

SWOPG-18.0

M-Switch Operator's Guide

Isode

Table of Contents

Chapter 1	Overview.....	1
	This chapter covers the features of the Isode M-Switch required by Operators of M-Switch. It gives detailed descriptions of the monitoring and control features and components, especially the Graphical Management tools. It also provides links to the complementary volumes, M-Switch Administration Guide and the M-Switch Advanced Administration Guide .	
Chapter 2	Message Switch Console.....	2
	Message Switch Console (MConsole) is a graphical management tool that can be used on UNIX or Windows to monitor, control and configure Isode messaging services, including M-Switch. This chapter introduces MConsole and explains how to start it up.	
Chapter 3	Message Switch Console Operator Views.....	4
	This chapter lists the MConsole Operator Views and provides a brief summary.	
Chapter 4	Starting and Stopping.....	5
	Starting and stopping the Messaging Services on both UNIX and Windows systems are described in this chapter.	
Chapter 5	Switch Operations.....	9
	This chapter describes how the Switch Operations View is used to manage MTAs, Channels, Messages and Recipients.	
Chapter 6	Events.....	14
	This chapter describes M-Switch Events and the how the Event Viewer View is used.	
Chapter 7	Alerts.....	18
	This chapter describes M-Switch Alerts and how the Alert Viewer View is used.	
Chapter 8	Message Tracking.....	22
	This chapter describes the AuditDB views used for message tracing and searching.	
Chapter 9	Summary View.....	28
	This chapter describes how the Summary View can be used to determine problems with an MTA.	
Chapter 10	Channel Monitor View.....	30
	This chapter describes how Channel Monitor View can be used to check on the status of various channels.	
Chapter 11	ACP142 View.....	33
	This chapter describes how ACP142 features of M-Switch are monitored and operated. This is performed using the M-Console ACP142 View.	
Chapter 12	ACP127.....	38
	This chapter describes how ACP127 features of M-Switch are monitored and operated. This is performed using the MConsole ACP127 View.	
Chapter 13	Vetting View.....	55
	The Vetting View allows Operators to check that selected messages are suitable for queueing and sending and then manually release them for processing.	

Chapter 14	Diversions.....	56
	This chapter describes how the M-Switch Diversions View is used.	
Chapter 15	Correction View.....	57
	This chapter describes the Corrections View which allows operators to correct messages which would otherwise be non-delivered.	
Chapter 16	Message Switch Console Views.....	61
	This chapter lists the MConsole Operator Views, providing a summary and links to further information.	

Isode and Isode are trade and service marks of Isode Limited.

All products and services mentioned in this document are identified by the trademarks or service marks of their respective companies or organizations, and Isode Limited disclaims any responsibility for specifying which marks are owned by which companies or organizations.

Isode software is © copyright Isode Limited 2002-2023, all rights reserved.

Isode software is a compilation of software of which Isode Limited is either the copyright holder or licensee.

Acquisition and use of this software and related materials for any purpose requires a written licence agreement from Isode Limited, or a written licence from an organization licensed by Isode Limited to grant such a licence.

This manual is © copyright Isode Limited 2023.

1 Software version

This guide is published in support of Isode M-Switch R18.0. It may also be pertinent to later releases. Please consult the release notes for further details.

2 Readership

This guide is intended for operators who plan to monitor and operate the Isode M-Switch message switch. For configuration features generally used by Administrators to set up M-Switch, and for more detailed information on M-Switch, use the complementary volumes, [M-Switch Administration Guide](#) and the [M-Switch Advanced Administration Guide](#).

3 How to use this guide

This guide can be read through as a whole but can also be accessed from within MConsole using context sensitive links.

Chapter 1 Overview

This chapter covers the features of the Isode M-Switch required by Operators of M-Switch. It gives detailed descriptions of the monitoring and control features and components, especially the Graphical Management tools. It also provides links to the complementary volumes, [M-Switch Administration Guide](#) and the [M-Switch Advanced Administration Guide](#).

1.1 What is the Isode M-Switch?

M-Switch is a high-performance, versatile Message Transfer Agent (MTA), which can be installed on either Windows or UNIX platforms. It is the main component in a messaging system and supports:

- Internet messaging
- X.400 messaging
- ACP127 messaging
- A mixture of the three variants, converting messages from one form to the other.

The MTA consists of:

- The Queue Manager (`qmgr`)
- Channels which deliver messages into mailboxes or relay to other MTAs or gateway to other Message Transfer Systems
- Protocol listeners for messages entering the MTA (`iaed`, `smtpsrvr` or the `isode.pp.p3` daemon)
- Channels which perform conversions on messages

Other components of a complete Isode messaging system include:

- An M-Vault DSA, used to hold configuration
- The Message Audit Database which records information about messaging events and provides applications with the ability to access this information
- Management tools (GUIs and command line)

Chapter 2 Message Switch Console

Message Switch Console (MConsole) is a graphical management tool that can be used on UNIX or Windows to monitor, control and configure Isode messaging services, including M-Switch. This chapter introduces MConsole and explains how to start it up.

2.1 Starting MConsole

2.1.1 Introduction

As MConsole uses a client/server architecture you can install MConsole on any supported platform to connect to and manage the Isode M-Switches, either locally or remotely.

On Unix systems to start MConsole, ensure (`BINDIR`) is included in your path, and type: `mconsole`

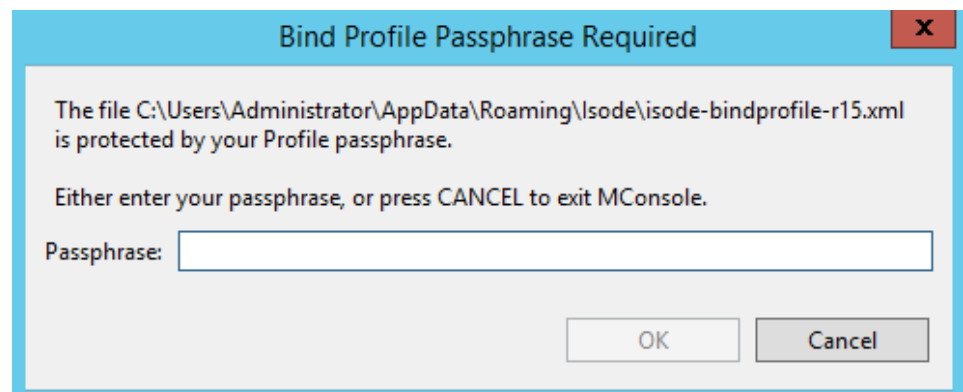
On Windows right click on **Start** → **Isode** → **MConsole** and choose **Run As Administrator**.

2.1.1.1 Starting MConsole First Time

You are recommended to encrypt your Bind Profile, so when MConsole starts up you are prompted for your password. This is set up by the Messaging Administrator. Once entered you now can now login to the M-Switch server with suitable privileges.

2.1.1.2 Bind Profiles

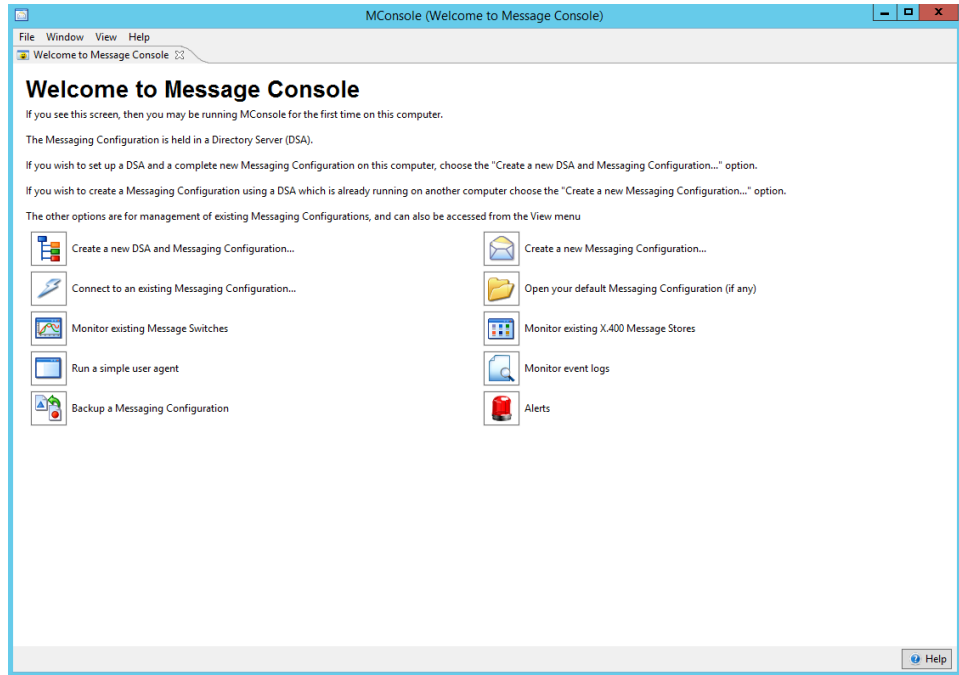
Figure 2.1. MConsole Entering Bind Profile Passphrase



2.1.1.3 Welcome Screen

The initial Welcome screen now opens. This lists a number of Views which you can now open, see [Chapter 3, Message Switch Console Operator Views](#) for more details.

Figure 2.2. MConsole Welcome



Chapter 3 Message Switch Console Operator Views

This chapter lists the MConsole Operator Views and provides a brief summary.

3.1 Introduction

The MConsole framework for displaying information is to provide views in a tabbed series of windows similar to that used in web browsers.

Views are created using the pull down menus, which create a new tab in the existing MConsole window. Some Views will only allow one Tab to be created and will simply open the the existing View if the Operator attemptss to open a second tab. The Alert View is one example of such a Tab.

Tabs can be moved into a new MConsole window by right clicking on the Tab, or by dragging the tab to the Desktop.

Detailed descriptions of all the MConsole Views used by Operators and Administrators of M-Switch are described in [Chapter 16, Message Switch Console Views](#).

3.2 Live Operations

These are Views used by operators in order to manage Isode messaging systems in real time. These are documented in this manual, but further information (in particular how to configure these views) is in the

- **Switch Operations.** See [Chapter 5, Switch Operations](#) for a description of how Operators can use this View.
- **Event Viewer.** See [Chapter 6, Events](#) for a description of how Operators can use this View.
- **Alerts.** See [Chapter 7, Alerts](#) for a description of how Operators can use this View.
- **User Agent.** This View is used to forward messages from the messaging system into an X.400 Message Store. See [Section 8.2, "Forwarding Messages from MConsole \(User Agent\)"](#) for a description of how Operators can use this View.
- **Vetting.** See [Chapter 13, Vetting View](#) for a description of how Operators can use this View.
- **ACP127.** See [Chapter 12, ACP127](#) for a description of how Operators can use this View.
- **ACP142 Message Transfer.** See [Chapter 11, ACP142 View](#) for a description of how Operators can use this View.
- **Message Store View.** See the description of how Operators can use this View.

Welcome View. Most Views can be started by clicking on the icons. This View is described in [Section 2.1.1.3, "Welcome Screen" \[2\]](#).

Chapter 4 Starting and Stopping

Starting and stopping the Messaging Services on both UNIX and Windows systems are described in this chapter.

4.1 Introduction

The Isode M-Switch Server comprises a number of “Services” depending on the Features required. These Services are usually started and stopped by an Administrator but some Operators may also be granted permission to do this.

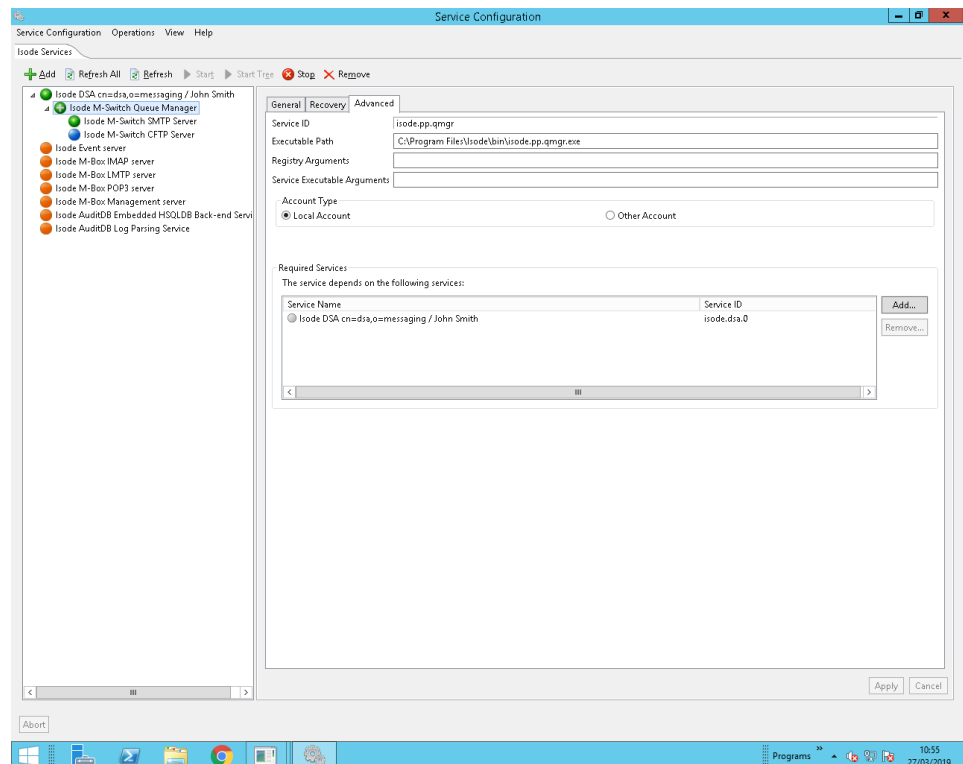
4.1.1 Starting and Stopping Services on Windows

Starting and Stopping Services on Windows is done using the “Isode Service Configuration” GUI Tool, this must be run as an Administrator and started from the Start Menu → Programs → Isode M.m → Isode Service Configuration, where “M” is the Major Release Number and “m” is the Minor Release Number e.g. Isode 16.7.

The Administrator will have configured all the services to start automatically when the system starts up.

So a normal running system would present all the configured services and the dependencies. The following diagram shows the appearance of M-Switch Services when running as an Internet MTA:

Figure 4.1. MTA Services and their Dependencies



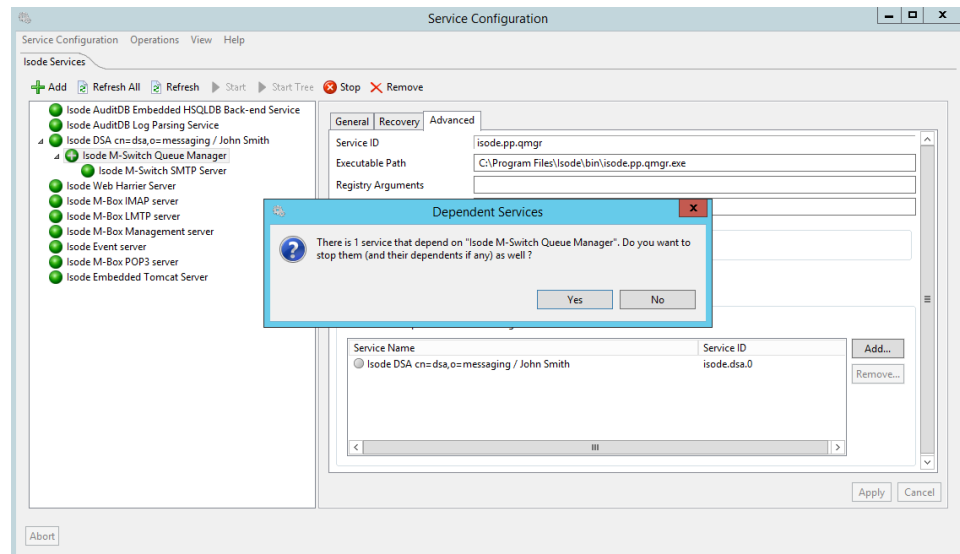
Services will usually have been set up so other services depend on it. These form a "tree" of dependencies. So a normal running system would present all the configured services and the dependencies. The above diagram [Figure 4.1, “MTA Services and their](#)

Dependencies” shows the appearance of M-Switch Services including these dependences, e.g. the `isode.pp.smtp` depends on the `isode.pp.qmgr`

Running Services are indicated by a “Green” circle, Stopped Services by an “Orange” circle and disabled services by a “Blue” circle. You can “Start All” and “Stop All” the services from the Operations menu.

You can start individual services by clicking on the **Start** button which will start the selected service. If that service has dependencies you will be asked if you wish to start these services. In addition you can click on the **Start Tree** button in order to start all the dependent services. If you select to stop a service, you will be asked if you wish to stop any dependent services, as shown below.

Figure 4.2. Stopping Services



4.1.1 Use of systemctl

Unix-like systems nowadays use `systemctl` to start and stop long lived services. This replaces SVR4 startup and shutdown procedures in older Unix-like systems, such as Red Hat 6/Centos 6. This section describes starting and stopping the services using `systemctl` commands.

An MTA comprises a number of processes. Starting an MTA therefore involves starting the various processes associated with that MTA.

R uses the SVR4 legacy features of `systemctl` in which most of the complexity is hidden behind standard SVR4 startup scripts, which for M-Switch is in files such as `/etc/init.d/pp`. On RedHat Linux, this is installed as a link to the actual script in `(SBINDIR)/pp`. On other unix platforms this may vary slightly.

4.1.2 Overview

This section summarizes what you must start, and what you may need to start depending on your configuration. Once you have a general understanding of this section, turn to [???](#), and follow the startup steps for your particular configuration:

- If the Directory is to be used for the messaging configuration and/or routing, ensure the Directory Server is running before starting your messaging system.
- Start the MTA processes. These can be started interactively from the command line, and left to run in the background, but normally they are started automatically as part of the system startup. Suitable scripts for doing this are copied into the appropriate places as part of the Isode MTA installation (e.g. the script `/etc/init.d/pp` on RedHat Linux).

- Only the qmgr process is essential and should be started before other processes. These run under the MTA userID (normally pp). The userID used is the owner of the file (*EXECDIR*)/*sendmail*.

