TIDAL

Tidal Workload Automation
PeopleSoft Adapter Guide

Version 6.2.2

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Contents

Preface

This guide describes the installation, configuration, and usage of the PeopleSoft Adapter with Cisco Tidal Enterprise Scheduler (TES).

Audience

This guide is for administrators who install and configure the PeopleSoft Adapter for use with TES, and who troubleshoot TES installation and requirements issues.

Related Documentation

For a list of all Tidal Workload Automation guides, see the Tidal Workload Automation Documentation Overview of your release on tidalautomation.com at:

[Tidal Automation Doc Support](#)

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

Document Change History

The table below provides the revision history for the *Cisco Tidal Enterprise Scheduler PeopleSoft Adapter Guide*.

Version Number	Issue Date	Reason for Change
6.1.0	October 2012	• New Cisco version.
6.2.1	June 2014	• Available in online Help only.
6.2.1 SP2	June 2015	• Configuration provided in the *TES Installation Guide;* usage provided in online Help only.
6.2.1 SP3	May 2016	• Consolidated all PeopleSoft Adapter documentation into one document.

Introducing the PeopleSoft Adapter

This chapter provides an overview of the PeopleSoft Adapter and its requirements:

- o Overview
- o Terms to Know
- o Minimum Software Requirements

Overview

The PeopleSoft module of Tidal Enterprise Scheduler (Enterprise Scheduler) works with the PeopleSoft Process Enterprise Scheduler to enhance PeopleSoft usability and integrate seamlessly with Enterprise Scheduling.

Enterprise Scheduler's PeopleSoft adapter appears in Enterprise Scheduler as PeopleSoft connections. You create PeopleSoft jobs and schedule them to run on PeopleSoft process servers that you defined in the Enterprise Scheduler **PeopleSoft Connection Definition** dialog.

When a PeopleSoft job is ready to run, Enterprise Scheduler's PeopleSoft adapter tells the PeopleSoft Process Enterprise Scheduler to launch each process in the job. The adapter uses the standard **PSPRCSRQST** table that the PeopleSoft Process Enterprise Scheduler uses to launch processes. By querying and updating information in this and related tables, Enterprise Scheduler controls how processes are executed within the PeopleSoft environment.

You can also invoke PeopleSoft from Scheduler to add and edit process definitions and run controls for which you have privileges through authorized PeopleSoft operator IDs.

Terms to Know

- o **Access ID** – In the PeopleSoft environment, an access ID is a user with access to the PeopleSoft database. There is usually one access ID dedicated to tools administration. For example, in an PeopleSoft database environment, this id is often known as the **SYSADM** user.

- o **Job** – A PeopleSoft job in Enterprise Scheduler is a collection of one or more PeopleSoft processes. The processes that make up a job can be of the same or different types.

Note   The concept of a job in PeopleSoft is different from the one used in Enterprise Scheduler. In this documentation, where there is a reference to a "PeopleSoft job", it specifically means a Enterprise Scheduler job defined to run processes on a PeopleSoft process server.

- **Mapped Drive** – A mapped drive refers to mapping a Windows drive letter to a network file system. The network drive becomes a virtual hard drive for the computer that has mapped to it. The drive letter is included when referring to the network drive in a path from the perspective of the machine that has it mapped.

- **Process** – A PeopleSoft process is a single program or executable, for example, an SQR report.

- **Process Scheduler** – Native PeopleSoft job scheduling facility.

- **PeopleTools** – Development and administration infrastructure tools included with all PeopleSoft applications that includes the Process Scheduler.

- **Operator ID** – A PeopleSoft user definition that restricts access to specific components of the PeopleSoft application itself.

- **Run Control ID** – A name that identifies a set of runtime parameter values for a process, including both global and process-specific information.

- **UNC** – UNC stands for Uniform Naming Convention or Universal Naming Convention. UNC is a way of specifying shared directories, servers, and other resources on a network, indicating path or directory levels within the computer. For example: **\\computer_name\directory_name.**

Minimum Software Requirements

The minimum software releases for Enterprise Scheduler PeopleSoft adapter implementation are:

- PeopleSoft 8.1, 9.1, 9.2
- PeopleTools version 8.49 - 8.54

Note See the *Cisco TES Compatibility Guide* for specific version support.

