Cisco Tidal Enterprise Scheduler 6.2 Transporter User Guide

June 9, 2015

Cisco Systems, Inc.
www.cisco.com

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco website at www.cisco.com/go/offices.

Text Part Number: OL-32205-01

Cisco Tidal Enterprise Scheduler 6.2 Transporter User Guide

Preface 5

Audience 5

Related Documentation 5

Obtaining Documentation and Submitting a Service Request 5

Document Change History 6

Introduction to the Cisco TES Transporter 1-7

Overview 1-7

Basic Steps of the Transporting Process 1-8

Installing the Transporter 2-9

Minimum System Requirements 2-9

Prerequisites 2-9

Installing the Transporter 2-10

Uninstalling the Transporter 2-10

Getting Started 3-11

Starting the Transporter 3-11

Understanding the Transporter Interface 3-11

Main Menus 3-12

File Menu 3-12

Preferences Menu 3-13

Search Menu 3-13

Transport Menu 3-14

Actions Menu 3-14

Reports Menu 3-14

Help Menu 3-14

Toolbar/Buttons 3-15

Tabs 3-16

Securing the Transporter 3-16

Defining a User in TES 3-17

Authorizing TES Users to Work with Transporter Data Objects 3-17

Creating Connection Definitions 3-18

Connecting TES Source and Destination Systems 3-19

Configuring the Cisco TES Transporter 4-21

Overview 4-21

transporter.props Configuration 4-21

Configuring Transporter Options 4-24

Configuration Options Dialog 4-24

General Options Section 4-24

Transport Options 4-25

Automatic Mapping Options Section 4-28

Automatic Compile Options Section 4-28

Reading Data Objects 5-31

Reading the Data 5-31

Displaying Objects by Data Type 5-32

Filtering Data Objects 5-32

Job Filter Dialog 5-32

Finding a Specific Data Object 5-33

Selecting Specific Data Objects 5-34

Context Menus 5-34

Saving the Job/Job Group Object Selections 5-35

Loading Selected Data Objects from a File 5-35

Mapping Data Objects 6-37

Overview 6-37

Scheduler Object Mapping Dialog 6-37

How To Map Data Objects 6-38

Default Mapping Option 6-39

Remove Mapping Option 6-39

Saving the Mapping of Data Objects 6-40

Creating a Mapping File 6-40

Mapping Reports 6-40

Mapping Timezones 6-41

Transporting Data Objects 7-43

Overview 7-43

The Transport Process 7-43

Visual Cues 7-44

Transporting Job Objects 7-44

Resolving Mapping Errors and Conflicts For Jobs 7-45

Interactive Job Definition Mapping Dialog 7-46
Transporting within the Same Database 7-49
Sample Transport Within the Same Database 7-49

Running the Transporter in Batch Mode 8-51
Using Transporter Command Parameters 8-51
Running Batch Jobs with the Transporter 8-52
From a Command Line 8-52
Transporter Job Exit Codes 8-53

Transporter Reports and Log Files 9-55
Sample Reports 9-55
Session Reporting 9-55
Invalid Mapping Report 9-56
Mapping Report 9-57
Last Activity Report 9-58
Log Files 9-58
Session Logs 9-58
Diagnostic Logs 9-59

Preface

This guide describes how to use the Transporter for Cisco Tidal Enterprise Scheduler 6.2.

Audience

This guide is for administrators who configure, monitor, and maintain the Transporter for Cisco Tidal Enterprise Scheduler 6.2, and who troubleshoot Transporter issues.

Related Documentation

See the *Cisco Tidal Enterprise Scheduler 6.2 Documentation Overview* for a list of all TES guides.

Note We sometimes update the documentation after original publication. Therefore, you should also review the documentation on Cisco.com for any updates.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see What's New in Cisco Product Documentation at:

http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html.

Subscribe to What's New in Cisco Product Documentation, which lists all new and revised Cisco technical documentation, as an RSS feed and deliver content directly to your desktop using a reader application. The RSS feeds are a free service.

Document Change History

The table below provides the revision history for the *Cisco Tidal Enterprise Scheduler Transporter User Guide*.

Version Number	Issue Date	Reason for Change
6.2	June 2014	Updates for 6.2 release.
6.2.1 (SP2)	May 2015	Updated installation instructions, licensing requirement removed, naming, and cross references plus content validation and editorial improvements.

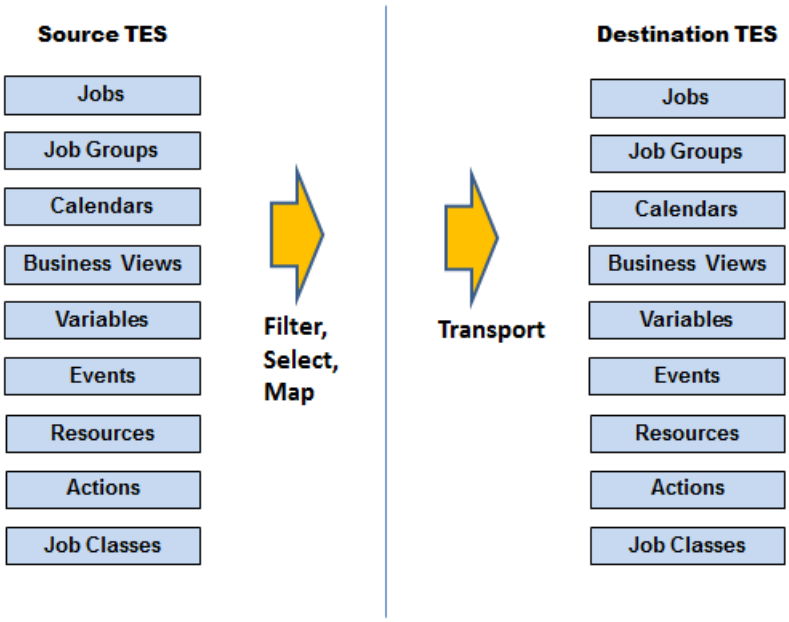
Introduction to the Cisco TES Transporter

This chapter provides an overview of the TES Transporter and the basic steps of using it.

Overview

The Cisco TES (Tidal Enterprise Scheduler) Transporter application copies scheduling objects from one database (source) to another database (destination). The primary strength of the Cisco TES Transporter is its ability to automate the transporting of job data, although it can transport other data types as well. The following discussion refers to job transports.

Each database is designed with its own unique needs and purposes. While job data in each database may be comprised of many of the same objects, each also uses different objects in defining jobs, such as calendar, variable, agent, etc. Ideally, the databases would use the same objects to define a job so a one-to-one relationship will exist between the job data in the two databases. Unfortunately, this one-to-one relationship rarely exists in the real world. For example, a test environment may refer to a different set of agents than the production environment. Using mapping rules, the Cisco TES Transporter automates the process of promoting jobs from development to test or production databases.



The Transporter compares the various objects of one database against the other database. Differences between the databases are noted and a job rule object from the source database can be matched to a different object in the destination database. When transporting job rules to another database, the Cisco TES Transporter provides a list of possible values in the destination database that can be selected to make a match for the source object without a mate. By mapping objects from the source database to objects in the destination database, subsequent job rules using the same objects can be transported without manual interaction.

While the Cisco TES Transporter is primarily designed to promote jobs between databases, it can also be used for synchronizing actions, events, variables, calendars, business views, resources, and job classes between two databases. An interactive mode and a batch mode are available for job transports.

The Cisco TES Transporter has menu options and a toolbar to provide a convenient and easy-to-use interface to enhance the object transporting process between two databases. The multi-step process is simplified by the toolbar mirroring the sequence of steps that comprise the object rule transporting procedure.

Basic Steps of the Transporting Process

Transporting objects from one source to another requires transporting and/or mapping different types of data objects referenced by the objects as much as transporting the objects themselves. The process of transporting object data between a designated source and destination consists of the following steps, though not all of the steps may be necessary each time:

1. **Create connection definitions** – Define and save connections to the source and destination instances.
2. **Connect the selected source and destination** – Select a source to transport the object information from and a destination to transport the information to.
3. **Read the data** – After connecting to the source and destination, click the **Read Data** button. This happens automatically if the configuration option is set to do so.
4. **For Jobs/Groups only, filter out unwanted job data** – The list of jobs and job groups can be very extensive and difficult to work with without filtering the displayed list. While optional, it is recommended to use filtering to reduce the amount of job data displayed from the source. Jobs can be filtered by various criteria or wildcards using the **Filter** dialog.

   Use Server Filtering for large scale databases to limit the number of records returned to the Transporter and improve performance. Select **Include Dependencies** when using Server Filtering to ensure the set of jobs returned also includes its dependent jobs.
5. **On each data type tab, select the data objects to transport** – Select the source objects to be transported. Search for specific source objects via the search text box and the **Find** and **Next** buttons.
6. **Map the data to resolve differences between data objects** – Map the data objects in the source with corresponding destination objects so that objects are correctly transported from the source to the destination. Use the **Mappings** dialog opened with the **Mappings** button.
7. **Transport the data objects** – Use the **Start Transfer** button to initiate the transport. Job transports have an interactive transporting mode where existing differences between source and destination jobs can be resolved on the fly. The interactive mode does not exist for other object transport types.

The rest of this guide describes how to install and configure the Transporter and then perform each of these tasks.

Installing the Transporter

This chapter describes how to install the Transporter in these sections:

- Minimum System Requirements, page 2-9
- Prerequisites, page 2-9
- Installing the Transporter, page 2-10
- Uninstalling the Transporter, page 2-10

Minimum System Requirements

The Cisco TES Transporter can be installed on a machine running the Cisco Tidal Enterprise Scheduler (TES), but it does not require it.

For the system and software minimum requirements for running the Transporter, see your *Cisco Tidal Enterprise Scheduler Installation Guide*.

Prerequisites

Before installing and using the Cisco TES Transporter, the following requirements need to be fulfilled:

- Before transporting ERP jobs (such as PeopleSoft, SAP, and Oracle Applications) ensure that the destination ERP system/agent meets the requirements to run the transported jobs.

  For example, if running Oracle Applications jobs, verify that the same user responsibility used in the source ERP system/agent is available in the destination ERP system/agent. Also the same concurrent program or result set referenced in the source ERP system/agent must also be available in the destination ERP system/agent. In general, it is recommended that the ERP system/agent environment in the destination ERP system/agent mirror the environment in source ERP system/agent by using the same release version and the same system configuration.
- TES 6.2.
- 64-bit OS.
- For large-scale databases: Dual Core, 12 GB Ram (16 GB recommended).
- Both the source and destination machines must have the Client Manager installed. The Transporter accesses the Client Manager database. The Java Client is optional.

Installing the Transporter

The Transporter can be installed on any machine that has access to the source and target machines where the Master and Client Manager are installed. If you are installing the Transporter on a machine that does not already have TES components installed, an extra step is required to specify where to install the Transporter. If TES components exists on the machine, the installation program installs the Transporter into the existing TIDAL directory (by default, TES components are installed in the C:\Program Files\TIDAL directory).

The Transporter software is bundled with the Cisco Tidal Enterprise Scheduler Base Product. See the *Cisco Tidal Enterprise Scheduler Installation Guide* for information about how to obtain the software.

To install the Transporter on Windows:

Step 1 On the machine where you placed the Cisco Tidal Enterprise Scheduler Base Product installation files, locate the *Cisco Tidal Enterprise Scheduler Transporter.msi* file in the **Transporter** folder for your platform and double-click it to start the installation program.

Step 2 On the Open File - Security Warning dialog, click **Run**.

The **Welcome** panel displays.

Step 3 Click **Next**. The **Destination Folder** panel displays.

Step 4 If a TES component does not already reside on the machine, specify a directory location to install the application files.

Step 5 Click **Next**.

The **Ready to Install the Program** panel displays.

Step 6 Click **Install**.

The installer displays the installation progress, then the **Setup Completed** panel displays.

Step 7 Click **Finish**.

Uninstalling the Transporter

Uninstalling the Transporter is as simple a process as the initial installation.

To uninstall the Transporter on Windows:

Step 1 From the **Start** menu, select **Control Panel**, then **Add or Remove Programs** to display the Windows **Add or Remove Programs** dialog.

Step 2 Select **TIDAL Enterprise Scheduler Transporter <platform>** for removal.

Step 3 Click **Remove**.

Getting Started

This chapter tells you how to start the Transporter and describes its user interface. It also describes security levels, users, and authorization. How to create and connect TES source and destination systems is also covered.

- Starting the Transporter, page 3-11
- Understanding the Transporter Interface, page 3-11
- Securing the Transporter, page 3-16
- Creating Connection Definitions, page 3-18
- Connecting TES Source and Destination Systems, page 3-19

The Transporter employs default configuration settings which you can modify. See Chapter 4, "Configuring the Cisco TES Transporter" for how to customize the system and operational configuration options for your environment.

Starting the Transporter

To start the Transporter:

Step 1 Click **Start** to display the Windows Start menu.

Step 2 Select:

All Programs>TIDAL Software>Transporter>Transporter

to display the **Transporter** interface.

