshIQ technical support by e-mail, send a message to <u>mysupport@meshiq.com</u>. To access the meshIQ automated support system (user ID and password required), go to <u>https://mysupport.meshiq.com/</u>. Contact your local meshIQ Manage Administrator for further information.

2.1 meshIQ Manage

The purpose of this guide is to familiarize users with the meshIQ Manage application, introduce them to basic functionality, and describe all dialog windows that they can encounter when working with meshIQ Manage.

The system consists of two main parts:

- Server-side components that reside within an Apache-Tomcat JSP container or equivalent.
- Client application running in a browser using HTML pages, which are served by the server-side components.

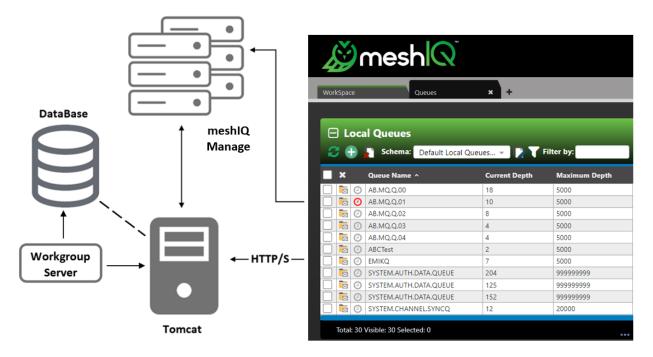


Figure 2.1-A. Message Management Flow Chart

meshIQ Secure must be installed and configured at a minimum to use meshIQ Manage.

meshIQ Manage supports IBM MQ, IIB, ACE, TIBCO EMS, Apache Kafka, Solace, and RabbitMQ objects. For information on each platform, please see the following links:

- IBM MQ: <u>https://www.ibm.com/support/knowledgecenter/en/SSFKSJ_9.0.0/com.ibm.mq.pro.doc/q0</u> <u>03070_.htm</u>
- IBM IIB and ACE: <u>https://www.ibm.com/docs/en/app-connect/11.0.0?topic=app-connect-enterprise-</u> <u>software</u>
- TIBCO EMS:
 <u>https://docs.tibco.com/pub/ems/8.4.0/doc/pdf/TIB_ems_8.4_users_guide.pdf</u>

- Apache Kafka:
 <u>https://kafka.apache.org/documentation/</u>
- Solace Pub/Sub
 <u>https://docs.solace.com/</u>
- RabbitMQ
 <u>https://www.rabbitmq.com/documentation.html</u>

3.1 System Access

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

http://<machine_name>:8080/manage/

meshIQ Manage uses workgroup server authentication when logging into the application. The login/password pair must be defined with appropriate group permissions.

Enter your assigned **User ID** and **Password**. Only specify the **Domain** if instructed to do so by your administrator. Click **LOGIN** to enter the application.

	Please provide your credentials
Logi	n ID
-	Login ID
Pass	word
۵,	
	LOGIN
	meshiQ Manage v11.0.0.21 Copyright © 2023 meshiQ

Figure 3.1-A. meshIQ Manage Login

3.2 Connecting to the Network

If this is the first time you are logging into meshIQ Manage and your Administrator has not yet assigned connections, the *Connect to WGS* window will appear. This is where you select the environments you want to log into.

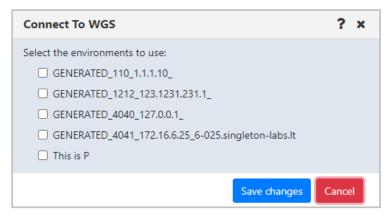


Figure 3.2-A. Connecting to a Workgroup Server selection

If there are issues logging into one of the selected environments, go to *Failed Connection*, for more information.

3.2.1 Select Different Workgroup Server

Users can select different connection environments in which they want to work. Do this by clicking the **Add** button + located at the top-left of the *Workgroup servers* viewlet.

🖃 Workgr	roup servers	grou 🔻 🚺	
	Connection Name	Workgroup Name ¹ ^	State
	Primary Connection	MQM	Active

Figure 3.2.1-A. Workgroup Servers Viewlet

The *Connect to WGS* window opens (this is the same window displayed when logging in with no specified connections, as seen in section 3.2 above). All connections available to the user are displayed. The check mark represents environments the user is currently connected to. Select all desired connections and click **Save changes**. meshIQ Manage will now connect to the selected environments.

Connect To WGS	? ×
Select the environments to use: Display selected connections(ignore filter):	
Filter by: ConnectionName	
Production	
Test	
Save changes	Cancel

Figure 3.2.1-B. Workgroup Server Selection

3.3 Failed Connection

When logging in, if there are connection issues to the currently selected workgroup servers, the *Connection Selection* window displays listing all other available connections. On this window the user can select the connections to reconnect to. If the selected connections are successful, then they will be remembered as this user's selected connections.

Connection Selection ?	×
Connection failed.	
To try to reconnect to other connections please select another connection	n.
GENERATED_110_1.1.1.10_	
GENERATED_1212_123.1231.231.1_	
GENERATED_4040_127.0.0.1_	
GENERATED_4041_172.16.6.25_6-025.singleton-labs.lt * Failed connecting to this connection	
This is P	
Try to reconnect to failed connections	
Connect Cance	4

Figure 3.3-A. Connection Failed

If any of the connections return an error, a window will appear asking the user to re-enter their credentials.

Please enter your password to continue	? ×
* Wrong credentials please re-enter the password.	
User name:	
Ad	
Password:	
Cancel	Continue

Figure 3.3-B. Reenter Credentials

4.1 General Features

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<mark>V</mark>								
🖃 Kafka Topic viewlet								
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📄 🛅 🕓 jkadminre	q-to-query 32	32	2	24	0	0	localhost:9092	00:00:10 hours
📄 🛅 🕓 jkql-item-	defs-in 32	32	2	23	0	0	localhost:9092	00:00:10 hours
📄 🛅 🕓 jkql-item-	defs-out 32	32	2	7	0	0	localhost:9092	00:00:10 hours
📄 🛅 🕓 jkql-to-ex	ec 32	32	2	0	0	0	localhost:9092	00:00:10 hours
jkreq-to-c	uery 64	64	1	147	0	0	localhost:9092	00:00:10 hours
Visible: 1-6 of 45 Total: 4							Last re	fresh time: 2:22:2
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U	Jama 1 a	Topic Name	Cluster Name	Leader Replica Id	Preferred Replica Id	Total Messages	Available Messages	Last Updat
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Partition		jkreq-to-query	localhost:9092	0	0			00:00:10 h
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Partition Partition jkreq-to-c jkreq-to-c jkreq-to-c jkreq-to-c jkreq-to-c	uery-29 uery-3					0	0	00:00:10 h
Partition Partition Kreq-to-c Kreq-to-c Kreq-to-c Kreq-to-c Kreq-to-c Kreq-to-c Kreq-to-c Kreq-to-c	uery-29 uery-3 uery-30	jkreq-to-query	localhost:9092	0	0			
Partition Partition Sireq-to-c Sireq-to-c Sireq-to-c Sireq-to-c Sireq-to-c Sireq-to-c Sireq-to-c Sireq-to-c Sireq-to-c Sireq-to-c	uery-29 uery-3 uery-30 uery-31	jkreq-to-query jkreq-to-query	localhost:9092 localhost:9092	0	0	0	0	00:00:10 h
Partition Partition Kreq-to-c Kreq-to-c Kreq-to-c Kreq-to-c Kreq-to-c Kreq-to-c Kreq-to-c Kreq-to-c	uery-29 uery-3 uery-30 uery-31 uery-32	jkreq-to-query jkreq-to-query jkreq-to-query	localhost:9092 localhost:9092 localhost:9092	0 0 0	0 0 0	0	0	00:00:10 h 00:00:10 h

Figure 4.1-A. General Features

- A: Username of the user who is logged in.
- B: **Reconnect** button. Reconnects workgroup server connections (Section <u>4.4.1</u>).
- C: **Request History** button. Displays all running and completed tasks (Section <u>4.4.5</u>).
- D: Open the **Statistics** Report (Section <u>4.4.2</u>).
- E: Opens the **Schedules** window (Section <u>4.6</u>).
- F: Click to display User/Global Settings window (Section <u>4.4.4</u>).
- G: Opens the security application. See the Resource Center (link below) for more information.
- H: Opens the <u>*Resource Center*</u> or other online resource defined in your system's global settings (Section <u>4.3.9</u>).
- I: Displays the **version number**.
- J: Log Out button.
- K: **User Perspective list.** Group related dashboards into perspectives, or views (section <u>4.2.13</u>).
- L: **Workspace Dashboard.** The Workspace dashboard is the default dashboard. It shows your connections.
- M: Dashboards. Each tab represents a different dashboard. The dashboard with the green line is the default dashboard. You can change your default dashboard (see <u>Set</u> <u>Dashboard as Default</u>).
- N: Create dashboard button (Create New Dashboard).
- O: Navigation between dashboards (*Displaying Additional Dashboards*).

- P: **Paste** button: Used when copying objects (*Copy Objects*).
- Q: Manage Dashboards button: Used to add a shared dashboard (<u>Sharing</u>).
- R: Create a new viewlet (*Adding and Maintaining Viewlets*).
- S: Collapse button. Collapses a viewlet (Collapse / Expand Viewlets).
- T: Add button. Use the Add button to quickly create objects (*Create Objects*).
- U: Click the checkbox of an object in the viewlet to display its Action menu (*Appendix* <u>*C: Object Menus*</u>).
- V: **Expand** button. Expand a viewlet (<u>Collapse / Expand Viewlets</u>).
- W: Viewlet Menu button (<u>Viewlet Menu</u>).
- X: **Console** panel (<u>Console Panel</u>).

4.2 Dashboards

The interface's flexible design allows individual users to focus on the data that is most important to them. The tabs at the top of the screen represent dashboards.

4.2.1 What is a Dashboard?

A dashboard is a way to organize information. Each dashboard contains viewlets, which provide details about specific objects, such as queue managers, queues, connections, or topics.

Dashboards are composed of a summary panel above and a Console panel below (*see* <u>Console Panel</u>). The summary panel displays the main viewlets of the object. The Console panel displays viewlets containing additional object information, for example, messages, events, attributes, or object statuses.

4.2.2 Workspace Dashboard

The *Workspace* dashboard is the default dashboard; this will be the dashboard users see immediately after logging in. It is marked with a green dot. The default dashboard can be changed, please see <u>Set Dashboard as Default</u> for more information. To learn how to create dashboards, skip to <u>Create New Dashboard</u>.

The Workspace dashboard consists of:

- *Workgroup Servers* viewlet: This is the first viewlet on the *Workspace* dashboard. It displays a list of workgroup servers that are currently configured, whether or not you are connected, and provides the information described in <u>Table 4.2.2.1-A</u>.
- *MQM Node* viewlet: This is the second viewlet on the *Workspace* dashboard. It displays all nodes. Scroll down to view the objects of the *MQM Node* viewlet. Please see <u>Nodes</u> for more information on node viewlets.



You can add viewlets to the *Workspace* dashboard, but they are always temporary (not saved when you close your session). See <u>Adding and Maintaining Viewlets</u> for more information.

NA		Kafka		Solace		EMS		MQ		RabbitMQ	×	AC	⇒	-	Jser Perspec	tive: Ma	in			- · · · 😔 🚍
Ŵ	Total	: 2 View	vlets Collapse														٢	Manage [Dashboards	+ Viewlet
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₽		-	Connection Nam		Workgroup Name ¹ ^	State	Hostname		Connection	IP Address	IP Po			latform		are Version		Node Na		Server Alias
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٠			Node Viewlet (P																	i
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			Schema Defau Node Name ¹ ^ CMKafka		Dir	NC)	127.0.0.1	5566	Java	Descr	iption	N	IQM	p Name	11.1.1.0		ion	Heartbeat	
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t B			Schema Defau Node Name ¹ ^ CMKafka CMSolace EMSNode LEUNAME	ult Nodes	Dir Dir Hostname jenkins-meshiq-com jenkins-meshiq-com			127.0.0.1 127.0.0.1 127.0.0.1 75.99.48.52	5566 5588 5555 5016	Java Java Java WINDOWS NT	Descr	iption	N N N	AQM AQM AQM AQM	p Name	11.1.1.0 11.1.1.0 11.1.1.0 6.7.000	08	ion	1 1 1	
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Figure 4.2.1-A. Workspace Dashboard

4.2.2.1 Workgroup Servers Viewlet

Connected workgroup servers are signified with a green check-mark symbol 🔄, and disconnected servers with a red exclamation point symbol 🗔. Scroll to the right to see all the workgroup server connection's properties and limits.

Select a workgroup server to display the Action menu. Please see <u>Appendix C</u> for an explanation of the menu options.

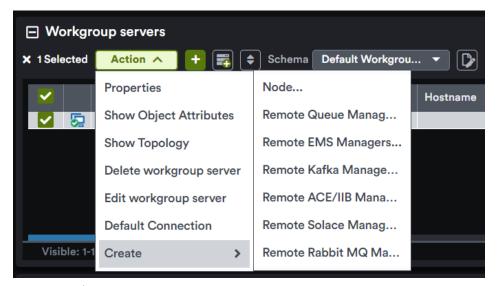


Figure 4.2.2.1-A. Workgroup Server Action Menu



Depending on your user permissions, your options may differ from the above figure.

The table below describes the functionality of the *Workgroup servers* viewlet toolbar.

Table 4.2.2.1-A. Workgroup Servers Viewlet Toolbar			
Field Name Description		Description	
+	Add	Displays the Connect to WGS window (see <u>Select Different</u> <u>Workgroup Server</u>) to select different connections.	
7	Add Workgroup Server	Launches the Work Group Server Connections window to add, modify, delete or re-assign viewlets.	
\$	Default Table Sorting	Click to go back to the viewlet's default sorting.	
Schema	Schema	The current schema that is in effect. Controls how the viewlet is displayed. See <u>Schemas</u> for more information.	

4.2.2.1.1 Create a Node

To create a node, either:

• Select **Create** > **Node...** from the workgroup server's action menu within the *Workgroup servers* viewlet (see Figure <u>4.2.2.1-A</u>).

-or-

• Click the green Add button within a Nodes viewlet (see Create Objects).

A window similar to the following opens.

Node Properties			? ×
🛶 Identity	Name:		
Communication Policy	REMOTE_QMGRS_2		
Discovery Policy	Host Name:		
Statistics	IP-172-31-21-247.US-EAST-2.COMPU	Use DNS	
Trace	IP Address:		
Advanced	127.0.0.1		
	Listening Port:		
	5012		
	Platform:		
	UNIX		
	Description:		
	Nada Turar		/_
	Node Type:		~
		Ok	Cancel

Figure 4.2.2.1.1-A. Node Properties – Identity Tab

Specify all node properties on this screen. Enable the **Use DNS** option to automatically populate the **IP Address** field when the **Host Name** is specified.

Switch the **Node Type** to create the desired type of node. Available types are **M6-WMQ Agent-managed MQ Node**, **EMS Agent-managed Node**, **Kafka Agent-managed Node**, **ACE/IIB Agent-managed Node**, and **Solace Agent-managed Node**.

Click **Ok** to create the node.



When creating a node, you're actually adding a new node reference. Only existing nodes can be added to your workgroup server. An identical node can be added with a different name (the Host Name and IP address would be the same). In this case, all actions performed within one of the nodes would also be applied to the identical node as well.

Table 4.2.2.1.1A. Node Properties Window Attributes		
Field Description		
Identity Tab	Figure 4.2.2.1.1-A	

Table 4.2.2.1.1A. Node Properties Window Attributes			
Field	Description		
Name	Name of the node, as defined in meshIQ Manage		
Host Name	The network name for the physical workstation on which the agent is installed		
Use DNS	Select this checkbox if you want to use Domain Naming Service instead of WebSphere MQ node's IP address.		
IP Address	WebSphere MQ node's IP address		
Listening Port	Agent listening port number for this IP address		
Platform	Operating system platform of the node (for example, Java, Unix, Linux, or Windows)		
Description	Optional field to describe the node/agent		
Node Type	The default Node Type is M6-WMQ Agent-managed MQ Node . Other Node Types are EMS Agent-managed Node, Kafka Agent-managed Node, and ACE/IIB Agent-managed Node.		
Communication Policy	<u>Figure 4.2.2.1.1-B</u>		
Heartbeat, min.	Heartbeat interval, in minutes, of the WMQ Agent. Default: 1 minute.		
Update interval, sec.	Amount of time, in seconds, before the workgroup server updates information about the node's WebSphere MQ objects, such as queue managers, queues, and channels.		
	Default: 30 seconds.		
Request timeout, sec.	Command timeout period, in seconds. Sets amount of time workgroup server waits for a response from the WMQ Agent running on the node.		
	Default: 60 seconds.		
Command limit	Specifies the number of commands that can be issued by the workgroup server to the WMQ Agent without acknowledgement from the agent. A value of zero indicates that there is no command limit.		
	Default: 5000 commands.		
Send registration to GM period, sec.	Retry interval at which an agent should periodically send a registration request to the WGS. This is equivalent to an "I'm alive" message.		
	Default: 0		

Table 4.2.2.1.1A. Node Properties Window Attributes			
Field	Description		
DNS name to create fully qualified host name	Domain name, to be used to create a fully qualified host name (one that specifies all domain levels)		
Discovery tab	<u>Figure 4.2.2.1.1-C</u>		
Queue managers or Managers	Specifies which queue managers (for MQ, ACE/IIB) or EMS managers are to be automatically discovered by the workgroup server. This field accepts simple wildcards, meaning that characters can be followed by an asterisk (*). Example: LONDON*		
	Applies to MQ and ACE/IIB nodes.		
Model queues	Specifies which model queues are to be automatically discovered by the workgroup server. This field accepts simple wildcards, meaning that characters can be followed by an asterisk (*).		
	Applies to MQ and ACE/IIB nodes.		
Namelists	Specifies which namelists are to be automatically discovered by the workgroup server. This field accepts simple wildcards, meaning that characters can be followed by an asterisk (*).		
Local queues	Applies to MQ, ACE/IIB, EMS nodes. Specifies which local queues are to be automatically discovered by the workgroup server. This field accepts simple wildcards, meaning that characters can be followed by an asterisk (*).		
	Applies to MQ and ACE/IIB nodes.		
Remote queues	Specifies which remote queues are to be automatically discovered by the workgroup server. This field accepts simple wildcards, meaning that characters can be followed by an asterisk (*).		
	Applies to MQ and ACE/IIB nodes.		
Authentication information	Specifies which authentication information is to be automatically discovered by the workgroup server. This field accepts simple wildcards, meaning that characters can be followed by an asterisk (*).		
	Applies to MQ and ACE/IIB nodes.		
Alias queues	Specifies which alias queues are to be automatically discovered by the workgroup server. This field accepts simple wildcards, meaning that characters can be followed by an asterisk (*).		

Table 4.2.2.1.1A. Node Properties Window Attributes			
Field	Description		
	Applies to MQ and ACE/IIB nodes.		
Client connections	Specifies which client connections are to be automatically discovered by the workgroup server. This field accepts simple wildcards, meaning that characters can be followed by an asterisk (*).		
	Applies to MQ and ACE/IIB nodes.		
Services	Specifies which services are to be automatically discovered by the workgroup server. This field accepts simple wildcards, meaning that characters can be followed by an asterisk (*).		
	Applies to MQ, ACE/IIB, EMS nodes.		
Channels	Specifies which channels are to be automatically discovered by the workgroup server. This field accepts simple wildcards, meaning that characters can be followed by an asterisk (*).		
	Applies to MQ and ACE/IIB nodes.		
Cluster queue managers	Specifies which cluster queue managers are to be automatically discovered by the workgroup server. This field accepts simple wildcards, meaning that characters can be followed by an asterisk (*).		
Clusters	Applies to Kafka nodes. Specifies which clusters are to be automatically discovered by the workgroup server. This field accepts simple wildcards, meaning that characters can be followed by an asterisk (*).		
	Applies to MQ and ACE/IIB nodes.		
Subscriptions	Specifies which subscriptions are to be automatically discovered by the workgroup server. This field accepts simple wildcards, meaning that characters can be followed by an asterisk (*).		
	Applies to MQ and ACE/IIB nodes.		
Processes	Specifies which processes are to be automatically discovered by the workgroup server. This field accepts simple wildcards, meaning that characters can be followed by an asterisk (*).		
	Applies to MQ and ACE/IIB nodes.		
Listeners	Specifies which listeners are to be automatically discovered by the workgroup server. This field accepts simple wildcards, meaning that characters can be followed by an asterisk (*).		
Topics	Applies to MQ, ACE/IIB, EMS, Kafka nodes.		
	Specifies which topics are to be automatically discovered by		

Discovery period, min. Discovery period, min. Default	rkgroup server. This field accepts simple wildcards, ag that characters can be followed by an asterisk (*). terval, in minutes, at which the WMQ Agent discovers ects and reports any changes to the workgroup server. : 720 minutes.	
Discovery period, min. Discovery period, min. Default	ng that characters can be followed by an asterisk (*). terval, in minutes, at which the WMQ Agent discovers ects and reports any changes to the workgroup server. : 720 minutes.	
Discovery period, min. MQ obj Default	ects and reports any changes to the workgroup server. : 720 minutes.	
Applies		
Enable special name list comma discovery (-N) MQCM 64KB.	to z/OS. Use when there is a very large number of c, channels, or any object type. Overcomes a z/OS and server limitation in creating D_INQUIRE_objectType_NAMES replies greater than : Disabled	
Force this discovery for initial	agent starts, force a discovery of all objects, versus only hat were altered since the last discovery time. : OFF	
Statistics Figure	Figure 4.2.2.1.1-D	
Node Type Node T	Node Type from the Identity tab	
Software version meshIC	MQ, EMS, Kafka, or ACE/IIB software version	
Status Active of	or Unknown	
System information	ing system and version (for example, Microsoft vs 7, 64-bit, Version 6.1.7601 Service Pack 1).	
CPU Count Number	er of licensed CPUs.	
possibl	f the User ID is authorized to execute the various e object commands (for example, delete queue, alter er) for the node type MQ, EMS, Kafka, IIB/ACE, Solace, or MQ.	
Default	: Disabled.	
Event counter Number genera	r of workgroup events that the workgroup server has ted.	
Last action The las	t command applied to this node.	
	e: EXCMD_UNMANAGE_MQNODE	
Last event time The mo	ost recent time that an event was recorded for this node	
Last updated The mo	ost recent time that the view for this node was refreshed	
Time since last update The mo	ost recent time that the node was active	

Table 4.2.2.1.1A. Node Properties Window Attributes			
Field	Description		
Advanced <u>Figure 4.2.2.1.1-E</u>			
Convert user id to upper case Controls whether the user ID is converted to uppercase being passed to M6-WMQ agent for checking authorization			
Buffer size, KB	Total per-socket buffer spaces reserved for receives and sends		
Reuse address	If this socket option is ON, the kernel will reuse the port even if the port is busy (in the TIME_WAIT state)		
TCP no delay	Disables the Nagle algorithm for send coalescing		
Number of TCP/IP bind retries	Maximum number of attempts to retry binding the socket to the IP address		
TCP buffering queue limit	Maximum number of items permitted in the TCP buffering queue		
Max. wait time for socket r/w event, msecMaximum number of milliseconds to wait for the socker read/write event			

Node Properties		? ×
Identity	Heartbeat, min.:	
➡ Communication	1	
Policy	Update interval, sec.:	
Discovery Policy	30	
Statistics	Request timeout, sec.:	
Trace	60	
Advanced	Command limit:	
	5000	
	Send registration to GM period, sec.:	
	0	
	DNS name to create fully qualified host name:	
	Ok	Cancel

Figure 4.2.2.1.1-B. Node Properties – Communication Policy Tab

Node Properties ? X			
Identity	Queue managers:	Modal queues:	Namelists:
Communication Policy	*	*	*
🛶 Discovery Policy	Local queues:	Remote queues:	Authentication information:
Statistics	*	*	*
Trace	Alias queues:	Client connections:	Services:
Advanced	*	*	*
	Channels:	Cluster queue managers:	Subscriptions:
	*	*	*
	Processes:	Listeners:	Topics:
	*	*	*
	Discovery period, min.:		
	720		
	Enable special name list discovery (-N):		
	ON		
	Force full discovery for initia	l discovery (-f):	
	OFF		
			Ok Cancel
			Calicer

Figure 4.2.2.1.1-C. Node Properties – Discovery Policy Tab

Node Properties		? ×
Identity	Node type:	Connection Manager-managed MQ Node
Communication Policy	Software version:	6.7.0003
Discovery Policy	Status:	Unknown
ightarrow Statistics	System information:	Linux::V#1 SMP Tue Aug 11 19:12:04 EDT 2020.R3.10.0-11;
Trace Advanced	CPU count:	16
	Authorization:	Disabled
	Event counter:	0
	Last action:	EXCMD_UNMANAGE_MQNODE
	Last event time:	2021-09-14 11:39
	Last updated:	2021-09-14 11:40
	Time since last update:	2021-09-14 11:39
		Ok Cancel

Figure 4.2.2.1.1-D. Node Properties – Statistics Tab

Node Properties		? ×
Identity	Convert user id to upper case:	OFF
Communication Policy Discovery Policy	Controls whether user id is converte applying local authorizations.	ed to uppercase before being passed to M6-WMQ agent for
Statistics	Buffer size, KB:	64
Trace	Total per-socket buffer spaces reser	ved for receives and sends.
Advanced	Reuse address:	OFF
	This socket option tells the kernel th ahead and reuse it anyway.	hat even if this port is busy (in the TIME_WAIT state), go
	TCP no delay:	OFF
	Disables the Nagle algorithm for se	and coalescing.
	Number of TCP/IP bind retries:	1
	TCP buffering queue limit:	10
	Max. wait time for socket r/w event, msec:	1000
		Ok Cancel

Figure 4.2.2.1.1-E. Node Properties – Advanced Tab

4.2.2.1.2 Create Remote Queue Managers

When **Create** > **Remote Queue Managers** is selected from the workgroup server's pop-up menu (*Figure 4.2.2.1-A*), the *Remote Queue Manager Connections* window opens.

1	ilter by:				
		Instance Name	Queue Manager Name v	Attribute Name	Attribute Value
		REMOTE_CONNECTION	CONNECTION_NAME	Instance Name	-
		REMOTE_QMGR	QMGR	Queue Manager Name	-
		REMOTE_QMGRS	QMGR_NAMES	Connection Name	-
				Channel Name	-
				Command Queue	-
				Conversion	-
				SSL Key Repository	-
				SSL Crypto Hardware	-
				SSL Cipher Specification	-
				User ID	-
				SSH User Name	-
		d Verify Connection	Modify Copy as	SSH Host	_

Figure 4.2.2.1.2-A. Remote Queue Manager Connections

Click the **Add** button to add a new remote queue manager connection. After adding a new connection, you can verify it. See <u>Verifying Remote Manager Connections</u>.

To update or delete existing remote queue managers, select them, and click either the Modify or Delete button. To learn how to import and export remote manager definitions, see *Importing and Exporting Remote Managers*.



The **Undo** button may be available in the remote manager connections window immediately after you add, modify, copy, delete, or import a connection. Only the most recent action can be undone.

Hover over a remote queue manager to view its attributes on the right side of the window. The columns of the remote queue manager table on the left side of the window can be sorted alphabetically by simply clicking the column headers.

Table 4.2.2.1.2-A. Remote Queue Manager Connections Window Attributes			
Field	Description		
General Tab	<u>Figure 4.2.2.1.2-B</u>		
Connection Manager Instance name	Enter the instance name. REMOTE_QMGRS is the default.		
Queue Manager name	Enter the name of the queue manager to which your new remote queue manager will be linked. QMGR_NAME is the default.		
Project name	Input disabled.		
User ID	Specify a user identifier/name to connect to the queue manager using security parameters (available in WMQ v.8.0 and later) or leave it empty if user authentication is not required. User IDs may be case-sensitive, especially on z/OS. Check with your security/RACF administrator to be sure.		
Password	Enter the user's password. Passwords may be case-sensitive, especially on z/OS. Check with your security/RACF administrator to be sure.		
Communication tab	Figure 4.2.2.1.2-C		
	Enter the IP address(es) or host name(s) and IP port (in parentheses) as shown below to specify a name for the new connection.		
Connection name	Example:		
	server1(1414)		
	or, for replicated data queue managers:		
	server1(1414),server2(1414),server3(1414)		
Command queue name	Select the name for the command queue from the drop-down menu. SYSTEM.ADMIN.COMMAND.QUEUE is the default.		
Channel name	Enter the name of the server-connection (svrconn) channel to be used for connecting to the remote queue manager. SYSTEM.DEF.SVRCONN is the default.		
Security Exit Name	Specifies the descriptive name of the channel security exit; this is a parameter of the MQCD channel definition structure which controls channel execution. It is passed to a channel that is called from a Message Channel Agent (MCA).		
	Click the ellipses button to add a security exit name or edit / delete existing exit strings (<i>Figure 4.2.2.1.2-D</i>).		
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		

Table 4.2.2.1.2-A. Remote Queue Manager Connections Window Attributes				
Field	Description			
	exit to use. Click the ellipses button to add new or edit / delete existing exit strings (<i>Figure 4.2.2.1.2-D</i>).			
Command conversion (zOS systems)	Select if this is a connection to a z/OS queue manager, earlier than version 8.			
SSL tab	<u>Figure 4.2.2.1.2-E</u>			
Key repository	Specify the key repository.			
SSL certificate key	Specify the SSL certificate key.			
Cipher specification	Select the cipher specification from the drop-down menu.			
Cryptographic hardware	The applied encryption hardware is noted in the Cryptographic hardware field. Click the Settings button to specify cryptographic hardware settings (<i>Figure 4.2.2.1.2-F</i>).			

dd Queue Manager	Connection
🛶 General	Connection Manager Instance name:
Communication	REMOTE_QMGRS
SSL	Queue Manager name:
	QMGR_NAME
	Project name:
	DEFAULT
	Specify a user name and password to connect to the queue manager using security parameters (available in WMQ v.8.0 and later) or leave it empty if authentication is not required: User ID:
	Password:

Figure 4.2.2.1.2-B. Remote Queue Manager Connections – General Tab

Add Queue Manager Co	onnection	?
General	Connection name:	
Communication	IP ADDRESS(IP PORT)	
SSL	Command queue name:	
	SYSTEM.ADMIN.COMMAND.QUEUE	•
	Channel name:	
	SYSTEM.DEF.SVRCONN	
	Security Exit Name:	
	Security Exit Data:	
	Command conversion (zOS systems)	

Figure 4.2.2.1.2-C. Remote Queue Manager Connections – Communication Tab

The following window appears after clicking the ellipses button of **Security Exit Name**. Enter a new exit string and click **Add**. Click **Ok** to save changes and continue the creation process.

Remote Queue Manager Connec	ons ?
	Add
Exit String	Actions

Figure 4.2.2.1.2-D. Remote Queue Manager Connections – Communication Tab Exit Strings

On the SSL tab window, populate the fields as noted in <u>Table 4.2.2.1.2-A</u>.

Add Queue Manager Co	nnection	?
General	Key repository:	
Communication		
🛶 SSL	SSL certificate key:	
	Cipher specification:	
		•
	Cryptographic hardware	
	No encryption hardware specified.	

Figure 4.2.2.1.2-E. Remote Queue Manager Connections – SSL Tab

The following window displays after the **Settings** button is clicked. Make your selections and click **Ok**. Back on the **SSL** tab, click **Ok** to save all changes.

Cryptographic Hardware Settings ?			
None			
Rainbow			
Enable for Middleware			
Disable for Middleware			
nCipher			
Enable for Middleware			
Disable for Middleware			
Other (PKCS11)			
Driver path:			
Token label:			
Token password:			

Figure 4.2.2.1.2-F. Remote Queue Manager Connections – Settings

4.2.2.1.3 Create Remote EMS Manager

To create a remote EMS manager connection, select a workgroup server from the Workgroup Server viewlet. From the pop-up menu, select **Create** > **Remote EMS Managers**. The *Remote EMS Connections* window opens.

	by:				
#		Instance Name	EMS Server Name+	Attribute Name	Attribute Value
1		REM_EMS	EMS	Instance Name	-
2		REMOTE_EMS	EMS-SERVER	EMS Server Name	-
3		EMS	SERVER	Server URL	-
				EMS User	-
				SSL Trust Cert	-
				SSL Identity	-
				SSL Ciphers	-
				SSL Host Name	-
				SSL Verify Host name	-
				SSL Verify Host	-
				SSL Debug Trace	-
	_	Verify Connection	Modify Copy as		

Figure 4.2.2.1.3-A. Remote EMS Connections Window

Click the **Add** button to create the new connection. The *Add EMS Manager Connection* window opens. See the table below for an explanation of this window's settings. After adding a new connection, you can verify it. See <u>Verifying Remote Manager Connections</u>.

To update an existing remote EMS queue manager, select the connection and click Modify (opens the same window as the Add button). To delete a connection, select it and click Delete. To learn how to import and export remote manager definitions, see <u>Importing and</u> <u>Exporting Remote Managers</u>.



The **Undo** button may be available in the remote manager connections window immediately after you add, modify, copy, delete, or import a connection. Only the most recent action can be undone.

Table 4.2.2.1.3-A. Add (Change) EMS Manager Connections Window Properties				
Field	Description			
General Tab	<u>Figure 4.2.1.1.3-B</u>			
EMS Agent Instance Name (Node)	Enter the name of the EMS agent node the manager will connect to. REMOTE_EMS is the default.			
EMS Server Name	Enter the EMS server name which will be displayed in an EMS manager viewlet. EMS-SERVER is the default.			
	Specify the EMS server URL. This is required.			
EMS Server URL	The structure of the EMS server URL is: <protocol>://<ip address="">:<port>, i.e., tcp://172.16.6.48:7222</port></ip></protocol>			
User ID	Specify the username to connect to the TIBCO EMS instance.			
Password	Password is optional.			
SSL tab	<u>Figure 4.2.1.1.3-C</u>			
Trusted Certificate	Specify the full path and file name of the trusted certificate(s). Passed to tibemsadmin as:			
	-ssl_trusted filename			
Client Identity	Specify the full path and file name of the file containing the client certificate, extra issuer certificates (optional) and the private key. Passed to tibemsadmin as:			
	-ssl_identity filename			
lssuer	Specify the full path and file name of the file containing extra issuer certificate(s) for client-side identity. Passed to tibemsadmin as:			
	-ssl_issuer filename			
Password (PKCS12 password)	Enter the private key or PKCS#12 password if required. Passed to tibemsadmin as:			
	-ssl_password password			
Key repository	This is the SSL private key. Use the following to pass it to the EMS Administration Tool (tibemsadmin):			
	-ssl_key filename			
Cipher specification	Select a cipher specification from the drop-down menu. Select Custom to enable the Custom Cipher name field and enter a custom cipher name.			
Vendor	Specify the full path and file name of the file containing extra issuer certificate(s) for client-side identity. Passed to tibemsadmin as:			

Table 4.2.2.1.3-A. Add (Change) EMS Manager Connections Window Properties			
Field	Description		
	-ssl_issuer filename		
Host name	Enter the name expected in the server certificate sent by the host. Passed to tibemsadmin as:		
	-ssl_hostname name		
SSL Options	<u>Figure 4.2.1.1.3-D</u>		
Verify Host Name	Enables/disables whether EMS will verify the SSL hostname when connecting. Passed to tibemsadmin as: -ssl_noverifyhostname		
Verify Host	Used when connecting to EMS.		
SSL Trace	Show loaded certificates and certificates sent by the host. Passed to tibemsadmin as: -ssl_trace		
SSL Debug Trace	Show additional tracing, which is useful for debugging. Passed to tibemsadmin as: -ssl_debug_trace.		

Add EMS Manager Con	nection ?
🛶 General	EMS Agent Instance Name (Node):
SSL	REMOTE_EMS
SSL Options	EMS Server Name:
	EMS-SERVER
	EMS Server URL:
	Field is required
	Specify a user name and password to connect to the queue manager using security parameters (available in WMQ v.8.0 and later) or leave it empty if authentication is not required: User ID:
	Password:
	Ok Cancel

Figure 4.2.2.1.3-B. Add EMS Manager Connection Window – General Tab

Add EMS Manager Conn	nection	?
General	Trusted Certificate (full path and filename):	
🛶 SSL		
SSL Options	Client Identity (full path and filename):	
	Issuer (full path and filename):	
	Password (PKCS12 password):	
	Key repository:	
	Cipher specification	
	CUSTOM	•
	Custom Cipher name:	
	Vendor:	
	Host name (Name expected in server certificate):	
	Ok	Cancel

Figure 4.2.2.1.3-C. Add EMS Manager Connection Window – SSL Tab

Add EMS Manager Connection		
General	 Verify Host Name Verify Host 	
SSL	SSL Trace	
🛶 SSL Options	SSL Debug Trace	
	Ok Cancel	

Figure 4.2.2.1.3-D. Add EMS Manager Connection Window – SSL Options Tab

4.2.2.1.4 Create Remote Kafka Manager

You have the option of creating a new remote Kafka manager by importing its properties. See <u>Import Remote Kafka Manager Properties for New Connections</u> for more information.

To create a remote Kafka manager connection, select a workgroup server from the Workgroup Server viewlet. From the pop-up menu, select **Create** > **Remote Kafka Managers**.

 Workgroup servers Filter by: 					
🗹 🗶 Connection Name		Workgroup Name ^	State	Hostname	Default (
 Properties Show Object Attributes Show Topology Default Connection 		MQM	Active		true
Create	>	Node Remote Queue Managers Remote EMS Managers Remote Kafka Managers Remote ACE/IIB Managers Remote Solace Managers			

Figure 4.2.2.1.4-A. Add Remote Kafka Managers Option

The *Remote Kafka Manager Connections* window opens, where you can add a new Kafka connection manager. After adding a new connection, you can verify it. See <u>Verifying Remote</u> <u>Manager Connections</u>. You can also edit and delete existing connections from this screen. To learn how to import and export remote manager definitions, see <u>Importing and Exporting</u> <u>Remote Managers</u>.



The **Undo** button may be available in the remote manager connections window immediately after you add, modify, copy, delete, or import a connection. Only the most recent action can be undone.

emo	ote Kafk	a Manager Connec	tions
ter	by:		
#		Node name	Cluster name+
1		KAFKA	KAFKA
2		KAFKA	KAFKA_15
3		KAFKA_SERVER	KAFKA_SERVER
	Add	Verify Connection	Modify Copy as
	Delete	Export Import	Import properties
		Undo	

Figure 4.2.2.1.4-B. Remote Kafka Manager Connections Screen

Click Add. The Add Kafka Manager Connection window opens.

dd Kafka Manager	Connection ? >
🛶 General	Node Name:
Connect	× •
Config	Cluster Name:
Schema Registry	Cluster Name:
KSQL	
MDS	Cluster Name: custom text value used to identify data objects that are from a same connection.
	Bootstrap Server:
	Group Id (optional):
	Ok Schedule Cancel

Figure 4.2.2.1.4-C. Add Kafka Manager Connection

Enter the configurations for the new Kafka connection manager. (See the following section for information about SSL connection configuration.)

Click **Ok**.

SSL Connections

To establish an SSL connection to the Kafka bootstrap server, you can use the Kafka Manager Connection Config tab. On this tab, you can enter the same configuration parameters that you would in a Kafka client application properties file. (For information on configuring connections using the nsqcmkafka.properties file, refer to the Connection Manager for Kafka chapter in the *Components Installation Guide*.)

Due to the large number of possible Kafka configuration options, the configuration tab is provided to allow you to enter the specific parameters that are relevant to your environment.

To configure parameters, enter each parameter name in the Configuration Entry field. Enter each parameter value in the Value field. Configuration value fields include icons for encrypting values and for showing unencrypted values. When the value is hidden, or masked, the value is treated as a password and is encrypted during transmission to Kafka, then decrypted so Kafka can read it.

- The encrypt icon encrypts and masks the Configuration Value, as shown
 here:
- The show unencrypted icon $^{\textcircled{0}}$ shows the full value. See the important note below.



The configuration tab shown below is an example of parameters for setting up secure connections with SASL/SSL. These are only examples and do not reflect the actual parameters that would be needed in a specific customer environment.

dd Kafka Manager Conne	ection			? >
General	Configuration Entry	Value		
Connect	Filter by key	Filter by value		Q
🛶 Config	security.protocol	SSL	8	Remove
Schema Registry	ssl.keystore.type	jks	8	Remove
KSQL	ssl.truststore.location	/opt/nastel/AutoPilotM6/ssl	8	Remove
	ssl.keystore.password		0	Remove
	ssl.keystore.location	/opt/nastel/AutoPilotM6/ssl	8	Remove
	ssl.truststore.type	jks	Ø	Remove

Figure 4.2.2.1.4-D. Remote Kafka Manager Connections Screen

Table 4.2.2.1.4-A. Example of SASL/SSL Connection Parameters				
Field	Description			
security.protocol	SSL			
ssl.keystore.type	jks			
ssl.truststore.location	/opt/nastel/AutoPilotM6/ssl			
ssl.keystore.password				
ssl.keystore.location	/opt/nastel/AutoPilotM6/ssl			
ssl.truststore.type	jks			

Confluent Platform Metadata Service (MDS) Setup

The MDS tab on the Remote Manager Connection dialog allows you to add multiple Kafka MDS nodes in one remote Kafka instance. See *Figure 4.2.2.1.4-E*.

Click **Add** to add a new MDS node. See *Figure 4.2.2.1.4-F*.

After an MDS node is set up, you can create an MDS viewlet. See <u>Kafka MDS Viewlets</u>.

Change Kafka Manage	r Connection		? ×
General	Filter by		
Connect	Filter by name	Q	
Config			
Schema Registry	MDS Name MDS		Actions Modify Remove
KSQL			
➡ MDS			Add



Add Kafka MDS		? ×
Name		MDS
URL		https://177.16.33.125:8091,https://177.16.33.1
Security		
Туре	○ None	● Basic Auth ○ Bearer Token
Username		superUser
Password		******
HTTPS Configuration		
✓ Skip SSL validation		
Key Store Path		
Key Store Passphrase (optional)		
Trust Store Path		
Trust Store Passphrase (optional)		
		Ok Cancel

Figure 4.2.2.1.4-F. Add Kafka MDS

4.2.2.1.5 Create Remote ACE or IIB Manager

To create a remote ACE or IIB manager connection, select a workgroup server in the Workgroup Server viewlet. From the pop-up menu, select **Create** > **Remote ACE/IIB Managers**.

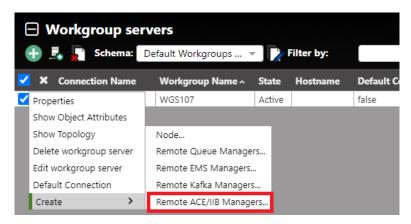


Figure 4.2.2.1.5-A. Create > Remote ACE/IIB Managers

The *Remote IIB/ACE Manager Connections* window opens where you can add a new IIB or ACE connection manager. You can also edit and delete existing connections from this screen. To learn how to import and export remote manager definitions, see <u>Importing and Exporting</u> <u>Remote Managers</u>.



The **Undo** button may be available in the remote manager connections window immediately after you add, modify, copy, delete, or import a connection. Only the most recent action can be undone.

Rem	note l	IIB/ACE Manager Conn	ections		?
Filte	r by:				
#		Node Instance Name	Integration Node Alias+	Attribute Name	Attribute Value
1		ACE_15	ACE	Instance Name	-
2		ACE_SERVER	ACE_SERVER	Integration Node	Alias -
3		IIB_SERVER	IIB	Туре	-
				Url	-
				Username	-
	Ad	d Verify Connection	Modify Copy as		
		Delete Export Ir	nport Undo		
					Ok Clos

Figure 4.2.2.1.5-B. Remote IIB/ACE Manager Connections

Click the **Add** button. The *Change IIB/ACE Manager Connection* window opens. Enter the configurations for the new IIB or ACE connection manager on both the **General** and **Key** tabs. Click **Ok** when finished. After adding a new connection, you can verify it. See <u>Verifying</u> <u>Remote Manager Connections</u>.

Change IIB/ACE Manag	er Connection			? ×
🛶 General	Node Instane N	lame:		
KEY	CMACE			
	Queue Manage	r Name:		
	Some			
	URL:			
	localhost:154	2		
	Type:			
	IIB			~
	UserName:	some		
	Password:			
			Ok Schedule Ca	ancel

Figure 4.2.2.1.5-C. Change IIB/ACE Manager Connections

4.2.2.1.6 Create Remote Solace Manager

To create a remote Solace manager connection, select a workgroup server within the Workgroup Server viewlet. From the pop-up menu, select **Create** > **Remote Solace Managers**.

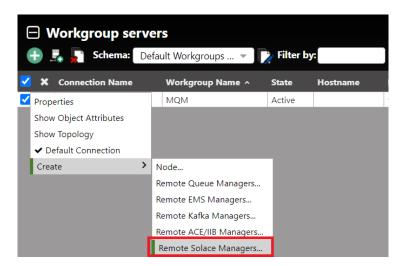


Figure 4.2.2.1.6-A. Add a Remote Solace Manager

The Remote Solace Manager Connections window opens.

Ren	note	Solace Manager Conne	ections				? ×
Filte	er by:						
#		Node Instance Name	Integration Node Alias ,	Attribute Name		Attribute Value	
1		SOLACE	SOLACE	Instance Name		-	
2		SOLACE_PC15	SOLACE_PC	Integration Node	Alias	-	
3		SOLACE_SERVER	SOLACE_SERVER	Url		-	
				Username		-	
	Ad		Modify Copy as				
		Delete Export Ir	mport Undo				
						0	k Close

Figure 4.2.2.1.6-B Remote Solace Manager Connections

Click the **Add** button to create the new connection. The *Add Solace Manager Connection* window opens. Enter the configurations for the new Solace connection manager on both the **General** and **Key** tabs. Click **Ok** when finished. After adding a new connection, you can verify it. See <u>Verifying Remote Manager Connections</u>. You can also modify or delete existing connections. To learn how to import and export remote manager definitions, see <u>Importing</u> <u>and Exporting Remote Managers</u>.



The **Undo** button may be available in the remote manager connections window immediately after you add, modify, copy, delete, or import a connection. Only the most recent action can be undone.

dd Solace Manage	r Connection	?
🔶 General	Node Instance Name:	
KEY		0
	Field is required	
	Broker Name:	
	URL:	
	Paging Size:	
	100	
	Username:	
	Password:	
		Ok Schedule Cancel

Figure 4.2.2.1.6-C Add Solace Manager Connection

4.2.2.1.7 Create RabbitMQ Remote Manager

To create a remote Rabbit MQ manager connection, select a workgroup server within the Workgroup Server viewlet. From the pop-up menu, select **Create > Remote Rabbit MQ Managers**. The *Remote Rabbit MQ Manager Connections* window opens where you can add a new Rabbit MQ connection manager.

Click the **Add** button. The *Add Rabbit MQ Manager Connection* dialog opens. Enter the configurations for the new Rabbit MQ connection manager.

On the **SSL** tab, configure SSL security (Trust Store and Key Store paths and passwords). For meshIQ Cloud users, in the **Trust Store Path** field on the **SSL** tab, enter the path to the uploaded certificate file, as shown on the **Certificates** tab of your meshIQ Cloud subscription page. On the **AMQP** tab, you can add AMQP protocol configurations. Click **Ok** when finished. After adding a new connection, you can verify it. See <u>Verifying</u> <u>Remote Manager Connections</u>.

To learn how to import and export remote manager definitions instead of entering them manually, see *Importing and Exporting Remote Managers*.

	Workgroup servers Schema: Default Workgroups Fi						
-	× Connection Name			ate			
~	Properties		Node	tiv			
	Show Object Attributes		Remote Queue Managers	:tiv			
	Show Topology		Remote EMS Managers				
	Delete workgroup server		Remote Kafka Managers				
	Edit workgroup server		Remote ACE/IIB Managers				
	Default Connection		Remote Solace Managers				
	Create	>	Remote Rabbit MQ Managers.				

Figure 4.2.2.1.7-A. Add a Remote RabbitMQ Manager

Remote Rabbit MQ Manager Connections					
ter	by:				
#		Node Instance Name	Integration Node Alias+	Attribute Name	Attribute Value
1		RABBITMQCM	rabbit	Instance Name	-
				Integration Node Alias	-
				Url	-
				Username	-
	Ad		Modify Copy as		

Figure 4.2.2.1.7-B. Remote RabbitMQ Manager Connections

Add Rabbit MQ Manag	Add Rabbit MQ Manager Connection ? ×					
🛶 General	Node Instance Name:					
SSL	RABBITMQCM					
AMQP	Server Name:					
	rabbit					
	URL:					
	http://11.24.72.178:15672					
	Username: Admin					
	Password:					

Figure 4.2.2.1.7-C. Add RabbitMQ Manager Connection

Key Store —		
Path:		
Password:		
Trust Store -		
Path:		
Password:		
□ Ignore SSL Certi	ificate	

Figure 4.2.2.1.7-D. RabbitMQ Connection SSL Tab

Add AMQP	? ×
AMQP Name:	AMQP
Virtual Host Name:	NANO
Host:	11.24.72.177
Port:	5699
User Name:	Admin
Password	
Uri:	http://11.24.72.177:15672
	Ok Cancel

Figure 4.2.2.1.7-E. RabbitMQ Connection AMQP Tab

4.2.2.1.8 Importing and Exporting Remote Managers

You can export remote IBM MQ, TIBCO EMS, Kafka, ACE/IIB, Solace, and RabbitMQ connections to allow them to be imported later as needed. Consider using exporting and importing connections as a way to pass connections between people or make them available for new users.

Remote manager configurations are imported and exported from the remote manager connections window, in the form of .json files.

4.2.2.1.8.1 Import remote manager configurations

 From the workgroup server's pop-up menu, select Create > Remote Queue Managers. The *Remote Queue Manager Connections* window opens. The name of the menu option and window vary based on the product (IBM, Kafka, TIBCO EMS, IIB/ACE, Solace, or RabbitMQ).

er by:			
Instance Name	Queue Manager Name +	Attribute Name	Attribute Value
		Instance Name	-
		Queue Manager Name	-
		Connection Name	-
		Channel Name	-
		Command Queue	-
		Conversion	-
		SSL Key Repository	-
		SSL Crypto Hardware	-
		SSL Cipher Specification	-
		User ID	-
		SSH User Name	-
Add Verify Connection	Modify Copy as	SSH Host	-
Delete Export	Import Undo		

2. Click Import. The Import Remote Queue Manager Connections dialog opens.

Import Remote Queue Manag	ger Connections	?	×
Choose Import file: Choose File No file chosen			
Instance Name	Queue Manager Name		
	Clear Import	Clos	e

3. Click **Choose File**.



Import files must have the .json file name extension. You must import a remote manager definition file for the product that matches your selection on the workgroup server's pop-up menu (IBM, Kafka, TIBCO EMS, IIB/ACE, or Solace).

4. Navigate to the .json file from which you want to import remote manager definitions. Double-click the file, or click it once and click **Open**. The file name is included on the dialog, and the Instance Name and Queue Manager Name for each

remote manager in the file are listed.

Imp	ort Remote Queue Mana	ger Connections	? ×
	se Import file: ose File exported_re707368).json ● Loaded	
	Instance Name	Queue Manager Name	
	REMOTE_CONNECTION	CONNECTION_NAME	٩
	REMOTE_QMGR	QMGR	Q
	REMOTE_QMGRS	QMGR_NAMES	Q
		Clear	Close

5. Verify the managers that you want to import. You can click **Clear** to clear all selections, or select and clear checkboxes individually.

6. Click **Import** to import all selected managers. The imported records are displayed on the remote managers dialog:

Remote Queue Manager Connections							
#		Instance Name	Queue Manager Name ,]	Attribute Name	Attribute Value	
1		REMOTE_CONNECTION	CONNECTION_NAME		Instance Name	-	
2		REMOTE_QMGR	QMGR		Queue Manager Name	-	
3		REMOTE_QMGRS	QMGR_NAMES		Connection Name	-	
					Channel Name	-	
					Command Queue	-	
					Conversion	-	
					SSL Key Repository	-	
					SSL Crypto Hardware	-	
					SSL Cipher Specification	-	
					User ID	-	
					SSH User Name	-	
	Ad	d Verify Connection	Modify Copy as		SSH Host	-	
		Delete Export In	nport Undo			Ok	Clos

7. Click **OK** to close the window and return to the Workspace dashboard. You can also reverse the import process by clicking **Undo**.

4.2.2.1.8.2 Export remote manager configurations

 From the workgroup server's pop-up menu, select Create > Remote Queue Managers. The *Remote Queue Manager Connections* window opens. The name of the menu option and window vary based on the product (IBM, Kafka, TIBCO EMS, IIB/ACE, or Solace).

2. Select the remote manager or managers that you want to export the definition of.

tei	r by:				
#	=	Instance Name	Queue Manager Name 、	Attribute Name	Attribute Value
1		REMOTE_CONNECTION	CONNECTION_NAME	Instance Name	REMOTE_QMGR
2		REMOTE_QMGR	QMGR	Queue Manager Name	QMGR
3		REMOTE_QMGRS	QMGR_NAMES	Connection Name	IP ADDRESS(IP PORT)
				Channel Name	SYSTEM.DEF.SVRCONN
				Command Queue	SYSTEM.ADMIN.COMMAND.QU
				Conversion	DEFAULT
				SSL Key Repository	
				SSL Crypto Hardware	
				SSL Cipher Specification	
				User ID	Admin
	Ad	d Modify Copy as	Delete Export	SSH User Name	
			ndo	L	

- 3. Click **Export**.
- 4. The export file is downloaded through your browser. It is named exported_remote_queue_manager_connections(<*unique identifier*>).json.



5. Double-click the file to open and view it:

exported_remote_queue_manager_connections(1678228450044).json - Notepad				-		\times
ile Edit Format View Help						
						1
"version": "v10.5.0.7",						
"type": "mq",						
"remoteConnections": [
{						
"name": "REMOTE_QMGR",						
"project": "DEFAULT",						
"qmgrName": "QMGR",						
"userName": "Admin",						
"password": "***********************************						
"commandQ": "SYSTEM.ADMIN.COMMAND.QUEUE",						
"channelName": "SYSTEM.DEF.SVRCONN",						
"connName": "IP ADDRESS(IP PORT)",						
"sshHost": "",						
"sshIpAddress": "",						
"sshPassword": "",						
"sshPort": 0,						
"sshUserName": "",						
"sslKeyRepos": "",						
"sslCrypHrdw": "",						
"sslCipherSpec": "",						
"sslKeyPassPhrase": null,						
"sslKeyStorePassword": "",						•
	Ln 1, Col 1	100%	Unix (LF)	UTF-	8	

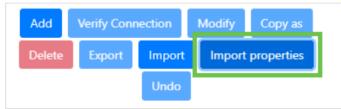
4.2.2.1.8.3 Import Remote Kafka Manager Properties for New Connections

You can import remote Kafka manager properties for new connections, instead of entering them manually. Refer to the table below for mapped properties.

Table	4.2.2.1.8.3. Mapped Kafka Properties
Parameter in Add Kafka Manager Connection	Parameter in .properties file(If multiple names for the same parameter are supported, they
	are shown separated by commas)
Node Name	'node.name'
Cluster Name	'kafka.cluster.name', 'cluster.name'
Bootstrap Server	'kafka.bootstrap.servers', 'bootstrap.servers'
Group Id	'kafka.group.id', 'group.id'
Schema Name	'kafka.schema_registry.name', 'schema_registry.name'
Schema URL	'kafka.schema_registry.url', 'schema_registry.url'
Schema ('schema_registry'), Connect ('connect'), KSQL ('ksql') and MDS ('mds')	These four share the same structure. In the syntax example below, replace the "configType" placeholder with the appropriate value:
	'schema_registry', 'schema.registry', 'schema'. <i>If more than one variant is present, the order of precedence is schema_registry > schema.registry > schema) 'connect'</i>
	'ksql'

Table	e 4.2.2.1.8.3. Mapped Kafka Properties
Parameter in Add Kafka Manager Connection	Parameter in .properties file
	(If multiple names for the same parameter are supported, they are shown separated by commas)
	'mds'
	Syntax example:
	Name: 'kafka."configType".url', '"configType".url'
	URL: 'kafka."configType".url', '"configType".url'
	When there is more than one Connect, KSQL or MDS instance, differentiate them by assigning a sequential number (N) to each instance:
	configType_N
	For example:
	kafka.connect_1.name=Connector1
	kafka.connect_1.url= <u>http://172.16.6.44:8382/</u>
	kafka.connect_2.name=Connector2
	kafka.connect_2.url= <u>http://172.16.6.45:8382/</u>

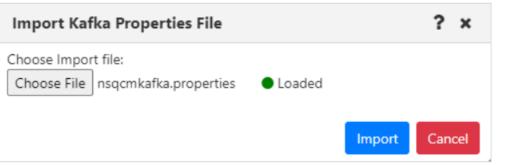
1. From the Remote Kafka Manager Connections dialog, click **Import properties**.



The Import Kafka Properties File dialog opens.

Import Kafka Properties File	?	×
Choose Import file: Choose File No file chosen		
Im	port Can	cel

2. Choose a file:

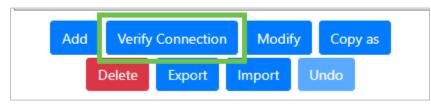


3. Click **Import**. The Add Kafka Manager Connection dialog opens with the imported properties filled in where applicable. An example of the Config tab is shown below.

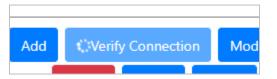
dd Kafka Manager (Connection			?
General	Configuration Entry	Value		
Connect	Filter by key	Filter by value		Q
🛶 Config	node.port	5566	8	Remove
Schema Registry	wgs.host	127.0.0.1	8	Remove
KSQL	wgs.service	4040	8	Remove
MDS	wgs.name	MQM	8	Remove
	trace	false	8	Remove
	encryption	true	Ø	Remove
	trusted.ip	*	8	Remove
	broadcast	false	8	Remove
	kafka.security.protocol	SASL_PLAINTEXT	8	Remove
	kafka.sasl.mechanism	PLAIN	8	Remove
	kafka.sasl.jaas.config	org.apache.kafka.com	non.se 🕲	Remove
	kafka.max.message.bytes	30000000	8	Remove
	kafka.max.request.size	30000000	8	Remove
	kafka.buffer.memory	30000000	œ	Remove
				Add
		O	k Schedu	le Cano

4.2.2.1.9 Verifying Remote Manager Connections

The remote manager connections dialogs for all products include a Verify Connection button.

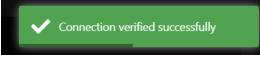


Select the connection you want to verify. Click Verify Connection. The button changes to indicate that the application is attempting to connect.



Results

If the connection is successful, the following message is displayed:



If it is unsuccessful, an error dialog similar to the one below is displayed.

verify remote queue	manager - Error			
Command status	∫ Origin	Timestamp	Reason	Actions
Verification failed	\\MQM\CMSolace\Demo_System_Solace	Jun 14 2023 11:53:14	Unknown	Description
				Ok
,	Command status	,	Command status Origin Timestamp	Command status Origin Timestamp Reason

4.2.3 Console Panel

The top of a dashboard displays the main viewlets of the objects. When object aspects are opened from the top panel, they appear in tabs located at the bottom of the screen in the Console panel. Queue and channel statuses, messages, attributes, and events are some of the object aspects that appear in the Console panel. To collapse/expand this section, click **Console**. You can also increase or decrease the height of the Console panel by clicking on the ellipses **even** and dragging it up or down.

Schema Default Topics Dir	 Search (Filte 	r By) T Projects A	All •→ 🗐				
Topic Name ¹ ^	Total Partitions	Preferred Leader Repli	cas Total Messages	Available Messages	Consumer Groups	Cluster Name	Last Updated
) item-update-requests	16	16	2002	0	0	localhost:9092	00:00:47 hours
jkadminreq-to-query	32	32	0	0	0	localhost:9092	00:00:47 hours
) jkql-item-defs-in	32	32	0	0	0		00:00:47 hours
jkql-item-defs-out	32	32	0	0	0		00:00:47 hours
			0	0	0		00:00:47 hours
							00:00:47 hours
			0				00:00:47 hours
job-requests	8	8	M. Consolo (6)	0	0	localhost:9092	00:00:47 hours
x	× ↑ to-activity-cl	e × ↑ to-compu		r x 10-item-update	r X	localbost:0002	00:00:47 hours
	X ↑ to-activity-cl	e X ↑ to-compu	te-h X 1 1 to-def-exporte		r X ilter: *	▼ Schema: My k	Corco: 47 hours
	X 10-activity-cl	a X			r X ilter: * Message Data ASCII		
	× ↑ to-activity-cle	e × ↑ to-compu Key Da	te-h X 1 1 to-def-exporte		r × iitor: * Message Data ASCII Track test	▼ Schema: My k	
	×	a × ↑ to-compu Key Da 12	te-h X 1 1 to-def-exporte		r X illtor: * Message Data ASCII Track test Track test	▼ Schema: My k	
	X A to-activity-cle Partition Id 8 8 8	key Da 12 12 12	te-h X 1 1 to-def-exporte		r X Nessage Data ASCII Track test Track test Track test	▼ Schema: My k	
	×	a × ↑ to-compu Key Da 12	te-h X 1 1 to-def-exporte		r X ilter: * Message Data ASCII Track test Track test Track test Track test	▼ Schema: My k	
	X A to-activity-cle Partition Id 8 8 8	key Da 12 12 12	te-h X 1 1 to-def-exporte		r X Nessage Data ASCII Track test Track test Track test	▼ Schema: My k	
) item-update-requests) jkadminreq-to-query) jkql-item-defs-in) jkql-item-defs-out	item-update-requests 16 jkadminreq-to-query 32 jkql-item-defs-in 32 jkql-item-defs-ut 32 jkql-to-exec 32 jkreq-to-query 64 jkreq-to-aub-grid 16	Item-update-requests 16 jkadminreq-to-query 32 32 jkq-item-defs-in 32 32 jkq-item-defs-out 32 32 jkq-item-defs-out 32 32 jkq-item-defs-out 32 32 jkq-item-defs-out 32 32 jkq-to-exec 32 32 jkreq-to-query 64 64 jkreq-to-sub-grid 16 16	item-update-requests 16 16 2002 jkadnimireq-to-quary 32 32 0 jkql-tem-defs-in 32 32 0 jkql-tem-defs-out 32 32 0 jkql-tem-defs-out 32 32 0 jkql-tem-defs-out 32 32 0 jkrq-to-exerc 32 32 0 jkrq-to-sub-grid 64 64 37 jkrqo-to-sub-grid 16 16 0	item-update-requests 16 16 2002 0 jkadnimreq-to-guory 32 32 0 0 jkadnimreq-to-guory 32 32 0 0 jkadnimreq-to-guory 32 32 0 0 jkadnimreq-to-sub-grid 32 32 0 0 jkadnime-defs-out 32 32 0 0 jkadnime-defs-out 32 32 0 0 jkreq-to-sub-grid 64 64 37 10 jkreq-to-sub-grid 16 16 0 0	Item-update-requests 16 16 2002 0 0 jkadnimreg-to-guery 32 32 0 0 0 jkadniem-def-out 32 32 0 0 0 jkadniem-def-out 32 32 0 0 0 jkrag-to-guery 64 64 37 10 0 jkrag-to-guery 16 16 0 0 0	Item-update-requests 16 16 2002 0 0 localhost:9092 jkadminreq-to-query 32 32 0 0 0 localhost:9092 jkadminreq-to-query 32 32 0 0 0 localhost:9092 jkad-tem-defs-in 32 32 0 0 0 localhost:9092 jkad-tem-defs-out 32 32 0 0 0 localhost:9092 jkad-tem-defs-out 32 32 0 0 0 localhost:9092 jkad-tem-defs-out 32 32 0 0 0 localhost:9092 jkreq-to-exec 32 32 0 0 0 localhost:9092 jkreq-to-query 64 64 37 10 0 localhost:9092 jkreq-to-sub-grid 16 0 0 0 localhost:9092

Figure 4.2.3-A. Console

You can click on the up arrow A located on the left side of the tabs to jump to the originating viewlet which generated the Console tab. When the number of tabs exceeds the space available within the Console, you can use the left and right navigation buttons to easily scroll through them (see the red boxes in the figure below).

	✓ Console (10)									
<	. ×	↑ item-update-	r × ↑ item-upd	ate-r ×	↑ item-update-r ×	↑ item-update-r ×	↑ item-update-r ×	↑ jkql-item-defs ×	↑ jkql-item-defs ×	↑ jkql-item-defs × >
3	C 🕫 🗈 🗶 🗟 🔍 🗟 🔍 🗟 🕞									
		Offset 🗸	Partition Id	Кеу	Data Size 🛛 👻	N	Message Data 🛛 ASCII 🗸 🗸		Timestamp GMT	•
		0	5		16	т	'his is a test.		2024/03/18 20:19:33.245	
		1	5		20	т	his is a test 2.		2024/03/18 20:19:43.445	
		2	5		20	т	'his is a test 3.		2024/03/18 20:19:52.545	

Figure 4.2.3-B. Viewing Console Tabs

Right-click on a Console tab to display options to close all Console tabs, or close all other tabs except for the tab you right-clicked on.



Figure 4.2.3-C. Close Tabs

4.2.4 Create New Dashboard

To add a new dashboard, do one of the following:

- Click the **Create dashboard** button located immediately to the right of the dashboard tabs.
- Click **Dashboards...** to open the *Manage Dashboards* dialog, then click **+New**.

← ₩	Kafka	×	Solace	× Ra	abbitMQ	×	MQ	×	EMS	× AC	→ +
Total: :	Total: 2 Viewlets Collapse all										
= W	/orkgroup se		Workgrou 🔻	D							
		ction Name	Workgroup	Name ¹ ^	State	Hostname	Default Conne	ection	IP Address	IP Port	OS Platform
	·	• · ·			• .•		<u>, , , , , , , , , , , , , , , , , , , </u>				

Figure 4.2.4-A. Create Dashboard Button

The *Create new Dashboard* dialog box opens. Enter a name for the new dashboard. Each dashboard must have a unique name.

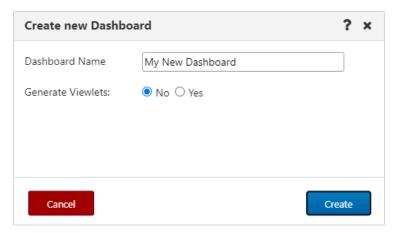


Figure 4.2.4-B. Create New Dashboard

Select **Yes** to generate initial default viewlets in the new dashboard or **No** to create an empty dashboard. If you select **Yes**, the following additional fields display:

- Viewlets template: Select a template for your viewlet. This is optional.
- **Product:** Select the object product type for the initial viewlets that will be generated. Choose from the following options:
 - **IBM MQ:** Local queue and channel viewlets get generated.
 - **EMS:** Queue, route, bridge, and connection viewlets get generated.
 - **Kafka:** Topic viewlets get generated.
 - **IIB:** Broker, server, service, REST API and Application viewlets get generated.

- **ACE**: Integration node, servers, applications, service, and REST API viewlets get generated.
- **SOLACE**: Brokers and Message VPNs viewlets get generated.
- **RABBITMQ**: Virtual Host and Queues viewlets get generated.
- Workgroup server: Select the workgroup server.
- Use original path: By default, the Use original path check box is selected, indicating that the new dashboard will use the Node and Queue manager of the selected dashboard template (from the Viewlets template list). To choose a different Node or Queue manager, clear this check box.
- **Node:** Select a specific node, or use an asterisk to include all objects from all nodes.
- **Queue Manager:** Select a specific queue manager, or use an asterisk to include all objects from all queue managers on the selected node(s).

Create New Dashboard								
Dashboard Name	Dashboard Name My New Dashboard							
Generate Viewlets	○ No							
Viewlets template	Default viewlets	•						
Product	IBM MQ	•						
Workgroup server	Primary Connection - (MQM)	•						
Use original path								
Node	*	-						
Queue manager	*	•						
Cancel		Create						

Figure 4.2.4-C. Generating Initial Viewlets

Click **Create**. A new dashboard is added with initial viewlets, if applicable. New dashboards are added to the current User Perspective.