- Enterprise Scheduler v6.1 and above
- Network File System (NFS) software in a mixed Windows/Unix environment. The Windows master must be able to see the output and logs of PeopleSoft jobs running on Unix process servers via NFS or FTP.
- One of the following databases:
  - Oracle 10g and 11i
  - DB2 UDB 9 for Unix and DB2 UDB 9 for z/OS
  - Microsoft SQL Server 2005 and 2008
- JDBC drivers – If your PeopleSoft instance uses a Microsoft SQL Server database and your Enterprise Scheduler master runs on Unix, JDBC drivers must be installed on the Unix master. Directions for downloading and installing the JDBC driver (SP2) are provided in the *Installing the Unix Master* chapter in the *Installation and Configuration Guide*. The Unix administrator can help to install the driver and to configure a **CLASSPATH** environment variable to point to the *.jar* file.

  If you are using the IBM® SDK for Java and the DB2® Universal JDBC (sometimes referred to as JCC) driver to run a program against a host database, you may encounter an exception like com.ibm.db2.jcc.b.SqlException: unsupported encoding Cp277 for resultset column . The cause of this exception is that there are two jar files for codesets in the JDK. One is for the basic encoding set (...jre/lib/rt.jar). The other is for the extended encoding set (...jre/lib/charsets.jar). An example

of a codeset that is supported by the extended encoding set is Cp277. If you are connecting to PeopleSoft while running DB2, the master should be using JDK instead of JRE. For a workaround, copy the *charset.jar* file into the jre\lib directory.

- Cisco Tidal Enterprise Scheduler Adapters require Java 7. (Refer to *Cisco Tidal Enterprise Scheduler Compatibility Guide* for further details).

CHAPTER **2**

Configuring the PeopleSoft Adapter

Overview

To run and monitor a PeopleSoft job from Enterprise Scheduler, you must create a Enterprise Scheduler job definition for it. The job or processes may already exist within PeopleSoft.

Enterprise Scheduler then controls the PeopleSoft job in the Enterprise Scheduler environment, first making sure that all of the job's dependencies have been met. Once the job clears Enterprise Scheduler's queues, it queues a request in the PeopleSoft process request tables.

The PeopleSoft Process Scheduler runs the requested process and Enterprise Scheduler monitors its progress. Operators can control the job and, when the job is complete, view the job output from the Enterprise Scheduler **Job Activity** pane.

The PeopleSoft Adapter software is installed as part of a standard installation of Enterprise Scheduler.

However, before the PeopleSoft Adapter can be used, the following configuration procedures must be completed:

- **o** Configuring the Adapter
    - Creating a PeopleSoft Security Policy
    - Defining PeopleSoft Users
    - Authorizing Enterprise Scheduler Users to Run PeopleSoft Jobs
    - Licensing an Adapter
    - Defining a PeopleSoft Connection
    - Defining a PeopleSoft Agent List

All of these procedures are described in this chapter.

See Configuring service.props for information about general and adapter-specific properties that can be set to control things like logging and connection properties.

Configuring the Adapter

Note   For the Windows master, ensure that the Enterprise Scheduler master service logs on as a specific user account. The master should not log on as a local system.

To configure the PeopleSoft adapter:

Step 1 Create a security policy to assign to the users that will schedule PeopleSoft jobs. You may want to create different security policies to differentiate between users who just run PeopleSoft jobs versus users who can run and edit PeopleSoft jobs. You could also just add the security functions to the existing policies for each user as needed. Refer to "Creating a PeopleSoft Security Policy".

Step 2 The PeopleSoft administrator must provide one or more operator IDs to be used with Enterprise Scheduler. Create runtime users in Enterprise Scheduler for one or more PeopleSoft operator IDs. Add runtime user authorizations for each scheduling user that should be able to schedule PeopleSoft jobs using these operator IDs. Refer to "Defining PeopleSoft Users".

Step 3 Add the PeopleSoft database user (access ID) to Enterprise Scheduler as a runtime user to provide access to the PeopleSoft database. Refer to "Authorizing Enterprise Scheduler Users to Run PeopleSoft Jobs".

Step 4 License your PeopleSoft connection(s). You cannot define a Peoplesoft connection until you have applied the PeopleSoft license. Refer to "Licensing an Adapter".

Step 5 Define a PeopleSoft connection so the adapter can connect to the PeopleSoft database. Refer to "Defining a PeopleSoft Connection".

Step 6 (Optional) Define PeopleSoft Agent lists you need for broadcasting jobs to multiple servers, high availability and/or load balancing. Refer to "Defining a PeopleSoft Agent List".

