

TIBCO Mainframe Service Tracker™

Installation and Administration

*Software Release 1.0
January 2008*

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Preface



This software may be available on multiple operating systems. However, not all operating system platforms for a specific software version are released at the same time. Please see the readme.txt file for the availability of this software version on a specific operating system platform.

This manual describes the installation and administration of the TIBCO Mainframe Service Tracker product.

Topics

- *Related Documentation, page x*
- *How to Contact TIBCO Support, page xi*

Related Documentation

This section lists documentation resources you may find useful.

TIBCO Mainframe Service Tracker Documentation

The following documents form the TIBCO Mainframe Service Tracker documentation set:

- *TIBCO Mainframe Service Tracker Installation and Administration* Read this manual for instructions on site preparation, installation, and configuration, as well as for details on error messages.
- *TIBCO Mainframe Service Tracker Release Notes* Read the release notes for a list of new and changed features. This document also contains lists of known issues and closed issues for this release. There are no release notes for the initial version (1.0) of the product.

Other TIBCO Product Documentation

The documentation for the following product provides background information for understanding and using TIBCO Mainframe Service Tracker:

- TIBCO Hawk™ software: This is a tool for monitoring and managing distributed applications and operating systems, upon which TIBCO Mainframe Service Tracker is currently based.

You may find it useful to read the documentation for the following TIBCO product:

- TIBCO Rendezvous® software: This software enables programs running on many different kinds of computers on a network to communicate. It includes two main components: the Rendezvous programming language interface (API) in several languages, and the Rendezvous daemon.

How to Contact TIBCO Support

For comments or problems with this manual or the software it addresses, please contact TIBCO Support as follows.

- For an overview of TIBCO Support, and information about getting started with TIBCO Support, visit this site:

<http://www.tibco.com/services/support>

- If you already have a valid maintenance or support contract, visit this site:

<https://support.tibco.com>

Entry to this site requires a user name and password. If you do not have a user name, you can request one.

Chapter 1 Introduction

This manual provides information on TIBCO Mainframe Service Tracker, an asynchronous service that maintains and reports the status of mainframe tasks or jobs and their registered events. TIBCO Mainframe Service Tracker provides this service using TIBCO Hawk and TIBCO messaging software.

This document is intended primarily for system programmers who are responsible for installing and maintaining the software. We recommend that you read through this manual before attempting to install the product, and keep a copy handy for future reference.

Topics

- *Overview, page 2*
- *Understanding TIBCO Hawk, page 3*
- *TIBCO Mainframe Service Tracker Services, page 6*

Overview

TIBCO Mainframe Service Tracker is a mainframe product that exposes z/OS information to TIBCO Hawk agents running anywhere in an enterprise. TIBCO Hawk agents can then feed this information to orchestration engines, business process systems, or business event engines, enabling them to make decisions based on the real-time information of your mainframe activities. Additionally, user applications and other TIBCO Software products, executing anywhere in z/OS (such as in CICS, IMS or Batch), can now send unsolicited messages or notifications to TIBCO Software environments via TIBCO Hawk.



For details on TIBCO Hawk terminology, see Understanding TIBCO Hawk on page 3.

Features

TIBCO Mainframe Service Tracker provides the following functionality:

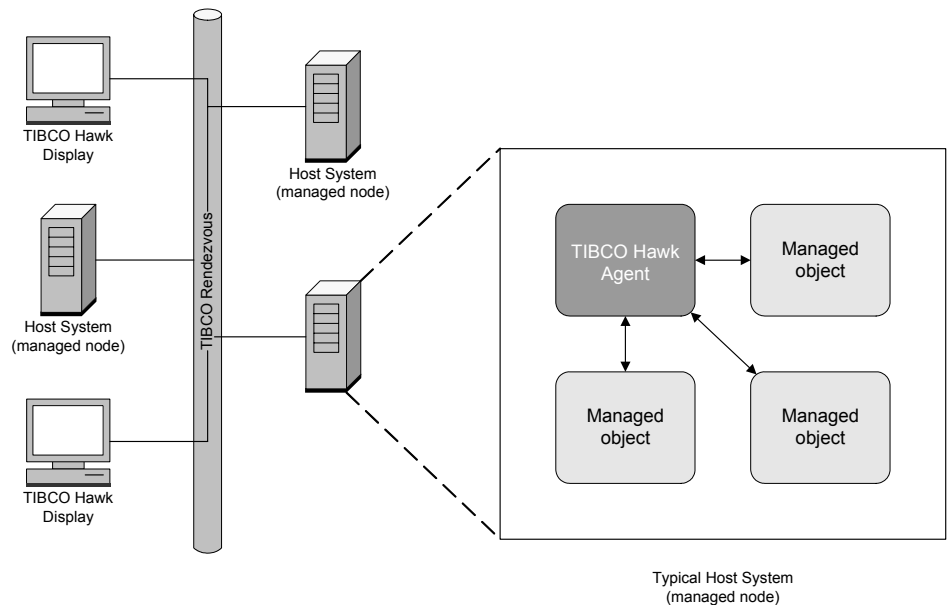
- Provides real-time z/OS job status information to TIBCO Software enterprise environments
- Reports events on behalf of other mainframe applications
- Records events and status changes to its logging mechanism
- Empowered TIBCO Mainframe Service Tracker clients, such as z/OS applications, can specify interest on qualified jobs or tasks
- Critical events in TIBCO Substation ES or TIBCO Object Service Broker can now be relayed to monitors or other TIBCO Software products
- Single or multiple instances can scales horizontally and vertically according to available system resources
- No other software needs to be installed on z/OS to activate and enable the product's capabilities
- The next major release (scheduled for late 2008) to include all reasonable customer enhancements, if received before July 2008.

Understanding TIBCO Hawk



This section provides the basic concepts of TIBCO Hawk, followed by information for understanding how TIBCO Mainframe Service Tracker operates with TIBCO Hawk. The TIBCO Hawk concepts presented here are condensed and simplified; for a complete understanding of the TIBCO Hawk software, refer to the documentation for that product.

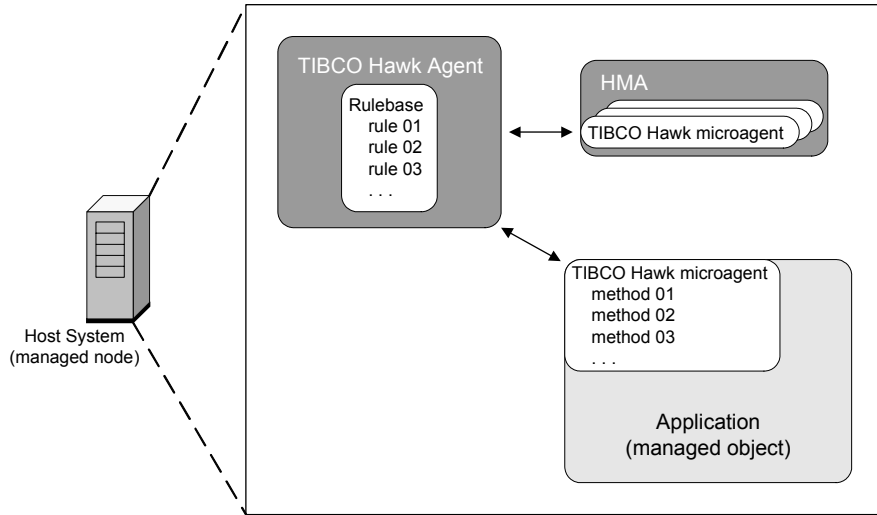
TIBCO Hawk is a scalable tool for monitoring and managing distributed systems. It employs distributed *agents* that run on nodes throughout a network. These agents autonomously monitor various system and application parameters, and can take actions based on these parameter values. TIBCO Hawk uses TIBCO messaging software for communication and inherits many of its benefits. Because TIBCO Hawk is designed specifically for monitoring distributed systems, there is no centralized console; however, TIBCO Hawk provides a console application, referred to as the *TIBCO Hawk Display*, as a user interface for viewing events on the network and configuring agents. In addition, other TIBCO Software products are available that provide console and dashboard facilities.



Within this architecture, TIBCO Mainframe Service Tracker functions similar to a TIBCO Hawk *microagent*.

Components Installed on Monitored Systems

The following diagram shows the main TIBCO Hawk components that are installed on a monitored system:



- **TIBCO Hawk agent** – An autonomous process that monitors applications and systems activity. Agents use *rules* (organized into *rulebases*) to apply monitoring logic, and microagents to interface with managed objects.

rule – A user-defined monitoring construct. A rule has three parts: the data source monitored by the agent, one or more tests that check for conditions, and one or more actions to perform if a test is true.

rulebase – A collection of rules.

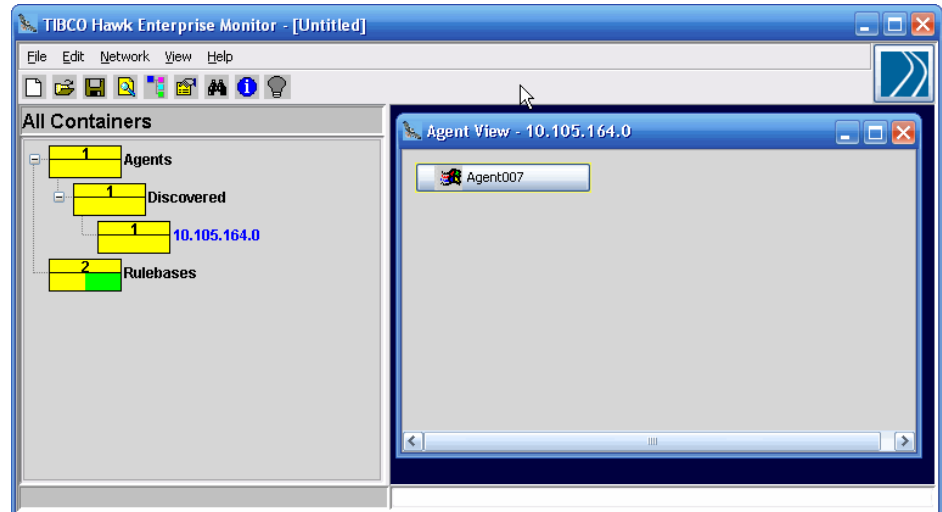
- **TIBCO Hawk microagent** – An object used by a TIBCO Hawk agent to collect information and perform tasks. A microagent (such as TIBCO Mainframe Service Tracker) exposes a set of *methods* to the agent that the agent uses to collect information and take action.

method – A function that can be performed by a TIBCO Hawk microagent.

- **HMA** – A partner process to the TIBCO Hawk agent that provides the local agent with methods for monitoring the host operating system. Like the agent, the HMA is generally installed on each computer you wish to monitor

TIBCO Hawk Display

The TIBCO Hawk Display console application subscribes to alert messages generated by TIBCO Hawk rulebases and presents them in an organized view. Alerts are color-coded to indicate the severity of a reported problem. You use the TIBCO Hawk Display to view the status of mainframe tasks or jobs that is provided by TIBCO Mainframe Service Tracker.



The main window of the TIBCO Hawk Display graphically represents system behavior with each monitored computer represented by a *container* icon (in left panel above). You use application menus and dialogs to create, modify and distribute rulebases, which control the monitoring behavior of TIBCO Hawk agents.

TIBCO Hawk Display does not store centralized monitoring intelligence; it simply provides a view of events on your distributed systems. All TIBCO Hawk Display users view the same managed objects without complicated configuration schemes. Each user can also customize their instance of the TIBCO Hawk Display interface without affecting others. Adding more instances of the console application requires no additional network overhead or configuration.



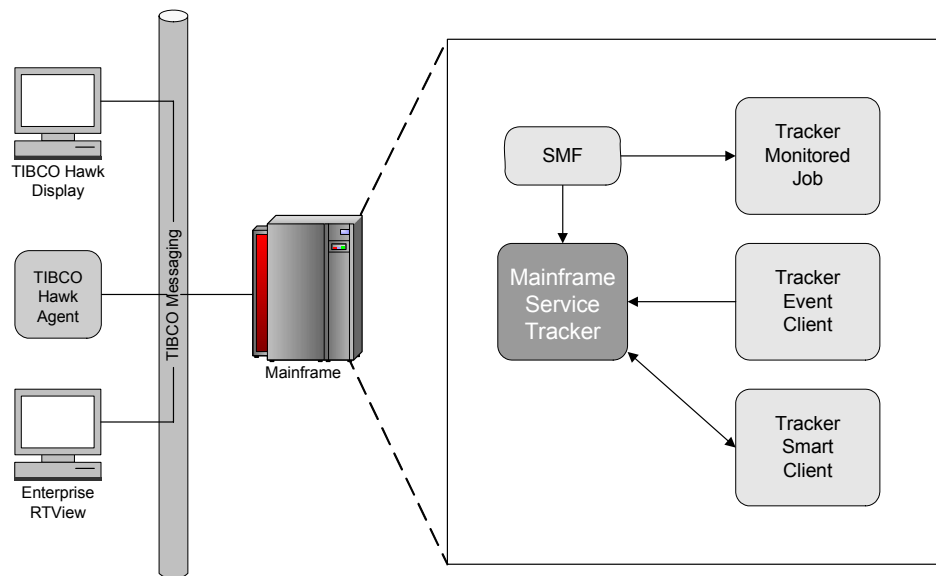
Sherrill-Lubinski Corporation (SL) is a TIBCO Software Alliance Partner that provides an alternative product called Enterprise RTView. This lightweight, real-time display application provides easy access to and visualization of real-time enterprise data. For details, visit www.sl.com.

TIBCO Mainframe Service Tracker Services



This section provides an overview of TIBCO Mainframe Service Tracker services. For details on using the TIBCO Hawk Display to monitor jobs and events described in this section, see [Accessing TIBCO Mainframe Service Tracker](#) on page 43.

The following diagram shows the services provided by TIBCO Mainframe Service Tracker installed on a mainframe system:



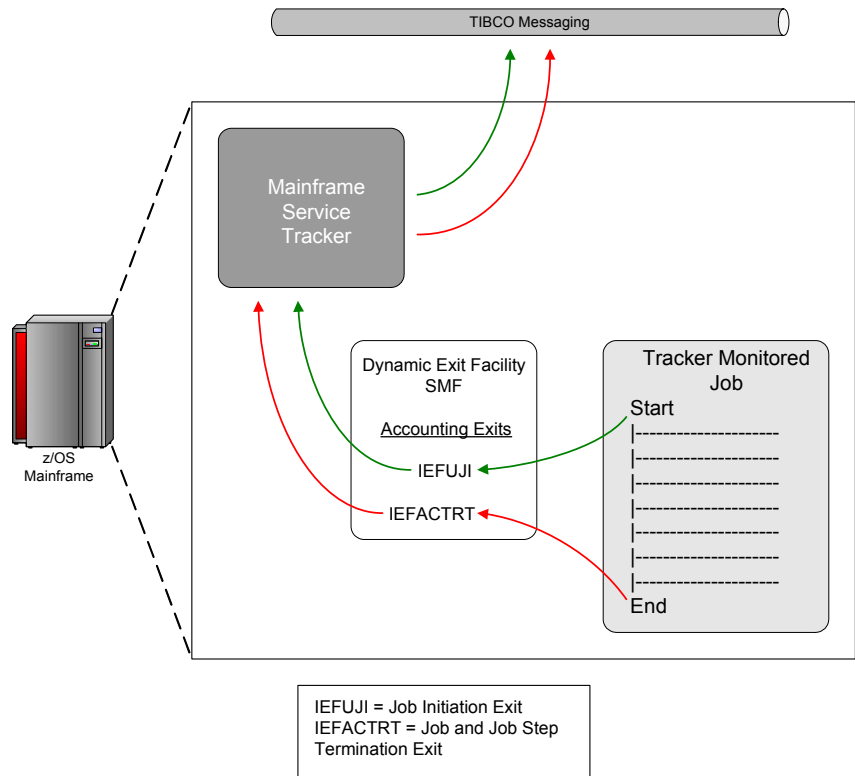
TIBCO Mainframe Service Tracker monitors the following:

- Monitored Jobs
- Event Clients
- Smart Clients

Monitored Jobs

TIBCO Mainframe Service Tracker can provide enterprise-wide orchestration or workflow engines, BPM, and other processes, with real-time information about the status and termination condition of z/OS jobs. Critical scheduled tasks and web services can then be controlled based on this information. TIBCO Mainframe Service Tracker provides you with the tools necessary to manage and control your environment.

Two z/OS SMF accounting exits are dynamically loaded to obtain job status information, as shown below:



Event Clients

TIBCO Mainframe Service Tracker provides a simple single call mechanism to event enable your mainframe platform. Event Client user or TIBCO applications that incorporate this capability are referred to as Tracker Event Clients. For details on Event Client samples provided with the product, see Chapter 4, Examples.