4.1.3 Starting Services

In most simple cases, services are started/stopped/restarted by using an invocation such as the following in order to, for example, start an M-Switch service:

```
systemctl command service
```

If you are using Directory-based configuration you first start M-Vault using:

```
systemctl start dsa
```

The main M-Switch services include a small number of mandatory subservices, and a larger number of optional services depending on the type of M-Switch Configuration. See [M-Switch Administrator Guide](#) for a list of these sub services. See [M-Switch Administrator Guide](#) for a description of how to configure each of them.

You can then start M-Switch using:

```
systemctl start pp
```

If you are using M-Store, you can start it using:

```
systemctl start pumice
```

If you are using the Audit DB services, you may need the following services:

If you are using Postgres, start this as follows:

```
systemctl start postgresql
```

Alternatively, if you are using the Isode supplied test/demo DBMS, start this as follows:

```
systemctl start isode-hsqldb
```

Other Audit DB processes are started as follows:

```
systemctl start adb-lp
systemctl start adb-hk
```

These Audit DB services are less likely to be in use, but are included to complete the list of available services.

```
systemctl start adb-qn
systemctl start adb-qn
systemctl start adb-qosn
systemctl start adb-qr
```

4.1.4 Stopping Services

Stopping services is carried out by stopping services in the reverse order to starting them, for example, if you are using Directory-based configuration you first start M-Vault using:

```
systemctl stop dsa
```

Chapter 5 Switch Operations

This chapter describes how the **Switch Operations** View is used to manage MTAs, Channels, Messages and Recipients.

5.1 Switch Operations Overview

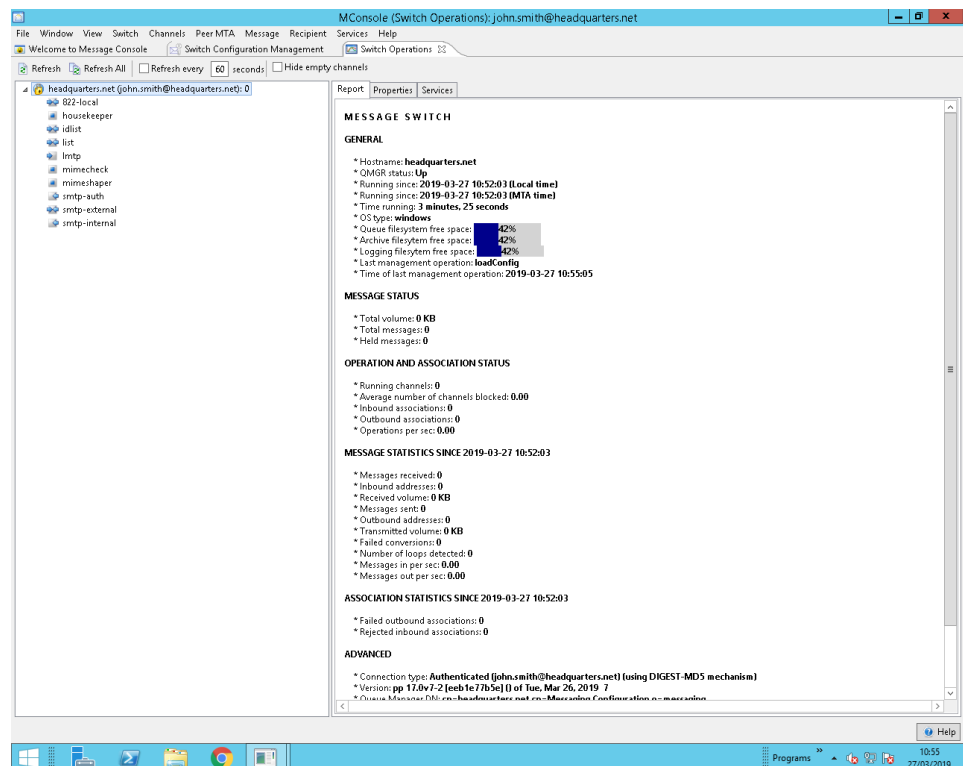
The **Switch Operations** view displays information about Switches (MTAs) using an Explorer Window.

The **Switch Operations** view connects to the Queue Manager of each configured **Switch**.

The connection parameters for each Switch need to be set up by an Administrator. These parameters include a username (SASL ID) and password. These are set up by the M-Switch Administrator.

The **Switch Operations** view appears as follows providing a Explorer Window which shows the different **Switch** instances whose connections have been configured. Each **Switch** actually represents the Queue Manager for that **Switch**. Beneath each Switch/Queue Manager are the configured Channels for that **Switch**. Beneath a Channel there may either be queued **Messages** when the Channel processes messages within the MTA or **Peer MTAs** which represent external destinations to which **Messages** will be transferred by the Channel. Under each **Message** are the recipients for that **Message** which will be processed for the parent **Peer MTA**.

Figure 5.1. Simple Switch Operations View



Once you have connected to a **Switch**, you will be able to see the different messaging entities, as in the above diagram: [Figure 5.1, “Simple Switch Operations View”](#).

- the configured channels,
- messages queued on those channels,
- recipients of the queued messages,
- active connections to remote MTAs,

By selecting a **Switch**, **Channel** or **Peer MTA** item you can use an option from the popup menu (launched using the right mouse button) to access the configuration of that item in the Directory.

If you have authenticated as a suitably privileged user you can not only view the above entities, but also manage the entities. For a description of SASL IDs and authentication see [M-Switch Administration Guide](#)).

5.2 Management and Monitoring

5.2.1 Message Switch

A Message Switch object shown on the right-hand side of the Switch Operations View represents the Switch as a whole. It presents information about the overall performance and status of the Switch, and allows the following operations to be performed:

- Edit switch configuration. This opens (or switches to) the Switch Configuration Management view, and selects the configuration entry for the Message Switch.
- Increase the maximum operation rate. This allows the MTA to perform more operations per second, increasing the amount of system resources that the MTA uses.
- Decrease the maximum operation rate, reducing the amount of system resources that the MTA uses.
- Enable submission: allow messages to be submitted normally again, after submission has been disabled.
- Disable submission: this prevents messages being submitted into the MTA. Use of this control might be useful if the MTA was being flooded with message submission.
- Enable all channels in a single operation.
- Disable all channels in a single operation.
- Check routing. This allows the user to determine how the MTA would route an address.
- Reload message queue. This causes the Queue Manager to re-read all messages which are currently held on disk in the message queue.
- Reprocess queue. This causes the Queue Manager to perform a routing calculation for each recipient of every message currently queued. If routing or other configuration changes have been made since messages were queued, this may cause messages to be requeued on different channels or for transfer to different Peer MTAs.
- Reload configuration. This causes the Queue Manager to check its configuration entry in the Directory for configuration changes, and reload it if necessary.
- Shutdown. This causes the Queue Manager to terminate.

5.2.2 Channel

The following operations can be performed on individual channels:

- Alter channel configuration. This opens (or switches to) the Switch Configuration Management view, and selects the configuration entry for the channel.

- Enable the channel.
- Disable the channel. This prevents the channel from processing any messages which are queued on it.
- Enable inbound connections, allowing the channel to accept new inbound connections. This may be a no-op for some channels.
- Disable inbound connections, preventing the channel from accepting new inbound connections. Existing inbound connections are unaffected. This may be a no-op for some channels.
- Enable outbound connections. This may be a no-op for some channels.
- Disable outbound connections, preventing the channel from making new outbound connections. Existing outbound connections are unaffected. This may be a no-op for some channels.
- Disconnect all incoming connections. This may be a no-op for some channels.
- Clear delay. This clears any delay which may have been applied to the channel itself.
- Set 1 minute delay. Applies a one minute delay to the channel.
- Set 10 minute delay. Applies a ten minute delay to the channel.
- Set 1 hour delay. Applies a one hour delay to the channel.
- Downwards force attempt. This clears any delay on the channel, enables the channel, and then performs a "downwards force attempt" on any subordinate Peer MTA or messages.
- Connect to Peer MTA. This allows an arbitrary Peer MTA name to be entered and passed to the channel as the argument of a "connect" instruction. The name entered should be in the appropriate format for the channel protocol: e.g. a mail domain name for an SMTP channel or the Distinguished Name of a Peer MTA's x400p1 channel for a x400p1 channel. This is a no-op for non-protocol channels.
- Limit by priority. This allows you to configure the channel to only process Urgent or Urgent and Normal priority messages, with an optional time range, Lower-priority messages will be ignored, even if there are no messages of the selected higher priority to process. The priority limitation can be cleared by choosing the "All messages" option.
- Timeout all messages. This allows all messages queued on the channel to be timed out. The messages will be queued onto the Housekeeper channel for processing, and non-delivery reports will be generated for any message recipients for which they were requested.
- Delete all messages. This allows all messages queued on the channel to be deleted. No non-delivery reports will be generated.
- Reprocess queue. This causes the Queue Manager to perform a routing calculation for each recipient of every message currently queued on this channel. If routing or other configuration changes have been made since messages were queued, this may cause messages to be requeued on different channels or for transfer to different Peer MTAs.

5.2.3 Peer MTA

The following operations can be performed on individual Peer MTAs:

- Alter Peer-MTA Agreement. This opens (or switches to) the Switch Configuration Management view, and selects the configuration entry for the Peer-MTA agreement for this Peer MTA, if one exists.
- Enable the Peer MTA.
- Disable the Peer MTA. This prevents the channel from processing any messages which are queued on this Peer MTA.
- Enable inbound connections, allowing the channel to accept new inbound connections from this Peer MTA. This may be a no-op for some channels.

- Disable inbound connections, preventing the channel from accepting new inbound connections from this Peer MTA. Existing inbound connections are unaffected. This may be a no-op for some channels.
- Enable outbound connections. This may be a no-op for some channels.
- Disable outbound connections, preventing the channel from making new outbound connections to this Peer MTA. Existing outbound connections are unaffected. This may be a no-op for some channels.
- Clear delay. This clears any delay which may have been applied to the Peer MTA.
- Set 1 minute delay. Applies a one minute delay to the Peer MTA.
- Set 10 minute delay. Applies a ten minute delay to the Peer MTA.
- Set one 1 delay. Applies a one hour delay to the Peer MTA.
- Downwards force attempt. This clears any delay on the Peer MTA, enables it, and then performs a "downwards force attempt" on any subordinate messages.
- Reprocess queue. This causes the Queue Manager to perform a routing calculation for each recipient of every message currently queued on this Peer MTA. If routing or other configuration changes have been made since messages were queued, this may cause messages to be requeued on different channels or for transfer to different Peer MTAs.
- Connect MTA. Causes the channel to open a connection to this Peer MTA.
- Disconnect MTA. Causes the channel to close all open connections to this Peer MTA.
- Delete MTA. This allows an existing Peer MTA agreement to be temporarily deleted, so that no knowledge of the Peer MTA will be maintained once all queued messages have been processed and any open associations to or from the Peer MTA have been closed. If the MTA is "permanent", then the knowledge of it will be reloaded from the Directory the next time that the Queue Manager does a configuration reload.
- Timeout all messages. This allows all messages queued on the Peer MTA to be timed out. The messages will be queued onto the Housekeeper channel for processing, and non-delivery reports will be generated for any message recipients for which they were requested.
- Delete all messages. This allows all messages queued on the Peer MTA to be deleted. No non-delivery reports will be generated.

5.2.4 Message

The following operations can be performed on individual messages:

- Start the message; enable it to be processed.
- Stop the message; prevent it from being processes
- Clear delay. This clears any delay which may have been applied to the message
- Set 1 minute delay. Applies a one minute delay to the message.
- Set 10 minute delay. Applies a ten minute delay to the message.
- Set 1 hour delay. Applies a one hour delay to the message.
- Downwards force attempt. This clears any delay on the message, starts it, and then clears any delay on its recipients.
- Reprocess. This causes the Queue Manager to perform the routing calculation for each recipient of this message. If routing or other configuration changes have been made since messages were queued, this may cause one or more of the recipients of this message to be requeued on different channels or for transfer to different Peer MTAs.
- Delete. Deletes this message without any non-delivery report being generated.
- Timeout. Passes the message to the Housekeeper channel for processing. Non-delivery reports will be generated for any message recipients for which they were requested.
- Reload. Causes the message to be reloaded from the queue directory.

- Abort. If the message is currently being transferred to a Peer MTA, this will abort the transfer. This is a no-op for some channels.
- Pause. If the message is currently being transferred to a Peer MTA, this will pause the transfer. This is a no-op for some channels.
- Resume. If the message is currently being transferred to a Peer MTA and is paused, this will resume the transfer. This is a no-op for some channels.
- Forward as attachment. This uses the built-in User Agent to forward the selected message as an attachment to a new message.
- Forward as inline. This uses the built-in User Agent to forward the selected message as inline text in a new message.
- Content view: view the message content.
- Tracking search: open the Message Tracking view and search for information about the selected message.

5.2.5 Recipient

The following operations can be performed on message recipients:

- Clear delay. This clears any delay which may have been applied to the recipient
- Set 1 minute delay. Applies a one minute delay to the recipient.
- Set 10 minute delay. Applies a ten minute delay to the recipient.
- Set 1 hour delay. Applies a one hour delay to the recipient.
- Delete. Deletes this recipient without any non-delivery report being generated.
- Timeout. Passes the recipient to the Housekeeper channel for processing. A non-delivery report will be generated if one has been requested for this recipient.
- Redirect. Allows this recipient to be redirected to an arbitrary address.

- **Local Files:** These are log files created by M-Switch, and other applications, that are accessible through the file system by the Event Viewer. If this source is an option, it should be preferred, as it is more efficient.
- **SOM Server:** By connecting to a SOM server (e.g. a **Queue Manager**) it is possible to see the log files written to the SOM server's file system.

You can select the Event Source by choosing the corresponding radio button in the **Event Source** section.

6.3 Selecting the log files to work with

Since the different Isode programs write their events in their respective log files, the Event Viewer provides a log file selector which allows only the relevant logs to be shown. To select which log files are shown, click on the **Select** button in the corresponding section, and the Log File Selector dialog is shown.

6.3.1 Selecting local log files

When selecting Local Files, the **Log Directory** is shown at the top of the dialog. This is the directory where the program expects to find the log files, and it is set to (LOGDIR) by default. If you want to change it, click on the **Select** button. If the content of the directory has changed since the dialog was opened, you can click on the **Refresh** button to refresh the content of the log table.

The log files that are available in the Log Directory are shown in the log table. Only files that end in *.log* are shown.

6.3.2 Selecting log files from a SOM Server

When selecting log files from a SOM Server, the known SOM Servers are shown at the top of the dialog in a pull down list. These are the same SOM Servers that MConsole knows about for other views.

If you do not have a SOM Server defined, select the Switch Operations view (**View** → **Live Operations** → **Switch Operations**), and add a new switch by selecting **Switch** → **Add**.

You can connect to a SOM Server by clicking on the **Connect** button. If you want to close a connection, click on the **Disconnect** button. If you want to change the SOM Server, simply choose it from the pull down list and then click **Connect**. If the connection succeeds, the available log files (ending in ".log") will automatically be shown on the log file selection table.

If the content of the SOM Server has changed since the dialog was opened, you can click on the **Refresh files** button to refresh the content of the log file selection table.

6.3.3 Automatic or Manual file selection

The Log File Selector dialog gives you two ways of selecting the log files: an Automatic and a Manual selection. If you choose the Automatic selection, then you simply have to decide which product, type and date you want to select, and the files will be selected automatically.

You can choose between **Automatic** and **Manual** by selecting the radio button at the top of the dialog.

For example, if you want to review the M-Vault Event files from yesterday, check the **M-Vault** product, the **Event** Type and the **Yesterday** Date options, and uncheck all other options. As you check and uncheck the options you will see the files in the log file selection table showing which files will be selected automatically.

When you select log files manually, you can use the check boxes next to each file in the log file selection table to select them. You can also use the **Select All**, **Clear Selection** and **Invert Selection** buttons to help you deal with the large number of files that you will probably be given.

The **Include regex** section only applies to SOM connections.

6.3.4 The log file selection table

The log files that are available to work with are shown in the log file selection table. The table has columns for the **Name**, **Size** and **Estimated Date**. The date is estimated as it is based on the log file name (which is what the SOM Server provides). It is possible to sort the log files in the table by clicking on any of the table column names.

Some files may have a colour-coded circle that warns the user that the size of the file is large. This is because the Event Viewer is not suitable for handling very large files, so there's no point in retrieving them from the server.

6.4 Selecting the Operation Mode

The Event Viewer can operate in one of two modes:

- in Monitor Mode, which shows events as are they written to the log files
- in Review Mode, in which the events recorded earlier in the log files can be reviewed

The Monitor Mode and Review Mode are selected in the **New Events** section. If you want to work in Review Mode, then select the option **Show existing events only** from the pull down menu.

If you want to work in Monitor Mode, then select the option **Monitor for new events** from the pull down menu. Once you have selected this, a new pull down menu is activated. This gives you two options: **Scroll down on new events** and **Don't scroll down on new events**.

If you are monitoring a system and decide that you want to stop the scrolling, change the second pull down menu to **Don't scroll down on new events**. This option means that new events will be added to the bottom of the table, but the table will remain static, giving you the chance to review the events in more detail.

If the option **Scroll down on new events** is chosen, any new events are added at the bottom of the table and the table is scrolled automatically to display the new entries.

6.5 Event Actions

Once you have selected an event source and source files, the events will be shown on the events table. The **Event Actions** buttons allow you to manage the log table. All the buttons have a tooltip that explain their function.

The first button is used to refresh the content of the log table. This is only activated in Review mode. The second button is used to clear the content of the log table. This is used when the log table fills up or when you want to remove old events. The third button is used to copy the selected events to the clipboard. The fourth button is used to open a log viewer inspector that shows more information about the selected event. This is only activated when a single event is selected.

Any action performed on the Event Viewer will not affect the log files. That is, cleaning the table will only remove them from the table, but will leave the log files unchanged.

6.6 Filters

Since programs generate a large number of log events, there are a number of toolbar buttons that can be used to reduce the number of events shown.

By default the filter is set to **Show all entries**, but you can change it to **Show only errors**, **Show only Critical and Fatal** or **Show only Errors and Warnings**.

These refer to the Level of the log message, which is found by looking at the first letters of the log message: "C-" for critical, "F-" for failures, "E-" for errors, "W-" for warnings.

Additionally, it is possible to set a text filter by using the **Filter** section. If text is inserted here, only the log events that include the given string in the log line will be shown in the log table. The string comparison is case-insensitive. You can clear the filter by using the brush icon at the end of the text box.

