



RadZen DCMQ

DICOM Queue Network Device

Version 3.1

User Manual

1 Table of Contents

1	Table of Contents	i
2	Introduction	1
2.1	What is RadZen DCMQ?	1
2.2	Where Does It Fit?	1
2.3	Features.....	1
2.3.1	Ease of Use	1
2.3.2	Low-cost	2
2.4	Basic Concepts.....	2
2.4.1	Inbound Server.....	2
2.4.2	Routing Rules.....	2
2.4.3	Outbound Queue	2
2.4.4	Persistence of Entries.....	2
3	Getting Started.....	3
3.1	Before You Begin.....	3
3.1.1	Docker Compose	3
3.2	Installation.....	3
3.2.1	Windows, Mac and Linux	3
3.2.2	NAS Devices.....	4
3.2.3	Basic Configuration	4
3.2.3.1	Ports	4
3.2.3.2	Container Name	4
3.2.3.3	Persistent Data	4
3.2.3.4	CORS Origins (Optional)	4
3.2.3.5	Time Zone.....	4
3.2.4	(Optional) Launching DCMQ with Docker Compose	5
4	The Administration Console	6
4.1	Accessing the Console	6
4.1.1	System Administrator Login	6
4.2	System Menu.....	7
	Changing Your Password.....	8
4.3	Console Home Page	9
4.3.1	Inbound Server.....	9

4.3.2	Outbound Queues	10
4.3.3	Routing Rules.....	10
4.3.4	Storage	11
4.3.5	Engine Version and License	11
5	Managing a Queue	12
5.1	Re-Queuing Sent or Failed Instances	13
5.2	Re-prioritizing Entries.....	13
5.3	Cancelling an Instance.....	13
5.4	Pausing the Queue	14
5.5	Moving Orphaned Instances	14
6	Configuring	15
6.1	Applying a License	15
6.2	Inbound Server.....	16
6.2.1	General	16
6.2.2	Performance.....	16
6.2.3	Encryption	17
6.3	Outbound Queue	17
6.3.1	Queue Name	18
6.3.2	Local	18
6.3.3	Destination	18
6.3.4	Data Transforms.....	19
6.3.5	Performance.....	19
6.4	Routing Rules	21
6.4.1	Orphan Entries	21
6.5	Storage and Housekeeping	21
7	Viewing Log Files	23
8	User Management.....	24
8.1	User Roles.....	24
8.2	Adding A User.....	25
8.3	Changing a User's Password.....	25
9	Support.....	26
9.1	Support Contact	26
9.2	Warranty	26

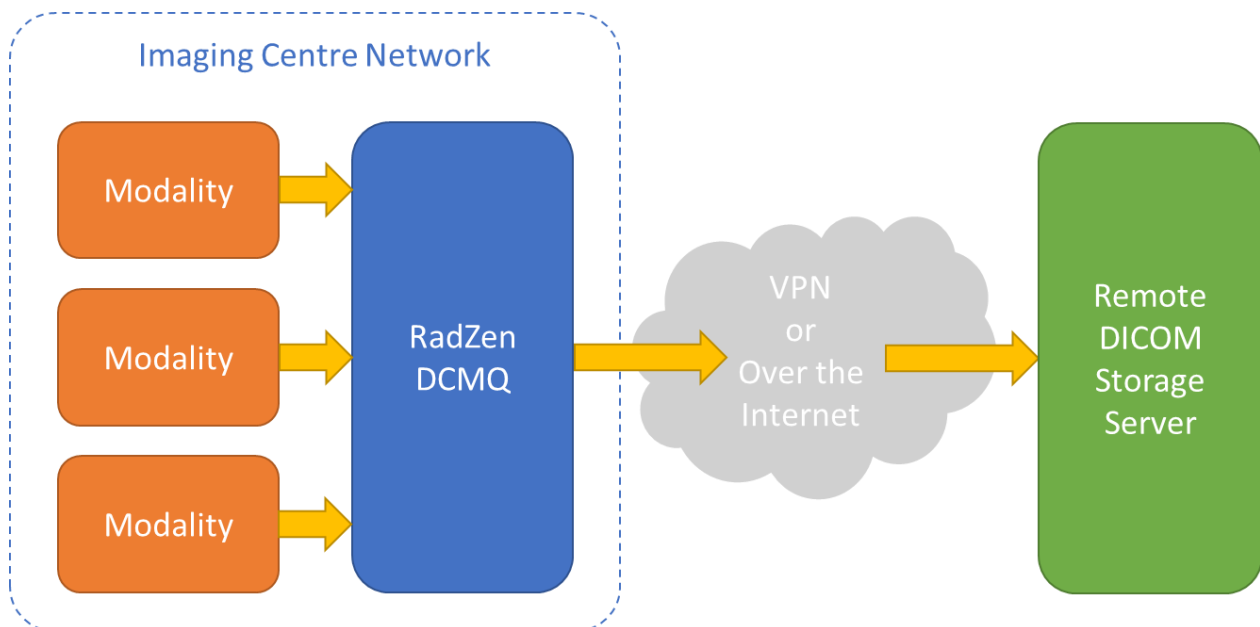
2 Introduction

2.1 What is RadZen DCMQ?

RadZen DCMQ is a simple, low-cost solution to route and send DICOM data across a network. It is virtual Docker appliance that has the sole function of receiving multiple DICOM instances concurrently, storing them and sending them on to another DICOM server one at a time.

2.2 Where Does It Fit?

RadZen DCMQ can be used where DICOM data needs to be sent securely over an Internet connection or VPN, or where the network bandwidth is limited and the sending software is not capable of queuing the DICOM data for transmission.



2.3 Features

2.3.1 Ease of Use

DCMQ software is easily deployed on a Windows or Linux Docker server or a NAS that supports Docker containers. Once installed, the rest of the configuration is completed using the web-based Administration Console.

The Administration Console allows Administrators easy access to define the inbound server configuration, configure new queues and to view the entries on the queue. Administrators can also create additional user profiles to allow other staff members access to the Administration Console.

2.3.2 Low-cost

The queuing software utilises open-source and free software components where possible, keeping the software development costs down.

2.4 Basic Concepts

The DCMQ is comprised of two main parts: the inbound server and the outbound queue.

2.4.1 Inbound Server

The Inbound server “listens” on the network for DICOM transmissions addressed to it by network address and Application Entity (AE) Title.

Each transmission usually corresponds to a single DICOM image being sent from a modality. DICOM images or objects are received by the DCMQ, registered as entries on the queue and then stored on disk.

2.4.2 Routing Rules

Routing rules defined by the administrator allow instances to be routed to one or more Outbound Queues.

2.4.3 Outbound Queue

The outbound queue is responsible for transmitting the instances on the queue to the configured destination, one at a time. The destination is specified by network address and AE Title.

The outbound queue “wakes up” at regular intervals as specified in the configuration to process entries on the queue. It will first check that the destination is available to receive transmissions before processing the queue.

