CAPLIN

Caplin Trader 1.5

Installing Caplin Trader for Evaluation

January 2010

CONFIDENTIAL

Contents

1 Preface

1.1 What this document contains

This document describes how to install Caplin Trader on a Linux server for evaluation purposes. It accompanies the Caplin Trader Evaluation installation package.

It specifically covers deployment of Caplin Trader on the Apache Tomcat Web application server and the MySQL® database server and does not include details of how to deploy this software on other third-party application servers and databases.

The guide assumes installation will take place on one server meeting the requirements described in Installation requirements 8.

About Caplin document formats

This document is supplied in three formats:

- Portable document format (*.PDF* file), which you can read on-line using a suitable PDF reader such as Adobe Reader®. This version of the document is formatted as a printable manual; you can print it from the PDF reader.
- Web pages (*.HTML* files), which you can read on-line using a web browser. To read the web version of the document navigate to the *HTMLDoc_m_n* folder and open the file *index.html*.
- Microsoft HTML Help (*.CHM* file), which is an HTML format contained in a single file.
  To read a *.CHM* file just open it – no web browser is needed.

For the best reading experience

On the machine where your browser or PDF reader runs, install the following Microsoft Windows® fonts: Arial, Courier New, Times New Roman, Tahoma. You must have a suitable Microsoft license to use these fonts.

Restrictions on viewing .CHM files

You can only read *.CHM* files from Microsoft Windows.

Microsoft Windows security restrictions may prevent you from viewing the content of *.CHM* files that are located on network drives. To fix this either copy the file to a local hard drive on your PC (for example the Desktop), or ask your System Administrator to grant access to the file across the network. For more information see the Microsoft knowledge base article at
http://support.microsoft.com/kb/896054/.

1.2 Who should read this document

This document is intended for system administrators who need to install the evaluation version of Caplin Trader.

1.3 Related documents

Caplin Trader and Caplin Xaqua documents

The following documentation is included within the Caplin Trader installation kit. It is located within the *docs* directory in the home directory of Caplin Trader (see Directory structure 26).

- **Caplin Xaqua Overview**

  A business and technical overview of Caplin Xaqua.

- **Caplin Trader Overview**

  An overview of the Caplin Trader trading application and its supporting platform.

- **Caplin Trader Architecture**

  Describes the architecture of Caplin Trader and identifies the areas in which Caplin Trader can be integrated with your company's own and third-party systems.

- **Caplin Trader Client: Customizing the Appearance**

  Describes how to configure the on-screen layout and 'look and feel' of Caplin Trader.

- **Caplin Trader XML Configuration Reference**

  Describes the XML-based configuration that defines the layout of Caplin Trader and other aspects of its appearance, through webcentric.

- **Integrating External Flash/Flex Content into Caplin Trader**

  Describes the various methods for integrating external Flash or Flex content in a Caplin Trader application.

- **Integrating Caplin Trader with a Trading System**

  Describes how the Caplin Trading DataSource allows you to integrate Caplin Trader with your existing Trading System.

- **Caplin Trader Trade Model XML Reference**

  Describes the XML-based configuration that defines the Trade Models in Caplin Trader.

Other Caplin product documents

Product documentation and administration guides are included for the following components.

- **Liberator 4.4 Administration Guide**
- **Transformer 4.4 Administration Guide**
- **SSLsrc 4.2 Administration Guide**

  SSLsrc is the Caplin DataSource adapter for Reuters RMDS – see the About the evaluation kit 6.

The documentation is located in the *doc* directory of the component's install kit. For example, if the the Caplin Trader evaluation software has been installed in */home/CaplinTrader*, the Liberator documentation would be in */home/CaplinTrader/kits/Liberator/latest/doc/*

1.4 Typographical conventions

The following typographical conventions are used to identify particular elements within the text.

Type	*Uses*
aMethod	Function or method name
aParameter	Parameter or variable name
/AFolder/Afile.txt	File names, folders and directories
`Some code;`	Program output and code examples
The `value=10` attribute is...	Code fragment in line with normal text
Some text in a dialog box	Dialog box output
`Something typed in`	User input – things you type at the computer keyboard
XYZ Product Overview	Document name
◆	Information bullet point
■	Action bullet point – an action you should perform

Note: Important Notes are enclosed within a box like this.
Please pay particular attention to these points to ensure proper configuration and operation of the solution.

Tip: Useful information is enclosed within a box like this.
Use these points to find out where to get more help on a topic.

1.5 Feedback

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

Visit our feedback web page at https://support.caplin.com/documentfeedback/.

1.6 Acknowledgments

Adobe® Reader is a registered trademark of Adobe Systems Incorporated in the United States and/or other countries.

Windows is a registered trademark of Microsoft Corporation in the United States and other countries.

Sun, *Sun JRE* and *Java*, are trademarks or registered trademarks of Sun Microsystems, Inc. in the U.S. or other countries.

Linux® is the registered trademark of Linus Torvalds in the U.S. and other countries.

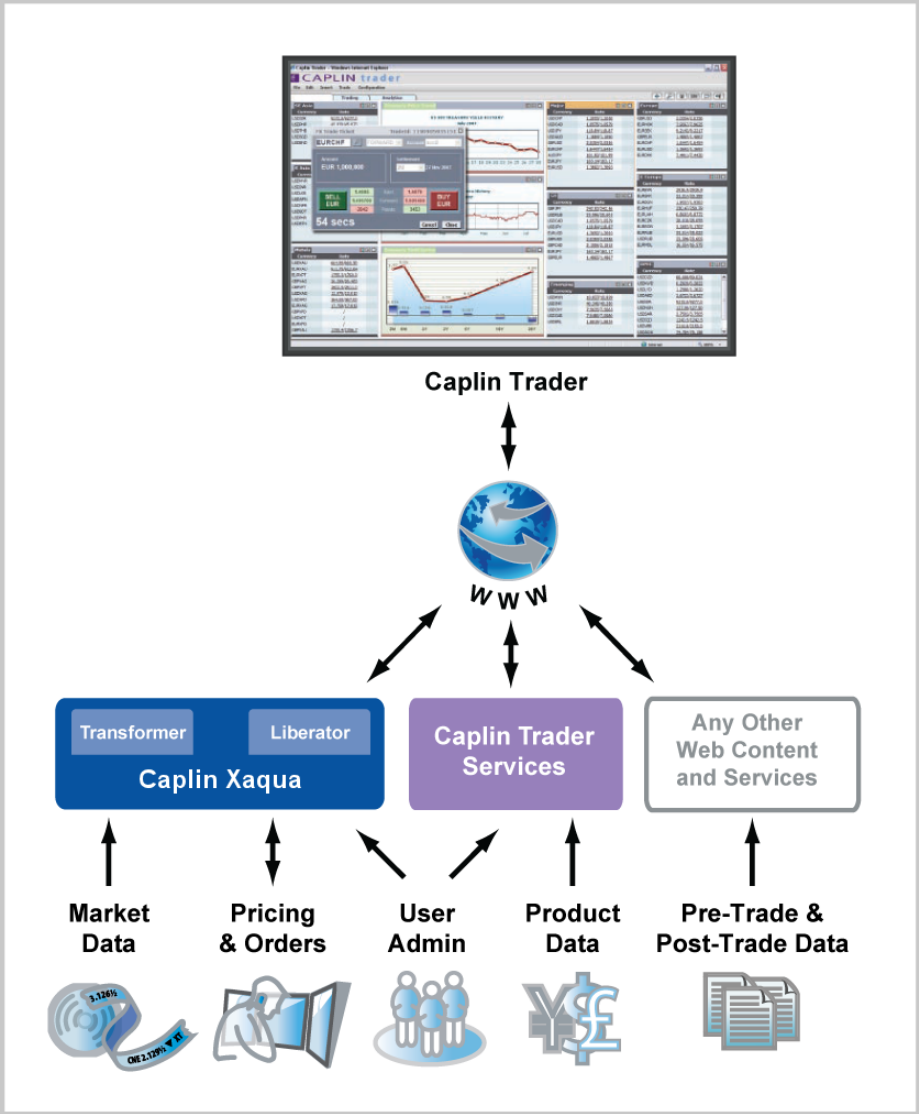
MySQL is a registered trademark of MySQL AB in the United States, the European Union and other countries.