6.7 Search

Another way to find events is by using the search facility. Simply type the string to search and the log table will be searched. If an event's log message matches the string provided the event will be highlighted and the table will be automatically scrolled to show the event that was found. The search is case insensitive.

You can then use the left and right arrows to find more events that match the given criteria. You can clear the search box by using the brush icon at the end of the text box.

6.8 Status Line

At the bottom of the Event Viewer you can find a status line that shows information about the current status of the Event Viewer. If you hover the mouse over the middle section where **Reviewing log files** or **Monitoring log files** is shown, a tooltip with the list of files will appear.

Chapter 7 Alerts

This chapter describes M-Switch Alerts and how the Alert Viewer View is used.

7.1 Alerts Overview

M-Switch Alerts are generated from Isode Events and represent information items which have been configured as requiring the attention of an Operator. See [M-Switch Administration Guide](#) for a description of Isode Events. The complete set of Isode Events is provided here: <https://www.isode.com/Documentation/isode-events/index.html>

The Alerts View is opened from the **View** → **Alerts** menu option or by clicking on the **Alerts** icon in the Welcome View.

There can only be one Alerts View in MConsole; if one instance is open and you try to create a new one, the existing one will be shown.

The alerts shown in Alerts View are almost entirely driven by external events, that is, MConsole is not trying to determine if a certain condition is met or not before notifying the user: it expects some external entities to generate standard Isode events that it can then monitor. Alerts can come from multiple local or remote M-Switch servers.

There are three sources of events that are shown in the Alerts View:

- events taken from local Isode log files
- events taken from one or more Isode SOM Servers
- internal MConsole events

The Alerts View allows the administrator to configure the type of alert notification based on the Isode Events which are listed in the Isode Events Catalogue. This is done with the build-in Alert Configuration Editor.

To understand the Alerts View, it is important to be familiar with the Isode Event Catalogue and the configuration of logging in general. Refer to the section [M-Switch Administration Guide](#) for more information.

There are seven Alerts Groups defined. Each Alert Group has a number of Alert Actions associated with it, for example playing a sound, showing an error window or raising the MConsole window. By selecting the right Alert Group for an Isode Event, the administrator is able to select what type of alert is required for each Isode Event.

A new Alert Daemon, documented in [M-Switch Administration Guide](#) can monitor multiple M-Switch installations (via the SOM protocol) to generate alerts, which are then displayed by the Alerts View. The Alert Daemon is capable of generating alerts based on message age, number of messages queued and many other parameters. Flexible rule configuration based on priority, channel and sender is available, as well as control of the frequency with which events are generated for a given status.

7.2 GUI Elements

The Alerts View is composed of the following GUI elements:










- a toolbar, with a few buttons that allow you to configure and manage the events that you will be alerted on.
- an alerts table, which takes most of the space in the view. Here is where the alerts are displayed.
- an alert viewer at the bottom of the window, which displays information about the selected alert. It is made up of two sections: the Alert Details pane, where information from the Isode Events Catalogue is shown, and the Alert Status pane, where information about the selected alert is shown.
- a status bar at the bottom of the view.


Like all other MConsole views, the Alerts View has an icon. The icon starts as a green light. When new events are added, as they are unacknowledged, the icon changes into a red light. Once all alert events have been acknowledged, it changes back to a green light.

New Alerts added to the Alerts Table are initially unacknowledged. Unacknowledged alerts are shown in a bold font. Acknowledged alerts are shown in normal font. Only when the administrator acknowledges the alert does the font change from bold to normal.

7.2.1 The toolbar

The toolbar has buttons to perform the following actions:

-  Acknowledge button: changes the status of the selected alert(s) to acknowledged. Also available as a right-click menu option from the Alerts Table.
-  Acknowledge all similar alerts button: changes the status of the alerts that have the same event entry in the catalogue as the selected alerts to acknowledged. Also available as a right-click menu option from the Alerts Table.
-  Clean button: cleans the Alerts Table. Care should be taken when using this button, as once the table is clear, the alerts can no longer be examined.
-  Copy button: copies the selected Alerts as text to the Clipboard. Also available as a right-click menu option from the Alerts Table.
-  Catalogue Information button: This button is enabled if there is an alert selected in the Alerts Table. When selected, it searches the Isode Event Catalogue and shows the information available for this error in a pop-up window.
-  Alert Configuration: calls the Alert Configuration Editor. Also available as a right-click menu option from the Alerts Table. See [M-Switch Administration Guide](#).
-  Alert Groups: calls the Alert Group Editor. See [M-Switch Administration Guide](#).
-  SOM Reconnection: Attempts to reconnect to any SOM server that is currently disconnected.
-  Alert View Options: calls the Alerts View Options page. [M-Switch Administration Guide](#).

-  Scroll control: allows you to control the way that new alerts are added to the display. If “*Updating*” when new alerts are added, the table scrolls down and shows the new alert. If “*Paused*” alerts are added as normal, but the selected alert is not changed and the table is not scrolled. This allows you to examine the selected alert without being interrupted by new alerts.
- Alerts history size: allows you to control the number of entries to display in the Alerts Table. As with any GUI, if there are lots of entries in the table, it can be very slow, so setting this to a sensible value means that the table doesn't get too full. Once the maximum number is reached old alerts will be removed as new alerts are added.

7.2.2 The Alerts Table

The alerts table is the place where new alerts are added. It consists of 8 columns.

- Time/Date: In *YYYY-MM-DD HH:MM:SS.ms* format
- Source: The source of the event. Local files or a SOM server.
- Severity: The severity of the event (C, F, E, W)
- Level: The level of the alert event (derived from the Alert Group)
- Facility: The event facility
- MessageId: The message identifier of the event
- Program: The program or channel name that generated the event
- Description: The full text that describes the event or alert.

7.2.2.1 Right-click menu options in the Alerts Table

It is possible to invoke some of the actions that appear in the toolbar by selecting an entry in the Alerts Table, and using the equivalent action in right-click menu.

- Acknowledge
- Acknowledge all similar alerts
- Configure alert
- Don't alert. Used to add a "*Don't Alert*" configuration for the selected event.
- Copy text to clipboard.

7.2.3 The Alerts Details and Alert Status boxes

When an alert is selected in the Alerts Table, the two views at the bottom of the window are updated with information about the selected alert.

The **Alert Details** box shows the information taken from the Isode Events Catalogue, like Facility Name, Error Description, Action and the full text of the alert message.

When the text of an alert message is very long, it may not fit in the "*Message*" column of the Alerts table, but it is available in "*Alert Details*" box.

The **Alert Status** box shows the status of the alert: if it has been acknowledged or not, the Process ID that created the event, the User ID and the corresponding log file name.

7.2.4 The Alert View Status bar

At the bottom of the Alerts View, there's a status bar, that displays the following information:

- The Alert Source: an icon that shows the source of the Alert Events. It can be the SOM Server, Local Files or both.
- The number of alerts displayed in the Alerts Table

- The date and time of the local system

7.3 Alert Sources

The Event Sources are configured in the Alerts View Options page.

If configured to use a SOM Server, MConsole connects to the SOM Server and starts to monitor all the event log files for event lines of level Critical, Warning, Fatal and Error.

If configured to use local log files, it will periodically inspect all the files under (LOGDIR) (that is, */var/isode/log*, *C:\Isode\log* or whatever is configured), as this would be the place where local events are written.

Once an event is detected, the alert action to perform is determined according to what is in the configuration. If the new event is found to match one of the events configured in the Alert Editor, the corresponding set of Alert Actions will be performed.

Isode events are made of a Level, a Facility and a Description, for example E-MTA-TLSRequired is level "E" (an Error), the facility is "MTA" and the description (or name) is "TLSRequired".

The Internal MConsole events are Alerts resulting from local MConsole errors (e.g., failure to connect).

7.3.1 Local Log Files

These are the log files created by the Isode products in (LOGDIR), for example *mta-event.2016-10-02-00-00.log*.

7.3.2 SOM Server

If the connection to SOM is lost, a reconnection attempt will be tried periodically. It can also be triggered by clicking on the **SOM Reconnection** toolbar button.

The status of the SOM Server connection is shown in the status line, using connected/disconnected icons.

Chapter 8 Message Tracking

This chapter describes the AuditDB views used for message tracing and searching.

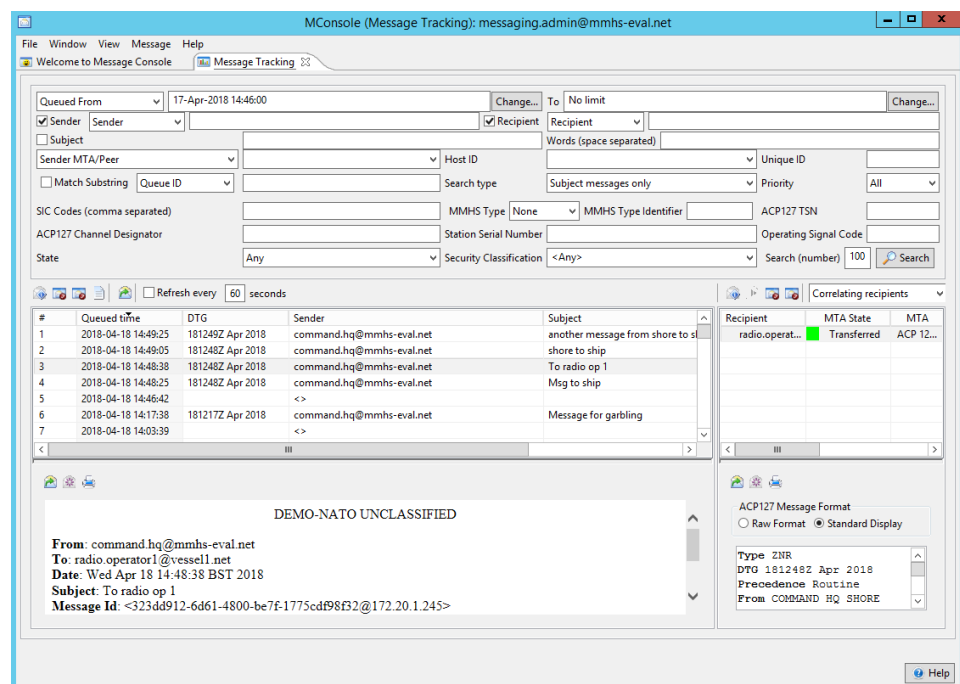
8.1 MConsole Message Tracking

8.1.1 Message Tracking View

The Message Tracking View allows you to query the database for information about messages using various search options. Some boxes such as **Sender** and **Recipient** have a checkbox which allow you to specify whether an exact match is required or simply that the value in the database contains that string. Exact matches work more quickly. You can also specify how many results you want to be returned – there may be a very large number.

Once you have set up your query, press the **Search** button and wait for the result to be displayed as in [Figure 8.1, “Messaging Tracking View display”](#).

Figure 8.1. Messaging Tracking View display



Once your query returns the result, you can select each message to see information about recipients in the right hand page. You can also right click on each message to:

- display details of the message ([Figure 8.2, “Message details view”](#))
- display the content of the message ([Figure 8.3, “Message content view”](#))
- report information about the message
- forward the message using the built-in User Agent

You can also configure which columns are displayed.

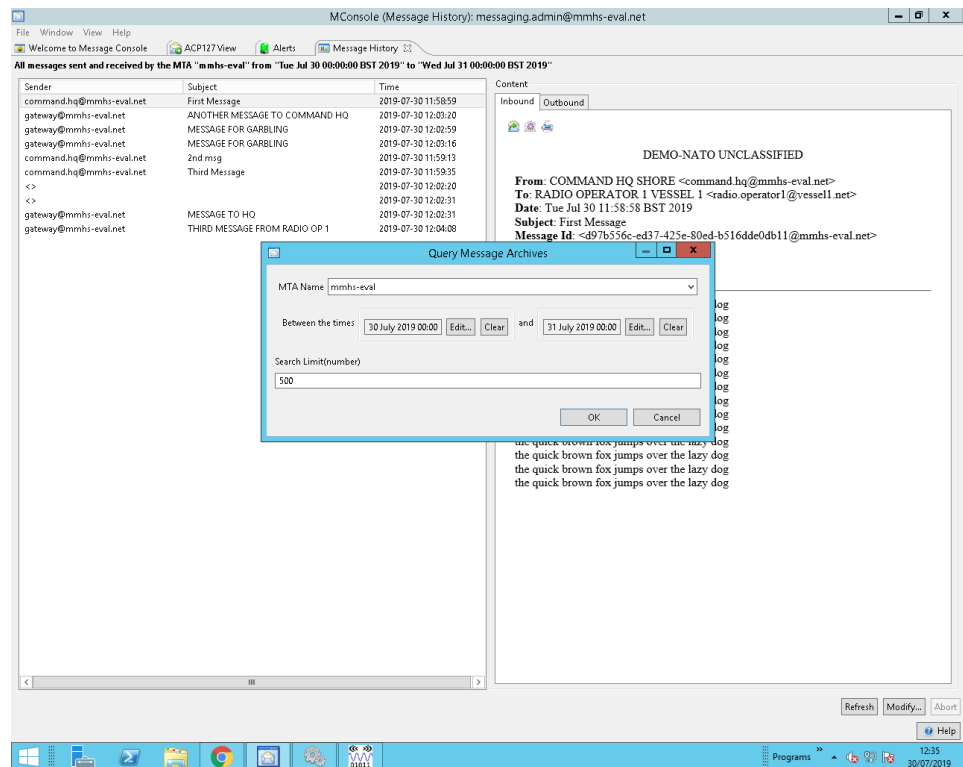
side pane and on the Content View that opens on right clicking the RHS recipient table and selecting **Content**. If the outbound archive has not been enabled, the inbound format will be used to display content on both LHS and RHS tables.

If this does not appear, you need to configure the Message Archiving rule as described in the [MTA Configuration](#) and [Securing Your System](#) sections of the M-Switch Administration Guide.

8.1.2 Message History View

This view can be used to display a quick summary of messages that are sent and received by the the MTA for the day. There is an option to modify the time limits to widen or narrow down the search.

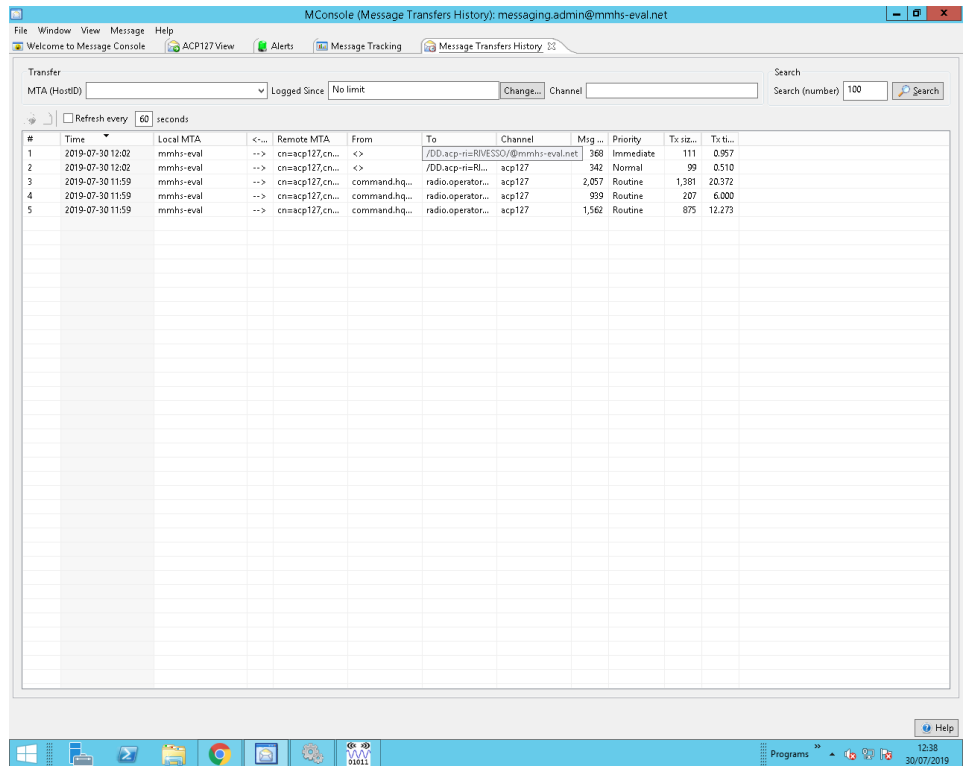
Figure 8.4. Message History View



8.1.3 Message Transfers History View

This view displays the transfer history for messages displaying the local MTA, remote MTA, sender, recipients and other message attributes.

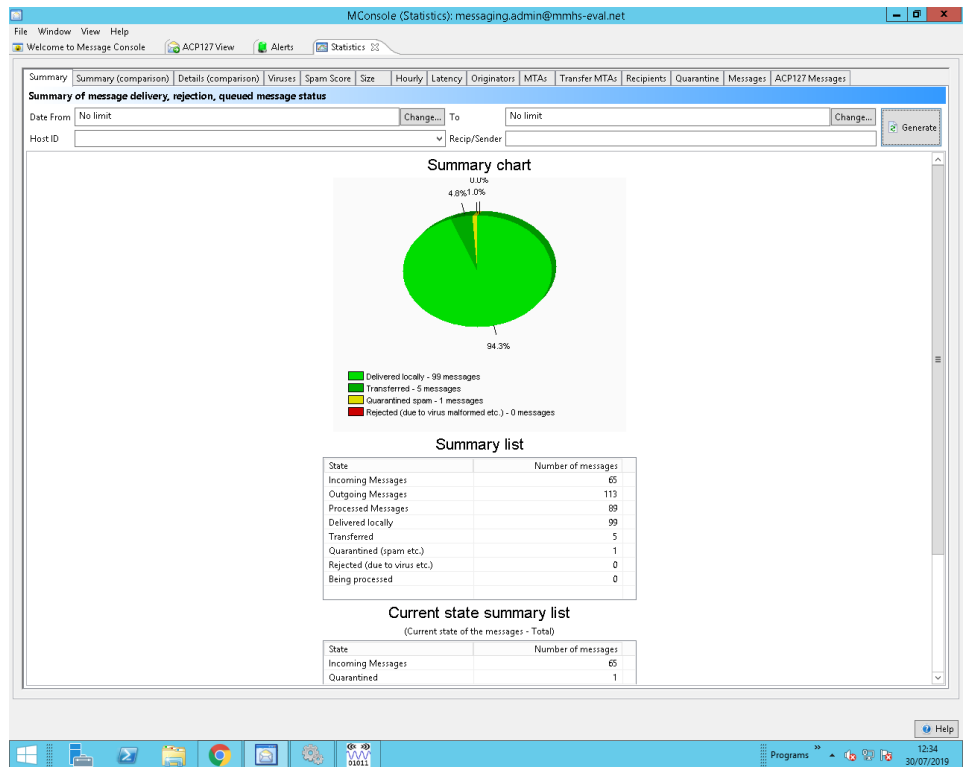
Figure 8.5. Message Transfers View



8.1.4 Statistics View

This view displays a range of statistics of messaging events in different formats. The statistics are displayed on different tabs and each tab provides further filtering depending on the type of statistic.