Understanding the Transporter Interface

The Transporter main selection screen is divided into two sections with a **Source** and **Destination** side. Once connected to their respective source and destination, each side displays data objects that can be matched to its corresponding mate in the opposite window. A tabbed view of Transport data types is available for selection. Source and Destination object lists are merged into a single table view where matching Source and Destination objects are lined up in the same row for easy viewing. As a consequence, if the Source and Destination data is very different, there may be gaps in the display. For added control over the display, two Preference options are available to control destination display. Refer to "Preferences Menu".

Note You can adjust the size of these windows by moving the center bar left or right.

The Transporter uses a combination of menu options and a toolbar to access and manage the transporting of data objects between source and destination.

Main Menus

The Transporter contains the following main menus:

- File Menu
- Preferences Menu
- Search Menu
- Transport Menu
- Actions Menu
- Reports Menu
- Help Menu

File Menu

The **File** menu manages the access and reading of file information and the Transporter operation. This menu contains the following options:

- **Connections** – Displays the **Connections** dialog. This dialog is used to create and modify existing connections to a source and destination using connection files. Connections files are created in the user's Transporter home directory.

  For example:

  – **C:\Documents and Settings\<user>\.transporter**

Note The user information is encrypted in the file, using Triple DES Encryption.

  Clicking Connections on the toolbar is the same as selecting the **Connections** option.

- **Connect** – Establishes connections to the source and destination. Once connections are established, the **Connect** option is unavailable; only the **Disconnect** option is available.

  Clicking Connect on the toolbar is the same as selecting the **Connect** option.

- **Disconnect** – Ends the current session as well as the connection to the source and destination sides. Once the connection ends, the **Disconnect** option is unavailable; only the **Connect** option is available.

  Clicking Disconnect on the toolbar is the same as selecting the **Disconnect** option.

- **Configure** – Displays the **Configuration Options** dialog to customize the Transporter for working preference. See Chapter 4, "Configuring the Cisco TES Transporter" for more information.

  Clicking Configure on the toolbar is the same as selecting the **Configure** option.

- **Read Data** – Reads data from both the source and destination for the currently selected object type.

  Clicking Read Data on the toolbar is the same as selecting the **Read Data** option.

- **Refresh All** – Disconnects and then reconnects to the selected sources.
- **Save Map** – Displays the **Save Tidal Scheduler Map File** dialog to save the object mappings that have been selected during the current session. The file name you provide is assigned a *.map* extension. You can avoid repeating the manual mapping process for jobs if jobs with the same data objects need to be transported again by saving the object map.
- **Save Selections (Applies to jobs only)** – Displays the **Save Selection to File** dialog to save the job objects selected in the main text field of the source tree. The file name you provide is assigned a *.xpr* extension. Save job selections if you do not want to repeat the same selection process in a future session or you want to schedule the Transporter in batch mode. Refer to Chapter 8, "Running the Transporter in Batch Mode".
- **Load Selections** – Displays the **Open Selection File** dialog to select and load a selection file that was saved from a previous Transporter session.
- **Exit** – Ends the Transporter session and closes the Transporter application.

Preferences Menu

The **Preferences** menu allows you to manipulate how data is viewed in the **Destination** window. This menu contains the following options:

- **Show Unmatched Destination Items** – Displays destination objects that have no matching source only. The default is False.
- **Show Duplicate Destination Objects** – Displays destination objects that have a matching source. The default is **True**.

Note If both of the above options are set to **OFF**, no text displays in the **Destination** window.

- **Expand Groups on Read** – Expands all job groups in the current view upon read.
- **Collapse Groups on Read** – Collapses all job groups in the current view upon read.

Search Menu

The **Search** menu helps you sort through a potentially large number of data objects that may be displayed in the source list. This menu contains the following options:

- **First** – Finds the first match for the criteria entered in the **Search Text** field.

  Clicking Find on the toolbar is the same as selecting the **First** option.
- **Next** – Finds the next match for the criteria entered in the **Search Text** field.
  Clicking Next on the toolbar is the same as selecting the **Next** option.
- **Filter** – Displays the **Job Filter** dialog that provides various text fields to filter the available jobs/groups that are displayed in the source.

  Clicking Filter on the toolbar is the same as selecting the **Filter** option.

Note To search on data against the destination list, right-click on the **Destination** pane and select **Find First** or **Find Next** from the following menu options:
Find First – Finds the first destination match for the criteria specified in the Search text field.
Find Next – Finds the next destination match for the criteria specified in the Search text field.

Transport Menu

The **Transport** menu organizes the tasks directly concerning the transporting of object data. This menu contains the following options:

- **Mappings** – Displays the **Scheduler Object Mapping** dialog to map the various data objects between the source and destination.
- **Synchronize** – Copies all objects listed in the source listing to the destination. Normally a user would not want all of their jobs to be transported at once. The user would select which objects should be transported to the destination.

  Depending upon the number of objects in the source, using the synchronize option may require a lengthy amount of time to complete.
- **Start Transfer** – Begins the transporting process of the selected objects between the source and destination.

  Clicking 

on the toolbar is the same as selecting the **Start Transfer** option.

Actions Menu

The **Actions** menu groups together options affecting the operation of the TES Master and its job schedule. This menu contains the following options:

- **Pause Scheduler** – Pauses the destination TES Master.
- **Create Schedule** – Recompiles the destination production schedule for the current or future day.

Reports Menu

The **Reports** menu provides ready access to the main reports and logs provided by Transporter. Reports are HTML based and viewed via the system's default browser. This menu contains the following options:

- **Mappings Report** – Displays the **Scheduler Object Mapping Rules** report that details the source objects that are currently mapped to corresponding destination objects. Recall that the purpose for mapping source object to destination objects is to automate the transporting process.
- **Invalid Mappings** – Displays a report of mappings that are no longer valid. Mappings may no longer be valid if the object was renamed or deleted in the destination. Therefore, no valid mapping between a source and destination object can be established.
- **Last Activity Log** – Displays the **Activity Log** report for the last transport operation of the current Transporter session.
- **Current Session Log** – Displays the **Activity Log** report containing the complete activity log of the current Transporter session.
- **Past Session Log** – Displays the **Open Past Activity Log File** dialog to select a log file from past Transporter sessions. Session logs for the Transporter are saved with transporter-timestamp.sess format where the timestamp that the session occurred on is affixed as part of the name. Timestamp has the format: **yyyyMMddHHmmssSSS**.

Help Menu

The **Help** menu provides information on the version of the Transporter and how to use the application. Selecting this option launches your default Web browser and allows you to search for a topic. This menu contains the following options:

- **About** – Displays the splash screen for the Transporter. The version number of the Transporter is displayed here.
- **Contents** – Displays the online help system. You can search for a topic from the Help system's table of contents or use the **Search** or **Index** features.

Toolbar/Buttons

The toolbar provides one-click access to some of the most frequently used features during a Transporter session. The buttons are arranged from left-to-right in approximately the same sequence needed during a typical session. The buttons duplicate the same options that are available in the main menu but provide more convenient access. The buttons and their purpose are:

- Source **Source** – Launches the TES Web Client in your default Web browser for the selected source.
- Destination **Destination** – Launches the TES Web Client in your default Web browser for the selected destination.
- Connections **Connections** – Displays the **Connections** dialog. This dialog is used to create and modify existing connections to source and destination Clients using connection files.
- Connect **Connect** – Establishes a connection to the items selected in the **Source** and **Destination** fields. Once the connection is established, the button changes to **Disconnect** and when clicked ends the connection. Clicking this button is the same as selecting the **Connect** option in the **File** menu. (A complete refresh of all data objects is accomplished during a session by disconnecting and reconnecting.)
- Disconnect **Disconnect** – Ends the connection to the items selected in the **Source** and **Destination** fields. Once the connection ends, the **Disconnect** option is unavailable. Only the **Connect** option is available. Clicking the **Disconnect** button on the toolbar is the same as selecting the **Disconnect** option. (A complete refresh of all data objects is accomplished during a session by disconnecting and reconnecting to the source and destination.)
- Read Data **Read Data** – Reads the object data for the definitions from the selected source and destination. Clicking the **Read Data** button is the same as selecting the **Read Data** option from the **File** menu.
- Start Transfer **Start Transfer** – Begins the data transporting process between the selected source and destination. (Job transports provide for interactive mapping by transporting individual jobs or job groups.)

  Clicking the **Start Transfer** button is the same as selecting the **Start Transfer** option in the **Transport** menu.

Note For Job transports, an individual job or job group can also be transported by dragging and dropping a source job or job group to a destination group. Be careful not to drop the job inside the wrong job group in the destination inadvertently.)

- Filter **Filter** – Displays the **Job Filter** dialog that provides various filter criteria for filtering of jobs/groups that are displayed at the source.

  Clicking the **Filter** button is the same as selecting the **Filter** option in the **Search** menu.
- Mappings **Mappings** – Displays the **Scheduler Object Mapping** dialog where the various objects from the source can be associated with corresponding destination objects.

  Clicking the **Mapping** button is the same as selecting the **Mapping** option in the **Transport** menu.

- Configure **Configure** – Displays the **Configuration Options** dialog to customize the Transporter to work according to your preference. See Chapter 4, "Configuring the Cisco TES Transporter" for more information.

  Clicking the **Configure** button is the same as selecting the **Configure** option in the **File** menu.
- Find **Find** – Highlights the first source data object that matches the criteria entered in the search text field.
- Next **Next** – Highlights the next source match for the criteria entered in the search text field.

Note To Search on data against the destination list, right-click on the **Destination** pane and select **Find First** or **Find Next** from the available menu options available.
Find First – Finds the first destination match for the criteria specified in the Search text field.
Find Next – Finds the next destination match for the criteria specified in the Search text field.

- **Status Panel** – Located at the bottom of the Transporter screen, this panel displays the number of objects selected for transport as well as other status messages.

Tabs

The main Transporter selection screen contains a tabbed view of the following Transport Data types:

- **Jobs/Groups** – Displays job and job group definitions that can be transported from the source to the destination.
- **Calendars** – Displays calendar definitions that can be transported from the source to the destination.
- **Business Views** – Displays business views that can be transported from the source to the destination.
- **Variables** – Displays variable definitions that can be transported from the source to the destination.
- **Events** – Displays the event definitions that can be transported from the source to the destination.
- **Resources** – Displays resource definitions that can be transported from the source to the destination.
- **Actions** – Displays action definitions that can be transported from the source to the destination.
- **Job Classes** – Displays job class definitions that can be transported from the source to the destination.

Securing the Transporter

A valid Scheduler user is an LDAP user with a user record in the Master Database.

When a user logs in to the Client Manager, it sends the username and password to the LDAP server to be authenticated. If the user is disabled in LDAP, that user is not authenticated. Once the user is validated, the TESPlugin determines what security policies are in effect for the user.

Given this, there are two levels of security for a Transporter user. First, the Transporter user must be a valid LDAP user in order to access Client Manager for data access via the Transporter application. Once the user is authenticated against LDAP, the user's access rights are determined given their TES security configuration and/or rights to access the data object.

These are the same general requirements required by TES 6.2; refer to TES v. 6.2 documentation for further information. Additionally, there are two general security functions specific to the Transporter:

- **Move Jobs to Production** allows a Transporter user to transport objects independent of ownership.

- **Move Own Jobs to Production** allows a Transporter user to transport only owned objects.

The Transporter user's ability to access data objects for transport is configured given ownership and security policies from the TES Web Client.

Note A user who has been defined as a Super User has full transport abilities without regard to object ownership nor Transporter Security Functions (Move Jobs to Production and Move Own Jobs to Production.

Note When changing user security policies, The Transporter will not automatically update the list of displayed data objects, given new policy updates. You should read again via the **Read** button anytime data is altered externally from the Transporter. Additionally, for Security policy updates, it will take some time for the Client Manager to apply the security updates. If after re-reading data, and the data is still not reflective of the user policy updates, **Disconnect**, **Connect** and then **Read**. This will force an immediate update.

Defining a User in TES

A Transporter user is an interactive user that is either a super user or a non-super user with a specific security policy.

To define a user in TES:

Step 1 In the TES Console navigator pane, select **Administration>Interactive Users** to display the **Users** pane.

Step 2 Right-click and select **Add Interactive User** from the context menu, or select and existing user and choose **Edit** to display the **User Definition** dialog.

Step 3 For a new user definition, enter these values for these fields:

- **User Name—**Enter a new user name.
- **Full Name**—Enter a description to help identify this user.
- **Domain**—Select a Windows domain associated with the user account required for authentication, if necessary.

Step 4 Click the **Passwords** tab.

Step 5 In the **Windows\FTP\Data Mover** fields, enter the password and the confirmation password.

Step 6 Click **OK** to add or save the user record in the Scheduler database.

Authorizing TES Users to Work with Transporter Data Objects

To define a Security Policy:

Step 1 In the TES Console navigator pane, select **Administration>Security Policies** to display the **Security Policies** pane, listing all defined security policies.

Step 2 Right-click and select **Add Security Policy** from the context menu, or select an existing policy and choose **Edit** to display the **Security Policy Definition** dialog.