2.4.4 Persistence of Entries

All queue entries, the internal database and security certificates are stored on Docker volumes. This means that if there were instances on a queue when the Docker container was stopped, they will still be there when the DCMQ container is restarted, and processing will resume.

3 Getting Started

3.1 Before You Begin

For Windows, Mac and Linux computers, a Docker host must be installed on the computer that DCMQ is to be installed on.

A description of the Community and Enterprise Editions, and the relevant installation instructions can be found at:

<https://docs.docker.com/install/overview/>

If DCMQ is being installed on a NAS (Network Attached Storage) device that supports Docker containers (such as a QNAP TS-x31P2), make sure the device has enough memory. Remember to also identify the type of processor running in the device, e.g. ARM, Intel Atom or Intel Celeron, as this will determine whether a variant of the DCMQ docker image will need to be installed.

3.1.1 Docker Compose

Docker Compose provides a convenient way of starting up one or more Docker containers using a docker-compose.yml configuration file.

Docker Compose is installed by default on Community Edition for Mac and Windows but will need to be installed on Linux computers, and for Enterprise Edition. Instructions can be found here:

<https://docs.docker.com/compose/install/>

NAS devices usually come with their own container launch and management apps so Docker Compose is not required in these use cases.

3.2 Installation

3.2.1 Windows, Mac and Linux

Installation of a Docker container must be performed from a command-line or terminal. The following command will start a basic instance of DCMQ:

```
$ docker run -d -p 9080:5000 -p 11112:11112 --restart=always --name dcmq-1 \
-v dcmq-data:/app/data \
-v dcmq-logs:/app/logs \
-v dcmq-certs:/app/certs \
-e "TZ=Australia/Sydney" \
docker-registry.futurezen.com.au/radzen/dcmq:3.1-amd64
```

This will pull the latest AMD64 platform image for DCMQ and run it in a new container

- detached (-d)
- mapped to internal port 11112 (-p)
- name the container dcmq-1 (--name)
- always restart the container if it fails or if the host restarts (--restart=always)

- create and mount persistent data volumes (`-v`) for data, logs and certs

3.2.2 NAS Devices

Refer to the NAS device user manual for launching a Docker container. For devices that have an ARM processor, the ARM 32-bit DCMQ image may be required:

```
docker-registry.futurezen.com.au/radzen/dcmq:3.1-arm32
```

3.2.3 Basic Configuration

Refer to the Docker manuals for advanced container configuration, such as attaching multiple virtual network adapters or more advanced use of volumes and bindings.

3.2.3.1 Ports

The DCMQ console runs on port 5000 by default. This can be configured by exposing a different port and mapping it to 5000 using the `-p` option. For example, `-p 18080:5000` exposes port 18080 and maps network traffic to port 5000.

The DCMQ engine runs on port 11112 by default and as with the DCMQ console, a different port may be exposed instead and mapped to port 11112.

3.2.3.2 Container Name

Use the `--name` option to give the container a meaningful name. This name makes it easier to manage the container later.

3.2.3.3 Persistent Data

Docker volumes allow data to be stored between container lifecycles. Using the `-v` option specifies the volume and mount point in the container. The mount points required are as follows:

- `/app/data` : DCMQ database and DICOM instance data
- `/app/logs` : Log files for the web console and DCMQ engine
- `/app/certs` : SSL certificate files uploaded to enable SSL/TLS encryption

3.2.3.4 CORS Origins (Optional)

CORS is a security mechanism to ensure that a web request is from a trusted origin. The web console employs CORS to prevent hacking attacks.

To enable CORS, this must be set to all possible URLs that the web console can be accessed with. Separate each URL with semicolon (;).

For example, if the DCMQ was installed on a docker host with IP address 192.168.100.30 running on port 9080 and had a domain name of "mydcmq.local", the CORS Origins setting would be:

```
-e "CORS_ORIGINS=http://192.168.100.30:9080;http://mydcmq.local:9080"
```

3.2.3.5 Time Zone

By default, the DCMQ container time zone is set to Universal Time Coordinates (UTC) which happens to be the same as Greenwich Mean Time (GMT) + 0.

To create the container with a different time zone, pass the following option on the docker run command:

```
-e "TZ=MyTimeZone"
```

Replace MyTimeZone with the appropriate time zone as defined in the IANA Time Zone Database, e.g. Australia/Sydney. A full list can be found on Wikipedia at:

https://en.wikipedia.org/wiki/List_of_tz_database_time_zones

3.2.4 (Optional) Launching DCMQ with Docker Compose

Docker Compose provides a convenient way of launching the DCMQ container with a configuration file.

The docker command in section 3.2.1 can be defined as a docker-compose.yaml file as follows:

```
version: "3"
services:
  dcmq:
    image: docker-registry.futurezen.com.au/radzen/dcmq:3.1-amd64
    ports:
      - "9080:5000"
      - "11112:11112"
    network_mode: "bridge"
    volumes:
      - dcmq-data:/app/data
      - dcmq-logs:/app/logs
      - dcmq-certs:/app/certs
    environment:
      - TZ=Australia/Sydney
volumes:
  dcmq-data:
  dcmq-logs:
  dcmq-certs:
```

To start the DCMQ container, run the command from the same directory as the docker-compose.yaml file:

```
$ docker-compose up -d
```

The advantages of using Docker Compose are:

- no need to script the launch of the container
- the configuration is captured in the docker-compose.yaml file
- multiple DCMQ containers can be launched at once
- Docker Compose can manage container configuration if the docker-compose.yaml configuration is changed

Refer to the Docker Compose documentation for more information:

<https://docs.docker.com/compose/overview/>

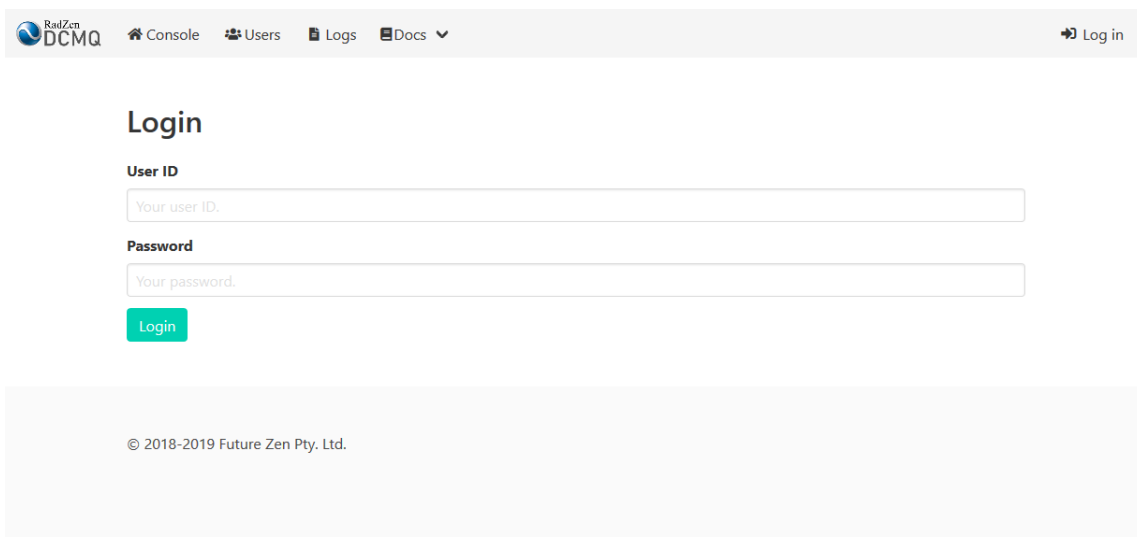
4 The Administration Console

4.1 Accessing the Console

To access the Administration Console, open a web-browser and visit:

http://<DCMQ_address>:<DCMQ_port>/

The login page will be displayed, prompting for a username and password.



