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# **Chapter 2. For administrators**

The following chapter shows how to operate and configure QFLEX for Administrators.

## 2.1 Qflex Welcome Page

On welcome page, you can see some informative charts:

• 24 Hour Application Messages Volume Distribution:





• 24 Hour Queue Managers Performance Data:





• Current Queue Depths:





# Current Queue Depths This chart shows the current queue depths except for SYSTEM.\* queues.

• Activity Chart for all Queue Managers:





Click on Hourly Chart to see the hourly activity report, or Daily Chart to see hourly activity report.

## 2.2 Managing Resources

This chapter will explain how to add, edit and delete queue managers, brokers and applications from QFlex domain.

### 2.2.1 Queue Managers

This chapter shows how to add, edit, delete and manage queue managers.

#### 2.2.1.1 Adding Queue Managers

To work with QFlex, first add or register the WebSphere MQ Queue Manager with QFlex. In the left panel expand **Resources** and click on **Queue Managers**. You can see a list of the existing Queue Managers and a form for adding New Queue Managers:

Qflex	•		
Home   Logout	Current Queue Manager	for Company (Netflexit	y)
<ul> <li>Resources</li> <li>Queue Managers</li> </ul>	Enabled	Queue Manager Name	e as Queue Manag
<ul> <li>Brokers</li> <li>Applications</li> </ul>		IB9QMGR	IB9QMGR
+ Reports		MQV8QM_TEST	MQV8QM_TEST
+ Problem Management	Auto-Discover Queue Ma *Host Name	anager(s)	*Port Range
<ul> <li>Utilities</li> <li>Queue Browser</li> <li>Log File Viewer</li> <li>Message Purgers</li> </ul>	Host Name Check/Uncheck All Save Queue Manager Click	Queue Manager Nam     Queue Manager Nam     Save to save queue manager set	use as
+ Operations	Add New Queue Manage *Queue Manager Name	e <b>r</b> Queue Manager	Alias
+ Options	*Channel Name	Command Serve	er Queue Name <sup>③</sup>
Change Control	MCA User		
+ Support Info	*Host Name	*Port	
	Host Name (Passive Multi-Inst	ance) Port (Pa:	ssive Multi-Instance) me
	SSL Information		Keystore Password

Truststore file	Truststore Password
Choose File No file chosen SSL Peer	CipherSpec as configur
Enable Queue Manager	
Save Queue Manager Click Save t	o save queue manager settings.

Parameter Name	Purpose
Queue Manager Name	Name of the WebSphere MQ queue manager that is to be added into QFlex monitoring domain.
Queue Manager Alias*	(Optional) Friendly queue manager name or alias.
Channel Name	SVRCONN type channel that has been defined for QFlex to use.
Command Server Queue Name	(Optional) Queue which is serviced by the queue manager command server process. Z/OS Only.
Command Server Reply Queue	(Optional) Local or an alias queue that has been defined for use by QFlex. Z/OS Only.
MCA User	MCA User name which was specified for MQ channel, used to connect Qflex to QManager.
Operating System	QFlex distinguishes only between PCF aware and non-PCF aware queue managers. However it is highly recommended that correct operating system is selected in order to take advantage of future operating system specific functionalities in QFlex and WebSphere MQ 6.0.
MQ Version	There are several versions of WebSphere MQ. Here you need to indicate version of the system that QFLEX will connect to.
Host Name	Host name of the server where queue manager resides. IP addresses or DNS names are allowed.
Port	Port number where queue manager listener is accepting connections from WebSphere MQ Clients.
SSH Port	(Optional) Post used for reading MQ logs on Unix-based systems.
Host Name (Passive Multi-Instance)	(Optional) Host name or IP address for passive instance of multi-instance QM.
Port (Passive Multi-Instance)	(Optional) Port for passive instance of multi-instance QM.
Data Root Directory	(Optional) AIX, HPUX, and Linux Only. Location of WebSphere MQ data directory such as /var/mqm. QFlex needs to know where the data directory is in order to enable features log file viewing, FDC and AMQERROR log monitoring.
Username and password**	Username and password QFlex will use to browse WebSphere MQ data directory such as /var/mqm. QFlex needs to have read permissions to data directory in order to enable features log file viewing, FDC and AMQERROR log monitoring.
Keystore file and Keystore password	(Optional) Keystore file is a JKS type keystore containing your client private key and a certificate.
Truststore file/password	(Optional) Truststore file is a JKS type keystore containing your client public key and a certificate.
SSL Peer	(Optional) Specifies the X500 peer name used in SSL channel negotiation.

in SVRCONN channel	CipherSpec as configured in SVRCONN channel       (Optional) Compatible CipherSpec that you have configured on SVRCONN channel.	
-----------------------	--	--

\* optional

\*\* AIX, HPUX, and Linux only

Switch **Enable Queue Manager** to enabled or disabled state. If disabled, all monitors, statistics collectors, archive utilities, etc. related to this particular QManager are switched off. If you add a QManager in disabled state, the monitoring systems are not switched on.

After filling out all of the necessary fields, press the **Save Queue Manager** button. The queue manager, the queue manager listener and the command server must be available at the time the queue manager is added. If QFlex fails to connect to the queue manager, it will not be added into monitoring domain.

#### More about Queue Manager Aliases

In certain instances, when there is more than one queue manager in QFlex domain with the same name or the queue manager name is too long and using a shortcut name would be more preferential, one can define queue manager aliases. These aliases are QFlex aliases, not WebSphere MQ Queue Manager aliases. By default, the alias name is the same as the queue manager name. However should the alias be defined, it will be used in the palce of real queue manager name when working with:

- Performance Reports
- Monitors
- Alerts

### 2.2.1.2 Editing Queue Managers

To edit the queue manager, go to *Resources* and select *Queue Managers*. Then, click the *Edit* button

Home   Logout	Current Queue Manager	for Company (Netflexity	)
			use as
Resources     Queue Managers	Enabled 🗧	Queue Manager Name	Queue Manage
Brokers     Applications	×	IB9QMGR	IB9QMGR
	F	MQV8QM_TEST	MQV8QM_TEST
L± Reports			

Change whichever properties you need and press Save Queue Manager button:

Home   Logout	Update Queue Manager IB9QMG	iR
<ul> <li>Resources</li> <li>Queue Managers</li> <li>Brokers</li> <li>Applications</li> </ul>	*Queue Manager Name IB9QMGR *Channel Name QFLEX.SVRCONN	Queue Manager Alias IB9QMGR Command Server Queue Name <sup>(3)</sup>
+ Reports	MCA User MUSR_MQADMIN Host Information	
+ Problem Management	*Host Name Host Name (Passive Multi-Instance)	*Port 2414 Port (Passive Multi-Instance)
1 Utilities	Data Root Directory	User Name admin
Operations	SSL Information Keystore file Choose File No file chosen	Keystore Password
Options	Truststore file Choose File No file chosen	Truststore Password
Change Control	SSL Peer	CipherSpec as configure
+ Support Info	Enable Queue Manager     Save Queue Manager     Click Save to save	ve queue manager settings.

The icon in the *Connected* status column indicates whether QFlex is able to connect to the queue manager at the moment:

Home   Logout	Current Queue Manager	for Company (Netflexity	)
			use as
Queue Managers	Enabled 🔶	Queue Manager Name	Queue Manage
<ul><li>Brokers</li><li>Applications</li></ul>		IB9QMGR	IB9QMGR
	×	MQV8QM_TEST	MQV8QM_TEST
L± Reports			

If there are more queue managers added to QFlex domain than fit on a single page, there will be > and >> buttons at the bottom that will allow to scroll to the next and last pages listing queue manager names.

-

## 2.2.1.3 Deleting Queue Managers

To delete a queue manager.	go to Resources and select Queue Managers.	Then, click on Delete button
	j	

Home   Logout	Current Queue Manager for Company (Netflexity)		
			use as
Resources	Enabled	Queue Manager Name	Queue Manage
Grokers	N.		
Applications		IBAÓWCK	IBAÓWCK
	Þ	MQV8QM_TEST	MQV8QM_TEST
1 Reports			

The queue manager is deleted with all data associated with it:

Statistics

Г

- Monitors
- Existing Alerts

### 2.2.1.4 Searching queue managers

To search for specific queue manager you can use the Search toolbar with the following categories:

	Home   Logout	Current Queue Ma	nager for Company (Netfle	xity)
	Resources	Enabled	Queue Manager Name	use as Queue Manage
Queue I     Brokers     Applicati	<ul> <li>Queue Managers</li> <li>Brokers</li> <li>Applications</li> </ul>		IB9QMGR	IB9QMGR
		×	MQV8QM_TEST	MQV8QM_TEST
	1 Reports			

Use field for searching input text.

Select: substring, match or regexp.

Select on column: Enabled, Queue Manager Name, Queue Manager Alias, Host Name or Connected status.

Press **Search** button  $\stackrel{\bigcirc}{\frown}$  to initiate the search process or **Refresh** button  $\stackrel{\textcircled{}{\leftarrow}}{\leftarrow}$  to reload the data.

### 2.2.1.5 Auto-Discover Queue Manager(s)

You can search for a specific queue manager(s) using Auto-Discover Queue Manager(s) option:

Home   Logout	Current Queue Mar	nager for Company (Netfle	xity)
<ul> <li>Resources</li> <li>Queue Managers</li> <li>Brokers</li> <li>Applications</li> </ul>	Enabled	Queue Manager Name IB9QMGR	use as gueue Manager IB9QMGR
+ Reports		MQV8QM_TEST	MQV8QM_TEST
+ Problem Management	Auto-Discover Que *Host Name	ue Manager(s)	*Port Range
+ Utilities	Host Name	Queue Manager	Name $\Rightarrow$ Cl
Operations	Save Queue Manager	Click Save to save queue manager	settings.

Indicate Host Name and Port Range of Queue Manager and then click Discover button.

## 2.2.2 Brokers

This section shows how to work with brokers. To manage Brokers go to **Resources** and select **Brokers**.

Чleн		
Home   Logout	Current Brokers for Company (Netflex	<b>kity)</b> use
Queue Managers	Broker Name	<b>÷</b>
<ul><li>Brokers</li><li>Applications</li></ul>	NF01BRK	cb8083d1-eb7e-4€
+ Reports	Create Broker	
	*Broker Name	Broker Alias
Problem Management	Broker Queue Manager IB9QMGR \$	Broker Dur Sub Queue SYSTEM.JMS.D.CC.SUBSCRIBER.QUI
± Utilities	Save Broker Click Save to save broker settings.	
+ Operations		
+ Options		
Change Control		
+ Support Info		

## 2.2.2.1 Creating new broker

In Create Broker section set the following data and click Save Broker button:

Чleн		
Home   Logout	Current Brokers for Company (Netflex	<b>tity)</b>
E Resources	Broker Name	\$
<ul> <li>Queue Managers</li> <li>Brokers</li> <li>Applications</li> </ul>	NF01BRK	cb8083d1-eb7e-4€
+ Reports	Create Broker *Broker Name	Broker Alias
+ Problem Management	Broker Queue Manager IB9QMGR \$	Broker Dur Sub Queue SYSTEM.JMS.D.CC.SUBSCRIBER.QUI
Utilities	Save Broker Click Save to save broker settings.	
Operations		
Options		
Change Control		
Support Info		

Parameter Name	Purpose
Broker Name	The name of the WebSphere Message Broker that is to be added into QFlex monitoring domain.
Broker Alias	The display name of the broker queue manager in case the environment contains multiple brokers with the same Broker Queue Manager name.
Broker Queue Manager	The queue manager on the top of which Message Broker runs.

Broker Durable Subscription Queue The name of the queue that QFlex uses to create various broker subscriptions. Note that this queue has to begin with the prefix SYSTEM.JMS.D.\*, e.g. SYSTEM.JMS.D.QFLEX. It is not recommended to use generic durable subscription queues used by other subscribers such as SYSTEM.JMS.D.CC.SUBSCRIBER.QUEUE.

## 2.2.2.2 Viewing existing brokers

Current Brokers section shows the existing brokers with the following data:

<b>Current Brokers</b>	for Company (Netflexity)		
		use as substring \$ on col	umn Broker N
	Broker Name	⊖ UUID	
NF01BRK		cb8083d1-eb7e-4e84-b83d-e669e4fd0c27	
Broker Name - Title of me	essage broker, added to monitoring domain.		
UUID - Native IBM Messa	ge Broker UUID that identifies a particular b	ker.	
Status - Running - ▶ or	Stopped -		
Editing buttons - Delete	🔀 and Edit D.		
If you have a big list of bro	okers use <b>Search</b> toolbar to sort brokers by t	e following data:	
Current Brokers	for Company (Netflexity)		
		use 🗸 substring on co	lun 🗸 Broker
	Broker Name	match     regexp	UUID
NF01BRK		cb8083d1-eb7e-4e84-b83d-e669e4fd0c27	
Use - search string to look As - <i>substring, match</i> or On column type - <i>Broker</i> Press <i>Search</i> button	c up by. <b>regexp.</b> <b>r Name, UUID</b> or <b>Status</b> . to initiate search process or <b>Refresh</b> button <b>prokers</b>	to reload the data.	
Select the broker you wan	it to edit and click <b>Edit</b> button <u></u> :		
<b>Current Brokers</b>	for Company (Netflexity)		
		use as substring \$ on col	umn Broker N
	Broker Name	⊖ UUID	
NF01BRK		cb8083d1-eb7e-4e84-b83d-e669e4fd0c27	

In the opened page you can modify broker data and view topology in the Message Broker section:

Update Broker NF01BRK	
*Broker Name NF01BRK	*Broker Alias NF01BRK
*Broker Version	*UUID
9002	cb8083d1-eb7e-4e84-b83d-e669e4fd0c27
Broker Queue Manager	Broker Dur Sub Queue
IB9QMGR	SYSTEM.JMS.D.CC.SUBSCRIBER.QUEUE
Save Broker Click Save to save broker settings.	
Message Broker	
K NF01BRK	
🛨 🚍 default	
IB9QMGR Save Broker Click Save to save broker settings. Message Broker Message Broker	SYSTEM.JMS.D.CC.SUBSCRIBER.QUEUE

Click Save Broker button to save new settings.

## 2.2.3 Managing virtual applications

Virtual Applications provide a different method to interpret queue statistics and alerts, collected and managed by QFlex. A virtual application can be associated with one or more queues, where a queue is associated with an application as an input, output or an error queue.

The reports per application can be viewed with the abstraction of the notion of queue names and queue manager names from those who does not need to see all those technical details but is rather concerned with the overall application performance.

You can also assign "business friendly" labels to queue names, so that when queue statistics reports are rendered, labels will be used instead of queue names.

Here is a sample of a virtual application report where queue names are hidden:



## 2.2.3.1 Creating virtual application

In order to create a virtual application, go to Resources and select Applications:

Home | Logout **Current Applications for Company Netflexity** use Resources Application Name Queue Managers Brokers All Queues No type Applications Alpha No type + Reports Single Queue No type Check/Uncheck All + Problem Management Delete Click Delete to remove selected Applications. + Utilities Add New Application + Operations \*Application Name \*Application <sup>-</sup> Description + Options Save Application Click Save to save application settings and proceed to assigning dest Change Control + Support Info

Parameter Name	Purpose
Application Name	Name you would like to assign to the virtual application.
Application Type	This is a free text field. You can assign whatever types you need.
Description	Any comments or description of the application.

Click on **Save application** button to create your virtual application.

) flex

The next screen allows you to assign various queues to the virtual application:

#### Home | Logout

. ∽flex

#### **Current destinations for application Test Application**

Queue Name

search

Destination

	Resources
--	-----------

- Queue Managers
- Brokers
- Applications

#### Assign destinations to application Test Application

Queue Manager Name

		search	1
+ Reports	Queue Manager Name 🔶	Queue Name	Destinatio
	IB9QMGR	ORDERS	Queue \$
	IB9QMGR	QUEUE.OUT	Queue \$
+ Problem Management	IB9QMGR	SYSTEM.ADMIN.ACCOUNTING.QUEUE	Queue \$
	IB9QMGR	SYSTEM.ADMIN.ACTIVITY.QUEUE	Queue \$
+ Utilities	IB9QMGR	SYSTEM.ADMIN.CHANNEL.EVENT	Queue \$
	IB9QMGR	SYSTEM.ADMIN.COMMAND.EVENT	Queue \$
	IB9QMGR	SYSTEM.ADMIN.COMMAND.QUEUE	Queue \$
+ Operations	IB9QMGR	SYSTEM.ADMIN.CONFIG.EVENT	Queue \$
	IB9QMGR	SYSTEM.ADMIN.LOGGER.EVENT	Queue \$
	IB9QMGR	SYSTEM.ADMIN.PERFM.EVENT	Queue \$
Options	IB9QMGR	SYSTEM.ADMIN.PUBSUB.EVENT	Queue \$
	IB9QMGR	SYSTEM.ADMIN.QMGR.EVENT	Queue \$
+ Change Control	IB9QMGR	SYSTEM.ADMIN.STATISTICS.QUEUE	Queue \$
	IB9QMGR	SYSTEM.ADMIN.TRACE.ACTIVITY.QUEUE	Queue \$
	IB9QMGR	SYSTEM.ADMIN.TRACE.ROUTE.QUEUE	Queue \$
± Support Info	IB9QMGR	SYSTEM.AUTH.DATA.QUEUE	Queue \$
		134 record(s) found.	Page 1 of
	Assign Destinations C	lick Save to assign destinations to application Test /	Application.

Click on queue names you would like to be added and then choose the following parameters:

Parameter Name	Purpose
Destination Type	Currently only <b>Queue</b> is available as Destination Type.

Destination Purpose	Input for incoming data, Output for outgoing data, Error for collecting errors.
Destination Name	It can be named as you wish.

Click Assign Destinations button to save destinations for selected application.

## 2.2.3.2 Editing application

To update an application, select it and click **Update** button - D:

Current Applications for Company Netflexity		
	use	as substring \$ on column Application N
Application Name		Application Type
All Queues	No type	
Alpha	No type	
Single Queue	No type	
Check/Uncheck All		
Delete Click Delete to remove selected Applications.		

You will see current destinations for selected applications which can be deleted:

Home   Logout	Update Applicat	tion All Queues		
	*Application Name		*Application	on Type
E Resources	All Queues		No type	
Queue Managers	Description			
Brokers				
Applications				
	Save Application	Click Save to save application settings and	proceed to assigning d	estinations.
+ Reports	Current destina	tions for application All Queues		
			search	as substring 🛊 o
Problem Management	Queue Manager Name	Queue Name 🔶	Destination Type	Destination Purpose
	IB9QMGR	SYSTEM.JMS.ADMIN.QUEUE	Queue	Input
	<b>IB9QMGR</b>	SYSTEM.BROKER.WS.REPLY	Queue	Input
Utilities	IB9QMGR	SYSTEM.BROKER.EXECUTIONGROUP.REPLY	Queue	Input
	IB9QMGR	SYSTEM.BROKER.AGGR.CONTROL	Queue	Input
	IB9QMGR	SYSTEM.BROKER.DC.RECORD	Queue	Input
+ Operations	IB9QMGR	SYSTEM.BROKER.ADAPTER.INPROGRESS	Queue	Input
- Operations	IB9QMGR	SYSTEM.RETAINED.PUB.QUEUE	Queue	Input
	IB9QMGR	SYSTEM.DEFAULT.ALIAS.QUEUE	Queue	Input
	IB9QMGR	SYSTEM.BROKER.DIRECT.REPLY	Queue	Input
Options	IB9QMGR	SYSTEM.BROKER.CONTROL.QUEUE	Queue	Input
	IB9QMGR	SYSTEM.ADMIN.PERFM.EVENT	Queue	Input
	IB9QMGR	SYSTEM.BROKER.WS.INPUT	Queue	Input
+ Change Control	IB9QMGR	SYSTEM.ADMIN.COMMAND.EVENT	Queue	Input
	IB9QMGR	SYSTEM.JMS.PS.STATUS.QUEUE	Queue	Input
	IB9QMGR	SYSTEM.CLUSTER.HISTORY.QUEUE	Queue	Input
+ Support Info	IB9QMGR	SYSTEM.DEFAULT.INITIATION.QUEUE	Queue	Input
		85 reco	rd(s) found. Page 1 o	of 6

#### Check/Uncheck All

Delete

Click Delete to remove selected Destinations.

#### Assign destinations to application All Queues

		search	as substr	ing 🗧 or
Queue Manager Name	Queue Name	Destin	ation Type 🔶	Destina
IB9QMGR	ORDERS	Queue	• •	Input
IB9QMGR	TEST.VICTIM	Queue	• •	Input
MQV8QM_TEST	SYSTEM.ADMIN.ACCOUNTING.QUEUE	Queue	• •	Input
MQV8QM_TEST	SYSTEM.ADMIN.ACTIVITY.QUEUE	Queue	• •	Input
MQV8QM_TEST	SYSTEM.ADMIN.CHANNEL.EVENT	Queue	• •	Input
MQV8QM_TEST	SYSTEM.ADMIN.COMMAND.EVENT	Queue	• •	Input
MQV8QM_TEST	SYSTEM.ADMIN.COMMAND.QUEUE	Queue	• •	Input
MQV8QM_TEST	SYSTEM.ADMIN.CONFIG.EVENT	Queue	• •	Input
MQV8QM_TEST	SYSTEM.ADMIN.LOGGER.EVENT	Queue	• •	Input
MQV8QM_TEST	SYSTEM.ADMIN.PERFM.EVENT	Queue	• •	Input
NOVOON TEST		<b>_</b>	•	

MQV8QM_1ES1	SYSTEM.ADMIN.PUBSUB.EVENT	Queue =
MQV8QM_TEST	SYSTEM.ADMIN.QMGR.EVENT	Queue \$
MQV8QM_TEST	SYSTEM.ADMIN.STATISTICS.QUEUE	Queue \$
MQV8QM_TEST	SYSTEM.ADMIN.TRACE.ACTIVITY.QUEUE	Queue \$
MQV8QM_TEST	SYSTEM.ADMIN.TRACE.ROUTE.QUEUE	Queue \$
MQV8QM_TEST	SYSTEM.AUTH.DATA.QUEUE	Queue \$
	49 record(s) found.	Page 1 of 4
Assign Destinations	Click Save to assign destinations to application All Q	ueues.

## 2.2.3.3 Viewing application monitors

To view application monitors, select an application and click View button -

<b>Current Applications for Company Netflexity</b>	
	use as substring \$ on column Application
Application Name	Application Type
All Queues	No type
Alpha	No type
Single Queue	No type
Check/Uncheck All	
Delete Click Delete to remove selected Applications.	

It opens the list of application monitors with the following data:

Current Monitors for Application All Queues						
					search as substring an column Monit	tor Name
Criticalit	y ÷		Status		Monitor Name	Queue Manager Name
Warning					QUEUE_EMPTY	IB9QMGF
Failure					SYSTEM.BROKER.ADAPTER.FAILED::IB9QMGR::QUEUE_DEPTH_MORE_THAN_0	IB9QMGF
Failure					SYSTEM.BROKER.DC.BACKOUT::IB9QMGR::QUEUE_DEPTH_MORE_THAN_0	IB9QMGF
Failure					SYSTEM.CLUSTER.TRANSMIT.QUEUE::IB9QMGR::QUEUE_DEPTH_MORE_THAN_0	IB9QMGF
Failure					SYSTEM.DEAD.LETTER.QUEUE::IB9QMGR::QUEUE_DEPTH_MORE_THAN_0	IB9QMGF
Failure					SYSTEM.PROTECTION.ERROR.QUEUE::IB9QMGR::QUEUE_DEPTH_MORE_THAN_0	IB9QMGF
Check/Und	check All Click Dele	te to re	emove sele	ected	Monitors.	



