



OMEGAMON XE for Messaging

Comprehensive Workspace Sample Using Navigator Views

IBM Software Group

Version 1.1
17. Nov 2009

Detlef Wolf
Senior Consultant -- IT Specialist

<mailto:detlef.wolf@de.ibm.com>
Phone: +49 151 11750274

© Copyright International Business Machines Corporation 2009. All rights reserved.

US Government Users Restricted Rights – Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

Table of Contents

1	PREFACE	3
1.1	PURPOSE	3
1.2	THE AUTHOR	3
2	CONVENTIONS	4
3	THE NAVIGATOR DWMQ WEBSHERE MQ	5
4	THE NAVIGATOR ITEMS AND WORKSPACES	8
4.1	NAVIGATOR ITEM DWMQ WEBSHERE MQ SUMMARY	8
4.2	NAVIGATOR ITEM DWMQ CHANNEL DEFINITION SUMMARY	10
4.2.1	<i>Workspace DWMQ Channel Definition Summary</i>	10
4.2.2	<i>Workspace DWMQ Channel Definition Details</i>	12
4.3	NAVIGATOR ITEM CHANNEL PERFORMANCE SUMMARY	13
4.3.1	<i>Workspace DWMQ Channel Performance Summary</i>	13
4.3.2	<i>Workspace Send/Receive Channel Overview</i>	16
4.4	NAVIGATOR ITEM DWMQ CLUSTER QUEUE MANAGER SUMMARY	19
4.5	NAVIGATOR ITEM DWMQ DEAD-LETTER QUEUE MESSAGES SUMMARY	20
4.5.1	<i>Workspace DWMQ Dead-Letter Queue Messages Summary</i>	20
4.5.2	<i>Workspace DWMQ Dead Letter Queue Messages</i>	22
4.6	NAVIGATOR ITEM DWMQ ERROR LOG SUMMARY	24
4.7	NAVIGATOR ITEM DWMQ MQSERIES EVENT SUMMARY	27
4.8	NAVIGATOR ITEM DWMQ QUEUE DEFINITION SUMMARY	29
4.8.1	<i>Workspace DWMQ Queue Definition Summary</i>	30
4.8.2	<i>Workspace DWMQ Queue Definition Details</i>	32
4.9	NAVIGATOR DWMQ QUEUE MANAGER STATUS SUMMARY	34
4.9.1	<i>Workspace DWMQ Queue Manager Status Summary</i>	34
4.9.2	<i>Workspace DWMQ Queue Manager Parameters</i>	37
4.9.3	<i>Workspace DWMQ Queue Manager Listener Overview</i>	39
4.10	NAVIGATOR ITEM QUEUE STATISTICS SUMMARY	41
4.10.1	<i>Workspace DWMQ Queue Statistics</i>	41
4.10.2	<i>Workspace DWMQ Queue Status</i>	45
4.10.3	<i>Workspace DWMQ Triggered Queue Watch</i>	48
4.10.4	<i>Workspace DWMQ Queue Messages</i>	49
4.10.5	<i>Workspace DWMQ Queue Message Details</i>	52
5	QUERIES	53
5.1	CHANNEL DEFINITIONS	53
5.2	CHANNEL STATISTICS	54
5.3	CURRENT EVENTS	54
5.4	ERROR LOG	55
5.5	LISTENER STATUS	55
5.6	MANAGER DEFINITION DETAILS	56
5.7	MANAGERS	57
5.8	MESSAGE DATA	58
5.9	MESSAGE DETAILS	58
5.10	MESSAGE SUMMARY	59
5.11	QUEUE DEFINITION DETAILS	60
5.12	QUEUE DEFINITIONS	61
5.13	QUEUE HANDLE STATUS	62
5.14	QUEUE STATISTICS	63
5.15	QUEUE STATUS	63
6	ITM V6.2 NAVIGATOR PACKAGE USAGE	64
6.1	PACKAGE CONTENT – DELIVERED FILES	64
6.2	IMPLEMENTING THE NAVIGATOR	64
6.2.1	<i>Prerequisites</i>	64
6.2.2	<i>Loading the Navigator</i>	64



1 Preface

1.1 Purpose

This solution presents ITM V6.x enhanced comprehensive workspaces in a custom navigator view for OMEGAMON XE for Messaging V7.

OMEGAMON XE for Messaging V7 delivers a lot of useful workspaces with very detailed information on a single WebSphere MQ server. This solution presents a complete new approach to navigate to the details of a single MQ resources. The inspection of single objects is more context driven and spans WebSphere MQ server bounds.

The structure of the new navigator is inherited from the original product, so that the user will feel comfortable with the solution. When installed, situations are associated to the new navigation tree.

This solution should highlight the capabilities of the ITM V6 infrastructure and the power of using ITM navigator views in a production environment to identify potential upcoming problems in WebSphere MQ infrastructures.

The linking capability enables the users to follow the path of the message flows across system borders and get a more comprehensive view of the entire object chain making up the communication path in WebSphere MQ. It enables users to quickly identify the root cause of message flow problems.

1.2 The Author

Detlef Wolf is an IBM Certified IT Specialist for IBM Tivoli System Automation, working for the Tivoli Technical Sales team with focus on for the ITCAM product portfolio. He has about 20 years of experience in the IT industry. Starting in an application development department in the medical care industry, he became a System Programmer for z/OS in an insurance company. In 2000 he joined Candle and focused on IBM WebSphere® products, and the management of these systems. Since 2004 he has been a part of the IBM team in Germany, working together with major financial services clients on deploying IBM Tivoli products in their environment. He holds a Graduate Engineer Degree in Computer Science from the University of Erlangen-Nürnberg.

2 Conventions

- Queries:
All used queries in the workspaces under the new navigator have been self-defined (inherited from the product provided queries)
The queries have the prefix DW.
- Navigator name:
The navigator name starts with the prefix DWMQ
- Navigator item names
All navigator item names start with the prefix DWMQ
- Workspace names
All workspace names start with the prefix DWMQ
- Link names
All defined links have the prefix DWMQ in their names.

3 The Navigator DWMQ WebSphere MQ

The standard MQ monitoring navigator in OMEGAMON XE for Messaging V7 lacks the ability to display information across WebSphere MQ queue manager boundaries. This is because one agent for OMEGAMON XE for Messaging can only monitor the queue manager it is dedicated to. The IBM Tivoli Monitoring (ITM) infrastructure enables users to cross these boundaries by creating Logical Views.

Since Version 6.2.1 of ITM a new feature enables users to export and import navigators from ITM and to share these navigators across ITM infrastructures. This new feature is used, to share the on hand WebSphere MQ solution.

The new navigator is inherited from the original WebSphere MQ navigator sub-tree known from the Physical View in ITM.

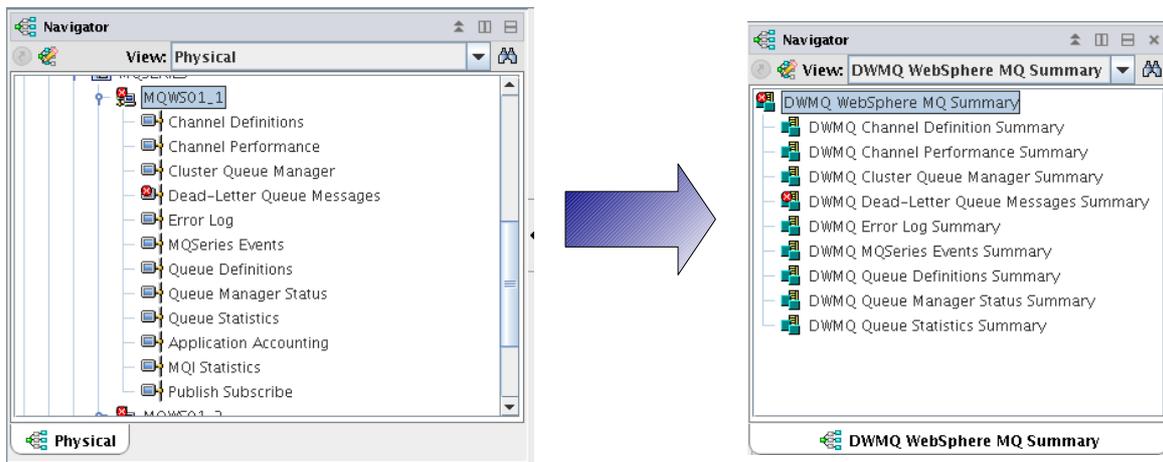


Illustration 1: Navigator Setup

Almost all navigator items from the *Physical View* are also available in the new created *DWMQ WebSphere MQ Summary* navigator.

While on the left side only one managed system (here: queue manager MQWS01_1) is reporting data, on the right side, all connected managed system of type WebSphere MQ are reporting.

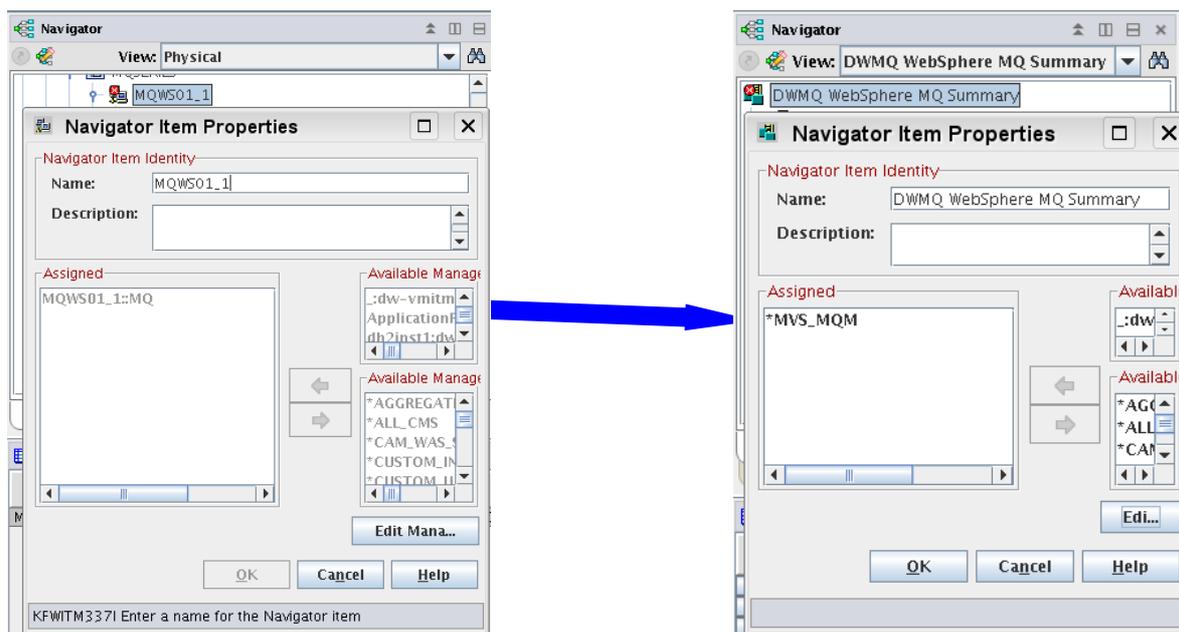


Illustration 2: Managed system assignment change

The managed system list “*MVS_MQM” represents all agents (and its instances from z/OS) reporting to the actual ITM infrastructure.

To limit the number of reporting agents, exchange the managed system list assignment, using your own management system list. Details about creating and managing system list may be found in the [ITM User's Guide](#).

Warning:

In large enterprises, the *MVS_MQM Managed Systems List may contain many MQ systems. If the number of managed systems is large you will encounter performance problems. When using this solution, create your own Managed Systems Lists and assign a limited number of MQ managed systems to each Managed Systems List.

We recommend that you perform load testing in your environment prior to putting the solution into production. This will allow you to build Managed Systems Lists with the appropriate number of managed systems while achieving the performance characteristics you desire.

The new assignment of managed systems enables now a comprehensive view on your entire MQ environment.

The screenshot displays the IBM WebSphere MQ Administration console. The top window, titled "Situation Event Console", shows a list of 10 events. The first seven are "Critical" and the last two are "Minor". The events are related to queue filling, dead-letter queue messages, and dead-letter queue statistics. Below this, the "Queue Manager Status Overview" table provides a detailed view of the system's performance.

Origin Node	QMgr Name	Host Name	QMgr Subsys	Host Jobname	Start Date & Time	QMgr Status	QMgr Type	DLQ Depth	DLQ Maximum	Monitored Queues	Local Queues	Remote Queues	Alias Queues	Transmit Queues	Predefined Queues	Dynamic Perm Qs	Dynamic Temp Qs	Open Queues	# Qs With High Depth
MQWS01_1:MQ	MQWS01_1	dw-vmwas01			08/14/09 10:25:00	Active	Linux	1	1024	44	34	2	1	4	34	0	0	30	1
MQWS01_2:MQ	MQWS01_2	dw-vmwas01			08/14/09 10:25:00	Active	Linux	1	1024	46	35	3	1	4	35	0	0	32	1
MQWS02_1:MQ	MQWS02_1	dw-vmwas02			08/14/09 10:24:00	Active	Linux	0	1024	43	33	3	1	4	33	0	0	28	0
MQWS02_2:MQ	MQWS02_2	dw-vmwas02			08/14/09 10:24:00	Active	Linux	0	1024	43	33	3	1	4	33	0	0	28	0
MQWSCLO1:MQ	MQWSCLO1	dw-vmwas01			08/14/09 10:25:00	Active	Linux	0	1024	39	30	1	1	1	30	0	0	26	0
MQWSCLO2:MQ	MQWSCLO2	dw-vmwas02			08/14/09 10:24:00	Active	Linux	0	1024	40	31	1	1	1	31	0	0	26	0

Illustration 3: The new view to WebSphere MQ

4 The Navigator Items and Workspaces

4.1 Navigator Item DWMQ WebSphere MQ Summary

This is the root item of the new navigator. It has only one workspace attached, having the same name.

The screenshot displays the IBM ITM Navigator interface for the workspace 'DWMQ WebSphere MQ Summary'. The Navigator tree on the left shows a hierarchy of summary items. The Situation Event Console in the top right displays a list of active situations with columns for Severity, Status, Owner, Situation Name, Display Item, Source, and Impact. The Queue Manager Status Overview table in the bottom right provides a detailed view of the reporting queue managers.

Origin Node	QMgr Name	Host Name	QMgr Subsys	Host Jobname	Start Date & Time	QMgr Status	QMgr Type	DLQ Depth	DLQ Maximum	Monitored Queues	Local Queues	Remote Queues	Alias Queues	Transmit Queues	Predefined Queues	Dynamic Perm Qs	Dynamic Temp Qs	Open Queues	# Qs With High Depth
MQWS01_1:MQ	MQWS01_1	dw-vmwas01			08/14/09 10:25:00	Active	Linux	1	1024	44	34	2	1	4	34	0	0	30	1
MQWS01_2:MQ	MQWS01_2	dw-vmwas01			08/14/09 10:25:00	Active	Linux	1	1024	46	35	3	1	4	35	0	0	32	1
MQWS02_1:MQ	MQWS02_1	dw-vmwas02			08/14/09 10:24:00	Active	Linux	0	1024	43	33	3	1	4	33	0	0	28	0
MQWS02_2:MQ	MQWS02_2	dw-vmwas02			08/14/09 10:24:00	Active	Linux	0	1024	43	33	3	1	4	33	0	0	28	0
MQWSCLO1:MQ	MQWSCLO1	dw-vmwas01			08/14/09 10:25:00	Active	Linux	0	1024	39	30	1	1	1	30	0	0	26	0
MQWSCLO2:MQ	MQWSCLO2	dw-vmwas02			08/14/09 10:24:00	Active	Linux	0	1024	40	31	1	1	1	31	0	0	26	0

Illustration 4: Workspace DWMQ WebSphere MQ Summary

It has two table views:

- Situation Event Console

In the upper right frame the currently active situations are displayed. This Situation Event Console shows only situations active in the navigation tree displayed on the left site.

- Queue Manager Status Overview

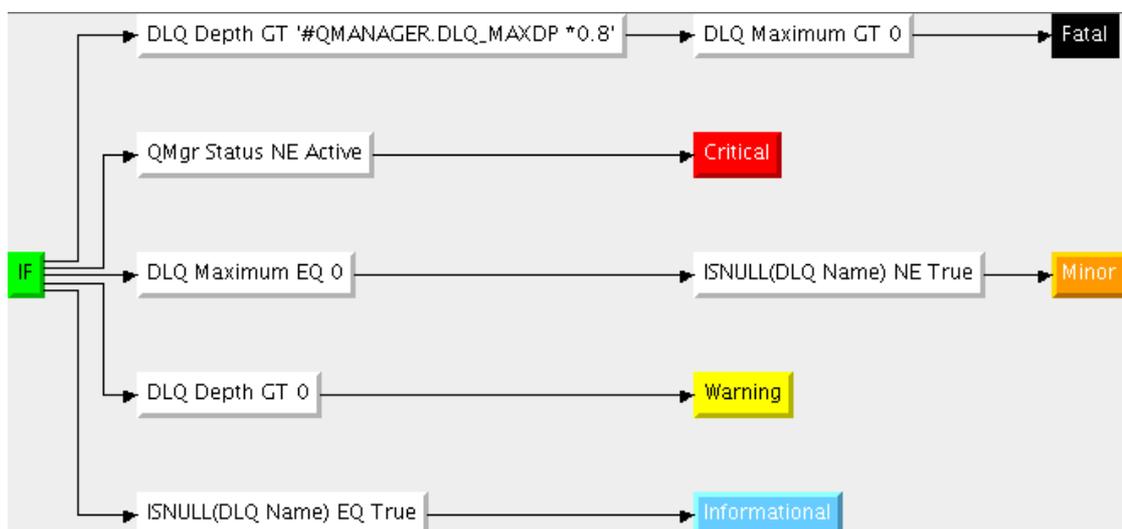
In the lower area the status of all reporting queue managers is shown. The following links have been defined:

- 🔗 DWMQ Queue Manager Parameters
- 🔗 DWMQ Listener Status
- 🔗 DWMQ Dead Letter Queue Status for QMgr ...
- 🔗 DWMQ Error Log Summary for QMgr ...
- 🔗 DWMQ Queue Statistics Summary for QMgr ...
- 🔗 DWMQ Queue Definitions Summary for QMgr ...
- 🔗 DWMQ Channel Performance Summary for QMgr ...
- 🔗 DWMQ Channel Definitions Summary for QMgr ...
- 🔗 DWMQ MQSeries Events Summary for QMgr ...
- 🔗 DWMQ Linux OS System

Illustration 5: Links for queue managers

- DWMQ Queue Manager Parameters
This link will guide to the selected queue manager's parameters on workspace [DWMQ Queue Manager Parameters](#)
- DWMQ Listener Status
Direct link to the workspace [DWMQ Queue Manager Listener Status](#), limiting the output of listener status information to the selected queue manager
- DWMQ Dead Letter Queue Status for QMgr ...
Displays the Dead-Letter queue status summary for the selected queue manager using the workspace [DWMQ Dead Letter Queue Status Summary](#)
- DWMQ Error Log Summary for QMgr ...
Link to the workspace [DWMQ Error Log Summary](#), limiting the output to the selected queue manager context.
- DWMQ Queue Statistics Summary for QMgr ...
Link to the workspace [DWMQ Queue Statistics Summary](#), limiting the output to the selected queue manager context.
- DWMQ Queue Definition Summary for QMgr ...
Link to the workspace [DWMQ Queue Definition Summary](#), limiting the output to the selected queue manager context.
- DWMQ Channel Performance Summary for QMgr ...
Link to the workspace [DWMQ Channel Performance Summary](#), limiting the output to the selected queue manager context.
- DWMQ Channel Definition Summary for QMgr ...
Link to the workspace [DWMQ Channel Definition Summary](#), limiting the output to the selected queue manager context.
- DWMQ MQSeries Event Summary for QMgr ...
Link to the workspace [DWMQ MQSeries Event Summary](#), limiting the output to the selected queue manager context.
- DWMQ Linux OS Agent
Link to the root navigator item of the Linux OS agent in the Physical ITM navigator for the hosting system.