When you embed Tracker Event Client capabilities into applications, you enable those applications to send critical real-time information about z/OS tasks to other processes, including enterprise-wide orchestration, workflow or business event engines. Other TIBCO Software mainframe products are incorporating Tracker Event Client capabilities; when used with TIBCO Mainframe Service Tracker, an entire event decisive enterprise can be readily available.

Functions:

- Send Alert messages comparable to TIBCO Hawk unsolicited messages.
- Send Notification messages used to signify critical, error, or informational events that contain related information.

Smart Clients

TIBCO Mainframe Service Tracker provides a communication mechanism that enables sophisticated applications to gain access to information provided by the product. User or TIBCO applications that incorporate this capability are referred to as Tracker Smart Clients. A Smart Client sample is provided with the product; for details, see Chapter 4, Examples.

Tracker Smart Clients can perform the same functions as Event Clients. In addition, when you embed Tracker Smart Client capabilities into applications, you enable those applications to communicate directly with the Tracker server. After registering with TIBCO Mainframe Service Tracker, applications can subscribe to job monitoring. When a job status subscription changes, an application can be aware of the change and can react according to the end-of-job condition code available to the application.

Other TIBCO Software mainframe products will also incorporate Tracker Smart Client capabilities in the future. This will provide capabilities similar to job schedulers, that are easily enriched to have event-driven pre- and post-routines, and capable of providing other enterprise integration processes with related information.



Tracker Smart Clients need to be authorized, since communication with TIBCO Mainframe Service Tracker uses the z/OS subsystem interface.

Chapter 2 **Installation**

This chapter describes how to install the TIBCO Mainframe Service Tracker software.

Topics

- *Installation Requirements, page 10*
- *Distribution Media and Contents, page 12*
- *Installation Overview, page 14*
- *Uploading the Software, page 15*
- *Installing the Software, page 17*
- *Verifying the Installation, page 23*
- *Optional Installation Changes, page 25*

Installation Requirements

In order to install and use TIBCO Mainframe Service Tracker, you should have TIBCO Hawk and TIBCO Rendezvous active within your network. You should also ensure that you have z/OS version 1.6 or later loaded and configured before you activate the product.

Storage Requirements

TIBCO Mainframe Service Tracker requires approximately 100 cylinders of Direct-Access Storage Device (DASD) space. This space calculation is based on an IBM 3390 DASD device.

System Software Requirements

The TIBCO Mainframe Service Tracker software runs as a z/OS MVS authorized subsystem. The product is supported on z/OS version 1.6 and above.

Language Environment (LE)

The IBM Language Environment (LE) is used by TIBCO Mainframe Service Tracker in the MVS. The LE component must be available where TIBCO Mainframe Service Tracker components are to be executed.

In addition, you must provide the LE libraries required for compilation of IVP samples. User applications do not require the LE when invoking TIBCO Mainframe Service Tracker. User programs using the interfaces provided by TIBCO Mainframe Service Tracker must be LE-compliant.

TIBCO Messaging

TIBCO messaging or the ESB are not required on z/OS for the delivery of event or status information. TIBCO Mainframe Service Tracker communicates with the designated TIBCO Hawk HMA via TCP/IP.



The TIBCO Hawk HMA and the primary AMI session communicate via TIBCO Rendezvous.

Secure Keys

TIBCO Mainframe Service Tracker requires a secure key for run-time execution. A single secure key allows users to execute the software. To obtain a secure key, contact fulfillment@tibco.com and request a TIBCO Mainframe Service Tracker secure key. For details on contacting TIBCO Support, see How to Contact TIBCO Support on page xiii.

Distribution Media and Contents

The most convenient way to obtain a copy of the TIBCO Mainframe Service Tracker software is to download it directly from the TIBCO Software website, or obtain the product on a CD. The software is distributed in IBM XMIT format.

Complete Replacement Package

By default, the TIBCO Mainframe Service Tracker software is delivered as a non SMP/E stand-alone, base function package. Subsequent modifications and updates are version and product dependent. Therefore, a complete product replacement is performed with each installation.

Component Code

The component code for the TIBCO Mainframe Service Tracker product is SXX. This component code is registered with the IBM product codes division.

Obtaining the Installation Media

Downloading from the Website

To download TIBCO Mainframe Service Tracker from the TIBCO Software website, follow these steps:

1. Contact TIBCO Software Inc. for a password and directory information.
2. Connect to the TIBCO Software website with the required information.
3. Download the following installation package for z/OS version 1.6 or later:

```
TIB_tracker_1.0.0_zos.sxx.xmit.zip
```

The zip file contains the following files:

```
TIB_tracker_1.0.0_zos.sxx.xmit.inst  
TIB_tracker_1.0.0_zos.sxx.xmit.main
```

Upload the files to the z/OS system as described in Uploading the Software on page 15.

Requesting a CD

If you do not want to download the software over the network, you can obtain a CD containing the software and load it onto your system. The minimum time period for delivery of a CD is five working days. Contact TIBCO Support at the following site:

<http://support.tibco.com>

and request the desired media for your environment. For details, see How to Contact TIBCO Support on page xiii.

Installation Overview

Before installing, read the installation requirements and identify the files necessary for your installation. Refer to Obtaining the Installation Media on page 12.

By using the file tailoring CLISTs supplied as part of the installation, the JCL and parameter changes to be performed by the user is kept to a minimum.

TIBCO Mainframe Service Tracker installation provides default values for system and data configuration parameters. For a first installation of the product, using these defaults provides for easier startup, connectivity and message flow testing.

The following steps show an overview of the installation:

1. Upload or unload the TIBCO Mainframe Service Tracker XMIT files to your host.
2. RECEIVE the installation XMIT file containing installation JCL, CLISTS and parameters.
3. Customize the installation JCL using installation file tailoring CLISTs
4. RECEIVE the TIBCO Mainframe Service Tracker XMIT files
5. Customize the TIBCO Mainframe Service Tracker execution JCLs, parameters, and so forth by using the file tailoring CLIST.
6. Perform the installation update that populates the TIBCO Mainframe Service Tracker system files from temporary installation files.
7. Customize TIBCO Mainframe Service Tracker parameters and network connectivity requirements

When you have completed these steps, TIBCO Mainframe Service Tracker should now be ready for use.

Conclude the installation by running the Installation Verification Program (IVP) tests and/or samples that are relevant for your environment. Running the IVPs ensures that the connectivity, data transformation, message flow and system operations are correctly installed and functional.

Uploading the Software

If you have acquired the TIBCO Mainframe Service Tracker software by downloading it from the TIBCO Software website, you need to upload the software to the z/OS MVS host system using the FTP file transfer utility. Sample JCL for performing the file transfer is shown below.

Initial Installation

Sample JCL for an Upload

This sample uses IBM's FTP to copy the TIBCO Mainframe Service Tracker installation file(s) from a LAN server or PC to the z/OS MVS host.

```
//<JOBNAM> JOB (&SYSUID), 'TRACKER FTP', CLASS=A
//*
// SET FTPADDR=10.10.2.99 < IP Address or Host Name
//*
//FTP EXEC PGM=FTP, REGION=0M, PARM='&FTPADDR (TIMEOUT 20'
//SYSPRINT DD SYSOUT=*
//OUTPUT DD SYSOUT=*
//SYSTCPD DD DISP=SHR, DSN=TCPIP.PROFILE(FTPDATA) < Host Member
//INPUT DD *
<lan-userid>
<lan-password>
cd /<lan-file-dir>
binary
LOC SITE RECFM=FB LRECL=80 BLKSIZE=27920 TR PRI=60 SEC=15
get <userhlq>.xmit.inst' <USERHLQ>.XMIT.INST' (REPLACE
quit
/*
//
```

Receive the Initial Installation File



This step must be performed during a TIBCO Mainframe Service Tracker software initial installation on the z/OS MVS Host.

The <USERHLQ>.XMIT.INST file contains JCL that is required to receive other files and to create the appropriate libraries. To complete this process, the TIBCO supplied variables must be substituted with the appropriate site-specific user values.

Perform the following steps:

1. From the ISPF Command Shell Panel, type the following command to receive a file containing the JCL required to begin a first-time installation:

```
receive inda('<USERHLQ>.XMIT.INST')
```

TSO will prompt with the following:

```
INMR906A Enter restore parameters or 'DELETE' or 'END' +
```

2. Supply the following:

```
DA('<USERHLQ>.INSTALL')
```

After a successful receive, the following message is displayed:

```
INMR001I Restore successful to dataset '<USERHLQ>.INSTALL'
```

The data set name supplied in Step 2 above is output and populated with the members that are required in order for you to continue with the installation.

Installing the Software

The following steps are required to install the MVS components for the TIBCO Mainframe Service Tracker software. All members reside within the <USERHLQ> . INSTALL dataset.

Edit the selected members listed in the steps below. Substitute the variables, follow any instructions contained in the member, and then submit the JCL for execution.



To redo the installation at any step, simply submit member SXK\$9DEL and restart the installation from Step 1.

STEP 1: Make CLIST temporary file

Change the #JOBNAME, #USERHLQ, #USERVOL statement variables according to your sites requirements.

Member: SXK\$1MKT

Table 1 defines the user substitution variables for the installation JCL and the parameters that will be required during the file tailoring process. Ensure that you have all the necessary information before performing Step 2.

Table 1 File Tailoring Variables for Installation JCL

Variable	Default and Structure	User Value
USERHLQ	TIBCO.SXK.VxRxMx	
VOLSER Volume Serial	TIB999	
JOBNAME	SXKTR First 6 characters	
JOBCLASS	A	
MSGCLASS	X	


STEP 2:	Execute File Tailoring clist for installation JCL. If an error is made during input, press the attention key (PA1) and execute this step again.
Member:	SXX\$2EX1 (EX member)
STEP 3:	Upload the TIBCO Mainframe Service Tracker installation file(s) to OS/390 MVS. Perform one of the following: <ul style="list-style-type: none">• Upload the files via FTP to your host OR• Unload the files from the installation CD.
Member:	For DFSMSdss sites, use SXX\$3FT. For non DFSMSdss sites, use SXX\$3FT@.
STEP 4:	Define and allocate TIBCO Mainframe Service Tracker product libraries
	Only to be performed on initial installation
Member:	SXX\$4ALL
STEP 5:	Convert TIBCO Mainframe Service Tracker installation files to the appropriate data sets
Member:	For DFSMSdss sites, use SXX\$5RC. For non DFSMSdss sites, use SXX\$5RC@.

Table 2 defines the user substitution variables within JCL and parameter members that will be required during the file tailoring process. Ensure that you have all the necessary information before executing this step.

Table 2 File Tailoring Variables

Variable	Default and Structure	User Value
IBM Assembler Libraries Target Library	ASM *.SASMMAC2	
COBOL for MVS Libraries Target Library	IGY *.SIGYCOMP	
CICSHLQ CICS System Libraries	CICSTS31.CICS *.CICS.SDFHLOAD	
CCSDHLQ CICS DFHCSD	CICSTS31.REGION *.DFHCSD	

STEP 6: **Execute File Tailoring clist to update the product supplied variables.**



If an error is made during input, press the attention key (PA1) and execute the clist again.

Member: SXX\$6EX2 (EX member)

STEP 7: **Populate the TIBCO Mainframe Service Tracker data sets with all the updates and downloaded members.**

Member: SXX\$7UPD

To install the CICS samples and resource definitions for TIBCO Mainframe Service Tracker, submit the member listed in the step below. Follow any instructions and submit it for execution.

If you will not run the CICS samples, ignore this step. The update is not required for the product to function correctly.

STEP 8: Update CICS with the CICS Interface Resource Definitions (Optional)

This member updates the CICS System Definition (CSD) file with the Resource definitions necessary for Tracker Event Client applications to operate.

Data Set: <USERHLQ> . JCL

Member: SXKCSDUP

Starting the Software

This section describes how to start the software.

Pre-Start Checklist

Before starting the product, check the following:

Table 3 Pre-Start Checklist

Requirement	Check?
Has the <USERHLQ>AUTH library been APF authorized?	
Has TIBCO Hawk been installed and activated on your network? If yes, obtain the Rendezvous settings for the HMA and Primary AMI sessions that will be used to update the parameter member in the <USERHLQ>.CNTL data set.	
Is the TIBCO Rendezvous daemon running? (the daemon configured by the TIBCO Hawk agent's AMI session)	

Setting TIBCO Hawk Parameters

Specify values for the following Rendezvous transport parameters:

- **HAWKDAEMON**
- **HAWKNETWORK**
- **HAWKSERVICE**

Data set: <USERHLQ>.CNTL

Member: SXKPARM

The values are the same as you would specify on the TIBCO Hawk configuration panel. For parameter details, see TIBCO Hawk Parameters on page 32.

Starting the Software

To start the software, perform the following:

STEP S1: TIBCO Mainframe Service Tracker startup JCL



This member starts the TIBCO Mainframe Service Tracker MVS region.

All keyword values specified in the JCL's PARM parameter must be prefixed by a dash or minus sign. Keyword values are separated from the keywords by one or more spaces.

The following is an example of a JCL's EXEC statement PARM parameter:

```
PARM= ' -SSXK1 -MSXKPARM '
```

In this example, parameter member for Tracker is located in the library <USERHLQ> .CNTL.

Data Set: <USERHLQ> . JCL
Member: XTRACKER

Sample Procedure:

Data Set: <USERHLQ> . PROC
Member: TIBTRACK

Verifying the Installation

After starting TIBCO Mainframe Service Tracker, you can execute the following samples to verify that product components have been correctly installed and configured.

STEP I1: **Subscribe Job Status, Notification and Unsolicited**



Review Accessing TIBCO Mainframe Service Tracker on page 43 before proceeding.

- Access the system where TIBCO Hawk is installed and start the TIBCO Hawk Display. This application dynamically discovers TIBCO Hawk agents on your network.
- Select the agent named TIBCO Tracker agent for Bushmen (this name is specified in the HAWKSESS2 parameter) and access its microagents.
- Select the Job Status method and subscribe to it with a data delivery interval of 5 seconds. You should now be able to view the z/OS jobs that have been selected to be monitored by TIBCO Mainframe Service Tracker.
- Select the Notification or _onUnsolicitedMsg method and subscribe to it. You should be able to view the messages after the execution of STEP I2 or STEP I3.

STEP I2: **Execute Batch Tracker Event Client Sample**



Replace the TIBCO Mainframe Service Tracker subsystem ID with the appropriate user value. This member will initiate the base batch examples for a user event publisher to publish messages to the desired Tracker subsystem. By substituting the MOD parameter, the JCL can be used to execute the C or COBOL sample programs.

Data Set: <USERHLQ> . JCL
Member: RUNUEVT

STEP I3: Execute CICS Tracker Event Client Sample

Invoke the SXX1 transaction at the command line using the parameters described in Input Parameters for Event Client Examples on page 52. The CICS system will translate input parameter values to uppercase.

The following examples send the A(lert)/N(otification) message "this-is-a-test" to a Tracker Event Client interface with subsystem ID ABCD, and message code SXX0123I with severity I and W:

```
SXX1 -SABCD, -MSXX0123I, -Tthis-is-a-test, -QA  
SXX1 -SABCD -MSXX0123W -Tthis-is-a-test -LW -QN
```



An error message displays if there is a problem completing the process. This could be caused by an invalid parameter value; check the parameter values and re-enter.

Optional Installation Changes

TIBCO Mainframe Service Tracker software sample programs are supplied as source and executable modules as part of the installation. However, users may desire to change the source code to perform additional functions. JCLs and procedures have been supplied to compile the sample programs that normally have to be modified to be used within a user's environment.

Edit the data sets and selected members listed in the steps below. Substitute the variables, follow any instructions that are contained in the member and then submit it for execution.

Compiling C Programs

Step 1a: C language options file



This member is the Options File used for Tracker Event Client C compiles that needs to include members from the system C and Tracker libraries. Substitute the appropriate values and installation variables that are located within this member.

Data Set: <USERHLQ>.CNTL

Member: OPTFSXX

Step 1b: Tracker Event Client C language compilation JCL



The JCL listed below uses a procedure that may have to be modified so that it conforms to your site's requirements and executes correctly.

Data Set: <USERHLQ>.JCL

Member: SXK3NCPL

Compiling COBOL Programs

Step 1c: Tracker Event Client COBOL compilation JCL



The JCL listed below uses a procedure that may have to be modified so that it conforms to your site's requirements and executes correctly. This member will compile COBOL supplied batch sample program(s).

Data Set: <USERHLQ> . JCL

Member: SXKCNCP

Step 1d: Tracker Event Client CICS COBOL compilation JCL



The JCL listed below uses a procedure that may have to be modified so that it conforms to your site's requirements and executes correctly. This member will compile COBOL supplied CICS sample program(s).