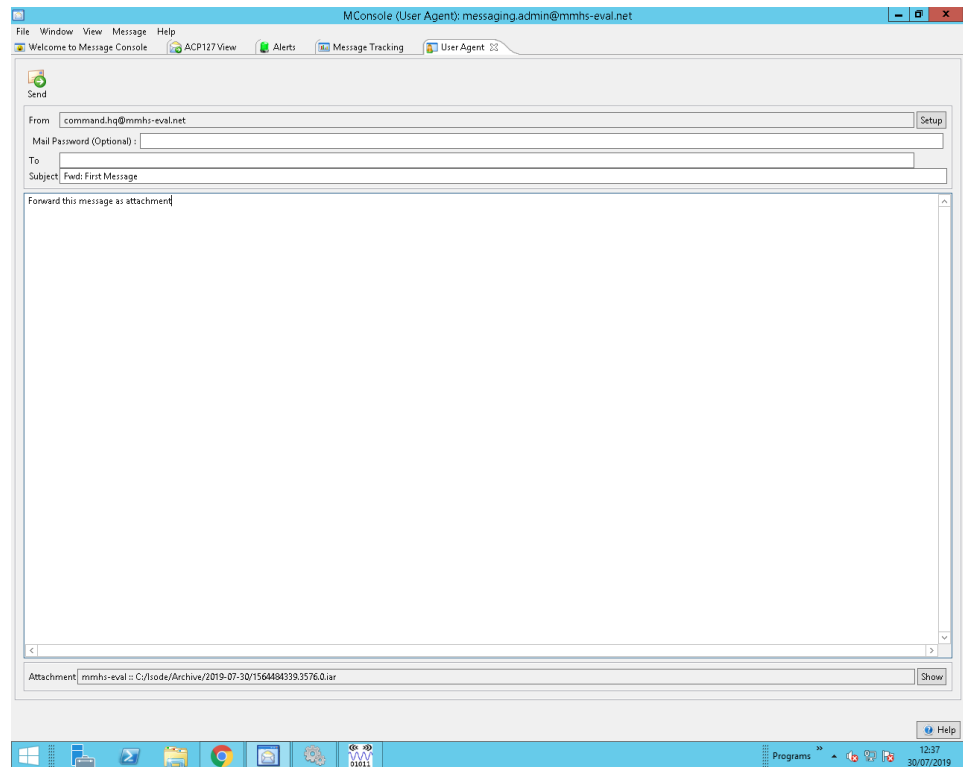
Figure 8.6. Statistics View



8.2 Forwarding Messages from MConsole (User Agent)

Operators can forward a message by right clicking on the message in the **Message Tracking View**. This will display a **User Agent View**.

Figure 8.7. User Agent View: Forwarding a Message



8.3 Resubmit Messages from MConsole

Operators can resubmit a message by clicking the resubmit tool item on the **Message Content View** toolbar. This will display a dialog that allows you to resubmit the message to its original recipients or new recipients.

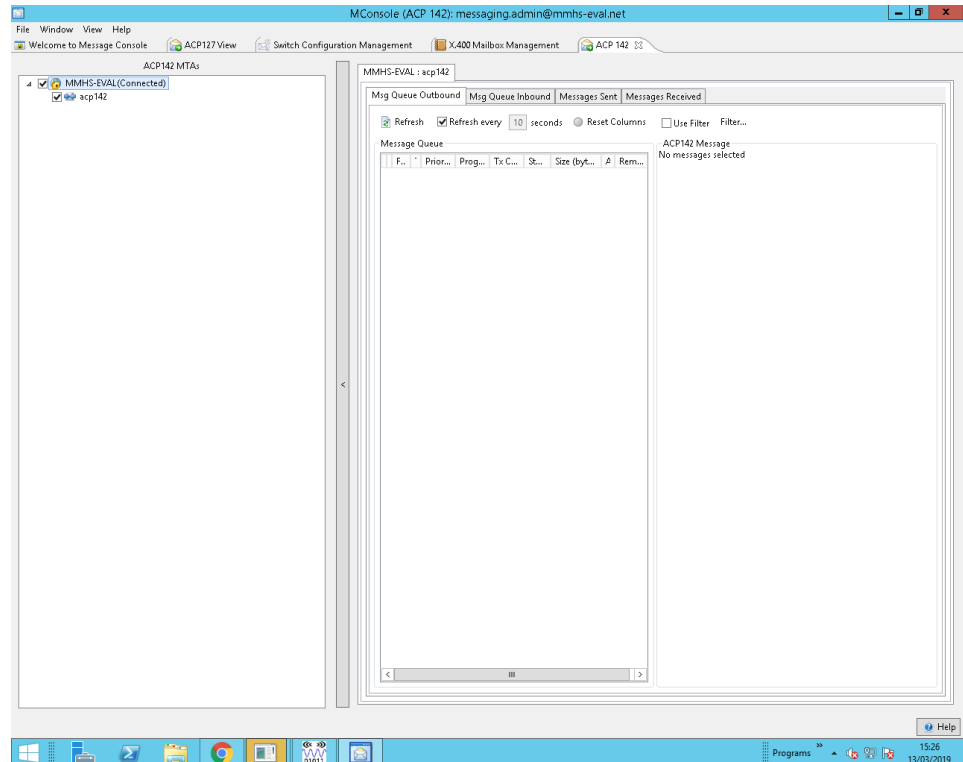
Chapter 9 Summary View

This chapter describes how the Summary View can be used to determine problems with an MTA.

The Summary Message Transfer View is used to check the health of a M-Switch. It does this by querying configured M-Switchs, collecting a list of messages, and displaying channels which have messages over a certain time limit.

This allows an operator to quickly see if a channel can't process a message, or a backlog is being created.

Figure 9.1. Summary View showing a working MTA



The top of the Summary View contains contains a toolbar with several controls:

- If a user selects the **Refresh** messages are reread from the MTAs.
- The **Refresh Every** checkbox can be checked to enable periodic refresh at a configurable interval.
- The **Minimum Age** value. If a channel has a message older than this age, then the channel is shown in a suitable table, and the message can be used in the channel / MTA stats.
- The **Include Peers** If selected then peer / circuit information is shown. This means that it's possible to see which ACP127 circuit or X.400 P1 Bilateral Agreement has stuck messages.

The Summary View will open a tab for each pre-configured M-Switch profile. (To configure an M-Switch profile consult [M-Switch Administration Guide](#))

Each M-Switch tab consists of a summary section and optional tables. The summary section includes:

- Total number of stuck messages for the whole MTA.
- Total volume of stuck messages for the whole MTA.

- The highest priority of a stuck message.
- The age of the oldest stuck message.

Up to 3 optional tables are then shown.

- Transfer channels. SMTP / X.400 P1 / ACP 127 / ACP 142 / etc
- Delivery channels. LMTP / P3
- Misc channels. All others.

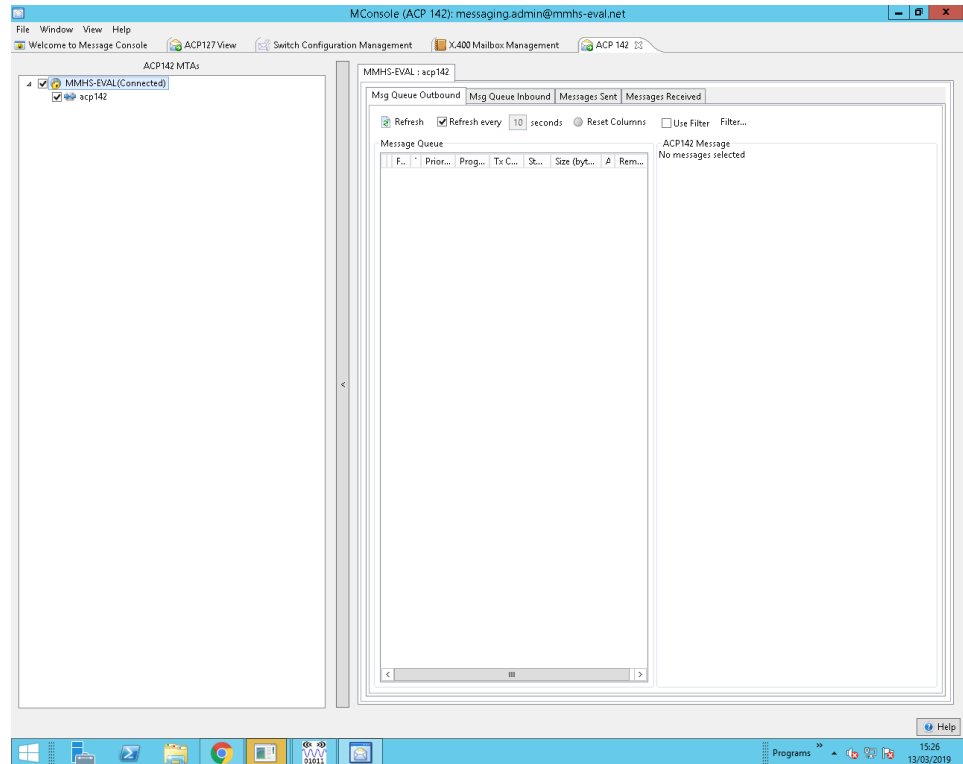
These tables are only shown if a channel has a message older than the max age time.

Chapter 10 Channel Monitor View

This chapter describes how Channel Monitor View can be used to check on the status of various channels.

The Channel Monitor View is used to monitor outgoing messages on channels which don't have a dedicated view. (IE CFTP / X.400p1 / SMTP / ETC).

Figure 10.1. ChannelMonitor Circuit MTA and Channel Selection



The Channel Monitor View left hand side allows MTAs and channels to be selected and displayed. Each channel is presented as a selectable Tab on the right hand side.

The MTAs available to the Channel Monitor View are as configured in the Switch Operations View.

See the [M-Switch Administration Guide](#) for details on how to configure the **Switch Operations View**.

You will also need to configure a suitable SASL Identity to connect to the Queue Manager of a configured **Switch**. SASL Identities are configured using the **Authenticated Entities Management** view or **Internet Mailbox Management** view (see [M-Switch Administration Guide](#)).

Once you have selected these, they will reconnect automatically and you can hide the left hand side of this view using the "<" button.

10.1 Channel Monitor main window

The main window of the channel monitor view allows some controls over the frequency of updates, and the age of messages which are to be included in the view.

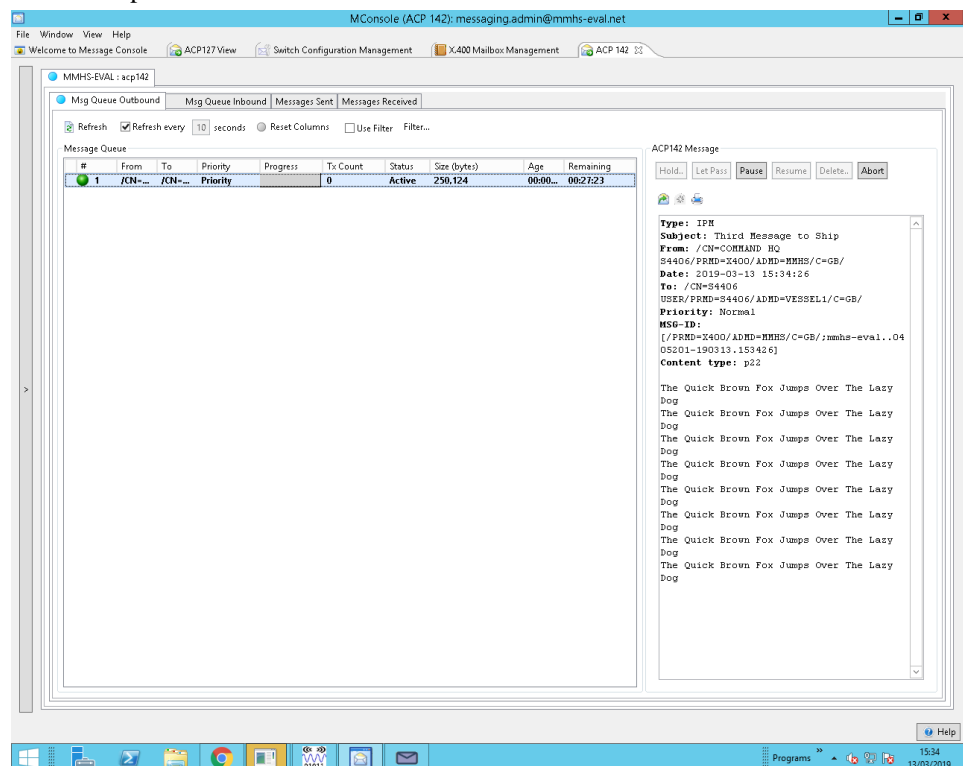
The top of the right hand side has the following controls:

- If a user selects the **Refresh** the messages are reread from the Channel Monitor channel.
- The **Refresh Every** checkbox can be checked to enable periodic refresh at a configurable interval.
- The **Minimum Age to Include** lets an operator specify how old a message has to be before it's shown in the channel view tab.

Beneath the refresh controls is a list of tab monitoring selected channels.

10.2 Channel Monitor Tab

Each tab shows a list of currently queued messages waiting to be transferred for the given channel or peer.



The Msg Queue Tab has the following buttons:

- If a user selects the **Reset Columns** the layout of the columns is recalculated in order to present more clearly.

- The **Use Filter** checkbox can be checked to filter messages according to a predefined filter.
- Selecting the **Filter..** button allows the configuration of a filter which restricts the set of messages displayed.

Selecting a message within the queue will display the message. It also allows a user to see the message content and perform actions on the message.

Depending on the nature of the channel and the status of the message different buttons appear and are selectable or greyed out as appropriate.

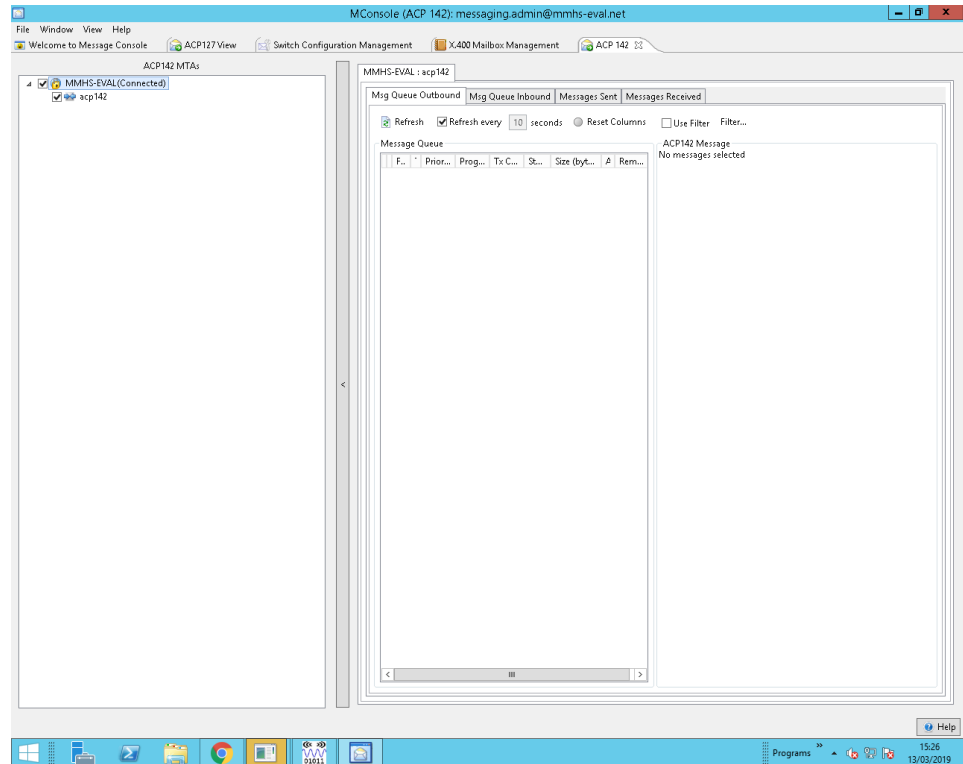
- The **Hold...** option allows an operator to put a delay on a message if it is currently waiting to be transmitted. Once the delay is cleared the message will start.
- If a message is delayed the **Let pass** button allows an operator to manually clear a delay.
- The **Delete...** option allows an operator to remove a message from the queue. This can only be done if the message is not being transferred. Any message currently being transferred will first have to be aborted.
- The **Abort** button allows the operator to cancel an ongoing transmission.

Chapter 11 ACP142 View

This chapter describes how ACP142 features of M-Switch are monitored and operated. This is performed using the M-Console ACP142 View.

The ACP142 Message Transfer View is used to monitor incoming and outgoing ACP142 messages.

Figure 11.1. ACP142 Circuit MTA and Channel Selection



The ACP142 View left hand side allows MTAs and channels to be selected and displayed. Each channel is presented as a selectable Tab on the right hand side.

The MTAs available to the ACP142 View are as configured in the Switch Operations View.

See the [M-Switch Administration Guide](#) for details on how to configure the **Switch Operations View**.

You will also need to configure a suitable SASL Identity to connect to the Queue Manager of a configured **Switch**. SASL Identities are configured using the **Authenticated Entities Management** view or **Internet Mailbox Management** view (see [M-Switch Administration Guide](#)).