The following thresholds apply to the table:



4.2 Navigator Item DWMQ Channel Definition Summary

This Navigator Item has two workspaces.



Illustration 6: Available workspaces

The default workspace is the one with same name as the navigator item. The other one is for displaying channel definition details.

4.2.1 Workspace DWMQ Channel Definition Summary

This workspace displays an overview of all channel definitions in the reporting WebSphere MQ environment.

Origin Node	QMgr Name	Host Name	Current Channels	Inactive Channels	Current Receivers	Inactive Receivers	Current Senders	Inactive Senders
MQWS01_1::MQ	MQWS01_1	dw-vmwas01	1	17	0	7	1	5
MQWS01_2::MQ	MQWS01_2	dw-vmwas01	2	16	1	6	1	5
MQWS02_1::MQ	MQWS02_1	dw-vmwas02	2	14	1	5	1	4
MQWS02_2::MQ	MQWS02_2	dw-vmwas02	2	14	1	5	1	4
MQWSCL01::MQ	MQWSCL01	dw-vmwas01	0	12	0	4	0	3
MQWSCL02::MQ	MQWSCL02	dw-vmwas02	0	12	0	4	0	3

Origin Node	Channel Name	Channel Type	Cluster	Cluster Name	Connection Name	Transport Type	Batch Size	Maximum Msg Len	Cur Defn
MQWS01_2::MQ	MQWS01_1.MQWS01_2	RCVR				TCP	50	4194304	Yes
MQWS01_1::MQ	MQWS01_1.MQWS01_2	SDR			dw-vmwas01.home(1415)	TCP	50	4194304	Yes
MQWS02_1::MQ	MQWS01_1.MQWS02_1	RCVR				TCP	50	4194304	Yes
MQWS01_1::MQ	MQWS01_1.MQWS02_1	SDR			dw-vmwas02.home(1414)	TCP	50	4194304	Yes
MQWS02_2::MQ	MQWS01_1.MQWS02_2	RCVR				TCP	50	4194304	Yes
MQWS01_1::MQ	MQWS01_1.MQWS02_2	SDR			dw-vmwas02.home(1415)	TCP	50	4194304	Yes
MQWS01_1::MQ	MQWS01_2.MQWS01_1	RCVR				TCP	50	4194304	Yes
MQWS01_2::MQ	MQWS01_2.MQWS01_1	SDR			dw-vmwas01.home(1414)	TCP	50	4194304	Yes
MQWS02_1::MQ	MQWS01_2.MQWS02_1	RCVR				TCP	50	4194304	Yes
MQWS01_2::MQ	MQWS01_2.MQWS02_1	SDR			dw-vmwas02.home(1414)	TCP	50	4194304	Yes
MQWS02_2::MQ	MQWS01_2.MQWS02_2	RCVR				TCP	50	4194304	Yes
MQWS01_2::MQ	MQWS01_2.MQWS02_2	SDR			dw-vmwas02.home(1415)	TCP	50	4194304	Yes

Illustration 7: The workspace DWMQ Channel Definition Summary

The workspace consists of two table views:

- Reporting Queue Managers

This table displays the channel summary overview from the queue manager perspective. The list of the queue manager indicates the number of potential reporters for the second table (see below).

Reporting Queue Managers			
	Origin Node	QMgr Name	Host Name
	MQWS01_2::MQ	MQWS01_1	-vmwas01
			-vmwas01
			-vmwas02
			-vmwas02
			-vmwas01
			-vmwas02

By using the provided context sensitive link on one of the table lines you can limit the output in the second table (“Channel Definitions”).

- Channel Definitions

In this table all channel definition abstracts in the entire MQ network are displayed (except a limitation has been set, by using one of the provided links – from this workspace or from another workspace). To get more details about one specific link, please use the provided link “DWMQ Channel Details”.

Channel Definitions			
	Origin Node	Channel Name	Channel Type
	MQWS01_2::MQ	MQWS01_1.MQWS01_2	RCVR
	MQWS01_1::MQ	MQWS01_1.MQWS01_2	SDR
		MQWS01_1.MQWS02_1	RCVR
		MQWS01_1.MQWS02_1	SDR

The following thresholds have been defined to the table view:

1:1	Hand icon	Mouse icon	Refresh icon	Search icon	Zoom icon	Reset icon
IF	→	Cur Defn EQ No	→	Informational		

4.2.2 Workspace DWMQ Channel Definition Details

This workspace should only be used as a target link from another workspace.

Warning:

Navigating to this workspace directly, without required context information (Channel Name and Queue Manager Name) will lead to extensive CPU and network usage on the WebSphere MQ hosting system as well as on the entire ITM infrastructure, because definition details for all channels in the entire WebSphere MQ scope will be gathered, transferred and displayed.

Below there is an example of that workspace, displaying detailed information for a sender channel.

The screenshot shows the 'DWMQ Channel Definition Detail' workspace. The left pane shows a tree view with 'DWMQ Channel Definition Summary' selected. The main area displays a table of 'Channel Parameters' for channel 'MQWS01_1.MQWS01_2'. The 'XMITQ' parameter is highlighted with a link icon. Below the parameters is a 'Channel Definitions' table.

Parameter Name	Parameter Description	Parameter Value	Para Ty
CHANNEL	Channel name	MQWS01_1.MQWS01_2	
CHLTYPE	Channel type	SDR	QMCH_DEF.
CONNNAME	Connection name	dw-vmwas01.home(1415)	
TRPTYPE	Transport type	TCP	QMCH_DEF.
DESCR	Description	Sender Channel from MQWS01_1 To MQWS01_2	
BATCHSZ	Max msgs for checkpoint	50	
MAXMSGL	Maximum message length	4194304	
XMITQ	Transmission queue name	MQWS01_2	
CONVERT	Sending MCA convert data	No	QMCH_DEF.
DISCINT	Max xmitq msg wait in s.	6000	
LONGRTY	Max long retry attempts	999999999	
LONGTMR	Long retry wait in s.	1200	
MCANAME	Message channel agent		
MCAUSER	MCA user identifier	Process	QMCH_DEF.
MODENAME	LU 6.2 mode name		
MSGDATA	Message exit user data		
MSGEXIT	Message exit name		
PASSWORD	MCA SNA session password		
RCVDATA	Receive exit user data		
RCVEXIT	Receive exit name		
SCYDATA	Security exit user data		
SCYEXIT	Security exit name		
SENDDATA	Send exit user data		
SENDEXIT	Send exit name		
SEQWRAP	Sequence number wrap	999999999	
SHORTRTY	Max short retry attempts	10	
SHORTTMR	Short retry wait in s.	60	
TPNAME	Transaction program name		
USERID	Task user identifier		
BATCHINT	Batch interval in ms.	0	

Origin Node	Channel Type	Channel Name	Cluster	Cluster Name	Connection Name	Transport Type	Batch Size	Maximum Msg Len	Cur Defn	Channel Description
MQWS01_1::MQ	SDR	MQWS01_1.MQWS01_2			dw-vmwas01.home(1415)	TCP	50	4194304	Yes	Sender Channel from MQWS01_1 To MQWS01_2

Illustration 8: Workspace DWMQ Channel Definition Detail

Each single parameter for the selected channel is displayed.

For a view parameters, additional information is available. The provided link will guide you to the required information. In this sample, the transmission queue parameter is highlighted with a link symbol.

XMITQ	Transmission queue name	MQWS01_2
DW XmitQ Status	MCA convert data	No
	mita msg wait in s.	6000

This link will guide to the workspace [DWMQ Queue Status](#) for the named transmission queue (here: MQWS01_2).

4.3 Navigator Item Channel Performance Summary

This Navigator Item has two workspaces.

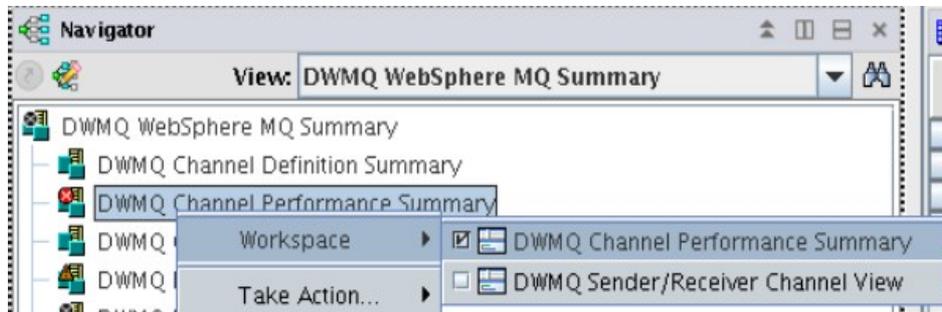


Illustration 9: Available workspaces

The default workspace is the one with same name as the navigator item, named “DWMQ Channel Performance Summary”. The other one is presenting a comprehensive view on Sender/Receiver Channels and the involved objects.

4.3.1 Workspace DWMQ Channel Performance Summary

This workspace delivers a status overview for all channels in all reporting queue managers.

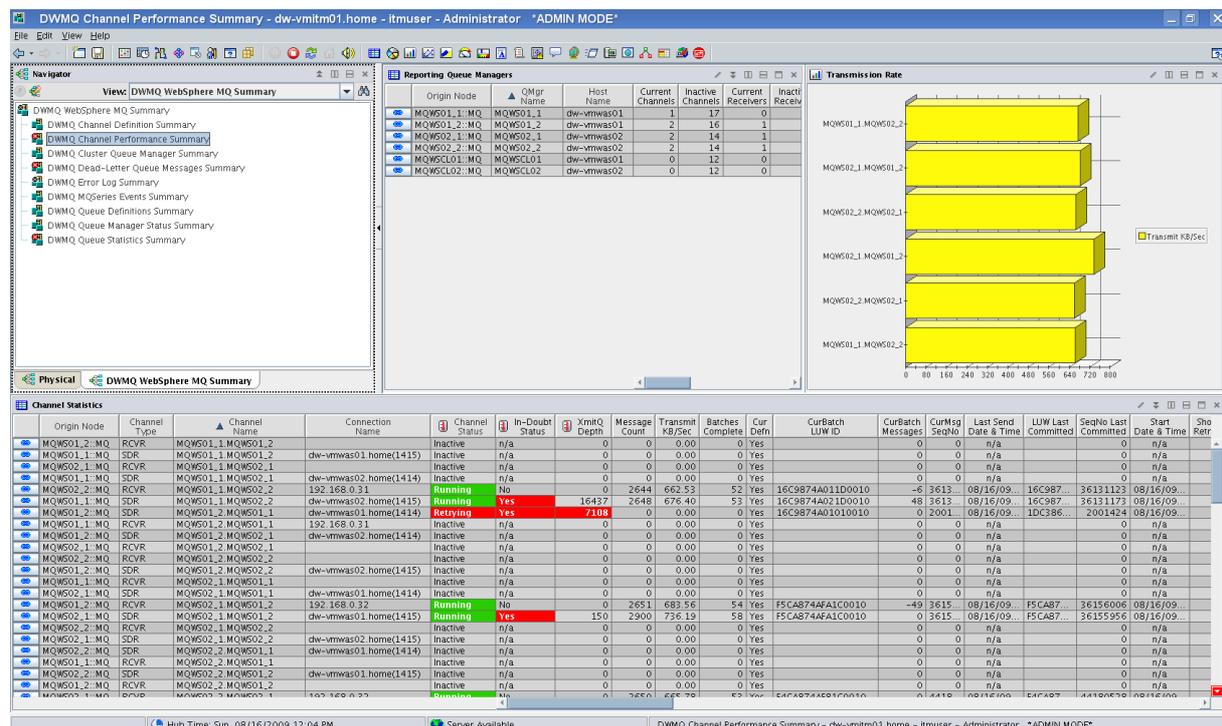


Illustration 10: Workspace DWMQ Channel Performance Summary

The workspace consists of two table views and one bar chart:

- Reporting Queue Managers (Table View)

This table displays the channel summary overview from the queue manager perspective. The list of the queue manager indicates the number of potential reporters for the other table and the bar chart (see below).

Reporting Queue Managers			
Origin Node	QMgr Name	Host Name	
MQWS01_1::MQ	MQWS01_1	-vmwas01	
	DWMQ Limit To Queue Manager ...	-vmwas01	
	Link Wizard...	-vmwas02	
	Link Anchor...	-vmwas01	
		-vmwas02	

By using the provided context sensitive link on one of the table lines you can limit the output in the other views.

- Channel Statistics

In this table channel statistics details from all channels in the entire MQ network are displayed (except a limitation has been set, by using one of the provided links – from this workspace or from another workspace). The provided links present more specific information on a single channel:

Channel Statistics								
	Origin Node	Channel Type	Channel Name	Connection Name	Channel Status	In-Doubt Status	XmitQ Depth	
	MQWS01_2::MQ	RCVR	MQWS01_1.MQWS01_2		Inactive	n/a	0	
	MQWS01_1::MQ	SDR	MQWS01_1.MQWS01_2	dw-vmwas01.home(1415)	Inactive	n/a	0	
	MQWS02_1::MQ	RCVR	MQWS01_1.MQWS02_1		Inactive	n/a	0	
	MQWS01_1::MQ	SDR	MQWS01_1.MQWS02_1	dw-vmwas02.home(1414)	Inactive	n/a	0	
	MQWS02_2::MQ	RCVR	MQWS01_1.MQWS02_2	192.168.0.31	Running	No	0	
	MQWS01_1::MQ	SDR	MQWS01_1.MQWS02_2	dw-vmwas02.home(1415)	Running	Yes	18396	
			DWMQ Channel Pair Display	MQWS01_1	dw-vmwas01.home(1414)	Retrying	Yes	7108
			DWMQ Send/Receive Channel Overview	MQWS01_1	192.168.0.31	Inactive	n/a	0
			DWMQ Queue Manager Listener Status	MQWS02_1	dw-vmwas02.home(1414)	Inactive	n/a	0
			DWMQ Transmission Queue Status	MQWS02_2		Inactive	n/a	0
			DWMQ Channel Definition Details	MQWS02_2	dw-vmwas02.home(1415)	Inactive	n/a	0
				MQWS01_1		Inactive	n/a	0
				MQWS01_1	dw-vmwas01.home(1414)	Inactive	n/a	0

- DWMQ Channel Pair Display:

For sender/receiver channels the sending and receiving part of the channel are displayed. The link is enable for channels of type SDR and RCVR only. The link points to the current workspace, simply limiting the output to the selected channel pair.

- DWMQ Send/Receive Channel Overview

For sender channels the sending and receiving part of the channel are displayed. Additionally the referenced transmission queue and the Dead-Letter Queue on the receiving systems are displayed. The link is enable for channels of type SDR only. A detailed description of the target workspace [DWMQ Send/Receive Channel Overview](#) is given below.

- DWMQ Queue Manager Listener Status

Display the listener status for the selected channel's queue manager using the workspace [DWMQ Queue Manager Listener Overview](#). This link is always enabled.

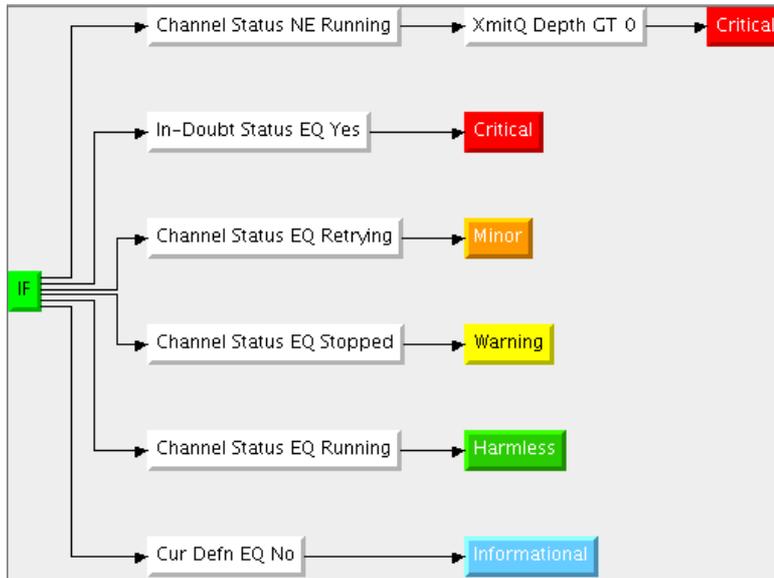
- DWMQ Transmission Queue Status

Link to the workspace [DWMQ Queue Status](#) to display the status details on the channel's referenced transmission queue. This link is only available for channels referencing a transmission queue.

- DWMQ Channel Definition Details

This is a reference to the workspace [DWMQ Queue Definition Details](#). The link is always enabled.

The following thresholds have been defined to the table view:



- **Transmission Rate (Bar Chart)**
Displays the transmission rate on channels, where the transmission rate is greater than zero.

4.3.2 Workspace Send/Receive Channel Overview

This workspace gives a comprehensive overview of the selected sender/receiver channel pair and its related queue objects.