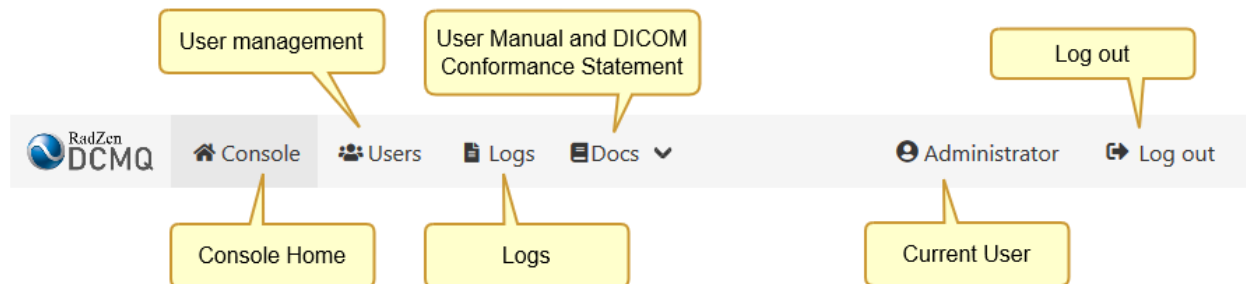
4.1.1 System Administrator Login

This user profile is created by default. It provides full access to the DCMQ configuration and management of queues. Keep these credentials safe.

Username	admin
Default Password	radzen

IMPORTANT! For security, make sure you log in as each of the above users and change their passwords (see 4.3 Changing Your Password).

4.2 System Menu



The system menu is available throughout the application. Some options may not be available depending on whether the currently logged in user has access to them.

Console	The Administration Console home page
Users	User management, requires the Administrator role
Logs	View system log files
Docs	User manual and DICOM Conformance Statement
Current User	Shows the current user name, allows the current user to change their details and password
Logout	Logs the current user out of the Administration Console

Changing Your Password

Passwords may be changed by clicking on the Current User system menu option. This prompts for a new password and the new password again for confirmation.

My User Profile

admin

User ID

admin

Full name

Administrator

Password

Password again

Roles

☒ Administrator

☐ Operator

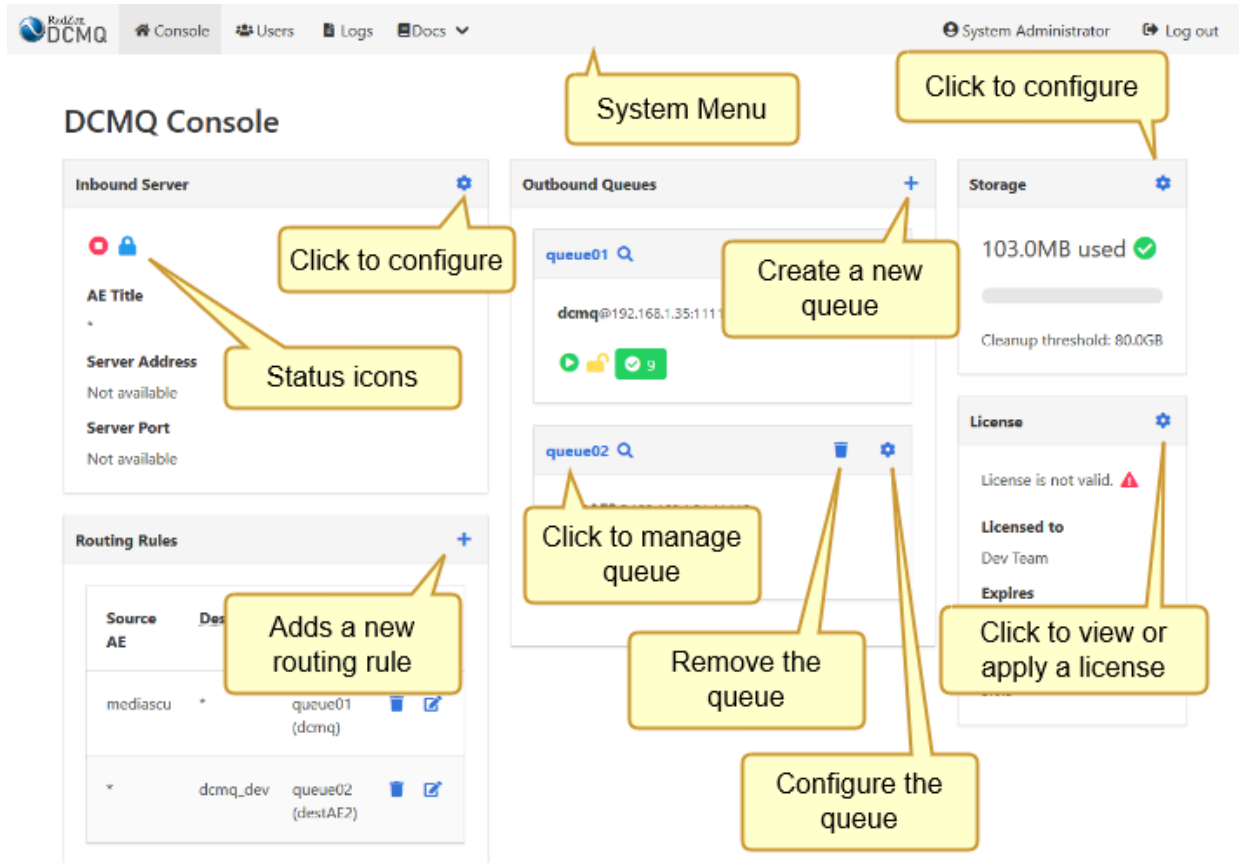
Save

Click on the 'Save' button to change the password, or 'Back' to return to the main menu.

Remember to store your password in a safe place. There is currently no way to reset a lost password.

4.3 Console Home Page

Once logged, in the Administration Console home page displays the status of the various components. When logged in as an Administrator, the components may also be configured by clicking on the relevant  icon.