2 Overview of Caplin Trader

Caplin Trader is a Caplin Xaqua client application that provides a framework and comprehensive set of components for constructing browser-based trading applications implemented in Ajax. A cost-effective alternative to the more traditional sell-side to buy-side offerings, it allows customers to their end-users trading access to a broad range of instruments via a single Web front-end.

Caplin Trader delivers a sophisticated trading screen direct to users' desktops, with nothing to install and no changes to security settings or firewalls. Users can access Caplin Trader from any major browser, and its highly configurable user interface is easy to customize and extend to meet your exact needs.

The diagram below gives an overview of the architecture of Caplin Trader.



Caplin Trader – Architectural Overview

- **Caplin Trader** is a platform neutral Web application that provides a rich trading workstation in a browser. It is based on an Ajax framework called webcentric, into which you can place any Web content created in HTML, Ajax, Flex, or any other similar technology. It interfaces to Caplin Xaqua and Caplin Trader Services.
- **Caplin Trader Services** is a set of application services that manage persistence, user administration, and product data.
- **Caplin Xaqua** is a single-dealer platform that enables banks to deliver multi-product trading direct to client desktops. It uses third generation financial Web technology, and provides an abstraction layer allowing multiple trading systems and data sources to be connected to multiple client applications.

These three major components combine to produce a complete online trading platform, which can be customized and extended to meet your precise requirements using the configuration options, APIs, and SDKs provided.

You can also incorporate any other Web content into Caplin Trader, and make use of third-party Web-based services.

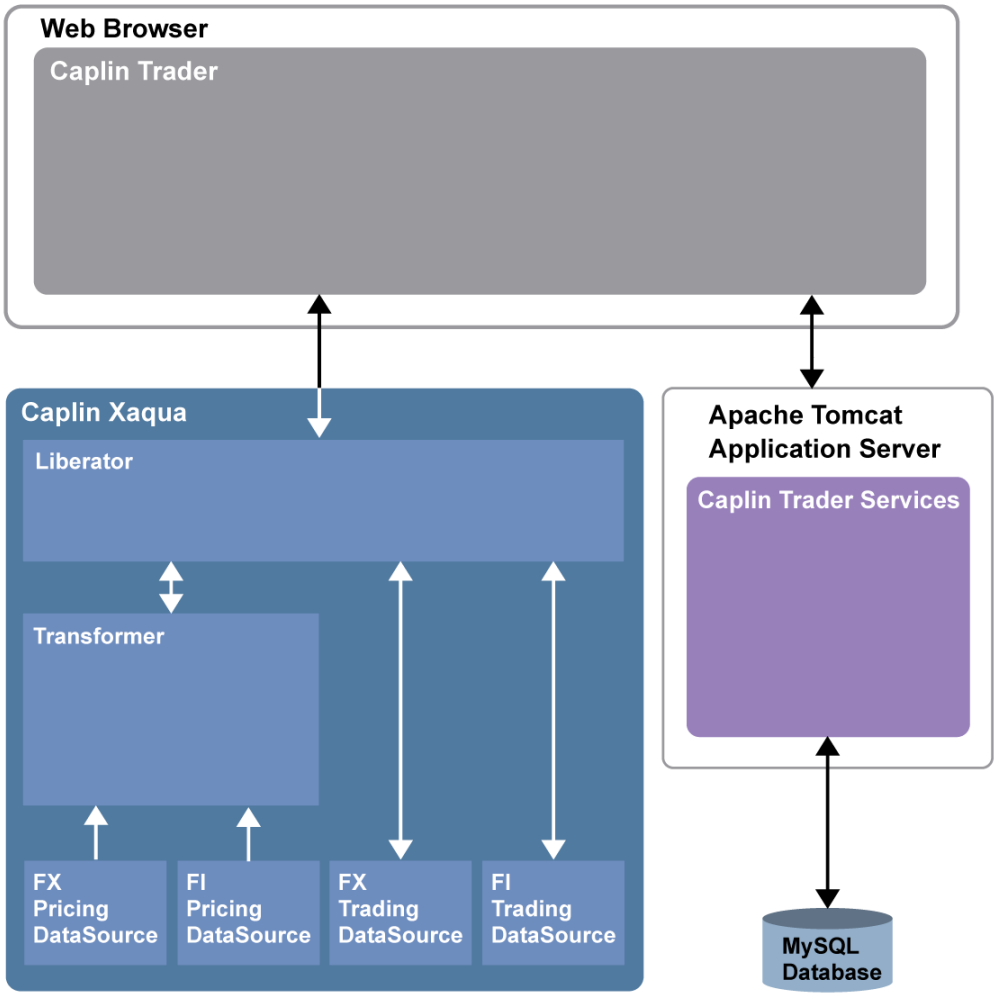
Tip: For more information about Caplin Trader, see the documents **Caplin Trader Overview** and **Caplin Trader Architecture**.

3 About the evaluation kit

The evaluation kit contains all you need to install and run a version of Caplin Trader that is pre-configured to implement an FX trading system for evaluation purposes.

It contains:

- Caplin Trader and its associated Caplin Trader Services.
- Caplin Xaqua Components.
- Third-party components.



Components in the Caplin Trader evaluation kit

Caplin Xaqua Components

- Liberator

  Caplin Liberator is a bidirectional streaming server that is used to deliver trade messages and market data to and from subscribing Caplin Trader clients.

- Pricing DataSources

  Pricing DataSources are responsible for delivering real time indicative prices.
  The evaluation kit contains two demonstration Pricing DataSources that provide canned random data, one supplies FX prices, and the other supplies FI prices. The kit also includes an SSLsrc DataSource adapter for integrating Caplin Trader with a Reuters RMDS data feed.

- Trading DataSources

  Trading DataSources are responsible for the interaction between Caplin Trader and a trading system. There are two demonstration Trading DataSources supplied in the evaluation kit, one for FX trading, and the other for FI trading.

- Transformer

  Caplin transformer is a real-time business rules and analytics engine that adds value to the pricing data in the system by means of business processing modules.

Third-party components

Caplin Trader also requires some third-party components to help deliver its functionality.

- A Java application server that hosts Caplin Trader and Caplin Trader Services.

  The evaluation kit contains a version of the Apache Tomcat server.

- A database server that manages persisted data used by Caplin Trader Services (for example, user login information and saved configurations).

  The evaluation kit contains a version of the MySQL database server.

4 Installing the software

To install Caplin Trader, including the associated Caplin Xaqua components, follow these steps in order:

1. Check the installation requirements are met 8.
2. Make sure you have the required installation packages 8.
3. *Define $CT_INSTALL_DIR* 9.
4. Install Caplin Xaqua 10.
5. Install the third-party components 13.
6. Install Caplin Trader 15.
7. Install the product evaluation licenses 17.

4.1 Installation requirements

Linux

The software should be installed on a single server running a Linux implementation that has a version 2.4 or 2.6 kernel.

Java run-time environment

A Sun® JRE™ (version 1.5) is required to run the Java DataSources.

Storage space

Approximately 800 Megabytes of free disk space is required to store the uncompressed software.

A further 1 Gigabyte of free disk space is recommended for storage of run-time log files.

4.2 Supplied packages

Before starting the installation make sure the following three installation packages are available:

- **Caplin Xaqua Package**

  CaplinXaqua-1.X.run

  This package includes the Caplin Xaqua components. The installation process installs and configures Caplin Liberator, Transformer, and the Permission, Pricing, and Trading DataSources.

- **Third Party software Package**

  ThirdParty-1.X.run

  This package contains Apache Tomcat and MySQL server. The installation process installs Tomcat and configures the web access ports. A MySQL server is installed and started, the root password is set, and the Caplin Trader database is installed.

- **Caplin Trader Package**

  CaplinTrader-1.X.run

  This package contains Caplin Trader. The installation process configures this web application and deploys it within the Apache Tomcat application server.