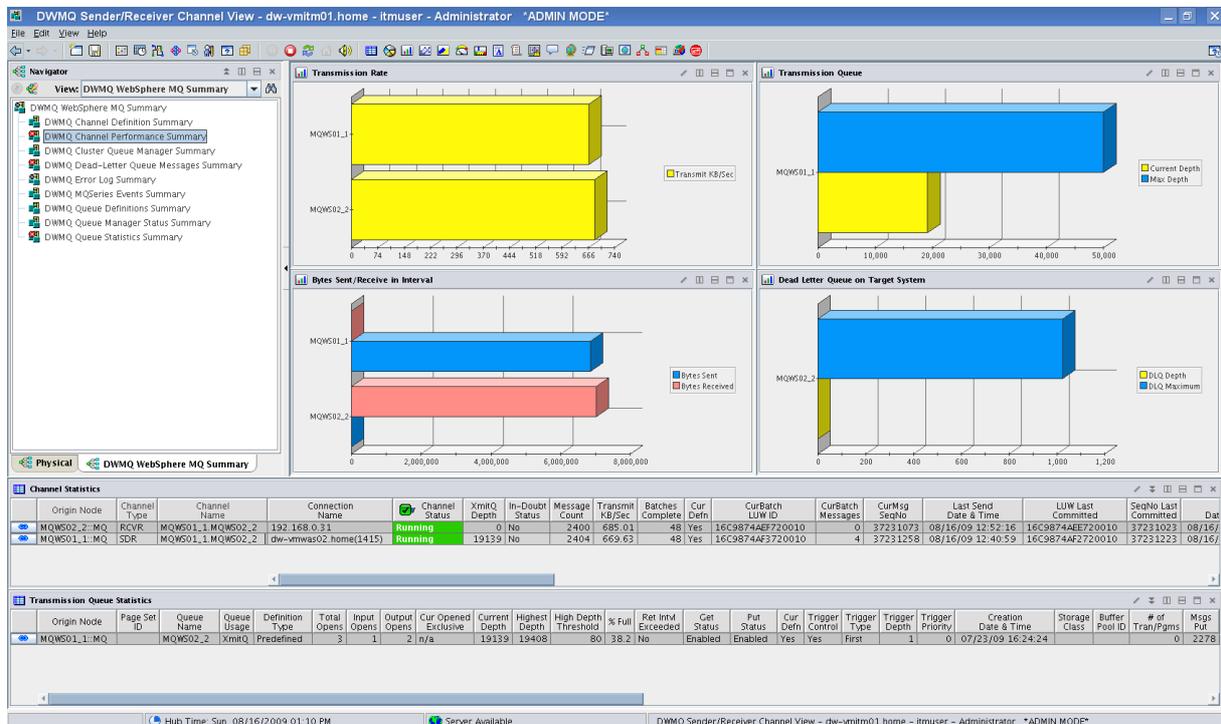
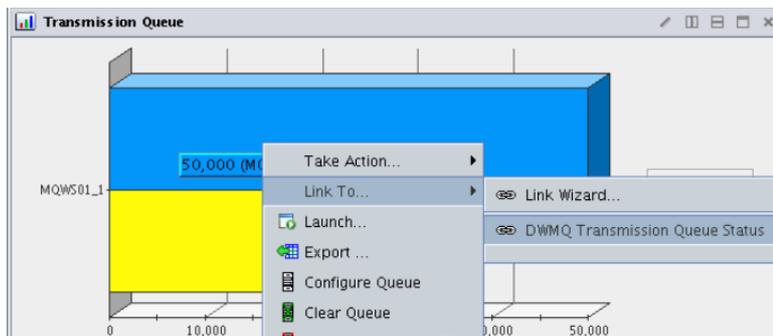


Illustration 11: Workspace Send/Receive Channel Overview

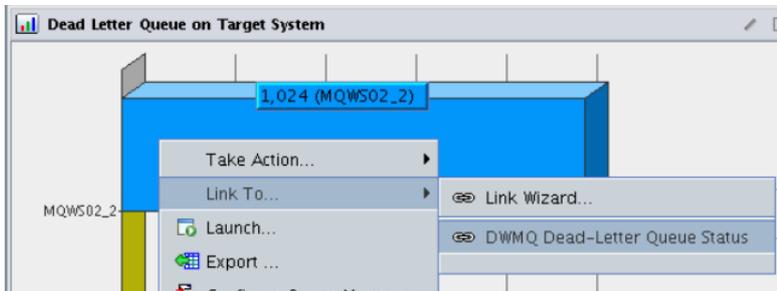
The workspace is composed out of six sensors.

- **Transmission Rate (Bar Chart)**
The data transfer rate in kilobytes for the channel stub per queue manager.
- **Bytes Sent/Received in Interval (Bar Chart)**
The data transfer per direction and channel stub per queue manager.
- **Transmission Queue (Bar Chart)**
Usage of the transmission queue.
By using the second mouse button inside the bar chart, a direct link to the [transmission queue status](#) is available.



The link will guide to the workspace [DWMQ Queue Status](#).

- Dead-Letter Queue on Target System (Bar Chart)
Usage of the Dead-Letter Queue on the target system.



The bar chart context sensitive available link DWMQ Dead-Letter Queue Status will guide directly to the workspace [DWMQ Queue Status](#) and display the status of the Dead-Letter queue.

- Channel Statistics (Table View)

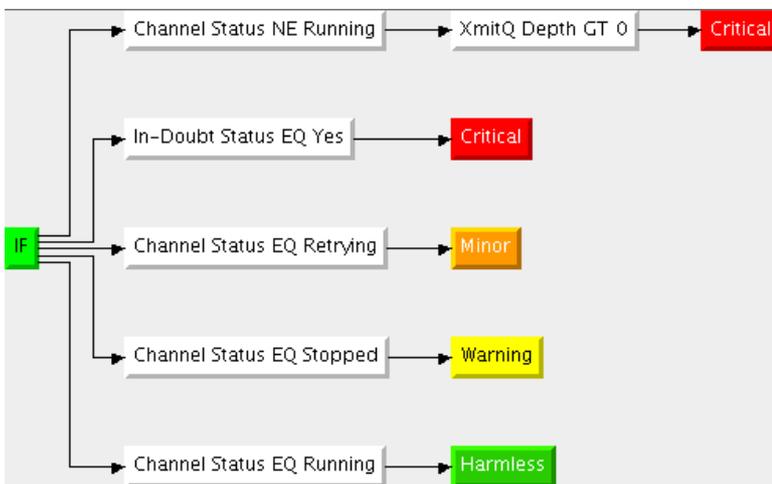
In this table channel statistics details for the sender and receiver part of the selected channel from the two involved queue managers are displayed.

Channel Statistics			
	Origin Node	Channel Type	Channel Name
	MQWS02_2::MQ	RCVR	MQWS01_1.MQWS02_2
	MQWS01_1::MQ	SDR	MQWS01_1.MQWS02_2

[DW Channel Pair Display](#)

The provided link on the table rows will guide back to the workspace [DWMQ Channel Performance Summary](#), limiting the channel selection to the current scope.

The following thresholds are defined for that table:



- Transmission Queue Statistics (Table View)

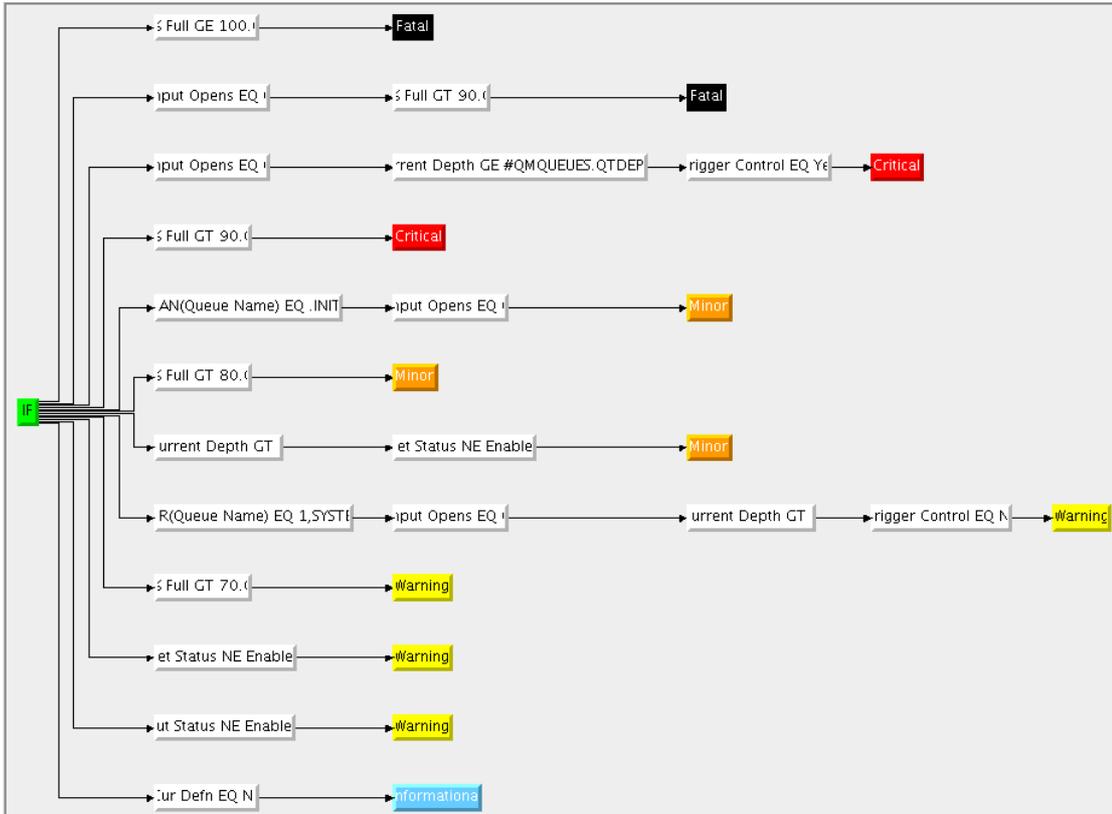
In this table, usually only one row is displayed, the detailed queue statistics for the transmission queue.

Transmission Queue Statistics				
	Origin Node	Page Set ID	Queue Name	Queue Usage
	MQWS01_1::MQ		MQWS02_2	XmitQ

Context menu options: [DWMQ Transmission Queue Status](#), [Link Wizard...](#), [Link Anchor...](#)

The link will guide to the workspace [DWMQ Queue Status](#).

The following thresholds are define for that table:



4.4 Navigator Item DWMQ Cluster Queue Manager Summary

This navigator item has only one workspace, having the same name.

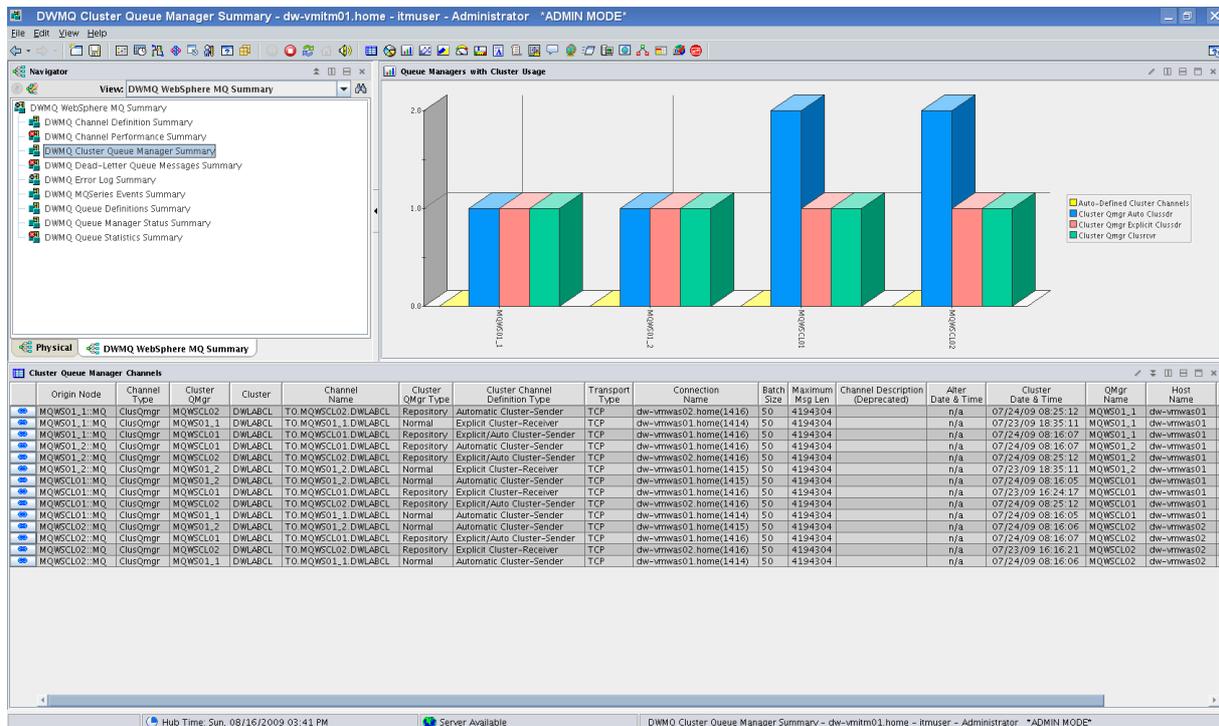


Illustration 12: Workspace DWMQ Cluster Queue Manager Summary

The workspace gives an overview all defined clusters and the used cluster channels.

- Queue Managers with Cluster Usage (Bar Chart)

The bar chart displays the number of cluster channels existing on each queue manager.

- Cluster Queue Manager Channels (Table View)

This table lists all currently defined cluster channels across all queue manager.

The provided link “DWMQ Queues in Cluster” displays all queues defined within the selected cluster.

Origin Node	Channel Type	ClusQMgr
MQW501_1::MQ	ClusQmgr	MQW501_1
MQW501_1::MQ	ClusQmgr	MQW501_1
MQW501_1::MQ	ClusQmgr	MQW501_1
DWMQ Queues in Cluster ...		
Link Wizard...		
Link Anchor...		

The link redirects the user to the workspace [DWMQ Queue Definition Summary](#).

4.5 Navigator Item DWMQ Dead-Letter Queue Messages Summary

4.5.1 Workspace DWMQ Dead-Letter Queue Messages Summary

The workspace gives an overview of the usage of the Dead-Letter queues for all queue managers.

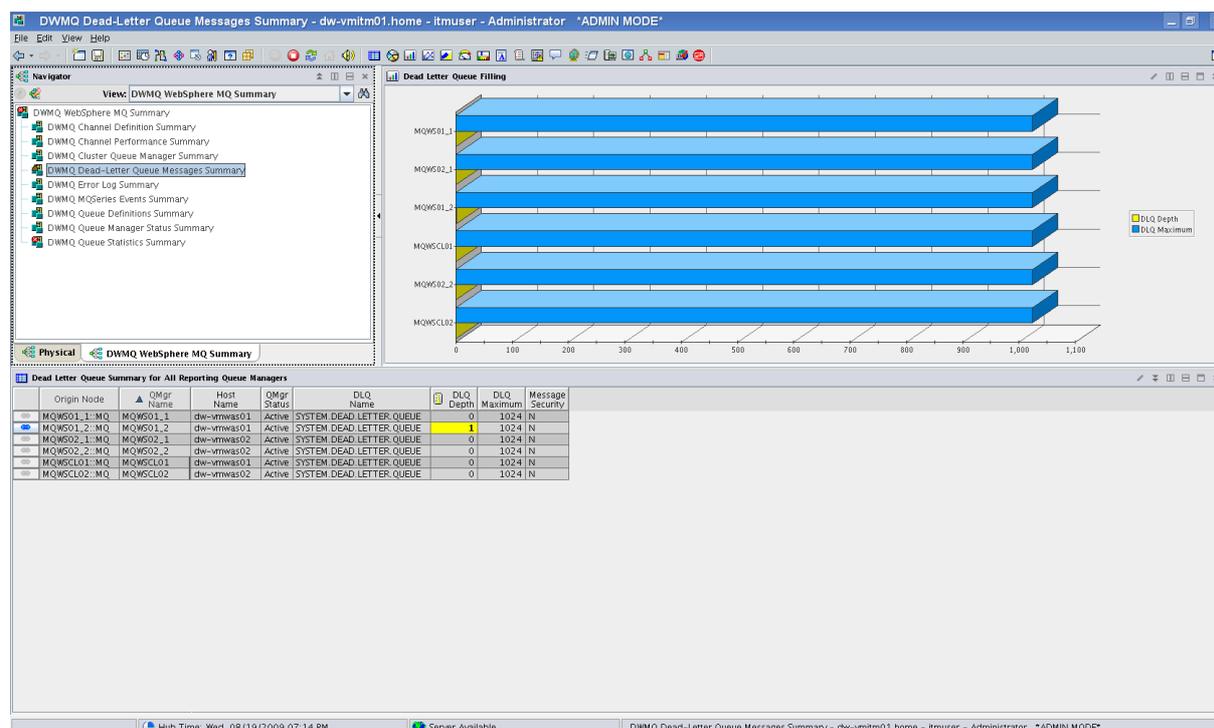


Illustration 13: Workspace DWMQ Dead-Letter Queue Messages Summary

The workspace contains two views:

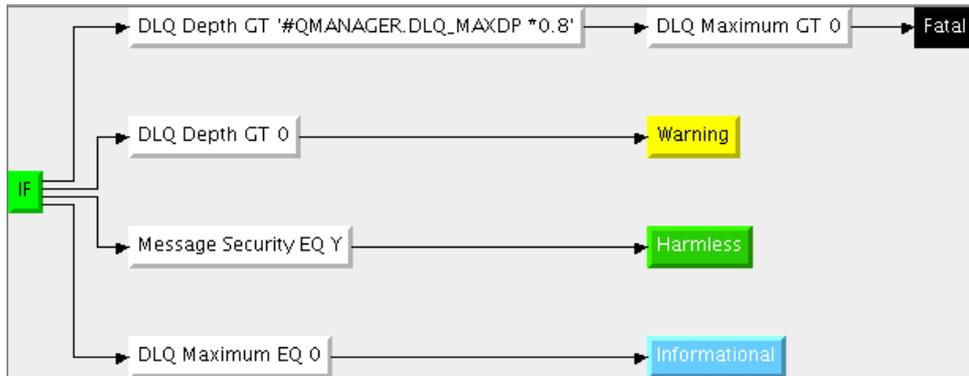
- Dead Letter Queue Filling (Bar Chart)
The chart shows the maximum queue depth compared to the current queue depth for each queue manager.
- Dead Letter Queue Summary for All Reporting Queue Manager (Table View)
The tables displays all reporting queue manager's status in details.

The following link is defined for the table entries:

Dead Letter Queue Summary for All Reporting Queue Managers				
	Origin Node	QMgr Name	Host Name	QMgr Status
	MQW501.1::MQ	MQW501.1	dw-vmwas01	Active
	MQW501.2::MQ	MQW501.2	dw-vmwas01	Active
			vmwas02	Active
			vmwas02	Active
			vmwas02	Active

The link is available only for those table rows, where the current Dead-Letter Queue depth is greater than zero. The link will guide to the workspace [DWMQ Dead Letter Queue Messages](#)

The following thresholds have been defined for the table:



4.5.2 Workspace DWMQ Dead Letter Queue Messages

This workspace displays all current messages on a selected Dead-Letter queue on a single queue manager.

Warning:

Navigating to this workspace directly, without required context information (Queue Name and Queue Manager Name) will lead to extensive CPU and network usage on the WebSphere MQ hosting system as well as on the entire ITM infrastructure, because messages from all Dead-Letter queues in the entire WebSphere MQ scope will be gathered, transferred and displayed.

