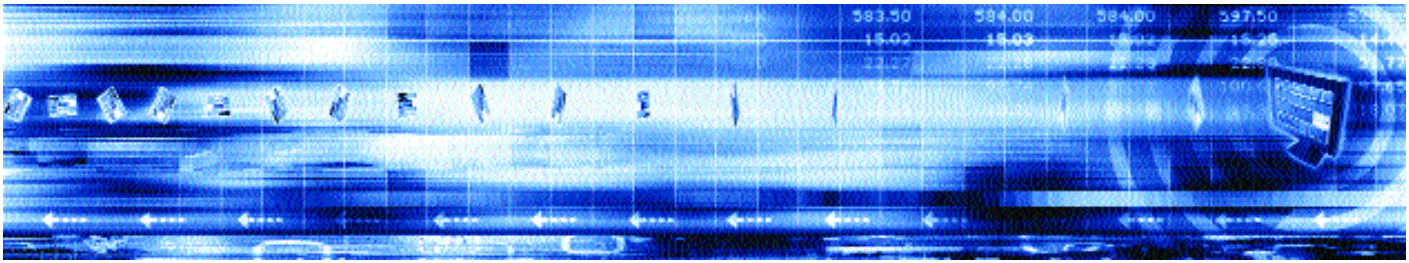

CAPLIN ENTERPRISE MANAGEMENT CONSOLE 4.0

Getting Started Guide

June 2005

1 Preface

1.1 What this document contains

This document describes how to configure Caplin's Enterprise Management Console.

This guide assumes that the user has a Java Virtual Machine (JVM) version 1.5 or later installed and added to the classpath. This is the minimum requirement in order to run JMX monitoring.

1.2 Who should read this document

This document is intended for people who want to install and configure the Enterprise Management console to monitor Caplin's real-time data architecture.

1.3 Typographical conventions

This document uses the following typographical conventions to identify particular elements within the text.

Type	Use
Arial Bold	Other sections and chapters within this document.
Arial Italic	Parameter names and other variables.
Times Italic	File names, folders and directories.
`Courier`	Program output and code examples.
❖	Information bullet point
■	Instruction

1.4 Feedback

Customer feedback can only improve the quality of Caplin product documentation, and we would welcome any comments, criticisms or suggestions you may have regarding this document.

Please email your thoughts to documentation@caplin.com.

2 Server-side Configuration for Caplin Products

2.1 Configuring Caplin Liberator

As a prerequisite for using JMX Monitoring, the user will need version 4 of the Caplin Liberator. The Liberator will be supplied with some predefined configuration files that will need to be modified in order to use JMX Monitoring. The files that will require modification are:

- *rttpd.conf* (Caplin Liberator configuration file)
- *jmx.conf* (JMX Monitoring configuration file)
- *mftp.conf* (socket monitoring configuration file)

The Liberator will also need a license file that allows monitoring to be enabled.

rttpd.conf

Some of the JMX Monitoring options will be supplied with the Caplin Liberator, however these options will be commented out by default. The user will need to uncomment the following lines in this file in order to use JMX Monitoring. The *drmi.client.port* is normally set to one higher than the *rmi-registry-port* in *jmx.conf*. Please refer to the Liberator Administration Guide for further option details.

```
## Monitoring#######################################################
#
#
monitor-moddir  %r/lib
#monitor-plugin mftp       #uncomment this to allow socket monitoring
#monitor-plugin jmx        #uncomment this to allow jmx monitoring

process-usage-period  10.0

# Username and password for accessing monitoring
add-monuser
           user            admin
           pass            admin
end-monuser

peer-monitor-interval      10

log-monitor-level          DEBUG

...
```

```
## JAVA ##############################################################
#
# the following lines should be set to the correct jvm location for solaris or
# linux respectively
jvm-location          /usr/local/jdk1.5.0/jre/lib/sparc/libjava.so
#jvm-location         /usr/local/jdk1.5.0/jre/lib/i386/libjava.so

# Any additional options for the JVM can go here:
jvm-global-classpath  %r/lib/java/jmx-default-classloader.jar
jvm-global-classpath  %r/lib/java/common-jmx.jar

jvm-options     -Djava.naming.factory.initial=com.sun.jndi.rmi.
registry.RegistryContextFactory
jvm-options     -Drmi.client.port=10001

#set the classpath and environment variables to load the JMX Monitoring class.
add-javaclass
     class-name      com.caplin.management.jmx.JMXController
     class-id        jmx
     classpath       %r/lib/java/dev/ian/jmx-child-classloader.jar
     classpath       %r/lib/java/common-jmx.jar
end-javaclass
```