Note: You will also need a set of valid licenses in a package called *licenses-DATE-Company.tar.gz* (see Installing the Caplin product evaluation licenses 17).

4.3 Defining $CT_INSTALL_DIR

- Decide on the directory where the installed Caplin Trader evaluation software is to be located.

  For example */home/CaplinTrader*

- Define an environment variable *$CT_INSTALL_DIR* that resolves to your chosen installation directory.

  For example:

  ```
  export CT_INSTALL_DIR=/home/CaplinTrader
  ```

Note: In the rest of this guide the installation directory where the Caplin Trader evaluation software is located is referred to using the environment variable name *$CT_INSTALL_DIR*

4.4 Installing Caplin Xaqua

The following steps describe how to install Caplin Xaqua, including Liberator, Transformer, and the Java DataSources (Permissions DataSource, Pricing DataSource, and Trading DataSource).

- Set the current directory to the one containing the install kit.
- Change the UNIX permissions for the Caplin Xaqua install script, so that it can be executed:

  ```
  chmod +x CaplinXaqua-1.X.run
  ```

- Run the Caplin Xaqua install script:

  ```
  ./CaplinXaqua-1.X.run $CT_INSTALL_DIR
  ```

  The install script should then display the following (note that references to “Trading Platform” mean “ Caplin Xaqua”):

```
Trading Platform 1.x - starting installation... please wait

Installing Liberator ...Installed
Installing Transformer ...Installed
Installing SSLsrc ...Installed
Installing Benchsrc ...Installed
Installing PricingSourceDataSource ...Installed
Installing TradingDataSource ...Installed
Installing CaplinTraderPipeline ...Installed
Installing ContainerFilteringModule ...Installed
```

  The script then configures Caplin Xaqua for the target environment. It prompts for particular configuration options, namely the hostname, Java location, and port prefix.

> **Tip:** If after installation you wish to change these options, you can do this by editing the file *apps/caplin/CommonConfig/Config_defns.m4*
> See Common configuration for Caplin Xaqua components 34.

Hostname

The script will prompt for a hostname. This is required for the Caplin Xaqua components to reference each other.

```
Set server hostname including domainname
(press enter for 'mylinuxbox.mydomain.com'):
```

- Enter the fully qualified domain name of the installation server, or press the enter key to accept the detected hostname. Supply the *fully qualified* hostname rather than the short DNS name.

  For example: `myhost.mydomain1.mydomain2` *not* `myhost`

  Note the host name for use later in Checking the Caplin Xaqua components have started 20.

Java location

The script will prompt for the path to the Java Run Time Environment that is required to run the Java DataSources, Liberator's Java Authentication module, and the JMX modules for Liberator and Transformer.

```
Set the JRE root directory path (press enter for '/usr/local/java/jre'):
```

- Enter the path to the '*JRE*' directory of the Sun Java Runtime Environment, or press the enter key to accept the indicated default.

SSL Certificate Path

Caplin Liberator supports standard SSL server-side certificates to authenticate the server to the client. If an authority signed certificate named *rttpd.pem* has already been installed, this certificate may be referenced here.

```
Set path to SSL certificates directory (press enter for default
certificate):
```

- Enter the path to the directory containing the pre-installed certificate, or press the enter key to use the default self-signed certificate.

Licenses Path

You should normally have been supplied with a set of Caplin product licenses specifically for the evaluation of Caplin Trader, or alternatively you may have licenses from a previous installation available.

```
Set path to licenses directory (press enter for '$CT_INSTALL_DIR/
licenses'):
```

- If you have previous licenses that can be reused, enter the path to them here.

  Otherwise, press the enter key; you will then install the Caplin product evaluation licenses in a subsequent step (Installing the Caplin product evaluation licenses 17).

  Note that if you press enter to select the default licenses but do not subsequently install any Caplin product evaluation licenses, Caplin Liberator, Transformer, and SSLsrc will only run for 30 minutes at a time.

Runtime User

If started as root, Caplin Liberator may be configured to switch to a runtime user after initialization to provide a secure sandbox for port 80 and 443 connections.

```
Set runtime user for Liberator (press enter for 'myUsername'):
```

- Enter a runtime user or press the enter key to use the existing console session user.

Liberator Interface

Caplin Liberator may be configured to use a specific network interface for client communication.

```
Set interface (ip address) to use for Liberator HTTP
(press enter for '123.123.123.123'):
```

- Enter the network interface IP-address or press the enter key to use the detected interface.

Port prefix

The Caplin Xaqua components use a set of TCP/IP ports for internal communication. These ports start with a common prefix; for example `501xxx`, where the prefix is `501`.

```
Set port prefix for all internal Caplin Platform component communication.
The Liberator HTTP/HTTPS ports may be set later in a separate step.
(press enter for '501'):
```

- Enter the prefix for all Caplin Xaqua ports, or press the enter key to accept the default prefix of `501`.

Liberator HTTP Port

The HTTP port for client communication may be set to any valid port value.

```
Set Liberator HTTP port (press enter for '50180'):
```

- Enter Liberator's HTTP port or press the enter key to accept the default value of `50180`.

  Note the port number for use later in Checking the Caplin Xaqua components have started 20.

Liberator HTTPS Port

The HTTPS port for secure client communication may be set to any valid port value.

```
Set Liberator HTTPS port (press enter for '50181'):
```

- Enter Liberator's HTTPS port or press the enter key to accept the default value of `50181`.

Self-signed certificates

The installation process then displays some prompts about installing self-signed certificates for HTTPS access from Caplin Trader. Ignore these messages as the installer automatically sets up the required certificates.

When the Caplin Xaqua components have been installed successfully, the following message is displayed:

```
Installed server kits
```

The Caplin Trader installation location, *$CT_INSTALL_DIR*, should now contain the following directories

apps/

kits/

licenses/

ssl_certs/

4.5 Installing the third-party components

The Third Party software package (*ThirdParty-1.X.run*) within the Caplin Trader install kit contains the Apache Tomcat web application server and the MySQL database server. The following steps describe how to install these products.

- Set the current directory to the one containing the install kit.
- Change the UNIX permissions for the third-party components installation script, so that it can be executed:

  ```
  chmod +x ThirdParty-1.X.run
  ```

- Run the third-party components installation script, providing the generic Caplin Trader installation location as an argument.

  The following example command assumes that the current directory is the one containing the install kit:

  ```
  ./ThirdParty-1.X.run $CT_INSTALL_DIR
  ```

  The install script prompts for particular configuration options, namely the Tomcat HTTP Port, Tomcat HTTPS Port, and Java location.

Java location

```
Set the JRE root directory path (press enter for '/usr/local/java/jre'):
```

- Tomcat requires the path of a Sun Java Runtime Environment (JRE) to run. Enter the path of the '*JRE*' directory, or press the enter key to accept the indicated default.

Tomcat HTTP Port

```
Set Tomcat HTTP port (press enter for '8080'):
```

- The default Tomcat HTTP port is 8080. If you require a different port, enter it here, otherwise press the enter key to accept the default.

  Note the port number for use later when starting Caplin Trader 23.

Tomcat HTTPS Port

```
Set Tomcat HTTPS port (press enter for '8443'):
```

- The default Tomcat HTTPS port is 8443. If you require a different port, enter it here, otherwise press the enter key to accept the default.

Tomcat Interface

```
Set Tomcat network interface (press enter for '123.123.123.123'):
```

- If Tomcat is to run on a specific network interface enter it here, otherwise press the enter key to accept the detected interface.

Tomcat SSL Certificate

```
Set path to Tomcat SSL keystore file (press enter for default
certificate):
```

- If a Java SSL certificate has been pre-installed, this keystore file may be referenced here. Otherwise press the enter key to accept the default self-signed certificate.

When the third-party components have been installed successfully, the script displays:

```
Installed Tomcat

Installing MySQL ... Installed

Do you want to run the MySQL setup now? y/n (enter for y):
```

- Press the enter key to continue the installation and setup MySQL.

Note: If you do not run the MySQL script now, it may be run later from the script *apps/thirdparty/mysql/setup.sh*.