Data Set: <USERHLQ> . JCL

Member: SXKCCCPL

Chapter 3 **Operations and Administration**

This chapter describes how to use and administer the TIBCO Mainframe Service Tracker software. Before performing any procedures, you must have completed the installation of the software, and executed the IVP steps successfully (as described in Verifying the Installation on page 23).

Topics.

- *Configuration, page 28*
- *Operational Commands, page 39*
- *Accessing TIBCO Mainframe Service Tracker, page 43*

Configuration

TIBCO Mainframe Service Tracker provides facilities and standard MVS methods to configure and administer the product. The software contains PDS members that consist of a default set of parameters. These default parameters are normally sufficient to activate the product. Refer to Starting the Software on page 21 for a list of parameters to change during an installation.

Configuration parameters are contained in the member SXKPARM.

Parameter Syntax

Each configuration parameter consists of a keyword, which specifies how a particular function is to be implemented, and its associated value. Keywords are alphanumeric, contain no spaces or blanks (low-values) and must start in column 1 of the input record. For PDS member input parameters, keyword values are separated by an equal sign "=" . The equal sign is required.

Keyword Values

Keyword values must be specified using a valid format. Keywords can be upper, lower or mixed case and are usually in one of the following formats:

- A value, which may have a predefined range if the requirement is numeric.
- A yes or no indicator (Y/N).
- A constant value (e.g. program or interface name).
- A string or sentence with embedded spaces. The entire sentence must be enclosed in single quotation marks (for example, 'TIBCO Software Inc.'). The string will be truncated if the maximum length is exceeded.



When a keyword value is not specified, the default value (if specified) is used.

Comments

Comments or comment lines may be inserted between parameters or after keyword values. A comment follows the first space, as in JCL comments. An entire comment line begins with an asterisk in column 1.

Tracker Main Parameters

Table 4 Tracker Main Parameters

Parameter	Description
RUNKEY	<p>The run key is the security key issued by TIBCO to authorize Tracker to perform its functions. This parameter can be entered up to 20 times.</p> <p>Valid Values: security key value</p>
SSID	<p>The identity of the associated subsystem. This value must be unique for each instance of Tracker on an LPAR. It can also be specified in the parm field of the EXEC statement using -s followed by the subsystem ID (for example, -SSXKS). If specified in both the parm field and the control member, the value in the control member is used.</p> <p>Default: SXKS</p>
MONJOB	<p>A job name or job name prefix specifying job(s) to be reported to Hawk. Maximum of 20 entries.</p>

Component Parameters

These values describe component characteristics and behavior. These statements can only be specified after the COMPONENT control statement.

Table 5 Component Parameters

Parameter	Description
COMPONENT	<p>The component within Tracker. Each component represents a single sub-task. Cannot be blank.</p> <p>Valid Values:</p> <p>MAIN – the main task</p> <p>TASK – task manager task</p> <p>CONSOLE – console handler (stops and modifies commands)</p> <p>SUBSYSTEM – subsystem creation and termination; job activity score-keeping</p> <p>SUBSMCL – smart client interface</p> <p>HAWKCNTL – Hawk control routines</p> <p>HAWKPRC – Hawk processing routines</p>
RELATED	Shows a relationship among components.
LOADMOD	The name of the load module to be attached in support of a component. Cannot be blank.
DBGLVL	<p>The diagnostic level for the component. The recommended value is 2.</p> <p>Valid Values: 0 through 5</p> <p>Default: 2</p>
SENDSHARQ	The name of a component defined as ATTACHTYPE=SHRQ, to be used as a recipient of work messages.
WORKSHARQ	The name of a component defined as ATTACHTYPE=SHRQ, to be used as a source of work messages.

Table 5 Component Parameters

Parameter	Description
MODID	An identifier used in console modify commands to identify the receiving component.
WAITINIT	The amount of time (in microseconds) to wait for Tracker to initialize. Default: 5000000
WAITTERM	The amount of time (in microseconds) to wait for Tracker to terminate. Default: 2000000

TIBCO Hawk Parameters

For details on Hawk parameters, see *TIBCO Hawk Installation and Configuration*.

Table 6 TIBCO Hawk Parameters

Parameter	Description
HAWKDAEMON	The Hawk Rendezvous daemon and TCP port parameters.
HAWKNETWORK (Optional)	The Hawk Rendezvous network parameter.
HAWKSERVICE	The Hawk Rendezvous UDP service port
HAWKSESS1	The Hawk session short name. Default: SXKS_Hawk
HAWKSESS2	The Hawk session long name that will be displayed in Hawk microagents. Default: Tracker SXKS Hawk Interface
HAWKPOLLD	Specifies how often (in microseconds) the Hawk processor checks for an alert. Default: 3000000

z/OS Subsystem Parameters

Table 7 z/OS Subsystem Parameters

Parameter	Description
MODSSINI	The name of the subsystem initialization module. Default: SXKASINI
MODFUNCT	The name of the functions module for the subsystem. Default: SXKASFUN
ACTRT	The name assigned to the ACTRT SMF exit. Default: the subsystem ID with 'JXAC' appended (for example, SXKSJXAC).
UJI	The name assigned to the UJI SMF exit. Default: the subsystem ID with 'JXJI' appended (for example, SXKSJXJI).

Subsystem Control Parameters

These keywords are entered without an equal or a value. They are stand-alone keywords, similar to TRK or CYL in JCL.

Table 8 Subsystem Control Parameters

Parameter	Description
BUILDSS	Create a subsystem during initialization.
NOBUILDSS	Do not create a subsystem during initialization.
REPLACE	If a version of the subsystem exists, replace it with the current version.
DEACTIVATE	If the subsystem exists and is active, deactivate it.
NODEACTIVATE	If the subsystem exists and is active, do not deactivate it.

Log and Trace Parameters



The value for parameters that specify diagnostic level (such as DBGLVLALL) ranges from 0 through 5, where 0 is none and 5 is verbose (unless otherwise specified, as with DBGLVLALL-WTO).

Table 9 Log and Trace Parameters

Parameter	Description
DBGLVLALL	<p>The default diagnostic level for all components. The recommended value is 2.</p> <p>Valid Values: 0 through 5</p> <p>Default: 2</p>
DBGLVLALL-SRW (SRW = send-receive-wait)	<p>The default diagnostic level for the inter-task messages for all components. The recommended value is 2.</p> <p>Valid Values: 0 through 5</p> <p>Default: 2</p>
DBGLVLALL-WTO (WTO = write to operator)	<p>The diagnostic level for WTO messages issued by the subsystem functions routines and the SMF exits.</p> <p>Valid Values:</p> <ul style="list-style-type: none"> 1 – Allow error messages 2 – Show major events, such as one-time starting messages 3 – Show major events, such as one-time starting messages 4 – Activity messages for requested job names 5 – Activity messages for all jobs <p>Default: 2</p>
LOGDDN (Optional)	<p>The DD Name of the data set where Tracker formatted log information is written. The DD Name must appear in the Tracker's startup procedure.</p> <p>Valid Values: DDName</p> <p>Default: TIBLOG</p>

Table 9 Log and Trace Parameters

Parameter	Description
LOGFMT (Optional)	<p>The log format. When log information for Tracker is routed to a print file, this value determines the edit format used to display the routed information.</p> <p>Valid Values:</p> <ul style="list-style-type: none">1 – Short format output.2 – Short format with Tracker location information. <p>Default: 2</p>
LOGROUTE (Optional)	<p>Specifies where the output for log entries is routed. The DD Name selected for routing to a print file is specified by the value of the LOGBUGDD keyword. The DD Name selected for routing to a disk file is specified by the value of the <LOGDISK1 LOGDISK2 LOGDISK3 LOGDISK4 LOGDISK5> keywords.</p> <p>Valid Values:</p> <ul style="list-style-type: none">P(rint) – Formatted print format. A formatted print file, similar to SYSPRINT.D(isk) – Disk file. A VSAM RRDS disk file formatted for Tracker. <p>Default: P</p> <p>Note: Print is the only option supported in release 1.0.</p>
LOGDBGDDN (Optional)	<p>The DD Name of the data set where LTA Agents of Tracker internal debugging information is written. The DD Name must appear in Tracker's startup procedure if require to see these debug messages.</p> <p>Valid Values: DDName</p> <p>Default: LOGDEBUG (used if a value is not specified)</p>

Table 9 Log and Trace Parameters

Parameter	Description
LOGDBGLVL (Optional)	<p>The trace debug level. The LTA Agents of Tracker have their own internal debugging facility. This value should always be left to the default (1) unless TIBCO Support personnel require the output. The DD Name LOGDBGDDN is required in the startup procedure when a non-zero value is specified. The output is directed to SYSOUT.</p> <p>Valid Values: 0 through 5</p> <p>Default: 1</p> <p>Note: Some overhead and many lines of output are produced when this value is greater than 1.</p>
TRCDDN (Optional)	<p>The DD Name of a data set where Tracker formatted trace information is written. The DD Name must appear in the Tracker's startup procedure.</p> <p>Valid Values: DDName</p> <p>Default: TIBTRACE</p>
TRCFMT (Optional)	<p>The format for logged trace information. When trace information is routed to a print file, this value determines the edit format used to display the routed information.</p> <p>Valid Values:</p> <ul style="list-style-type: none"> 1 – Short format output. 2 – Short format with Tracker location information. <p>Default: 2</p>

Table 9 Log and Trace Parameters

Parameter	Description
TRCROUTE (Optional)	<p>Specifies where the output for trace entries is routed. The DD Name selected for routing to a print file is specified by the value of the TRCDDNAM keyword. The DD Name selected for routing to a Disk file is specified by the value of the <TRCDISK1 TRCDISK2 TRCDISK3 TRCDISK4 TRCDISK5> keywords.</p> <p>Valid Values:</p> <p>P(rint) – Formatted print format. A formatted print file, similar to SYSPRINT.</p> <p>D(isk) – Disk file. A VSAM RRDS disk file formatted for Tracker.</p> <p>Default: P</p> <p>Note: Print is the only option supported in release 1.0.</p>
TRCDBGDDN (Optional)	<p>The DD Name of a data set where LTA Agents of Tracker internal trace information is written. The DD Name must appear in Tracker's startup procedure if require to see these debug messages.</p> <p>Valid Values: DDName</p> <p>Default: TRCDEBUG</p>
TRCDBGLVL (Optional)	<p>The trace debug level. The LTA Agents have their own internal debugging facility. This value should always be left to the default (1) unless TIBCO Support personnel require the output. The DD Name TRCDBGDDN is required in the Tracker's startup procedure when a non-zero value is specified. The output is directed to SYSOUT.</p> <p>Valid Values: 0 through 5</p> <p>Default: 1</p> <p>Note: Some overhead and many lines of output are produced when this value is greater than 1.</p>

Operational Commands

TIBCO Mainframe Service Tracker operational commands (also referred to as *console commands*) are entered using the z/OS command interface. Commands that are received, and resultant outputs, are logged to the TIBCO Mainframe Service Tracker log medium.

The z/OS MVS Command Interface is the default command interface for TIBCO Mainframe Service Tracker. Commands are entered on the console by specifying a modify command. An active TIBCO Mainframe Service Tracker can be shut down normally via a z/OS JES stop command. Refer to the MVS System Commands for the syntax and usage of these commands.

Command Syntax

The following syntax and terminology is used:

```
F jobname,<recipient>,<verb>,<qualifier>
```

Recipients

The *recipient* is a component or task on which an action is performed. Valid recipients are shown in the Table 10:

Table 10 Command Syntax – Recipients

Recipient	Description
ALL	All components and entities
MAIN	Main component.
TASK	Task manager component
CONS	Console component
SS	Subsystem component
SMCL	Smart Client component
HAWK	TIBCO Hawk interface component

Verbs

The *verb* is an action performed on a recipient. A verb may have a *qualifier(s)*. Valid verbs are shown in Table 11:

Table 11 Command Syntax – Verbs

Verb	Description
ABEND	Causes a recipient to abend. There are no qualifiers used with this verb.
DEBUG	Sets the debug value of the recipient. The qualifier is a value from 0 through 5. The value specified will change the run-time value of the DBGLVL parameter specified at startup.
DEBUGSRW	Sets the SRW (send-receive-wait) debug value of the recipient. The qualifier is a value from 0 through 5. The value specified will change the run-time value of the DBGSRWLVL parameter specified at startup.
SHOW	Inquire about statistics, usage and other information. Various qualifiers are used, depending on the recipient.

User Commands

This section lists the user commands that are applicable to specific recipients, and provides examples of each command.

All Recipients The DEBUG and DEBUGSRW verbs can be used with all recipients (see Command Syntax – Recipients on page 39 for a list of available recipients).
The following command sets the debug value of the Main component to a value of 3:

```
MAIN,DEBUG,3
```

This command sets the SRW debug value of the Smart Client component to a value of 1:

```
SMCL,DEBUGSRW,1
```

Subsystem Component The ABEND, SHOW, and DEBUG (a special case) verbs can be used with the Subsystem component (SS). The following command uses the ABEND verb to halt the Subsystem component:

SS , ABEND

The SHOW verb is used with the TABLE qualifier to provide table information about the Subsystem component. You designate specific table information by adding the ALL, ACTIVE, or MONITOR qualifier, where

- ALL is all table information
- ACTIVE is information from the active table
- MONITOR is information from the monitor

The following command displays all table information for the Subsystem component:

SS , SHOW , TABLE , ALL

The SHOW verb with the COUNTS qualifier displays the number of Job Status change calls, calls issued by a Tracker Smart Client, calls issued from Event Clients, and other internal values.

SS , SHOW , COUNTS

The DEBUG verb can be used with all recipients, as described in All Recipients on page 40. However, there is a special case using the DEBUG verb with the WTO qualifier that can only be used with the Subsystem component. The following command:

SS , DEBUG , 2 , WTO

sets the WTO debug level to 2; this controls which messages are written to the console by the SMF exits and the Subsystem functions routines that do not have access to the logging mechanism.

Smart Client Component The ABEND verb can be used to halt the Smart Client component (SMCL):

SMCL , ABEND

The SHOW verb is used with the TABLE qualifier to provide table information about the Smart Client component. You designate specific table information by adding the ALL, CLIENT, or JOB qualifier, where

- ALL is all table information
- CLIENT is information about a specific client
- JOB is information about a specific job

The following command displays job-specific table information for the Smart Client component:

```
SMCL, SHOW, TABLE, JOB
```

**TIBCO Hawk
Interface
Component**

The ABEND verb can be used to halt the TIBCO Hawk interface component (HAWK):

```
HAWK, ABEND
```

**Main
Component**

The SHOW verb with the LOG qualifier can be used with the Main component (MAIN) to write the specified text to the log and trace:

```
MAIN, SHOW, LOG, <text-to-display>
```

This provides a way for the operator to make a notation on the running log.

System Commands

This section lists commands used by TIBCO Support and TIBCO engineering personnel:

```
f <jobname>, TASK, SHOW, TASK
```

Directed only to TASK, SHOW, TASK shows an internals-oriented display of a TIBCO Mainframe Service Tracker subtask status.

Accessing TIBCO Mainframe Service Tracker

This section demonstrates how to use the TIBCO Hawk Display to access TIBCO Mainframe Service Tracker information.



It is assumed that the TIBCO Hawk agent has been configured. For information on configuring TIBCO Hawk, see *TIBCO Hawk Installation and Configuration*.

If you are unfamiliar with the TIBCO Hawk terminology used in this section, see Understanding TIBCO Hawk on page 3.

You can also view this information using Enterprise RTView.

Perform the following steps:

1. **Start the TIBCO Hawk Display** – the console application dynamically discovers the TIBCO Hawk agents on your network (also referred to as the *Enterprise Monitor*). Select the agent associated with the TIBCO Mainframe Service Tracker.
2. **Access Microagents, Methods and Arguments** – get the microagents associated with the selected agent. Note that in addition to the TIBCO Mainframe Service Tracker microagent(s), the agent also has default microagents for monitoring various system objects, such as log files, processes, and application metrics. Select a microagent to access its methods and associated arguments.
3. **Invoke a Method** – select and invoke the desired TIBCO Mainframe Service Tracker microagent to extract monitoring information and/or carry out specified tasks.
4. **View Results** – view the results of the invocation, which are presented in table format.