jmx.conf

The user will need to configure this file as it tells the Caplin Liberator what options to use for the monitoring utility. This file is used to specify the monitoring port and other options that will be used by the Caplin Enterprise Management Console to connect to the Liberator. The only option

that may need to be changed is the *rmi-registry-port* which needs to be a unique port that the Caplin Enterprise Management Console can connect to.

```
#
#  Example Config File for JMX Monitoring Module
#
#  $Id: jmx.conf,v 1.1 2004/09/08 14:05:20 dominic Exp $
#

##################################################################
#
# Debug level
#
# One of either:
# CRIT, ERROR, NOTIFY, WARN, INFO, DEBUG
#
# (These are in descending order of importance and increasing order
#  of logging detail)
#
#################################################################
debug-level   INFO

#################################################################
#
# Hash table size
#
# This value should be about twice the total number of mbeans that
# your system will create
#
#################################################################
jmxcache-hash-size      100000
```

```
################################################################
#
# Port number that the MX4J system listens on for HTTP connections
#
# This is only accessible from the loopback interface
#
################################################################
http-port        -1


################################################################
#
# Classid to use from the add-javaclass groups in the main
# configuration file.
#
# This defaults to jmx
#
################################################################
jmx-classid             jmx

################################################################
#
# Bind name of the registry
#
# This defaults to datasrc
#
################################################################
registry-bind-name     datasrc

################################################################
#
# Port number that the monitoring interface is exposed on
################################################################

rmi-registry-port       10000
```

mftp.conf

This file configures the monitoring plug-in. This plug-in uses a simple text based protocol (see the companion document **Socket Monitoring Guide** for more details).

```
#
#  Example Config File for Socket Monitoring Module
#
#  $Id: //CDev/main/monmods/mftp/mftp-sample.conf#1 $
#


##################################################################
#
# Debug level
#
# One of either:
# CRIT, ERROR, NOTIFY, WARN, INFO, DEBUG
#
# (These are in descending order of importance and increasing order
# of logging detail)
#
##################################################################
debug-level   INFO



#################################################################
#
# Hash table size
#
# This value should be about twice the total number of mbeans that
# your system will create
#
```

```
##################################################################
cache-hash-size 100000


##################################################################
#
# Listen port configuration
#
##################################################################
mftp-port               10002
#mftp-interface         127.0.0.1
```

license file You will also need a new license to enable Monitoring. This will require *jmx monitor* and/or *mftp monitor* modules - please contact Caplin for a license file.

2.2 Configuring Caplin Transformer

As a prerequisite for using JMX Monitoring, the user will need version 4 of the Caplin Transformer. The Transformer will be supplied with some predefined configuration files that will need to be modified in order to use JMX Monitoring. The files that will require modification are:

- *transformer.conf* (Caplin Transformer configuration file)
- *jmx.conf* (JMX Monitoring configuration file)
- *mftp.conf* (socket monitoring configuration file)

The Transformer will also need a license file that allows monitoring to be enabled. This will be discussed at the end of this section.

transformer.conf See the license file requirement details for Caplin Liberator above for details.

jmx.conf This should be configured in the same was as **jmx.conf** on page 5

mftp.conf This should be configured in the same way as **mftp.conf** on page 8

license file See the license file requirement details for Caplin Liberator above for details.