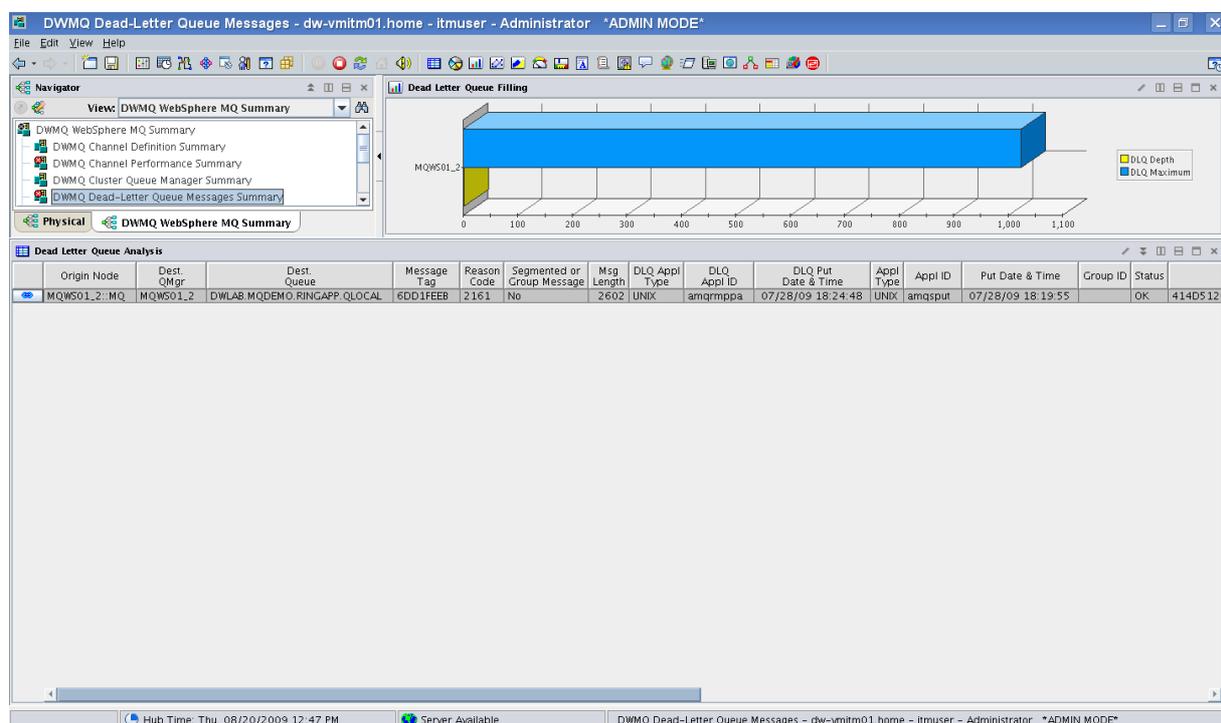


Illustration 14: Workspace DWMQ Dead Letter Queue Messages

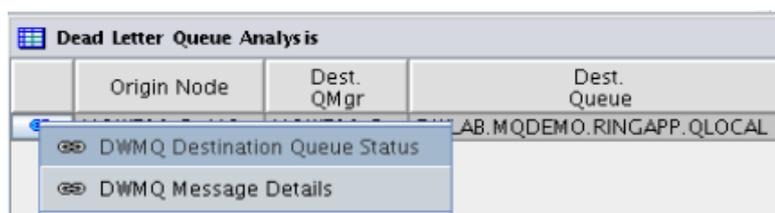
- Dead-Letter Queue Filling (Bar Chart)

This bar chart shows the current queue depth compared to the maximum queue depth of the Dead-Letter queue

- Dead-Letter Queue Analysis (Table View)

In this table all current messages on the Dead-Letter Queue are displayed, each message in a single row. The attributes displayed, are parts of the Dead-Letter queue header and the message header. The reason code describes, why the message was put onto the Dead-Letter queue.

The provided links may be used, to lead to a better understanding of the misbehavior:



- Link DWMQ Destination Queue Status

This link is intended to help to analyze the reason why the message was not put onto the target queue. Who is the queue doing? Which readers are consuming the arriving messages?

The target workspace is [DWMQ Queue Status](#).

- Link DWMQ Message Details

This link will guide to the workspace [DWMQ Queue Message Details](#) to display the queue message descriptor and content. This might help to understand how to proceed with the message delivery, after the message has been put onto the Dead-Letter queue.

4.6 Navigator Item DWMQ Error Log Summary

This navigator item has only one workspace, having the same name.

Illustration 15: Workspace DWMQ Error Log Summary

This workspace gives a consolidated view on the WebSphere MQ error logs across all reporting queue manager. This helps to quickly identify reasons for a misbehaving MQ transaction.

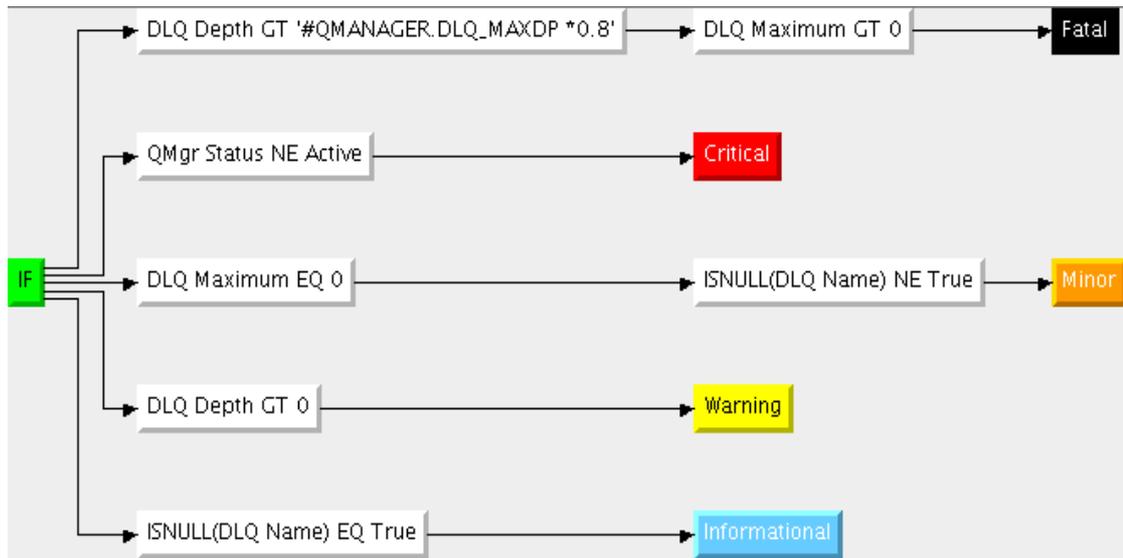
- Reporting queue manager (Table View)

This table shows the status of all reporting queue managers. The following link has been defined:

Reporting Queue Managers					
	Origin Node	QMgr Name	Host Name	QMgr Subsys	Host Jobname
	MQWS01.1:MQ	MQWS01.1	dw-vmw01		
	DWMQ Limit To Queue Manager ...		twas01		
	Link Wizard...		twas02		

The link will recursively call this workspace, limiting the error log entries to the selected queue manager.

The following thresholds have been defined to the table view:



- Error Log (Table View)

The table contains error message from all WebSphere MQ queue managers reporting to that infrastructure.

The provided links should be used with care, because the context of the table column “Involved Object” is not always clear, so that the links are always enabled, regardless the object type.

Error Log				
	QMgr Name	▼ Log Date & Time	⊗ Message ID	Involved Object
	MQWS01_2	08/20/09 13:10:37	AMQ9506	MQWS01_2.MQWS01_1
	MQWS01_2	08/20/09 13:10:37	AMQ9999	MQWS01_2.MQWS01_1
	MQWS01_1	08/20/09 13:10:36	AMQ9999	MQWS01_2.MQWS01_1
	MQWS01_1	08/20/09 13:10:36	AMQ9511	DWLAB.MQDEMO.AMQSPUTC.QLOCAL
	DWMQ Channel Status		AMQ9527	MQWS01_2.MQWS01_1
	DWMQ Queue Status For Queue ...		AMQ7469	
	Link Wizard...		AMQ9511	SYSTEM.DEAD.LETTER.QUEUE
			AMQ9544	MQWS01_2.MQWS01_1
			AMQ7234	MQWS01_1

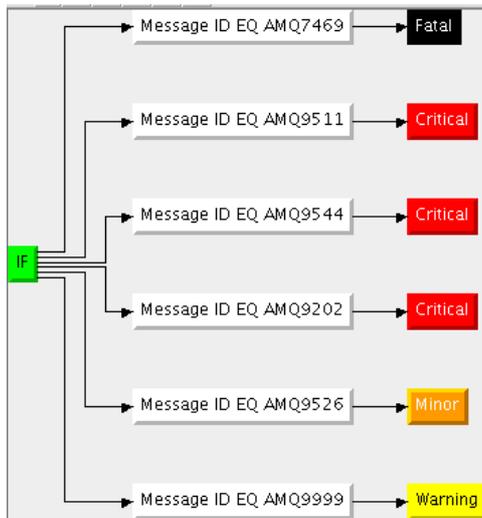
- DWMQ Channel Status

If the involved object is a channel, use this link to get to workspace [DWMQ Channel Performance Summary](#) to see the channel status details. From there, inspect the channel definition, if required.

- DWMQ Queue Status

If the involved object is a queue, this link will guide to the queue status display. From that point, you may take a closer look onto the queue definition attributes, queue messages and so on. The workspace [DWMQ Queue Status](#) is used.

The following thresholds have been defined for that table:



The highlighting shows only a few message codes, indicating a remarkable error condition in WebSphere MQ. Additionally messages may be picked from the [WebSphere MQ messages and codes guide](#), to be set as a threshold.

4.7 Navigator Item DWMQ MQSeries Event Summary

This navigator item has only one workspace, having the same name.

The screenshot displays the 'Queue Manager Status Overview' table with the following data:

Origin Node	QMgr Name	Host Name	QMgr Subsys	Host Jobname	Start Date & Time	QMgr Status	QMgr Type	DLQ Depth	DLQ Maximum	Monitored Queues	Local Queues	Remote Queues	A
MQWS01.1:MQ	MQWS01.1	dw-vmwas01			08/20/09 11:15:00	Active	Linux	1	1024	44	34	2	
MQWS01.2:MQ	MQWS01.2	dw-vmwas01			08/20/09 11:15:00	Active	Linux	1	1024	46	35	3	
MQWS02.1:MQ	MQWS02.1	dw-vmwas02			08/20/09 11:15:00	Active	Linux	0	1024	43	33	3	
MQWS02.2:MQ	MQWS02.2	dw-vmwas02			08/20/09 11:15:00	Active	Linux	0	1024	43	33	3	
MQWSCL01:MQ	MQWSCL01	dw-vmwas01			08/20/09 11:15:00	Active	Linux	0	1024	39	30	1	
MQWSCL02:MQ	MQWSCL02	dw-vmwas02			08/20/09 11:15:00	Active	Linux	0	1024	40	31	1	

The 'WebSphere MQ Events' table below it has the following columns: Origin Node, Event Date & Time, Event, Event QMgr Name, Event Host Name, Resource Name, Internal EventID, Reporting Qmgr Name, and Reporting Host Name.

Illustration 16: Workspace DWMQ MQSeries Event Summary

The workspace gives you a comprehensive overview of all WebSphere MQ events across all reporting queue manager.

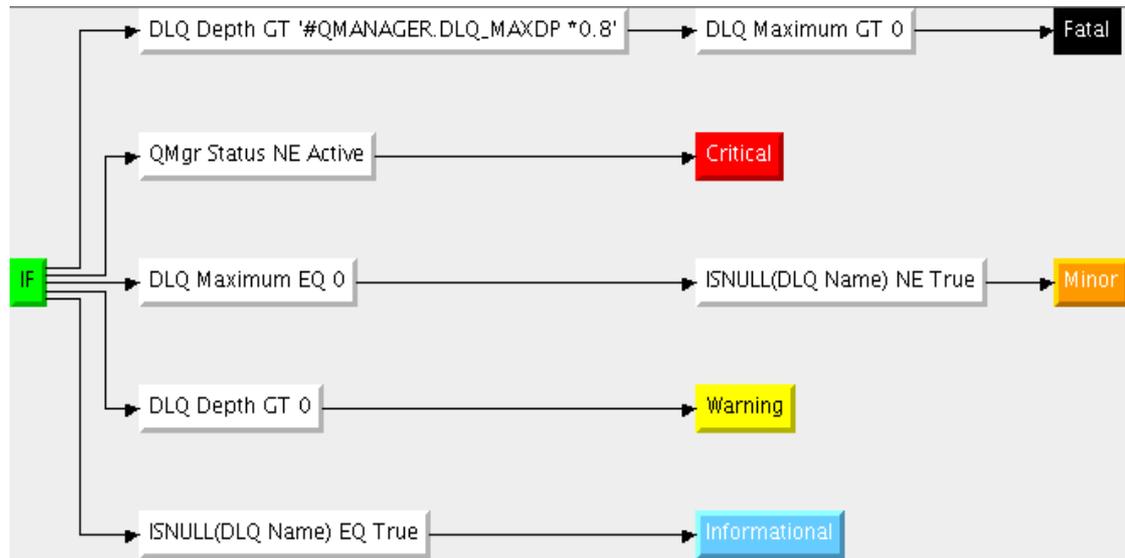
- Reporting queue manager (Table View)

This table shows the status of all reporting queue managers. The following link has been defined:

Origin Node	QMgr Name	Host Name	QMgr Subsys	Host Jobname
MQWS01.1:MQ	MQWS01.1	dw-vmwas01		
DWMQ Limit To Queue Manager ...		twas01		
Link Wizard...		twas02		

The link will recursively call this workspace, limiting the event entries to the selected queue manager.

The following thresholds have been defined to the table view:



- WebSphere MQ Events (Table View)

This table displays all currently existing events from all reporting queue managers.

4.8 Navigator Item DWMQ Queue Definition Summary

This navigator item has two workspaces.

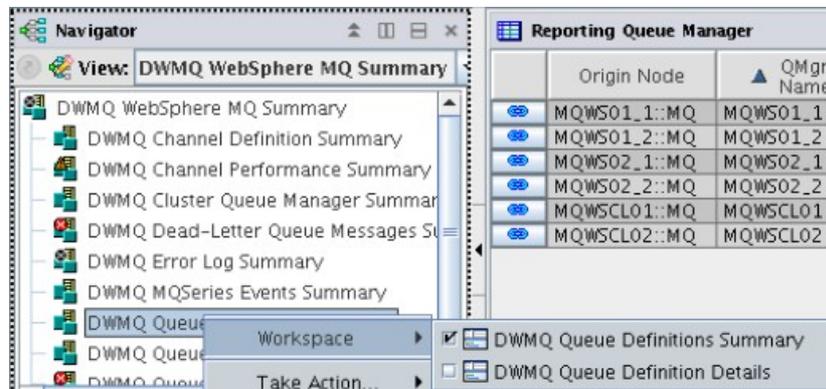


Illustration 17: Available workspaces

The default workspace is the one with same name as the navigator item, named “DWMQ Queue Definition Summary”. The other one is presenting detailed information for a selected Queue Definition.

4.8.1 Workspace DWMQ Queue Definition Summary

The workspace delivers a comprehensive overview of all queue definitions from all reporting WebSphere MQ queue managers.

The screenshot shows the 'DWMQ Queue Definitions Summary' application. The top table, 'Reporting Queue Manager', provides a summary of queue managers. The bottom table, 'Defined Queue Objects', provides a detailed view of individual queue definitions.

Origin Node	QMgr Name	Host Name	Monitored Queues	Local Queues	Remote Queues	Alias Queues	Transmit Queues	Predefined Queues	Dynamic Perm Qs	Dynamic Temp Qs	Cluster Queues
MQWS01_1:MQ	MQWS01_1	dw-vmwas01	44	34	2	1	4	35	0	0	1
MQWS01_2:MQ	MQWS01_2	dw-vmwas01	46	35	3	1	4	33	0	0	1
MQWS02_1:MQ	MQWS02_1	dw-vmwas02	43	33	3	1	4	33	0	0	0
MQWS02_2:MQ	MQWS02_2	dw-vmwas02	43	33	3	1	4	33	0	0	0
MQWSCLO1:MQ	MQWSCLO1	dw-vmwas01	39	30	1	1	1	30	0	0	1
MQWSCLO2:MQ	MQWSCLO2	dw-vmwas02	40	31	1	1	1	31	0	0	1