The MySQL install script displays the following (where in this example *$CT_INSTALL_DIR* is */home/CaplinTrader*):

```
Setting up MySQL
Starting MySQL
Starting mysqld daemon with databases from /home/CaplinTrader/apps/thirdparty/
mysql/data
Setting root password
Done
```

Tip: The MySQL server will automatically start running when it has been installed. There is no need to start it manually.

4.6 Installing Caplin Trader

The following steps describe how to install Caplin Trader and deploy it within Apache Tomcat.

- Set the current directory to the one containing the install kit.
- Change the UNIX permissions for the Caplin Trader installation script, so that it can be executed:

  ```
  chmod +x CaplinTrader-1.X.run
  ```

- Run the Caplin Trader installation script.

  The following example command assumes the current directory is the one containing the install kit:

  ```
  ./CaplinTrader-1.X.run $CT_INSTALL_DIR
  ```

The following configuration options are set during installation, but you can subsequently change them by editing the file: *apps/webapps/caplintrader/sl4b-configuration-attributes.js*.

Liberator HTTP URL

Caplin Trader requires the URL for connection to Liberator's HTTP port.

```
Set the Liberator HTTP URL
(press enter for 'http://mylinuxbox.mydomain.com')
```

- Enter the URL to Liberator's HTTP port, or press enter to use the detected address.

  The URL is the fully-qualified name of Liberator's network interface.

```
Set the Liberator HTTP port (press enter for '50180'):
```

- Enter the port number for Liberator's HTTP port, or press enter to use the default port number.

Liberator HTTPS URL

Caplin Trader also requires the URL for secure connection to Liberator's HTTPS port.

```
Set the Liberator HTTPS URL
(press enter for 'https://mylinuxbox.mydomain.com')
```

- Enter the URL to Liberator's HTTPS port, or press enter to use the detected address.

  The URL is the fully-qualified name of Liberator's network interface.

```
Set the Liberator HTTPS port (press enter for '50181'):
```

- Enter the port number for Liberator's HTTP**S** port, or press enter to use the default port number.

Common Domain

The application server and Caplin Liberator must share a common domain in order to comply with JavaScript's security policy. Specify the domain name common to both Liberator and the application server here.

In cases where Liberator and the application server are installed on the same box, this should be simply set to the local domain.

```
Set the common domain (press enter for 'mydomain.com'):
```

- Enter the common domain address, or press enter to use the detected address.

Upon successful installation, the following output is displayed:

```
Installed Caplin Trader

Do you want to populate the Caplin Trader database now? y/n (enter for y):
```

- Press the enter key to continue the installation and populate the Caplin Trader database.

Note: If the database is not populated now, it may done later by running the script *apps/thirdparty/mysql/setup.sh*.

MySQL home path

The MySQL home path is required to populate the database.

```
MySQL location (press enter for '/home/CaplinTrader/apps/thirdparty/
mysql'):
```

- Press the enter key to accept the default location, or enter the path to another MySQL installation home directory.

MySQL Root Password

The database root password is required for authentication before populating the database. The script will first prompt:

```
MySQL needs to be running before the next step. Press enter when ready..
```

- Press the enter key to confirm that the MySQL server process is running.
  (If you installed the third-party components immediately before running this Caplin Trader installation script, the MySQL server will have been started automatically.)

  The installation script responds with:

  ```
  Running database scripts; using pre-configured MySQL password
  Set the JRE root directory path (press enter for '/usr/local/java/jre'):
  ```

- The installation software that populates the database requires the path of a Sun Java Runtime Environment (JRE) to run. Enter the path of the *'JRE'* directory, or press the enter key to accept the indicated default.

This step completes the initialization and population of the database.

The Caplin Trader installation location, *$CT_INSTALL_DIR*, should now contain Caplin Trader and Caplin Xaqua documentation in the *docs* directory.

4.7 Installing the Caplin product evaluation licenses

If, when installing Caplin Xaqua, you selected the default licenses directory by pressing enter in response to the prompt "`Set path to licenses directory...`" (see Licenses path 11 in Installing Caplin Xaqua 10), you should now install the Caplin product licenses that have been supplied specifically for the evaluation of Caplin Trader.

Note: Typically evaluation licenses are provided with Caplin Trader that expire at the end of the evaluation agreement. Caplin Support will contact you before your licenses expire and renew them if necessary.

The Caplin Trader product licenses are distributed in a package called *licenses-DATE-Company.tar.gz*, which contains licenses for the following products:

- Liberator
- Transformer
- SSLsrc

To install the licenses

- Copy the license package to the *licenses* directory within the Caplin Trader installation.

  For example:

  ```
  cp licenses-200707-Caplin.tar.gz  $CT_INSTALL_DIR/licenses
  ```

- Next uncompress the package:

  ```
  cd $CT_INSTALL_DIR/licenses
  tar xfz licenses-200707-Caplin.tar.gz
  ```

  The licenses are inserted into the relevant directory for each product:

Product	Location of licence file
Liberator	*$CT_INSTALL_DIR/apps/Caplin/Liberator/etc/*
Transformer	*$CT_INSTALL_DIR/apps/Caplin/Transformer/etc/*
SSLsrc	*$CT_INSTALL_DIR/apps/Caplin/SSLsrc/etc/*

The license package may now be removed (or archived if required):

```
rm licenses-200707-Caplin.tar.gz
```

5 Starting the Caplin Xaqua components

Before you can run a Caplin Trader client you must first start up the Caplin Xaqua components, such as Liberator and the various DataSources. Scripts are provided for this purpose, and there is also a script for stopping all the components in an orderly fashion (see Stopping all Caplin Xaqua components 29).

5.1 Starting Caplin Xaqua components in demonstration mode

Once you have successfully installed the Caplin Xaqua software, you can start up the various components of Caplin Xaqua in demonstration mode.

- Run the script *apps/caplin/start-all-components.sh.*

  The following command example assumes the current directory is *$CT_INSTALL_DIR*:

  ```
  ./apps/caplin/start-all-components.sh
  ```

  On successful startup the script will display the following (where in this example *$CT_INSTALL_DIR* is *./home/CaplinTrader*):

```
Starting rttpd:
Reading config file /home/tester/CaplinTrader-1.4.0-Linux/apps/caplin/Liberator/
etc/rttpd.conf
Reading config file /home/tester/CaplinTrader-1.4.0-Linux/apps/caplin/Liberator/../
CommonConfig/fields-reuters.conf
Reading config file /home/tester/CaplinTrader-1.4.0-Linux/apps/caplin/Liberator/
CommonConfig/fields-caplintrader.conf
Reading config file /home/tester/CaplinTrader-1.4.0-Linux/apps/caplin/Liberator/../
CommonConfig/fields-trade.conf
Reading config file /home/tester/CaplinTrader-1.4.0-Linux/apps/caplin/Liberator/../
CommonConfig/fields-mm.conf
Reading config file /home/tester/CaplinTrader-1.4.0-Linux/apps/caplin/Liberator/../
CommonConfig/fields-permissioning-latest.conf
Reading config file /home/tester/CaplinTrader-1.4.0-Linux/apps/caplin/Liberator/
etc/java.conf
Reading config file /home/tester/CaplinTrader-1.4.0-Linux/apps/caplin/Liberator/
etc/jmx.conf
Reading config file /home/tester/CaplinTrader-1.4.0-Linux/licenses/license-rttpd.conf
rttpd: system-max-files set to 32768
Reading config file /home/tester/CaplinTrader-1.4.0-Linux/apps/caplin/Liberator/
etc/javaauth.conf
Evaluation. Will shutdown in 30 minutes

Starting transformer:
Reading config file /home/tester/CaplinTrader-1.4.0-Linux/apps/caplin/Transformer
/etc/transformer.conf
Reading config file /home/tester/CaplinTrader-1.4.0-Linux/apps/caplin/Transformer/
../CommonConfig/fields-reuters.conf
Reading config file /home/tester/CaplinTrader-1.4.0-Linux/apps/caplin/Transformer/
../CommonConfig/fields-caplintrader.conf
Reading config file /home/tester/CaplinTrader-1.4.0-Linux/apps/caplin/Transformer/
../CommonConfig/fields-trade.conf
Reading config file /home/tester/CaplinTrader-1.4.0-Linux/apps/caplin/Transformer/
../CommonConfig/fields-mm.conf
Reading config file /home/tester/CaplinTrader-1.4.0-Linux/apps/caplin/Transformer/
../CommonConfig/fields-permissioning-latest.conf
Reading config file /home/tester/CaplinTrader-1.4.0-Linux/apps/caplin/Transformer/
etc/java.conf
Reading config file /home/tester/CaplinTrader-1.4.0-Linux/apps/caplin/Transformer/
etc/jmx.conf
Reading config file /home/tester/CaplinTrader-1.4.0-Linux/licenses/
license-transformer.conf
Evaluation. Will shutdown in 30 minutes
```

```
Starting TradingDataSource:
Starting PricingSourceDataSource:
Starting PermissioningDatasource:
Starting permissioning using java:/usr/local/java/jre/bin/java
Starting FiPricingSourceDataSource:
Starting FiTradingDataSource:
Starting ServerManagement:
```