Step 3 Specify a **Security Policy Name.**

Step 4 On the **Functions** tab, double-click the **General** category and select the functions to be authorized under this policy.

There are two General security functions specific to the Transporter:

Move Jobs to Production—Allows a Transporter user to transport objects independent of ownership.

Move Own Jobs to Production—Allows a Transporter user to transport only owned objects.

Super Users have full access to transport objects independent of ownership and security policies.

Step 5 Click **OK** to close the **General** dialog.

Step 6 Click **OK** to save the policy.

Note When changing user security policies, The Transporter will not automatically update the list of displayed data objects, given new policy updates. You should read again via the **Read** button anytime data is altered externally from the Transporter. Additionally, for Security policy updates, it will take some time for the Client Manager to apply the security updates. If after re-reading data, and the data is still not reflective of the user policy updates, **Disconnect**, **Connect** and then **Read**. This will force an immediate update.

Creating Connection Definitions

Creating a connection definition refers to defining the connection details for the source and destination TES systems you are transporting data from and to. Data resources are requested given an HTTP (or HTTPS secured connection), client connection using HTTP Basic Authentication. Refer to your *TES Installation Guide* for more information regarding SSL-enabled Client Manager configurations.

Connection details are created via the **Connections** dialog where connection files containing connection attributes for establishing connections are created.

To create a connection:

Step 1 Click Connections to open the **Connections** dialog.

Step 2 Optionally, click **New** to populate the fields with default values.

Step 3 Enter these values in the **Connections** dialog:

- **Connection Name**—Enter the name for the connection file.
- **Server Name**—Enter the name of the Tidal Client Manager machine.
- **DSP/Plugin Name**—Enter the Master instance name. The Master instance name is the TES DSP or Plugin name that is displayed in the Web UI in the **Master Status** pane.
- **Server Port**—Enter the listening Web Service port used by the TES Web Client. The default is **8080** for non-secured connections and **8443** for secured connections.
- **User** and **Password**—Enter a valid TES user name and password.
- **Secure HTTP—**Select if you want to connect securely through the HTTPS protocol. This option is enabled only if the Transporter has been configured for secure connections. For instructions on configuring the Transporter for secure HTTP, see Securing the Transporter, page 3-16.

Step 4 Click **Test** to validate that the Transporter can connect to the instance.

Step 5 Click **Save**.

The connections file is created in the user's Transporter Home directory.

For example:

– **C:\Documents and Settings\<user>\.transporter**

Note The user information is encrypted in the file, using Triple DES Encryption.

Connecting TES Source and Destination Systems

Once you've created connections to possible source and destination TES systems as described in Creating Connection Definitions, page 3-18, the connections appear in the source and destination menus as selectable options and the Transporter can connect them.

To establish a connection between TES source and destination systems:

Step 1 Select a source from the **Source** list.

Step 2 Select a destination from the **Destination** list.

Step 3 Once the source and destination are selected, click the **Connect** button on the toolbar to connect to the source and destination.

Once connected, the **Connect** button changes to **Disconnect** and the **Connect** option in the **File** main menu is unavailable. If the Transporter is connected, then the **Source** and **Destination** lists are available.

Note The list of data objects is displayed automatically if the **Read on Connect or New Data Type** configuration option is selected. See Chapter 4, "Configuration Options Dialog" for more information.

Once connected, you can:

- Configure the Transporter options (see Chapter 4, "Configuring the Cisco TES Transporter").
- Read the data and then start selecting the data objects in the source that you want to transport to the destination (see Chapter 5, "Reading Data Objects").

To select other sources, you must first disconnect from the current connection by clicking the **Disconnect** button or selecting the **Disconnect** option from the **File** main menu.

Configuring the Cisco TES Transporter

Overview

There are two types of configuration:

- General Transporter properties—Properties like the Java home directory, logging, file maintenance, security, timeout, and performance settings are specified in the transporter.props file. See "transporter.props Configuration".
- How the Transporter application works—Once the Transporter is connected to the selected source and destination, you can configure the way the application works. You can modify how the Transporter operates on initial startup and the way it works when transporting data objects. The configuration options that are selected are saved for future sessions. See "Configuring Transporter Options".

transporter.props Configuration

The transporter.props file contains general Transporter configuration properties. transporter.props, if specified, is located under the **config** directory relative to the Transporter install location.

For example, if you used the defaults to install the Transporter on a Windows machine where the Scheduler and Client Manager are installed, the properties file can be found here:

C:\Program Files\TIDAL\Transporter\config

The configuration options which are controlled via transporter.props are as follows:

Transporter Properties	Description	Default
`JAVA_HOME`	The location of the Java driver.	`C:\Program Files\Java\jre7`
`UseUnixId`	Specifies whether to execute Unix **id** command to gather user information. The Transporter uses context information unique to the login user to encrypt sensitive data so no one else can comprise its secrecy. By default, this user information is gathered using **javax.security.auth.login.LoginContext API**. If the runtime platform is a Unix system and, for any reason, it does not fully support this API, you can set this property to true and the Transporter will gather user information by the **id** command instead.	`false`

Transporter Properties	Description	Default
Logging Properties		
Valid options are SEVERE, WARNING, FINE, FINER, and FINEST where SEVERE is the least granular (only logging the most severe incidents) while FINEST is the most comprehensive.		
`TransporterLog`	Used to control logging of general categories including non-job transports.	FINE
`TransporterJobLog`	Used to control logging of job transport operations.	FINE
`TransporterDataLog`	Used to control logging of data related operations.	FINE
`TransporterUILog`	Used to control logging of general UI operations.	FINE
File Maintenance Properties		
`MaxLogFiles`	Used to control the number of Transporter log files retained.	50
`MaxSessionFiles`	Used to control the number of Transporter session files retained.	50
Timeout Properties		
`CONNECT_TIMEOUT`	Used to specify a connection timeout in milliseconds; in this example, a time of 20 sec has been defined.	20000
`READ_TIMEOUT`	Used to specify a connection read timeout in milliseconds.	`20000`
Security Property		
`Truststore`	This is used to specify the fully-qualified path of the SSL trust store file to be used if you wish to connect Transporter to an SSL enabled Client Manager(s). A truststore file is a key database file that contains the public keys for target servers. For example: `c:\\temp\\mytruststores\\demo-truststore` Note the use of escaped backslashes for windows directories. If this configuration option is not specified, you will be unable to define a secured connection during the process of defining connection files. See Creating Connection Definitions, page 3-18. There are various tools that allow you to generate keys and certificates and among them is the Java Keytool program that comes with the Java JRE installation. All keystore entries (key and trusted certificate entries) are accessed via unique aliases. An alias is specified when you add an entity to the keystore using the **-genkey** command to generate a key pair (public and private key) or the **-import** command to add a certificate or certificate chain to the list of trusted certificates. Subsequent keytool commands must use this same alias to refer to the entity. When connecting to multiple Client Manager servers configured for SSL, your trust store must contain entries for each Client Manager server you intent to connect to via HTTPS. You can use the alias to refer to each of these servers. See your Java Keytool documentation for specific details.	`None`

Transporter Properties	Description	Default
Performance Properties The following configurations are available in order to provide improved performance for unfiltered job reads. Multiple options have been provided for flexibility and the option to be configured may require some tuning based on specific user environments. For tuning purpose, it is best to run Transporter in debug mode with an open console so that you can view how the reads are performing. **Note**: Only one parameter, READJOBS_PAGINATED, READJOBS_BATCHES, or READJOBS_ALL should be set to "true" at a time. Parameter READ_BATCHES applies to READJOBS_PAGINATED or READJOBS_BATCHES. If none of these parameters is set, the default configuration is READ_BATCHES=500, READJOBS_BATCHES=true.		
READJOBS_PAGINATED	Configures Client Manager to return job data in pages of READ_BATCHES batches. For example: `READ_BATCHES=1000 and READJOBS_PAGINATED=true` tells Client Manager to return job data in batches of 1000. This approach reduces the overhead on Client Manager as data is sent in smaller batches, as opposed to the entire job data in one request. Increasing the READ_BATCHES will reduce the number of requests sent to Client Manager, since the jobs are returned in larger batches. Note: This approach may have less benefit given many jobs (i.e. 50K or more). The batching is done at the Client Manager level.	None

READJOBS_BATCHES	Reads jobs given a range of job id's, where the range is specified via READ_BATCHES.
	For example, if you have 50K job records with job IDs starting at 1 and ending at 50,000, and you have set `READ_BATCHES=1000 and READJOBS_BATCHES=true`, requests will be sent to Client Manager to query job records, in ranges as follows, until no more records are returned.
	`1. jobid >=1 and jobid <=1001`
	`2. jobid >=1002 and jobid <= 2002`
	`3. jobid >=2003 and jobid <= 3003`
	`4. …`
	Note: This approach appears to be more beneficial when there are many job records, for example, 50,000 or more).
		None

READJOBS_ALL	This reads all jobs given the first and last job id. The result is that all jobs will be read in a single request. This approach is different from the job.getList call in that while both return all jobs, this request adds a query condition to the request, which seems to produce better performance. However, because all records are returned in a single request, Client Manager will need to process all the records for return to Transporter. If there are many job records, the overhead on Client Manager may be to high.	None
XPORTER_DEBUG	Specify YES to run the Transporter in debug mode. Run the Transporter using the transporter.cmd script located in bin.	None

Configuring Transporter Options

You use the **Configuration Options** dialog to configure the Transporter to work according to your personal preference. Keep these things in mind when configuring the Transporter:

- Some configuration options can be locked down so that no one without Super User authorization can modify the settings. These options have a **Restricted** check box beside them.

  Note Users without Super User security will not see the **Restricted** check boxes.

  If a configuration option has been restricted, that option is unavailable to other users. These configuration restrictions apply only to the selected destination. If another source is selected for the destination, then the same restrictions do not apply.

- Transporter configuration options are saved in the user's Transporter Home Directory to a file called *user.props*. For example, a file called *user.props* will be created in the following directory for Windows Server 2008 R2 Enterprise:

  C:\Users\<user>\.transporter\config

  Note A user's home directory is different on different platforms. The example provided is specific and intended for demonstration only. Your configuration will be different.

  Following are examples of user home locations by platform:

  Microsoft Windows NT: <root>\WINNT\Profiles\<user> %UserProfile%
  Microsoft Windows 2000, XP and 2003: <root>\Documents and Settings\<user>
  Microsoft Windows Vista and 7: <root>\Users\<user>

Configuration Options Dialog

To display the Transporter Configuration Options dialog

Step 1 Run the Transporter.

Step 2 Click **Configure** on the **Transporter** toolbar or select the **Configure** option from the **File** menu.

Transporter displays the **Configuration Options** dialog.

The following sections describe the options in the **Configuration Options** dialog.

General Options Section

- **Connect on Startup** – Connections started to the most recently selected source and destination are made whenever Transporter is started.
- **Read on Connect/New Data Type** – Once a connection is established between the source and destination, the data type used in the last Transporter session is read and displayed. If the data type is changed during the session, it is also read.

- **Include Duplicates (Replace Allowed)** – Displays any duplicate data objects on the **Source** side in blue. If this option is not selected, then objects already existing on the **Destination** side are not displayed on the **Source** side (since there may be no need to transport them again).

  Note A job group will be displayed if at least one child job within that job group is not a duplicate even if the job group is duplicated.

- **Log Directory** – Specifies where the session log file(s) are written to.

  By Default, session logs are created with *.sess* extension and saved to the user's Transporter Home directory under a subdirectory called sessions. This default location may be changed given this option.

  Default location example for Windows Server 2008 R2 Enterprise:

  C:\Users\<user>\.transporter\session\transporter-20100506025113898.sess

  Note A user's home directory is different on different platforms. The example provided is specific and intended for demonstration only. Your configuration will be different.

  Following are examples of user home locations by platform:

  Microsoft Windows NT: <root>\WINNT\Profiles\<user> %UserProfile%
  Microsoft Windows 2000, XP and 2003: <root>\Documents and Settings\<user>
  Microsoft Windows Vista and 7: <root>\Users\<user>

Transport Options

- **Display Warnings** – Displays a warning message each time a non-critical issue is encountered as data is transported. The operator has to acknowledge each warning message as it is displayed to continue the transporting operation.
- **Annotate** – Updates either the **Description** or **Notes** (for Jobs) field with the names of the source, the user, and the date and time of the transport of data objects.

Note If you are transporting data objects, Transporter may not be able to annotate these objects. The **Description** text fields of data objects are limited to 4000 characters and there may not be any room available in the **Description** field to add annotations. Deleting text in the object's **Description** field will provide room for annotations. If the Transporter cannot annotate the data objects it is transporting, this is noted in the session log. This issue does not apply to jobs that are transported when using the **Annotate** option.

- **Disable Copy** – Disables each job, event, or resource as it is transported into the destination. This option ensures that the object cannot be used in the schedule until the operator manually enables it. This option only applies to jobs, events, and resources; other objects do not have this attribute.