Notification	Mode of notification delivery: SMTP, SNMP, Log File. By default, all alerts are always preserved in the database and can be
methods	view through Existing Alerts page.

If you want to edit a monitor, select an application monitor and click **Display Monitor** button at the end of the row. *Update Monitor* page appears and you can modify the following data:

Update Monitor QUEUE_EMPT	(		
*Monitor Template NONE 💠			
*Monitor Object Type		*Criticality	
Queue 🗘		Warning \$	
*Notification Methods Log file (*Required of Log File 111.bxt SMTP SNMP	only for 'Write to Log File' method)	Email Recepients (*Required fedor.vostrikov@gmail.com	only for 'SMTP' method. Semi
*Triggering Condition			
Queue Empty \$			
*Interval between Occurrences (minutes)	)	* Polling Interval (minutes)	D
10		2	
Select Object to Monitor			
0			
Queue Manager	*Object Name		
	Q0202.001	•	
0			
QUEUE_ENFT1			
Alert Content			
*Message Text		*Special Instructions	
\$q_nm this alert was received on \$date	2	Please do the following to co	rrect the problem
Queue depth: \$q_depth			6
Associate monitor with available Re	ecovery Actions		
Action Name	Recovery Action Type	Command	Command Argum
STOP MONITOR	Java		
Associate monitor with available Pe	olling Policies		
	-		
Polli	ng Policy Name		Cron Expression
every 3 minutes		3 * ? * *	
Monitor enabled			
	1		
Save Monitor Click Save to save mon	ntor settings.		
Save Monitor As Click Save as to t	hese settings to a new monitor.		
Parameter Purpose Name			

Monitor Template	Monitor Templates is an easy way to create many monitors and apply them to <i>N</i> number of objects. Templates are simply cookie cutters for creating monitors. Templates define all attributes of a monitor, except triggering condition and the object name. Any other attribute of a monitor can be customized, after it had been created with the template. For more details, see M onitor Templates chapter.
Monitor Object type	There are the following types: Queue, Queue Manager, Channel, QoS, Broker or Flow.
Criticality	It is used on dashboard to prioritize resolution of alerts: Failure, Problem, Warning, Info.
Notification Methods	Log file, SMTP or SNMP.
Log file	Required only for 'Write to Log File' method.
Email Recipients	Required only for 'SMTP' notification method. Semicolon separated.
Triggering Condition	Queue Full         ✓ Queue Empty         Queue Depth <         Queue Depth >=         Queue Depth >=         Queue Depth >=         Input Count =         Output Count =         Queue Input Count <         Queue Input Count <=         Queue Input Count <=         Queue Output Count <=         Queue Output Count <         Queue Output Count >=         Queue Depth Percentage <         Queue Depth Percentage >=         Queue Depth Percentage >=

Interval between Occurrences (minutes)	The time period between alerts notifications. Here, one can control how often to send an alert for a particular monitor event. For example, if you think you need to receive an alert only if it has been happening for at least an hour, you set this parameter to 60 (minutes). This way, you will see 1 alert message after the first occurrence and the next one in an hour.
Polling Interval (minutes)	The time period the monitor is triggered to check the condition. Basically, the monitoring interval.
Select Object to Monitor	Choose Object Name (Qmanager, Queue or Channel) to monitor. The object type depends on the selected monitor type.
Monitor Name	The assigned title of the monitor.

#### Alert Content section

(i)

(II)

You can type a notification in the Message Text box and in Special Instructions box to give an advice or a command for the user. Essentially, here you define the content of the alert.

Associate monitor with available Recovery Actions section Check here the box next to an Action you want the monitor to be associated with.

Associate monitor with available Polling Policies Check Associate monitor with available Polling Policies to associate a monitor with existing polling policy. For more info, see Polling Policies chapter.

Ticking Monitor enabled checkbox the monitor becomes active upon creation.

Clicking Save Monitor button you will save the new settings.

If you want to assign new settings to another monitor:

- 1. Click Save Monitor As button.
- 2. Choose Current Monitors or Unmonitored queries in the Select view dropdown menu.
- 3. Select a monitor from the list and click Save Monitor button.

#### 2.2.3.4 Deleting application

To delete one or several applications use Check/Uncheck All checkbox or simply select an application and click Delete button:

Current Applications for Company Netflexity	
	use as substring \$ on column Application N
Application Name	Application Type
All Queues	No type
Alpha	No type
Single Queue	No type
Check/Uncheck All	
Delete Click Delete to remove selected Applications.	

#### 2.2.3.5 Using search toolbar

Use the search bar for *Current Applications*.

<b>Current Applications for Company Netflexity</b>		
	use	a v substring on colum v Application
Application Name		regexp ation Type
All Queues	No type	
Alpha	No type	
Single Queue	No type	
Check/Uncheck All		
Delete Click Delete to remove selected Applications.		

Use the search bar for *Current Monitors.* 

Current Mon	itors fo	or Applicatio	n All Queues				
			search		🗸 substring	colum 🗸 Mon	itor Nam
					match	Que	ue Manag
Criticality		Status	Мо	nitor Name	regexp	_	Manager Name
Warning			QUEUE_EMPTY				IB9QMG
Failure			SYSTEM.BROKER.ADAPTER.FAILED:	:IB9QMGR::	QUEUE_DEPTH_M	DRE_THAN_0	IB9QMG
Failure			SYSTEM.BROKER.DC.BACKOUT::IB90	QMGR::QUE	UE_DEPTH_MORE_	THAN_0	IB9QMGF
Failure			SYSTEM.CLUSTER.TRANSMIT.QUEUE	E::IB9QMGR	.::QUEUE_DEPTH_N	MORE_THAN_0	IB9QMGF
Failure			SYSTEM.DEAD.LETTER.QUEUE::IB90	QMGR::QUE	UE_DEPTH_MORE_	THAN_0	IB9QMGF
Failure			SYSTEM.PROTECTION.ERROR.QUEU	E::IB9QMG	R::QUEUE_DEPTH_	MORE_THAN_0	IB9QMG
Check/Uncheck All Click Delete to remove selected Monitors.							

Use the search bar for *Current destinations*.

Current destinations for application All Queues Oueue Man				
		search	🗸 🗸 substring	columm 🗸 Queue Nam
Queue Manager Name	Queue Name	Destination Type 🔶	match Des regexp	Destination
IB9QMGR	SYSTEM.JMS.ADMIN.QUEUE	Queue	Input	SYSTEM.JMS.ADMIN.QU
IB9QMGR	SYSTEM.BROKER.WS.REPLY	Queue	Input	SYSTEM.BROKER.WS.RE
IB9QMGR	SYSTEM.BROKER.EXECUTIONGROUP.REPLY	Queue	Input	SYSTEM.BROKER.EXECU
IB9QMGR	SYSTEM.BROKER.AGGR.CONTROL	Queue	Input	SYSTEM.BROKER.AGGR.
IB9QMGR	SYSTEM.BROKER.DC.RECORD	Queue	Input	SYSTEM.BROKER.DC.RE
IB9QMGR	SYSTEM.BROKER.ADAPTER.INPROGRESS	Queue	Input	SYSTEM.BROKER.ADAPT
IB9QMGR	SYSTEM.RETAINED.PUB.QUEUE	Queue	Input	SYSTEM.RETAINED.PUB.
IB9QMGR	SYSTEM.DEFAULT.ALIAS.QUEUE	Queue	Input	SYSTEM.DEFAULT.ALIAS
IB9QMGR	SYSTEM.BROKER.DIRECT.REPLY	Queue	Input	SYSTEM.BROKER.DIREC
IB9QMGR	SYSTEM.BROKER.CONTROL.QUEUE	Queue	Input	SYSTEM.BROKER.CONTF
IB9QMGR	SYSTEM.ADMIN.PERFM.EVENT	Queue	Input	SYSTEM.ADMIN.PERFM.
IB9QMGR	SYSTEM.BROKER.WS.INPUT	Queue	Input	SYSTEM.BROKER.WS.IN
IB9QMGR	SYSTEM.ADMIN.COMMAND.EVENT	Queue	Input	SYSTEM.ADMIN.COMMA
IB9QMGR	SYSTEM.JMS.PS.STATUS.QUEUE	Queue	Input	SYSTEM.JMS.PS.STATUS
IB9QMGR	SYSTEM.CLUSTER.HISTORY.QUEUE	Queue	Input	SYSTEM.CLUSTER.HIST(
IB9QMGR	SYSTEM.DEFAULT.INITIATION.QUEUE	Queue	Input	SYSTEM.DEFAULT.INITIA
	85 reco	rd(s) found. Page 1 d	of 6	
Check/Uncheck Al				
Delete Click Delete to remove selected Destinations.				

Press **Search** button et initiate search process or **Refresh** button to reload the data.

## 2.3 Managing Reports

QFlex allows viewing performance data of queue managers that had been added to QFlex. In order to view the performance data, ensure that you have set up a Data Collection Policy and it had been started in the Operations Console.

Reports can be viewed at the Queue for a specific Queue Manager or at the Queue Managers Level. At the queue level, you will be able to see statistics for all queues for a particular interval in time. At the queue manager level, you will be able to see the total statistics for each queue manager.

## 2.3.1 Applications

0

This section shows how to create reports for Applications, compare them and use sort filter.

### 2.3.1.1 Creating reports for Applications

Go to **Reports** and click on **Applications** to create statistics report. *Applications Statistics Report* page appears and you can set the following data:

Qflex						
Home   Logout	Appl	ications Statistic	:s Report			
Resources     Reports		Report Source Applications ALL All Queues Alpha Single Queue				
<ul> <li>Applications</li> <li>Queue Managers</li> <li>Queues</li> <li>Channels</li> <li>Websphere Broker</li> <li>Schedule Report</li> </ul>	۲	By Date/Time Starting from Until		Hours 00 \$ Hours 00 \$	Minutes 01 Minutes 01	
+ Problem Management	0	By Interval Days 00 \$	Hours	Minutes	5	
Utilities		Generate Report Report and Save	Click Generate Click to save re	Report to display eport with name:	report.	
Operations						

Parameter Name	Purpose
Report Source	Select all existing or specific application source.
By Date/Time	Calendar time of start and end with indication of hours and minutes, if necessary.
By interval	Time period in hours and minutes.

Click Generate Report button to display the report in a new page:

Home   Logout	Application Stat	tistics for (Netflexity)	) on interval 5/13/15 12:0
-			use
Resources	Application Nam	e	ages
	All Queues	20152	56011
Reports	Alpha	56011	0
Applications	Single Queue	6	1051
Queue Managers	Total	76169	57062
Queues	Check/Uncheck All		
Channels	Compare Click C	Compare to compare selected	Applications.
+ Websphere Broker			
Schedule Report			

Click to download a pdf report.

To save the report for further use, indicate its name and click Report and Save button.
Q <sub>flex</sub>			••••		
Home   Logout	Appli	cations Statistic	s Report		
+ Resources		Report Source Applications ALL			
<ul> <li>Reports</li> <li>Applications</li> </ul>		All Queues Alpha Single Queue			
<ul> <li>Queue Managers</li> <li>Queues</li> <li>Channels</li> <li>The Websphere Broker</li> <li>Schedule Report</li> </ul>	۲	By Date/Time Starting from 05/13/2015 Until 05/05/2016		Hours 00 ¢ Hours 00 ¢	Minutes 01 ¢ Minutes 01 ¢
+ Problem Management	0	By Interval	Hours	Minutes	
± Utilities	Г	Generate Report	Click Generate	Report to display	report.
+ Operations	L	Report and Save	Click to save r	eport with name:	rest Report
+ Options					

The report is displayed in a new page and when you go back to Applications it is shown in Reports of type Application Statistics section, at the bottom of the main page:

Home   Logout	Applications	Statistics Repo	rt		
+ Resources	Applicat ALL	Source			
<ul> <li>Reports</li> <li>Applications</li> </ul>	All Que Alpha Single (	Queue			
<ul> <li>Queue Managers</li> <li>Queues</li> <li>Channels</li> <li>Websphere Broker</li> <li>Schedule Report</li> </ul>	Starting     Until	from	Hours 00 \$ Hours 00 \$	Minutes 01 ¢ Minutes 01 ¢	
+ Problem Management	Days	rval Hours 00 ‡	Minutes		
± Utilities	Generate Report a	Report Click Ger	nerate Report to display save report with name:	report.	
+ Operations					
+ Options	Reports of ty	pe Application	Statistics		use
+ Change Control	Test Report	Report N	ame		05-06-2016 20
± Support Info	Check/Unchec	k All Delete to remove sele	cted Reports.		

To remove a report, select it and click **Delete** button.

## 2.3.1.2 Comparing reports

To view compared reports select them from the list and click **Compare** button:

Q <sub>flex</sub>			  
Home   Logout	Application Statistics	for (Netflexity) on inte	erval 3/10/16 12:0:
+ Resources	Application Name 🔶	Incoming Messages	use Outgoing Messages
	All Queues	13188	14994
Reports	Alpha	14994	0
Applications	Single Queue	0	266
Queue Managers	Total	28182	15260
Queues	Check/Uncheck All		
<ul> <li>Channels</li> <li>Websphere Broker</li> <li>Schedule Report</li> </ul>	Compare Click Compare	to compare selected Application	S.

Application Comparison Chart appears with the results of comparison:



To go back to previous page click **Back To Report** button.

# 2.3.1.3 Using sorting filter

You can use the sorting filter on the top of the list if you need to find a specific type of application statistics or reports:

~flex		• •	
Home   Logout	Application Statis	tics for (Netflexity)	on interval 3/25/15 12:01
+ Resources	Application Name	Incoming Messa	use use ages
	All Queues	13224	15190
Reports	Alpha	15190	0
Applications	Single Queue	0	266
Queue Managers	Total	28414	15456
Queues Channels  Websphere Broker	Check/Uncheck All	npare to compare selected /	Applications.
Schedule Report			

Click Search button  $\bigcirc$  to initiate search process or Refresh button  $\gtrless$  to reload the data.

# 2.3.2 Queue Managers

QFlex allows viewing performance data on queue managers that had been added to QFlex. In order to view the performance data, ensure that you have set up a Data Collection Policy and it was started in the Operations Console. This section shows how to create reports for Queue Managers, compare them and use sorting filter.

#### 2.3.2.1 Creating reports for Queue Managers

Go to **Reports** and click on **Queue Managers** to create statistics report. *Queue Managers Statistics Report* appears and you can set the following data:

	:H	)		••••			
Home	Logout	Que	ue Managers Sta	tistics Repor	t		
± Reso	ources	•	By Date/Time Starting from		Hours	Minutes 01 \$	
E Repo	orts Applications	·	Until		Hours	Minutes 01 \$	
= ( = ( = (	Queue Managers Queues Channels	0	By Interval Days 00 \$	Hours	Minutes		
= s	eosphere Broker Schedule Report		Generate Report Report and Save	Click Generate I Click to save re	Report to display	report.	
+ Prob	lem Management						
Parameter Name	Purpose						
By Date/Time	Calendar time of the start and the	end, w	ith indication of hours ar	nd minutes, if nece	ssary.		
By interval	Time period in hours and minutes last X minutes that you have sele	s. If type cted, sta	e of report By Interval is s arting from current time,	selected and clickir not the time the re	ng the <i>Refresh</i> bu	itton, the report refreshee	s for

If you click Generate Report button, the report will be displayed in a new page:

Home   Logout	Queue Manager S	tatistics for (Netfle	xity) on interval	4/7/14 12
			use	as
C Resources	Queue Manager Name	Messages In	Messages Out	+ High
	IB9QMGR	31800	31799	3000
E Reports	MQV8QM_TEST	134864	134864	100
Applications	Total	166664	166663	3100
Queue Managers	Check/Uncheck All			
Queues	Compare Click Com	npare to compare selected (	Queue Managers.	
Channels				
+ Websphere Broker				
Schedule Report				

Parameter Name	Purpose
Messages In	Shows how many messages had been PUT on the queue during the interval.
Messages Out	Shows how many messages were removed from the queue either using MQGET or CLEAR commands.
High Depth	Shows maximum depth of the queue that had been reached during that interval.
Total Throughput	An arithmetic expression of Messages In + Messages Out.
PDF Report	You can download the report in pdf format.

To save the report for further use, give it name and click **Report and Save** button.

#### lex Home | Logout **Queue Managers Statistics Report** By Date/Time + Resources Starting from Minutes Hours 01 \$ 04/06/2015 00 \$ $\mathbf{\bullet}$ Until Hours Minutes Reports 00 \$ 04/17/2016 01 🛊 Applications **Queue Managers** By Interval Queues $\bigcirc$ Days Hours Minutes Channels 00 \$ 00 \$ 01 \$ + Websphere Broker Schedule Report Generate Report Click Generate Report to display report. **Report and Save** Click to save report with name: Test Report + Problem Management

The report is displayed in a new page and when you go back to *Queue Managers* it is shown in *Reports of type Queue Managers Statistics* sectio n, in the bottom of the main page:

Q <sub>flex</sub>						
Home   Logout	Queu	e Managers Sta	tistics Repo	rt		
+ Resources		By Date/Time Starting from		Hours	Minutes	
<ul> <li>Reports</li> <li>Applications</li> </ul>		Until		Hours	Minutes 01 \$	
<ul> <li>Queue Managers</li> <li>Queues</li> <li>Channels</li> <li>Websphere Broker</li> </ul>	0	By Interval Days 00 \$	Hours	Minutes 01 \$		
Schedule Report		Generate Report Report and Save	Click Generate Click to save n	Report to display eport with name:	report.	
Problem Management						
± Utilities	Repo	rts of type Que	ue Manager	Statistics		use
			Report Name			
+ Operations	Test Re	eport				04-24-2016 19:
+ Options	Che	eck/Uncheck All Click Delete to r	emove selected R	Reports.		

To remove a report, select it and click **Delete** button.

# 2.3.2.2 Comparing reports

To view compared reports, select them from the list and click **Compare** button:

Alex		• •		
Home   Logout	Queue Manager Si	tatistics for (Netfle	exity) on interval 3	/30/15 12
			use	as s
L± Resources	Queue Manager Name	Messages In	Messages Out	High D
	IB9QMGR	32182	32181	3000
E Reports	MQV8QM_TEST	135714	135714	100
Applications	Total	167896	167895	3100
Queue Managers	Check/Uncheck All			
Queues	Compare Click Com	pare to compare selected	Queue Managers.	
Channels				
+ Websphere Broker				
Schedule Report				

The Queue Manager Comparison Chart shows the results of comparison:

 $\bigcirc$ 



To go back to previous page click **Back To Report** button.

#### 2.3.2.3 Using sorting filter

To find a specific type of queue manager statistics or reports use the sorting filter, at the top of the list:

Чleн	•			
Home   Logout	Queue Manager S	tatistics for (Netfle	xity) on interva	<b>3/30/15</b> 1
+ Resources	Queue Manager Name	Messages In 🔶	use Messages Out	÷ Hie
	IB9QMGR	32334	32333	3000
E Reports	MQV8QM_TEST	135993	135993	100
Applications	Total	168327	168326	3100
Queue Managers	Check/Uncheck All			
Queues Channels	Compare Click Cor	npare to compare selected (	Queue Managers.	
Websphere Broker     Schedule Report				
Schedule Report				

Press Search button  $\bigcirc$  to initiate search process or **Refresh** button  $\gtrless$  to reload the data.

# 2.3.3 Queues

Reports can be viewed at the Queue for a specific Queue Manager or at the Queue Managers Level. At the queue level, you will be able to see statistics for all queues, for a particular interval in time. At the queue manager level, you will be able to see the total statistics for each queue manager.

## 2.3.3.1 Creating reports for Queues

Go to Reports and click on Queues to create a statistics report. Queue Statistics Report page appears and you can set the following data:

Yflex	••••			••••			•
Home   Logout	Q	)ueue	Statistics Re	port			
+ Resources			Report Source				
			IB9QMGR :	•			
Reports			ALL ORDERS				
<ul> <li>Applications</li> <li>Oueue Managers</li> </ul>	1		QUEUE.OUT SYSTEM.ADMIN.A	CCOUNTING.QU	JEUE		
Queues	1						
Channels	-		By Date/Time				
Websphere Broker			Starting from		Hours	Minutes	
Schedule Report	0	•	04/13/2015		00 <del>ç</del>	01 🗧	
			Until 05/25/2016		Hours	Minutes	
+ Problem Managemer	at		03/23/2010		00 \$		
			By Interval				
			Days	Hours	Minutes		
± Utilities			00 \$	00 \$	01 🖨		
		(	Generate Report	Click Genera	te Report to display	report.	
Operations			Report and Save	Click to sav	e report with name:		
+ Options	P	enor	ts of type Que	ue Statisti	ne -		
± Change Control				Penort Name			use
	0	orders		Report Name	2		10-28-2015 17:
Support Info	0	Cheo	k/Uncheck All				
		Delete	Click Delete to	remove selecte	d Reports.		
Parameter Name	Purpose						
Report Source	Select all existing or	r specif	ic queue sources.				

By Date/Time	Calendar time of start and end with indication of hours and minutes, if necessary.
By interval	Time period in hours and minutes.

Click Generate Report button to display the report in a new page:



To save a report for further use, indicate its name and click Report and Save button.

Q <sub>flex</sub>	
Home   Logout	Queue Statistics Report
+ Resources	Report Source IB9QMGR \$
<ul> <li>Reports</li> <li>Applications</li> <li>Queue Managers</li> </ul>	Queues ALL ORDERS QUEUE.OUT SYSTEM.ADMIN.ACCOUNTING.QUEUE
<ul> <li>Queues</li> <li>Channels</li> <li>Websphere Broker</li> <li>Schedule Report</li> </ul>	By Date/Time     Starting from Hours Minutes     04/13/2015     00
+ Problem Management	Until Hours Minutes 05/25/2016 00 \$ 01 \$ By Interval
± Utilities	Days Hours Minutes 00 \$ 00 \$ 01 \$
+ Operations	Generate Report         Click Generate Report to display report.           Report and Save         Click to save report with name:         Test Report

The report is displayed in a new page and when you go back to Queues it is shown in Reports of type Queue Statistics section, at the bottom of the main page:

<b>C</b> flex					•
Home   Logout	Queue Statistics Re	port			
+ Resources	Report Source Report Source IB9QMGR	•			
<ul> <li>Reports</li> <li>Applications</li> <li>Queue Managers</li> </ul>	Queues ALL ORDERS QUEUE.OUT SYSTEM.ADMIN.A				
<ul> <li>Queues</li> <li>Channels</li> <li>Websphere Broker</li> <li>Schedule Report</li> </ul>	By Date/Time Starting from		Hours	Minutes 01 \$	
+ Problem Management	Until By Interval		Hours	Minutes 01 \$	
± Utilities	Days	Hours	Minutes 01 \$		
+ Operations	Generate Report Report and Save	Click Generate Rep Click to save repor	ort to display t with name:	report.	
± Options	Reports of type Que	eue Statistics			
+ Change Control		Report Name			use
+ Support Info	Test Report orders				04-25-2016 19 10-28-2015 17
	Check/Uncheck All Delete Click Delete to	remove selected Repo	rts.		
•••	) () () () () () () () () () () () () () () (	)			

To remove a report, select it and click **Delete** button.