It will look similar to the following:

Kafka	× Solace	× RabbitMQ	× MQ	× EMS	× AC →	User Persp	ective: Main	-	0
otal: 2 Viewlet	s Collapse all						e 💿	1anage Dashboards +	Viewl
∃ Local Que	ues								1
+ 🖸 🗢 s	chema 🛛 Default Local Que 👻 🔲	Search (Filter By)	Projects All	••					
	Queue Name ¹ ^		Manager Name	Current Depth	Maximum Depth	Get Messages	Put Messages	Open Input Counter	c
0 👼 🕚	AB.MQ.Q.01		LEUNAME	9	504	Allowed	Allowed	0	0
	AB.MQ.Q.02		LEUNAME	442	5000	Allowed	Allowed	0	0
0 5	AB.MQ.Q.03		LEUNAME	185	5000	Allowed	Allowed	0	0
	AB.MQ.Q.04		LEUNAME	185	5000	Allowed	Allowed	0	0
	AB.MQ.Q.05		LEUNAME	185	5000	Allowed	Allowed	0	0
	AB.MQ.Q.06		LEUNAME	185	5000	Allowed	Allowed	0	0
	ABC		LEUNAME	0	5000	Allowed	Inhibited	0	0
	100 Total: 100			•••				Last refresh time: 4:55	:09 P
Channels									
• 🖸 🔶 s	ichema Default Channels Dir 👻 [Search (Filter By)	T Projects All	• • 🗐					
2 ¢ s	chema Default Channels Dir 👻 📙	Search (Filter By) Manager Name	Projects All Channel Type	→ Status	Bytes Sent	Bytes Received	Messages	Shov	v crite
					Bytes Sent	Bytes Received	Messages 0		v crite
	Channel Name ¹ ^	Manager Name	Channel Type	Status				Last Updated	v crit
	Channel Name 1 ^ SYSTEM.DEF.SENDER	Manager Name	Channel Type Sender	Status	0	0	0	Last Updated 04:55:35 hours	v crit
	Channel Name ¹ A SYSTEM.DEF.SENDER SYSTEM.DEF.SERVER	Manager Name LEUNAME LEUNAME	Channel Type Sender Server	Status Inactive Inactive	0	0	0	Last Updated 04:55:35 hours 04:55:35 hours	v crite
	Channel Name 1 A SYSTEM.DEF.SENDER SYSTEM.DEF.SERVER SYSTEM.DEF.SERVER SYSTEM.DEF.SERVER SYSTEM.DEF.SERVER	Manager Name LEUNAME LEUNAME EMIK QA QA	Channel Type Sender Server Server	Status Inactive Inactive Inactive	0 0 0	0 0 0	0 0 0	Last Updated 04:55:35 hours 04:55:35 hours 04:55:35 hours	v crite
	Channel Name ¹ A SYSTEM.DEF.SENDER SYSTEM.DEF.SERVER SYSTEM.DEF.SERVER SYSTEM.DEF.SERVER	Manager Name LEUNAME LEUNAME EMIK QA	Channel Type Sender Server Server Server	Status Inactive Inactive Inactive Inactive	0 0 0 0	0 0 0 0	0 0 0 0	Last Updated 04:55:35 hours 04:55:35 hours 04:55:35 hours 04:55:35 hours	v criti

Figure 4.2.4-D. New Dashboard with Initial Viewlets

If you selected **No**, an empty dashboard like the one below is created. This dashboard includes the same options that are available in the new viewlet dialog (see section <u>4.3.1</u>, <u>Adding and Maintaining Viewlets</u>).

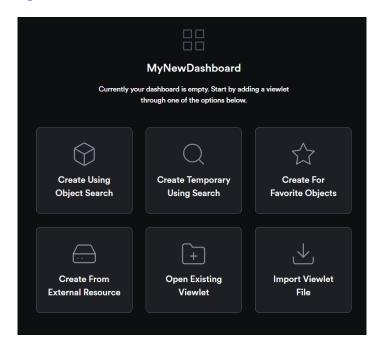


Figure 4.2.4-E. New Dashboard without Viewlets

4.2.5 Change the Order of Dashboards

The order in which dashboards are displayed can be changed. Click on the tab of the dashboard you would like to move and drag and drop it to a new position.

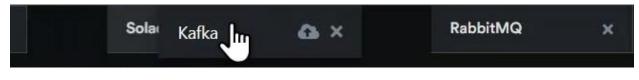


Figure 4.2.5-A. Moving a Dashboard

4.2.6 Displaying Additional Dashboards

In systems with several dashboards, all dashboard tabs will not display within the immediate view of the screen. To scroll through all available dashboards, click on the arrows located to the far left and far right of the dashboard tabs (see the red boxes in the image below) or hover over the dashboards and scroll the wheel of your mouse.

Kafka	×	Solace	× EMS		MQ ×	RabbitMQ	× AC →	+ User Perspective:	Main	
Total: 4 View	lets Expand								() Manage Dash	boards + Viewlet
										:
🕀 Broker										:
🖃 Kafka To	pic viewlet									ł
• 3 •	Schema Def	ault Topics Dir 🛛 👻	Search (F	ilter By) 🝸 P	rojects All	• •				
	Topic Nam	ie ¹ ^	Total Partitions	Preferred Le	ader Replicas Tot	al Messages	Available Messages	Consumer Groups	Cluster Name	Last Updated
	() item-upda	te-requests	16	16	200	02	0	0	localhost:9092	00:00:10 hours
	jkadminree		32	32	24		0	0	localhost:9092	00:00:10 hours
	jkql-item-c	lefs-in	32	32	23		0	0	localhost:9092	00:00:10 hours

Figure 4.2.6-A. Displaying Additional Dashboards

4.2.7 Rename a Dashboard

To rename a dashboard, do one of the following:

- Right-click the tab of the dashboard that you want to rename and select **Rename**.
- Click **Dashboards...** to open the *Manage Dashboards* dialog, select the checkbox for the dashboard in the **Dashboard Name** list, then click **Rename**.

The following dialog box appears. Enter a new name and click **OK**.

Rename Dashboard: MQ DASH	? ×
New Name:	
MQ Dashboards	
	Ok Cancel

Figure 4.2.7-A. Rename Dashboard

4.2.8 Remove a Dashboard from the User Perspective

To remove a dashboard from the current User Perspective, click on the **X** within the tab of the dashboard. A confirmation prompt will appear asking you to confirm this action. Click **Yes** to remove the dashboard or **No** to cancel. For more information about User Perspectives, see the <u>User Perspectives</u> section.

			_		_		_
Kafka	×	Solace	×	RabbitMQ	×	MQ	×

Figure 4.2.8-A. Remove Dashboards from the User Perspective

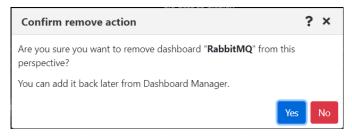


Figure 4.2.8-B. Dashboard Removal Confirmation

4.2.9 Delete Dashboards

To delete a dashboard, do one of the following:

- Right-click the tab of the dashboard that you want to delete and select **Delete Dashboard**.
- Click **Dashboards...** to open the *Manage Dashboards* dialog, select the checkbox for the dashboard or dashboards in the **Dashboard Name** list, then click **Delete**.

The following dialog box appears. Click **Yes** to delete the dashboard or dashboards, or **No** to cancel.



Figure 4.2.9-A. Confirm Delete Dashboards

4.2.10 Set Dashboard as Default

You can specify which dashboard you would like to view immediately after logging in. This dashboard is known as the default dashboard.

To set a dashboard as the default, right-click the dashboard tab and select **Set as default** from the dashboard menu.

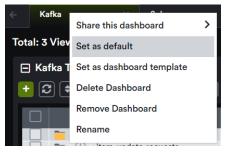


Figure 4.2.10-A. Set Dashboard as Default

A dashboard tab with a green dot is the default dashboard of the system.



Figure 4.2.10-B. Default Dashboard

4.2.11 Dashboard Templates

Users can designate dashboards as dashboard templates. These templates can then be used when generating new dashboards. The new dashboards will automatically be populated with predefined viewlets from the template. Multiple templates can be created. When you designate a dashboard as a template, it is available to all other users.

To find out whether a dashboard has been set as a template, right-click its dashboard tab and look for a checkmark next to the **Set as dashboard template** option. In the example below, *Kafka* is a dashboard set as a template.

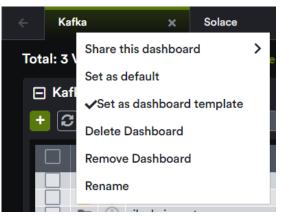


Figure 4.2.11-A. A Default Template Dashboard

To designate a dashboard as a template, follow the steps below:

1. Right-click on the dashboard tab that you want to set as a template:

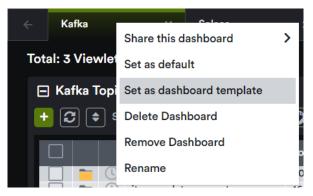


Figure 4.2.11-B. Set Dashboard as Dashboard Template

2. Select Set as dashboard template.

If a template from another user already exists with the same dashboard name, an error similar to the following will be displayed:



Figure 4.2.11-C. Dashboard Name Exists Error

 From this point forward, the dashboard template will be available to all users. When adding a new dashboard, the template will be available from the Viewlets template drop-down:

Create New Dashbo	ard ? ×
Dashboard Name	My New Dashboard
Generate Viewlets	○ No [●] Yes
Viewlets template	Default viewlets
Product	Default viewlets
Workgroup server	MQ DASH
Use original path	Dashboard2
Node	
Queue manager	*
Cancel	Create

Figure 4.2.11-D. Select Dashboard Template

4.2.12 Sharing

You can share dashboards with other users by making them available to groups. Consider using shared dashboards in cases like these:

- Create a series of dashboards that new users will get automatically when they log in.
- Share your dashboards with other members of your team.

How to share a dashboard

Right-click on the dashboard tab to share and select **Share this dashboard**. From the popup menu, click the read (eye) icon <a> next to the groups you want to share the dashboard with. The read icon changes to green for selected groups. A user will only be able to share with their own groups, unless they have the **Show All Groups for Shared Dashboards** right, which will allow sharing with all groups.

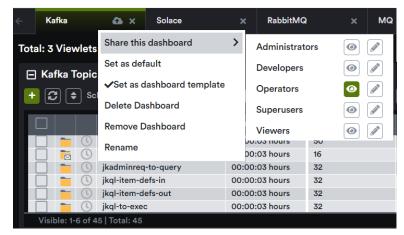


Figure 4.2.12-A. Sharing Dashboards

To allow a group to edit the shared dashboard, click the edit (pencil) icon \checkmark . Both the read and edit icons will change to green \circ .

When a dashboard is shared, it will be displayed with the shared icon:



Figure 4.2.12-B. Shared Dashboard Tab

When creating shared dashboards, consider the following restrictions:

- What each user sees will depend on their rights. For example, an Administrator creates a dashboard with a queues viewlet and shares it with the Payments and the Credit teams. When creating the dashboard, the Administrator user sees all queues, but the Payment and Credit teams will only see their queues when using it.
- If you share a dashboard containing a favorite viewlet which contains objects the shared group is not allowed to see, they will still show up in the viewlet but with no attributes.
- A dashboard cannot be deleted by the owner if it is currently being shared with any other users.
- User settings such as showing empty queues do apply to shared dashboards, so resulting views may differ slightly.
- You cannot edit the schema of a shared dashboard.

Viewing shared dashboards

When a user logs on for the first time, all shared dashboards are visible automatically, based on the groups the user belongs to. However, dashboards that are shared after a user has already logged in are not visible right away. To view available dashboards, click **Manage Dashboards**.



If the shared dashboards you added do not display on the main tab bar, log out and log back in.

When viewing shared dashboards created by someone else, the following restrictions apply:

- Viewlets within a shared dashboard can be minimized or maximized, but only for the current session; a viewlet's collapsed/expanded state will not be saved.
- Only the dashboard owner can add new viewlets to a shared dashboard. However, if the owner grants edit ("write") access when sharing the dashboard with a group, members of that group can edit the viewlets on the shared dashboard.
- The shared dashboard cannot be renamed.

• Schemas cannot be applied. The schema applied by the dashboard's owner is the only schema that will be used.

4.2.13 User Perspectives

User Views were renamed "User Perspectives" in version 10.5.

With User Perspectives, you can group related dashboards into perspectives, or views. You can switch between perspectives at any time. The Workspace dashboard is in all User Perspectives and cannot be removed.

4.2.13.1 What is a User Perspective?

A User Perspective is a container for a set of dashboards. Initially, each user starts with a single User Perspective called the "Main" one.

4.2.13.2 Add a User Perspective

To add a new User Perspective, click the User Perspective menu icon and select **+Add User** Perspective.

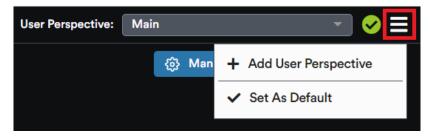


Figure 4.2.13.2-A. User Perspective Menu: Add Perspective

Enter a name for the new perspective:

Add User Perspective		? ×
User Perspective Name:		
Critical Issues		
	Ok	Cancel

Figure 4.2.13.2-B. Add User Perspective

Click **OK**. All current dashboards except the Workspace dashboard are cleared. From there, you can add, rename, or delete dashboards to update your new User Perspective. All changes you make are retained and are visible the next time you access the same perspective.

You can return to the Main perspective by selecting it from the User perspective list:

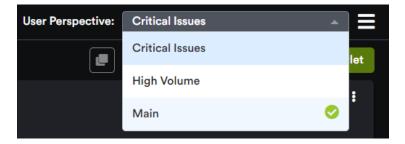


Figure 4.2.13.2-C. User Perspective List

4.2.13.3 Edit a User Perspective

You can edit a User Perspective by renaming it. Select the view from the User perspective list (Figure <u>4.2.13.2-C</u>) to view it. Then click the User Perspective menu icon and select **Edit User Perspective**.

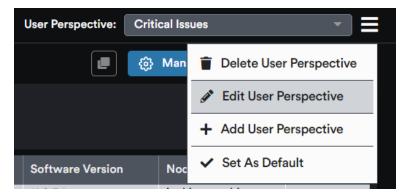


Figure 4.2.13.3-A. User Perspective Menu Icon

Enter a new name for the User Perspective and click **OK**.

The new name appears in the User perspective list.

Edit User Perspective	? ×
User Perspective Name:	
Critical Issues	
	Ok Cancel

Figure 4.2.13.3-B. Edit User Perspective

4.2.13.4 Set a User Perspective as the Default

If you want a certain User Perspective to be displayed when you log on to the application, set that User Perspective as the default. First, switch to that User Perspective. Then, click the User Perspective menu icon (Figure <u>4.2.13.3-A.</u>) and select **Set As Default**.

4.2.13.5 Delete a User Perspective

You can delete a User Perspective so it is no longer available. Select the perspective from the User perspective list to view it. Then click the User Perspective menu icon (Figure <u>4.2.13.3-A.</u>) and select **Delete User Perspective**.

Click **Yes** to delete the User Perspective. As a result, your current User Perspective reverts to the Main perspective.

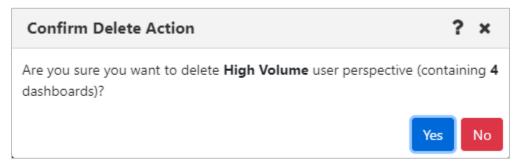


Figure 4.2.13.5-A. Confirm Delete Action: Delete User Perspective

4.2.14 Manage Dashboards

The Manage Dashboards dialog is a central location for many dashboard-related actions:

- viewing which user perspectives and viewlets are associated with a dashboard
- adding shared or imported dashboards to your current User Perspective
- finding a dashboard that you previously removed from a User Perspective and adding it back
- assigning tags to dashboards to keep them organized

From here you can also perform the basic functions of adding, renaming, and deleting dashboards.

Manage Dashboards also provides access to advanced features such as creating, editing, and deleting tags and exporting and importing dashboards.

When you click the name of a dashboard on the left side, its details are displayed. The right side of the dialog shows (from top to bottom) the User Perspectives that contain the selected dashboard (along with the number of dashboards in each one), any tags that have been assigned to the dashboard, and the dashboard's viewlets.



To preview a dashboard's details without selecting it, hover over its name in the list.

Manage	Dashboards			? ×
Filter By:		Fil	ter By Tags: By Tag	~
Sh	ared Dashboards		ter by rags.	
#	✓ Dashboard Name		✓Perspective Name Dashboard	Count
	EMS-Local 🔁	•	High Volume 4	
	KafkaDash 🔁	7	Main 8	
	KeyQueues 🔁			
	MQ DASH 🔁		Important	
	🕨 My Test Dashboard 🛛 🔁)		
	My_Dashboard			
	🖌 Schema 📃 🔁		Viewlet Name	
			Kafka Topics	
			Kafka Brokers	
			Kafka Consumers	
)		
+ N	ew 🖉 Rename 🕅 Delete 🛛 🏵 Tags			
Export	t Import + Add To Current Perspective			Close

Figure 4.2.14-A. Manage Dashboards

4.2.14.1 Finding Dashboards

On the *Dashboard Management* dialog, you can find dashboards in several ways:

Filter the Dashboard List

Use the Filter By field to find dashboards by three criteria. The Dashboard Name list is automatically filtered to include only dashboards that match any of these criteria, including partial matches:

- Dashboard name
- Name of a viewlet contained on the dashboard
- Name of a User Perspective that contains the dashboard

Search for Dashboards by Tags

Use the Filter By Tags field to find dashboards that have been assigned certain tags. To be included in the results, a dashboard must have all the tags that have been added to the Filter By Tags field.

To add a tag to the Filter By Tags field, do one of the following:

- Click the Filter By Tags list arrow and select as many tags as you want to include in your search.
- If a tag is visible in the tag box (between the User Perspective and Viewlet boxes on the right side), click and drag it to the Filter By Tags field to add it to the criteria.

4.2.14.2 Adding Dashboards to the Current View

If you have found a dashboard (for example, a shared dashboard) that you want to add to your current perspective, select the checkbox for the dashboard in the Dashboard Name

list and click + Add To Current View. The Dashboard is immediately added to your current User Perspective.

4.2.14.3 Navigating to Dashboards, User Perspectives, and Viewlets

Open buttons on the *Dashboard Management* dialog can be used to navigate directly to the corresponding items. For example:

- Click Open <a> next to a User Perspective to open the selected dashboard in the selected User Perspective.
- Click Open
 next to a Dashboard to open the selected dashboard. If the selected Dashboard is not part of the current User Perspective, it will be added to the User Perspective.
- Click Open
 next to a Viewlet to open the selected viewlet within the selected dashboard. Again, if the selected Dashboard is not part of the current User Perspective, it will be added to the User Perspective.

4.2.14.4 Assigning Tags to Dashboards

Tags make finding dashboards easier. You can search for dashboards by the tags that are assigned to them.

To assign tags to dashboards, you must have the **Manage Tag Assignment to Dashboards** right in the security application.

Click **Dashboards...** to open the *Manage Dashboards* dialog. Select the checkbox for a dashboard or dashboards in the **Dashboard Name** list and click **Tags**.

The left column lists all tags that are available to be assigned to the dashboard. The right column lists any tags that are already assigned to the dashboard.

To add tags, on the Tag Name list on the left side, select the checkbox for each tag you want to add to the dashboard. Click the right arrow to add the tag to the dashboard. The tag is moved to the right column.

To remove tags, on the right side, select the checkbox for each tag you want to remove from the dashboard. Click the left arrow to remove the tag from the dashboard. The tag is moved back to the left column.

To add all tags to the dashboard, whether or not they are selected, click the double right arrow.

To remove all tags from the dashboard, click the double left arrow 🖆

Click Save.

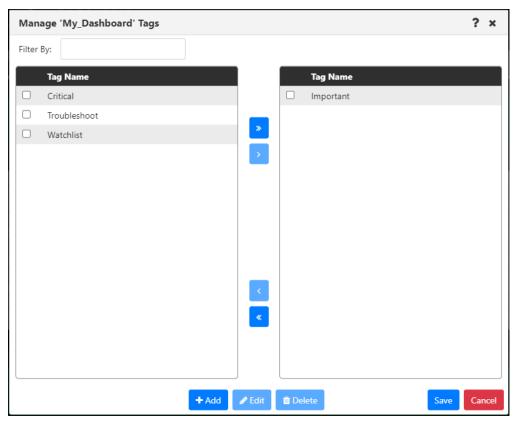


Figure 4.2.14.4-A. Manage Dashboard Tags

4.2.14.5 Advanced Dashboard Management Features

The *Manage Dashboards* dialog also provides access to several tools that are designed to be used by advanced users, such as administrators:

- Managing tags (adding, editing, and deleting the tags that are used to organize dashboards and make them easy to find)
- Importing and Exporting Dashboards
- Importing and Exporting Viewlets

The procedures below will begin from the *Manage Dashboards* dialog. To perform them, first click **Dashboards...** to open the *Manage Dashboards* dialog.

4.2.14.5.1Managing Tags

To ensure control over the classification of dashboards, the ability to create, edit, and delete dashboard tags requires the **Manage Dashboards Tags Data** right to be granted in the security application.

To create a tag, on the *Manage Dashboards* dialog, select the checkbox for a dashboard or dashboards in the **Dashboard Name** list and click **Tags**. Click **+Add** to open the *Edit Tags* dialog. Enter the name of the new tag and click **+Add**. Repeat this process for as many new tags as you want to add. Then click **Save**.

Edit Tags	? ×
Name	
Critical	+ Add
	Save Cancel

Figure 4.2.14.5.1-A. Edit Tags

New tags are added to the bottom of the tag Name list.

To edit a tag, on the *Manage Dashboards* dialog, select the checkbox for a dashboard in the **Dashboard Name** list and click **Tags**. Select the checkbox or checkboxes for the tag or tags you want to edit and click **Edit**. Update the tag names as needed and click **Save**.

To delete a tag, on the *Manage Dashboards* dialog, select the checkbox for a dashboard in the **Dashboard Name** list and click **Tags**. Select the checkbox or checkboxes for the tag or tags you want to delete and click **Delete**. Click **Yes** to delete the selected tags or **No** to cancel.

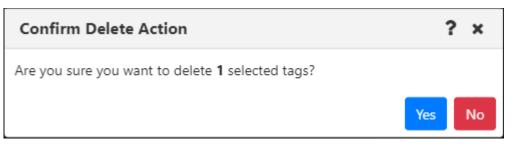


Figure 4.2.14.5.1-B. Confirm Delete Action: Tags

You can also delete a tag that you are editing by clicking the **Delete** button next to it in the *Edit Tags* dialog.

4.2.14.5.2Importing and Exporting Dashboards

The Manage Dashboards window also allows you to export dashboards, along with their viewlets and tags, into files so that others can import them.

4.2.14.5.2.1 Export Dashboards

You can export dashboards that other users can import. Consider using exported and imported dashboards in cases like these:

• Exporting is a way to save your dashboards for future re-import if, for example, the database that you are using will be replaced.

- Exporting and importing dashboard files is a way to pass dashboards between people or make them available for new users.
- Exporting and importing dashboards can be used to move dashboards from one environment to another.

r'-'1
NOTE
NOTE

When exporting dashboards, favorite viewlets are not included. Only external viewlets and data are included.

To export one or more dashboards from the *Manage Dashboards* dialog, select the dashboard or dashboards and click **Export**.

A file called exported_dashboards[uniqueid].json is generated and downloaded through your browser. The file can be saved or opened.



Other users can then use this file to import these dashboards through the import process described in the next section.

4.2.14.5.2.2 Import Dashboards

You can import a dashboard that you or someone else has exported. For example, an administrator might create a set of dashboards specifically for new users, export them to a file, and have a new user import that file.

From the *Manage Dashboards* dialog, click **Import** to open the *Import Dashboards* dialog. Under Choose Import file, click **Choose File**. Use the *Open* dialog to navigate to the dashboard file or files that you want to import. Double-click the file or files. Dashboards from the file are listed on the left side of the dialog.

Imp	ort Dashboards				?	×
	se Import file: ose File exported_da7	31646).json● Loaded				
	Dashboard Name	Viewlet Count		Tags		
	MQ DASH	1	Q	Not assigned to any Tags		
	Schema	1	Q	External Viewlet(s)		
	EMS-Local	26	Q	No External Viewlets		
				Search Viewlet(s)		
				No Search Viewlets		
				Favorite Viewlet(s)		
				No Favorite Viewlets		
	Iap Connection(s) *Re	quired		✓ Add New Dashboard(s) To Current Pe	erspe	ctive
				Clear Import	Can	cel

Figure 4.2.14.5.2.2-A. Import Dashboards

To view details about a dashboard, such as its tags and viewlets, click the magnifying glass icon **Q**.



Figure 4.2.14.5.2.2-B. Imported Tags and Viewlets

By default, importing connections are mapped to the first workgroup server connection that is in use. If a user has more than one connection in use, has permission to create connections at import, and wants to import the dashboards into a connection other than the default, the user can click **Map Connection(s)**. On the *Map Connection(s)* dialog, the user can select the connection that they want to use for the imported data. The **User Connection** list includes all connections that are in use.

A user who has the **Allowed Create Connection On Import** right can allow new connections to be added automatically at import, if needed. The user can select the *Add if not found in* option from the **User Connection** list. The user's connections are searched for those that have the same port and connection list as the importing connections, even if the names are different. If no such connections are found, a new connection is added.

Click **OK**.

Map Connection(s)	? ×
Importing Connection:	User Connection:
Primary Connection +	Primary Connection
*Re-login required if new connection is added	Add if not found in
	Primary Connection

Figure 4.2.14.5.2.2-C. Map Connections

By default, the **Add New Dashboard(s) To Current Perspective** checkbox is selected, so that upon import, new dashboards will be added to the current user perspective. If you want to prevent this from happening, clear the checkbox.

Choose the specific dashboards that you want to import by selecting their checkboxes.

Click **Import**. The imported dashboard or dashboards are displayed. If you've chosen to import multiple dashboards, the first one is displayed.

If you already have a dashboard with the same name as one that you are importing, a (1) is appended to the imported dashboard's name.

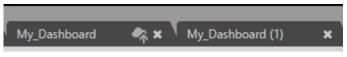


Figure 4.2.14.5.2.2-D. Treatment of Duplicate Dashboard Names

4.3 Viewlets

4.3.1 Adding and Maintaining Viewlets

The *Create Viewlet* dialog box is displayed when the **Viewlet** button **+ Viewlet** is clicked from the top right of the screen (*Figure 4.1-A*). Please note that when accessed from the *WorkSpace* dashboard, only the **Create a temporary viewlet using search** option is available.

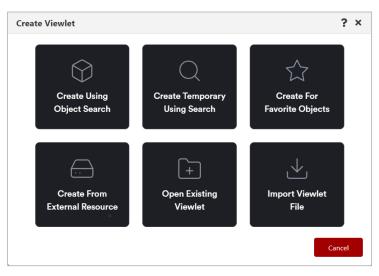


Figure 4.3.1-A. Create Viewlet

4.3.1.1 Creating New / Temporary Viewlets

The *Create new viewlet* window is displayed when **Create a new viewlet using object search** or **Create a temporary viewlet using search** is selected from the **Create Viewlet** dialog box (*Figure 4.3.1-A*). If **Create a temporary viewlet using search** was selected, the viewlet will only be visible during this session.

Select the product and object type from the left side of the screen. On the right side of the screen, complete the fields as required. When selecting a Workgroup server connection, you can choose to show objects from multiple connections by selecting the **Multi-Selection** checkbox and selecting the individual Workgroup servers one at a time.

If Workgroup server connection groups have been created, and the User Settings **Display Grouping In Connection Selection** checkbox is selected, connection groups are included in Workgroup server lists, in addition to individual connections.

To make the viewlet temporary, enable the **Temporary** check box.

Use the **Project** drop-down to filter the viewlet by user group configurations. Viewlet results are filtered by the selected group's server (workgroup servers, nodes, and managers) and object group access permissions defined in the security application. If **All** is selected, the data displayed is according to all groups the user belongs to. For example, if

the user belongs to both the *Administrators* and *Users* groups, the viewlet will display data that meets the security application filters for *Administrator* or *Users* when **All** is selected.

The **Attribute filter** is useful to search for specific cases. See <u>Attribute Filter</u>, for more info.

The **Custom Viewlet Color** option allows you to color code viewlets. See <u>*Color Settings Tab*</u></u>, for more information.

Click **Save Changes** when done. The viewlet will appear at the bottom of the current dashboard.

Create New IBM I	MQ Queue Viewlet	? ×
Product IBM MQ -	Viewlet name QUEUES	Workgroup server Temporary Primary Connection - (WGS1 * • ✓ ✓Multi-Selection ✓
Node		
Manager	Node	Manager
Queue	*	*
Channel		
Process	Object name	Queue Type
Торіс	*	Local Queue
Listener		
Namelist		
Service	Custom Viewlet Color Flat Color	:
Auth info		Find messages 🔽
Cluster QMgr	Project All ->	
Subscription	Active attribute filtering 🗆	
Channel auth rec		Search criteria smart x
Comm Info	Attribute filter queue depth + x	
	Result limit 20000	Search depth 10000
		Apply changes Cancel

Figure 4.3.1.1-A. Create New Queue Viewlet



4.3.1.2 Create a New Viewlet for Favorite Objects

The *Add favorite viewlet* dialog box is displayed when **Create a new viewlet for favorite objects** is selected from the **Create Viewlet** dialog box (*Figure 4.3.1-A*). For more information on favorite viewlets, see *Favorites*.

Add favorite viewlet	?
Viewlet name: My Favorites	
Workgroup server: MQM - 0 🔻	
Cancel Save Char	iges

Figure 4.3.1.2-A. Add Favorite Viewlet Dialog Box

4.3.1.2.1 Create a Favorite Viewlet

- 1. Enter a name for the viewlet within the **Viewlet name** field.
- 2. Select a server from the **Workgroup server** drop-down list.
- 3. Click Save Changes.
- 4. A viewlet for all favorite objects is now created. Scroll down to see the new viewlet. Favorite viewlets will have a star icon appearing immediately before the viewlet's name.

Favorites1MQM (10.0.0.91:4010)			
Object Name	Manager Name	Object Type ¹ ^	
BANK.DEF.SVRCONN	LEUNAME	Channel	
🔲 🔂 AB.MQ.Q.01	LEUNAME	Local Queue	
EUNAME	LEUNAME	Queue Manager	
🔲 🐻 🕓 QA	QA	Queue Manager	
Visible: 1-4 of 4 Total: 4	***		

Figure 4.3.1.2-B. Favorites Viewlet

4.3.1.2.2 Edit / Delete a Favorites Viewlet

Click the viewlet menu on the right side of the viewlet. Select **Edit viewlet** to rename the viewlet (*Figure 4.3.1.2-D*) or **Delete viewlet** (*Figure 4.3.1.2-E*) to remove the viewlet.

🖂 🌟 Favorites1MQM (10.0.0.91:4010)				:
🕄 🜩 Schema Default 🔹 🍞 Search (Filter By) 🍸			😰 Edit viewlet	riteria
Object Name	Manager Name	Object Type ¹ ^	Create selected objects viewlet	
	LEUNAME	Channel	× Remove viewlet	
AB.MQ.Q.01	LEUNAME	Local Queue		
EUNAME	LEUNAME	Queue Manager	Delete viewlet	
🗌 🐻 QA	QA	Queue Manager	Export data to CSV	
			Export data to CSV	
			Export viewlet to file	
Visible: 1-4 of 4 Total: 4	***		▼ Manage Filtered Columns	11 PM
			🕸 Manage Frozen Columns	

Figure 4.3.1.2-C. Edit / Delete Favorite Viewlet

Edit Favorites1 Favorite Viewlet		? ×
Viewlet	name: Favorites1	
Workgroup server:	Primary Conne 🗙	•
	Apply C	Changes Cancel

Figure 4.3.1.2-D. Edit Favorite Viewlet

Confirm Delete Action		? ×
Are you sure you want to delete viewlet "Favorites1"?		
	Yes	No

Figure 4.3.1.2-E. Delete Viewlet Confirmation

4.3.1.3 Create a New External Resource Viewlet

You can create a viewlet using an external resource. For example, you can display your company's intranet or a knowledge base so that it is easily viewed and accessible right within meshIQ Manage. If you utilize XRay, this feature allows for integration; you can view XRay viewlets from meshIQ Manage.

To create a viewlet using an external resource, select **Create a new external resource viewlet** from the *Create Viewlet* window (*Figure 4.3.1-A*). The below window opens. Enter a name for the viewlet and the URL to the external source. Select the workgroup server in the last field and click **Ok**.



If you are adding an XRay viewlet, refer to <u>Can I publish a viewlet on a web page?</u> For information on how to share the viewlet and retrieve its URL.

Create new external resource viewlet	?	×
Viewlet name:		
Local Queue Usage		
External resource URL:		
https://xray.nastel.com/xray/embedded.jsp?type=viewlet⁣	d=39e1(
Workgroup server:		
GENERATED_4097_11.0.0.38_	Ŧ	
Ok	Cance	el 🛛

Figure 4.3.1.3-A. Create New External Resource Viewlet

The viewlet will now appear on your dashboard. Below is an example.

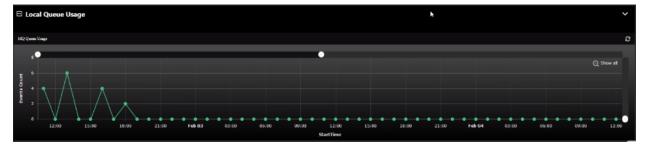


Figure 4.3.1.3-B. External Resource Viewlet

4.3.1.4 Import a Viewlet from a File

If you or another user has exported viewlet properties to a file (see *Export viewlet to file*), you can import that file to create a new viewlet. Select the **Import viewlet from file** option from the **Create Viewlet** dialog box (*Figure 4.3.1-A*).

Import Viewlet	? ×
Choose Import file: Choose File No file chosen	
Viewlet name:	
	Import Cancel

Figure 4.3.1.4-A. Import Viewlet

After you choose a file, the Viewlet Name is filled in, based on the file contents. Workgrouip server connections are listed. A user who has the **Allowed Create Connection On Import** right can allow new connections to be added automatically at import, if needed. The user can select the *Add if not found in* option from the **User Connection** list. The user's connections are searched for those that have the same port and connection list as the importing connections, even if the names are different. If no such connections are found, a new connection is added.

Import Viewlet	? ×
Choose Import file: Choose File exported_vi350333).j	son 🕒 Loaded
Viewlet name:	QUEUES
Primary Connection	Primary Connection 💌
*Re-login required if new connection	is added
	Import Cancel

Figure 4.3.1.4-B. Import Viewlet with File

Click **Import** to import the viewlet into the dashboard. If a new connection has been added, log out and back in again to view it.

4.3.1.5 Viewlet Menu

Clicking the three vertical dots menu located at the top right corner of a viewlet opens the viewlet menu. Users have the option to edit, remove or delete viewlets. They can also export viewlet data or properties. See the sections immediately below for more information on these options.

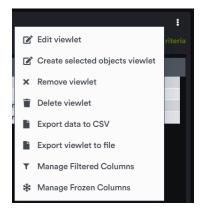


Figure 4.3.1.4-A. Viewlet Menu

4.3.1.5.1 Edit Viewlet

Select **Edit Viewlet** from the viewlet drop-down menu. The *Edit Viewlet* window opens. For more information on this screen, please see <u>Creating New / Temporary Viewlets</u>.

4.3.1.5.1.1 Attribute Filter

The **Attribute filter** feature allows you to narrow down the number of records in a viewlet to display more relevant results. Attribute filters can be valuable when searching for specific use cases, such as queues that get disabled, queues with more than 1000 messages, or objects that do not have specific settings (default persistence). Users can specify multiple attributes for each filter. In versions 10.4.2 and earlier, attribute filters are applied to data that the workgroup server has already returned. In versions 10.5 and later, the workgroup server applies any active attribute filters to data before it is passed to the application server to be displayed in the browser.

Attribute filters can be applied on the *Create New Queue Viewlet* and *Edit Queue Viewlet* (*section <u>4.3.1.5.1</u>*) windows. See <u>Creating New / Temporary Viewlets</u>. Once you create an attribute filter for a particular product and viewlet type, it becomes available for all viewlets for that product and type. For example, if an attribute filter is created for an IBM channel viewlet, it is available on other IBM channel viewlets.

The **Active attribute filtering** checkbox turns attribute filtering on and off for the viewlet. Select the checkbox to enable attribute filtering.



Whether attribute filtering is enabled or not, the specific attribute filters that you add will remain available for later use.

Create new IBM I	MQ Queue viewlet	? ×
Product	Viewlet name Workgrou Temp_Queue_Viewlet_1 Default	Lip server Temporary
Node		
Manager	Node Manager	•
Queue		
Process	Object name Queue Ty * Local Q	
Торіс		
Listener Namelist	Custom Viewlet Color Flat Color:	
Service	Project All Find mess	ages 🗆
Auth info	Project All	
Cluster QMgr Subscription	Active attribute filtering Attribute filter	teria x
Channel auth rec		
Comm Info	Result limit 100 Search de	pth 10000
		Save changes Cancel

Figure 4.3.1.5.1.1-A. Attribute Filter Option

You must have the **Manage Private Attribute Filters** right to add, edit, copy, or delete attribute filters.

To add an attribute filter, click the 🕒 button immediately to the right of the field.

The *Attribute Filters* dialog box opens. If you created any filters in the past, they are included in the Filter Name list.

About Sharing Attribute Filters:

- Any filters that you have shared have a green Shared Filter sicon on the Attribute Filters dialog. You can view and use filters that others have shared by turning on the Shared Filters slider. Filters that others have shared have a red Shared Filter icon.
- To share a filter with one or more groups, you must have both Manage Private Attribute Filters and Manage Shared Attribute Filters rights. Turn on the **Share Filter** slider for the filter in the *Attribute Filter Management* dialog (Figure <u>4.3.1.5.1.1-D</u>).

From the popup menu, click the read icon next to the groups you want to share the filter with. The read icon changes to green for selected groups.

Attribute Filters					? ×
Filter by:		Shared Filt	ters		
Filter Name 🗸		Mat	ch ALL of the follo	owing:	
CurrDepth		Attribute	Operation	Value	
Depth		Current Depth	is less than	100	
Max10000		Maximum Depth	is greater than	1000	
QueueName	>				
Add Copy As Delete Edit				Cancel	ОК

Figure 4.3.1.5.1.1-B. Attribute filters

You can search for a filter by entering part of its name in the **Filter by** field. The list is filtered automatically based on your entry.

Attrib	Attribute Filters						
Filter b	y:	Depth					
	Filter Name	•					
4	CurrDepth						
	Depth						

Figure 4.3.1.5.1.1-C. Attribute Filters: Filtering

To add a new filter, click the **Add** button. The *Attribute filter management* dialog box opens. Enter a name for the filter within the **Filter name** field.

Attribute Filter	Attribute Filter Management ? ×							
Filter name:	2r							
◉ Match All ○ Ma	atch At Least One							
Attribute	Compare operation		Value					
Add		Cancel	ОК					

Figure 4.3.1.5.1.1-D. Add New Attribute Filter

Select one of the following radio buttons:

- **Match All**: Objects with all attributes specified by the user will be found.
- **Match At Least One**: Objects with at least one of the attributes specified by the user will be found.

Click **Add** to add one or more attributes to the new filter.

The *Available attributes* window appears. Click on an attribute to select it. Multiple attributes can be added. The background color of a selected attribute will appear green.

There are two filter methods to locate attributes more easily:

- *Filter by name.* Use the **Enter filter value** search box to search by attribute name (part of the name can be entered).
- *Filter by category.* Use the drop-down list to select the category for the attribute you are looking for. Categories are specific to the viewlet's object type (for example, queue manager categories may include *Cluster* and *Communication*; channel categories may include *Statistics* and *Monitoring*).

Available Attributes	? ×
Available attributes:	
Enter filter value All 🗸	
Base Object Name	General
Use Dead Letter Queue	General
Put Messages	General
Queue Type	General
Cluster Name	General
Node Name	General
Hosting Queue Manager	General
Manager Name	General
Queue Description	General
Cluster Queue Type	General
QSG Disposition	General
Last Updated	General
Remote Queue Manager	General
Remote Queue	General
Usage	General
Get Messages	General
Maximum Depth	General
Definition Type	General
Open Input Counter	General
Open Output Counter	General
Current Depth	General
	Cancel OK

Figure 4.3.1.5.1.1-E. Available Attributes

Click **OK** to return to the *Attribute Filter Management* dialog. The selected attributes will need to be configured. For each attribute, select an option from the **Compare operation** drop-down. (Selections vary by data type. For example, numerical comparisons are as follows: *is equal, is less than, is greater than, is not equal, is empty,* and *is not empty.* Text comparisons are as follows: *is equal, is not equal, starts with, ends with, contains, does not contain, is blank, is not blank, matches pattern.* For custom attributes, compare operations are as follows: *key exists, key does not exist, is equal, is not equal, starts with, ends with, ends with, ends with, contains, does not contain, and matches pattern.*) Then specify a **Value**. *Figure 4.3.1.5.1.1-E* below is an example. (To learn how to set attribute filter criteria on the fly with variable values, see <u>Attribute Filter Variables.</u>)

To remove an attribute, simply click on the red X at the end of the attribute row. Click **OK** after all attributes have been configured.

Attribute Filter Management ?							
Filter name: Depth							
Attribute	Compare operation	Value					
Current Depth	is less than 🖌	100	*				
Maximum Depth	is greater than 🗙	1000	*				
Add		Cancel	ОК				

Figure 4.3.1.5.1.1-F. Configuring Attributes

The Attribute filters dialog box appears. The left side of the screen displays all created filters. Click on a filter to view that filter's attributes within the content box on the right side of the screen. If all attributes must be met, the text, **Match ALL of the following**, is displayed (*Figure 4.3.1.5.1.1-G.*). If at least one attribute must be met, the text, **Match at least ONE of the following**, is displayed (Figure <u>4.3.1.5.1.1-G.</u>). This is specified when

adding a new filter (Figure <u>4.3.1.5.1.1-D</u>) but can be updated when configuring attributes (Figure <u>4.3.1.5.1.1-F</u>).

Attribute Filters					? x
Filter by: my		Shared F	ilters		
Filter Name 🗸		Ma	tch ALL of the follo	owing:	
Myfilter		Attribute	Operation	Value	
		Queue Name	starts with	AB	
		Node Name	contains	12	
	→	Current Depth	is greater than	100	
Add Copy As Delete Edit				ОК	Cancel

Figure 4.3.1.5.1.1-G. Attribute Filters – All Attributes

Attribute Filters					?	×
Filter by: my		Shared Fi	lters			
Filter Name 🗸		Match	at least ONE of the	following:		
Myfilter		Attribute	Operation	Value		
		Queue Name	starts with	AB		
		Node Name	contains	12		
	>	Current Depth	is greater than	100		
Add Copy As Delete Edit				ОК	Cancel	

Figure 4.3.1.5.1.1-H. Attribute Filters – At Least One Attribute

To edit a filter, click **Edit** to open the *Attribute Filter Management* dialog, where you can add one or more new attributes, or modify or delete an existing attribute. Existing attributes can be deleted using the delete student button.

To create a new attribute filter by modifying an existing one, select the filter that you want to start with and click **Copy As...** The Attribute Management dialog opens. You can modify the filter that you copied, give it a new name, and click **OK**.

To delete an attribute filter, select it and click **Delete**. Click **Yes** to delete the selected attribute filter or **No** to cancel.



Figure 4.3.1.5.1.1-I. Confirm Delete Action

Users who have the **Manage Private Attribute Filters** right can view and manage the filters they have created by going to the User Settings Attribute Filters tab. Likewise, users with the **Manage Global Attribute Filters** right can manage global filters through the Global Settings Attribute Filters tab. See <u>Attribute Filter Tab</u> for more information.

If the WGS cannot retrieve any of the parameter values expected to display in the viewlet schema based on the attributes selected, a warning symbol Δ is displayed immediately next to the viewlet menu button.

	Queues 🕀 💂 Default	t schema: Default L	ocal Queues Dir 🔻	Filter by:					A۲
∎ ×	Queue Name ^	Manager Name	Current Depth	Maximum Depth	Get Messages	Put Messages	Open Input Counter	Open Output Counter	Last Updated
No	data to display								

Figure 4.3.1.5.1.1-J. Warning Sign

Click on the warning symbol to view the error description window.

Filter delete errors Error								
Status	Command status	Origin	Timestamp	Reason	Actions			
A	Filter by attribute: 185 (Default Persistence) failed	-	Rgp 13 2019 11:51:52	Retrieved data does not contain selected filter attribute	Description			
					O			

Figure 4.3.1.5.1.1-K. Error Description Window

Click on the **Description** button to view the error details. Click **Ok** to exit the window.

Actions
Hide description
Ok

Figure 4.3.1.5.1.1-L. Error Details

4.3.1.5.1.1.1 Attribute Filter Variables

Set attribute filter criteria on the fly with variable values. Instead of using a hardcoded value that may need to be updated over time, you can set up a variable value in your attribute filter. Then set the variable value as needed, by clicking the Variable button on the user interface. In the example below, an attribute filter looks for channel names that match its criteria using a text-based variable.

When setting up the attribute filter, choose *Variable* under **Value Type**. (See *Figure* <u>4.3.1.5.1.1.1-A</u>.) (For attributes such as Node Type, whose possible values are items in a list,

this option is unavailable.) Click to manage the variable. Enter the name of a new variable, or choose an existing variable to use for this attribute filter. (See <u>Figure</u> <u>4.3.1.5.1.1.1-B</u>.) Click **OK**. The name you entered is displayed in the Value column. (See <u>Figure 4.3.1.5.1.1.1-C</u>.) Click **OK** to save the new attribute filter.

To filter a viewlet by applying the variable that you have set up, first make sure that the attribute filter with the variable has been applied to the viewlet and that the viewlet's **Active attribute filtering** checkbox is selected. Then On the main interface, click the **Variable** button to set the criteria that the attribute filter will look for. In the example created earlier in this article, the variable is for text. (See <u>Figure 4.3.1.5.1.1.1-D</u>.)

Enter the text in the Modify Variables dialog (see <u>*Figure 4.3.1.5.1.1.1-E*</u>). Click **Save** to apply the variable. (See <u>*Figure 4.3.1.5.1.1.1-F*</u>.)

Attribute Filter I	Management		? ×
Filter name: chnl_te	st		
Share Filter Match All 〇 Mat			
Attribute	Compare operation	Value	Value Type
Channel Name	is equal 🗸		✓ Value



Attribute Filter Variables Management	? ×
Edit Variable Name TestVar(channel)	Use Existing Variable
	OK Cancel



Attribute Filter M	lanagement		? ×
Filter name: chnl_tes	st		
Share Filter			
-			
● Match All ○ Match	ch At Least One		
Match All () Mate Attribute	ch At Least One	Value	Value Type
		Value TestVar(channel)	Value Type O Value Value Variable

Figure 4.3.1.5.1.1.1-C. Attribute Filter Management with Variable Value

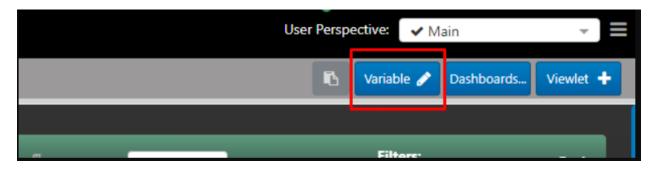


Figure 4.3.1.5.1.1.1-D. Attribute Filter Variable Button

Attribute Filter M	lanagement				?	×
Filter name: chnl_tes	st					
C Share Filter						
● Match All ○ Match	ch At Least One					
Attribute	Compare operation	Value		Value Type		
Channel Name	contains 👻	TestVar(channel)	 Image: A set of the set of the	○ Value ● Variable	*	8
Add				ОК	Cancel	

Figure 4.3.1.5.1.1.1-E. Attribute Filter Management Value Type

) C		NNELS Schema: Default Channels Dir 👻	Filter by:
×		Channel Name 🔨	Manager Name
0	Θ	SYSTEM.ADMIN.SVRCONN	ORIS
.0	Θ	SYSTEM.ADMIN.SVRCONN	OMEGA
	Θ	SYSTEM.AUTO.RECEIVER	OMEGA
0	Θ	SYSTEM.AUTO.RECEIVER	IBM
2	Θ	SYSTEM.AUTO.RECEIVER	PEARL
.0	0	SYSTEM.AUTO.RECEIVER	SSL_QM

Figure 4.3.1.5.1.1.1-F. Filtered Channels Viewlet

4.3.1.5.1.2 Find Messages

Within the *Edit Queue* * *viewlet* window (or *Create New Queue Viewlet*, see <u>Figure 4.3.1.1-A</u>), users can filter queues by messages containing specific data.

The Find Messages feature has two components:

- Search criteria, which limit the results that will be returned from the workgroup server according to the contents of individual messages. Search criteria are saved for easy retrieval and can also be used for actions such as Put New, Copy All, Move All, and Delete All.
- The Find Messages checkbox, which applies the Search criteria, enabling the message search criteria at the source (that is, the workgroup server).



If you use the Find Messages option, it is recommended that you also use the fields provided to narrow results by Queue name (Object name), Project name, or other parameters. This makes your search more efficient by limiting the amount of data being searched.

Create new IBM I	MQ Queue viewlet	? ×
Product	Viewlet name Workgroup server	Temporary
IBM MQ 👻	Temp_Queue_Viewlet_1 Default Connection 🔻	
Node		
Manager	Node Manager	•
Queue		· ·
Channel	Object name Queue Type	
Process	* Local Queue	-
Торіс		
Listener		
Namelist	Custom Viewlet Color	
Service	Project All	
Auth info	Project All	
Cluster QMgr	Active attribute filtering 🗹	
Subscription	Attribute filter + x	X
Channel auth rec		
Comm Info	Result limit 100 Search depth 10000	
	Save chang	ges Cancel

Figure 4.3.1.5.1.2-A. Find Messages

To add, edit, and delete criteria records, you must have the **Manage Private Message Criteria** right in the security application. To add criteria, click the ellipses button of the **Search Criteria** field. The following dialog box opens.



Figure 4.3.1.4.1.2-B. Message Criteria

To add new search criteria, click ^[12]]. A new search criteria row is added. Double-click the new row and enter a name for the record. Press **Tab** on your keyboard.

The data to search for will need to be added to the search criteria record created above.

Make sure that the message criteria record is selected, then click the Data button to specify the data.

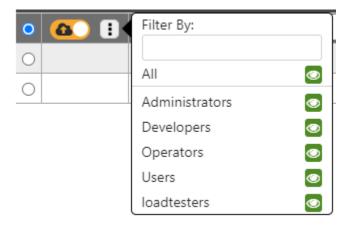
Message Data Criteria		? ×
Text only	Encoding: US-AS	SCII 🗸
Message Search criteria		
Help: CTRL + C - Copy selected data; CTF	RL + V - Paste data	
	Save	Cancel



Click **Save**. Additional search criteria records can be added by repeating the previous step.

To share criteria records with groups, you must have both the **Manage Private Message Criteria** and the **Manage Shared Message Criteria** rights in the security application. To share any record with one or more groups, double-click its name. The **Security** Private icon is displayed in front of the name of the record. Click the Private icon to share the record. The

icon changes to a Shared icon. From the popup menu, click the read icon icon ext to the groups you want to share the dashboard with. The read icon changes to green for selected groups.



To apply search criteria, select the search criteria record you want to use and click **Save**. (If you are accessing the Message Criteria dialog when editing a viewlet, you can view shared records by turning on the Shared Criteria slider.)

Back on the *Edit Queue viewlet* window, make sure that the Find messages checkbox is selected so that your search criteria take effect. The criteria record you selected is displayed in the Search Criteria box. Click **Apply Changes**. The viewlet will display only the queues with messages containing the data specified in the search criteria.

To limit the number of records that will be searched within each queue manager, you can specify a value within the **Search depth** field. Click **Apply Changes**. The Search Depth can be applied independently of the Search criteria, or alongside it.

To turn off the data message filter that is displayed, click the **X** to the right of the **Search Criteria** field. To completely disable filtering by message content, clear the **Find messages** checkbox.

To delete a search criteria record that you no longer need, select it on the Message Criteria window and click the delete solution.

4.3.1.5.2 Remove Viewlet

Selecting **Remove viewlet** from the viewlet menu (*Figure 4.3.1.4-A*) will remove the viewlet from your dashboard. It will still be available to add back at any time (see section, *Adding and Managing Viewlets*, for information on adding an existing viewlet).

4.3.1.5.3 Delete Viewlet

To delete a viewlet select **Delete viewlet** from the viewlet menu (*Figure 4.3.1.4-A*). The following dialog box opens to confirm the delete action.

Confirm delete action	?
Are you sure you want to delete viewlet "Queues"	
	Yes No

Figure 4.3.1.4.3-A. Confirm Delete Action

4.3.1.5.4 Export data to CSV

Selecting **Export data to CSV** from the viewlet menu (*Figure 4.3.1.4-A*) will export all data displayed in the viewlet to a CSV file. The file will automatically download. By default, the export file includes extra whitespace (from one to three spaces) after the Manager Name, Node Name, and other fields. When you choose the export option, a prompt is displayed to ask you whether you want to remove (strip) the extra whitespace. To remove it, click **Yes**.

4.3.1.5.5 Export viewlet to file

Selecting **Export viewlet to file** from the viewlet menu (*Figure 4.3.1.4-A*) will export all viewlet properties to a JSON file. The file will automatically download. You can then share this file with others, who can import it. See *Import a Viewlet from a File*.

4.3.1.5.6 Force Refresh (Viewlet)

The Force Refresh option is currently only available for queue viewlets of 100 rows or fewer.

When you know you'll need to force a refresh of viewlet data several times in a row (for example, if a problem with the queues requires you to view the latest Current Depth right away), you can turn on Force Refresh mode by selecting **Enable Force Refresh** from the viewlet's menu. This mode allows you to force update the data in the entire viewlet, just as you would do for one queue or a few queues, but using a simpler, more efficient method.

In this temporary alternate mode, the regular refresh icon becomes a blue force refresh icon. Unlike the regular refresh icon, which refreshes the data from the cache, this force refresh icon obtains the latest data from the workgroup server.

You can use the blue Force Refresh icon as many as five additional times. After these additional refreshes (or after a browser refresh), the normal refresh mode and regular icon return. You can reinitiate Force Refresh mode by selecting **Enable Force Refresh** from the viewlet's menu again.

You can exit Force Refresh mode at any time by selecting **Disable Force Refresh** from the viewlet's menu.

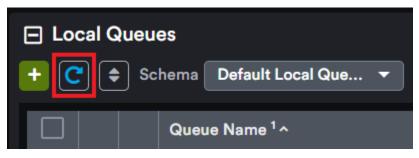


Figure 4.3.1.5.6-A. Force Refresh Button

4.3.1.5.7 Manage Filtered Columns

By managing filtered columns in a viewlet, you can tailor the use of the **Search (Filter by)** box to your specific needs. Instead of using it to filter viewlet data by all columns only (its default behavior), you can choose one or more specific columns to apply the filter to. For example, you can specify the Put column for filtering, so that a filter for "Allowed" returns only records for which the Put action is allowed.

To manage filtered columns, a user must either be the creator of the viewlet or, for viewlets on shared dashboards, have "write" permission for the viewlet. After filtered columns have been selected for a viewlet, all users of the viewlet can choose whether to filter by the selected columns or by all columns (see *Choose a filter method* below).

4.3.1.5.7.1 Manage filtered columns

icons

- 1. Select **Manage Filtered Columns** from the viewlet's menu to allow individual columns to be selected for filtering.
- 2. To indicate which columns you want the viewlet data to be filtered by, click the filter

Topic Name¹ next to the column headers. The icons turn green

Topic Name¹^. When filtering viewlet data, users can still choose whether or not to use these columns exclusively. See *Choose a filter method* below.

4.3.1.5.7.2 Clear all column-specific filters

While in Manage Filtered Columns mode, to "reset" or clear the green filter icons from all columns, click the **Clear All Selected Filters** button. The filter icons for all columns will turn white Topic Name¹

4.3.1.5.7.3 Turn off individual column filtering

To stop managing which columns are filtered, select **Stop Managing Filtered Columns** from the viewlet's menu. Columns that have been selected for filtering retain the green icons. When filtering viewlet data, users can still choose whether or not to use these columns exclusively. See *Choose a filter method* below.

4.3.1.5.7.4 Choose a filter method

The filter icon in front of the **Search (Filter by)** label allows you to toggle between filtering by all columns and filtering by selected columns:

- Click this white filter icon to switch to Filter by Chosen mode. This icon now has a red border . Records are filtered by the values in the selected columns (those with the green filter icons) only.
- To revert to filtering by all columns, click the filter icon again. It becomes a white **Filter by All** icon **I**. The **Search (Filter by)** box will apply to values in all columns.

Enter a filter value in the **Filter By** box to filter records as you type.

4.3.1.5.8 Manage Frozen Columns

By freezing columns in a viewlet, you can keep important columns on the left side of the viewlet no matter how far you scroll to the right, without changing your schema. Frozen columns will remain frozen (on the left side) until they are unfrozen.

To manage frozen columns, a user must either be the creator of the viewlet or, for viewlets on shared dashboards, have "write" permission for the viewlet.

4.3.1.5.8.1 Manage frozen columns

- 1. Select **Manage Frozen Columns** from the viewlet's menu to enable individual columns to be frozen or unfrozen.
- 2. Choose which columns you want to freeze or unfreeze.
 - To select a column to freeze, click the **Freeze pane** icon a next to its column header. The column moves to the left, and its icon becomes a green

Unfreeze pane icon **III**. To keep the leftmost column in place, make sure to freeze it.

🖃 Kafka Topic viewlet					
	Schema Default Topics Dir	Search	(Filter By) T Pro	jects All	
	🏶 Topic Name ¹ ^	🛞 Last Updated	🍀 Total Partitions	🛠 Preferred L	
	consumer_offsets	00:00:13 hours	50	50	
	item-update-requests	00:00:13 hours	16	16	
	jkadminreq-to-query	00:00:13 hours	32	32	
0	jkql-item-defs-in	00:00:13 hours	32	32	
	jkql-item-defs-out	00:00:13 hours	32	32	
	jkql-to-exec	00:00:13 hours	32	32	
Visible: 1-6 of 4	45 Total: 45				

To select a column to unfreeze, click the green Unfreeze pane icon next to its column header. The column moves to its assigned position in the schema, and its icon becomes a white Freeze pane icon .

MM11.001

4.3.1.5.8.2 Clear all frozen columns

To clear all frozen columns, click the **Clear All Frozen Columns** button. The frozen columns revert to their assigned based on the schema. All icons revert to white **Freeze**

pane 🗱 icons.

4.3.1.5.8.3 Turn off frozen column management

To turn off all frozen icons for individual columns, select **Stop Managing Frozen Columns** from the viewlet's menu. The **Freeze pane**, **Unfreeze pane**, and **Clear All Frozen Columns** icons are no longer available. After one or more frozen columns have been set for a viewlet, all users of the viewlet will see them on the leftmost side of the viewlet.

🖂 Kafka Topic viewlet					
🕂 🕄 🖨 Sa	chema Default Topics Dir 🔻	Search (Filte	ar By) T Project	All	
	Topic Name ¹ ^	Last Updated	Total Partitions	Preferred Lea	
	item-update-requests	00:00:13 hours	16	16	
	jkadminreq-to-query	00:00:13 hours	32	32	
	jkql-item-defs-in	00:00:13 hours	32	32	
	jkql-item-defs-out	00:00:13 hours	32	32	
	jkql-to-exec	00:00:13 hours	32	32	
	ikrea-to-auery	00:00:13 hours	64	64	
Visible: 2-7 of 4	45 Total: 45		••	•	

Frozen columns remain in place, even when you scroll to the right:

Total: 3 Viewlets	Collapse all					
🖃 Kafka Topic	🖃 Kafka Topic viewlet					
+ 🖸 🖨 Sc	hema Default Topics Dir 🔻	Search (Filt	er By) 🝸 Proje	cts All		
	Topic Name ¹ ^	Last Updated	er Replicas	Total Messages		
	item-update-requests	00:00:13 hours		2866		
	jkadminreq-to-query	00:00:13 hours		24		
	jkql-item-defs-in	00:00:13 hours		26		
	jkql-item-defs-out	00:00:13 hours		7		
	jkql-to-exec	00:00:13 hours		0		
	ikrea-to-query	00:00:13 hours		147		
Visible: 2-7 of 4	15 Total: 45			•••		

4.3.1.6 Action Menu

When you click on the check box immediately to the left of an object within a viewlet, the Action menu becomes available. Please see <u>Appendix C</u> for an explanation of these options. The box will remain checked until you collapse the viewlet, change dashboards, or click on the check box.

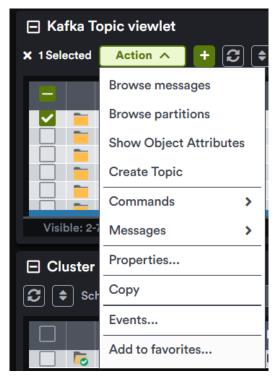


Figure 4.3.1.6-A. Action Menu

Note that the menu is transparent when your mouse is not hovering over it. This makes it easier to view other objects when selecting multiple objects.



Figure 4.3.1.6-B. Transparent Menu

The menu becomes fully visible when your mouse is hovering over it.

× 1Selected	Action 🔨 🕂 🕄 🖨	
	Browse messages	
	Browse partitions	
	Show Object Attributes	
	Create Topic	
	Commands >	
Visible: 2-7	Messages >	
Cluster	Properties	
C 🗢 Sch	Сору)
	Events	
	Add to favorites	B

Figure 4.3.1.6-C. Fully Visible Menu

When multiple objects are selected, you can click on the in the header to clear (uncheck) all selected objects.

You can check the header check box 🔲 to select all objects in the viewlet (a white

checkmark 🔽 is displayed) and clear it to deselect all objects.



The header check box may not be available if there are too many objects in the viewlet. The number of queue managers that can be selected in this way is limited by the Bulk Select Max options: Restricted objects global user setting. The number of other objects in a viewlet that can be selected in this way is limited by the General objects setting.

4.3.2 Nodes

There can be multiple nodes in a workgroup server (see <u>Create a Node</u> for information on how to create a node). The nodes are the access points for the queue managers and EMS brokers. A workgroup server's nodes can be viewed on the **WorkSpace** dashboard. There will be a node viewlet for each workgroup server. You can create a new schema to add, remove, or rearrange displayed columns as you see fit. See <u>Schemas</u> for instructions.

A green circle with a white checkmark $\frac{1}{2}$ shows that the node is active, and a red circle with an exclamation mark $\frac{1}{2}$ means that the node is stopped, or its state is unknown.

The following screenshot displays the pop-up menu options of node objects. Please see <u>Appendix C</u> for an explanation of these options.



Your pop-up menu options may differ according to your user permissions, which are managed by an admin.

Show Object Attribute Show Topology Create Queue Manage Events			US-EAST-2.COMPUTE.IN1 RHEL7 RHEL72	
✓ Manage		Start all WMQ Objects		
Commands	>	Stop all WMQ Objects		
Discover now	>	Shutdown		

Figure 4.3.2-A. Nodes Pop-Up Menu

4.3.2.1 Manage Nodes

The **Manage** option marks whether a node is managed. When a node is inactive, uncheck the **Manage** option in the pop-up menu and check it again – this will start the inactive node. To stop a node, perform the opposite – uncheck the **Manage** option. When the node is not managed, it can be deleted, or its properties can be modified.

When the node is managed, it can also be discovered. See <u>Appendix C</u> for more information on discovery modes.

If you select multiple nodes, you are presented with the **Compare** option. Select this option to launch a viewlet displaying similarities and differences between the selected nodes (see the <u>Comparing Objects</u> section for more information). If you selected unmanaged nodes, you also have the option to delete the selected nodes.

Ľ	3 (🗄 🛐 Schema:	Default Nodes Dir		*	Filter by	r.		
~	×	Node Name ^	Hostname	Use DNS	IP Address	IP Port	OS Platform	Description	Hear
~	5	DESKTOP-12K3488	DESKTOP-12K3488	NO	127.0.0.1	5010	WINDOWS NT		1
~	50	pavani		NO	172.16.31.102	5010	WINDOWS NT		1
~	50	REMOTE_EMS	DESKTOP-12K3488	NO	127.0.0.1	5012	Java		1
	omp	916	DESKTOP-12K3488	NO	127.0.0.1	5020	WINDOWS NT		1

Figure 4.3.2-B. Multiple Nodes Selected

4.3.2.2 Starting / Stopping all WMQ Objects (Nodes)

To start or stop WMQ objects on nodes, or shut down a node, select **Commands** > **Start all WMQ objects** or **Stop all WMQ objects** from the selected node's action menu (*Figure 4.3.2-* <u>A</u>).

Start All WMQ Objects

To start the node's WMQ objects, select **Commands** > **Start all WMQ objects**.

You can select **Start channels**, **Start an instance of a multi-instance queue manager**, or both. Click **Yes** to continue, or **No** to cancel.

For more information on multi-instance queue managers, please go to the IBM Knowledge Center:

<u>https://www.ibm.com/support/knowledgecenter/en/SSFKSJ_7.5.0/com.ibm.mq.con.doc/q018140</u> . <u>htm</u>

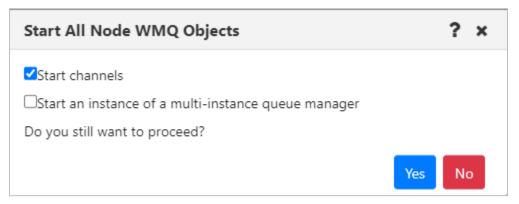


Figure 4.3.2.2-A. Start All Node WMQ Objects

Stop All WMQ Objects

To stop the node's WMQ objects, select **Commands** > **Stop all WMQ objects**. Click **Yes** to continue, or **No** to cancel.

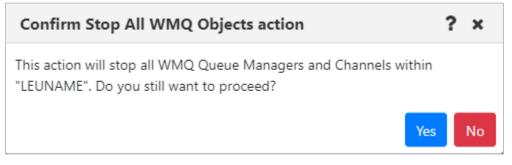


Figure 4.3.2.2-B Confirm Stop All Node WMQ Objects

Shut Down the Node

To fully stop the node, select **Commands** > **Shutdown**. Click **Yes** to continue, or **No** to cancel.

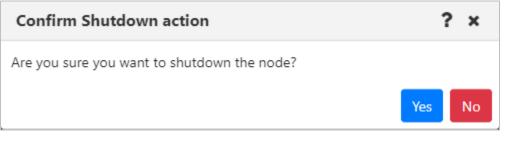


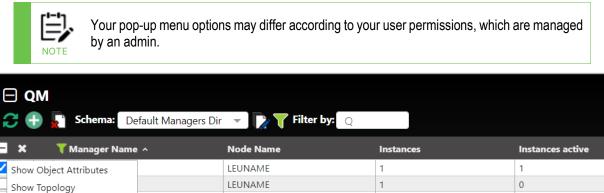
Figure 4.3.2.2-C Confirm Node Shutdown

4.3.3 Managers

4.3.3.1 Queue Managers

To view queue managers, create a viewlet (see <u>Adding and Maintaining Viewlets</u> for more information). The viewlet toolbar includes a refresh viewlet button \bigcirc . It also includes **Default schema** drop-down options and the ability to create a new schema \bigcirc or edit an existing schema \bigcirc . For more information on schemas, please see *Customizing Viewlets* (section <u>4.3.7</u>).

You can view a queue manager's path by hovering over its name. Select a queue manager to display the action menu. The menu options are described in <u>Appendix C</u>.



Show Topology Show Status			UNAME		1	0
Create Queue Manager						
Commands	>	Start all WMQ objects				
Cluster membership	>	Stop all WMQ objects				
Properties		Ping				
MQSC	>	Security	>			
Discover now	>	View Error Log				
Delete		Connections(modal)				
Delete from database		Connections(console).		Filter by:		
Events					—	
MQ Statistics					🝸 Manager Name	Current Depth
Create dashboard	>	·			QA	8
Add to favorites					QA	0
Add to lavolites					04	0

Figure 4.3.3.1-A. Queue Manager Viewlet

A queue manager's state is represented by the folder icon appearing before its name. Refer to the table below for the meaning of each folder icon. You can add the **Queue manager state** and **State** columns to the viewlet's schema to display a more detailed state (*Figure 4.3.3.1-B*).

Table 4.3.3.1-A. Queue Manager States					
Icon Possible States					
	Unknown state				

Table 4.3.3.1-A. Queue Manager States						
lcon	Possible States					
	Running / active					
	Running as standby					
	Ending immediately					
	Ending preemptively					
	• Stopped					
	Updating state					
6	Starting					
	Status not available					
	Ended normally					
	Ended immediately					
	Ended unexpectedly					
	Ended preemptively					
-	Quiescing					
	Running elsewhere					

qmgr Default schema: Copy of Default Managers Dir Filter by:						
_		Manager Name ^	Queue manager state	State	Node Name	
	6	T12	Status Not Available	Stopped	BENAS	
	6	T2	Status Not Available	Stopped	BENAS	
	6	т2	Status Not Available	Stopped	DAINIUS	
	5	T2	Running	Active	DZI	
	6	Т2	Status Not Available	Stopped	SAMTIS	
	6	Т3	Status Not Available	Stopped	BENAS	
	6	тз	Running	Active	DAINIUS	
	5	Т3	Running	Active	DZI	
	6	Т3	Status Not Available	Stopped	SAMTIS	
	6	T4	Status Not Available	Stopped	BENAS	
	5	Τ4	Running	Active	DZI	

Figure 4.3.3.1-B. Queue Manager States

4.3.3.1.1 Attributes

When **Show Object Attributes** is selected from a queue manager's action menu (*Figure* <u>4.3.3.1-A</u>), the *Attributes* viewlet opens. This viewlet displays the attributes of the selected object. Scroll down to see additional attributes.

To export the attributes of the selected object, click the **Save Table as CSV** button. A file called exported_compare_attributes.csv is generated and downloaded through your browser. The file can be saved or opened.

You can also search the list to find specific attributes or values. Enter part or all of the attribute name or value in the box provided. The first record that matches the value you entered is highlighted. You can then browse through matches using the right ≥ and left ≤ arrows.

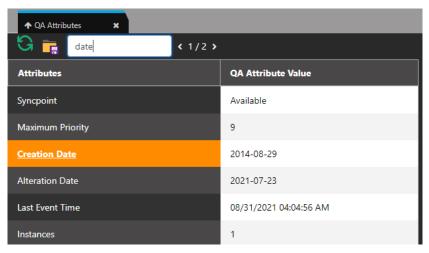


Figure 4.3.3.1.1-A. Queue Manager Attributes

4.3.3.1.2 Starting / Stopping all WMQ Objects (Queue Managers)

To start or shutdown queue managers, select **Commands** > **Start all WMQ objects** or **Stop all WMQ objects** from the selected queue manager's action menu (*Figure 4.3.3.1-A*).

Start Queue Manager

The following dialog box is displayed when **Start all WMQ objects** is selected. You can select **Start channels** and/or **Start an instance of a multi-instance queue manager** by clicking the check boxes.