The message "`Evaluation. Will shutdown in 30 minutes`" only appear if you have not installed the Caplin product evaluation licenses (see Installing the Caplin product evaluation licenses 17).

5.2 Starting Caplin Xaqua components to run with live pricing data

If you have access to Reuters RMDS, you can run the Caplin Trader demonstration using live pricing data obtained from RMDS in real time. To do this:

- First configure the SSLsrc DataSource to connect to RMDS. For information on how to do this see the **SSLsrc Administration Guide**.
- Start the Caplin Xaqua components by running the script *apps/caplin/start-all-components-rmds.sh*.

  The following command example assumes the current directory is *$CT_INSTALL_DIR*:

  ```
  ./apps/caplin/start-all-components-rmds.sh
  ```

5.3 Checking the Caplin Xaqua components have started

- To check that Caplin Xaqua components are up and running, display the Liberator status page by typing the following URL into your web browser:

  `http://myhost.mydomain.com:LiberatorHTTPPort`

  `myhost.mydomain.com` is the hostname 10 that you specified in Installing Caplin Xaqua 10.

  `LiberatorHTTPPort` is the Liberator's HTTP port number
  (see Liberator HTTP Port 12 in Installing Caplin Xaqua 10).

  For example:

  `http://linux1.domain1.com:50180`

- Click on the Status button located on the menu bar.

  A dialog box will appear requesting Liberator login details, as follows:

  The server <myhost.mydomain.com> at Liberator Admin requires a username and password.

- Enter Username `admin` and Password `admin`

  The Liberator will display the status of Caplin Liberator and all connected DataSources, as follows:
  If the Caplin Xaqua components have started successfully all the Data Services will have status OK and all the DataSources will have status UP.

  The Liberator status display is shown on the following page.

CAPLIN

CAPLIN Liberator 4.5

Home | Status | Documentation | Examples | Diagnostics | Caplin.com

London office

Caplin Systems Ltd
Triton Court
Finsbury Square
London

EC2A 1BR

info@caplin.com

Status

Server Version:	4.5.5
SL4B Version:	4.5.0
Company:	Evaluation
Max Concurrent Users:	10
Max Unique Users:	Unlimited
Max Sources:	Unlimited
Expiry Date:	Unlimited
Grace Period Expiry:	Not in Grace Period
Number of Objects:	79

	Total	Type 1	Type 2	Type 3	Type 4	Type 5
Current Sessions:	1	0	0	0	0	1
Peak Sessions:	1	0	0	0	0	1

+ Cluster Information

+ License Information

Data Services

Name:	permissioning-data	Name:	fi-trade-data
Status:	OK	Status:	OK
Last Change:	Feb 16 11:22:43	Last Change:	Feb 16 11:22:43
Name:	fx-trade-data	Name:	market-data
Status:	OK	Status:	OK
Last Change:	Feb 16 11:22:41	Last Change:	Feb 16 11:22:41

Data Sources

ID:	20	ID:	16
Name:	transformer	Name:	permissioningsrc
Status:	UP	Status:	UP
Last Change:	Feb 16 11:22:41	Last Change:	Feb 16 11:22:43
Address:	192.168.253.129:38878	Address:	192.168.253.129:38897
Label:	transformer	Label:	permissioningsrc
ID:	17	ID:	18
Name:	tradesrc	Name:	tradesrc
Status:	UP	Status:	UP
Last Change:	Feb 16 11:22:41	Last Change:	Feb 16 11:22:43
Address:	192.168.253.129:38875	Address:	192.168.253.129:38895
Label:	fxtradesrc	Label:	fitradesrc

Liberator status page

5.4 Starting Apache Tomcat

Once the Caplin Xaqua components are running, start the Apache Tomcat server.

- To **start Tomcat** run the following script (the command assumes the current directory is *$CT_INSTALL_DIR)*:

```
./apps/thirdparty/tomcat/start.sh
```

The script will display the following (where in this example *$CT_INSTALL_DIR* is */home/CaplinTrader*):

```
Using CATALINA_BASE:   /home/CaplinTrader/apps/thirdparty/tomcat
Using CATALINA_HOME:   /home/CaplinTrader/apps/thirdparty/tomcat
Using CATALINA_TMPDIR: /home/CaplinTrader/apps/thirdparty/tomcat/temp
Using JRE_HOME:       /usr/local/java/jre
```

- **C**heck whether the Apache Tomcat server is running, by issuing the following **ps** command

```
ps -ef | grep tomcat
```

If the Tomcat server is running, **ps** should display a process entry that looks like the following:

```
tester    5650     1  0 09:17 pts/1    00:00:12 /usr/local/java/jre/bin/java
-Djava.util.logging.manager=
org.apache.juli.ClassLoaderLogManager
-Djava.util.logging.config.file=/home/tester/CaplinTrader/apps/thirdparty/
tomcat/conf/logging.properties
-Djava.endorsed.dirs=/home/tester/CaplinTrader/apps/thirdparty/tomcat/
common/endorsed
-classpath :/home/tester/CaplinTrader/apps/thirdparty/tomcat/bin/
bootstrap.jar:
/home/tester/CaplinTrader/apps/thirdparty/tomcat/bin/commons-logging-api.jar
-Dcatalina.base=/home/tester/CaplinTrader/apps/thirdparty/tomcat
-Dcatalina.home=/home/tester/CaplinTrader/apps/thirdparty/tomcat
-Djava.io.tmpdir=/home/tester/CaplinTrader/apps/thirdparty/tomcat/
temp org.apache.catalina.startup.Bootstrap start
```

If Tomcat is not running, **ps** will just display its own command:

```
tester   10444 10378  0 09:51 pts/1    00:00:00 grep tomcat
```

Tip: There is no need to manually start the MySQL server, as it is started automatically when it is installed. (See Installing the third-party components 13.)

6 Starting Caplin Trader

- To start Caplin Trader, navigate your web browser to the URL of your Tomcat instance:

  `http://myhost.mydomain.com:MyTomcatHTTPPort/caplintrader`

  For example:

  `http://linux1.domain1.com:8080/caplintrader`

  The browser will display the Caplin Trader demonstration start page:

Caplin Trader demo start page

Note that if you omit the `caplintrader` part of the URL and just navigate to `http://linux1.domain1.com:8080/`, the Caplin Trader demo start page will still be displayed.

