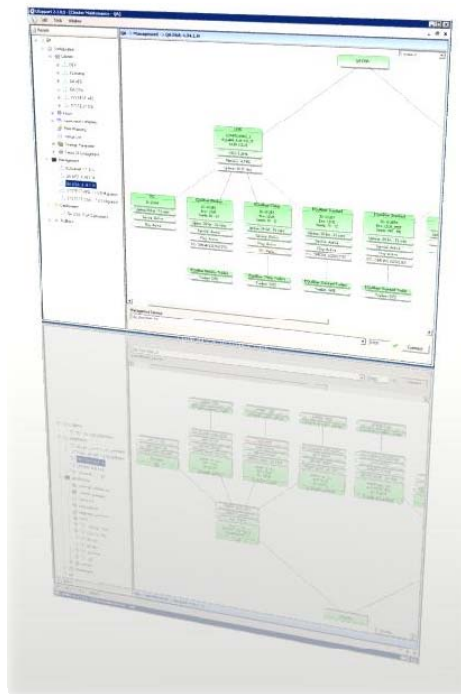


USupport User Guide

v1.0

For USupport 2.7.x.x

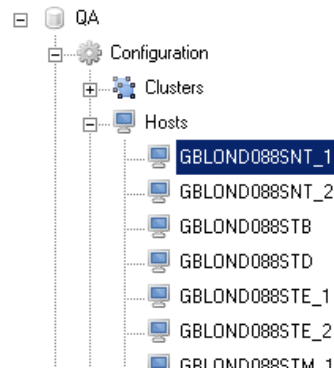


Hosts Configuration

USupport 2.7.x.x separates the configuration of a host away from configuration of an environment. This allows configurations to be seamlessly moved between physical machines in addition to reducing the complexity of mirroring environment configurations between standard and DR deployments.

Hosts are administered using the nodes underneath "Hosts" in the main configuration tree. Right clicking and selecting "Modify" will check out a particular host for editing. Selecting a specific host will open the settings dialog for a particular host. The host configuration dialog remains the same as in previous versions of USupport.

Right clicking and saving the host will immediately update the settings for a particular host. There is no need to check out a cluster and save it in order to update it with the new host settings. If a snapshot has already been created for deployment this will NOT be updated with the new host settings unless the snapshot is recreated.



The following table describes each of the available options when configuring a host and what their affect on the deployment is.

Paths

Host	The physical host name of the target machine on the network
Port	The port that the USupport service is listening on (default 8085)
Service Account	The account name that the EQuAl services will be installed under
Service Password	The password associated with the service account
EQuAl Directory	The physical disc path where EQuAl will be installed to on the host
Network Path	The network path which will point to the EQuAl installation. Enter a username and password if one is required to access the path.

RV Transports

Click the "New Transport" button to add transports. Each transport consists of a description, service, daemon and network. On deployment the settings entered here will be written to RVTransports.txt. The text entered in the description text box needs to be present in the RVTransports.txt file copied from the bundle in order for it to get overwritten. So for example to overwrite the default GENERAL_TRANSPORT block the settings would be as follows:

Default transport block	USupport Configuration	Result
~~~ NONE 0 ID 1 TYPE NET DESCRIPTION	Description: GENERAL_TRANSPORT Service: 49252 Daemon: tcp:7500 Network: ;239.15.199.35	~~~ NONE 0 ID 1 TYPE NET DESCRIPTION GENERAL_TRANSPORT

GENERAL_TRANSPORT SERVICE # DAEMON # NETWORK # QUEUE GENERAL_QUEUE ++		SERVICE 49252 DAEMON tcp:7500 NETWORK ;239.15.199.35 QUEUE GENERAL_QUEUE ++
-----------------------------------------------------------------------------------------	--	-----------------------------------------------------------------------------------------

### WOMBAT Config / WOMBAT SIC

Settings entered under the "WOMBAT Config" tab overwrite the configuration found in WombatConfig_Trader.txt. Entries under the "WOMBAT SIC" tab overwrite settings in the WombatConfig_SIC.txt config file. These files must be present in the bundle to get overwritten. Settings are overwritten as follows:

Middleware	Overwrites the MIDDLEWARE setting for this host. This is usually set to lbm or wmw
MAMA Params	Overwrites the MAMA_PARAMS section
MAMDA_Params	Overwrites the MAMDA_PARAMS config file section

### Mama Properties

Entries in the section overwrite the mama.properties file. Configuration in the "Additional Settings" textbox is written directly to the file. If desired mama.properties transport settings can be specified by clicking the "+" icon in the top right corner of the control and editing the displayed values. The output from these controls will be generated during deployment and written to mama.properties.

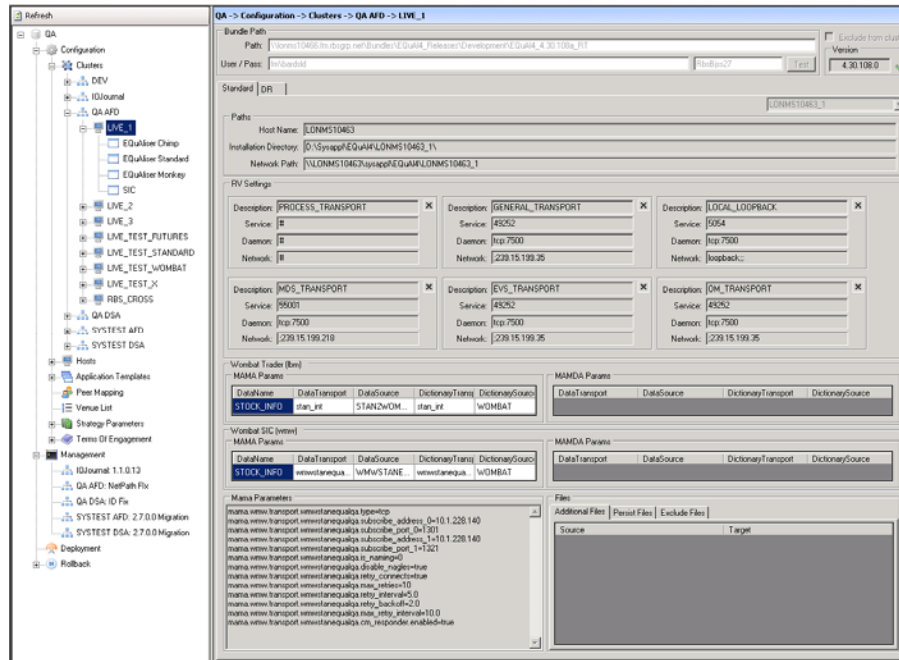
### Advanced

Using the settings in this tab it's possible to control the behaviour of certain files during deployment. The settings are treated as follows:

Additional Files	Specify any additional files that should be copied. These may exist outside of the bundle directory. Specify the source search string in the source column and the target directory in the target column.
Persistent Files	Files matching the search string entered into the source column will not be removed during a deployment. For example to keep all .txt files in the \Input\ directory which start with VFStocks enter "Input\VFStocks_*.txt"
Exclude Files	These are files which should not be copied from the bundle directory to the target host. For example to prevent the copying of the template mama.properties file so it does not overwrite the file which we generate enter "Config\mama.properties"

# Environment Configuration

The configuration for a particular cluster is handled by selecting the environment from under the root node of a particular cluster. In the following screenshot "LIVE_1" is selected. A readonly view of the host is included for verification - changes to the host should be carried out under the host node. This process is for configuring the bundle path to the EQuAl binaries along with the target hosts for both standard and DR installations.