2.3 Configuring Caplin Datasource

As a prerequisite for using JMX Monitoring, the user will need version 4 of the Caplin Datasource. The Datasource will be supplied with some predefined configuration files that will need to be modified in order to use JMX Monitoring. For example the files that will require modification for Datasource for Triarch are:

- *sslsrc.conf* (Caplin datasource configuration file)
- *jmx.conf* (JMX Monitoring configuration file)

Note: *The Datasource will also need a license file that allows monitoring to be enabled.*

sslsrc.conf

This is should be configured in the same way as **rttpd.conf** on page 4.

jmx.conf

The user will need to modify this file as it tells the Caplin Datasource what options to use for the monitoring utility. By default, the only difference between this file and the **jmx.conf** file used in the Caplin Liberator or Caplin Transformer configuration section is the *rmi-registry-port* which needs to be different if the Caplin Liberator or Caplin Transformer are executing on the same physical machine as the Caplin Datasource.

license file

See the licence file requirement details for Caplin Liberator on page 9 for details.

3 Client-side Installation

In order to run the Caplin Enterprise Management Console the user will require JVM 1.5 or later.

3.1 Starting the Caplin Enterprise Management Console

The Caplin Enterprise Management Console is supplied as an executable Java Archive (JAR) file which can be run in two ways.

1 Double click on the file called emc.jar which is located in the directory Caplin Enterprise Management Console kit was installed to. This will start the console provided that the user has set javaw as the default handler for executable JAR files.

2 The user can type the below line in an executable shell at the location in which the Caplin Enterprise Management Console kit was installed.

```
$ java -jar emc.jar
```

This will start the Caplin Enterprise Management Console and a splash screen will load. Then a blank screen will appear.

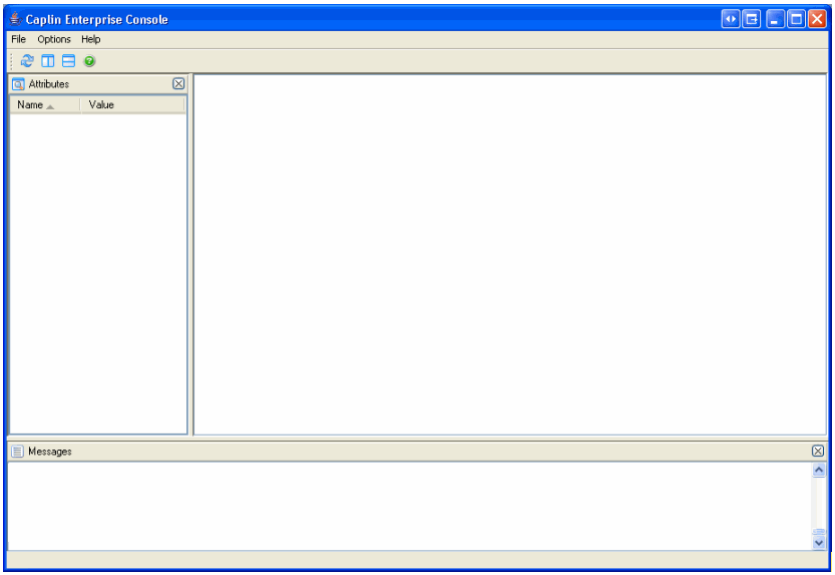

Figure 3-1: Initial screen

This is the overview screen of the Caplin Enterprise Management Console. Next the user will need to add a monitorable Caplin Product. This is done by right clicking in the centre of the main window and selecting Add New DataSource (Figure 3-2).