- Click on the Caplin Trader Demo link to bring up the Caplin Trader login page, which opens in a separate browser window and displays the following login dialog box:

Caplin Trader login dialog box

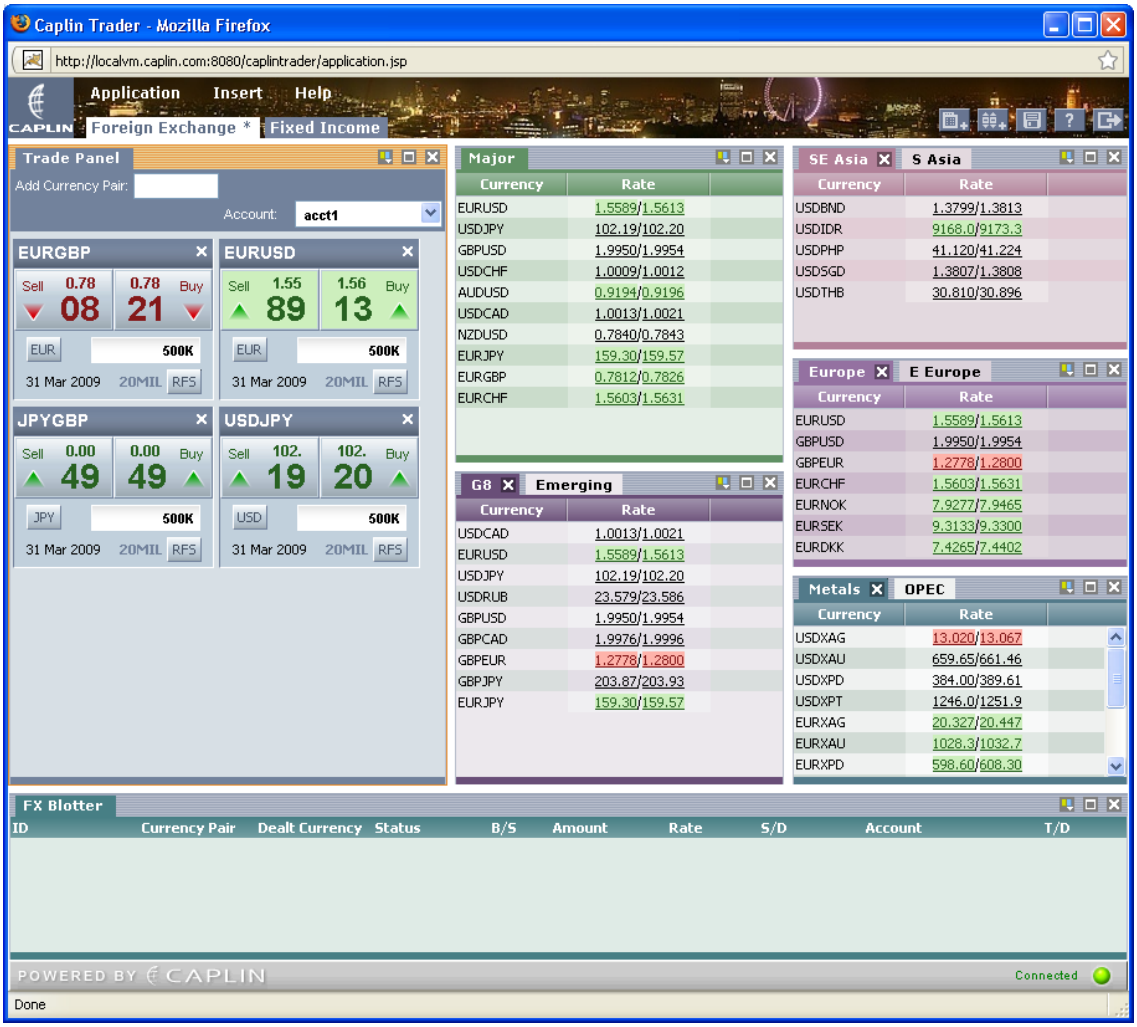
- Enter the default username and password:

  Username: `user1@caplin.com`

  Password: `cappass`

- Click on the LOGIN button

  Caplin Trader will be loaded and its default layout page should be displayed:



Caplin Trader default layout page

Tip:	If any there are any problems with viewing the Caplin Trader default layout page, please contact your Caplin sales or support consultant.

7 Directory structure

Once Caplin Xaqua has been successfully installed, the installed components are located within the following top level directory structure:

```
$CT_INSTALL_DIR/ (for example /home/CaplinTrader)
        apps
        docs
        kits
        licenses
        ssl_certs
```

The *apps* directory contains the preconfigured Caplin Xaqua components, Caplin Trader, and the third-party components. The directory contains configuration information for all components, and symbolic links to the binaries and libraries within the kits directory.

The *docs* directory contains documentation about Caplin Trader and Caplin Xaqua (see Related documents 2).

The *kits* directory holds the installation kits for the above products. It allows you to easily upgrade Caplin Xaqua components when new versions are available, with no impact on your customized configuration. Just unpack the new version of a component, such as Liberator, into the *kits* directory, and then point the links in the *apps* directory to the relevant new directories in *kits*.

The *licenses* directory holds the Caplin product licenses (see Installing the Caplin product evaluation licenses 17).

The *ssl_certs* directory contains the default SSL certificates shipped with Caplin Trader that are not authenticated or 'trusted' for the environment where Caplin Trader is installed. If SSL certificates are available for this host, place the certificates and private encryption key here.

7.1 apps – applications directory

The *apps* directory contains the following directories:

```
$CT_INSTALL_DIR/apps/
        caplin
        thirdparty
        webapps
```

caplin contains the configuration for Caplin Xaqua components such as Liberator and Transformer.

thirdparty contains the Apache Tomcat Web server and the MySQL database server.

webapps holds the Caplin Trader application that is hosted by Apache Tomcat.

caplin directory

The *caplin* directory within *apps* contains the Caplin Xaqua components:

```
$CT_INSTALL_DIR/apps/caplin/
        Benchsrc
        CommonConfig
        FiPricingSourceDataSource
        FiTradingDataSource
        kits
        Liberator
        PermissioningDataSource
        PricingSourceDataSource
        SSLsrc
        TradingDataSource
        Transformer
```

- The Liberator directory contains links to the 'kits' directory for binaries and libraries:

```
apps/caplin/Liberator/
        bin -> $CT_INSTALL_DIR/kits/Liberator/Latest/bin
        doc -> $CT_INSTALL_DIR/kits/Liberator/Latest/doc
        etc
        htdocs -> $CT_INSTALL_DIR/kits/Liberator/Latest/htdocs
        include -> $CT_INSTALL_DIR/kits/Liberator/Latest/include
        lib -> $CT_INSTALL_DIR/kits/Liberator/Latest/lib
        users
        var
```

- The other components—Transformer and the Pricing, Trade, and Permissions DataSources—also have a similar directory structure.

  For example the Trade DataSource directory structure is:

```
apps/caplin/TradingDataSource/
        stop.sh
        start.sh
        lib -> $CT_INSTALL_DIR/kits/TradePermissionsDataSource/Latest/lib
        demo-trading-datasource.jar -> $CT_INSTALL_DIR//kits/TradingDataSource/
                                                Latest/demo-trading-datasource.jar
        logs
        conf
```

- The *kits* directory contains the Permissioning DataSource and the associated Liberator Permissioning Auth Module.

- For information about the *CommonConfig* see Common configuration for Caplin Xaqua Components 34.

thirdparty - Third-party components directory

The *thirdparty* directory within *apps* contains links to the Tomcat and MySQL installation directories, and the installation directories themselves:

```
$CT_INSTALL_DIR/apps/thirdparty/
        tomcat -> apache-tomcat-5.5.27
        mysql -> mysql-5.0.37-linux-i686-glibc23
        apache-tomcat-5.5.27
        mysql-5.0.37-linux-i686-glibc23
```

webapps - Caplin Trader directory

Caplin Trader is located in the *apps/webapps* directory.

```
$CT_INSTALL_DIR/apps/webapps/
        caplintrader
```

7.2 kits directory

The kits directory contains the original *unconfigured* installations of the Caplin Xaqua and Caplin Trader components:

```
$CT_INSTALL_DIR/kits/
        Benchsrc
        CaplinTrader
        CaplinTraderPipeline
        ContainerFilteringModule
        Liberator
        M4
        PricingSourceDataSource
        SSLsrc
        TradingDataSource
        Transformer
```

Note: Do not implement configuration changes for these components by editing the configuration files in these directories.
See the subsections within Advanced configuration 34 for information on which configuration files can be edited.