## Standard / DR Tabs

The tabs marked Standard and DR allow the user to switch between DR and Standard mode, select a host for each of these scenarios and review the host configuration for each of them independently. The underlying configuration (installed applications, EQuAl version etc) will always match between standard and DR configurations.

## Bundle Path

The deployment bundle should also be specified at this stage. If the network path where the bundle is stored requires a user name and a password they should also be specified. Failure to specify the correct user name and password will prevent files being copied correctly at the deployment stage - even if the machine where the USupport client is running has access to the bundle path it must also be available from the target host.

## Exclude From Cluster

The selected environment can be temporarily excluded from the cluster by checking the "Exclude from cluster" box and carrying out a deployment. This will leave all configuration in place however excluded peers will not be written to other hosts in the environment and services for the excluded cluster will not be installed. When excluding hosts from a cluster all hosts within the cluster must be deployed in order for the peer mappings to be configured correctly.

**Version**

This text box shows the detected version of EQuAliser.exe from the specified bundle path.

**Host Selection**

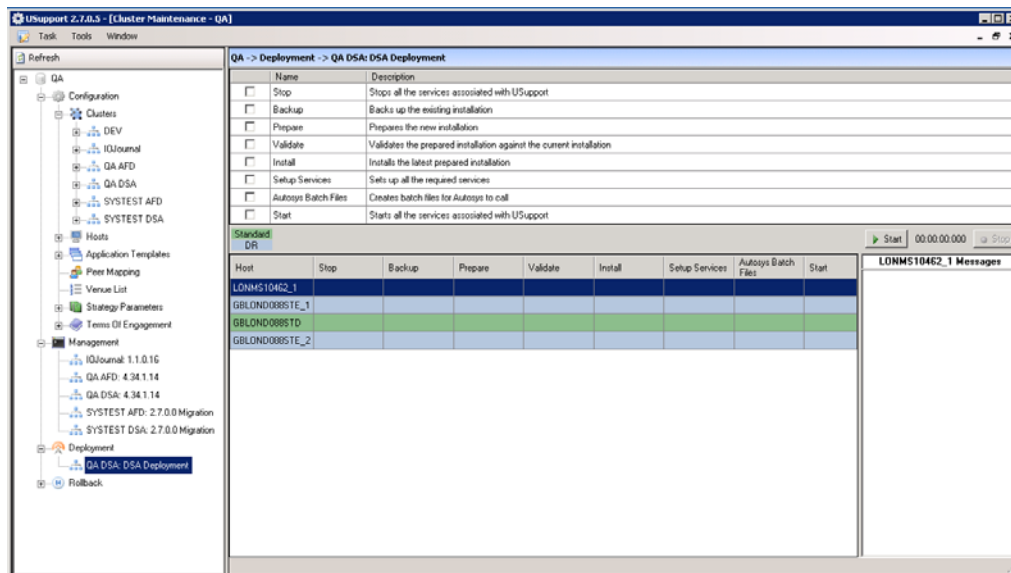
The drop down at the top right hand corner of the configuration screen allows the host to be selected. Choose any previously configured host for the deployment - this will import all host settings (paths, rv, wombat, mama.properties etc)

## Deployment

In order to create a deployment snapshot first configure hosts, applications and environments. Once a given cluster has been saved; right click on the cluster name in the main USupport tree. Select "Create Snapshot" from the cluster. In the create snapshot dialog enter a suitable comment (usually the CR number for a production release or the latest version number for QA). Finally select the environments which will be deployed from the list. Use the following table to determine if all hosts should be deployed or only the subset for which configuration has been modified.

Deployment	Scenario
All hosts	- A host has been removed or added to the cluster    - In application has been added or removed from the cluster    - The ID of an EQuAliser has been changed    - A host has been excluded/included from the cluster
Subset of hosts	- Any configuration change to a specific application    - EQuAl version change