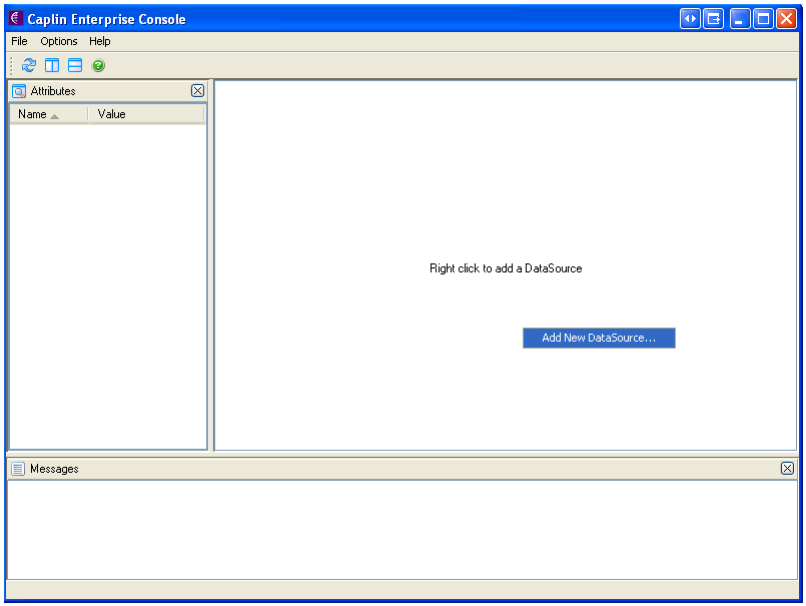

Figure 3-2: Adding new datasource

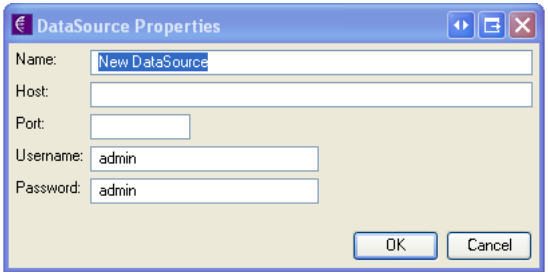

Figure 3-3: Adding a new datasource

3.2 Configuring the Caplin Enterprise Management Console

When the user right-clicks on the centre screen, a new window will appear which will allow the user to enter the details of a new monitorable Caplin Product (Figure 3-3). The user should enter a meaningful name for the product. Then add the IP address or DNS name of the machine that the product is running on. Below that the user must enter the port that JMX Monitoring has been set up on. This will correspond to the *rmi-registry-port* property that was set in the *jmx.conf* configuration file when setting up the server side product (i.e. Caplin Liberator, Caplin Transformer, Caplin Datasource).

Finally the user needs to specify a user name and password that the Caplin Enterprise Management Console can use to access the monitoring. These two properties need to be configured in the configuration file for the Caplin Product (*rttpd.conf*, *transformer.conf* or the Datasource configuration file). See **Server-side Configuration for Caplin Products** on page 4 for more details.

If both the Caplin Enterprise Management Console and the relevant Caplin Product have been configured correctly then the Caplin Product will turn blue and if the user left-clicks once on it then a list of attributes will appear in the left hand column (Figure 3-4). Otherwise the Caplin Product will be red in colour and the attribute column will also be empty. This specifies that the Caplin Enterprise Management Console was unable to connect to the Caplin Product. A brief

explanation of what is wrong is available as a tool-tip which can be viewed by hovering over the Caplin Product using the mouse for a few seconds (Figure 3-5).