# 2.3.3.2 Viewing data on queue

To see detailed data about a specific queue, click on the queue name in Statistics for Queue Manager page.

Q <sub>lex</sub>						
Home   Logout	Statistics for Queue Manager	(IB9QMGR)	) on interval	3/30/15 1	L <b>2</b> :	
+ Resources	Queue Name 🔶	Messages In 🔶	use Messages Out	as Throughput per minute	sut	
	ORDERS	0	0	0		
E Reports	QUEUE.OUT	0	0	0		
Applications	SYSTEM.ADMIN.ACCOUNTING.QUEUE	0	0	0		
Queue Managers	SYSTEM.ADMIN.ACTIVITY.QUEUE	0	0	0		
Queues	SYSTEM.ADMIN.CHANNEL.EVENT	0	0	0		
Channels	SYSTEM.ADMIN.COMMAND.EVENT	0	0	0		
Websphere Broker	SYSTEM.ADMIN.COMMAND.QUEUE	21438	21438	0	0	
Schedule Report	SYSTEM.ADMIN.CONFIG.EVENT	0	0	0		
	SYSTEM.ADMIN.LOGGER.EVENT	0	0	0		
	SYSTEM.ADMIN.PERFM.EVENT	0	0	0		
Problem Management	SYSTEM.ADMIN.PUBSUB.EVENT	0	0	0		
	SYSTEM.ADMIN.QMGR.EVENT	0	0	0		
	SYSTEM.ADMIN.STATISTICS.QUEUE	0	0	0		
Unities	SYSTEM.ADMIN.TRACE.ACTIVITY.QUEUE	0	0	0		
	SYSTEM.ADMIN.TRACE.ROUTE.QUEUE	0	0	0		
Operations	SYSTEM.AUTH.DATA.QUEUE	0	0	0		
	Totals for IB9QMGR:	39419	39418	0	0	
			87 record(s) for	und. Page 1 o	f 6	
Options	Check/Uncheck All					
	Compare Click Compare to compare	e selected Queue	s.			

Several charts, depicting detailed queue statistics will be presented, as well as textual representation of the graphical data:





		-	-	-
ORDERS	0	0	0	0
ORDERS	0	0	0	0
ORDERS	0	0	0	0
ORDERS	0	0	0	0
ORDERS	0	0	0	0
ORDERS	0	0	0	0
ORDERS	0	0	0	0
ORDERS	0	0	0	0
ORDERS	0	0	0	0
ORDERS	0	0	0	0
ORDERS	0	0	0	0
ORDERS	0	0	0	0
ORDERS	0	0	0	0
ORDERS	0	0	0	0
ORDERS	0	0	0	0
ORDERS	0	0	0	0
				24 record(s) found. Page 1 (

Idleness Report for Queue Manager (IB9QMGR)

Idle Reason Idling Started

At the bottom of the screen there is the Idleness Report. Idleness Report shows times during which collection could not take place for such reasons as:

- Collection Disabled
- Queue Manager Not Available.

If QFlex was turned off for a period of time, it will show up as Collection Disabled.

#### Note

Use textual data to see precise interval times for performance data.

Textual data will not match graphical charts if you specified the interval for which performance records are placed OUTSIDE. The data will not be presented graphically. However, it will be presented in a text form.

*Example:* There are two time-adjacent performance records. Record A shows all the performance data from January 1st to February 1st 12AM. Record B shows all the performance data from February 1st 12:01 AM to February 1st 3AM. If you select to see all the data from February 1st 10AM or 3AM, the chart will not be able to scale in a meaningful way and data is not displayed graphically. However it is available in a textual format.

#### 2.3.3.3 Comparing reports

To view compared reports select them from the list and click **Compare** button:

Home | Logout

, flex

# Statistics for Queue Manager (IB9QMGR) on interval 3/30/15 12:

_			use	as	sul
+ Resources	Queue Name	Messages In 🗢	Messages Out	Throughput per minute	•
	ORDERS	0	0	0	
Reports	QUEUE.OUT	0	0	0	
Applications	SYSTEM.ADMIN.ACCOUNTING.QUEUE	0	0	0	
Queue Managers	SYSTEM.ADMIN.ACTIVITY.QUEUE	0	0	0	
Queues	SYSTEM.ADMIN.CHANNEL.EVENT	0	0	0	
Channels	SYSTEM.ADMIN.COMMAND.EVENT	0	0	0	
Websphere Broker	SYSTEM.ADMIN.COMMAND.QUEUE	21438	21438	0	0
Schedule Report	SYSTEM.ADMIN.CONFIG.EVENT	0	0	0	
	SYSTEM.ADMIN.LOGGER.EVENT	0	0	0	
	SYSTEM.ADMIN.PERFM.EVENT	0	0	0	
🕒 Problem Management	SYSTEM.ADMIN.PUBSUB.EVENT	0	0	0	
	SYSTEM.ADMIN.QMGR.EVENT	0	0	0	
	SYSTEM.ADMIN.STATISTICS.QUEUE	0	0	0	
Unities	SYSTEM.ADMIN.TRACE.ACTIVITY.QUEUE	0	0	0	
	SYSTEM.ADMIN.TRACE.ROUTE.QUEUE	0	0	0	
Operations	SYSTEM.AUTH.DATA.QUEUE	0	0	0	
	Totals for IB9QMGR:	39419	39418	0	0
			87 record(s) fo	und. Page 1 c	f 6
+ Options	Check/Uncheck All				
	Compare Click Compare to compare	e selected Queue	s.		

Queue Comparison Chart appears with results of comparison:



To go back to previous page click **Back To Report** button.

#### 2.3.3.4 Using sorting filter

Use the sorting filter on top of the list if you need to find a specific type of queue statistics or reports:

Home | Logout

eх

## Statistics for Queue Manager (IB9QMGR) on interval 3/30/15 12:

_			use		🗸 su
+ Resources	Queue Name	Messages In $\ominus$	Messages Out	Throughpu per minut	re
	ORDERS	0	0	0	-
E Reports	QUEUE.OUT	0	0	0	-
Applications	SYSTEM.ADMIN.ACCOUNTING.QUEUE	0	0	0	-
Queue Managers	SYSTEM.ADMIN.ACTIVITY.QUEUE	0	0	0	-
Queues	SYSTEM.ADMIN.CHANNEL.EVENT	0	0	0	-
Channels	SYSTEM.ADMIN.COMMAND.EVENT	0	0	0	-
Websphere Broker	SYSTEM.ADMIN.COMMAND.QUEUE	21862	21862	0	C
Schedule Report	SYSTEM.ADMIN.CONFIG.EVENT	0	0	0	-
	SYSTEM.ADMIN.LOGGER.EVENT	0	0	0	-
_	SYSTEM.ADMIN.PERFM.EVENT	0	0	0	-
Problem Management	SYSTEM.ADMIN.PUBSUB.EVENT	0	0	0	-
	SYSTEM.ADMIN.QMGR.EVENT	0	0	0	-
	SYSTEM.ADMIN.STATISTICS.QUEUE	0	0	0	-
Utilities	SYSTEM.ADMIN.TRACE.ACTIVITY.QUEUE	0	0	0	-
	SYSTEM.ADMIN.TRACE.ROUTE.QUEUE	0	0	0	-
+ Operations	SYSTEM.AUTH.DATA.QUEUE	0	0	0	-
	Totals for IB9QMGR:	39920	39919	0	C
			87 record(s) fo	und. Page 1	of 6
+ Options	Check/Uncheck All				
	Compare Click Compare to compare	e selected Queue	s.		

Click Search  $\bigcirc$  button to initiate search process, or **Refresh** button  $\gtrless$  to reload the data.

# 2.3.4 Channels

This section shows how to create reports for Channels, view them and use sort filter.

#### 2.3.4.1 Creating Reports for Channels

Go to Reports and click on Channels to create a statistics report. Channels Statistics Report page appears and you can set the following data:

Home   Logout	Chan	nel Statistics Re	port		
+ Resources		Report Source			
<ul> <li>Reports</li> <li>Applications</li> <li>Queue Managers</li> <li>Queues</li> </ul>		IB9QMGR Channels ALL ADMIN.TLS.SVRCON QFLEX.SVRCONN SYSTEM.AUTO.RECE	IN		
Channels     Websphere Broker     Schedule Report	۲	By Date/Time Starting from Until		Hours	Minutes 01 ‡
+ Problem Management		By Interval		00 \$	01 \$
+ Utilities	0	Days 00 \$	Hours 00 \$	Minutes 01 \$	
+ Operations		Generate Report Report and Save	Click Generate Re Click to save rep	port to display r	report.
+ Options					
+ Change Control					
+ Support Info					
Parameter Name Purpose					

i arameter Name	
Report Source	Select the application source and channel.
By Date/Time	Calendar time of start and end, with indication of hours and minutes, if necessary.
By interval	Time period in hours and minutes.

Click Generate Report button to display the report in a new page:

				use
Resources	Channel Name	MCA Job Name 🗢	Bytes Sent 🔶	Bytes Received 🗢
	QFLEX.SVRCONN	00000D8000004E4	1292892	455016
Reports	QFLEX.SVRCONN	00000D80000065C	3580180	1323760
Applications	QFLEX.SVRCONN	00000D800000690	153760	152320
Queue Managers	QFLEX.SVRCONN	00000D8000006C8	0	0
Queues	QFLEX.SVRCONN	00000D800000710	361764	358596
Channels	QFLEX.SVRCONN	00000D800000EA4	0	0
+ Websphere Broker	QFLEX.SVRCONN	00000D8000001154	1442544	506160
Schedule Report	QFLEX.SVRCONN	00000D8000001498	459004	274944
	QFLEX.SVRCONN	00000D80000014D0	3685012	1327740
+ Problem Management	QFLEX.SVRCONN	00000D800000152C	4649576	1703736
	QFLEX.SVRCONN	00000D800000156C	0	0
	QFLEX.SVRCONN	00000D80000016DC	221636	69928
	QFLEX.SVRCONN	00000D8000001770	4695824	1704488
Utilities	SYSTEM.BKR.CONFIG	00000D8000001508	40232	83380
	SYSTEM.BKR.CONFIG	00000D8000001724	65980	169792
Operations	Totals for IB9QMGR:		20648404	8129860
Options				
Change Control				
Support Info				

If you want to save the report for further use, indicate its name and click Report and Save button.

Home   Logout	Chan	nel Statistics R	eport			
Resources     Reports     Applications		Report Source Report Source IB9QMGR Channels ALL ADMIN.TLS.SVRCO QFLEX.SVRCONN	) NNN			
<ul> <li>Queue Managers</li> <li>Queues</li> <li>Channels</li> <li>Websphere Broker</li> </ul>		SYSTEM.AUTO.REC	CEIVER	Hours	Minutes	
Schedule Report	۲	05/12/2015 Until 05/05/2016		00 ¢ Hours 00 ¢	01 ¢ Minutes 01 ¢	
Problem Management	0	By Interval	Hours	Minutes		
Operations	Г	Generate Report Report and Save	Click Generate Click to save r	Report to display	report. Test Report	
Options						
Change Control						
+ Support Info						

The report is displayed in a new page and when you go back to *Channels* it is shown in *Reports of type Channel Statistics* section, at the bottom of the main page:

Home   Logout	Channel Statistics Report	
+ Resources	Report Source	
<ul> <li>Reports</li> <li>Applications</li> <li>Queue Managers</li> <li>Queues</li> </ul>	Channels ALL ADMIN.TLS.SVRCONN QFLEX.SVRCONN SYSTEM.AUTO.RECEIVER	
Channels  Websphere Broker  Schedule Report	By Date/Time       Starting from     Hours       05/12/2015     00 €       Until     Hours       Minutes	
+ Problem Management	05/05/2016 00 \$ 01 \$	
Utilities	Days Hours Minutes	
Operations	Generate Report         Click Generate Report to display report.           Report and Save         Click to save report with name:         Test Report	t
+ Options	Reports of type Channel Statistics	
+ Change Control	Report Name	use
Support Info	Test Report Check/Uncheck All Click Delete to remove selected Reports.	05-05-2016 20

To remove a report, select it and click **Delete** button.

#### 2.3.4.2 Viewing Data on Channels

To see detailed data about a specific channel, click on the channel name in Channel Statistics for Queue Manager page.

Home | Logout

# Channel statistics for Queue Manager (IB9QMGR) on interval 5/1

				use	
L± Resources	Channel Name	MCA Job Name 🔶	Bytes Sent 🔶	Bytes Received	Bu
	QFLEX.SVRCONN	00000D8000004E4	1292892	455016	
□ Reports	QFLEX.SVRCONN	00000D80000065C	3580180	1323760	
Applications	QFLEX.SVRCONN	00000D800000690	153760	152320	
Queue Managers	QFLEX.SVRCONN	00000D8000006C8	0	0	
Queues	QFLEX.SVRCONN	00000D800000710	361764	358596	
Channels	QFLEX.SVRCONN	00000D800000EA4	0	0	
+ Websphere Broker	QFLEX.SVRCONN	00000D8000001154	1442544	506160	
Schedule Report	QFLEX.SVRCONN	00000D800000123C	4652988	1705520	
	QFLEX.SVRCONN	00000D80000012C8	3210572	1149568	
	QFLEX.SVRCONN	00000D800000140C	216040	214060	
Problem Management	QFLEX.SVRCONN	00000D8000001498	459004	274944	
	QFLEX.SVRCONN	00000D80000014D0	3685012	1327740	
+ 18/06-	QFLEX.SVRCONN	00000D800000152C	4649576	1703736	
Li Otilides	QFLEX.SVRCONN	00000D800000156C	0	0	
	QFLEX.SVRCONN	00000D80000016DC	221636	69928	
+ Operations	QFLEX.SVRCONN	00000D8000001728	672212	260680	
	Totals for IB9QMGR:		29455472	11574412	
			20 rec	ord(s) found. Page 1 o	f 2
브 Options					

Several charts, depicting detailed queue statistics are presented, as well as textual representation of the graphical data:



#### Activity chart for Channel (QFLEX.SVRCONN)

Channel Name	MCA Job Name	Bytes Sent		Bytes Received	E
QFLEX.SVRCONN	00000D800000152C		93756	24816	
QFLEX.SVRCONN	00000D800000152C		248516	92012	
QFLEX.SVRCONN	00000D800000710		3620	3584	
QFLEX.SVRCONN	00000D800000152C		390496	145392	
QFLEX.SVRCONN	00000D800000710		3620	3584	
QFLEX.SVRCONN	00000D800000152C		535596	200620	
QFLEX.SVRCONN	00000D800000710		3676	3640	
QFLEX.SVRCONN	00000D800000152C		1107868	416140	
QFLEX.SVRCONN	00000D800000710		3676	3640	
QFLEX.SVRCONN	00000D800000152C		1335948	487712	
				362 record(s) found.	Page 1

### 2.3.4.3 Using Sorting Filter

Use the sorting filter to find a specific type of channel statistics or reports:

#### Home | Logout

ех

## Channel statistics for Queue Manager (IB9QMGR) on interval 5/1:

				use	
L± Resources	Channel Name	MCA Job Name 🔶	Bytes Sent 🔶	Bytes Received	Buff
	QFLEX.SVRCONN	00000D8000004E4	1292892	455016	
E Reports	QFLEX.SVRCONN	00000D80000065C	3580180	1323760	
Applications	QFLEX.SVRCONN	00000D800000690	153760	152320	
Queue Managers	QFLEX.SVRCONN	00000D8000006C8	0	0	
Queues	QFLEX.SVRCONN	00000D800000710	361764	358596	
Channels	QFLEX.SVRCONN	00000D800000EA4	0	0	
Websphere Broker	QFLEX.SVRCONN	00000D8000001154	1442544	506160	
Schedule Report	QFLEX.SVRCONN	00000D800000123C	4652988	1705520	
	QFLEX.SVRCONN	00000D80000012C8	3210572	1149568	
	QFLEX.SVRCONN	00000D800000140C	216040	214060	
Problem Management	QFLEX.SVRCONN	00000D8000001498	459004	274944	
	QFLEX.SVRCONN	00000D80000014D0	3685012	1327740	
<b>1</b> 10/2014	QFLEX.SVRCONN	00000D800000152C	4649576	1703736	
Candes	QFLEX.SVRCONN	00000D800000156C	0	0	
	QFLEX.SVRCONN	00000D80000016DC	221636	69928	
+ Operations	QFLEX.SVRCONN	00000D8000001728	672212	260680	
	Totals for IB9QMGR:		29455472	11574412	
			20 rec	ord(s) found. Page	1 of 2
L Options					

Click Search  $\bigcirc$  button to initiate search process, or Refresh button  $\gtrless$  to reload the data.

# 2.3.5 Websphere Broker

Click on Node to view statistics on a specific Node and Flow if you need to view report on a flow:

Reports	
Applications	
Queue Managers	
Queues	
Channels	
Websphere Broker	
Node	
Flow	
Schedule Report	

#### 2.3.5.1 Node

This section shows how to create reports for a node, view data on it and use sort filter.

2.3.5.1.1 Creating reports for a node

To create broker report for a node go to **Reports**, select **Websphere Broker** and click on **Node**. *Node Cpu Statistics by Flow* page appears and you can set the following data:

Q <sub>flex</sub>		
Home   Logout	Node Cpu Statistics by Flow	
+ Resources	Select Flow Brokers NF01BRK \$	
<ul> <li>Reports</li> <li>Applications</li> <li>Queue Managers</li> <li>Queues</li> <li>Channels</li> <li>Websphere Broker</li> </ul>	Execution Groups default \$ Flows SampleMessageFlow \$ By Date/Time Starting from Hours Minutes	
Node     Flow     Schedule Report	Image: Constraint of the second sec	
Problem Management	By Interval       Days     Hours       00 ‡     00 ‡	
+ Utilities	Generate Report       Click Generate Report to display Node Cpu Statisitic         Report and Save       Click to save report with name:	s report.

Parameter Name	Purpose
Select Flow	select the Brokers, Execution Groups and Flows.
By Date/Time	Calendar time of start and end with indication of hours and minutes, if necessary.
By interval	Time period in hours and minutes. If type of report <b>By Interval</b> is selected, clicking on refresh refreshes the report for last X minutes that you have selected, starting from current time, not the time the report was generated

Click Generate Report button to display the report in a new page:

Q <sub>len</sub>			
Home   Logout	Node Statistics for flow	(SampleQueueToFile	MessageFlow) on in
			use
L Resources	Node 🔶	Cpu Time(sec)	Elapsed Time(sec)
	File Output	0	0
Reports	MQ Input	0	0
<ul> <li>Applications</li> <li>Queue Managers</li> <li>Queues</li> <li>Channels</li> <li>Websphere Broker</li> <li>Node</li> <li>Flow</li> <li>Schedule Report</li> </ul>	Totals for SampleQueueToFileMessageFlow:	0	0
Parameter Name Purpose			

Parameter Name	Purpose
Cpu Time(sec)	Number of seconds CPU was executing the node's logic
Elapsed Time(sec)	Total time it took from message entering till message exiting the node
Invocation Count	Number of times node was called



To save the report for further use, type its name and click *Report and Save* button.

Чleн	•					
Home   Logout	Node	Cpu Statistics t	y Flow			
+ Resources		Select Flow Brokers IB9NODE \$				
<ul> <li>Reports</li> <li>Applications</li> <li>Queue Managers</li> </ul>		Execution Groups IB9SERVER \$ Flows SampleQueueToFil	eMessageFlow \$			
<ul> <li>Queues</li> <li>Channels</li> <li>Websphere Broker</li> </ul>		By Date/Time		Hours	Minutes	
<ul><li>Node</li><li>Flow</li><li>Schedule Report</li></ul>	•	03/30/2015 Until 04/24/2016		Hours	Minutes	
+ Problem Management	0	By Interval Days 00 \$	Hours 00 \$	Minutes 01 \$		
+ Utilities	6	Generate Report	Click Generate Re Click to save repo	port to display	Node Cpu Statisitics n Test Report	eport.
+ Operations						

The report is displayed in a new page and when you go back to **Node page** it is shown in *Reports of type Node Cpu Time Statistics By Flow* secti on, in the bottom of the main page:

.ex Home | Logout Node Cpu Statistics by Flow Select Flow + Resources Brokers IB9NODE \$ Execution Groups Reports IB9SERVER \$ Applications Flows SampleQueueToFileMessageFlow \$ Queue Managers Queues By Date/Time Channels Starting from Hours Minutes Websphere Broker 03/30/2015 00 \$ 01 \$ Node  $\bullet$ Flow Until Hours Minutes 04/24/2016 00 \$ 01 \$ Schedule Report By Interval Days Hours Minutes  $\bigcirc$ Problem Management 00 \$ 00 \$ 01 \$ Generate Report Click Generate Report to display Node Cpu Statisitics report. Utilities Report and Save Click to save report with name: Test Report + Operations Reports of type Node Cpu Time Statistics By Flow Options use Report Name Test Report 05-23-2016 21:0 + Change Control Check/Uncheck All Delete Click Delete to remove selected Reports. Support Info

To remove a report, select it and click **Delete** button.

2.3.5.1.2 Viewing data on node

To see detailed data about a specific node, click on the node name in *Node Statistics for flow* page.

Q <sub>fleн</sub>			
Home   Logout	Node Statistics for flow	(SampleQueueToFile)	MessageFlow) on i
			use
+ Resources	Node 🔶	Cpu Time(sec)	Elapsed Time(sec)
	File Output	0	0
E Reports	MQ Input	0	0
Applications	Totals for	0	0
Queue Managers	SampleQueueIoFileMessageFlow:		
Queues			
Channels			
Websphere Broker			
Node			
Flow			
Schedule Report			

Several charts, depicting detailed queue statistics will be presented as well as textual representation of the graphical data:


2.3.5.1.3 Using sorting filter

You can use sorting filter on top of the list if you need to find a specific type of node statistics or reports:

Home   Logout	Node Statistics for f	low (Sar	npleQueueToFile	MessageFlow) o
7 -			_	use
Resources	Node		Cpu Time(sec)	Elapsed Time(se
	File Output	0		0
Reports	MQ Input	0		0
<ul> <li>Applications</li> <li>Queue Managers</li> <li>Queues</li> <li>Channels</li> <li>Websphere Broker</li> <li>Node</li> <li>Flow</li> <li>Schedule Report</li> </ul>	<b>Totals for</b> SampleQueueToFileMessage	Flow: 0		0

## 2.3.5.2 Flow

This section shows how to create reports for Flow, view data on it and use search filter.

2.3.5.2.1 Creating reports for Flow

To create broker report for a flow, go to Reports -> Websphere Broker and click on Flow. Flow Data Volume by Broker page appears and you can set the following data:

Qflex				
Home   Logout	Flow Statistics for	r broker (IB9NODE) on	interval 12/5/1	5 12:01
			use	as
L± Resources	Exec Group	Flow	Cpu Time(sec)	Numbe
	IB9SERVER	SampleQueueToFileMessageFlo	w 0	0
E Reports				
Applications				
Queue Managers				
Queues				
Channels				
Websphere Broker				
Node				
Flow				
Schedule Report				

Parameter Name	Purpose
Brokers	Select a broker for report generation.
By Date/Time	Calendar time of start and end, with indication of hours and minutes, if necessary.
By interval	Time period in hours and minutes. If you selected type of report <b>By Interval</b> , clicking on refresh will refresh the report for last X minutes that you have selected, starting from current time, not the time the report was generated.