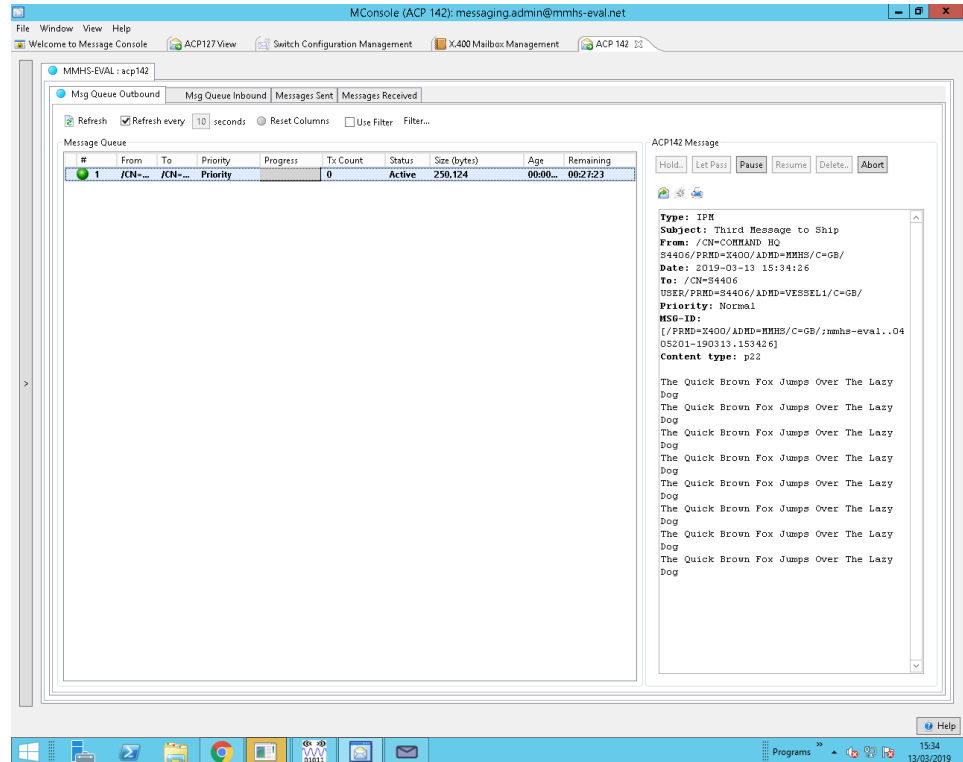
Some parts of the ACP142 View also use the Audit DB features to return information about previously transferred messages.

The selection of connected MTAs and Circuits appears as follows:

Once you have selected these, they will reconnect automatically and you can hide the left hand side of this view using the "<" button.

11.1 Message Queue Outbound

This tab shows a list of currently queued messages waiting to be transferred.



The Msg Queue Tab has the following buttons:

- If a user selects the **Refresh** the messages are reread from the ACP142 channel.
- The **Refresh Every** checkbox can be checked to enable periodic refresh at a configurable interval.
- If a user selects the **Reset Columns** the layout of the columns is recalculated in order to present more clearly.
- The **Use Filter** checkbox can be checked to filter messages according to a predefined filter.
- Selecting the **Filter..** button allows the configuration of a filter which restricts the set of messages displayed.

Selecting a message within the queue will display the message. It also allows a user to see the message content and perform actions on the message.

Depending on the nature of the channel and the status of the message different buttons appear and are selectable or greyed out as appropriate.

- The **Hold...** option allows an operator to put a delay on a message if it is currently waiting to be transmitted. Once the delay is cleared the message will start.

If a message is delayed the **Let pass** button allows an operator to manually clear a delay.

The **Pause** option allows a message that is being transferred to be paused. This stops data being written out to the transport layer. Any existing data (for instance in an S'5066 server's queue) will still be transferred.

The **Resume** option allows a paused message to continue to be transferred.

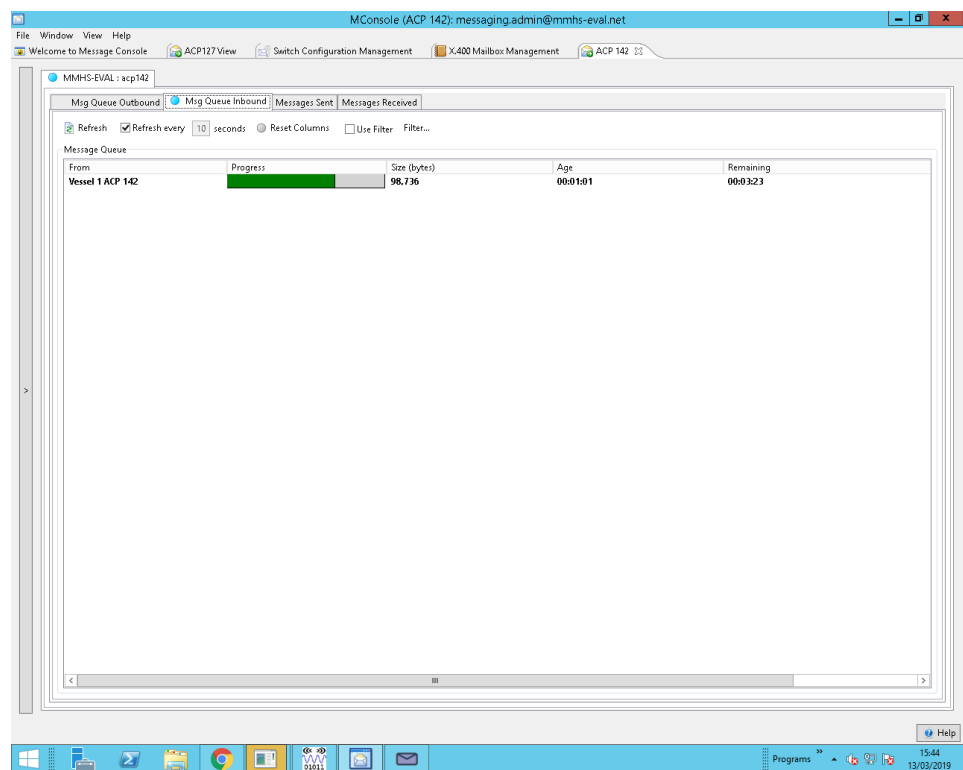
The **Delete...** option allows an operator to remove a message from the queue. This can only be done if the message is not being transferred. Any message currently being transferred will first have to be aborted.

The **Abort** button allows the operator to cancel an ongoing transmission. Note that any bytes which have already been written out to an S'5066 server will still be broadcast.

The **Process Next** button changes the processing priority of the message. This will make the selected message the next to be processed.

The **Move...** button allows a user to move a specific message up or down the message queue.

11.2 Message Queue Inbound



The inbound tab allows an operator to see some information for inbound ACP142 messages.

Note: The only information that can be displayed is from the ACP142 protocol, not the message itself. As such things like **From** represent the senders destination ID rather than an actual address

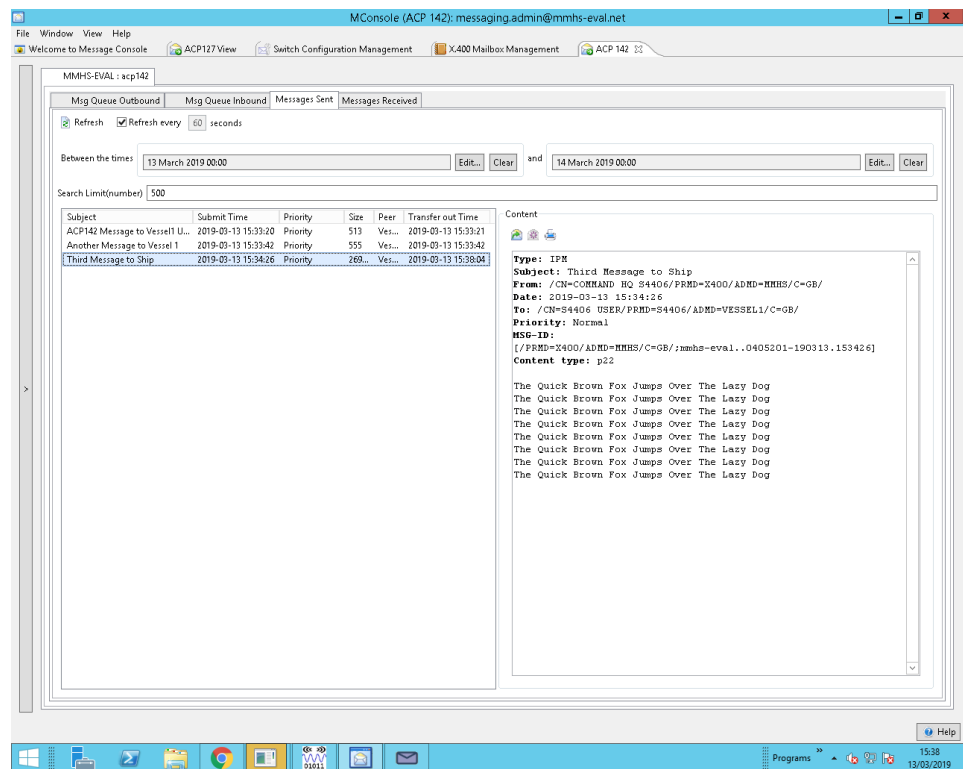
11.3 ACP142 Messages Sent View

Each tab for the ACP142 channel for an MTA will have **Messages Sent** tab. This tab connects to the Audit Database. The Audit Database is configured in the **Options** view.

The start and finish time selectors allow the range of messages which are displayed to be limited. A size limit on the search operation can also be configured.

Selecting a message in the view causes the Message Content to be displayed.

Figure 11.2. ACP142 Messages Sent View



11.4 ACP142 Messages Received View

Each tab for the ACP142 channel for an MTA has a **Messages Received** tab. This tab connects to the Audit Database configured in the **Options** view.

The start and finish time selectors allow the range of messages which are displayed to be limited.

Selecting a message in the view causes the Message Content to be displayed.

Chapter 12 ACP127

This chapter describes how ACP127 features of M-Switch are monitored and operated. This is performed using the MConsole ACP127 View.

12.1 ACP127 View

There are various ACP127 sub-views which are consolidated into a single View: the **ACP127 View**. Some of these sub-views can be "popped out" into a new window.

The ACP127 View left hand side allows MTAs and circuits to be selected and displayed. Each circuit is presented as a selectable Tab on the right hand side.

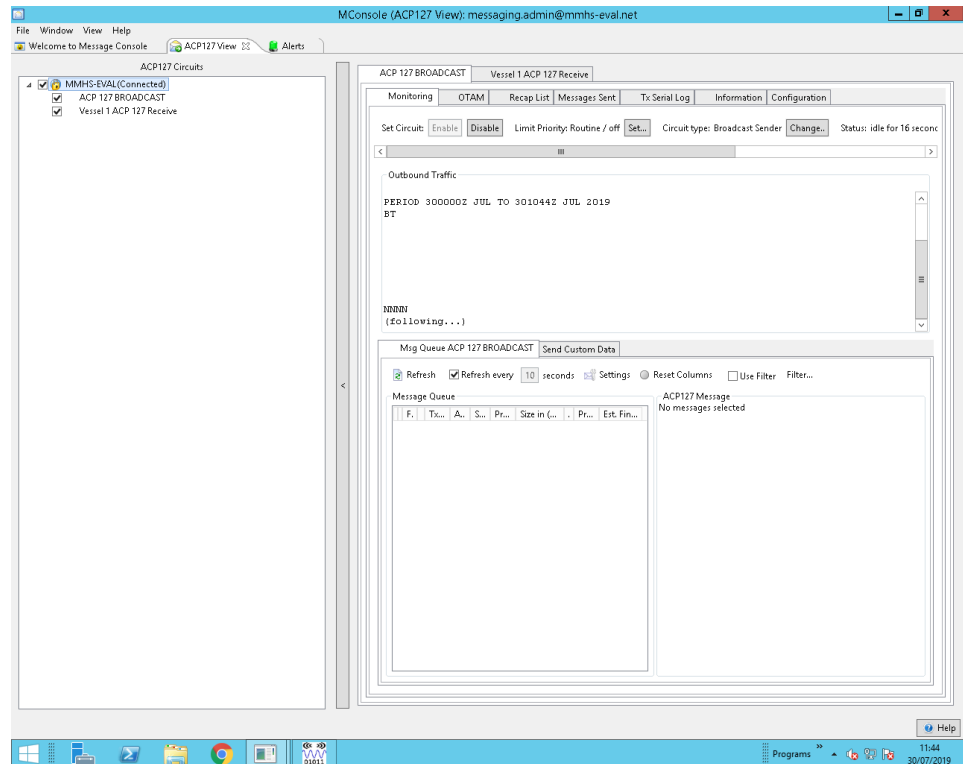
The MTAs available to the ACP127 View are the set that are configured in the Switch Operations View.

See the [M-Switch Administration Guide](#) for details on how to configure the **Switch Operations View**.

You will also need to configure a suitable SASL Identity to connect to the Queue Manager of a configured **Switch**. SASL Identities are configured using the **Authenticated Entities Management** view or **Internet Mailbox Management** view (see [M-Switch Administration Guide](#)).

Some parts of the ACP127 View also use the Audit DB features to return information about messages, such as displaying content. You will need to have configured your Audit Database in order for this functionality to work (see [M-Switch Administration Guide](#)).

The selection of connected MTAs and Circuits appears as follows:

Figure 12.1. ACP127 Circuit MTA and Circuit Selection

Once you have selected these, they will reconnect automatically and you can hide the left hand side of this view using the "<" button.

12.1.1 ACP127 Circuit Monitor View

Circuits have a **Monitoring** Tab which allows the ACP127 process to monitor incoming traffic, outgoing traffic or both depending on whether the Circuit Tab is **Receive Only**, **Transmit Only** or **Two Way**.

There are buttons which allow the operator to make dynamic changes to the Circuit's behaviour.

- **Set Circuit** This button allows the circuit to be enabled/disabled
- **Circuit Type** This button allows the circuit to be switched between automatic and manual.

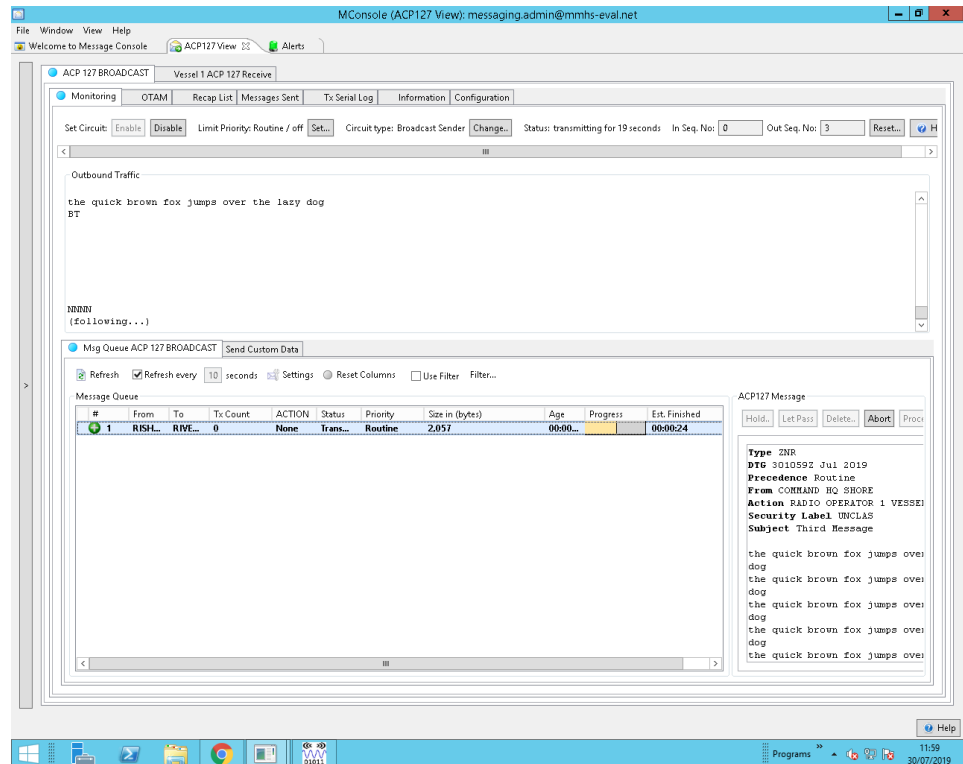
Outbound traffic is shown when data is queued up to be transmitted, while the inbound traffic is shown as soon as it is received.

In addition to the Traffic Panes, there are other sub tabs which provide different functions depending on the type of circuit. Available functions are as follows:

12.1.1.1 Message Queue

The **Message Queue** sub tab displays messages queued outbound on this circuit.

Figure 12.2. ACP127 Circuit Monitor View (Message Queue) Tab



The Msg Queue Tab has the following buttons:

- If a user selects the **Refresh** button the messages are reread from the ACP127 channel.
- The **Refresh Every** checkbox can be checked to generate periodic refreshes at regular intervals.
- If a user selects the **Reset Columns** the layout of the columns is recalculated in order to present them more clearly.
- The **Use Filter** checkbox can be checked to filter messages according to a predefined filter.
- Selecting the **Filter...** button allows a user to configure a filter which restricts the set of messages displayed.

Selecting a message within the queue will display the message. It also allows a user to see the message content and perform actions on the message.

Depending on the nature of the channel and the status of the message different buttons appear and are selectable or greyed out as appropriate.

For a circuit that is in the manual mode the following options are available:

- If a user selects the **Delete** button, then the currently selected message will be deleted if it hasn't yet started to be transmitted. If it has started, then the MTA will be told to abort (cancel) transferring the message before deleting the message.
- If a user selects the **Send** button, the message will be transmitted.
- If a user selects the **Abort** button, the transfer of the message will be aborted (cancelled in ACP127 terms).
- If a user selects the **Transferred** button, the message will be regarded as having been sent successfully and will be deleted from the MTA's queues.
- If a message is large enough, and Message Segmentation is enabled in the configuration of the circuit, it will be segmented when the initial attempt to transmit a message takes place, i.e. when the **Send** button is pressed when the message is selected.

Should this happen, the first segment will immediately begin to transmit. All the segments of the message will now appear as subsidiary items in the queue. The operator must use the **Send** button for each other segment in order to send it. The status will change from Transmitting to Sent as the segment is successfully sent and acknowledged, and the segment count in the message updated to reflect the number of segments successfully sent so far.