Step 7 (Optional) Specify parameters in the service.props file to control polling, output, and logging. See Configuring service.props.

Creating a PeopleSoft Security Policy

Access to the PeopleSoft scheduling environment is controlled by assigning PeopleSoft functions in a security policy. The scheduling administrator should create a new security policy or edit an existing policy in Enterprise Scheduler as described in the *Users* chapter of the *TES User Guide*, that in addition to the normal user privileges, includes the capability to add and/or edit PeopleSoft jobs. A user whose assigned security policy does not include PeopleSoft privileges cannot create and/or run PeopleSoft jobs.

To grant PeopleSoft access privileges:

Step 1 In the **Navigator** pane, select **Security Policies** to display the **Security Policies** pane.

Step 2 Select a security policy for the PeopleSoft job privileges and double-click on it to display its **Security Policy Definition** dialog.
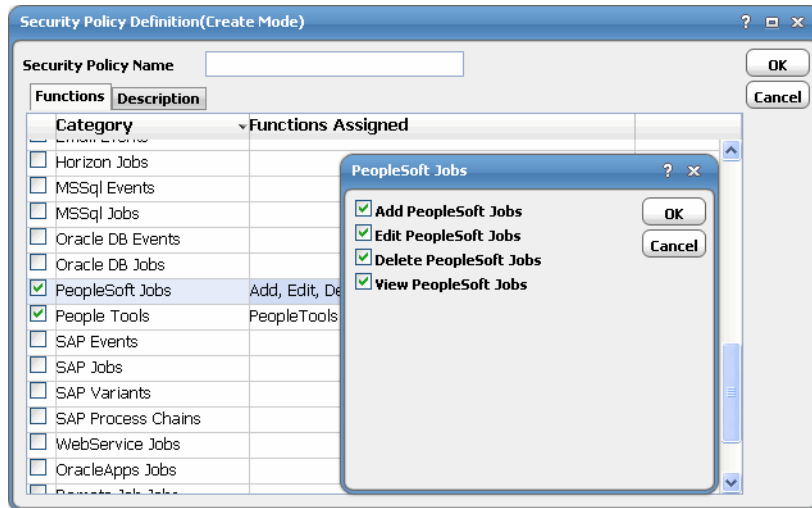
Step 3   Scroll down the list of function categories and double-click on the **PeopleSoft Jobs** category to display the available functions.

Step 4   Double-click the category row to display the **PeopleSoft Jobs** dialog.

Step 5   Select the desired job privileges, then click **OK**.

A check mark appears next to the **PeopleSoft Jobs** function category indicating that one or more functions are selected within the category.

If needed, different security policies with varying authorized functions can be created to provide different levels of access for a variety of users.

Defining PeopleSoft Users

Before you can work with PeopleSoft jobs in Enterprise Scheduler, an access ID to the Process Scheduler database tables (the database owner or equivalent) and one or more application users (operator IDs) must be defined in Enterprise Scheduler. These user definitions authorize a connection to be established to the PeopleSoft database and permit requests to be made on behalf of application users.

Access to the PeopleSoft environment can be controlled by creating specific user definitions with PeopleSoft privileges. Scheduling administrators can grant runtime user (operator ID) privileges to other users who need to run PeopleSoft jobs. Scheduling users can also be limited to specific PeopleSoft instances or servers, if desired.

Note   The user of the PeopleSoft adapter for Enterprise Scheduler is limited when running PeopleSoft to the same privileges available to the PeopleSoft operator IDs created by the PeopleSoft Administrator. Be sure that the operator ID has read access to the PeopleSoft run control values for each process that needs to be scheduled.

The PeopleSoft administrator must provide the Enterprise Scheduler administrator with an access ID that consists of the name and password of a database account with access to the Process Scheduler database tables. In this documentation, this user account is referred to as the PeopleSoft database user. This is a runtime, non-interactive, user account and is only used to provide backend access to the PeopleSoft database by Enterprise Scheduler. The database connection for this user is not made directly available to any scheduling user.