Once a deployment has been created it will appear under the "Deployment" node in the main tree, selecting this will result in a view similar to the screenshot below. The hosts which will be affected by this deployment are listed in the second panel. Hosts marked in green are standard host, DR hosts are shown in blue. Log messages from the selected host will be shown in the panel on the right.



Select from the deployment stages in the top panel and click start to carry out a deployment. The stages and the actions they carry out are defined in the following table. All hosts must complete a given stage before any host can move to the following stage.

Stage	Action
Stop	Stop ALL services prior to deployment - Note that this will stop <b>ALL</b> services in the cluster (even those not marked for deployment). If this is not the desired action then the hosts being deployed to must be manually stopped using the management screen.

Backup	Backup the existing EQuAl installation. This will copy the contents of Input, Config and Bin directories to a Backup folder under the EQuAl installation path. This phase must be selected in order for the rollback option to function correctly.
Prepare	This stage copies the contents of the bundle directory to the target host. Files are copied to a Staging directory under the EQuAl installation path. Settings configured at the host and application level are written to the EQuAl configuration files.
Validate	WinMerge is invoked comparing the contents of the staging directory with the current installation directory - this allows a precise comparison between the files which are currently installed and the files they are about to be overwritten with.
Install	Files are copied from the staging path to the EQuAl installation path. This is the first destructive stage of a deployment. Up until this point in the deployment no live files have been modified and the deployment can be backed out of without carrying out a rollback or redeployment.
Setup Services	The Equal services are created.
Autosys Batch Files	Batch files are created for autosys to call. Each deployment modifies the batch files so autosys only starts and stops the correct services.
Start	Starts ALL hosts in the cluster.

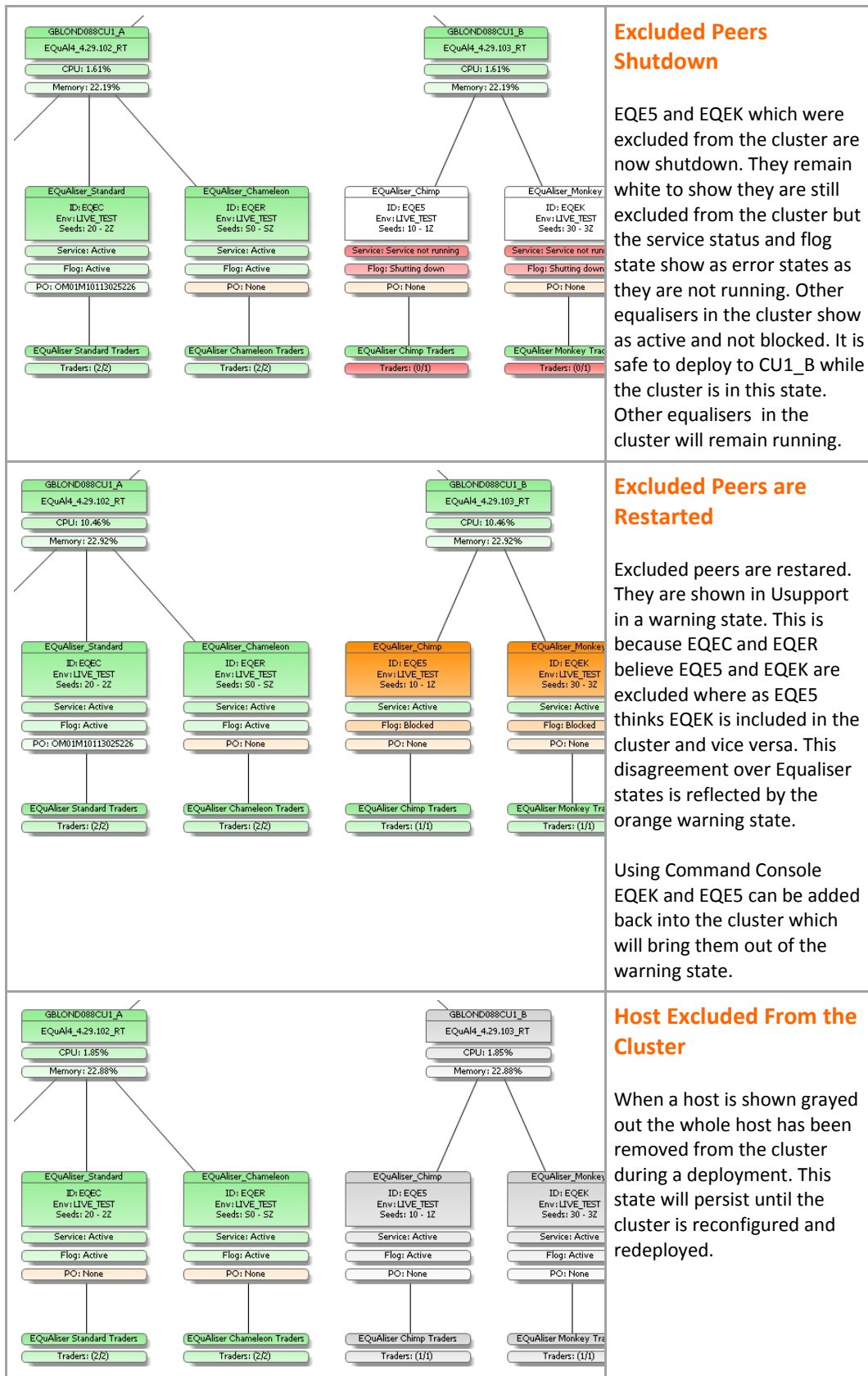
Stages can be re-run as many times as required, however, no changes made to the configuration will be deployed unless a new snapshot is created.

Right clicking on the corresponding node allows the snapshot to be marked as either "Complete" or "Failed". Once marked as complete the management screen is updated to reflect the most recent changes to the cluster. If it's marked as failed the management screen will not be updated.

# Management Screen Status

The following table shows some of the possible cluster states as shown in the Usupport management screen and explains their meaning.