If a user selects the **Transferred** button for a segment, the **Send** button lights up and can be used to send another segment. Once all the segments have been sent, the message itself can be set to sent by selecting the **Transferred** button.

For automatic circuits the following options are available:

- If a user selects the **Hold** button, a delay will be imposed on the message.
- If a user selects the **Let Pass** button, any delay on the message is removed.
- If a user selects the **Delete** button, then the currently selected message will be deleted if it is idle. If transmission of the message has started, the MTA will be told to abort (cancel) transfer of the message before deleting it.
- If a user selects the **Abort** button, the message transfer will be aborted (cancelled in ACP127 terms) and be delayed or deleted depending on the option chosen.
- If a user selects the **Process Next** button, any delay will be cleared and the message will be set to be processed next.
- If a user selects the **Move** button, the message's place in the queue can be changed to alter the order in which messages are set to be processed.

Note: MConsole will resume the other messages only after it knows the current message has been transferred, and its knowledge of the queued messages is refreshed.

12.1.1.1 Understanding message queue settings

There are a variety of different settings to help monitor the message queue. These fall into two categories, automatic and manual settings.

12.1.1.1.1 Manual settings

When a circuit is in manual mode, the **settings** options just allow extra information to be displayed. It's up to the operator to decide if a message should be processed or not.

- **Display ZPW in message queue.**

Displays the ZPW as a new table column. This will force the table to be resized if needed. The ZPW will only be shown if present.

- **Display DTG in message queue.**

Displays the DTG (Date Time Group) value in a new column. This will force the table to be resized if needed.

- **Display CSN in message queue.**

Displays the circuit serial number. This will force the table to be resized if needed.

Note: The CSN is generated by the **ACP127 channel**. As such it's only shown when a message has started to be transferred.

12.1.1.1.2 Automatic settings

Automatic settings allow an operator to set specific instructions to **MConsole**, which can manipulate messages under certain circumstances.

- **Display and check ZPW in message queue.**

Displays the ZPW as a new table column. This will force the table to be resized if needed. The ZPW will only be shown if present. This option also allows further actions to be taken on the ZPW.

- **Hold when ZPW is missing.**

When the ZPW is missing, MConsole will issue a delay or **Hold** command on the message. The length of delay is specified by the **Delay timer**. The delay will not be issued if the message has already started being transmitted.

- **ZPW Expiry Actions.**

No Action, means that no action will be taken when the ZPW has expired. **Discard Immediately**, means that as soon as a ZPW is expired, the message will be discarded. **Delay then discard**, means that the message will be delayed by the **Delay timer** value, and then discarded. This gives an operator the ability to choose to transfer a message, or not, while automatically keeping the channel clear.

- **Delay timer.**

The delay in minutes to be applied to a message if the ZPW is missing or expired.

- **Display DTG in the message queue.**

Shows the **Date Time Group** in the message queue.

- **Display CSN in the message queue.**

Shows the **Circuit Serial Number** in the message queue.

- **Non-Delivery.**

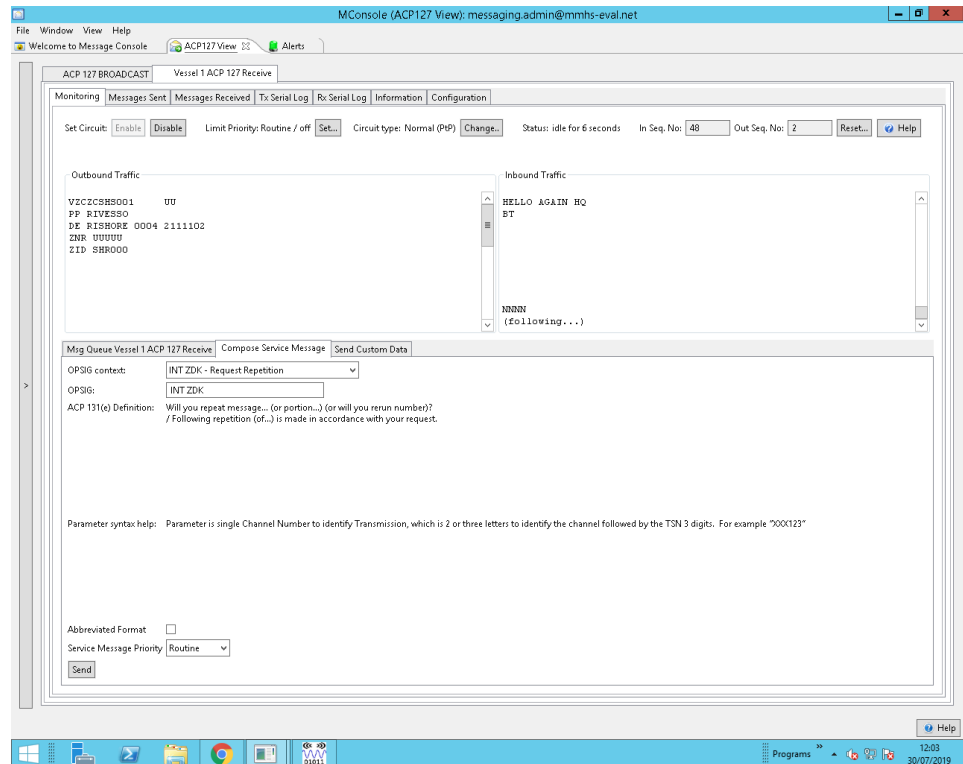
If set, this option will generate a non delivery report when a message is discarded. The delivery report will include the reason specified in the text box.

Note: Messages can only be discarded or delayed if a message isn't already being transmitted. If a message is submitted, and begins to be processed by the **ACP127 channel** then delay and discard operations will not have any effect.

12.1.1.2 Compose Service Message

The **Compose Service Message** sub tab allows ad hoc Service Messages to be sent using the circuit.

Figure 12.3. ACP127 Circuit Monitor View (Compose Service Message)



The pull down menu attached to **Default** allows you to choose a Service Message type from a list of commonly used types.

Custom SIG allows a service message type that is not in the commonly used list to be sent by specifying it directly.

The **Abbrev** option makes the ACP127 process send out an abbreviated service message.

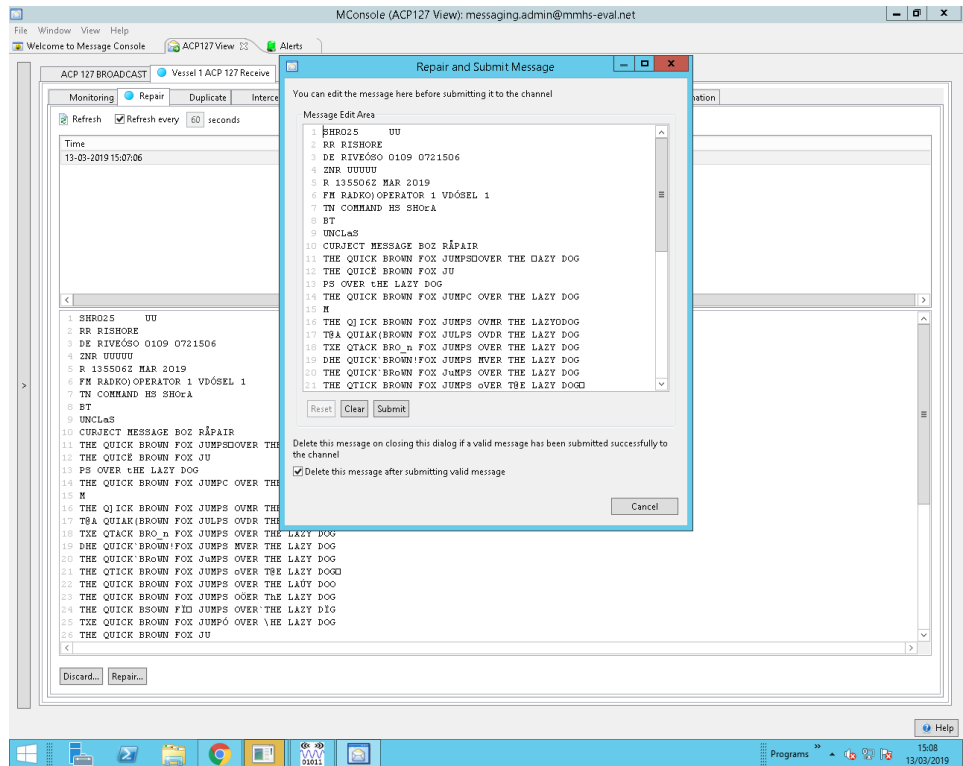
The **Params** option allows an operator to enter free form information, if suitable for a given service message type. This needs to be appropriate for the service message chosen.

The **Send** button submits the service message to the queue.

12.1.1.3 Send Data

The **Send Data** Tab allows an operator to send data over the circuit. The tab looks within the *(ETCDIR)/ACP127TestTapeTemplates* directory, and lists all readable files in a pull down list. This means it is possible to store preconfigured test tapes / common messages within this directory, and easily transmit them over the circuit.

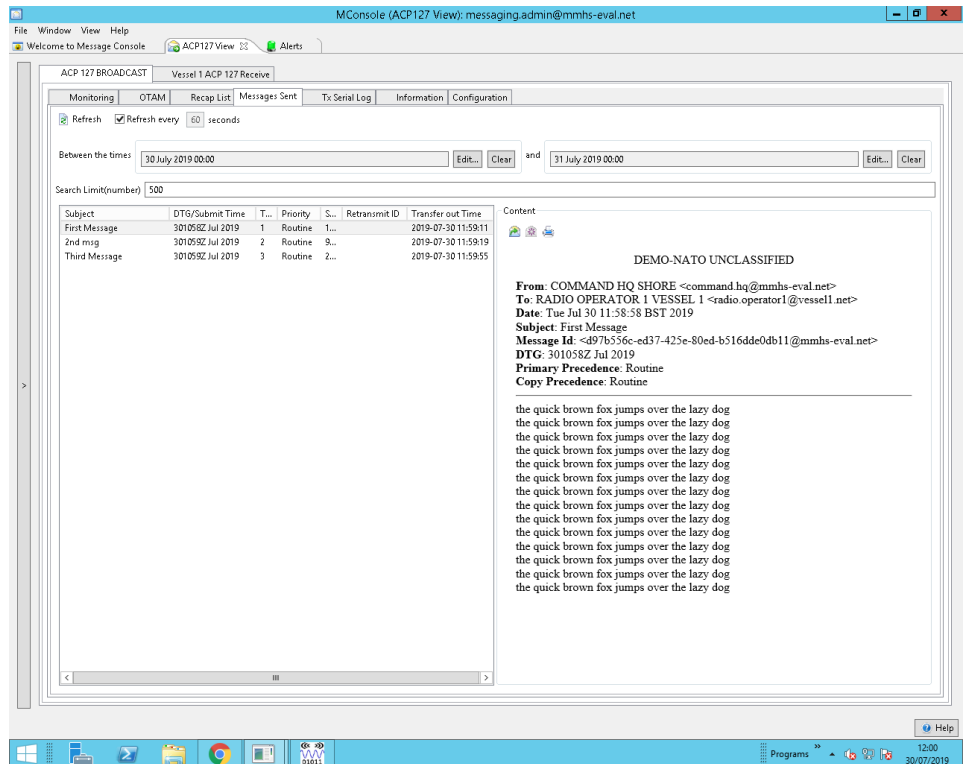
Figure 12.5. ACP127 Repair Queue



12.1.3 ACP127 Messages Sent View

Broadcast and Point to Point senders have a View which shows the messages sent, as shown below.

Figure 12.6. ACP127 Messages Sent View



The Messages Sent view connects to the Audit Database. The Audit Database is configured in the Options view.

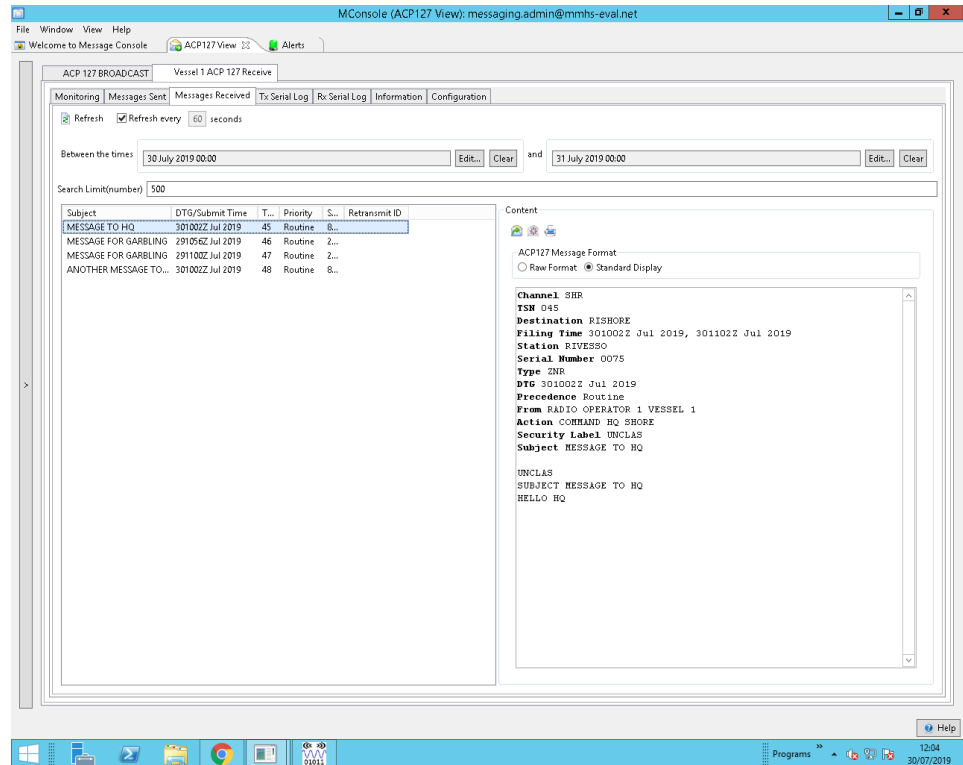
The time and date range fields allow selection of messages sent between two specified times and dates. The number of messages requested in the search results can also be limited.

Selecting a message in the view causes the Message Content to be displayed.

12.1.4 ACP127 Messages Received View

Broadcast and Point to Point receivers have a View which shows the messages received, as shown below.

Figure 12.7. ACP127 Messages Received View



The Messages Received view connects to the Audit Database. The Audit Database is configured in the **Options** view.

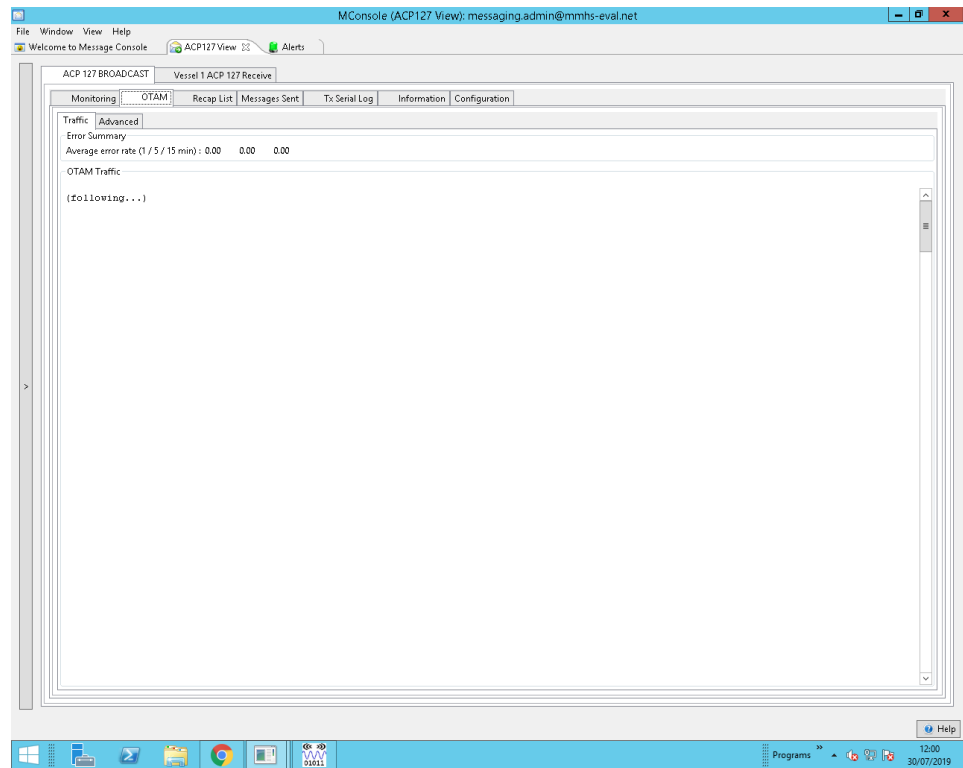
Setting the **Between the times** and the **and** text causes messages from between those times to be displayed.

Selecting a message in the view causes the Message Content to be displayed.

Logging of data received can be captured in log files and viewed in the Rx Serial LOG Viewer tab.

12.1.7 ACP127 OTAM View

Figure 12.10. ACP127 OTAM View



The OTAM process connects to the ACP127 process, and monitors outbound traffic. It also connects to a receiver, allowing traffic that is being transmitted to be received. By comparing the two streams of read and write data, it is possible to spot errors when transmitting and allow the operator to assess the quality of the signal.

The OTAM view connects to the OTAM process in a similar fashion to the other ACP127 views by selecting an MTA/Circuit.

Once a circuit is being monitored Summary Error information and traffic is displayed within the **Traffic** sub tab.