The screenshot shows the RadZen DCMQ Console interface. The top navigation bar includes 'Console', 'Users', 'Logs', and 'Docs'. The user is logged in as 'System Administrator' with a 'Log out' option. The main content area is divided into several sections:

- System Menu:** Located at the top right, it contains a 'Click to configure' button.
- Inbound Server:** Displays the status of the inbound server. It includes a 'Click to configure' button and 'Status icons' (a red circle with a white square and a blue circle with a white square). The status shows 'Not available' for both 'Server Address' and 'Server Port'.
- Outbound Queues:** Displays a list of queues. It includes a 'Create a new queue' button and a 'Click to manage queue' button. The queues listed are 'queue01' and 'queue02'.
- Storage:** Displays storage usage (103.0MB used) and a 'Cleanup threshold: 80.0GB'.
- License:** Displays the license status. It includes a 'Click to view or apply a license' button. The license is 'Dev Team' and 'Expires'.
- Routing Rules:** Displays a table of routing rules. It includes an 'Adds a new routing rule' button. The table has columns for 'Source AE', 'Destination', and 'Queue'. The rules listed are 'mediascu' and 'dcmq_dev'.

4.3.1 Inbound Server

The following icons indicate the status of the inbound server:

-  Running – the normal working status
-  Stopped – there is a problem with the component, such as an invalid license
-  SSL/TLS encryption enabled
-  SSL/TLS encryption disabled

In addition to the server status, the following identifying information is shown:

AE Title	The AE Title that modalities must use to connect to the server. An asterisk (*) indicates that the server is promiscuous and may be referred to by any AE Title.
Server Address	The server IP address to listen on. This allows multiple DCMQ containers to run on the same host but on different networks. An address of 0.0.0.0 indicates that the server will listen on all network addresses.
Server Port	The port number on which the server will listen. This is INTERNAL to the container and should not have to be changed.

4.3.2 Outbound Queues

In addition to the queue status, a summary of the statistics is displayed next to the queue name.



Running – the normal working status



Stopped – the outbound queue is stopped



SSL/TLS encryption enabled



SSL/TLS encryption disabled



Destination is down



Outbound queue is paused



Number of DICOM instances in the queue



Number of DICOM instances that failed to send



Number of DICOM instances sent successfully in the last 24 hours

The queue destination is also shown to allow quick identification of the queue.

New queues can be created by clicking on the + button on the top-right of the panel.

4.3.3 Routing Rules

The list of routing rules is displayed showing the source/calling AE title, destination/called AE title and the queue to route the incoming DICOM instance to.

New routing rules may be added by clicking on the + button on the top-right of the panel. Existing rules may be edited by clicking on  or deleted by clicking on .

4.3.4 Storage

The amount of storage used by DICOM data and the Cleanup Threshold is shown. If the amount of storage used exceeds the Cleanup Threshold at the next scheduled cleanup, old DICOM instances that have already been sent are purged from storage.

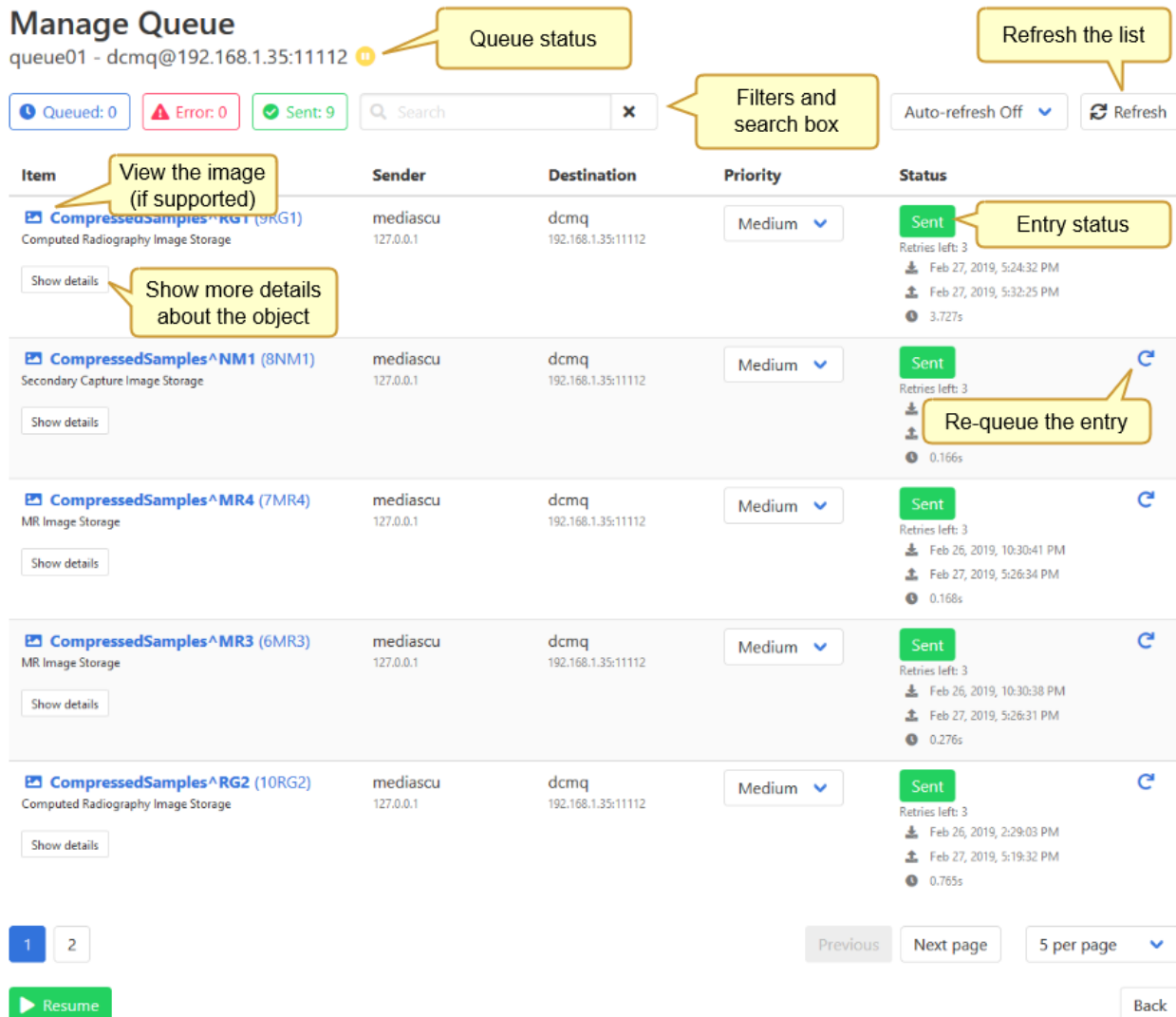
4.3.5 Engine Version and License

The DCMQ engine version is shown along with the status of the license.

5 Managing a Queue

You will need to be logged in as an Operator or System Administrator to access these functions.

From the Console Home Page, click on the name of the queue to manage the queue.