Job Transport Options Tab

- **Auto Select Dependencies** – If a job selected for transporting has any predecessors, all of its predecessors are also automatically selected for transporting. This option works in conjunction with the **Replace Existing Dependencies** option.

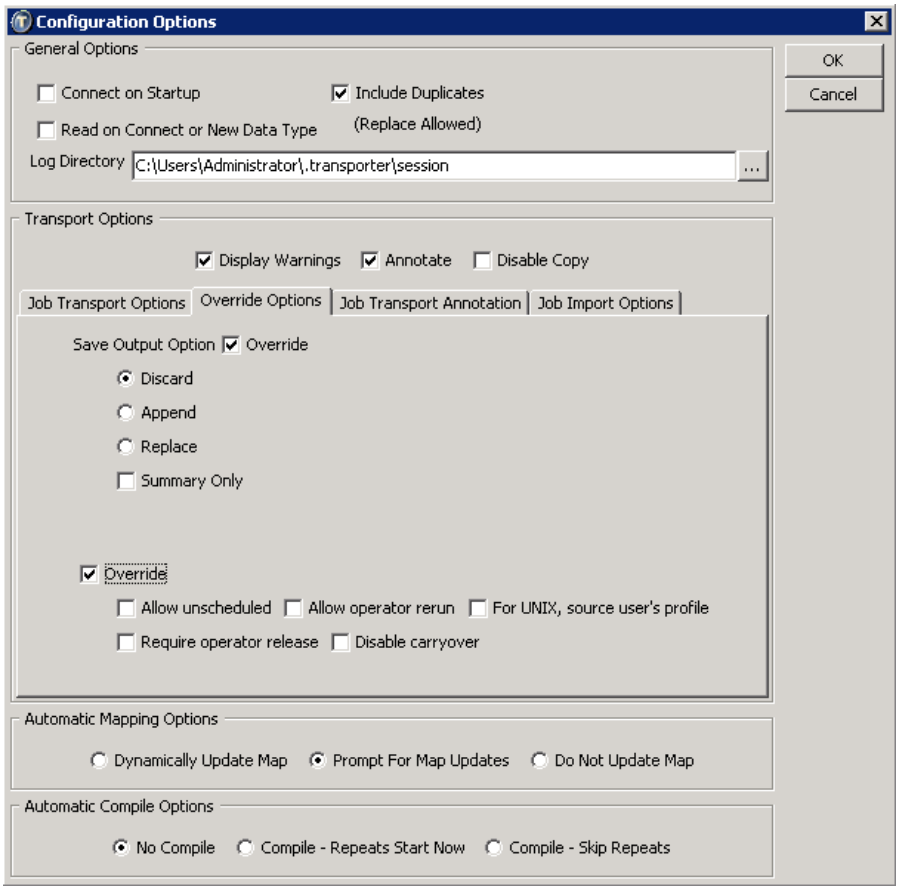
Note The **Auto Select** option may affect system performance when used.

- **Replace Existing Dependencies** – Selects only a dependency if it does not already exist in the destination.
- **Auto Select Parent Group** – If a job selected for transporting is a child job, then all of the parent job groups it belongs to are also automatically selected for transporting.
- **Auto Select Children** – If a job selected for transporting is a parent job, then all of its child jobs are also automatically selected for transporting.
- **Auto Add (no errors, no conflict)** – Performs the Job transport operation automatically if no conflicts or errors are detected. If a mapping error or conflict occurs, the **Job Definition Mapping** dialog is displayed to resolve the problem interactively.
- **Allow Conflicts** – Allows a Job transport as long as there are no errors during the transporting operation, even if mapping conflicts occur. If a conflict between the source and destination is not resolved, that job may still run correctly but may be missing dependencies, variables, or events, etc.
- **Effective Date** – Enter a date in the text field or click on the down arrow to display a calendar where a date can be selected to indicate the earliest date that the transported job can be compiled into the schedule.

Warning **Changing the default Effective Date (current date) from the current date while transporting job groups cause severe disruptions in the production schedule. Do not modify the Effective Date option to resolve this issue. Instead use one of two methods to transport a job group with a future effective date. Either disable the job group and then transport it with the default Effective Date (current date) or select the Disable Copy and No Compile options in this dialog before transporting job groups. After the job group transport is complete, enable the job group and schedule it as needed.**

Override Options Tab

The Override Options tab sets the default handling of job output.



- **Save Output Option, Override option** – Check this box to specify what will happen to the job's output. If job output is saved, you can view it from the **Output** tab of the **Job Detail** dialog. You can choose from the following options:
  - **Discard** – Does not save the job output. (Default)
  - **Append** – Saves the complete output from each job instance, adding the output to the previous job instance's output.
  - **Replace** – Saves the complete output from each job instance, overwriting the previous job instance's output.
  - **Summary Only** – Select this option to save the job output in a summary form. This option is useful when jobs have long job output and you do not want the entire output file. Not available if the **Discard** option is selected.
- **Override option** – Check this box to control how the transport jobs can be scheduled and run.
  - **Allow unscheduled** – Enables the job to be inserted into the production schedule on an as-needed basis. The default is that unscheduled instances are allowed. If you do not want the job to run on an ad hoc basis, you can clear this option to prevent non-scheduled submissions.
  - **Allow operator rerun** – Allows the operator to rerun a job. The default is allow operator reruns (options selected).

- **For UNIX, source user's profile** – Allows you to execute Unix user profiles. This option provides for the execution of all variables in a Unix user's profile. Without this option, Unix user profile variables that are referenced by scripts are not being executed, causing errors in TES.
- **Require operator release** – Holds the job until an operator releases it. The job will not run until it is released. When all the job's dependencies are met, and it is ready to run, its status is *Waiting On Operator*. The information in the **Operator Instructions** field (**Description** tab) can inform the operator of any external requirements that need to be met before the job is released.
- **Disable carryover** – Disables the job carry forward feature that appends the jobs that did not run in the current production schedule to the next day's production schedule. Any job from the current production schedule that is not in an **Active** or a **Launched** status when the next production day starts, will not be carried over to the next production day. The default is to enable job carry forward (cleared).

Job Transport Annotation Tab

When an object is transported, a description of the transport operation is annotated to the description field of the object, if **Annotate** is selected. This option provides for a customizable annotation message to the job description during transport. Use the **Configuration Options** dialog to supply a global annotation message which will apply to all jobs during transport.

To override the global setting during interactive job transport, supply a new value in the **Annotation** tab of the job transport.

The job is transported with the customized annotation included in the job's notes field. In the following example, the annotation has been overwritten by appending with **xx** at the end.

Also, a description of the transport operation is annotated at the end of the custom annotation.

Job Import Options Tab

- **Business Views** – Check to import business views with the transport.

Automatic Mapping Options Section

- **Dynamically Update Map** – Maps the object in the source as soon as a mapping selection is made from the destination during job transport.
- **Prompt for Map Updates** – Each time data objects are selected to resolve conflicts or errors during job transport, you are prompted to update the mapping.
- **Do Not Update Map** – The paths between objects in the source and destination are manually resolved during job transport, but not mapped.

Automatic Compile Options Section

These compiling options are used to control compilation of production schedules at the destination, during job transport. When a job is transported, the job update will affect the destination production schedule given the options selected.

- **No Compile** – The changes are not applied until the next time the schedule is compiled. The changes do not apply to the schedule currently running (including the future days already compiled).

- **Compile-Repeats Start Now** – The changes are applied to the schedule currently running. Any changes that apply to the repeating jobs within the current day's schedule take effect when the schedule is recompiled. This is the same as selecting the **Start today's repeating job(s) now** option that is in the **Effective Date** dialog displayed in the TES Web Client whenever adding a repeating job with an associated calendar date belonging to the current production schedule.
- **Compile-Skip Repeats** – The changes are applied to the schedule currently running.

  Instances of repeating jobs are skipped if they would have run prior to the current time.

Reading Data Objects

Once connections to the selected sources and destination are established, you can read the data and then select the type of data objects to display and transport. This chapter describes how to read the data, display data types, filter and select objects, and save job selections to a file.

- Reading the Data, page 5-31
- Displaying Objects by Data Type, page 5-32
- Filtering Data Objects, page 5-32
- Selecting Specific Data Objects, page 5-34
- Saving the Job/Job Group Object Selections, page 5-35
- Loading Selected Data Objects from a File, page 5-35

Reading the Data

To read the data:

Step 1 Connect to the source and destination clients as described in "Connecting TES Source and Destination Systems".

Note The list of data objects is displayed automatically if the **Read on Connect or New Data Type** configuration option is selected. See "Configuration Options Dialog" for more information.

Step 2 Click the **Read Data** button to display a list of data objects based on the currently selected data types.

The Jobs/Job Groups data type is selected by default once a connection is established for the first time. The last selected data type is saved once the current session is closed and the application terminated. This data type will be selected upon start of the next session.

To select a different type is a simple matter of selecting the corresponding tab. The type of data object that is currently selected is displayed in the title as well as the status panel of the **Main Selections** dialog.

Displaying Objects by Data Type

The type of data object displayed is managed using the tabs on the Transport main screen. Select a data type for display by selecting the corresponding tab. The data type options are:

- Jobs/Job Groups
- Calendars
- Business Views
- Variables
- Events
- Resources
- Actions
- Job Classes

The list of data objects for each type can be very extensive depending upon the source. If you are working with job data objects, the number of jobs listed can be very large. With job objects, it is recommended that you filter out unwanted jobs before selecting the jobs to transport. The filter criteria specified in the current session is saved upon application termination and available for subsequent sessions. Only Jobs/Job Groups can be filtered.

Filtering Data Objects

Selecting the job data type may list an extensive number of jobs and job groups, making it difficult to navigate to the desired jobs and groups for transport. You can use a filter to limit which jobs and job groups to display in the **Source** field.

Note Only Jobs and Job Groups can be filtered.

Job Filter Dialog

The **Job Filter** dialog is displayed by clicking the **Filter** button or by selecting the **Filter** option under the **Search** main menu.

Use this dialog to filter out undesired jobs. The elements included on this dialog are as follows:

- **Job Name**– Displays all the job instances that match the specified text string. You can use the wildcard characters, * (asterisk) or % (percent sign), in all text fields that use text strings. For example, A* will match (display) AB, ABB, and ABBB.
- **Job ID** – Displays all the job instances that match the specified ID string.
- **Group Name** – Filters for all job groups and their child jobs matching the criteria specified in this text field. The **Show Groups** option must be selected before you can use this text field. This text field also allows wild card characters.
- **Command** – Filters for jobs that use a specified command.
- **Agent** – Filters for all job instances that run jobs on the agent selected from the list. When no agent is selected, all agents are assumed. The default is to show all agents.

- **Owner** – Filters for all job instances that owned by the user or workgroup selected from the list. If left blank, jobs belonging to all of the various owners are displayed.
- **Calendar** – Filters for jobs that use a specific calendars.
- **Job Class** – Filters for all jobs belonging to the job class selected from the list. If left blank, jobs belonging to all job classes are displayed.
- **Enabled** – Selecting the Yes option filters for all jobs that are enabled. Selecting the No option filters for all jobs that are disabled. Leaving this text field blank includes all jobs, whether enabled or not.
- **Show Groups** – Filters for job groups. Selecting this option ensures that all job groups/jobs are displayed according to their parent/child relationships. Leaving this option cleared means that the parent/child relationships of job groups are not displayed.
- **Use Server Filtering** – Used to limit the number of records returned to Transporter. A query condition that specifies the filter criteria is generated on the database server, and has a direct performance benefit, especially for large scale databases.
- **Include Dependencies** – While using server filtering, select the Include Dependencies option to ensure the set of jobs returned includes dependent jobs.

  Note The filter is only applied to the Source Database. The destination Database is unfiltered.

- **Defaults** [button] – Clicking this button resets the job filter criteria to the default options. This clears all text fields of their criteria though the **Show Groups** option is selected by default.

  After setting the filter criteria for jobs, click the **OK** button to display only the jobs in the source that meet the specified criteria.

  Even after filtering jobs, you might still have more jobs than you want. You can locate a specific job as described in "Finding a Specific Data Object".

  The specific jobs that will be worked with must still be selected as described in "Selecting Specific Data Objects".

Finding a Specific Data Object

If there is an extensive list of data displayed in the source or destination lists, you may have difficulty finding a specific data object. Transporter provides a way for you to search for a specific data object using a text string.

To find a specific data object at the Source:

Step 1 In the **Search** field next to the **Find** button, enter a string of text to search for.

Step 2 Click the **Find** button to display the first data object that matches the specified criteria from the source list.

Step 3 Click the **Next** button to go to the next data object that matches the search criteria.

Continue clicking the **Next** button until you arrive at the desired item.

If no data object matches the search criteria, a "Not found." message is displayed.

To find a specific data object at the Destination:

Step 1 In the **Search** field next to the **Find** button, enter a string of text to search for.

Step 2 Select the **First** menu option from the **Search** menu to display the first data object that matches the specified criteria from the destination list.

Step 3 Select the **Next** menu option from the **Search** menu to go to the next data object that matches the search criteria.

Continue selection of **Next** until you arrive at the desired item.