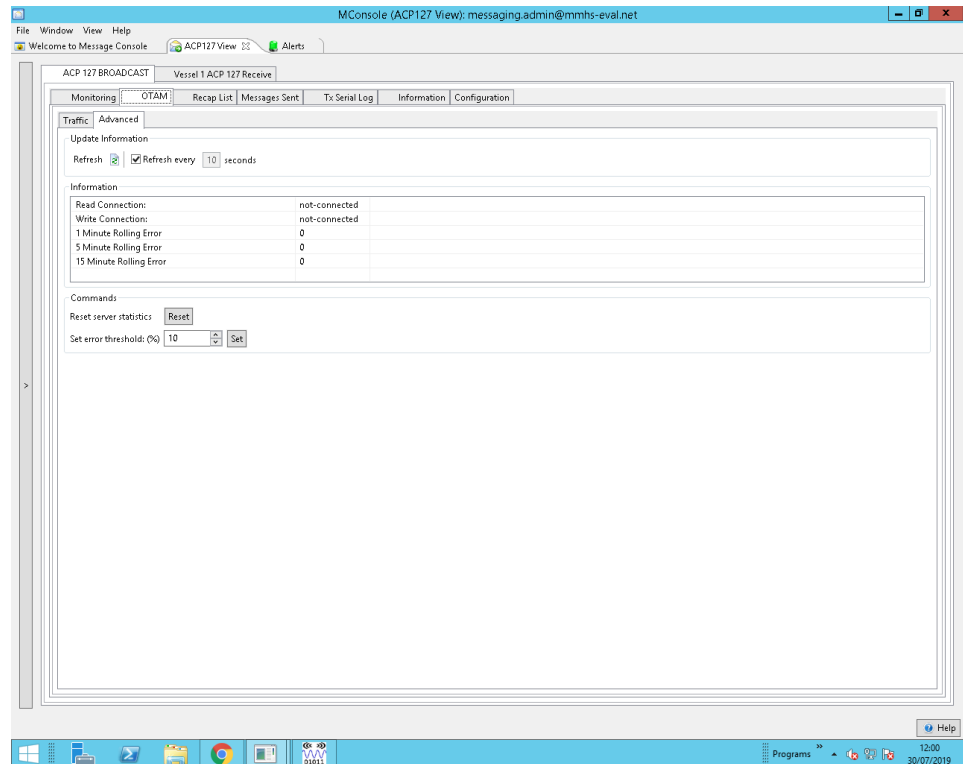
The current error rate is displayed as a rolling average for the last minute, five minutes and fifteen minutes.

The Traffic window shows the comparison between the inbound and outbound streams. Green traffic means that the streams match.

Red means that a **Data Read Miss** has occurred. This happens when there is data in the read stream (from the receiver), but not present in the write stream.

Blue means that **Data Write Miss** has occurred. Data is present in the write stream, but not in the read stream.

Figure 12.11. ACP127 OTAM View Advanced



The **Advanced** tab allows a user to:

- Refresh the error information and connection status
- Check the read connection.
- Check the write connection
- Check the 1 / 5 / 15 minute rolling average error information.
- Reset the error statistics.
- Set an error threshold. If the error rate reaches this level then an alert is issued.

Error information is updated when MConsole asks for the information to be refreshed from the OTAM process. A user can do this manually by selecting the **Refresh** button, or by setting the **Refresh every** option.

Selecting the **Reset** button will cause the OTAM process to reset its internal error count.

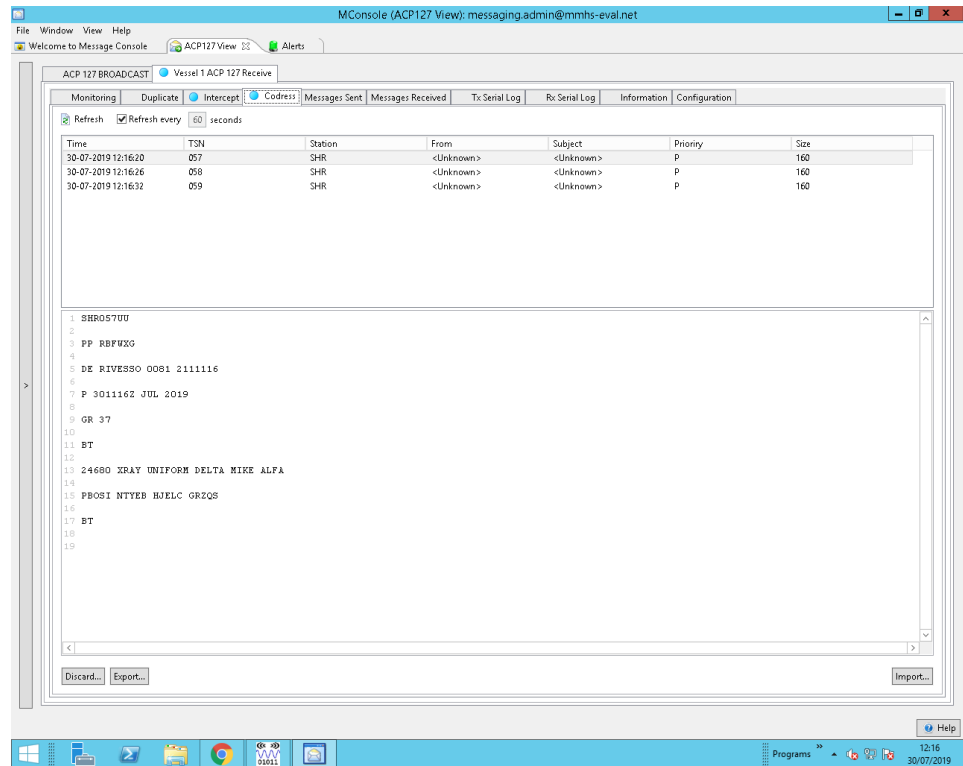
MConsole will notify a user if the OTAM internal error count exceeds the specified error threshold.

The **Read** and **Write** connection information is useful to check that the OTAM process has both read and write streams. It requires both streams to function correctly. If one or both of the streams are not connected, then the OTAM process cannot provide any useful information to the user.

12.1.8 ACP127 Queue Tabs

ACP127 server has types of queues associated with it that can be enabled by configuring the server to send messages to them in certain scenarios.

Figure 12.13. ACP127 Codress Queue

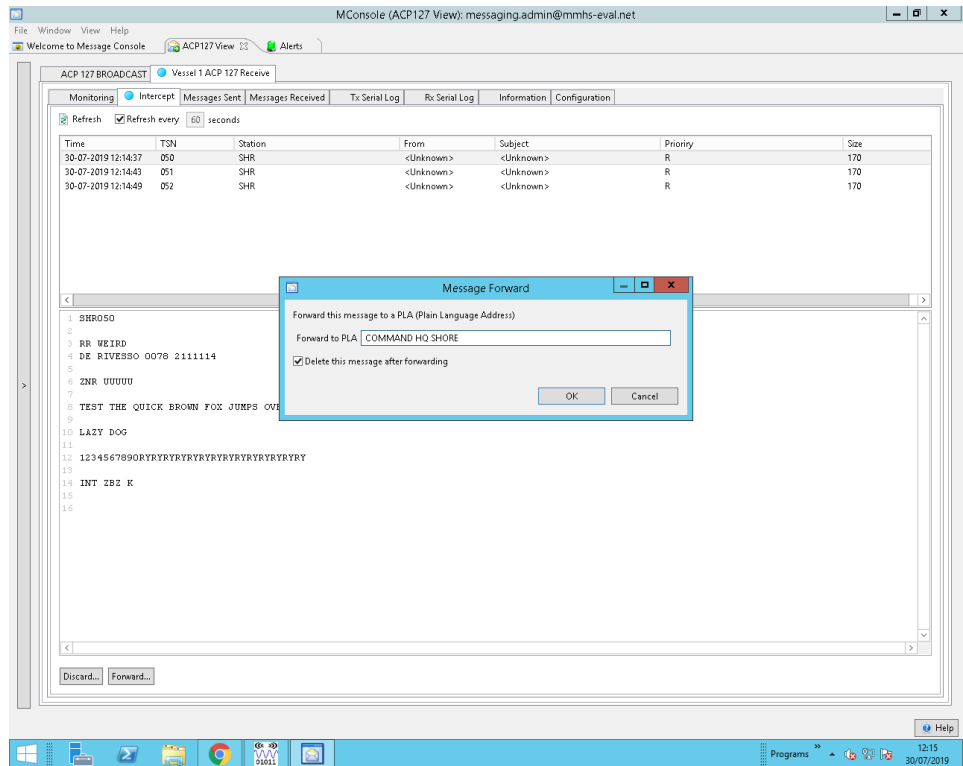


12.1.8.3 Intercept Queue

The intercept queue lists the messages received that are not explicitly meant for this station. This tab will only appear if the circuit has been configured to send intercepted messages to the intercept queue as explained in [M-Switch Administration Guide](#).

The UI provides operations for discarding and forwarding the messages to an alternate ACP127 address.

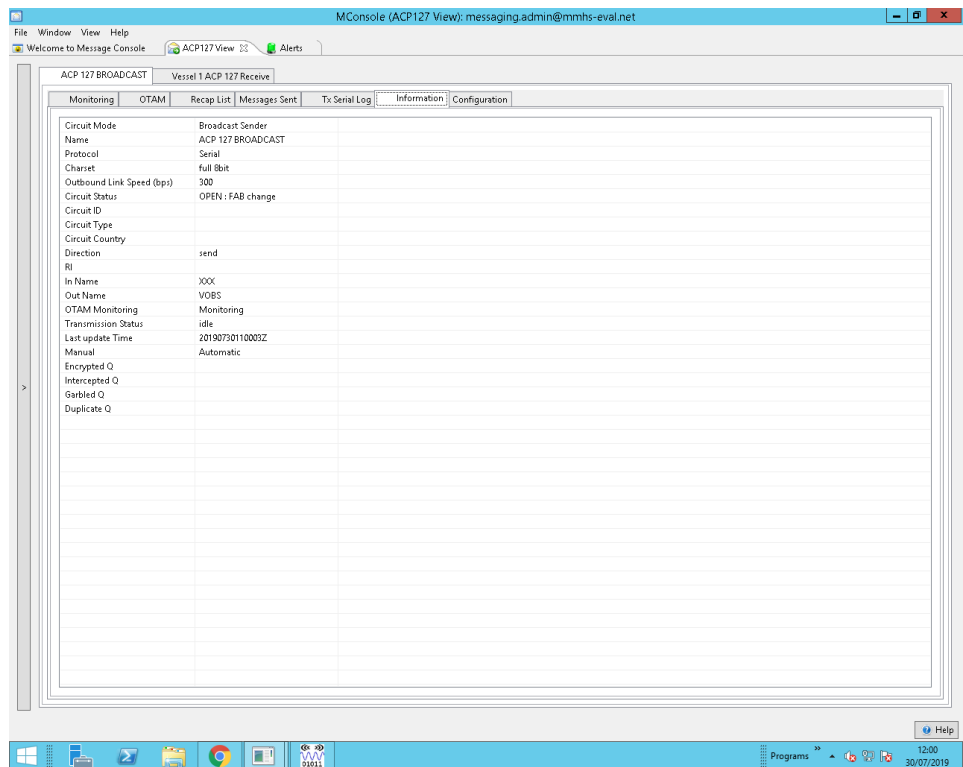
Figure 12.14. ACP127 Intercepted Queue



12.1.9 Information

The **Information** tab contains extra information about a given circuit.

Figure 12.15. ACP127 Circuit Monitor View (Information) Tab



12.2 Windows COM device support

M-Switch provides support to connect to Windows COM devices. This allows data to be sent directly over serial based modems, or via 3rd party systems.

12.2.1 Preparation to use a COM device

It is advisable to have configured a working ACP127 based M-Switch configuration before going any further, using a TCP-based circuit connection. This allows verification of routing, and authentication before configuring the COM device.

The ACP127 channel process will relay information through a **serial proxy**. It may be useful to enable logging for the serial proxy during configuration. To do this, set the environment variable SERIALPROXY_DEBUG to a debug output file of your choice.

12.2.2 Configuring a COM device

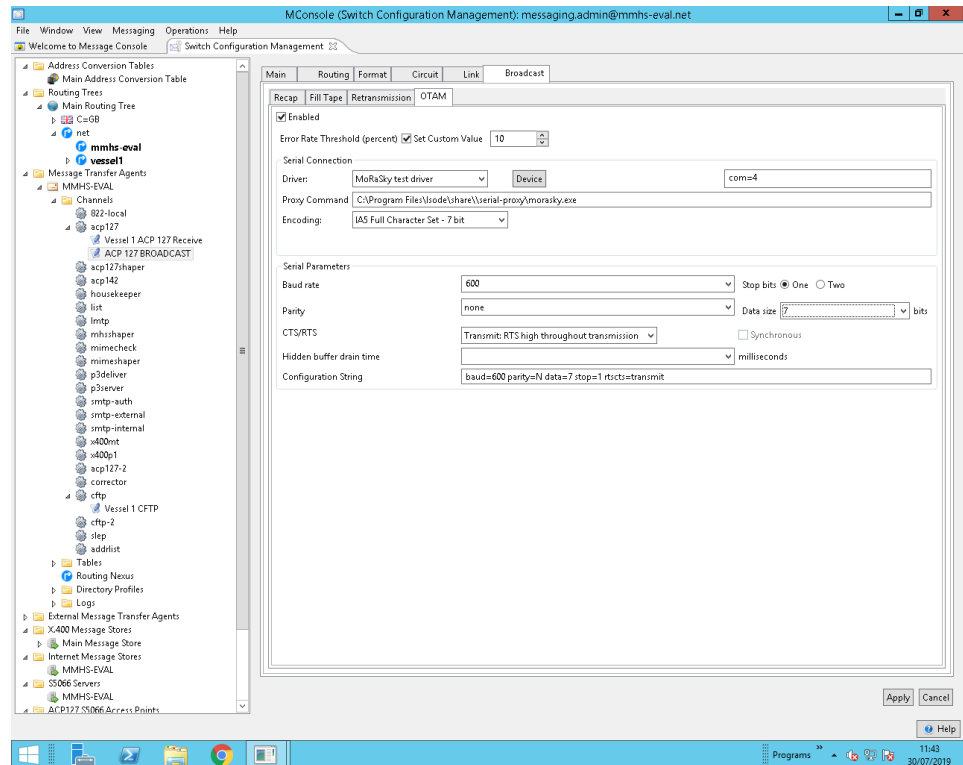
Once the COM device drivers have been installed, the device settings should be set. For example

- Set **baud rate** to **300bps**
- Set **data bits** to **7**
- Set **Parity** to **Odd**
- Set **Stop bits** to **1**
- Set **Flow Control** to **Hardware**

Note: In this example a data rate of 300bps is being set for the COM device. M-Switch will be told to transfer data at a higher rate to prevent buffer underflows.

12.2.3 Configuring the ACP127 circuit to use the COM device

Figure 12.16. ACP127 OTAM View Using the COM device



Select the circuit you wish to configure within the **Switch Configuration Management** view of MConsole.

Select the **Circuit** tab.

- Select **Serial** as the connection type.
- Select **Serial proxy** as the driver.
- Set **device** to the COM device. E.G **dev=com4**.
- Set the **baud rate** to be higher than the configured rate of the device. So in this example set it to **600**
- Set **Stop bits** to **1**.
- Set **Parity** to **Odd**.
- Set **Data Size** to **7 bits**.
- Set **CTS/RTS** to **transmit**.

Once configured you should restart the ACP127 process.

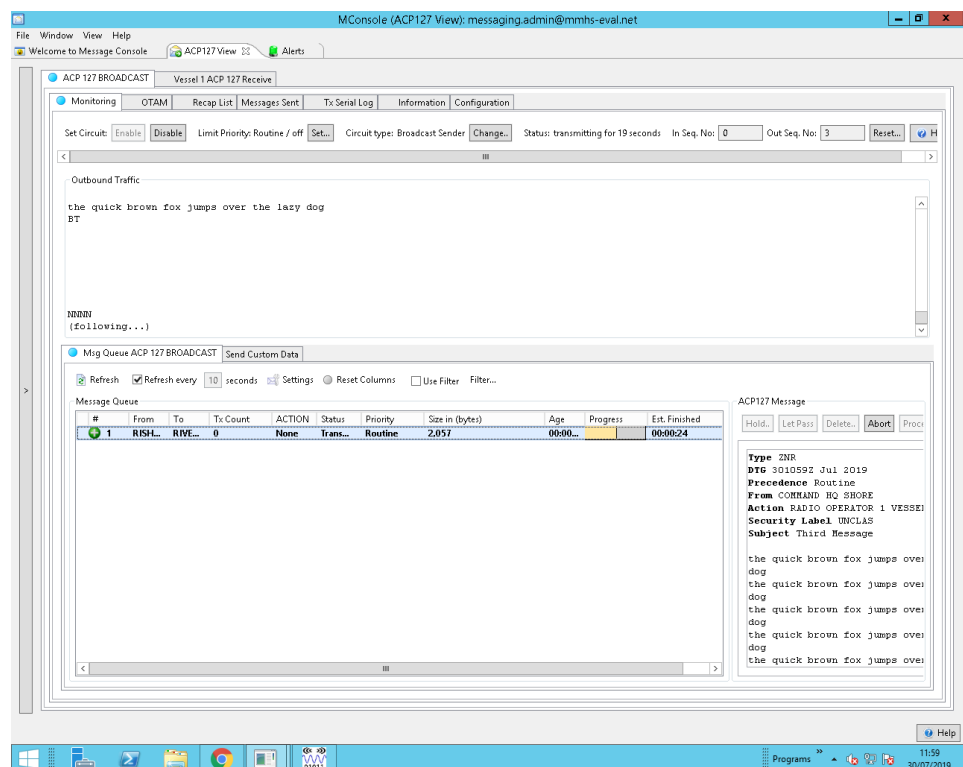
Chapter 13 Vetting View

The Vetting View allows Operators to check that selected messages are suitable for queuing and sending and then manually release them for processing.

Authorization Rules can be used to select messages to be "held" on arrival (submission or transfer-in) at a Message Switch. Messages which are "held" remain queued on their first scheduled channel until they are either manually released (via a SOM protocol operation) using the **Vetting View** or reach their expiry time, when they will be non-delivered.

Message holding allows messages to be inspected and cleared (or manually non-delivered) by an operator. Use of Authorization Rules to select those messages which will be held allows holding to be restricted to a subset of messages, e.g. those routed to external MTAs.

Authorization Rules are described in the



The **Vetting View** consists of a table, which lists all held messages, and a window allowing an operator to check the held message, before accepting or rejecting it.

Chapter 14 Diversions

This chapter describes how the M-Switch Diversions View is used.