Click Generate Report button to display the report in a new page:

Home   Logout  Flow Statistics for broker (IB9NODE) on interval 12/5/15 12:0  use	28				
★ Resources       Exec Group ◆       Flow ◆       Cpu Time(sec) ◆       Nut         Exec Group ◆       Flow ◆       Cpu Time(sec) ◆       Nut         IB9SERVER       SampleQueueToFileMessageFlow 0       0         Paper       Applications       Queue Managers       0         Queues       Channels       Channels       0	Logout	Flow Statistics for	broker (IB9NODE) on	interval 12/5/	15 12:01 /
Resources Exec Group Flow Cpu Time(sec) Nur   IB9SERVER SampleQueueToFileMessageFlow 0 0   Reports Applications Queue Managers 0 0   Queues Channels Channels 0 0				use	as
IB9SERVER SampleQueueToFileMessageFlow 0 0 Reports Applications Queue Managers Queues Channels	ources	Exec Group	Flow	Cpu Time(sec)	• Numbe
<ul> <li>Reports</li> <li>Applications</li> <li>Queue Managers</li> <li>Queues</li> <li>Channels</li> </ul>		IB9SERVER	SampleQueueToFileMessageFlo	o wo	0
<ul> <li>Applications</li> <li>Queue Managers</li> <li>Queues</li> <li>Channels</li> </ul>	orts				
Queue Managers       Queues       Channels	Applications				
Queues Channels	Queue Managers				
Channels	Queues				
	Channels				
E Websphere Broker	ebsphere Broker				
Node	Node				
E Flow	Flow				
Schedule Report	Schedule Report				

Parameter Name	Purpose
Exec Group	Execution Group Name
Flow	Flow Name
Cpu Time(sec)	Number of seconds that CPU spent to execute the entire flow.
Number of messages	Number of messages that went through the flow.
Data Volume(kb)	Volume of information in kilobytes.
PDF Report	You can download the report in .pdf format.

To save report for further use, type its name and click **Report and Save** button. The report is displayed in a new page and when you go back to *Fl* ow page it is shown in *Reports of type Flow Data Volume Statistics By Broker* section, at the bottom of the main page:

Qflex			••••
Home   Logout	Flow Data Volume	by Broker	
+ Resources	Brokers NF01BRK \$		
<ul> <li>Reports</li> <li>Applications</li> <li>Queue Managers</li> <li>Queues</li> <li>Channels</li> <li>Websphere Broker</li> <li>Node</li> <li>Flow</li> <li>Schedule Report</li> </ul>	By Date/Time     Starting from     Until     By Interval     Days     00 \$	Hours 00 ¢ Hours 00 ¢ Hours 00 ¢ Minute 00 ¢ OI ¢	Minutes 01 ‡ Minutes 01 ‡ es Prove Data Volume report.
+ Problem Management	Report and Save	Click to save report with name	
Utilities	Reports of type Flo	w Data Volume Statistic	s By Broker
Operations	Test Report	Report Name	05-05-2016 1
Options	Check/Uncheck All	o romano coloctod Roporto	
+ Change Control		o remove selected Reports.	

To remove a report, select it and click **Delete** button.

2.3.5.2.2 Viewing data on flow

To see detailed data about a specific flow, click on the flow name in Flow Statistics for broker page.

Q <sub>flex</sub>	)			
Home   Logout	Flow Statistics for	broker (IB9NODE) on ir	nterval 12/5/15	; <b>12:01</b> /
			use	as
L± Resources	Exec Group	Flow 0	Cpu Time(sec)	Number
E Proste	IB9SERVER	SampleQueueToFileMessageFlow	0	0
Applications				
Queue Managers				
Queues				
Channels				
Websphere Broker				
Node				
= Flow				
Schedule Report				

A chart, depicting detailed data flow volume is presented, as well as textual representation of the graphical data:



Use sorting filter to find a specific type of flow statistics or reports:

Q <sub>flen</sub>		
Home   Logout	Flow Statistics	or broker (IB9NODE) on interval 12/5/15 12:0
_		use
± Resources	Exec Group	
	IB9SERVER	SampleQueueToFileMessageFlow 0 0
⊡ Reports		
Applications		
Queue Managers		
Queues		
Channels		
Websphere Broker		
Node		
Flow		
Schedule Report		
0		

Click **Search** button  $\bigcirc$  to initiate search process or **Refresh** button  $\gtrless$  to reload the data.

# 2.3.6 Schedule Report

To create automatic report generation go to **Reports** and click on **Schedule Report**. Schedule Report Generation page appears and you can set the following data:

Alex			
Home   Logout	Schedule Report Genera	ation	
+ Resources	Schedule Properties Reports Test Report2 \$	Policies	
<ul> <li>Reports</li> <li>Applications</li> <li>Queue Managers</li> <li>Queues</li> </ul>	e-mails test@netflexity.com Save Schedule Click Save	Schedule to schedule report	sending.
<ul> <li>Channels</li> <li>Websphere Broker</li> <li>Node</li> </ul>	Scheduled Reports List		use
Flow	Reports		Polling Polices
Schedule Report	orders	every 3	minutes
+ Problem Management	Check/Uncheck All Generate Now Click Generate	ate Now to generate and ser	nd report(s).
+ Utilities	Delete Click Delete to remo	ve selected Schedules.	

Parameter Name	Purpose
Reports	Select existing reports from drop down menu.
Policies	Select existing cron/polling policy (when or how often to send report). Ensure that you have set one up ????in Polling Policies.
E-mails	Electronic mail addresses where you want the report to be sent. You can use several email addresses separated by semicolon.

# 2.4 Problem Management

In the Problem Management section of QFlex you can see Existing Alerts, Monitors and Monitor Templates.

## 2.4.1 Existing Alerts

This section shows how to view, search, edit, delete and filter existing alerts.

## 2.4.1.1 Viewing Existing Alerts

To see the log of existing alerts, go to **Problem Management** and click on **Existing Alerts**. You will see a list of alarms in the *Current Alerts* secti on:

Qflex		•••••
Home   Logout	Current Alerts for (Netflexity)	
± Resources	Criticality 🗢 Status	<ul> <li>Alert Name</li> </ul>
<ul> <li>Reports</li> <li>Applications</li> <li>Queue Managers</li> <li>Queues</li> <li>Channels</li> <li>* Websphere Broker</li> <li>Schedule Report</li> </ul>	Failure     New       Check/Uncheck All       Delete       Click Delete to remove selected       Delete All	SYSTEM.DEAD.LETTER.QUEUE::IB9QMGR::QU ed Alerts. Alerts.
	Search Alert	Alout Stat
<ul> <li>Problem Management</li> <li>Existing Alerts</li> <li>Monitors</li> <li>Monitor Templates</li> </ul>	First Occurrence	Hours Minutes
Utilities	Last Occurrence	
Operations	Date	Hours Minutes 00 ¢ 01 ¢
Options	Monitor Objects       Queue Manager       ALL	
+ Change Control	Search Alerts Click Search to obtain	alerts by specified criteria.
Support Info		
•••		

2.4.1.2 Searching for Existing Alerts

To search through the log of existing alerts use Search Alert section in the bottom, where you can set the following criteria:

Q <sub>flex</sub>		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Home   Logout	Current Alerts for (Netflexity)	
+ Resources	Criticality $\diamond$ Status $\diamond$	use Alert Name
<ul> <li>Reports</li> <li>Applications</li> <li>Queue Managers</li> <li>Queues</li> <li>Channels</li> <li>* Websphere Broker</li> <li>Schedule Report</li> </ul>	Failure     New     State       Check/Uncheck All     Click Delete to remove selected Ale       Delete     Click Delete to remove all Alerts	SYSTEM.DEAD.LETTER.QUEUE::IB9QMGR::QU erts. s.
<ul> <li>Problem Management</li> <li>Existing Alerts</li> <li>Monitors</li> <li>Monitor Templates</li> </ul>	Search Alert Alert Name First Occurrence Date	Alert Sta ✓ ANY New Ackno Resolv 00 ‡ 01 ‡
+ Utilities	Last Occurrence	Hours Minutes
+ Operations	Monitor Objects	00 \$ 01 \$
+ Options	Queue Manager ALL \$	
Change Control	Search Alerts Click Search to obtain alert	s by specified criteria.
Support Info		

Parameter Name	Purpose
Alert Name	Title of alert you need to find.
Alert Status	ANY, New, Acknowledged or Resolved.
Criticality	ANY, Failure, Warning, Problem or Info.
First Occurrence	Calendar date and time (hours, minutes) when an alert first appeared.
Last Occurrence	Calendar date and time (hours, minutes) when an alert was detected for the last time.
Monitor Objects	Queue Manager objects - ALL or specific.

If you choose a specific **Queue Manager** object you can also select **Channels** (all, single or several - ctrl+left click) and **Queues** (all, single or several - ctrl+left click):

s Minutes (01 ) s Minutes (01 )				
s Minutes s Minutes s Minutes \$ 01 \$				
s Minutes				
Minutes				
¢ 01 ¢				
ueues				
ALL				
ORDERS				
QUEUE.OU I				
15TEMADMIN.ACCC	000000000000000000000000000000000000000			
osified criteria				
	Queues ALL ORDERS QUEUE.OUT SYSTEM.ADMIN.ACCC	Queues ALL DRDERS QUEUE.OUT SYSTEM.ADMIN.ACCOUNTING.QUEUE	Queues ALL DRDERS QUEUE.OUT SYSTEM.ADMIN.ACCOUNTING.QUEUE	Queues ALL DRDERS QUEUE.OUT SYSTEM.ADMIN.ACCOUNTING.QUEUE

Click Search Alerts button, in the bottom, to view list of alerts in the Alert Search Results page.

### 2.4.1.3 Editing Alerts

Alerts can be edited by changing the status of the alert or by writing comments regarding the incident. To edit an alert, click Edit button

Qflex	• • • • • • • • • • • • • • • • • • • •	
Home   Logout	Alert Search Results (1)	
		use
L± Resources	Criticality 🗢 Status 🗢	Alert Name
<ul> <li>Reports</li> <li>Applications</li> <li>Queue Managers</li> <li>Queues</li> <li>Channels</li> <li>Websphere Broker</li> <li>Schedule Report</li> </ul>	Failure       New       SYST         Check/Uncheck All       Click Delete to remove selected Alerts.         Delete       Click Delete to remove all Alerts.         Delete All       Click Delete to remove all Alerts.	EM.DEAD.LETTER.QUEUE::IB9QMGR::

The Update Alert page opens:

Jpdate Alert	
Alert Name SYSTEM.DEAD.LETTER.QUEUE::IB9QMGR::QUEUE_L	
Alert Status	
Time of Occurrence Apr 26, 2016 7:27:50 PM -	
Comments	
Alert Message	
04/26/2016 07:27:52 PM - Queue SYSTEM.DEAD.LETTER.QUEUE has depth of 1 message(s).	
Save Alert Click Save to save alert settings.	
Current Alerts for (SYSTEM.DEAD.LETTER.QUEUE::IB9QMGR::QUEUE_DEPTH_MORE_THAN_0)	
Started	

Here you can change *Alert Name, Alert Status, Criticality, Comments* and *Alert Message*. Click Save Alert button to update new alert settings.

In the Current Alerts for section you can also see all the occurrences of this particular alert before it had been reported in the console.

#### 2.4.1.4 Deleting Alerts

Select an alert or use **Check/Uncheck All** checkbox to select all alerts and click **Delete** button to remove selected Alerts. Click **Delete All** button to remove all alerts:

Qflex	)	•••••	
Home   Logout	Current Alerts fo	or (Netflexity)	use
+ Resources	Criticality $\Rightarrow$	Status 🔶	Alert Name
Reports	Failure	New	SYSTEM.DEAD.LETTER.QUEUE::IB9QMGR::QU
<ul> <li>Applications</li> <li>Queue Managers</li> <li>Queues</li> <li>Channels</li> <li>The Websphere Broker</li> <li>Schedule Report</li> </ul>	Check/Uncheck All Delete Click Dele Delete All Click I	te to remove selected A Delete to remove all Aler	lerts. ts.

## 2.4.1.5 Using sorting filter

You can use sorting filter on top of the list if you need to find a specific type of alert:

Q <sub>lex</sub>	•			
Home   Logout	Current Alerts fo	or (Netflexity)		
+ Pasources			use	_
La Resources	Criticality	Status	Alert Name	
Reports     Applications	Failure	New	SYSTEM.DEAD.LETTER.QUEUE::IB9QMGR:	:QU
Queue Managers	Check/Uncheck All			
Queues	Delete Click Dele	ete to remove selected A	Alerts.	
Channels	Delete All Click	Delete to remove all Ale	rts.	
Websphere Broker				
Schedule Report				

Click Search button  $\bigcirc$  to initiate the search process or **Refresh** button 2 to reload the data.

## 2.4.2 Monitors

Monitors are different from monitoring templates because they are bound to specific WebSphere MQ and WebSphere Message Broker objects. Monitors are also bound to specific triggering conditions values or parameters. Changing the monitor properties does not affect the template and vice versa. All properties inherited from the template can be over written.

Any changes to the monitor are picked up automatically during next polling interval. This section describes how to view existing monitors, add and delete them.

## 2.4.2.1 Viewing existing monitors

To view current monitors go to **Problem Management** and click on **Monitors**. In the opened page scroll down to *Select view* section and choose *Current Monitors* to see existing monitors:

....

ех

#### Home | Logout Add New Monitor \*Monitor Template NONE ŧ + Resources \*Monitor Object Type \*Criticality Failure 🛊 \$ Queue \*Notification Methods Log file (\*Required only for 'Write to Log File' method) Email Recepie Reports Log File adobretsov@ Applications SMTP SNMP Queue Managers Queues \*Triggering Condition Queue Full ŧ Channels \*Interval between Occurrences (minutes) Websphere Broker \* Polling Inter Schedule Report Select Object to Monitor Queue Manager \*Object Name Problem Management **IB9QMGR** ŧ SYSTEM.BROKER.ADAPTER.PROCESSED Existing Alerts SYSTEM.BROKER.ADAPTER.UNKNOWN SYSTEM.BROKER.ADMIN.QUEUE н. Monitors SYSTEM.BROKER.ADMIN.REPLYTODM SYSTEM BROKER ADMIN STREAM Monitor Templates Alert Content + Utilities \*Message Text 🗿 \*Special Instru Operations Detions Associate monitor with available Recovery Actions Action Name Recovery Action Type + Change Control STOP MONITOR Java Associate monitor with available Polling Policies ± Support Info Polling Policy Name every 3 minutes 3\*? Monitor enabled

Save Monitor	Click Save to	save monitor settings.
Select view (	Current Monito	rs 🗘
Current Mon	itors for Co	mpany
		search
Criticality 🔶	Status 🔶	Monitor Name
Failure		IB9QMGR::QMANAGER_DOWN
Failure		MQV8QM_TEST::COMMAND_SERVER_DOWN
Failure		MQV8QM_TEST::QMANAGER_DOWN
Warning		QUEUE_EMPTY
Failure		SYSTEM.BROKER.ADAPTER.FAILED::IB9QMGR::QUEUE_DEF
Failure	•	SYSTEM.BROKER.DC.BACKOUT::IB9QMGR::QUEUE_DEPTH_
Failure		SYSTEM.CLUSTER.TRANSMIT.QUEUE::IB9QMGR::QUEUE_DI
Failure		SYSTEM.CLUSTER.TRANSMIT.QUEUE::MQV8QM_TEST::QUE
Failure		SYSTEM.DEAD.LETTER.QUEUE::IB9QMGR::QUEUE_DEPTH_

SYSTEM.DEAD.LETTER.QUEUE::MQV8QM\_TEST::QUEUE\_DE

SYSTEM.PROTECTION.ERROR.QUEUE::IB9QMGR::QUEUE\_E

SYSTEM.PROTECTION.ERROR.QUEUE::MQV8QM\_TEST::QUI

Select Unmonitored Queues to see the list of queues that are not monitored:

Failure

Failure

Failure

Delete

Check/Uncheck All

Click Delete to remove selected Monitors.

Select view Unmonitored Queues \$

## **Current Unmonitored Queues for Company**

	Queue Manager Alias	Q	ueue Manage	r Name		Queue Name
IB9QMGR		IB9QMGR			ORDERS	
IB9QMGR		IB9QMGR			SYSTEM.AD	MIN.ACCOUNTING.Q
IB9QMGR		IB9QMGR			SYSTEM.AD	MIN.ACTIVITY.QUEU
IB9QMGR		IB9QMGR			SYSTEM.AD	MIN.CHANNEL.EVEN
IB9QMGR		IB9QMGR			SYSTEM.AD	MIN.COMMAND.EVE
IB9QMGR		IB9QMGR			SYSTEM.AD	MIN.COMMAND.QUE
IB9QMGR		IB9QMGR			SYSTEM.AD	MIN.CONFIG.EVENT
IB9QMGR		IB9QMGR			SYSTEM.AD	MIN.LOGGER.EVENT
IB9QMGR		IB9QMGR			SYSTEM.AD	MIN.PERFM.EVENT
IB9QMGR		IB9QMGR			SYSTEM.AD	MIN.PUBSUB.EVENT
IB9QMGR		IB9QMGR			SYSTEM.AD	MIN.QMGR.EVENT
IB9QMGR		IB9QMGR			SYSTEM.AD	MIN.STATISTICS.QU
IB9QMGR		IB9QMGR			SYSTEM.AD	MIN.TRACE.ACTIVIT
IB9QMGR		IB9QMGR			SYSTEM.AD	MIN.TRACE.ROUTE.C
IB9QMGR		IB9QMGR			SYSTEM.AU	TH.DATA.QUEUE
IB9QMGR		IB9QMGR			SYSTEM.BR	OKER.ADAPTER.INPF
		131 record	d(s) found.	Page 1 of 9		
			use	as substring	on column	Queue Manager A

## 2.4.2.2 Using sorting filter

You can use sorting filter on top of the list if you need to find a specific type of monitor:

Select view	Current Monitors 🕴 🛊	)
-------------	----------------------	---

## **Current Monitors for Company**

		search 🛛 🗧 🗸 substring	colum 🗸	Monitor Nan
Criticality	Status	Monitor Name regexp		Queue Mana Manager
chicking	56565			Name
Failure		IB9QMGR::QMANAGER_DOWN		IB9QMGR
Failure		MQV8QM_TEST::COMMAND_SERVER_DOWN		MQV8QM_TE
Failure		MQV8QM_TEST::QMANAGER_DOWN		MQV8QM_TE
Warning		QUEUE_EMPTY		IB9QMGR
Failure		SYSTEM.BROKER.ADAPTER.FAILED::IB9QMGR::QUEUE_DEPTH_MORE_THAN_C	)	IB9QMGR
Failure		SYSTEM.BROKER.DC.BACKOUT::IB9QMGR::QUEUE_DEPTH_MORE_THAN_0		IB9QMGR
Failure		SYSTEM.CLUSTER.TRANSMIT.QUEUE::IB9QMGR::QUEUE_DEPTH_MORE_THAN	_0	IB9QMGR
Failure		SYSTEM.CLUSTER.TRANSMIT.QUEUE::MQV8QM_TEST::QUEUE_DEPTH_MORE_	THAN_0	MQV8QM_TE
Failure		SYSTEM.DEAD.LETTER.QUEUE::IB9QMGR::QUEUE_DEPTH_MORE_THAN_0		IB9QMGR
Failure		SYSTEM.DEAD.LETTER.QUEUE::MQV8QM_TEST::QUEUE_DEPTH_MORE_THAN_	0	MQV8QM_TE
Failure		SYSTEM.DEF.SENDER::IB9QMGR::CHANNEL_NOT_RUNNING		IB9QMGR
Failure		SYSTEM.DEF.SENDER::MQV8QM_TEST::CHANNEL_NOT_RUNNING		MQV8QM_TE
Failure		SYSTEM.PROTECTION.ERROR.QUEUE::IB9QMGR::QUEUE_DEPTH_MORE_THAN	1_0	IB9QMGR
Failure		SYSTEM.PROTECTION.ERROR.QUEUE::MQV8QM_TEST::QUEUE_DEPTH_MORE	THAN_0	MQV8QM_TE
Check/Unchec	k All			
Delete Click	Delete to remo	ve selected Monitors.		

To sort unmonitored queues use the filter in the bottom:

Select view	Unmonitored Queues	ŧ
-------------	--------------------	---

### **Current Unmonitored Queues for Company**

	Queue Manager Alias	Queue Manag	jer Name 🔶	Queue Nan
<b>IB9QMGR</b>		IB9QMGR		ORDERS
IB9QMGR		IB9QMGR		SYSTEM.ADMIN.ACCOUNTING
IB9QMGR		IB9QMGR		SYSTEM.ADMIN.ACTIVITY.QU
IB9QMGR		IB9QMGR		SYSTEM.ADMIN.CHANNEL.EV
IB9QMGR		IB9QMGR		SYSTEM.ADMIN.COMMAND.E
IB9QMGR		IB9QMGR		SYSTEM.ADMIN.COMMAND.Q
IB9QMGR		IB9QMGR		SYSTEM.ADMIN.CONFIG.EVE
IB9QMGR		IB9QMGR		SYSTEM.ADMIN.LOGGER.EVE
IB9QMGR		IB9QMGR		SYSTEM.ADMIN.PERFM.EVEN
IB9QMGR		IB9QMGR		SYSTEM.ADMIN.PUBSUB.EVE
IB9QMGR		IB9QMGR		SYSTEM.ADMIN.QMGR.EVENT
IB9QMGR		IB9QMGR		SYSTEM.ADMIN.STATISTICS.C
IB9QMGR		IB9QMGR		SYSTEM.ADMIN.TRACE.ACTIV
IB9QMGR		IB9QMGR		SYSTEM.ADMIN.TRACE.ROUT
IB9QMGR		IB9QMGR		SYSTEM.AUTH.DATA.QUEUE
IB9QMGR		IB9QMGR		SYSTEM.BROKER.ADAPTER.IN
		131 record(s) found.	Page 1 of 9	
		use	🗸 substring	on colum 🗸 Queue Manage
			regexp	Queue Manage Queue Name
			regenp	Quede Maine

Press Search button  $\bigcirc$  to initiate search process or **Refresh** button  $\gtrless$  to reload the data.