Start the TIBCO Hawk Display

To start an instance of the TIBCO Hawk Display, perform the following:

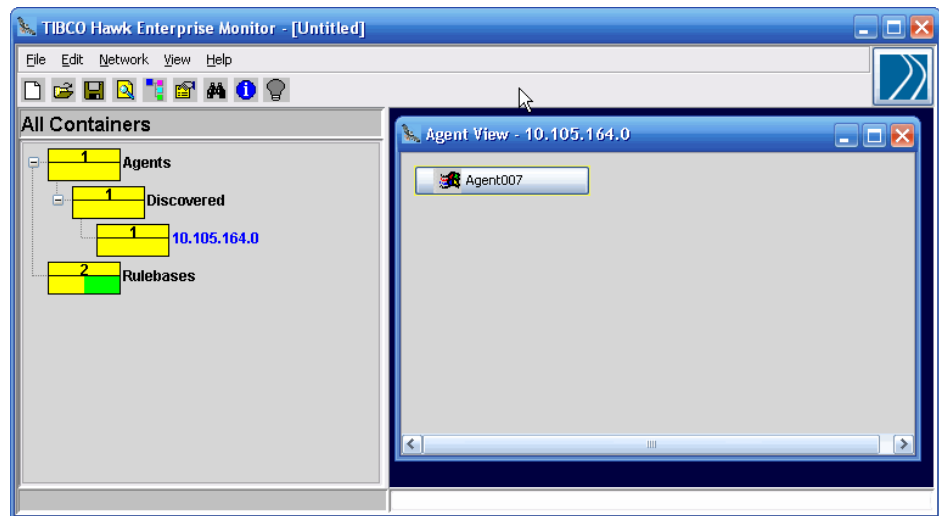
Microsoft Windows:

From the Start menu, select **All Programs > TIBCO > TIBCO Hawk x.x > Hawk Display**, or double-click **Hawk Display** in the TIBCO Hawk program group.

UNIX:

Type **startdisplay** at a command prompt.

The TIBCO Hawk Display main window displays:

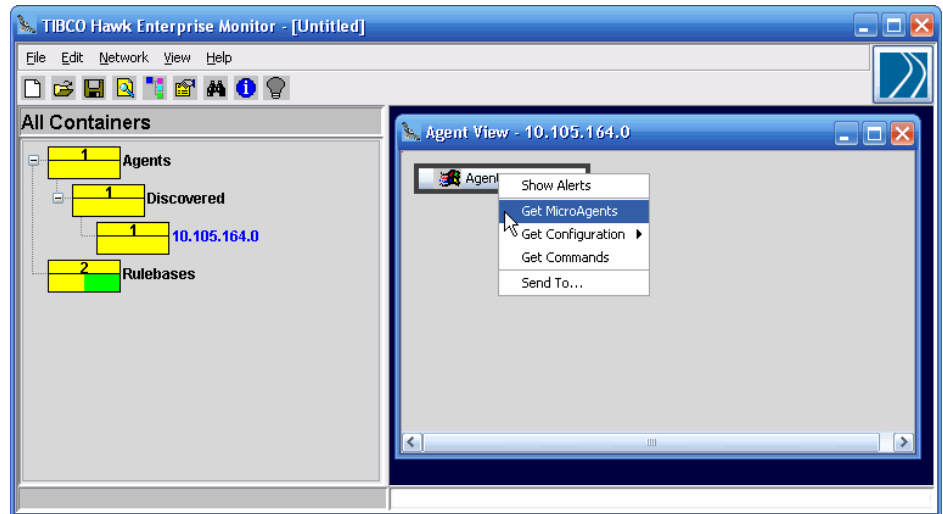


The TIBCO Hawk Display dynamically discovers TIBCO Hawk agents on your network. Newly-discovered agents are grouped by subnet and placed in a container nested under agents, labeled *Discovered*. As agents are discovered, the counters increment to reflect the current number of discovered agents.

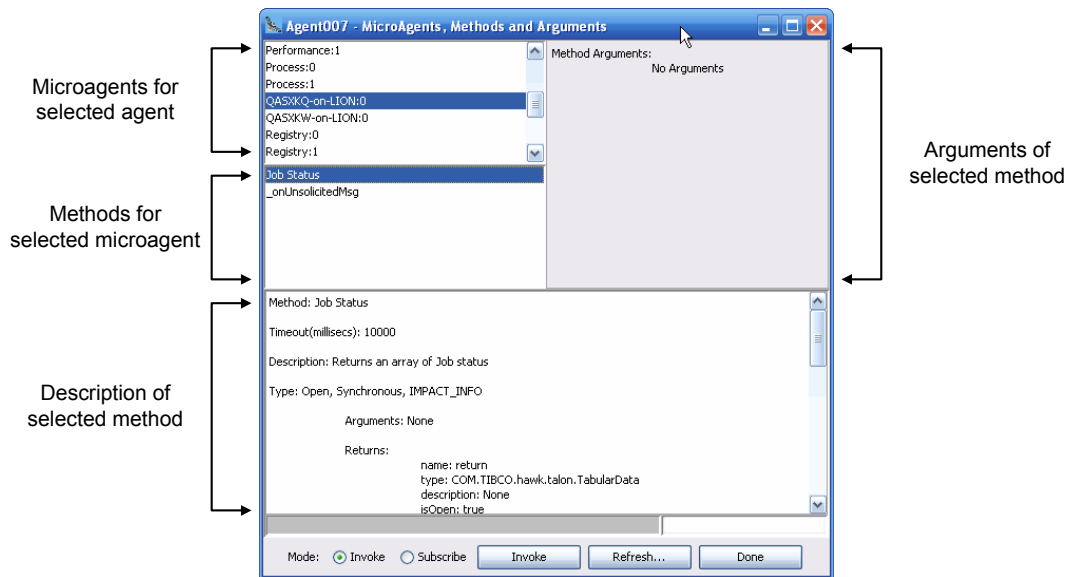
Monitored network nodes are arranged in a hierarchical tree of containers. Clicking a container in the left panel displays nested items on the right panel (in the above example, an agent displays in the right panel).

Access Microagents, Methods and Arguments

To access the microagents associated with the selected agent, right-click the agent icon in the right panel and select **Get MicroAgents**:



The MicroAgents, Methods and Arguments window displays:

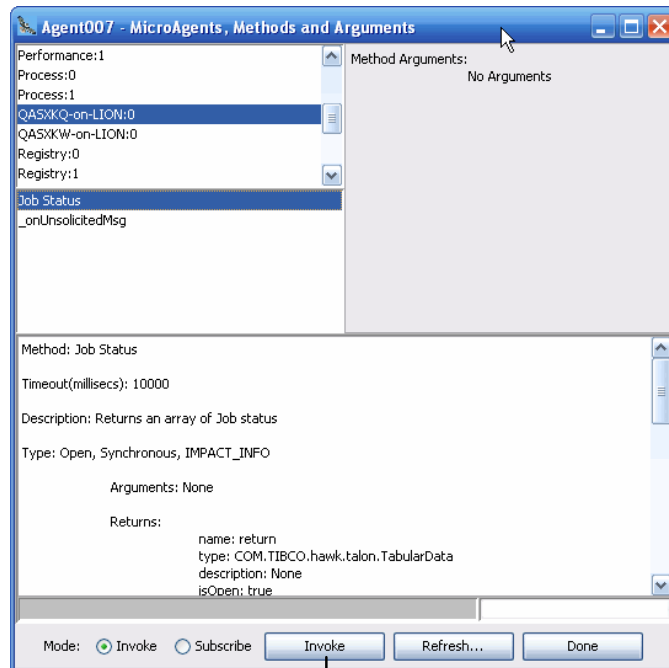


This window is comprised of the following panels:

- **Microagents** – the upper left panel lists the microagents associated with the selected agent. In this example, there are two TIBCO Mainframe Service Tracker microagents, labeled QASXKQ-on-LION:0 and QASXKW-on-LION:0. The other entries are default microagents.
- **Methods**– the middle left panel lists the methods for a selected microagent. In this example, the TIBCO Mainframe Service Tracker microagent labeled QASXKQ-on-LION:0 is selected. There are two methods associated with this microagent: Job Status, Notification and _OnUnsolicitedMsg.
- **Method Description** – the bottom panel shows a description of the selected method. In this example, the Job Status method is selected, and its description is displayed.
- **Arguments** – the upper right panel lists the arguments for the selected methods. There are none for the selected method (Job Status) in this example.

Invoke a Method

To invoke a method, click **Invoke** at the bottom of the window:



Invoke selected
method

View Results

The results window for an invoked method is shown below (in this example, the Job Status method was invoked):

Status and
Return Code

Job Start Date/Time

Job End Date/Time

	MF-QA-OP - Subscription Results for - Job Status():3600							
	Jobname	Job Status	Addr Space ID	System Name	Start Date	Start Time	End Date	End Time
Substation ES	SSTATION	Normal End RC=0	57	LION	2008/01/07	15:41:26.17	2008/01/08	13:03:30.22
	RVSUB	Abended-00C4	67	LION	2008/01/08	12:34:04.04	2008/01/08	12:46:23.15
Rendezvous apps	RVSEND	Abended-0913	59	LION	2008/01/08	11:43:19.29	2008/01/08	11:43:19.43
	RVPUB	Running	59	LION	2008/01/08	12:32:26.96	<Active>	
	RVLISTEN	Normal End RC=0	54	LION	2008/01/07	15:50:19.36	2008/01/08	13:05:52.67
Rendezvous daemons and compile	RVD7500	Running	169	LION	<None>		<Active>	
	RVD390	Running	189	LION	2008/01/07	15:58:22.18	<Active>	
IMS region	RVCPL	Normal End RC=12	67	LION	2008/01/08	11:53:03.14	2008/01/08	11:53:07.16
	IMS90	Running	214	LION	<None>		<Active>	
File adapter apps	FILEADS	Normal End RC=0	65	LION	2008/01/07	16:34:58.67	2008/01/08	13:08:18.04
	FILEADP	Cancelled	62	LION	2008/01/07	16:03:29.54	2008/01/08	13:04:27.24
EMS compile and client apps	EMSCPL	Normal End RC=0	63	LION	2008/01/07	16:34:03.83	2008/01/08	13:08:25.72
	EMSCLNTP	Normal End RC=0	66	LION	2008/01/08	11:50:32.37	2008/01/08	13:06:55.54
	EMSCLNTC	Normal End RC=8	64	LION	2008/01/08	13:00:40.13	2008/01/08	13:00:45.15
	C321WW2	Normal End RC=0	212	LION	<None>		2008/01/08	11:51:22.51
CICS regions	C321WW1	Normal End RC=2	165	LION	2008/01/08	10:25:13.18	2008/01/08	11:51:18.28
	C321WN1	Running	190	LION	<None>		<Active>	
	C321JD2	Running	219	LION	2008/01/07	18:24:08.42	<Active>	

Click a cell to display its value in this area!

Updating subscription # Tue Jan 08 13:08:59 PST 2008 #

History... Done

Mainframe processes are listed as rows in the table (described here by the labels to the left of the table). The columns displayed are specific to the method invoked.

Chapter 4 **Examples**

This chapter contains examples of using TIBCO Mainframe Service Tracker.

Topics

- *Tracker Client API Calls, page 50*
- *Input Parameters for Event Client Examples, page 52*
- *Tracker Event Client Batch Sample, page 53*
- *Tracker Event Client CICS Online Sample, page 54*
- *Tracker Event Client COBOL Sample, page 55*
- *Tracker Event Client C Sample, page 57*
- *Tracker Smart Client Batch Sample, page 58*

Tracker Client API Calls

SXKADSSI

Function

Purpose Used to send Tracker Alert or Notification messages.

C Declaration `sxk_status_char SXKADSSI (
char* SubsystemId,
*Structure,
Function);`

COBOL Call `CALL 'SXKADSSI'
USING BY REFERENCE SubsystemId,
BY REFERENCE Structure,
BY VALUE Function
RETURNING sxk_status_char
END-CALL.`

Parameters

Parameter	Description
SubsystemId	The subsystem ID that Tracker started with and registered as.
Structure	Structure containing the information to be sent.
Function	Tracker function number to identify call.
sxk_status_char	Error message pointer returned from the API call.

SXKACSSI

Function

Purpose Used by Smart Clients to communicate with Tracker.

C Declaration

```
sxk_status_char SXKACSSI (  
    char* SubsystemId,  
    *Structure,  
    NULL);
```

COBOL Call

```
CALL 'SXKACSSI'  
    USING BY REFERENCE    SubsystemId,  
          BY REFERENCE    Structure,  
          BY REFERENCE    NULL  
    RETURNING sxk_status_char  
END-CALL.
```

Parameters

Parameter	Description
SubsystemId	The subsystem ID that Tracker started with and registered as.
Structure	Structure containing the information to be sent. The structure information differs for each type of call that can be made to Tracker.
sxk_status_char	Error message pointer returned from the API call.

Remarks For required values and structure information, see Tracker Smart Client Batch Sample on page 58.

Input Parameters for Event Client Examples

Input parameters for the Event Client examples are described in Table 12.

Table 12 Input Parameters

Flag	Operand	Description
-S	<subsystem ID>	ID of the local Tracker.
-D	<number>	Debug level. Valid values: 1 – 5.
-M	<message ID>	Eight-character message ID in the format SXKnnnnS, where: <ul style="list-style-type: none">SXK – product code for Trackernnnn – message numberS – severity code. For the Alert message type, the valid values are I, W, and E. For the Notification message type, the valid values are I, W, E, C, and F.
-T	<text>	The message content.
-L	<severity code>	The message severity. Valid values: I, W, E, C, F. For details, see Message Identifiers on page 62.
-Q	<message type>	The message type. Valid values: A (alert), N (notification); default = A.

Tracker Event Client Batch Sample

The SXK3NUEV and SXKCNEUV programs function as TIBCO Tracker user Hawk event publishers. These programs publish Unsolicited Alert messages or Tracker Notification messages based on parameters passed in through EXEC PARM statements in the run JCL. If an error occurs it will be reported (for details on the error messages, see Messages Returned from API Calls on page 107).

There is a single run JCL to run multiple times; it can be found in:

Data Set: <USERHLQ>.JCL
Member: RUNUEVT

PARM Input Parameters

This sample PARM statement sends an Unsolicited Alert message to TIBCO Hawk through the interface:

```
-SSXK1 -D3 -MSXK1234I -T...ALERT:Bushman-Needs-Water-Today
```

This sample PARM statement sends a Tracker Notification message to TIBCO Hawk through the interface:

```
-SSXK1 -QN -LW -D3 -MSXK0911W -TNotify:No-Water-received-yet
```

The messages sent by the TIBCO Tracker user Hawk event publisher are determined by the keywords and operands specified in the PARM input statements.

Tracker Event Client CICS Online Sample

The SXXCCUEV program functions as a Tracker user Hawk event publisher. It publishes an Unsolicited Alert message or Tracker Notification message based on input parameters passed in through the command line. If an error occurs it will be reported (for details on the error messages, see Messages Returned from API Calls on page 107).

To run this example, you invoke a transaction at the command line using the following syntax:

```
Tran ID    {-S(subsystem ID)}
           {-D(number)}
           {-M(message ID)}
           {-T(text)}
           {-L(severity code)}
           {-Q(message type)}
```

Tran ID is the transaction ID. Invoke the SXX1 transaction at the command line using the parameters described in Input Parameters for Event Client Examples on page 52. The CICS system will translate input parameter values to uppercase.