14.1 Diversions and Nexus Overview

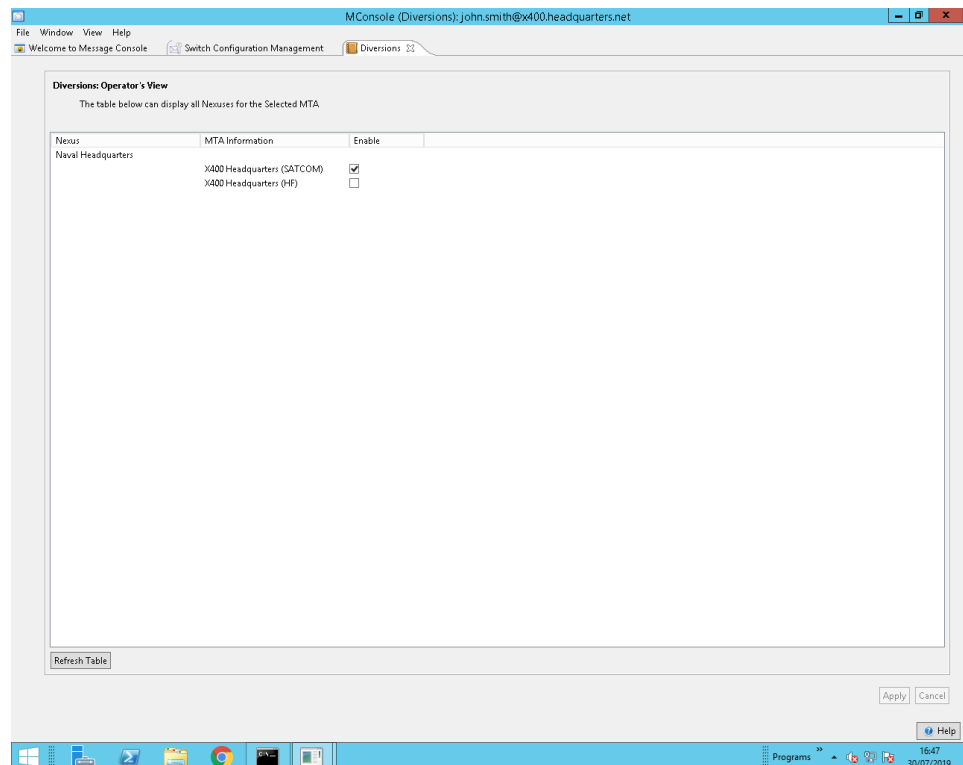
The Diversions View enables an Operator to **Enable** or **Disable** certain routes, so that they are ignored for Routing purposes. This allows the Operator to respond to lack of availability of certain MTAs or networks. This is done using Routing Nexus.

A Routing Nexus specifies one or more MTAs which are to be the target for Routing. Each MTA can be labelled **Enabled** or **Disabled**. The checkboxes mean that the Operator is able to select which one of the MTAs is enabled. Enabling one MTA disables all the others.

The following screenshot shows how the Nexus can be edited to **Enable** or **Disable** the MTA Information.

The Nexus and MTA Information cannot be edited in the Diversion View which is intended for Operators. The Nexus and MTA Information can be edited in the Switch Configuration View. See [M-Switch Administration Guide](#) for further explanation.

Figure 14.1. Diversion View



Chapter 15 Correction View

This chapter describes the Corrections View which allows operators to correct messages which would otherwise be non-delivered.

15.1 Correction View

Once the corrector channel has been set up correctly, and at least one user has been configured to manage the messages in the corrector channel, the Message Correction GUI can be used to process the messages that are pending in the corrector channel.

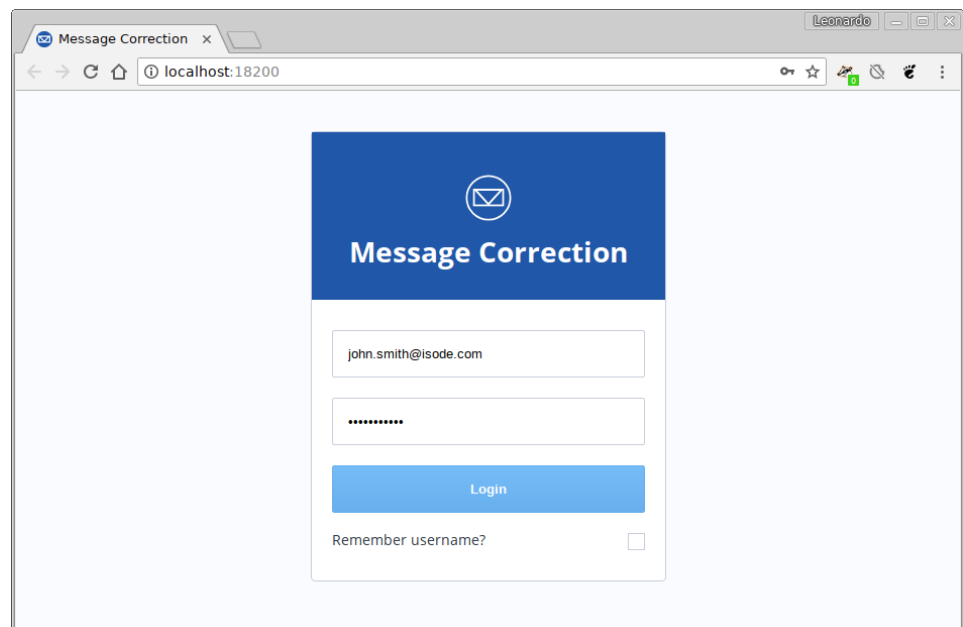
The Message Correction GUI offers a way to “fix” messages that are syntactically correct, but have been faulted for other reasons.

Connecting to the Message Correction GUI The Message Correction GUI can be accessed via a standard web browser. The default URL is `http://localhost:18200` but this can change depending on your configuration.

If you are accessing the Message Correction GUI from another machine, make sure that it is possible to establish a connection to the port and IP address that the server is listening on.

After an HTTP connection is established with the Message Correction Channel, the web browser will display a web page like the one in the image below.

Figure 15.1. Correction View Login

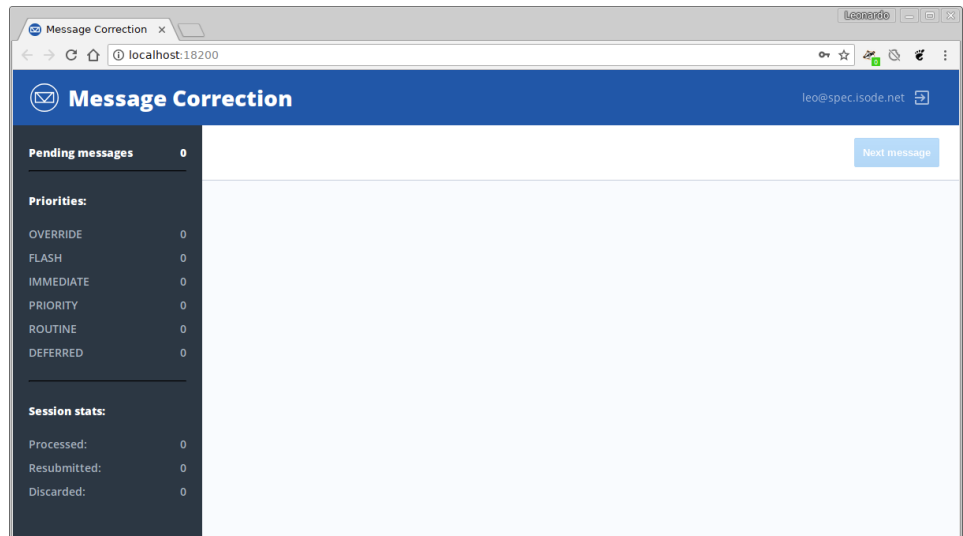


Enter your user name in the first text box and then the password in the second box. If you want the web browser to remember the user name, click on the “Remember username?” checkbox. Click on the “Login” button to log in.

Provided that you have entered the correct user name and password, you will now see the main interface of the Message Correction GUI.

15.1.1 Message Correction Interface

Figure 15.2. Message Correction Interface



The interface keeps track of the number of messages that are pending in the corrections channel and also keeps statistics for the session. Once you log off and log on again, the “Session stats” are reset.

The total number of pending messages are displayed in the “Pending messages” attribute. There is also a breakdown of pending messages arranged by military priority, to give the administrator an indication of what messages should be processed first.

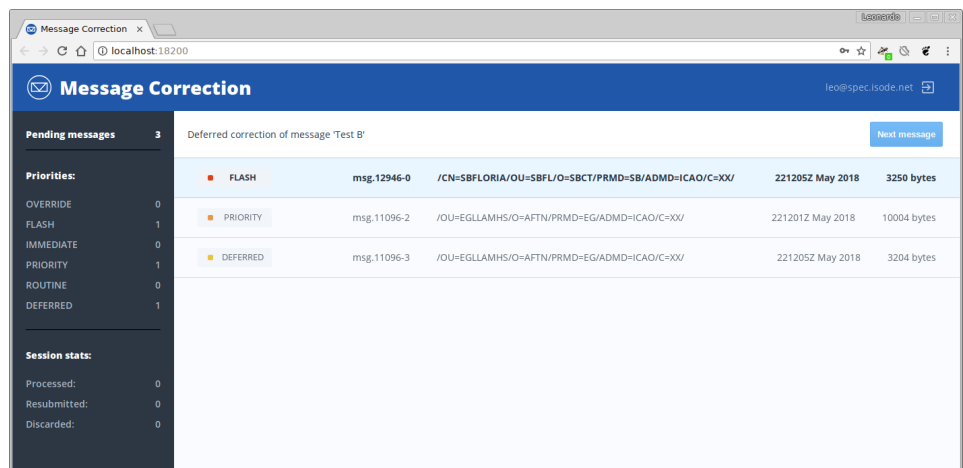
When a message is queued in the corrector channel it will be picked up by the Message Correction GUI automatically. There may be a delay before the message is shown, and this is controlled by the M-Switch Administrator, by default the messages are refreshed every 10 seconds.

To log out of a session, click on the “arrow inside a box” icon on the top right hand side of the page. This will bring you back to the log in screen.

15.1.2 Selecting messages for correction

The following figure shows 3 messages in the corrector channel. The messages are arranged by priority first and then by age, that is: the highest priority messages are shown first and if two messages have the same priority the oldest message is shown before the newer message.

Figure 15.3. Message Selection



To select a message for correction, simply click on it, and the message details will be shown.

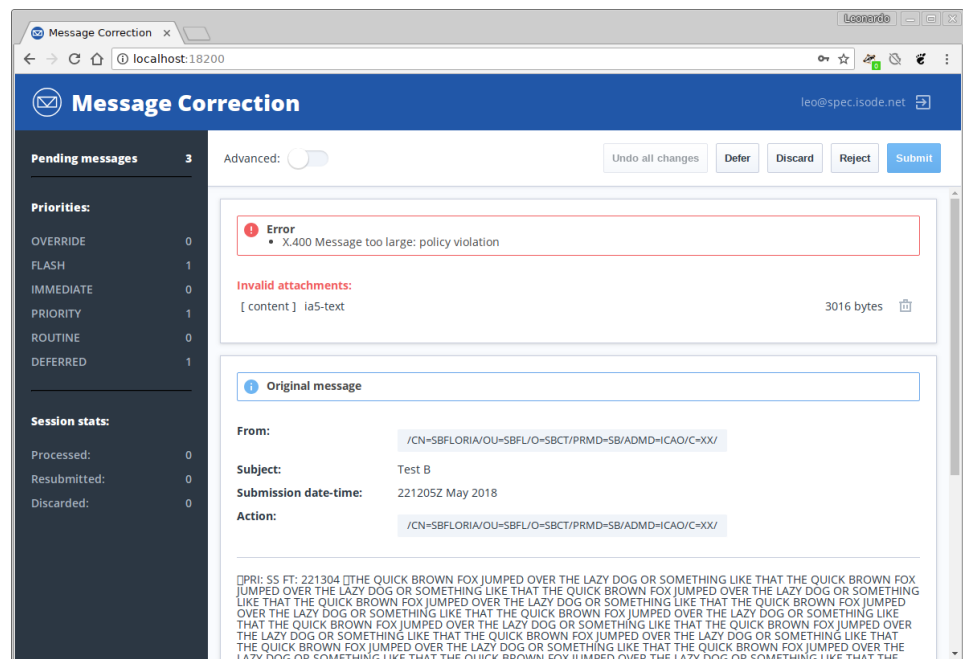
15.1.3 Operating on messages

The following figure shows the message correction editor. The operator is presented first with the error message that caused the message to be sent to the corrector channel. In the case of this example, it was “X.400 Message too large: policy violation”.

The size and type of the offending bodypart is shown, together with a summary of the message header and content.

The operator has four options to deal with the message: Defer, Discard, Reject and Submit.

Figure 15.4. Operating On Messages



- **Defer.**

This simply requeues the message in the corrector channel, to be processed later.

- **Discard.**

The message will be dropped and the originator of the message will not receive a non-delivery report or DSN. The first time you discard a message, the GUI will ask you to confirm. The confirmation dialog can be optionally disabled for the remainder of the session.

- **Reject.**

This option allows the operator to reject the message (i.e. it will not be sent to the recipients), but it will create an X.400 Non-Delivery Report or Internet DSN (if requested) and it will include an optional text string with additional information. To reject the message without any additional information, simply click on “Submit”.

- **Submit.**

This option can be used to submit the modified message back to the MTA, for further processing. Unless the message is modified or the configuration of the MTA changed, submitting the message without changes will result in the message being put back in the corrector channel.

15.1.4 Performing Message Correction

As there are several reasons why the message have been sent to the correction channel, the operator has a choice of message correction actions to perform on a message.

The actions include:

- **Removing a message bodypart.**

To remove a message bodypart, click on the trashcan icon.

- **Adding a SIC.**

To add a SIC or a Security Label, first click on the “Advance” sidebar so that the Security label and SICs interface is shown.

If the problem with the message is a lack of SIC codes, enter the SIC code in the box provided.

- **Adding a Security Label.**

You can select a Security label by clicking on the “[no marking]” text, and a list of known Security labels will be shown.

- **Recipient address correction or removal.**

To correct an invalid recipient address, click on the the pencil icon or the text. To remove the recipient address, click on the trash can icon.

After the message has been edited, click on “Submit” to submit it back to the MTA for further processing.

Chapter 16 Message Switch Console Views

This chapter lists the MConsole Operator Views, providing a summary and links to further information.

16.1 MConsole Views

The MConsole framework for displaying information is to provide views in a tabbed series of windows similar to that used in web browsers.

These Views can be broken down into the following groups:

- **Live Operations**

These are Views used by operators in order to manage Isode messaging systems in real time. These are documented in this manual, but further information (in particular how to configure these views) is in the

- **Switch Operations.** See [Chapter 5, *Switch Operations*](#) for a description of how Operators can use this View. See [M-Switch Administration Guide](#) for a description of configuring this View.
- **Event Viewer.** See [Chapter 6, *Events*](#) for a description of how Operators can use this View. See [M-Switch Administration Guide](#) for a description of configuring this View.
- **Alerts.** See [Chapter 7, *Alerts*](#) for a description of how Operators can use this View. See [M-Switch Administration Guide](#) for a description of configuring this View.
- **User Agent.** This View is used to forward messages from the messaging system into an X.400 Message Store. See [Section 8.2, “Forwarding Messages from MConsole \(User Agent\)”](#) for a description of how Operators can use this View. See [M-Switch Administration Guide](#) for a description of configuring this View.
- **Vetting.** See [Chapter 13, *Vetting View*](#) for a description of how Operators can use this View. See [M-Switch Administration Guide](#) for a description of configuring this View.
- **ACPI27.** See [Chapter 12, *ACPI27*](#) for a description of how Operators can use this View. See [M-Switch Administration Guide](#) for a description of configuring this View.
- **ACPI42 Message Transfer.** See [Chapter 11, *ACPI42 View*](#) for a description of how Operators can use this View. See [M-Switch Administration Guide](#) for a description of configuring this View.
- **Message Store View.** See the description of how Operators can use this View.

- **Configuration**

These are Views used by Administrators in order to configure and manage Isode messaging systems. These are documented in .

- **Switch Configuration Management.** This View is the main way in which configuration changes are applied to M-Switch and other messaging applications. See [M-Switch Administration Guide](#) .
- **X.400 Mailbox Management.** This allows configuration of X.400 (P7 and P3) mailbox users and X.400 Distribution Lists. See [M-Switch Administration Guide](#) .
- **Internet Mailbox Management.** This allows configuration of Internet mailbox users and Internet Distribution Lists. See [M-Switch Administration Guide](#) .
- **Gateway Users.** This allows the configuration of ACPI27 address mappings. See [M-Switch Administration Guide](#) .

- **Authenticated Entities Management.** This allows the configuration of the identity and authentication of users who operate and administer Isode messaging services. See [M-Switch Administration Guide](#).
- **ACP127 Addresses.** This allows the configuration of ACP127 addresses. See [M-Switch Administration Guide](#).

- **Message Tracking**

These are Views used by operators in order to manage Isode messaging systems in near real time by displaying information about messaging events in one or more Isode MTAs. The use by Operators of these features is documented in [Chapter 8, Message Tracking](#). The Message Audit Database and its configuration are documented in detail in

- **Message Tracking.** See [Section 8.1.1, “Message Tracking View”](#)
- **Message History.** See [Section 8.1.2, “Message History View”](#)
- **Message Transfers History.** See [Section 8.1.3, “Message Transfers History View”](#)
- **Quarantine Tracking.** If your messaging system is performing content checking of messages (e.g. anti-virus, or spam), messages which fail content checking can be quarantined. See [M-Switch Administration Guide](#) for a description of content checking. See [M-Switch Advanced Administration Guide](#) for a description of how Quarantine works.
- **Acknowledgement Tracking.** Messages handled by M-Switch can result in Acknowledgements in the form of Delivery Reports or Read Receipts. The Message Tracking System can be configured to report on the presence or absence of Acknowledgements. See [M-Switch Advanced Administration Guide](#)
- **Statistics.** See [Section 8.1.4, “Statistics View”](#)

- **Miscellaneous**

These are Views which provide ways to configure and navigate in MConsole itself.

- **Welcome View.** Most Views can be started by clicking on the icons. This View is described in [Section 2.1.1.3, “Welcome Screen” \[2\]](#).
- **Options.** The Options View is described in the [M-Switch Administration Guide](#)

To display a view, click **View** and select the view you wish to display. Some views are greyed out until you have configured them. You do this by bringing up the **Options** which allows views to be configured.

A view can be detached into a new window which opens up a new invocation of MConsole by right clicking the **View's** tab or by dragging the view outside the MConsole window.