## 2.4.2.3 Adding new monitor

To create a monitor navigate to Problem Management and click on Monitors. On the Add New Monitor page you can set the following data:

# •••••••••••••

Home | Logout Add New Monitor \*Monitor Template NONE \$ + Resources \*Monitor Object Type <sup>(i)</sup> \*Criticality Failure 🛊 Queue ŧ Reports \*Notification Methods Log file (\*Required only for 'Write to Log File' method) Email Recepte Log File test@netflex Applications SMTP SNMP Queue Managers Queues \*Triggering Condition Queue Full ŧ Channels + Websphere Broker \*Interval between Occurrences (minutes) 🤫 \* Polling Inte Schedule Report Select Object to Monitor Queue Manager \*Object Name Problem Management SYSTEM.ADMIN.COMMAND.EVENT IB9QMGR \$ SYSTEM.ADMIN.COMMAND.QUEUE Existing Alerts SYSTEM.ADMIN.CONFIG.EVENT SYSTEM.ADMIN.LOGGER.EVENT Monitors SYSTEM.ADMIN.PERFM.EVENT Monitor Templates Alert Content ± Utilities \*Message Text 😐 \*Special Instri Operations + Options Associate monitor with available Recovery Actions Action Name Recovery Action Type + Change Control STOP MONITOR Java Associate monitor with available Polling Policies ± Support Info Polling Policy Name every 3 minutes 3\*? Monitor enabled

lex

Parameter Name	Purpose
Monitor Template	Monitor Templates is an easy way to create many monitors and apply them to <i>N</i> number of objects. Templates are simply cookie cutters for creating monitors. Templates define all attributes of a monitor, except triggering condition and the object name. Any other attribute of a monitor can be customized, after it had been created with the template. For more details, see M onitor Templates chapter.
Monitor Object Type	Queue, Queue Manager, Channel, QoS, Broker or Flow.
Criticality	Failure, Warning, Problem or Info.
Notification Methods	Log file, SMTP, SNMP or RSS.
Log file	If <i>Write to Log File</i> is the notification method for the monitor, select file location where log files should be written. Any valid file path for the operating system hosting QFlex is allowed.
<b>Email</b> Recepi ents*	Required only for 'SMTP' method. Semicolon separated.

Triggering	
Condition	✓ Queue Full
	Queue Empty
	Queue Depth <
	Queue Depth >
	Queue Depth <=
	Queue Depth >=
	Input Count =
	Output Count =
	Queue Input Count <
	Queue Input Count >
	Queue Input Count <=
	Queue Input Count >=
	Queue Output Count <
	Queue Output Count >
	Queue Output Count <=
	Queue Output Count >=
	Queue Put Disabled
	Queue Get Disabled
	Queue Depth Percentage <
	Queue Depth Percentage >
	Queue Depth Percentage <=
	Queue Depth Percentage >=
	Provide a value for this field if <i>Queue</i> is the monitor object type. For example, to set up a monitor that checks if the depth is over 10, triggering condition parameter should be Depth > and triggering condition parameter 10. For monitors with monitor object type <i>Queue Manager</i> or <i>Channel</i> this field is irrelevant.
Interval between Occurrences (minutes)	Allows to ignore subsequent occurrences of the alarm for a specified period of time, after monitoring condition occurred for the first time. <i>Example:</i> Monitor Template A has Polling Interval set to 1 minute and Interval Between Occurrences is set to 3 minutes. After QFlex notices that the condition has occurred for the first time, it will send an alarm. However, it will not send another alarm until three minutes have elapsed, provided during that time condition remained true. Once the alert is sent, message in the web console will also show all times and number of occurrences that monitoring condition was true but no alert was sent out. If
	condition had no longer been met during the interval between occurrence the counter is reset.
Polling Interval (minutes)	Controls frequency with which monitored condition is checked. Minimal value is 1 minute.
*Special Instructions	Provides a way to customize messages for each monitor. You are encouraged to use this field to instruct your operations and data center staff about handling of this alarm. You can use all the custom tags that are used in Alert Text.
*Recovery Text	provides a way to customize messages for each monitor. You are encouraged to use this field to instruct your operations and data center staff about handling of this alarm. You can use all the custom tags that are used in Alert Text.

selected by holding Ctrl-Key while clicking on the names of queue managers. Template can then be applied to multiple queue managers. Select the object name that is to be monitored. Object names should be either a channel name or queue name dependent on the monitor object type selected. Hold Ctrl-Key and click on object names to select multiple objects. The template will then be applied to all objects selected.		
Al In cc m	lert Content the <i>Alert Content</i> section you can type notification in the <i>Message Text</i> box and in <i>Special Instructions</i> text with advice or ommand for user. Alert Text provides a way to customize messages for each monitor. Following custom tags can be used in the essage body. These tags will be replaced with the actual values at runtime:	
	* \$date \-Date	
	* \$qm_nm \-Queue Manager Name	
	* \$qm_alias \-QFlex Queue Manager Alias	
	* \$q_nm \-Queue Name	
	* \$q_depth \-Current Queue Depth	
	* $q_in_count$ and $q$ out out $-Queue$ Input and Output Count	
	* \$channel_nm \-Channel Name	
	* \$channel_sts \-Channel Status	
	* \$channel_start \-Channel Start Time	
	* \$channel_tp \-Channel Type	
	* \$connection_count \-Number of Current Channel Connections	
	* \$monitor_nm \-Monitor Name	
	* Sseverity \-Alert Severity	
	<pre>^ Strig_condition_param \-Triggering Condition Parameter * description and the News</pre>	
	* Smonitor_nm \-Monitor Name	
	* \$msg id \_Maggage ID of a Stale Maggage	
	<pre>subsy_ru \-messaye ID OI a scare messaye * \$mgg body \-Meggage Body of a Stale Meggage</pre>	
	* Śmsg put time \-Message Dut Time of a Stale Message	
	* Shrk nm \-Broker Name	
	* \$flow nm \-Flow Name	
	VIION_ING ( IION INC	

#### Advanced Stale Message Alert Text

QoS Stale Message monitor allows QFlex end user not only list the basic details of a stale message at the top of the queue, but also display any message header variable and loop through a number of stale messages on the queue.

QFlex 2.0 introduced new variable called \$stale\_message. Using this variable one can access the following fields to provide more details in the alert content:

```
$stale_message.id \-Same as $msg_id
$stale_message.data \-Same as $msg_body
$stale_message.messageHeader \-Object that provides access to MQMD
$stale_message.messageHeader.accountingToken
$stale_message.messageHeader.applicationId
$stale_message.messageHeader.applicationOrigin
$stale_message.messageHeader.backoutCount
$stale_message.messageHeader.Coa
$stale_message.messageHeader.Cod
$stale_message.messageHeader.CodePage
$stale_message.messageHeader.CorreclationId
$stale_message.messageHeader.expiration
$stale message.messageHeader.expiry
$stale_message.messageHeader.groupId
$stale_message.messageHeader.messageFormat
$stale_message.messageHeader.messageType
$stale_message.messageHeader.persistence
$stale_message.messageHeader.priority
$stale_message.messageHeader.putApplicationName
$stale_message.messageHeader.putTime
$stale_message.messageHeader.replyToQueueName
$stale_message.messageHeader.replyToQmanagerName
$stale_message.messageHeader.messageSequenceNumber
$stale_message.messageHeader.userId
$stale_message.messageHeader.messageFlags
$stale_message.messageHeader.originalLength
$stale_message.messageHeader.characterSet
$stale_message.messageHeader.encoding
$stale_message.messageHeader.feedback
```

Associate r

Associate monitor with available Recovery Actions

In the Associate monitor with available Recovery Actions section check the box next to an Action you want the monitor to be associated with.

Associate monitor with available Polling Policies Check Associate monitor with available Polling Policies to associate a monitor with existing polling policy by checking it. For more info, see Polling Policies chapter.

Monitor enabled checkbox allows you activate the monitor upon creation.

Click Save Monitor button to save the new settings.

#### 2.4.2.4 Editing a monitor

To edit a monitor click **Edit** button *a* the end of the line:

Select view Current Monitors

## **Current Monitors for Company**

\$

		search as substring 🕈 on column	Monitor Name
Criticality 🔶	Status 🔶	Monitor Name	Queue Manager Name
Failure		IB9QMGR::QMANAGER_DOWN	IB9QMGR
Failure		MQV8QM_TEST::COMMAND_SERVER_DOWN	MQV8QM_TES
Failure		MQV8QM_TEST::QMANAGER_DOWN	MQV8QM_TES
Warning		QUEUE_EMPTY	IB9QMGR
Failure		SYSTEM.BROKER.ADAPTER.FAILED::IB9QMGR::QUEUE_DEPTH_MORE_THAN_0	IB9QMGR
Failure		SYSTEM.BROKER.DC.BACKOUT:: IB9QMGR:: QUEUE_DEPTH_MORE_THAN_0	IB9QMGR
Failure		SYSTEM.CLUSTER.TRANSMIT.QUEUE::IB9QMGR::QUEUE_DEPTH_MORE_THAN_0	IB9QMGR
Failure		SYSTEM.CLUSTER.TRANSMIT.QUEUE::MQV8QM_TEST::QUEUE_DEPTH_MORE_THAN_0	MQV8QM_TE
Failure		SYSTEM.DEAD.LETTER.QUEUE::IB9QMGR::QUEUE_DEPTH_MORE_THAN_0	IB9QMGR
Failure		SYSTEM.DEAD.LETTER.QUEUE::MQV8QM_TEST::QUEUE_DEPTH_MORE_THAN_0	MQV8QM_TE
Failure		SYSTEM.DEF.SENDER::IB9QMGR::CHANNEL_NOT_RUNNING	IB9QMGR
Failure		SYSTEM.DEF.SENDER::MQV8QM_TEST::CHANNEL_NOT_RUNNING	MQV8QM_TES
Failure		SYSTEM.PROTECTION.ERROR.QUEUE::IB9QMGR::QUEUE_DEPTH_MORE_THAN_0	IB9QMGR
Failure		SYSTEM.PROTECTION.ERROR.QUEUE::MQV8QM_TEST::QUEUE_DEPTH_MORE_THAN_0	MQV8QM_TE
Check/Unchec	k All		
Delete	Delete to remo	ve selected Monitors.	

In the Update Monitor section, set the following data:

Update Monitor MQV8QM_TES	T::COMMAND_SERVER_D	OWN	
*Monitor Template NONE  \$			
*Monitor Object Type Queue Manager \$		*Criticality Failure \$	
*Notification Methods Log file (*Required Log File SMTP SNMP	only for 'Write to Log File' method)	Email Recepients (*Required	only for 'SMTP' method. Semi
*Triggering Condition Command Server Down			
*Interval between Occurrences (minutes)	Ð	* Polling Interval (minutes)	)
Select Object to Monitor			
*Object Name MQV8QM_TEST \$			
Monitor Name			
MQV8QM_TEST::COMMAND_SERVER_DOV	VN		
Alert Content			
*Message Text		*Special Instructions	
\$date - Command Server for \$qm_nm not responding. (MQ Error: \$mq_reason_code)     Restart command server.			1.
Associate monitor with available R	ecovery Actions		
Action Name	Recovery Action Type	Command	Command Argume
STOP MONITOR	Java		
Accorista manitar with available B	alling Policies		
Associate monitor with available P	oning Policies		
Polli	ing Policy Name		Cron Expression
every 3 minutes		3*?**	
Manitar anablad			
Save Monitor Click Save to save more	nitor settings		
Save Monitor As Click Save as to	these settings to a new monitor.		

Check/uncheck Monitor enabled checkbox to start/stop monitoring.

Click Save Monitor button to save the new settings.

**Save Monitor As** is used to copy an existing monitor with its settings to a new monitor. The new monitor receives a name in form <SOURCE\_MONITOR\_NAME>.N, where N - auto incremented numeric index.

#### 2.4.2.5 Deleting monitors

To remove one monitor click on it, or check Check/Uncheck All checkbox to select all monitors, and click Delete button:

Select view Current Monitors \$

#### **Current Monitors for Company**

		search as substring 🗘 on column	Monitor Name
Criticality 🔶	Status 🔶	Monitor Name	Queue Manager Name
Failure		IB9QMGR::QMANAGER_DOWN	IB9QMGR
Failure		MQV8QM_TEST::COMMAND_SERVER_DOWN	MQV8QM_TES
Failure		MQV8QM_TEST::QMANAGER_DOWN	MQV8QM_TES
Warning		QUEUE_EMPTY	IB9QMGR
Failure		SYSTEM.BROKER.ADAPTER.FAILED::IB9QMGR::QUEUE_DEPTH_MORE_THAN_0	IB9QMGR
Failure		SYSTEM.BROKER.DC.BACKOUT::IB9QMGR::QUEUE_DEPTH_MORE_THAN_0	IB9QMGR
Failure		SYSTEM.CLUSTER.TRANSMIT.QUEUE::IB9QMGR::QUEUE_DEPTH_MORE_THAN_0	IB9QMGR
Failure		SYSTEM.CLUSTER.TRANSMIT.QUEUE::MQV8QM_TEST::QUEUE_DEPTH_MORE_THAN_0	MQV8QM_TES
Failure		SYSTEM.DEAD.LETTER.QUEUE::IB9QMGR::QUEUE_DEPTH_MORE_THAN_0	IB9QMGR
Failure		SYSTEM.DEAD.LETTER.QUEUE::MQV8QM_TEST::QUEUE_DEPTH_MORE_THAN_0	MQV8QM_TES
Failure		SYSTEM.DEF.SENDER::IB9QMGR::CHANNEL_NOT_RUNNING	IB9QMGR
Failure		SYSTEM.DEF.SENDER::MQV8QM_TEST::CHANNEL_NOT_RUNNING	MQV8QM_TES
Failure		SYSTEM.PROTECTION.ERROR.QUEUE::IB9QMGR::QUEUE_DEPTH_MORE_THAN_0	IB9QMGR
Failure		SYSTEM.PROTECTION.ERROR.QUEUE::MQV8QM_TEST::QUEUE_DEPTH_MORE_THAN_0	MQV8QM_TES

Check/Uncheck All

Delete Click Delete to remove selected Monitors.

## 2.4.3 Monitor Templates

Monitor Templates is an easy way to create many monitors and apply them to *N* number of objects. Once the monitor had been created using a template there is no relationship between the monitor and the monitoring template.

For example, if the property of the template which was used to create a monitor is modifed the change will not affect the monitor. Templates are simply cookie cutters for creating monitors. Templates define all attributes of a monitor, except triggering condition and the object name. Any other attribute of a monitor can be customized after it had been created with the template.

This section shows how to view, add, edit and delete monitor templates.

#### 2.4.3.1 Viewing current monitor templates

To view current monitors go to **Problem Management** and click on **Monitor Templates**. In the opened page scroll down to *Current Monitor Templates for Company* to see existing monitor templates:

Qflex	• • • • • • • • • • • • • • • • • • • •	
Home   Logout	Add New Monitor Template	
+ Resources	*Monitor Object Type <sup>(i)</sup> Queue <b>‡</b>	
<ul> <li>Reports</li> <li>Applications</li> <li>Queue Managers</li> <li>Queues</li> <li>Channels</li> <li>Websphere Broker</li> <li>Schedule Report</li> </ul>	*Notification Methods Log File SMTP SNMP *Triggering Condition Queue Full $\ddagger$ *Template Name <sup>(i)</sup> QUEUE_FULL *Interval between Occurrences (minutes) <sup>(i)</sup>	
<ul> <li>Problem Management</li> <li>Existing Alerts</li> <li>Monitors</li> </ul>	Associate monitor template with available Recovery Actions         Action Name       Recovery Action Type         STOP MONITOR       Java	
Monitor Templates	Associate monitor template with available Polling Policies	
1 Utilities	Polling Policy Name every 3 minutes	3 * 1
Operations	Save Template Click Save to save monitor template settings.	
+ Options	Current Monitor Templates for Company	
+ Change Control	Criticality	
+ Support Info		

## 2.4.3.2 Adding new monitor template

To create a monitor, go to **Problem Management** and click on **Monitor Templates.** On the Add New Monitor Template page you can set the following data:

Чleн		
Home   Logout	Add New Monitor Template	
+ Resources	*Monitor Object Type Queue *Notification Methods	
<ul> <li>Reports</li> <li>Applications</li> <li>Queue Managers</li> <li>Queues</li> <li>Channels</li> <li>Websphere Broker</li> </ul>	Log File SMTP SNMP *Triggering Condition Queue Full *Template Name QUEUE_FULL *Interval between Occurrences (minutes)	
Schedule Report	Associate monitor template with available Recovery Actions	
<ul> <li>Problem Management</li> <li>Existing Alerts</li> <li>Monitors</li> </ul>	Action Name Recovery Action Type STOP MONITOR Java	
Monitor Templates	Associate monitor template with available Polling Policies	
± Utilities	Polling Policy Name every 3 minutes	3*1
+ Operations	Save Template Click Save to save monitor template settings.	

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Parameter Name	Purpose
Monitor Object Type	In order to monitor the status of the queue manager, choose <i>Queue Manager</i> as monitor object type. For channel events, such as channel stopping, channel binding, etc., choose <i>Channel</i> . For queue related attributes, such as depth or number input processes, choose <i>Queue</i> . Monitor object can also be <i>Broker</i> and <i>Flow</i> for broker related conditions, as well as <i>QoS</i> for advanced monitoring.
Criticality	Choose appropriate criticality level as you see it - <i>Failure, Warning, Problem</i> or <i>Info</i> . As of release 1.0.x, QFlex will not perform any special behavior for different criticality levels. In the future, however there will be functionalities that will rely on criticality for various types of handling of alert messages. Criticality is passed along with the alert via all notification methods. You may choose to instruct your staff to act different upon receiving alerts with various criticality levels.
Notification Methods	Regardless of what notification method is chosen, all alerts with status <i>New</i> will be displayed in the QFlex Web Console. The following notification methods are currently supported: <i>Log file, SMTP, SNMP</i> and <i>RSS</i> .

Triggering	
Condition	

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V	Queue Full
	Queue Empty
	Queue Depth <
	Queue Depth >
	Queue Depth <=
	Queue Depth >=
	Input Count =
	Output Count =
	Queue Input Count <
	Queue Input Count >
	Queue Input Count <=
	Queue Input Count >=
	Queue Output Count <
	Queue Output Count >
	Queue Output Count <=
	Queue Output Count >=
	Queue Put Disabled
	Queue Get Disabled
	Queue Depth Percentage <
	Queue Depth Percentage >
	Queue Depth Percentage <=
	Queue Depth Percentage >=

	Triggering conditions are displayed based on the monitoring object type, selected to narrow down the specific type of event. Triggering condition parameters or values can be selected during creation of the actual monitors.
Template Name	It is assigned automatically. It is recommend that you accept auto generated name. However, you are free to use your own template names.
Interval between occurrences(mi nutes)	It allows to ignore subsequent occurrences of the alarm for a specified period of time, after monitoring condition occurred for the first time. <i>For example:</i> Monitor Template A has Polling Interval set to 1 minute and Interval Between Occurrences is set to 3 minutes. After QFlex notices that the condition has occurred for the first time, it will send an alarm. However, it will not send another alarm until three minutes have elapsed, provided during that time condition remained true. Once the alert is sent, message in the web console will also show all times and number of occurrences that monitoring condition was true, but no alert was sent out. If the condition had no longer been met during the interval between occurrence, the counter is reset.
Polling Interval(minutes)	It allows to control frequency with which monitored condition is checked. Minimal value is 1 minute.

()		Associate monitor template with available Recovery Actions In the Associate monitor template with available Recovery Actions section check the box next to an Action you want the monitor template to be associated with.			
	(j	Associate monitor template with available Polling Policies Associate monitor template with available Polling Policies section offers the possibility to associate a monitor with existing polling policy by checking it.			

Click Save Template button to save monitor template settings.

## 2.4.3.3 Deleting monitor template

To delete a monitor template click **Delete** button **S** at the end of the row:

Current Monitor Templates for Company					
			use	as substrin	g 💠 on column Template N
	Criticality		Template Name		Notification Methods
Failure		QUEUE	FULL		

A window pops up requesting confirmation of deleting action. Click **Ok** to delete or **Cancel** to go back.

## 2.4.3.4 Editing monitor template

To modify an existing monitor template, click **Edit** button at the end of the row:

Current Monitor Templates for Company					
			use	as substring	on column Template N
	Criticality		Template Name		Notification Methods
Failure		QUEUE_FULL			

On the Update Monitor Template page you can modify data for the selected monitor template:

Update Monitor Template QUEUE_FULL				
*Monitor Object Type Queue *Notification Methods Log File SMTP SNMP *Triggering Condition Queue Full *Template Name		*Criticality Failure \$		
QUEUE_FULL         *Interval between Occurrences (minutes)         3         3         Associate monitor template with available Recovery Actions				
Action Name	Recovery Action Type	Command	Command Argum	
STOP MONITOR	Java			
Associate monitor template with available Polling Policies           Polling Policy Name         Cron Expression           Image: Severy 3 minutes         3 * ? * *				
Save Template Click Save to save monitor template settings.				

Click Save Template button to store new settings.

# 2.5 Managing Utilities

This chapter presents information on managing such utilities as Queue Browser, Log File Viewer and Message Purgers.

## 2.5.1 Queue Browser

QFlex allows its users to browse the queues of any Queue Manager that had been added into the QFlex.

To browse a queue message, go to Utilities and select Queue Browser. In Queue Message Browser section set the following data:

# ••••••

Home | Logout Queue Message Browser Target Resources Queue Manager Queue \$ IB9QMGR ORDERS Reports Browse Put Applications · Either From or Till value has to be provided. Ac Queue Managers · If only From provided, all messages starting from position From ne Queues will be retrieved. Channels · If only Till provided, all messages until position specified in Till will be shown. + Websphere Broker Schedule Report Till From 0 5 + Problem Management Put Click Browse to retrieve Queue messages. Browse Dump Utilities Dump Click Dump to save Queue dump to File. Queue Browser Log File Viewer Restore Message Purgers Select backup file Messages per 50 \$ Choose File No file chosen + Operations Restore Click Restore to send saved messages to Queue.

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Parameter Name	Purpose
Queue Manager	From this dropdown menu choose a queue manager.
Queue	From this dropdown menu choose a queue.
<i>Browse</i> se ction	Explains how to use <i>From</i> and <i>Till</i> values. To retrieve messages of specific sequence, put in values for the <i>starting</i> message sequence number and/or <i>ending</i> . You will be presented with the list of messages. Messages will be converted to the native <i>CCSI D</i> of the J2EE Server where QFlex resides. Queue browser can only display <i>MQMD</i> header. At this point, Queue Browser will not display MQHFR2 headers or any other. Click on the icon next to the message to view MQMD and message data.

Put section	Click <b>Put</b> button to place a message on Queue. On the next page you can configure additional properties of Put operation:				
	Put message on Queue (ORDERS) of Queue Manager (IB9QMGR)				
	File Source	Size Source			
	File Choose File No file chosen	Load Size:			
	Screen Source				
	Message Type	Persistence			
	Datagram     Request	Persistent     Not Persistent			
	Reply	Persistence as Queue			
	Format	Expiry			
	Format     String	Time (1/10 secs)     Unlimited			
	Correlation ID				
	CorrelID				
	None				
	Reply				
	ReplyToQMgr NONE +				
	Reply loQMgr	Nepy IoQ			
	Put				
Dump	To save Queue dump to File click <b>Dump</b> button				
Dump	TO Save Queue dump to File Click	<b>Dump</b> button.			
Restore	In this section you can browse for After you select backup file and s	the backup file and select from the dropdown menu a number of messages per transaction. et the number of messages, click <i>Restore</i> button.			

# 2.5.2 Log File Viewer

If SSH parameters, such as Data Root Directory, username and password have been supplied when the queue manager was added to QFlex, it is possible to use QFlex to browse any AMQERROR log files and FDC files in the Websphere MQ data root directory such as /var/mqm.

In the **MQ Error Log File Viewer** section choose in the Target section a queue manager. The result you will see below, in **MQ Error Log Files** s ection:

Q <sub>flex</sub>	
Home   Logout	MQ Error Log File Viewer
+ Resources	Queue Manager
+ Reports	
+ Problem Management	MQ Error Log Files
	⇔ Path ⇔ I
<ul> <li>Utilities</li> <li>Queue Browser</li> <li>Log File Viewer</li> <li>Message Purgers</li> </ul>	

Use the sorting filter on top of the list to change the order of data representation.