Enterprise Scheduler reads from a large number of data tables, but only updates the following:

- **PSPRCSRQST** (insert, update and delete process requests)

As of PeopleTools 8, Enterprise Scheduler also updates the following tables:

- **PS_PRCSSEQUENCE** (update of **LASTPRCSINSTANCE** and **LASTCONTENTID**)
- **PS_CDM_AUTH** (controls access to output, logs and other content)
- **PS_CDM_LIST** (inserts column in distribution table)
- **PSPRCSPARMS** (updates and modifies request parameters)
- **PSPRCSQUE** (queues process requests)
- **PSPRCSRQSTTEXT** (controls report distribution text associated with process requests)
- **PS_PRCSRQSTDIST** (specifies the operator IDs and/or roles as the target of report distribution)
- **PS_PRCSRUNCNTL** (demonstrates how run control values are passed to processes that run within the Process Scheduler)

Your PeopleSoft administrator might not allow access to the database owner account, though it is strongly recommended. If the database owner account is not used, verify that the database user account provided for Enterprise Scheduler can update the tables listed above along with read access to other tables as described in "Appendix".

Adding the PeopleSoft database user to Enterprise Scheduler is the same as adding any other Enterprise Scheduler user. The administrator of Enterprise Scheduler must create a user record for accessing the PeopleSoft database using the name and password that the PeopleSoft administrator provides.

To add a database user:

Step 1   From the **Navigator** pane, expand the **Administration** node and select **Runtime Users** to display the defined users.

Step 2   Right-click **Runtime Users** and select **Add Runtime User** from the context menu (*Insert* mode).

-or-

Click the **Add** button on the Enterprise Scheduler menu bar.

The **User Definition** dialog displays.

Step 3   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   To define this user as a runtime user for PeopleSoft jobs, click **Add** on the **Passwords** tab.

The **Change Password** dialog displays.

Step 7   Select **PeopleSoft** from the **Password Type** list.

Step 8   Enter a password (along with confirmation) in the **Password/Confirm Password** fields.

Only those users with a password specified for PeopleSoft will be available for use with PeopleSoft jobs. The password might be the same as the one specified for Windows/FTP jobs.

Step 9   Click **OK** to return to the **User Definition** dialog.

The new password record displays on the **Passwords** tab.

Step 10   Click **OK** to add or save the user record in the Enterprise Scheduler database.

✎

Note   For more information about the User Definition dialog, see the Users chapter in your *Tidal Enterprise Scheduler User Guide*.

Authorizing Enterprise Scheduler Users to Run PeopleSoft Jobs

If a Enterprise Scheduler user is to work with PeopleSoft jobs, they must be authorized to access one or more PeopleSoft operators and process servers. If a PeopleSoft operator is not added to a Enterprise Scheduler user's authorized runtime users list, the user has no access to PeopleSoft processes. Any restrictions placed on the operator ID account in the PeopleSoft environment apply to the Enterprise Scheduler user as well.

To authorize access to runtime users and process servers:

Step 1   From the **Navigator** pane, expand the **Administration** node and select **Interactive Users** to display the defined users.

Step 2   Right-click **Interactive Users** and select **Add Interactive User** from the context menu (*Insert* mode). You can also right-click a user in the **Interactive Users** pane and select **Edit Interactive User** from the shortcut menu (*Edit* mode).

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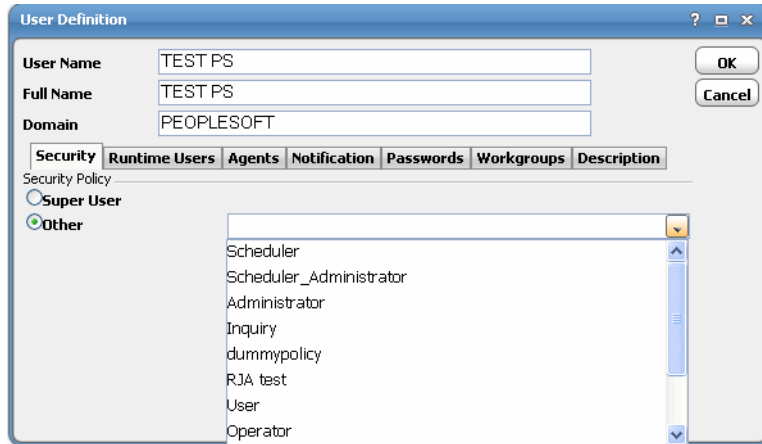
Step 3 If this is a new user definition, enter the new user name in the **User/Group Name** field.

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 On the **Security** page, select the **Other** option and then select the security policy that includes authorization for PeopleSoft jobs.