Origin Node	Queue Name	Queue Type	Queue Usage	Definition Type	Creation Date & Time	Cur Defn	Put Status	Default Priority	Default Persist	Queue Description (Deprecated)	Local Qu
MQWS01_1:MQ	DWLAB.MQDEMO.AMOSPUTC.QLOCAL	Local	Normal	Predefined	07/23/09 16:24:25	Yes	Enabled	0	Yes	Local Queue for the function AMOSPUTC, MQDEMO, &Customer)	Local Qu
MQWS02_2:MQ	DWLAB.MQDEMO.AMOSPUTC.REMOTE	Remote	n/a	n/a	n/a	Yes	Enabled	0	Yes	Remote Queue for DWLAB, MQDEMO, AMOSPUTC on QM MQWS0...	Remote
MQWS01_1:MQ	DWLAB.MQDEMO.AMOSPUTC.REMOTE	Remote	n/a	n/a	n/a	Yes	Enabled	0	Yes	Remote Queue for DWLAB, MQDEMO, AMOSPUTC on QM MQWS0...	Remote
MQWS01_2:MQ	DWLAB.MQDEMO.AMOSPUTC.REMOTE	Remote	n/a	n/a	n/a	Yes	Enabled	0	Yes	Remote Queue for DWLAB, MQDEMO, AMOSPUTC on QM MQWS0...	Remote
MQWSCLO1:MQ	DWLAB.MQDEMO.CLUSSAMP.QLOCAL	Cluster	n/a	n/a	n/a	Yes	Enabled	0	Yes	Local Queue for the function CLUSSAMP, MQDEMO, &Customer)	Local Qu
MQWS01_2:MQ	DWLAB.MQDEMO.CLUSSAMP.QLOCAL	Cluster	n/a	n/a	n/a	Yes	Enabled	0	Yes	Local Queue for the function CLUSSAMP, MQDEMO, &Customer)	Local Qu
MQWS01_1:MQ	DWLAB.MQDEMO.CLUSSAMP.QLOCAL	Local	Normal	Predefined	07/23/09 16:16:21	Yes	Enabled	0	Yes	Local Queue for the function CLUSSAMP, MQDEMO, &Customer)	Local Qu
MQWSCLO2:MQ	DWLAB.MQDEMO.CLUSSAMP.QLOCAL	Cluster	n/a	n/a	n/a	Yes	Enabled	0	Yes	Local Queue for the function CLUSSAMP, MQDEMO, &Customer)	Local Qu
MQWS01_2:MQ	DWLAB.MQDEMO.RINGAPP.INITQ	Local	Normal	Predefined	07/23/09 16:24:08	Yes	Enabled	0	Yes	Initiationqueue f obige Anwendung	Initiation
MQWS01_2:MQ	DWLAB.MQDEMO.RINGAPP.QLOCAL	Local	Normal	Predefined	07/23/09 16:24:08	Yes	Enabled	0	Yes	Local Queue for the function RINGAPP, MQDEMO, &Customer)	Local Qu
MQWS02_2:MQ	DWLAB.MQDEMO.RINGAPP.REMOTE	Remote	n/a	n/a	n/a	Yes	Enabled	0	Yes	Remote Queue for DWLAB, MQDEMO, RINGAPP on QM MQWS02_1	Remote
MQWS02_1:MQ	DWLAB.MQDEMO.RINGAPP.REMOTE	Remote	n/a	n/a	n/a	Yes	Enabled	0	Yes	Remote Queue for DWLAB, MQDEMO, RINGAPP on QM MQWS01_2	Remote
MQWS01_2:MQ	DWLAB.MQDEMO.RINGAPP.REMOTE	Remote	n/a	n/a	n/a	Yes	Enabled	0	Yes	Remote Queue for DWLAB, MQDEMO, RINGAPP on QM MQWS02_2	Remote
MQWS01_1:MQ	DWLAB.MQDEMO.RINGAPP.REMOTE	Remote	n/a	n/a	n/a	Yes	Enabled	0	Yes	Remote Queue for DWLAB, MQDEMO, RINGAPP on QM MQWS02_2	Remote
MQWSCLO1:MQ	KBXUFPERMMODEL	Model	Normal	PermDyn	07/23/09 16:24:17	Yes	Enabled	0	Yes		
MQWS01_1:MQ	KBXUFPERMMODEL	Model	Normal	PermDyn	07/23/09 16:24:23	Yes	Enabled	0	Yes		
MQWS02_2:MQ	KBXUFPERMMODEL	Model	Normal	PermDyn	07/23/09 16:16:18	Yes	Enabled	0	Yes		
MQWSCLO2:MQ	KBXUFPERMMODEL	Model	Normal	PermDyn	07/23/09 16:16:20	Yes	Enabled	0	Yes		
MQWS02_1:MQ	KBXUFPERMMODEL	Model	Normal	PermDyn	07/23/09 16:16:18	Yes	Enabled	0	Yes		
MQWS01_2:MQ	KBXUFPERMMODEL	Model	Normal	PermDyn	07/23/09 16:24:04	Yes	Enabled	0	Yes		
MQWS01_1:MQ	MQWS01_1	Local	XmitQ	Predefined	07/23/09 16:16:20	Yes	Enabled	0	Yes	Transmission Queue To MQWS01_1	Transmit

Illustration 18: Workspace DWMQ Queue Definition Summary

The workspace consists of two table views:

- Reporting Queue Managers (Table View)

This table displays the queue summary overview from the queue manager perspective. The list of the queue managers indicates the number of potential reporters for the second table.

The following link has been defined:

Origin Node	QMgr Name	Host Name	QMgr Subsys	Host Jobname
MQWS01_1:MQ	MQWS01_1	dw-vmwas01		
	DWMQ Limit To Queue Manager ...	vmwas01		
	Link Wizard...	vmwas02		

The link will recursively call this workspace, limiting the queue entries to the selected queue manager.

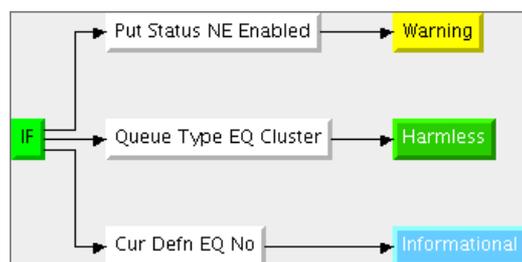
- Defined Queue Objects (Table View)

In this table all queue definition abstracts in the entire MQ network are displayed (except a limitation has been set, by using one of the provided links – from this or another workspace). To get more details about one specific queue, please use the provided links:

Defined Queue Objects				
	Origin Node	Queue Name	Queue Type	Que Usa
	MQWS01_1::MQ	DWLAB.MQDEMO.AMQSPUTC.QLOCAL	Local	Norm
	MQWS02_2::MQ	DWLAB.MQDEMO.AMQSPUTC.REMOTE	Remote	n/a
	MQWS02_1::MQ	DWLAB.MQDEMO.AMQSPUTC.REMOTE	Remote	n/a
	MQWS01_2::MQ	DWLAB.MQDEMO.AMQSPUTC.REMOTE	Remote	n/a
	DWMQ Target Queue Status		LOCAL	Cluster n/a
	DWMQ Queue Definition Details		LOCAL	Cluster n/a
	DWMQ Queues Using This Queue As Target ...		LOCAL	Local Norm
	DWMQ Queue Status		LOCAL	Cluster n/a

- DWMQ Target Queue Status
 - Displays the queue status for the target queue of the selected remote queue definition, using the workspace [DWMQ Queue Status](#).
 - DWMQ Queue Definition Details
 - Displays the queue definition details, using the workspace [DWMQ Queue Definition Details](#)
 - DWMQ Channel Using this XmitQ
 - If the queue is marked as a transmission queue, the enabled link will display the channel performance data, using the workspace [DWMQ Channel Performance Summary](#)
 - DWMQ Queues Using This Queue As Target
 - The link will guide to the current workspace to display all queues using the selected queue as their target.
 - DWMQ Queue Status
 - Displays the queue status for the selected queue, using the workspace [DWMQ Queue Status](#)

The following thresholds have been set for this table:



4.8.2 Workspace DWMQ Queue Definition Details

This workspace should only be used as a link target from another workspace.

Warning:

Navigating to this workspace directly, without required context information (Queue Name and Queue Manager Name) will lead to extensive CPU and network usage on the WebSphere MQ hosting system as well as on the entire ITM infrastructure, because definition details for all queues in the entire WebSphere MQ scope will be gathered, transferred and displayed.

Below there is an example of that workspace, displaying detailed information for a remote queue definition.

The screenshot shows the 'DWMQ Queue Definition Details' workspace. It features a 'Navigator' on the left with a tree view of various summaries. The main area is divided into three sections:

- Queue Parameters (Table View):** A table listing parameters for the selected queue. The 'XMITQ' parameter is highlighted, indicating it is the selected transmission queue.
- Defined Queue Objects:** A table showing the relationship between the origin queue and the target remote queue.
- Queue Statistics:** A table providing performance metrics for the queue, such as total opens, current opens, and depth.

Illustration 19: Workspace DWMQ Queue Definition Detail

- Queue Parameters (Table View)

Each single parameter for the selected queue is displayed.

For a few parameters, additional information is available. The provided link will guide you to the required information:

- DWMQ Transmission Queue Definition Details

The link will guide to the workspace to the current workspace, displaying the definition details of the referenced transmission queue.

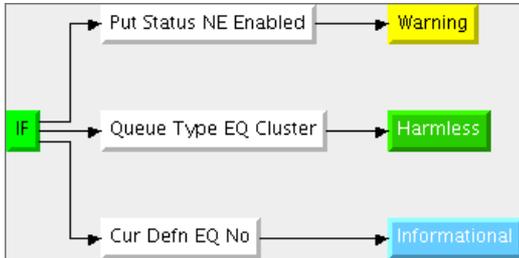
- DWMQ Initiation Queue Definition Details

The link will guide to the workspace to the current workspace, displaying the definition details of the referenced initiation queue.

- Defined queue objects

In this (single row) table the selected queue definition abstract is displayed

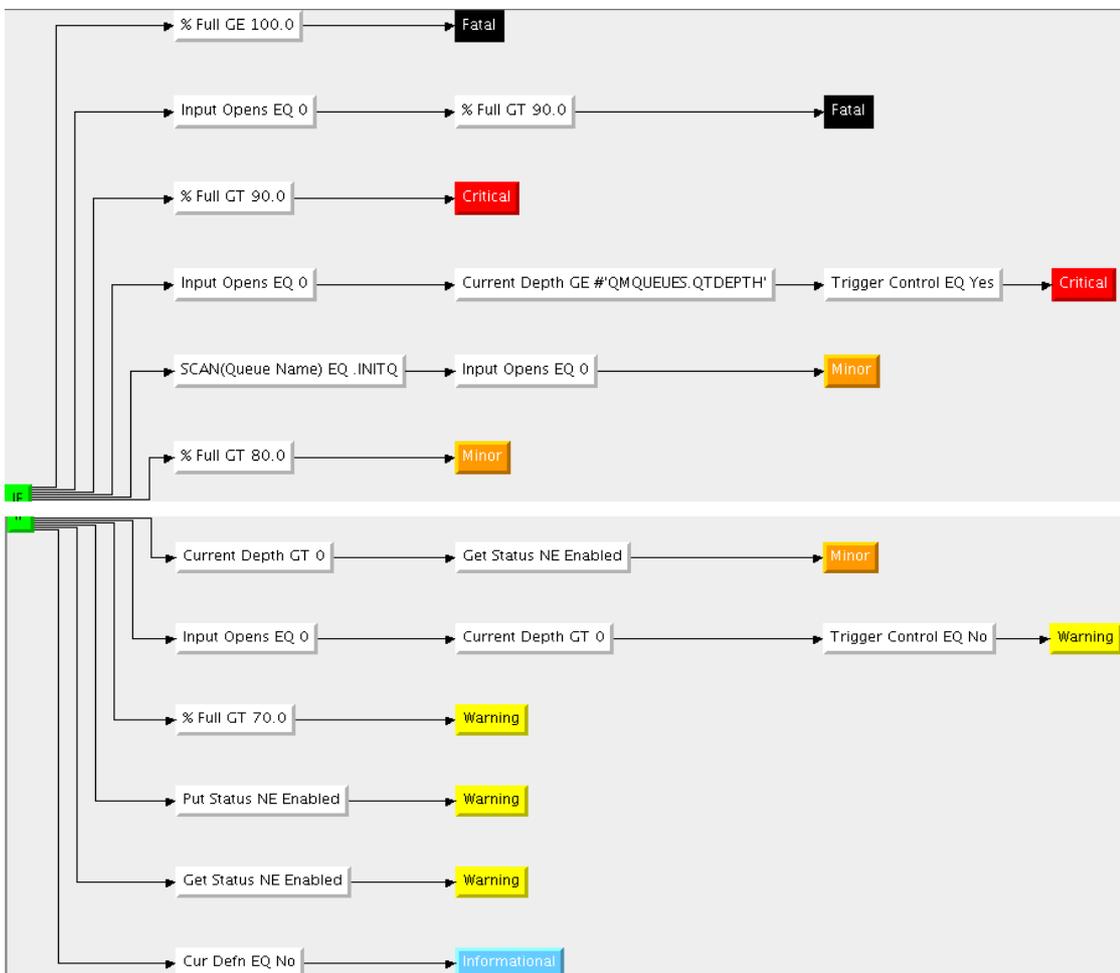
The following thresholds have been set for this table:



- Queue Statistics

In this (single row) table the queue statistics for the selected queue are displayed.

The following thresholds have been applied to this table:



For remote or alias queues, this table remains empty, because these objects have no physical implementation.

4.9 Navigator DWMQ Queue Manager Status Summary

This navigator item presents multiple workspaces to analyze the status of all reporting queue manager. There are three workspaces:

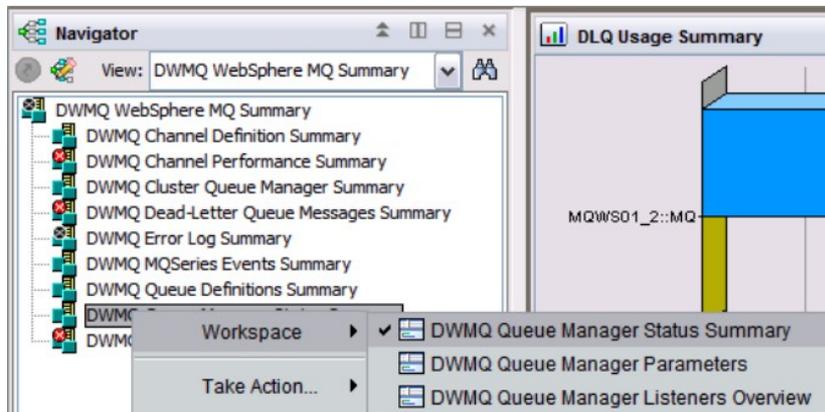


Illustration 20: Available Workspaces

These workspaces give a comprehensive overview of the queue manager and its surrounding components.

4.9.1 Workspace DWMQ Queue Manager Status Summary

The default workspace is displaying status and usage information for all reporting queue managers.

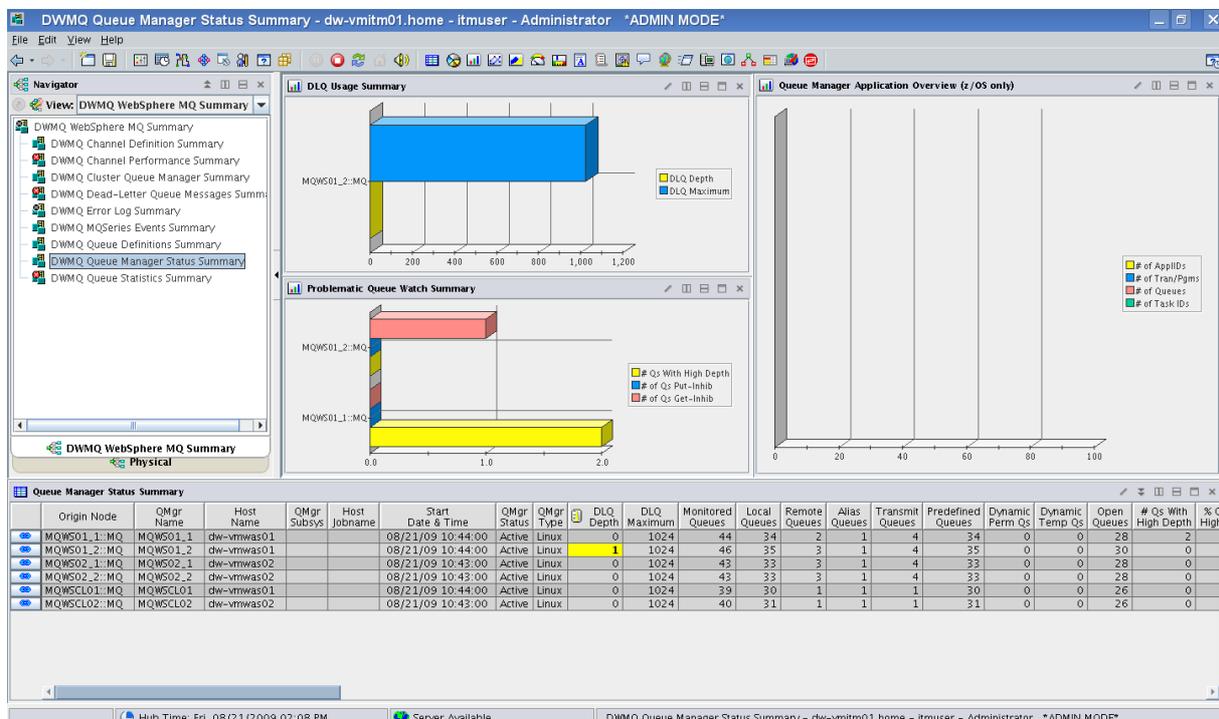


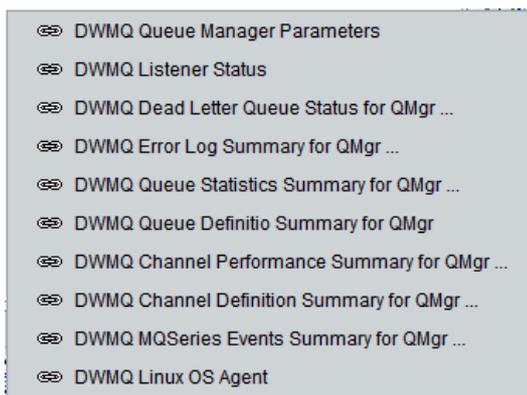
Illustration 21: Workspace DWMQ Queue Manager Status Summary

The following four data views are presented:

- DLQ Usage Summary (Bar Chart)

Comparison between the current and the maximum depth of the Dead-Letter queue for all reporting queue managers, having messages on the Dead-Letter queue.

- Problematic Queue Watch Summary (Bar Chart)
Number of queues in problematic status, either with put/get disabled or high depth watermark reached. Only queue managers fulfilling this criteria are displayed.
- Queue Manager Application Overview (Bar Chart)
For z/OS queue manager some application usage key metrics are shown.
- Queue Manager Status Summary (Table View)
This table shows the detailed queue manager status summary. All available attributes are displayed. To get more insight on a specific queue manager, use the provided links:

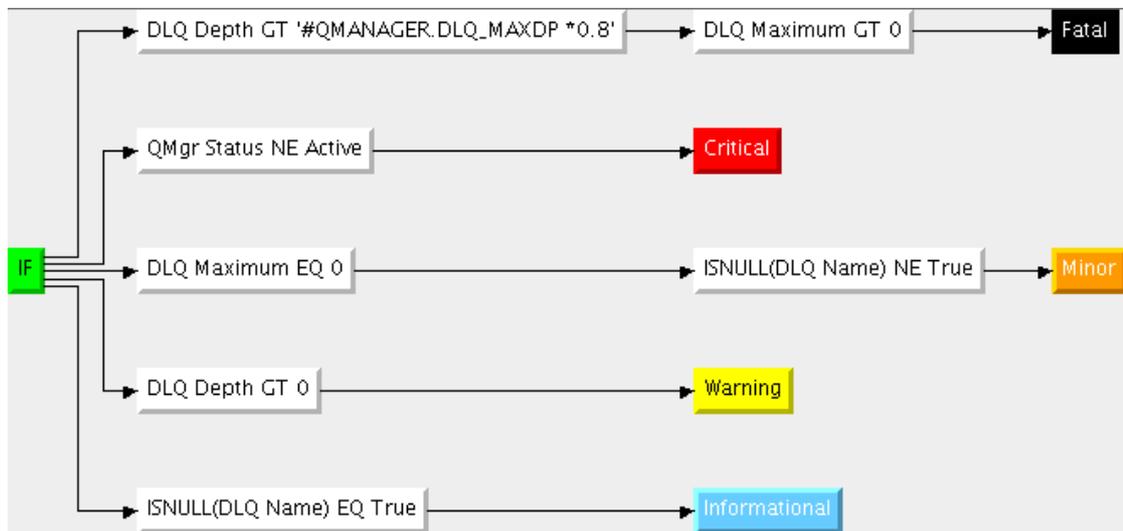


- DWMQ Queue Manager Parameters
This link will guide to the selected queue manager's parameters on workspace [DWMQ Queue Manager Parameters](#)
- DWMQ Listener Status
Direct link to the workspace [DWMQ Queue Manager Listener Status](#), limiting the output of listener status information to the selected queue manager
- DWMQ Dead Letter Queue Status for QMgr ...
Displays the Dead-Letter queue status summary for the selected queue manager, using the workspace [DWMQ Dead Letter Queue Status Summary](#)
- DWMQ Error Log Summary for QMgr ...
Link to the workspace [DWMQ Error Log Summary](#), limiting the output to the selected queue manager context.
- DWMQ Queue Statistics Summary for QMgr ...
Link to the workspace [DWMQ Queue Statistics Summary](#), limiting the output to the selected queue manager context.
- DWMQ Queue Definition Summary for QMgr ...
Link to the workspace [DWMQ Queue Definition Summary](#), limiting the output to the selected queue manager context.
- DWMQ Channel Performance Summary for QMgr ...
Link to the workspace [DWMQ Channel Performance Summary](#), limiting the output to the selected queue manager context.
- DWMQ Channel Definition Summary for QMgr ...
Link to the workspace [DWMQ Channel Definition Summary](#), limiting the output to the selected queue manager context.
- DWMQ MQSeries Event Summary for QMgr ...
Link to the workspace [DWMQ MQSeries Event Summary](#), limiting the output to the selected queue manager context.