## 2.5.3 Message Purgers

The Message purger can scan WebSphere MQ queues with certain frequency and purge messages over a certain age.

This section describes adding, updating, editing and deleting message purgers.

#### 2.5.3.1 Adding new message purger

To create a new message purger go to Utilities and select Message Purgers. In the Add Message Purger(s) to Queue(s) section, set the following data:
Q <sub>flex</sub>	
Home   Logout	Message Purger Policies for (Netflexity)
+ Resources	use as Queue Manager Name
+ Reports	IB9QMGR
+ Problem Management	IB9QMGR
<ul> <li>Utilities</li> <li>Queue Browser</li> <li>Log File Viewer</li> </ul>	IB9QMGR
Message Purgers	IB9QMGR
+ Operations	IB9QMGR
+ Options	
+ Change Control	IB9QMGR
+ Support Info	IB9QMGR
	IB9QMGR
	IB9QMGR
	IB9QMGR
	86 record(s) found. Page 1 of

Check/Uncheck All  Enable Disable Delete Purge Now Click to Enable/Disable/Delete or Purge
Add Message Purger(s) to Queue(s)
Queue Manager       IB9QMGR       Purger to be Executed every
Interval 01 \$ Minutes \$
Message to be Purged if older than Interval
01 \$       Minutes \$         Save Purger       Click Save to save message purger settings.

Select the Queue Manager and the Queue(s) where the purger should search for old messages.

In the *Purger to be Executed every* section, select frequency with which the purger should run by choosing the *Interval* (01-99) and the unit of measure (*minutes, hours, day, weeks, months* or *years*).

You can also set the time Interval of message life in the Message to be Purged if older than section.

Click Save Purger button to save a new message purger.

### 2.5.3.2 Updating message purger

To edit a message purger, select it or check Check/Uncheck All checkbox to select all existing items and lick Edit button

Messag	e Purger	Policies	for (Netfle	xity)						
					use	as su	bstring 🗘	on column	Queue Ma	nager N
			Queue Manage	er Name				Queue I	lame	
IB9QMGR							ORDERS			
IB9QMGR							QUEUE.OU	т		
IB9QMGR							SYSTEM.AD	DMIN.ACCO	UNTING.QU	EUE
IB9QMGR							SYSTEM.AD	DMIN.ACTI	/ITY.QUEUE	
IB9QMGR							SYSTEM.AD	DMIN.CHAN	NEL.EVENT	
IB9QMGR							SYSTEM.AD	DMIN.COM	IAND.EVENT	
IB9QMGR							SYSTEM.AD	DMIN.COM	1AND.QUEU	E
IB9QMGR							SYSTEM.AD	MIN.TRAC	E.ACTIVITY.	QUEUE
IB9QMGR							SYSTEM.AD	MIN.TRAC	E.ROUTE.QU	IEUE
IB9QMGR							SYSTEM.AU	ITH.DATA.C	UEUE	
0.0				86 record	l(s) found.	Page 1 of 6				
Enable	Uncheck All	Delete	Purge Now	Click to Enable/	Disable/Dele	ete or Purge Me	essage Purge	r(s)		

Update Message Purger page appears and you can modify the following data:

Update Message Purger for (IB9QMGR).ORDERS			
Purger to be Executed every			
Interval 01   Days			
Message to be Purged if older than			
Interval 01 ¢ Months ¢			
Save Purger Click Save to save message purger settings.			

Click Save Purger button to save new settings.

### 2.5.3.3 Editing and deleting message purger

In the Message Purger Policies section you can edit and delete one or all message purgers:

Messag	e Purger	Policies	for (Netfle	kity)						
					use	as su	bstring 🗧	on column	Queue Ma	nager N
			Queue Manage	r Name				Queue N	lame	
IB9QMGR							ORDERS			
IB9QMGR							QUEUE.OU	т		
IB9QMGR							SYSTEM.AL	DMIN.ACCO	UNTING.QUI	EUE
IB9QMGR							SYSTEM.AI	OMIN.ACTI	/ITY.QUEUE	
IB9QMGR							System.Al	omin.chan	NEL.EVENT	
IB9QMGR							SYSTEM.AL	DMIN.COMM	1AND.EVENT	
IB9QMGR							SYSTEM.AL	DMIN.COMM	1AND.QUEUE	I
IB9QMGR							SYSTEM.AD	omin.traci	E.ACTIVITY.C	QUEUE
IB9QMGR							SYSTEM.AL	DMIN.TRAC	E.ROUTE.QU	EUE
IB9QMGR							SYSTEM.AL	JTH.DATA.Q	UEUE	
0.0				86 record	(s) found.	Page 1 of 6				
Enable	Disable	Delete	Purge Now	Click to Enable/I	Disable/Dele	ete or Purge Me	essage Purge	er(s)		

Enable/Disable buttons allow to switch on or off a message purger.

Click **Delete** button to remove all or a specific message purger(s).

Click Purge Now to purge the message immediately, regardless of the set purge time.

When you click one of the above buttons, a window pops up, requesting confirmation of your action. Click **Ok** to continue or **Cancel** to go back.

### 2.5.3.4 Using sorting filter

You can use the sorting filter, on the top of the list, if you need to find a specific type of message purger:

Messag	e Purger	Policies	for (Netfle	xity)						
					use	🗸 si	ubstring	on colur	Queue Manag	er N
			Queue Manage	er Name		re	natch egexp	Queu	Queue Name Status	
IB9QMGR							ORDERS			
IB9QMGR							QUEUE.OU	π		
IB9QMGR							System.AI	DMIN.ACCO	UNTING.QUEUE	
IB9QMGR							System.AI	DMIN.ACTI	/ITY.QUEUE	
IB9QMGR							SYSTEM.AI	DMIN.CHAN	NEL.EVENT	
IB9QMGR							SYSTEM.AI	DMIN.COMM	IAND.EVENT	
IB9QMGR							SYSTEM.AI	DMIN.COM	1AND.QUEUE	
IB9QMGR							SYSTEM.AD	OMIN.TRAC	E.ACTIVITY.QUEU	IE
IB9QMGR							SYSTEM.AL	OMIN.TRAC	E.ROUTE.QUEUE	
IB9QMGR							SYSTEM.AL	JTH.DATA.Q	UEUE	
				86 re	ecord(s) found.	Page 1 of 6				
Check/	Uncheck All	Delete	Purge Now	Click to Ena	ble/Disable/Dele	ete or Purge M	essage Purge	er(s)		

Click Search button  $\bigcirc$  to initiate the search process, or **Refresh** button  $\gtrless$  to reload the data.

# 2.6 Managing Operations Console

Operations console is useful when your queue manager is undergoing a migration and you would like to prevent all clients from connecting to the queue manager. Simply suspend those activities and QFlex will not be connecting to the queue manager.

This chapter presents information on operations console. You will learn how to manage statistical data collection and manage the monitors.

# 2.6.1 Viewing Operations Console

To view operations console go to **Operations** and click **Console**. You will see two sections - *Statistical Data Collection Operation Console* and *M* onitors Operation Console:

#### Statistical Data Collection Operation Console

		-		
D			use	as su
Resources		Queue Manager Na	me	
	IB9QMGR			
Reports	MQV8QM_TEST			
	Check/Uncheck All			
Problem Management	Enable Disable	Click to Enable/Disable Collections		

Monitors Operation Console

flex

Home | Logout

+

+

+

+ Utilities

	search	
Operations	Monitor Name	
- Console	IB9QMGR::QMANAGER_DOWN	IB9
	MQV8QM_TEST::COMMAND_SERVER_DOWN	MQ
+ Options	MQV8QM_TEST::QMANAGER_DOWN	MQ
	QUEUE_EMPTY	IB9
	SYSTEM.BROKER.ADAPTER.FAILED::IB9QMGR::QUEUE_DEPTH_MORE_THAN_0	IB9
Change Control	SYSTEM.BROKER.DC.BACKOUT::IB9QMGR::QUEUE_DEPTH_MORE_THAN_0	IB9
	SYSTEM.CLUSTER.TRANSMIT.QUEUE::IB9QMGR::QUEUE_DEPTH_MORE_THAN_0	IB9
_	SYSTEM.CLUSTER.TRANSMIT.QUEUE::MQV8QM_TEST::QUEUE_DEPTH_MORE_THAN_0	MQ
土 Support Info	SYSTEM.DEAD.LETTER.QUEUE::IB9QMGR::QUEUE_DEPTH_MORE_THAN_0	IB9
	SYSTEM.DEAD.LETTER.QUEUE::MQV8QM_TEST::QUEUE_DEPTH_MORE_THAN_0	MQ
	SYSTEM.DEF.SENDER::IB9QMGR::CHANNEL_NOT_RUNNING	IB9
	SYSTEM.DEF.SENDER::MQV8QM_TEST::CHANNEL_NOT_RUNNING	MQ
	SYSTEM.PROTECTION.ERROR.QUEUE::IB9QMGR::QUEUE_DEPTH_MORE_THAN_0	IB9
	SYSTEM.PROTECTION.ERROR.QUEUE::MQV8QM_TEST::QUEUE_DEPTH_MORE_THAN_0	MQ
	Check/Uncheck All	
	Enable Disable Click to Enable/Disable Monitors	

Statistical Data Collection Operation Console shows a list of data with queue manager name, frequency of collection and status: running k or r stopped

Monitors Operation Console shows a list of data with monitor name, queue manager name and running or stopped status.

# 2.6.2 Managing Statistical Data Collection Operations Console

To start/stop collections for specific or all queue managers, select them by clicking or checking Check/Uncheck All checkbox and click Enable/Dis able button:

Statistical Data Collection Operation Console	
use as substring \$ on column Queu	ie Manager N
Queue Manager Name	
IB9QMGR	Collection run Minutes(s)
MQV8QM_TEST	Collection run Minutes(s)
Check/Uncheck All	
Enable Disable Click to Enable/Disable Collections	

A window pops up requesting confirmation of enabling or disabling action. Click Ok to continue or Cancel to go back.

Changing the collection policy, automatically shuts down the process of collection. After a collection policy was modified, it needs to be restarted manually.

# 2.6.3 Managing Monitors Operations Console

To start/stop monitoring for specific or all monitors, select them by clicking or checking *Check/Uncheck All* checkbox, and click **Enable/Disable** bu tton:

1	Monitors Operation Console		
	search	as substring 🖨 on column	Monitor Name
	Monitor Name	Queue Manager Name	S
	IB9QMGR::QMANAGER_DOWN	IB9QMGR	
	MQV8QM_TEST::COMMAND_SERVER_DOWN	MQV8QM_TEST	
	MQV8QM_TEST::QMANAGER_DOWN	MQV8QM_TEST	
	QUEUE_EMPTY	IB9QMGR	
	SYSTEM.BROKER.ADAPTER.FAILED::IB9QMGR::QUEUE_DEPTH_MORE_THAN_0	IB9QMGR	
	SYSTEM.BROKER.DC.BACKOUT:: IB9QMGR:: QUEUE_DEPTH_MORE_THAN_0	IB9QMGR	
	SYSTEM.CLUSTER.TRANSMIT.QUEUE::IB9QMGR::QUEUE_DEPTH_MORE_THAN_0	IB9QMGR	
	SYSTEM.CLUSTER.TRANSMIT.QUEUE::MQV8QM_TEST::QUEUE_DEPTH_MORE_THAN_0	MQV8QM_TEST	
	SYSTEM.DEAD.LETTER.QUEUE::IB9QMGR::QUEUE_DEPTH_MORE_THAN_0	IB9QMGR	
	SYSTEM.DEAD.LETTER.QUEUE::MQV8QM_TEST::QUEUE_DEPTH_MORE_THAN_0	MQV8QM_TEST	
	SYSTEM.DEF.SENDER::IB9QMGR::CHANNEL_NOT_RUNNING	IB9QMGR	
	SYSTEM.DEF.SENDER::MQV8QM_TEST::CHANNEL_NOT_RUNNING	MQV8QM_TEST	
	SYSTEM.PROTECTION.ERROR.QUEUE::IB9QMGR::QUEUE_DEPTH_MORE_THAN_0	IB9QMGR	
	SYSTEM.PROTECTION.ERROR.QUEUE::MQV8QM_TEST::QUEUE_DEPTH_MORE_THAN_0	MQV8QM_TEST	
Г	Check/Uncheck All		
	Enable Disable Click to Enable/Disable Monitors		

A window pops up requesting confirmation of enabling or disabling action. Click Ok to continue or Cancel to go back.

If all monitors for specific queue managers are deleted, the monitoring will automatically turn off. Monitoring will need to be manually turned on when new monitors are created.

# 2.7 Managing Options

This chapter explains how to configure various options in QFlex.

### flex Home | Logout **Environmental Properties** Property Name Property Value + Resources SMTP Email From test@nebulent.com SMTP Server smtp.gmail.com SMTP Email To test@netflexity.com + Reports SMTP Username test@nebulent.com SMTP Password ..... + Problem Management Save Properties Click Save to save property settings. + Utilities Operations Options SMTP SNMP LDAP Data Collection Data Archival Polling Policies Alert Cleanup Policies Message Cleanup Policies Recovery Actions Broker Subscriptions Broker Compressions Security Export

+ Change Control

+ Support Info

# 2.7.1 SMTP settings

SMTP needs to be configured if you are planning to use Email for alert notification and send bug reports to Netflexity. Go to **Options** and click **S MTP**. In the *Environmental Properties* section, check the boxes next to the fields that you will change:

Enviro	Environmental Properties				
	Property Name	Property Value			
	SMTP Email From	test@nebulent.com			
	SMTP Server	smtp.gmail.com			
	SMTP Email To	test@netflexity.com			
	SMTP Username	test@nebulent.com			
	SMTP Password	•••••			
Save Pr	Save Properties Click Save to save property settings.				

Parameter Name	Purpose
SMTP EMAIL FROM	The email address that will be used as <i>from address</i> when sending alerts and bug reports. This must be a valid email address in your domain.
SMTP SERVER	The host name of the server hosting SMTP server.
SMTP EMAIL TO	A field where one or more email addresses can be specified. These addresses will receive alerts when monitoring conditions occur. To specify multiple addresses, separate them with semicolons.
SMTP USERNAME	The user name that must be used in combination with SMTP PASSWORD field. It is optional depending on your local SMTP configuration.
SMTP PASSWORD	It is required by some SMTP servers. This field is optional depending on your local configuration.

You must check the boxes next to the fields that are being updated.

Click Save Properties button to store new SMTP settings.

# 2.7.2 SNMP settings

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Download qflex.mib file from Netflexity website. You may import this mib file into enterprise consoles such as HP OpenView, Tivoli Enterpise Console, Nagios and Big Brother. In the *Environmental Properties* section check the boxes next to the fields that you change:

Environmental Properties					
	Property Name	Property Value			
	SNMP Server	127.0.0.1			
	SNMP Server PORT	162			
	SNMP Community	public			
	SNMP Retries	10			
	SNMP Timeout	5000			
	SNMP Generic Type	0			
	SNMP Specific Type	0			
	SNMP Version	1			
Save Properties Click Save to save property settings.					

You must specify Server, port, SNMP version and community in order to send alerts via SNMP traps. Contact your SNMP administrator for more details.

You must check the boxes next to the fields that are being updated.

Click Save Properties to store new SMTP settings.

### 2.7.3 LDAP Settings

QFLEX has the ability to use LDAP/Active Directory for user authentication and authorization.

#### LDAP

Let assume we`re using following ldif file for our LDAP server:

```
dn: dc=mycompany,dc=com
objectClass: domain
objectClass: top
dc: mycompany
dn: ou=people,dc=mycompany,dc=com
objectClass: top
objectClass: organizationalUnit
ou: people
dn: uid=sheppard,ou=people,dc=mycompany,dc=com
objectClass: posixAccount
objectClass: top
objectClass: inetOrgPerson
objectClass: person
givenName: John
sn: Sheppard
displayName: John Sheppard
uid: sheppard
loginShell: sheppard
cn: John Sheppard
uidNumber: 31546
userPassword: {SHA}FuRghGiBVEh38QrtWf3adeGW5WQ=
homeDirectory: C:\
gidNumber: 28341
```

dn: uid=lowson,ou=people,dc=mycompany,dc=com objectClass: posixAccount objectClass: top objectClass: inetOrgPerson objectClass: person gidNumber: 0 givenName: Miranda sn: Lowson displayName: Miranda Lowson uid: lowson homeDirectory: C:\ loginShell: lowson cn: Miranda Lowson uidNumber: 7382 userPassword: {SHA}lixNlELBI9AgxGjWKUWLwsBE8cU= dn: ou=groups,dc=mycompany,dc=com objectClass: top objectClass: organizationalUnit ou: groups dn: cn=ROLE\_ADMIN,ou=groups,dc=mycompany,dc=com objectClass: posixGroup objectClass: top cn: ROLE\_ADMIN gidNumber: 28341 memberUid: sheppard dn: cn=ROLE\_USER,ou=groups,dc=mycompany,dc=com objectClass: posixGroup objectClass: top

So, we have 2 users and 2 roles (ROLE\_ADMIN, ROLE\_USER).

# To enable LDAP integration, browse to page Options/LDAP. This form contains following fields:

Parameter Name	Purpose	Default Value
Enable LDAP	Enable/disable LDAP integration.	false
LDAP server URL	Server URL in form Idap(s)://Idap_server_url:port.	Idap://localhost:389
Base	Your Company Base DN.	DC=mycompany,DC=com
Search base	Search base value is used by QFLEX to perform user search. DN in this case is: base + search base (In our example: ou=people,dc=mycompany,dc=com).	ou=people
Authentication filter	That`s a query to filter user. {0} will be replaced with user login parameter.	(&(uid={0})(objectClass=person))
Group search base	This entry is used to search user role (DN: base + group search base, in our example: ou=groups,dc=mycompany,dc=com).	ou=groups
Group search filter	This is a query to filter user role. There are 2 available parameters: {0} = user DN, {1} = username.	memberUid={1}
Role prefix	A prefix prepended to all user role fetched from server.	
Administrator role	This role in LDAP will be mapped to QFLEX Administrator role.	ROLE_ADMIN
User role	This role in LDAP will be mapped to QFLEX User role.	ROLE_USER
Manager DN	Manager DN used to perform user search. {0} parameter will be replaced with username. Reset this field if your LDAP server is configured to use anonymous search.	uid={0},ou=people,DC=mycompany,DC=com
Manager password	Manager password to perform user search. {0} parameter will be replaced with user password. Leave this field blank if your server is configured to use anonymous search.	{0}

#### Active Directory

Active Directory configuration has following differences from LDAP.

Parameter Name	Value
Search base	CN=Users
Authentication filter	(&(userPrincipalName={0})(objectClass=person))
Group search base	CN=Users
Group search filter	(&(member={0})(objectClass=group))
Manager DN	{0}
Manager password	{0}

Notes

LDAP/AD authentication process is performed before legacy DB-based authentication.

So, if LDAP/AD login fails, QFLEX will try to make it agains database.

#### Troubleshooting

The error shown below is similar each time there is an LDAP authentication issue.

"The exception is [

LDAP: error code 49 - 80090308: LdapErr: DSID-0Cxxxxxx, comment: AcceptSecurityContext error, data xxx

, vece]."

However, there are several values that can indicate what LDAP function is causing the issue. Here are some general references for Microsoft Active Directory:

The AD-specific error code is the one after "data" and before "vece" or "v893" in the actual error string returned to the binding process:

525	user not found
52e	invalid credentials
530	not permitted to logon at this time
531	not permitted to logon at this workstation
532	password expired
533 534	account disabled The user has not been granted the requested logon type at this machine
701	account expired
773	user must reset password
775	user account locked

Example issue message:

LDAP failure: [LDAP: error code 49 - 80090308: LdapErr: DSID-0C0903C8, comment: AcceptSecurityContext error, data 52e, v2580]; nested exception is javax.naming.AuthenticationException: [LDAP: error code 49 - 80090308: LdapErr: DSID-0C0903C8, comment: AcceptSecurityContext error, data 52e, v2580]

### 2.7.4 Data Collection

Data Collection provides a way to configure the frequency QFlex queries queue managers performance data. Note that this value does not affect polling intervals of the monitors, defined in QFlex. In the *Collection Policies* section and *Add same collection policy to all Queue Managers* you can set the following data:

Collection Policies for (Netflexity)				
Queue Manager				
IB9QMGR	•			
	Collection runs every 2 Minutes(s)			
MQV8QM_TEST	<b>+</b>			
	Collection runs every 1 Minutes(s)			

If it is important to see data on a minute by minute basis, configure collection to run every 1 minute. One collection policy can be applied to all queue managers at once by setting Interval in Add same collection policy to all Queue Managers and clicking Save Collection, or clicking plus

button 🛨 next to the queue manager name to add specific collection policy for that queue manager:

Add same collection p	oolicy to all Queue Managers	
Interval 01 \$ Minutes \$ Save Collection Click Sa	Collection Queue Filters.(Comma delimited)	Collection Channel Filters.(Comma delimited

QFlex allows users to specify certain queues which should be excluded from having statistical data, gathered and stored for those queues. There are two ways to add a filter to a collection policy:

- Click on the plus sign next to a collection policy and place a filter value into the filter box. You can specify multiple filters as comma delimited values. In addition, you can use wild cards at the end of the filter like this SYSTEM\*. Such a filter would prevent the statistical data from being gathered for any queue that begins with SYSTEM\*
- 2. There is also a way to add filters to multiple queue managers at once by adding the filter directly from the collections page. However, the filter will not be displayed until you edit collection policies for specific queue managers.

#### Note

Even though, after adding filters for certain queues, those queues will still show up in reports, they should have 0 values for statistics.

Alternatively, you can edit collection policies for specific queue managers by clicking on edit button 📝, next to queue manager .

Click **Delete** button <sup>123</sup> to remove selected collection policies.

#### Data Frequency Resolution

Consider a scenario where QFlex collects performance data from some queue manager every 5 minutes. Within that interval, some application enqueues 100 messages and another application dequeues all of those messages. Because QFlex relies on the queue manager to keep track of stats, it simply retrieves those counters at a collection interval. This activity is recorded by QFlex. Even if the collection interval is set to every 60 minutes and some application enqueues/dequeues 10K messages in one second, QFlex records that traffic activity. However, it is not able to show exactly when that occurred, since it retrieved counter values only once an hour.

# 2.7.5 Data Archival

Performance data in QFlex is stored using database records that have somewhat following format. ID1,...IDx, MSGS IN, MSGS OUT, START TIME, END TIME. START TIME and END TIME indicate for what period in time this statistics applies. If the difference between START TIME and END TIME is a minute or less, we categorize that type of record as a Minutely Data. Same principle applies to hourly, daily, etc. types of data.

Data is archived in the straightforward fashion. To convert minutely data into hourly, QFlex adds all MSG IN and MSG OUT values for the past hour. The QFlex creates a new record with the START TIME of the EARLIEST minutely record and END TIME of the LATEST minutely record for the past hour. Then, places the MSG IN and MSG OUT values, calculated in the previous step and creates a new performance record. QFlex then deletes all the Minutely data for the past hour. So, instead of having 60 records (1:00 to 1:01, 1:01 to 1:02) you now have one record from (1:00 to 2:00).

A QFlex allows you to have flexibility to configure for how long you would like to keep each Type of data.

