ISE FAST Decoding Demonstration Application

Installation Guide

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Produced by:
International Securities Exchange, Inc.
60 Broad Street, New York NY 10004
www.ise.com

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1 About this Document

This document describes how to install and configure the ISE FAST Decoding Demonstration Application, a client-side tool for the ISE Depth of Market Feed.

The ISE FAST Decoding Demonstration Application is a simple program that decodes the FAST messages sent by the ISE at the subscriber's location. The decoded messages will be written to a set of data log files. The subscriber can use this open source application to build their own decoder.

The ISE FAST Decoding Demonstration Application is an open source application that has been developed in Java by OMX and is platform independent.

1.1 Intended Audience

This document is for programmers developing applications that subscriber to the ISE Depth of Market Feed.

1.2 Terminology

For a definition of the terms and abbreviations used in this document, see section 7.

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2 Requirements

2.1 Installation Kit

The ISE FAST Decoding Demonstration Application installation kit is delivered in zipped format. The kit contains the files and documentation needed to install the product.

2.2 System Requirements

2.2.1 Hardware

The computer on which ISE FAST Decoding Demonstration Application is being installed should have the following minimum specifications:

- 2.0 GHz Intel processor (or AMD equivalent)
- 1 GB RAM
- 80 GB hard disk

2.2.2 Operating system and Java™

The ISE FAST Decoding Demonstration Application requires the following operating system and software:

- Microsoft® Windows® XP, Service Pack 2
- Java™ Runtime Environment 1.5 or later

2.2.3 Network and Authorization

The computer on which ISE FAST Decoding Demonstration Application is to be installed at the subscriber's site must have sufficient authorization to access the BT Radianz or NYSE TransactTools SFTI network and listen for FAST messages broadcast by the ISE.

For an overview of the network connections used by the various ISE solution components, see Figure 1. The ISE FAST Decoding Demonstration Application is a type of “User Application” shown at the bottom of the figure.

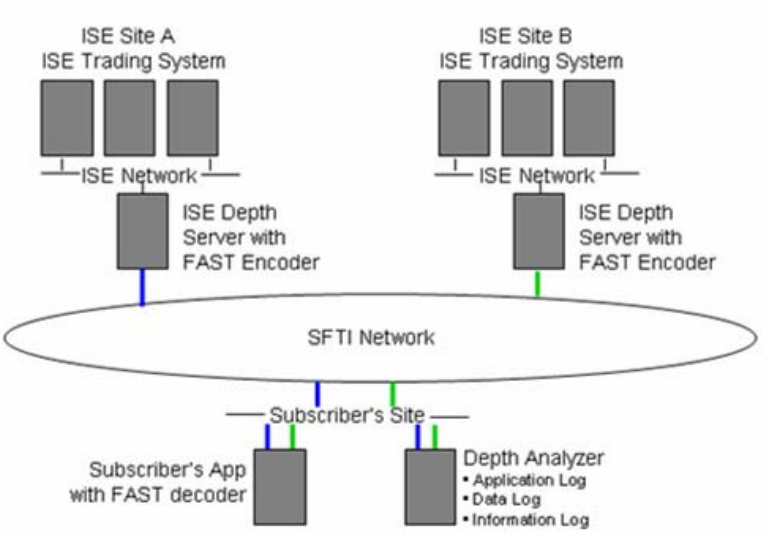

Figure 1: ISE solution components and network connections

3 Installing the Application

3.1 Installing ISE FAST Decoding Demonstration Application

1. Log on to the target computer as a user with administration rights.
2. Unzip the installation package (**ise_fast_demo.zip**) into a suitable directory, for example: C:\Programs\ISE\FASTDEMO.

3.2 Directory Structure and Installed Files

After installation, the installation directory will contain the following subdirectories and files:

Directory/file	Description
Logs	Directory containing application log files. The ISE FAST Decoding Demonstration Application creates a new application log file every day it runs. See Section 5.4 - Maintenance of the Log Files. Each application log file contains information about the ISE FAST Decoding Demonstration Application’s own activities, including start-up information, connection details, and operational errors. This directory also contains a subdirectory for data log files.
logs/data	Directory containing data log files. For every multicast address/port to which it listens, ISE FAST Decoding Demonstration Application creates a new data log file every day. Every FAST message received is copied to the appropriate data log file in binary format.
Bin	Directory containing ISE FAST Decoding Demonstration Application executable files.