- DWMQ Linux OS Agent

Link to the root navigator item of the Linux OS agent in the Physical ITM navigator for the hosting system.

The following thresholds apply to the table:



4.9.2 Workspace DWMQ Queue Manager Parameters

This workspace should only be used as a link target from another workspace. This workspace displays all available parameters for a selected queue manager.

Warning:

Navigating to this workspace directly, without required context information (Queue Manager Name) will lead to extensive CPU and network usage on the WebSphere MQ hosting system as well as on the entire ITM infrastructure, because definition details for all queue managers in the entire WebSphere MQ scope will be gathered, transferred and displayed.

The screen shot below shows sample data.

The screenshot displays the 'DWMQ Queue Manager Parameters' workspace. It features a 'Queue Manager Parameters' table with columns for Parameter Name, Parameter Description, Parameter Value, and Repository Name/Value. Below this is a 'Queue Manager Status' table with columns for Origin Node, QMgr Name, Host Name, QMgr Subsys, Host Jobname, Start Date & Time, QMgr Status, QMgr Type, DLQ Depth, DLQ Maximum, Monitored Queues, Local Queues, Remote Queues, Alias Queues, Transmit Queues, Predefined Queues, Dynamic Perm Qs, Dynamic Temp Qs, Open Queues, # Qs With High Depth, and % Qs With High Depth.

Parameter Name	Parameter Description	Parameter Value	Repository Name/Value
QMNAME	MQ manager name	MQWS01_2	
AUTHOREV	Authority events	Enabled	
CCSID	Coded character set ID	1208	
COMMANDQ	Command input queue name	SYSTEM.ADMIN.COMMAND.QUEUE	
CMDLEVEL	Command level	700	
DEADQ	Dead letter queue name	SYSTEM.DEAD.LETTER.QUEUE	
DESCR	Description		
INHIBTEV	Inhibit events	Enabled	
LOCALEV	Local error events	Enabled	
MAXHANDS	Maximum open handles	256	
MAXMSGL	Maximum message length	4194304	
MAXPRTY	Maximum message priority	9	
MAXUMSGS	Maximum uncommitted msgs	10000	
PERFMEV	Performance events	Enabled	
PLATFORM	Architecture of platform	Linux	
REMOTEV	Remote error events	Enabled	
STRSTPEV	Start and stop events	Enabled	
SYNCPNT	Syncpoint support	Available	
TRIGINT	Trigger interval in ms	999999999	
DEFMITQ	Default transmission Q		
CHAD	Channel auto definition	Enabled	
CHADEV	Channel auto definition events	Enabled	
CHADEXIT	Channel auto definition exit		
DISTL	Distribution lists	Yes	
CLWLXIT	Cluster workload exit		
CLWLDATA	Cluster workload exit data		
CLWLLEN	Cluster workload exit maximum	100	
QMID	Internal queue manager name	MQWS01_2.2009-07-23.16.22.10	
REPOS	Repository cluster		
REPOSNL	Repository clusters namelist		
SSLCLNL	SSL CRL namelist		
SSLKEYR	SSL key repository	/var/mqm/qmgrs/MQWS01_2/ssl/key	
SSLCRYP	SSL crypto hardware	Disabled	

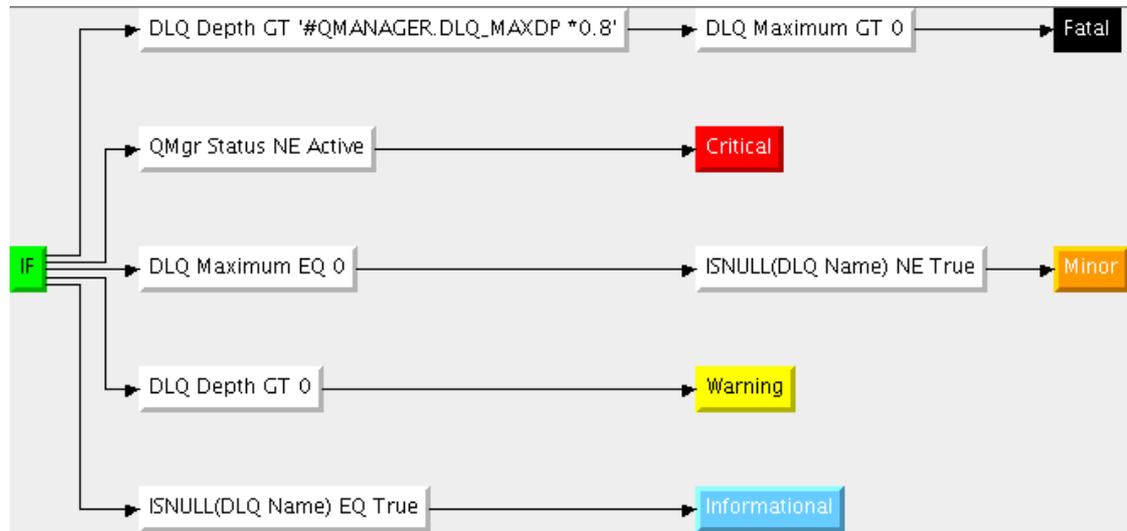
Origin Node	QMgr Name	Host Name	QMgr Subsys	Host Jobname	Start Date & Time	QMgr Status	QMgr Type	DLQ Depth	DLQ Maximum	Monitored Queues	Local Queues	Remote Queues	Alias Queues	Transmit Queues	Predefined Queues	Dynamic Perm Qs	Dynamic Temp Qs	Open Queues	# Qs With High Depth	% Qs With High Depth
MQWS01_2:MQ	MQWS01_2	dw-vmitm01			08/21/09 10:44:00	Active	Linux	1	1024	46	35	3	1	4	35	0	0	30	0	0.4

Illustration 22: Workspace DWMQ Queue Manager Parameters

The workspace splits up into two table views:

- Queue Manager Parameters
The table presents all available information on the selected queue manager
- Queue Manager Status
This table shows in a single row the detailed queue manager status summary for the selected queue manager.

The following thresholds apply to the table:



Both tables have no links defined.

4.9.3 Workspace DWMQ Queue Manager Listener Overview

The workspace displays the status of the listeners for all reporting queue managers.

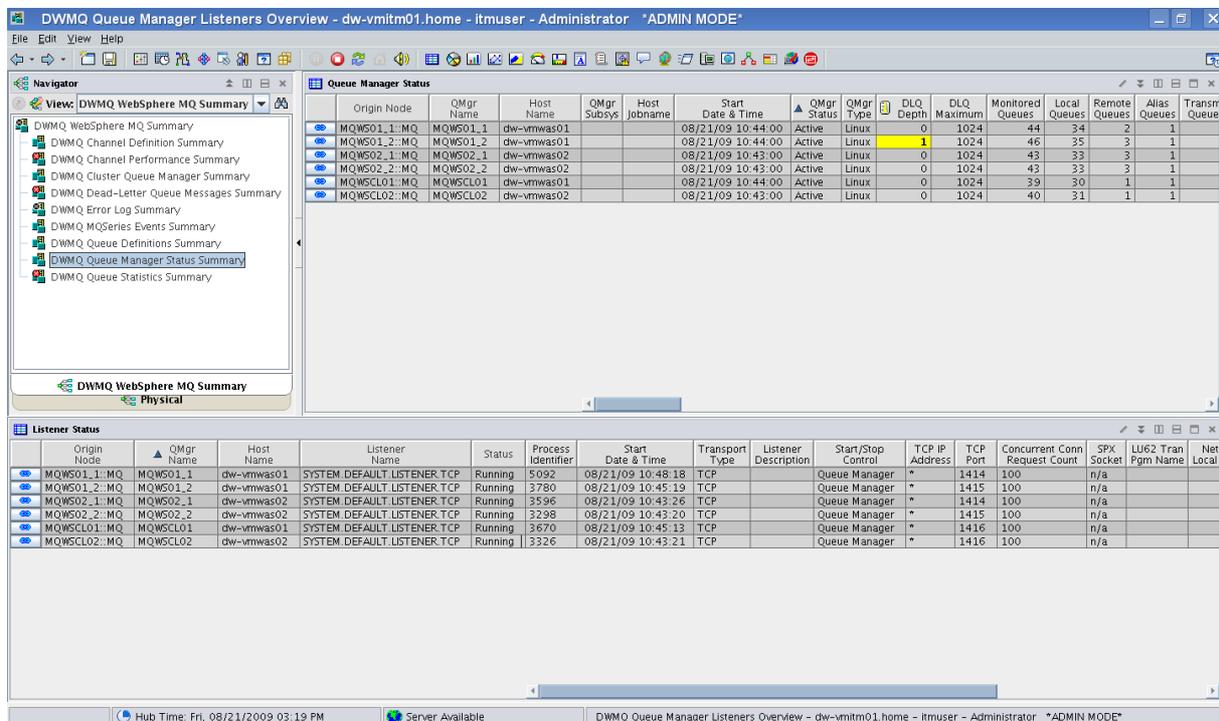


Illustration 23: Workspace DWMQ Queue Manager Listeners Overview

The workspace is made up out of two table views:

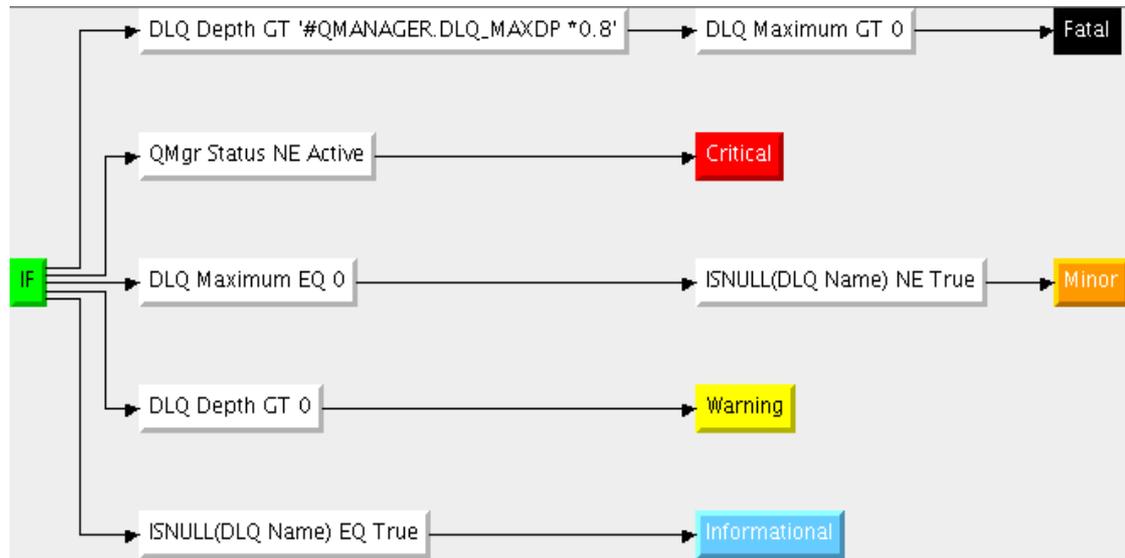
- Reporting queue manager (Table View)

This table shows the status of all reporting queue managers. The following link has been defined:

Reporting Queue Managers					
	Origin Node	QMgr Name	Host Name	QMgr Subsys	Host Jobname
	MOWS01.1:MQ	MOWS01.1	dw-vmwas01		
	DWMQ Limit To Queue Manager ...		twas01		
			twas02		
	Link Wizard...		twas02		

The link will recursively call this workspace, limiting the listener entries to the selected queue manager.

The following thresholds have been defined to the table view:



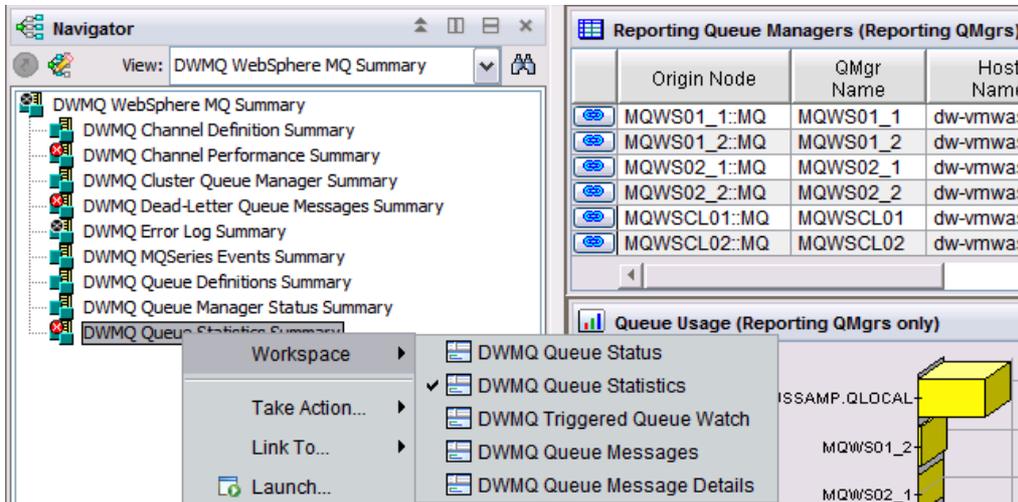
- Listener Status

The table shows all existing listener for all reporting queue managers.

The provided link [DWMQ Listener Process Watch](#) will guide to the process table of the operating system agent workspace. This link is more experimental, and is supported on Linux systems only at this time.

4.10 Navigator Item Queue Statistics Summary

This navigator item has five workspaces.



The default workspace is named “DWMQ Queue Statistics”. The others are presenting more details on a specific queue and the current usage of the object.

4.10.1 Workspace DWMQ Queue Statistics

The workspace gives a comprehensive overview of all queues from all reporting queue managers, unless a limitation to a specific queue manager and/or queue has been set by linking from another workspace.

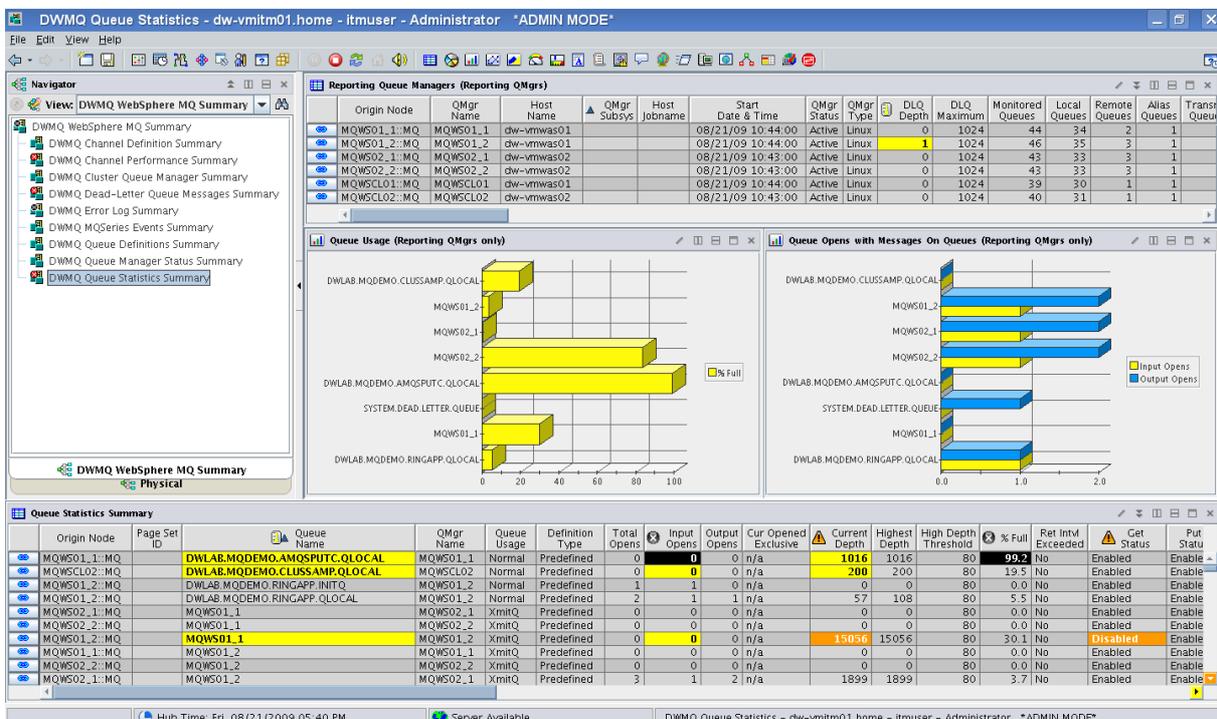


Illustration 24: Workspace Queue Statistics

The workspace is a composition out of table views and bar charts:

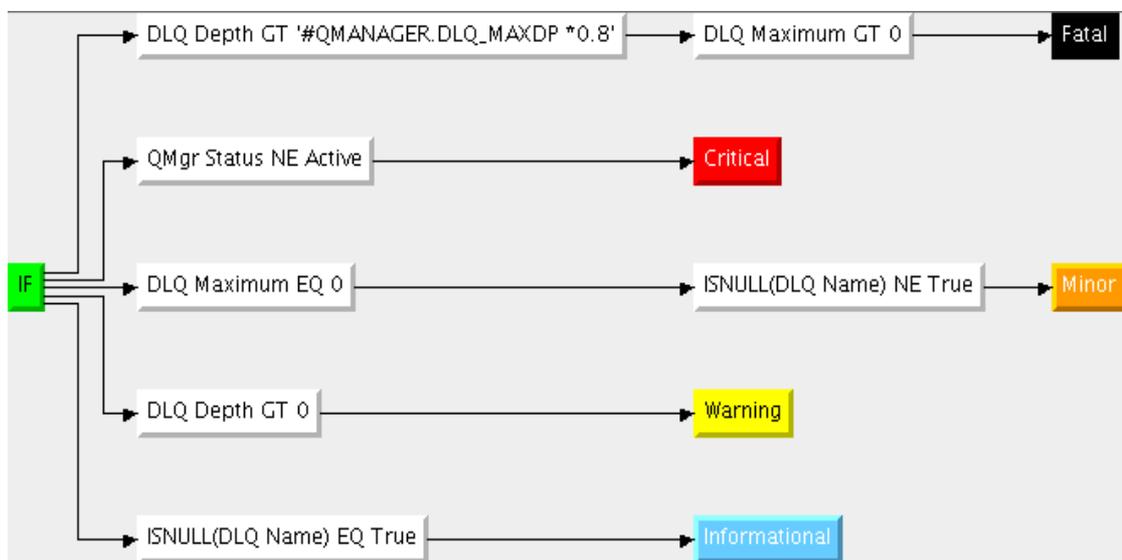
- Reporting queue manager (Table View)

This table shows the status of all reporting queue managers. The following link has been defined:

Reporting Queue Managers					
	Origin Node	QMgr Name	Host Name	QMgr Subsys	Host Jobname
	MOWS01.1:MQ	MOWS01.1	chw-vmw01		
			hw01		
			hw02		
			hw02		

The link will recursively call this workspace again, limiting the queue entries to the selected queue manager.