For more information on multi-instance queue managers, please go to the IBM Knowledge Center:

<u>https://www.ibm.com/support/knowledgecenter/en/SSFKSJ_7.5.0/com.ibm.mq.con.doc/q018140</u>. <u>htm</u>

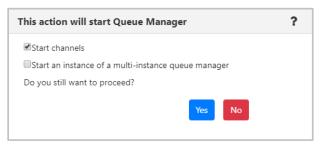


Figure 4.3.3.1.2-A. Start Queue Manager

Stop Queue Manager

When **Stop all WMQ objects** is selected, the following dialog box is displayed where you can select the shutdown method.

-Shutdown Method Quiesced Immediate Preemptive -Shutdown Options	Do not use PREEMPTIVE method unless all other attempts to stop the queue manager have failed. This method can have unpredictable consequences for connected applications
	o Reconnectable Clients tandby QMgr
End a standby inst	ance of the QMgr
	Yes Cancel

Figure 4.3.3.1.2-B. Stop Queue Manager

4.3.3.1.3 Properties

When **Properties** is selected from the queue manager's action menu (*Figure 4.3.3.1-A*), the *Properties* window for the selected object is displayed. For detailed descriptions of the various input fields and tabs, go to the IBM Knowledge Center:

<u>https://www.ibm.com/docs/en/ibm-mq/9.2?topic=properties-queue-</u> manager#e_properties_qmanager

See <u>*Custom Attributes*</u> for information on adding custom attributes to a queue manager (done on the **Custom Attributes** tab).

Queue Manager QA Pro	perties	? ×
QA	Queue Manager Name:	
🛶 General	QA	
Cluster	Description	
Repository	Test Multiple managers	
Communication	Dead-Letter queue:	
Events		× •
SSL	Maximum Message Length:	Maximum Open Handles:
Monitoring	4194304	256
Pub/Sub	Maximum Uncommited Messages:	Trigger Interval:
Log	10000	999999999
Custom Attributes	Command Server Control:	Channel Initiator Control:
	Queue Manager 🗸 🗸	Queue Manager 🗸 🗸
	Msg Mark Browse Interval (mSec.):	Max Properties Length:
	5000	-1
	Custom:	
	Version:	AMQP Capability
	09020300	NOT SUPPORTED
	Advanced Capability	
	NOT SUPPORTED	•
	Collect MQ SysMetrics	Force Changes
		Ok Schedule Cancel

Figure 4.3.3.1.3-A. Queue Manager Properties

4.3.3.1.4 Events

When Events is selected from the queue manager's action menu (*Figure 4.3.3.1-A*), the Events viewlet opens. The viewlet displays events in real time. The **Event #** provides the event number within its category number. Click this number to display the Event Details window.

⊟ Ma × 1Sele	nager_Viewlet cted Action V 🕂 🕄 🗣 S	chema Default Manager	s Dir 👻 🛛 🛛 🖓		Projects All →			Show criteri
	Manager Name 1 ^	Node Name	Instances	Instances active	Command Level	OS Platform	Node Type	Last Updated
	🔁 🕓 QA	LEUNAME	1	1	923	WINDOWS NT	IBM MQ Agent	00:00:32 hours
				_				
				~ (Console (1)			
↑ QAE	rents ×							
	Search Q < 0/0 >							
Event #	Date/Time		Category	E	vent ID	Object		
871	3/5/2024 4:23:04 PM (UTC-05:00)		Queue Manager	A	uto-Discovery Stopped	\\MQM\LEUN	AME\QA	
858	3/5/2024 4:13:04 PM (UTC-05:00)		Queue Manager	А	uto-Discovery Stopped	\\MQM\LEUN	AME\QA	
845	3/5/2024 4:03:04 PM (UTC-05:00)		Queue Manager	А	uto-Discovery Stopped	\\MQM\LEUN	AME\QA	
832	3/5/2024 3:53:05 PM (UTC-05:00)		Queue Manager	А	uto-Discovery Stopped	\\MQM\LEUN	AME\QA	
819	3/5/2024 3:43:04 PM (UTC-05:00)		Queue Manager	А	uto-Discovery Stopped	\\MQM\LEUN	AME\QA	
806	3/5/2024 3:33:04 PM (UTC-05:00)		Queue Manager	А	uto-Discovery Stopped	\\MQM\LEUN	AME\QA	
793	3/5/2024 3:23:04 PM (UTC-05:00)		Queue Manager	А	uto-Discovery Stopped	\\MQM\LEUN	AME\QA	
780	3/5/2024 3:13:05 PM (UTC-05:00)		Queue Manager	А	uto-Discovery Stopped	\\MQM\LEUN	AME\QA	
100								
767	3/5/2024 3:03:04 PM (UTC-05:00)		Queue Manager	A	uto-Discovery Stopped	\\MQM\LEUN	AME\QA	

Figure 4.3.3.1.4-A. Events Viewlet

Clicking a blue event number will open the *Event details* window for the event. There are three tabs: **General** (*Figure 4.3.3.1.4-B*), **Diagnostic** (*Figure 4.3.3.1.4-C*) and **Detail** (*Figure 4.3.3.1.4-D*). The General tab provides context for the Receive Time that is shown. By default, the event date and time is converted to local time. The Coordinated Universal Time (UTC) offset is displayed. To view the date and time converted to GMT, click the GMT option button.

On the **Detail** tab, one or more attributes can be selected to restore the attribute's previous properties. Select the attribute to revert and click **Rollback Selected Changes** (*Figure 4.3.3.1.4-E*).



Some attribute changes cannot be rolled back. For example, if you attempt to roll back an increase in partitions for a Kafka topic, the rollback action is not allowed because the number of partitions cannot decrease. If a change has been made that is not eligible for rollback, the relevant error is displayed.

Event details					
General Diagnostic Detail					
Event Time & Origin					
Receive Time:	10/3/2022 7:44:18 AM				
	○ GMT ● Local (UTC-04:00)				
Category:	Alter				
Group Name:	MQM				
Node Name:	LEUNAME				
Qmgr Name:	LEUNAME				
Object:	AB.MQ.Q.02				
Description: EXRC_CHANGED_OBJECT: A attributes have changed. Corrective Action: None.	n M6-WMQ Workgroup Server has found an object whose				
Close					

Figure 4.3.3.1.4-B. Event Details – General Tab

	User ID: Elapsed Time: Error ID:	ADMIN 04:46:23 hours
		04:46:23 hours
Reason Qualifier:	Error ID:	
	Enority.	AMQ
Name	Value	
Workgroup Name	MQM	
Node Name	LEUNAME	
Queue Manager Name:	LEUNAME	
Object Type	Local Queue	
Object Name	AB.MQ.Q.02	
Original User ID	SYSTEM	
Last Event Time	04:46:23	
Description:		

Figure 4.3.3.1.4-C. Event Details – Diagnostic Tab

Event details					
General Diagnostic Detail]				
Attribute Name	Current Value	Previous Value			
Put Messages	Allowed	Inhibited			
Time Since Reset	00:00:00 hours	00:01:12 hours			
Alteration Time	07.44.17	07.43.06			
Last Updated	00:00:00 hours	00:01:12 hours			
		Rollback Selected Changes			
Close					

Figure 4.3.3.1.4-C.	Event Details	– Details Tab
---------------------	----------------------	---------------

General Diagnostic De	tail	
Attribute Name	Current Value	Previous Value
Put Messages	Allowed	Inhibited
Time Since Reset	00:00:00 hours	00:01:12 hours
Alteration Time	07.44.17	07.43.06
Last Updated	00:00:00 hours	00:01:12 hours

Figure 4.3.3.1.4-C. Event Details – Details Tab: Edit

4.3.3.1.5 Favorites

Instead of searching for a specific queue manager, you can add an entire queue manager (that is, the queue manager along with all of its subfolders) to a *Favorites* viewlet. Favorites are per workgroup server.

E)
NOTE

A *Favorites* viewlet can be created for other objects as well. The objects which you can create a *Favorites* viewlet for are any of the objects which have the **Add to favorites**... option on their action menu.

Select **Add to favorites...** from the queue manager's action menu (*Figure 4.3.3.1-A*) to open the *Add to selected favorite viewlet* window. If no favorite viewlets exist, you will see the following screen. For more information on adding a favorite viewlet, please see <u>Create a</u> <u>New Viewlet for Favorite Objects</u>.

Add to selected favorite viewlet ?	
You do not have any F	avorite Viewlets
	Create New Viewlet
Cancel	Save Changes

Figure 4.3.3.1.5-A. No Favorites Dialog Box

If favorite viewlets already exist, continue to the next section, Add to Selected Favorite Viewlet.

Add to Selected Favorite Viewlet

- 1. After selecting **Add to favorites...** from the queue manager's Action menu (*Figure* <u>4.3.3.1-A</u>), the **Add to Selected Favorite Viewlet** dialog box is displayed.
- 2. Select the favorite viewlet from the drop-down list and click **Save Changes**.

Create shortcu	uts in:
My Favorites	¥

Figure 4.3.3.1.5-B. Add to Favorite Viewlet

4.3.3.1.6 MQSC Command Window

APPLY SCRIPT

Select **MQSC > Apply script** from a queue manager's pop-up menu to open the command window where you can execute multiple commands using a script. Please see <u>Appendix C</u> for an explanation of the menu options.



Figure 4.3.3.1.6-A. MQSC > Apply Script

You can either type the commands in the *Script* box located on the left side of the screen or click **Load from file** to import commands from a .txt file. Click **Submit** to execute the commands. The results are displayed on the right side of the screen in the *Response* box. Use the **Find** button located at the top-right of the window to easily search for details within the *Response* box. Clicking the **History** button gives you a list of what scripts you have run during the current session (the list will not be saved after the command window is closed).

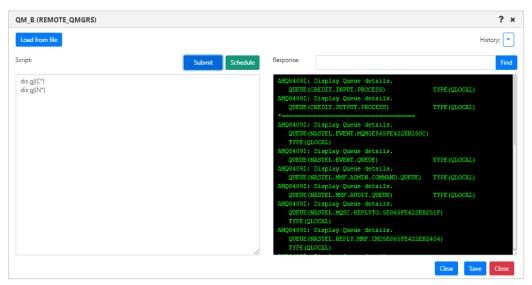


Figure 4.3.3.1.6-B. Apply Script Console

Click **Clear** to clear the response. Click the **Save** button to save the command window's contents as a .txt file.

The **Apply Script** command when applied to a connection manager node can also handle multiple MQSC commands, but the output will be slightly different (see figure below). The replies for each command will be separated by a dashed line, and a summary of commands processed, failed and valid, will appear at the end of the output, similar to a runmqsc command summary.

HBC_QM2 (REMOTE_QMGRS)			? ×
Load from file			History: 💌
Script:	Response:		Find
		ere MQ queue created.	
* comment line 1 DEFINE QLOCAL(CM.10.LQ) + DESCR('Test * q 10') REPLACE		ere MQ object already exists.	
* comment line 2 DEFINE QLOCAL(CM.11.LQ) + DESCR('Test q 11')		ere MQ object CM.11.LX not found.	
DISPLAY QLOCAL(CM.11.LX)			
	Summary: 3 MQSC commands	nrocessed	
	2 MQSC command(s		
	1 MQSC commands	valid	
		Clear Sav	e Close

Figure 4.3.3.1.6-C Apply Script Console used with Connection Manager

CONSOLE

Select **MQSC > Console** from a queue manager's pop-up menu to open the command window where you can execute a single command.



Please note that the node containing the selected queue manager must be active to have the ability to execute the commands (see Nodes for more information on node statuses).

Camgrs	Default Managers Dir
🗖 🗙 Manager Nam	e ^ Node Name
🗸 🐻 🙆 ом а	DESKTOP-NLDFRS0
Show Object Attributes	DESKTOP-NLDFRS0
Show Topology	DESKTOP-NLDERS0
Show Status	
Create Queue Manager	DESKTOP-NLDFRS0
Commands >	DESKTOP-NLDFRS0
Cluster membership >	
Properties	1
MQSC >	Apply script
Discover now >	Console
Delete	Snapshot

Figure 4.3.3.1.6-D. MQSC > Console

For information on MQSC commands, see the following IBM online Knowledge Center article:

<u>https://www.ibm.com/support/knowledgecenter/en/SSFKSJ_7.5.0/com.ibm.mq.ref.adm.doc/q085</u> <u>130_.htm</u>

Enter a command in the field located at the top and click **Submit** to execute it. You can use the drop-down menu located on the right side of the command field to browse through the most recent commands entered (exists only for this session, the list will not be saved after the command window is closed). MQ's informational responses are returned in the MQSC Console. The console displays "Command completed with messages" and includes the informational message.

n the example below the command **DISPLAY QMGR** was entered and the selected queue managers' details displayed in the command window.

T1 (SLB19)	
Command:	
DISPLAY QMGR	- Subn
Response:	
AMQ8408: Display Queue Manager de	etails.
QMNAME (T1)	ACCTCONO (DISABLED)
ACCTINT (1800)	ACCTMQI (OFF)
ACCTQ (OFF)	ACTIVREC (MSG)
ACTVCONO (DISABLED)	ACTVTRC (OFF)
ALTDATE (2018-11-19)	ALTTIME (14.19.15)
AMQPCAP (NO)	AUTHOREV (DISABLED)
CCSID(437)	CERTLABL (ibmwebspheremqt1)
CERTVPOL (ANY)	CHAD (DISABLED)
CHADEV (DISABLED)	CHADEXIT()
CHLEV (DISABLED)	CHLAUTH (ENABLED)
CLWLDATA ()	CLWLEXIT()
CLWLLEN(100)	CLWLMRUC (99999999)
CLWLUSEQ (LOCAL)	CMDEV (DISABLED)
CMDLEVEL (900)	COMMANDQ (SYSTEM.ADMIN.COMMAND.QUEUE)
CONFIGEV (DISABLED)	
CONNAUTH (SYSTEM. DEFAULT. AUTHI)	NFO.IDPWOS)
CRDATE (2018-11-12)	CRTIME (10.39.09)
CUSTOM()	DEADQ (SYSTEM. DEAD. LETTER. QUEUE)
DEFCLXQ (SCTQ)	DEFXMITQ()
	Find Clear Copy Save Clos

Figure 4.3.3.1.6-E. MQSC Command Window

Use the search field and **Find** button located at the bottom of the window to easily search for details within the response. Click **Clear** to clear the command window. Click the **Copy** button to copy the text of the command window. Click the **Save** button to save the command window's contents as a .txt file.

SNAPSHOT

Select **MQSC > Snapshot** from an object's pop-up menu to view the definition of the object. This gives you the information needed to recreate the object. You can take a snapshot of any one object, such as a queue or channel, or of an entire queue manager, which can be used for queue manager backup or duplication.

😋 🕂 🙀 Schema:	Default Managers Dir
📕 🗙 🛛 Manager Name	e ^ Node Name
🗸 🐻 👩 ом а	DESKTOP-NLDFRS0
Show Object Attributes	DESKTOP-NLDFRS0
Show Topology	DESKTOP-NLDFRS0
Show Status	DESKTOP-NLDFRS0
Create Queue Manager	
Commands >	DESKTOP-NLDFRS0
Cluster membership >	
Properties	1
MQSC >	Apply script
Discover now >	Console
Delete	Snapshot

Figure 4.3.3.1.6-F. MQSC > Snapshot

After selecting **Snapshot**, a screen like the one below will appear.

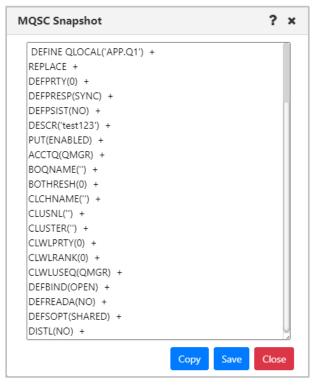


Figure 4.3.3.1.6-G. Snapshot Screen

Export this MQSC snapshot to a .txt file by clicking the **Save** button. You can then use the **MQSC** > **Apply Script** option (*see above for explanation*) to import the file and recreate the object.

z/OS REPORTS

Select **MQSC > Snapshot** from a z/OS queue manager's pop-up menu to open the report window.

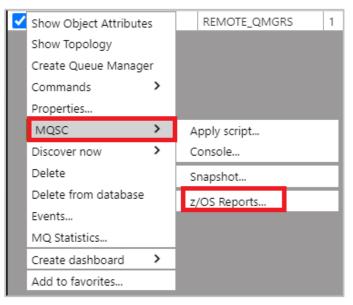


Figure 4.3.3.1.6-H. z/OS Reports Option

On the window that opens, there are tabs for each report type. Select the desired tab to run that report.

CS91 (R	EMOTE_C	(MGRS)									?	×
General	(Archive	1 Dqm	Group	Log	Y _{Security}	Y _{System}	Y Thread	Y _{Trace}	V Usage	V Storage Cla	()	
												1.
Display										Сору	Print	
										Save	Close	

Figure 4.3.3.1.6-I. z/OS Reports

The **Display** button is available on all tabs except for the **General** tab. This button requests and displays the report.

On each tab you can copy the entire text block by clicking the **Copy** button. You can also print the report by clicking the **Print** button. The report will be printed with the queue manager's name, report date and type.

The below tabs have additional functionality:

- *Archive*: Use the **Set** button to set archive data. It will open a separate window where you specify configurations.
- Dqm:
- Start/Stop Channel Initiator: Allows you to start initiators and specify jcp parameters. You can also stop initiators and specify when to restart the shared channel.
- Start/Stop Channel Listener: Start or stop listeners and specify the max number of archive log volumes and dedicated tape units, the IP address and port, and lu62 name (for starting only).

- Log: Clicking the Set button opens a new window where you can set the command scope and manager, default parameters, compression, deallocation time, max number of archive log volumes and dedicated tape units, and number of output buffers. Clicking the Archive button opens a new window where you can select the command scope and manager, mode, and time.
- Security: Clicking Set will open a new window where you can specify properties. The Refresh and Reverify buttons allow you to select function properties to refresh or verify.
- *System*: Click the **Set** button to specify system settings.
- *Thread*: Select thread type and queue manager name for thread display.
- *Trace*: Specify start and stop trace options.
- Usage: Select usage type and pageSet ID for Display function.
- *Storage Class*: Select storage class and page set identifier for display function. You can select qsg disposition, command scope and manager by clicking the **Set** button.
- *Coupling Facility*: Select coupling facility name for display function.
- *SMDS*: Select queue manager and coupling facility names for display function.

4.3.3.1.7 Security

Except for Cluster Queue Managers, users can view and change authorization settings for all IBM MQ objects. This is done by selecting the object and selecting **Commands** > **Security** from the object's drop-down menu. The *Display Or Set Authority* window opens.

Set Authority		
Required	Authorizations	
Object Type:	🗆 All	Display
Queue	All Admin	
	Alternate	Pass All
Object Name:	User	Context
SYSTEM.AUTH.DATA.QUEUE × 🔻	Authority	
	Browse	Pass Identity
Optional	Change	Context Publish
Qmgr Name:	Clear	Publish Put
	Connect	Resume
T1	Control	🖉 Set
MQ Group Name:	Contorl	Set All
	Extended	Context
mqm	Create	Set Identity Context
Principal Name:	Delete	Subscribe
Service Component:		

Figure 4.3.3.1.7-A. Display or Set Authority Modal Window

Select an **Object Type** and **Object Name**. The object's authority permissions are displayed and can be modified. Within the *Authorizations* section, enable/disable all desired options. To quickly clear all options, click the **Clear** button (updates to the **Principal Name** and **Service Component** fields are also cleared). Click the **Display** button to see the object's original authority settings. The **Refresh** button will perform a security refresh. To save changes, click **Set**. Clicking **Cancel** will close the window without saving changes.

4.3.3.1.8 View Error Logs



The View Error Log function can only be used with an agent that is running on the node. It cannot be used with a connection manager.

To view queue manager error logs, select an active queue manager and select **Commands** > **View Error Log** from the drop-down menu. The error logs open in the *Log File Browse* window where you can view and download a LOG file, an FDC file, or an FFST Summary (of the FDC files).

At the top of the *Log File Browse* window, the queue manager's location is displayed (workgroup server, node, and queue manager name). The Log type that you select will determine the options that are available in the file filter. Only the INI filter includes INI files.

	Table 4.3.3.1.8-A. Lo	og Type Filters
Filter	Queue Manager	WMQ System
LOG	LOG	LOG
FDC		FDC ffstsummary.FDC
INI	INI (of the queue manager, for example, qm.ini)	INI (of MQ: mqs.ini from /var/mqm/mqs.ini) (Agent level 6.7.7 or higher is required.)
All	LOG Includes any error log files from the queue manager error directories below. Windows C:\Program Files (x86)\IBM\WebSphere MQ\Qmgrs\ <qmgr_name>\errors\ Linux /var/mqm/qmgrs/<qmgr_name>/errors/</qmgr_name></qmgr_name>	LOG Includes any error log files from the system error directories below. Windows C:\Program Files (x86)\IBM\WebSphere MQ\ errors\ Linux /var/mqm/errors/ FDC

As indicated in the table below, if the ALL or FDC filters are selected, the FFST Summary file ffstsummary.FDC is included in the file listing. A sample display of this file is shown below.

	Table 4.3.3.1.8-A. Lo	og Type Filters
Filter	Queue Manager	WMQ System
		ffstsummary.FDC

The table records can be sorted by clicking on the column headers. The location of the selected error log file is located at the bottom of the window within the grey field. Within the **Read** field, specify the amount of text lines to be displayed in the error log file. Enter a number in the **Lines, Starting From** field to specify the starting row to be exported; data will be exported starting from this line of the error log file. Click **Save** to download and open the file.

Log File Bro	wse					? ×	:
Location:	WGS107		RHEL53ADM.NA	STEL1.M	IN ST1		
Log Type:	WMQ SYSTEM	~	FDC	~			
Filter by name:			Clear filte	er			
File Name And	i Path v	L	ast Modified				
ffstsum mary.FD	x	2	021-10-06 18:54				Ī.
AMQ89921.0.F	DC	2	021-10-0503:49				1
AMQ89916.0.F	DC	2	021-10-05/03:49				
AMQ89908.0.F	DC	2	021-10-0503:49				
AMQ89907.0.F	DC	2	021-10-0503:49				
AMQ89906.0.F	DC	2	021-10-0503:49				
AMQ89865.0.F	DC	2	021-10-0503:49				
AMQ89864.0.F	DC	2	021-10-0503:49				
AMQ89863.0.F	DC	2	021-10-0503;49				
AMQ89861.0.F	DC	2	021-10-0503;49				
AMQ89859.0.F	DC	2	021-10-0503:49				
AMQ89805.0.F	DC	2	021-10-0618:48				
AMQ89800.0.F	DC	2	021-10-0618:48				
AMQ89799.0.F	DC	2	021-10-0618:48				
AMQ89798.0.F	DC	2	021-10-0618:48				
AMQ89792.0.F	DC	2	021-10-0618:48				
AMQ89778.0.F	DC	2	021-10-0618:48				
AMQ89775.0.F	DC	2	021-10-06 18:48				
AMQ89774.0.F	DC	2	021-10-06 18:48				
Total: 611			Visible:611				
	ors/ffstsum mary.FDC						
	299999 Lines, Starting From:	. 0			Preview Save	Close	

Figure 4.3.3.1.8-A Queue Manager's Logs

You can preview the file before exporting by clicking the **Preview** button located at the bottom-right of the window. The preview will look similar to the following:

Log File Bro	owse				Preview Log File	Addin 14 2 10 14 11
Location:	WG5107		RHELSBADM.NASTE	II.M INSTI	File Name: Last Modified:	
Log Type:	WMQ SYSTEM	~	FDC	~	ffstsum mary.FDC 2021-10-06 18:54	
Filter by name:			Clearfilter		AVGD104.8.TCC 301/1/30/9.14.129:77 20039-4 functualization duput D104.1 XX07007 Academicingum acciLINDIVETD_SATA_EC or AVGD104.8.TCC 3021/1/30/9.11.29:77 AMSENTA functualization duput D15.1 XX07007 Academicingum acciLINDIVETD_SATA_EC or AVGD104.8.TCC 3021/1/30/9.11.29:77 AMSENTA functualization duput D15.1 XX07007 Academicingum acciLINDIVETD_SATA_EC or AVGD104.8.TCC 3021/1/30/9.11.29:77 AMSENTA functualization duput D15.1 XX07007 Academicingum acciLINDIVETD_SATA_EC or AVGD104.8.TCC 3021/1/30/9.11.29:77 AMSENTA functualization duput D15.1 XX0707 Academicingum acciLINDIVETD_SATA_EC or AVGD104.8.TCC 3021/1/30/9.11.29:77 AMSENTA functualization duput D15.1 XX0707 Academicingum acciLINDIVETD_SATA_EC or AVGD104.8.TCC 3021/1/30/9.11.29:77 AMSENTA functualization duput D15.1 XX0707 Academicingum acciLINDIVETD_SATA_EC or AVGD104.8.TCC 3021/1/30/9.11.29:77 AMSENTA functualization duput D15.1 XX0707 Academicingum acciLINDIVETD_SATA_EC or AVGD104.8.TCC 3021/1/30/9.11.29:77 AMSENTA functualization duput D15.1 XX0707 Academicingum acciLINDIVETD_SATA_EC or AVGD104.8.TCC 3021/1/30/9.11.29:77 AMSENTA functualization duput D15.1 XX0707 Academicingum acciLINDIVETD_SATA_EC or AVGD104.8.TCC 3021/1/30/9.11.29:77 AMSENTA functualization duput D15.1 XX0707 Academicingum acciLINDIVETD_SATA_EC or AVGD104.8.TCC 3021/1/30/9.11.29:77 AMSENTA functualization duput D15.1 XX0707 Academicingum acciLINDIVETD_SATA_EC or AVGD104.8.TCC 3021/1/30/9.TCC 3021/9.77 Academicingum acciLINDIVETD_SATA_EC or AVGD104.8.TCC 3021/9.77 AMSENTA functualization duput D15.1 XX0707 Academicingum acciLINDIVETD_SATA_EC or AVGD104.8.TCC 3021/1/301.77 Academicingum acciLINDIVETD_SATA_EC or AVGD104.77 Academicingum acciLINDIVETD_SA	
File Name An	ıd Path ∨	La	st Modified		AV(2001.8.0C 2021/10/04 14:20:27.420090-4 Installation) dspm E101 1 X(020022 xcsbac/Program xecF LINEXPKTED_SYSTEM_RC OK AV(2008 8.PC) 2021/10/04 14:20:27.42621-4 Installation] dspm E109 1 X(020022 xcsbac/Program xecF LINEXPKTED_SYSTEM_RC OK	
ffstsum mary.F					Avgine 6.10. 201/16/94 14:5512:450214 Installational damp Size 1 X/02P022 X/DENCYORPH XxCrUNEXTS.IN_INSTRING N Avgine 6.00. 201/16/94 14:512:4989944 (Installational damp Size 1 X/02P022 X/DENCYORPH XxCrUNEXTD SYSTEM NO N	
AM089921.0.		2	21-10-050349		AVXENS.6.FOC 2021/16/04 14:20:27.904718-4 Instellation3 dspm S165 1 X0027022 xcsbmcProgram werk LANCPECTED SYSTEM & OK	
AM089916.0.			21-10-0503:49		AV(2166.0.FDC 2021/10/04 14:29:37.907029-4 Installation3 dspmg E166 1 X0037022 xcsBvecProgram xecF_EUNEXPECTED_SYSTEM_BC OK	
AM069906.0.			21-10-050349		AV(3151.0.FDC 2021/10/04 14:29:27.522102-4 Installation3 dspm; 2161 1 X00F022 xcsBxcProgram xccF_E_UNEXPECTED_SYSTEA_BC 0X	
AMQ89907.0.			21-10-0503:49		AV(2100-0.FC) 2021/10/04 14:20:27.513093-4 Installation3 dspmg S100 1 X/027022 xcsbuceProgram xccF_LIND/FUTHD_S75TA_FC 0X AV(2214-0.FC) 2021/10/04 14:20:27.554324-4 Installation3 dspmg S214 1 X/027022 xcsbuceProgram xccF LINE/FD THD_S75TA_FC 0X	
AM089906.0			21-10-0503:49		Avgesta e. No. 2021/10/94 14:25:27.0594.084 A Installational depth 2214 1 Xe09422 Xe04ee/Yogrem Xech_ELNEXF6.10_XXS10_10 0X Avgesta e. No. 2021/10/94 14:27:27.05996974 A Installational depth 2215 1 Xe09422 Xe04ee/Yogrem Xech_ELNEXF6.10	
AMQ89865.0.			21-10-050349		AVG2007 & FIC: 2021/26/04 12:22:27.0012/67-4 Installational dama BW 1 X007021 Xx30xcFrogram area [LINE/PKTD 12 X716 12 X717 1	
AM089864.0.			121-10-0503:49		AV(\$286.6.FDC 2021/16/64 14:20:27.685225-4 Installation3 dspm 5265 1 X/027622 xcsbecProgram xecF_E_LNEXPECTED_SYSTEM_BC 0X	
AMQ89863.0.			121-10-050349		AVQE213.0.FDC 2021/10/04 14:29:27.6E5470-4 Instellation3 dspmg S213 1 X082F012 xcsDxecProgram xecF_E_INEXPECTED_SYSTEM_BC 0X	
AMQ89863.0. AMQ89861.0.			121-10-05 03:49		AVGE214.0.FDC 2021/10/04 14:20:27.700364-4 Instellation3 dspmg E214 1 X0037022 xcsDoscProgram xecf_LUNEXPECTED_SYSTEM_EC OX	
					AV(S215.0.RC) 2021/10/04 14:29:27.722475-4 Installation3 dspmq 2215 1 X002022 xcsbecProgram xecf_E_UNEXPECTED_SYSTEM_0C 0X AV(S207.0.RC) 2021/10/04 14:29:27.73357-4 Installation3 dspmg 2207 1 X002022 xcsbecProgram xecf_E_UNEXPECTED_SYSTEM_0C 0X	
AMQ89859.0.			21-10-0503:49		Average in the second s	
AMQ89805.0.			21-10-06 18:48		AV(S206.6.FOC 2021/16/64 14:20:27.770016-4 Instellation3 dspmg S206 1 X/087022 xxs8xecProgram xecF ELMEXPECTED SYSTEM BL OK	
AMQ89800.0.			21-10-06 18:48		AV(\$321.0.FDC 2021/10/04 14:30:32.004453-4 Instellation3 dspmg 5321 1 X083/022 xcsbecProgrem xecF_E_UNEXPECTED_SYSTEM_8C 0X	
AMQ89799.0.			21-10-06 18:48		AVQE334.0.FDC 2021/10/04 14:30:20.02030'-4 Instelletion3 dspmg E334 1 XX03F022 XcsDxcProgrem xecF_E_INEXPECTED_SYSTEM_EC OX	
AMQ89798.0.			21-10-06 18:48		AV(2018.0.RC) 2021/10/04 14:30:30.005/02-4 Installation3 dapmg 2010 1 XX007022 xcsbecProgram xecF_EUNEXFECTED_SYSTEM_0X 0X AVX0022.0.RC 2021/10/04 14:30:30.004069-4 Installation3 dapmg 2022 1 XX007022 xcsbecProgram xecF_EUNEXFECTED_SYSTEM_0X 0X	
AMQ89792.0.			21-10-06 18:48		AYQS322.0.RDC 2021/10/04 14:30:30.40463F-4 Instellation3 dspmg 8322 1 XX0F022 xcsbecProgram xecF_E_UNEXPECTED_SYSTEM_0X 0X AYQS325.0.RDC 2021/10/04 14:30:30.404975-4 Instellation3 dspmg 8325 1 XX0F022 xcsbecProgram xecF_E_UNEXPECTED_SYSTEM_0X 0X	
AMQ89778.0.			21-10-06 18:48		Avgalation for a state with a second	
AMQ89775.0.	.FDC	20	21-10-06 18:48		AV(S121.8.FC) 2821/18/94 14:38:39.677337-4 Instellation3 dspm, S221 1 X/047922 xcsbec/Program work E UNEXPECTD SYSTEM B: 00	
AMQ89774.0.	.FDC	20	21-10-06 18:48		AVQ2326.0.FDC 2021/10/04 14:30:39.053951-4 Instellation3 dspmg S336 1 X/037022 xcsbec/Program xecF_E_UNEXPECTED_SYSTEM_0C 0K	
Total: 611			Visible: 611		AM00322.0.FDC 2021/10/04 14:30:30.007005-4 Installation3 dspmg S322 1 X0037022 xcsDecProgram xecF_E_UNEXPECTED_SYSTEM_BC OK	
					AV(\$215.0.FDC 2021/10/04 14:30:30.121110-4 Installation3 dspm; \$315.1 X00F022 xcsbxcProgram xccF_E_UNEXPECTED_SYSTEM_BC 0X	
					ANGEIS.0.FCC 2021/10/04 14:30:30.125500-4 Installation3 dspmg SID0 1 XX02F022 xcsDurcProgram xmcF_E_UNEXFECTED_SYSTEM_0X 0X ANGEIS.0.FCC 2021/10/04 14:30:30.130740-4 Installation3 dspmg SID0 1 XX02F022 xcsDurcProgram xmcF E UNEXFECTED_SYSTEM R: 0X	
/var/mqm/e	errors/ffstsum mary.FDC				Available for or add average to as the the average the state of the st	
					AV(2361.6.FDC 2621/16/64 14:36:36.M6978-4 Instellation3 dspm, S361 1 X06F622 xcsbecProgram wccF_E_NEXPECTD_S/ST67_8C 0X	
Read: 9999	999999 Lines, Starting From :	0			AVG2399.0.FDC 2021/10/04 14:30:30.JP0005-4 Instellation3 dspmg E359 1 X04JP022 xcsbecProgrem xecF_UANDAPDCTED_SYSTEM_RC OK	
					AV(\$155.0.FOC 2021/10/04 14:30:30:411265-4 Installation1 dspm; 2352 1 X00F022 XcsBxcProgram xccF_E_UNEXPBCTED_SYSTEM_RC 0K	
					AV(SSF).0.FDC 2021/10/04 14:30:30-435440-4 Installation3 dspm; SSF 1 X003P022 xcsbxcProgram xccF_EUNEPECTED_SYSTEA_K OK	
				Preview Sa	AV(2001.0.RC 201/14/04 14:30:30.429200-4 Installation3 dapmg 2003 1 XX020022 xcsbercProgram xecf_U_UNEXPECTED_SYSTEM_0X 0X AV(2001.0.RC 201/14/04 14:30:30.449501-4 Installation3 dapmg 2001 1 XX020022 xcsbercProgram xecf_U_UNEXPECTED_SYSTEM 0X 0X	
					ANGESELE.HC 2021/10/04 14:30:39.485961-4 Installation3 dspmp 2361 1 X043/022 XCSEMECPTOgram XeCF_EUNEXPECTED_SYSTEM_AC OK ANGESEG.BC 2021/10/04 14:30:39.435966-4 Installation3 dspmp 2366 1 X043/022 XCSEMECPTOgram XeCF_EUNEXPECTED_SYSTEM_AC OK	
		HOM/A	RD2-RC		AVGED 6. FOC 2021/26/64 14:30:39.409060-4 Installational dama 3259 1 X087922 Xx280ecF0germ area [1.00070710 K K K K K K K K K K K K K K K K K K K	
					AV(\$367.6.FOC 3021/16/64 14:30:30.50/626-4 Instellation3 dspmg 5367 1 X081/922 xcsbecProgrem work ELMEXPECTED SYSTEM BL OK	

Figure 4.3.3.1.8-B. Preview Log File

4.3.3.1.9 Connections

You can view queue manager connections from the console pane or from a modal window.

4.3.3.1.9.1 View Connections

- To view connections in a modal window, select the checkbox for the queue manager in the viewlet, and select Commands > Connections (modal) from the Action menu.
- To view connections in the console pane, select the checkbox for the queue manager in the viewlet, and select **Commands > Connections (console)** from the Action menu.

4.3.3.1.9.2 Queue Manager Connections in Console Pane

In the Console pane, you can filter the list of connections, stop connections, view connection handles, and view connection object properties. A refresh 🖸 button is available to update the list.

	r QA	- Appl	licati ×									
Search Q (0 / 0) Schema: Default Qmgr Con												
			Application Type	Node Name	Manager Name	Channel Name	Connection Name	Active Connection Id	Generic Connection ID	Connection Info Typ	Asynchronous State	Process
Г	~		Queue manager	LEUNAME	QA			414D514351412020202020202020202	414D514351412020202020202020202	Connection	None	5496
	^		Queue manager	LEUNAME	QA			414D514351412020202020202020202	414D51435141202020202020202020202	Connection	None	4248
	Read	d Ahea	ıd	Node Nam	10	Manager Na	me	Active Connection Id		G	eneric Connection ID	
	Inac	tive		LEUNAME		QA		414D514351412020202020202020202020202020202020202	2020209A04E66500170040	4	4D51435141202020202020	20202020
Ľ	~		User application	LEUNAME	QA			414D514351412020202020202020202	414D514351412020202020202020202	Connection	None	336
	Total:	27									Last refresh time: 2:	:56:18 PM



4.3.3.1.9.3 Queue Manager Connections in Modal Window

In the modal window, connections are grouped by Application tag. By default, all connections are expanded to show their individual connection handles.

- Click the down arrow ♥ for a group to collapse its list of connection handles, or click **Collapse all** to collapse all groups.
- Click the right arrow → for a group to expand its list of connection handles, or click
 Expand all to expand all groups.

Connections				
→ phere MQ8\bin64\runmqchi.exe				
→ phere MQ8\bin64\amqzfuma.exe				
Name	Process ID	Thread ID	User ID	Connection ID
SYSTEM.BROKER.ADMIN.STREAM	8840	1	SYSTEM	414D514351412020202020202020202054888E6200130040
QA	8840	1	SYSTEM	414D514351412020202020202020202054888E6200130040
SYSTEM.QPUBSUB.QUEUE.NAMELIST	8840	3	SYSTEM	414D514351412020202020202020202054888E6200140040
SYSTEM.BROKER.INTER.BROKER.COMMUNICATIONS	8840	4	SYSTEM	414D514351412020202020202020202054888E6200220040
→ phere MQ8\bin64\amqfcxba.exe				
→ phere MQ8\bin64\amqzmuf0.exe				
→ phere MQ8\bin64\amqzmuc0.exe				
→ phere MQ8\bin64\amqzmur0.exe				
→ \Nastel\apwmq\bin\nsqpub.exe				
→ phere MQ8\bin64\amqrrmfa.exe				
→ \Nastel\apwmq\bin\nsqmsg.exe				
→ phere MQ8\bin64\amqpcsea.exe				
→ :\Nastel\apwmq\bin\nsqmq.exe				
				Expand all Collapse all OK

Figure 4.3.3.1.9.3-A. Queue Manager Connections in Modal Window

4.3.3.1.9.4 Filter Connections

You can filter console records to find, for example, an application name (in the Application Tag column) or content (such as queue or channel name).

Image: Scheme 39A04E66500200040 < 1/2 > Scheme											
		Application Type+	Node Name	Manager Name	Channel Name	Connection Name	Active Connection Id	Generic Connection ID	Connection Info Type	Asynchronous State	Proce
~		Channel initiator	LEUNAME	QA			414D514351412020202020202020202	414D514351412020202020202020202	Connection	Started	5256
~		Channel initiator	LEUNAME	QA			414D514351412020202020202020202	414D514351412020202020202020202	Connection	None	5256
~		Queue manager	LEUNAME	QA			414D514351412020202020202020202	414D514351412020202020202020202	Connection	None	7452
~		Queue manager	LEUNAME	QA			414D514351412020202020202020202	414D514351412020202020202020202	Connection	None	7272
~		Queue manager	LEUNAME	QA			414D514351412020202020202020202	414D514351412020202020202020202	Connection	None	7452
~		Queue manager	LEUNAME	QA			414D514351412020202020202020202	414D514351412020202020202020202	Connection	None	5276



4.3.3.1.9.5 Stop Connections

Select the checkbox of a queue manager connection to perform an action on it. For example, you can stop one or more connections from here: select the checkbox for each connection,

then select **Stop Connection(s)** on the Action menu, or click the Stop Qmgr Connection button.

4.3.3.1.9.6 View Connection Handles

Connection handle objects are listed for each connection record. Click \checkmark to expand each record in the console pane and show the individual connection handles.

•	↑ QA-Applicati ×												
0	3 ■ X Search Q < 0/0 >					Schem	a: Default Qmgr Con	🔹 🕞					
			Application Type	Node Name	Manager Name	Channel Name	Connection Name	Active Connection Id	Generic Connection ID	Connectio	on Info Type	Asynchronous State	Process
Г	^		User application	LEUNAME	QA			414D514351412020202020202020202	414D514351412020202020202020202	Connectio	n	None	1524
	Read	d Ahe	ad	Node Name	•	Manager Name	•	Active Connection Id			Generic C	onnection ID	
	Inac	tive		LEUNAME		QA	414D5143514120202020202020202020209		209A04E66500260040 414D		414D51435	1435141202020202020202020209A0	
	Inactive LEUNAME		QA	414D51435141202020202020202020209A04E66500260040			414D51435141202020202020202020209A0		20209A0				
	Total:	27										Last refresh time: 3:	29:43 PM

Figure 4.3.3.1.9.6-A. View Connection Handles

4.3.3.1.9.7 View Connection Object Properties

To view the properties of connections or connection handles, click the individual records.

You can also view connection properties by selecting the checkbox for a connection and selecting **Properties** on the Action menu.

Connection by phere M	IQ8\bin64\amqfqpub.exe - Properties	? ×
🛶 General	Application Name:	phere MQ8\bin64\amqfqpub.exe
Unit of work	Application Type:	Queue manager
	Application Description:	IBM MQ Queued Pub/Sub Controller
	Process ID:	8644
	Thread ID:	1
	User ID:	SYSTEM
	Options !!!!!!!!:	1
	Channel Name:	
	Connection Name:	
	Client ID:	
	Connection ID:	414D5143514120202020202020202020209E4
		Close

Figure 4.3.3.1.9.7-A. Queue Manager Connection Properties

Connection handle to (QA - Properties	? ×
🛶 General	Connection ID:	414D51435141202020202020202020209E4
	Object Name:	QA
	Object Type:	QMgr
	Open Options !!!!!!!!!!	32
	Handle State:	None
	Asynchronous State:	None
	Read Ahead:	Inactive

Figure 4.3.3.1.9.7-B. Connection Handle Properties

4.3.3.1.10Cluster Membership

A cluster is a group of at least two logically associated queue managers that can share information with each other. For example, messages can be transferred between any queue manager and queue within a cluster. Clusters are treated as MQ and Kafka objects and are viewed by creating a viewlet just like any other object (see <u>Adding and Maintaining Viewlets</u>).

4.3.3.1.10.1 Join Cluster

To join a queue manager to a cluster, select **Cluster membership** > **Join** ... from the queue manager's pop-up menu. On the *Choose the action* window, select the **Join the existing cluster** option. Click **Next**.

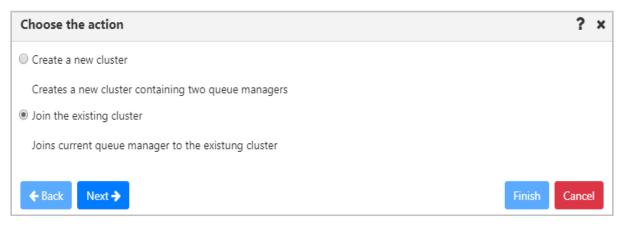
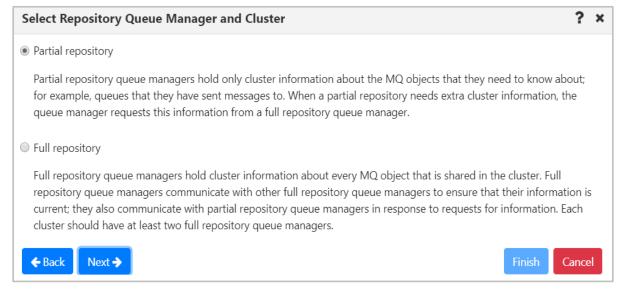


Figure 4.3.3.1.9.1-A. Choose to Create or Join a Cluster

On the following window, select the queue manager's repository type and click **Next**. In this example the **Partial repository** option was selected. Regardless of the option selected, the proceeding windows are the same.





On the following screen, select a cluster and click **Next**.

Cluster	Queue Managers	
TestCluster	▼ Full Repositories	
	T1 @ DAINIUS	
	T3 @ DAINIUS	
	Partial Repositories	
cluster_test	▼ Full Repositories	
	T1 @ SLB19	
	T2 @ SLB19	
	Partial Repositories	

Figure 4.3.3.1.9.1-C. Select Existing Cluster to Join

On the following window, the **Cluster-receiver channel name** field gets automatically populated but can be changed. Specify the **Cluster-receiver channel connection name** for the queue manager. Depending on the channel type, it can be defined as domain address, IP address (IPV6, IPV4), Luname, remote machine name. For more information on channel connection names, refer to the IBM documentation:

<u>https://www.ibm.com/support/knowledgecenter/en/SSFKSJ_7.5.0/com.ibm.mq.ref.con.doc/q0818</u> 20_.htm.

Click **Next**.

Define the cluster-receiver channel for the queue manager	?	×
The joining queue manager will use a cluster-receiver to receive cluster information from the full repository queue managers.		
Cluster-receiver channel name:		
TO.T1		
Cluster-receiver channel connection name:		_
	×	
Field is required		
← Back Next → Finish C	ance	1

Figure 4.3.3.1.9.1-D. Define Channel Connection Name

Select repositories on the *Select the full repository queue managers* window. Multiple queue managers can be selected. Click **Next**.

Select the full repository queue managers	? ×
The queue manager must be able to send cluster inform repository queue manager in the cluster.	nation to at least one full
Select a full repository queue manager to send information	to
Full repository queue manager	Cluster-receiver channel
T1 @ DAINIUS	TO.T1
T3 @ DAINIUS	TO.T3
Select all Select none	
← Back Next →	Finish Cancel

Figure 4.3.3.1.9.1-E. Select Full Repository Queue Manager(s)

Review the summary and click **Finish**.

Join the existing cluster	? >
Adding queue manager "T1" to cluster: "TestCluster"	
Joining cluster as a "PARTIAL" repository queue manager Creating cluster-receiver channel: T1: "TO.T1"	
Creating cluster-sender channels: "TO.T1" to queue manager "T1@DAINIUS "	
← Back Next →	Finish Cancel

Figure 4.3.3.1.9.1-F. Join the Existing Cluster Summary

4.3.3.1.10.2 Create Cluster

Confirm the following pre-requisites are completed before creating a new queue manager cluster:

- Two queue managers, having full repositories for the cluster, are created
- The cluster's full repository queue managers have a running listener
- You are aware of the connection details; you will be asked to specify them during the creation process



When full repository queue manager(s) already belong to another cluster, you cannot terminate the creation process and an error message will be displayed (*Figure 4.3.3.1.9.2-E*). If you still want to use the queue manager(s), the cluster will need to be configured using MQSC commands.

Steps to create a new cluster:

- 1. Select a queue manager and click **Cluster membership** > **Join** ... on the pop-up menu.
- 2. Select **Create a new cluster** on the *Choose the action* window. Click **Next**.

Select the full repository queue managers	? ×	
The queue manager must be able to send cluster inform repository queue manager in the cluster.	nation to at least one full	
Select a full repository queue manager to send information	to	
Full repository queue manager	Cluster-receiver channel	
← Back Next →	Finish Cancel	

Figure 4.3.3.1.9.2-A. Create New Cluster Option

3. Specify a unique name for the cluster and click **Next**.

Name the cluster	?	×
Type a name for the cluster:		
← Back Next → Finish	Cance	el



4. Information about the first selected queue manager to join the cluster is displayed on the *First full repository queue manager* window. Click **Next**.

First full repository queue manager	?	×
M6-WMQ agent name (MQ Node):		
SLB19		
Select a queue manager to add to the cluster		
Т3		
← Back Next →	Finish Cance	el

Figure 4.3.3.1.9.2-C. Selecting First Queue Manager

5. Select the second queue manager to join the new cluster. Click the **Next** button.

S	elect the second full repository queue manager	?	×
	M6-WMQ agent name (MQ Node):		
	SLB19	•	·]
	Select a queue manager to add to the cluster		
	T4	•	,
	In the following circumstances a queue manager is not listed: The queue manager is selected as first repository queue manager.		
	← Back Next → Finish C	ance	4

Figure 4.3.3.1.9.2-D. Selecting Second Queue Manager



If you select a full repository queue manager which already belongs to another cluster, you will be alerted with an error message.

Using meshIQ Manage

elect the second full repository queue manager	? ×		
M6-WMQ agent name (MQ Node):			
RUTA	•		
Select a queue manager to add to the cluster		Platform	Node Type
		NDOWS NT	M6-WMQ Agent-managed MQ Node
	*	NDOWS NT	M6-WMQ Agent-managed MQ Node
		NDOWS NT	M6-WMQ Agent-managed MQ Node
n the following circumstances a queue manager is not listed:		NDOWS NT	M6-WMQ Agent-managed MQ Node
The queue manager is selected as first repository queue manager.		NDOWS NT	M6-WMQ Agent-managed MQ Node
		NDOWS NT	M6-WMQ Agent-managed MQ Node
		NDOWS NT	M6-WMQ Agent-managed MQ Node
		NDOWS NT	M6-WMQ Agent-managed MQ Node
		NDOWS NT	M6-WMQ Agent-managed MQ Node
		NDOWS NT	M6-WMQ Agent-managed MQ Node
			Last refresh time: 6:16:22 PM
← Back Next →	Finish Cancel		
			~
		Sele	cted queue manager is full
		X	
		repo	sitory for a cluster "cluster_test"!
Console			

Figure 4.3.3.1.9.2-E. Error Message for Already Belonging to Cluster Queue Manager

6. According to the instructions displayed on the *Creating cluster channels* window, define the cluster-receiver channel and channel connection name for both queue managers on the proceeding windows (*Figures 4.3.3.1.9.2-G* and *H*).

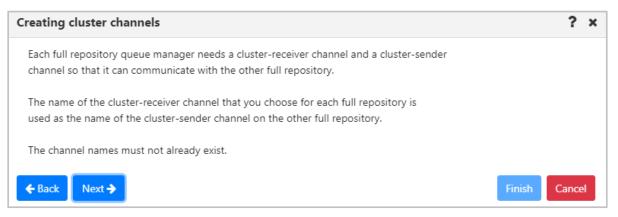


Figure 4.3.3.1.9.2-F. Creating Cluster Channels Instructions

Define the cluster-receiver channel for the queue manager	?	×
The joining queue manager will use a cluster-receiver to receive cluster information from the full repository queue managers.		
Cluster-receiver channel name:		
TO.T3		
Cluster-receiver channel connection name:		
	×]
Field is required		_
← Back Next → Finish	Cance	el

Figure 4.3.3.1.9.2-G. Define Cluster-Receiver Channel for First Queue Manager

Define the cluster-receiver channel for the second queue manager	? ×
The joining queue manager will use a cluster-receiver to receive cluster information from the full repository queue managers.	
Cluster-receiver channel name:	
TO.T4	
Cluster-receiver channel connection name:	
	×
Field is required	
← Back Next →	Finish Cancel

Figure 4.3.3.1.9.2-H. Define Cluster-Receiver Channel for Second Queue Manager

7. Review the cluster summary and click **Finish**.

Create the cluster	?		×
Creating cluster: "Test"			
Adding queue managers: "T3" and "T4"			
Creating cluster-receiver channels: T3: "TO.T3" T4: "TO.T4"			
← Back Next →	Finish Cano	cel	

Figure 4.3.3.1.9.2-I. Cluster Creation Summary

8. To view the new cluster, populate the cluster queue manager's viewlet (see <u>Adding</u> <u>and Maintaining Viewlets</u>).

Cl G	schema: Default Cluster Queue Manager Dir V	Filter by:			
×	Hosting Queue Manager	Cluster Name	Queue Manager Type	Channel Name	Definition Type
k	T1	cluster_test	Repository		Cluster Receiver
R	SYSTEM.TEMPQMGR.t2_test_cluster	cluster_test	Repository		Explicit Cluster Sender
2	SYSTEM.TEMPQMGR.t1_test_cluster	cluster_test	Repository		Explicit Cluster Sender
2	T2	cluster_test	Repository		Cluster Receiver
R	T1	cluster_test	Repository		Cluster Receiver
2	SYSTEM.TEMPQMGR.t2_test_cluster	cluster_test	Repository		Explicit Cluster Sender
2	SYSTEM.TEMPQMGR.t1_test_cluster	cluster_test	Repository		Explicit Cluster Sender
R	T2	cluster_test	Repository		Cluster Receiver



4.3.3.1.10.3 Cluster Refresh

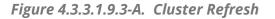
Select **Cluster membership** > **Refresh** from the selected queue manager's pop-up menu. The **Refresh Cluster Information** window opens. From the *Cluster name* drop-down menu, select a cluster to refresh. Check off the **Refresh repository** checkbox and click **OK**.

Consult the IBM documentation for information on the Refresh Cluster command and repository refresh types:

<u>https://www.ibm.com/support/knowledgecenter/en/SSFKSJ_7.5.0/com.ibm.mq.ref.adm.doc/q086</u> 470 .htm

https://www.ibm.com/support/knowledgecenter/en/SSFKSJ_7.5.0/com.ibm.mq.ref.con.doc/q0823 60_.htm

Refresh Cluster Information	? ×
Cluster name:	
All Clusters	· · · · · · · · · · · · · · · · · · ·
Refresh repository	OK Cancel



4.3.3.1.10.4 Leave Cluster

To remove a queue manager from a cluster, select **Cluster membership** > **Leave** from the queue manager's pop-up menu. The *Leave Cluster* window opens. Review the summary table, enable the desired delete options at the bottom of the screen and click **OK**.

Leave Cluster				?	×
Cluster Name	Full Repository		Suspended		
cluster_test	YES		NO		
Channel Name		Channel Type			
TO.T2		Cluster Receiver			
TO.T1		Cluster Sender			
Delete above cluster channel definiti	ions				
Delete all cluster queue definitions					
				ОКС	ancel

Figure 4.3.3.1.9.4-A. Leave Queue Managers Cluster

4.3.3.1.11Ping

You can ping a queue manager to view its status. Do this by selecting **Commands** > **Ping** from the queue manager's pop-up action menu.

You will either see a *Success* message displayed at the bottom right of the window:



Figure 4.3.3.1.10-A. Successful Ping

or a failed detailed error will be displayed:

Error - Error								
Status	Command status	Origin	Timestamp	Reason	Actions			
×	(RC - 2059), CMD - MQCMD_PING_Q_MGR - Failed!	\\WGS107\AM- POWER\IBM\IBM	Nov 10 2020 16:51:32	MQRC_Q_MGR_NOT_AVAILABLE	Description			
					Ok			



4.3.3.2 EMS Manager

An EMS manager has the following pop-up menu options.

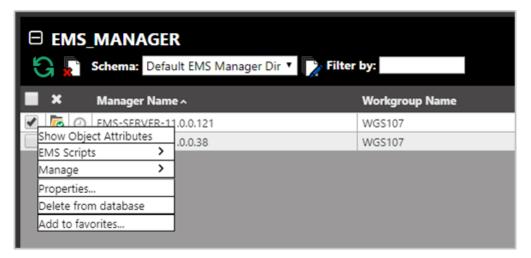


Figure 4.3.3.2-A. EMS Manager Pop-Up Menu

4.3.3.2.1 Attributes

Select **Show Object Attributes** from an EMS manager's pop-up menu to open the *Attributes* table on the Console panel.

◆ EMS-SERVER-11.0.0 ★				
Attributes	EMS-SERVER-11.0.0.121			
EMS Server URL	EMS-SERVER-11.0.0.121			
Workgroup Name	WGS107			
Node Name	EMSAGENT01			
Estimated Response Time				
State				
EMS Server Name	EMS-SERVER			

Figure 4.3.3.2.1-A. EMS Manager Attributes

4.3.3.2.2 EMS Scripts Console

After selecting **EMS Scripts > Console** from EMS manager's pop-up menu (*Figure 4.3.3.2-A*), the below command window opens. Type in a command in the field at the top of the window. Please consult TIBCO User's Guide for more information on EMS commands: https://docs.tibco.com/pub/ems/8.4.0/doc/pdf/TIB ems_8.4 users_guide.pdf

The functionality of the buttons and fields on this window is the same as described in section <u>4.3.3.1.6</u>, MQSC Command Window.

tcp://127.0.0.1:7222 (EMS-SERVER_RUTA)		? ×
Command:		
	•	Submit
Response:		
Find Clear Co	opy Save	Close

Figure 4.3.3.2.2-A. EMS Scripts Console

4.3.4 Queues and Partitions

Select a queue to enable the Action menu. Menu options are described in <u>Appendix C</u>.



TID

Your Action menu options may differ according to your user permissions, which are managed by an admin. Please also note that different queue types have different menu options.

elected	Action 🔨 🕂 😂	🛊 🛛 Schema 🛛 Default Local Queu 👻 🍞	Search (Filter By)	T Projects All	-> a				
	Browse messages		Manager Name	Current Depth	Maximum Depth	Get Messages	Put Messages	Open Input Counter	Open Output Counter
6	Show Object Attributes		LEUNAME	105	500	Allowed	Allowed	0	0
	Show Queue Status		LEUNAME	107	5000	Allowed	Allowed	0	0
-	Show Queue Status		LEUNAME	0	5000	Allowed	Allowed	0	0
	Create Queue		LEUNAME	0	5000	Allowed	Allowed	0	0
			LEUNAME	0	5000	Allowed	Allowed	0	0
-	Messages >		LEUNAME	0	5000	Allowed	Allowed	0	0
-	Commands >		LEUNAME	0	5000	Allowed	Inhibited	0	0
-	-		QA	0	5000	Allowed	Allowed	0	0
	MQSC >		LEUNAME	0	5000	Allowed	Allowed	0	0
-	Сору		QA	0	5000	Allowed	Allowed	0	0
-	Copy		EMIK	0	5000	Allowed	Allowed	0	0
-	Properties		EMIK	0	5000	Allowed	Allowed	0	0
-			LEUNAME	0	5000	Allowed	Allowed	0	0
-	MQ Statistics		EMIK	0	5000	Allowed	Allowed	0	0
	Events		QA	0	5000	Allowed	Allowed	0	0
-			LEUNAME	0	5000	Allowed	Allowed	0	0

Figure 4.3.4-A. Queue Viewlet and Actions

Clicking on a queue name will open the queue's attribute viewlet.

Browse messages by clicking a cell within the Current Depth column.

Clicking cells within Open Input Counter or Open Output Counter will display status tabs.

Partition_Viewlet							
🗙 1 Selected Action 🔨 🔁 🖨 Schema Default Partitions Dir 👻 🕞 Search (Filter By) 🝸 Projects All 🔹 🐳 🗃							
	Browse messages		Topic Name	Cluster Name	Leader Replica Id	Preferred Replica Id	
	Show Object Attributes		jkql-item-defs-in	localhost:9092	0	0	
	Commands >		jkql-item-defs-in	localhost:9092	0	0	
	•		jkql-item-defs-in	localhost:9092	0	0	
	Messages >		jkql-item-defs-in	localhost:9092	0	0	
			jkql-item-defs-in	localhost:9092	0	0	
	Events		jkql-item-defs-in	localhost:9092	0	0	
	Add to favorites		jkql-item-defs-in	localhost:9092	0	0	
			and the second sec	1 11 1 0 0 0 0	•	0	



At the top-right of the viewlet there is a **Project** drop-down which filters the viewlet by user group configurations (the user group's description is listed). Viewlet results are filtered by the selected group's server (workgroup servers, nodes, and managers) and object group access permissions defined in the security application. If **All** is selected, the data displayed is according to all groups the user belongs to. For example, if the user belongs to both the *Administrators* and *Users* groups, the viewlet will display data that meets the security application filters for *Administrator* or *Users* when **All** is selected.

4.3.4.1 Queue Status

After selecting **Show queue status** from an IBM MQ or EMS queue viewlet's Action menu (*Figure 4.3.4-A*), the *Queue Status* viewlet is displayed.



Figure 4.3.4.1-A. Show Queue Status

You can customize the status table by clicking the **Manage viewlet schemas** icon **D**. See <u>Schemas</u>.

4.3.4.2 Queue Properties

After selecting **Properties** from the queue's Action menu (*Figure 4.3.4-A*), the *Properties* window for the local queue is displayed. For detailed descriptions of the various input fields and tabs, go to the IBM Knowledge Center:

https://www.ibm.com/docs/en/ibm-mq/9.3?topic=properties-mq-queue

See <u>*Custom Attributes*</u> for information on adding custom attributes to a queue (done on the **Custom Attributes** tab).

Local Queues BANK.IN P	roperties	? ×
🛶 General	Queue Name:	
Extended	BANK.IN	
Cluster	Description:	
Triggering		
Events	Queue Usage:	Scope:
Storage	Normal	✓ Queue Manager ✓
Monitoring	Default Bind:	Default Persistance:
Statistics	On Open 🗸	✓ Non Persistent ✓
Custom Attributes	Put Messages:	Get Messages:
	Allowed	✓ Allowed ✓
	Custom:	
	Default Priority	
	0	Force Changes
		Ok Schedule Cancel

Figure 4.3.4.2-A. Local Queues Properties

For detailed descriptions of the various input fields for EMS queues, go to the TIBCO Product Documentation for queues:

https://docs.tibco.com/pub/ems/10.1.0/doc/html/GUID-EE423898-3C90-4F54-84D6-026F85ACD6E4.html.

EMS Queues AB.Q.01 Properties ? ×					
🛶 General	Queue Name:				
Destination Info	AB.Q.01				
Custom Attributes	Definition Type:	GET Consumer Count:			
	Predefined 🗸	0			
	From Queue Name:	Receiver Count:			
		0			
	Consumer Count:	To Queue Name:			
	Flow Control Max. Bytes:	Delivered Messages Count:			
	0	0			
	In Transit Message Count:	Expiry Override:			
	0	0			
	Maximum Redelivery:	Maximum Messages:			
	0	999999			
	Pending Msg. Size:	Overflow Policy:			
	1090	Default 🗸			
	Pending Persist. Msg. Size:	Pending Persist. Msg. Count:			
	1090	10			
	Redelivery Delay:	Reroute Name:			
	Enabled				
	0				
	Store Name:	Prefetch Count:			
	\$sys.nonfailsafe	5			
	Max. Bytes:	Pending Msg. Count:			
	0	10			
	Message Trace:				
	None 🗸				
	Exclusive Global	☐ Fail-safe Route Connected			
	Routed	Secure			
	Sender Name	Sender Name Enforced			
		Ok Schedule Cancel			

Figure 4.3.4.2-B. EMS Queue Properties

4.3.4.3 Messages

Messages can be put and managed in Kafka topics and partitions and in queues (such as RabbitMQ, Solace, local, alias, and EMS queues). For queues containing messages that are represented by an envelope folder icon 🗟, a red line envelope icon 🖻 signifies that a queue is full and new messages cannot be added. To display messages, do one of the following:

- Select **Browse messages** from the Action menu (*Figure 4.3.4-A*) of a queue, topic, or partition with messages
- Click a value in the **Total Messages** or **Available Messages** columns for Kafka topics and partitions or the **Current Depth** column for local queues.

To perform an action on a message, select it and then click the appropriate icon described in *Table 4.3.4.3-A* below, or select an action from the Action menu (*Figure 4.3.4.3-J*).

The **Active Filter** list at the top of the viewlet displays the **Message Criteria** that is currently enabled in settings (See <u>Message Commands Tab</u> for more information). You can change the **Message Criteria** by selecting a different configuration from the list, or you can type its name to easily search for one. The viewlet will display messages according to the new filter selected. To clear the filter and display all messages, click the **X** within the field. Please note that the changes made will only be applied to the current *Console Message* viewlet and will not override the existing **Message Criteria** that is enabled in settings.

To customize the Messages viewlet, see <u>Schemas</u>.



Sometimes after selecting "Browse messages" for a queue, messages will not appear within the messages tab in the Console panel. This is due to the system periodically refreshing the content of queues. To get the most recent status of the queues, click the **Refresh** button \Im .

∱ jkadı	↑ jkadminreqto X							
× 1 Selecte	🗙 1 Selected 🛛 Active filter * 🔹 Schema My Kafka Messagee 👻 🕑							
	Message Cursor	Partition Id	Key	Data Size B 🔹	Message Data ASCII 👻	Timestamp GMT 👻		
	5	22		8	New test	2024/03/12 19:33:48.873		
	6	22		12	New test 1	2024/03/12 20:01:46.293		
	7	22		12	New test 2	2024/03/12 20:01:59.817		
	8	22		12	New test 3	2024/03/12 20:02:08.739		
	9	22		12	New test 4	2024/03/12 20:02:24.571		
	10	22		12	New test 5	2024/03/12 20:02:33.983		
Partitio	n:\\MQM\CMKafka\localhost:9092\			🗧 Page 🚺	of 2 🗲			

Table 4.3.4.3-A. Message Viewlet Toolbar				
lcon	con Name Description			
3	Refresh	Refreshes the viewlet.		
•	Put New	Displays the Put New window (<i>Figure 4.3.4.3.1-A</i>) to create and put new message(s) into selected queue.		

Table 4.3.4.3-A. Message Viewlet Toolbar				
lcon	Name	Description		
×	Delete	Allows you to delete the message. (Not available for alias queue messages).		
~	Reroute	Reroute messages from one queue to another queue located within a different queue manager (section <u>4.3.4.3.9</u>). (Not available for EMS or alias queue messages).		
٩	Copy message	Displays the Copy messages window (<i>Figure 4.3.4.3.5-A</i>) where a user can define how and where messages should be copied. (Not available for alias queue messages).		
	Move message	Displays the Move messages window (<i>Figure 4.3.4.3.5-B</i>). On this screen the queue to move the messages is specified. (Not available for alias queue messages).		
	Edit message	Displays the Edit message window (<i>Figure 4.3.4.3.6-A</i>) where a user can edit message information and data. (Not available for EMS or alias queue messages).		
-	Load from File	If loading single or multiple messages from .mmf files, .txt files, or files created by the IBM dmpmqmsg utility (<i>Figure 4.3.4.3.5-A</i>), opens the Command Settings dialog box to continue or configure settings. If loading messages from shared storage, opens the Select Files dialog.		
٩	Browse Options	Opens the Message Commands tab of the User/Global Settings Window (<u>Message Commands</u>) to customize message browse options.		
	Save selected messages	Exports selected message(s) to either an MMF or text file, or to shared storage. (Not available for alias queue messages.)		
₽	Save all messages	Exports all messages to either an MMF or text file, or to shared storage. (Not available for alias queue messages.)		

Load More Messages / Navigate to a Page

In the console pane, the list of messages is divided into "pages." The Message Count setting in the Browse settings section of the User Settings Message Commands tab determines the number of messages that are displayed per page. To load additional messages, use the

previous and next buttons located at the bottom of the viewlet or type a page number within the **Page** field.



When browsing Kafka messages in a *partition*, it is possible to page through additional messages in the partition. (When browsing messages at the *topic level*, paging is not supported.)

🗈 🗙 🛃 🗨 🖻 🕞				Active filter *	👻 Schema 🛛 My Kafka Messages 👒 🛛 🕽
Message Cursor	Partition Id	Key	Data Size B 🗸	Message Data ASCII +	Timestamp GMT 🗸
1	21		16	Test message 1	2024/03/13 02:04:18.601
2	21		16	Test message 2	2024/03/13 02:04:46.124
3	21		16	Test message 3	2024/03/13 02:04:51.733
4	21		16	Test message 4	2024/03/13 02:05:00.843
5	21		16	Test message 5	2024/03/13 02:05:11.571
6	21		16	Test message 6	2024/03/13 02:05:18.674
7	01		16	T- d	2024/07/17 02:05:25 075

Figure 4.3.4.3-B. Load More Messages / Navigate to a Page

Viewing Messages

To view a message, click anywhere on the message row.

/iew Mess	age 4 in \\MQM\CMKafka	a\localhost:909	02∖jkql-item-d	efs-in-1		?
artition ID	1					
Offset	3					
ley						
imestamp	2024/03/13 14:12:19.427			● GMT ○ Local		
¥ Messag	e Headers Data					
Hex	Text XML	JSON	Full Msg	Message No. : 4 / 10 Message length : 24 ,	/ 24	\leftrightarrow
Text only				Er	coding: US-ASCII	~
This is a	test message.					
	+ C - Copy selected data; CTRL + \	/ Deate date				
		r - r orre will til				

Figure 4.3.4.3-C. View Message: Kafka Example



To copy or paste data, select the data, then use keyboard functions CTRL + C or CTRL + V, respectively.

Depending on the message type, you can specify ASCII, EBCDIC, or Hexadecimal (Hex) for the Message ID (**Msg ID**) and Correlation ID (**Correl ID**).

To navigate between messages, use the navigation buttons, \blacklozenge and \blacklozenge .