Step 7 Click the **Runtime Users** tab.
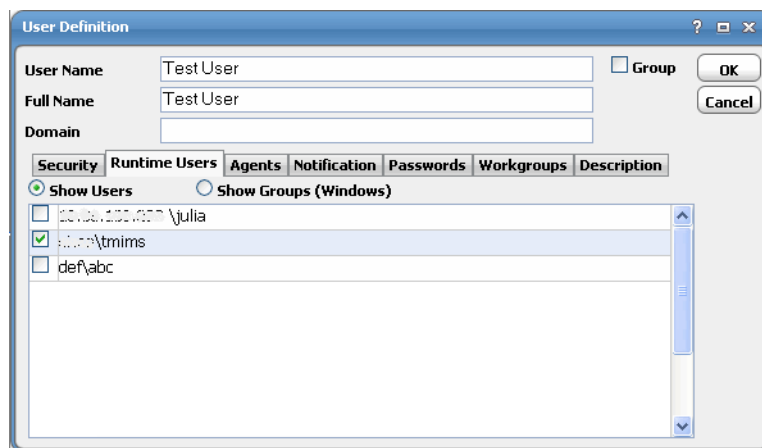
Step 8 Select the PeopleSoft users that this scheduling user may use for PeopleSoft authentication in PeopleSoft jobs.

Step 9 Click the **Agents** tab.

Step 10 Select the check boxes for the PeopleSoft connections that this scheduling user can access when scheduling jobs.

Step 11 Click **OK** to save the user definition.

Licensing an Adapter

Each TES Adapter must be separately licensed. You cannot use an Adapter until you apply the license file. If you purchase the Adapter after the original installation of TES, you will receive a new license file authorizing the use of the Adapter.

You might have a Demo license which is good for 30 days, or you might have a Permanent license. The procedures to install these license files are described below.

To license an Adapter:

Step 1   Stop the master:

Windows:

a   Click **Start** and select **Programs>TIDAL Software>Scheduler>Master>Service Control Manager**.

b   Verify that the master is displayed in the **Service** list and click on the **Stop** button to stop the master.

UNIX:

Enter **tesm stop**

Step 2   Create the license file:

- For a Permanent license, rename your Permanent license file to *master.lic*.

- For a Demo license, create a file called *demo.lic*, then type the demo code into the *demo.lic* file.

Step 3   Place the file in the **C:\Program File\TIDAL\Scheduler\Master\config** directory.

Step 4   Restart the master:

Windows:

Click **Start** in the Service Control Manager.

UNIX:

Enter **tesm start**

The master will read and apply the license when it starts.

Step 5   To validate that the license was applied, select **Registered License** from **Activities** main menu.

Defining a PeopleSoft Connection

You will need to define connections between Enterprise Scheduler and one or more PeopleSoft process servers. You can limit access to specific PeopleSoft process servers by user account. See Authorizing Enterprise Scheduler Users to Run PeopleSoft Jobs, page 2-13.

To define a connection:

Step 1   From the **Navigator** pane, select **Administration>Connections** to display the **Connections** pane.

Step 2   Click the **Add** button and select the **Peoplesoft Adapter** option from the list of connection types or right-click and select **Add Connection>PeopleSoft Adapter** from the context menu.

The **Connection Definition** dialog displays.
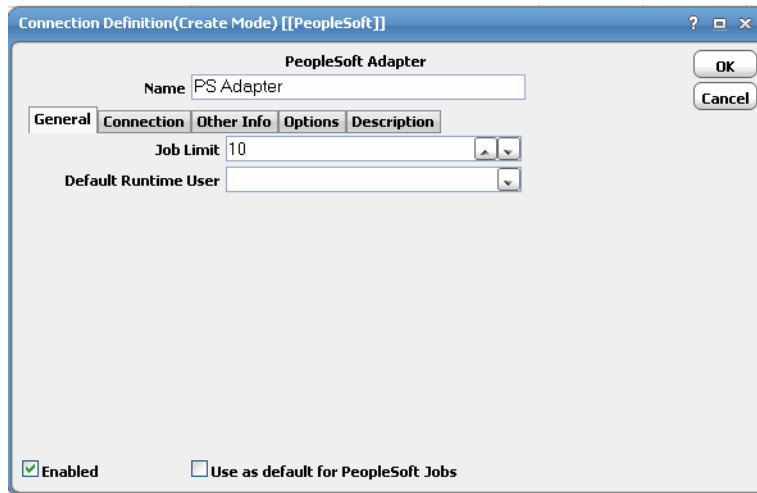
Step 3   In the **Connection Definition** dialog:

Name: Enter a name to be used by Enterprise Scheduler to identify the PeopleSoft connection. The name does not have to correspond to the actual PeopleSoft process server name.