Manage Queue
queue01 - dcmq@192.168.1.35:11112

Queued: 0 | Error: 0 | Sent: 9

Search

Auto-refresh Off | Refresh

Item	Sender	Destination	Priority	Status
 CompressedSamples^RG1 (9RG1) Computed Radiography Image Storage Show details	mediascu 127.0.0.1	dcmq 192.168.1.35:11112	Medium	Sent Retries left: 3 Feb 27, 2019, 5:24:32 PM Feb 27, 2019, 5:32:25 PM 3.727s
 CompressedSamples^NM1 (8NM1) Secondary Capture Image Storage Show details	mediascu 127.0.0.1	dcmq 192.168.1.35:11112	Medium	Sent Retries left: 3 Feb 26, 2019, 10:30:41 PM Feb 27, 2019, 5:26:34 PM 0.166s
 CompressedSamples^MR4 (7MR4) MR Image Storage Show details	mediascu 127.0.0.1	dcmq 192.168.1.35:11112	Medium	Sent Retries left: 3 Feb 26, 2019, 10:30:41 PM Feb 27, 2019, 5:26:34 PM 0.168s
 CompressedSamples^MR3 (6MR3) MR Image Storage Show details	mediascu 127.0.0.1	dcmq 192.168.1.35:11112	Medium	Sent Retries left: 3 Feb 26, 2019, 10:30:38 PM Feb 27, 2019, 5:26:31 PM 0.276s
 CompressedSamples^RG2 (10RG2) Computed Radiography Image Storage Show details	mediascu 127.0.0.1	dcmq 192.168.1.35:11112	Medium	Sent Retries left: 3 Feb 26, 2019, 2:29:03 PM Feb 27, 2019, 5:19:32 PM 0.765s

1 | 2 | Previous | Next page | 5 per page | Resume | Back

The filter buttons at the top of the list filter the list by status.

The Search feature searches for partial matches on Patient ID, Patient Name, Accession Number and Study ID.

Click on the  icon to view the DICOM image. Viewing of images is only supported for some JPEG transfer syntaxes. Viewing of non-image DICOM instances is not supported.

5.1 Re-Queuing Sent or Failed Instances

An instance may be re-queued for transmission by clicking on .

5.2 Re-prioritizing Entries

Entries on the queue have a default priority of 'Medium'. Priority can be set to 'High' or 'Low' by changing the priority selection on the relevant queue entry.

5.3 Cancelling an Instance

Queued and failed instances can be cancelled and removed from the queue.

Manage Queue

queue01 - dcmq@192.168.1.35:11112 

Queued: 3
Error: 0
Sent: 6

Auto-refresh Off
Refresh

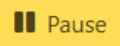
Item	Sender	Destination	Priority	Status
 CompressedSamples^MR4 (7MR4) MR Image Storage Show details	mediascu 127.0.0.1	dcmq	Medium 	Queued Retries left: 3  Feb 26, 2019, 10:30:41 PM 
 CompressedSamples^NM1 (8NM1) Secondary Capture Image Storage Show details	mediascu 127.0.0.1	dcmq 192.168.1.35:11112	Medium 	Queued Retries left: 3  Feb 26, 2019, 10:30:43 PM  Feb 27, 2019, 5:26:37 PM  0.166s 
 CompressedSamples^RG1 (9RG1) Computed Radiography Image Storage Show details	mediascu 127.0.0.1	dcmq 192.168.1.35:11112	Medium 	Queued Retries left: 3  Feb 27, 2019, 5:24:32 PM  Feb 27, 2019, 5:32:25 PM  3.727s 

1
Pause
Previous
Next page
5 per page
Back

To permanently remove an instance from the queue, click on  next to the corresponding entry and confirm the cancellation.

Although the instance will still appear in the queue history as having been 'Cancelled', it is removed from the system. If the cancellation was accidental, the DICOM instance will need to be sent to the queue again.

5.4 Pausing the Queue

Processing of queue instances can be paused by clicking on the  button. This suspends sending of DICOM instances to the destination indefinitely.

5.5 Moving Orphaned Instances

Instances that have been received but do not match any routing rules are considered orphaned.

A link to the Orphaned entries will be displayed in the Outbound Queues panel on the Console Home. These entries may be moved to a queue manually.

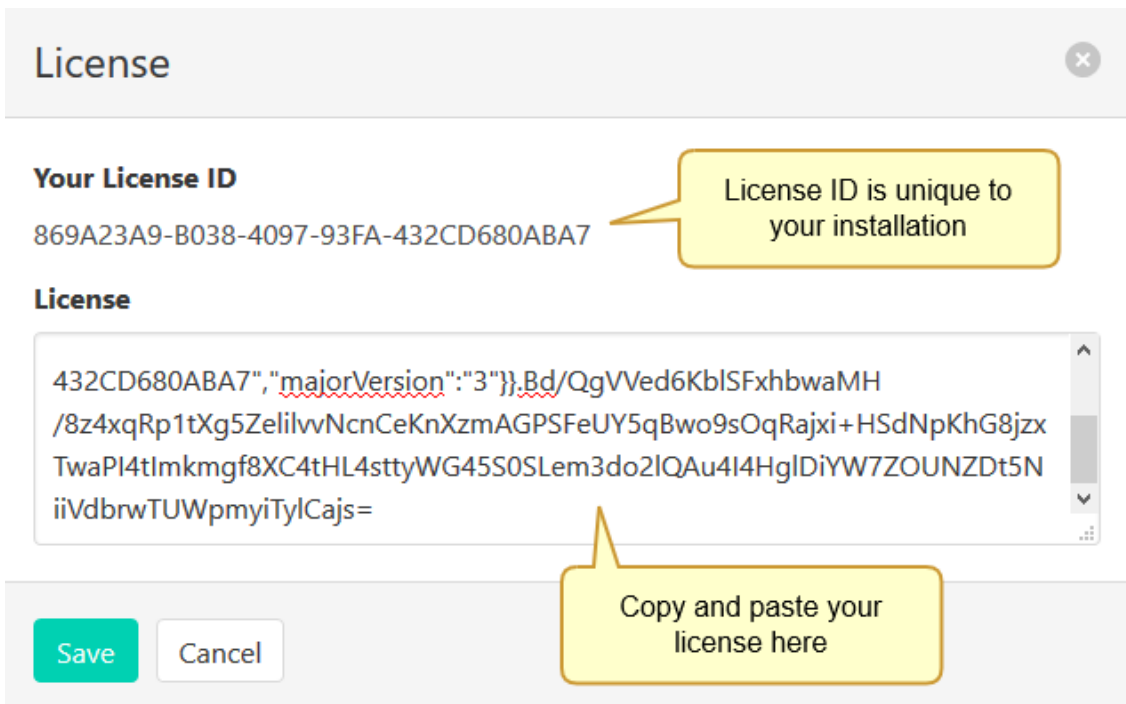
6 Configuring

Only System Administrators can change the configuration of the DCMQ components.

All configuration panels are accessed from the Console Home Page.

6.1 Applying a License

To view and install a license, configure the license module by clicking on the configuration icon in the License panel on the Console Home Page.