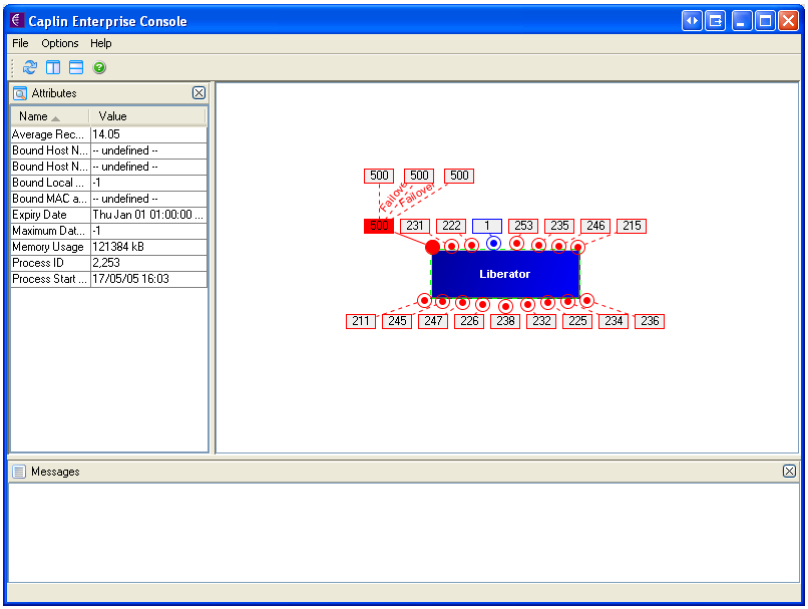

Figure 3-4: Attribute list

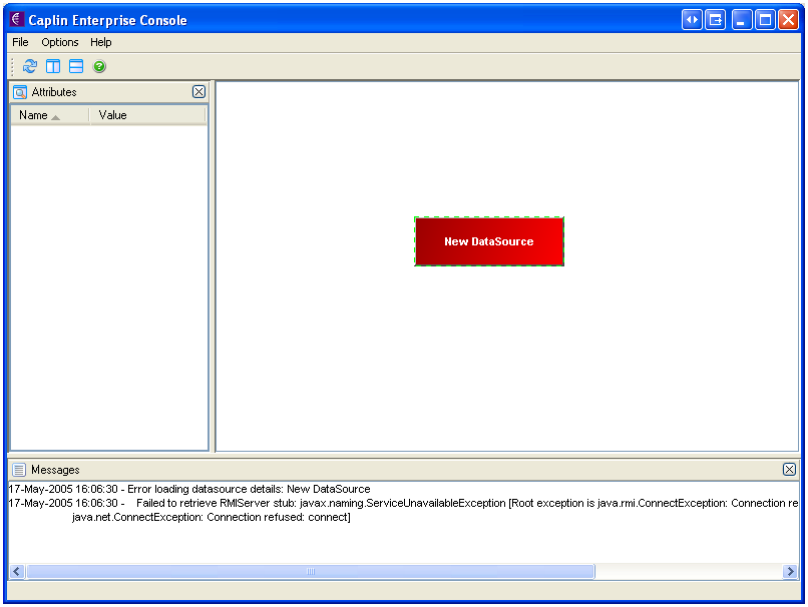

Figure 3-5: Adding a new datasource

The user can add as many Caplin Products as required following the above procedure for each. The Caplin Enterprise Management Console will automatically detect that two Caplin Products

are linked to one another (e.g. a Caplin Datasource is connected to a Caplin Liberator) and link the two (see Figure 3-6).

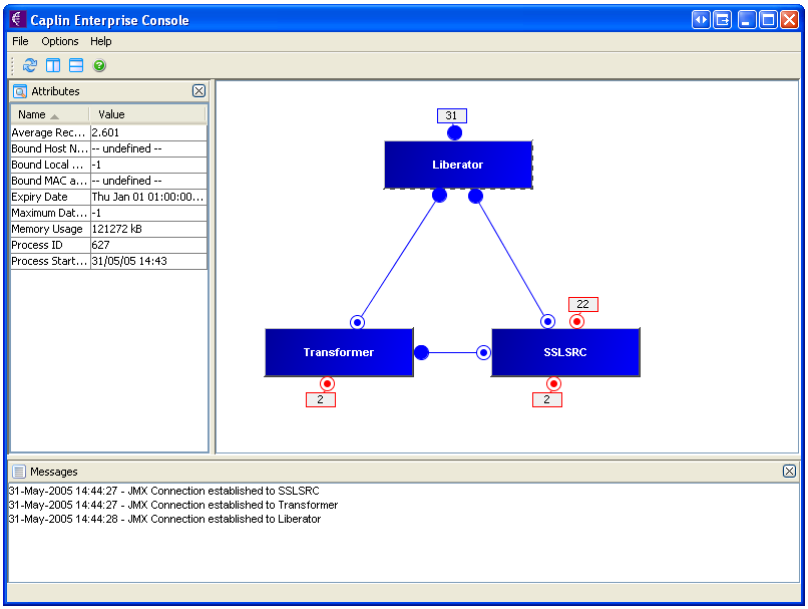

Figure 3-6: Linked products

Next the user should double click on the Product they wish to view. This action will open up the console view. This window contains all the information available about this particular Caplin Product. The views available (i.e. one view is assigned to one tab) will depend on the type of Caplin Product being viewed. The Caplin Enterprise Management Console will determine the

type of Caplin Product being viewed by using a MBean attribute contained within each Caplin Product. Figure 3-7 shows the typical view available for a Caplin Liberator.