The following samples send an Unsolicited Alert message to TIBCO Hawk through the interface (identified by the subsystem ID SXX1):

```
SXX1,-SSXX1,-D3,-MSXX1234I,-T...ALERT:Bushman-Needs-Water-Today
```

```
SXX1 -SSXX1 -D3 -MSXX1234I -T...ALERT:Bushman-Needs-Water-Today
```

The following samples send a Tracker Notification message to TIBCO Hawk through the interface (identified by the subsystem ID SXX2):

```
SXX1,-SSXX2,-QN,-LW,-D3,-MSXX0911W,-T...Notify:No-Water-
received-yet
```

```
SXX1 -SSXX2 -QN -LW -D3 -MSXX0911W -T...Notify:No-Water-
received-yet
```

Tracker Event Client COBOL Sample

Unsolicited Alert Message

This sample demonstrates how to use an API call to send an Unsolicited Alert message to Hawk through a Tracker subsystem interface. The full version of the batch program is <USERHLQ>..COB(SXKCNUEV) and the CICS online program is <USERHLQ>..COB(SXKCCUEV).

```

* Information passed from the parameters
*   Subsystem to communicate with
*   Error message pointer return from the API call
01  SXX-BASE.
    05  WS-SSID                      PIC X(4)   VALUE 'SXX1'.
    05  ERROR-MSG-POINTER           USAGE POINTER.

* Tracker Request Copybook
COPY SXXCCMSG.

* Set request type
* Set request message id
* Set message text
  MOVE SXX-REQ-ALERT-ID             TO SXX-ALERT-REQUEST-ID.
  MOVE 'SXX9999I'                  TO SXX-ALERT-MSG-ID.
  MOVE ' A Test Message'           TO SXX-ALERT-DATA.

* Compute length which is message size plus 12
  COMPUTE SXX-ALERT-SEG-LEN = 15 + 12.
  SET ERROR-MSG-POINTER           TO NULL.

* Call Tracker interface routine
  CALL 'SXXADSSI'
    USING BY REFERENCE WS-SSID,
          BY REFERENCE SXX-ALERT-REQUEST,
          BY VALUE      SXX-FUNCTION-ID,
          RETURNING     ERROR-MSG-POINTER
  END-CALL.

* See if there is an error message returned
  IF ERROR-MSG-POINTER NOT = NULL
    PERFORM 850-ON-CALL-ERROR
  END-IF.
```

Notification Message

This sample demonstrates how to use an API call to send a Notification message to Hawk through a Tracker subsystem interface. The full version of the batch program is <USERHLQ>..COB(SXKCNUDEV) and the CICS online program is <USERHLQ>..COB(SXKCCUEV).

```

* Information passed from the parameters
*   Subsystem to communicate with
*   Error message pointer return from the API call
01  SXX-BASE.
    05  WS-SSID                PIC X(4)   VALUE 'SXX1'.
    05  ERROR-MSG-POINTER USAGE POINTER.

* Tracker Request Copybook
COPY SXXCCMSG.

* Set request type
* Set request message id and others
* Set message text
  MOVE SXX-REQ-NOTIFICATION-ID    TO SXX-NOTIFY-REQUEST-ID.
  MOVE 'SXX9999I'                 TO SXX-NOTIFY-MSG-ID.
  MOVE ' A Notify Message'        TO SXX-NOTIFY-DATA.
  MOVE ' SXKCNUDEV'               TO SXX-NOTIFY-SOURCE.
  MOVE 'Function Name'            TO SXX-NOTIFY-SUBSOURCE.
  MOVE 'BATCH'                   TO SXX-NOTIFY-PLATFORM.

* Set total length of the record
  MOVE LENGTH OF SXX-NOTIFICATION-REQUEST  TO SXX-NOTIFY-SEG-LEN.
  SET ERROR-MSG-POINTER                     TO NULL.

* Call Tracker interface routine
  CALL 'SXXADSSI'
    USING BY REFERENCE  WS-SSID,
          BY REFERENCE  SXX-NOTIFICATION-REQUEST,
          BY VALUE      SXX-FUNCTION-ID,
          RETURNING     ERROR-MSG-POINTER
  END-CALL.

* See if there is an error message returned
  IF ERROR-MSG-POINTER NOT = NULL
    PERFORM 850-ON-CALL-ERROR
  END-IF.

```

Tracker Event Client C Sample

Unsolicited Alert Message

This sample demonstrates how to use an API call to send an Unsolicited Alert message to TIBCO Hawk through a Tracker server. The full version of the batch program is <USERHLQ>..C(SXK3NUEV).

```
#include "sxkhmsg.h"
char      *crc;

tal_Seg_Length = sizeof(Tracker_Alert) + strlen(<text length>);
tal_Request = TRACKER_REQUEST_ALERT;
memcpy(tal_Identifier, "SXKALERT", 8);
strcpy(tal_Data, "...z/OS_Alert_Message");

crc = SXKADSSI("SSID", <tal structure>, TRACKER_FUNCTION_MSG_A);
```

Notification Message

This sample demonstrates how to use an API call to send a Notification message to TIBCO Hawk through a Tracker server. The full version of the batch program is <USERHLQ>..C(SXK3NUEV).

```
#include "sxkhmsg.h"
char      *crc;

tnf_Seg_Length = sizeof(Tracker_Notify);
tnf_Request = TRACKER_REQUEST_NOTIFY;
memcpy(tnf_Message_Number[0], "SXKNOTIFY", 8);
memcpy(tnf_Severity[0], "I ", 1);
strcpy(tnf_Issuer_Source, "SXK3NUEV");
strcpy(tnf_Issuer_Sub_Source, "PROGRAM");
strcpy(tnf_Host_Platform, "BATCH");
strcpy(tnf_Message_Text, "...z/OS_Notification_Message");

crc = SXKADSSI("SSID", <tnf structure>, TRACKER_FUNCTION_MSG_N);
```

Tracker Smart Client Batch Sample

The SXK3BSMC program functions as a Tracker Smart Client. As such, it can publish events (like an Event Client) or communicate directly with the Tracker server.

Parameters are passed in through input control statements in the run JCL. Errors and run-time messages are logged to the data set referred to by DDName TIBLOG.

Data Set: <USERHLQ> .JCL
Member: RUNSLC



All keyword values specified in the JCL's PARM parameter must be prefixed by a dash or minus sign. Keyword values are separated from the keywords by one or more spaces. The following is an example of a JCL's EXEC statement PARM parameter:

```
PARM= ' -SSXK1 -D3 '
```

The control keywords for this example are described below:

MESSAGE <message_code> <message_text>	Sends an Alert message. A space follows the keyword; there is no space between <i>message_code</i> and <i>message_text</i> .
FULLMSG <message_code> <severity> <message_text>	Sends a Notify message. A space follows the keyword; there are no spaces between <i>message_code</i> , <i>severity</i> , and <i>message_text</i> .
CHECK JOB,<jobname>	Requests a status of <i>jobname</i> , which was previously registered as a job of interest (using the QUERY keyword)
LOGON	Creates a connection as a Smart Client. Internally, it defines and references a 'callback' ecb and reply area
QUERY JOB,<jobname>	Registers <i>jobname</i> as a job of interest, the status of which will now be maintained.
QUIT	Terminates a Smart Client connection. Must be the last call as a Smart Client.
TERMINAT	Stops reading control input and terminates processing.
WAIT <number>	Waits for <i>number</i> seconds.

Input Control Statements Examples

Messages are sent by the program using keywords specified in the input control statements. The following example sends an Unsolicited Alert message to TIBCO Hawk through the Tracker interface:

```
MESSAGE SXX2147WText_of_Message
```

This example sends a Tracker Notification message to TIBCO Hawk through the interface:

```
FULLMSG SXX8943E1Error_Message_Text_1
```

This example demonstrates an interaction between a Smart Client and the Tracker server.

```
LOGON
QUERY JOB,RVD7500
WAIT 10
CHECK JOB,RVD7500
QUIT
TERMINAT
```

The statements perform the following:

1. Logon to the Tracker server as a Smart Client.
2. Register the Rendezvous daemon RVD7500 as a job of interest, the status of which will now be maintained.
3. Wait for 10 seconds.
4. Ask for the status of the Rendezvous daemon RVD7500 (previously registered as a job of interest).
5. Terminate the Smart Client connection with the Tracker server.
6. Stop reading control input and terminate processing.

Appendix A **Messages and Codes**

This appendix describes messages and codes related to TIBCO Mainframe Service Tracker.

Topics

- *Understanding Messages, page 62*
- *Return Codes, page 64*
- *General Messages, page 65*
- *WTO Messages, page 99*
- *Messages Returned from API Calls, page 107*

Understanding Messages

This section is for those who need to understand and respond to TIBCO Mainframe Service Tracker messages. This includes system operators, system programmers, and administration staff.

Overview

You can refer to this section for the meaning of a message without understanding the manual as a whole. Your understanding of TIBCO Mainframe Service Tracker will be enhanced by knowledge of the types of messages the product produces. Knowledge of the messages includes understanding the different destinations to which the product sends messages, and the different audiences the messages are intended to reach.



All numeric response and reason code values are shown by default in decimal. A hexadecimal value is sometimes included when these values are received from IBM macros and facilities.

Message Identifiers

The format of a message issued by the TIBCO Mainframe Service Tracker software is as follows:

```
SXKnnnnS <message text, follow on codes, originating module, etc.>
```

The parts of the format are described below.

- **SXK** is the product code that identifies TIBCO Mainframe Service Tracker messages.
- **nnnn** is the message number.
- **S** is the message severity code, which is separated from the message text by blanks. The severity code defines the importance of the message. Values are:
 - **I** — Informational. These types of messages are usually advisories or a reply to a request performed by TIBCO Mainframe Service Tracker users. Action by you is not usually required.
 - **W** — Warning. These messages draw your attention to a problem or potential problem. Action by you may be required.
 - **E** — Error. These tell you that something has gone wrong. Action by you is probably required.

- **S / C** — Severe error. This indicates something has gone seriously wrong. Action by you is required, probably with help from your system support personnel.
- **F** — Fatal error. Normally indicates that the system or a critical part of the system may no longer be operational. Recovery may be possible. Determine the problem by inquiring on the message received and also any error or warning messages issued previously, located in the Log output file. Notify TIBCO Support.

Message Description Format

Message descriptions are presented in the following format:

- **Message identifier** — in the form SXKnnnnS. (refer to preceding section)
- **Message text** — the words and inserts which make up the message as displayed by TIBCO Mainframe Service Tracker.
- **Explanation** — the events leading to or following the production of the message
- **User Response** — the action recommended for the user (the console or system administrator or programmer). If no user response is required, this item is omitted.
- **System Action** — the action that has been or will be taken by TIBCO Mainframe Service Tracker.
- **Expected Destination** — the device to which the message is sent. Values are:
 - **Console** — refers to the MVS master terminal console
 - **Log and/or Trace** output files of the TIBCO Mainframe Service Tracker software.
 - **SYSPRINT** (system printer defined to the same *DDName*)

Return Codes

Whenever a message is recorded by the TIBCO Mainframe Service Tracker software, it will have a return code value of zero or greater. When an error is encountered, the return code value will be greater than four. Return code values are passed back to the application program or reported by system modules

To resolve the informational and error messages, you need to review the message containing the return code. The values and names below will assist you in identifying the cause of the reported condition.

Table 13 Return Codes

Code	Description
0000	Return code associated with all Informational messages (XX*xxxxI) User Response: Refer to the issuing message for an explanation and action to take. Normally no response is required.
0004	Return code associated with all Warning messages (XX*xxxxW) User Response: Refer to the issuing message for explanation and action.
0008	Return code associated with all Error messages (XX*xxxxE) User Response: Refer to the issuing message for explanation and action.
0012	Return code associated with all Catastrophic or Critical messages (XX*xxxxC) User Response: Refer to the issuing message for an explanation and action.
0016	Return code associated with all Fatal or Serious messages (XX*xxxxF or XX*xxxxS) User Response: Refer to the issuing message for explanation and action.
0020	Return code associated with all Fatal or Serious messages that are unrecoverable. (XX*xxxxF or XX*xxxxS) User Response: Refer to the issuing message for explanation and action.

General Messages

Table 14 General Messages

Code	Description
SXK0063E	Getmain failed for component
	Explanation: Getmain for the Component block failed
	User Response: Contact TIBCO Support
	System Action: Processing terminated
SXK0067E	Attach for <i>pgmid</i> failed rc= <i>rc</i> , type <i>att-type</i>
	Explanation: The attach for the stated program failed
	User Response: Contact TIBCO Support
	System Action: Processing terminates
SXK0068E	Invalid request <i>req</i> to Ysub
	Explanation: An invalid request was found by the support subroutine
	User Response: Contact TIBCO Support
	System Action: Processing terminates
SXK0073I	Component <i>cmp</i> still has an SRW pointer
	Explanation: An SRW area still exists during termination
	User Response: Contact TIBCO Support
	System Action: Processing continues
SXK0074E	Address space not authorized
	Explanation: The address space is not authorized
	User Response: Authorize the address space
	System Action: Processing terminates

Table 14 General Messages

Code	Description
SXK0075I	Address space made non-swappable
	Explanation: Address space has been made non-swappable
	System Action: Processing continues
SXK0076E	Entry <i>cmp</i> has invalid attach type <i>att-type</i>
	Explanation: The attach-type value is invalid
	User Response: Correct attach-type
SXK0077W	Dynamic Component <i>cmp</i> created
	Explanation: A Component has been created only from control statements instead of being pre-defined
	User Response: Verify this is the intended action
SXK0204I	Task manager quick quit
	Explanation: TASK received a message to quit processing
	User Response: Review log for reason for quick quit message
SXK0206E	Component <i>cmp</i> terminated too soon
	Explanation: A component terminated before the stop command
	User Response: Review log for reason for early termination
SXK0211I	Component status:
	Explanation: Shown in response to timeout or SHOW TASK console command
	System Action: Processing continues

Table 14 General Messages

Code	Description
SXX0212I	Status summary complete
	Explanation: Shown in response to timeout or SHOW TASK console command
	System Action: Processing continues
SXX0213I	Component <i>cmp</i> shared GM error
	Explanation: A shared GetMain failed, or too many shared getmain requests
	User Response: Contact TIBCO Support
SXX0214I	Id: <i>cmp</i> stat: <i>status byte</i> intrm: <i>term-indic</i>
	Explanation: Shown in response to timeout or SHOW TASK console command
	System Action: Processing continues
SXX0215W	Component <i>cmp</i> sent exit too soon
	Explanation: A component sent its final message before the stop command
	User Response: Review log for reason for early termination
SXX0216W	Phased terminate msg late
	Explanation: A component sent its termination phase message too late
	System Action: Processing continues
SXX0220W	Modify command <i>verb</i> , <i>qual</i> not supported
	Explanation: The console command is not supported by this component
	User Response: Revise console command and reenter
	System Action: Command not processed

Table 14 General Messages

Code	Description
SXK0221E	Phased initialize msg <i>msgid</i> late
	Explanation: A component sent its initialization phase message too late
	System Action: Processing continues
SXK0302E	Comp <i>cmp</i> lost <i>num</i> messages
	Explanation: Since the last task dispatch, <i>num</i> task messages have been lost due to no buffer available
	User Response: Increase the number of buffers for <i>cmp</i>
SXK0303E	Comp <i>cmp</i> no proc for subj <i>subj</i> from <i>cmp</i>
	Explanation: <i>cmp</i> has not defined a processing routine for subject code <i>subj</i>
	User Response: Contact TIBCO Support
SXK0305C	Comp <i>cmp</i> type <i>which</i> - no SRW area
	Explanation: <i>cmp</i> issued an SRW request <i>which</i> but had no SRW area
	User Response: Contact TIBCO Support
SXK0306C	Comp <i>cmp</i> send to <i>cmp-addr</i> not in list
	Explanation: <i>cmp-addr</i> is a pointer to the receiving Component, but is not in the list of active Components
	User Response: Contact TIBCO Support
SXK0306C	Comp <i>cmp</i> send to <i>cmp-addr</i> not in list
	Explanation: <i>cmp-addr</i> is a pointer to the receiving Component, but is not in the list of active Components
	User Response: Contact TIBCO Support
SXK0306C	Comp <i>cmp</i> send to <i>cmp-addr</i> not in list
	Explanation: <i>cmp-addr</i> is a pointer to the receiving Component, but is not in the list of active Components
	User Response: Contact TIBCO Support
SXK0306C	Comp <i>cmp</i> send to <i>cmp-addr</i> not in list
	Explanation: <i>cmp-addr</i> is a pointer to the receiving Component, but is not in the list of active Components
	User Response: Contact TIBCO Support
SXK0306C	Comp <i>cmp</i> send to <i>cmp-addr</i> not in list
	Explanation: <i>cmp-addr</i> is a pointer to the receiving Component, but is not in the list of active Components
	User Response: Contact TIBCO Support

Table 14 General Messages

Code	Description
SXK0307E	<p>Cmp <i>cmp</i> send msg to <i>cmp2</i> - overflow</p> <hr/> <p>Explanation: The buffer definition for <i>cmp2</i> is too small to accept this message</p> <hr/> <p>User Response: Specify a larger buffersize for <i>cmp2</i>. If the condition persists, contact TIBCO Support.</p> <hr/> <p>System Action: Processing for this task message dropped.</p>
SXK0308E	<p>Cmp <i>cmp</i> receiving <i>cmp2</i> has no buffers</p> <hr/> <p>Explanation: <i>cmp2</i> has no buffers allocated</p> <hr/> <p>User Response: Contact TIBCO Support</p> <hr/> <p>System Action: Processing for this task message dropped.</p>
SXK0309E	<p>Cmp <i>cmp</i> receiving <i>cmp2</i> no bufr avail</p> <hr/> <p>Explanation: <i>cmp2</i> has no free buffers to receive a message</p> <hr/> <p>User Response: Specify a larger number of buffers for <i>cmp2</i>. If the condition persists, contact TIBCO Support.</p> <hr/> <p>System Action: Processing for this task message dropped.</p>
SXK0313E	<p>CMP <i>cmp</i> shrqsend - no target</p> <hr/> <p>Explanation: While processing a request to send to a shared queue, the shared queue could not be found</p> <hr/> <p>User Response: Contact TIBCO Support</p> <hr/> <p>System Action: Processing for this task message dropped.</p>
SXK0323E	<p>Cmp <i>cmp</i> send reserved - overflow</p> <hr/> <p>Explanation: The buffer definition for <i>cmp2</i> is too small to accept this message</p> <hr/> <p>User Response: Specify a larger buffersize for <i>cmp2</i>. If the condition persists, contact TIBCO Support.</p> <hr/> <p>System Action: Processing for this task message dropped.</p>