License

Your License ID
869A23A9-B038-4097-93FA-432CD680ABA7

License
432CD680ABA7", "majorVersion": "3"}}, Bd/QgVVed6KblSFxhbwaMH
/8z4xqRp1tXg5ZelilvNcnCeKnXzmAGPSFeUY5qBwo9sOqRajxi+HSdNpKhG8jzx
TwaPI4tlmkmgf8XC4tHL4sttyWG45S0SLem3do2lQAU4I4HgldiYW7ZOUNZDt5N
iiVdbrwTUWpmyiTylCajs=

Save **Cancel**

Licenses may be purchased from the Future Zen Online Store. You will need to provide the License ID shown on the License panel.

Once payment has been processed, a license will be sent by email to email address on the purchase order. Copy and paste the license into the License field and click 'Save' to apply the license.

Each license is unique to a DCMQ installation. Make sure this is kept in a safe place and be sure to regularly back up your DCMQ Docker volumes.

6.2 Inbound Server

✕
Inbound server configuration

General
Performance
Encryption

AE Title

*

Port

11112

Address

0.0.0.0 (Any IP Address) ▼

Save

Cancel

6.2.1 General

AE Title	The AE Title of the Inbound server. Modalities that send images to the DCMQ must use this AE Title. Note that AE Title is case-sensitive. If AE Title is set to asterisk (*), then the server will not enforce AE Title checking and will accept requests made to any AE Title. This is the default setting.
Port	The port that the DCMQ will listen on. Defaults to 11112.
Address	The network interface to listen on.

6.2.2 Performance

These settings do not need to be changed unless performance becomes an issue.

Maximum number of clients allowed	Limits the number of client connections allowed to the server. Unlimited by default.
Maximum command buffer size	Maximum size of the command buffer. 1KB by default.
Maximum data buffer size	Maximum size of the data buffer. 1MB by default

Maximum number of PDVs per PDU	Maximum number of Presentation Data Values to allow in a Presentation Data Unit. Unlimited by default.
Enable TCPNoDelay	Enables the TCPNoDelay option at the network socket communications layer. Enabled by default.

6.2.3 Encryption

Enable SSL/TLS	Enables (and enforces) SSL/TLS encryption on all connections to the server. This uses the Certificate specified to perform the encryption and decryption. Disabled by default.
Certificate	Upload an SSL/TLS certificate in PKCS12 (.pfx) format to use for encryption and decryption of the incoming network traffic. Clicking on 'Use Default' will use the default self-signed certificate that is generated when DCMQ is installed.
Certificate Password	The password used to encrypt the certificate file.

6.3 Outbound Queue

Queue Configuration

queue1

Queue name

Local

Destination

Data Transforms

Performance

☒ Masquerade as originating AE

AE Title
dcmq

Save

Cancel

6.3.1 Queue Name

Enter a meaningful name to identify the queue.

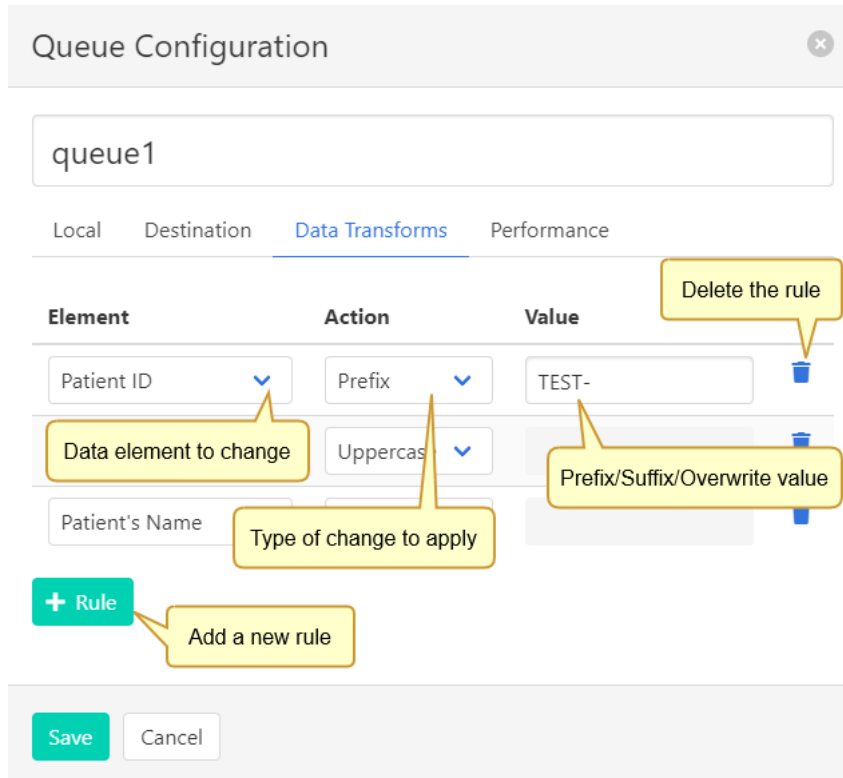
6.3.2 Local

Masquerade as originating AE	Enable this feature if the queue is to use the AE title of the sender of the DICOM instance as the calling AE title when connecting to the destination. Disabled by default.
AE Title	Calling AE title to use when connecting to the destination.

6.3.3 Destination

AE Title	AE title of the destination.
Address	Hostname, DNS name or IP Address of the destination.
Port	The destination port number.
Enable SSL/TLS	Enables SSL/TLS encryption between DCMQ and the destination. Disabled by default.
Ignore SSL Policy Errors	Enable this when using self-signed certificates. Disabled by default.

6.3.4 Data Transforms



Queue Configuration

queue1

Local Destination **Data Transforms** Performance

Element	Action	Value
Patient ID	Prefix	TEST-
Patient's Name	Uppercase	

+ Rule

Save Cancel

This feature allows certain elements of the DICOM data to be adjusted before the DICOM instance is sent to the destination.

This feature supports the following data elements:

- Patient Name
- Patient ID
- Study ID
- Accession Number

The following transformation operations can be performed:

- Overwrite
- Prefix
- Suffix
- Uppercase
- Lowercase

Overwrite, prefix and suffix operations require a value to be specified.

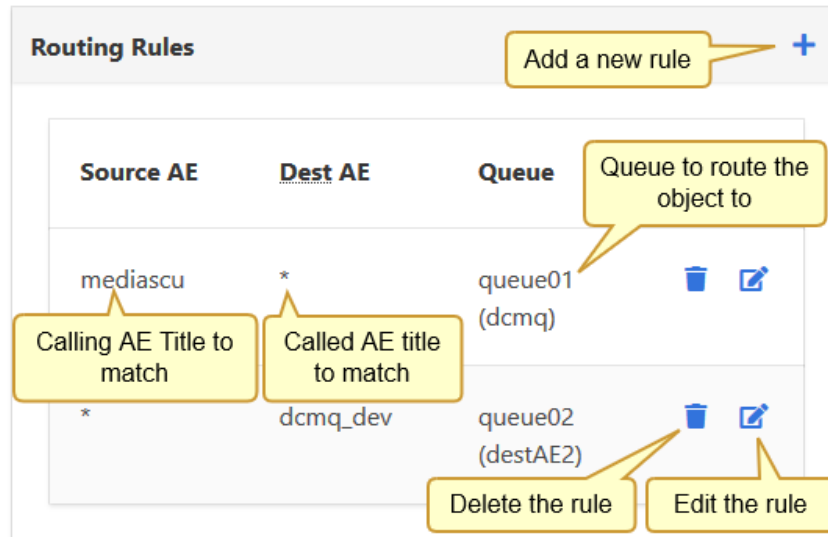
6.3.5 Performance

These settings do not need to be changed unless performance becomes an issue.