*For example:* You can decide that you need hourly data for the entire month and your collection frequency is every hour. You can configure following Archival Policy. Frequency = Hourly, Interval = 1 Month. QFlex will not archive this data into a monthly interval until it is one month old. Similarly, you can then configure how often to archive monthly data, and so on.

You can add one archival policy to all queue managers at once in the Add same compression policy to all Queue Managers section:

Compression Policies for (N	etflexity)	
	Queue Manager	
IB9QMGR		•
MQV8QM_TEST		•
Add same compression polic	cy to all Queue Managers	
Frequency	Interval	
• Yearly	00 \$	Years \$
Frequency	Interval	
Monthly	00 🗧	Months 🗧
Frequency	Interval	Days 🔺
Frequency	Intencel	Duys Y
Hourly		Hours 🛊
Frequency	Interval	
Minutely	00 \$	Minutes \$
Save Compression Click Save to	save compression for all queue managers.	
Statistics data cleanup		
Cleanup interval	01 \$	Years 💠
Save cleanup interval Click Save to	save statistics data cleanup interval.	

After you set the compression policy, click Save Compression button to apply policy settings.

To add collection policy for a chosen queue manager, go to *Compression Policies for* section, click on the plus sign 🖿 next to a specific queue manager and edit the archival/compression policy for that queue manager. Nothing else needs to be done for the archival to go in the effect. As soon as you submit it, QFlex archival thread will notice it and archive the data when necessary.

In the Statistics data cleanup section you can set cleanup interval in minutes, hours, days, weeks, months and years. Click **Save cleanup** interval button to store new settings.

A QFlex Express will delete all the performance data that is more than 24 hours old.where is it?

# 2.7.6 Polling Policies

Sometimes, running a monitor every 2 minutes or every 5 is not flexible enough. Consider a scenario where we have a back up of MQ server every Sunday between 3 and 6 AM. Since we do not want to be receiving alerts during those hours on Sunday, we want to make sure that the monitor is not ran then. In order to accomplish this we can create one or more polling policies in the *Add New Polling Policy* section and then associate those polling policies with the monitor:

Current Polling Policies for Company (Netflexity)				
	use as substring \$ on column Polling Policy N			
	Polling Policy Name			
every 3 mir	nutes			
Check/L	Jncheck All			
Delete	Click Delete to remove selected Polling Policies.			

### Add New Polling Policy

nutes	Hours		Days of Week	Days of Month
Values(*)	All Values(*) 00 01	Not Relevant	All Values(*) No Specific Value(?) Sunday	All Values(*) No Specific Value(?) Last
	02 03		Monday Tuesday	01 02
	utes Values(*)	Values(*) Values(*) 00 01 02 03	Not Relevant       Values(*)       00       01       02       03	Index     Hours     Days of Week       Values(*)     All Values(*)     Not Relevant     All Values(*)       00     01     Sunday       02     03     Tuesday

Click Save to save polling policy settings.

Set Polling Policy Name, Time Expression and Date Expression. Click Save Polling Policy button to store new settings.

To view and delete existing polling policies see Current Polling Policies section. To edit current polling policy click on edit button 📝.

# 2.7.7 Alerts Cleanup Policies

Available only in QFLEX Standard version.

Save Polling Policy

Alerts cleanup policies are used to automatically delete application alerts on time basis. Clean all outdated alerts to save your disk space.

Go to New application alert cleanup policy section, select the Application and Cleanup interval. This scheduled task will remove all alerts older then cleanup interval.

If you check Clean open alerts checkbox, scheduled task will remove even active alerts:

Current application alerts cleanup policies for (Netflexity)						
Application Name				Clean open alerts		
All Queues	Cleanup runs every 1 Weeks	5(s)	Yes			
Alpha	Cleanup runs every 1 Days(	s)	No			
Single Queue	Cleanup runs every 1 Years(	(s)	No			
New application alert	cleanup policy					
Application	All Queues 😫					
Cleanup interval	01 \$	Minutes \$				
Clean open alerts						
Save alert cleanup policy	Click Save to save application alert cl	eanup policy.				

In the Current application alerts cleanup policies for click on delete button 🔀 to remove alert cleanup policy.

# 2.7.8 Message Cleanup Policies

Save Application Messages

In Qflex you can save application messages for later use. Go to **Resources** and select **Applications**. Click the Edit button D of an application:

Home   Logout	Current Applications for Company Netflexity	
E Resources		use i
Queue Managers	Application Name	÷
<ul><li>Brokers</li><li>Applications</li></ul>	All Queues	No type
	Alpha	No type
Reports		
	Single Queue	No type
+ Problem Management	Check/Uncheck All	
Utilities	Delete Click Delete to remove selected Applications.	
	Add New Application	
Operations	*Application Name	*Application 1
+ Options	Description	
Change Control	Save Application Click Save to save application settings and procee	a to assigning desti
Support Info		

у flex

Then, scroll down to Assign destinations to application All Queues section. Click on Input, under Destination Purpose, and from the drop down menu select Store.

Assign destinations to	o application All Queues			
		search as s	ubstring 🗘 on column 🛛 Qu	ieue Name
Queue Manager Name	Queue Name	Destination Type	Destination Purpose	<ul> <li>De</li> </ul>
IB9QMGR	ORDERS	Queue \$	Input 🛊	ORDER
IB9QMGR	ORDERS	Queue \$	Input 🛊	ORDER
IB9QMGR	SYSTEM.BROKER.AGGR.TIMEOUT	Queue 🖨	Input 🛊	SYSTEM
IB9QMGR	SYSTEM.BROKER.AGGR.TIMEOUT	Queue 🖨	Input 🛊	SYSTEM
IB9QMGR	TEST.VICTIM	Queue \$	Input 🛊	TEST.VI
MQV8QM_TEST	SYSTEM.ADMIN.ACCOUNTING.QUEUE	Queue \$	✓ Input	SYSTEM
MQV8QM_TEST	SYSTEM.ADMIN.ACTIVITY.QUEUE	Queue \$	Error	SYSTEM
MQV8QM_TEST	SYSTEM.ADMIN.CHANNEL.EVENT	Queue \$	Store	SYSTEM
MQV8QM_TEST	SYSTEM.ADMIN.COMMAND.EVENT	Queue \$	Input \$	SYSTEM
MQV8QM_TEST	SYSTEM.ADMIN.COMMAND.QUEUE	Queue 🖨	Input 🛊	SYSTEM
MQV8QM_TEST	SYSTEM.ADMIN.CONFIG.EVENT	Queue \$	Input 🛊	SYSTEM
MQV8QM_TEST	SYSTEM.ADMIN.LOGGER.EVENT	Queue 🖨	Input 🛊	SYSTEM
MQV8QM_TEST	SYSTEM.ADMIN.PERFM.EVENT	Queue 🖨	Input 🛊	SYSTEM
MQV8QM_TEST	SYSTEM.ADMIN.PUBSUB.EVENT	Queue \$	Input 🛊	SYSTEM
MQV8QM_TEST	SYSTEM.ADMIN.QMGR.EVENT	Queue \$	Input 🛊	SYSTEM
MQV8QM_TEST	SYSTEM.ADMIN.STATISTICS.QUEUE	Queue \$	Input 🛊	SYSTEM
	52 record(s) for	und. Page 1 of 4		
Assign Destinations C	ick Save to assign destinations to application	All Queues.		

### Message Cleanup Policies

Message cleanup policies are used to delete automatically all messages stored in database, on time basis. To see the current message cleanup policy, go to **Options** and select **Message Cleanup Policies**.

Q <sub>flen</sub>	
Home   Logout	Current message cleanup policies for (Netflexity)
+ Resources	Cleanup runs every 1 Weeks(s)
+ Reports	
+ Problem Management	
+ Utilities	
+ Operations	
<ul> <li>Options</li> <li>SMTP</li> <li>SNMP</li> <li>LDAP</li> <li>Data Collection</li> <li>Data Archival</li> <li>Polling Policies</li> <li>Alert Cleanup Policies</li> <li>Alert Cleanup Policies</li> <li>Recovery Actions</li> <li>Broker Subscriptions</li> <li>Broker Compressions</li> <li>Security</li> <li>Export</li> </ul>	
Change Control	
+ Support Info	

To delete the current message cleanup policy, click the Delete button 🙁. A message, requesting confirmation to continue the action, pops up. Click **OK**.

Are you sure you want to delete this message cleanup policy?
Cancel OK

Then, select a new cleanup interval and click Save message cleanup policy.

Q		
Home   Logout	New message cleanup policy	
Resources	Cleanup interval 01 \$ Save message cleanup policy Click Save to save message cleanup policy.	
± Reports		
+ Problem Management		
Utilities		
+ Operations		
<ul> <li>Options</li> <li>SMTP</li> <li>SNMP</li> <li>LDAP</li> <li>Data Collection</li> <li>Data Archival</li> <li>Polling Policies</li> <li>Alert Cleanup Policies</li> <li>Alert Cleanup Policies</li> <li>Recovery Actions</li> <li>Broker Subscriptions</li> <li>Broker Compressions</li> <li>Security</li> <li>Export</li> </ul>		

This scheduled task will remove all messages older then the cleanup interval.

# 2.7.9 Recovery Actions

There are three types of Recovery Actions: Java, SSH and System script

• Currently java based recovery actions are in beta but in the future a simple XML based language will be released so that users can build their own recovery actions. There is one pre-installed recovery action called **STOP MONITOR**. This recovery action will stop the monitor. It can be used on a non-critical monitors to prevent alerting until the problem is resolved.

- SSH based recovery actions allow QFlex to execute arbitrary script on a queue manager server, if QFlex can access that server via ssh. SSH based recovery action will only work if the queue manager monitored by QFlex runs on a unix based operating system such as AIX, Linux, HPUX or Solaris. You have to specify username and password when adding queue manager. Using the identity of that user, QFlex will log on to the operating system via ssh and attempt to execute command specified in the command window. Command has to be fully qualified e.g. /home/mqmadmin/bin/restartChannel.sh. Command arguments can be specified to be passed to the script e.g. /home/mqmadmin/bin/restartChannel.sh QM1.TO.QM2.
- System Script local batch (.bat) or shell (.sh) script that will be executed by recovery action.

You can then associate monitors or monitoring templates with one or more recovery actions. However, for now the order in which the recovery actions will be executed cannot be controlled. And it cannot be established whether recovery action actually worked or not.

In the Add Recovery Action section you can set Recovery Action Type, Action Name, set Command and Command Arguments for Ssh or local system script, and Java class in case of Java recovery action type:

<b>Recovery Actions for Netfle</b>	xity			
		use as	substring \$	on column Action Name
Action Name		Command		Command Arguments
STOP MONITOR				
Check/Uncheck All				
Delete Click Delete to remove se	lected Recovery Actions	s.		
Add Recovery Action				
*Recovery Action Type Ssh \$			*Action Name	
Ssh or Local Script			Java	
Command Comm	nand Arguments		Java class	
Save Recovery Action Click Sav	ve to save Recovery Act	tion.		

To edit existing recovery action click on edit button 📝 in *Recovery Actions* section.

To delete existing recovery action click on it or use Check/Uncheck All checkbox and click Delete button.

### 2.7.10 Broker Subscriptions

In order to turn on broker statistics, select the broker, execution group and flow name by expanding the topology tree and clicking on the appropriate object.

Statistical Subscription(s) for (Netflexity)	
U	as substring \$ on column Topic N
Topic Name	
SYS/Broker/NF01BRK/StatisticsAccounting/SnapShot/default/SampleMessageFlow and the statisticsAccounting/SnapShot/default/SampleMessageFlow and the statisticsAccounting/SnapShot/default/SampleAccounting/SnapShot/default/SampleAccounting/SnapShot/default/SampleAccounting/SnapShot/default/SampleAccounting/SnapShot/default/SampleAccounting/SnapShot/default/SampleAccounting/SnapShot/default/SampleAccounting/SnapShot/default/SampleAccounting/SnapShot/default/SampleAccounting/SnapShot/SampleAccounting/SnapShot/SampleAccounting/SnapShot/SampleAccounting/SnapShot/SampleAccounting/SnapShot/SampleAccounting/SnapShot/SampleAccounting/SnapSh	,
Check/Uncheck All	
Enable Disable Delete Click to Enable/Disable/Delete Statistical Subsc	criptions
Message Broker Topology	
Click on any object you would like to receive statistical data for.	
NF01BRK	
SampleMessageFlow	
Please select object to subscribe to from the tree above.	
Node Statistics	
Subscribe Click Subscribe to register for broker statistical data collection.	

Optionally, click on the broker to subscribe for statistics on everything or click on execution group to subscribe for statistics for all flows in that execution group:

Statistical Subscription(s) for (Netflexity)			
use as substring \$ on column Topic			
Topic Name			
\$SYS/Broker/NF01BRK/StatisticsAccounting/SnapShot/default/SampleMessageFlow			
Check/Uncheck All			
Enable Disable Delete Click to Enable/Disable/Delete Statistical Subscriptions			
Message Broker Topology			
Click on any object you would like to receive statistical data for.			
K NF01BRK			
E adefault			
SampleMessageFlow			
Subscribe to topic://\$SYS/Broker/NF01BRK/StatisticsAccounting/SnapShot/+/+			
Node Statistics			
Subscribe Click Subscribe to register for broker statistical data collection.			

Next step is enable subscription. Check subscriptions in a table and click **Enable** button.

Statistical Subscription(s) for (Netflexity)
use as substring \$ on column Topic t
Topic Name
\$SYS/Broker/NF01BRK/StatisticsAccounting/SnapShot/default/SampleMessageFlow
Check/Uncheck All  Enable Disable Delete Click to Enable/Disable/Delete Statistical Subscriptions
Message Broker Topology
Click on any object you would like to receive statistical data for. I NF01BRK I Gefault SampleMessageFlow
Subscribe to topic://\$SYS/Broker/NF01BRK/StatisticsAccounting/SnapShot/+/+
Node Statistics         Subscribe         Click Subscribe to register for broker statistical data collection.
Alternatively, use Websphere MQ Explorer (context menu at needed subscription -> Statistics -> Start Message Flow Statistics).

# 2.7.11 Broker Compressions

*QFlex Express* discards all broker statistics that are older than 3 hours. However, *Standard version* can be configured to support more flexible long term statistical archiving, similar to *Queue Stats Archival*.

In Add same compression policy to all Brokers section you can set the following frequency of compression:

Compression Policies for (Netflexity)		
Broker Name	e	
NF01BRK		•
Add same compression policy to all Brokers	s	
Frequency	Interval	
• Yearly	01 🛊	Years 🛊
Frequency	Interval	
Monthly	01 🛊	Months 🕈
Frequency	Interval	
O Daily	01 🛊	Days 💠
Frequency	Interval	
Hourly	01 🛊	Hours 💠
Frequency	Interval	
Minutely	01 🛊	Minutes 🕏
Save Compression Click Save to save compression for	all Brokers.	

# 2.7.12 Security

In order to change Administrators' information such as password or email, go to **Options** and select **Security**. In the *Current Principals for Company* section click on edit icon , next to Principal Name.

Home   Logout	Current Principals for Company	
	use	
+ Resources	Principal Name	
+ Reports	Administrator	
	Olga	
Problem Management	Add New Principal	
+ Utilities	*Principal Name Administrator	
Operations	*Role *Email USR \$ *User Name *Password	
<ul> <li>Options</li> <li>SMTP</li> <li>SNMP</li> <li>LDAP</li> <li>Data Collection</li> <li>Data Archival</li> <li>Polling Policies</li> <li>Alert Cleanup Policies</li> <li>Message Cleanup Policies</li> <li>Recovery Actions</li> <li>Broker Subscriptions</li> <li>Broker Compressions</li> <li>Security</li> <li>Export</li> </ul>	Save Principal Click Save to save principal settings.	

Change values to suit your needs and click **Save Principal** button:

Principal Name		
Administrator		
Role	*Email	Phone
ADM \$	test@test.com	
User Name	*Password	
admin		
Save Principal Click Save to	save principal settings.	
	New Principal section, set new data and click Save Principal to s	tore new settings. Click on delete icon
create new user account go to Add		

# 2.7.13 Export

In cases when a back up of QFlex configuration needs to be preserved or when the same configuration needs to be replicated between QFlex environments (Development, Test, Production), you can use the export option. If you need to export your database to an XML file go to **Options** and select **Export**. Set **Export filename** and click **Export** button:

Home   Logout	Export Database to XML file
± Resources	*Export filename Export can be used as backup of all Qflex configurations, such as Queue Managers, Message
Reports	Export Click to perform export data to XML file
Problem Management	
± Utilities	
Operations	
<ul> <li>Options</li> <li>SMTP</li> <li>SNMP</li> <li>LDAP</li> <li>Data Collection</li> <li>Data Archival</li> <li>Polling Policies</li> <li>Alert Cleanup Policies</li> <li>Message Cleanup Policies</li> <li>Recovery Actions</li> <li>Broker Subscriptions</li> <li>Broker Compressions</li> <li>Security</li> <li>Export</li> </ul>	

A Exported configuration can be imported into newly installed QFlex during the first login.

# 2.8 Change Control

QFlex can detect changes to MQ objects such as queue or a channel. In order to do that, config collection has to be turned on.

# 2.8.1 Change Log

To view configuration change log go to Change Control and select Change Log:

Q	
Home   Logout	Configuration Change Log for (Netflexity)
+ Resources	Queue Managers Definition IB9QMGR - 1.1 Definition Queues
Reports	E Channels
Problem Management	
1 Utilities	
Operations	
Options	
<ul> <li>Change Control</li> <li>Change Log</li> <li>Config Collection</li> </ul>	
Support Info	

# 2.8.2 Config Collection

To add configuration collection policy to a queue manager or add same collection policy to all queue managers go to **Change Control** and select **Config Collection**:

Q <sub>flex</sub>	
Home   Logout	Configuration Collection Policies for (Netflexity)
+ Resources	use as s
	IB9QMGR
Reports	Check/Uncheck All
+ Problem Management	Enable Disable Delete Click to Enable/Disable/Delete Collections
	Add Configuration Collection policy to
Utilities	Queue Manager MQV8QM_TEST \$
+ Operations	Interval Collection Queue Filters.(Comma delimited)          05 \$       Minutes \$         Save Collection       Click Save to save collection settings.
Options	Add same collection policy to all Queue Managers
<ul> <li>Change Control</li> <li>Change Log</li> <li>Config Collection</li> </ul>	Interval Collection Queue Filters.(Comma delimited)          05 +       Minutes +         Save Collection       Click Save to save collection settings.
+ Support Info	
Note     For queue managers with over 500 que     of object changes is a CPU intensive o	eues, configuration collection interval less than 10 minutes is not recommended, as keeping track peration.
Once the the configuration collection had been created and enabled, QFlex will load an initial tree of all object definitions and assign a version to each object. QFlex will detect changes to objects and assign a new revision to one or more changes that had been detected during the collection interval. Detected changes can be approved or rejected.	
If the change is approved, QFlex accept to and including approved revision are remain outstanding and can be rejected	ots that revision as a last approved queue definition. In case of multiple revisions, all revisions up approved. If the revision that is approved is not the latest revision, remaining revisions will d. If a change is rejected, queue is reverted to the last approved state.
If multiple changes are rejected, all cha the latest revision, remaining revisions not supported in QFlex Express	anges up to and including the rejected revision are rejected. If the revision that is rejected is not will remain outstanding and can be approved or rejected at a later time. Approval and rejection is

# 2.9 Support Info
In this section you can see information on company's info, problem report and licenses.

# 2.9.1 Company Info

To update the company's information go to Support Info and select Company Info, where you can set the following data:

Q <sub>flex</sub>		
Home   Logout	Update Company Info	
+ Resources	*Company Name	
+ Reports	*Serial Number	
+ Problem Management		
+ Utilities		
Operations		
Options	*Email	
+ Change Control	*Address *City	State
<ul> <li>Support Info</li> <li>Company Info</li> <li>Problem Report</li> </ul>	Save Company Profile Click Save to save company information	Alabama 🗘
Licenses		

Click Save Company Profile button to store new settings.

Note It will be easier for Netflexity to get in touch with you when you submit a problem. A serial number that you have received can be updated here to switch to a full version of the QFlex or to allow QFlex to upgrade to a newer major release.	
--	--

# 2.9.2 Problem Report

If you have identified a bug or other type of inconsistency in QFlex, go to Support Info and select Problem Report.



Customer Feedback for Netflexity page opens. In I suggest you section you can see some advice or post a new idea. To report a problem, click on Contact support.



The Contact support window opens. Fill in the necessary fields and attach necessary files to submit a problem. If you get a server error, please include compressed TOMCAT HOME/logs and C:\home\QFLEX\logs directories. The email message containing problem report will be sent to qfle x@netflexity.com

Knowledge Base browse articles	Contact support
Upgrade Existing Qflex There is an Install/Update guide on the download page ht	Message subject
Qflex Enterprise vs Qflex Standard Versions Feature Qflex Express Qflex Enterprise 24x7 Customer S	Туре -
Qflex User Manual 4.x.x User manual and latest product downloads are located he  Oflex Windows Installer/I Indator - 64 bit	How can we help you today?
Offex Install / Upgrade Guide for UNIX and W	Attach a File
Qflex Install Guide for UNIX and Windows. 1. Download	Your email address
	Send message

### 2.9.3 Licenses

E.

To obtain QFlex licensing details go to Support Information and select Licenses.



# 2.10 Useful Information

This chapter provides you some useful information on the following:

- How to configure Websphere MQ Queue Manager
- Websphere Message Broker & IBM Integration Bus Monitoring and Statistics
- How to schedule daily reports email in Qflex
- Monitor Websphere MQ configuration changes

# 2.10.1 Configuring WebSphere MQ

### How to configure Websphere MQ Queue Manager as JMS provider

Commercial version of Qflex Websphere MQ monitoring tool allows you to add and monitor Websphere Message Brokers. Before that can be done Queue Manageer needs to be configured or enabled as a JMS provider. To accomplish that one needs to execute a special script that comes as part of Websphere MQ installation. Note, for Websphere MQ v7.1, publish/subscribe MUST be enabled as well.

Follow the link to IBM Infocenter with details on how to configure Websphere MQ Queue Manager as JMS provider.

### **Configuring WebSphere MQ**

#### About this task

The WebSphere MQ administrator must do the following tasks: **Procedure** 

- 1. Create the queue manager, by using the crtmqm command.
- 2. Start the queue manager, by using the strmqm command.
- 3. If you are using WebSphere MQ V7.1, publish/subscribe must be enabled. Use the ALTER QMGR command for this queue manager.
- 4. Create the queues required, by running:

```
runmqsc
queue-manager-name < mq-install-dir\java\bin\MQJMS_PSQ.mqsc
```

where mq-install-dir is the installation location of WebSphere MQ.

5. If you are configuring a cluster, create the extra queues required, by running:

runmqsc queue-manager-name < <InstallDir>\config\was\create\_MQ\_JMS\_MQ\_queues.mqsc

where <InstallDir> is the installation location of Decision Server Events.

### Example

C:\Program Files (x86)\IBM\WebSphere MQ\bin>runmqsc.exe MYQMGR < "C:\Program Files (x86)\IBM\WebSphere MQ\java\bin\MQJMS\_PSQ.mqsc"

# 2.10.2 Websphere Message Broker & IBM Integration Bus Monitoring and Statistics

In this post we would like to demonstrate how easy it is to setup monitoring and statistics collection in Qflex for IBM Websphere Message Broker and Integration Bus v9 and up. Note that we assume you already have broker Queue Manager already setup in Qflex and that JMS provider is enabled

### Connect to Message Broker

Let's select broker's queue manager and dedicated JMS queue for Qflex to collect all communication from broker.