Table 14 General Messages

Code	Description
SXX0324E	Cmp <i>cmp</i> auto-send - overflow
	Explanation: The buffer definition for the receiving buffer is too small to accept this message
	User Response: Contact TIBCO Support
	System Action: Processing for this task message dropped.
SXX0331C	Request <i>req</i> invalid
	Explanation: The request code <i>req</i> to SRW processing was invalid
	User Response: Contact TIBCO Support
	System Action: Processing for this request dropped.
SXX0332E	Comp <i>cmp</i> - no msg area for diag
	Explanation: A diagnose request found no SRW area allocated
	User Response: Contact TIBCO Support
	System Action: Diag terminated
SXX0333C	GM buffers comp <i>cmp</i> failed
	Explanation: The request to allocate the message buffers failed
	User Response: Contact TIBCO Support
	System Action: Processing terminates
SXX0335E	Cmp <i>cmp</i> over max msg registered
	Explanation: <i>cmp</i> attempted to define too many message types
	User Response: Contact TIBCO Support
	System Action: Processing terminates

Table 14 General Messages

Code	Description
SXK0336E	<p>SRW: <i>cmp</i> has active msg from <i>cmp2</i> subj <i>subj</i> at term</p> <hr/> <p>Explanation: The described message has still not been processed at the end of termination</p> <hr/> <p>User Response: Contact TIBCO Support</p> <hr/> <p>System Action: Termination continues</p>
SXK0338C	<p>Comp <i>cmp</i> type <i>which</i> no SRW area</p> <hr/> <p>Explanation: <i>cmp</i> attempted to process a request with code <i>which</i> with no SRW area allocated</p> <hr/> <p>User Response: Contact TIBCO Support</p> <hr/> <p>System Action: Processing continues</p>
SXK0343E	<p>Shared queue <i>qname</i> not found</p> <hr/> <p>Explanation: A request to initialize a shared queue could not find the queue in question</p> <hr/> <p>User Response: Contact TIBCO Support</p> <hr/> <p>System Action: Processing continues</p>
SXK0345E	<p>SRW: <i>cmp</i> has no shared queue for diag</p> <hr/> <p>Explanation: A request for shared queue statistics found no shared queue defined</p> <hr/> <p>User Response: Contact TIBCO Support</p> <hr/> <p>System Action: Processing continues</p>
SXK0347I	<p>SRW:Shr queue <i>qname</i> linked to by <i>cmp</i></p> <hr/> <p>Explanation: The shared queue <i>qname</i> has been linked-to by <i>cmp</i></p> <hr/> <p>System Action: Processing continues</p>

Table 14 General Messages

Code	Description
SXK0348E	Shrq <i>qname</i> - <i>cmp</i> zero use during termination
	Explanation: The use count for a shared queue has gone below zero during termination
	User Response: Contact TIBCO Support
	System Action: Termination continues
SXK0350E	Shrq <i>qname</i> not found by processor <i>cmp</i>
	Explanation: The sender's shared queue does not exist
	User Response: Contact TIBCO Support
	System Action: The component terminates
SXK0351E	Cmp <i>cmp</i> has blank shareq
	Explanation: A component which expected to use a shared queue has none defined
	User Response: Contact TIBCO Support
	System Action: The component terminates
SXK0354E	Free error,SRW of <i>cmp</i> at <i>add</i> , leng <i>leng</i> sp= <i>sp</i>
	Explanation: The STORAGE RELEASE of the SRW area for <i>cmp</i> failed
	User Response: Contact TIBCO Support
	System Action: Termination continues
SXK0404W	CNSL: <i>cmp</i> Quick leave
	Explanation: The console processor has received a quick leave message, and will terminate without any cleanup
	User Response: Review log messages for reason for 'quick leave'
	System Action: Console terminates

Table 14 General Messages

Code	Description
SXX0405I	CNSL: <i>cmp</i> monitoring started
	Explanation: Console is now monitored for Modify and Stop commands
	System Action: Processing continues
SXX0406E	CNSL: Error <i>rc</i> from M001
	Explanation: An error code was received by the Console interface routine
	User Response: Contact TIBCO Support
SXX0407I	System Action: Console processing continues
	CNSL: Msg - stop (P)
	Explanation: A stop command was received
SXX0408I	System Action: Termination processing starts
	CNSL: Modify: <i>message</i>
	Explanation: A modify message has been received
SXX0409E	System Action: Processing continues
	CNSL: Initialize failed - <i>rc</i>
	Explanation: Console initialization failed
SXX0410E	User Response: Contact TIBCO Support
	System Action: Console notifies Task of failure
	CNSL: Multiple error - terminating
	Explanation: Multiple errors have been received by the console interface.
	User Response: Contact TIBCO Support
	System Action: The console application terminates

Table 14 General Messages

Code	Description
SXX0411E	Modify request <i>verb</i> , <i>req</i> not supported
	Explanation: The Modify command directed to the Console processor is not supported
	User Response: Revise console command
	System Action: Console command ignored
SXX0701E	Modify command <i>cmd</i> received.
	Explanation: The console command <cmd> has been received
	System Action: Processing continues
SXX0702E	Invalid recipient <i>rcp</i> on modify command
	Explanation: The target name <i>rcp</i> on the console command is invalid
	User Response: Change the console command and resubmit
	System Action: Processing of this command terminates
SXX0703E	Invalid verb <i>verb</i> on modify command
	Explanation: The first value after the target name on the modify command is invalid
	User Response: Change the verb in the command and resubmit
	System Action: Processing of this command terminates
SXX0704E	Extra/invalid value <i>value</i> on modify command
	Explanation: The last value entered on the modify command is invalid
	User Response: Change the modify command and resubmit
	System Action: Processing of this command terminates

Table 14 General Messages

Code	Description
SXX0705E	Send failure on modify command to <i>cmp</i>
	Explanation: An internal error occurred while routing the modify command to the proper Component
	User Response: Contact TIBCO Support
	System Action: The command may not be completely processed
SXX0801E	Read error from <i>pgmid: msgno - message</i>
	Explanation: The PDS access routine returned an error, as described
	User Response: Contact TIBCO Support
	System Action: Processing terminates
SXX0802E	Mbr <i>mbr</i> premature EOF - Missing continuation
	Explanation: A syntax error in the control member has been found
	User Response: Correct the control statement in error
	System Action: Processing terminates
SXX0803E	Mbr <i>mbr</i> scan error from <i>pgmid: msgid - message</i>
	Explanation: An error has been found in a control statement
	User Response: Correct the control statement in error
	System Action: Processing terminates
SXX0806I	Pds ddname <i>ddn</i> processed, rc= <i>rc</i>
	Explanation: The specified ddname has been processed with the return code rc
	System Action: Processing continues

Table 14 General Messages

Code	Description
SXX0809E	Keyword must appear under a COMPONENT= statement
	Explanation: The keyword must appear after a valid COMPONENT statement
	User Response: Correct the control statement in error
	System Action: Processing terminates
SXX1039I	Tracker Good to Go
	Explanation: Tracker is fully initialized and now active
	System Action: Processing continues
SXX1050I	Tracker subsys ssid Release v.r.m.b start
	Explanation: Tracker has started
	System Action: Processing continues
SXX1051I	Tracker into termination
	Explanation: Tracker has begun the termination sequence
	System Action: Termination continues
SXX1052I	Tracker ssid shutting down logging
	Explanation: Tracker has completed its termination and is stopping the logging processes
	System Action: Termination is almost complete
SXX1054E	Error in Task initialization - terminating
	Explanation: An error occurred during initialization
	User Response: Review log for previous error description
	System Action: Process enters termination.

Table 14 General Messages

Code	Description
SXK1056E	<p>Timeout awaiting TASK startup</p> <hr/> <p>Explanation: The subtask manager TASK did not initialize within the initialization period</p> <hr/> <p>User Response: See previous error messages for indications of initialization failure</p> <hr/> <p>System Action: Process enters termination</p>
SXK1059E	<p>Timeout in termination, waited <i>usec</i> usec</p> <hr/> <p>Explanation: The termination process required more than <i>usec</i> microseconds to complete</p> <hr/> <p>User Response: Contact TIBCO Support</p> <hr/> <p>System Action: Process enters final termination.</p>
SXK1064I	<p>Main received <i>msg</i> message showing Error</p> <hr/> <p>Explanation: Value of <i>msg</i>. Is either Console Answer or Task Answer. One of the early startup Components signaled startup failure</p> <hr/> <p>User Response: Review the log for previous error messages related to this failure</p> <hr/> <p>System Action: Processing terminates</p>
SXK1065E	<p>Message notify failed in work rc <i>rc</i></p> <hr/> <p>Explanation: A call to task messaging during startup failed</p> <hr/> <p>User Response: Contact TIBCO Support</p> <hr/> <p>System Action: Processing terminates</p>
SXK1066E	<p>Message notify failed in termination rc <i>rc</i></p> <hr/> <p>Explanation: A call to task messaging during termination failed</p> <hr/> <p>User Response: Contact TIBCO Support</p> <hr/> <p>System Action: Processing continues termination.</p>

Table 14 General Messages

Code	Description
SXK1067E	Wait in hung terminate <i>where</i> failed rc <i>rc</i>
	Explanation: An unexpected process request was returned during timeout termination processing
	User Response: Contact TIBCO Support
	System Action: Termination continues
SXK1068E	Initial set message failed rc <i>rc</i>
	Explanation: A call to task messaging during initialization failed
	User Response: Contact TIBCO Support
	System Action: Processing terminates
SXK1069E	No pthread routine for Cmp <i>cmp</i> program-id <i>pgmid</i>
	Explanation: No routine defined for <i>cmp</i> which is to be created with pthread_create
	User Response: Contact TIBCO Support
	System Action: Process is not created
SXK1070E	Attach failed for <i>pgm</i> in Cmp <i>cmp</i> , rc= <i>rcpre7f</i>
	Explanation: The attach subroutine failed for <i>pgm</i>
	User Response: See log for previous error messages
	System Action: Subtask is not created
SXK1077E	Pthread_create failure for <i>cmp</i> rc= <i>rc</i> - <i>reason</i>
	Explanation: Pthread_create failed for <i>cmp</i> with return code rc, explained as <i>reason</i>
	User Response: Contact TIBCO Support
	System Action: Pthread is not created

Table 14 General Messages

Code	Description
SXX1079E	Job table not forwarded, error in send
	Explanation: The job table address send process failed
	User Response: Contact TIBCO Support
	System Action: Processing continues, but Hawk cannot access active job status
SXX1080I	Oper: <i>message</i>
	Explanation: Echoes <i>message</i> as sent from the SHOW LOG console command
	System Action: Processing continues
SXX1081E	Modify <i>verb qual info</i> not supported
	Explanation: The given Modify command is not supported by this routine
	User Response: Revise the Modify command and re-enter
	System Action: Processing continues.
SXX1083E	No Run Keys included
	Explanation: There are no Run Keys in the control member
	User Response: Update the control member
	System Action: Processing terminates
SXX1085W	Run Key <i>key</i> valid for <i>num</i> more days
	Explanation: The specified Run Key will expire in <i>num</i> days
	User Response: If no other valid Run Key is available, contact your Tibco representative to renew
	System Action: Processing continues.

Table 14 General Messages

Code	Description
SXX1086E	No valid Run Ken Processed
	Explanation: There are not valid Run Keys in the control member
	User Response: If no other valid Run Key is available, contact your Tibco representative to renew
	System Action: Processing terminates
SXX1087I	Debug level for <i>cmp</i> changed from <i>old debug</i> to <i>new debug</i>
	Explanation: The debug value was changed with a console command
	System Action: Processing continues
SXX1092I	Debug-srw level for <i>cmp</i> changed from <i>old debug</i> to <i>new debug</i>
	Explanation: The srw debug value was changed with a console command
	System Action: Processing continues
SXX1093E	Component edit returned non-zero code <i>rc</i>
	Explanation: One or more Components failed edit.
	User Response: See log for specific error descriptions
	System Action: Processing terminates
SXX1095E	Value for <i>field name</i> cannot be blank
	Explanation: Input field <i>field name</i> is blank; a value is required
	User Response: Update the control member and resubmit
	System Action: Processing terminates
SXX1102E	Error in IEFSSI QUERY call <i>rc:rc-rsn - explanation</i>
	Explanation: The IEFSSI QUERY call received an error with return code <i>rc</i> , reason <i>rsn</i> , explained as <i>explanation</i>
	User Response: Contact TIBCO Support
	System Action: Subsystem is not activated

Table 14 General Messages

Code	Description
SXK1103I	<p>No subsystem <i>ssid</i> currently defined</p> <hr/> <p>Explanation: Subsystem <i>ssid</i> is not defined in the system</p> <hr/> <p>System Action: Processing continues</p>
SXK1105E	<p>Query did not return entry for <i>ssid</i></p> <hr/> <p>Explanation: The IEFSSI QUERY indicated a good return, but did not return an entry for <i>ssid</i></p> <hr/> <p>User Response: Contact TIBCO Support</p> <hr/> <p>System Action: Subsystem is not activated</p>
SXK1106W	<p>Subsystem <i>ssid</i> is not dynamic</p> <hr/> <p>Explanation: Subsystem <i>ssid</i> is not defined to the system as dynamic</p> <hr/> <p>System Action: Processing continues</p>
SXK1107W	<p>Subsystem <i>ssid</i> is active; no permission to deactivate</p> <hr/> <p>Explanation: Subsystem <i>ssid</i> is active, and DEACTIVATE is not specified</p> <hr/> <p>User Response: Verify that another version of Tracker is not using the same subsystem id</p> <hr/> <p>System Action: Processing terminates</p>
SXK1108W	<p>Error in IEFSSI DEACTIVATE call rc:<i>rc-rsn</i> - <i>explanation</i></p> <hr/> <p>Explanation: An error was returned from IEFSSI DEACTIVATE</p> <hr/> <p>User Response: Contact TIBCO Support</p> <hr/> <p>System Action: Processing terminates</p>
SXK1110W	<p>Subsystem <i>ssid</i> values: no permission to replace</p> <hr/> <p>Explanation: The subsystem <i>ssid</i> exists and REPLACE is not specified</p> <hr/> <p>User Response: Either change to another <i>ssid</i> or grant permission to replace</p> <hr/> <p>System Action: Processing terminates</p>

Table 14 General Messages

Code	Description
SXX1111I	Subsystem <i>ssid</i> removed with permission
	Explanation: The subsystem <i>ssid</i> has been removed
	System Action: Processing continues
SXX1112I	Subsystem <i>ssid</i> found and dynamic
	Explanation: Subsystem definition found and marked as dynamic
	System Action: Processing continues
SXX1113E	Error in IEFSSI GET call rc:rc-rsn - <i>explanation</i>
	Explanation: An error was returned from the IEFSSI GET call
	User Response: Contact TIBCO Support
	System Action: Processing terminates
SXX1114E	Error in IEFSSI PUT call rc:rc-rsn - <i>explanation</i>
	Explanation: An error was returned from the IEFSSI PUT call
	User Response: Contact TIBCO Support
	System Action: Processing terminates
SXX1115E	Error in CMD Prefix DELETE call rc:rc-rsn - <i>explanation</i>
	Explanation: An error was returned from the CPF DELETE request
	User Response: Contact TIBCO Support
	System Action: Processing continues
SXX1152E	Error in IEFSSI ADD rc:rc-rsn - <i>explanation</i>
	Explanation: An error occurred in IEFSSI ADD for the subsystem
	User Response: Contact TIBCO Support
	System Action: Subsystem not created

Table 14 General Messages

Code	Description
SXK1156I	On system id <i>sysid</i>
	Explanation: Tracker is running on system <i>sysid</i>
	System Action: Processing continues
SXK1158W	<i>cmp</i> Quick leave
	Explanation: The component received a quick leave and is terminating without normal cleanup
	User Response: See previous messages for cause of quick leave
SXK1162E	System Action: Termination continues
	Error getting common rc= <i>rc</i> , rs= <i>rsn</i> - <i>explanation</i>
	Explanation: The IEFSSI GET request failed
SXK1165E	User Response: Contact TIBCO Support
	System Action: Subsystem not activated
	Invalid modify msg Verb= <i>verb</i> , Qual= <i>qual</i> , Value= <i>value</i>
SXK1166E	Explanation: The console command was invalid for this component
	User Response: Revise console command and reentry
	System Action: Command not processed
SXK1166E	Job <i>job</i> overflowed monitor job list - rejected
	Explanation: The job to be monitored was not added to the Monitor table - the table was full
	User Response: Monitor fewer jobs with this instance of Tracker
SXK1166E	System Action: Job not monitored