View Mess	age 1 in \\MQM\QUEMAN\QUENAME\ABCD		? ×
Msg ID Correl ID	AMQ QUEUMAN �0&;#65533;d&;#39;@	ASCIIOEBCDICOUTF8OHEX Msg format ASCIIOEBCDICOUTF8OHEX Code page	437
Hex (1 xm<br 2 * <usr 3 4 5 6 7 8 9 10 11 <td><pre><fileiname>SAP101.ORDERS.45268.KPLWARTQ26FXG.dst</fileiname> cMTE>20172-023-06.15 20:18</pre>/cMTE>20172-021-06.15 20:18/cMTE> cSOURCESUBENSG.SAP101.ORDERS.IDCCP cMRSUTPESUBENSG.SAP101.ORDERS.IDCCP cMRSUTPESUBENCURRENCY> cURRENCY=0240-CURRENCY> cVALUE> 23541/vALUE> 23541/vALUE> 23541/vALUE> 23541/vALUE></td><td>Message id : 1 / 4 Message length : 389 / 389</td><td>↔</td></usr 	<pre><fileiname>SAP101.ORDERS.45268.KPLWARTQ26FXG.dst</fileiname> cMTE>20172-023-06.15 20:18</pre> /cMTE>20172-021-06.15 20:18/cMTE> cSOURCESUBENSG.SAP101.ORDERS.IDCCP cMRSUTPESUBENSG.SAP101.ORDERS.IDCCP cMRSUTPESUBENCURRENCY> cURRENCY=0240-CURRENCY> cVALUE> 23541/vALUE> 23541/vALUE> 23541/vALUE> 23541/vALUE>	Message id : 1 / 4 Message length : 389 / 389	↔
12			Cancel

Figure 4.3.4.3-D. Navigate Between Messages

Click **Message Headers Data** (*Figure 4.3.4.3-E*) to view the header details, if applicable (*Figure 4.3.4.3-F*).

View M	essage 1 in \\MQM\QUEMAN\QUENAME\ABCD D		? ×
Msg ID Correl ID	AMQ QUEUMAN �0�d'@	ASCIIOEBCDICOUTF8OHEX Msg format ASCIIOEBCDICOUTF8OHEX Code page	437
Hex 1 < 2 * 3 4 5 6 7 8 9 10	sage Headers Data Text XML JSON MsgProp Full Msg 2xml version="1.0" encoding="utf-8" standalone="yes"?> usr> <fliteinamesap101.orders.45268.kplmartq20fxg.dat< fliteinames<br=""><gates2023-06.15 20:18<="" dates<br=""><gourcejuebmsg. msgtypes<br="" sap101.orders.100cp<=""><grouctids kplmartq20fxg<="" productids<br=""><currency-usds currency=""> <ulues 23541<="" values<br=""><gs278 sgid="">26168@pas2-uebmsg.eu.gxs.com /usr></gs278></ulues></currency-usds></grouctids></gourcejuebmsg.></gates2023-06.15></fliteinamesap101.orders.45268.kplmartq20fxg.dat<>	Message id : 1 / 4 Message length : 389 / 389	\leftrightarrow
			Cancel

Figure 4.3.4.3-E. Message Headers Data Button

Viev	v Mess	age 1 in \\MQM\QL	JEMAN\QUENAME\ABCD		? ×
Msg	ID	AMQ QUEUMAN &	#65533;0�d'@	●ASCIIOEBCDICOUTF8OHEX Msg format	
Corr	el ID			●ASCIIOEBCDICOUTF8OHEX Code page	437
	Head	er Attribute	Value		
	MD	Version	1		
	MD	Report options	0		
*	MD	Msg. type	8		
	MD	Expiry	-1		
	MD	Feedback	0		
	MD	Encoding	546		
	1 xm<br 2 * <usr 3 4 5 6 7 8 9 0 1 <td>> <pre> </pre> <pre> </pre> </td><td>SOURCE> .ORDERS.IDOCP XG Y></td><td>Message id : 1 / 4 Message length : 389 / 389</td><td>\leftrightarrow</td></usr 	> <pre> </pre> <pre> </pre>	SOURCE> .ORDERS.IDOCP XG Y>	Message id : 1 / 4 Message length : 389 / 389	\leftrightarrow
					Cancel

Figure 4.3.4.3-F. Message Headers

Depending on its type, the message may be able to be displayed in either hexadecimal, text, XML or JSON format. Select one of these formats or check the **Text only** check box to easily toggle between text and the other modes.

To view the entire message, click the **Full Msg** button. A prompt may be displayed to confirm this action. (Whether you receive a prompt depends on your **Prompt** selection on the Message Commands tab in User Settings (under **Load full msg. for XML/JSON**).

	sage 1 in \\MQM\QUEMAN\QUENAME\ABCD	? >
Vlsg ID	AMQ QUEUMAN �0�d'@	ASCIIOEBCDICOUTF8OHEX Msg format
Correl ID		ASCIIOEBCDICOUTF8OHEX Code page 437
✓ Messag Hex	ge Headers Data Text XML JSON MsgProp Full Msg	Message id : 1 / 4 Message length : 389 / 389
Text only		Encoding: US-ASCII 🗸
<usr> <filen: <date>: <sourci <msgty <produc< th=""><th>rsion="1.0" encoding="utf-8" standalone="yes"?> AME>SAP101.ORDERS.45268.KFLM4RTq20FXG.dat 2023-06.15 20:18</th></produc<></msgty </sourci </date> E>UEBMSG.BDOCF FE>UEBMSG.SAP101.ORDERS.IDOCF CTID>KFLM4RTQ20FXG NCY>USD 2035412/VAUUE> 2135412/VAUUE> 2155412/VAUUE> 2157577777777777777777777777777777777</filen: </usr>	rsion="1.0" encoding="utf-8" standalone="yes"?> AME>SAP101.ORDERS.45268.KFLM4RTq20FXG.dat 2023-06.15 20:18	
<value: <as2ms </as2ms </value: 	GID/2010009882-uebmsg.eu.gxs.com <td></td>	

Figure 4.3.4.3-G. Hex or Text Message Mode / Full Message

You may be able to change the message encoding type using the **Encoding** list (for Kafka messages, US-ASCII encoding is always used). The UTF-8 encoding format (CCSID [coded character set identifier] 1208) may be available for selection. If so, supported actions include viewing messages and editing messages, loading messages from a file, and putting messages to a queue.

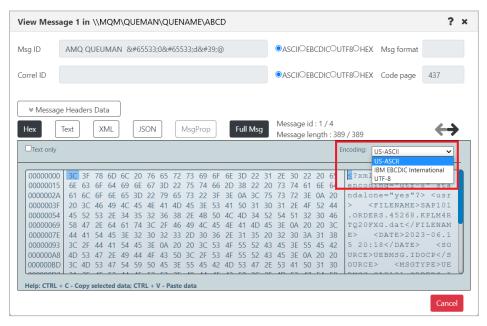


Figure 4.3.4.3-H. Message Encoding

To switch between decimal and hexadecimal mode for the address of the first byte, click anywhere in the address field.

View Message 1 in \\MQM\QUEMAN\QUENAME\ABCD																						
1sg ID	AM	QQ	UEU	MAI	N 8	<i>≀</i> #65	533;	:0&#	¢655	33;d	18:#3	39;@)				O A:	SCII	Oeb	CDI	:OU	TF8OHEX Msg format
orrel ID	orrel ID											OA:	SCII	Oeb	CDI	COU	TF8OHEX Code page 437					
												a/ 389 +>										
Text only																	TVIC.		je ie	iga		ncoding: US-ASCII V
00000000 00000024 00000034 00000054 00000054 00000055 00000055 00000055 00000055 000000	6E 61 20 45 58 44 3C 4D 3C	3F 63 6C 3C 52 47 41 2F 53 4D 53	6F 6F 53 2E 54 44 47 53	64 6E 49 2E 64 45 41 2E 47	69 65 34 61 3E 54 49 54	6E 3D 45 35 74 32 45 45 44 59	67 22 32 30 30 3E 4F 50	3D 79 41 36 2F 32 0A 43 45	22 65 4D 38 46 33 20 50 3E 25	75 73 45 2E 49 2D 20 3C 55	74 22 4B 4C 30 3C 2F 45	66 3F 53 50 45 36 53 53	2D 3E 41 4C 4E 2E 4F 4F	38 0A 50 4D 41 31 55 55	22 3C 31 34 4D 35 52 52 47	31 20 75 30 52 45 20 43 43 2E	73 73 31 54 3E 32 45	74 72 2E 51 0A 30 3E	32 20 3A 55 0A	6E 0A 52 30 20 31 45 20	64 20 44 46 3C 38	<pre>\$?xml version="1.0" encoding="utf-8" sta ndalone="yes"?> <usr > <filename>SAP101 .ORDERS.45268.KPLM4R TQ20FXG.datE> <date>2023-06.1 5 20:18</date> <s0 URCE>UEBMSG.IDOCFOURCE> <msgtype>UE CORE CEDICI CEDER F</msgtype></s0 </filename></usr </pre>

Figure 4.3.4.3-I. Address of First Byte

Message Action Menu

The following Action menu options are available when a single message is selected.

↑ AB.MQ.0	↑ AB.MQ.Q.02 ×												
× 1 Selected	Action 🔨 😯 🗙	3 🛃 🗗	6	• Q 🖬 🖬	3								
	View message	DLH		XQH	Data Size	В	-						
1	Edit message		false	false	33								
2	Delete message		false	false	32								
3	Reroute message		false	false	33								
4	Copy message		false	false	32								
5	Move message		false	false	33								
6	wovemessage		false	false	33								
7	Save to storage		false	false	33								
8			false	false	33								
9			false	false	33								
10)		false	false	33								

Figure 4.3.4.3-J. Message Action Menu

If multiple or all messages are selected, the following Action menu options are available. To select all messages, click the select all button located on the left side of the viewlet. Click the same button, now green to clear all message selections.

↑ AB.MQ.0	↑ AB.MQ.Q.02 ×											
× 2 Selected	🗙 2 Selected Action 🔨 🔁 💽 🛃 🕑 🖹 🖉 🛃 💽 💽											
E M	Delete messages	DLH	ХQH	Data Size B 👻								
1	Reroute messages	false	false	33								
2	Copy messages	false	false	32								
3	Move messages	false	false	33								
4	Save to storage	false	false	32								
5		false	false	33								
6		false	false	33								
7		false	false	33								
8		false	false	33								
9		false	false	33								
10)	false	false	33								

Figure 4.3.4.3-K. Action Menu for Multiple Messages



The message action menu and viewlet toolbar options may differ due to the queue type. Please see <u>Table 4.3.4.3-A</u> for more information on the available options of each messages queue type.

4.3.4.3.1 Put New MQ messages

The *Put New* window is displayed when the **Put New** icon ⁺ is selected from the *Message* viewlet (*Figure 4.3.4.3-A*) or **Messages** > **Put New Message** is selected from the Action menu options (*Figure 4.3.4-A*) when the queue is selected. It is used to create new messages and put them into one or more destination queues.

To control the properties of messages that are created during the Put New or Load from File processes, see <u>Message Commands Tab</u>.

See <u>*Table 4.3.4.3.1-A*</u> for an explanation of options on the **General** tab.

Add new messag	je to: AB01 ? ×
General	Number of Messages 1
MD	Message Size (bytes) 1
MD1	If Put Failed STOP V
MDE	Contain headers OMD1 OMDE ODLH OXQH ORFH2 OJMS
DLH	File attachment
XQH	Message template
PMO	Data:
	Text Hex XML JSON
	Text only Encoding: US-ASCII
	Help: CTRL + C - Copy selected data; CTRL + V - Paste data Ok Schedule

Figure 4.3.4.3.1-A. Put New Window



To copy or paste data, select the data, then use quick keyboard functions CTRL + C or CTRL + V, respectively.

Within the **Data** section, you can check the **Text only** checkbox to display the message content as text, or leave it off to view message content as code. Also, the message encoding type can be changed. This is selected from the **Encoding** list (*Figure 4.3.4.3.1-B*).

To switch between decimal and hexadecimal mode for the address of the first byte, click anywhere in the address field. See *Address of First Byte* (*Figure 4.3.4.3-I*) for an example.

Add new mess	age to: AB01 ? ×
General	Number of Messages 1
MD	Message Size (bytes)
MD1	If Put Failed STOP ~
MDE	Contain headers OMD1 OMDE ODLH OXQH ORFH2 OJMS
DLH	File attachment
XQH	Message template
PMO	Data:
	Text Hex XML JSON
	Text only Encoding: US-ASCII
	US-ASCII IBM EBCDIC International

Figure 4.3.4.3.1-B. Put New Window – Encoding on General Tab

Control	Control Description				
Number of Messages	Enter the number of messages to put into a queue.				
Message Size (bytes)	Displays the size of the message text being entered or created in the Data field.				
lf Put Failed	Select the action that should be taken if Put command fails.				
Contains headers	The header(s) in the message. Select MD1, MDE, DLH, XQH, RFH2, JMS, or a combination of these. Please note that DLH and XQH cannot be selected together, and RFH2 and JMS cannot be selected together.	Always enabled.			
File attachment	Enter the path of the file to attach to the message.				
File attachment	Displays the Open File dialog box to select the file to attach to this message.				
Message template	(Available in a future version)				
Message template	(Available in a future version)				
RFH2 headers	Enter raw RFH2 header data.	Enabled only if RFH2 checkbox is selected.			

Table 4.3.4.3.1-A. Put New Message			
Control	Description	States and Conditions	
JMS headers	Enter raw RFH2 header data. Your entry automatically includes <usr></usr> tags.	Enabled only if JMS checkbox is selected.	
MD	Displays the Message Descriptor Properties window (<i>Figure 4.3.4.3.1-C</i>) where the user can edit the MD header of the message.	Enabled only if MD1 checkbox is not selected.	
MD1	Displays the Message Descriptor Properties window (<i>Figure 4.3.4.3.1-C</i>) where the user can edit the MD1 header of the message.	Enabled only if MD1 checkbox is selected.	
MDE	Displays the Message Descriptor Extension window (<i>Figure 4.3.4.3.1-H</i>) where the user can edit the MDE header of the message.	Enabled only if MDE checkbox is selected.	
DLH	Displays the Dead Letter Queue Header window (<i>Figure 4.3.4.3.1-I</i>) where the user can edit the DLH header of the message.	Enabled only if DLH checkbox is selected.	
ХQН	Displays the Transmission Queue Header window (<i>Figure 4.3.4.3.1-J</i>) where the user can edit the XQH header of the message.	Enabled only if XQH checkbox is selected.	
РМО	Displays the Message Put Options window (<i>Figure 4.3.4.3.1-N</i>) where the user can set put message options.	Always enabled.	

Message Descriptor Properties

The **MD** and **MD1** tabs are used to view/edit MD and MD1 message headers.

General	General	Identity	Origin	Reports	Group
MD	Version	VERSION 1	 Applicat 	ion message type	8
MD1 MDE DLH	Message type Message format Feedback Expiry (1/10sec)	DATAGRAM NONE NONE	Encoding CCSID0	-	0
хон РМО	Persistent Put date Put time	As Queue	• Backourc	Junto	
	Reply to queue Reply to QM]

Figure 4.3.4.3.1-C. Message Descriptor Properties – General

Table 4.3.4.3.1-B. Message Descriptor Properties – General			
Control	Description	States and Conditions	
Version	Select MD version from the list.	Always enabled.	
Application message type	Input application message type.	Editable only if APPLICATION message type is selected from the Message Type drop-down menu.	
Message type	Select message type from the list.	Always enabled.	
Application feedback code	Input application feedback code.	Editable only if APPLICATION feedback code is selected from the Feedback drop-down menu.	
	Select message format from the list.		
Message format	If either the RFH2 or the JMS option is selected on the General tab, then the MQHRF2 list item is automatically selected in the Message format list on the Message Descriptor Properties tab.	Always enabled.	
	If either option is later unselected, the Message format is reset to its previous value.		
Encoding	Provides message data encoding.	Read only.	
Feedback	Select message feedback code from the list.	Always enabled.	
CCSID	Provides message coded character set identifier.	Read only.	
Expiry	Input message expiry.		
Priority	Input message priority.	Always enabled.	
Backout count	Provides backout counter.	Read only.	
Persistent	Set message persistence.	Always enabled.	
Put date	Provides date when message was put.		
Put time	Provides time when message was put.		
Reply to queue	Input name of a message queue to which the reply or report message should be sent.	Always enabled.	
Reply to QM	Input name of the queue manager to		

Table 4.3.4.3.1-B. Message Descriptor Properties – General		
	which the reply or report message should	
	be sent.	

Below are MDS **Identity** tab properties.

Add new message to: SYSTEM.AUTH.DATA.QUEUE ? ×				
General	General Identity Origin Reports	Group		
MD	Message Identifier			
MD1	Text only Encoding: US-ASCII	•		
MDE	00000000 00 00 00 00 00 00 00 00 00 00	<u> </u>		
DLH	0000000E 00 <	<u> </u>		
XQH	Correlation identifier			
РМО	Text only Encoding: US-ASCII	•		
	00000000 <			
	Help: CTRL + C - Copy selected data; CTRL + V - Paste data			
	User identifier Application identity data Accounting token			
	Text only Encoding: US-ASCII	•		
	00000000 <	^		
	Help: CTRL + C - Copy selected data; CTRL + V - Paste data			

Figure 4.3.4.3.1-D. Message Descriptor Properties – Identity

Table 4.3.4.3.1-C. Message Descriptor Properties – Identity			
Control	Description	States and Conditions	
Message identifier	Edit message identifier.		
Correlation identifier	Edit message correlation identifier.		
User identifier	Enter user identifier.	Always enabled.	
Application identity data	Enter application identity data.		
Accounting token	Edit message accounting token.		

meshIQ Manage User's Guide

Using meshIQ Manage

General	General Identity Origin Reports Group
MD	Put application type 0
MD1	Application origin data
	Application name
MDE	
DLH	
XQH	
PMO	

Figure 4.3.4.3.1-E. Message Descriptor Properties – Origin

Table 4.3.4.3.1-D. Message Descriptor Properties – Origin			
Control Description States and Conditions			
Put application type	Input put application type.		
Application origin data	Input application origin data.	Always enabled.	
Application name	Input put application name.		

General	General Ide	entity Origin	Reports	Group
MD	Exception	•		
	Expiration	•		
MD1	Confirm on arrival	•		
MDE	Confirm on delivery	•		
DLH	Message ID	Generate new	OPass old	
XQH	Correlation ID	Copy message	OPass old	
PMO	Disposition options	• DLQ	ODiscard	

Figure 4.3.4.3.1-F. Message Descriptor Properties – Reports

Table 4.3.4.3.1-E. Message Descriptor Properties – Reports			
Control	Description	States and Conditions	
Exception	Select an exception report message type from the list.		
Expiration	Select an expiration report message type from the list.	Always enabled.	
Confirm on arrival	Select confirm on arrival report message type from the list.		

Table 4.3.4.3.1-E. Message Descriptor Properties – Reports		
Control	Description	States and Conditions
Confirm on delivery	Select confirm on delivery report message type from the list.	
Message ID	Specify how the Message ID of the report message (or the reply message) is to be set.	
Correlation ID	Specify how the Correlation ID of the report message (or the reply message) is to be set.	_
Disposition options	Specify message disposition type when a message cannot be delivered to its destination queue.	

Add new message to: SYSTEM.AUTH.DATA.QUEUE ? ×				
General	General Identity Origin	Reports Group		
MD	Group identifier			
MD1	Text only	Encoding: US-ASCII		
MDE	00000000 00 00 00 00 00 00 00 00 00	0 00 00 00		
DLH				
XQH	Help: CTRL + C - Copy selected data; CTRL + V - Message sequence number			
РМО	Message flags 0			
	Data offset 0			
	Original length -1			

Figure 4.3.4.3.1-G. Message Descriptor Properties – Group

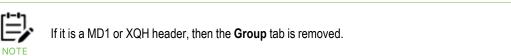


Table 4.3.4.3.1-F. Message Descriptor Properties – Group		
Control	Description	States and Conditions
Group identifier	Edit group identifier.	
Message sequence number	Input sequence number of the logical message within the group.	
Message flags	Input message flags.	Always enabled.
Data offset	Input offset of data in physical message from the start of the logical message.	
Original length	Input length of original message.	

Message Descriptor Extension Properties

The *Message Descriptor Extension Properties* window is displayed when the **MDE** button is clicked from *Put New* window (*Figure 4.3.4.3.1-A*). The *Message Descriptor Extension Properties* window is used to edit the MDE message header.

Add new message to: SYSTEM.AUTH.DATA.QUEUE		?	
General	Version	VERSION 2	•
	Structure length	72	
MD	Encoding	546	
MD1	Coded charset id	0	
MDE	Format	NONE	•
DLH	Flags	0	
XQH	Group id	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	
РМО	Message sequence number	1	
PMO	Offset	0	
	Message flags	0	
	Original length	-1	

Figure 4.3.4.3.1-H. Message Descriptor Extension

Table 4.3.4.3.1-G. Message Descriptor Extension		
Control	Description	
Version	Select version from the list.	
Structure length	Specify structure length.	
Encoding	Specify message data encoding.	
Coded charset id	Specify message coded character set identifier.	
Format	Select message format from the list.	
Flags	Specify a value for flags.	
Group id	Edit group identifier.	
Message sequence number	Input sequence number of logical message within group.	
Offset	Input offset of data in physical message from the start of the logical message.	
Message flags	Input flags that specify attributes of the message.	
Original length	Input length of original message.	

Dead Letter Queue Header Properties

The *Dead Letter Queue Header* window is displayed, when the **DLH** button is clicked from *Put New* window (*Figure 4.3.4.3.1-A*). The *Dead Letter Queue Header* window is used to edit the DLH message header.

Add new message to: SYSTEM.RETAINED.PUB.QUEUE		? ×	
General	Version	VERSION 1	T
	Reason	0	
MD	Dest q name		
MD1	Dest q manager name		
MDE	Encoding	0	
DLH	Coded chartset id	0	
ХОН	Format	NONE	T
2140	Put appl type	0	
PMO	Put appl name		
	Put date		
	Put time		

Table 4.3.4.3.1-H. Dead Letter Queue Header		
Control	Description	
Version	Select version from the list.	
Reason	Input reason code.	
Dest q name	Input name of destination queue.	
Dest q manager name	Input name of destination queue manager.	
Encoding	Specify message data encoding.	
Coded chartset id	Specify message coded character set identifier.	
Format	Select message format from the list.	
Put appl type	Input put application type.	
Put appl name	Input put application name.	
Put date	Provides date when message was put.	
Put time	Provides time when message was put.	

Transmission Queue Header Properties

The *Transmission Queue Header* window is displayed, when the **XQH** button is clicked from *Put New* window (*Figure 4.3.4.3.1-A*). The *Transmission Queue Header* window is used to view/edit the XQH message header.

General	General Identit	y Origin	Reports
MD	Remote q name		
MD1	Remote q manager name MD Version	VERSION 1	Application message type 8
NDE	Message type	DATAGRAM •	Application feedback code 0
DLH	Message format	NONE	Encoding546
(QH	Feedback	NONE	CCSID0
owo	Expiry (1/10sec)	-1 Priority -1	Backout count0
	Persistent	As Queue 🔻	
	Put date		
	Put time		
	Reply to queue		
	Reply to QM		

Figure 4.3.4.3.1-J.	Transmission	Queue Header	– General
---------------------	--------------	---------------------	-----------

Table 4.3.4.3.1-I. Transmission Queue Header – General			
Control	Description	States and Conditions	
Remote q name	The name of the remote queue.		
Remote q manager name	The name of the remote queue manager.	Always enabled.	
MD Version	Select the MD version from the list.		
Application message type	Input application message type.	Editable only if APPLICATION message type is selected in Message Type combo box.	
Message type	Select message type from the list.	Always enabled.	
Application feedback code	Input application feedback code.	Editable only if APPLICATION feedback code is selected in Feedback combo box.	
Message format	Select message format from the list.	Always enabled.	
Encoding	Provides message data encoding.	Read only.	

Table 4.3.4.3.1-I. Transmission Queue Header – General			
Control Description		States and Conditions	
Feedback	Select message feedback code from the list.	Always enabled.	
CCSID	Provides message coded character set identifier.	Read only.	
Expiry (1/10sec)	Input message expiry.	Always enabled.	
Priority	Input message priority.	Always enabled.	
Backout count	Provides backout counter.	Read only.	
Persistent	Select message persistence.		
Put date	Input date when message was put.		
Put time	Input time when message was put.		
Reply to queue	Input name of a message queue to which the reply or report message should be sent.	Always enabled.	
Reply to QM	Input name of the queue manager to which the reply or report message should be sent.		

Add new messag	je to: SYSTEM.RETAINED.PUB.QUEUE	?	×
General	General Identity Origin Reports		
MD	Message Identifier		
MD1			
MDE			
DLH	Correlation identifier		
ХQН	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA		
PMO			
	User identifier		
	Application identity data AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA		
	Accounting token		
	ААААААААААААААААААААААААААААААААААААААА		

Figure 4.3.4.3.1-K. Transmission Queue Header – Identity

Table 4.3.4.3.1-J. Transmission Queue Header – Identity			
Control	Description	States and Conditions	
Message identifier	Edit message identifier.		
Correlation identifier	Edit message correlation identifier.		
User identifier	Enter user identifier.	Always enabled.	
Application identity data	Enter application identity data.		
Accounting token	Edit message accounting token.		

General	General Identity	Origin Reports
MD	Put application type 0	
MD1	Application origin data	
	Application name	
MDE		
DLH		
XQH		
РМО		



Table 4.3.4.3.1-K. Transmission Queue Header – Origin			
Control Description States and Conc			
Put application type	Input put application type.		
Application origin data	Input application origin data.	Always enabled.	
Put application name	Input put application name.		

Additional options for XQH messages are available to configure.

General	General Id	entity Origin	Reports
MD	Exception	•]
MD1	Expiration	•]
	Confirm on arrival	•]
MDE	Confirm on delivery	•]
DLH	Message ID	Generate new	OPass old
XQH	Correlation ID	Copy message	OPass old
РМО	Disposition options	• DLQ	Oliscard

Figure 4.3.4.3.1-M. Transmission Queue Header – Reports

Table 4.3.4.3.1-L. Transmission Queue Header – Reports			
Control	Description	States and Conditions	
Exception	Select an exception report message type from the list.		
Expiration	Select an expiration report message type from the list.		
Confirm on arrival	Select confirm-on-arrival report message type from the list.		
Confirm on delivery	Select confirm-on-delivery report message type from the list.	Always enabled.	
Message ID	Specify how the Message ID of the report message (or the reply message) is to be set.		
Correlation ID	Specify how the Correlation ID of the report message (or the reply message) is to be set.		
Disposition options	Specify message disposition type when a message cannot be delivered to its destination queue.		

Message Put Options Properties

The *Message Put Options* window is displayed when **PMO** button on the *Put New* window (*Figure 4.3.4.3.1-A*) is clicked. The *Message Put Options* window is used to specify any options the user wants to use when putting a message onto a queue.

General	✓No Put Options	
MD	Syncpoint	No Syncpoint
MD1	New Message ID	New Correlation ID
	No Context	Default Context
MDE	Pass Identity Context	Pass All Context
DLH	Set Identity Context	Set All Context
XQH	Alternate User Authority	Fail if Quiescing
РМО		Logical Order

Figure 4.3.4.3.1-N. Message Put Options

Table 4.3.4.3.1-M. Message Put Options		
Control	Description	States and Conditions
No Put Options	Specifies that no options are used.	Disabled if another entry is selected.
Syncpoint	Operate within the normal unit-of-work protocols.	Enabled only when

Table 4.3.4.3.1-M. Message Put Options			
Control	Description	States and Conditions	
No Syncpoint	Operate outside the normal unit-of-work protocols.	No Put Options is NOT selected.	
New Message ID	Used to identify a new message identifier.	NOT selected.	
New Correlation ID	Used to identify a new correlation identifier.		
No Context	Context field in MQMD are set to blanks, nulls, and zeros.		
Default Context	Message will have default context associated with it.		
Pass Identity Context	Passes identity context information from the original message to a new message.		
Pass All Context	Passes identity and origin context information from the original message to a new message.		
Set Identity Context	Sets identity context information from the original message to a new message.		
Set All Context	Sets identity and origin context information from the original message to a new message.		
Alternate User Authority	User identifier to validate authority to messages on the queue.	Enabled only when No Put Options is	
Fail if Quiescing	Forces MQPUT or MQPUT1 call to fail if queue manager in quiescing state.	NOT selected.	
Logical Order	Puts groups and segment information in logical order rather than physical order.		

4.3.4.3.2 Put New Kafka Messages

Adding messages to queues is performed on the Add new message to dialog.

You get to this window in one of two ways:

- Click the **Put New** button ⁺ from a Message viewlet.
- Or, select **Messages** > **Put New Message** from the Action menu of a topic or partition.

The instructions below explain how to add a message from the Action menu.

- Within the topic or partition viewlet, select the topic or partition you want to put messages on. From the Action menu, select Messages > Put New Message.
- 2. On the General tab, Specify the **Number of Messages**.

- 3. The **Message Size (bytes)** is filled in as yo8u enter the message text in the space provided. But you can also specify the message size.
- 4. If applicable, use the **File attachment** browse button by to locate a file to attach to the message.
- 5. (Optional.) Enter a **Message Key**. See the next step for more information.
- 6. When putting a message on a topic, a Kafka message is placed on a partition according to its key, by default. But you can also specify a **Partition** for the message to go to, overriding this default. (If you are putting a message to a Partition, the Partition is not shown.)
- 7. Within the **Data** section, enter the message body. You can check the **Text only** checkbox to display the message content as text, or leave it off to view message content as code.
- 8. Select the Headers tab. Add headers as Key-Value pairs:
 - a. Enter the **Header Name** and its corresponding **Value**.
 - b. Click 🤼
- 9. Click **OK**.

Add New Mess	age to: item-update-reque	sts	? ×
General	Number of Messages	1	
Headers	Message Size (bytes)	12	
	File attachment		
	Message key		
	Partition/s	Default 👻	
	Text Hex XML	JSON	
	Encoding: US-ASCII 🗸		
	Test message		
	Help: CTRL + C - Copy s	elected data; CTRL + V - Paste data	
		Ok Scher	dule Cancel

Figure 4.3.4.3.2-A Put New Kafka Message

Table 4.3.4.3.2-A. Message Properties: Kafka		
Control	Description	
Message size (bytes)	Displays size of message without headers.	
File attachment	Name of file that is attached to this message.	
Message Key	Message keys are used by Kafka for message placement. Messages with the same key will be placed in the same partition, maintaining the correct order of messages.	
Partitions	Partition where the message is located.	

4.3.4.3.3 Put New Solace, RabbitMQ, and TIBCO EMS Messages

Adding messages to queues is performed on the *Add new message to: queue_name* dialog.

You get to this window in one of two ways:

- Click the Put New button ⁺ from a Message viewlet.
- Or, select **Messages > Put New Message** from a queue's Action menu.

The instructions below explain how to add a message from the queue's Action menu.

- 1. Within the queue viewlet, select the queues you want to put messages on.
- 2. From the Action menu, select **Messages > Put New Message**.
- 3. On the General tab of the *Add new message to: queue_name* dialog, enter the number of messages to put into a queue.
- 4. Message Size (bytes): Displays the size of the message text being entered or created in the Data field.
- 5. If applicable, use the **File attachment** browse button by to locate a file to attach to the message.
- 6. Data: Within the Data section, select the message data type (text, hex XML or JSON). Check the Text only checkbox to display the message content as text only. Unchecking Text only will display the message content with offsets which increases the load on the browser and should be used only for small messages. The message encoding type can be changed by using the Encoding list.
- 7. (TIBCO EMS messages.) Select the Headers tab. Add headers as Key-Value pairs:
 - a. Enter the **Header Name** and its corresponding **Value**.



8. Click **Ok**.

Messages are now added to each of the selected queues.

Add New Messag	ge to: Solace1 ?	×
General	Number of Messages	
	Message Size (bytes)	
	File attachment	
	Text Hex XML JSON	
	Encoding: US-ASCII	
		1
	Help: CTRL + C - Copy selected data; CTRL + V - Paste data	
	Ok Schedule Cancel	

Figure 4.3.4.3.3-A Put New Solace Message

Add New Messa	ge to: RabbitMQ1	? ×
General	Number of Messages 1	
	Message Size (bytes)	
	File attachment	
	Text Hex XML JSON	
	Encoding: US-ASCII	
	Help: CTRL + C - Copy selected data; CTRL + V - Paste data	
		ancel

Figure 4.3.4.3.3-B Put New RabbitMQ Message

Add New Messag	ge to: \$sys.admin	? ×
General	Number of Messages	
Headers	Message Size (bytes)	
	File attachment	
	Text Hex XML JSON	
	Encoding: US-ASCII	
	Help: CTRL + C - Copy selected data; CTRL + V - Paste data	
	Ok Schedule	Cancel

Figure 4.3.4.3.3-C Put New TIBCO EMS Message

Table 4.3.4.3.3-A. Message Properties: Solace, RabbitMQ, and TIBCO EMS			
Control	Description		
Message size (bytes)	Displays size of message without headers.		
File attachment	Name of file that is attached to this message.		

4.3.4.3.4 Delete Messages



If you have chosen to select messages by **Message Position** (on the **Message Commands** tab of the *User/Global Settings Window*), the delete icon will not be available when multiple individual messages are selected. You can still choose to delete all messages using the message(s) Action menu.

The *Confirm delete action* dialog box is displayed when one or more messages are selected and the **Delete** icon is selected from the *Messages* viewlet (*Figure 4.3.4.3-A*) or **Delete message(s)** is selected from the message(s) Action menu (*Figure 4.3.4.3-J* / *Figure 4.3.4.3-K*). It is used to delete messages from the queue, or the Kafka topic or partition. Kafka messages cannot be deleted individually. If you try to delete one or more Kafka messages, you will receive a prompt asking you to confirm whether you want to clear all messages. Click **Yes** to delete the selected messages or **No** to cancel.

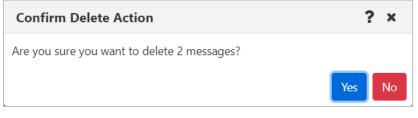


Figure 4.3.4.3.4-A. Delete Confirmation

The following window is displayed when **Messages** > **Delete All** is selected from the queue's Action menu in a queues viewlet (*Figure 4.3.4-A*). If you select a criteria record, messages will only be deleted if they meet the criteria specifications (see <u>4.4.4.1.2</u>, *Message Commands* for more information on message criteria).

Delete All Messages			? ×		
Selected objects:					
Queue	Manager	Node	Workgroup		
SYSTEM.CHANNEL.SYNCQ	QA	RMTQMGRS	MQM		
Delete By Criteria: *		•			
Delete all messages from: SYSTEM.CHANNEL.SYNCQ					
			Ok Cancel		

Figure 4.3.4.3.4-B. Delete All

4.3.4.3.5 Copy / Move



If you have chosen to select messages by **Message Position** (on the **Message Commands** tab of the *User/Global Settings Window*), the copy and move icons will not be available when multiple individual messages are selected. You can still choose to copy or move *all* messages using the message(s) Action menu.

The *Copy messages* or *Move messages* windows are displayed when one or more messages are selected and either the **Copy message** icon or the **Move message** icon are selected from the *Messages* viewlet, (*Figure 4.3.4.3-A*) or **Copy message(s)/Move message(s)** is selected from the message(s) Action menu (*Figure 4.3.4.3-J / Figure 4.3.4.3-K*). Messages can be copied or moved into all queues available in the **Queue name** list.

opy 2 messages		? :
Queue name: SYSTEM.AUTH.DATA.QUEUE		
Filter by:		
Queue Name	Current Depth	Maximum Depth
✓ LQ1	0	5000
Local_Queue_1	0	5000
Local_Transmission	0	5000
✓ MYQ	0	5000
NASTEL.EVENT.QUEUE	0	100000
NASTEL.MMF.ADMIN.COMMAND.QUEUE	0	5000
NASTEL.MMF.AUDIT.QUEUE	0	5000
□ NASTEL.PUBSUB.EVENT.QUEUE	0	100000
	0	5000

Figure 4.3.4.3.5-A. Copy Messages

Move 2 messages		? ×
Queue name: SYSTEM.AUTH.DATA.QUEUE		
Filter by:		
Queue Name	Current Depth	Maximum Depth
LQ1	0	5000
Local_Queue_1	0	5000
Local_Transmission	0	5000
□ MYQ	0	5000
✓ NASTEL.EVENT.QUEUE	0	100000
NASTEL.MMF.ADMIN.COMMAND.QUEUE	0	5000
NASTEL.MMF.AUDIT.QUEUE	0	5000
✓ NASTEL.PUBSUB.EVENT.QUEUE	0	100000
Navias	0	5000

Figure 4.3.4.3.5-B. Move Messages

The following windows appear when **Messages** > **Copy All** or **Move All** is selected from the queue's Action menu in a queues viewlet (*Figure 4.3.4-A*). If you select a message criteria record, messages will only be copied or moved if they meet the criteria specifications (see *Message Commands* for more information on message criteria).

The checkbox in the Queue Name column header selects all visible queues (clearing the checkbox clears the selection). If a filter has been applied to the list before the checkbox is selected, then only items in the filtered list are selected.

			? ×
Queue name: ABCTest			
Copy By Criteria:	*	-	
Filter by:	AB		
🗹 Queue Name		Current Depth	Maximum Depth
AB.MQ.Q.04		185	5000
AB.MQ.Q.05		185	5000
AB.MQ.Q.02		442	5000
AB.MQ.Q.03		185	5000
AB.MQ.Q.01		9	504
ABC		0	5000
ABCD		185	5000
AB.MQ.Q.06		185	5000

Figure 4.3.4.3.5-C. Copy All Messages

When the filter is removed, the selection is retained:

Queue name: ABCTest				
Copy By Criteria:	*	~		
Filter by:				
Queue Name		Current Dep	oth Maximum Depth	
AB.MQ.Q.04		185	5000	
AB.MQ.Q.05		185	5000	
AB.MQ.Q.02		442	5000	
AB.MQ.Q.03		185	5000	
AB.MQ.Q.01		9	504	
□ TESTQUEUE		185	5000	
BLE		185	5000	
ABC		0	5000	
BLU		185	5000	
ABCD		185	5000	
□ JKOOL.QUEUE		185	5000	
		105	5000	

Figure 4.3.4.3.5-D. Copy All Messages

Move All Message	25		? ×
Queue name: .xx			
Move By Criteria:	zeros × 🔻		
Filter by:			
Queue Name		Current Depth	Maximum Depth
○ TEST		0	50002
OMN		0	5000
⊖ HBC1.LQ		0	5000
O TEST2		0	50002
○ rftestTEST		0	5000
○ rftest		1	5000
OD		0	5000
O AMQ.MQEXPLOR	ER.608926FD03096E23	0	5000
O QM4		0	5000
O QM3		0	5000
O QQ6		0	5000

Figure 4.3.4.3.5-E. Move All Messages

4.3.4.3.6 Edit

The *Edit message* window is displayed by selecting **Edit** from the message's Action menu (*Figure 4.3.4.3-J*) or by clicking the **Edit** icon on the *Messages* viewlet (*Figure 4.3.4.3-A*). It is used to edit message information and data. For more information about edit options, please see *Put New* (*Section 4.3.4.3.1*).

Please note that Kafka, EMS, and alias queue messages cannot be edited.

Edit Message							?	×
General	Message size (bytes)	3						
MD	Remove original							
MD1	Preserve context							
MDE	Contain headers	□ MD1			□ XQH	RFH2		
DLH	File attachment							
XQH	Message template							
Data	RFH2 headers	<usr><</usr>	ims> <stuff></stuff>	a/random/jr	ms/folde.r/te	st <th>></th> <th></th>	>	

Figure 4.3.4.3.6-A. Edit Message

Table 4.3.4.3.6-A. Edit Message				
Control	Description	States and Conditions		
Message size (bytes)	Displays size of message without headers.			
Remove original	If checked, removes all original message headers when submitted.	Always enabled.		
Preserve context	If checked, preserves message context.			
Contains headers	Selects which header(s) will be available in the message.			
MD button	Displays Message Descriptor Properties window where user can view/edit MD header of message (<i>Figure 4.3.4.3.1-C</i>).	Enabled only if MD1 checkbox is not selected.		
MD1 button Displays Message Descriptor Properties window where user can view/edit MD1 header of message (<i>Figure 4.3.4.3.1-C</i>).		Enabled only if MD1 checkbox is selected.		
MDE button	Displays Message Descriptor Extension window where user can edit MDE header of message (<i>Figure</i> <u>4.3.4.3.1-H</u>).	Enabled only if MDE checkbox is selected.		
DLH button	Displays Dead Letter Queue Header window where user can view/edit DLH header of message (<i>Figure</i> <u>4.3.4.3.1-I</u>).	Enabled only if DLH checkbox is selected.		
XQH button	XQH buttonDisplays Transmission Queue Header window where user can view/edit XQH header of message (<i>Figure</i> 4.3.4.3.1-I).			
File attachment	Input file name to attach to this message.	Always enabled.		
RFH2 headers	RFH2 headers Edit raw RFH2 or JMS header data.			
Data button	Displays Message Data window where user can view/edit message data (<i>Figure 4.3.4.3.4-B</i>).	Always enabled.		

The *Message Text Data* window is displayed when the **Data** button is clicked on the *Edit Message* window (*Figure 4.3.4.3.6-A*). It is used to view/edit the message data. **Text only** is the default option for displaying message text data.

Edit message		? ×
General	Message data	
MD	Text Hex XML JSON	
MD1	✓Text only	Encoding: US-ASCII •
MDE	Error report submitted	
DLH		
XQH		
Data		
	Help: CTRL + C - Copy selected data;	CTRL + V - Paste data

Figure 4.3.4.3.6-B. Message Text Data

4.3.4.3.7 Load Messages from a File or Shared Storage

You can choose to load messages from one of several sources. The load procedure will vary depending on the source you choose.

4.3.4.3.7.1 Messages from .mmf files, .txt files, or files created by the IBM dmpmqmsg utility Load single or multiple messages from .mmf files, .txt files, or files created by the IBM

dmpmqmsg utility. Select **Load from File** from the *Messages* viewlet (*Figure 4.3.4.3-A*) or **Load from File** from the Queue Viewlet Messages Action menu options (*Figure 4.3.4-A*). The *Command settings* dialog box for loading messages is displayed. Make file format and encoding selections before proceeding.

Choose the file format you're loading from. Choices are as follows:

- **Text/binary.** Choose this option for plain text format.
- **MMF.** The MMF option is meshIQ's Message Management File format. Please be aware that when this file type is selected, extra data, such as headers, will be saved.
- **Dmpmqmsg.** This option indicates a character-encoded binary file that was produced by the IBM dmpmqmsg utility, which saves messages from a queue into a file.

Use the list on the right to choose between US-ASCII and IBM EBCDIC International encoding. The encoding method in the list will be reflected in the Message Headers Data. If you select the **Force Encoding** checkbox, not only the message headers, but the message encoding type (in the Encoding list) and message data itself will also reflect your selection. When loading Kafka messages from a file, the Encoding is set to *US-ASCII* and cannot be changed (the **Force Encoding** option is not available).

Click Yes to load a file.

Command Settings	? ×
Load messages using default user sett	_
File format:	Force Encoding: 🗌
text/binary 🗸	US-ASCII 🗸
_	
Yes	Configure Schedule Cancel

Figure 4.3.4.3.7.1-A. Load from File Command Settings

(Command Settings				? ×
L	oad messages using default	user setti	ngs?		
ł	ile format:		Encoding:		
	text/binary	~	US-ASCII		~
		Yes	Configure	Schedule	Cancel

Figure 4.3.4.3.7.1-B. Load from File Command Settings: Kafka

Clicking **Configure** will open the *Load Message* settings window (section <u>4.4.4.1.3</u>), where you can specify settings for the new messages, such as the delimiter used.

If a file is loaded containing more messages than the queue's maximum depth, an error message similar to the following will be displayed:

Load - Error						
Status	Command status	Origin	Timestamp	Reason	Actions	
A	(RC - 2053), CMD - EXCMD_MG_NEW - Failed!	\\MQM\DESKTOP-GQ6QDV1\TEST\4.4.2	Nov 16 2020 09:40:02	MQRC_Q_FULL	Description	
					Ok	

Figure 4.3.4.3.7.1-C. Max Depth Load Error

4.3.4.3.7.2 Load messages from Shared Storage



The ability to save or export files to shared storage requires that you enter a valid path in the Enterprise Manager MQM Properties dialog's MMF Shared Storage tab, in the Directory to be used for MMF Shared Storage field. This option is available for IBM MQ queues, Solace queues, Kafka topics and partitions, and EMS durables and queues.

Choose one of two methods for loading messages from storage:

- Select the queue into which you want to load messages. On the Action menu, select Messages > Load from Shared Storage.
- While browsing messages, select the Load from **b**utton, then select **Load from Shared Storage**.

The Select Files dialog includes all message files. Choose a file by clicking it.

elect Files		? ×
File name	Creation Date	
all_messages	2023-07-06_18:51:08	,
6_messages	2023-07-06_19:33:13	

4.3.4.3.8 Export All Messages



The ability to save or export files to shared storage requires that you enter a valid path in the Enterprise Manager MQM Properties dialog's MMF Shared Storage tab, in the **Directory to be used for MMF Shared Storage** field. This option is available for IBM MQ queues, Solace queues, Kafka topics and partitions, and EMS durables and queues.

To export all messages in a queue, topic, or partition, select **Messages > Export All Messages > .MMF**, **.TXT**, or **To Shared Storage** from the Action menu options (*Figure 4.3.4-*<u>A</u>).

If you chose **.MMF** or **.TXT**, the *Command settings* dialog box for exporting messages appears. Click **Yes** to export the messages. Clicking **Configure** will open the *Save Messages* settings window. See *Save Messages* (section <u>4.4.4.1.4</u>) for more information.

If you chose **To Shared Storage**, the Write File Name dialog opens. Enter a file name. Click **OK**.

Partitions					
× 1 Selected	Action 🔨 🔁 🗢 Sc	hema Default Partitions Dir 👻	Search (F	Filter By) T Projects	
	Browse messages	Put New Message		Cluster Name	
	Show Object Attributes	Load From File		localhost:9092	
	Commands >	Load From Shared Stor		localhost:9092	
			As MMF	9092	
	Messages >	Export All Messages >		9092	
	Evente	Comy All	As .TXT	9092	
	Events	Copy All		9092	
	Add to favorites	Clear All	To Shared Storag	5052	
	- 6 447C Tobal 447C			0002	

Figure 4.3.4.3.8-A. Export All Messages

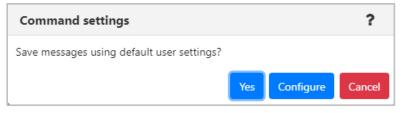
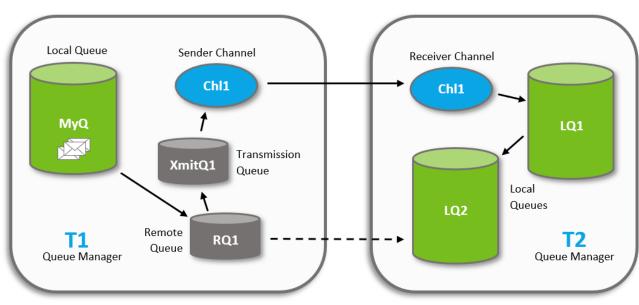


Figure 4.3.4.3.8-B. Export all Messages Command settings

Write File Name	
File Name:	
all_messages	
	Ok Cancel

Figure 4.3.4.3.8-C. Write File Name Dialog (Shared Storage)



4.3.4.3.9 Message Rerouting

Figure 4.3.4.3.9-A. Message Rerouting Process

The reroute feature transmits messages from one queue manager to another, for example, sending messages from queue manager T1 to a local queue (LQ2) on remote queue manager T2. This feature works by dynamically altering definitions to enable the messages to be transmitted.

4.3.4.3.9.1 Rerouting Requirements

Rerouting messages requires the following:

1. **Channels:** Create a sender and receiver channel on each of the queue managers. This feature works by dynamically altering the definitions to enable the messages to be transmitted. The channels are one directional and must have the same name, for example: Sender Channel (on T1): Chl1 Receiver Channel (on T2): Chl1

- Transmission Queue: Create a transmission queue on the sending queue manager (T1), for example: Transmission Queue: XmitQ1
- Remote Queue: Create a remote queue on the sending queue manager (T1). It will need to point to the local queue (LQ2) receiving the messages (located on the receiving queue manager T2). For example: Remote Queue: RQ1
- 4. **User Rights:** Users who will be rerouting messages need security rights to make definition changes to the objects listed above. These objects will need to be defined with special security rules, allowing them to be altered by users with the reroute rights.

The Reroute button in the console panel is only active for users with the Reroute Messages right (even though all users with the Show Queue Manager Attributes right can see it).

The set of rights required to perform the reroute messages action itself depends on the version you are using:

- Prior to version 10.4, the following rights were required: Change Channel, Change Queue, Move Messages, Start Channel, Stop Channel, and Refresh Queue Runtime.
- In versions 10.4.0 and later, in addition to the **Reroute Messages** right that makes the button available, you must also have the **Move Messages** right for both the queue you are moving the message from and the queue you are moving the message to. Moreover, if you are rerouting messages from one queue manager to another and channels are used, you must also have the **Start Channel**, **Stop Channel**, and **Change Channel** rights.

4.3.4.3.9.2 The Rerouting Process

Using the diagram above, the meshIQ components dynamically update the object definitions to reroute messages from MYQ on queue manager T1 to local queue LQ2 on queue manager T2 as follows:

- 1) Alter the remote queue (RQ1) on T1 to:
 - a. Point to the target local queue (LQ2) on T2.
 - b. Use T1's transmission queue (XmitQ1).

- 2) Alter the sending channel (Chl1) on T1 to:
 - a. To point at the connection for T2.
 - b. To use the transmission queue (XmitQ1).
- 3) Start the sending channel (Chl1).
- 4) Move the messages from MYQ to RQ1 on T1. This causes them to be placed on the transmission queue, picked up by the channel, transmitted to T2 and placed on LQ2.

Second Example: To move messages from MYQ to LQ1, the process is the same except RQ1 will need to point to LQ1 instead of LQ2. All other steps are the same and the same objects are used, pointing at LQ2 instead of LQ1.

Third Example: To move messages from MYQ to LQ1 on T3, the process is the same except the channel will be directed at T3 instead of T2. T3 needs a receiving channel Chl1 as well.

4.3.4.3.9.3 Reroute Configuration



If you have chosen to select messages by **Message Position** (on the **Message Commands** tab of the *User/Global Settings Window*), the reroute icon will not be available when multiple individual messages are selected.

Perform the following to reroute messages:

1. Open the messages to be rerouted in the Console panel. See <u>Messages</u> (section <u>4.3.4.3</u>) for information on viewing a <u>que</u>ue's messages). Select the message(s) to be rerouted

and click the **Reroute** button from the Message Viewlet toolbar (see <u>Figure 4.3.4.3-</u><u>A</u>). The *Reroute Messages* window opens.

Reroute Messages			?	×
Re-route from:				
Local_Queue_1				
Current queue depth:				
1				
Routing template:				
	× •	Delete Template		
Routing scope:				
Current Queue Manager				
Re-route messages to any queue within queue manager.				
Middleware Cluster				
Re-route messages to any queue shared within cluster.				
Nastel Workgroup				
Re-route messages to any queue within nastel Workgroup.				

Figure 4.3.4.3.9.3-A. Reroute Messages – Routing Scope

- 2. The **Re-route from** and **Current queue depth** fields display the name of the messages' queue and the queue's depth. Please note that these fields are always inactive.
- 3. Select a **Routing template** from the list. To create a new template instead, enter a template name in the **Routing template** field and press the **Enter** key on your keyboard. To delete a template, select it and click the **Delete Template** button.
- 4. Select a **Routing Scope** (a description of each option appears immediately below the option name). It will be used when there is a need to reroute messages into a location not defined in message headers.
- 5. Click **Next** to continue configuring the reroute properties. The *Reroute Messages* window opens. Select a **Routing destination** option and click **Next**.

Reroute Messages	?	×
Re-route from:		
Local_Queue_1		
Middleware Cluster:		
cluster_test		v
Routing destination:		
Original destination:		
Re-route messages to "destination queue" on "destination queue manager", identified in the dead letter header.		
Back to Sender		
Re-route messages to "reply to queue" on "reply to queue manager", identified in the original message descriptor		
O New destination		
Re-route messages to manualy defined queue.		
← Back Next → Finish	Cance	el

Figure 4.3.4.3.9.3-B. Reroute Messages – Routing Destination

6. If either **Original destination** or **Back to Sender** were selected for the **Routing destination**, the following window will open. By default, both transmission-queue (XQH) and dead-letter (DLH) headers are stripped from messages during rerouting

(based on the Strip message headers STRIP ALL selection). But you can choose to strip only XQH headers (STRIP XQH), only DLH headers (STRIP DLH), or neither (LEAVE ALL).

Reroute Messages	? ×
Re-route from:	
Local_Queue_1	
If command failed:	Strip message headers:
STOP ALL	STRIP ALL
Message batch:	
Delete original messages:	Request completion report:
ON POSITIVE RESPONSE	ONLY IF FAILED
Report queue:	v
← Back Next →	Finish Cancel

Figure 4.3.4.3.9.3-C. Reroute Messages – Additional Options

- 7. Click Next.
- 8. A summary of the reroute plan for the selected messages displays. If everything is correct, click **Finish**.

Reroute Messages		?	×
Re-route 3 messages from: MQ Node - SLB19, QMGR - T1, Queue - Local_Queue_1 . Re-route to: Original destination.			
← Back Next →	Finish	Cance	el

Figure 4.3.4.3.9.3-D. Reroute Messages – Summary

9. If **New destination** was selected for the **Routing destination** (*Figure 4.3.4.3.7.3-B above*, this option is used to re-route messages from one queue to another, which belong to different queue managers), a window similar to the below will open. Select a **Destination Queue name** from the list.

10. Click **Next** for additional options (*Figure 4.3.4.3.7.3-C* above). Specify the properties and click **Next** to view the reroute summary.

Reroute Messages	?	×
Re-route from:		
Local_Queue_1		
Group Manager name:		
MQM		•
Destination Node name:		
SLB19		•
Destination Queue Manager name:		
T2		•
Destination Queue name:		
Local_Queue_2	×	•
← Back Next → Finish	Cance	el

Figure 4.3.4.3.9.3-E. Reroute Messages – Set Destination

4.3.4.3.10Retrieving Messages from an Inoperable Cluster Queue

This section pertains to IBM MQ messages only.

Within a <u>cluster</u>, you can move messages from a put-inhibited queue on one queue manager to another queue of the same name on another queue manager. This functionality is only for put-inhibited queues that are shared within a cluster.

Prerequisites

- Both queue managers have joined the same cluster.
- The two queues (one on each queue manager) have the same name.
- On the properties of the two queues, the Cluster tab must indicate *Shared in a cluster*.
- The queue you are moving messages from must be "Put Inhibited" and the other must be "Put Allowed."

To see this functionality, verify that all criteria listed in the prerequisites section have been met. Then:

 Select the checkbox for the put-inhibited queue and make sure that the **Messages** submenu includes the **Distribute to Cluster** item. This option indicates that messages put to this queue can be moved to another queue of the same name on a different queue manager. (See <u>Figure 4.3.4.3.10-A</u>.)

2. Click **Distribute to Cluster**.

3. A list of potential destinations is displayed, along with a confirmation message. See *Figure 4.3.4.3.10-B*.

- 4. Click **Continue**. If messages have been moved successfully, a Success message is displayed in the lower right corner of the window.
- 5. Wait for the queues to be moved and for the viewlet data to be refreshed, or refresh the viewlet manually. The messages will be included on the second (Put Allowed) queue. See <u>Figure 4.3.4.3.10-C</u>.

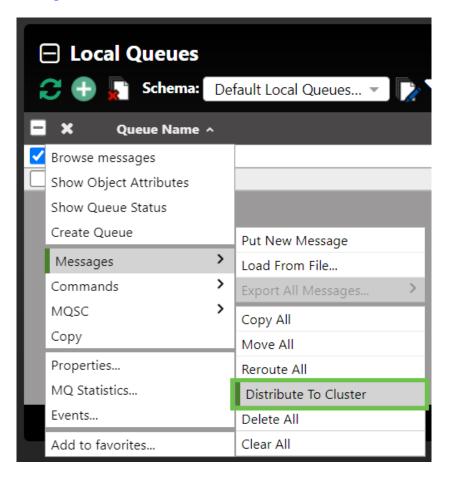


Figure 4.3.4.3.10-A. Distribute to Cluster Menu

Possible Destinations In The Current Connection						
Queue Manager	PUT status	Depth	IPPROCS	OPPROCS		
QUEMGR	Allowed	0	0	0		

Figure 4.3.4.3.10-B. Possible Destinations

🗆 Que		t Local Queues 🔻	Filter by:	ABCD	Criteria Manago	* × •
∎ ×	Queue Name ^	Manager Name	Current Depth	Maximum Depth	Get Messages	Put Messages
🗹 🔂 🕘	ABCD	QUEMGR	10	5000	Allowed	Allowed
	ABCD	QA	0	5000	Allowed	Inhibited

Figure 4.3.4.3.10-C. Messages Moved Successfully

4.3.4.4 Commands

The Commands submenu is accessed from the queue's Action menu. **Copy As**, **Delete Queue**, **Force Update**, and **Allow/Inhibit Get/Put Messages** are the options available.

Copy As

The **Copy As** option creates a new object based on the definition of the currently selected object. When clicked from the **Commands** submenu of the queue's Action menu options (*Figure 4.3.4-A*), the *Copy viewlet object* dialog box opens.

- 1. Enter a name and description
- 2. Click **Ok** to copy an object.

Copy viewlet object	
Object name:	
Object description:	
	Ok Cancel

Figure 4.3.4.4-A. Copy Viewlet Object

Delete Queue

The **Delete Queue** option allows users to delete the queue. When selected from the **Commands** submenu of the queue's Action menu options (*Figure 4.3.4-A*), the below dialog box appears.

Please note that there are no delete options for EMS queues. All EMS queues and their messages will be deleted.

Delete Queue			? ×
Selected objects:			
Queue	Manager	Node	Workgroup
SYSTEM.CHANNEL.SYNCQ	QA	RMTQMGR	S MQM
Delete Authority record:	Yes		~
Purge messages:	No		~
		Ok Sche	dule Cancel

Figure 4.3.4.4-B. Delete Queue

Specify if you would like the authority record deleted. When a queue contains messages, select **Yes** from the **Purge messages** option to delete both the queue and the messages it contains. If the queue contains messages and **No** is selected, an error notification similar to the below screenshot will appear. The **Description** button can be clicked for more details.

Delete Queue - Error							
Status Con	nmand status	Origin	Timestamp	Reason	Actions		
💥 (RC	- 2055), CMD - MQCMD_DELETE_Q - Failed!	\\MQM\RMTQMGRS\QA\ABCTest	Oct 24 2023 11:51:02	MQRC_Q_NOT_EMPTY	Description		

Figure 4.3.4.4-C. Delete Queue – Error

Force Update

The data in the WGS is cached and only periodically updated. Selecting the **Force Update** option will trigger the WGS to retrieve the most recent copy of the data. Select no more than 20 items to minimize impact on the WGS.

Allow or Inhibit Get and Put Messages

The ability to change the Get Messages and Put Messages attributes for a queue using the object menu requires the **Change Queue Extended** right in the security application.

The menu actions that are available depend on the queue type.

Queue Type:	Available Actions:
Local Queues and Alias Queues	Inhibit/Allow Get and Put
Remote Queue	Inhibit/Allow Put
	If Get is <i>Inhibited</i> , you cannot browse the queue.
	If Put is <i>Inhibited</i> , you cannot perform message-related operations.
Model Queues	Allow Get or Put
	There is no option to inhibit Put or Get from the Commands menu; instead, this can be done from properties.

The Get and Put Messages columns indicate the current state, or mode, of each queue when it comes to get and put message operations:

- If Get Messages is *Allowed* for a queue, then messages are allowed to be gotten from the queue. If Get Messages is *Inhibited*, then messages are prevented from being gotten from the queue.
- If Put Messages is Allowed for a queue, then messages are allowed to be put on the queue. If Put Messages is Inhibited, then messages are prevented from being put on the queue.

You can change these attributes for a single queue or multiple queues.

When you select a single queue, options shown are to change the current mode: for a queue with Get Messages *Allowed*, the menu option is **Inhibit Get**. For a queue with Get Messages *Inhibited*, the menu option is **Allow Get**.

When you select more than one queue, options shown are based on the current mode of the first queue that you select. The action applies to all selected queues.

Queues X 2 Selected Action Y + C + Schema Default Local Que Search (Filter By) Projects All							
		Queue Name	Manager Name	Current Depth ¹ ~	Maximum Depth	Get Messages	Put Messages
6	U	SYSTEM.AUTH.DATA.QUEUE	LEUNAME	201	999999999	Allowed	Allowed
	()	SYSTEM.AUTH.DATA.QUEUE	QA	147	999999999	Inhibited	Allowed
	(L)	SYSTEM.AUTH.DATA.QUEUE	EMIK	127	999999999	Allowed	Allowed
	()	SYSTEM.CLUSTER.REPOSITORY.QUEUE	QA	77	999999999	Allowed	Allowed
	(L)	SYSTEM.CLUSTER.REPOSITORY.QUEUE	LEUNAME	32	999999999	Allowed	Allowed
	()	SYSTEM.RETAINED.PUB.QUEUE	QA	29	999999999	Allowed	Allowed
	U	SYSTEM.RETAINED.PUB.QUEUE	EMIK	29	999999999	Allowed	Allowed
	()	SYSTEM.RETAINED.PUB.QUEUE	LEUNAME	29	999999999	Allowed	Allowed

Figure 4.3.4.4-D Message Queue Before Inhibit Put

Queues					
× 2 Selected	Action 🔨 🕇 🕄) (Schema	Default Local Que	-
	Compare				
	Show Queues Status		EUE		
	Messages	>	Copy As		
	Commands	>	Rename		
	MQSC	>	Delete Qu	lene	
	Сору		Force Upo	date	
	Properties		Allow Ge	t	
	MQ Statistics		Inhibit Pu	t	
	Add to favorites		Q		

Figure 4.3.4.4-E Inhibit Put Command

🖃 Qu								
🗙 2 Selected 🛛 Action 🔨 🕂 🌮 💠 Schema Default Local Que 👻 🕞 Search (Filter By) 🍸 Projects All 🛛 🔸 🧟								
			Queue Name	Manager Name	Current Depth ¹ ~	Maximum Depth	Get Messages	Put Messages
	6	()	SYSTEM.AUTH.DATA.QUEUE	LEUNAME	201	999999999	Allowed	Inhibited
\checkmark		()	SYSTEM.AUTH.DATA.QUEUE	QA	147	999999999	Inhibited	Inhibited
		()	SYSTEM.AUTH.DATA.QUEUE	EMIK	127	999999999	Allowed	Allowed
		()	SYSTEM.CLUSTER.REPOSITORY.QUEUE	QA	77	999999999	Allowed	Allowed
		()	SYSTEM.CLUSTER.REPOSITORY.QUEUE	LEUNAME	32	999999999	Allowed	Allowed
		()	SYSTEM.RETAINED.PUB.QUEUE	QA	29	999999999	Allowed	Allowed
		0	SYSTEM.RETAINED.PUB.QUEUE	EMIK	29	999999999	Allowed	Allowed
		()	SYSTEM.RETAINED.PUB.QUEUE	LEUNAME	29	999999999	Allowed	Allowed

Figure 4.3.4.4-F Inhibit Put Results

4.3.5 Channels

A channel viewlet displays all related information to channels. The icons represent the status of the channels:

- Active Channel: 🗳
- Inactive Channel: -
- Changing State: 🗳
- Stopped Channel: 🗳

A pop-up menu appears when a channel's check box is checked. See <u>Appendix C</u> for an explanation of these options. Clicking on a channel name will open the *Attribute* viewlet (*section <u>4.3.5.1</u>*). Clicking on a channel status will open the **<channel_name> Status** viewlet (*section <u>4.3.5.2</u>*).



Your pop-up menu options may differ according to your user permissions, which are managed by an admin.

X Channel Name ^		Manager Name	Channel Type	Status
L Chl1		T1	Sender	Inactive
Chl1		T2	Receiver	Inactive
EROM T1		T1	Sender	Retrying
Show Object Attributes	VER	T1	Receiver	Inactive
Show Channel Status	VER	T2	Receiver	Inactive
Commands >	Start Channel		Server Connection	Inactive
Properties	Stop Channel		Server Connection	Inactive
Events	Ping Channel			
MQ Statistics	Resolve Channel		AMQP	Inactive
Add to favorites	Reset Channel		AMQP	Inactive
SYSTEM.DEF.CLNT	CC Security		Client Connection	Inactive
SYSTEM.DEF.CLNT		T2	Client Connection	Inactive

Figure 4.3.5-A. Channel Pop-up Menu



If your *Channel* viewlet is empty, check if the **Show inactive channels** option is selected in the **User Settings** window > **User Settings** tab (see <u>User Settings Tab</u>).

4.3.5.1 Channel Attributes

Selecting **Show Object Attributes** from the channel's pop-up menu (*Figure 4.3.5-A*) will display the channel's *Attributes* viewlet.

Attributes	TO.T2
hannel Monitoring	Queue Manager
Channel Statistics	Queue Manager
roperty Control Attribute	Compatibility
lse Dead Letter Queue	Yes
fransport Type	ТСР
Batch Size	50

Figure 4.3.5.1-A. Channel Attributes

4.3.5.2 Channel Status

Selecting **Show Channel Status** from the channel's pop-up menu (*Figure 4.3.5-A*) or clicking the channel status within the **Status** column of the viewlet will display the *Status* viewlet of the channel. The following statuses are signified with specific colors: running (green), retrying (orange) and stopped (red).

The columns displayed in this viewlet can be customized by clicking the **Table** icon **E**.

1	MOMEGALSVR.CONN X		{ }
ť	G 🔳		
#	Name	Channel Type	Status
1	OMEGA.SVR.CONN		
	Current	Server Connection	Running

Figure 4.3.5.2-A. Channel Status

Table 4.3.5.2-A. Channel Status		
Status	Description	
Inactive	Channel is not active.	
Binding	Channel is negotiating with the partner.	
Starting	Channel is waiting to become active.	
Running	Channel is transferring or waiting for messages.	
Stopping	Channel is in process of stopping.	
Retrying	Channel is reattempting to establish connection.	
Stopped	Channel is stopped.	
Requesting	Requester channel is requesting connection.	

Table 4.3.5.2-A. Channel Status		
Status	Description	
Paused	Channel is paused.	
Disconnected	Channel is disconnected.	
Initializing	Channel is initializing.	
Switching	Channel is switching transmission queues.	

4.3.5.3 Channel Commands

The **Commands** submenu accessed from the channel's action menu (*Figure 4.3.5-A*) gives the option to start, stop, ping, resolve or reset channels. These options can differ depending on the channel type.

Start Channel

After selecting **Start Channel**, the *Start Channel* window opens. Within the **Channel Disposition** section, you can specify to include **Private**, **Shared** or **Shared-Linked** channel dispositions. Check the box and select the desired option from the drop-down menu. You can also specify the **Command scope** if needed. For more information on these options, please see the IBM online documentation:

<u>https://www.ibm.com/support/knowledgecenter/en/SSFKSJ_7.5.0/com.ibm.mq.ref.adm.doc/q088</u> <u>420_.htm</u>

Click **Ok** to start the channel, or click **Schedule** to create a task to start the channel at a specified time (see <u>Scheduling</u>). The **Schedule** button will not appear if your WGS is not configured for scheduling.

Start Channel	?
Channel name: SYSTEM.DEF.REQUESTER	
Channel Disposition: Command scope:	
Ok Schedule	Cancel

Figure 4.3.5.3-A. *Start Channel Dialog Window*

After selecting **Start Channel** the status will appear as **Initializing** or **Retrying** with the changing state icon 🗳.

Stop Channel

After selecting **Stop Channel**, the *Stop Channel* dialog box appears. The stop options are selected on this screen.

top Channel			? :
Selected objects:			
Channel	Manager	Node	Workgroup
PEARL.SVR.CONN	PEARL	AM-POWER	WGS19C
Stop mode:		Channel state a	after stop:
FORCE	-	Stopped	*
Filter			
		Ok S	chedule Cancel

Figure 4.3.5.3-B. Stop Channel

When you stop a specific channel instance, the two checkboxes (Stop channels from this remote queue manager and Stop channels from this remote connection) are selected, and the queue manager and remote connection are filled in if they exist, since they are necessary to identify the particular channel instance.

Stop Channel				1	2 ×
Selected objects:					
Channel	Manager	Node	Workgroup	Connection Na	ime
PAYROLL.PARIS	PARIS	SLBPC04	MQM	172.16.67.15	
Stop mode:			Channel state	e after stop:	
FORCE		~	Inactive		-
Filter					
✓ Stop channe	ls from this	remote q	ueue manager		
SUNI					
🗹 Stop channe	ls from this	remote co	onnection		_
172.16.67.15					
			Ok	Schedule	ncel

Figure 4.3.5.3-C. Stop Channel (with Remote Queue Manager and Connection)

Ping Channel

After selecting **Ping Channel**, the *Ping Channel* dialog box appears.

Ping Channel	?
Transmitting Queue Manager:	
Channel name:	
SYSTEM.DEF.CLUSSDR	•
Data Count (bytes):	
64	
Ping Channel	Channel Properties
	Ok Cancel

Figure 4.3.5.3-C. Ping Channel

Resolve Channel

After selecting **Resolve Channel** (only Sender or Cluster Sender channels have this option available in their *Commands* menu), the *Resolve Channel* dialog window appears. Use this option when the link fails during the confirmation period and the connection cannot be reestablished.

The following buttons appear at the bottom of the dialog window. The **Commit** and **Backout** buttons are only available when the channel is in INDOUBT state. This means that the channel's sending end does not know if messages were received.

