CHAPTER **3**

Getting Started

transporter.props Configuration

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

Some configuration options which may be controlled via *transporter.props* are as follows:

- **UseUnixId** – Specifies whether to execute Unix **id** command to gather user info. Default is false. 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 info 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 info by the **id** command instead.

To control logging categories and granularity, specify:

Categories of logging:

- **TransporterLog** – Used to control logging of general categories including non-job transports
- **TransporterJobLog** – Used to control logging of job transport operations
- **TransporterDataLog** – Used to control logging of data related operations
- **TransporterUILog** – Used to control logging of general UI operations

Logging Levels:

Valid options are SEVERE, WARNING, FINE, FINER, FINEST, with a default of SEVERE, if not Logging levels mentioned are the same as those used by Scheduler where a level of SEVERE is the least granular (only logging the most severe incidents) while FINEST is the most comprehensive.

To control connection timeouts specify:

- **CONNECT_TIMEOUT=20000** (Used to specify a connection timeout in milliseconds; in this example, a time of 20 sec has been defined.
- **READ_TIMEOUT=20000**. (Used to specify a connection read timeout in milliseconds).

To control the number of transporter and session log files retained:

- **MaxLogFiles=50** (Used to control the number of Transporter log files retained. Defaults to **50** if unspecified).
- **MaxSessionFiles=50** (Used to control the number of Transporter session files retained. Defaults to **50** if unspecified).

To configure Transporter for secure HTTP, specify:

Truststore=c:\\temp\\mytruststores\\demo-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.

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 a Connection".

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.

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. To run Transporter in debug mode, include XPORTER_DEBUG=YES in Transporter.props and run transporter given transporter.cmd script located in bin.

- **READJOBS_PAGINATED** – configures CM to return job data in pages of READ_BATCHES batches.

  For example, `READ_BATCHES=1000 and READJOBS_PAGINATED=true`
  tells CM to return job data in batches of 1000. This approach reduces the overhead on CM 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 CM, since the jobs are returned in larger batches.

  > **Note** Note: This approach may have less benefit given many jobs (i.e. 50K or more). The batching is done at the CM level.

- **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 CM 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).

- **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, CM will need to process all the records for return to Transporter. If there are many job records, the overhead on CM may be to high.

> **Note** Only one parameter, READJOBS_PAGINATED, READJOBS_ALL, or READJOBS_BATCHES 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 for read defaults to
> (READ_BATCHES=500, READJOBS_BATCHES=true)

Understanding the Transporter Interface

Start Transporter by clicking **Start** and selecting **Programs>TIDAL Software>Transporter>Transporter** to display 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".

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

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

Main Menus

Transporter contains the following main menus:

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

File

The **File** menu manages the access and loading of file information and 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:
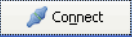
    – **C:\Documents and Settings\<user>\.transporter**

![Note icon]

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.

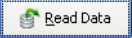   Clicking ⬚ Connect ⬚ on the toolbar is the same as selecting the **Connect** option.

- **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 Transporter for working preference.

    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 copied 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 Transporter in batch mode. Refer to "Running 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

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 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

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.
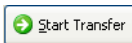
Transport

The **Transport** menu organizes the tasks directly concerning the copying 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 copied at once. The user would select which objects should be copied 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 copying process of the selected objects between the source and destination.

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

Actions

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

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 transfer 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 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**.
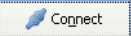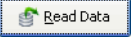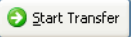
Help

The **Help** menu provides information on the version of 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 Transporter. The version number of 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** – Launches the Tidal Web Client in your default Web browser for the selected source.
- **Destination** – Launches the Tidal Web Client in your default Web browser for the selected destination.

- **Connections** – Displays the **Connections** dialog. This dialog is used to create and modify existing connections to a source and destination using connection files.

- **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** – 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** – 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** – Begins the data copying process between the selected source and destination. (Job transports provide for interactive mapping by transferring 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** – 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** – 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** – Displays the **Configure Options** dialog to customize Transporter to work according to your preference.

  Clicking the **Configure** button is the same as selecting the **Configure** option in the **File** menu.

- **Find** – Highlights the first source data object that matches the criteria entered in the search text field.

- **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 copied from the source to the destination.

- **Calendars** – Displays calendar definitions that can be copied from the source to the destination.

- **Business Views** – Displays business views that can be copied from the source to the destination.

- **Variables** – Displays variable definitions that can be copied from the source to the destination.

- **Events** – Displays the event definitions that can be copied from the source to the destination.

- **Resources** – Displays resource definitions that can be copied from the source to the destination.

- **Actions** – Displays action definitions that can be copied from the source to the destination.

- **Job Classes** – Displays job class definitions that can be copied from the source to the destination.

Securing Transporter

A valid Scheduler user is an LDAP user with a user record in the Tidal 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 Tidal 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 Transporter. These are **Move Jobs to Production** and **Move Own Jobs to Production**. **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 Tidal 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, 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 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   From the **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 Interactive User** to display the **User Definition** dialog.

Step 3   If this is a new user definition, enter the new user name in the **User/Group Name** field.

Step 4   For documentation, enter the **Full Name** or description associated with this user.

Step 5   In the **Domain** field, select a Windows domain associated with the user account required for authentication, if necessary.

Step 6   In the **Windows/FTP** field, enter the password and confirmation password.

Step 7   Click **OK** to add or save the user record in the Scheduler database.

Authorizing Schedulers to Work With Transporter Data Objects

To define a Security Policy:

Step 1   From the **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   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 Transporter, **Move Jobs to Production** and **Move Own Jobs to Production**. **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 4   Click **OK** to close the **General** dialog.

Step 5   Click **OK** to save the policy.

Note   When changing user security policies, 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 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 a Connection

Data resources are requested given an HTTP (or HTTPS secured connection), client connection using HTTP Basic Authentication. Refer to your TES documentation 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   In the **Connection Name** field, enter the name for the connection file.

Step 2   In the **Server Name** field, enter the name of the Tidal Client Manager machine.

Step 3   In the **Master Name** field, enter the master instance name.

The master instance name is the TES DSP or Plugin name. This is displayed from the Web UI in the **Master Status** pane.

Step 4   In the **Server Port** field, enter the listening Web Service port used by the Tidal Web Client. The default is **8080** for non-secured connections and **8443** for secured connections.

Step 5   In the **User** and **Password** fields, enter a valid TES user name and password.

Step 6   Select the **Secure HTTP** option if you want to connect securely through the HTTPS protocol.

This option is enabled only if Transporter has been configured for secure connections.

For instructions on configuring Transporter for secure HTTP, see Page 11.

Step 7   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.

The **Connections** dialog also contains the following elements not discussed in the procedure above:

- **New** – Click to create a new connection.
- **Rename** – Click to rename an existing connection.
- **Delete** – Click to delete a connection.
- **Test** – Click to test an existing connection.
- **Exit** – Click to exit the **Connections** dialog.

Establishing a Connection

To establish a connection:

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.

After the connections are established, click the Read Data button to display a list of data objects based on the currently selected data types. This is done automatically if the **Read on Connect or New Data Type** configuration option is selected. After the connections are established, the source and destination displays a list of data objects based on the currently selected data types.

Once connected, the **Connect** option in the **File** main menu is unavailable and toggles to the **Disconnect** menu option.

If Transporter is currently connected, then the **Source** and **Destination** lists are unavailable.

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.

Once connected, you can either configure a set of Transporter options or you can **Read Data** and then start selecting the data objects in the source that you want to copy to the destination.