Directory/file	Description
Config	Directory containing the ISE FAST Decoding Demonstration Application configuration file and the FAST template used to decode messages.
Lib	Directory containing ISE FAST Decoding Demonstration Application library files, such as .jar files.

4 Configuring the Application

4.1 Configuration File

The ISE FAST Decoding Demonstration Application is configured through an XML configuration file called **config.xml** located in the **/config** directory created during installation of the product (see section 3.2).

The configuration file is read when ISE FAST Decoding Demonstration Application starts up. It is not possible to change the configuration while ISE FAST Decoding Demonstration Application is running. Changes to the configuration file will only take effect next time the application starts up.

You can use a text editor to edit the file. The file consists of several sets of parameters grouped together in different XML elements.

4.2 Example XML Configuration File

Please note that the delivered configuration file may not exactly match the following example:

```
<?xml version="1.0" encoding="ISO-8859-1" ?>
<ISE FAST DEMO>

        <SYSTEM>
                <COMMUNICATION SET>
                        <SFTI_ADDRESS>10.110.110.10</SFTI_ADDRESS>
                        <SFTI_PORT>8080</SFTI_PORT>
                </COMMUNICATION SET>

                <COMMUNICATION SET>
                        <SFTI_ADDRESS>12.120.120.12</SFTI_ADDRESS>
                        <SFTI_PORT>8080</SFTI_PORT>
                </COMMUNICATION SET>
        </SYSTEM>

        <FUNCTIONAL>
                <FLUSH_INT>1000</FLUSH_INT>
        </FUNCTIONAL>

</MIDAS FAST DEMO>
```

4.3 Configuration Parameters

The configuration file contains the parameters listed in the table below. The “Req?” column shows whether or not the parameter is mandatory (yes) or optional (no). The “Default” column shows the value that will be used if an optional parameter is omitted entirely from the file.

Refer to the example file above for the correct XML syntax.

Parameter	Valid Values	Description	Req?	Default
SYSTEM COMMUNICATION SET		Each communication set consists of an address and port to which the FAST Decoding Demonstration Application listens for FAST messages. The addresses and ports should match the addresses and ports configured on the ISE server configuration file. Multiple communication sets can be defined.		
SYSTEM COMMUNICATION SET SFTI_ADDRESS	A valid IP address, for example: 123.123.123.123	A multicast address to which the ISE FAST Decoding Demonstration Application should listen for FAST encoded messages.	[none]	[none]
SYSTEM COMMUNICATION SET SFTI_PORT	A TCP/IP port, for example: 8080	The port number of the multicast address above.	yes	[none]
FUNCTIONAL FLUSH_INT	Time in milliseconds, for example: 1000.	This parameter determines how often the application flushes information from its internal memory buffer to the data log files. Recommendation: this value should be less than 10000 milliseconds.	yes	[none]

5 Running the Application

5.1 Fast Template

The ISE FAST Decoding Demonstration Application uses an XML-format template to decode FAST messages. This template must be stored in the **/config** installation directory and be the same as the template that was used to encode the messages.

5.2 Starting the Application

To start the ISE FAST Decoding Demonstration Application, run the executable program **midas_fast_demo.cmd**. MIDAS will run as a console application. Application data will be written to the application log file, and the decoded FAST messages will be written in FIX format to the data log file. Application data will also be written to the console window.

5.3 Stopping ISE FAST Decoding Demonstration Application

To stop ISE FAST Decoding Demonstration Application, simply stop the application by closing the console window or pressing Ctrl-C.

5.4 Maintenance of the Log Files

The data log files that the application creates will eventually take a lot of space on the hard drive. Therefore we recommend that you periodically clean up the logs directory or at least check that there is sufficient disk space available for continued operation.

6 Removing the Application

6.1 Removal Procedure

You can uninstall the ISE FAST Decoding Demonstration Application simply by deleting all the files in the installation directory.

You can keep a copy the log files in the /logs directory if you think that you may need them at a later time.