	<b>Active Host</b>  Diagram shows an active host in a cluster. No nodes are in an error state. The last portfolio order for chameleon is highlighted as a warning as no orders have been assigned yet and Equaliser_Standard shows the last assigned portfolio order.
	<b>Peers Excluded Using Command Console</b>  Equaliser_Chimp and Equaliser_Monkey have been removed from the cluster using command console and are shown in white. SIC is still initialising and is active but with an unknown flog state.



LIVE  
LONMS10462_1  
EQuAl4_4.30.112_RT  
{4.30.112.0}

CPU: 0.22%

Memory: 4.73%

Uptime: 80.9 days

LIVE  
GBLOND088STE_1  
EQuAl4_4.30.112_RT  
{4.30.112.0}

CPU: 0.48%

Memory: 6.95%

Uptime: 2.14 days

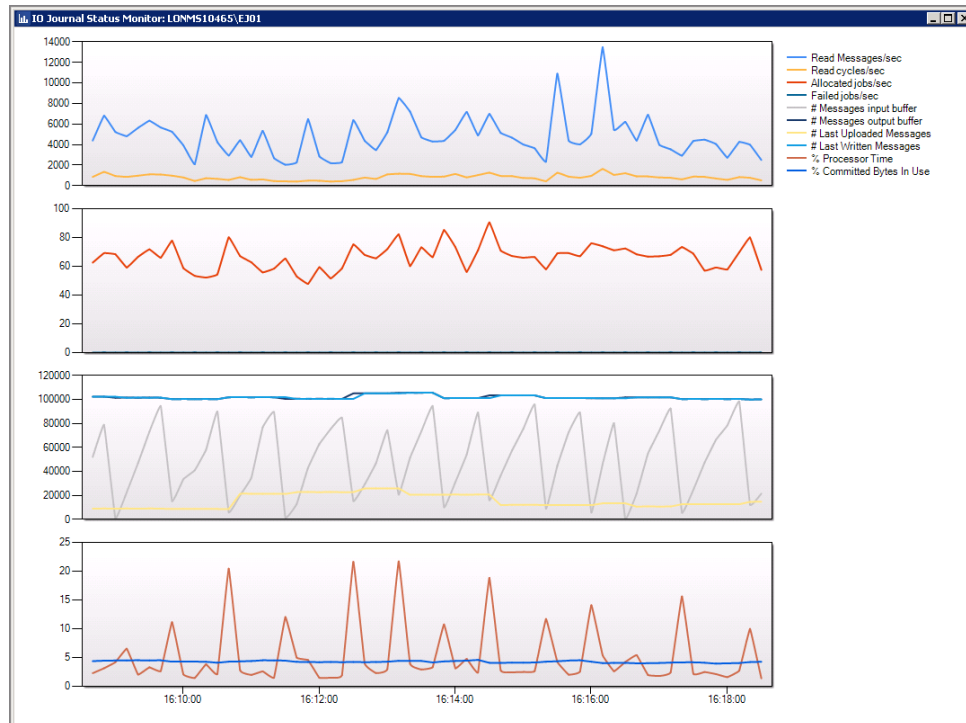
### Standard / DR Hosts

Use the combo box at the top right of the management screen to switch between Standard and DR view. DR hosts are marked in blue, standard hosts are displayed in green.

# IOJournal Status Monitor

IOJournal logs a number of performance variables using standard windows performance counters. Some of these counters are available directly from Usupport to allow IOJournal performance to be monitored throughout the day. Historical statistics are monitored via spotfire however to get a live view of IOJournal activity use the following procedure.

First view the IOJournal cluster from the Usupport management screen, right click on the IOJournal node and select "IOJournal Status" from the context menu. This will display the following realtime graphs:



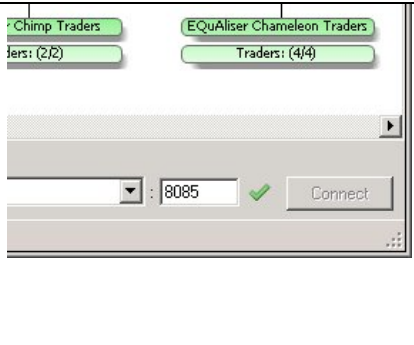
The parameters shown are defined as in the table below:

Performance Counter	Description
Read Messages/sec	The total number of messages/sec read across all hosts
Read Cycles/sec	The total number of cycles/sec read across all hosts
Allocated Jobs/sec	The number of jobs allocated by the thread pool each second
Failed Jobs/sec	The number of failed jobs per second.
# Messages input buffer	The current number of messages in the input buffer. These are messages which have been read into the cache but not fully processed.
# Messages output buffer	The number of messages in the output buffer. These are messages which are pending being written to the database.
# Last Uploaded Messages	The number of messages written to the database during the last write operation

# Last Written Messages	The number of messages written to the interpreted logs in the last operation
% CPU Time	IOJournal CPU utilisation for the IOJournal host
% Committed Bytes in use	The total memory utilisation for the IOJournal host

# USupport Command Console

USupport includes functionality to safely add or remove EQuAlisers from a cluster. This functionality is available from the management screen in USupport and requires a valid command console connection.



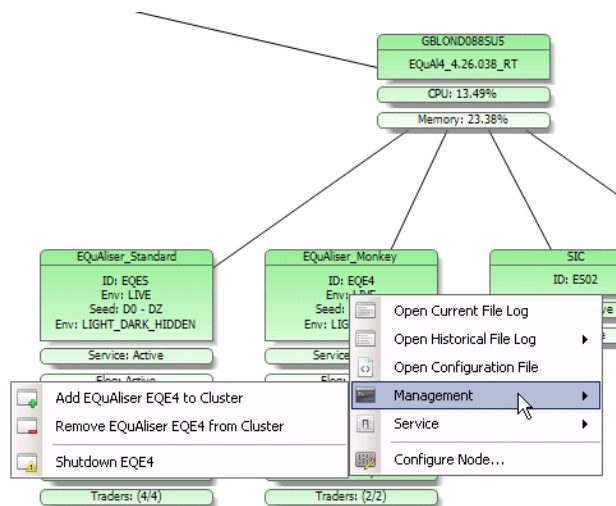