If no data object matches the search criteria, a "Not found." message displays.

Selecting Specific Data Objects

While you may want to transport all of the objects listed in the source, it is more likely that you need to selectively designate which objects will be transported.

The following options are available for making your selections:

- For all Data Types, select an individual data object by clicking on the check box to the left of the source object to display a check mark.
- For job groups, select a job group by selecting not only the job group but also individually selecting its child jobs.

  -or-

  Right-click on the job group and select the **Check Entire Group** option from the displayed context menu. You can also click on the job group while pressing the Shift and Ctrl keys to select the entire job group simultaneously.

Note Clicking on a job group selects the job group parent and all child jobs within the job group given Job Transport Configuration options, **Auto Select Parent Group** and **Auto Select Children.**

Context Menus

Note The availability of menu options varies depending on the data type selected.

Right-clicking in the **Source** or **Destination** fields displays a context menu of selection and display options specific to the data type selected. If a keyboard shortcut is available, it is displayed beside the menu option.

The following options are available in the context menu at the source for the Job type:

- **Check All** – Selects all of the listed objects, placing a check mark in each check box.
- **Uncheck All** – Clears the check box of each selected object.
- **Check Entire Group** (Applies only to the jobs/groups object type.) – Selects the highlighted job group and its child jobs.
- **Uncheck Entire Group** (Applies only to the jobs/groups object type.) – Clears the check box of the selected job group.

- **Expand All** – Expands all job groups in the source and destination, displaying their child jobs.
- **Collapse All** – Collapses all job groups in the source and destination, hiding their child jobs from view.
- **Include Duplicates** – Displays all source objects that exist in the destination. A check mark beside the menu option means the option is enabled. No check mark beside this menu option means the option is disabled. No check mark beside this menu option means that the option is not selected and duplicate objects are not displayed.

The following options are available in the context menu at the Destination for the Job type:

- **Expand All** – Expands all job groups in the source and destination, displaying their child jobs.
- **Collapse All** – Collapses all job groups in the source and destination, hiding their child jobs from view.
- **Rename** – Allows for the renaming the destination object.
- **Enable** – Enables a destination object. This option applies to Jobs, Events, and Resources.
- **Disable** – Disables a destination object. This option applies to Jobs, Events, and Resources.
- **Find First** – Finds the first destination match for the criteria specified in the search text field.
- **Find Next** – Finds the next destination match for the criteria specified in the search text field.

Saving the Job/Job Group Object Selections

The process of selecting job objects to transport can be time consuming, depending upon the number of jobs you are working with. Creating a selection file will save time and effort when repeating the transporting process in the future. However, the primary benefit of preserving your selections, is that you can perform the transporting operation at a later time as a scheduled job in TES.

The selection file saves the names of the source and destination being used, the current configuration option settings, and the jobs/job groups that are selected. The information within the selection file can be examined by opening the file with a standard text editor program like Notepad. A *.xpr* extension is added when the selection file is saved for easy identification. By specifying the name of the selection file as a command line parameter, you can run the job transporting process as a batch job in TES. See Chapter 8, “Running the Transporter in Batch Mode”.

To create a selection file:

Step 1 Complete the selection of the job objects between the source and destination.

Step 2 From the **File** menu, select the **Save Selections** option to display the **Save Selections to File** dialog.

Step 3 Name and save the file to the desired directory location. Providing a qualified name for the selection file will be helpful when searching for the file in the future.

An **Information** dialog confirms that the selection file was created successfully.

Loading Selected Data Objects from a File

If a selections file has been saved as described in “Saving the Job/Job Group Object Selections”, you can load the job/job group data and configuration option settings specified in the file.

To load data objects from a file:

Step 1 From the **File** menu, select the **Load Selections** option to display the **Open Selection File** dialog.

Step 2 Select the desired file to load the corresponding jobs into the Transporter.

Mapping Data Objects

The data objects in the source do not always exist in the destination or perhaps they use different naming conventions. These differences can be resolved by matching a data object in the source that does not exist in the destination to a different but comparable data object in the destination. This process is called mapping.

This chapter provides an overview of mapping and how to map the object in these sections:

- Overview, page 6-37
- Scheduler Object Mapping Dialog, page 6-37
- How To Map Data Objects, page 6-38
- Saving the Mapping of Data Objects, page 6-40

Overview

To ensure that the **Source** objects are transported to the correct **Destination** objects, Transporter provides a mapping mechanism. Mapping data is applied to an object's referenced objects and not to the actual object itself. Mappings automate the transporting process as discrepancies between source and destination object references are automatically mapped given the mapping rules. For convenience, mapping rules can be saved in a map file and restored later.

The mapping process is done in the **Scheduler Object Mapping** dialog. In this dialog, a list of the various types of data objects is divided into two columns. One column displays the data objects of the source and the other column displays the data objects of the destination Master. By comparing the source and destination side-by-side, you can easily spot any differences that need to be mapped.

The mapping process involves going down the column of source data objects and ensuring that a match for the comparable data object that is missing in the destination is mapped. Once the mapping is completed, the transporting process that transports the jobs or other data types from one source to another can start. Mapping can also be done dynamically for Job transports during the actual transporting procedure so that a complete map is built over time.

Scheduler Object Mapping Dialog

To display the **Scheduler Object Mapping** dialog, click the **Mappings** button on the Transporter toolbar or select the **Mappings** option of the Transport main menu.

The **Scheduler Object Mapping** dialog displays the following tabs:

- **Object Map Filename** – The name of the object map file. By default, the file is given the name of the source and given a *.map* extension.
- **Connections** – This tab displays a list of defined agent connections that exist in the source and provides for a mapping of a corresponding destination agent.
- **Agent Lists** – This tab displays a list of defined agent lists that exist in the source and provides for a mapping of a corresponding destination agent list.
- **Calendars** – This tab displays a list of defined calendars that exist in the source and provides for a mapping of a corresponding destination calendar.

Note If a selected calendar depends upon a fiscal calendar, the fiscal calendar is also transported with the selected calendar.

- **Classes** – This tab displays a list of defined job classes that exist in the source and provides for a mapping of a corresponding destination job class.
- **Events** – This tab displays a list of defined events that exist in the source and provides for a mapping of a corresponding destination event.
- **Groups** – This tab displays a list of defined job groups that exist in the source and provides for a mapping of a corresponding destination group.
- **Owners** – This tab displays a list of defined users and workgroup owners that exist in the source and provides for a mapping of a corresponding destination owner.
- **Users** – This tab displays a list of defined users that exist in the source and provides for a mapping of a corresponding destination user.
- **Variables** – This tab displays a list of defined variables that exist in the source and provides for a mapping of a corresponding destination variable.
- **Virtual Resources** – This tab displays a list of defined virtual resources that exist in the source and provides for a mapping of a corresponding destination virtual resource.
- **Custom Resources** – This tab displays a list of defined custom resources that exist in the source and provides for a mapping of a corresponding destination custom resource.
- **Timezones** – This tab displays a list of defined timezones that exist in the source and provides for a mapping of a corresponding destination timezone.

How To Map Data Objects

Each list that is displayed by clicking one of the buttons listed above is divided into two columns that display the selected data object type from the source and destination. If an object type that exists in the source also exists in the destination Master, it is displayed in the destination column (unless previously mapped to a different destination object). If there is no matching object type on the destination side (and that object has not been mapped), that space is blank.

On the right side of each **Destination** text field is a combo box that displays a list of available values. Select an object from the list to associate with the source data object. Ideally, you would match up each value displayed on the source side with a value on the destination side.

However, the jobs or other data that are being transported may not use all of the values that exist in the source. You may wish to map only the data object values that you think are needed and leave the rest unmapped.

Note Mappings apply an object's referenced objects and not the actual object itself.

The idea behind mapping the data objects is to provide a means to automate transporting of data between the source and destination.

With a map file, it is easy to schedule a batch job in TES to transport a job or job group between the source and destination. Refer to Chapter 8, "Running the Transporter in Batch Mode" for information on using Transporter in batch mode.

Default Mapping Option

You can configure a default mapping value for each type of data object. Each list of potential values for a data object type in the source starts with a default. This default has no value until it is assigned a destination value.

Specify a value for default by selecting a value from the list on the Destination side. This default value will be used during object transporting whenever a corresponding data object is not mapped in the destination.

Not only can using a default value cut down on possible mapping errors, it can also save you considerable time. For example, if you are mapping connection objects and a large number of connections exist in the Source, but only one connection is used in the Destination, make the one connection the default. This avoids having to map each individual object. However, if the default value is incompatible with the type of data object being mapped, an error will still result. For example, if a connection object requires a Unix value and the default value is a Windows value, an error will result. In another example, an error would also result if a text string variable is required but the default value is a date calculation variable.

Remove Mapping Option

One of the options in the list on the destination side is **<<Remove>>**. If there is no corresponding destination data object to match an existing data object in the Source, you can just delete any reference to the data object when transporting objects between Source and Destination. There is no **<<Remove>>** option on the source side. It only exists on the destination side.

The **<<Remove>>** option allows a source object to be transported to the destination. For example, jobs must have an owner and an agent so you cannot remove the owner or agent data objects.

Note With the **<<Remove>>** option, data is transported to the destination, while "removing" object references that had been mapped to **<<Remove>>**. Note that an object's required references cannot be removed; mapping an object's required reference to **<<Remove>>** results in an error when trying to transport the object. For example, a job is required to have an agent, so if the job's agent is mapped to **<<Remove>>** you cannot transport the job.

Saving the Mapping of Data Objects

The mapping process can be time consuming depending upon the number of data objects you are working with. If you think you might transport the same data types between the same source and destination, you should preserve the mapping you have completed for the selected data objects. Creating a mapping file will save time and effort when repeating the transporting process in the future. A *.map* extension is added when the mapping file is saved for easy identification.

Creating a Mapping File

To create a mapping file:

Step 1 Complete the mapping of the data objects between the source and destination.

Step 2 From the **File** menu, select **Save Map** to display the **Save TIDAL Scheduler Map File** dialog.

Step 3 Name and save the file to the desired directory location. Providing a qualified map file name will be helpful when searching for the file in the future.

An **Information** dialog confirms that the map file was created successfully.

The information within the map file can be examined by opening the file with a standard text editor program like Notepad.

Mapping Reports

Transporter can display two mapping reports that provide details about how data objects were mapped in the current session:

Scheduler Object Mapping Rules—Lists the mapping object type and its corresponding mapping rules that are described in a *.map* file. The report also provides the name of the map file and its source and destination.

Invalid Mapped Objects—Lists those data objects that it determines to have invalid mapping because the data object was deleted or renamed in the destination Master.

To view the Scheduler Object Mapping Rules Report:

- From the **Reports** menu, select **Mapping Report**,

  or

- From the **Scheduler Object Mapping** dialog, click the **Report** button.

  The **Scheduler Object Mapping Rules** report is displayed in the default browser. See "Mapping Report" for an example.

To view the Invalid Mapped Objects Report:

- From the **Reports** menu, select **Invalid Mappings**.

  The **Invalid Mapped Objects** report lists the mapping object type and its corresponding mapping rules that is considered invalid. The report also provides the name of the map file and its source and destination Master. The Invalid Mapped Objects report is displayed in the default browser. See "Invalid Mapping Report" for an example.

Mapping Timezones

TES can have an associated Timezone. For the Transporter, this means that Timezones can be mapped from source to destination.

A Job can reference a Timezone which affects transporting of Jobs. Timezones are referenced via the **Scheduler Object Mapping** dialog.

The following example shows a source Job (with no Parent) with a referenced Timezone. There is a matching destination Timezone (AAA TIMEZONE).

The example below shows a Job (with a Parent, \JOB GOUP) with a referenced Timezone that is inherited from its Parent Group. There is a matching Timezone in the destination (TIMEZONE 01).

The following example shows a Job (with a Parent, \JOB GOUP) with a referenced Timezone that is NOT inherited from its Parent Group. There is a matching Timezone in the destination (TIMEZONE 01). Note that Timezone inheritance is independent of other inherited values (unlike Agent inheritance which is tied to AgentList and Runtime User inheritance).

Transporting Data Objects

This chapter describes how to invoke the transport and then resolve any discrepancies in these topics:

- Overview, page 7-43
- The Transport Process, page 7-43
- Resolving Mapping Errors and Conflicts For Jobs, page 7-45
- Transporting within the Same Database, page 7-49

Overview

When object differences have been resolved using mapping rules, data objects can be easily transported. For Jobs, if some differences between the data objects still occur during the transport process, these differences can be resolved on-the-fly via the **Interactive Job Definition Mapping** dialog.

Warning **Changing the default Effective Date (current date) from the current date while transporting job groups may cause severe disruptions in the production schedule. Do not modify the Effective Date option to resolve this issue. Instead, use one of two methods to transport a job group with a future effective date. Either disable the job group and then transport it with the default Effective Date (current date) or select the Disable Copy and No Compile options in the Configuration Options dialog before transporting job groups. After the job group transport is complete, enable the job group and schedule it as needed.**

The Transport Process

Once an object's referenced data objects have been optionally mapped between the designated source and destination, you can begin the transport process for that object. After selecting the data objects to be transported, you can start the transport between the source and destination in one of four ways:

- Click the **Start Transfer** button on the toolbar.
- Select the **Start Transfer** option in the **Transport** main menu.
- For Jobs, drag and drop a single selected data object (or job group) from the Source side to job group on the Destination side.
- Press the **F9** key

Note When dragging and dropping job/job groups to the Destination side, be careful that you do place them in the intended location. Verify that you are not inadvertently placing the items into the wrong job group.