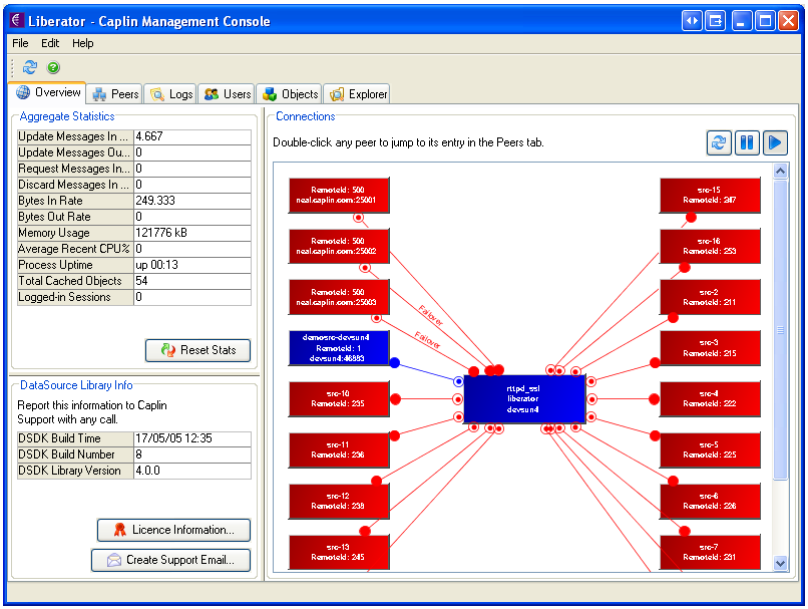

Figure 3-7: Typical Liberator view

At the top of the window the user has a number of tabs available. Each tab describes a different view of the Caplin Liberator. The final tab is the Explorer tab which shows every MBean available in the Caplin Liberator (Figure 3-8). The user can browse through the explorer tree on the left hand side. The user can perform operations on these MBeans if the MBean has any

operations that can be performed on it. The user may wish to view the SERVERTYPE MBean first as this will confirm what type of Caplin product is being viewed.

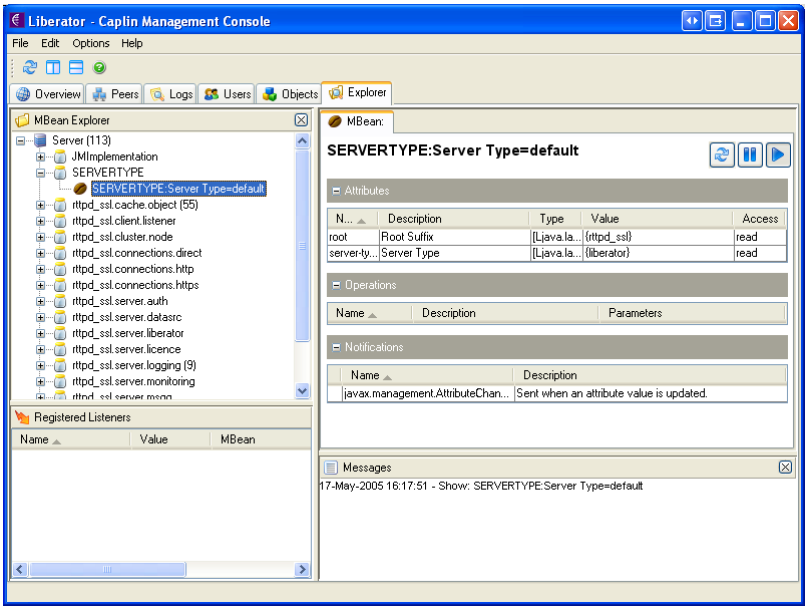

Figure 3-8: Typical Explorer tab view

Please refer to the Help section of the Caplin Enterprise Management Console for further details about the functionality of the console.

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