### Connect to the Management Service

In order to connect to the management service go to the management screen for the cluster that requires administering and select the host which will be used to send the management commands from the drop down. Click on the **Connect** button at the bottom right hand corner of the management screen in order to activate the connection. A successful connection is denoted by a green tick next to the connect button.

## EQuAliser Command Console Actions

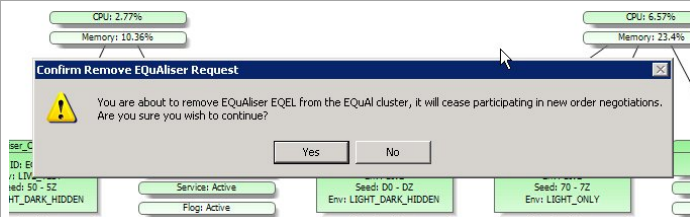
After connecting to the command service the cluster management view will allow access to the command console functionality via the management menu. The management context menu is available via a right click on the relevant Equaliser node from the management view.

The context menu at the host level will allow the exclusion / inclusion of all equalisers under a given cluster.



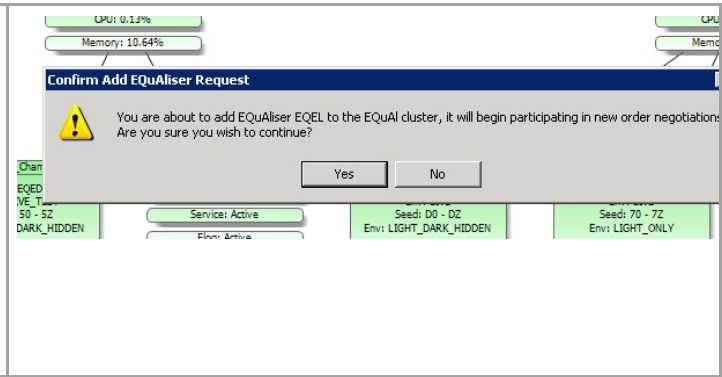
## Remove EQuAliser from cluster

To remove a specific equaliser from a cluster right click on the equaliser node in the management screen and select **Management -> Remove Equaliser EQEX from cluster**. Then simply click **Yes** when prompted to confirm the action.



## Add a removed Equaliser back into the cluster

To add a removed Equaliser back into a cluster right click on the Equaliser node in the management screen and select *Management -> Add Equaliser EQEX to cluster*. Then simply click *Yes* when prompted to confirm the action.



# USupport Order Cancellation

Usupport includes functionality to send RV cancel messages to EQuAL. This functionality is available from the management screen in Usupport. Usupport version 2.5.1.0 is the earliest version to support this feature. Two modes of cancellation are available; either all the orders from a given trader, or specific orders can be cancelled.

Chimp Traders  
Traders: (2/2)

EQuAliser Chameleon Traders  
Traders: (4/4)

8085

Connect

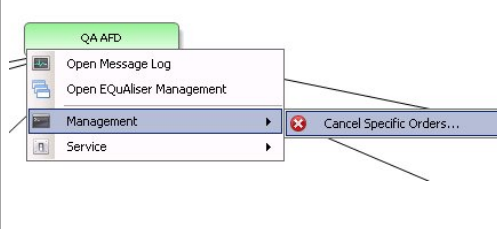
### Connect to the Management Service

In order to connect to the management service go to the management screen for the cluster that requires administering and select the host which will be used to send the management commands from the drop down. Click on the **Connect** button at the bottom right hand corner of the management screen in order to activate the connection. A successful connection is denoted by a green tick next to the connect button.

## Cancel Specific Portfolio Orders

### 1. Open Order Cancellation Window

To cancel a specific set of orders right click on the root node for the cluster which contains the orders which require cancellation. Thne select **Management->Cancel Specific Orders** from the context menu.