The following thresholds have been defined to the table view:



- Queue Usage with Messages on Queue (Bar Chart)

Current queue depth usage in percent for all queues from all reporting queue managers with messages on the queue.

- Queue Opens with Messages on Queue (Bar Chart)

Number of Input and Output Opens per queue from reporting queue managers with messages on the queue

- Queue Statistics Summary (Table View)

The table reports detailed statistic information on all queues from all reporting queue managers.

The provided links help to analyze the queue usage and dependencies. The following links are defined for this table rows:

DWMQ Queue Status
DWMQ Channels Using This XmitQ ...
DWMQ Queues Using This Queue As Target ...
DWMQ Triggered Queue Watch
DWMQ Queue Referenced As Initiation Queue By ...
DWMQ Recent Queue Statistics
DWMQ Historical Queue Statistics
DWMQ Queue Definition Details
DWMQ Current Message Statistics
DWMQ Recent Message Statistics
DWMQ Queue Messages

- DWMQ Queue Status
Link to the queue status workspace [DWMQ Queue Status](#) for the selected queue.
- DWMQ Channel Using This XmitQ
Displays the channel, which uses the selected transmission queue, in workspace [DWMQ Channel Performance Summary](#)
- DWMQ Queues Using This Queue As Target
References the workspace [DWMQ Queue Definition Summary](#) to display all remote queue definitions from all reporting queue managers, which point to the selected queue.
- DWMQ Triggered Queue Watch
Link to workspace [DWMQ Triggered Queue Watch](#) to display the used initiation queue.
- DWMQ Queue Referenced As Initiation Queue By ...
Link to the current workspace, limiting the selection of queues according to the queue definition, referencing the selected queue as the initiation queue for trigger processing.
- DWMQ Queue Messages
Displays the queue content, using the workspace [DWMQ Queue Messages](#)

The link availability depends on the queue usage.

All other remaining links are copies from the original product and reference workspaces in the product provided Physical View.

The following thresholds have been applied to this table:



4.10.2 Workspace DWMQ Queue Status

This workspace will report the detailed status of a single queue.

Warning:

Navigating to this workspace directly, without required context information (Queue Name and Queue Manager Name) will lead to extensive CPU and network usage on the WebSphere MQ hosting system as well as on the entire ITM infrastructure, because status details for all queues in the entire WebSphere MQ scope will be gathered, transferred and displayed.

The screen shot below shows a sample for a queue status detail inspection.

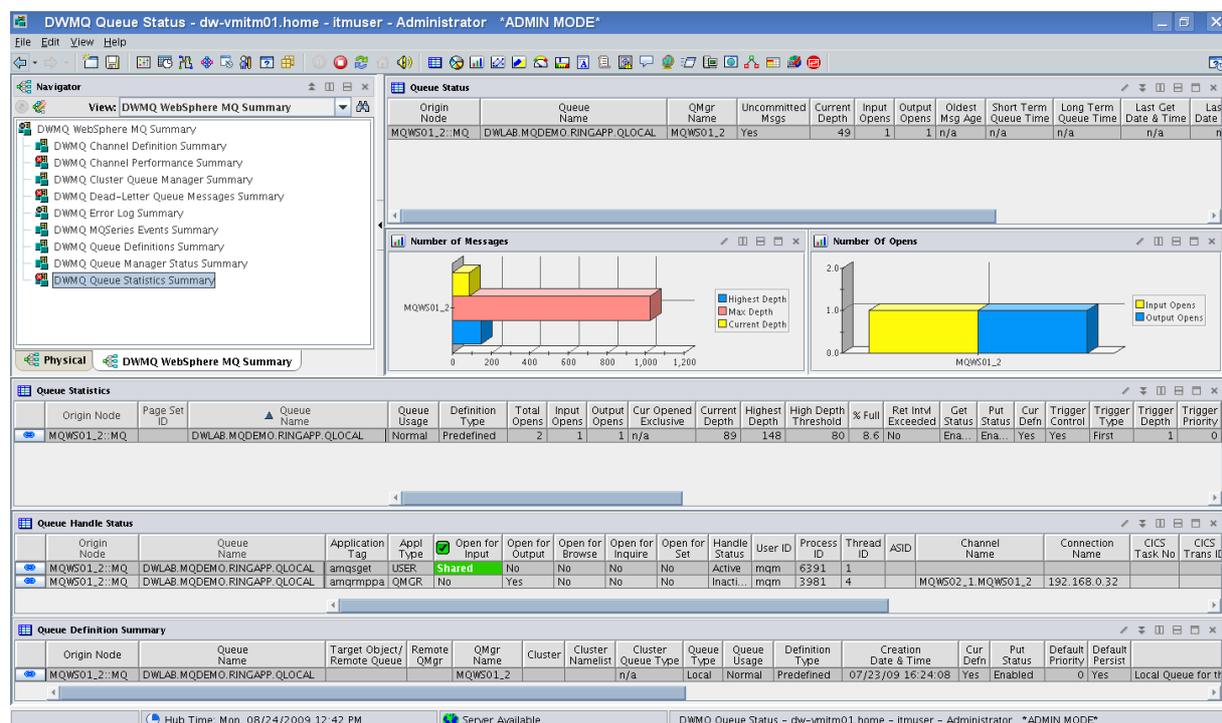


Illustration 25: Workspace DWMQ Queue Status

The workspace displays a bunch of different metrics from various attribute groups, which makes it relatively resource consuming to display this information. It has six different views:

- Queue Status (Table View)
Displays the detailed status of the selected queue
- Number of Messages (Bar Chart)
Displays the number of messages on the selected queue compared to the max depth and the highest depth in interval.
- Number of Opens (Bar Chart)
Number of Input and Output Opens against the selected queue

- Queue Statistics (Table View)

The table reports detailed statistic information for the queue.

The provided links help to analyze the queue usage and dependencies. The following links are defined for this table:

Queue Statistics			
Origin Node	Page Set ID	Queue Name	
		MQDEMO.RINGAPP.QLOCA	
			DWMQ Queue Definition Details
			DWMQ Queue Messages

- DWMQ Queue Definition Details

Link to the workspace [DWMQ Queue Definition Details](#) for the selected queue.

- DWMQ Queue Messages

Displays the queue content, using the workspace [DWMQ Queue Messages](#).

The following thresholds have been applied to this table:



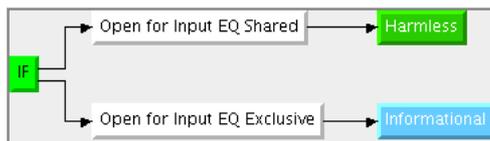
- Queue Handle Status (Table View)

Displays all open handles on the selected queue.

Queue Handle Status	
Origin Node	Queue Name
MQW01.3:MQ	DWLAR.MQDEMO.PINCARR.LOCAL
DWMQ Operation System Process Details (Linux)	

The provided link will guide you to the process analyze workspace in the Physical Navigation Tree of the corresponding system. The link works for Linux platforms only.

The following thresholds have been set:

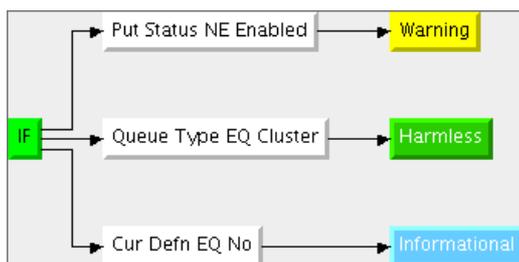


- Queue Definition Summary (Table View)
Displays the definition summary of the selected queue

The following link is defined for this table:

- DWMQ Queue Definition Details
Link to the workspace [DWMQ Queue Definition Details](#) for the selected queue.

The following thresholds have been set for this table:



4.10.3 Workspace DWMQ Triggered Queue Watch

This workspace is displaying informations related to a selected triggered queue.

Warning:

Navigating to this workspace directly, without required context information (Queue Name and Queue Manager Name) will lead to extensive CPU and network usage on the WebSphere MQ hosting system as well as on the entire ITM infrastructure, because status details for all queues in the entire WebSphere MQ scope will be gathered, transferred and displayed.

This workspace should help to identify issues with the trigger configuration for the selected queue.

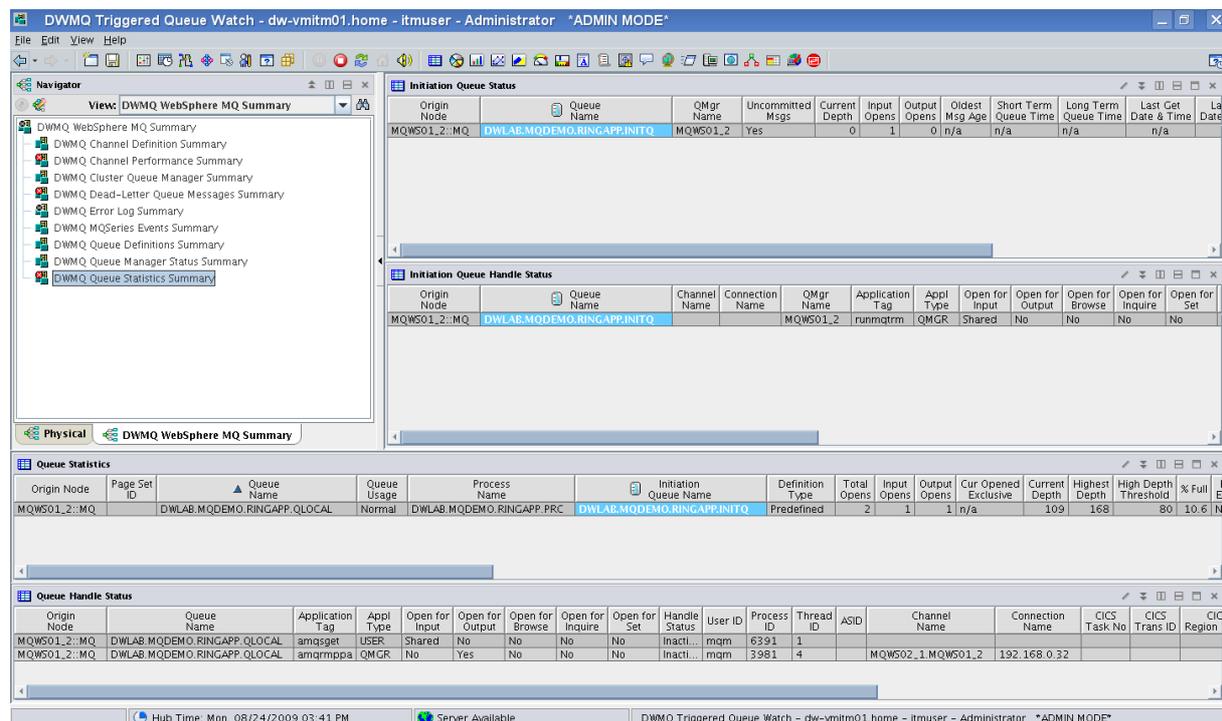


Illustration 26: Workspace Triggered Queue Watch

The workspace contains four table views:

- **Initiation Queue Status**
Displays the detailed status of the referenced initiation queue.
- **Initiation Queue Handle Status**
Displays the queue handles currently open for the referenced initiation queue.
- **Queue Statistics**
Displays the detailed queue statistics for the selected queue.
- **Queue Handle Status**
Displays the queue handles currently open for the selected queue.

In each table the initiation queue name is highlighted.

4.10.4 Workspace DWMQ Queue Messages

This workspace is displaying messages from a selected queue.

Warning:

Navigating to this workspace directly, without required context information (Queue Name and Queue Manager Name) will lead to extensive CPU and network usage on the WebSphere MQ hosting system as well as on the entire ITM infrastructure, because messages from all queues in the entire WebSphere MQ scope will be gathered, transferred and displayed.

The screenshot displays the 'DWMQ Queue Messages' workspace in 'ADMIN MODE'. It features a left-hand navigation pane with various summary views. The main area is divided into four table views:

- Messages On Queue:** A table listing individual messages with columns for Message Tag, Msg Type, Msg Length, Expire (Secs), Priority, Persistence, Segmented or Group Message, Backout Count, Appl Type, Appl ID, Put Date & Time, Group ID, and Status.
- Queue Statistics:** A table showing queue-level metrics such as Origin Node, Page Set ID, Queue Name, Queue Usage, Definition Type, Total Opens, Input Opens, Output Opens, Cur. Opened Exclusive, Current Depth, Highest Depth, High Depth Threshold, % Full, Ret. Intvl Exceeded, Get Status, Put Status, Cur. Defn, Trigger Control, Trigger Type, Trigger Depth, and Trigger Priority.
- Queue Handle Status:** A table detailing queue handles with columns for Origin Node, Queue Name, Application Tag, Appl Type, Open for Input, Open for Output, Open for Browse, Open for Inquire, Open for Set, Handle Status, User ID, Process ID, Thread ID, ASID, Channel Name, Connection Name, CICS Task No, and CICS Trans ID.
- Queue Definition Summary:** A table providing definition details like Origin Node, Queue Name, Target Object/Remote Queue, Remote QMgr, QMgr Name, Cluster, Cluster Name/ID, Cluster Queue Type, Queue Type, Queue Usage, Definition Type, Creation Date & Time, Cur. Status, Put Status, Default Priority, Default Persist, and Local Queue for...

Illustration 27: Workspace DWMQ Queue Messages

The workspace contains four table views:

- Messages On Queue

Displays the current messages on the selected queue. On this level, only a few parameters from the message descriptor are displayed. The provided link will guide to message details:

- DWMQ Queue Message Details

The message descriptor and the message content will be displayed. Special authorities are required for this action.

- Queue Statistics (Table View)

The table reports detailed statistic information for the queue.

The provided links help to analyze the queue usage and dependencies. The following links are defined for this table:

Queue Statistics		
Origin Node	Page Set ID	Queue Name
		MQDEMO.RINGAPP.QLOCA
	DWMQ Queue Definition Details	
	DWMQ Queue Messages	

- DWMQ Queue Definition Details

Link to the workspace [DWMQ Queue Definition Details](#) for the selected queue.

- DWMQ Queue Messages

Displays the queue content, using the workspace [DWMQ Queue Messages](#).

The following thresholds have been applied to this table:



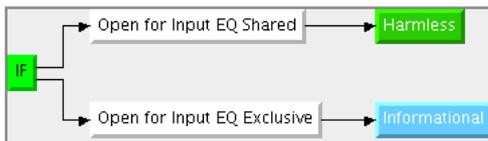
- Queue Handle Status (Table View)

Displays all active open handles on the selected queue.

Queue Handle Status	
Origin Node	Queue Name
MOWS01...MO	DWLAR.MODEMO.PINC.AB.LOCAL
DWMQ Operation System Process Details (Linux)	

The provided link will guide you to the process analyze workspace in the Physical Navigation Tree of the corresponding system. The link works for Linux platforms only.

The following thresholds have been set:



- Queue Definition Summary (Table View)

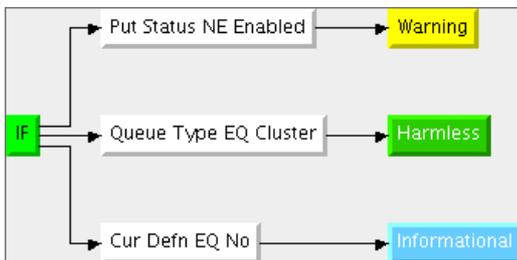
Displays the definition summary of the selected queue

The following link is defined for this table:

- DWMQ Queue Definition Details

Link to the workspace [DWMQ Queue Definition Details](#) for the selected queue.

The following thresholds have been set for this table:



4.10.5 Workspace DWMQ Queue Message Details

This workspace displays the detailed message header and content. This workspace will only contain data, if a single message from the workspace DWMQ Queue Messages has been selected.

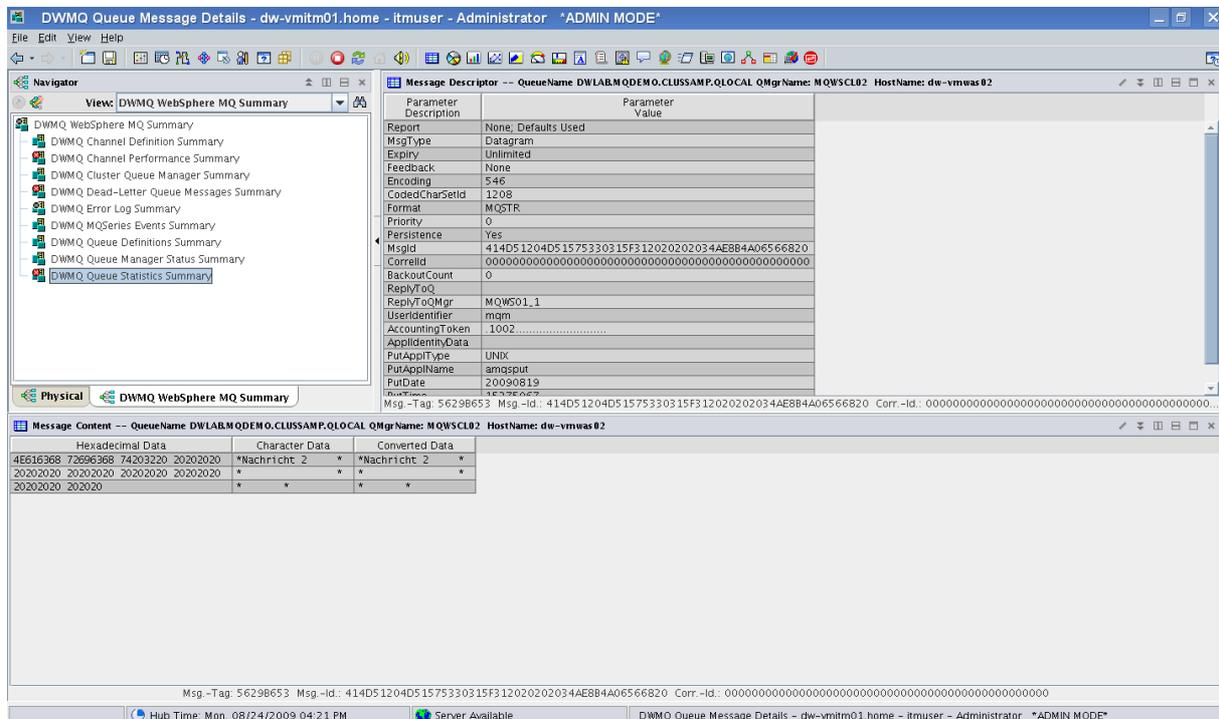


Illustration 28: Workspace DWMQ Queue Message Details

The workspace contains two table views:

- Message Descriptor:
The detailed message descriptor with all available attributes
- Message Content
The message content in hexadecimal data and character data representation

Both table frames display message identification data in the header and footer, to make the message identification possible.