- **Commit**: The in-doubt messages will be deleted from the transmission queue.
- **Backout:** The in-doubt messages are returned to the transmission queue.
- **Channel Properties**: Update the channel's properties. See *section* <u>4.3.5.4</u>, <u>Channel</u> <u>Properties</u>, for more information.

Resolve Channel	?
Queue Manager:	
Τ1	~
Channel Name:	
SYSTEM.DEF.CLUSSDR	~
Channel Status:	
Inactive	*
Indoubt Status:	
NOT INDOUBT	*
Commit Backout Channel Properties	
IMPORTANT: To resolve channel it must be in INDOUBT state.	
Ok Car	cel

Figure 4.3.5.3-D. Resolve Channel

Click **Ok** when finished.

Reset Channel

Select **Reset Channel** to reset the message sequence number for an IBM MQ channel. The *Reset Channel* dialog window appears. Optionally, a sequence number can be specified within the **Message Sequence number** field to be used when the channel is started.

Reset Channel	?
Transmitting Queue Manager:	
Channel name:	
senderTest	-
Message Sequence number: 1	
Channel Properties	
Ok	Cancel

Figure 4.3.5.3-E. Reset Channel

4.3.5.4 Channel Properties

Clicking **Properties** from the channel's action menu (*Figure 4.3.5-A*) will open the channel's *Properties* window.

For more information on the properties of channels, please go to the IBM Knowledge Center:

<u>https://www.ibm.com/support/knowledgecenter/en/SSFKSJ_7.5.0/com.ibm.mq.explorer.doc/e_pro</u> <u>perties_channels.htm</u>

See <u>*Custom Attributes*</u> for information on adding custom attributes to a channel (done on the **Custom Attributes** tab).

Sender SENDER.ICON1 Pre	operties		? ×
🔶 General	Channel Name:		
Extended	SENDER.ICON1		
MCA	Description:		
Exits	Multiple channel Description		
LU 6.2	Туре:	Transport Type:	
Retry	Sender 🗸	ТСР	~
SSL	Connection Name:		
Compression	localhost(1413)		
Monitoring	Local Communication Address:		
Statistics			
Custom Attributes	Transmission Queue Name:		
	SYSTEM.CLUSTER.TRANSMIT.QUEUE		× -
		Ok Schedule	Cancel

Figure 4.3.5.4-A. Channel Properties

4.3.5.5 Channel Events

Clicking **Events** from a channel's action menu (*Figure 4.3.5-A*) will display the *Events* viewlet of the channel.

Channel Name ^	Manager Name	Channel Type	Status	Bytes Sent	Bytes Received	Messages	
Baggins	T1	AMQP	Inactive				
SYSTEM.ADMIN.SVRCONN	T1	Server Connection	Inactive	0	0	0	
SYSTEM.AUTO.RECEIVER	T1	Receiver	Inactive	0	0	0	
SYSTEM.AUTO.RECEIVER	T1	Receiver	Stopped	0	0	0	
SYSTEM.AUTO.RECEIVER	T2	Receiver	Stopped	0	0	0	
SYSTEM.AUTO.SVRCONN	T1	Server Connection	Inactive	0	0	0	
SYSTEM.AUTO.SVRCONN	T1	Server Connection	Stopped	0	0	0	
SYSTEM.AUTO.SVRCONN	T2	Server Connection	Stopped	0	0	0	
SYSTEM.DEF.AMQP	T1	AMQP	Inactive				
SYSTEM.DEF.AMQP	T1	AMQP	Inactive				
SYSTEM.DEF.AMQP	T2	AMQP	Inactive				
otal: 42 Visible:42 Selected: 0	τ4	Client Connection	Inactivo	0	0	Last refresh time: 1	
			Console				
			Console			_	
YSTEM.AUTO.SVRC 🗙							
#	Date/Time	Category		Event ID	Object		
	22:31:04, Kov, 15, 2019	Alter		Object Changed	\\MOM\SLB	19\T2\SYSTEM.AUTO	SVRC

Figure 4.3.5.5-A. Channel Events Viewlet

Clicking a blue event number will open the *Event details* window for the event. There are three tabs: **General** (*Figure 4.3.5.5-B*), **Diagnostic** (*Figure 4.3.5.5-C*) and **Detail** (*Figure 4.3.5.5-D*).

On the **Detail** tab, an attribute can be selected to restore the attribute's previous properties. Select the attribute to revert and click **Rollback Selected Changes** (*Figure 4.3.5.5-D*).

Event details						
General Diagnostic Detail						
Event Time & Origin						
Receive Time:	22:31:04, Kov, 15, 2019					
Category:	Alter					
Group Name:	MQM					
Node Name:	SLB19					
Qmgr Name:	T2					
Object:	SYSTEM.AUTO.SVRCONN					
Description:						
	is zero and signifies a successful completion. When occurs in					
events, signifies that no furti Corrective Action: None	her qualification of the event is available.					
Corrective Action: None						
Close						



Event details	
General Diagnostic Detail	
Event #: 46	User ID: Ruta
Event ID: 20002	Elapsed Time: 00:00:05 hours
Reason: 0	Error ID: AMQ
Name	Value
Workgroup Name	MQM
Node Name	SLB19
Queue Manager Name	T2
Object Type	Channel
Object Name	SYSTEM.AUTO.SVRCONN
Original User ID	SYSTEM
Last Event Time	4
Description:	
MQRC_NONE: Reason code is zero and signif	fies a successful completion. When occurs in
events, signifies that no further qualification	of the event is available.
Corrective Action: None	
Close	



Event details		
General Diagnostic Detail		
Attribute Name	Current Value	Previous Value
Alteration Date	2019-03-15	2018-11-12
Alteration Time	22.31.04	15.07.14
Channel Description	Auto-defined	Auto-defined by
4		*
		Rollback Selected Changes
Close		

Figure 4.3.5.5-D. Event Details – Detail Tab

4.3.5.6 Add Channel to Favorites

Channels can be added to a *Favorites* viewlet. For more information on adding a favorites viewlet, please see <u>Create a New Viewlet for Favorite Objects</u>.

4.3.6 Comparing Objects

Objects can be compared within a viewlet. To compare objects, either select all objects (by clicking on the Select All check box) or select multiple objects. Click **Compare** on the popup menu. A compare table appears in the *Console* panel at the bottom of the screen.

Partition	n_Viewlet						:
× 2 Selected	Action ^ 📿 🖨 Sch	nema 🛛 Default Partitions Dir 👻 🚺	Search (Filter By)	Projects All	-→ 2		Show criteria
	Browse messages	Topic Name	Cluster Name	Leader Replica Id	Preferred Replica Id	Total Messages	Available Messages
88	Compare	jkreq-to-query	localhost:9092	0	0	0	0
		jkreq-to-query	localhost:9092	0	0	2	0
	Commands >	jkreq-to-query	localhost:9092	0	0	0	0
	Messages >	jkreq-to-query	localhost:9092	0	0	27	25
	, included and the second seco	jkreq-to-query	localhost:9092	0	0	0	0
	Add to favorites	jkreq-to-query	localhost:9092	0	0	66	65
	Jkreq-to-query-24	jkreq-to-query	localhost:9092	0	0	0	0
	() ilman to much 05	Horan to minne	less/hest/0000	^	0	0	
Visible: 20	06-212 of 1136 Total: 1136					Last	refresh time: 4:34:42 PM

Figure 4.3.6-A. Compare Option



When comparing channels, only channels of the same type can be compared; the **Compare** option will only appear when the **Channel Type** is the same for all selected channels.

Within the comparison table, by default, the **Compare** option (*Figure 4.3.6-B*) is enabled. Attributes that are identical for all objects are displayed in black font. Attributes that are different are displayed in red font.

↑ jkreq-to-querC Search	↑ jkreq-to-quer × ② ③ Search Q O Search Q Compare Differences only						
Attributes	jkreq-to-query-23 Attribute Value	jkreq-to-query-21 Attribute Value					
Workgroup Name	MQM	мам					
Node Name	CMKafka	CMKafka					
Cluster Name	localhost:9092	localhost:9092					
Topic Name	jkreq-to-query	jkreq-to-query					
Partition Id	23	21					
Leader Replica Id	0	0					
Preferred Replica Id	0	0					



To only view objects with differences, turn on the **Differences Only** option (*Figure 4.3.6-C*).

↑ jkreq-to-quer ×							
🕄 🖻 Search Q < 0 / 0 > 🏹 Compare 🏹 Differences only							
Attributes jkreq-to-query-23 Attribute Value jkreq-to-query-21 Attribute Value							
Partition Id	23	21					
Total Messages	66	27					
Available Messages	65	25					

Figure 4.3.6-C. Differences Only Option

When the Compare option is turned off, all objects are displayed in black font.

↑ jkreq-to-quer × C Search Q < 0 / 0 > Compare Differences only						
Attributes	jkreq-to-query-23 Attribute Value	jkreq-to-query-21 Attribute Value				
Workgroup Name	MQM	мам				
Node Name	CMKafka	CMKafka				
Cluster Name	localhost:9092	localhost:9092				
Topic Name	jkreq-to-query	jkreq-to-query				
Partition Id	23	21				
Leader Replica Id	0	0				
Preferred Replica Id	0	0				

Figure 4.3.6-D. Differences Only Option

4.3.7 Customizing Viewlets

The way a viewlet is displayed can be changed by using schemas, sorting, and filtering. Viewlets can also be customized by changing the width of the columns. Hover over the column headers until you see a double arrow, then click and drag to increase or decrease the column width.

4.3.7.1 Schemas

Schemas control how a viewlet is displayed; the attribute columns and the order in which they appear are controlled by the schema currently in effect. Each viewlet type has a default schema, but you can create your own custom schema to specify the attributes you want to view and their order.

By default, the **Manager Name** column appears as the second column in most of the viewlets even though it does not appear in the Available attributes list (*Figure 4.3.7.1-C*). To remove the **Manager Name** column, uncheck the **Show Manager for default schemas** option in *User Settings* (section <u>4.4.4.1</u>).

To change a viewlet's display, select a schema from the **Default schema** drop-down list. All available schemas will appear in this list.



Figure 4.3.7.1-A. Default Schema

To create a schema, click the **Manage Viewlet Schemas** button.

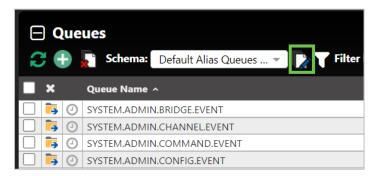


Figure 4.3.7.1-B. Manage Viewlet Schemas Button

The *Manage Schemas* window appears. Click **Add** to add a new schema. You can also copy an existing schema by clicking the **Copy As** button.

Manage Schemas		?	×
Shared Display Schemas Viewlet schemas: Default Alias Queues Dir My_Schema AliasQ2	Schemas object attributes: Queue Name Base Object Name Last Updated		
Add Copy As			
Cancel	I	ОК	

Figure 4.3.7.1-C. Manage Schemas – Adding a New Schema

The *Edit Schema* window opens.

Schema Name: My_Schema					
Share Display Sc	hema 🚦				
wailable attributes:			Displayed attribu	tes:	8
Enter filter value			Name	Category	
All 🗸			Queue Name	General	
		-	Manager Name	General	
Name	Category		Default Bind	General	
Custom	General		Default Priority	General	Move Up
Base Object Name	General		Put Messages	General	
Default Persistence	General	6 Add all »			Move Dow
Cluster Workload Rank	Cluster				
Cluster Name	Cluster	Add >			
Node Name	General				
Cluster Workload Priority	Cluster	< Remove			Move to
Queue Description	General	1			Bottom
QSG Disposition	General	Remove all	9 Default sort		
Last Updated	General				
Scope	General		☑ Col. #1:	lueue Name	~
Default Put Response Type	Extended		Direction: A	scending	~
Cluster Namelist	Cluster		Col. #2:		~
Cluster Workload Use Qu	Cluster				
Cluster-Sender Channel N	Cluster		Direction: A	scending	~
Get Messages	General				

Figure 4.3.7.1-D. Edit Schema

Add a name for the new schema in the field provided (1). Using the **Add all** (6) and **Add** (3) buttons, select attributes from the **Available attributes** table (4) on the left side of the screen. They will now appear in the **Displayed attributes** table (5) on the right side of the screen. Easily find attributes in the **Available attributes** table by using the filter (4) immediately above the table.

To remove attributes from the **Displayed attributes** table, use the **Remove** and **Remove** all buttons (7).

The order the attributes appear within the **Displayed attributes** table is the order in which the attributes will appear in the viewlet. To change this order, select an attribute and use the **Move to Top**, **Move Up**, **Move Down** and **Move to Bottom** buttons (8).

The manner in which the viewlet's data will be sorted is specified within the **Default sort** section at the bottom right of the screen (9). Enable the **Col #1** checkbox and select the attribute to sort by. Select **Ascending** or **Descending** from the **Direction** drop-down list. To sort by a secondary column, perform the same steps for the **Col. #2** checkbox.

Click **OK** to add the new schema.

The schema will now appear on the *Manage Schemas* window. On this screen, users can add, copy, edit or delete existing schemas.

Manage Schemas	? ×
 Shared Display Schemas Viewlet schemas: Default Alias Queues Dir My_Schema AliasQ2 	Schemas object attributes: Queue Name Manager Name Default Bind Default Priority Put Messages
Add Copy As Edit Delete	
Cancel	ОК

Figure 4.3.7.1-E. Manage Schemas

The **Edit Schema** button in now appears allowing you to edit your new schema.

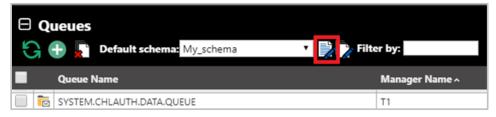


Figure 4.3.7.1-F. Edit Schema Button

To customize messages viewlets, create a new schema or apply an existing one by clicking the **Manage viewlets schemas** or **Edit current schema** button as described above.

♠ SYSTEM.DEAD.L	ETTE 🗙	♠ System.auth.data ¥		
	Schema	Default Messages	Ţ	

Figure 4.3.7.1-G. Schemas for Messages Viewlet

When you click the **Edit current Schema** button, the *Edit Schema* window opens. Within the *Available Attributes* list, there are several message attributes to select from. Perform the same steps as explained above to create or edit a schema.

Schema Name: MyMsgScher					
🛛 🍊 Share Display Scł	nema				
vailable attributes:			Displayed attributes:		
Enter filter value			Name	Category	Move to Top
All 🗸			DLH	DLH	Move to top
			XQH	XQH	
Name	Category		Data Size	General	
MD::Priority	MD		MD::Type	MD	Move Up
MD::Put Appl. Name	MD		MD::Format	MD	
MD::Put Appl. Type	MD	Add all ≫	MD::Message ID	MD	Move Down
MD::Reply QMgr	MD		MD::Correl. ID	MD	
MD::Reply Queue	MD	Add >	MD::Put Date	MD	
MD::User ID	MD		MD::Put Time	MD	
Message Data	General	< Remove	MD::Version	MD	Move to
XQH::MD::Acct. Token	XQH::MD		Message Cursor	General	Bottom
XQH::MD::Appl. Identity D		≪ Remove all	 Default sort 		
XQH::MD::Appl. Origin Data			✓ Col. #1:	~	
XQH::MD::Backout Count	XQH::MD				
XQH::MD::CCSID	XQH::MD		Direction: Ascendir	ng 🗸 🗸	
XQH::MD::Correl. ID	XQH::MD		Col. #2:	~	
XQH::MD::Encoding	XQH::MD		Direction:	~	
XQH::MD::Expiry	XQH::MD		Direction.		
XQH::MD::Feedback	XQH::MD				

Figure 4.3.7.1-H. Edit Schema

To share a schema, turn on the **Shared Display Schema** slider (2) . Its color changes to orange. Click the vertical ellipse icon that is now displayed next to the **Shared Display Schema** label Schema

Click the eye icon next to each group you want to share the dashboard with. The eye icon changes to green for selected groups. Hover your mouse over the vertical ellipse icon to view a list of the groups with which a schema is shared. On the *Manage Schemas* window, look for the following icons:



Indicates a schema that has been shared with your group.

۵

Indicates a schema that you have shared. After you edit a schema that you have shared with one or more groups, the users in those groups will have access to the updated version of the schema.

Edit Schema						
Schema Name: My_Schema						
Share Display Schema Filter By:						
Available attributes: All						
Enter filter value Administrators						
All Developers						
Name Category Operators						
Custom General Users						

Figure 4.3.7.1-I. Share Schema

Edit Schema					
Schema Name:	My_Schema	Administrators, Developers, Operators			
🙆 Sha	re Display So	chema			

Figure 4.3.7.1-J. Shared Schema

4.3.7.2 Sorting

By default, a viewlet reflects the sort method set up in the selected schema. The primary and secondary sort methods are denoted by the numbers 1 and 2 next to the column labels. The arrow at the right of the column header name indicates whether the data is sorted in ascending (up arrow ^) or descending (down arrow v) order. To go back to the

viewlet's default sort method, click the **Default table sorting** button

If the viewlet's schema includes both primary and secondary sort methods, numbers and arrows are displayed in both column headers. To change the primary and secondary sort methods:

- 1. Click the header of the new column that you want to use for the primary sort method. The number 1 is added to denote the primary sort method.
- 2. Control-click (or Alt-click) the header of the column that you want to use for the secondary sort method. The number 2 is added to denote the secondary sort method.

After completing the steps above, if you remove the sort from one of the columns, data is sorted by the remaining column.

As stated above, to revert to the viewlet's default sort method, click the **Default table**

sorting button **.** You can also turn off all sorting by repeatedly Control-clicking or Altclicking each column header that has an arrow until its arrow is removed.

In versions prior to 10.5.0.1, sorting functionality was different from that described above.

In version 10.5.0, if a viewlet is sorted by two columns (whether based on a schema or set manually), then clicking on a third column turns off the primary sort column. If a viewlet is sorted by one column (whether based on a schema or set manually), then when you click a second column, it is used as a secondary sort method.

Before version 10.5.0, the first time you clicked a column header other than one already used for sorting, the column that was clicked would be used for the secondary sort. You could turn off the secondary sort to revert to the primary sort method.

The example below shows a primary sort by Manager Name and a secondary sort by Channel Type.

Manager Name ¹ ^	Channel Type ² ^
LEUNAME	Cluster Receiver
LEUNAME	Cluster Sender
LEUNAME	Sender
LEUNAME	Sender
LEUNAME	Server Connection
QA	Cluster Receiver
QA	Cluster Sender

Figure 4.3.7.2-A. Column Sorting (Primary and Secondary)

4.3.7.3 Filtering

Use the **Filter by** field to key in any string of characters to filter objects within a viewlet. The filter applies to all of the viewlet's attributes.

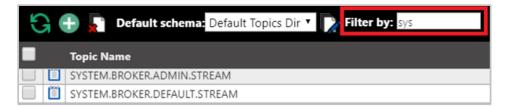


Figure 4.3.7.3-A. Filter By

4.3.7.4 Collapse / Expand Viewlets

Use the minus button 🔳 to collapse and the plus button 🗈 to expand viewlets.

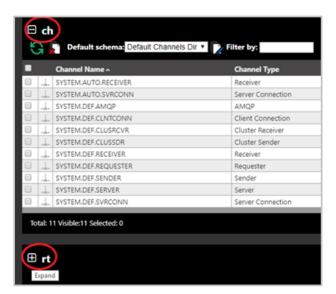


Figure 4.3.7.4-A. Collapse / Expand Viewlets

With one click you can easily expand or collapse all viewlets on your dashboard. Simply right-click on any viewlet's expand/collapse button. A menu will appear where you can select to expand or collapse all viewlets on the dashboard.



Figure 4.3.7.4-B. Collapse / Expand All Viewlets

4.3.7.5 Moving Viewlets

To move a viewlet up or down, click the top of it and drag and drop it to a new position.



4.3.7.6 Resize Viewlets

The height of viewlets can be resized. The updated size will be retained from session to session until the viewlet is resized again.

To update a viewlet's height, hover your mouse within the black bottom portion of a viewlet until your cursor changes to the resize symbol . Click and hold the mouse while dragging up to decrease or down to increase the viewlet's size.

	Manager Name ^	Node Name	Instances	Instances active	Command Level
0	Contraction of the Contraction Contraction of the	AM-POWER	1	1	900
0	CS71	ZOS-AGENT	1	0	0
0	CSQ8	ZOS-AGENT	1	0	800
0	CSQ9	ZOS-AGENT	1	0	905
0	DOUBLE.03	AM-POWER	1	1	900
0	ENGLAND	ABBA	1	1	900
0	FRANCE	ABBA	1	1	900
0	IBM	AM-POWER	1	0	900
0	NY1_912	AM-POWER	1	0	0
0	NY2_912	AM-POWER	1	0	0
0	OMEGA	AM-POWER	2	2	900
0	OMEGA	REMOTE_QMGRS	2	2	900
	OPIS	AM-DOM/EP	3	2	000

Figure 4.3.7.6-A. Resize Viewlets

4.3.8 Topology

The Topology feature allows you to view an animated graphic representation of queue relationships. The object structure and hierarchy are displayed. The below figure is an example:

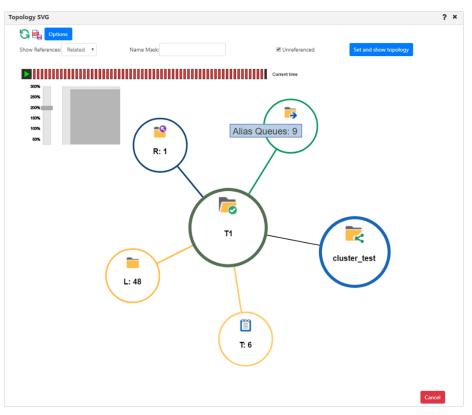


Figure 4.3.8-A. Topology Diagram

4.3.8.1 How to Display a Topology

From a queue manager or node pop-up menu (for IBM MQ, TIBCO EMS or Apache Kafka), select **Show Topology**. Please note, you can select multiple queue managers belonging to the same node.

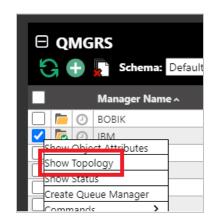


Figure 4.3.8.1-A. Show Topology

The *Topology SVG* window opens.

Topology SVG			•	?	×
G 🙀 Options					
Show References:	Name Mask:		Set and show		
Related 🗸		Unreferenced	topology		
To view topo	logy, select the options from at	oove and then press "Set and Sho	w Topology"		

Figure 4.3.8.1-B. Show Topology

From the **Show References** drop-down, select the type of references (**Related**, **All** or **Invalid**) the topology should display.

Use the **Name Mask** field to filter the topology by the lowest hierarchical object level. The default value of this field is an asterisk "*", which means everything. You can search using the asterisk, QAB* or enter the object's exact name. In the example below **QABC** was entered within the **Name Mask** field to display this exact queue.

Use the **Unreferenced** check box to specify whether or not to display unreferenced objects.

Click the blue **Set and show topology** button after you have specified your options to display the topology diagram and animation. The objects are signified with A (alias queue), L (local queue), R (remote queue) or T (topics) and the number of queues or topics. The default configuration for topology is to show queue manager relationships, including remote queues, transmission queues, channels, and clusters. The key element is to verify setup and discover inconsistencies. For example, in the diagram below, a remote queue "aname" is actually a point to a remote queue on the local queue manager.

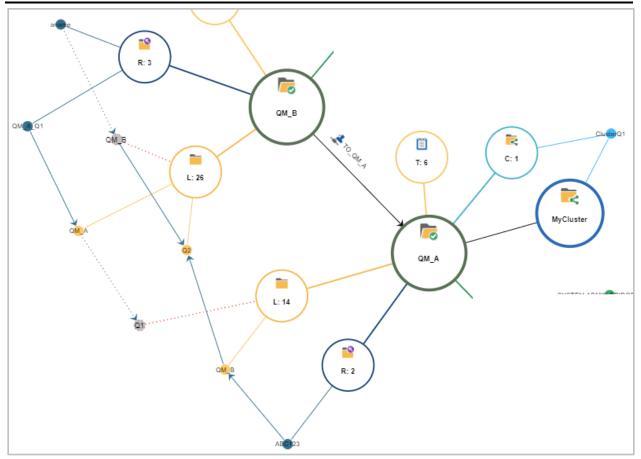


Figure 4.3.8.1-C. Customized Topology

Hover over the topology circles to view object names.

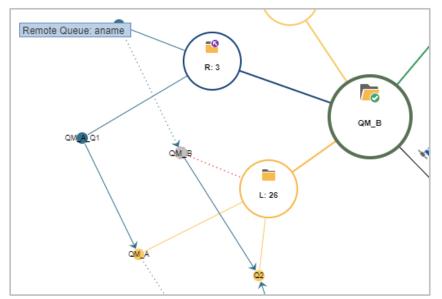


Figure 4.3.8.1-D. Display Object Names

Zoom in or out by scrolling your mouse scroll button or by dragging the size slider located on the left side of the window. Change a topology's location on the screen by clicking the topology and drag and dropping it to a new position. Click the refresh \bigcirc button or Set and Show Topology to refresh the topology.

Another topology view is **All**. This includes all local queues whether they are in a relation or not. To reduce the amount of data presented, this only includes queue objects with message by default (see exception in animation below).

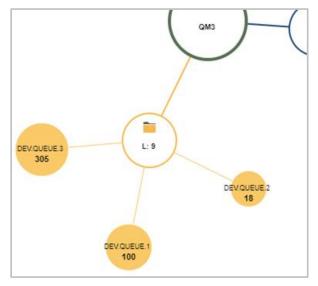


Figure 4.3.8.1-E. Show References: All

You can click the **Export Topology to PDF** button to download a PDF of the topology. The downloaded file will have the object's name for which the topology is created, time generated and reference type. The PDF page will adapt its size to the displayed data but will not exceed 9000x9000 (maximum topology size). Please note that to download a PDF file, it is not required that the topology be displayed in the current SVG window.

4.3.8.2 Diagram Options

To customize the diagram, click the **Options** button located at the top-left of the *Topology SVG* window. The *Topology animation options* window opens.

Topology SVG			
G 🖬	Options		
Show References:			
Related	d 🗸		

Figure 4.3.8.2-A. Options Button

The topology diagram data can be animated over a specified time range. This extracts data from the IBM MQ statistics and can take some time to complete. To activate, enable **Animate Queue Statistics**.

Use the following drop-down menu options to customize your selection:

- **Time frame:** Specify the date range for the animation. Select from **Last hour**, **Last 3 hours**, **Last 6 hours** or **Range**.
- Animated Queue Property: Specify what to animate. Select from Max. queue depth, Puts count (messages arrived), Put get delta (difference between the messages read and the messages arrived).
- Animation Speed: Specify the speed for the animation. Choose from Fast (6 seconds), Normal (12 seconds) or Slow (20 seconds).

Enable the **Show current queue depth** option to display queue depth values when animation is not active.

The **Maximum Topology Object Amount** field is used to determine the maximum amount of topology objects to represent. The default value is 1000. The **Maximum Topology Child Node values Amount** field is used to determine the maximum number of queues to represent in the topology. The default value is 500.

Topology Options		? ×
Animate Queue Statistics Time frame	Note: Requires database access which increases time to collect Last hour	~
Animated Queue Property	Max. queue depth	~
Animation Speed	Fast (6 seconds)	~
Show current queue depth		
Maximum Topology Object Amount (1 - 10000)	1000	
Maximum Topology Child Node values Amount (1 - 500)	500	
	Ok	Cancel

Figure 4.3.8.2-B. Topology Animation Options

Click **Ok** to save your changes. Back on the *Topology SVG* window, click the **Play** button **b** to start the animation.





If the graph to be generated includes more objects than the specified **Maximum Topology Object Amount**, an error message will be displayed, and the graph is not generated.

If **All** is selected from the **Show References** dropdown, the topology will not represent queues if the queues amount in the queue manager exceeds the **Maximum Topology Child Node values Amount** (specified on the *Topology Options* screen). These queues are displayed in an additional view which is launched by clicking the **Additional Topology Views** button. In the new window that opens, select the manager, object, and diagram page number for which you want to view the results.

Queue Topology Preview				
Select	Select manager:			
T1 •				
ТЗ	-			
L	ocal Queue			
	Page no.: 1			
	Page no.: 2			
	Page no.: 3			
	Page no.: 4			
	Page no.: 5			

Figure 4.3.8.2-D. Queue Topology Preview

All overflowed objects will be displayed in multiple graphs (each graph will have a maximum of 100 queue objects), with each graph displayed on its own page. To navigate between the pages, use the list on the left side of the window or the arrow buttons located above the graph.

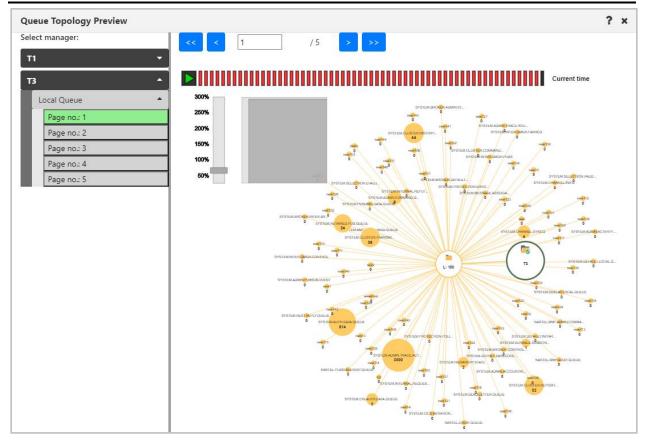


Figure 4.3.8.2-E. Graphs of Overflowed Objects

Kafka Nodes

Kafka node types can be displayed. The brokers (displayed in the orange boxes below) and topics (displayed in the red boxes below) are displayed. If **All** is selected for **Show References**, all topics are displayed as well (displayed in the blue box below).

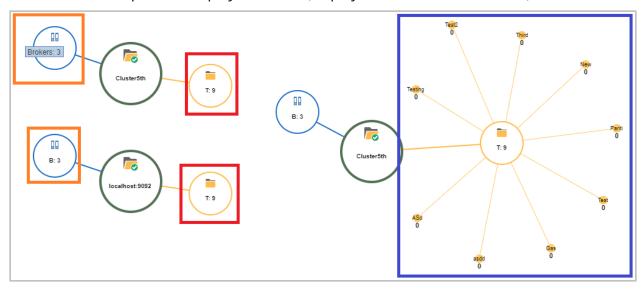


Figure 4.3.8.3-A. Kafka Nodes

4.3.9 Help Button

There is a help button located at the top right corner of various windows. Click this button to get to the <u>*Resource Center*</u>.

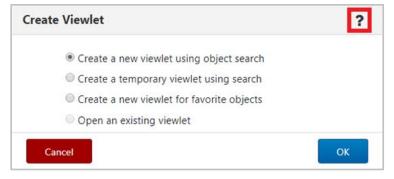


Figure 4.3.9-A. Help Option

You can also reach the <u>Resource Center</u> or other online resource defined in your system's global settings by selecting the **Help** button from the toolbar (see <u>Toolbar Options</u>).

4.3.10 MQ Statistics Viewlet

MQ statistics viewlets display all attributes of local MQ queues, channels, and queue managers. The attributes displayed in these viewlets are determined by SQL queries created by you. The SQL queries are saved as schemas for easy retrieval for future use.

4.3.10.1 Viewing an MQ Statistics Viewlet

Multiple objects can be displayed in an MQ statistics viewlet. To view statistics for object(s), select them from a queue, channel, or queue manager viewlet. Select **MQ Statistics** from the pop-up menu that appears.

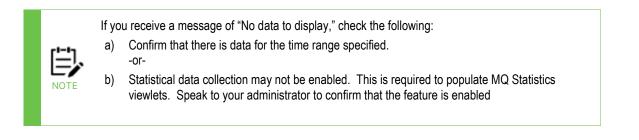
Local Queue viewlet Oefault schema: Default Local Queues Dir V Pilter by:					
Queue Name ^	Manager Name				
CREDIT.OUTPUT	QM_B				
CSQ8	QM_B				
Compare	QM_A				
Show Queues Status	QM_A				
Messages	V910Test2				
Commands >	QM_C				
Copy	QM B				
	QM_A				
MQ Statistics	V910Test2				
Add to favorites	V910Test2				

Figure 4.3.10.1-A. MQ Statistics Option on the Object's Menu

The SQL viewlet opens in the Console panel with all of the selected objects' attributes displayed. Be sure to scroll to the right to view all fields.

You can update the date range using the **Date mode** list: *Last 24 hours, Last 48 hours, Last 7 days*, Custom Days Count (enter the number of previous days), or User Date Range (select a date range). When switching back and forth between the User Date Range and the Custom Days count, the date range is updated. For example, if you view records after selecting a Custom Days Count of 14, then switch to the User Date Range, the range shows the past 14 days.

The data can be sorted by clicking the column headers. Click the **Refresh** button is to confirm that viewlet is up to date. You can save the viewlet table to a CSV file by clicking the **Save Table As CSV** button.



				Console			
↑ Local_Queue_1 \$	Stati 🗙						
G 🖬		ate User Date Rar	nge v Range :	2019-07-01 4:43 PM	2019-09-17 7:43 PM Defa	Default Queue Status	Query
STATQUEUE_NO	MANAGER_NAME	MQNODE_NAME	MQMGR_NAME	STAT_TIME_STAMP	INTERVAL_START_DATE_TIME	INTERVAL_END_DATE_TIME	COMMAND_LE
3185	MQM	SLB19	T1	1566482016	2019-08-22 16:51:36.0	2019-08-22 16:53:36.0	900
3627	MQM	SLB19	T1	1566545127	2019-08-23 10:23:27.0	2019-08-23 10:25:27.0	900
3727	MQM	SLB19	T1	1566547408	2019-08-23 11:01:27.0	2019-08-23 11:03:27.0	900
10478	MQM	SLB19	T1	1568732697	2019-09-17 18:02:56.0	2019-09-17 18:04:56.0	900

Figure 4.3.10.1-B. MQ Statistics Viewlet

4.3.10.2 Changing the Data Displayed

The management of statistics schemas is governed by the **Manage Global Display Schemas** and **Manage Private Display Schemas** rights.

The data displayed is controlled by the schema selected from the **Default schema** dropdown located at the top right of the viewlet. This is the schema that was selected during your previous session and will remain in effect until you select a different schema.

To change your view, select a different schema from the **Default schema** dropdown. You can also create a new schema by editing the current one (please note that you cannot

edit the **Default Queue Status Query** schema) or creating a completely new schema After selecting one of these options to edit or create a new schema, the *Manage Statistics Schemas* window opens. This is where you specify the query to determine the attributes displayed.



When creating a new schema, it is recommended to make a copy of an existing schema and use that as a starting point (instead of overwriting an existing schema).

Manage Statistics Schemas	? ×
Viewlet schemas:	SELECT:
Default Queue Status Query Put Total	*
Put Total	
	FROM:
	statqueue
	WHERE:
	MANAGER_NAME = {WGS_NAME} AND MQNODE_NAME = {NODE_NAME} AND MQMGR_NAME = {QMGR_NAME} AND QUEUE_NAME = {OBJ_NAME} AND STAT_TIME_STAMP >= {INTERVAL_START} AND STAT_TIME_STAMP <= {INTERVAL_END}
	GROUP BY or LIMIT:
	LIMIT 1000
	Chart by:
Add Copy As Edit Delete	
	Save Cancel

Figure 4.3.10.2-A. Manage Statistics Schemas Window

The left side of the window displays the existing schemas. Select a schema to view its query on the right side of the window. The queries will have slight differences depending on the database you utilize.

See below for an explanation of the schema fields.

• **SELECT** statement: The attributes to display in the viewlet are specified within the **SELECT** statement. The **Default Queue Status Query** schema selects all attributes. You can change this by entering all desired attributes and separating them with a comma.



You can copy and paste attribute names from viewlet column headers right into the **Select** field of the query.

The column header names within the viewlet can be customized by using "as <*ColumnTitle*>" to change the column header names. Attributes containing numeric values can also be added together using +. As seen in the below examples, the put count fields were added together and display in one column titled "TOTALPUT."

NOT

Refer to <u>Appendix D</u> for a listing of all available statistic attributes.

Manage Statistics Schemas	? >	×
Statistics schema name:		2
Test2 SELECT:		J
MANAGER_NAME as Manager, MQNODE_NAME as MQNode, MQMGR_NAME as MQManager, Nonpers_put_ Pers_put_count + Nonpers_put1_count + Pers_put1_count as TotalPut	:ount +	

Figure 4.3.10.2-B.	Adding Fields	and Changing	Display Names
115410 4.5.10.2 0.	///////////////////////////////////////		Display Hames

MANAGER	MQNODE	MQMANAGER	TOTALPUT
MQM	HPENVY0113	V910Test	12
MQM	HPENVY0113	V910Test	12
MQM	HPENVY0113	V910Test	12
MQM	HPENVY0113	V910Test	12
MQM	HPENVY0113	V910Test	12

Figure 4.3.10.2-C. Using Views

- **FROM** statement: Defines the table name.
- WHERE statement: contains query conditions. It can have defined or dynamic parameters. Dynamic parameter values are filled automatically according to the selected object. Possible dynamic parameters:

{WGS_NAME} - workgroup server name {NODE_NAME} - node name {QMGR_NAME} - queue manager name {OBJ_NAME} - object name {INTERVAL_START} - interval start time Unix timestamp {INTERVAL_END} - interval end time Unix timestamp

- **GROUP BY** or **LIMIT** statement: defines the sorting and/or the limiting of the column values (limit of record rows). For example, Group by MQNODE_NAME asc LIMIT 1000 (the definition depends on database vendor).
- **Chart by** field: specify a data field to display the results as a graph. See <u>Viewing a</u> <u>Statistics Graph</u>.

If you have no SQL experience: As you can see, the *Manage Statistics Schemas* window is very advanced and requires knowledge of SQL. Ask your administrator for assistance. They can send you queries you can copy and paste into the *Manage Statistics Schemas* window.

An even easier method is to utilize Views. Views are queried tables saved in the database created by your administrator. Multiple views can be created. The View name will need to be specified within the **FROM** statement, as seen below. The **WHERE** statement remains the same.

Manage Statistics Schemas	? ×
Viewlet schemas:	SELECT:
Default Queue Status Query	*
View1	
	FROM:
	view1
	WHERE:
	MANAGER_NAME = {WGS_NAME} AND MQNODE_NAME = {NODE_NAME} AND MQMGR_NAME = {QMGR_NAME} AND STAT_TIME_STAMP >= {INTERVAL_START} AND STAT_TIME_STAMP <= {INTERVAL_END} AND ROWNUM <= 1000
	GROUP BY or LIMIT:
	Chart by:
Add Copy As Edit Delete	
	Save

Figure 4.3.10.2-D. Using Views

4.3.10.2.1Example of MySQL Query

Two queues from different nodes (MQM/NODE1/T1/LQ1) and (MQM/NODE2/T2/LQ2) were selected. The local time specified in the statistics viewlet gets converted to a Unix timestamp:

start time (2019-08-21 10:00 AM) 1566370800, end time (2019-08-21 11:15 PM) 1566418500 The following schema was used for the queue:

Manage Statistics Schemas	?	×
Statistics schema name:		
Default Queue Status Query		
SELECT:		
•		
FROM:		
statqueue		
WHERE:		
MANAGER_NAME = {WGS_NAME} AND MQNODE_NAME = {NODE_NAME} AND MQMGR_NAME = {QMGR_NAME AND QUEUE_NAME = {OBJ_NAME} AND STAT_TIME_STAMP >= {INTERVAL_START} AND STAT_TIME_STAMP <= {INTERVAL_END}	}	
GROUP BY or LIMIT:		
LIMIT 1000		
Chart by:		
Save	Can	icel

Figure 4.3.10.2-E. MySQL Query Example

Actual query:

```
SELECT * FROM statqueue WHERE

(
          MANAGER_NAME = 'MQM' AND MQNODE_NAME = 'NODE1' AND MQMGR_NAME = 'T1'
AND QUEUE_NAME = 'LQ1' AND STAT_TIME_STAMP >= 1566370800 AND STAT_TIME_STAMP
<= 1566418500
     )
     OR
     (
          MANAGER_NAME = 'MQM' AND MQNODE_NAME = 'NODE2' AND MQMGR_NAME = 'T2'
AND QUEUE_NAME = 'LQ2' AND STAT_TIME_STAMP >= 1566370800 AND STAT_TIME_STAMP
<= 1566418500
     )
     LIMIT 1000</pre>
```

Queries are run using the 'nastel_apwmq' database.



The schemas are very flexible and different queries can be run. This includes queries not related to MQ statistics. The syntax is dependent on your SQL database; that is. Queries for the MySQL database can be different from the Postgre database.

4.3.10.3 Viewing a Statistics Graph

Statistics viewlets can be displayed as a graph by specifying the data field within the **Chart by** field. For example, to view message backout count (messages withdrawn from a queue due to transaction problems), enter the data field name, **BACKOUT_COUNT** within **Chart by**.

Manage Statistics Schemas	?	×
Statistics schema name:		
Statistics graph		
SELECT:		
*		
FROM:		
statmqi		
WHERE:		
WHERE:		
MANAGER_NAME = {WGS_NAME} AND MQNODE_NAME = {NODE_NAME} AND MQMGR_NAME = {QMGR_NAM AND STAT_TIME_STAMP >= {INTERVAL_START} AND STAT_TIME_STAMP <= {INTERVAL_END}	IE}	
GROUP BY or LIMIT:		
LIMIT 1000		
Chart by:		
-		
BACKOUT_COUNT		
Save	Car	ncel

Figure 4.3.10.3-A. Specify Column

Your viewlet will now display as a graph, displaying the dynamics of the backed-out messages during the specified time period.

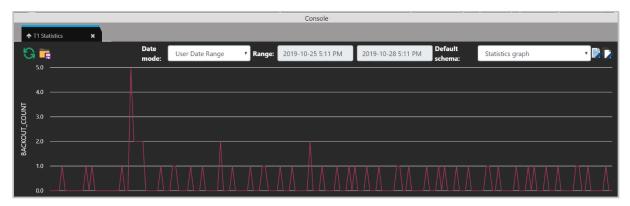


Figure 4.3.10.3-B. Statistics Graph

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4.3.11 Kafka Viewlets

Manage all your Kafka instances in meshIQ Manage. You can create viewlets for Kafka nodes, clusters, brokers, topics, partitions, consumers, and connectors. You can also create viewlets for schemas, schema subjects, and schema subject versions.

4.3.11.1 Kafka Clusters

Displays the overall context of the clusters connected. This summary information is gathered from the collective brokers and services.

Cluster_Viewlet						:
🕄 ¢ Schema Det	efault Clusters Dir 👻	Search (Filter By)	Projects All	→ ■ Node *	X - Cluster *	X - Result Limit
Clus	ster Name ¹ ^	Boostrap Server	Total Topics	Total Partitions	Preferred Leader Replicas	Last Updated
📃 🐻 🕓 loca	alhost:9092	localhost:9092	45	1136	1136	00:00:16 hours
Visible: 1-1 of 1 Total	al: 1					Last refresh time: 5:43:31 PM

Figure 4.3.11.1-A. Kafka Clusters

4.3.11.1.1Manage ACLs

From the action menu of a Kafka Cluster, select **Commands > Manage ACLs** to open the Permissions dialog for the Kafka cluster. From the permissions dialog, you can view, add, or export a list of Kafka ACLs.

To view ACLs, select the **Manager**, **Node**, and **Cluster** for which you want to view them.

You can also enter a value in the **Filter by** box to filter the list of results.

To export ACLs to a .csv file, use the export button E. A <u>sample export file</u> is shown below.

Kafka Cluster's 127.0.0	0.1:9092 Permissions	5				?	×
Manager			Node				
MQM		~	CMKafka			~	
Cluster							
127.0.0.1:9092		-					
Filter by:							
Resource Name	Resource Type	Resource Pat	ttern Type	Principal	Host		
test	Group	Prefixed		principalType:principal	test		
test2	Delegation Token	Prefixed		test:test2	tr		
Total: 2 Visible: 2 Reset						Add	
						Clos	e

Figure 4.3.11.1.1-A. Manage Kafka ACLs

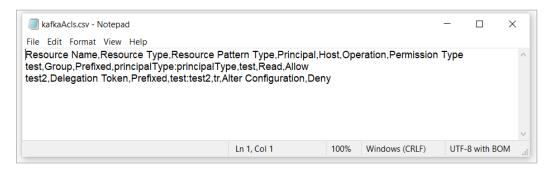


Figure 4.3.11.1.1-B. Kafka ACL Export File

4.3.11.2 Kafka Brokers

Displays Kafka brokers across clusters and operational information. Allows for control of cluster properties which can be configured.

Broker_Vie	wlet						:
C 🗢 Schem	a Default Brokers D	ir 👻 🕞 Search (Filter By) 🝸 Projects All	• • 🗐	Node *	× -	Cluster *	X - Object *
	Broker ID ¹ ^	Host		Port	Total Partitions	Cluster Name	Last Updated
	0	jenkins-meshiq-com.subnet10241312.vcn10241312.oraclevcn.com		9092	1136	localhost:9092	00:00:06 hours
Visible: 1-1 of	Total: 1					L	ast refresh time: 5:45:21 PM

Figure 4.3.11.2-A. Kafka Brokers

4.3.11.3 Kafka Topics

Displays the topics defined across the clusters and current usage. On-the-fly updates, such as changing the number of partitions, are supported. Messages can be opened from this screen to view associated details.

E Kafka Topic	viewlet hema Default Topics Dir 👻	•	Projects All		de * × -	Cluster *	¥ ▼ Object *
	Topic Name	Total Partitions	Preferred Leader Replicas	Total Messages	Available Messages	Consumer Groups	Cluster Name
	item-update-requests	16	16	2002	0	0	localhost:9092
	jkreq-to-query	64	64	147	90	0	localhost:9092
	jkadminreq-to-query	32	32	24	0	0	localhost:9092
	jkql-item-defs-in	32	32	23	0	0	localhost:9092
	jkql-item-defs-out	32	32	7	0	0	localhost:9092
\square	jkreq-to-sub-grid	16	16	0	0	0	localhost:9092
	to-sched-ikgl-handler	64	64	0	0	0	localhost:9092
Visible: 1-7 of 4	2 Total: 45		•••			Last re	fresh time: 5:29:20 PM

Figure 4.3.11.3-A. Kafka Topics

Users can create and delete topics, change topic attributes such as partition and replication, and compare topic definitions, including across clusters.

4.3.11.3.1Kafka Messages

Messages are accessed by drilling down from a topic or partition. They can be filtered by partition, content, or offset, or can tail a given topic. Messages can be read from most recent to least recent.

🗈 🗶 🛃 🗨 🖻 🕞				Active filter	👻 Schema 🛛 My Kafka Messages 👻 🚺
Message Cursor	Partition Id	Key	Data Size B 🗸	Mossage Data ASCII 👻	Timestamp GMT 🗸
1	21		16	Test message 1	2024/03/13 02:04:18.601
2	21		16	Test message 2	2024/03/13 02:04:46.124
3	21		16	Test message 3	2024/03/13 02:04:51.733
4	21		16	Test message 4	2024/03/13 02:05:00.843
5	21		16	Test message 5	2024/03/13 02:05:11.571
6	21		16	Test message 6	2024/03/13 02:05:18.674
7	21		16	Test	2024/07/17 02:05:05:075

Figure 4.3.11.3.1-A. Kafka Messages

Users can add messages, load files to topics and save topics to a file. See section <u>4.3.4.3</u>, <u>Messages</u>.

4.3.11.4 Kafka Schema

Last Updated
AVRO 00:00:13 hours

Figure 4.3.11.4-A. Kafka Schema

4.3.11.5 Kafka Schema Subject

e 1	Schema: Default Ka	fka Schem 👻 🚺 🏹 Filter by	-				
:	Node Name	Cluster Name	Name A	Subject Name	Mode	Compatibility Level	Last Updated
0	REMOTE_KAFKA	RemCluster1	SchemaRegistry	topic1-value			00:00:23 hours
0	REMOTE_KAFKA	RemCluster1	SchemaRegistry	topic2-value			00:00:23 hours

Figure 4.3.11.5-A. Kafka Schema

4.3.11.6 Kafka Schema Subject Version

🖃 Kafka Schema S	ubject Version			Projects: All	• →
🕃 🚡 Schema: Default	Kafka Schem 👻 🔽 Filter by:				
🗙 Workgroup Name	e Node Name	Cluster Name	Object Path	Stat	te
🛛 🛇 🕘 мом	REMOTE_KAFKA	RemCluster1	\\MQM\REMOTE_KAFKA\RemCluster1\SchemaRegistry\topic1-value\1	Acti	ve
O MOM	REMOTE KAEKA	RemCluster1	VMOM/REMOTE KAEKA/RemCluster1/SchemaRegisto/tonic2-value/1	Acti	va

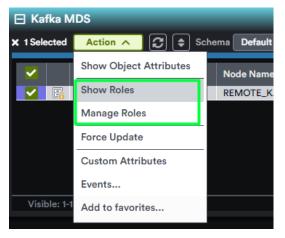
Figure 4.3.11.6-A. Kafka Schema

4.3.11.7 Kafka MDS Viewlets

After an MDS node is set up (see <u>Confluent Platform Metadata Service (MDS) Setup</u>), you can create an MDS viewlet.

🖂 Kafka MDS				:
Schema Default Kafka MD 👻	Search (Filter By) T Pro	jects All 🗸 🚽 🗐 🕅	Node REMOTE_KAFKA 🗙 🕶 Cluster	MDS-Cluster X - Result Limit
Name	Node Name	Manager Name	Workgroup Name	Last Updated
MDS1	REMOTE_KAFKA	MDS-Cluster	MQM	00:00:38 hours

Using the Kafka MDS viewlet's action menu, you can use the Show Roles and Manage Roles actions to view and change aspects of Role-Based Access Control (see <u>Show Roles</u> and <u>Manage Roles</u>). For example, you can assign a role to a resource type, view the principals that a role is bound to, or add or delete principals.



4.3.11.7.1Show Roles

The Show Roles action opens MDS Roles tab in the console pane.

For Role-Based Access Control, each role is displayed in a column in the console. For each role, the following information is provided:

- The Scope Type is the level at which the role is assigned: Cluster (access to all resources in a cluster) or Resource (access to specific resources).
- The allowed operations, which are divided into two rows. In both rows, you can scroll through values using the horizontal scroll bar provided.
 - The Resource Type that the operation (action) is performed on
 - The Role Operations that can be performed by users who are assigned the role

The comma-separated values in the Resource Types row correspond directly to the comma-separated values in the Role Operations row. For example, the AuditAdmin role shows Resource Types "Cluster, Cluster" and Role Operations "DescribeConfigs, AlterConfigs". These values indicate that users with this role can perform two operations on Clusters: DescribeConfigs and AlterConfigs.

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↑ MDS Roles	× ↑ Manage Roles ×				
🕄 🔒 Search.					
Roles	AuditAdmin	ClusterAdmin	DeveloperManage	DeveloperRead	DeveloperWrite
Scope Type	Cluster	Cluster	Resource	Resource	Resource
Resource Types	Cluster ,Cluster	KsqlCluster ,KsqlCluster ,Cluster ,Cluster ,	Topic ,Topic ,Topic ,Topic ,KsqlCluster ,Trai	Cluster ,Subject ,Subject ,Group ,Group ,C	Topic ,Topic ,Connector ,Co
RoleOperations	DescribeConfigs ,AlterConfigs	Contribute ,Terminate ,Alter ,Describe,Cre	Delete ,Describe,Create ,DescribeConfigs	,Read,ReadCompatibility ,Read,Describe,F	Write ,Describe,ReadStatus

Figure 4.3.11.7.1-A. MDS Roles

4.3.11.7.2Manage Roles

Manage Roles opens the Manage Roles tab in the console pane. Use this tab to assign roles to resources. See *Figure 4.3.11.7.2-A*.

- 11. Click the resource that you want to assign a role to. The Select Role Name dialog opens. See *Figure 4.3.11.7.2-B*.
- 12. Select the Role Name that you want to assign to the resource.
- Click Select. Details for the role that you selected are displayed, including its Attributes (Scope Type, Resource Types, and Role Operations) and the Principals it is bound to. See <u>Figure 4.3.11.7.2-C</u>.
- 14. You can choose among the following options:
 - Add a new principal for this role
 - View details for the principal (if applicable)
 - Remove the principal from the role

To add a new principal for this role, click **Add New Principal**, enter a **Principal Name**, and select its **Principal Type** (*User* or *Group*). Then click **Create**. (See *Figure 4.3.11.7.2-D*.) You can follow the steps below to open the new principal and view the roles that are bound to it (Principal Roles), Visible Clusters (based on the Resource you originally selected), and Principal Resources.

To view details for the principal, including Principal Roles, Visible Clusters, and Principal Resources, select a principal from the list and click **Open Principal**. See <u>Figure 4.3.11.7.2-E</u>.

To remove a principal from a role, select a principal for the role and click **Delete Principal**. Click **Yes** to confirm the action.

↑ MDS Roles				
Cluster Type		Connect cluster	KSQL	Schema Registry
Cluster Id	s4y0h5lGRd2VQ5uwCeyMzg	connect-cluster	ksql-cluster	schema-registry

Figure 4.3.11.7.2-A. Manage Roles Tab

Select Role Name		? ×
Role Names:		
SystemAdmin		~
	Select	Cancel



SystemAdmin					?	×
Role Attributes:						
Scope Type	Resource Types		Role Operation	s		
Cluster	All		All			
Role Principals:						
Principal Name		Principa	al Type			
superUser		User				
	Delete	Principal	Add New Principal	Open Principal	Clo	se

Figure 4.3.11.7.2-C. Role Details

РМ						?	×
Principal Roles:							
Role Name							
SystemAdmin							
Visible Clusters:							
Kafka Cluster Id		Connect Cluster Id	Sch Reg	Cluster Id	Ksql Cluster Id		1
DMTiZ39VSzGDQV3	KWZXg				ksql-cluster		
Principal resources:							
Role Name	Resource	Гуре Р	attern Type	Resourc	e Name		
SystemAdmin							
					[Clo	ose



superUser					? :
Principal Roles:					
Role Name					
SystemAdmin					
Visible Clusters:					
Kafka Cluster Id		Connect Cluster Id	Sch Reg Clus	ster Id	Ksql Cluster Id
DMTiZ39VSzGDQV3	KWZXg				
DMTiZ39VSzGDQV3	KWZXg	connect-cluster			
DMTiZ39VSzGDQV3	KWZXg				ksql-cluster
DMTiZ39VSzGDQV3	KWZXg		schema-regis	stry	
Principal resources:					
Role Name	Resource	Type Pa	ttern Type	Resou	ırce Name
SystemAdmin					

Figure 4.3.11.7.2-E. Principal Details

4.3.12 Viewing Properties of Multiple Objects

To view properties of multiple objects within a viewlet, select the objects and then click **Properties** from the action menu. The *Properties* window opens.

A blue tooltip box appears on the bottom right corner of the screen (as seen below) instructing you to hover over fields to display the values. Simply hover over any of the fields with a blue line appearing on the left side of the field box; these are the fields which contain multiple values.

Sender Sender1 Properties	5		?	×	~
🔿 General	Channel Name:				
Extended				Received	Messages
Extended	(0
MCA	Description:				0
Exits					0
					0
LU 6.2	Type:	Transport Type:			0
Retry	Sender 🔻	TCP	•	·	0
SSL	Connection Name:				0
Compression					
Marthula					0
Monitoring	Local Communication Address:			Last refr	esh time: 6:35:05 PM
				Lastrein	ESIT GITTE: 0.55.05 FTM
	Transmission Queue Name:				
	•		.		
			Ok Cance		
			Ok Cance		
				Hover multiple	e fields, to see values 🗙

Figure 4.3.12-A. Properties of Multiple Channels

After hovering over the fields, a black box will appear displaying all of the field's values.

EMS Topic Info sample Pro	operties			?	×
General	Topic Name: This field contains 4 different values: Active Durable path :: va tcp://127.0.0.1:7222//sample : tcp://127.0.0.1:7222//test : tcp://127.0.0.1:7222//test ems topic :	0 1 0 0	Topic Consumer Count: 0 Expiry Override: 0 Max. Message Bytes:	F	
	0		0		

Figure 4.3.12-B. Multiple Properties Tooltip Box

4.3.13 Custom Attributes

You can add custom attribute fields to a variety of objects in meshIQ Manage. Your viewlets can be filtered and sorted by custom attributes, and multiple custom attributes can be added to each viewlet. The following objects support custom attributes:

IBM MQ	Manager, Queue, Channel, Topic
EMS	Manager, Queue, Topic
Kafka	Cluster, Broker, Topic, Schema, Schema Subject, Schema Subject Version
IIB	Broker, Server, Application, Service, Message Flow, Sub Flow
ACE	Integration Node, Server, Application, Service, Message Flow, Sub Flow
Solace	All objects

4.3.13.1 Add a New Custom Attribute

To add a custom attribute, select **Properties** from the action pop-up menu of a queue manager or queue.

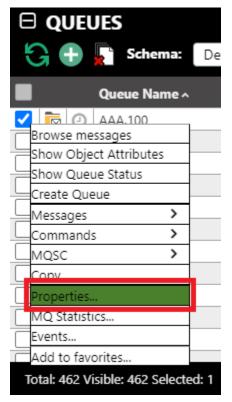


Figure 4.3.13.1-A. Properties

The *Properties* window opens. Go to the **Custom Attributes** tab and click the **Add** button.

Local Queues AAA.100 Properties			? ×
General	Attribute Name	Value	
Extended	Filter by key	Filter by value	Q
Cluster	Key	Value	Add
Triggering	No custom attributes		
Events			
Storage			
Monitoring			
Statistics			
🖨 Custom Attributes			

Figure 4.3.13.1-B. Custom Attributes Tab

In the **Key** field, enter the name of the attribute you are adding and its value for this object in the **Value** field.

Local Queues AAA.100	Properties		? ×
General	Attribute Name	Value	
Extended	Filter by key	Filter by value	Q
Cluster	Color	Red	Add
Triggering	No custom attributes		
Events			
Storage			
Monitoring			
Statistics			
Custom Attributes			

Figure 4.3.13.1-C. Add Custom Attribute

Click the **Add** button. The custom attribute is now added to this object and will appear in a new row.

Local Queues AAA.100 P	roperties		? ×
General	Attribute Name	Value	
Extended	Filter by key	Filter by value	Q
Cluster	Color	Red	Add
Triggering			
Events	Color	Red	Remove
Storage			
Monitoring			
Statistics			
➡ Custom Attributes			

Figure 4.3.13.1-D. Custom Attribute Added

Multiple custom attributes can be added. Simply repeat the steps above to add additional attributes.

Local Queues AAA.100	Properties		? ×
General	Attribute Name	Value	
Extended	Filter by key	Filter by value	Q
Cluster	Urgency	High	Add
Triggering			
Events	Color	Red	Remove
Storage	Urgency	High	Remove
Monitoring			
Statistics			
🛶 Custom Attributes			

Figure 4.3.13.1-E. Adding Multiple Custom Attributes

4.3.13.2 Display Custom Attributes

To display the custom attributes in your viewlets, you will need to add them to your viewlet's schema (see <u>Schemas</u> for more information). Click the **Manage Viewlet Schemas** button.

	-	JES Schema: Layout 1	
		Queue Name	Current Depth
-	0	SYSTEM.DEFAULT.LOCAL.QUEUE	0
-	Θ	SYSTEM.MESSAGE.ASSOCIATION.QUEUE	0
-	Ø	testq01	0
	Θ	LM1	16
	Θ	LM2	0
	0	LM3	0
	0	SYSTEM.BROKER.INTER.BROKER.COMMUNICATIONS	0
	٢	queue10	0
	0	queue.1	0
	Θ	queue.2	0
	Θ	queue.3	0
-	0	augus A	0

Figure 4.3.13.2-A. Manage Viewlet Schemas Button

The *Manage Schemas* screen opens. Select the desired schema and click **Edit**.



Please note, you cannot edit the default schema. If you do not have any schemas other than the default, see <u>Schemas</u> for information on how to add a new schema.

Manage Schemas	? >	ŧ
Viewlet schemas: Default Local Queues Dir Layout 1	Schemas object attributes: Queue Name Current Depth Maximum Depth Last Updated	
Add Copy As Edit Delete		
Cancel	ОК	

Figure 4.3.13.2-B. Edit Selected Schema

On the *Edit Schema* screen, select **Custom attributes** from the filter drop-down to display all custom attributes that exist for this viewlet. From the left side of the screen select the custom attributes you want to add to the schema and click the **Add** button (or click **Add all** to add all of the custom attributes).

Edit Schema						? ×
Schema Name: Layou	ut 1					
Available attributes:			Displayed attributes:			
Enter filter value	Custom attribut 🗸		Name	Category		Move to Top
Name	Category		Queue Name	General	_^	
Color	Custom attri		Current Depth	Statistics	_	
	Custom attri		Maximum Depth	Extended	_ .	
Urgency	Custoin attri	Add all »	Last Updated	Statistics	_	Move Up
		Add >				Move Down
	1	< Remove				
		Remove all				Move to
			4		• •	Bottom
			Default sort			
			Column:		~	
	-		Direction: Ascendi	ing	~	
4	•			5		
						or
Cancel						ОК

Figure 4.3.13.2-C. Edit Selected Schema

You can sort the viewlet by the custom attribute field.

		? ×
Displayed attributes:		
Name	Category	Move to Top
Queue Name	General ^	wove to top
Current Depth	Statistics	
Maximum Depth	Extended	
Last Updated	Statistics	Move Up
Color	Custom attri	
Urgency	Custom attri	Move Down
4	*	Move to Bottom
Default sort		
Column: Urgenc	y 🗸	
Direction: Ascend		
		ОК

Figure 4.3.13.2-D. Default Sort

Click **OK** when finished on this screen and then on the *Manage Schemas* screen. Your viewlet will now display the custom attribute fields and their values.

E		_	JES Schema: Layout 1	👻 📝 🏹 Filter by:		Pr	All	Ŧ	ľ
			Queue Name	Current Depth	Maximum Depth	Last Updated	Color ~	Urgency	
		0	AAA.100	18	5000	00:01:49 hours	Red	High	
		0	AAA.101	15	5000	00:00:55 hours	Green	Low	
		0	AAA.100	11	5000	00:00:00 hours	Green	Low	
		0	SYSTEM.DEFAULT.LOCAL.QUEUE	0	5000	02:14:46 hours		_	-
		0	SYSTEM.MESSAGE.ASSOCIATION.QUEUE	0	999999999	02:14:49 hours			
		0	testq01	0	3	02:14:49 hours			
		0	LM1	16	5000	02:14:46 hours			
		0	LM2	0	5000	02:14:46 hours			
		0	LM3	0	5000	02:14:46 hours			
		0	SYSTEM.BROKER.INTER.BROKER.COMMUNICATIONS	0	999999999	02:14:46 hours			
	-	0	queue10	0	5000	02:14:46 hours			
	-	0	augua 1	0	5000	03:14:45 hours			

Figure 4.3.13.2-E. Custom Attributes Displayed in Viewlet

4.3.13.3 Filter by Custom Attributes

You can use the **Filter by** field located at the top of the viewlet to display only rows containing the custom attribute value entered.

∃ QUEUES		~
😋 于 📡 Schema: Layout 1	Filter by: green	Project: All 👻
Queue Name	Current Depth Maximum Dept	h Last Updated Color Urgency 🗸
) 🔂 🕗 AAA.101	15 5000	00:02:43 hours Green Low
] 🔁 🕗 AAA.100	11 5000	00:01:48 hours Green Low
Total: 462 Visible: 2 Selected: 0		Last refresh time: 12:21:05 PM

Figure 4.3.13.3-A. Filter By

You can also use custom attributes when creating new viewlets. See <u>Attribute Filter</u> for more information.

4.3.14 Advanced Viewlet Filtering

When the advanced viewlet filtering feature is enabled, all of the *Add/Edit Viewlet* screen filters (*Edit Viewlet*) will appear conveniently at the top of each viewlet. In the figures below, the fields in the red boxes are all viewlet filtering options. Please note that the two figures are part of the same viewlet header. The viewlet header becomes scrollable if you reduce the size of the window.



Figure 4.3.14-B. Advanced Viewlet Filtering Options (cont.)

This feature allows users to quickly apply filters right from the viewlet instead of having to open the *Edit Viewlet* screen.

4.3.14.1 Setup

To enable quick access to advanced filtering features for all viewlets, turn on the **Show advanced viewlet filtering** option on the **User Settings** tab of the *User/Global Settings* window.

Settings window	
User Settings	Refresh interval (sec.)
User Settings Refresh interval (sec.) Message Commands Show inactive channels Load Messages Show empty queues Save Messages Show temporary dynamic queues Show full names for favorites shortcuts Show full names for search results objects Show SYSTEM objects Show SYSTEM objects	
Load Messages	
Save Messages	Show full names for favorites shortcuts
	Show objects search results from active managers only
	Show advanced viewlet filtering
	Show log out window

Figure 4.3.14.1-A. Setting

Note that when this option is enabled, the **Show empty queues**, **Show empty Kafka topics** and **Show SYSTEM objects** options are automatically disabled because these options are included in the advanced viewlet filtering options.

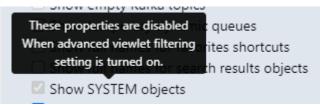


Figure 4.3.14.1-B. Disabled Settings

4.3.14.2 Use



The advanced filtering options cannot be used with viewlets that display server-generated nodes, workgroup servers, or external resources.

After the option above is enabled, you will see the new menu options located at the top of each viewlet where you can select/input the following properties:

- Criteria (box #1 in Figure <u>4.3.14.2-C</u>below)
 - o Node
 - Queue manager/cluster
 - o Object

• Object type.



In versions 10.4 and later, the fixed limit of 1000 results for each queue type no longer applies. Instead, the number of objects returned is controlled by the Result Limit, which applies to each type of object (for queues: local, remote, model, alias, and cluster; for channels: MQ channels, AMQP, MQTT, and client connections). See the Result Limit definition under the Results bullet below for more information.

- Filters (box #2 in Figure <u>4.3.14.2-C</u> below)
 - Attribute: enable or disable the attribute filtering setting. You can click on the ellipses button immediately to the right of the checkbox to open the *Attribute filters* window where you can edit, add, delete, or copy filters. See <u>Attribute Filter</u> for more information. If attribute filtering needs to be removed, simply select the **No filter** option.

Attribute Filters					?	×
Filter by:		Shared Filt	ters			
Filter Name 🗸		Mat	ch ALL of the follo	owing:		
CurrDepth		Attribute	Operation	Value		
Depth		Current Depth	is less than	100		
Max10000		Maximum Depth	is greater than	1000		
QueueName	>					
Add Copy As Delete Edi				Cancel	ОК	

Figure 4.3.14.2-A. Attribute Filters

You can hover over the Attribute filter to view the selected filter in a tool tip. If no filter is selected, then "No filter selected" will be displayed.



Figure 4.3.14.2-B. Selected Filter Tool Tip

- o Message: enable or disable the Find Messages setting
- o Empty: enable or disable the Show empty queues/topics setting
- System enable or disable the Show system objects setting
- Results (box #3 in figure below)
 - Result limit: The maximum number of results that can be displayed in a viewlet. For new viewlets, the default value is defined by the global or user

Result Limit setting. For queue and channel viewlets, this limit is per queue type and per channel type, as described above in the Object type bullet. (The "total" (or maximum) number of items that can be returned is the Result Limit multiplied by the number of object types.)

 In versions 10.5 and later, attribute filters are applied by the workgroup server before results are returned. If you consistently notice that the number of records in your viewlets matches the Result Limit (in versions 11 and later, the Total/Visible/Selected labels are orange in this case), then either adjust the Result Limit or consider fine-tuning the viewlet's attribute filters to return a more relevant set of results from the workgroup server.



Figure 4.3.14.2-C. Advanced Filtering Options

The *Criteria* and *Filters* options (box 1 and 2 above) are available depending on the viewlet's object type. For example, if a viewlet's object type is IBM channels, all criteria options and only **Attribute** and **System** filters will be displayed. For a node viewlet, only the **Node** criteria option and **Attribute** checkbox in the *Filters* group will be displayed.

4.3.15 IIB Viewlets

4.3.15.1 Connect to IIB Server

To connect an IIB server, you will need to add a node as type **ACE/IIB Agent-managed Node**.

Create Node		? ×
identity	Name:	
Communication Policy	CMACEIIB	
Discovery Policy	Host Name:	
Statistics		Use DNS
Trace	IP Address:	
	127.0.0.1	
	Listening Port:	
	5577	
	Platform:	
	UNKNOWN	
	Description:	
		4
	Node Type:	
	ACE/IIB Agent-managed Node	~ J
		Ok Cancel

Figure 4.3.15.1-A. Create Node

Create a viewlet as you normally would (see <u>Adding and Maintaining Viewlets</u>). For **Product**, select **IIB**.

Create new IIB Se	erver viewlet	? ×
Product IIB 👻	Viewlet name Workgroup server WGS_M - (MQM)	Temporary
Broker	Viewlet name cannot be empty	
Server	Node Manager	•
Application		
Service	Object name	
REST API	*	
Library		
Shared Library		
Message Flow	Custom Viewlet Color	
Sub Flow	Project All	
Resource		
	Active attribute filtering 🔽	
	Attribute filter + x	
	Result limit 100	
	Save char	nges Cancel

Figure 4.3.15.1-B. Select IIB Product Type

4.3.15.2 IIB Viewlet Types

The below viewlets are the IIB viewlet types you can create. See <u>Appendix C</u> for menu options.