Minimum Send Duration	The minimum time allocated to send an image. If the image is sent within this limit, the outbound queue waits until this time elapses. Use this along with Maximum Transmission Rate to throttle network traffic. Defaults to 1 second.
Maximum number of retries	Sets the number of times the queue will attempt to send the object if it fails to send. Defaults to 'Do not retry'.
Maximum transmission rate	Throttles the transmission speed. Defaults to 'Unlimited'.
Asynchronous operations invoked	Maximum number of concurrent operations that can be invoked. Defaults to 'Unlimited'.
Asynchronous operations performed	Maximum number of concurrent operations that can be performed. Defaults to 'Unlimited'.
Send Timeout	Send operations are aborted if they take longer than this limit. Defaults to 1 minute.
Maximum number of PDVs per PDU	Maximum number of Presentation Data Values to allow in a Presentation Data Unit. Unlimited by default.
Enable TCPNoDelay	Enables the TCPNoDelay option at the network socket communications layer. Enabled by default.

6.4 Routing Rules

Routing rules determine which queue incoming DICOM instances are routed to. A DICOM instance may be routed to multiple queues in which case a copy of the object is sent to multiple destinations.



The source AE title of the DICOM instance and/or the AE title used to connect to the Inbound Server are matched against each routing rule.

For example, the following rule:

Source AE	AE1
Dest AE	AE2
Queue	Queue1

would match an incoming DICOM instance sent from AE1 addressed to AE2 and route the object to Queue1.

An asterisk (*) denotes a wildcard meaning it will match against any value. So, a rule with both Source AE and Dest AE set to * would match all incoming DICOM instances.

6.4.1 Orphan Entries

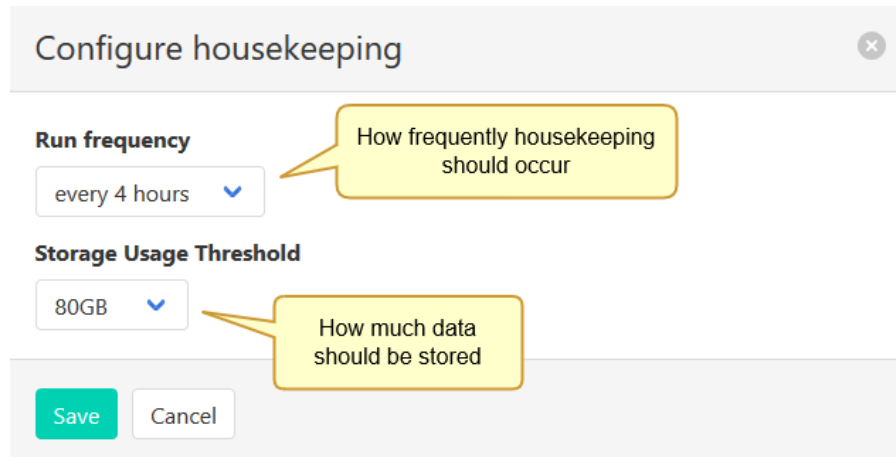
If a DICOM instance is received that does not match any routing rules, it is marked as 'Orphaned'.

Orphaned entries are managed via the Orphaned Entries link on the Console Home. These entries can be moved to a valid queue or cancelled.

6.5 Storage and Housekeeping

The housekeeping process is run at the configured intervals.

The process will attempt to keep storage at the threshold specified should the used storage exceed it.



Configure housekeeping

Run frequency
every 4 hours

How frequently housekeeping should occur

Storage Usage Threshold
80GB

How much data should be stored

Save Cancel

Note that between runs, the actual storage used may exceed the threshold size. The Run Frequency may need to be adjusted depending on the size of DICOM data and amount of traffic passing through DCMQ.

7 Viewing Log Files

View logs by selecting Logs from the System Menu.

Log files

Available log files

dcmq-20190221.log

▼

Select a log file to view

```

2019-02-21 13:56:50.205 +11:00 [Information] Initialising database. Database path: "data/db"
2019-02-21 13:56:50.595 +11:00 [Information] Initialising DCMQEngine instance.
2019-02-21 13:56:50.749 +11:00 [Information] Starting DCMQEngine instance.
2019-02-21 13:56:50.764 +11:00 [Information] [inbound] Starting inbound server on port 11112.
2019-02-21 13:56:50.859 +11:00 [Information] Starting housekeeper.
2019-02-21 13:56:50.879 +11:00 [Information] Running housekeeping process.
2019-02-21 13:56:50.919 +11:00 [Information] Starting license checker.
2019-02-21 13:56:51.081 +11:00 [Information] Checking license.
2019-02-21 13:56:51.142 +11:00 [Fatal] License is not valid. "A valid license is not installed."
2019-02-21 13:56:51.149 +11:00 [Information] [inbound] Stopping inbound server.
2019-02-21 13:56:51.191 +11:00 [Information] Cleanup completed.
2019-02-21 15:16:17.954 +11:00 [Information] Checking license.
2019-02-21 15:16:18.052 +11:00 [Fatal] License is not valid. "A valid license is not installed."
2019-02-21 15:20:12.887 +11:00 [Information] Checking license.
2019-02-21 15:20:12.945 +11:00 [Fatal] License is not valid. "A valid license is not installed."
2019-02-21 15:22:40.206 +11:00 [Information] Checking license.
2019-02-21 15:22:40.248 +11:00 [Fatal] License is not valid. "A valid license is not installed."
2019-02-21 15:27:18.509 +11:00 [Information] Checking license.
2019-02-21 15:27:18.569 +11:00 [Fatal] License is not valid. "A valid license is not installed."
2019-02-21 17:56:52.004 +11:00 [Information] Running housekeeping process.
2019-02-21 17:56:52.052 +11:00 [Information] Cleanup completed.
2019-02-21 18:09:08.864 +11:00 [Information] Checking license.
2019-02-21 18:09:08.920 +11:00 [Fatal] License is not valid. "A valid license is not installed."
2019-02-21 18:12:07.388 +11:00 [Information] Checking license.
2019-02-21 18:12:07.442 +11:00 [Fatal] License is not valid. "A valid license is not installed."
2019-02-21 18:13:56.322 +11:00 [Information] Checking license.
2019-02-21 18:13:56.383 +11:00 [Fatal] License is not valid. "A valid license is not installed."
2019-02-21 18:15:39.111 +11:00 [Information] Checking license.
2019-02-21 18:15:39.172 +11:00 [Fatal] License is not valid. "A valid license is not installed."
2019-02-21 18:17:10.233 +11:00 [Information] Checking license.
2019-02-21 18:17:10.288 +11:00 [Fatal] License is not valid. "A valid license is not installed."