5 Queries

All workspaces presented use queries to retrieve data from the agents. To enable the enhanced linking features most of the used queries were enhanced with additional parameters.

To make the solution more consistent and comprehensible all used queries are self-created. The queries have been inherited from the product provided ones.

5.1 Channel Definitions

The following queries have been added to the query dictionary of ITM for the attribute group channel definitions:

- DW Channel Definitions

The query has been inherited from the product provided query Channel Definitions.

The screenshot shows the 'Specification' tab of a query configuration window. On the left is a tree view with 'DW Channel Definitions' selected. The main area contains a table with the following columns: Origin Node, Channel Type, Channel Name, QMgr Name, and C. The table has three rows:

	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	== \$NODE\$	!= ClusQmgr	== \$ChName\$	... \$QMgrName\$	
3					

The parameter QmgrName has been added as a search argument. This enables querying for specific queue manager without setting the node. Once a node has been set, it can't be changed in sub-subsequent searches.

- DW Cluster Queue Manager Channels

The Query has been inherited from Cluster Queue Manager Channels

The screenshot shows the 'Specification' tab of a query configuration window. On the left is a tree view with 'DW Cluster Queue Manager Channels' selected. The main area contains a table with the following columns: Origin Node, Channel Type, QMgr Name, Cluster QMgr, and CI. The table has four rows:

	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	== \$NODE\$	== ClusQmgr	... \$QMgrName\$		
3					
4					

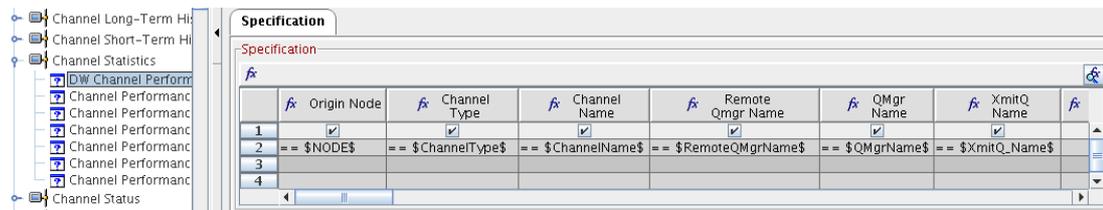
The parameter QmgrName has been added as a search argument. This enables querying for specific queue manager without setting the node. Once a node has been set, it can't be changed in sub-subsequent searches.

5.2 Channel Statistics

For this attribute group only one query has been added:

- DW Channel Performance Query

The query is a copy of the product provided query Channel Performance Query.



The following parameters have been added to the specification:

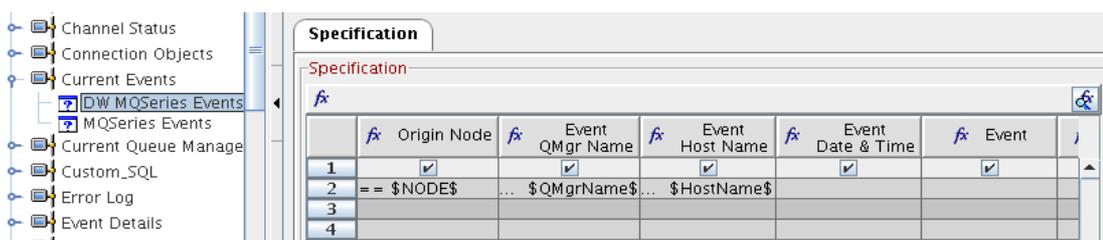
- RemoteQmgrName
 - This parameter enables the correlation between the destination and source queue manager.
- QmgrName
 - This parameter enables querying for specific queue manager without setting the node. Once a node has been set, it can't be changed in sub-sequent searches.
- XmitQ_Name
 - By using this parameter, the correlation between channels and queues gets possible

5.3 Current Events

For this attribute group only one query has been added:

- DW MQSeries Events

The query is a copy of the product provided query Mqseries Events Query.



The following parameters have been added to the specification:

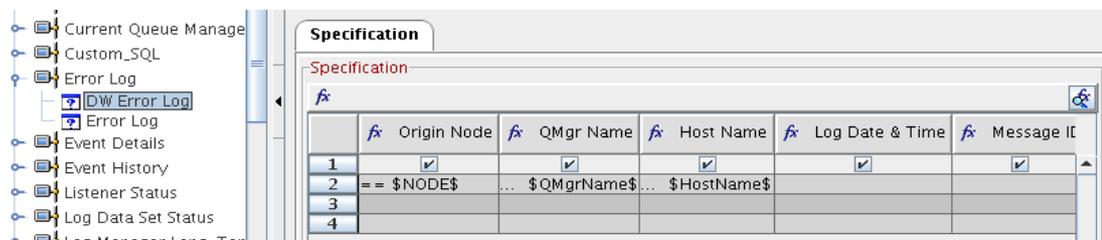
- QmgrName
 - This parameter enables querying for specific queue manager without setting the node. Once a node has been set, it can't be changed in sub-sequent searches.
- HostName
 - By using this parameter, the result may be limited to one specific host.

5.4 Error Log

For this attribute group only one query has been added:

- DW Error Log

The query is a copy of the product provided query Error Log.



The following parameters have been added to the specification:

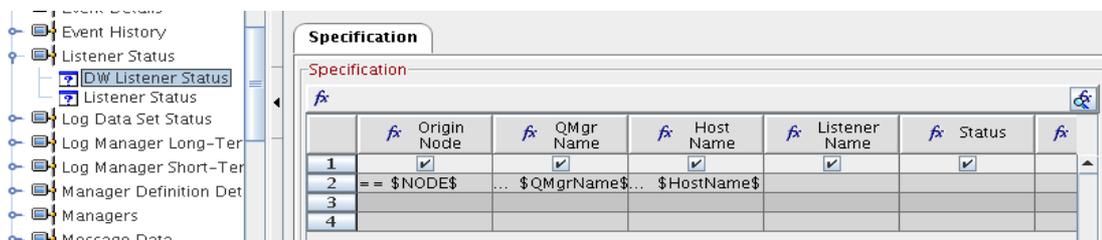
- QmgrName
 - This parameter enables querying for specific queue manager without setting the node. Once a node has been set, it can't be changed in sub-subsequent searches.
- HostName
 - By using this parameter, the result may be limited to one specific host.

5.5 Listener Status

For this attribute group only one query has been added:

- DW Listener Status

The query is a copy of the product provided query Listener Status.



The following Data parameters have been added to the specification:

- QmgrName
 - This parameter enables querying for specific queue manager without setting the node. Once a node has been set, it can't be changed in sub-subsequent searches.
- HostName
 - By using this parameter, the result may be limited to one specific host.

5.6 Manager Definition Details

For this attribute group only one query has been added:

- DW Queue Manager Parameters

The query is a copy of the product provided query Queue Manager Parameters.

	<i>fx</i> Origin Node	<i>fx</i> QMgr Name	<i>fx</i> Host Name	<i>fx</i> Listener Name
1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	== \$NODE\$	... \$QMgrName\$	\$HostName\$	
3				
4				

The following parameters have been added to the specification:

- QmgrName
 - This parameter enables querying for specific queue manager without setting the node. Once a node has been set, it can't be changed in sub-sequent searches.
- HostName
 - By using this parameter, the result may be limited to one specific host.

5.7 Managers

The following queries have been added to the query dictionary of ITM for the attribute group channel definitions:

- DW Channel Definitions Summary
The query is a copy of the product provided query Channel Definitions Summary.
- DW Cluster Queue Manager
The query is a copy of the product provided query Cluster Queue Manager.
- DW Dead-Letter Queues Summary
The query is a copy of the product provided query Dead-Letter Queues Summary.
- DW Queue Definitions Summary
The query is a copy of the product provided query Queue Definitions Summary.
- DW Queue Manager Status
The query is a copy of the product provided query Queue Manager Status.

For all specifications, the similar changes have been applied:

- QmgrName
This parameter enables querying for specific queue manager without setting the node. Once a node has been set, it can't be changed in sub-sequent searches.
- HostName
By using this parameter, the result may be limited to one specific host.

5.8 Message Data

For this attribute group only one query has been added:

- DW Message Content

The query is a copy of the product provided query Message Content.

	Origin Node	Queue Name	Message ID	Correlation ID	Message Tag	CMW Userid	QMgr Name	Host Name	Disp
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
2	== \$NODE\$	... \$QueueName\$	... \$MessageID\$	... \$CorrelationID\$	... \$MessageTag\$	encryptedLogon...	\$QMgrName\$	... \$HostName\$	
3									
4									

The following parameters have been added to the specification:

- QmgrName
 - This parameter enables querying for specific queue manager without setting the node. Once a node has been set, it can't be changed in sub-subsequent searches.
- HostName
 - By using this parameter, the result may be limited to one specific host.

5.9 Message Details

For this attribute group only one query has been added:

- DW Message Descriptor

The query is a copy of the product provided query Message Descriptor.

	Origin Node	Queue Name	Message ID	Correlation ID	Message Tag	CMW Userid	QMgr Name	Host Name
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
2	== \$NODE\$	... \$QueueName\$	... \$MessageID\$	... \$CorrelationID\$	... \$MessageTag\$	encryptedLogon...	\$QMgrName\$	... \$HostName\$
3								
4								

The following parameters have been added to the specification:

- QmgrName
 - This parameter enables querying for specific queue manager without setting the node. Once a node has been set, it can't be changed in sub-subsequent searches.
- HostName
 - By using this parameter, the result may be limited to one specific host.

5.10 Message Summary

The following queries have been added to the query dictionary of ITM for the attribute group channel definitions:

- DW Dead-Letter Queue Messages

The query is a copy of the product provided query Dead-Letter Queue Messages.

	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Origin Node	CMW Userid	Dest. QMgr	QMgr Name	Host Name	Dest. Queue
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	== \$NODE\$ \$encryptedLogon=... \$DestQMgr\$... \$QMGRName\$... \$HostName\$					
3						
4						

The following parameters have been added to the specification:

- QmgrName

This parameter enables querying for specific queue manager without setting the node. Once a node has been set, it can't be changed in sub-subsequent searches.

- HostName

By using this parameter, the result may be limited to one specific host.

- DW Queue Messages

The query is a copy of the product provided query Queue Messages.

	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Origin Node	Queue Name	CMW Userid	QMgr Name	Host Name	Message Tag
1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	== \$NODE\$... \$QueueName\$ \$encryptedLogon=... \$QMGRName\$... \$HostName\$					
3						
4						

The following parameters have been added to the specification:

- QmgrName

This parameter enables querying for specific queue manager without setting the node. Once a node has been set, it can't be changed in sub-subsequent searches.

- HostName

By using this parameter, the result may be limited to one specific host.

5.11 Queue Definition Details

For this attribute group only one query has been added:

- DW Queue Parameters

The query is a copy of the product provided query Queue Parameters.

	Origin Node	Queue Name	QMgr Name	Cluster	Host Name	Parameter Name
1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
2	== \$NODE\$	... \$QueueName\$	... \$QMgrName\$	== \$Cluster\$	... \$HostName\$	
3						
4						

The following parameters have been added to the specification:

- QmgrName
 - This parameter enables querying for specific queue manager without setting the node. Once a node has been set, it can't be changed in sub-subsequent searches.
- Cluster
 - By using this parameter, the result may be limited to one specific cluster.
- HostName
 - By using this parameter, the result may be limited to one specific host.

5.12 Queue Definitions

For this attribute group only one query has been added:

- DW Queue Definitions

The query is a copy of the product provided query Queue Definitions.

	<input checked="" type="checkbox"/>						
	Origin Node	Queue Name	Target Object/Remote Queue	Remote QMgr	QMgr Name	Cluster	Cluster NameList
1	<input checked="" type="checkbox"/>						
2	== \$NODE\$	\$QueueName\$ == \$TargetQueue\$	\$RemoteQMgr...	\$QMgrName\$ == \$Cluster\$	\$ClusterNameList\$		
3							
4							

The following parameters have been added to the specification:

- RemoteQMgr
 - This parameter enables the backward linking to a remote queue definition, using a selected target queue.
- TargetQueue
 - This parameter enables the backward linking to a remote queue definition, using a selected target queue.
- QMgrName
 - This parameter enables querying for specific queue manager without setting the node. Once a node has been set, it can't be changed in sub-sequent searches.
- Cluster
 - By using this parameter, the result may be limited to one specific cluster.
- ClusterNameList
 - By using this parameter, the result may be limited to one specific cluster group.
- HostName
 - By using this parameter, the result may be limited to one specific host.

5.13 Queue Handle Status

For this attribute group only one query has been added:

- DW Queue Handle Status

The query is a copy of the product provided query Queue Handle Status.

	fx	Origin Node	fx	Queue Name	fx	Target Object/ Remote Queue	fx	Remote QMgr	fx	QMgr Name	fx	Cluster	fx	Cluster NameList
1	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
2		== \$NODE\$		... \$QueueName\$		== \$TargetQueue\$		== \$RemoteQMgr\$		... \$QMgrName\$		== \$Cluster\$		. \$ClusterNameList\$
3														
4														

The following parameters have been added to the specification:

- RemoteQMgr

This parameter enables the backward linking to a remote queue definition, using a selected target queue.
- TargetQueue

This parameter enables the backward linking to a remote queue definition, using a selected target queue.
- QMgrName

This parameter enables querying for specific queue manager without setting the node. Once a node has been set, it can't be changed in sub-sequent searches.
- Cluster

By using this parameter, the result may be limited to one specific cluster.
- ClusterNameList

By using this parameter, the result may be limited to one specific cluster group.
- HostName

By using this parameter, the result may be limited to one specific host.

5.14 Queue Statistics

For this attribute group only one query has been added:

- DW Queue Statistics

The query is a copy of the product provided query Queue Statistics.

	fx	Origin Node	fx	Page Set ID	fx	Queue Name	fx	QMgr Name	fx	Process Name	fx	Initiation Queue Name	fx	Host Name	
1		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
2	==	\$NODE\$...	\$PageSetID\$...	\$QueueName\$...	\$QMgrName\$...	\$ProcessName\$	==	\$InitQName\$...	\$HostName\$
3															
4															

The following parameters have been added to the specification:

- ProcessName
This parameter enables the linking from a selected process (for future use – not supported yet).
- InitQName
This parameter enables the backward linking to a queue, using a selected target queue as its initiation queue within the trigger processing.
- QMgrName
This parameter enables querying for specific queue manager without setting the node. Once a node has been set, it can't be changed in sub-sequent searches.
- HostName
By using this parameter, the result may be limited to one specific host.

5.15 Queue Status

For this attribute group only one query has been added:

- DW Queue Status

The query is a copy of the product provided query Queue Status.

	fx	Origin Node	fx	Queue Name	fx	QMgr Name	fx	Host Name	fx	U
1		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		
2	==	\$NODE\$		...	\$QueueName\$	...	\$QMgrName\$	...	\$HostName\$	
3										
4										

The following parameters have been added to the specification:

- QMgrName
This parameter enables querying for specific queue manager without setting the node. Once a node has been set, it can't be changed in sub-sequent searches.
- HostName
By using this parameter, the result may be limited to one specific host.

6 ITM V6.2 Navigator Package Usage

6.1 Package Content – Delivered Files

- File `ITMNavigator_V1.0.tar.gz`
This file contains a single XML file for import into the TEPS.

6.2 Implementing the Navigator

The situation advices have to be placed on the Tivoli Enterprise Portal Server (TEPS) system.

6.2.1 Prerequisites

The development of that solution ITM Software has been performed on ITM V6.2.1 IF 2. ITM version 6.2.1 or above is required.

To have situations attached to the new navigator, please implement the OPAL solution “OMEGAMON XE for Messaging, ITM Sample Situation Package” prior to implementing this solution. The sample situation package can be found at the following URL:

<http://www-01.ibm.com/software/brandcatalog/portal/opal/details?catalog.label=1TW10OM1E>

These sample situations are optional.

6.2.2 Loading the Navigator

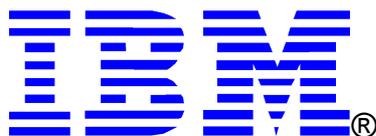
The provided compressed tar file contains a single XML file. Extract this file to a directory of your choice on the TEPS system.

Loading the new navigator:

- On Unix/Linux/Windows:
 - Login to TEPS, where the new navigator should get visible using the command `tacmd login`
 - Execute the command `tacmd importnavigator` with the required parameters.

Example:

```
tacmd importnavigator -x ITMNavigator_V1.0.xml -u itmuser -p "secret_password"
```



© Copyright IBM Corporation 2009

IBM United States of America

Produced in the United States of America

All Rights Reserved

The e-business logo, the eServer logo, IBM, the IBM logo, OS/390, zSeries, SecureWay, S/390, Tivoli, DB2, Lotus and WebSphere are trademarks of International Business Machines Corporation in the United States, other countries or both.

Lotus, Lotus Discovery Server, Lotus QuickPlace, Lotus Notes, Domino, and Sametime are trademarks of Lotus Development Corporation and/or IBM Corporation.

Java and all Java-based trademarks and logos are trademarks of Sun Microsystems, Inc. in the United States, other countries or both.

Other company, product and service names may be trademarks or service marks of others.

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PAPER "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

Information in this paper as to the availability of products (including portlets) was believed accurate as of the time of publication. IBM cannot guarantee that identified products (including portlets) will continue to be made available by their suppliers.

This information could include technical inaccuracies or typographical errors. Changes may be made periodically to the information herein; these changes may be incorporated in subsequent versions of the paper. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this paper at any time without notice.

Any references in this document to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing
IBM Corporation
4205 South Miami Boulevard
Research Triangle Park, NC 27709 U.S.A.