Broker Viewlets: display IIB Integration brokers (nodes)

Result limit: 100
Long Description Last Updated
00:04:56 hours
00:04:56 hours

Figure 4.3.15.2-A. IIB Broker Viewlets

Server Viewlets: display IIB integration servers



Figure 4.3.15.2-B. IIB Server Viewlets

Application Viewlets: display IIB deployed applications

Applications Schema: Default IIB	Applicatio 👻 🚺	Iter by:		C Node: * × Object: 0 Manager: * ×		Filters: Attribute: 🗹 🕻 System:)	Proj	act: All	- -
Application Name ^	Node Name	Version	Manager Name	UUID	Start Mode	Running	Java Isolation	Short Description	Run Mode	Last Updated
🗌 🗞 🕗 Delete_app	CMACE		LOstNode	34017db5+0a9c+4521+b659+8fbf0f20ada4	Maintained	true	false		running	00:06:49 hours
🗌 🐮 🕐 NewAPP_123	CMACE		SecondNode	97effa0f-5c76-41c0-a457-20d7f2459e3f	Maintained	true	false		running	00:06:46 hours
🗌 🐮 🕐 NewApplication	CMACE		SecondNode	b9aa620a-4668-4228-8dd7-b9b8ce88e8df	Maintained	true	true		running	00:06:46 hours
🗌 🐮 🕗 NewApplication	CMACE		SecondNode	ab1c8836-09be-4924-9f20-2ff2cdd5a8ef	Maintained	true	true		running	00:06:46 hours
Total: 4 Visible: 4 Selected: 0										Last refresh time: 8:08:51 AM

Figure 4.3.15.2-C. IIB Application Viewlets

Services Viewlets: display IIB deployed services

t Updated
16:42 hours
6:38 hours
2:0

Figure 4.3.15.2-D. IIB Services Viewlets

REST API Viewlets: display deployed IIB Rest APIs

	st APIs Schema: Default IIB Rest	API Dir 👻 📝 Filte	r by:	Criteria Manager:	* × *	bject: Filters: Attribute: System:	/ 8			Project: All Result limit: 100	· 12
	Rest API Name ^	Node Name	Integration Server Name	Manager Name	Run Mode	UUID	Running	Start Mode	Version	Short Description	Last Updated
	deleteAPI	CMACE	default	SecondNode	running	40726ce6-0951-40ab-ab9d-34a4ab4ab3bb	true	Maintained			00:06:43 hours
	RESTAPI_Blob_Blop	CMACE	secondsServer	SecondNode	running	292d5bcd-63d2-476c-913f-608b94477891	true	Maintained			00:06:43 hours
Total: 2 V	risible: 2 Selected: 0									l	ast refresh time: 8:08:51 AM

Figure 4.3.15.2-E. IIB REST API Viewlets

Library Viewlets: display deployed IIB Libraries



Figure 4.3.15.2-F. IIB Library Viewlets

Shared Libraries viewlets: display deployed IIB Shared libraries



Figure 4.3.15.2-G. IIB Shared Libraries Viewlets

Message Flow Viewlets: display deployed IIB Message flows

G 🔽	Schemer Default IIB Mess	age 👻 🏹 🖬	ter by:	Crite	Manager: *	× *		Syste	nute: 📝 🚺 m:		Result limit:	100		
	Message Flow Name ^	Node Name	Integration Server Name	Manager Name	Run Mode	Service Name	Rest API Name	Library Name	Run Mode	UUID	Running	Start Mode	Version	Short
a 0	gen.delete	CMACE	default	LOstNode	stopped	delete			stopped	ca3d9e59-a6d2-4c84-8ae3-beeaa98bca13	false	Maintained		
😝 O	gen.deleteAPI	CMACE	default	SecondNode	stopped		deleteAPI		stopped	c9201b08-3c32-4717-9af7-d099068c34bd	false	Maintained		
\$ 0	gen.Int_Service	CMACE	secondsServer	SecondNode	stopped	Int_Service			stopped	e4621d8a-412b-4ee7-b14e-216d49440b0a	false	Maintained		
\$ 0	gen.RESTAPI_Blob_Blop	CMACE	secondsServer	SecondNode	stopped		RESTAPI_Blob_Blop		stopped	030f67eb-b29a-4de6-944d-d4f16a931f85	false	Maintained		
\$ 0	M_flow_App	CMACE	secondsServer	SecondNode	running				running	52fd3571-e83f-4f44-9f4b-c50134db7286	true	Maintained		
Ø 0	M_flow_App	CMACE	default	SecondNode	running				running	072d7d90-d558-4b5d-ad4f-33f12ddbe1ab	true	Maintained		
S 0	MessageStaticLibFlow	CMACE	newServwer	SecondNode	running			LibraryStat_ical	running	6d9e8b2e-36fa-4776-83fd-68df8549e126	true	Maintained		
80	MessageStaticLibFlow	CMACE	default	SecondNode	running			LibraryStat_ical	running	d40b0ff2-249b-485c-9c38-11d157d3fbd0	true	Maintained		

Figure 4.3.15.2-H. IIB Message Flow Viewlets

Sub Flows viewlets: display IIB deployed sub flows

_	Schema: Def	ault IIB Sub Flow	 Filter by: 	• Node: * Manager: *	× • Object: •		Filte Attribut System:	e: 🔽 🚺		Project: All 🗸 🏹
	Node Name	Manager Name	Sub Flow Name ^	Integration Server Name	Application Name	Service Name	Rest API Name	Library Name	Shared Library Name	UUID
	CMACE	SecondNode	gen.Int_ServiceInputCatchHandler	secondsServer		Int_Service				/Int_Service/gen.Int_ServiceInputCatchHandler
8	CMACE	SecondNode	gen.Int_ServiceInputFailureHandler	secondsServer		Int_Service				/Int_Service/gen.Int_ServiceInputFailureHandler
) 🐺 (CMACE	SecondNode	gen.Int_ServiceInputHTTPTimeoutHandler	secondsServer		Int_Service				/Int_Service/gen.Int_ServiceInputHTTPTimeoutHandler
4	CMACE	SecondNode	SubFlowHandler	secondsServer	NewApplication					/NewApplication/SubFlowHandler
8	CMACE	SecondNode	SubFlowHandler	default	NewApplication					/NewApplication/SubFlowHandler
(CMACE	SecondNode	SubFlowOfFlow	default				LibraryStat_ical		LibraryStat_ical/SubFlowOfFlow
₩ (CMACE	SecondNode	SubFlowOfFlow	newServwer				LibraryStat_ical		LibraryStat_ical/SubFlowOfFlow
8	CMACE	SecondNode	TimeoutHandler	default	NewApplication					/NewApplication/TimeoutHandler
8	CMACE	SecondNode	TimeoutHandler	newServwer				LibraryStat_ical		LibraryStat_ical/TimeoutHandler
8	CMACE	SecondNode	TimeoutHandler	secondsServer	NewApplication					/NewApplication/TimeoutHandler
	CMACE	SecondNode	TimeoutHandler	default				LibraryStat_ical		LibraryStat_ical/TimeoutHandler
_										

Figure 4.3.15.2-I. IIB Sub Flows Viewlets

Resource viewlets: display IIB resources

🖯 Res	ources Schema: Default IIB Resource * 🍞 Filter by:	* Sode: Cuite: Manager:	× • Object	÷	Filte Attribute System:	: 🔽 🚺		Project: All - 2
	Resource Name ^	Integration Server Name	Application Name	Service Name	Rest API Name	Library Name	Shared Library Name	UUID
	delete.wsdl	default		delete				delete.wsdl
	delete.xsd	default		delete				delete.xsd
	delete_InlineSchema1.xsd	default		delete				delete_InlineSchema1.xsd
	IBMdefined/org/w3/www/xml/_1998/namespace/xml.xsd	default		delete				IBMdefined/org/w3/www/xml/_1998/namespace/xml.xsd
	IBMdefined/org/w3/www/xml/_1998/namespace/xml.xsd	default				LibraryStat_ical		IBMdefined/org/w3/www/xml/_1998/namespace/xml.xsd
	IBMdefined/org/w3/www/xml/_1998/namespace/xml.xsd	newServwer				LibraryStat_ical		IBMdefined/org/w3/www/xml/_1998/namespace/xml.xsd
	IBMdefined/org/w3/www/xml/_1998/namespace/xml.xsd	secondsServer		Int_Service				IBMdefined/org/w3/www/xml/_1998/namespace/xml.xsd
0	IBMdefined/org/w3/www/xml/_1998/namespace/xml.xsd	default	NewAPP_123					IBMdefined/org/w3/www/xml/_1998/namespace/xml.xsd
	IBMdefined/org/xmlsoap/schemas/soap/envelope/soapenv11.xsd	default	NewAPP_123					IBMdefined/org/xmlsoap/schemas/soap/envelope/soapenv11.xsd
	IBMdefined/org/xmlsoap/schemas/soap/envelope/soapenv11.xsd	default				LibraryStat_ical		IBMdefined/org/xmlsoap/schemas/soap/envelope/soapenv11.xsd
0 2 0	IBMdefined/org/xmlsoap/schemas/soap/envelope/soapenv11.xsd	default		delete				IBMdefined/org/xmlsoap/schemas/soap/envelope/soapenv11.xsd
		1	,	1	1			
Total: 38 V	sible: 38 Selected: 0							Last refresh time: 8:12:51 AM

Figure 4.3.15.2-J. IIB Resource Viewlets



After IIB commands are completed, the viewlet may require you to select **Force update** from the action pop-up menu of each object to view the updates quickly.

4.3.15.3 IIB Broker Admin Logs

Load all IIB broker logs by selecting **Admin logs** from the action pop-up menu of a broker.

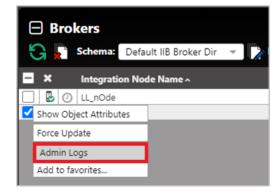


Figure 4.3.15.3-A. Select Broker > Admin Logs

The Bip number, timestamp, source, and message are displayed for each log. You can filter the results using these columns by typing a value in the box immediately below the column header. To clear a filter, you can either backspace the text or click on the source.

LOstNode	SecondNode		
Bip Number	Timestamp	Source	Message
0	0	0	0
BIP2880I	1616390458625	Change Notification	BIP2880I: The property 'processId' has char 'ExecutionGroup' with parent 'localNode' o
BIP2880I	1616390459744	Change Notification	BIP2880I: The property 'processId' has char 'ExecutionGroup' with parent 'localNode' o
BIP28711	1616391341736	Administration Request	BIP2871I: The request made by user 'SYSTE 'WebUser' on parent 'WebAdmin' of type 'V
BIP2871I	1616392057230	Administration Request	BIP2871I: The request made by user 'SYSTE 'ExecutionGroup' on parent 'localNode' of
BIP2871I	1616392072422	Administration Result	BIP2871I: The request made by user 'SYSTE 'ExecutionGroup' on parent 'localNode' of
BIP2880I	1616392072450	Change Notification	BIP2880I: The property 'object.runstate' has 'secondsServer' of type 'ExecutionGroup' w
BIP2880I	1616392072460	Change Notification	BIP2880I: The property 'processId' has char 'ExecutionGroup' with parent 'localNode' o
BIP2871I	1616392089355	Administration Request	BIP2871I: The request made by user 'SYSTE 'ExecutionGroup' on parent 'localNode' of
BIP2880I	1616392092197	Change Notification	BIP2880I: The property 'processId' has char 'ExecutionGroup' with parent 'localNode' o
BIP2880I	1616392092197	Change Notification	BIP2880I: The property 'object.runstate' has 'secondsServer' of type 'ExecutionGroup' w
BIP2871I	1616392092203	Administration Result	BIP2871I: The request made by user 'SYSTE 'ExecutionGroup' on parent 'localNode' of
BIP2871I	1616392135812	Administration Result	BIP2871I: The request made by user 'SYSTE 'ExecutionGroup' on parent 'localNode' of
BIP2871I	1616392148534	Administration Result	BIP2871I: The request made by user 'SYSTE 'ExecutionGroup' on parent 'localNode' of
BIP2871I	1616393093233	Administration Request	BIP2871I: The request made by user 'SYSTE 'Application' on parent 'default' of type 'Exe

Figure 4.3.15.3-B. IIB Broker Admin Logs for Two Brokers

Broker admin logs can be loaded for multiple brokers, as seen in the figure immediately above. Additional brokers appear on separate tabs.

4.3.15.4 IIB Server Deploy Function

You can deploy content on servers using a bar file. Select **Deploy** from the action pop-up menu of a server.

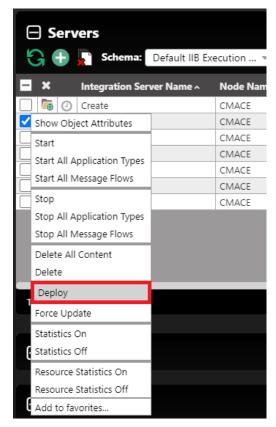


Figure 4.3.15.4-A. Select Server > Deploy

A window similar to the below appears. Click **Choose File** to select the import file. When the file is finished loading the **Deploy** button becomes available and *Loaded* is displayed. Click the **Deploy** button to import the file.

Server Content Deploy	×
Choose Bar file: Choose File Dass.bar	Loaded
	Deploy Cancel

Figure 4.3.15.4-B. Server Content Deploy Window

When the file is finished being imported, it is recommended to refresh/discover the node.

4.3.15.5 IIB Message Flow Activity Logs

Load all IIB message flow activity logs by selecting **Activity Logs** from the action pop-up menu of a message flow object.

🗆 Mes	sage Flov	vs	
G 🕻	Schema: De	fault IIB Mess	age 🔻
∎ ×	Message Flow	v Name ^	Node N
	gen.delete		CMACE
0	gen.delete		CMACE
0	gen.delete		CMACE
🗹 Show Obj	ect Attributes		CMACE
Start			CMACE
Stop			CMACE
			CMACE
Force Stop	5		CMACE
Activity L	ogs	p_Blop	CMACE
Force Upo	late	b_Blop	CMACE
Stop Reco	rdina	b_Blop	CMACE
Statistics (2		CMACE
			CMACE
Statistics (Dtt	Flow	CMACE
Start Flow	Monitoring	Flow	CMACE
Stop Flow	Monitoring		
Add to fav	/orites		

Figure 4.3.15.5-A. Select Message Flow > Activity Logs

The Bip Number, Timestamp, Tag, Tag Name, Source, Thread Id, Thread Sequence No., Message and Detailed Message are displayed for each log. You can filter the results using these columns by typing a value in the box immediately below the column header. To clear a filter, you can either backspace the text or click on the solution.

M,flow,App Bip Number	Timestamp	Tag	Tag name	Source	Thread Id	Thread Sequence No	Message	Detailed Message
0			•	•	•			
IP11507W	1618291730000	JMS input .M_flow_App	NODEMSGFLOW	BiPmaga	26572	1198735	BIP11507W: Rolled back a local transaction.	A local transaction has been rolled back for work done on the message flow thread.
IP11506i	1618291730000	JMS input, M_flow, App	NODEMSGFLOW	BiPmags	26572	1196736	BIP11506I: Committed a local transaction.	A local transaction has been committed for work done on the message flow thread.
IP11507W	1618291732000	JMS input, M_flow, App	NODEMSGFLOW	BiPmags	26572	1198737	BIP11507W: Rolled back a local transaction.	A local transaction has been rolled back for work done on the message flow thread.
8IP11506i	1618291732000	JMS input .M_flow_App	NODEMSGFLOW	BiPmags	26572	1196738	BIP11506I: Committed a local transaction.	A local transaction has been committed for wor done on the message flow thread.
IP11507W	1618291734000	JMS input .M_flow_App	NODEMSGFLOW	8:Pmags	26572	1198739	BIP11507W: Rolled back a local transaction.	A local transaction has been rolled back for work done on the message flow thread.
IP11506i	1618291734000	JMS input, M_flow_App	NODEMSGFLOW	BiPmags	26572	1196740	BIP11506: Committed a local transaction.	A local transaction has been committed for work done on the message flow thread.
IP11507W	1618291736000	JMS input .M_flow_App	NODEMSGFLOW	BiPmaga	26572	1198741	BIP11507W: Rolled back a local transaction.	A local transaction has been rolled back for work done on the message flow thread.
IP11506I	1618291736000	JMS input, M_flow_App	NODEMSGFLOW	BiPmags	26572	1196742	BIP11506I: Committed a local transaction.	A local transaction has been committed for work done on the message

Figure 4.3.15.5-B. Message Flow Activity Logs

You can view activity logs for multiple message flows on separate tabs.

4.3.15.6 Delete IIB Message Flows, Sub Flows, and Resources



You can only delete Message Flows, Sub Flows, and Resources that have been created directly on the server.

To delete an IIB Message Flow, Sub Flow, or Resource, click **Delete** on the object's action menu.

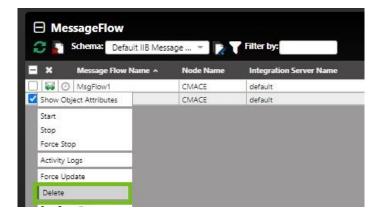


Figure 4.13.15.6-A. Delete IIB Message Flows

4.3.16 ACE Viewlets

4.3.16.1 Connect to ACE Server

To connect an ACE server, you will need to add a node as type **ACE/IIB Agent-managed Node**.

Create Node		? ×
identity	Name:	
Communication Policy	CMACEIIB	
Discovery Policy	Host Name:	
Statistics		Use DNS
Trace	IP Address:	
	127.0.0.1	
	Listening Port:	
	5577	
	Platform:	
	UNKNOWN	
	Description:	
		<i>a</i>)
	Node Type:	
	ACE/IIB Agent-managed Node	Ť
		Ok Cancel

Figure 4.3.16.1-A. Create Node

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Create a viewlet as you normally would (see section <u>Adding and Maintaining Viewlets</u>). For **Product**, select **ACE**.

Create new ACE S	Server viewlet	? ×
Product ACE -	Viewlet name	Workgroup server Temporary WGS_M - (MQM)
Integration Node	Viewlet name cannot be empty Node	Manager
Server	* X *	* v
Application		
Service	Object name	
Rest API	*	
Library		
Shared Library		
Message Flow	Custom Viewlet Color	
Sub Flow		
Resource	Project All 🔹	
Link	Active attribute filtering 🔽	
	Attribute filter + x	
	Result limit 100	
		Save changes Cancel

Figure 4.3.16.1-B. Select ACE Product Type

4.3.16.2 ACE Viewlet Types

The below viewlets are the ACE viewlet types you can create. See <u>Appendix C</u> for menu options.

Integration Node viewlets: Display ACE Integration Nodes

Integration Node Schema: Copy of Default ACE L. Filter by:		e Nodes * × ▼ Filters: Attribute: 2 § Manager: * × ▼ System:		Attribute: 📝 🚺		Project: All ~ Result limit: 100				
Integration Name >	Manager Url	Integration Node Name	Node Name	Manager Name	Integration Server Name	Product Name	Version	Platform Name	Platform Architecture	Last Updated
A_For_delete	http://localhost:7602		CMACE	An_AN	A_For_delete	IBM App Connect Enterprise	11.0.0.11	Windows 10 Pro	AMD64	00:03:31 hours
ACE_second	http://localhost:7601		CMACE	A_Second	ACE_second	IBM App Connect Enterprise	11.0.0.11	Windows 10 Pro	AMD64	00:03:31 hours
ACE_TEST_SERVER	http://localhost:7600		CMACE	ACENode	ACE_TEST_SERVER	IBM App Connect Enterprise	11.0.0.11	Windows 10 Pro	AMD64	00:03:31 hours
Total: 3 Visible: 3 Selected: 0									Last n	efresh time: 2:20:44 PM

Figure 4.3.16.2-A. ACE Integration Node Viewlets

Server viewlets: Display ACE Integration Servers



Figure 4.3.16.2-B. ACE Server Viewlets

Application viewlets: Display ACE Deployed Applications

Applications		eria	Node: * × • Object *	Filters: Attribute: 📝 🚺		Project:	All 👻 🌄
Default ACE Ap	oplicati 👻 📝 Filter by:	Crite	Manager * × *	System:		Result limit:	100
Application Name ^	Node Name	Manager Name	Integration Server Name	Java Isolation: Active Value	Monitoring	Running	Last Updated
] 🗞 🕐 AC_APP	CMACE	ACENode	ACE_TEST_SERVER	1	inactive	true	00:03:27 hours
] 🐮 🕗 del_app	CMACE	An_AN	A_For_delete	1	inactive	true	00:03:27 hours
] 🐮 🕗 del_app	CMACE	A_Second	ACE_second	1	inactive	true	00:03:27 hours
] 🗞 🕗 Dfa	CMACE	A_Second	ACE_second	1	inactive	true	00:03:27 hours
🕈 🕐 Dfa	CMACE	An AN	A For delete	1	inactive	true	00:03:27 hours

Figure 4.3.16.2-C. ACE Application Viewlets

Services viewlets: Display ACE deployed Services

Services	Service Dir 👻 📝 Filter by:		Node: * × ♥ Object: * Manager: * × ♥	Filters: Attribute: 🜌 🕄 System:		Project: Result limit:	All
Service Name ~	Node Name	Manager Name	Integration Server Name	Java Isolation: Active Value	Monitoring	Running	Last Updated
8 🕗 A_S_Ervice	CMACE	A_Second	ACE_second	1	inactive	true	00:05:21 hours
A_S_Ervice	CMACE	ACENode	ACE_TEST_SERVER	1	inactive	true	00:05:21 hours
🕸 🕗 Service	CMACE	A_Second	ACE_second	1	inactive	true	00:05:21 hours

Figure 4.3.16.2-D. ACE Services Viewlets

REST API viewlets: Display deployed ACE Rest APIs

Rest APIs Schema: Default ACE Re	st API 👻 🏹 Filter by:		Node: * × V Object: *	Filters: Attribute: 🗹 🕄 System:		Project: Result limit:	All
Rest API Name ^	Node Name	Manager Name	Integration Server Name	Java Isolation: Active Value	Monitoring	Running	Last Updated
A_rest_prop	CMACE	A_Second	ACE_second	1	inactive	true	00:05:21 hours
Total: 1 Visible: 1 Selected: 0							Last refresh time: 2:22:35 PM

Figure 4.3.16.2-E. ACE REST API Viewlets

Library viewlets: Display deployed ACE Libraries

C Library		ov Criteria Wa	de: * × × Object *	Filters: Attribute: 🔽 🕄 System:		Project: All - 2 2 - 4 Result limit: 100		
	Library Name ^	Node Name	Manager Name	Integration Server Name	Application Name	Service Name	Rest API Name	Last Updated
	St_lijh_hg	CMACE	An_AN	A_For_delete	Dfa			00:05:21 hours
	St_lijh_hg	CMACE	A_Second	ACE_second	Dfa			00:05:21 hours
Total: 3 Visil	ble: 3 Selected: 0							Last refresh time: 2:22:35 PM

Figure 4.3.16.2-F. ACE Library Viewlets

Shared Libraries viewlets: Display deployed ACE Shared libraries



Figure 4.3.16.2-G. ACE Shared Library Viewlets

Message Flow viewlets: Display deployed ACE Message flows

Message Flows Schema: Default ACE Mess	age 👻 📝 Filter by:		E Node: * × *	Object: *	Filter Attribute System:	. 🗹 🕄		Project: All All tesult limit: 100	~ ~
Message Flow Name ^	Node Name	Manager Name	Integration Server Name	Application Name	Service Name	Rest API Name	Library Name	Running	Last Updated
gen.A_rest_prop	CMACE	A_Second	ACE_second			A_rest_prop		false	00:00:21 hours
☐ ₩ Ø gen.A_S_Ervice	CMACE	ACENode	ACE_TEST_SERVER		A_S_Ervice			false	00:00:21 hours
gen.A_S_Ervice	CMACE	A_Second	ACE_second		A_S_Ervice			false	00:00:21 hours
☐ ₩ Ø gen.del_serv	CMACE	ACENode	ACE_TEST_SERVER		del_serv			false	00:00:20 hours
🗌 😝 🕐 gen.Service	CMACE	A_Second	ACE_second		Service			false	00:00:21 hours
								4.1	
Total: 6 Visible: 6 Selected: 0									Last refresh time: 2:25:05 PM

Figure 4.3.16.2-H. ACE Message Flow Viewlets

Sub Flow viewlets: Display ACE deployed sub flows

🕒 Sub Flows	Filter by:	te	lode: * × × Obje	sct: *	Filters: Attribute: 🚽 System:			Project: All Result limit: 100	- I
Sub Flow Name ^	Node Name	Manager Name	Integration Server Name	Application Name	Service Name	Rest API Name	Library Name	Shared Library Name	Last Updated
gen.A_S_ErviceInputCatchHandler	CMACE	ACENode	ACE_TEST_SERVER		A_S_Ervice				00:00:31 hours
gen.A_S_ErviceInputCatchHandler	CMACE	A_Second	ACE_second		A_S_Ervice				00:00:30 hours
gen.A_S_ErviceInputFailureHandler	CMACE	A_Second	ACE_second		A_S_Ervice				00:00:30 hours
gen.A_S_ErviceInputFailureHandler	CMACE	ACENode	ACE_TEST_SERVER		A_S_Ervice				00:00:31 hours
Total: 15 Visible: 15 Selected: 0								l	ast refresh time: 2:25:05 PM

Figure 4.3.16.2-I. ACE Sub Flows Viewlets

Resource viewlets: Display ACE resources

Resources Schema: Default ACE Resourc Filter by:	Criteria	Node: * Manager: *	× * Object *	Atte	Filters: ribute: 🗹 🚺 tem:			oject: All sult limit: 100	, Ja
Resource Name ^	Node Name	Manager Name	Integration Server Name	Application Name	Service Name	Rest API Name	Library Name	Shared Library Name	Last Updated
A_S_Ervice.wsdl	CMACE	ACENode	ACE_TEST_SERVER		A_S_Ervice				00:00:31 hours
A_S_Ervice.wsdl	CMACE	A_Second	ACE_second		A_S_Ervice				00:00:30 hours
A_S_Ervice.xsd	CMACE	A_Second	ACE_second		A_S_Ervice				00:00:30 hours
A_S_Ervice.xsd	CMACE	ACENode	ACE_TEST_SERVER		A_S_Ervice				00:00:31 hours
Total: 33 Visible: 33 Selected: 0			•••					Last n	efresh time: 2:25:05 PM

Figure 4.3.16.2-J. ACE Resource Viewlets

Link viewlets: Display ACE links

🕒 Links	ault ACE Link Dir	 Filter by: 		• Criteria Manager:	× * Obj	set: *		Filters: ribute: 🖌 🖪 tem:		Project: Result limit:	All 100	· · ·
Link Name ^	Node Name	Manager Name	Integration Server Name	Application Name	Service Name	Rest API Name	Library Name	Shared Library Name	Link Type	Link From	Link To	Last Updated
🗌 🔚 🕗 A_sh_lib_q	CMACE	ACENode	ACE_TEST_SERVER		Service				SharedLibraryReference		sharedLibrary	00:00:31 hours
🗌 😸 🕗 A_sh_lib_q	CMACE	A_Second	ACE_second		Service				SharedLibraryReference		sharedLibrary	00:00:30 hours
Total: 4 Visible: 4 Selected: 0											Last refr	esh time: 2:25:05 PM

Figure 4.3.16.2-K. ACE Link Viewlets

4.3.16.3 ACE Integration Node Admin Logs

Load all ACE integration node admin logs by selecting **Admin logs** from the action pop-up menu of an integration node.

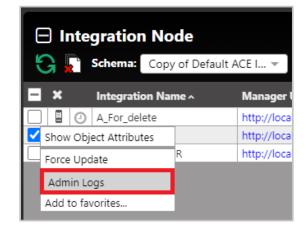


Figure 4.3.16.3-A. Select Integration Node > Admin Logs

The BIP number, timestamp, tag, tag name, source, message, and detailed message are displayed for each log. You can filter the results using these columns by typing a value in the box immediately below the column header. To clear a filter, you can either backspace the text or click on the source button.

No.	Bip Number	Timestamp	Tag	Tag name
	0	0	0	0
26	BIP200211	1618485898468	SLBPC21\Edvinas, <no-auth-role>,POST,/apiv2/deploy,200,20210415112458166929-toolkit- 0,A_sh_lib_qproject.generated.bar</no-auth-role>	USER.AUTHORIZED_RO .HTTP_METHOD .PATH.HTTP_STATUS .REQUEST_ID .BAR_FILE
7	BIP200411	1618485898468	SLBPC21\Edvinas , <no-auth-role> ,20210415112458166929-toolkit-0 ,A_sh_lib_qproject.generated.bar</no-auth-role>	USER.AUTHORIZED_RO .REQUEST_ID .BAR_FILE
8	BIP200371	1618485898468	SLBPC21\Edvinas , <no-auth-role> ,20210415112458166929-toolkit-0 ,A_sh_lib_qproject.generated.bar ,Service</no-auth-role>	USER.AUTHORIZED_RO .REQUEST_ID .BAR_FILE.APP_NAME
9	BIP200321	1618485898468	SLBPC21\Edvinas. <no-auth-role>.20210415112458166929-toolkit-0 .A_sh_lib_qproject.generated.bar .Service</no-auth-role>	USER.AUTHORIZED_RO ,REQUEST_ID ,BAR_FILE.APP_NAME
0	BIP200311	1618485898468	SLBPC21\Edvinas. <no-auth-role>.20210415112458166929-toolkit-0 .A_sh_lib_oproject.generated.bar .Service</no-auth-role>	USER.AUTHORIZED_RO ,REQUEST_ID ,BAR_FILE.APP_NAME
1	BIP20036I	1618485898468	SLBPC21\Edvinas. <no-auth-role>.20210415112458166929-toolkit-0 .A_sh_lib_qproject.generated.bar .A_sh_lib_q</no-auth-role>	USER.AUTHORIZED_RO .REQUEST_ID .BAR_FILE.APP_NAME
2	BIP200321	1618485898468	SLBPC21\Edvinas . <no-auth-role> ,20210415112458166929-toolkit-0 .A_sh_lib_aproject.generated.bar</no-auth-role>	USER.AUTHORIZED_RO ,REQUEST_ID .BAR_FILE
3	BIP200311	1618485898468	SLBPC21\Edvinas . <no-auth-role> ,20210415112458166929-toolkit-0 ,A_sh_lib_aproject.generated.bar</no-auth-role>	USER.AUTHORIZED_RO ,REQUEST_ID ,BAR_FILE
4	BIP200311	1618485898216	SLBPC21\Edvinas. <no-auth-role>.20210415112458166929-toolkit-0 .A_sh_lib_oproject.generated.bar .Service</no-auth-role>	USER.AUTHORIZED_RO ,REQUEST_ID ,BAR_FILE.APP_NAME
5	BIP200311	1618485898215	SLBPC21\Edvinas. <no-auth-role>.20210415112458166929-toolkit-0 .A_sh_lib_qproject.generated.bar</no-auth-role>	USER.AUTHORIZED_RO ,REQUEST_ID ,BAR_FILE
			PERFORMENTAL AND AND AND SOME PROPERTY CONFERENCESS AND A	USER.AUTHORIZED_RO

Figure 4.3.16.3-B. ACE Integration Node Admin Logs

You can view admin logs for multiple integration nodes on separate tabs. Admin logs are loaded by page. You can specify the amount displayed per page by changing the **Logs per page** number located at the bottom-left of the window. Navigate between the pages using the page arrows located at the lower right, or select a specific page number from the drop-down to immediately jump to that page.

4.3.16.4 ACE Integration Server Deploy Function

You can deploy content on servers using a bar file. Select **Deploy** from the action pop-up menu of an ACE integration server.

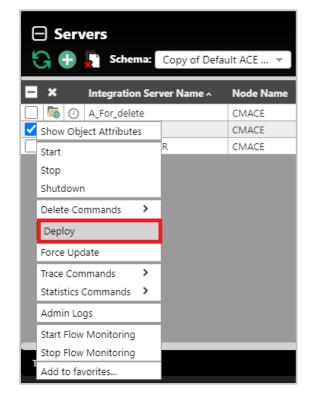


Figure 4.3.16.4-A. Select Integration Server > Deploy

A window similar to the below appears. Click **Choose File** to select the import file. When the file is finished loading the **Deploy** button becomes available and *Loaded* is displayed. Click the **Deploy** button to import the file.

Server Content	Deploy		×
Choose Bar file:	Choose File Dass.bar	 Load 	ed
		Deploy	Cancel

Figure 4.3.16.4-B. Server Content Deploy Window

When the file is finished being imported, it is recommended to refresh/discover the node.

4.3.17 Solace Viewlets

Manage your Solace events and messages in meshIQ Manage. You can create viewlets for these Solace items:

- Node
- Remote Queue Manager
- Broker
- Message VPN
- Queue
- Queue Template
- Topic Endpoint
- Topic Endpoint Template

- Bridge
- Client Profile
- ACL Profile
- Client UserName
- JNDI Connection Factory
- JNDI Queue
- JNDI Topic
- Client Certificate Authority

For more information about Solace, refer to <u>https://docs.solace.com/</u>.

Solace Brokers

🖯 Bro	kers		Criteria	Node: * ×	Attr	Filters:	Proje
C	Schema: Default Solace Broker	Filter by:	Crit	Manager: * ×		tem: 🗸	Resu
∎ ×	Manager Name	Workgroup Name	Node Name	Platform	Semp Version	Last Updated	
) SolaceNode	MQM	CMSOLACE	VMR	soltr/9_12VMR	00:06:13 hours	
	REMOTE	MQM	CMSOLACE	VMR	soltr/9_11VMR	00:00:01 hours	
Total: 2 Vis	ible: 2 Selected: 0					Last refresh time: 7:38:30	AM

Solace Message VPNs

	sage VPNs Schema: Default Solace N	1essa 🔻 🚺 🏹 Filt	er by:	Criteria	Node: * × ▼ Manager: * × ▼	Filters: Attribute: 🛄 🚺 System: 🗸	Proj Resi
×	Message VPN Name 🔺	Workgroup Name	Node Name	Manager Name	Message VPN Enabled	Message Spool Usage Max	Last Upda
) 🖾 🕗	default	MQM	CMSOLACE	REMOTE	1	1500	00:00:02 ł
) 🖾 🕘	default	MQM	CMSOLACE	SolaceNode	1	1500	00:06:14 k
	secondary	MOM	CMSOLACE	SolaceNode	1	0	00:06:14

Solace Queues

	Que	Schema: Default Solace Queu	Filter by:		iter	× ▼ Filt Attribut × ▼ System:	e:
	×	Queue Name ^	Workgroup Name	Node Name	Manager Name	Message VPN Name	Last Updated
	10	default_default_Queue	MQM	CMSOLACE	REMOTE	default	00:00:04 hours
Tot	al: 1 Visi	ble: 1 Selected: 0		***			Last refresh time: 7:38:33 AM

Solace Queue Templates

C Template		Unde: * × * Manager: * × *		Filters: Attribute: () System: V	Proje Resu		
×	Queue Template Name 🔨	Workgroup Name	Node Name	Manager Name	Message VPN Name	Last Updated	
0	Q_template_1	MQM	CMSOLACE	SolaceNode	default	00:06:17 hours	
	Q_template_2	MQM	CMSC	aceNode	default	00:06:17 hours	

Client Profile

Client Profile Viewlet	Filter by:	Vode: * × * Manager: * × *	Attribute: System:		Projects: All
X Client Profile Name ^	Workgroup Name	Node Name	Manager Name	Message VPN Name	Last Updated
🚨 🕘 #client-profile	MQM	REMOTE_SOLACE	default	default	00:05:28 hours
🚨 🕗 default	MQM	REMOTE_SOLACE	default	default	00:05:28 hours

ACL Profile

	L Profile Viewlet Schema: Default Solace ACL P 🏹 🏹 Fil	Iter by:	Node: * × * Manager: * × *	Filters: Attribute: 🔳 🚺 System: 🏹	Projects Result li	
×	ACL Profile Name ^	Workgroup Name	Node Name	Manager Name	Message VPN Name	Last Updated
	#acl-profile	MQM	REMOTE_SOLACE	default	default	00:05:47 hours
🗆 🕹 🤅) default	MQM	REMOTE_SOLACE	default	default	00:05:47 hours
Total: 2 Vi	sible: 2 Selected: 0					Last refresh time: 3:30:36 PM

Client UserName

Client UserName Viewlet	 Filter by: 	E Node: * × · · U Manager: * × ·	Filters Attribute: System:		Projects: All → 🚽 🌄 🗙
X Client UserName Name ^	Workgroup Name	Node Name	Manager Name	Message VPN Name	Last Updated
a 🕘 #client-username	MQM	REMOTE_SOLACE	default	default	00:06:08 hours
ቆ 🕗 default	MQM	REMOTE_SOLACE	default	default	00:06:08 hours
stal: 2 Visible: 2 Selected: 0					Last refresh time: 3:30:57

JNDI Connection Factory

🕞 JNDI Connection Factory Viewlet	phe c	Node: * × * Manager: * × *	Filters: Attribute: 📕 System: 🖌		Projects: All
X JNDI Connection Factory Name ^	Workgroup Name	Node Name	Manager Name	Message VPN Name	Last Updated
🗌 🐞 🕐 /jms/cf/default	MQM	REMOTE_SOLACE	default	default	00:06:32 hours
Total: 1 Visible: 1 Selected: 0					Last refresh time: 3:31:20 PM

4.3.17.1 Manage Solace Remote Message VPNs

You can view, create, modify, and delete Remote Message VPNs from Solace Bridge viewlets.

Select the check box for the Solace bridge and select the Action menu. Choose **Remote Msg Vpns...**.

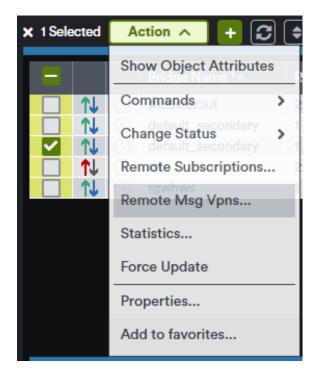


Figure 4.3.17.1-A. Solace Bridge Action Menu

A list of Remote Message VPNs is displayed in the console panel.

↑ def	fault_secon ×	Q < 0/0 >						
	Message VPN Name	Message VPN Location	The Physical Interface	Enabled	Client Username	Client Username Password	Compression Enabled	TLS Er
	secondary	127.0.0.1:55555		true			false	false
	new_m	127.0.0.1:55556		false	meow		false	false
	ts per page 50 🚽		🤶 Page		of 1 →		View 1	

Figure 4.3.17.1-B. Solace Remote Message VPNs in Console

To create a new Remote Message VPN, click 🧖.

You can modify or delete a disabled Remote Message VPN.

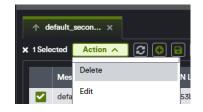


Figure 4.3.17.1-C. Solace Remote Message VPNs Console Action Menu

- To modify a disabled Remote Message VPN, select its check box, then select **Edit** from the Action menu. The Solace Bridge Remote Msg VPN properties dialog opens (see the figure below).
- To delete a disabled Remote Message VPN, select its check box, then select **Delete** from the Action menu.

Solace Bridge Remote Msg Vpn		?>	ĸ
Message Vpn Name:	secondary		
Message Vpn Location:	127.0.0.1:55555		
The Physical Interface:			
Enabled:	True	~	
Client Username:			
Client Username Password:			
Compression Enabled:	False	~	
TLS Enabled:	False	~	
Connect Order:	4		
Remote Queue:	default_secondary_Queue		
Window Size:	255		
Unidirectional Client Profile:	#client-profile		
Connection Up:	True	~	
Last Connection Failure Reason:			
Bound To Queue:	False	~	
Last Queue Bind Failure Reason:			
Queue Bound Uptime:	0		
	Ok Schedule C	ancel	



4.3.18 RabbitMQ Viewlets

View your RabbitMQ objects in meshIQ Manage. You can create viewlets for these RabbitMQ items:

- Node
- Server
- Remote Node
- Virtual Host
- Connection
- Channel
- Consumer

- Exchange
- Queue
- User
- Component
- Policy
- Operator Policy

Some examples are shown below.

Node

	Default Nodes	Dir 👻	Filter by:		Crite		× *		Attribute: 📰 🚺		rojects: All esult limit: 20000	
🗙 Node Name 🥎	Hostname	Use DNS	IP Address	IP Port	OS Platform	Description	Workgroup Name	Software Version	Heartbeat Interval (min.)	Update Interval (sec.)	Command Timeout (sec.)	Pending Com
RABBITMQCM	AM-POWER	NO	11.24.72.177	5699	Java	rabbit mq node	WGS19C	11.0.0.5	1	30	60	5000
Total: 1 Visible: 1 Selected												h time: 12:16:15 Pl

Server

You can change the RabbitMQ server cluster name. See <u>Change RabbitMQ server cluster</u> <u>name</u>.

	ER hema: Default Rabbit MQ S Profilter by:	B Node: RAB × ▼ B Manager: rabbit × ▼	Filters: Attribute: 🖬 🕄 System: 🏹	Projects: Result limit:	All -> 7
		t Version Rates Mode Connections	Channels Exchanges Qu	eues Consumers Message	s Last Updated
Contraction of the second seco	abbit RABBITMQCM 3.11.5	basic 0	0 7 2	0 7	00:00:22 hours

Remote Node

Remote Node Na			Filter by:		Crite	Manager: ra	abbit × *			Attribute: 📗 🚺 System: 🗹		Result limit: 20000		
		Manager Name	User ID	Is Running	Uptime	FD Used	FD Total	Sockets Used	Sockets Total	Erland Proc. Used	Erlang Proc. Total	Mem. Calculation Strategy	Mem. Used	N
rabbit@NANO	ſ	rabbit		true	1294656497	327	65536	0	58893	418	1048576	rss	85884928	

Virtual Host

	ual Host Schema: Default Rabbit	t MQ Vi 👻	Filter by:		aneger: rabbit × *		Filters: Attribute: 🛄 🚺 System: 🗸	Projects: Result limit		•] 🖥
•	Virtual Host Name	Manager Name	Cluster State Map	Messages Ready	Messages Unacked	Messages	Returned Unrouted Messages Rate	Unrouted Dropped Messages Rate	Published Messages	Gotten [
0	1	rabbit	rabbit@NANO=running	7	0	7	0	0	3	4

Exchange

	Schema: Default Rabbit MQ E 🔻	Filter by:	F Node: RAB × ▼		Filters: Attribute: 🛄 🕃 System: 🧹	Projects: Result limit:	All → 7
×	Exchange Name 🔺	Manager Name	Virtual Host Name	Exchange Type	Publish In Rate	Publish Out Rate	Last Updated
	amq.default	rabbit	1	direct	0	0	00:00:58 hours
	 amq.direct 	rabbit	1	direct	-9999	-9999	00:00:58 hours
	 amq.fanout 	rabbit	1	fanout	-9999	-9999	00:00:58 hours
	amq.headers	rabbit	1	headers	-9999	-9999	00:00:58 hours
	amq.match	rabbit	1	headers	-9999	-9999	00:00:58 hours
	 amq.rabbitmq.trace 	rabbit	1	topic	-9999	-9999	00:00:58 hours
	amq.topic	rabbit	1	topic	-9999	-9999	00:00:58 hours
Tota	l: 7 Visible: 7 Selected: 0						Last refresh time: 12:16:56 PM

Queue

🗆 QU	Schema: Default	Rabbit MQ Q 👻	Filter by:		Criteria Manager	RAB × ▼ rabbit × ▼		Filt Attribut System:	ke: 🔲 🚺	Projects: All Result limit: 20000	•• 🖥 🗸
×	Queue Name ~	Manager Name	Virtual Host Name	Queue Type	Queue State	Messages Ready	Messages	Messages Unacked	Gotten Delivered Messages Rate	Acknowledgment Messages Rate	Last Updated
		rabbit	1	classic	running	7	7	0	0	0	00:00:09 hours
0 6	RBMQ02	rabbit	1	classic	running	0	0	0	-9999	-9999	00:00:09 hours
Total: 2	Visible: 2 Selected: 0									Last refres	h time: 12:17:08 PM

User

		Filter by:	RAB × ▼ Node: RAB × ▼ U Manager: * × ▼	Filten: Attribute: 🔤 🚺 System: 🥑	Projects: Result lin	
×	User Name 🔺	Manager Name	Password Set	Hashing Algorithm	Tags	Last Updated
	Arnold	rabbit	true	rabbit_password_hashing_sha256	administrator	00:00:17 hours
2	guest	rabbit	true	rabbit_password_hashing_sha256	administrator	00:00:17 hours
Total:	2 Visible: 2 Selected: 0					Last refresh time: 12:17:15 PM

4.3.18.1 RabbitMQ Status viewlets

You can view status information for RabbitMQ channels, connections, exchanges, consumers, nodes, queues, servers, and virtual hosts. For example, you can select Show Exchange Status from a queue viewlet's Action menu (or click the status value within the Status column of the viewlet) to display a Status viewlet for the queue, as shown in the figures below.

You can also compare the status of multiple objects of the same type by selecting the objects and selecting **Show Status** from the action menu. See Figure 4.3.18.1.1-I below.

↑ rabbit@m-rab ×	
Search Q	< 0/0 >
Attributes	rabbh@mrabbh.mq
Manager Name	RabbitServer
Workgroup Name	MGM
Node Name	CMRABBIT
Estimated Response Time	1000
Rates Mode	bsic
Created Channels	2023
Created Channels Rate	0
Closed Channels	-2023
Closed Channels Rate	•
Created Connections	-3
Created Connections Rate	0
Closed Connections	-3
Closed Connection Rate	0
Created Queues	-2
Created Queues Rate	0

Figure 4.3.18.1.1-A. RabbitMQ Node Status Viewlet

↑ RabbitServer ×		
Search Q < 0/0 >		
Attributes	RabbitServer	
Manager Name	RabbitServer	
Manager Status	Running	
Connections	0	
Channels	0	
Exchanges	14	
Queues	4	
Consumers	0	
Messages	1	
Messages Rate	0	
Messages Ready	1	
Messages Ready Rate	0	
Messages Unacked	0	

Figure 4.3.18.1.1-B. RabbitMQ Server Status Viewlet

meshIQ Manage User's Guide

↑ /-Status X		
Search Q < 0/0 >		
Attributes	,	
Manager Name	RabbitServer	
Workgroup Name	мам	
Node Name	CMRABBIT	
Estimated Response Time	1000	
Messages	540	
Messages Rate	0	
Messages Ready	540	
Messages Ready Rate	0	
Messages Unacked	0	
Mossages Unack Rate	0	
Published Messages	1950	
Published Messages Rate	0	
Confirmed Messages	0	
Cofirmed Messages Rate	0	
Delivered Messages No Acknowledgment	0	
Delivered Messages No Acknowledgment Rate	0	



~ 172.17.0.15508 ×			
Search	G ■ Search C < 0/0 >		
Attributes	173.05.45388 + 07.05.24573		
Manager Name	RabbitServer		
Workgroup Name	мам		
Node Name	CMRABBIT		
Estimated Response Time	1000		
Channels	1		
State	running		
OCT Received	487		
OCT Received Rate	0		
OCT Send	663		
OCT Send Rate	0		
Connection Name	172.17.0.156388 -v 172.17.0.2.5672		
Reductions	21782		
Reductions Rate	173.2		
Receive Count	•		
Send Count	0		
Sand Pandina			



C Search Q < 0/0 >	C 🗑 Search Q < 0/0 >		
Attributes	172.02.55386 > 172.02.62.5672 (1)		
Manager Name	RabbitGerver		
Workgroup Name	мам		
Node Name	CMRABBIT		
Estimated Response Time	1000		
Published Messages	-9999		
Published Messages Rate	-9999		
Confirmed Messages	-9999		
Cofirmed Messages Rate	-9999		
Delivered Messages No Acknowledgment	-9999		
Delivered Messages No Acknowledgment Rate	-9999		
Delivered Messages Acknowledgment	-9999		
Delivered Messages Acknowledgment Rate	-9999		
Gotten Delivered Messages	-9999		
Gotten Delivered Messages Rate	-9999		
Acknowledgment Messages	-9999		
Acknowladomant Massanas Data	-9223		



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↑ amq.default ×	
Search	Q < 0/0 >
Attributes	ang default
Manager Name	RabbitServer
Workgroup Name	мам
Node Name	CMRABBIT
Estimated Response Time	1000
Virtual Host Name	/
Exchange Name	amqdefault
Publish In	-3993
Publish In Rate	-3999
Publish Out	-3999
Publish Out Rate	-3999
Confirmed	-3999
Confirmed Rate	-999



↑	↑ q-Statua X		
	Search Q < 0/0 >		
A	Attributes	•	
N	Aanager Name	RabbitServer	
v	Vorkgroup Name	-MQM	
N	lode Name	CMRABBIT	
E	stimated Response Time	1000	
c	Consumers	0	
N	Aessages	1	
N	Aessages Rate	0	
N	Aessages Ready	,	
N	Aessages Ready Rate	0	
N	Aessages Unacked	0	
N	Aessages Unack Rate	0	
P	ublished Messages	1	
P	ublished Messages Rate	0	

Figure 4.3.18.1.1-H. RabbitMQ Queue Status Viewlet

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↑ Queuet, Que ×			
Attributes Queue1 Queue2			
Manager Name	RabbitServer	RabbitServer	
Workgroup Name	MQM	MQM	
Node Name	CMRABBIT	CMRABBIT	
Estimated Response Time	1000	1000	
Consumers	0	0	
Messages	0	0	
Моссалос Рато	0	0	

Figure 4.3.18.1.1-I. Compare Status of RabbitMQ objects

4.3.18.2 Change RabbitMQ server cluster name

By default, the RabbitMQ server cluster name is derived from the name of the first node in the cluster, but you can change it. Doing so changes the name of the cluster only, not the name of any objects within it.

To change a server cluster name:

- 1. Select the check box for the server and select **Set Cluster Name** from the Action menu.
- 2. Enter the new name.
- 3. Click **OK**.

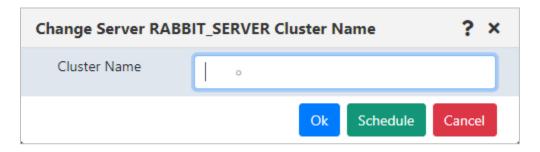


Figure 4.3.18.2-A. Change RabbitMQ Server Cluster Name

4.4 Toolbar Options

The toolbar appears at the top right of the screen. Functionality is explained in *Table 4.4-A* below.

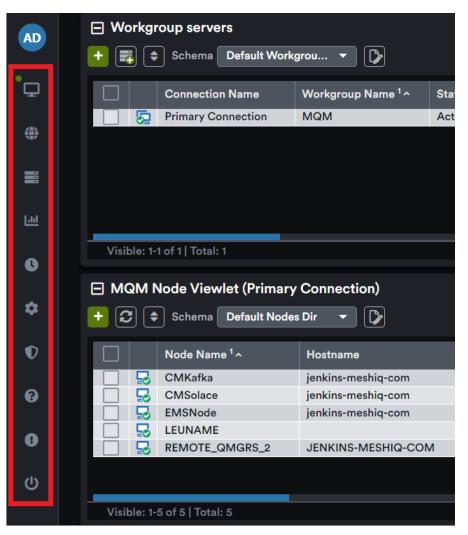


Figure 4.4-A. Toolbar Options

Table 4.4-A. Toolbar Options		
lcon	Name	Description
ML	User Name	Displays the user's name.
'Ţ	Go to Workspace dashboard	Navigates to the Workspace dashboard, which was available as a dashboard tab in versions 11.0 and earlier.
۲	Reconnect	Reconnects workgroup server connections.

Table 4.4-A. Toolbar Options		
lcon	Name	Description
	Request History	Displays all historical requests. (Section <u>4.4.5)</u> .
0	Schedules	Opens the Schedules window. A list of scheduled commands and their statuses are displayed. (Section $4.4.2$).
*	Settings	Displays the Settings window . See Settings Window below (Section <u>4.4.4</u>) for more information.
0	Help	Opens the <u><i>Resource Center</i></u> or other online resource defined in your system's global settings.
0	About	Displays version number.
	Log Out	Logs the user out of the application.

4.4.1 Reconnect

Click the **Reconnect** button to reconnect the workgroup server when the status of the workgroup server is **Not Connected** or there are WGS issues. Enter the workgroup server's password and click **Renew Token**.

Renew token		?	
Connection info:			
IP	Hostname	Port	
172.16.6.60		4010	
Enter password to ren Password:	new token]
Cancel		Renew Token]

Figure 4.4.1-A. Renew Token

4.4.2 Statistics

To determine the highest value features of meshIQ Manage at your organization, run the Statistics report, available from the toolbar:

The **Show Navigator Statistics** right is required to view this report.

By default, the Statistics report shows counts of each user activity for today. You can change the date Range to view activity from a different time period. Hover over a bar on the chart to view the exact number of times a feature has been used.

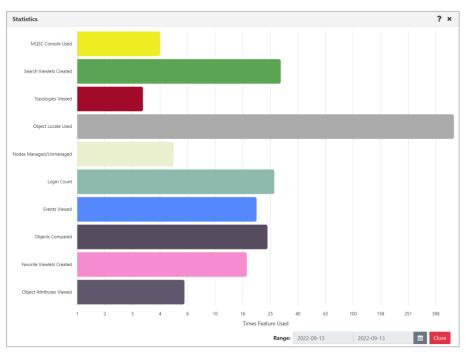


Figure 4.4.2-A. Statistic Report

By default, statistics data is updated about every 10 minutes. The chart uses a logarithmic scale since some features, like Object Locate, are used far more often than any others.

The features that are included in this report are listed below.

Action Schedule Used	MQSC Snapshots Created
Attribute Filters Created	Nodes Managed/Unmanaged
Authority Records Created	Object Attributes Viewed
Custom Attributes Created	Object Authority Records Viewed
Dashboard Templates Created	Object Locate Used
Events Viewed	Object Name Filters Created
External Viewlets Created	Object Status Viewed
Favorite Viewlets Created	Objects Compared
Login Count	Search Criteria Created

Managers Compared Message Export Used Message Import Used MQ Statistics Used MQSC Console Used Search Viewlets Created Shared Dashboard Count Topologies Viewed Viewlet Schemas Created

4.4.3 Schedules

After clicking the Schedules icon **O** from the top of the screen (*Figure 4.4-A*), the *Schedules* window opens. Only users with the required WGS configuration will have the ability to use this feature. See <u>Scheduling</u> for more information.

4.4.4 Settings Window

After clicking the **Settings** icon from the top right of the screen (*Figure 4.4-A*), the *Settings window* is displayed. This window is labeled *User Settings* or *Global Settings*, depending on which settings are being displayed. It has the following tabs:

Settings Common to User and Global Setting Windows

- User settings (Section <u>4.4.4.1</u>)
- Message Commands (Section
 <u>4.4.4.1.2</u>)
- Load Messages (Section <u>4.4.4.1.3</u>)
- Save Messages (Section <u>4.4.4.1.4</u>)
- Color Settings (Section <u>4.4.4.1.5</u>
- Attribute Filters (Section <u>4.4.4.1.6</u>)
- Display Schemas (Section <u>4.4.4.1.7</u>)

Global Only Settings

- Cipher Specs (Section <u>4.4.4.1.5</u>)
- Manage Users (Section <u>4.4.4.2.2</u>)
- Global Notice (Section <u>4.4.4.2.3</u>)
- **SSO** (Section <u>4.4.4.2.4</u>)
- Environment Level (Section <u>4.4.4.2.5</u>)
- Dashboard Ownership Management (Section <u>4.4.4.2.6</u>)
- User Object Ownership Management (Section <u>4.4.4.2.7</u>)

4.4.4.1 User and Global Settings

This section describes settings that can be configured at both the User level and the Global level. For information on settings that are global only, see <u>Global Settings</u>.

When a new user is added to the system, they will automatically have the global settings created by the administrator. If the user updates their settings, the updates will override the global settings they initially had.

If a user wants to restore their own settings to the default global settings, simply click the **Restore Default** button located at the bottom of the screen.

4.4.4.1.1 User Settings Tab

4.4.4.1.1.1 User Level

The **User settings** tab located on the *User Settings window* is shown below and described in *Table 4.4.4.1.1.1-A*.

User Settings	? ×		
User Settings	Refresh interval (sec.) 330		
Message Commands	Show inactive channels		
Load Messages	 Show empty queues Show empty Kafka topics 		
Save Messages	 Show temporary dynamic queues Show full names for favorites shortcuts 		
Color Settings	 Show full names for search results objects Show SYSTEM objects 		
Attribute Filters	Show objects search results from active managers only		
Display Schemas	 Show Manager for default schemas Show advanced viewlet filtering Show Viewlet's Product's Color Automatically update viewlet properties on refresh Show log out window Collapse all viewlets on login Show Color For WGS Connection In Viewlet Turn On Multi-Selection by Default Display Grouping In Connection Selection 		
	Search Settings		
	Result limit: 100		
	Edit global settings Restore Default Save Changes Cancel		

Figure 4.4.4.1.1.1-A. Edit User Settings

Table 4.4.4.1.1.1-A. User Settings			
Name	Description		
Refresh interval (sec.)	Automatically refreshes the displayed information at the specified interval (in seconds).		
Show inactive channels	Select to show all inactive channels in the tree.		
Show empty queues	Display all queues that have a current depth equal to zero. Applies to IBM MQ and TIBCO EMS. This option is not enabled by default.		
Show empty Kafka topics	Display Kafka topics that have a current depth equal to zero.		

	Table 4.4.4.1.1.1-A. User Settings
Name	Description
Show temporary dynamic queues	Select to display temporary dynamic queues.
Show full names for favorites shortcuts	Displays entire object path names on the Favorites tab.
Show full names for search results objects	Displays entire object path names for all search results.
Show SYSTEM objects	Select to show SYSTEM objects (objects that begin with SYSTEM or NASTEL).
Show objects search results from active queue managers only	Select to only search active queue managers. If off, all objects are shown, even from queue managers that are not currently active (will produce duplicates of the same object). This option is selected by default.
Show Manager for default schemas	By default, the Manager Name is the second viewlet column displayed. Uncheck this setting to remove the Manager Name column.
Show advanced viewlet filtering	Shows applicable advanced attribute filtering options at the top of search viewlets, so that you can adjust them more easily. Options shown are relevant to the object type (queues, channels, listeners, EMS routes, and so on). Advanced filter options can include settings from the viewlet properties such as Node, Manager, Object, queue Type, Attribute filters, and Message Search criteria. They can also include the user and global settings checkboxes Show empty queues and Show SYSTEM objects (labeled Empty and System , respectively).
	This setting applies to viewlets for IBM MQ, EMS, Kafka, and IIB products, including temporary viewlets. It does not apply to favorites viewlets, external viewlets, or system-generated viewlets in the Workspace dashboard.
	To learn more about advanced attribute filtering for a specific viewlet, see <u>Attribute Filter</u> .
Show Viewlet's Product's Color	Applies the product color settings from the Colors tab of the Settings window to the IBM MQ, EMS, Kafka, IIB, and ACE product viewlets. By default, a gradient is used, unless the Flat Color checkbox has been selected on the Color tab.
Automatically update viewlet data on refresh	When this setting is enabled, and another user updates the properties of a viewlet on a dashboard that you have open, the viewlet is updated automatically the next time its data is refreshed. This also holds true if you updated the viewlet yourself, from another computer.

Name	Description
	If this setting is not enabled, the viewlet information is not updated automatically; instead, the application will inform you of the pending synchronization.
Show log out window	When this option is selected, users receive a confirmation message after they click the Logout button on the toolbar. Users can click Yes to log out or Cancel to leave it open.
	A Remember this option checkbox is available to prevent future prompts; but clearing this setting has the same effect; the user is automatically logged out, bypassing the confirmation message.
Collapse all viewlets on login	You can choose to display all viewlets as collapsed at login. This option can be set at the global or user level. If you do not have this option enabled, then the next time you log in, viewlets will revert to their previous state.
	Note that Workspace dashboard viewlets are not subject to this setting.
Collapse all viewlets on login	You can choose to display all viewlets as collapsed at login. This option can be set at the global or user level. If you do not have this option enabled, then the next time you log in, viewlets will revert to their previous state.
	Note that Workspace dashboard viewlets are not subject to this setting.
Show Color For WGS Connection In Viewlet	Turn on this setting to shade viewlet rows by workgroup server connection. See <u>Color Settings Tab</u> to learn how to choose the colors.
Turn On Multi-Selection by Default	When this setting is turned on, by default, a user can select multiple workgroup servers when editing a viewlet. If it is not turned on, the user must first select the Multi-Selection checkbox under the Workgroup server list before being able to select multiple workgroup servers.
Search Settings: Result limit	For new viewlets. Define the default maximum number of results (objects) a search request will return. Use this to limit the number of managers, connections, routes, and so on, to be included in new viewlets by default.
	When the Total/Visible/Selected labels at the bottom of your viewlet are orange, it means that the number of records in your viewlet meets or exceeds the Result Limit, and you should consider fine-tuning the viewlet's attribute filters to return a more relevant set of results from the workgroup server.
	This setting overrides the corresponding Global Settings value.

	Table 4.4.4.1.1.1-A. User Settings
Name	Description
Restore Default button	Select to restore to default settings.

4.4.4.1.1.2 Global Level

The **User Settings** tab located on the *Global Settings* window is shown below and described in *Table 4.4.4.1.1.1-A*. Admins can edit the global settings by clicking the **Edit global settings** button located at the bottom of the screen.



Please note, updating the global settings will not affect existing users (admins can reset a user's settings back to the global settings on the Manage Users tab (*Section* 4.4.4.2.2)).

After making updates to global settings, click the **Save Changes** button to save and exit the screen. From this point forward, any new users added to the system will receive these settings. When editing global settings, you can switch back to updating your own settings by clicking the **Edit user settings** button located at the bottom.

Global Settings		1	? ×		
User Settings	Refresh interval (sec.)	310			
Message Commands	Refresh interval minimum (sec.)	120			
Load Messages	Session timeout (sec.)	600			
Save Messages	Default Workgroup Server timeout (sec.)	20			
Cipher Specs	Workgroup Server timeout for long operations ("Move/Copy All", "Delete All") (sec.)	300			
Manage Users	Default manager type:	Kafka	-		
Global Notice	Show inactive channels				
Color Settings	 Show empty queues Show empty Kafka topics 				
SSO Settings	Show temporary dynamic queues Show full names for favorites shortcuts				
Environment Level	Show full names for search results objects Show SYSTEM objects				
Attribute Filters	Show objects search results from active managers only				
Display Schemas	Show Manager for default schemas Show advanced viewlet filtering				
Dashboard Ownership Management	 Show Viewlet's Product's Color Automatically update viewlet properties on refresh Show log out window 				
User Object Ownership Management	 Collapse all viewlets on login Show Color For WGS Connection In Viewlet 				
	Edit user settings Save Chan	ges C	ancel		

Figure 4.4.4.1.1.2-A. Global User Settings

Table 4.4.4.1.1.2-A. Global User Settings				
Name	Description			
Refresh interval minimum (sec.)	To conserve system resources, you can prevent users' viewlets from being refreshed too frequently by establishing a minimum value for refresh intervals. This minimum threshold, Refresh interval minimum (sec.), is stored in Global Settings. When it is changed, all user-defined refresh intervals that fall below it are set to the threshold from Global Settings; the updated interval goes into effect the next time the user logs in.			
Session timeout (sec.)	For security reasons, user sessions are set to terminate after a defined period of inactivity (known as the "session timeout"). The Session timeout (sec.) value is defined on the Global Settings dialog. The default value is 600 seconds (10 minutes). If a user's session has been idle for 10 minutes, the Extend Session dialog is displayed, and the user can either click Continue to extend the user session or Log Out to exit the application.			
Default Workgroup Server timeout (sec.)	Default timeout value for most Workgroup Server operations. See also "Workgroup Server timeout for long operations" below. The default value is 20 seconds.			
Workgroup Server timeout for long operations ("Move/Copy All", "Delete All") (sec.)	Default timeout value for long Workgroup Server operations only. Overrides Default Workgroup Server timeout (sec.). The default value is 300 seconds.			
Bulk Select Max options	The Bulk Select Max options in Global User Settings control the number of objects in a viewlet that can be selected using the bulk select check box:			
	For General objects (that is, all objects except queue managers), the default limit is set to 100 objects. If there are more than 100 objects in the viewlet, the Bulk Select check box is unavailable.			
	For Restricted objects, which currently only includes queue managers, the default limit is set to 10 objects. If there are more than 10 objects, the Bulk Select check box is unavailable.			
	Either limit can be set from 0 to 1000.			
Search Settings: Result limit	For new viewlets. Define the default maximum number of results (objects) a search request will return. Use this to limit the number of managers, connections, routes, and so on, to be included in new viewlets by default. The user-level setting overrides the global setting.			
	When the Total/Visible/Selected labels at the bottom of your viewlet are orange, it means that the number of records in your viewlet meets or exceeds the Result Limit, and you should consider fine-tuning the viewlet's attribute filters to return a			

Table 4.4.4.1.1.2-A. Global User Settings					
Name Description					
	more relevant set of results from the workgroup server.				
Search Settings: Search depth	Define the number of records will be searched within each queue manager.				
DLQ Selector	The DLQ Selector configuration property allows for flexibility in identifying a Dead Letter Queue (DLQ) by its name, so that the management application can automatically apply the correct schema for the message format. This field accepts regular expressions for pattern matching. Example: .*\\.DEAD\\.LETTER\\.QUEUE.*				
Security Manager URL	Location of the security application. For the original security manager, use /apodwsm. For the new security manager introduced in version 10.4, use /navxwsm. For meshlQ Secure, use /secure.				
Main Help URL	Defines the URL destination for the help icon 🕜 on the toolbar. By default, the help icon opens the Resource Center; however, a different online destination can be configured here.				

4.4.4.1.2 Message Commands Tab

The **Message Commands** tab, located on both the *User Settings window* and the *Global Settings window*, provides settings for browsing messages. The various options are described in *Table 4.4.4.1.2-A*.

Settings window				? ×
User Settings	— Message Criteria	Settings		
Message Commands	Message Criteria:			✓ Configure
Load Messages	Browse settings			
Save Messages	Message Cursor:	1	Data Offset:	0
Cipher Specs	Message Count:	100	Data Size:	256
Manage users	Load full msg. for Prompt:	XML/JSON 🗹 🔿 Always		
		If message size in bytes >	1048576	
		○ Never		
	disadvantage Message Posi	-	sages could have the ere are multiple mess hat message position	same 'Message Identity'. ages with the same 'Message
		Edit global settings	Restore Default	Save Changes Cancel

Figure 4.4.4.1.2-A. Message Commands

Table 4.4.4.1.2-A. Message Commands			
Name	Description		
Message Criteria Settings	A filter for messages. When criteria set is specified, it can be used to browse, copy, move, re-route, and delete messages which satisfy the selected criteria's specifications. When a message criteria record is selected to filter messages, it also applies to the Put New Message option. Message criteria are also available to set default MQMD header values when you load messages from a file (Load from File option).		
Message Criteria	Select an existing message criteria set from the drop-down list to apply to the messages. Only one message criteria set can be specified.		
Configure button	Create, edit, or delete message criteria (<u>Message Criteria</u>).		
Browse Settings	The following describes browse options:		

Table 4.4.4.1.2-A. Message Commands			
Name	Description		
Maaaaa	Enter message cursor; that is, where to start reading the message. Range: 1 – 999999999. Default: 1 (Required)		
Message Cursor	For Kafka messages, this is the specific record in the partition that you want to start at.		
Data Offset	Enter message data offset. (Required)		
Message Count	The Message Count setting determines the number of messages that will be returned per page. The default setting is 500, but the Administrator can change this to any value from 1 to 1,000. 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. Note that when browsing Kafka messages at the <i>topic level</i> , paging is not supported.		
	For Kafka messages, to start at a specific record in the partition, update the Message Cursor setting. The messages listed in the console will begin at the Message Cursor value that you set.		
Data Size	Enter the message data size (in bytes) you would like the system to load. (Required)		
Load full msg. for	Full messages are needed for XML and decode views. Enable this option to allow full messages to be loaded when in an XML or decode view.		
XML and Decode views	When enabled, the system can be configured so that a confirmation prompt can appear before loading the full message. See below Prompt options to select desired criteria.		
	When the Load full msg. for XML and Decode views option is enabled, the Prompt options appear. These options control whether to display a confirmation prompt before loading a full message for XML and decode views. Select one of the following options:		
Prompt	 Always: Before loading full messages, the system will ask the user if the full message should be loaded. If message size in bytes >: Specify an amount. The prompt asking if the full message should load will only appear when the message size is larger than the size specified. Never: a confirmation prompt will never appear. 		
	Provides Copy/Move/Delete options. Available when User settings is clicked or if you are in Copy/Move/Delete messages operations.		
Messages Selection by radio buttons	As noted in the description on the dialog, the disadvantage of selecting messages by position (the Message Position method) is that a message's position might change within a queue. For this reason, when you select the Message Position method, the icons for deleting, rerouting, copying, and editing are not available when multiple individual messages are selected. You can still choose to copy, move, or delete all messages using the message(s)		

Table 4.4.4.1.2-A. Message Commands		
Name	Description	
	pop-up menu.	
Restore Default button	Restores the default settings.	

4.4.4.1.2.1 Message Criteria

When you click the **Configure** button on the **Message Commands** tab of either the *User Settings Window* or the *Global Settings window*, the *Message Criteria* window opens. Below the **name** header is the list of existing message criteria sets.

User Level

At the User level, the Message Criteria window displays a list of the message criteria records that you (the current user) have created. To add, edit, and delete criteria records, you must have the **Manage Private Message Criteria** right in the security application.

A user's message criteria record can be selected in the Active Filter of a queue to filter its results; in this case, the Put New Message option for that queue is also affected by the message criteria filter. Message criteria records that concern message descriptor properties can also affect messages loaded through the Load from File option (the message criteria record can be selected from the MQMD Header Default Values list).