Tip: The Permissioning DataSource and its associated Liberator Permissioning Auth Module are located in *$CT_INSTALL_DIR/apps/caplin/kits*

8 Additional information

8.1 Stopping all Caplin Xaqua components

The following command example assumes the current directory is *$CT_INSTALL_DIR*

- To stop all the Caplin Xaqua components
  run the script *apps/caplin/stop-all-components.sh*:

```
./apps/caplin/stop-all-components.sh
```

> **Tip:** You can also start and stop individual Caplin components, such as Liberator, Transformer, and the DataSources, and the third-party components (Apache Tomcat application server and the MySQL database server) – see Starting and stopping individual Caplin Xaqua components 29 and Starting and stopping individual third-party components 32

Also see Starting the Caplin Xaqua components 18.

8.2 Starting and stopping individual Caplin Xaqua components

You can start and stop individual Caplin components using the scripts described in the following sections. The command examples assume the current directory is *$CT_INSTALL_DIR*

Also see Starting the Caplin Xaqua components 18 and Stopping all Caplin Xaqua components 29.

Start/stop Liberator

- To start Liberator:

```
./apps/caplin/Liberator/etc/rttpd restart
```

- To stop Liberator:

```
./apps/caplin/Liberator/etc/rttpd stop
```

Start/stop Transformer

- To start Transformer:

```
./apps/caplin/Transformer/etc/transformer restart
```

- To stop Transformer:

```
./apps/caplin/Transformer/etc/transformer stop
```

Start/stop the demonstration FX Pricing DataSource

- To start the demonstration FX Pricing DataSource:

```
./apps/caplin/PricingSourceDataSource/start.sh
```

- To stop the demonstration FX Pricing DataSource:

  ```
  ./apps/caplin/PricingSourceDataSource/stop.sh
  ```

Note: Do not run both the demonstration FX Pricing DataSource (**PricingSourceDataSource**) and the live pricing DataSource (**sslsrc**) at the same time, because the demonstration source is designed to imitate the live source and the two will conflict.

Start/stop the demonstration FI Pricing DataSource

- To start the demonstration FI Pricing DataSource:

  ```
  ./apps/caplin/FiPricingSourceDataSource/start.sh
  ```

- To stop the demonstration FI Pricing DataSource:

  ```
  ./apps/caplin/FiPricingSourceDataSource/stop.sh
  ```

Note: Do not run both the demonstration FI Pricing DataSource (**PricingSourceDataSource**) and the live pricing DataSource (**sslsrc**) at the same time, because the demonstration source is designed to imitate the live source and the two will conflict.

Start/stop the live Pricing DataSource - SSLsrc

SSLsrc is the RMDS DataSource that provides live prices.

- To start SSLsrc:

  ```
  ./apps/caplin/SSLsrc/etc/sslsrc restart
  ```

- To stop SSLsrc:

  ```
  ./apps/caplin/SSLsrc/etc/sslsrc stop
  ```

Note: Do not run both the live pricing DataSource (**sslsrc**) and the demonstration Pricing DataSource (**PricingSourceDataSource**) at the same time, because the demonstration source is designed to imitate the live source and the two will conflict.

Start/stop the demonstration FX Trading DataSource

- To start the demonstration FX Trading DataSource:

  ```
  ./apps/caplin/TradingDataSource/start.sh
  ```

- To stop the demonstration FX Trading DataSource:

  ```
  ./apps/caplin/TradingDataSource/stop.sh
  ```

Start/stop the demonstration FI Trading DataSource

- To start the demonstration FI Trading DataSource:

  ```
  ./apps/caplin/FiTradingDataSource/start.sh
  ```

- To stop the demonstration FI Trading DataSource:

```
./apps/caplin/FiTradingDataSource/stop.sh
```

Start/stop the Permissions DataSource

- To start the Permissions DataSource:

  ```
  ./apps/caplin/TradePermissionsDataSource/start.sh
  ```

- To stop the Permissions DataSource:

  ```
  ./apps/caplin/TradePermissionsDataSource/stop.sh
  ```

8.3 Starting and stopping individual third-party components

You can start and stop third-party components using the scripts described in the following sections.

Start/stop Apache Tomcat

The following command examples assume the current directory is *$CT_INSTALL_DIR*

- To check whether the Apache Tomcat server is running, issue the **ps** command on the server where Tomcat has been installed:

```
ps -ef | grep tomcat
```

  If the Tomcat server is running, **ps** should display a process entry that looks like the following:

```
tester    5650     1  0 09:17 pts/1    00:00:12 /usr/local/java/jre/bin/java
-Djava.util.logging.manager=
org.apache.juli.ClassLoaderLogManager
-Djava.util.logging.config.file=/home/tester/CaplinTrader/apps/thirdparty/tomcat/
conf/logging.properties
-Djava.endorsed.dirs=/home/tester/CaplinTrader/apps/thirdparty/tomcat/
common/endorsed
-classpath :/home/tester/CaplinTrader/apps/thirdparty/tomcat/bin/bootstrap.jar:
/home/tester/CaplinTrader/apps/thirdparty/tomcat/bin/commons-logging-api.jar
-Dcatalina.base=/home/tester/CaplinTrader/apps/thirdparty/tomcat
-Dcatalina.home=/home/tester/CaplinTrader/apps/thirdparty/tomcat
-Djava.io.tmpdir=/home/tester/CaplinTrader/apps/thirdparty/tomcat/
temp org.apache.catalina.startup.Bootstrap start
```

  If Tomcat is not running, **ps** will just display its own command:

```
tester   10444 10378  0 09:51 pts/1    00:00:00 grep tomcat
```

- To **start Tomcat** run the following script:

```
./apps/thirdparty/tomcat/start.sh
```

The script will display the following (where in this example *$CT_INSTALL_DIR* is */home/CaplinTrader*):

```
Using CATALINA_BASE:   /home/CaplinTrader/apps/thirdparty/tomcat
Using CATALINA_HOME:   /home/CaplinTrader/apps/thirdparty/tomcat
Using CATALINA_TMPDIR: /home/CaplinTrader/apps/thirdparty/tomcat/temp
Using JRE_HOME:       /usr/local/java/jre
```

- To **stop Tomcat** run the following script:

```
./apps/thirdparty/tomcat/stop.sh
```

Start/stop MySQL Server

The following command examples assume the current directory is *$CT_INSTALL_DIR*

- To check whether the MySQL server is running issue the **ps** command on the server where MySQL has been installed:

  ```
  ps -ef | grep mysqld
  ```

  If the server is running, **ps** should display process entries that look like the following:

  ```
  tester   11945     1  0 11:14 pts/1    00:00:00 /bin/sh ./bin/mysqld_safe --no-defaults
  tester   11960 11945  0 11:14 pts/1    00:00:00 /home/tester/CaplinTrader/apps/
  thirdparty/mysql/bin/mysqld
  --no-defaults --basedir=/home/tester/CaplinTrader/apps/thirdparty/mysql
  --datadir=/home/tester/CaplinTrader/apps/thirdparty/mysql/data
  --pid-file=/home/tester/CaplinTrader/apps/thirdparty/mysql/data/localvm.localadmin.pid
  --skip-external-locking  --tmpdir=/tmp
  ```

  If Tomcat is not running, **ps** will just display its own command:

  ```
  tester   12083 10378  0 11:21 pts/1    00:00:00 grep mysqld
  ```

  Tip: If you have just initialized the MySQL database then the server should already be running.

- To start the MySQL server run the following script:

  ```
  ./apps/thirdparty/mysql/start.sh
  ```

  The start script displays the following message (where in this example *$CT_INSTALL_DIR* is */home/CaplinTrader*):

  ```
  Starting mysqld daemon with databases from
  /home/CaplinTrader/apps/thirdparty/mysql/data
  ```

  Press the enter key to obtain the Linux shell prompt.

- To stop MySQL server:

  `./apps/thirdparty/mysql/stop.sh`
  When the stop command has been run the script displays a message similar to the following:

```
STOPPING server from pid file
/home/CaplinTrader/apps/thirdparty/mysql/data/mylinuxbox.mydomain.com.pid
070919 13:53:47  mysqld ended
```

8.4 Advanced configuration

After installing Caplin Xaqua you may need to change the configuration of one or more Caplin Xaqua components. This section provides information on where the various configuration files are located.