If there are no problems during the data object transport process, an information dialog displays to notify you that the selected number of data objects was successfully transported to the destination.

Note Re-reading object data by clicking the Read Data button on the toolbar or pressing the F5 key updates the screen with the current information.

Visual Cues

Transporter provides visual clues to provide information at-a-glance about the data objects displayed in the **Source** and **Destination**.

- The data objects in the **Source** display in blue to indicate that they exist in the destination (unless duplicate objects are filtered out). If the object exists in the destination but is disabled at the source, its text color will be teal.
- Source objects that do not exist in the destination are displayed in black text unless they are disabled, in which case their text is displayed in light gray.
- Newly transported objects in the **Destination** are displayed in blue text to indicate that they were transported during the current session. This is reset when object data is re-read.

Warning **If any error messages about connections are displayed while transporting data objects, disconnect from the source and destination by clicking the Disconnect button. Resolve the problem and reconnect to continue the data transport.**

Data types like calendars, variables, events, resources, actions, and job classes are simple to map since they do not have many object references. The owner of these type of data objects is usually is the only item that may need to be mapped.

Transporting Job Objects

Jobs are more complicated because of the multiple objects that a job can reference. While there are numerous types of data objects referenced in jobs, Transporter is primarily interested in the following data objects that are key to jobs in TES:

- **Owner** – The owner of the job or job group.
- **Agent** – The agent that will run the job.
- **Job Alias** – The alias name for the job.
- **Parent** – The parent of a child job.
- **Job Class** – The job class, if any, associated with the job or job group.
- **Calendar** – The calendar, if any, associated with the job or job group.
- **Agent List** – The agent list, if any, associated with the job or job group.
- **Runtime User** – The runtime user, if any, associated with the job or job group.

- **Variables** – The variables associated with a job.
- **Job Events** – The job events associated with the jobs.
- **Job Dependencies** – The job dependencies that exist between the jobs.
- **Variable Dependencies** – The variable dependencies that exist for the jobs.
- **File Dependencies** – The file dependencies that exist among the jobs.
- **Timezone** – The timezone defined among the jobs.
- **Virtual Resources** – The virtual resources defined among the jobs.
- **Custom Resources** – The custom resources defined among the jobs.

Discrepancies between the values of these data objects in each source and destination should be resolved by mapping an equivalent value in the destination to the data object in the source. However, if left unmapped, only a subset of these values are considered errors and failure to map these will prevent the job transport. Depending on the job type, these required fields are **Owner**, **Agent**, **Agent List**, and occasionally **Runtime User**.

Occasionally, when transporting jobs, a mapping error or conflict may occur. On those occasions, the **Interactive Job Definition Mapping** dialog is displayed to pinpoint and resolve the problem areas.

Resolving Mapping Errors and Conflicts For Jobs

The **Interactive Job Definition Mapping** dialog provides a means to resolve any differences between the source and destination on-the-fly. See Interactive Job Definition Mapping Dialog, page 7-46 below.

Some data object differences are more critical than others. Mapping differences are divided into two types called *Errors* and *Conflicts*. Transporter provides visual clues to help the user quickly pinpoint any mapping problems between source and destination. Colored text in the **Interactive Job Definition Mapping** dialog highlights the tab and field where mapping differences exist.

Errors

Errors denote more crucial differences between data object. An error occurs when a vital component of a job in the source does not exist or is not mapped to an equivalent object in the destination. Errors result from missing values in the corresponding data fields that are key to a job. These data fields are the **Owner**, **Agent**, **Agent List**, and **Job Alias**. You can locate the field with the error by looking for the tab with red text. On that tab, a red arrow will point to each field containing an error. A job with a mapping error cannot be transported until the error is resolved.

From the destination list for the **Error** field, select a value in the destination that should be mapped to the source value. The number in the **Errors** field will decrease each time an error is resolved. The job cannot be successfully transported to the destination until all errors are resolved.

Conflicts

Conflicts are the less critical difference between data objects. A conflict occurs when a job object referenced by the source does not have a corresponding match in the destination. Unlike errors, these attributes are not critical. You can locate the field with the conflict by looking for the tab with the blue text. On that tab, one or more blue arrows will point to the field(s) causing the conflict. Conflicts do not prevent the job from being transported, but the conflicts result in a loss of data if not resolved (e.g., it may be missing dependencies or associated events, etc.)

From the destination list corresponding to the **Conflict** field, select a value in the destination that should be mapped to the source value. The number in the **Conflicts** field will decrease each time a conflict is resolved.

Interactive Job Definition Mapping Dialog

The **Interactive Job Definition Mapping** dialog displays during job transport operations unless the **Auto Add** configuration option was selected. If the **Auto Add** option is in affect, the **Interactive Job Definition Mapping** dialog is only displayed if a mapping error occurs while transporting the job.

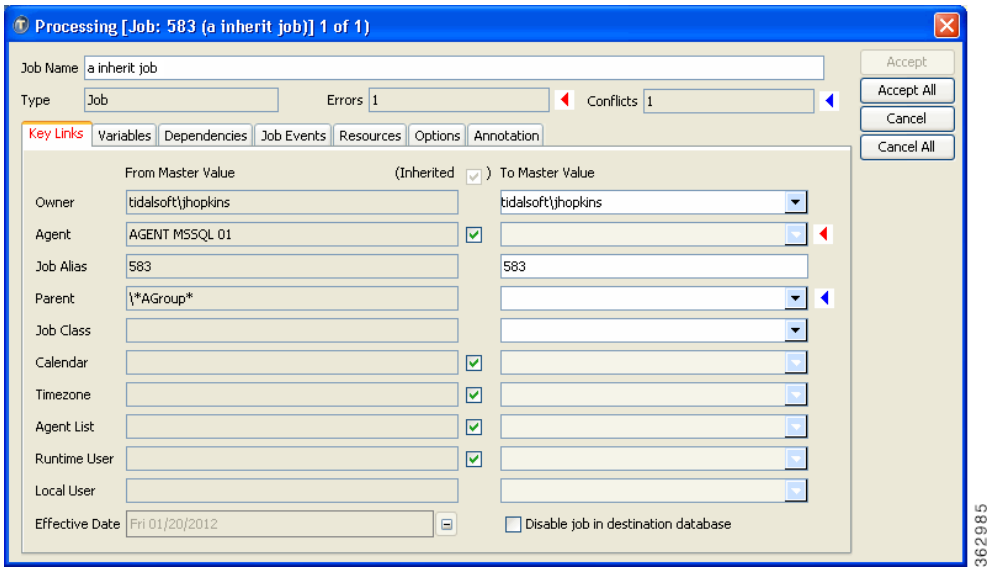


Figure 7-1 Interactive Job Definition Mapping Dialog, Key Links Tab

The title bar of the **Interactive Job Definition Mapping** dialog displays the current point of progress in the transport operation (1 of 1). The following text fields are displayed:

- **Job Name** – The name of the job being transported.
- **Type** – Indicates the job type (Job, Job Group, FTP job, etc.)
- **Errors** – Indicates the number of errors that occurred due to failed mappings between source and destination objects. Failed mapping for fields such as Owner, Agent or Agent List and sometimes Runtime Users (depending on job type) are considered errors. An error prevents a job from being transported.
- **Conflicts** – Indicates the number of conflicts that occurred due to failed mappings between source and destination objects. Conflicts indicate a job is missing
non-critical data such as dependencies or events. While the job may still run with conflicts, the missing data may prevent the job from running as expected.

Note You can use the **Delete** key to clear out non-required fields and if a field has conflicts, the conflict is also cleared.

There are several tabs in the **Interactive Job Definition Mapping** dialog:

- **Key Links** – The **Key Links** tab displays the basic attributes of a job. Three of the fields have required mappings, otherwise an error results. These three critical fields are the **Owner**, **Agent**, **Agent List**, and **Job Alias**.

Note A unique job alias is auto-generated by Transporter and does not usually require user intervention.

Any one of these fields in the **To Master Value** column that do not map to values displayed in the **From Master Value** column displays a red arrow to highlight a mapping error.

When transporting a job with a parent, the **Key Links** tab displays an **Inherited** check box next to fields that may be inherited from it's parent job. The fields are the **Agent**, **Calendar**, **Timezone**, **Agent List**, and **Runtime User** fields.

If the source job inherits attributes from its parent, then the check box will be selected next to the **Inherited** check box. If there is an attribute that is currently not inheriting, you can select the **Inherited** check box next to the attribute you want the transported job to inherit. However, if the job cannot inherit the attribute due to a failure mapping a corresponding value from the destination, then an error results preventing transport of the job. You must resolve this error to continue with the job transport.

In Figure 7-1, the source job inherits its Agent, Calendar, and Runtime User from its group **AGroup**. A parent mapping conflict occurred because the parent **AGroup** does not exist and is not mapped to an alternate group at the destination. However, a parent group is not a required attribute of a job, which is why this failed mapping is considered a conflict. Because there is no parent selection, the inherited values that cannot be determined are blank in the **To Master** (Destination) side. The non-critical inherited values are displayed as conflicts in blue. The **Agent** field is displayed as an error in red because an agent or agent list is required for jobs. There are several options to resolve this error:

- A parent selection can be made as in the following figure. In this case, the selection of group *Test Group* resolved the Agent error because this group has an agent assignment of *AGENT MSSQL 01 (MSSql)*. This group also has a calendar and Runtime User.
- A second alternative is to select an agent by clearing the agent **Inherited** check box. This makes the destination **Agent** list available for selection of an agent value to resolve the agent error. Doing so automatically clears the **Runtime User** check box. You are left with only the Parent and Calendar conflicts. You can resolve these conflicts by selecting a parent group and calendar. To select a calendar, clear the **Calendar** inherited check box. This makes the destination Calendar list available for selection of a calendar

Note If you have **Allow Conflicts** configured in the configuration option, you will be permitted to transport this job, even with conflicts.

If the job is transported with the Parent and Calendar conflict, the resulting job at the destination will not include a Parent nor a Calendar reference.

A third option is to make an Agent List selection. You can clear the **Agent List** inherited check box which enables the **Agent List** combo box selection, and then make a selection. This clears the agent error and allows transport of the job depending on resolution of any remaining conflicts.

Setting Inheritance

The following example includes a job that does not inherit from its parent.

When this job is transported, an error in the **Agent** field occurs because the source Agent *AGENT MSSQL 01* is non-existent and is not mapped to an alternate destination value. Because an agent or agent list is required for jobs, this is presented as an error. This error can be resolved by making an agent or agent list selection.

Since the job includes a parent group, if the parent group has an Agent or Agent List assignment, the error can also be resolved by selecting the **Agent** or **Agent List Inherited** check box.

After selecting the **Agent Inherited** check box, the error is resolved. The corresponding destination group has an Agent List assignment rather than an Agent assignment, as does its corresponding source group. In this case, selecting the **Agent Inherited** check box selects the Agent List value that is associated with the destination parent group. Note that the **Runtime User** field is automatically set to inherit and its value selected to match the destination parent's assigned Runtime User. This is because Agent/Agent List inheritance also assumes Runtime User inheritance.

Selecting the **Agent List Inherited** check box has the same result. When this job is transported, it is created under the group indicated and its Agent/Agent List value and Runtime User values inherit from this group.

Note If the destination parent group had no Agent or Agent List assignment, checking the **Agent** or **Agent List Inherited** check boxes would not resolve the error.

- **Variables** – The **Variables** tab displays the variables associated with the job named in the **Job Name** field. These variables are arranged in two columns, **From Master Variable** and **To Master Variable**. At the bottom of the **Variables** tab is a **Show Usage** button that displays how the variables are used in the job. Unmapped variables are displayed as conflicts since jobs do not usually require variables.

Note You can use the **Delete** key to clear out non-required fields. This is the same as selecting **<<Remove>>** from the destination list

- **Dependencies** – The **Dependencies** tab displays the dependencies associated with the job named in the **Job Name** field. These dependencies are divided into three types of dependencies: job dependencies, variable dependencies and file/JES dependencies. Each type of dependency is arranged in two columns, **From Master Dependency** and **To Master Variable**. Unmapped dependencies are displayed as conflicts since jobs do not usually require dependencies.

Note You can use the **Delete** key to clear out non required fields. This is the same as selecting **<<Remove>>** from the destination list

Note In the **To Master Agent** list, use the **<<Remove>>** option to remove the corresponding File or JES dependency. This option is not used to remove an Agent.

- **Job Events** – This tab displays the job events associated with the job named in the **Job Name** field. These job events are arranged in two columns, **From Master Event** and **To Master Event**.
- **Resources** – This tab displays the job resources associated with the job named in the **Job Name** field. These resources are arranged in two columns, **From Master Resource** and **To Master Resource**.