Global Level

At the Global level, the Message Criteria window displays a list of global message criteria records only. To add, edit, and delete global criteria records, you must have the **Manage Global Message Criteria** right in the security application.

Use the buttons described below to create, edit, or delete message criteria sets.

Message Criteria					?	×
А 🔄 💌 В			6	8		P
Filter by:) ă	E Share	⊩ d Crit	G teria	н	1

Figure 4.4.4.1.2.1-A. Message Criteria Window

A: Add new message criteria. After clicking this button, a new blank row appears. Double click on the new row to enter a name for the criteria set (do the same to rename an existing criteria). Customize its properties using the toolbar buttons. Click **Save** when finished.

B: Delete selected message criteria (please note, that there is no delete confirmation).

C: Customize Message Descriptor properties.

Message Descriptor Properties ? *						
🛶 General	MD					
Identity				Version:	VERSION 1	•
Origin	Message Type:			Application	Message Typ	oe:
Reports	DATAGRAM		٠	8		
Groups	Message Format:					
	NONE		•			
	FeedBack:			Application	Feedback Co	ode:
	NONE		*	0		
	Expiry(1/10sec):	Priority:		Persistent	P	ut Date:
	-1	-1		ONo ○N		
				⊙Yes ●As Oueue	P	ut Time:
				ons queue		
	Encoding:	CCSID:		Backout Co	unt:	
	546	0		0		
	Reply to queue:					
	Reply to queue mar	nager:				
						Ok Cancel

Figure 4.4.4.1.2.1-B. Message Descriptor Properties Window

D: MD1 – message descriptor properties. Opens the same windows when the MD option is clicked with the exception of the **Group** tab.

E: MDE – message descriptor extension properties.

Message Descriptor Extension Properties ? *	:
Message Group	
Group Identifier:	
Text only Encoding: US-ASCII •	
00000000 <	
Help: CTRL + C - Copy selected data; CTRL + V - Paste data Message Sequence Number: Message Flags:	
1 0	
Data offset: Original Length:	
0 -1	
Ok Cance	1

Figure 4.4.4.1.2.1-C. Message Descriptor Extension Properties Window

F: DLH – dead letter queue header properties.

Dead Letter Queue Header (DLH)	? ×
Reason:	0
Destination Queue:	
Destination Queue Manager:	
Encoding:	0
CCSID:	0
Message Format:	NONE
Appl. Type:	0
Put Application Name:	
Put Date:	
Put Time:	
	Ok Cancel

Figure 4.4.4.1.2.1-D. DLH – Dead Letter Queue Header Properties

G: XQH – transmission queue header properties.

Transmission Queue Head	er (XQH)	? ×
Remote		
Queue:		
QMGR:		
		Embedded MD
		Ok Cancel

Figure 4.4.4.1.2.1-E. XQH – Transmission Queue Header Properties

Click the **Embedded MD** button to open the *Message Descriptor Properties* window (*Figure* <u>4.4.4.1.2.1-B</u>.).

H: Data – message data criteria.

Message	Data Criteria ? ×
Text only	Encoding: US-ASCII •
00000000 0000000B	(*)
Help: CTRL	+ C - Copy selected data; CTRL + V - Paste data
	Save

Figure 4.4.4.1.2.1-F. Message Data Criteria

I: Message Properties – Ability to search messages based on message properties (including RFH2 header fields). Both key and value must match. When searching multiple properties, all property keys and values must match (&&).

Message Properties Crite	eria	? ×
Name	Value	
usr.MQMD.Correlld	414d5120504648524949!	Remove
		Add
	_	Add
	Save	Cancel

Figure 4.4.4.1.2.1-G. Message Properties Criteria

4.4.4.1.3 Load Messages Tab

The **Load Message** tab, located on both the *User Settings window* and the *Global Settings window*, is shown below and described in *Table 4.4.4.1.3-A*. This tab is used for the configuration of loading messages into a queue from a file.

User Settings		? ×
User Settings	Product:	IBM MQ -
Message Commands	Max loaded messages count:	500
Load Messages	Message Creation:	Create Multiple Messages 🗸
Save Messages	Preserve Context:	Yes 🗸
Color Settings	Message Delimiter:	CrLf 🗸
Attribute Filters	NOTE:	
Display Schemas	 Lf, CrLf, Tab, Ft - standard delimiters. Specify Delimiter String user can define special Specify Start of Message user defined string will message. Specify End of Message user defined string will message. Specify Start and End of Message user defined start and end of the message. MQMD Header Values Default settings: 	II be used as delimiter and kept at the start of I be used as delimiter and kept at the end of the strings will be used as delimiters and kept at the Configure
	Edit global settings	Restore Default Save Changes Cancel

Figure 4.4.4.1.3-A. Load Messages: IBM MQ

User Settings		? ×
User Settings	Product:	Kafka 🔹
Message Commands	Max loaded messages count:	500
Load Messages	Message Creation:	Create Multiple Messages 🗸 🗸
Save Messages	Preserve Context:	Yes 🗸
Color Settings	Message Delimiter:	CrLf 🗸
Attribute Filters Display Schemas	 Message Delimiter: CrLf CrLf, Tab, Ft - standard delimiters. Specify Delimiter String user can define special delimiter. Specify Start of Message user defined string will be used as delimiter and kept at the start of the message. Specify End of Message user defined string will be used as delimiter and kept at the end of the message. Specify Start and End of Message user defined strings will be used as delimiters and kept at the start and end of the message. 	
	Edit global settings	Restore Default Save Changes Cancel

Figure 4.4.3.1.3-B. Load Messages: Kafka, Solace, RabbitMQ, EMS, ACE, and IIB

Table 4.4.4.1.3-A. Load Messages		
Name	Description	
Product	Select the product for which you want to configure Load Messages. Some fields in this dialog will vary by product. The description of a field in this table indicates when a field is product-specific.	
Max loaded messages count	The Max loaded messages count depends on a queue manager's capacity to support a large number of messages.	
	You must set this value at the global settings level (click Edit Global Settings). The user settings field reflects the global setting; it is for display only.	
Message Creation	Specify if you would like a single message created or multiple messages.	
Preserve Context	Specify if you would like the message context preserved.	
Message Delimiter	Select the delimiter used from the Message Delimiter drop- down list. An explanation of the options appears immediately below the drop-down. Please note Ft represents the Form Feed delimiter.	

	Table 4.4.4.1.3-A. Load Messages
Name	Description
MQMD Header Default Values	This setting only applies to the IBM MQ product. Click Configure to view or configure the default Message Descriptor (MD) properties. (Some of these properties are described in the table in <u>Message Descriptor Properties</u> .) If you already have a configuration for message descriptor properties that has been saved through Message Commands (see <u>Message Commands</u> <u>Tab</u>), you can select a saved configuration from the MQMD Header Values list to use as a template (that is, a starting point) for changes to the MQMD header values. You can also make changes to a previously saved message criteria record from here by selecting the record from the MQMD Header Values list, clicking Configure , updating the configuration, and clicking Save Changes , as long as the record is
	not global or shared by another user (shared records in the list are displayed with a green Shared Filter icon . When saved, changes to the selected record become the default settings.
Restore Default button	Restores the default settings.

4.4.4.1.4 Save Messages Tab

The **Save Messages** tab, located on both the *User Settings window* and the *Global Settings window*, is shown below and described in *Table 4.4.4.1.4-A*. Use this tab for the configuration of saving messages into a file from a queue.

Settings window			? ×
User Settings	File Creation:	Write All Messages to Single File	~
Message Commands	Message Headers:	Leave All	~
Load Messages	Message Data:	Full Data	~
Save Messages	Data Offset:	0	
Cipher Specs	Data Size:	64	
Manage users	Message Selection:	By Position	~
	Message Delimiter:	CrLf	~
		Edit global settings Restore Default Save Changes	Cancel

Figure 4.4.4.1.4-A. Save Messages

	Table 4.4.4.1.4-A. Save Messages
Name	Description
File Creation	Select if you would like messages saved to a single file or separate files.
Message Headers	Select either Leave All , Strip All or Strip MD . Please note that the Strip MD setting will strip message descriptors.
Message Data	Select either Full Data to save entire messages or Selected Data to only save a specified amount. The amount to save is specified within the Data Size field.
Data Offset	Enter the starting point of the data.
Data Size	This setting is only required when Selected Data is specified for the Message Data setting. Enter the desired message size to be saved.
Message Selection	Select whether you would like the message selection to be by position or identity. By Identity uses Message ID, Correlation ID, Put Date and Put Time. The disadvantage of using By Identity is that many messages could have the same message identity. Use the By Position option if there are multiple messages with identical message identities. The disadvantage of using this method is that the message position can change within a queue.
Message Delimiter	Select desired message delimiter for the saved messages. Please note Ft represents the Form Feed delimiter.
Restore Default button	Restores the default settings.

4.4.4.1.5 Color Settings Tab

Color coding user interface elements lets you quickly determine characteristics of an object at a glance. Color coding viewlet headers makes it easier for users to identify the product that a viewlet is associated with, or what type of objects it contains. Color coding of viewlet rows by workgroup server quickly shows you which workgroup server an object is from.

4.4.4.1.5.1 Color Coding Viewlet Headers

On the **Color Settings** tab, located on both the *User Settings window* and the Global *Settings* window, color formatting can be applied at the user level or global level. You can specify which colors should represent what objects, giving you the ability to color code viewlet headers by object type. You can configure color settings as follows:

- you can specify one color to represent all viewlets of a product, or
- you can specify multiple colors where each viewlet type is represented by a different color, or

User Settings		? ×
User Settings	VIEWLET WGS 0	CONNECTION
Message Commands Load Messages	Set product or viewlet type colors: *Changing any settings here will activate viewlet co	
Save Messages	 Q IBM MQ Q EMS 	Flat Color:
Color Settings	 Q Kafka 	Flat Color:
Attribute Filters Display Schemas	 ➤ Q IIB ➤ Q ACE 	Flat Color: 🗌 Flat Color: 🗌
	C C Solace	Flat Color:
	➤ ☑ Q Rabbit MQ	Flat Color:
		Reset Color Settings
	Edit global settings Res	tore Default Save Changes Cancel

• you can select a color to represent a single viewlet

Figure 4.4.4.1.5-A. Color Settings

To activate this feature, you will need to enable the **Show Viewlet's Product's Color** setting on the **Users Settings** tab (see section <u>4.4.4.1</u>).

By default, a gradient is used, unless the Flat Color checkbox has been selected. See the following screenshot for an example of a color coded viewlet with a gradient. In this example, the manager viewlets are colored green:



Figure 4.4.4.1.5-B. Green Color Coded Viewlet: Gradient (Default)

When the Flat Color checkbox is selected, the tops of the viewlets have a solid background color. The following screenshot shows an example:



Figure 4.4.4.1.5-C. Green Color Coded Viewlet: Flat Color

To specify one color to represent all viewlets of a product: Check off the product and click on its color button. Select a color from the color picker window. You can also enter the desired color's code in RGB, HSL or Hex format by clicking the arrows [‡] at the bottom of the color picker window to select the format and enter the color codes.

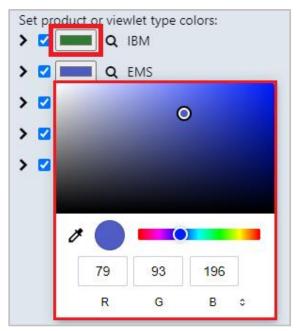
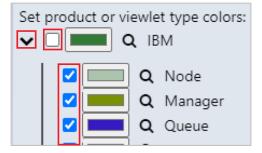


Figure 4.4.4.1.5-D. Select/Enter Color for Objects

To specify different colors to represent each viewlet type of a product: Click the expand button for the desired product to view all viewlet types for that product. Check a viewlet and click on the color button to specify the color for this viewlet type. Unchecked viewlets will follow the product's selected color.





You can preview the selected color by hovering your mouse over the magnifying glass.

Settings window	
User Settings	Set prodict or viewler type colors:
Message Commands	> 🗹 🔳 🔍 IBN
Load Messages	
Save Messages	Xafka
Sure messages	> 🗹 📖 Q IIB
Color Settings	▶ 🗹 💻 Q ACE

Figure 4.4.4.1.5-F. Preview Selected Color

To specify a color for a single viewlet: This is done on *the Create New/Edit Viewlet window* (see <u>*Creating New / Temporary Viewlets*</u>). Color codes specified on this window will override all color code options selected on the settings windows.

Edit IBM MQ Que	? ×	
Product	Viewlet name Workgroup server	
IBM MQ 👻	Queue Viewlet Primary Connection	- (MQM) 👻
Node		
Manager	Node Manager	
Queue	LEUNAME × -	•
Channel	Object name Queue Type	
Process	* Local Queue	•
Торіс		
Listener		
Namelist	✓ Custom Viewlet Color	
Service	Find messages	
Auth info	Project All	
Cluster QMgr		
Subscription	Active attribute filtering	X
Channel auth rec	Attribute filter + x	X
Comm Info		
	Result limit 100000 Search depth 10000)
	Ар	ply changes Cancel

Figure 4.4.4.1.5-G. Set Colors for Individual Viewlets

4.4.4.1.5.2 Color coding workgroup servers

Setup

To see color coding by workgroup server, you must make changes in User Settings and in the viewlet.

- In User Settings (or Global Settings, for all users), make sure you have selected the Show Color For WGS Connection In Viewlet checkbox. You can also choose these other settings:
 - **Turn On Multi-Selection by Default:** When you are editing viewlets, turning this setting on selects the Multi-Selection checkbox by default so that you can select more than one workgroup server.

- **Display Grouping In Connection Selection:** If Workgroup server connection groups have been created, includes connection groups in Workgroup server lists, in addition to individual connections.
- On the Color Settings tab of User Settings, the WGS Connection tab allows you to associate a color with each connection. Click the rectangle to select a unique color. See <u>Figure 4.4.4.1.5.2-A</u>.
- 3. Within an object viewlet, you can choose to show color-coded objects from multiple workgroup server connections by selecting the Multi-Selection checkbox and selecting the individual workgroup servers one at a time. See the <u>Node Viewlet</u> example under <u>Viewing color coding</u>.

User Settings		
User Settings	VIEWLET	WGS CONNECTION
Message Commands	Set WGS Connection colors:	
Load Messages	*Changing any settings here will activate co	onnection color display setting!
Save Messages	Primary Connection - (WGS19)	
Color Settings	WGS11 - (WGS11)	
Attribute Filters		
Display Schemas		

Figure 4.4.4.1.5.2-A. WGS Connection Tab of Color Settings

Viewing color coding

The selected colors are reflected in the Workgroup servers viewlet. See *Figure 4.4.4.1.5.2-B*. *Figure 4.4.4.1.5.2-C* shows a Node viewlet with nodes from two different workgroup servers (Primary Connection and WGS 11).

WorkSpac	ce	KAFKA.D	ASH	×	Œ
	Vorkgroup s	ervers			
- 🕂 .	🚡 📘 Schema:	Defau	lt Workgroups	; -]	📝 Filter by:
×	Connection Name	e	Workgroup N	ame ^	State
	Primary Connectio	n	WGS19		Active
	WGS11		WGS11	_	Active

Figure 4.4.4.1.5.2-B. Color-Coded Workgroup Servers Viewlet

Node_Viewlet_1 Schema: Default Nodes Dir Filter by							
	×	Node Name ^	Hostname	Use DNS			
	5	JAVA_AGENT19	SAMPLE	NO			
	5	JAVA_AGENT11	SAMPLE	NO			
	5	KAFKAAGENT19	SAMPLE	NO			
	5	KAFKAAGENT11	SAMPLE	NO			
	5	REMOTE_QMGRS19	SAMPLE	NO			
	5	REMOTE_QMGRS11	SAMPLE	NO			

Figure 4.4.4.1.5.2-C. Color-Coded Nodes Viewlet

4.4.4.1.6 Attribute Filter Tab

4.4.4.1.6.1 User Settings

Users with the **Manage Private Attribute Filters** right in the security application can view the attribute filters that they have created for filtering individual viewlets on the Attribute Filters tab of User Settings. Filters are organized according to Product and Viewlet Type. To view a filter's details, select it from the list; its details are displayed on the right side of the dialog.

Users with this right can add, copy, edit, and delete their own attribute filters from here. (This tab does not include global attribute filters or filters that other users have shared.)

If you also have the Manage Shared Attribute Filters right, you can share the filters you have created. Attribute filters that you have shared are displayed with a green Shared

Filter icon ⁴. They can be used on viewlets by members of the groups with which you have shared them.

4.4.4.1.6.2 Global Settings

Users with the **Manage Global Attribute Filters** right in the security application can view and manage global attribute filters, which are available to everyone. Click **Edit Global Settings** to access the global Attribute Filters tab. From there, you can add, copy, edit, and delete global attribute filters. For information on adding, copying, sharing, editing, and deleting attribute filters through the *Attribute Filter Management* dialog, see <u>*Attribute Filter*</u>.

Settings Window							? ×
User Settings	Product:		Viewl	et Type:			
Message Commands	IBM MQ	•	Que	eue			-
Load Messages	Filter by:						
Save Messages	Filter Name 🗸			Match AL	L of the follo	wing:	
Color Settings	CurrDepth		Attr	ibute C	peration	Value	
Attribute Filters	Depth		Curr	is	less than	100	
	Q1			imum is	greater nan	1000	
	QueueName		→				
	Add Copy As	Delete Edi	it				
		Edit global settings	Rest	ore Default	Save Chan	iges	Cancel

Figure 4.4.4.1.6.2-A. Settings: Attribute Filters

4.4.4.1.7 Display Schemas Tab

The **Display Schemas** tab located on the *Settings window* is a central location from which you can manage schemas for all products and objects.

- At the User Settings level, you can view, add, copy, edit, and delete your own schemas. These schemas remain private to you unless you share them with one or more groups. (See <u>Schemas</u> for instructions.)
- At the Global Settings level, you can view, add, copy, edit, and delete schemas that are available to all users who log in to the interface.

To view a schema, select the Product and Viewlet Type (Object) for which you want to view schemas. Viewlet schemas are displayed based on your selections. For products that include an Object Sub Type selection, the Object Sub Type *All* shows only schemas that

apply to all Sub Types. Click a Viewlet schema in the list on the left to view its columns in the Schemas object attributes list.

User Settings		? ×
User Settings	Product:	Viewlet Type:
Message Commands	Kafka 💌	Торіс 💌
Load Messages	Viewlet schemas: Kafka2	Schemas object attributes: Workgroup Name Node Name
Save Messages Color Settings	KafkaTopic	Cluster Name Topic Name
Attribute Filters Display Schemas		Total Partitions Preferred Leader Replicas Total Messages
	Add Copy As Edit	Available Messages Consumer Groups Is Internal Last Msg Partition Last Msg Offset Last Msg Timestamp Last Updated
	Edit global settings	s Restore Default Save Changes Cancel

To add a schema, select the Product and Viewlet Type (Object) of the schema you want to add. Then click **Add...**. To copy, edit, or delete a schema, view the schema using the instructions above, then click the appropriate button. See <u>Schemas</u> for more information.

4.4.4.2 Global Settings

This section describes settings that can be configured at the global level only. Global settings can only be modified by administrators (those who have the **Manage Administration** right in the security application). For information on settings that common to both the user and global levels, see <u>User and Global Settings</u>.

4.4.4.2.1 Cipher Specs Tab

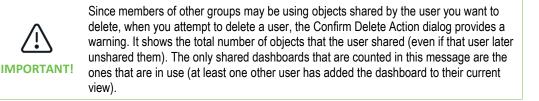
On the **Cipher Specs** tab, located on the *Global Settings* window, administrators can deselect the Cipher specifications that they do not want displayed in the application.

Settings window		?	×
User Settings	Toggle Cipher Specs:		-
Message Commands	✓ NONE		
Load Messages	Z ANY		
Save Messages	ANY_TLS12		
Cipher Specs	ANY_TLS13		
Manage users	ANY_TLS13_OR_HIGHER		
manage users	CUSTOM		
	VULL_MD5		
	✓ NULL_SHA		
	✓ RC4_MD5_EXPORT		
	✓ RC4_MD5_US		
	✓ RC4_SHA_US		
	✓ RC2_MD5_EXPORT		
	✓ DES_SHA_EXPORT		
	RC4_56_SHA_EXPORT1024		
	✓ DES_SHA_EXPORT1024		
	✓ TRIPLE_DES_SHA_US		
	✓ TLS_RSA_WITH_AES_128_CBC_SHA		
	TIS BOA WITH AS DEC COC SHA		•
	Edit global settings Restore Default Save Changes	Cano	el

Figure 4.4.4.2.1-A. Cipher Specs

4.4.4.2.2 Manage Users Tab

- On the **Manage users** tab, located on the *Global Settings* window, administrators can reset a user's settings back to the default settings or delete the user using the buttons provided.
- Deleting a user does not prevent that user from logging in. Instead, it deletes that user's dashboards, attribute filters, and schemas, including those that have been shared. Please see the important note about shared objects below.



Global Settings			?	×
User Settings	ID	Login name	Actions	
Message Commands	2	srodriguez	RESET 🏛 DELETE	
Load Messages	3	Admin	RESET 🛍 DELETE	
Save Messages	4	loadtestera1	RESET 💼 DELETE	
Cipher Specs	5	loadtestera2	🖌 RESET 🛍 DELETE	
Manage Users	6	pleguin	RESET DELETE	
Global Notice	7	dallen	RESET 🛱 DELETE	
Color Settings	8	loadtestera4	RESET DELETE	
SSO Settings	9	loadtestera99	RESET DELETE	
Environment Level	10	npatel	RESET DELETE	
Attribute Filters	11	jsanders	RESET DELETE	
	12	npotluru	RESET DELETE	
	13	rkazlauskas	RESET DELETE	
	14	sburgess	RESET DELETE	
			Edit user settings Save Changes Ca	ancel

Figure 4.4.4.2.2-A. Manage Users

4.4.4.2.3 Global Notice Tab

The global notice feature on the *Global Settings* window allows administrators to add banner messages that display across the top of the application window. For example, a custom banner could be used to announce scheduled maintenance to all users. A user can close a banner message, but it will be displayed again the next time the user logs in. See the example below.

	V	e will be updating the system	during the maintenance v	vindow on Tuesday, Au	gust 15, 2023 from 2:00 a.m. to 4	:00 p.m.		×
<i>i</i> in the second seco							Arnold 🍳 🖼 🗔 User Perspective:	© 0 0 Ţ
WorkSpace MQ.DASH	X JAVA_AGENT	REMOTE MQ	× ZOS.DASH	* ACE	* CEMS.DASH	× KAFKA.DASH	a + + + >	 . Viewlet +
		т .						
Workgroup servers								~



Click the **Edit global settings** button located at the bottom of the *User Settings window*.

Settings window	?	×
User Settings	Refresh interval (sec.) 120	
Message Commands	Show inactive channels	
Load Messages	Show empty queues Show empty Kafka topics	
Save Messages	Show temporary dynamic queues Show full names for favorites shortcuts	
Color Settings	 Show full names for search results objects Show SYSTEM objects Show objects search results from active managers only 	
	Show Objects search results from active managers only	
	Show advanced viewlet filtering Show Viewlet's Product's Color	
	Show log out window	
	Edit global settings Restore Default Save Changes Can	cel

Figure 4.4.4.2.3-A. Edit Global Settings

Go to the **Global Notice** tab and enable the **Display custom notice** option. Enter the desired message within the text box. Please note, the message can have a maximum of 4000 characters.

Global Settings			?	×
User Settings	☑ Display custom notice Notice text:			
Message Commands	Something you want everyone to be aware of			
Load Messages	Something you want everyone to be unare of			
Save Messages				
Cipher Specs				
Manage Users				
Global Notice				
Color Settings				
SSO Settings				
Environment Level				
Attribute Filters				
Dashboard Ownership Management				
	Display license expiry notice Threshold (days):		30	
	Edit user s	settings Save C	Changes Ca	ancel

Figure 4.4.4.2.3-B. Enable Global Notice and Enter Message

Click **Save Changes** when finished. From this point forward, all users will see this message display at the top of their screen.

Administrators can also choose to display a warning banner at the top of the application window when a workgroup server license is approaching its expiration date. Select the **Display license expiry notice** check box, and enter the number of days in advance that you want the banner to be displayed (prior to the expiration date) in the **Threshold (days)** field. When the license of any connected workgroup server is due to expire in less than this number of days, a license expiration notice appears to inform users of the time remaining.

4.4.4.2.4 Single Sign-on (SSO)

If your organization would like to set up Single Sign-on, note the following requirements and guidelines:

- Your organization must choose and set up an identity provider. This is the provider that is responsible for authenticating users for the sign-on process. Examples are Auth0, Okta, and Keycloak.
- The identity provider configuration includes setting up users and assigning them to groups. The groups (which may also be called roles, depending on the identity provider),

are used for role mapping, and ensure that the users are assigned the proper permissions at login.

- A configuration file defines the SSO options that are available on the login page. meshIQ support provides assistance in setting up the configuration file for our customers.
- If applicable, more than one identity provider may be named within a configuration file. meshIQ support will work with you to determine the order in which providers will appear on the login page.
- When the configuration file is complete, it will be placed in the expected location in your system, and the required pointer to it will be updated in Apache Tomcat. Each time a configuration file is updated, Apache Tomcat must be restarted.

The Global Settings SSO tab is for systems that have single sign-on (SSO) configured. Use the SSO tab to preview the connection settings for service providers. If no SSO connections are detected, then this tab will not be filled in.

If SSO is configured, the following configuration settings are displayed on this tab:

- Name
- Description
- Status (Active or Passive)
- Position
- Client Issuer (Client Entity ID)
- Assertion Consumer Service URL
- SSO Issuer (Provider Entity ID)
- IdP (Identity Provider) SSO Service URL
- IdP (Identity Provider) Artifact Resolve URL
- Authentication Request Signed (Active or Passive)
- Artifact Resolve Request Signed (Active or Passive)
- Client Certificate, in JKS or PKS12 format (Type, Key Store File, and Key Alias)
- IdP (Identity Provider) Signing Certificate (X.509 Certificate from IdP metadata)

4.4.4.2.5 Environment Level Tab

On the **Environment Level** tab, located on the Global *Settings* window, administrators can help users identify which environment they are using by adding a label next to the logo, as shown below. You must have the **Manage Environment Level** right to perform the actions described in this section.



Figure 4.4.4.2.5-A. Environment Level Label Example

To turn on the label, select the **Display Environment Level** checkbox on the Environment Level tab.



Figure 4.4.4.2.5-B. Set Environment Level

You can format this label whether or not it is currently turned on. Use the *Environment Level Properties* dialog to define a set of colors for the label for each environment, including text, optional text outline, and background color.

Select the **Environment Level** you want to format from the list, and click **Add** to format its label. Set the **Text Color**, **Text Outline**, **Background Color**, and **Text Size**. **Text Outline** and **Background Color** can be turned on and off using the checkboxes. The Preview area shows changes. Click **Save Changes** to return to the *Set Environment Level* dialog.

To edit a format, click the **Edit** button in its row. The *Environment Level Properties* dialog opens. Make changes and save them. To delete a format, click the **Delete** button in its row.

Environment Level Prop	perties		? ×
Environment Level Text:		Environment Level	
Text Color:			
Text Outline:			
Background Color:			
Text size:			
○ Small	0	lormal	⊖ Big
Preview:			
E	nvironm	ient Level	
		Save Changes	Cancel

Figure 4.4.4.2.5-C. Environment Level Properties

4.4.4.2.6 Dashboard Ownership Management

Dashboard Ownership Management is located on the *Global Settings* window. This feature is intended to manage the dashboards of inactive users before the users' accounts are deleted. Administrators can use it to change the ownership of an inactive user's dashboard, assigning it to a different user. Dashboard Ownership Management provides access to any dashboard in the system. You can view all dashboards by clicking **Search**.

To search for specific dashboards, use the filter on the Dashboard Ownership Management tab (see *Figure 4.4.4.2.6-A*). You can search by the **Owner** of the dashboard, by its **Title**, or **All** (both **Owner** and **Title**). Searches are case-sensitive.

For shared dashboards, the Permissions column shows the groups that have been granted permissions for the dashboard. When the ownership of a dashboard changes, its permissions are carried through to the new owner. In the Permissions column, the following codes are used:

- The "(rw)" code means that the group has both read and write permission for that dashboard. This is equivalent to both read and write icons being selected:
- The "(r)" code means that the group has read only permission for that dashboard.
 This is equivalent to the read icon being selected:
 Image: Image:

To change dashboard ownership, select one or more dashboards that you want to change the owner of. Click **Change Owner** to open the *Change Dashboard Owner* dialog.

Search for a new Owner by entering part or all of the new Owner's name in the search field and clicking **Search**. Click the **Set Owner** button that corresponds to the Owner you want to assign to the dashboard. Read the warning message that is displayed carefully (see *Figure 4.4.4.2.6-B*). Click **Yes** to continue applying changes.



If the changes you have made apply to your own account, you must log out and log in again for them to take effect.

Global Settings			?	×
User Settings	Dashboards:	All 👻 Kafka	Searc	h
Message Commands	■ Title ,	Owner	Permissions	
Load Messages	C Kafka	Admin	Operators (r) Developers (rw) Administrators (rw	I)
Save Messages	🗆 KafkaDash	sdilg		
Cipher Specs				
Manage Users				
Global Notice				
Color Settings				
SSO Settings				
Environment Level				
Attribute Filters				
Dashboard Ownership Management				
	🖋 Change Owner			
			Edit user settings Save Changes Canc	el

Figure 4.4.4.2.6-A. Dashboard Ownership Management

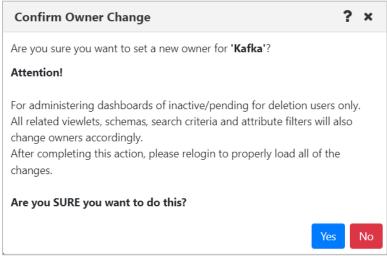


Figure 4.4.4.2.6-B. Confirm Owner Change dialog

4.4.4.2.7 User Object Ownership Management

The User Object Ownership Management feature, located on the *Global Settings* window, is intended to manage the attribute filters, display schemas, and message criteria of inactive users before the users' accounts are deleted. For example, administrators can use it to change the ownership of an inactive user's message criteria record, assigning it to a different user. User Object Ownership Management provides access to any object in the system.

The management of user objects is governed by the Manage Global Attribute Filters, Manage Global Display Schemas, Manage Global Message Criteria, Manage Shared Attribute Filters, Manage Shared Display Schemas, Manage Shared Message Criteria, Manage Private Attribute Filters, Manage Private Display Schemas and Manage Private Message Criteria rights. See Navigator GUI Feature Rights in the *meshIQ Secure User Guide* for details.

To change the owner of a user object, click the User Settings icon **Settings**, then click **Edit global settings**. Select the *User Object Ownership Management* vertical tab. Three horizontal tabs are displayed: *Attribute Filters*, *Display Schema*, and *Message Criteria*. Select the one that corresponds to the object that you want to change the owner of.

Search for objects using the following steps:

- **Attribute Filters:** Select the Product and Viewlet Type of the attribute filter you want to change the ownership of. Use the Filter list to choose a method to further narrow down results (by the attribute filter's Owner, Title, or All [either Owner or Title]). Enter a search value.
- **Display Schema:** Select the Product and Viewlet Type of the schema you want to change the ownership of. For products that include an Object Sub Type selection, the Object Sub Type *All* shows only schemas that apply to all Sub Types. Use the Filter list to choose a method to further narrow down

results (by the schema's Owner, Title, or All [either Owner or Title]). Enter a search value.

• **Message Criteria:** You can view all message criteria records by clicking **Search**. Or use the Filter list to choose a method to further narrow down results (by the message criteria record's Owner, Title, or All [either Owner or Title]). Enter a search value.

Click **Search** to retrieve a list of results (see *Figure 4.4.4.2.7-A*).

You can view object details by clicking anywhere on the blue bar with the left arrow **C**. (See

Figure 4.4.4.2.7-B.) Click the right arrow to collapse details again.

Select one or more objects that you want to change the owner of. Click **Change Owner** to open the *Change User Object Ownership* dialog (see *Figure 4.4.4.2.7-C*).

Enter part or all of the new Owner's name in the search filter and click **Search**. Click the **Set Owner** button that corresponds to the Owner you want to assign to the object.

Read the warning message carefully. If you are sure you want to continue applying changes, click **Yes** to update the Owner Name for the object. Otherwise, click **No**.



If the changes you have made apply to your own account, you must log out and log in again for them to take effect.

ATTRIBUTE FILTERS	DISPLAY SCHEMA	MESSAGE CRITERIA
Product:	Viewlet Typ	e:
IBM MQ	▼ Queue	Ψ
Filter: Title 💌 name		Search
📮 Object Name 🗸	Owner Na	me
manager name	Arnold	
Queue name	Arnold	<
Change Owner		



•	Object Name 🗸	Owner Name		Match	ALL of the fol	lowing:
	manager name	Arnold		Attribute	Operation	Value
	queue name	Arnold	>	Queue Name	starts with	SSH

Figure 4.4.4.2.7-B. View Object Details

Change User Object Ownership	×
Owner:	Search
Object Name 🗸	Actions
Admin	✤ Set Owner
Arnold	♥ Set Owner
Barry	* Set Owner
Ben	7 Set Owner
Robert	* Set Owner
Close	

Figure 4.4.4.2.7-C. Set New Object Owner

4.4.5 Request History

Clicking the **Request History** button **History** displays all running and completed tasks.

	Max entries: 50	00 Refresh	Clean		Show: 🗹 Fa	ailed 🗹 Running 🗹 Complete
Origin	Request /dashboardOwnership/owners	Started 9/15/2022 2:30:36 PM	Ended 9/15/2022 2:30:37 PM	Time spent	Status	Message
	/dashboardOwnership/owners	9/15/2022 2:30:24 PM	9/15/2022 2:30:26 PM	00:00:02.614	Completed	
Queues Messages Verification / Local Queue	Get viewlet data	9/15/2022 2:29:00 PM	9/15/2022 2:29:03 PM	00:00:03.055	 Completed 	
	/dashboardOwnership/dashboards	9/15/2022 2:28:16 PM	9/15/2022 2:28:19 PM	00:00:02.440	 Completed 	
	Get message command settings	9/15/2022 2:27:30 PM	9/15/2022 2:27:31 PM	00:00:00.636	 Completed 	
	/filter/forType	9/15/2022 2:27:30 PM	9/15/2022 2:27:31 PM	00:00:00.653	 Completed 	
	/user/globalUserSettings	9/15/2022 2:27:29 PM	9/15/2022 2:27:30 PM	00:00:00.715	 Completed 	
	/users/management/usersList	9/15/2022 2:27:27 PM	9/15/2022 2:27:28 PM	00:00:01.559	 Completed 	
	Get available Cipher specifications	9/15/2022 2:27:27 PM	9/15/2022 2:27:28 PM	00:00:01.340	 Completed 	
	/envLevel/management/list	9/15/2022 2:27:27 PM	9/15/2022 2:27:28 PM	00:00:01.319	Completed	
	/filter/forType	9/15/2022 2:27:27 PM	9/15/2022 2:27:28 PM	00:00:01.350	 Completed 	
	Create shared dashboard	9/15/2022 2:26:56 PM	9/15/2022 2:26:57 PM	00:00:00.712	 Completed 	
Queues Messages Verification / Local Queue	Get viewlet data	9/15/2022 2:26:31 PM	9/15/2022 2:26:42 PM	00:00:11.632	 Completed 	
WorkSpace / MQM Node Viewlet (Primary Con	Get viewlet data	9/15/2022 2:22:40 PM	9/15/2022 2:22:52 PM	00:00:12.092	 Completed 	
	Renew connection token	9/15/2022 2:21:19 PM	9/15/2022 2:21:20 PM	00:00:01.407	 Completed 	
	/dashboardOwnership/dashboards	9/15/2022 2:19:51 PM	9/15/2022 2:19:53 PM	00:00:01.397	 Completed 	
Total: 262 Visible: 262						



Several options are available to handle the data displayed:

- Use the **Failed**, **Running** and **Completed** options to filter the history.
- Click the **Clean** button to clear all completed historical requests. Only the requests with a status of *Running* will be displayed.
- To export Request History data to a .csv file to facilitate troubleshooting efforts or investigate performance issues, click the **Save Table As CSV** button (identified by a red border in the screen shot below).

Request History				
	Max entries: 50	0 Refresh	Clean	
Origin	Request	Started	Ended 9/15/2022 2:30:37 PM	Ti
	/dashboardOwnership/owners	9/15/2022 2:30:24 PM	9/15/2022 2:30:26 PM	00
Queues Messages Verification / Local Queue	Get viewlet data	9/15/2022 2:29:00 PM	9/15/2022 2:29:03 PM	00
	/dashboardOwnership/dashboards	9/15/2022 2:28:16 PM	9/15/2022 2:28:19 PM	00
	Get message command settings	9/15/2022 2:27:30 PM	9/15/2022 2:27:31 PM	00

Figure 4.4.5-B. Save Table As CSV Button

4.5 Updating the Configuration File

Some settings are stored in a configuration file rather than on dialogs in the user interface. This section describes two of these settings: the length of time for which user tokens are valid, and the ability to cache key database queries to improve the performance of your system. Both of these configuration settings have default values, but these values can be changed. See the sections immediately below for more information.

4.5.1 Renewing Workgroup Server Tokens

After being inactive for 30 minutes (the default time period) the user will need to renew the workgroup server token. The below warning pop-up notification will appear, and the *Renew Token* dialog box will be displayed (*Figure 4.4.1-A*). Enter the workgroup server's password and click **Renew Token** to continue the session.



Figure 4.5.1-A. Could Not Connect to WGS

Changing the Token Validation Time Period

Open the **navigator.cfg** file located in:

<tomcat_dir>\webapps\navigator-server\WEB-INF\classes

Edit the tokenLongevity value to your desired time period, in minutes.

🥘 navigator.cfg - Notepad				_		×
File Edit Format View Help						
[main]						^
<pre>;How long each generated to ;Default is 30. tokenLongevity=30 ;Database query cache. ;Only some queries are cach ;1 - use cache, 0 - always ;Default is 1. useCache=1</pre>	ned.					~
<						>
	Ln 1, Col 1	100%	Windows (CRLF)	UTF-	8	

Figure 4.5.1-B. Navigator.cfg - tokenLongevity Value

4.5.2 Caching Key Database Queries

To improve system performance, by default a limited set of database queries are stored within the cache instead of being obtained from the database. These queries capture key information, such as the items listed below:

- User ID
- Global user timeout settings
- User settings

This cached information will expire 90 minutes after the end of your most recent session. After it has expired, values will be obtained from the database.



When key database queries are cached, user permissions are also cached for the current session only. The permissions cache is then reset each time a user logs on. During a session, if that user's permission to perform an action is removed in the security application, and the action requires workgroup server involvement, then the user will not be able to complete the action.

Please keep in mind that, with the exception of user permissions, neither logging in nor logging out of the application has an immediate effect on this cached data. The cached information that is not related to permissions is only considered "expired" when one of the following takes place:

- The 90-minute lifespan of the cache instance (beyond the most recent user session) has elapsed.
- The application or server is restarted.

Changing the Database Query Cache Setting

As stated above, by default this setting is "on" (key queries are cached). If you would like to obtain this queried information from the database instead of from the cache, you can change this setting.

Open the **navigator.cfg** file located in:

<tomcat_dir>\webapps\navigator-server\WEB-INF\classes

Edit the useCache value to your desired setting: 0 (obtain values from the database) or 1 (used cached values).

🥘 navigator.cfg - Notepad				_	×
File Edit Format View Help					
[main]					^
;How long each generated to ;Default is 30. tokenLongevity=30	oken is valid, in	minute	s.		
;Database query cache. ;Only some queries are cach ;1 - use cache, 0 - always :Default is 1. useCache=1		he data	abase.		~
<					>
	Ln 1, Col 1	100%	Windows (CRLF)	UTF-8	

Figure 4.5.2-A. Navigator.cfg – useCache Value

4.6 Scheduling

When you schedule actions for objects, those actions can automatically take place at a later time, such as during a change or testing window.

Actions you can schedule include creating, deleting, modifying, starting or stopping objects. Message actions such as loading messages to a file or clearing a queue can also be scheduled.



Before you can schedule actions, your workgroup server must have the Job Scheduler Expert. Please see the Resource Center article <u>How do I install the Job Scheduler Expert</u> for requirements and setup instructions.

4.6.1 Viewing an Object's Scheduled Jobs

There is a clock icon next to the name of each object. The color represents the status of the object's scheduled jobs.

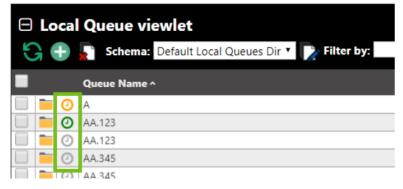


Figure 4.6.1-A. Schedule Icons

- Ino scheduled items found
- O all scheduled items found are complete
- 🥑 scheduled items are present, and none are pending
- Output: Provide the some pending authorization
- 🕑 some scheduled items failed

To view an object's scheduled jobs, click on its clock icon. A window similar to the following screenshot opens, displaying the object's past and future jobs.

Schedules for: N	IQM//NAME//O	A//ABCD			? ×
G			Search for tag	Columns	Approve All
Object name	Username	Scheduled Pcf Command	Status	Tags	Date ~
ABCD	ADMIN	EXCMD_CHANGE_Q_EX	🛛 Ready	Put allow	2023-07-08 02:00

Figure 4.6.1-B. Schedule for an Object

The **Status** field displays the status of the job; potential statuses include Pending, Ready, Retrying, Cancelled, Success, or Failure. The **Tags** field displays the tag (job name) that you specified when the job was created.

4.6.2 Scheduling a Job

Select an object to open its pop-up menu and select the desired action you want to schedule. In the example below, the Start all WMQ objects action is going to be scheduled for two queue managers.

🗹 Compare		QUEMGE
Compare Managers		QUEMGI
Show Topology		QUEMGE
Commands	>	Start all WMQ objects
Properties		Stop all WMQ objects
MQSC	>	Ping
Delete		Connections(modal)
Delete from database		Connections(console)

Figure 4.6.2-A. Action to Schedule

On the action window, click the green **Schedule** button.

Manager	Node	Workgroup
QMNEW	QUEMGR	MQM
QA	QUEMGR	MQM
✓ Start channe □ Start an insta	ls ance of a multi-instance	queue manager

Figure 4.6.2-B. Schedule Button

The *Scheduler* window opens. Enter the date and time. Specify a name for the scheduled job in the **Tag for scheduled job** field. Click **Ok**. The action is now scheduled.

Scheduler						? ×
Schedule action for date:				~		
2023-07-11		03]:[00		
		*		•		
Tag for scheduled job:						
StartWMQ	Q					
					Ok	Cancel

Figure 4.6.2-C. Scheduler Date, Time, and Tag

The object's clock icon will now appear yellow, signifying that the object has a job scheduled but that it has not yet been approved. See the following section for more information.

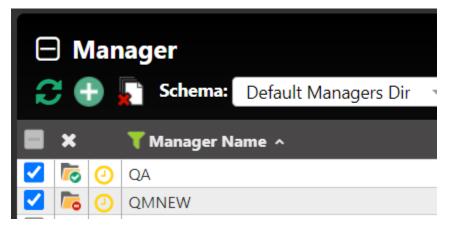


Figure 4.6.2-D. Pending approval

4.6.3 Approving Scheduled Jobs

You must have the **Approve Scheduled Job** right to perform the actions below.

15. To view all scheduled jobs for all objects, click the clock icon icon from the toolbar at the top right of the screen. Jobs that are pending approval show a status of Pending and

re listed with	an Approv	e button.			
Schedules					? ×
G			Search for tag	Columns	Approve All
Object name	Username	Scheduled Pcf Command	Status	Tags	Date ~
QMNEW	ADMIN	EXCMD_START_Q_MGR	O Pending Approve	StartWMQ	2023-07-11 03:00
QA	ADMIN	EXCMD_START_Q_MGR	O Pending Approve	StartWMQ	2023-07-11 03:00
ABCD	ADMIN	EXCMD_CHANGE_Q_EX	O Pending Approve	Put allow	2023-07-08 02:00

- 16. Choose one of the following:
- To approve a single job, click the Approve button that corresponds to that job. A Job Approval Action message is displayed.

Click **Yes** to confirm the approval. The job Status is updated to Ready.

Schedules					? ×
6			Search for tag	Columns	Approve All
Object name	Username	Scheduled Pcf Command	Status	Tags	Date ~
QMNEW	ADMIN	EXCMD_START_Q_MGR	🛛 Ready	StartWMQ	2023-07-11 03:00
QA	ADMIN	EXCMD_START_Q_MGR	O Pending Approve	StartWMQ	2023-07-11 03:00
ABCD	ADMIN	EXCMD_CHANGE_Q_EX	O Pending Approve	Put allow	2023-07-08 02:00

• To approve all Pending or Retrying jobs, click Approve All in the upper right corner of the dialog. A Job Approval Action message is displayed.

Click **Yes** to confirm the approval. The job statuses for all jobs are updated to Ready.

Schedules					? ×
G			Search for tag	Columns	Approve All
Object name	Username	Scheduled Pcf Command	Status	Tags	Date ~
QMNEW	ADMIN	EXCMD_START_Q_MGR	🛛 Ready	StartWMQ	2023-07-11 03:00
QA	ADMIN	EXCMD_START_Q_MGR	🛛 Ready	StartWMQ	2023-07-11 03:00
ABCD	ADMIN	EXCMD CHANGE Q EX	Ready	Put allow	2023-07-08 02:00

The clock icons for the ready jobs are now green.

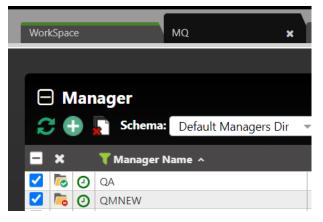


Figure 4.6.3-A. Manager with Approved Scheduled Task

4.6.4 Viewing All Scheduled Jobs

All past and future scheduled actions can be found by clicking the clock icon O from the toolbar at the top right of the screen (*Figure 4.4-A*).

The **Schedules** window opens.

Schedules					? :
G			Search for tag	Columns	Approve Al
Object name	Username	Scheduled Pcf Command	Status	Tags	Date ~
ABCD	ADMIN	EXCMD_CHANGE_Q_EX	O Pending Approve	Put allow	2023-07-08 02:00
LEUNAME	SGILL	MQCMD_ESCAPE	! Failure		2023-06-13 10:56
SYSTEM.CHANNEL.SYNC	ADMIN	EXCMD_MG_COPY	! Failure		2023-06-12 14:31
AB.MQ.Q.01	ADMIN	EXCMD_CHANGE_Q_EX	! Failure		2023-06-12 14:27
LEUNAME	SGILL	MQCMD_ESCAPE	✓ Success		2023-03-03 15:15
ABCEM	ADMIN	EXCMD_MG_NEW	! Failure		2023-03-03 09:16
ABCTest	AMANDOW	MQCMD_CHANGE_Q	✓ Success	change description	2023-03-01 14:34
ABCTest	AMANDOW	EXCMD_MG_NEW	✓ Success	put new msg	2023-03-01 11:59
ABCTest	AMANDOW	EXCMD_MG_NEW	! Failure	<u>put new msg</u>	2023-03-01 11:00
ABCTest	AMANDOW	EXCMD_MG_NEW	✓ Success	put new msg	2023-03-01 10:58
ABCTest	AMANDOW	EXCMD_MG_NEW	✓ Success	<u>put new msg</u>	2023-03-01 10:55
AB.MQ.Q.02Copy	ADMIN	EXCMD_MG_NEW	✓ Success		2023-01-10 07:21

Figure 4.6.4-A. Schedules List

If you have scheduled a command but it does not appear in the list, click the **Refresh** button ^S to reload the screen.

You can choose which columns to display on this dialog by clicking **Columns**. See <u>Choosing</u> <u>Scheduler Columns</u>.

Use the **Search** field to quickly filter and locate a scheduled task by entering its tag name and clicking the **Search for tag** button.

Schedules					? >
G put			Search for ta	g Columns	Approve All
Object name	Username	Scheduled Pcf Command	Status	Tags	Date ~
ABCD	ADMIN	EXCMD_CHANGE_Q_EX	👁 Ready	Put allow	2023-07-08 02:00
ABCTest	AMANDOW	EXCMD_MG_NEW	✓ Success	put new msg	2023-03-01 11:59
ABCTest	AMANDOW	EXCMD_MG_NEW	! Failure	put new msg	2023-03-01 11:00
ABCTest	AMANDOW	EXCMD_MG_NEW	✓ Success	put new msg	2023-03-01 10:58
ABCTest	AMANDOW	EXCMD_MG_NEW	✓ Success	put new msg	2023-03-01 10:55

Figure 4.6.4-B. Search for Scheduled Jobs

Select a scheduled job to open the *Scheduled job info* screen where all of the job's details are displayed.

Scheduled Job Info	? ×
Job Id:	5a5cd156-1787-11ee-a3b7-066cbf238f1a
Pcf Command:	EXCMD_START_Q_MGR
Status:	♥ Ready
Date:	2023-07-11 03:00
Workgroup Name:	MQM
Node Name:	QUEMGR
Manager Name:	QA
Start Channels:	YES
Reason Code:	INFO: Command completed successfully
User ID:	ADMIN
Response Text:	
Job Approval Required:	YES
Job Approved on:	2023-06-30 17:03:58
Job Approved by:	ADMIN
EMS Server URL:	
Scheduled Job Tag:	StartWMQ
	Cancel Schedule Close

Figure 4.6.4-C. Scheduled Action Details

In version 11, scheduled job details (EXCMD_INQUIRE_JOB) also return EXCA_RESPONSE_TEXT. Response Text will only have a value if the scheduled request was an Escape command.



The amount of data displayed in the Response Text row is limited to 2 KB.

User ID:	MNOUVEAU
Response Text:	AMQ8408I: Display Queue Manager details.QMNAME(NAME)ACCTCONO(DISABLED)ACCTINT(1800)ACCTMQI(OFF)ACCTQ(OFF)ACTIVREC(MSG)
Job Approval Required:	YES
Job Approved on:	2023-03-03 15:03:26

Figure 4.6.4-D. Response Text Details

You can then click the Response Text details to expand the row to include the full response.

4.6.5 Cancelling a Scheduled Job

Scheduled jobs can be cancelled from the *Scheduled job info* screen displayed above. Click the blue **Cancel Schedule** button at the bottom of the screen to cancel the job.

4.6.5.1 Choosing Scheduler Columns

To choose which columns you want to include on the table of scheduled jobs on the Schedules dialog, click **Columns** at the top of the dialog. Select the checkboxes of the columns you want to display, and clear the checkboxes of the columns you do not want to display. Click **OK**.

Scheduler Displayed Colum ? ×					
•	Column				
	bl dol				
	Job Status				
	Date				
	PCF Command				
	Object name				
	Manager				
	Reason				
	Username				
	Job Tag				
	Approved By				
	EMS Server URI				
	Ok Cancel				

Figure 4.6.5.1-A. Selected Scheduler Window Columns

4.7 Create Objects

There are two methods to create objects which are discussed in the below sections. For information on creating nodes, remote queue managers and remote EMS managers, see sections <u>4.2.2.1.1</u>, <u>Create a Node</u>, <u>4.2.2.1.2</u>, <u>Create Remote Queue Managers</u> and <u>4.2.2.1.3</u>, <u>Create Remote EMS Manager</u>.

Method #1

Select the **Create** option from an object's pop-up menu. Objects created in this manner will automatically take on the path of the selected object. The dialog windows that will appear are described in sections 4.7.1 - 4.7.5 below.

Method #2

Click the **Add** button within an object's viewlet. The *Select object path* window opens allowing you to fully customize the path of the new object.

Select the workgroup server, node, and queue manager to create a specific path for the new object. Use the drop-down menus to select your options, or type your entries into the fields. Leave an asterisk to create a new object in every node and queue manager of the selected WGS.

Select object path	ı		?
Workgroup server:	MQM - 1	• Node:	× •
Queue manager:	×	v	
			Select path Cancel

Figure 4.7-A. Select Object Path

Multiple nodes and queue managers can be selected at a time; a new object will be created in each selection. Remove unwanted items by simply clicking the **X** icon immediately to the left of an item's name or clear an entire field by clicking the **X** icon on the right side of the field.

Click **Select path** to save. The following sections discuss the dialog windows that appear for each object.

t object path	1			3
Workgroup server:	MQM - 1	• Node:	× SLB19 × EIVYDAS	X *
Queue manager:	× T1	× •		
	× T1	× ¥	Select path	Car

Figure 4.7-B. Select Object Path – Multiple

4.7.1 Create Process

In a Process viewlet, after clicking the **Add** button **b** or selecting **Create Process** from the pop-up menu, the following window appears to customize the properties of the new process being created.

Populate the fields on the **General** and **Extended** tabs. Click **Ok** when finished to create the process.

Process Create Window			?
🛶 General	Process name:		
Extended	SYSTEM.DEFAULT.PROCESS		
	Description:		
	Application ID:		
	Application Type:	User Application Type:	
	WINDOWS NT	11	
	Command Scope:	QSG Disposition:	
		Queue Manager	Ŧ
		Ok Ca	incel

Figure 4.7.1-A. Process Create Window

4.7.2 Create Queue Manager

From a Queue Manager viewlet, select **Create Queue Manager** from the pop-up menu to open the *Queue Create Window*. Enter the new queue manager name (required) and populate other needed details. Enable the **Make this default queue manager** checkbox if you would like it to be the default queue manager the applications connect to when there is no queue manager specified. Click **Next** and update options on the proceeding windows as needed.

Queue manager Create Window	? ×
Queue Manager name:	
	×
Default Transmission queue:	
Default Dead Letter queue:	
SYSTEM.DEAD.LETTER.QUEUE	
Description:	
Make this default que the second s	ieue manager
← Back Next → Finish	Cancel

Figure 4.7.2-A. Create Queue Manager Window

Queue manager Create Window	?	×
Queue Manager name:		
naujas_QMgr		
Trigger interval:		
999999999		
Maximum Handle limit:		
256		
Maximum Uncommitted messages:		
10000		
Application Group (UNIX only):		
← Back Next → Finish	Cance	I

Figure 4.7.2-B. Create Queue Manager Window

Queue manager Create Window		?	×
Queue Manager name:			
naujas_QMgr			
Log Path:			
Logging Type:	Circular		•
Log File size: (x 4KB)	4096		
Log Primary files: (No.)	3		
Log Secondary files: (No.)	2		
← Back Next →	Finish	Cance	el

Figure 4.7.2-C. Create Queue Manager Window

Queue manager Create Window
Queue Manager name:
naujas_QMgr
Channel Disposition:
 Automatic Startup Automatic Startup, Permitting Multiple Instances Interactive Startup (Manual) Service Startup
Data Path:

Figure 4.7.2-D. Create Queue Manager Window

On the last screen, click **Finish**. The new queue manager is now created.

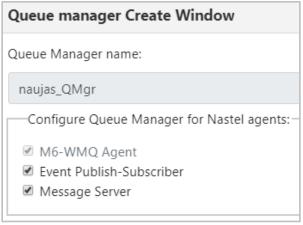


Figure 4.7.2-E. Create Queue Manager Window

4.7.3 Create Kafka Topic

You can create a Kafka topic from a topic viewlet in one of two ways:

- Select Create Topic from the action menu (when a topic is selected in a Topic viewlet)..
- Click the Add ⁺ button.

If you click the Add the button, the Select object path window opens. Specify the Workgroup server, Node, and Cluster and click Select path to open the Kafka Topic Create window. See Figure 4.7.3-A below. Fill in Topic Name. The Configuration tab is empty during the create process but is filled in and can be edited when the topic has been created. Click **OK** to create the topic.

To edit a topic, Select the checkbox for the topic and select **Properties...** from the action menu. On the Configuration tab, use the Configuration Entry (Filter by key) and Value (Filter by value) filters to find the configuration entry you want to update. Make your changes by replacing the existing values with new values. (See Figure 4.7.3-C below.) Click **OK** to save your changes.

Kafka Topic Create Wind	low		? ×
🛶 General	Topic Name:		
Configuration	KafkaTopic1		
Custom Attributes	Partition Count:	Replication Factor:	
	1	1	
		Ok Sche	dule Cancel

Figure 4.7.3-A. Create Kafka Topic

afka Topic Properties						
🛶 General	Topic Name:	Is Internal:				
Configuration	jkreq-to-sub-grid					
Custom Attributes	Partition Count:	Replication Factor:				
	16	1				
	Preferred Leader Replicas:	Replicas not in sync:				
	16	0				
	Consumer Groups:	Consumer Groups:				
	0					
	Compression Type:	Minimum In-sync Replicas:				
	producer	1				
	Cleanup Policy:	Bytes per Segment:				
	delete	524288000				
	Retention (ms):	Max Message Size (bytes):				
	3600000	10485760				
	Unclean Leader Election:	Retention (bytes):				
	false	-1				

Figure 4.7.3-B. Edit Kafka Topic

Kafka Topic Properties		? ×
General	Configuration Entry	Value
🔶 Configuration	Filter by key	Filter by value
Custom Attributes	compression.type	producer
	Sensitive: 📃 Default: 🗹 Custom: 🗌 S	ource: DEFAULT_CONFIG
	leader.replication.throttled.replicas	
	Sensitive: 🗌 Default: 🗹 Custom: 🗌 S	ource: DEFAULT_CONFIG
	message.downconversion.enable	true
	Sensitive: 🗌 Default: 🗹 Custom: 🗌 S	ource: DEFAULT_CONFIG
	min.insync.replicas	1
	Sensitive: 🗌 Default: 🗹 Custom: 🗌 S	ource: DEFAULT_CONFIG
	segment.jitter.ms	0
	Sensitive: 🔲 Default: 🗹 Custom: 🗌 S	ource: DEFAULT_CONFIG
	cleanup.policy	delete
	Sensitive: 🔲 Default: 🗹 Custom: 🗌 S	ource: DEFAULT_CONFIG
	flush.ms	9223372036854775807
	Sensitive: 🗌 Default: 🗹 Custom: 🗌 S	ource: DEFAULT_CONFIG
	follower.replication.throttled.replicas	
		Ok Schedule Cancel

Figure 4.7.3-C. Edit Kafka Configurations

4.7.4 Create Topic

For information on the properties which can be modified when creating a topic, please see the online IBM documentation:

https://www.ibm.com/support/knowledgecenter/en/SSFKSJ_7.5.0/com.ibm.mq.ref.adm.doc/q087 060_.htm

See <u>*Custom Attributes*</u> for information on adding custom attributes to a topic (done on the **Custom Attributes** tab).

Topic Create Window				?	×
🛶 General	Topic name:				
Distributed	SYSTEM.DEFAULT.TOPIC				J
Publish/Subscribe	Description:				
Cluster					
Custom Attributes	Topic String (must be unique):				
				()	
	Field is required)
	Publish:		Subscribe:		
	As Parent	~	As Parent	~	
	Durable Subscriptions:		Default Priority:		
	As Parent	~	As Parent	~	
	Default Persistence:		Default Put Response Type:		
	Non Persistent	~	As Parent	~	
	Model Durable Queue:				
				× •	
	Model Non-durable Queue:				
				× •	
	Non-persistent Msg Delivery:		Persistent Msg Delivery:		
	As Parent	~	As Parent	~	
	Wildcard Operation:				
	Passthrough	~			
	Communication Information:		Replace existing definition		
			Ok Schedule	Canc	el

Figure 4.7.3-A. Topic Create Window

4.7.5 Create Queue

From a Queue viewlet, select **Create Queue** or **Create EMS Queue** from the queue's action menu or click the **Add** button.

Specify a Path for the New Queue

If the **Add** button was clicked, the *Select object path* window will open. Specify the workgroup server, node, queue manager (leave the asterisk to create a new queue in all of the workgroup server nodes and queue managers) and object subtype (*local, model, alias, remote* and *cluster* queues can be created). Click **Select path** to open the *Queue Create* window and move on to the next section.

Select object path	ı			? ×
Workgroup server:	MQM - 0	• Node:	×	•
Queue manager:	*	▼ Objec subty	Local Queue	¥
			Select path	Cancel

Figure 4.7.4-A Create Queue – Select Object Path

Specify Queue Properties

When the *Queue Create Window (Figure 4.7.4-B)* or *EMS Queue Create Window (Figure 4.7.4-C)* opens, enter a queue name (required), and specify all desired options. Please see section <u>4.3.4.2</u>, *Queue Properties*, for more information on the queue properties in the *Queue Create Window*.

See <u>*Custom Attributes*</u> for information on adding custom attributes to a queue (done on the **Custom Attributes** tab).

Queue Create Window				? ×
🛶 General	Queue Name:			
Extended				×
Cluster Triggering	Field is required Description:			
Events Storage	Queue Usage: Normal	~	Scope: Queue Manager	~
Monitoring Statistics Custom Attributes	Default Bind: On Open	~	Default Persistance: Non Persistent	~
	Put Messages:		Get Messages:	
	Allowed	~	Allowed	~
	Custom:			
	Default Priority			
	0		Force Changes	
			Ok Schedule	Cancel

Figure 4.7.4-B. Queue Create Window

EMS Queue Create Window	N			? ×	:
🛶 General	Queue Name:				
Custom Attributes				0	
	Field is required				
	Definition Type:		GET Consumer Count:		
		~	0		
	From Queue Name:		Receiver Count:		
			0		
	Consumer Count:		To Queue Name:		
	0				
	Flow Control Max. Bytes:		Delivered Messages Count:		
	0		0		
	In Transit Message Count:		Expiry Override:		
	0		0		
	Maximum Redelivery:		Maximum Messages:		
	0		0		
	Pending Msg. Size:		Overflow Policy:		
	0		Default	~	
	Pending Persist. Msg. Size:		Pending Persist. Msg. Count:		
	0		0		
	Redelivery Delay:		Reroute Name:		
	Enabled				
	0				
	Store Name:		Prefetch Count:		
			0		
	Max. Bytes:		Pending Msg. Count:		
	0		0		
	Message Trace:				
	None	~			
	Exclusive		Fail-safe		
	Global Routed		Route Connected Secure		
	Sender Name		Sender Name Enforced		
			Ok Schedule	Cancel	

Figure 4.7.4-C. EMS Queue Create Window



If your newly created queue does not appear in a viewlet even after refreshing it, check if the **Show** empty queues option is selected in the User/Global Settings window > User Settings tab (<u>4.4.1.1</u>).

4.7.6 Create Listener

From a Listener viewlet, select **Create Listener** from the pop-up menu or click the **Add** button. The following window appears. Specify the properties of the new listener and click **Ok**.

Listener Create Window					?
🔶 General	Listener name:				
Extended	SYSTEM.DEFAULT.LISTENE	R.TCP			
	Description:		Start Mode:		
	ТСР	•	MANUAL		T
				Ok	Cancel

Figure 4.7.5-A. Listener Create Window

4.7.7 Create Subscription

From a Subscription viewlet, select **Create Subscription** from the pop-up menu or click the **Add** button. The following window appears. Specify the properties of the new subscription and click **Ok**.

ubscription Create	Window		•
🛶 General	Subscription name:		
Extended	SYSTEM.DEFAULT.SUB		
Destination	Topic Name:		
			× *
	Topic Name or Topic String must b	e specified!	
	Topic String:		
	Topic Name or Topic String must b	e specified!	
	Wildcard Usage:		Scope:
	Passthrough	Ŧ	All Qmgrs
	Durable:		Туре:
	Yes	*	Administrative •
	Selector Type:		Туре:
	None	•	As PCF Attributes
	Selector:		
	User data:		
			Ok Cance

Figure 4.7.6-A. Subscription Create Window

4.7.8 Create Route

Within a Route viewlet, click the **Add** button. The *Select Object Path* window opens; specify the object path of the new route and click **Select path**.

The following window opens. Specify the configurations of the new route and click **Ok**.

EMS Route Create Win	dow		?
🛶 General	Route Info name:		
SSL Routes	Field is required Connection URL: Connection ID:		
	0 Zone Type: Default	Connected Zone name:	
	Backlog Count:	Backlog Size:	
	Configured	Stalled	
		Ok	Cancel

Figure 4.7.7-A. EMS Route Create Window

4.7.9 Create Bridge

Within a Bridge viewlet, click the **Add** button. The *Select Object Path* window opens; specify the object path of the new bridge and click **Select path**.

The following window opens. Specify the configurations of the new bridge and click **Ok**.

EMS Bridge Create Wir	ndow	?
🖨 General	Source Type:	
	Queue	· · · · · · · · · · · · · · · · · · ·
	Source Name:	
		× •
	Target Type:	
	Торіс	•
	Target Name:	
		× •
	Selector:	
		Ok Cancel

Figure 4.7.8-A. EMS Bridge Create Window

4.7.10 Create Durable

To create a durable, do one of the following:

- **Create a new durable from scratch:** Within a Durable viewlet, click the **Add** button. The *Select Object Path* window opens; specify the object path of the new durable and click **Select path**.
- Create a new durable based on an existing one: Select the checkbox for the existing durable. On the actions pop-up menu, select Commands > Copy As. Update the name for the new object in the Copy Durable Window.

The following window opens. Specify the configurations of the new durable and click **Ok**.

EMS Durable Create Window				
🛶 General	Durable Info name:			
	Field is required			
	Topic Name:			
		× •		
	Client Id:	Selector:		
	Route	Username:		
	Pending msgs. count:	Pending msgs. size:		
	0	0		
	Delivered msgs. count:	Consumer Id:		
	0	0		
	Connected	No Local		
	Shared	Static		
		Ok Cancel		

Figure 4.7.9-A. EMS Durable Create Window

4.7.11 Create Channel Authentication Record

Block User Map, Block Address Map, SSL Peer Map, Address Map, User Map or Queue Manager Map channel authentication record types can be created. To learn more about types, see the following IBM documentation: <u>https://www.ibm.com/docs/en/ibm-</u> mq/9.0?topic=commands-set-chlauth.

There are several ways to create a Channel authentication record.

- From a Channel authentication record (channel auth rec) viewlet:
 - Click the **Add** button. The *Select Object Path* window opens. Specify the workgroup server, node, queue manager (leave the asterisk to create a new channel authentication record in all queue managers of the workgroup server) and object subtype. Click **Select path**.
 - Select the checkbox of a Channel auth rec record of the Channel auth type that you want to create, then select **Create ChAuthRec** from the Action menu to create a new record of that type.
- From a Channel viewlet: Select Create ChAuthRec from the Action menu of a channel record. The Select ChAuthRec Type dialog opens. Select a Type and click OK.

The *Channel Authentication Record Create* window opens. For more information, please see the following IBM documentation:

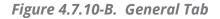
<u>https://www.ibm.com/support/knowledgecenter/en/SSFKSJ_9.0.0/com.ibm.mq.explorer.doc/e_pro</u> <u>perties_chlauth.html</u>

Select object pat	h				? ×
Workgroup server:	MQM - 0	▼ Node:	*		•
Queue manager:	*	•	Object subtype:	Block User Map	T
				Select path	Cancel

Figure 4.7.1-A. Select Path for Channel Authentication Record

Every channel auth rec type has two common tabs: **General** and **Extended**. On the **General** tab select the channel profile name and add the description. (On versions prior to 11, you must enter the name.)

Channel Authenticatio	n Record Create Window	? ×
🛶 General	Channel profile:	
Block		~
Extended	Field is required	
	Туре:	
	Block User Map	~
	Description:	



On the **Extended** tab, specify **Yes** or **No** from the **Warning** drop-down. Setting this option to **Yes** will use a warning instead of blocking access.

Within the **Custom** field, enter new feature configurations before separate attributes have been introduced.

Channel Authentication Record Create Window					×
General	Mapping Prope	rties			
Block	User source:		No Access	Ŧ	
🛶 Extended					
	MCA user ID:	Warning: No V	Check client connections		

Figure 4.7.10-C. Extended Tab

Block channel auth recs will have the **Block** tab as seen below. Specify users who should not have access to this channel (or channels). Creation of a Block User Map authentication record is displayed in the figure below.

Channel Authenticatio	n Record Create Window	?	×
General	*User list:		
🛶 Block		×	J
Extended	Field is required *Multiple values must be separated by comma (User1, User2)		

Figure 4.7.10-D. Block Tab

Instead of the **User list** field as seen above, the **Block** tab of a Block Address Map will have an **Address list** field. Enter the IP address(es) or IP address pattern(s) to be blocked from connecting to this queue manager using any channel. The IP address pattern(s) can also include an asterisk as a wildcard to represent one or more parts of the address.

Channel Authentication Record Create Window		? ×
General	*Address list:	
🛶 Block		×
Extended	Field is required *Multiple values must be separated by comma (9.10.*, 9.20.*)	

Figure 4.7.10-E. Block Tab

SSL Peer Map, Address Map, User Map and Queue Manager Map records have the **Address** tab. An **Address** field appears on this tab which is used as a filter. Specify the filter to be

used to compare with the client or partner queue manager's IP address at the other end of the channel.

Channel Authentication Record Create Window		? ×
General	Address:	
🛶 Address		
SSL Peer		
Extended		

Figure 4.7.10-F. Address Tab

SSL Peer channel auth recs have the **SSL Peer** tab. This tab has fields to specify *SSL Peer* and *SSL/TSL Issuer's Distinguished Name*.

Channel Authentication	n Record Create Window	? ×
General	SSL Peer Name:	
Address		×
🛶 SSL Peer	Field is required	
Extended	SSL/TSL Issuer's Distinguished Name:	

Figure 4.7.10-G. SSL Peer Tab

User Map channel auth recs also have a **ClientUser** tab to specify *Client user ID*.