Table 14 General Messages

Code	Description
SXK1169E	Monitor job key <i>job</i> delete - entry not found
	Explanation: When deleting a job from the Monitor list, the jobname was not found
	User Response: Contact TIBCO Support
	System Action: Delete request ignored
SXK1170I	Error in Command Prefix rc= <i>rc</i> , rsn= <i>rsn</i> - <i>explanation</i>
	Explanation: The command prefix call return an error
	User Response: Contact TIBCO Support
	System Action: No command prefix is available
SXK1173I	<i>cmp</i> debug changed from <i>db</i> to <i>db</i>
	Explanation: The debug value has been changed
	System Action: Processing continues
SXK1174I	WTO debug changed from <i>db</i> to <i>db</i>
	Explanation: The WTO debug value has been changed
	System Action: Processing continues
SXK1176I	Modify message <i>verb qual value</i> processed
	Explanation: The Modify message has been successfully processed
	System Action: Processing continues
SXK1177I	SS Count nnnnn - <i>count description</i>
	Explanation: Shows the count of the calls to each of the subsystem functions.
	System Action: Processing continues

Table 14 General Messages

Code	Description
SXX1201E	Create SSVT in <i>ssid</i> failed rc:rc:rsn - <i>explanation</i>
	Explanation: The IEFSSVT CREATE request failed
	User Response: Contact TIBCO Support
	System Action: The subsystem is not activated
SXX1202E	Exchange SSVT in <i>ssid</i> failed rc:rc:rsn - <i>explanation</i>
	Explanation: The IEFSSVT EXCHANGE request failed
	User Response: Contact TIBCO Support
	System Action: The subsystem is not activated
SXX1203E	Disable SSVT in <i>ssid</i> failed rc:rc:rsn - <i>explanation</i>
	Explanation: The IEFSSVT DISABLE request failed
	User Response: Contact TIBCO Support
	System Action: The subsystem is not activated
SXk1204E	Obtain for Subsystem <i>ssid</i> failed rc:rc
	Explanation: The STORAGE OBTAIN for the common data area failed
	User Response: Contact TIBCO Support
	System Action: Subsystem not activated
SXX1205E	Put addr for Subsystem <i>ssid</i> failed rc:rc:rsn - <i>explanation</i>
	Explanation: The IEFSSI PUT requests failed
	User Response: Contact TIBCO Support
	System Action: Subsystem not activated

Table 14 General Messages

Code	Description
SXK1206E	Set option for Subsystem <i>ssid</i> failed rc:rc:rsn - <i>explanation</i>
	Explanation: The IEFSSI OPTIONS request failed
	User Response: Contact TIBCO Support
	System Action: Subsystem not activated
SXK1207E	Activate Subsystem <i>ssid</i> failed rc:rc:rsn - <i>explanation</i>
	Explanation: The IEFSSI ACTIVATE request failed
	User Response: Contact TIBCO Support
	System Action: Subsystem not activated
SXK1208I	Subsystem <i>ssid</i> activated
	Explanation: The subsystem is successfully activated
	System Action: Processing continues
SXK1503I	<i>Cmp</i> Smart Client terminated
	Explanation: The smart client application is terminating
	System Action: Smart client processing ended
SXK1504W	<i>Cmp</i> quick leave
	Explanation: Smart client application has been instructed to terminate with no cleanup processing
	User Response: Review previous log messages for cause of quick termination
	System Action: Processing ends
SXK1505I	<i>Cmp</i> activated Smart Client interface
	Explanation: The smart client application has started
	System Action: Processing continues

Table 14 General Messages

Code	Description
SXK1508I	<p>Smart Client <i>cmp</i> received <i>addr</i> for sst</p> <hr/> <p>Explanation: The pointer to the SST has been received</p> <hr/> <p>System Action: Processing continues</p>
SXK1509E	<p>Smart Client request code: <i>req</i> invalid</p> <hr/> <p>Explanation: The request code passed to the smart client application is invalid</p> <hr/> <p>User Response: Contact TIBCO Support</p> <hr/> <p>System Action: This request is ignored</p>
SXK1510E	<p>Smart Client Modify request unknown: <i>verb qual</i></p> <hr/> <p>Explanation: An invalid Modify request was routed to smart client</p> <hr/> <p>User Response: Revise the Modify command and resubmit</p> <hr/> <p>System Action: Processing of this console message terminates</p>
SXK1801E	<p>Table doing <i>what</i>: From <i>modid</i> - <i>msgid</i> - <i>errmsg</i></p> <hr/> <p>Explanation: An error occurred in the internal table handler - this displays the message from that handler</p> <hr/> <p>User Response: Contact TIBCO Support</p> <hr/> <p>System Action: Processing continues</p>
SXK1803I	<p><i>job st: status (expl) ASCB:ascb smfid:smfid Asid:asid. (xasid) sta strttime rc:rc</i> <i>Ab:abend end:endtime SMF:smfrec</i></p> <hr/> <p>Explanation: Displayed in response to a SHOW TABLE ACTIVE command to SS. This shows all fields recorded for an active job</p> <hr/> <p>System Action: Processing continues</p>

Table 14 General Messages

Code	Description
SXK1808E	<p>Job step for <i>job asid</i> has no Active job entry</p> <hr/> <p>Explanation: An SMF step-end record has no matching Active job entry</p> <hr/> <p>User Response: Contact TIBCO Support</p> <hr/> <p>System Action: An entry is created for the active job</p>
SXK1815W	<p>Job <i>job ascb</i> term record <i>recid</i> has no Active entry</p> <hr/> <p>Explanation: An SMF termination record has not matching Active job entry</p> <hr/> <p>User Response: Contact TIBCO Support</p> <hr/> <p>System Action: An entry is created for the terminated job</p>
SXK1820I	<p>Active Jobs Table</p> <hr/> <p>Explanation: The heading displayed in response to a SHOW TABLE ACTIVE command</p> <hr/> <p>System Action: Processing continues</p>
SXK1821I	<p>List of Jobs to Monitor</p> <hr/> <p>Explanation: The heading displayed in response to a SHOW JOBS MONITOR command</p> <hr/> <p>System Action: Processing continues</p>
SXK1822I	<p>Length <i>len</i> Monitor job <i>job</i> as <i>why</i></p> <hr/> <p>Explanation: Displayed in response to a SHOW TABLE MONITOR, showing each job which is to be monitored, including the reason, such as Smart Client, Initial Load and Job of Interest</p> <hr/> <p>System Action: Processing continues</p>

Table 14 General Messages

Code	Description
SXK1824E	<p>Job term for <i>job ascb</i> found status <i>stat</i></p> <hr/> <p>Explanation: An SMF termination record found a status other than Running in the Active table entry.</p> <hr/> <p>User Response: Contact TIBCO Support</p> <hr/> <p>System Action: The entry is updated with the current information.</p>
SXK1826E	<p>Job step end for <i>job ascb</i> found completed job</p> <hr/> <p>Explanation: An SMF step-end record found a completed status in the Active table entry.</p> <hr/> <p>User Response: Contact TIBCO Support</p> <hr/> <p>System Action: The entry is updated with the current information</p>
SXK1828E	<p>Job name in SMF record invalid <i>job, job-in-hex</i></p> <hr/> <p>Explanation: An SMF record contains an invalid job name</p> <hr/> <p>User Response: Contact TIBCO Support</p> <hr/> <p>System Action: Processing continues.</p>
SXK1904E	<p>Table doing <i>what</i>: From <i>tbl-proc</i> - <i>tbl-err</i> - <i>err_desc</i></p> <hr/> <p>Explanation: The common table processor is reporting an error with its error message <i>tbl-err</i> and text <i>err-desc</i></p> <hr/> <p>User Response: Contact TIBCO Support</p> <hr/> <p>System Action: Processing continues</p>
SXK1905E	<p>Smart client <i>cmp</i> terminate - no entry found</p> <hr/> <p>Explanation: A logoff request came from a client for which there is no record</p> <hr/> <p>User Response: Contact TIBCO Support</p> <hr/> <p>System Action: Processing continues</p>

Table 14 General Messages

Code	Description
SXK1906E	No ALET created, rc= <i>rc</i> from AKLESERV ADD - <i>expl</i>
	Explanation: The ALESERV service failed with the specified return code and its explanation
	User Response: Contact TIBCO Support
	System Action: Processing continues, but async notification will not function.
SXK1907E	ALET not deleted, rc= <i>rc</i> from ALESERV DELETE - <i>explanation</i>
	Explanation: The ALESERV DELETE service failed with the specified return code and its explanation
	User Response: Contact TIBCO Support
	System Action: Processing continues
SXK1908E	Smart client <i>client</i> request - no logon entry found
	Explanation: No entry was found for a Smart Client when it issued a request
	User Response: Change Smart Client application to LOGON first
	System Action: Processing continues
SXK1914W	Smart Client <i>client</i> already logged on - using new data
	Explanation: When processing a LOGON request, an existing active entry was found. The new data is kept.
	User Response: Review Smart Client processing for LOGON /LOGOFF processing
	System Action: Processing continues
SXK1915E	Smart Client XM Post response failed
	Explanation: XM Post for async data or data return failed
	User Response: Contact TIBCO Support
	System Action: Smart Client does not receive POST.

Table 14 General Messages

Code	Description
SXX1917W	Client <i>client</i> already interest in <i>job</i>
	Explanation: Interest in <i>job</i> has already been registered by <i>client</i>
	User Response: Review logic in Smart Client
	System Action: Processing continues
SXX1918W	Client <i>client</i> - <i>ascb</i> terminated without logoff
	Explanation: A Smart Client terminated without first issuing a proper LOGOFF request
	User Response: Review logic in Smart Client
	System Action: Processing continues - logical LOGOFF processed.
SXX1927I	List of Smart clients
	Explanation: Shown in response to SHOW,TABLE,CLIENT
	System Action: Processing continues
SXX1928I	Jobs of Interest
	Explanation: Shown in response to SHOW,TABLE,JOB
	System Action: Processing continues
SXX1929I	Job <i>jobname</i> interest by Smart Client <i>client ascb</i>
	Explanation: Shown in response to SHOW,TABLE,CLIENT
	System Action: Processing continues
SXX1930I	Smart Client <i>client ascb</i> ECB: <i>addr</i> Data Len <i>len</i> at <i>addr</i>
	Explanation: Shown in response to SHOW,TABLE,JOB
	System Action: Processing continues

Table 14 General Messages

Code	Description
SXX2002E	Status SEND failed rc <i>rc</i>
	Explanation: An internal status message send failed with return code <i>rc</i>
	User Response: Contact TIBCO Support
	System Action: Processing continues
SXX2003E	Component <i>cmp</i> field <i>field name</i> has invalid value <i>num</i>
	Explanation: Field <i>field name</i> in Component <i>cmp</i> has an invalid value
	User Response: Update the parmlib member and resubmit
	System Action: Processing terminates
SXX2004E	Component <i>cmp</i> field <i>field name</i> has invalid value <i>num</i>
	Explanation: Field <i>field name</i> in Component <i>cmp</i> has an invalid value
	User Response: Update the parmlib member and resubmit
	System Action: Processing terminates
SXX2005E	Component <i>cmp</i> missing value for field <i>field name</i>
	Explanation: Field <i>field name</i> in Component <i>cmp</i> has no value
	User Response: Update the parmlib member and resubmit
	System Action: Processing terminates
SXX2402E	Subtask <i>cmp</i> initialization failed
	Explanation: A call to task messaging during startup failed.
	User Response: Review log for previous messages describing the failure
	System Action: Processing for the component terminates
SXX2406I	Hawk cntl task terminated normally
	Explanation: The Hawk control task has terminated without serious error
	System Action: Processing is in the act of terminating

Table 14 General Messages

Code	Description
SXK2407E	<p>Hawk ami error in '<i>where</i>': error rc=<i>rc</i> in <i>ami-loc</i> line <i>ami</i> line</p> <hr/> <p>Explanation: This message describes any error that occurs in the AMI interface</p> <hr/> <p>User Response: Contact TIBCO Support</p> <hr/> <p>System Action: Processing continues</p>
SXK2409E	<p>Hawk ami ERROR <i>ami_rc</i> <i>ami-error</i></p> <hr/> <p>Explanation: The message echoes an ami error notification, including the return code and description of the error</p> <hr/> <p>User Response: Contact TIBCO Support</p> <hr/> <p>System Action: Processing continues</p>
SXK2410W	<p>Hawk ami WARN <i>ami_rc</i> <i>ami-error</i></p> <hr/> <p>Explanation: The message echoes an ami warning notification, including the return code and description of the error</p> <hr/> <p>User Response: Contact TIBCO Support</p> <hr/> <p>System Action: Processing continues</p>
SXK2411I	<p>Hawk Session at HAWK stopped</p> <hr/> <p>Explanation: The Hawk session has been terminated</p> <hr/> <p>System Action: Processing continues.</p>
SXK2412E	<p>Hawk Processor pointer not supplied</p> <hr/> <p>Explanation: An internal communications error has occurred</p> <hr/> <p>User Response: Contact TIBCO Support</p> <hr/> <p>System Action: Processing terminates.</p>

Table 14 General Messages

Code	Description
SXK2413E	Job Table pointer not supplied Explanation: An internal communications error has occurred User Response: Contact TIBCO Support System Action: Processing terminates.
SXK2414I	Hawk RV parms: daemon: <i>daemon</i> , service: <i>service</i> , network: <i>network</i> Explanation: Shows the three connection parameters used to connect the Hawk processing to a Hawk server. System Action: Processing continues.
SXK2416I	Hawk session start rc <i>rc</i> , Name <i>name1</i> , Friendly: <i>name2</i> Help: <i>help</i> Explanation: Shows the session name, the 'friendly' session name, and the help description for the session. System Action: Processing continues.
SXK2418E	nvalid modify verb <i>verb</i> for <i>cmp</i> Explanation: The modify command directed to this component is not supported User Response: Revise the modify command System Action: The modify command is rejected
SXK2419I	Alert id <i>alert id</i> (type <i>alert type code</i>) request transmission: <i>message id</i> Explanation: A user requested that Tracker transmit an alert to Hawk. System Action: Processing continues.
SXK2422I	Hawk Close completed Explanation: The Hawk close request has completed normally System Action: Processing continues

Table 14 General Messages

Code	Description
SXK2426I	Hawk modify message <i>verb qualifier</i> processed
	Explanation: The modify message has been successfully processed
	System Action: Processing continues.
SXK2429W	No subscription for Full Alert <i>msg number of alert</i>
	Explanation: A Full Alert was received, but there is no subscription for it.
	User Response: Subscribe to the Full Alert.
	System Action: Processing continues.
SXK2482E	Invalid request <i>reqst</i> to Hsub
	Explanation: An invalid request was made to the Hawk support routine
	User Response: Contact TIBCO Support
	System Action: Processing continues.
SXK2602E	Hawk task <i>cmp</i> initialization failed
	Explanation: A call to task messaging during startup failed.
	User Response: Review log for previous messages describing the failure
	System Action: Processing for the component terminates
SXK2604E	Hawk ami error in <i>where: error rc=rc</i> in <i>ami-mod</i> line <i>ami-line</i>
	Explanation: This message describes any error that occurs in the ami interface
	User Response: Contact TIBCO Support
	System Action: Processing continues
SXK2607I	Hawk Interface <i>session name</i> activated
	Explanation: Hawk session has been established
	System Action: Processing continues

Table 14 General Messages

Code	Description
SXK2609E	Hawk Job Table error rc= <i>rc</i> doing <i>where</i>
	Explanation: An error occurred in accessing the active jobs table
	User Response: Contact TIBCO Support
	System Action: Processing continues
SXK2612I	Hawk Interface <i>session name</i> stopped
	Explanation: The Hawk session has been stopped
	System Action: Termination continues
SXK2902E	Error in SSREQ rc= <i>rc</i> = <i>explanation</i>
	Explanation: The SSI call to return the exit addresses returned an error
	User Response: Contact TIBCO Support
SXK2904E	System Action: SMF exits not loaded
	Error Dyn Add of <i>exit</i> rc= <i>rc</i> , rsn= <i>rsn</i> - <i>explanation</i>
	Explanation: The dynamic add of <i>exit</i> failed for the stated reason
SXK2905E	User Response: Contact TIBCO Support
	System Action: SMF exit not loaded
	Error Dyn Delete of <i>exit</i> rc= <i>rc</i> , rsn= <i>rsn</i> - <i>explanation</i>
	Explanation: The dynamic delete of <i>exit</i> failed for the stated reason
SXK2906I	User Response: Contact TIBCO Support
	System Action: SMF exit still active
	Dynamic Delete for <i>exit</i> OK
	Explanation: The SMF exit was successfully deleted
	System Action: Processing continues

Table 14 General Messages

Code	Description
SXK2907I	Dynamic Add for <i>exit</i> OK
	Explanation: The SMF exit was successfully added
	System Action: Processing continues
SXk2908W	SMF exit <i>exit</i> already active - will delete
	Explanation: The SMF exit is already active; it will be deleted
	System Action: Processing continues
SXK2909I	Previous SMF exit <i>exit</i> deleted
	Explanation: The old SMF exit has been deleted
	System Action: Processing continues
SXK2910E	Dynamic Delete of duplicate <i>exit</i> rc= <i>rc</i> = <i>explanation</i>
	Explanation: The pre-existing SMF exit could not be deleted
	User Response: Contact TIBCO Support
	System Action: SMF exit not loaded.
SXK3001E	Invalid Related= <i>related</i> in Component
	Explanation: The Related value in the receiving Component is not valid for this application.
	User Response: Contact TIBCO Support
	System Action: Component and system terminate
SXK3002E	Invalid Ident= <i>ident</i> in Component
	Explanation: The Identity field in the receiving Component is not valid for this application
	User Response: Contact TIBCO Support
	System Action: Component and system terminate.