### 2. Import List of Portfolio Order References

Click **Import** to load a csv file containing the list of portfolio orders that need to be cancelled or enter the order references in the appropriate column manually. Next click on **Scan Traders** to search the flog files to determine a mapping between order reference and trader Id. The state column will show which orders were found and their corresponding trader Id. Order references which can not be found are shown in orange. The action column allows the user to select which cancellation messages are sent and which are ignored. If the trader cannot be found automatically it can be manually entered by the user in the trader column. If traders are entered manually then the action column must be changed from Ignore to send.

Cancel Portfolio Orders			
	Portfolio Order Reference	Trader	State
	OM01M10013027447	ET91	Found
	OM01M10013027449	ET92	Found
	OM12345678912345	Unknown	Missing
	OM01M10013027451	ET92	Found
*			

0 Information 16 Message 0 Warning 0 Er

Time	Message
11:28:38	Finished scanning for OM01M10013027449: Found
11:28:38	Finished scanning for OM01M10013027451: Found
11:28:38	Done scanning for traders
11:29:10	Trader scan reset
11:29:10	Preparing to scan traders for portfolio orders
11:29:11	Finished scanning for OM01M10013027447: Found
11:29:11	Finished scanning for OM01M10013027449: Found
11:29:11	Finished scanning for OM01M10013027451: Found
11:29:11	Finished scanning for OM12345678912345: Missing
11:29:11	Done scanning for traders

### 3. Send Cancellation Messages

Click the **Cancel Orders** button to send cancellation messages to the discovered traders. As each cancellation message is sent the corresponding row will turn green.

Compass should show the orders as cancelled shortly after the command has been sent.

Cancel Portfolio Orders			
	Portfolio Order Reference	Trader	State
▶	OM01M10013027447	ET91	Cancelled
	OM01M10013027449	ET92	Cancelled
	OM12345678912345	Unknown	Missing
	OM01M10013027451	ET92	Cancelled
*			
0 Information 21 Message 0 Warning 0 Er			
Time	Message		
11:29:11	Finished scanning for OM01M10013027447: Found		
11:29:11	Finished scanning for OM01M10013027449: Found		
11:29:11	Finished scanning for OM01M10013027451: Found		
11:29:11	Finished scanning for OM12345678912345: Missing		
11:29:11	Done scanning for traders		
11:39:21	Preparing to send cancellation messages		
11:39:22	Sending cancel command for: OM01M10013027447 to ET91		
11:39:22	Sending cancel command for: OM01M10013027449 to ET92		
11:39:22	Sending cancel command for: OM01M10013027451 to ET92		
11:39:22	All messages sent		

### Cancel All Orders for a Specific Trader

In the management screen right click on the host that contains the trader which requires cancellation. **Select Cancel Portfolio Orders** this will create a dropdown with a list of active traders for this host. Click on the trader which you want to cancel and await for the confirmation message.