Channel Authentication	Record Create Window	? ×	:
General	Client user ID		
Address			
🔶 ClientUser	Field is required		
Extended			

Figure 4.7.10-H. ClientUser Tab

Queue Manager Map records have the **Queue Manager** tab to specify the *Remote queue manager*.

Channel Authentication Record Create Window		? ×
General	Remote queue manager:	
Address		
🛶 Queue Manager	Field is required	
Extended		

Figure 4.7.10-I. Queue Manager Tab

4.7.11.1 Copy Channel Authentication Record

You can create an exact copy of a channel authentication record or use an existing record as a basis for a new one.

- Use Copy to create an exact duplicate.
- Use Copy As to use an existing record to create a new one with a different name than the original.

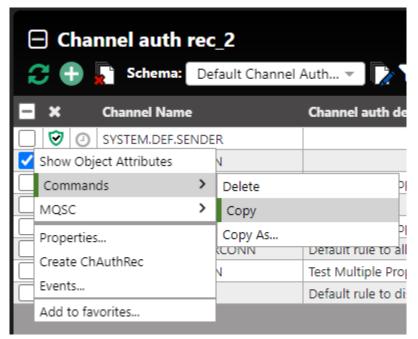


Figure 4.7.10.1-A. Channel Authentication Record Action Menu

To copy a channel authentication record, select **Commands > Copy** from a Channel auth record's pop-up action menu. The **Copy objects to selected path** icon changes color from

grey to orange: Click the **Copy objects to selected path** icon. Choose a path for the new object using the lists provided. Click **Paste**. After the object has been pasted successfully, a green Success Message is temporarily displayed in the lower right corner of the window and the new record appears in the viewlet.

To create a duplicate channel authentication record with a new name, select **Commands** > **Copy As...** from a Channel auth record's pop-up action menu. The Channel Authentication

Records dialog opens.

Channel Authentication	Records	? ×
🔿 General	Channel profile:	
Block	CHANNEL_NEW	× 👻
Extended	Туре:	
	Block User Map	~
	Description:	
	Ok S	chedule Cancel

Figure 4.7.10.1-A. Channel Authentication Records Dialog

Type a name for the new record in the **Channel profile** field. Fill in other tabs and fields as needed. See <u>Channel Authentication Record</u> for more information.

Click **OK**. After the new record has been created successfully, a green Success Message is temporarily displayed in the lower right corner of the window, and the new record appears in the viewlet

4.7.12 Create Channel



You cannot create AMQP channels on z/OS resource addresses.

Within a Channel viewlet, click the **Add** button to create a new channel. The *Select object path* window opens. Specify the channel's path and select its subtype from the drop-down menu. Click **Select path**.

Select object path	ı				?	×
Workgroup server:	MQM - 0	• Node:	*		Ŧ	
Queue manager:	*	•	Object subtype:	Sender	Ŧ]
-				Sender Server		
				Receiver Requester		
				Client Connection Server Connection		
381	luel	TVI	enying	Cluster Receiver		
AM	IQP	In	active	Cluster Sender		
	eiver		active	AMQP Telemetry		

Figure 4.7.11-A. Select Object Path for a New Channel

The Channel Create Window opens. Specify the channel's properties.



The tabs of the **Channel Create Window** differ according to the channel's type. Consult IBM documentation for the descriptions of channel properties:

<u>https://www.ibm.com/support/knowledgecenter/en/SSFKSJ_7.5.0/com.ibm.mq.explorer.doc/e_properties_chann</u> els.htm

Channel Create Window				?	×
🔶 General	Channel Name:				
Extended MCA	Field is required Description:			0	J
Exits Message Retry					
SSL	Type:	~	Transport Type:	~	
Compression Monitoring Custom Attributes	Replace existing definitio	n			
			Ok	Schedule Cancel	

Figure 4.7.11-B. Channel Create Window – General Tab

4.7.13 Create Consumer

When creating viewlets (section <u>Adding and Maintaining Viewlets</u>), go to the **Consumer** tab and enter all details.

Create new Cons	sumer viewlet		? ×
Queue *	Viewlet name	Workgroup server	_
Channel *	EMS consumers	MQM - 0	Temporary
Process			
Topic *	Node	Manager	
Listener	EMS-SERVER_PAULIUS10	× - tcp://127.0.0.1:7222	× 🔻
Namelist			
Service	Object name		
Auth info	×		
Cluster QMgr			
Subscription			
Channel auth rec			
Route	Attribute filter	. x	
Transport			
Bridge			
Durable			
Consumer			
Connection	Data limit offset		
		Save changes	Cancel

Figure 4.7.12-A. New Consumer

330

4.7.14 Create Connection

When creating viewlets (section <u>Adding and Maintaining Viewlets</u>), go to the **Connection** tab and enter all details.

Create new Co	nnection viewlet	? ×
Queue *	Viewlet name Workgroup server	-
Channel *	EMS Connection MQM - 0	Temporary
Process		
Topic *	Node Manager	
Listener	EMS-SERVER_PAULIUS10 × v tcp://127.0.0.1:7222	× 🔻
Namelist		
Service	Object name	
Auth info	· ·	
Cluster QMgr		
Subscription		
Channel auth rec		
Route	Attribute filter x	
Transport		
Bridge		
Durable		
Consumer		
Connection	Data limit offset 500	
	Save changes	Cancel

Figure 4.7.13-A. New Connection

4.7.15 Create RabbitMQ Virtual Host

RabbitMQ vhosts virtually separate applications within a single RabbitMQ instance. Each vhost has its own exchanges, queues, users, and policies.

To create a virtual host, do the following:

- 1. Enter the Vhost Name and a Description of the virtual host.
- 2. Select the **Default Queue Type** for new queues (quorum, stream, or classic).
- 3. Click + to begin adding tags.
- 4. Use the **Tracing** list to turn RabbitMQ's Firehose Tracer on (*True*) or off (*False*).
- 5. Click **OK** to save the virtual host.

Vhost / Properties		? ×
🛶 General	Vhost Name:	/
Messages	Description:	
Queued Messages	Default Queue Type:	
Status		· · · ·
Data Rates	— Tags	_
Custom Attributes	List Of Tags Currently Has No Values	•
	Tracing:	False 🗸
		Ok Schedule Cancel

Figure 4.7.15-A. Create RabbitMQ Virtual Host

4.7.16 Create RabbitMQ Exchange

RabbitMQ exchange objects show properties and metrics for RabbitMQ exchanges.

To create an exchange, do the following:

- 1. Click ⁺ on an exchange viewlet.
- 2. Enter the Exchange Name.

- 3. Select the **Exchange Type** (*Direct, Topic, Fanout, and Headers*).
- 4. To allow the queue to remain active after server restart, select *True* from the **Durable** list.
- 5. If you want this queue to be automatically deleted by the broker if it is not bound to a queue, select True from the **Auto delete** list.
- 6. If this exchange will not be directly available for clients to publish to, select *True* from the **Internal** list.
- 7. Click **OK** to save the new exchange.

Exchange amq.default	Properties		? ×
🔶 General	Exchange Name:	amq.default	
Arguments	Exchange Type:	Direct	~
Message Rates	Durable:	True	~
Status		inde	
Custom Attributes	Auto delete:	False	*
	Internal:	False	~
	User Who Performed Action:	admin	
		Ok Sched	dule Cancel

Figure 4.7.16-A. Create RabbitMQ Exchange

4.7.17 RabbitMQ User

RabbitMQ user objects show properties and metrics for RabbitMQ users.

User admin Properties		?>	ĸ
🛶 General	User Name:	admin	
Status	Password Set:	True	
Custom Attributes	Password Hashing Algorithm:	rabbit_password_hashing_sha256	
	Plain Password (Only for create/change):		
	Password Hash (Only for create/change):		
	Tags		
	administrator	X	
		+	
		Ok Schedule Cancel	

Figure 4.7.17-A. Create RabbitMQ Exchange

4.7.18 Create RabbitMQ Component

Using Components, you can specify and describe the traditional objects in RabbitMQ architecture. You can also use it to create and manage custom objects, if the environment allows it.

To add a component, do the following:

- 1. Click ⁺ on a component viewlet.
- 2. Enter the **Component Name**.
- 3. Select the **Type** of component.
- 4. Click **OK** to save the component.

To add a parameter:

- 1. Enter the parameter in the first space provided (red box below).
- 2. Enter the parameter value in the box below that (green box below).
- 3. Select the parameter's data type from the list.
- 4. Click 🕇

Component Limit Prop	Component Limit Properties ° ? ×		
🔶 General	Component Name:	Limit	
Status	Type:	Vhost-limits	-
Custom Attributes			
		+ 🗅	
		String -	
	max-queues	×	
	11111		
		Integer 🗸	
		Ok Schedule	Cancel

Figure 4.7.18-A. Create RabbitMQ Component

4.7.19 Create RabbitMQ Policy

You can use RabbitMQ policies to set optional arguments for queues and exchanges or to set up the Federation Plugin.

To create a policy, do the following:

- 1. Click ⁺ on a policy viewlet.
- 2. Enter the **Policy Name**.
- 3. In the **Pattern** field, enter a regular expression pattern to help match queues to this policy by queue name.
- 4. In the **Apply To** field, indicate the object that the policy applies to (queues or exchanges).
- 5. Enter a **Priority** to determine the relative likelihood of this policy being applied.
- 6. Click **OK** to save the policy.

Policy federate Proper	Policy federate Properties ? ×		
🛶 General	Policy Name:	federate	
Status	Pattern:	^federated\.]
Definitions Custom Attributes	Apply To:	exchanges	
Custom Attributes	Priority:	1	
		0	
		Ok Schedule Cancel	

Figure 4.7.19-A. Create RabbitMQ Policy

4.7.20 Create RabbitMQ Operator Policy

Operator policies allow operators to enforce certain policies. Their definitions are merged with regular policy definitions before the result is applied to matching queues. Operator policies are limited to a small set of arguments.

See <u>https://www.rabbitmq.com/parameters.html#operator-policies</u> for more information.

To create an operator policy, do the following:

1. Click ⁺ on an operator policy viewlet.

- 2. Enter the **Operator Policy Name**.
- 3. In the **Pattern** field, enter a regular expression pattern to help match queues to this operator policy by queue name.
- 4. In the **Apply To** field, indicate the object that the operator policy applies to (for example, *queues* or *exchanges*).
- 5. Enter a **Priority** to determine the relative likelihood of this policy being applied.
- 6. Click **OK** to save the operator policy.

Rabbit MQ Operator Policy Create Window ? X			
🛶 General	Operator Policy Name:	OperatorPolicy	
Definitions			
	Pattern:	*	
	Apply To:	queues	
	Priority:	0	
		Ok Schedule	Cancel

Figure 4.7.20-A. Create RabbitMQ Operator Policy

4.7.21 Create RabbitMQ Queue

RabbitMQ queue objects show properties and metrics for RabbitMQ queues.

To create a queue, do the following:

- 1. Click 📩 on the queue viewlet toolbar.
- 2. Enter the **Queue Name**.
- 3. Select the **Queue Type** (Quorum, Stream, or Classic).
- 4. To allow the queue to survive RabbitMQ restart, select *True* from the **Durable** list.
- 5. If you want this queue to be automatically deleted when the last consumer unsubscribes, select True from the **Auto delete** list.
- 6. If this queue will be limited to one consumer, select *True* from the **Exclusive** list.
- 7. If the queue is exclusive (**Exclusive** is set to *True*), enter the tag for its consumer in the **Exclusive Customer Tag** field.

- 8. The **Policy** and **Operator Policy** are set based on the queue's name value or regex matching.
- 9. Click **OK** to save the queue.

Queue \$32 Properties ?			×	
🔿 General	Queue Name:	\$32		
Message Details	Queue Type:	Classic	~	
Message Rates Messages	Durable:	True	~	
Queue Consumers	Auto delete:	False	~	
Runtime Metrics	Exclusive:	False	~	
Status Arguments	Remote Node Name:	rabbit@m-rabbit-mq		
Custom Attributes	Exclusive Consumer Tag:			
	Policy:	federate		
	Operator Policy:	test_op		
		Ok Schedule	Cancel	

Figure 4.7.21-A. Create RabbitMQ Operator Policy

4.8 Copy Objects

Select the object(s) to copy and use one of the following methods:

• click **Copy** in the object(s) pop-up menu

-or-

• use the keyboard shortcut keys, **Ctrl** + **C**

After performing one of the above actions, the **Paste** button blocated at the top right corner of the screen becomes enabled and appears in yellow block. Click this button to open the *Select object path* window and specify the workgroup server, node, and queue manager the selected object(s) should be copied to and click the **Copy** button. Refresh the viewlet to see the changes.



The copy option is available for queues, listeners, and processes.

A.1 meshIQ Documentation

The following documents relevant to meshIQ management applications can be found in the *<u>Resource Center</u>*.

Table A-1. meshIQ Documentation		
Document Number (or higher)	Title	
NAV/WGS 101.036	Workgroup Server Expert	
NAV/COMP 101.018	Components Installation Guide	
MS-UG 11.000	meshIQ Secure User's Guide	
M6/MQ 10.002.1	AutoPilot® M6 Plug-in for IBM MQ	
CS-INS11.000	meshIQ Platform Core Services Installation Guide	
APM6/USR 625.003	AutoPilot M6 User's Guide	

A.2 Tomcat

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

A.3 Java™

<u>http://java.sun.com/products/JavaManagement/reference/docs/index.html</u> <u>http://www.hp.com/products1/unix/java/infolibrary/index.html</u>

A.4 MS Windows

http://www.microsoft.com/windows/default.mspx

A.5 UNIX

http://www.unix.org/

A.6 Solaris

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

A.7 Linux

http://www.linux.org/

	Table B-1. Objects		
lcon	Name	Description	
Ţ	Node	A computer in a workgroup server. An EMS node contains EMS queue managers.	
	Manager	Queue (or EMS) managers maintain their queues and provide queuing services to applications.	
Queues	5	An IBM MQ queue is an object in which applications can put and get messages from.	
	Local	Transmission, initiation, dead-letter, command, default, channel, and event queues are types of local queues. A queue is known to a program as local if it is owned by the queue manager to which the program is connected. You can get messages from, and put messages on, local queues.	
o	Model	A model queue is a queue definition template used when creating dynamic queues.	
13	Alias	An alias queue is an IBM MQ object that you can use to access another queue or a topic. This means that more than one program can work with the same queue, accessing it using different names.	
-0	Remote	To a program, a queue is remote if it is owned by a different queue manager to the one to which the program is connected.	
Ņ	Cluster	A cluster queue is a queue that is hosted by a cluster queue manager and made available to other queue managers in the cluster.	
0 4	Channel	A channel is a communication link used by distributed queue managers. Channels are objects that provide a communication path from one queue manager to another.	
**	Process	Process definition object is an IBM MQ object that contains the definition of an MQ application. Process definition objects allow applications to be started without the need for operator intervention by defining the attributes of the application for use by the queue manager.	
Ĩ	Торіс	A topic object is an IBM MQ object that allows you to assign specific, non- default attributes to topics. Topics can be subscribed to and can be linked with particular messages.	
6	Listener	Listeners are processes that accept network requests from other queue managers, or client applications, and start associated channels.	
	Namelist	A namelist is an IBM MQ object that contains a list of cluster names, queue names or authentication information object names. In a cluster, it can be used to identify a list of clusters for which the queue manager holds the	

The following table is a list of objects and their descriptions.

	Table B-1. Objects		
		repositories.	
*	Service	Service objects are a way of defining programs to be run when a queue manager starts or stops.	
0	Auth info	An authentication information object provides the definitions required to perform certificate revocation checking. There are four types: CRL(LDAP), OCSP, IDPW(OS) and IDPW(LDAP)	
2	Cluster QMgr	A cluster queue manager is a queue manager that is a member of a cluster.	
	Subscriptio n	An object which requests topic information.	
©	Channel auth rec	Channel authentication records allow for more precise control over user access to connecting systems at a channel level.	
Ĩ.	Comm Info	Communication information	
EMS Ob	ojects		
	EMS Queue	Encapsulates a provider-specific queue name.	
Ĩ	EMS Topic	Subjects containing a set of related messages.	
.	EMS Channel	Each EMS channel is a client of an EMS server, which acts as a store-and- forward intermediary for all messages through the channel.	
ŝ	Route	The configuration and optionally statistical data about the routed server are represented by an object of this class.	
୶	Transport	The data and behavior common to transports of all types that are configured on the EMS server is represented by this abstract class. Transports are mechanisms for importing and exporting messages between EMS and other messaging systems. TIBCO Rendezvous and Rendezvous Certified Messaging are currently the only two types of transports supported.	
4	Bridge	Consists of a source destination name and type and 1 or more BridgeTarget objects.	
٠	Durable	Represents a durable subscription on the Tibjms server which may be active and receiving messages or it may be dormant, with its messages being stored on the server until it is active again.	
5	Server Properties	A TIBCO Enterprise Management Service (EMS) server provides messaging services for applications that communicate by monitoring queues. It ensures that sent messages are directed to the correct receive queue or that messages are routed to another queue manager.	

	Table B-1. Objects			
	Users	Users are specific IDs that allow you to identify yourself to the server. When logging in, the connect request should be accompanied by a username and password.		
	Groups	Groups are classes of users. A user can belong to multiple groups. The rights of a user are a combination of the rights of the groups the user belongs to, in addition to any rights granted to the user directly.		
	Access Control Lists	This file defines all rights on topics and queues for all users and groups.		
	Consumers	List of EMS Connections.		
	Connection s	List of EMS Connections.		
Kafka C	bjects			
88	Broker	The Kafka server (identified by its cluster and integer number), known by its number "0"		
6	Cluster	A group of Kafka brokers sharing a configuration. The identity of a cluster is generated GUID.		
	Торіс	The container for Kafka messages. The identity of a topic is a user defined name. All brokers in a cluster treat the topic as a single entity.		
	Partition	Where the data is stored, a topic will typically be spread across multiple partitions.		
	Message	The data. The identity of a message is a Kafka topic, partition, and sequence number.		
	Log	Refers to all of the messages collected for Kafka that are stored in a log. A unique aspect of Kafka is that the messages are not removed when they are read but are aged off the log based on time or size of log.		
	Replicas	For recovery, Kafka may keep additional copies of the log in case of a media failure.		
	Producer	An application writing messages to a topic.		
	Consumer	A single application reading a Kafka topic.		
	Consumer Group	A collection of applications that share reading a Kafka topic.		

Table B-1. Objects		
	Stream	A conduit between Kafka and other products, such as MQ or a database.
	Connector	Connector object, associated with Apache Kafka Connect.
	Schema	Confluent Kafka. The Schema registry helps keep track of changes to schemas over time.
	Schema Subject	Confluent Kafka. Schema subjects name schemas according to a strategy.
	Schema Subject Version	Confluent Kafka. Versions keep track of the evolution of schemas.
	KSQL	Confluent Kafka. KSQL endpoints.
IIB Obje	ects	
	Broker	A set of execution processes that hosts one or more message flows to route, transform, and enrich in flight messages.
F	Servers	A named grouping of message flows that have been assigned to an integration node.
*	Application s	A deployable container that provides isolation at runtime.
\$	Services	An application with a well-defined interface. It implements flows for each service operation.
A	Rest APIs	An application that implements a RESTful interface. A REST API is defined by importing a Swagger 2.0 document.
	Library	A logical grouping of related code, data, or both. Each reference to this object is deployed with a copy of this object. Any change will not be visible after an update in referenced objects and redeploy is necessary.
P	Shared Library	A logical grouping of related code, data, or both. Deployed directly to an integration server. Any change to the library will be seen in all other referenced objects.
¥	Message Flow	A sequence of processing steps that run in the integration node when an input message is received.
8	Sub Flow	A common sequence of actions to be used by several message flows, applications, or integration services.

	Table B-1. Objects		
	Resource	The projects, folders, and files.	
ACE Ob	jects		
Ξ	Integration Node	A set of execution processes that hosts one or more message flows to route, transform, and enrich in-flight messages.	
ħ	Servers	Object used to provide an isolated runtime environment for a set of deployed message flows and resources.	
*	Application s	A deployable container that provides isolation at runtime.	
*	Services	An application with a well-defined interface. It implements flows for each service operation.	
A	Rest APIs	An application that implements a RESTful interface.	
	Library	A logical grouping of related code, data, or both. Each reference to this object is deployed with a copy of this object. Any change will not be visible after an update in referenced objects and redeploy is necessary.	
R	Shared Library	A logical grouping of related code, data, or both. Deployed directly to an integration server. Any change to the library will be seen in all other referenced objects.	
¥	Message Flow	A message flow is a sequence of processing steps that run in the integration node when an input message is received.	
#	Sub Flow	A common sequence of actions to be used by several message flows, applications, or integration services.	
	Resource	The projects, folders, and files.	
7 55	Link	Object describing a connection(reference) between two objects.	
Solace Objects			
	Node		
	Remote Queue Manager		
	Broker	An event broker transmits events between producers and consumers.	

		Table B-1. Objects
	Message VPN	Message VPNs are used for client connections. They create separate domains on a broker so that topics and messages are separated. They control which clients can see which messages by grouping clients: each group of clients sees only messages that are published to their group.
(Queue	A queue receives published messages, either directly, or through a topic to which it is subscribed.
	Queue Template	A queue template can facilitate the process of creating queues. Set up a queue template with the desired configuration, then applications can use that template when creating new queues.
	Topic Endpoint	Name of a unique topic endpoint in a Message VPN.
1	Topic Endpoint Template	A Topic Endpoint Template facilitates the process of creating topic endpoints. The template is set up with attributes that are copied to new endpoints that are created dynamically through an API.
1	Bridge	Message VPN bridges connect two Message VPNs, so that messages published to one are delivered to the other, based on the topic subscriptions that are assigned to the bridge. Message traffic can flow through bridges in one direction or in both directions.
	Client Profile	A client profile is a set of configuration properties for a client application. Client application configuration is streamlined through client profiles: changes to the client profile affect the applications that are assigned to that profile.
/	ACL Profile	The ACL profile that is assigned to a client controls which event brokers it can connect to and which topics it can publish and subscribe to.
	Client UserName	Client usernames are the means through which clients are authorized to connect to a Message VPN. Client usernames must be assigned to a client.
(JNDI Connection Factory	Provides a means of configuring the connection between JMS clients and message brokers. The Connection Factory is looked up from the JNDI store on the broker.
J	JNDI Queue	A queue object in the Solace JNDI store
J	JNDI Topic	A topic object in the Solace JNDI store
(Client Certificate Authority	The Client Certificate CA (Certificate Authority) list is contained in the trust store. For incoming TLS connections, clients who present a valid client certificate can authenticate using Client Certificate CAs.
(Client	Application or device that connects to an event broker. Clients can send messages, receive messages, or do both.

Table B-1. Objects		
MQTT Session	Session resulting from an MQTT connection.	
RDP	A REST delivery point (RDP) on the Message VPN facilitates message delivery to REST consumers.	
Rest Consumer	A client or endpoint that receives messages through an RDP.	
Distributed Cache	A collection of one or more Cache Clusters on a Message VPN.	
Cache Cluster	Collection of Cache Instances that subscribe to the same topics.	
Cache Instance	A process that listens for and caches live data messages based on the topic subscriptions that are configured for its parent Cache Cluster.	
DMR Cluster	A DMR cluster on an event broker contains global DMR configuration parameters.	
CSPF Neighbor	An event broker that, based its topology, is considered the best node through which to forward a message to its destination event broker.	

Appendix C: Object Menus

The Action menu becomes available when an object is selected within a viewlet. The following table explains the menu options.



Your Action menu options may differ according to your user permissions, which are managed by an admin.

Table C-1. Object Menu Options		
Object	Option	Description
<u>Workgrou</u> <u>p Server</u>	Delete workgroup server	Delete selected workgroup server. A window will appear confirming this action.
	Edit workgroup server	Edit the workgroup server settings. The Edit workgroup server dialog box is similar to the Add new workgroup server screen (see <i>Figure 3.2.1-A</i>).
	Default Connection	Sets the selected workgroup server as a primary connection for all users. This eliminates the requirement for users to select workgroup server connections upon logging in for the first time. Multiple workgroup server connections can be set as defaults. The Default Connection column within the Workgroup Servers viewlet displays the workgroup server connections that are set as a default. To remove a workgroup server as a default connection, simply select the Default Connection option to disable the default setting. Only users with the Add/Remove Default Connection right enabled in the security application will have this ability; all other users will not have the Default Connection option and cannot edit or remove these connections. However, they can create new (non-default) workgroup server connections.
	Create > Node	Create a node. See <i>section <u>4.2.2.1.1, Create a Node</u>.</i>
	Remote Queue Managers	Create a remote queue manager. Includes edit and delete options (section <u>4.2.2.1.2</u>).
	Remote EMS Managers	Create a remote EMS manager connection. Includes edit and delete options (section <u>4.2.2.1.3</u>).
	Remote Kafka Managers	Create a remote Kafka manager connection. Includes edit and delete options (section <u>4.2.2.1.4</u>).

Table C-1. Object Menu Options		
Object	Option	Description
	Remote ACE/IIB Managers	Create a remote ACE or IIB manager connection. Includes edit and delete options (section <u>4.2.2.1.5</u>).
	Remote Solace Managers	Create a remote Solace manager connection. Includes edit and delete options (section <u>4.2.2.1.6</u>).
	Show Object Attributes	Displays the node's Attribute viewlet.
	Show Topology	See <u>Topology.</u>
	Events	Opens a Console tab displaying events which occurred within the selected node.
	Manage	Select the Manage option to activate an inactive node. Unselect this option to make a node inactive. When unselected, the Delete and Properties options become available in the node menu.
		Note: An active node may need to be reactivated by unselecting and reselecting the Manage option.
	Commands >	
Node	Start All WMQ Objects	Starts node's WMQ objects (section <u>4.3.2.2</u>).
Noue	Stop All WMQ Objects	Stops node's WMQ objects.
	Shutdown	Stops the node completely.
	Discover Now > Incremental Full	See the next section, Manager, for more information on discovery modes.
	Add to Favorites	Create a shortcut to the selected node in a Favorites viewlet. (Section <u>4.3.3.1.5</u> .)
	Delete	Displays in the menu when the node is not active (un-managed). Deletes the selected node.
	Properties	This option is available in the menu when the node is inactive (unmanaged). Opens the Properties window where you can view and/or edit the node's configurations.
<u>Manager</u> (Queue or	Show Object Attributes	Displays the MQ or EMS object manager's Attribute viewlet (section <u>4.3.3.1.1</u>).
<u>EMS</u>	EMS Scripts	Run EMS commands.

Table C-1. Object Menu Options		
Object	Option	Description
	Manage	Select either User Groups, Users or ACLs to manage these EMS aspects.
	Show Topology	View a graphic representation of queue relationship (see <u>Topology</u>)
	Show Status	Opens a Status viewlet within the Console panel.
	Create Queue Manager	Create a new Queue Manager (see section <u>4.7.2</u>)
	Commands > Start all WMQ objects	Allows you to start WMQ objects (section <u>4.3.3.1.2</u>). Not available for EMS queue managers.
	Stop all WMQ objects	Allows you to select the shutdown method (section <u>4.3.3.1.2</u>). Not available for EMS queue manager.
	Ping	Ping the selected queue manager (section <u>4.3.3.1.11</u> , Ping).
	Security	View or set authority for queue manager's objects (section <u>4.3.3.1.7</u>). Can also browse authority records.
	View Error Log	View and export error log files (section <u>4.3.3.1.8</u>).
	Connections (Modal), Connections (Console)	View, filter, stop, and refresh connections and connection handles (section <u>4.3.3.1.9</u>).
	Cluster membership > Join	Joins the selected queue manager to a cluster. Includes cluster create option (sections <u>4.3.3.1.10.1</u> and <u>4.3.3.1.10.2</u>).
	Refresh	Refreshes queue manager clusters and repositories (section <u>4.3.3.1.10.3</u>).
	Suspend	Temporarily reduce the inbound cluster activity to this queue manager.
	Resume	Informs other queue managers in a cluster that the local queue manager is available again for processing and can be sent messages. It reverses the action of the Suspend command.
	Leave	Removes the selected queue manager from the queue manager cluster (section <u>4.3.3.1.10.4</u>).
	Properties	Displays the Properties window (section <u>4.3.3.1.3</u>)
	MQSC / EMS	Select Apply script , Console (<i>Figure 4.3.3.1.6-A</i> or <i>Figure 4.3.3.2.2-A</i>), Snapshot , or z/OS Reports .

Table C-1. Object Menu Options		
Object	Option	Description
	Discover Now (only available for MQ queue managers)	Incremental : the WGS 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 queue managers are fully discovered.
		Full : when the WGS 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 queue manager 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 WGS.
	Delete	Remove the queue manager.
	Delete from Database	Allows you to delete the queue manager from the database. Please note that there is no confirmation dialog box for this action.
	Events	Displays the Events viewlet (section <u>4.3.3.1.4</u>).
	MQ Statistics	Displays a statistics viewlet generated by a SQL query (section <u>4.3.10</u>).
	Create Dashboard	Create a new dashboard for the queue manager using a default dashboard template (section <u>4.2.11</u>).
	Add to favorites	Allows you to create a shortcut for a MQ or EMS manager in a Favorites viewlet (section <u>4.3.3.1.5</u>).
	Browse messages	Displays a list of messages. (<u>Figure 4.3.4.3-A</u>)
<u>Queue</u>	Show Object Attributes	Displays the object attributes. (<u>Figure 4.3.3.1-A</u>)
	Show Queue Status / Show EMS Queue Status	Displays queue status. (<i>Figure 4.3.4.1-A</i>)
	Create Queue / Create EMS Queue	Opens the window to create a queue. (Section <u>4.7.5</u>)
	Messages	Put New Message: Displays the Put New window (<i>Figure 4.3.4.3.1-A</i>) to create and put new message(s) into the selected queue.
		Load From File: If loading single or multiple messages from .mmf files, .txt files, or files created by the IBM dmpmqmsg utility (<i>Figure 4.3.4.3.7.1-A</i>), opens

	Table C-1. Object Menu Options	
	t Option Description	Object Option
	the Command Settings dialog box to continue or configure settings. If loading messages from shared storage, opens the Select Files dialog.	
	Export All Messages: Exports all messages as .mm or .txt files, or to shared storage (<i>Figure 4.3.4.3.8-A</i>).	
ere	Copy All: Displays the Copy messages window (<i>Figu</i> <u>4.3.4.3.5-A</u>) where a user can define how and where messages should be copied. Message criteria can be selected to only copy messages which meet the criteria specifications.	
eria	Move All: Displays the Move messages window (<i>Figure 4.3.4.3.5-B</i>) where a user can define how and where messages should be moved. Message criteri can be selected to only move messages which meet the criteria specifications.	
n es ans on ueue	Delete All: Allows the user to delete all messages within the selected queue. The system reads then deletes one message at a time. This function does not recognize uncommitted messages, which mean that there could still be uncommitted messages on the queue. Also, the command might fail if the que is already exclusively opened by another application Message criteria can be selected to only delete messages which meet the criteria specifications.	
other	Clear All: This option will clear an entire queue without reading the messages. Please note that thi function will not work if the queue is open by anoth application or if the queue contains uncommitted messages.	
ıe	Commands > Creates a new object based on the definition of the currently selected object. (<i>Figure 4.3.4.4-A</i>) Copy As	
})	Delete Queue Allows users to delete the queue. (<i>Figure 4.3.4.4-B</i>)	Delete C
y of	Force Update Triggers the WGS to retrieve the most recent copy of the data (see section <u>4.3.4.4</u>).	Force Up
ge	Allow or Inhibit Get and Put Set a queue to allow or inhibit get and put message Messages operations.	
ection	Security View and set authority for MQ Queue objects. (Section 4.3.3.1.7.)	Security
	4.3.4.3.5-4) where a user can define how and where messages should be copied. Message criteria can selected to only copy messages which meet the criteria specifications. Move All: Displays the Move messages window (Figure 4.3.4.3.5-B) where a user can define how and where messages should be moved. Message criteria can be selected to only move messages which methe criteria specifications. Delete All: Allows the user to delete all messages within the selected queue. The system reads the deletes one message at a time. This function do not recognize uncommitted messages, which methat there could still be uncommitted messages the queue. Also, the command might fail if the c is already exclusively opened by another applica. Message criteria can be selected to only delete messages which meet the criteria specifications. Clear All: This option will clear an entire queue without reading the messages. Please note that function will not work if the queue is open by an application or if the queue contains uncommitte messages. Commands > Creates a new object based on the definition of t currently selected object. (Figure 4.3.4.4.4) Force Update Triggers the WGS to retrieve the most recent cop the data (see section 4.3.4.4). Allow or Inhibit Get and Put Set a queue to allow or inhibit get and put messages operations. Security View and set authority for MQ Queue objects. (5	Copy As Delete C Force Up Allow or Message

Table C-1. Object Menu Options		
Object	Option	Description
	Сору	Copy the selected object to a specified path (the yellow Paste button needs to be used, see section <u>4.8</u> <u>Copy Objects</u>).
	Properties	Displays the queue properties. (<i>Figure 4.3.3.1.3-A</i>)
	Events	Displays the Events viewlet (<i>Figure 4.3.3.1.4-A</i>)
	MQ Statistics	Displays a statistics viewlet generated by a SQL query (section <u>4.3.10</u>).
	Add to favorites	Allows you to add the selected queue to a Favorites viewlet. (<i>Figure 4.3.1.2-A</i>)
	Show Object Attributes	Displays the selected channel's Attribute viewlet (section <u>4.3.5.1</u>).
	Show Channel Status	Displays the selected channel's Status viewlet (section <u>4.3.5.2</u>).
	Commands	Gives the option to Start, Stop, Ping, Resolve or Reset the selected channel (section $4.3.5.3$) and to view or edit Security permissions (section $4.3.3.1.7$).
<u>Channel</u>	Properties	Displays the selected channel's Properties window (section <u>4.3.5.4</u>).
	Create ChAuthRec	Create channel auth rec (section <u>4.7.11</u>).
	Events	Displays the selected channel's Events viewlet (section <u>4.3.5.5</u>).
	MQ Statistics	Displays a statistics viewlet generated by a SQL query (section <u>4.3.10</u>).
	Add to favorites	Allows you to create a shortcut for the channel on a Favorites viewlet (section <u>4.3.5.6</u>).
	Show Object Attributes	Displays the selected process' Attribute viewlet.
<u>Process</u>	Commands	Gives the option to Copy As, Rename, Delete, or manage Security for the selected process (section <u>4.3.3.1.7</u>).
	Create Process	Create a new process (section <u>4.7.1</u>).
	Properties	Opens the Properties window for the selected process.
	Сору	Select to copy a process (section <u>4.8</u>).

Table C-1. Object Menu Options		
Object	Option	Description
	Events	Displays the selected processes Events viewlet.
	Add to favorites	Create a shortcut in a Favorites viewlet. (Section <u>4.3.3.1.5</u> .)
	Show Object Attributes	Displays the selected topic's Attribute viewlet.
	Create Topic Commands > Copy As	Create a new topic (section <u>4.7.3</u>)
	Create Topic Commands > Copy As Delete	Creates a new topic based on the definition of the currently selected topic. Specify the topic string (optional).
	Delete	Deletes selected topic(s).
<u>Topic</u>	Force Update	Triggers the WGS to retrieve the most recent copy of the data, see section <u>4.3.4.4</u> .
	Publish	Puts an IBM MQ message (containing information for the application) to a topic with a related subject.
	Security	Gives the option to view/edit Security permissions (section <u>4.3.3.1.7</u>).
	Properties	Displays the selected topic's Properties window.
	Events	Displays the selected topic's Events viewlet.
	Add to favorites	Allows you to create a shortcut for the listener in a Favorites viewlet.
<u>Listener</u>	Show Object Attributes	Displays the selected listener's Attribute viewlet.
	Create Listener	Create a new listener (section <u>4.7.6</u>).
	Commands	Gives the option to Start, Stop, Copy As, Rename, Delete or view/edit Security permissions (section <u>4.3.3.1.7</u>).
	Properties	Displays the selected listener's Properties window.
	Сору	Select to copy the listener (section <u>4.8</u>).
	Events	Displays the selected listener's Events viewlet.

	Table C-1. Object Menu Options		
Object	Option	Description	
	Add to favorites	Allows you to create a shortcut for the listener in a Favorites viewlet.	
	Show Object Attributes	Displays the selected namelist's Attribute viewlet.	
Newslight	Commands	Gives the option to Copy As, Rename, Delete or View/edit Security permissions (section <u>4.3.3.1.7</u>).	
Namelist	Events	Displays the selected namelist's Events viewlet.	
	Add to favorites	Allows you to create a shortcut for the namelist in a Favorites viewlet.	
	Show Object Attributes	Displays the selected service's Attribute viewlet.	
	Commands	Gives the option to Start, Stop, Copy As, Rename, Delete or view/edit Security permissions (section <u>4.3.3.1.7</u>).	
Service (IBM MQ)	MQSC	Run MQSC commands.	
	Events	Displays the selected service's Events viewlet.	
	Properties	Displays the Properties window.	
	Add to favorites	Allows you to create a shortcut for the services in a Favorites viewlet.	
	Show Object Attributes	Displays the selected auth info's Attribute viewlet. There are four types: CRL(LDAP), OCSP, IDPW(OS) and IDPW(LDAP)	
Auth Info	Commands	View/edit Security permissions (section <u>4.3.3.1.7</u>).	
	Events	Displays the selected auth info's Events viewlet.	
	Add to favorites	Allows you to create a shortcut for the auth info in a Favorites viewlet.	
<u>Cluster</u> QMgr	Show Object Attributes	Displays the selected cluster queue manager's Attribute viewlet.	
	Events	Displays the selected cluster queue manager's Events viewlet.	
	Add to favorites	Allows you to create a shortcut for the cluster queue manager in a Favorites viewlet.	
<u>Subscriptio</u>	Show Object Attributes	Displays the selected subscription's Attribute viewlet.	

Table C-1. Object Menu Options		
Object	Option	Description
<u>n</u>	Commands	Gives the option to Copy As, Rename or Delete.
	Create Subscription	Create a subscription (section <u>4.7.7</u>).
	Properties	Displays the selected subscription's Properties dialog box window.
	Events	Displays the selected subscription's Events viewlet.
	Add to favorites	Allows you to create a shortcut for the subscription in a Favorites viewlet.
	Show Routes Attributes	Displays the selected route's Attribute viewlet.
	Show Routes Status	Displays the selected route's Status viewlet.
Reute	Commands > Delete	Delete the selected route.
<u>Route</u>	Properties	Displays the selected route's Properties window.
	Events	Displays the selected route's Events viewlet.
	Add to Favorites	Allows you to create a shortcut for the route in a Favorites viewlet.
	Show Transport Attributes	Displays the selected transport's Attribute viewlet.
	Properties	Displays the selected transport's Properties window.
Transport	Events	Displays the selected transport's Events viewlet.
	Add to Favorites	Allows you to create a shortcut for the transport in a Favorites viewlet.
	Show Bridge Attributes	Displays the selected bridge's Attribute viewlet.
	Commands >	
<u>Bridge</u>	Delete	Delete selected bridge.
	Properties	Displays the selected bridge's Properties window.
	Events	Displays the selected bridge's Events viewlet.
	Add to Favorites	Allows you to create a shortcut for the bridge in a Favorites viewlet.
<u>Consumer</u>	Add to Favorites	Allows you to create a shortcut to consumers in a Favorites viewlet.

Table C-1. Object Menu Options		
Object	Option	Description
Connection	Command > Destroy	Deletes the connection.
connection	Add to Favorites	Allows you to create a shortcut to connections in a Favorites viewlet.
	Show Durable Attributes	Displays the selected durable's Attribute viewlet.
	Commands >	
	Delete	Delete selected durable object.
Durable	Purge	Purge messages in selected durable(s).
Durubic	Properties	Displays the selected durable's Properties window.
	Events	Displays the selected durable's Events viewlet.
	Add to Favorites	Allows you to create a shortcut to durables in a Favorites viewlet.
	Add to Favorites	Allows you to create a shortcut for a channel auth rec in a Favorites viewlet.
	Commands >	
Channel	Delete	Delete selected channel auth rec object.
<u>auth rec</u>	Properties	Displays the selected channel auth rec's Properties window.
	Create ChAuthRec	Create channel auth rec (section <u>4.7.11</u>).
	Events	Displays the selected channel auth rec's events viewlet.
	Show Object Attributes	Displays the selected comm info's object attributes. Also allows you to compare multiple comm info attributes.
Comm Info	Properties	Displays the selected comm info's Properties window which includes general information and alteration date and time statistics.
	Copy As	Make a copy of the selected comm info.
	Delete	Delete the comm info.
	Add to favorites	Allows you to create a shortcut for comm info in a Favorites viewlet.

Table C-1. Object Menu Options		
Object	Option	Description
	Show Object Attributes	Displays the selected broker's object attributes. Also allows you to compare multiple broker attributes.
Broker (IIB)	Force Update	Forcibly retrieves the object's value (required if needed to quickly refresh data)
	Admin Logs	View the administrative logs.
	Add to favorites	Allows you to create a shortcut to the broker in a Favorites viewlet.
	Show Object Attributes	Displays the selected server's attributes. Also allows you to compare multiple server attributes.
	Start	Start the selected server.
	Start All Application Types	Start the selected server's application types.
	Start All Message Flows	Start the selected server's message flows.
	Stop	Stop the selected server.
	Stop All Application Types	Stop the selected server's application types.
	Stop All Message Flows	Stop the selected server's message flows.
Server (IIB)	Delete All Content	Delete all of the selected server's content.
	Delete	Delete the selected server.
	Deploy	Deploys objects by bar file into the server.
	Force Update	Forcibly retrieves the object's value (required if needed to quickly refresh data)
	Statistics On	Turn the server's statistics on.
	Statistics Off	Turn the server's statistics off.
	Resource Statistics On	Turn resource statistics on.
	Resource Statistics Off	Turn resource statistics off.
	Add to favorites	Allows you to create a shortcut to the server in a Favorites viewlet.
Application (IIB)	Show Object Attributes	Displays the selected application's attributes. Also allows you to compare multiple application

Table C-1. Object Menu Options		
Object	Option	Description
		attributes.
	Start	Start the selected application.
	Stop	Stop the selected application.
	Delete	Delete the selected application.
	Force Update	Forcibly retrieves the object's value (required if needed to quickly refresh data)
	Statistics On	Turn statistics on.
	Statistics Off	Turn statistics off.
	Start Flow Monitoring	Enable flow monitoring.
	Stop Flow Monitoring	Disable flow monitoring.
	Add to favorites	Allows you to create a shortcut to the application in a Favorites viewlet.
	Show Object Attributes	Displays the selected service's attributes. Also allows you to compare multiple service attributes.
	Start	Start the selected service.
	Stop	Stop the selected service.
	Delete	Delete the selected service.
Service (IIB)	Force Update	Forcibly retrieves the object's value (required if needed to quickly refresh data)
	Statistics On	Turn statistics on.
	Statistics Off	Turn statistics off.
	Start Flow Monitoring	Enable flow monitoring.
	Stop Flow Monitoring	Disable flow monitoring.
	Add to favorites	Allows you to create a shortcut to the service in a Favorites viewlet.
	Show Object Attributes	Displays the selected REST API's attributes. Also allows you to compare multiple REST API attributes.
REST API (IIB)	Start	Start the selected REST API.
	Stop	Stop the selected REST API.

Table C-1. Object Menu Options		
Object	Option	Description
	Delete	Delete the selected REST API.
	Force Update	Forcibly retrieves the object's value (required if needed to quickly refresh data)
	Statistics On	Turn statistics on.
	Statistics Off	Turn statistics off.
	Start Flow Monitoring	Enable flow monitoring.
	Stop Flow Monitoring	Disable flow monitoring.
	Add to favorites	Allows you to create a shortcut to the REST API in a Favorites viewlet.
	Show Object Attributes	Displays the selected library's attributes. Also allows you to compare multiple library attributes.
	Delete	Delete the selected library.
Library (IIB)	Force Update	Forcibly retrieves the object's value (required if needed to quickly refresh data)
	Add to favorites	Allows you to create a shortcut to the library in a Favorites viewlet.
	Show Object Attributes	Displays the selected shared library's attributes. Also allows you to compare multiple share library attributes.
Shared Library	Delete	Delete the selected shared library.
(IIB)	Force Update	Forcibly retrieves the object's value (required if needed to quickly refresh data)
	Add to favorites	Allows you to create a shortcut to the shared library in a Favorites viewlet.
	Show Object Attributes	Displays the selected message flow's attributes. Also allows you to compare multiple message flow attributes.
Message Flow	Start	Start the message flow.
(IIB)	Stop	Stop the message flow.
	Force Stop	Force the message flow to stop.
	Activity Logs	Displays the message flow activity log.

Table C-1. Object Menu Options		
Object	Option	Description
	Force Update	Forcibly retrieves the object's value (required if needed to quickly refresh data)
	Stop Recording	Stop recording message flow.
	Statistics On	Turn statistics on.
	Statistics Off	Turn statistics off.
	Start Flow Monitoring	Start flow monitoring for the selected message flow.
	Stop Flow Monitoring	Stop flow monitoring for the selected message flow.
	Add to favorites	Allows you to create a shortcut to the message flow in a Favorites viewlet.
	Show Object Attributes	Displays the selected sub flow's attributes. Also allows you to compare multiple sub flow attributes.
Sub Flow (IIB)	Force Update	Forcibly retrieves the object's value (required if needed to quickly refresh data)
	Add to favorites	Allows you to create a shortcut to the sub flow in a Favorites viewlet.
	Show Object Attributes	Displays the selected resource's attributes. Also allows you to compare multiple resource attributes.
Resource (IIB)	Force Update	Forcibly retrieves the object's value (required if needed to quickly refresh data)
	Add to favorites	Allows you to create a shortcut to the resource in a Favorites viewlet.
Integration Node (ACE)	Show Object Attributes	Displays the selected integration node's attributes. Also allows you to compare multiple integration node attributes.
	Force Update	Forcibly retrieves the object's value (required if needed to quickly refresh data)
	Admin Logs	View the administrative logs.
	Add to favorites	Allows you to create a shortcut to the integration node in a Favorites viewlet.
Integration Server (ACE)	Show Object Attributes	Displays the selected server's attributes. Also allows you to compare multiple servers' attributes.

Table C-1. Object Menu Options		
Object	Option	Description
	Start	Start Integration Server
	Stop	Stop Integration Server
	Shutdown	Shutdowns the Integration Server
	Delete	Deletes the Integration Server
	Delete All Content	Deletes all deployed objects in the Integration Server
	Deploy	Deploys content by bar file to Server
	Force Update	Forcibly retrieves the object's value (required if needed to quickly refresh data)
	Start Service Trace	Starts server's service trace
	Rest Service Trace	Resets server's service trace
	Stop Service Trace	Stops server's service trace
	Start User Trace	Starts server's user trace
	Reset User Trace	Resets server's user trace
	Stop User Trace	Stops server's user trace
	Flow Statistic On	Enables flow statistics
	Flow Statistic Off	Disables flow statistics
	Resource Statistics On	Enables resource statistics
	Resource Statistics Off	Disables resource statistics
	Admin Logs	View the administrative logs
	Start Flow Monitoring	Enables flow monitoring
	Stop Flow Monitoring	Disables flow monitoring
	Add To Favorites	Allows you to create a shortcut to the Integration Server in a Favorites viewlet.
Application (ACE)	Show Object Attributes	Displays the selected application's attributes. Also allows you to compare multiple application attributes.
	Start	Start the application.
	Stop	Stop the application.

Table C-1. Object Menu Options		
Object	Option	Description
	Force Update	Forcibly retrieves the object's value (required if needed to quickly refresh data)
	Delete	Delete the application.
	Set Up	Configure the application.
	Teardown	Tears down the application.
	Validate	Validates the application.
	Add to favorites	Allows you to create a shortcut to the application in a Favorites viewlet.
Service (ACE)	Show Object Attributes	Displays the selected service's attributes. Also allows you to compare multiple service attributes.
	Start	Start the service.
	Stop	Stop the service.
	Force Update	Forcibly retrieves the object's value (required if needed to quickly refresh data)
	Delete	Delete the service.
	Set Up	Configure the service.
	Teardown	Tears down the service.
	Validate	Validates the service.
	Add to favorites	Allows you to create a shortcut to the service in a Favorites viewlet.
REST API (ACE)	Show Object Attributes	Displays the selected REST API's attributes. Also allows you to compare multiple REST API attributes.
	Start	Start the REST API.
	Stop	Stop the REST API.
	Force Update	Forcibly retrieves the object's value (required if needed to quickly refresh data)
	Delete	Delete the REST API.
	Set Up	Configure the REST API.
	Teardown	Tears down the REST API.
	Validate	Validates the REST API.

Table C-1. Object Menu Options		
Object	Option	Description
	Add to favorites	Allows you to create a shortcut to the REST API in a Favorites viewlet.
Library (ACE)	Show Object Attributes	Displays the selected library's attributes. Also allows you to compare multiple library attributes.
	Force Update	Forcibly retrieves the object's value (required if needed to quickly refresh data)
	Add to favorites	Allows you to create a shortcut to the library in a Favorites viewlet.
Shared Library (ACE)	Show Object Attributes	Displays the selected shared library's attributes. Also allows you to compare multiple shared library attributes.
	Force Update	Forcibly retrieves the object's value (required if needed to quickly refresh data)
	Delete	Delete the shared library.
	Add to favorites	Allows you to create a shortcut to the shared library in a Favorites viewlet.
Message Flow (ACE)	Show Object Attributes	Displays the selected message flow's attributes. Also allows you to compare multiple message flow attributes.
	Start	Start the message flow.
	Stop	Stop the message flow.
	Force Update	Forcibly retrieves the object's value (required if needed to quickly refresh data)
	Activity Logs	View the message flow's activity log.
	Set Up	Configure the message flow.
	Teardown	Tears down the message flow.
	Validate	Validates the message flow.
	Add to favorites	Allows you to create a shortcut to the message flow in a Favorites viewlet.
Sub Flow (ACE)	Show Object Attributes	Displays the selected sub flow's attributes. Also allows you to compare multiple sub flow attributes.
	Force Update	Forcibly retrieves the object's value (required if

Table C-1. Object Menu Options		
Object	Option	Description
		needed to quickly refresh data)
	Add to favorites	Allows you to create a shortcut to the sub flow in a Favorites viewlet.
Resource (ACE)	Show Object Attributes	Displays the selected resource's attributes. Also allows you to compare multiple resource attributes.
	Force Update	Forcibly retrieves the object's value (required if needed to quickly refresh data)
	Add to favorites	Allows you to create a shortcut to the resource in a Favorites viewlet.
Link (ACE)	Show Object Attributes	Displays the selected link's attributes. Also allows you to compare multiple link attributes.
	Force Update	Forcibly retrieves the object's value (required if needed to quickly refresh data)
	Add to favorites	Allows you to create a shortcut to the link in a Favorites viewlet.
Broker (Solace)	Show Object Attributes	Display object's attributes
	Statistics	Display object's statistics
	Properties	Edit object
	Force Update	Forcibly update object's properties
	Events	Make inquiries about and display events
	Add to favorites	Add object to favorite viewlet
Message VPNs	Show Object Attributes	Display object's attributes
	Properties	Edit object
	Status > Start	Start object
	Status > Stop	Stop object
	Status > Start DMR	Start dynamic message routing
	Status > Stop DMR	Stop dynamic message routing
	Commands >Delete	Delete object
	Commands > Clear Statistics	Clear object's statistics

Table C-1. Object Menu Options		Object Menu Options
Object	Option	Description
	Commands > Clear Guaranteed Statistics	Clear object's guaranteed statistics
	Statistics	Display object's statistics
	Force Update	Forcibly update object's properties
	Add to favorites	Add object to favorite viewlet
Queue	Show Object Attributes	Display object's attributes
	Properties	Edit object
	Commands > Delete	Delete object
	Commands > Clear Statistics	Clear object's statistics
	Commands > Start Replay	Start replay
	Commands > Cancel Replay	Cancel replay
	Change Status > Turn Outgoing On	Turn object's outgoing messages on
	Change Status > Turn Outgoing Off	Turn object's outgoing messages off
	Change Status > Turn Incoming On	Turn object's incoming messages on
	Change Status > Turn Incoming Off	Turn object's incoming messages off
	Statistics	Display object's statistics
	Force Update	Forcibly update object's properties
	Add to favorites	Add object to favorite viewlet
Queue	Show Object Attributes	Display object's attributes
Template	Commands \rightarrow Delete	Delete object
	Properties	Edit object
	Force Update	Forcibly update object's properties
	Add to favorites	Add object to favorite viewlet

Table C-1. Object Menu Options			
Object	Option	Description	
Topic Endpoint	Show Object Attributes	Display object's attributes	
	Properties	Edit object	
	Commands > Delete	Delete object	
	Commands > Clear Statistics	Clear object's statistics	
	Commands > Start Replay	Start object replay	
	Commands > Cancel Replay	Cancel object replay	
	Change Status > Turn Outgoing On	Turn object's outgoing messages on	
	Change Status > Turn Outgoing Off	Turn object's outgoing messages off	
	Change Status > Turn Incoming On	Turn object's incoming messages on	
	Change Status > Turn Incoming Off	Turn object's incoming messages off	
	Statistics	Display object's statistics	
	Force Update	Forcibly update object's properties	
	Add To Favorites	Add object to favorite viewlet	
Topic Endpoint	Show Object Attributes	Display object's attributes	
Template	Commands > Delete	Delete object	
	Properties	Edit object	
	Force Update	Forcibly update object's properties	
	Add to favorites	Add object to favorite viewlet	
Bridge	Show Object Attributes	Display object's attributes	
	Commands > Delete	Delete object	
	Commands > Clear Statistics	Clear object's statistics	
	Commands > Clear Event	Clear specified Event	

Table C-1. Object Menu Options		
Object	Option	Description
	Commands > Disconnect	Disconnect bridge
	Change Status > Enable	Enable object
	Change Status > Disable	Disable object
	Statistics	Display object's statistics
	Force Update	Forcibly update object's properties
	Properties	Edit object
	Add to favorites	Add object to favorite viewlet
Client Profile	Show Object Attributes	Display object's attributes
	Commands > Delete	Delete object
	Properties	Edit object
	Force Update	Forcibly update object's properties
	Add to favorites	Add object to favorite viewlet
ACL Profile	Show Object Attributes	Display object's attributes
	Commands > Delete	Delete object
	Browse Exceptions	Browse subobjects: Exceptions
	Properties	Edit object
	Force Update	Forcibly update object's properties
	Add to favorites	Add object to favorite viewlet
Client	Show Object Attributes	Display object's attributes
Username	Commands > Delete	Delete object
	Change Status > Enable	Enable object
	Change Status > Disable	Disable object
	Properties	Edit object
	Force Update	Forcibly update object's properties
	Add to favorites	Add object to favorite viewlet
JNDI	Show Object Attributes	Display object's attributes
Connection	Commands > Delete	Delete object
•	L	1

Table C-1. Object Menu Options			
Object	Option	Description	
Factory	Properties	Edit object	
	Force Update	Forcibly update object's properties	
	Add to favorites	Add object to favorite viewlet	
JNDI Queue	Show Object Attributes	Display object's attributes	
	Commands > Delete	Delete object	
	Properties	Edit object	
	Force Update	Forcibly update object's properties	
	Add to favorites	Add object to favorite viewlet	
JNDI Topic	Show Object Attributes	Display object's attributes	
	Commands > Delete	Delete object	
	Properties	Edit object	
	Force Update	Forcibly update object's properties	
	Add to favorites	Add object to favorite viewlet	
Client	Show Object Attributes	Display object's attributes	
Certificate Authority	Commands > Delete	Delete object	
	OCSP Trusted Names	Browse subobjects: OCSP trusted names	
	Refresh CRL	Refresh Certificate Revocation List	
	Properties	Edit object	
	Force Update	Forcibly update object's properties	
	Add to favorites	Add object to favorite viewlet	
Client	Show Object Attributes	Display object's attributes	
	Commands > Clear Statistics	Clear object's statistics	
	Commands > Clear Event	Clear specified Event	
	Commands > Disconnect	Disconnect object	
	Browse Sub-Objects	Browse subobjects	

Table C-1. Object Menu Options		
Object	Option	Description
	Statistics	Display object's statistics
	Force Update	Forcibly update object's properties
	Properties	Edit object
	Add to favorites	Add object to favorite viewlet
MQTT Session	Show Object Attributes	Display object's attributes
	Commands > Clear Statistics	Clear object's statistics
	Commands > Delete	Delete object
	Change Status > Enable	Enable object
	Change Status > Disable	Disable object
	Browse Subscriptions	Browse subobjects: Subscriptions
	Statistics	Display object's statistics
	Force Update	Forcibly update object's properties
	Properties	Edit object
	Add to favorites	Add object to favorite viewlet
RDP	Show Object Attributes	Display object's attributes
	Commands > Delete	Delete object
	Change Status > Enable	Enable object
	Change Status > Disable	Disable object
	Browse Queue Bindings	Browse subobjects: Queue Bindings
	Force Update	Forcibly update object's properties
	Properties	Edit object
	Add to favorites	Add object to favorite viewlet
Rest Consumer	Show Object Attributes	Display object's attributes
	Commands > Delete	Delete object
	Change Status > Enable	Enable object
	Change Status > Disable	Disable object

Table C-1. Object Menu Options		
Object	Option Description	
	Browse Queue Bindings	Browse subobjects: Queue Bindings
	Browse TLS Names	Browse subobjects: TLS names
	Force Update	Forcibly update object's properties
	Properties	Edit object
	Add to favorites	Add object to favorite viewlet
Distributed	Show Object Attributes	Display object's attributes
Cache	Commands > Delete	Delete object
	Commands > Clear Event	Clear specified Event
	Change Status > Enable	Enable object
	Change Status > Disable	Disable object
	Force Update	Forcibly update object's properties
	Properties	Edit object
	Add to favorite	Add object to favorite viewlet
Cache Cluster	Show Object Attributes	Display object's attributes
	Commands > Delete	Delete object
	Commands > Clear Event	Clear specified Event
	Commands > Start	Start object
	Change Status > Enable	Enable object
	Change Status > Disable	Disable object
	Browse Topic	Browse subobjects: Topics
	Browse Home Cache Cluster	Browse subobjects: Home Cache Clusters
	Force Update	Forcibly update object's properties
	Properties	Edit object
	Add to favorites	Add object to favorite viewlet
Cache Instance	Show Object Attributes	Display object's attributes
	Commands > Delete	Delete object

Table C-1. Object Menu Options		
Object	Option	Description
	Commands > Clear Event	Clear specified Event
	Commands > Start	Start object
	Commands > Clear Statistics	Clear object's statistics
	Statistics	Display object's statistics
	Change Status > Enable	Enable object
	Change Status > Disable	Disable object
	Browse Remote Topic	Browse subobjects: Remote Topics
	Browse Home Cache Cluster	Browse subobjects: Home Cache Cluster
	Force Update	Forcibly update object's properties
	Properties	Edit object
	Add to favorites	Add object to favorite viewlet
DMR Cluster	Show Object Attributes	Display object's attributes
	Commands > Delete	Delete object
	Browse Links	Browse Subobjects: Links
	Browse Topology Issues	Browse Subobjects: Topology Issues
	Force Update	Forcibly update object's properties
	Properties	Edit object
	Add to favorites	Add object to favorite viewlet
CSPF Neighbor	Show Object Attributes	Display object's attributes
	Commands > Delete	Delete object
	Browse TLS Name	Browse Subobjects: TLS Names
	Browse XML Connections	Browse Subobjects: XML Connection
	Force Update	Forcibly update object's properties
	Properties	Edit object
	Add to favorites	Add object to favorite viewlet

Appendix D: MQ Statistics Table Attributes

The following is a listing of all available MQ statistic attributes. These fields are used when generating MQ statistics viewlets (see section 4.3.10).

Table D1. STATQUEUE				
MANAGER_NAME	NONPERS_TIME_ON_Q_AVG	PERS_GET_BYTES		
MQNODE_NAME	PERS_TIME_ON_Q_AVG	NONPERS_BROWSE_COUNT		
MQMGR_NAME	NONPERS_PUT_COUNT	PERS_BROWSE_COUNT		
STAT_TIME_STAMP	PERS_PUT_COUNT	BROWSE_FAIL_COUNT		
INTERVAL_START_DATE_TIME	PUT_FAIL_COUNT	NONPERS_BROWSE_BYTES		
INTERVAL_END_DATE_TIME	NONPERS_PUT1_COUNT	PERS_BROWSE_BYTES		
COMMAND_LEVEL	PERS_PUT1_COUNT	EXPIRED_MSG_COUNT		
QUEUE_NAME	PUT1_FAIL_COUNT	NOT_QUEUED_MSG_COUNT		
QUEUE_TYPE	NONPERS_PUT_BYTES	PURGED_MSG_COUNT		
Q_DEFINITION_TYPE	PERS_PUT_BYTES	CB_CRT_ALT_COUNT		
CREATION_DATE	NONPERS_GET_COUNT	CB_REMOVE_COUNT		
CREATION_TIME	PERS_GET_COUNT	CB_RESUME_COUNT		
MIN_DEPTH	GET_FAIL_COUNT	CB_SUSPEND_COUNT		
MAX_DEPTH	NONPERS_GET_BYTES	CB_FAIL_COUNT		

Table D2. STATMQI			
MANAGER_NAME	CFSTRUCT_INQ_COUNT	TOPIC_INQ_COUNT	
MQNODE_NAME	LSR_INQ_COUNT	TOPIC_INQ_FAIL_COUNT	
MQMGR_NAME	SRVC_INQ_COUNT	TOPIC_SET_COUNT	
STAT_TIME_STAMP	QUEUE_INQ_FAIL_COUNT	TOPIC_SET_FAIL_COUNT	
INTERVAL_START_DATE_TI ME	NLIST_INQ_FAIL_COUNT	SUB_DUR_CREATE_COUNT	

Table D2. STATMQI				
INTERVAL_END_DATE_TIME	PROC_INQ_FAIL_COUNT	SUB_DUR_ALTER_COUNT		
COMMAND_LEVEL	STGCLS_INQ_FAIL_COUNT	SUB_DUR_RESUME_COUNT		
CONNECT_COUNT	QMGR_INQ_FAIL_COUNT	SUB_NDUR_CREATE_COUNT		
CONNECT_FAIL_COUNT	CHL_INQ_FAIL_COUNT	SUB_NDUR_ALTER_COUNT		
MAX_CONNECTIONS	AUTHINFO_INQ_FAIL_COUN T	SUB_NDUR_RESUME_COUNT		
NORMAL_DISC_COUNT	CFSTRUCT_INQ_FAIL_COUN T	SUB_FAIL_COUNT		
IMPLICIT_DISC_COUNT	LSR_INQ_FAIL_COUNT	UNSUB_DUR_CL_NOT_REM_COU		
QMGR_DISC_COUNT	SRVC_INQ_FAIL_COUNT	UNSUB_DUR_CL_REM_COUNT		
QUEUE_OPEN_COUNT	QUEUE_SET_COUNT	UNSUB_NDUR_CL_NOT_REM_CO		
NLIST_OPEN_COUNT	NLIST_SET_COUNT	UNSUB_NDUR_CL_REM_COUNT		
PROC_OPEN_COUNT	PROC_SET_COUNT	UNSUB_FAIL_COUNT		
STGCLS_OPEN_COUNT	STGCLS_SET_COUNT	SUB_RQ_COUNT		
QMGR_OPEN_COUNT	QMGR_SET_COUNT	SUB_RQ_FAIL_COUNT		
CHL_OPEN_COUNT	CHL_SET_COUNT	CB_CRT_ALT_COUNT		
AUTHINFO_OPEN_COUNT	AUTHINFO_SET_COUNT	CB_REMOVE_COUNT		
CFSTRUCT_OPEN_COUNT	CFSTRUCT_SET_COUNT	CB_RESUME_COUNT		
LSR_OPEN_COUNT	LSR_SET_COUNT	CB_SUSPEND_COUNT		
SRVC_OPEN_COUNT	SRVC_SET_COUNT	CB_FAIL_COUNT		
QUEUE_OPEN_FAIL_COUNT	QUEUE_SET_FAIL_COUNT	CTL_START_COUNT		
NLIST_OPEN_FAIL_COUNT	NLIST_SET_FAIL_COUNT	CTL_STOP_COUNT		
PROC_OPEN_FAIL_COUNT	PROC_SET_FAIL_COUNT	CTL_RESUME_COUNT		
STGCLS_OPEN_FAIL_COUN T	STGCLS_SET_FAIL_COUNT	CTL_SUSPEND_COUNT		

Table D2. STATMQI				
QMGR_OPEN_FAIL_COUNT	QMGR_SET_FAIL_COUNT	CTL_FAIL_COUNT		
CHL_OPEN_FAIL_COUNT	CHL_SET_FAIL_COUNT	MQSTAT_COUNT		
AUTHINFO_OPEN_FAIL_CO UNT	AUTHINFO_SET_FAIL_COUN T	MQSTAT_FAIL_COUNT		
CFSTRUCT_OPEN_FAIL_COU NT	CFSTRUCT_SET_FAIL_COUNT	SUB_HW_ALL_DUR_COUNT		
LSR_OPEN_FAIL_COUNT	LSR_SET_FAIL_COUNT	SUB_HW_APP_DUR_COUNT		
SRVC_OPEN_FAIL_COUNT	SRVC_SET_FAIL_COUNT	SUB_HW_ADMIN_DUR_COUNT		
QUEUE_CLOSE_COUNT	NONPERS_PUT_COUNT	SUB_HW_PROXY_DUR_COUNT		
NLIST_CLOSE_COUNT	PERS_PUT_COUNT	SUB_LW_ALL_DUR_COUNT		
PROC_CLOSE_COUNT	PUT_FAIL_COUNT	SUB_LW_APP_DUR_COUNT		
STGCLS_CLOSE_COUNT	NONPERS_PUT1_COUNT	SUB_LW_ADMIN_DUR_COUNT		
QMGR_CLOSE_COUNT	PERS_PUT1_COUNT	SUB_LW_PROXY_DUR_COUNT		
CHL_CLOSE_COUNT	PUT1_FAIL_COUNT	SUB_HW_ALL_NDUR_COUNT		
AUTHINFO_CLOSE_COUNT	NONPERS_PUT_BYTES	SUB_HW_APP_NDUR_COUNT		
CFSTRUCT_CLOSE_COUNT	PERS_PUT_BYTES	SUB_HW_ADMIN_NDUR_COUNT		
LSR_CLOSE_COUNT	NONPERS_GET_COUNT	SUB_HW_PROXY_NDUR_COUNT		
SRVC_CLOSE_COUNT	PERS_GET_COUNT	SUB_LW_ALL_NDUR_COUNT		
QUEUE_CLOSE_FAIL_COUN T	GET_FAIL_COUNT	SUB_LW_APP_NDUR_COUNT		
NLIST_CLOSE_FAIL_COUNT	NONPERS_GET_BYTES	SUB_LW_ADMIN_NDUR_COUNT		
PROC_CLOSE_FAIL_COUNT	PERS_GET_BYTES	SUB_LW_PROXY_NDUR_COUNT		
STGCLS_CLOSE_FAIL_COUN T	NONPERS_BROWSE_COUNT	TOPIC_PUT_PER_COUNT		
QMGR_CLOSE_FAIL_COUNT	PERS_BROWSE_COUNT	TOPIC_PUT_NPER_COUNT		
CHL_CLOSE_FAIL_COUNT	BROWSE_FAIL_COUNT	TOPIC_PUT_FAIL_COUNT		
AUTHINFO_CLOSE_FAIL_CO UN	NONPERS_BROWSE_BYTES	TOPIC_PUT1_PER_COUNT		

Table D2. STATMQI				
CFSTRUCT_CLOSE_FAIL_CO UN	PERS_BROWSE_BYTES	TOPIC_PUT1_NPER_COUNT		
LSR_CLOSE_FAIL_COUNT	COMMIT_COUNT	TOPIC_PUT1_FAIL_COUNT		
SRVC_CLOSE_FAIL_COUNT	COMMIT_FAIL_COUNT	TOPIC_PUT_PER_BYTES		
QUEUE_INQ_COUNT	BACKOUT_COUNT	TOPIC_PUT_NPER_BYTES		
NLIST_INQ_COUNT	EXPIRED_MSG_COUNT	PUB_MSG_PER_COUNT		
PROC_INQ_COUNT	PURGED_MSG_COUNT	PUB_MSG_NPER_COUNT		
STGCLS_INQ_COUNT	TOPIC_OPEN_COUNT	PUB_MSG_BYTES_PER_COUNT		
QMGR_INQ_COUNT	TOPIC_OPEN_FAIL_COUNT	PUB_MSG_BYTES_NPER_COUNT		
CHL_INQ_COUNT	TOPIC_CLOSE_COUNT			
AUTHINFO_INQ_COUNT	TOPIC_CLOSE_FAIL_COUNT			

Table D3. STATCHL			
MANAGER_NAME	CHANNEL_TYPE	EXIT_TIME_MIN	
MQNODE_NAME	REMOTE_QMGR_NAME	EXIT_TIME_AVG	
MQMGR_NAME	CONNECTION_NAME	EXIT_TIME_MAX	
STAT_TIME_STAMP	CHL_MSG_COUNT	FULL_BATCH_COUNT	
INTERVAL_START_DATE_TIME	CHL_MSG_BYTES	INCOMPLETE_BATCH_COUNT	
INTERVAL_END_DATE_TIME	NET_TIME_MIN	BATCH_SIZE_AVG	
COMMAND_LEVEL	NET_TIME_AVG	PUT_RETRY_COUNT	
CHANNEL_NAME	NET_TIME_MAX		

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