Table 14 General Messages

Code	Description
S XK3003E	Pthread_create for <i>cmp-ep</i> failed with <i>rc</i> - <i>reason</i>
	Explanation: The pthread_create for this entry point failed with return code <i>rc</i> , interpreted as <i>reason</i> .
	User Response: Contact TIBCO Support
	System Action: System terminates
S XK3004E	Pthread_join for <i>cmp-ep</i> failed with <i>rc</i> - <i>reason</i>
	Explanation: The pthread_join for this thread failed with return code <i>rc</i> , interpreted as <i>reason</i> .
	User Response: Contact TIBCO Support
	System Action: System terminates

WTO Messages



Each message in this section is sent to its expected destination only when the debug level (as specified in the DBGLVLALL parameter) is equal to or greater than the **Debug Level for Output** value for the message.

Table 15 WTO Messages

Code	Description
SXK0501E	Wrong subsystem name <i>ssid</i> on input
	Explanation: The SS name on the input message does not equal to <i>ssid</i> in the SSCVT
	User Response: Contact TIBCO Support
	System Action: Subsystem request not processed
	Debug Level for Output: 1
	Expected Destination: JESMSGLG of any job
SXK0502E	Wrong function <i>funct</i> received
	Explanation: The subsystem function code is not supported by the functions module
	User Response: Contact TIBCO Support
	System Action: Subsystem request not processed
	Debug Level for Output: 1
	Expected Destination: JESMSGLG of any job

Table 15 WTO Messages

Code	Description
SXX0503I	Return own version <i>pgm version</i>
	Explanation: Written in response to a function 15 - version - request
	System Action: Processing continues
	Debug Level for Output: 4
	Expected Destination: Tracker JESMSG LG
SXX0506I	Subsystem <i>ssid</i> Debug= <i>debug</i> , Load= <i>addr</i> , Funct= <i>funct</i>
	Explanation: An input with function code <i>funct</i> has been received
	System Action: Processing continues
	Debug Level for Output: 5
	Expected Destination: JESMSG LG of any job
SXX0508E	Get value Subsystem <i>ssid</i> failed - returned zero pointer
	Explanation: The SSCTSUSE pointer is zero
	User Response: Contact TIBCO Support
	System Action: Subsystem request not processed
	Debug Level for Output: 1
	Expected Destination: JESMSG LG of any job
SXX0510I	SSOBINDV= <i>hex ssob</i>
	Explanation: Display the first part of the SSOBINDV area
	System Action: Processing continues.
	Debug Level for Output: 5
	Expected Destination: JESMSG LG of any job

Table 15 WTO Messages

Code	Description
SXK0511I	Funct 237 returned <i>addr</i>
	Explanation: The function properly returned the address of itself and the SMF exits
	System Action: Processing continues
	Debug Level for Output: 4
	Expected Destination: Tracker JESMSGGLG
SXK0512I	SS/SMF (F238- <i>ssid</i> job <i>job</i> , <i>ascb</i> type <i>type</i> received
	Explanation: An SMF exit has returned a job status change
	System Action: Processing continues
	Debug Level for Output: 5
	Expected Destination: JESMSGGLG of any job
SXK0514I	SS/SMF (F238- <i>ssid</i>) tracking status change for <i>job</i>
	Explanation: A job status change matches a MONITOR entry
	System Action: Processing continues
	Debug Level for Output: 4
	Expected Destination: JESMSGGLG of a monitored job
SXk0515I	SmartClient (F239- <i>ssid</i>) reqst <i>reqid</i> received
	Explanation: A Smart Client request has been received
	System Action: Processing continues
	Debug Level for Output: 4
	Expected Destination: JESMSGGLG of a Smart Client

Table 15 WTO Messages

Code	Description
SXX0516E	SmartClient (F239-ssid) MISS cmp=addr
	Explanation: Smart Client message could not be sent to the processor - missing processor address or no buffer available
	User Response: Contact TIBCO Support
	System Action: Message not processed
	Debug Level for Output: 1
	Expected Destination: JESMSGGLG of a Smart Client
SXX0517I	HawkAlert (F240-ssid) reqst reqst received
	Explanation: A Hawk alert request has been received
	System Action: Processing continues
	Debug Level for Output: 4
SXX0518E	Expected Destination: JESMSGGLG of a Hawk alert requestor
	HawkAlert (F240-ssid) MISS cmp=addr
	Explanation: The Hawk alert message could not be sent to the processor - missing processor address or no buffer available
	User Response: Contact TIBCO Support
	System Action: Message not processed
	Debug Level for Output: 1
	Expected Destination: JESMSGGLG of a Hawk alert requestor

Table 15 WTO Messages

Code	Description
S XK1002E	Bad parm string <i>parm</i> for <i>ssid</i>
	Explanation: The input parm field has an invalid value
	User Response: Contact TIBCO Support
	System Action: Processing terminates; subsystem is not created.
	Debug Level for Output: 1
	Expected Destination: Tracker JESMSG LG
S XK1003E	ESTAE for Subsystem <i>ssid</i> failed rc:rc rsn:rsn
	Explanation: The ESTAE failed setup
	User Response: Contact TIBCO Support
	System Action: Subsystem not created
	Debug Level for Output: 1
	Expected Destination: Tracker JESMSG LG
S XK1004E	ESTAE activated <i>ssid</i> init failed
	Explanation: The ESTAE has been activated; an error in creation has occurred
	User Response: Contact TIBCO Support
	System Action: Subsystem not created
	Debug Level for Output: 1
	Expected Destination: Tracker JESMSG LG

Table 15 WTO Messages

Code	Description
SXK1005E	Create Subsystem <i>ssid</i> failed rc:rc:rsn - <i>explanation</i>
	Explanation: The IEFSSVT-CREATE failed
	User Response:
	System Action: Subsystem not created
	Debug Level for Output: 1
	Expected Destination: Tracker JESMSGGLG
SXK1006E	Obtain Subsystem <i>ssid</i> failed rc:rc
	Explanation: The Storage OBTAIN for the common data area failed
	User Response: Contact TIBCO Support
	System Action: Subsystem not activated
	Debug Level for Output: 1
	Expected Destination: Tracker JESMSGGLG
SXK1007E	Put value Subsystem <i>ssid</i> failed rc:rc:rsn - <i>explanation</i>
	Explanation: The IEFSSI PUT request failed
	User Response: Contact TIBCO Support
	System Action: Subsystem not activated
	Debug Level for Output: 1
	Expected Destination: Tracker JESMSGGLG

Table 15 WTO Messages

Code	Description
SXX1008E	Set option Subsystem <i>ssid</i> failed rc:rc:rsn - <i>explanation</i>
	Explanation: The IEFSSI OPTIONS request failed
	User Response: Contact TIBCO Support
	System Action: Subsystem not activated
	Debug Level for Output: 1
	Expected Destination: Tracker JESMSG LG
SXX1009E	Activate Subsystem <i>ssid</i> failed rc:rc - <i>explanation</i>
	Explanation: The IEFSSI ACTIVATE request failed
	User Response: Contact TIBCO Support
	System Action: Subsystem not activated
	Debug Level for Output: 1
	Expected Destination: Tracker JESMSG LG
SXX1010I	Tracker Subsystem <i>ssid</i> activated
	Explanation: The subsystem is successfully activated
	System Action: Processing continues
	Debug Level for Output: 2
	Expected Destination: Tracker JESMSG LG
SXX1701I	ACTRT for <i>ssid</i> job <i>job</i> at <i>ascb</i> , r0= <i>value</i>
	Explanation: The ACTRT exit is reporting a step/job end
	System Action: Processing continues
	Debug Level for Output: 5
	Expected Destination: JESMSG LG of any job

Table 15 WTO Messages

Code	Description
SXK1702E	ACTRT to IEFSSREQ rc:rc - <i>explanation</i>
	Explanation: The ACTRT call to IEFSSREQ failed with the return code and explanation
	User Response: Contact TIBCO Support
	System Action: Job status change message lost
	Debug Level for Output: 1
	Expected Destination: JESMSGGLG of any job
SXK1731I	UJI for ssid job job at ascb
	Explanation: The UJI exit is reporting a job start
	System Action: Processing continues
	Debug Level for Output: 5
	Expected Destination: JESMSGGLG of any job
SXK1732E	UJI to IEFSSREQ rc-rc - <i>explanation</i>
	Explanation: The UJI call to IEFSSREQ failed with the return code and explanation
	User Response: Contact TIBCO Support
	System Action: Job start message lost
	Debug Level for Output: 1
	Expected Destination: JESMSGGLG of any job

Messages Returned from API Calls

This section describes messages returned from TIBCO Mainframe Service Tracker API calls.

Table 16 Messages Returned from API Calls

Message
Subsystem not support function Explanation: The function is not supported by this subsystem. User Response: Use the proper function code.
Subsystem exists, but is not active Explanation: The subsystem is not active. User Response: Verify Tracker is running for this subsystem.
Subsystem not defined to MVS Explanation: The subsystem is not in the list of subsystems. User Response: Verify that the ssid in the client matches the ssid of the active Tracker.
A-SIB, A-SOB or FUNCT invalid Explanation: Internal control block construction error. User Response: Contact TIBCO Support.
SIB/SUB invalid length/format Explanation: Internal control block construction error. User Response: Contact TIBCO Support.
SSI not initialized Explanation: The subsystem interface is not initialized. User Response: Verify that the ssid in the client matches the ssid of the active Tracker.
Unknown return code Explanation: The returned code not in IBM's list. User Response: Contact TIBCO Support.

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Definitions. In connection with this End User License Agreement the following capitalized terms shall have the following meaning: "CICS Region" means a subdivided mainframe address space managed by CICS for resource allocation, resource sharing, and transaction execution, of which the resource definitions include the TIBCO EMS Client for z/OS; "Connection" means for TIBCO SmartSockets and TIBCO SmartMQ, any network protocol link established with such Software (directly or indirectly) to any other entity, including but not limited to software, firmware or hardware; "Connected Processor" means a Processor that produces information or messages consumed by the relevant Software (excluding Processors on devices such as routers, switches, proxies, HTTP or application servers configured to substantially pass-through information or messages to TIBCO Software); "Customer" means the original purchaser or licensee of the Software and any permitted successors and assigns; "Developer" means a Named User of a TIBCO Software product for use only in Non-Production; "Documentation" means text material that accompanies the TIBCO Software on delivery; "Enterprise" means an unlimited Number of Units of the TIBCO Software set forth in an Ordering Document, deployed by Customer for a period of **one (1) year** (unless otherwise set forth in an Ordering Document) from the Effective Date (the "Enterprise Term"), at which time, the Number of Units then deployed in Production and Non-Production use by Customer becomes fixed and Customer may not thereafter deploy additional Units. During the Enterprise Term, Customer's right to deploy an unlimited Number of Units does not extend to any entity which acquires, is acquired by, merged into, or otherwise combined with Customer. Customer hereby agrees to provide TIBCO, within sixty (60) days after the end of the Enterprise Term, with written notice of the Number of Units deployed at the end of the Enterprise Term by License Type, Platform and Unit; "License Type" means the environment in which the TIBCO Software may be used (including without limitation, Production, Non-Production); "Managed Endpoints" means the number of processors running instances of TIBCO BusinessWorks™ that are being managed by TIBCO ActiveMatrix™ Policy Manager; "MSU" means Millions of Service Units per hour, based on the then current MSU rating established by IBM for IBM and IBM compatible hardware which is used for software pricing (not

necessarily a direct indication of relative processor capacity) as set forth in IBM's generally available Large System Performance Reference; "Named User" means an identifiable individual, not necessarily named at the time of a license grant, designated by Customer to access the TIBCO Software, regardless of whether or not the individual is actively using the TIBCO Software at any given time; "Non-Production" means a non-operational environment into which the TIBCO Software may be installed, which is not processing live data, which is not running any operations of the Customer and which has not been deployed to permit any users to access live data. Non-Production environments include development, cold back-up, high availability, hot standby, and test environments; "Number of Units" means the cumulative number of copies of TIBCO Software licensed for use by type of Unit as set forth in this Agreement, or in an Ordering Document, and including, if applicable, as reported by Licensee upon expiration of a Project or Enterprise Term; "Ordering Document" means any purchase order or similar document or agreement requesting Software, Maintenance or Services; "Platform" means the operating system set forth in an Ordering Document; "Processor" means a central processing unit ("CPU") on which the TIBCO Software is licensed to run and which for the purposes of counting Processors on multicore chips, the number of Processors is the number of CPUs times the number of cores multiplied by .75.; "Processor Source Locked" means the number of connections to a single database made possible by (or licensed for) the relevant TIBCO Software regardless of how many Processors are used by the system or environment which is accessing the database; "Production" means an operational environment into which the licensed TIBCO Software has been installed, which is processing live data and which has been deployed so that the intended users of the environment are able to access the live data; "Project" means an unlimited Number of Units for the License Type listed in this Agreement, to be deployed by Customer solely in connection with the undertaking described under an Ordering Document for a period of **one (1) year** (unless otherwise set forth in this Agreement) from the Effective Date (the "Project Term"), at which time, the Number of Units then deployed in Production and Non-Production use by Customer becomes fixed and Customer may not thereafter deploy additional Units. During the Project Term, Customer's right to deploy an unlimited Number of Units does not extend to any entity which acquires, is acquired by, merged into, or otherwise combined with Customer. Customer hereby agrees to provide TIBCO, within sixty (60) days after the end of the Project Term, with written notice of the Number of Units deployed at the end of the Project Term by Unit and License Type. "Purchase Date" means the date of the Ordering Document is accepted by TIBCO; "Server Instance" means a computer with 1 CPUs (unless otherwise specified in the Agreement) performing common services for multiple other machines; "Software" means the most current generally available object code version (as of the Purchase Date) of the software products listed in an Ordering Document (except as provided for beta or evaluation licenses), in whole and in part, including its Documentation; "Third Party Software" means third-party software identified by its company and/or product name, the provision of which by TIBCO is made solely as an accommodation and in lieu of Customer purchasing a license to Third Party Software directly from the third party vendor; "Trading Partner" means an entity or individual with which the Licensee engages in electronic commerce by means of TIBCO Software in accordance with this Agreement; "Unit" means a license restriction describing the manner in which a copy (or multiple copies) of the TIBCO Software may be deployed (including, without limitation, Processor, Named User, Connected Processor, and Processor Source Locked) and is the mechanism used to determine the Number of Units licensed pursuant to an Ordering Document.

Special Product Provisions. TIBCO BusinessPartner: Customer may sublicense to third parties ("Partners") up to the total Number of Copies of TIBCO BusinessPartner, provided that for every such

sublicense, the Number of Copies Customer is licensed to use shall be reduced by the same number, and provided further that prior to delivery of TIBCO BusinessPartner to a Partner, such Partner agrees in writing (a) to be bound by terms and conditions at least as protective of TIBCO as the terms of this Agreement, (b) that TIBCO BusinessPartner be used solely to communicate with Customer's implementation of TIBCO BusinessConnect, and (c) for such Partner to direct all technical support and Maintenance questions directly to Customer. Customer agrees to keep records of the Partners to which it distributes TIBCO BusinessPartner, and to provide TIBCO the names thereof (with an address and contact name) within sixty days of the end of each quarter. Embedded/Bundled Products. Some TIBCO Software embeds or bundles other TIBCO Software (e.g., TIBCO InConcert bundles TIBCO Rendezvous). Use of such embedded or bundled TIBCO Software is solely to enable the functionality of the TIBCO Software licensed on the Cover Page, and may not be used or accessed by any other TIBCO Software, or for any other purpose. Open Source Software: If Customer uses Open Source software in conjunction with the TIBCO Software, Customer must ensure that its use does not: (i) create, or purport to create, obligations of use with respect to the TIBCO Software; or (ii) grant, or purport to grant, to any third party any rights to or immunities under TIBCO's intellectual property or proprietary rights in the TIBCO Software. You also may not combine the TIBCO Software with programs licensed under the GNU General Public License ("GPL") in any manner that could cause, or could be interpreted or asserted to cause, the TIBCO Software or any modifications thereto to become subject to the terms of the GPL.

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