Common configuration for Caplin Xaqua components

You can change the major configuration options, such as the ports reserved by each component, by editing the Common Configuration File *$CT_INSTALL_DIR/apps/caplin/CommonConfig/Config_defns.m4*

The following listing shows an example of *Config_defns.m4* (Note that references to “Caplin Platform” mean “Caplin Xaqua”.)

```
#apps/caplin/CommonConfig/Config_defns.m4

#The following configuration file defines general configuration
#options for the Caplin Platform.

dnl Load file that contains environmental variables
include(`../CommonConfig/Config_environment.m4')

dnl Define the Liberator Status page admin user and password
define(ADMINUSER,admin)
define(ADMINPASS,admin)

dnl Define the Ethernet interface for Liberator DataSource connections
define(DATASRCINTERFACE,0.0.0.0)

dnl Define the components hostnames
define(LIBERATOR1HOST,HOST1)
define(LIBERATOR2HOST,HOST2)
define(TRANSFORMER1HOST,HOST1)
define(TRANSFORMER2HOST,HOST2)
define(SSLSRC1HOST,HOST1)
define(SSLSRC2HOST,HOST2)
define(PERMSOURCE1HOST,HOST1)
define(PERMSOURCE2HOST,HOST2)
define(TRADESOURCE1HOST,HOST1)
define(TRADESOURCE2HOST,HOST2)

dnl define liberator ports
define(LIBERATOR1DIRECTPORT,HOST1PORTPREFIX`82')
define(LIBERATOR1DATASRCPORT,HOST1PORTPREFIX`00')
define(LIBERATOR1RMIREGISTRYPORT,HOST1PORTPREFIX`20')
define(LIBERATOR1RMICLIENTPORT,HOST1PORTPREFIX`30')
```

```
dnl define transformer ports
define(TRANSFORMER1DATASRCPORT,HOST1PORTPREFIX`01')
define(TRANSFORMER1UDPPORT,HOST1PORTPREFIX`61')
define(TRANSFORMER1SHELLPORT,HOST1PORTPREFIX`99')
define(TRANSFORMER1RMIREGISTRYPORT,HOST1PORTPREFIX`21')
define(TRANSFORMER1RMICLIENTPORT,HOST1PORTPREFIX`31')

dnl define sslsrc ports
define(SSLSRC1DATASRCPORT,HOST1PORTPREFIX`02')
define(SSLSRC1UDPPORT,HOST1PORTPREFIX`62')
define(SSLSRC1RMIREGISTRYPORT,HOST1PORTPREFIX`22')
define(SSLSRC1RMICLIENTPORT,HOST1PORTPREFIX`32')

dnl define tradesource ports
define(TRADESRC1RMIREGISTRYPORT,HOST1PORTPREFIX`24')
define(TRADESRC1RMICLIENTPORT,HOST1PORTPREFIX`34')

dnl define FI tradesource ports
define(TRADESRC2RMIREGISTRYPORT,HOST1PORTPREFIX`27')
define(TRADESRC2RMICLIENTPORT,HOST1PORTPREFIX`37')

dnl define permsource ports
define(PERMISSIONINGSRC1RMIREGISTRYPORT,HOST1PORTPREFIX`25')
define(PERMISSIONINGSRC1RMICLIENTPORT,HOST1PORTPREFIX`35')

dnl define FI ports
define(FIPRICING1DATASRCPORT,HOST1PORTPREFIX`03')
define(FIPRICING1UDPPORT,HOST1PORTPREFIX`63')
define(FIPRICING1RMIREGISTRYPORT,HOST1PORTPREFIX`26')
define(FIPRICING1RMICLIENTPORT,HOST1PORTPREFIX`36')

dnl define Server Management ports
define(SERVERMANAGEMENTSERVERPORT,HOST1PORTPREFIX`90')

dnl define Benchsrc ports
define(BENCHSRC1DATASRCPORT,HOST1PORTPREFIX`08')
define(BENCHSRC1UDPPORT,HOST1PORTPREFIX`68')
```

Configuring individual Caplin Xaqua components

The detailed configuration of individual Caplin Xaqua components can be changed by editing component specific configuration files, as follows:

To configure:	Edit the file:
Liberator	*$CT_INSTALL_DIR/apps/caplin/Liberator/etc/rttpd.conf*
Transformer	*$CT_INSTALL_DIR/apps/caplin/Transformer/etc/transformer.conf*
FX Pricing DataSource	*$CT_INSTALL_DIR/apps/caplin/PricingSourceDataSource/conf/DataSource.xml.m4*
FX Trading DataSource	*$CT_INSTALL_DIR/apps/caplin/TradingDataSource/conf/DataSource.xml.m4*
FI Pricing DataSource	*$CT_INSTALL_DIR/apps/caplin/FiPricingSourceDataSource/conf/DataSource.xml.m4*
FI Trading DataSource	*$CT_INSTALL_DIR/apps/caplin/FiTradingDataSource/conf/DataSource.xml.m4*
Permissions DataSource:	*$CT_INSTALL_DIR/apps/caplin/PermissioningDatasource/conf/DataSource.xml.m4*
SSLsrc (DataSource adapter for Reuters RMDS)	*$CT_INSTALL_DIR/apps/caplin/SSLsrc/etc/sslsrc.conf*

Note 1: Do not implement configuration changes for Caplin Xaqua components by editing the configuration files in the component directories under *$CT_INSTALL_DIR/kits/*. Only edit the configuration files listed in the table above.

Note 2: For the FX and FI Pricing DataSources, FX and FI Trading DataSources, and Permissions DataSource there are *two* copies of the configuration file, one with file extension *.xml* and the other with file extension *.xml.m4*.
Edit only the *.xml.m4* file.
If you edit the *.xml* file, when you next start up the DataSource your changes will be overwritten in the *.xml* file and will not take effect.

Tip: Further information regarding the configuration of these products may be found within the Administration Guide for each product.

9 Glossary of terms and acronyms

This section contains a glossary of terms, abbreviations, and acronyms, relating to Caplin Trader and Caplin Xaqua.

Term	Definition
Ajax	Asynchronous **JavaScript** and **XML** A combination of Web technologies used to implement interactive Web clients.
Caplin Platform	An old name for **Caplin Xaqua**.
Caplin Trader	Caplin Trader is a **Caplin Xaqua** client application that provides a framework and comprehensive set of components for constructing browser-based trading applications implemented in Ajax. *Note:* In older documents the term Caplin Trader means "**Caplin Trader Client** plus the **Caplin Platform**".
Caplin Trader Client	An old name for **Caplin Trader**.
Caplin Trader Services	Caplin Trader Services provide the supporting server-side non-realtime services to **Caplin Trader**.
Caplin Xaqua	Caplin Xaqua is a single-dealer platform that enables banks to deliver multi-product trading direct to client desktops. It uses third generation financial Web technology, and provides an abstraction layer allowing multiple trading systems and data sources to be connected to multiple client applications.
DataSource	In this document DataSource is used as a synonym for **DataSource adapter**.
DataSource adapter	Software adapters within Caplin Xaqua that connect Caplin Xaqua to external sources of real time data and external trading systems.
JavaScript	A scripting language used in Web browsers.
JMX	Java Management Extensions A Java technology for application and network management.
JRE	Java Runtime Environment The runtime environment for executing a Java application
SSL	Secure Sockets Layer An Internet protocol that uses encryption to transmit data securely between a Web client and a Web server or between servers. Conventionally, URLs requiring an SSL connection start with https: instead of http:
SSLsrc	The Caplin DataSource adapter for Reuters RMDS.
webcentric	A client-side portal framework that uses Ajax technology. Webcentric gives **Caplin Trader** the look and feel of a desktop GUI application.
XML	Extensible Markup Language

Contact Us

Caplin Systems Ltd
Triton Court
14 Finsbury Square
London EC2A 1BR
Telephone: +44 20 7826 9600
Fax: +44 20 7826 9610
www.caplin.com