```

Refresh

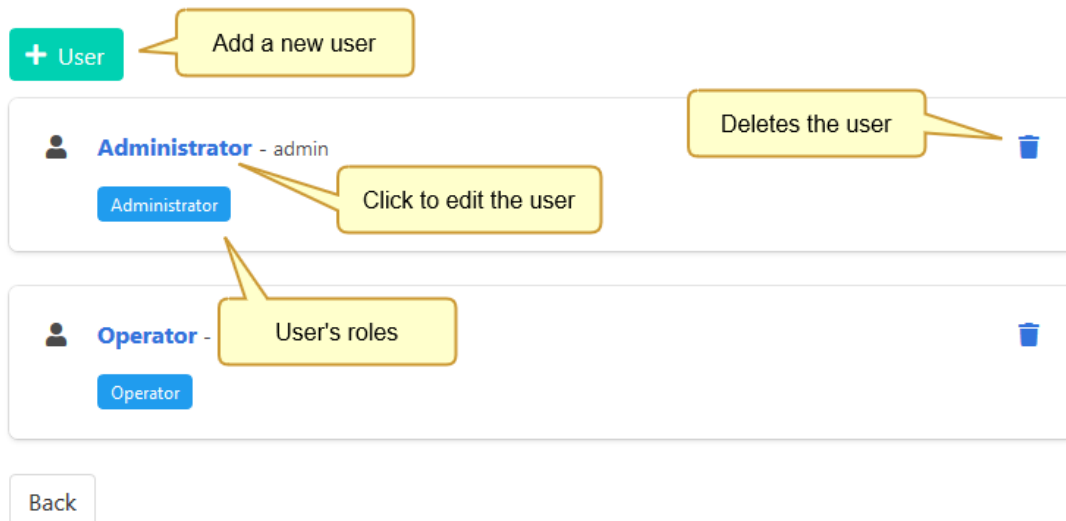
Back

Reload the selected log file

8 User Management

Users can be managed by selecting Users from the System Menu.

User Management



The screenshot shows the User Management interface. At the top left is a green button labeled '+ User' with a callout 'Add a new user'. Below this is a list of users. The first user is 'Administrator - admin'. Next to the name is a blue button labeled 'Administrator' with a callout 'Click to edit the user'. To the right of the user entry is a trash icon with a callout 'Deletes the user'. The second user is 'Operator -' with a blue button labeled 'Operator' and a callout 'User's roles'. At the bottom left is a 'Back' button.

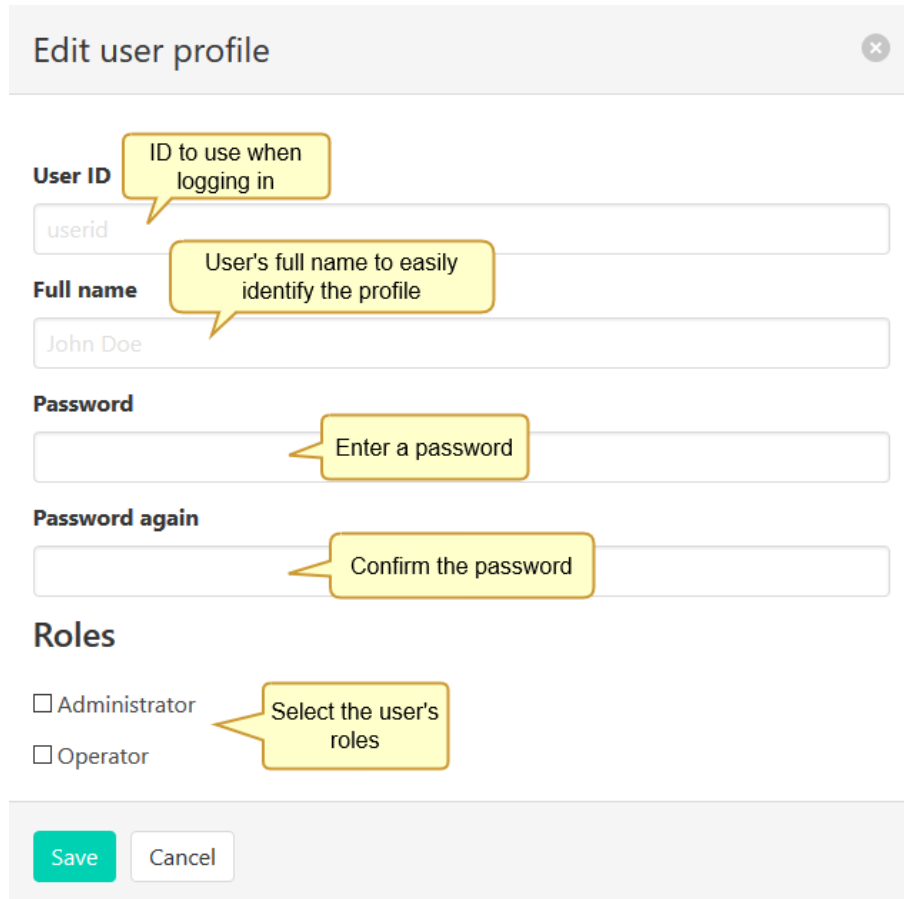
8.1 User Roles

A user may have one of the following roles:

Administrator	Full access to configure and manage DCMQ components
Operator	Access to only manage queues and view DCMQ status

We recommend creating a user profile for each person operating DCMQ and assign the appropriate role to avoid accidental changes to the configuration and prevent unauthorised access.

8.2 Adding A User



The screenshot shows a web form titled "Edit user profile" with a close button (X) in the top right corner. The form contains the following fields and callouts:

- User ID**: A text input field containing "userid". A yellow callout bubble points to it with the text "ID to use when logging in".
- Full name**: A text input field containing "John Doe". A yellow callout bubble points to it with the text "User's full name to easily identify the profile".
- Password**: A text input field. A yellow callout bubble points to it with the text "Enter a password".
- Password again**: A text input field. A yellow callout bubble points to it with the text "Confirm the password".
- Roles**: A section with two checkboxes: ☐ Administrator and ☐ Operator. A yellow callout bubble points to this section with the text "Select the user's roles".

At the bottom of the form are two buttons: a green "Save" button and a white "Cancel" button.

Enter a new User ID, the user's full name to easily identify the user profile, password and roles and click 'Save'.

8.3 Changing a User's Password

Edit the user and enter a new password, confirm it and click 'Save'.

9 Support

9.1 Support Contact

Please direct all support requests via our support form at:

<https://www.futurezen.com.au/support>

A response should be received within 1-2 working days.

9.2 Warranty

Software defects identified within 12 months of purchasing a license will be rectified free of charge.

All other support requests will be charged according to the fee schedule on the Future Zen website.