Once you created connection to broker you will see confirmation screen below.



### **Create Subscriptions**

Now you can navigate into topology to see all your execution groups and flows.

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Select the level of monitoring that you would like to perform. We suggest select the most detailed/specific part of taxonomy to reduce stress on underlying IBM Websphere Message Broker/ Integration Bus. In the example below we select sample message flow.



Select desired message broker/integration bus, execution group or message flow and click "Subscribe" button.



Subscription is now created within Qflex but not activated in the IBM Message Broker/Integration Bus, so select the subscription and press "Enable" button to activate it.



At this point the subscription is enabled within the broker and Qflex has started collecting various broker statistics in its data storage. At this point Qflex is ready to perform monitoring of message broker, it's message flows and nodes. In addition, Qflex will allow execution of various statistical reports. Note that data is preserved forever but can be configured to compress some statistics to save space.

### Monitor Message Broker

As an example, we will create a monitor that will check if a particular message flow generated any errors during execution. Other monitor types available for IBM Message Brokers/IIB, message flows and nodes. Check documentation for more information.



#### Message Broker Reporting

Now, let's play with statistical reporting features. Here we are trying to see node report for the past 10 hours. Note that this report can be scheduled to run daily or at any interval and be emailed as PDF as well.

Q <sub>leh</sub>	00000000000000000000000000000000000000	Office for Desirress users Lagout
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27 Index Reageneri	Exception Report     Concentrational Concentrations	
N union	Report and Sever	
R garatere		

As a result we get below.

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					en o ner en dak tapet.	* met * ne * stel

At this point we can drill into particular nodes to see more charts and detailed data breakdown.



As an example, let's also run message flow report.



As with nodes, we can drill into detailed message flow view.

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This concludes this presentation. For more information or comments, please contact as at customers@netflexity.com

# 2.10.3 Scheduling daily reports email in Qflex

It's been asked many times before so we decided to post a quick guide to make it easier for everyone to schedule daily report generation and notification.

First, make sure you have saved reports. Best way is to select hourly range so the report is relative.

localhost:8881/QFLEX/displayQmanagersSta	itsReport.do	
Q <sub>flex</sub>	••••••••••••••••••••••••••••••••••••••	Qflex
Home   Logout Resources Queue Managers Brokers Applications	Queue Managers Statistics Report       By Date/Time       Starting from       Hours       Minutes       00 +       01 +	
<ul> <li>Applications</li> <li>Reports</li> <li>Applications</li> <li>Queue Managers</li> <li>Queues</li> <li>Websphere Broker</li> <li>Node</li> <li>Flow</li> <li>Schedule Percet</li> </ul>	Until       Hours       Minutes         00 ‡       01 ‡         By Interval       Minutes         Hours       Minutes         23 ‡       59 ‡         Generate Report       Click Generate Report to display report.	
Problem Management	Report and Save         Click to save report with name:         My Daily Report	
Utilities     Operations     Console		
Options		



Next, create polling policy. The one in the example will trigger at 8AM every day.



Create schedule (cron expression) in Qflex

### Finally, store report schedule.

localhost:8881/QFLEX/displayReportSchedules.do

Q <sub>flex</sub>	• • • •			Qfle	x for Business users	Logou
Home   Logout	Schedule Report Generat	ion				
Queue Managers     Brokers     Applications	Reports My Daily Report \$ e-mails	Policies Every 5 minutes \$				
Reports     Applications     Queue Managers     Oueues	youremail@example.com	chedule to schedule report sending				
Websphere Broker Node Flow Schedule Report	Scheduled Reports List		use	as substring + on colu	mn Reports +	.0, 2
+ Problem Management	Reports My Daily Report	e Every day at 8AM	Polling Polices	⇔ vouremal@sa	E-mail list	
+ Utilities	Check/Uncheck All					
Operations Console	Generate Now         Click Generate           Delete         Click Delete to remove	e Now to generate and send report e selected Schedules.	:(s).			
Options SMTP SNMP LDAP						
<ul> <li>Data Collection</li> <li>Data Archival</li> </ul>						

### Store report schedule in Qflex

# 2.10.4 Monitoring Websphere MQ configuration changes

Qflex offers a handy utility, which acts as a version control system of your Websphere MQ infrastructure. It tracks all the changes made to Queue Manager, Queue, Channel and Topic configuration and preserves it in a local database. Undesired or not approved changes can be rolled back to previous state with a press of one button.

# To setup Websphere MQ configuration change management, you first need to enable configuration events on the Queue Manager that you are planning to monitor for changes.

Control of	File Edit Window Help		
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Greed Gr	S IB9NODE		
<ul> <li>Extended</li> <li>Channels</li> <li>Channel Authentication Records</li> <li>Channel Authentication Records</li> <li>Channel Authentication Records</li> <li>Structures</li> <li>Structures</li> <li>Structures</li> <li>Authentication Information</li> <li>Communication Information</li> <li>Communication Information</li> <li>Communication Information</li> <li>Structures</li> <li></li></ul>	🗁 Queues	General	Evente
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<ul> <li>Subscriptions</li> <li>Channels</li> <li>Listeners</li> <li>Services</li> <li>Namelists</li> <li>Authentication Information</li> <li>Communication Information</li> <li>Communication Information</li> <li>Communication Information</li> <li>Service Definitions Repositories</li> <li>Integration Nodes</li> <li>B ar Files</li> <li>Channels</li> <li>Channels</li> <li>Channel events:</li> <li>Channel auto definition events:</li> <li>Subscribe</li> <li>Channels</li> <li>Channel events:</li> <li>Channel auto definition events:</li> <li>Service Definition Repositories</li> <li>Integration Nodes</li> <li>B ar Files</li> <li>Channels</li> <li>Channels</li> <li>Channels</li> <li>Channel events:</li> <li>Channels</li> <li>Channel events:</li> <li>Service Definition Repositories</li> <li>Integration Nodes</li> <li>B ar Files</li> <li>Channels</li> <li>Channels</li> <li>Channels</li> <li>Channels</li> <li>Channels</li> <li>Channels</li> <li>Channel events:</li> <li>Channels</li> <li>Service Definition Information</li> <li>Service Definition Repositories</li> <li>Integration Nodes</li> <li>B ar Files</li> </ul>	🗁 Topics	Installable services	Command events:
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<ul> <li>➢ JMS Administered Objects</li> <li>➢ Managed File Transfer</li> <li>➢ Service Definition Repositories</li> <li>➢ Integration Nodes</li> <li>➢ Bar Files</li> </ul>	Queue Manager Clusters		
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Once change events are enabled, you can setup configuration event change collection in Qflex. See below for details.

# Cflex

Home   Logout	Configuration Change Log for (No name)
	Queue Managers
Resources	🖻 🛅 IB9QMGR - 1.1
Queue Managers	🕀 🛃 Queues
Brokers	🖓 🛱 🏊 QUEUE.OUT - 1.1
Applications	QUEUE.OUT - 1.1.0
	QUEUE.OUT - 1.1.1 [Administrato]
_	SYSTEM, ADMIN, ACCOUNTING, QUEUE - 1.1
Reports	SYSTEM.ADMIN.ACTIVITY.QUEUE - 1.1
Applications	SYSTEM.ADMIN.CHANNEL.EVENT - 1.1
Queue Managers	SYSTEM.ADMIN.COMMAND.EVENT - 1.1
Queues	SYSTEM.ADMIN.COMMAND.QUEUE - 1.1
Websphere Broker	SYSTEM.ADMIN.CONFIG.EVENT - 1.1
Schedule Report	SYSTEM.ADMIN.LOGGER.EVENT - 1.1
	SYSTEM.ADMIN.PERFM.EVENT - 1.1
	SYSTEM.ADMIN.PUBSUB.EVENT - 1.1
<ul> <li>Problem Management</li> </ul>	SYSTEM.ADMIN.QMGR.EVENT - 1.1
	SYSTEM.ADMIN.STATISTICS.QUEUE - 1.1
	SYSTEM.ADMIN.TRACE.ACTIVITY.QUEUE - 1.1
⊥ Utilities	SYSTEM.ADMIN.TRACE.ROUTE.QUEUE - 1.1
	SYSTEM.AUTH.DATA.QUEUE - 1.1
	SYSTEM.BROKER.ADAPTER.FAILED - 1.1
Operations	SYSTEM.BROKER.ADAPTER.INPROGRESS - 1.1
	SYSTEM.BROKER.ADAPTER.NEW - 1.1
	SYSTEM.BROKER.ADAPTER.PROCESSED - 1.1
Options	SYSTEM.BROKER.ADAPTER.UNKNOWN - 1.1
- SMIP	SYSTEM.BROKER.ADMIN.QUEUE - 1.1
- SNMP	SYSTEM.BROKER.ADMIN.REPLYTODM - 1.1
- LDAP	SYSTEM.BROKER.ADMIN.STREAM - 1.1
Data Collection	SYSTEM.BROKER.AGGR.CONTROL - 1.1
Data Archival	SYSTEM.BROKER.AGGR.REPLY - 1.1
- Poling Policies	SYSTEM.BROKER.AGGR.REQUEST - 1.1
Alert Cleanup Policies	SYSTEM.BROKER.AGGR.TIMEOUT - 1.1
Pessage Cleanup Policies	SYSTEM.BROKER.AGGR.UNKNOWN - 1.1
Recovery Actions	SYSTEM.BROKER.AUTH - 1.1
Broker Subscriptions	SYSTEM.BROKER.CONTROL.QUEUE - 1.1
Broker Compressions	SYSTEM.BROKER.DC.AUTH - 1.1
Security	SYSTEM.BROKER.DC.BACKOUT - 1.1
Export	SYSTEM.BROKER.DC.RECORD - 1.1

# Chapter 3. For business users

The following chapter shows how to operate and configure QFLEX for Business users.

# 3.1 Dashboard

This section shows how to use the following dashboard settings - Application Alerts and Message Distribution.

# **3.1.1 Application Alerts**

To see distribution of Alerts in Application click on Dashboard and select from expanded menu application alerts:



In the opened *Current Application Alerts* page you will see a graph with visual legend showing 4 types of alerts with different color: Failures, Problems, Warnings, Infos:

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1			2 MM 1 2
4	-		

Alerts are generated by monitors that watch over observance of certain conditions (see details in QFLEX documentation).

Types of Alerts correspond to types of monitors.

### 3.1.1.1 Display and sorting options

By clicking on *Chart* or *Table* in the top right corner you can switch display mode from graph to table:

$Q_{flex}$				
dashboard i 🖛 application i 🖛 topo	logy			
Current Application Alerts	G			
Application Name				
			Failures	
APP			0	
Application One			0	
Application Three			0	
Application Two			0	
MobileVideoCloud			0	
Test application 1			0	
		'		
Existing Alerts				
Application: All				
Search:	Show 10 - eptries Open.	alerts only	ülert ager jüll	-
		10105 01117 —		
Alert Name	Alert Message		Alert Status	
			No da	ta avaliable in tat
Showing 0 to 0 of 0 entries				
Check New Assigned Resolved	Change selected to New Assigned	Resolved Save		

Table display mode offers more detailed information. It can be also used as filter for sorting data from the lower table *Existing Alerts* which displays the last 1500 (maximum) existing alerts:

Q <sub>flex</sub>				
dashboard i - application i - top	ology			
Current Application Alert	S			
Application Name			Eailures	
APP			0	
Application One			0	
Application Three			0	
Application Two			0	
MobileVideoCloud			0	
Test application 1			0	
		I		1
Existing Alerts				
Application: All				
Search:	Show 10 - entries	Open alerts only 📕	Alert age: All	•
Alert Name	Alert Messao	e	Alert Status	_
	,	-	No da	ta available in ta
Showing 0 to 0 of 0 entries				
Showing o to o or o charles				
			1	
Check New Assigned Resolved	Change selected to <u>New</u> A	ssigned Resolved Save	]	

Current filter status is shown on the top of the table:

Application:	All
Alert type:	All

You can sort data of the lower table by clicking on cells of the upper table (as well as column and row headers). Click on **Show All Alerts** in the right corner to reset the filter:

4 <sub>lex</sub>				
ashboard i <del>-</del> application i - top	ology			
Current Application Alert	s ———			
Application Name			<b>-</b> - 1	
- ADD			Failures	
			U	
Application One			0	
Application Three			0	
Application Two			0	
MobileVideoCloud			0	
Test application 1			0	
To dettine a la la sete				
Existing Alerts				
Application: All Alert type: All				
Search:	Show 10 💌 entries	Open alerts only 📕	Alert age: All	•
📕 📤 Alert Name	Alert Messag	e	Alert Status	
			No dai	ta available in tal
Showing 0 to 0 of 0 entries				
Check New Assigned Resolved	Change selected to New A	ssigned Resolved Save	]	

Additional filters:

Open Alerts Only - shows only Alerts with empty Ended field (i.e. not completed).

Alerts Age - shows all/for the last 24 hours.

### 3.1.1.2 Other options

The webpage is automatically updated each 3 minutes. Click on the time counter to update it manually:

(	<b>}</b> ₄lex					
d	ashboard i - application i - topo	ology				
	Current Application Alert	S				
	Application Name					1
					Failures	
	APP				0	
	Application One				0	
	Application Three				0	
	Application Two				0	
	MobileVideoCloud				0	
	Test application 1				0	
			I			1
	Existing Alerts					
	Application: All					
	Alert type: All	chan to achieve	On an alasta and		Alash and All	
	Search: J		Open alerts on	y 🗖	Alert age:   All	•
	🔲 🔷 Alert Name	Alert Messag	e		Alert Status	
					No da	ta available in tal
	Showing 0 to 0 of 0 entries					
	Check New Assigned Resolved	Change selected to New 4	ssigned Resolv	ed Save		

You can change status of Alert (Each new Alert has New status) for single items by selecting necessary status from radio buttons (*New, Assigned, Resolved*):

~				
Q <sub>flex</sub>				
dashboard i - application i - topo	blogy			
Current Application Alerts				
	-			
Application Name				
- ppicador ritano			E Failures	
APP			0	
Application One			0	
Application Three			0	
Application Two			0	
MobileVideoCloud			0	
Test application 1			0	
Existing Alerts				
Alert type: Al				
Search:	Show 10 💌 entries Ope	en alerts only 🔳	Alert age: All	•
📕 📤 Alert Name	Alert Message		Alert Status	
			No da	ta available in tal
Showing 0 to 0 of 0 entries				
Check New Assigned Resolved	Change selected to New Assign	ed Resolved Save		

Checkbox in the beginning of the line will be automatically checked - after the form is sent only checked Alerts will be updated.

Use Check New/Assigned/Resolved buttons to select several items, in this case all Alerts with corresponding status will be selected.

To change selected lines use buttons Change selected to *New/Assigned/Resolved*. All selected Alerts will change their status depending on the pressed button.

Press Save button to store new settings.

To edit comment to an Alert double click on Alert Name or Comment cell and type in new data in appeared window.

# 3.1.2 Message Distribution

To see chart of message distribution for a specific Application over the last 24 hours click on **Dashboard** and select from expanded menu **messa** ge distribution:

Q <sub>flex</sub>	
dashboard i 🖛 application i 🖛 topology	
application alerts	
message distribution cha	
Current Application Alerts	
APP -	

In the left part of the page you will see a graph in form of Pie Chart with legend, and in the right - explanatory table:

dashboard i - application i - topology	
24 Hour Messaging Application Distribution	
	Applica
	APP
	Applica
	Applica
	Applica
	Mobile
No data available	Test ap
	Total m

The table shows exact number of messages, percentage to total number and total number of messages.

Message distribution page is automatically updated each 3 minutes. In the upper right corner there is a counter showing remaining time until the next update:

dashboard 🖅 application 🖅 topology	
24 Hour Messaging Application Distribution	
	Applicat
	APP
	Applicat
	Applicat
	Applicat
	MobileVi
No data available	Test app
	Total me

Click on the time counter to update it manually.

# **3.2 Application**

4lex

In this section you will see how to add and edit applications as well as how to view application data.

# 3.2.1 Adding New Application

Note This page is available only for Administrators.

1. To add new application go to *Application* and choose from dropdown menu +*Add Application*:

$\mathbf{Q}_{flex}$	
dashboard 🕴 🖛	application i - topolog
Applicat	APP Application One
APP Application One Application Thr Application Tw MobileVideoClo Test application	Application Three Application Two MobileVideoCloud Test application 1
	+ Add Application

2. In the *Add New Application* page set the following application settings:

Q <mark>flex</mark> dashboard i - application i - topology	
Add Application	
Add New Application	
* Application Name * Application Type	Description
Assigned Destinations	
Search: Show 10 rentries	
📕 🔺 Queue Manager Name 🥚 Queue Name	Destination Typ
Showing 0 to 0 of 0 entries	
Delete Click Delete to remove selected Destinations	
Available Destinations	
Save Application Click Save to save application settings.	

Application Name, Application Type - mandatory fields, Description (optional).

3. Click on *Available Destinations* to expand the table and add selected destinations first by checking them and then pressing *Assign* button in the top or bottom of the table:

Assign Click Assign to add selected Destinations				
Search:		Show 10  entries		
	Queue Manager Name		Queue Name	
	FP01		0U229E2R.J	
	FP01		12AEVVD.TEST.IN	
	FP01		1J5E5R.TEST.IN	
	FP01		1RJHUD.TEST.IN	
	FP01		2SHG5G.TEST.IN	
	FP01		2Y0XKF.TEST.IN	
	FP01		5DG2XD.TEST.IN	
	FP01		6F5HZL.TEST.IN	
	FP01		7SEUGO.TEST.IN	
	FP01		8NHHR8.TEST.IN	
Showing 1	1 to 10 of 216 entries			
Assign Click Assign to add selected Destinations				
S	Save Application Click Save to save application settings.			

4. After you press **Assign** button in the **Available Destinations** section you will see the Queue Manager assigned to your new application in the **Assigned Destinations** table:

Q <sub>flex</sub>	<ul> <li>application i </li> </ul>	y		
Add A	oplication			
Add Ne	w Application			
* Appli Test aj	cation Name oplication 4	* Application Type test	Description test	
Assigne	d Destinations ——			
Search:		Show 10 💌 entries		
	Queue Manager Name	Queue Name		Destination Type
	FP01	NWTY35.MISHA41		Queue
Showing 1	to 1 of 1 entries			
Delete	Click Delete to remove selected	Destinations		

5. Press Save Application button to save new application settings:

4lex		
	19 1	
Add New Application		
* Application Name Test application 4	* Application Type test	Description test
Assigned Destinations	Show 10 💌 entries	
Queue Manager Name	Queue Name	Destination Type
FP01	NWTY35.MISHA41	Queue
Delete Click Delete to remove selecte	d Destinations	
<ul> <li>Available Destinations —</li> </ul>		
Assign Click Assign to add selected [	Destinations	
Search:	Show 10 💌 entries	
📕 🔺 Queue Manager Name		Queue Name
FP01		NWTY35.MISHA36
FP01		NWTY35.TEST.IN
FP01		O3XNOG.
FP01		O3XNOGTEST7
FP01		O3XNOG.O3XNOGTEST2
FP01		O3XNOG.TEST3
FP01		O3XNOG.TEST5

	FPU1	O3XNOG.1ES16				
	FP01	O3XNOG.TEST7				
Showing 5	1 to 60 of 215 entries					
Assign	Click Assign to add selected Destinations					
5	Save Application Click Save to save application settings.					

# 3.2.2 Editing Application

Note
 This page is available only for Administrators.

1. To edit application settings go to Application and select from dropdown menu application you want to edit:

$\mathbf{Q}_{flex}$	
dashboard i 🔫	application i 👻 topology
	APP Application One Application Three
Application One Application Thr Application Tw MobileVideoClo Test application	Application Two MobileVideoCloud
	+ Add Application

2. Then click on *Edit application* in the top right of the data summary page:

Qflex dashboard i - applicat	tion 🕴 Topology	
Test applica	ation 1	
summary alerts monitors	Assigned Destinations Search: Show 10  entries	
	Queue Manager Name 🔷 Queue Name	) Destina
		No data a
	Showing 0 to 0 of 0 entries	

3. Here you can modify Application Name, Application Type or its Description:

Querter application in topolog	N/		
Test application 1			
Edit Application			
* Application Name Test application 1	* Application Type test application	Description for testing	
Assigned Destinations	Show 10 rentries		
📔 🔺 Queue Manager Name	Queue Name		Destination Type
FP01	12AEWD.TEST.IN		Queue
Showing 1 to 1 of 1 entries  2  Delete Click Delete to remove selected	d Destinations		
Save Application	Click Save to save application settings.		

To detach a Queue Manager in Assigned Destination table check it (1) and then press Delete button (2).

Then press Save Application button to save new application settings.

# **3.2.3 Viewing Application Data**

1. To view data for an application go to *Application* and choose one from dropdown menu:

$\mathbf{Q}_{flex}$	
dashboard i 🔫	application i 👻 topology
Applicat	APP Application One
APP Application One Application Thr	Application Three Application Two
Application Tw MobileVideoClo Test application	Mobile∀ideoCloud Test application 1
	+ Add Application 🕌

2. There will be 3 tabs: *Summary*, *Alerts* and *Monitors*:

Q <sub>flex</sub> dashboard i - applicat	ion i - topology		
summary alerts monitors	Assigned Destinations	Show 10 - entries	
	Queue Manager Name       FP01       FP01       FP01       FP01       FP01       FP01	Queue Name       1RJHUD.TEST.IN       2SHGSG.TEST.IN       2Y0XKF.TEST.IN       SDG2XD.TEST.IN       6F5HZL.TEST.IN	Destina Queue Queue Queue Queue

Summary tab shows list of assigned destinations where the last column displays direction (input, output or error).

Alerts displays list of alerts for this application.

Monitors tab shows list of monitors.

# 3.3 Topology

In this section you can see network configuration data obtained by scanning Qmanagers.

# 3.3.1 Choosing topology settings

1. Click on *Topology* on the top of the page:

$Q_{flex}$		
dashboard i 🔫	application 🕴 🔫	topology

2. Type in Qmanager name and press enter on your keyboard - all other fields will be automatically filled in with corresponding data:

Q <sub>fley</sub>		
dashboard 💌 application 💌 top	logy	
additional application i top	.cg)	
Topology		
Qmanager		
FP01		
Host		
WIN-T2DM9C2B3UA		
Port		
1414		
Channel name		
SYSTEM.DEF.SVRCONN		
View topology		

If you press down arrow on the keyboard with active QManager field, a list of all QManagers will appear and all fields will be automatically completed:

Q <sub>flex</sub> dashboard i - application i - top	ology	
Topology		
Qmanager FP01 FP02 NF01 Channel name View topology		

Press View topology button.

3. The scanner will search all Channels connected to this QManager. If in Channel's service data there is information on other QManager, then the system will try to connect to it and scan its Channels. The process is finished when all Channels are scanned.

# 3.3.2 Topology display options

1. Topology is shown as a graph where nodes represent QManagers and links between them - Channels:



2. QManager that was used as a starting point for search is represented by a star, other QManagers are marked by circles. Drawing algorithm is distributing the nodes in most optimal way.

3. If needed you can drag and drop the nodes to change automatic order.

4. Move mouse wheel to change the topology scale.

# Note Depe

Depending on configuration of the scanned network the scanning process can take some time.