Note You can use the **Delete** key to clear out non-required fields. This is the same as selecting **<<Remove>>** from the destination list.

- **Options** – This tab allows you to set the default handling of job output.
- **Annotation** – When an object is transported, a description of the transport operation is annotated to the **Description** field of the object, if **Annotate** is in effect. This option provides for a customizable annotation message to the job description during transport.

The **Interactive Job Definition Mapping** dialog displays the following buttons:

- **Accept** – Accepts the changes you have made, saves the job, and displays the next job to be mapped, if any. When there are no more jobs to process, the dialog is closed. If a mapping error is not resolved, the **Accept** button is unavailable and you can only cancel the job and go to the next job for processing. The dialog updates with data for each job in process.
- **Accept All** – Accepts all selected jobs for transport without displaying the mapping dialog for the job. Jobs with errors will be skipped. Jobs with only conflicts will be accepted only if **Allow Conflicts** is enabled. Use this option only if you are confident that all items were properly mapped earlier. Selecting the **Accept All** button displays the message"Only jobs without conflicts or errors will be accepted automatically. Proceed?"
- **Cancel** – Closes the displayed job's mapping dialog without saving any changes to that job and moves on to the next job, if any.
- **Cancel All** – Closes the **Job Mapping** dialog and cancels processing for jobs that have not yet been processed during the current transport operation. Jobs that were accepted earlier during the session will still be transported.

Transporting within the Same Database

You can transport jobs and job groups within the same database, but the source and destination job cannot be the same. The job or job group must be mapped to a different parent if there is an existing parent or to a new parent if none exists.

Note Transporting within the same database only applies to Jobs; all other tabs are disabled.

The transported job is then created under the parent group specified, with the original job undisturbed. For example, suppose you have a job group called Sales, which includes jobs relating to sales that were originally created under a group called Dev while the jobs are under development. Now, suppose you wish to migrate this job to production. You can transport the Sales group, but it must first be mapped to a new group.

Sample Transport Within the Same Database

In the example described above, the following job structure exists where **job B** depends on **job A** and **job C** depends on **job B**:

\DEV\SALES\job A, \DEV\SALES\job B, \DEV\SALES\job C

To transport group \DEV\SALES and its child jobs job A through job C:

Step 1 Create a mapping rule for Group DEV. In this example, DEV is mapped to PROD.

Note In the drop-down menu for group \DEV, you will not be provided an option to map \DEV to itself.

Step 2 Transport **SALES** and its child jobs. Notice that its Parent Job is mapped to **PROD** as per the mapping rule above. **SALES** will be created under parent **PROD** once transported.

Job A is transported under group **\PROD\SALES**.

Job B is transported under group **\PROD\SALES**.

Job B is transported with its job dependency on job **\PROD\SALES\Job A**.

Job C is transported under group **\PROD\SALES** and similarly along with its job dependency on job **\PROD\SALES\Job B**.

Because this is the first time that the **DEV\SALES** group was transported, Transporter creates a new group called **SALES** under the mapped group **PROD**.

A default annotation is included in the **Notes** tab that indicates the job was created.

After the initial transport, subsequent transport of group **\DEV\SALES** results in an update to existing **\PROD\SALES**.

A default annotation is included in the Job notes that indicates the job was updated.

If **\PROD\SALES** is transported, there will be an error because **PROD** had not been mapped. To resolve this, you can either create a new mapping rule for group **PROD** via the **Interactive Job Definition Mapping** dialog or you can interactively select a new group from the drop list. **\PROD** will not be available for selection.

Running the Transporter in Batch Mode

The Transporter can run from the command line or as a batch job in TES. The Transporter in command line mode only applies to jobs. You can either run using an existing selection file or you can specify parameters so that the Transporter can transfer a job or job group between source and destination as a batch job in TES.

This chapter describes how to use the Transporter command line parameters:

- Using Transporter Command Parameters, page 8-51

Using Transporter Command Parameters

The following command parameters are required to use the Transporter to batch a selection file, job, or job group in TES. Note that quotes are required for parameters which include white space.

- **-i** – The name of the selection file that was created by selecting jobs/job groups at an earlier time. If you are using a selection file, you do not need the other parameters as these parameters are specified in the selection file (unless you wish to override the parameter values).
- **-a** – If you are copying a single job, specify its job alias. You must also use the **-s**, **-d**, and **-m** parameters with the **-a** parameter. If a job already exists in the destination, it will still be copied unless the **-X** option is used.

  -or-

  -g – If you are copying a job group specify the full path with the group name in the following format:

  \full path\group name

  You must also use the **-s**, **-d**, and **-m** parameters with the **-a** or **-g** parameter. If a job group already exists in the destination, it will still be copied unless the **-X** option is used.
- **-s** – The name of the source. (Required if not using a selection file.)
- **-d** – The name of the destination. (Required if not using a selection file.)
- **-m** – The name of the map file. (Required if not using a selection file.)

In addition, there are other options that can be included in the parameters.

- **-D** – Disables the jobs that are copied to the destination. The jobs will have to be manually enabled before they can be run.
- **-S** – Automatically copies all predecessors of the selected jobs as well.
- **-A** – Annotates the **Notes** tab of a job/job group definition that the object or job/group was copied from another source.

- **-X** – Excludes duplicates. Does not copy a job or job group already present in the destination.
- **-SP** – If a job selected for copying is a child job then all of the parent job groups it belongs to are also automatically selected for copying.
- **-SC** – If a job selected for copying is a parent job then all of its child jobs are also automatically selected for copying.
- **-C** – Compiler option, valid values are OFF (No Compile), NOW (Compile - Repeats Start Now) and SKIP (Compile - Skip Repeats).
- **-E** – yyyyMMdd where (yyyyMMdd is the date format of the effective date for the compile).
- **-I** – Ignore conflicts.

Running Batch Jobs with the Transporter

Transporter can be scheduled as a batch job in TES to copy a job/job group or a saved selection of jobs between a source and destination.

To run batch jobs with Transporter:

Step 1 Create a job definition in TES and complete the header text fields.

Step 2 In the **Command** field, enter the path to the command mode Transporter executable.

Step 3 In the **Command Parameters** field, enter the parameters to use when copying the jobs. For example, to copy a job with alias 7663 from the **fulton** destination to the **drakken** destination:

-s fulton -d drakken -a 7663 -D -S -N OFF -m drak.map

To copy jobs from a selection file named *Accont.xpr*:

-i Accont.xpr

Step 4 Complete the rest of the job definition as with any other job.

From a Command Line

When scheduling Transporter batch mode to run with the Tidal Agent, the agent must logon using a user account with access to Transporter. The following is an example of setting up the agent user account for Windows.

The following are examples for scheduling batch-mode transports of jobs:

```
Example 1
```

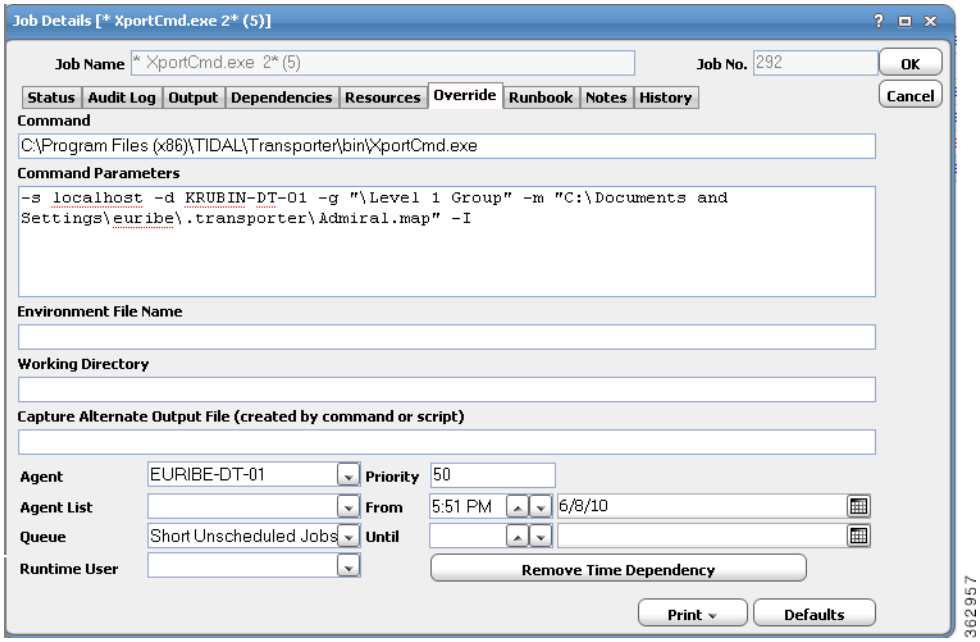
The following dialog shows a group called Level 1 Group copied from source database **localhost** to destination database **UBIN-RT-01**, while ignoring conflicts. Also, since auto selection parameters **-S(autoselect deps)**, **-SP(autoselect parents)**, and **-SC(autoselect children)** have not been specified, The Transporter will apply the user options set for the current Transporter user.

When transporting a single job via the **-g (fully qualified group name)** or **-a (job alias)** parameter(s), **-m (map file name)**, **-s (source database)** and **-d (destination database)** are required. The following example also includes **-I (allow conflicts)**.

Also note that quotes are required for parameters which include white space.

The following dialog shows a group called Level 1 Group copied from source database **ruibe-bt-01** to destination database **testvm-bt-01**, while ignoring conflicts.

Figure 8-1 Example 1



This example uses a selections file to transport job(s), which contains all information required for transport. When using a selections file, no other parameters are required, but may be specified if you would like to override certain values specified in the selections file.

Transporter Job Exit Codes

If a Transporter job does not complete successfully, it will have one of the following exit codes. Find the exit code to diagnose why the job was not successful.

1 = Invalid source specified.

2 = Invalid destination specified.

3 = Processing parameters failed.

4 = Processing selection file failed.

5 = Invalid selection file.

6 = Invalid mapping file.

7 = Unable to find and select all items.

8 = Unable to find the job or job group.

9 = Notify master option has an invalid value. Valid values are Y or N.

10 = Compiler option has an invalid value. Valid values are OFF, NOW and SKIP.

11 = Invalid effective date used.

12 = Group or Job not specified.

13 = Insufficient parameters.

14 = Source and destination must be different.

15 = Unable to connect to source and destination.

16 = Invalid selection type in selection file.

17 = No items in selection file to be copied.

18 = Not all jobs were copied.

Transporter Reports and Log Files

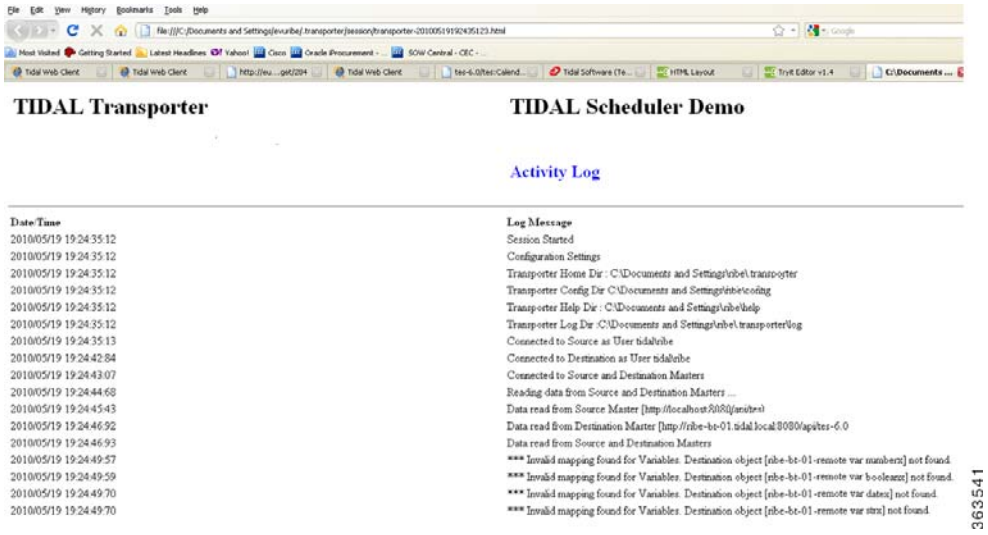
Reports are HTML-based and viewed via your system's default browser. This chapter provides sample reports and how to obtain logging information:

- Sample Reports, page 9-55
- Log Files, page 9-58

Sample Reports

Session Reporting

Figure 9-1 Session Report Example



TIDAL Transporter

TIDAL Scheduler Demo

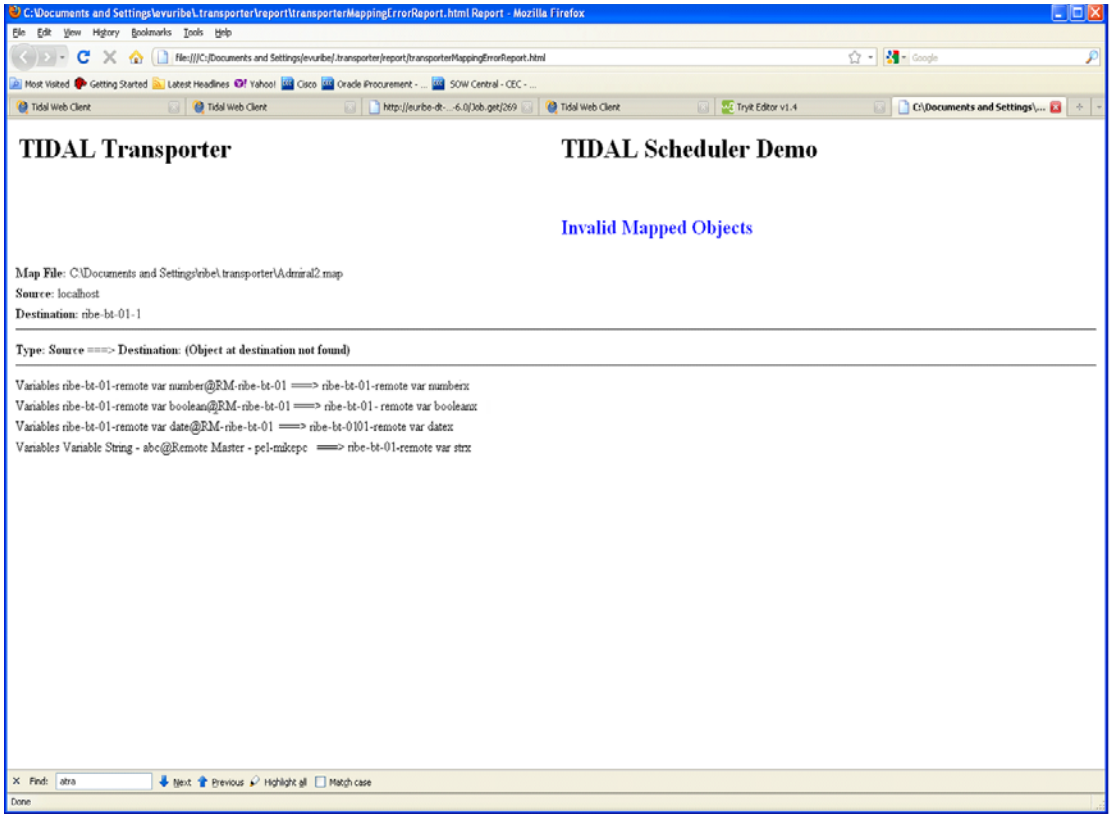
Activity Log

Date/Time	Log Message
2010/05/19 19:24:35:12	Session Started
2010/05/19 19:24:35:12	Configuration Settings
2010/05/19 19:24:35:12	Transporter Home Dir : C:\Documents and Settings\ribe\.transporter
2010/05/19 19:24:35:12	Transporter Config Dir C:\Documents and Settings\ribe\config
2010/05/19 19:24:35:12	Transporter Help Dir : C:\Documents and Settings\ribe\help
2010/05/19 19:24:35:12	Transporter Log Dir :C:\Documents and Settings\ribe\.transporter\log
2010/05/19 19:24:35:13	Connected to Source as User tidal\ribe
2010/05/19 19:24:42:84	Connected to Destination as User tidal\ribe
2010/05/19 19:24:43:07	Connected to Source and Destination Masters
2010/05/19 19:24:44:68	Reading data from Source and Destination Masters ...
2010/05/19 19:24:45:43	Data read from Source Master [http://localhost:8080/ans/rbe]
2010/05/19 19:24:46:92	Data read from Destination Master [http://ribe-bt-01.tidal.local:8080/api/tes-6.0
2010/05/19 19:24:46:93	Data read from Source and Destination Masters
2010/05/19 19:24:49:57	*** Invalid mapping found for Variables. Destination object [ribe-bt-01-remote var numberz] not found.
2010/05/19 19:24:49:59	*** Invalid mapping found for Variables. Destination object [ribe-bt-01-remote var boolearz] not found.
2010/05/19 19:24:49:70	*** Invalid mapping found for Variables. Destination object [ribe-bt-01-remote var datez] not found.
2010/05/19 19:24:49:70	*** Invalid mapping found for Variables. Destination object [ribe-bt-01-remote var strz] not found.

363541

Invalid Mapping Report

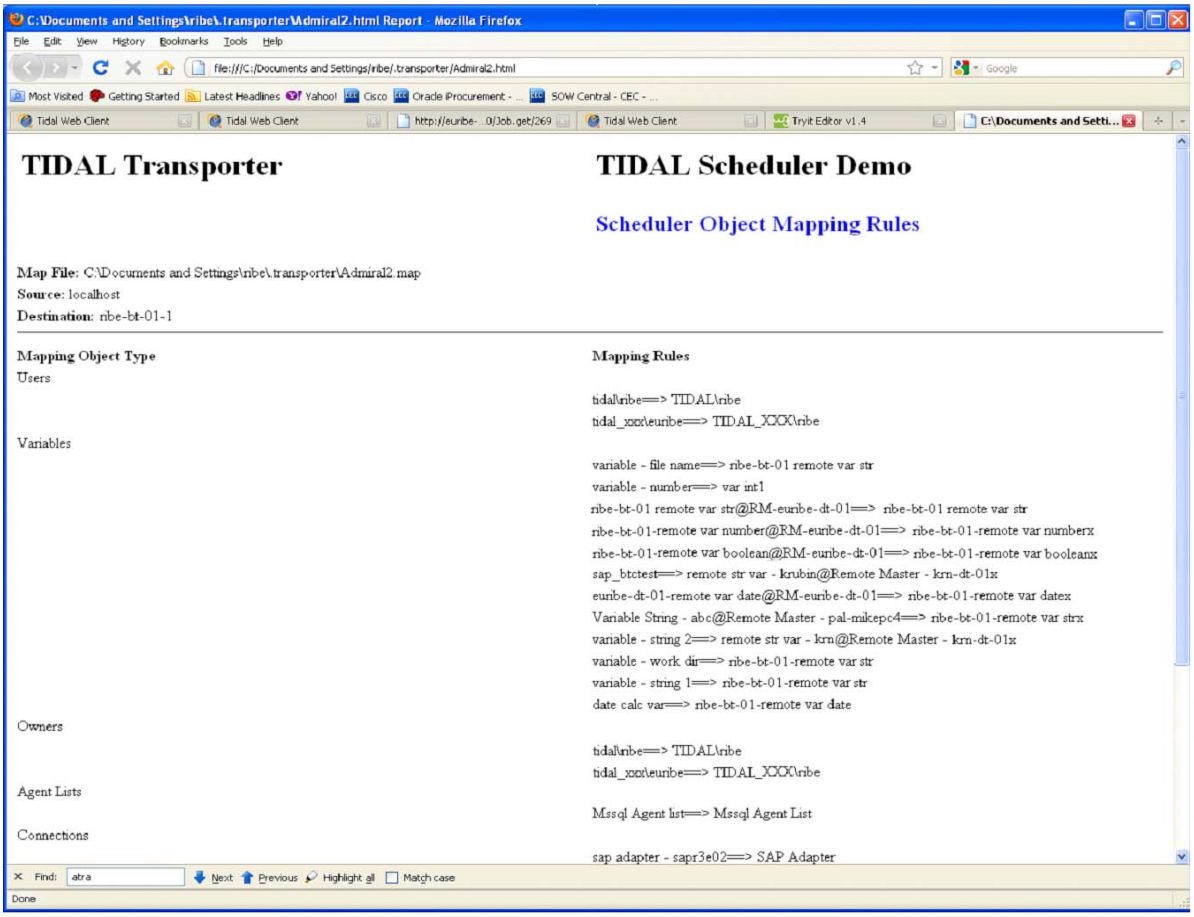
Figure 9-2 Invalid Mapping Report Example



363542

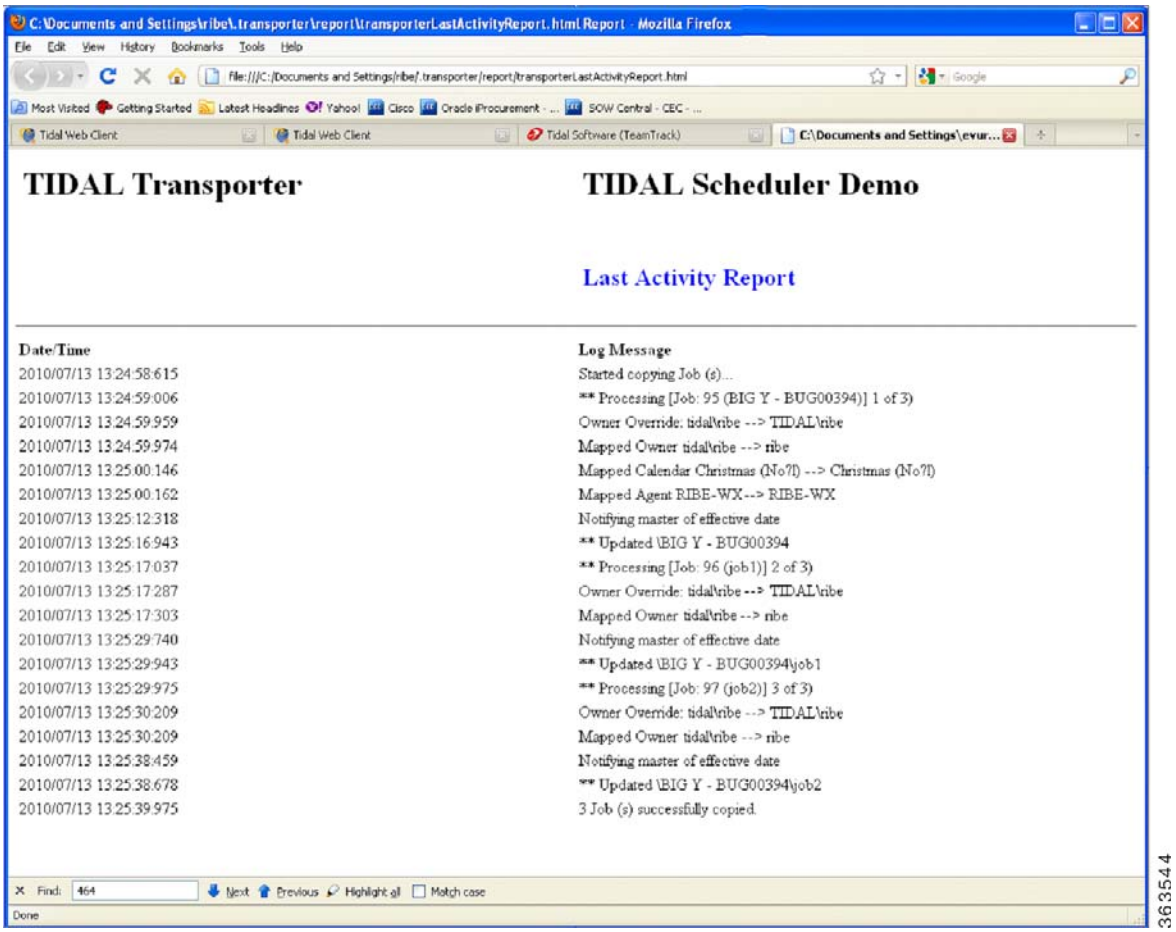
Mapping Report

Figure 9-3 Mapping Report Example



Last Activity Report

Figure 9-4 Last Activity Report Example



Log Files

Session Logs

Session logs are created with a *.sess* extension and saved to your **Transporter** home directory under a subdirectory called sessions, by default.

The session log directory is configured via the **Configuration Options** dialog under **General Options>Log Directory**.

- Windows example:

  C:\Documents and Settings\<user>\.transporter\session\transporter-20100506025113898.sess

Note A user's home directory is different on different platforms. The examples provided are specific to internal Windows XP systems and intended for demonstration only. Your configuration will be different. Following are examples of user home locations by platform:

Microsoft Windows NT: <root>\WINNT\Profiles\<user> %UserProfile%
Microsoft Windows 2000, XP and 2003: <root>\Documents and Settings\<user>
Microsoft Windows Vista and 7: <root>\Users\<user>

Diagnostic Logs

New diagnostics logs are created with a *.log* extension and saved to your **Transporter** home directory under a subdirectory called **logs**:

- Windows example:

  C:\Documents and Settings\<user>\.transporter\log\Transporter-20100506093221628.log

Note Diagnostic logging levels may be controlled via transporter.props. There is no corresponding option for session logs, which only contains information about data transport for a given session. See transporter.props Configuration, page 4-21 for further information regarding logging options configurable via transporter.props.

Note A user's home directory is different on different platforms. The examples provided are specific to internal Windows XP systems and intended for demonstration only. Your configuration will be different.

Following are examples of user home locations by platform:

Microsoft Windows NT: <root>\WINNT\Profiles\<user> %UserProfile%
Microsoft Windows 2000, XP and 2003: <root>\Documents and Settings\<user>
Microsoft Windows Vista and 7: <root>\Users\<user>