Enabled [checkbox]: Selected (by default) to activate the connection. Deselect to disable (deactivate) the connection, which shuts down the adapter. A job cannot run on an adapter if its connection is disabled. If jobs try to run on a disabled connection, the job enters Agent Disabled status. Jobs already running on an agent that is disabled (or if the connection to the agent is lost) run to completion; however, their completion status is not returned until the agent is enabled.

Use as default for PeopleSoft Jobs [checkbox]: Select to use the connection as your default connection when setting up future PeopleSoft jobs.

Step 4 In the **Job Limit** field, type the maximum number of concurrent active processes that Enterprise Scheduler should submit to the Process Scheduler on this server at one time. This number will be checked and enforced by Enterprise Scheduler prior to job launch.

Step 5   In the **Default Runtime User** field, choose the name of a runtime user (Operator ID) for PeopleSoft jobs.

Only users that have been defined with PeopleSoft passwords appear in the list. You *must* use a PeopleSoft *operator ID* as the runtime user. Do not use the database user (PeopleSoft access ID, or database owner).

Step 6   Click the **Connection** tab.

Step 7 In the **Process Server** field, type the name of the PeopleSoft Process Scheduler Server for the connection as the name appears in the PeopleSoft Process Server definition table.

Step 8 In the **Database Type** field, select the type of database this PeopleSoft installation is using.

The options listed are **Oracle**, **MSSQL (Microsoft SQL Server), DB2/OS390** and **DB2/UNIX**.

The type of database that is selected affects which options display on the rest of the tab.

If you chose **Oracle, MSSQL or DB2 UNIX** as your database, the following options are displayed:

- **DB Access ID** – Select the user that Enterprise Scheduler will use to connect to the PeopleSoft database. This should be the PeopleSoft access ID (database owner), that you added to Enterprise Scheduler in "Defining PeopleSoft Users".

- **DB Port** – Enter a port number for the database.

  For example, the Oracle TNS listener port.

- **Database Name** – Enter the name of the PeopleSoft database.

- **DB Instance (Oracle/DB2) or Database Server (MSSQL)** – Enter the name of the machine where the database resides.

Step 9 In the **PS Tools Version** field, select the correct version number of your PeopleSoft installation.

Step 10 Enter a **Web Signon URL** (PeopleTools 8.4 and above) that you use to log on to the PeopleSoft Web client from a browser.

Use the "http://" format. Do not include the **?cmd=signon**, e.g., http://peepsrv-02/psp/hrsys.

Note Enterprise Scheduler does not support URL redirection, so this value must include the **psp** directory in the URL.

Step 11 Optionally, if you need to override the JDBC URL with custom parameters for the connection, select the **Override JDBC URL** option and modify the content of this field as necessary.

Step 12 Click the **Other Info** tab.

Step 13   In the **Application Server** field, enter the name of a PeopleSoft application server, if needed by three-tier processes. This is a different machine name than the process server. You need to specify the application server if you are going to schedule **Database Agent** or **Message Agent API** process types.

Step 14   In the **Output Handling (by Scheduler)** section, specify how Enterprise Scheduler should retrieve PeopleSoft output.

If you are not going to use FTP to retrieve job output, enter a valid mapped drive letter, UNC path or NFS mounted path. Enter the path to the output file from the perspective of the Enterprise Scheduler master server.

PeopleSoft Adapter Output Handling Using Drive Mapping
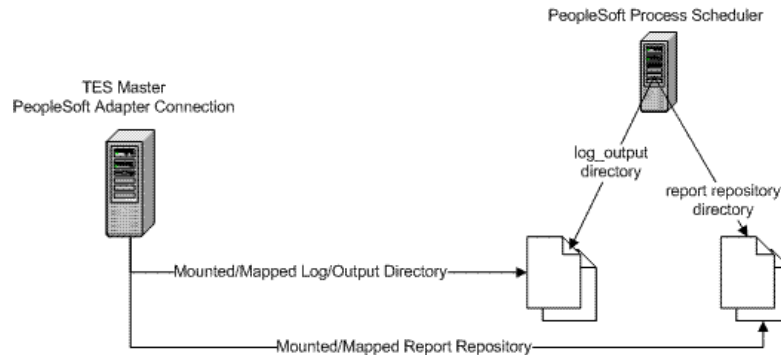
PeopleSoft Adapter Output Handling By FTP
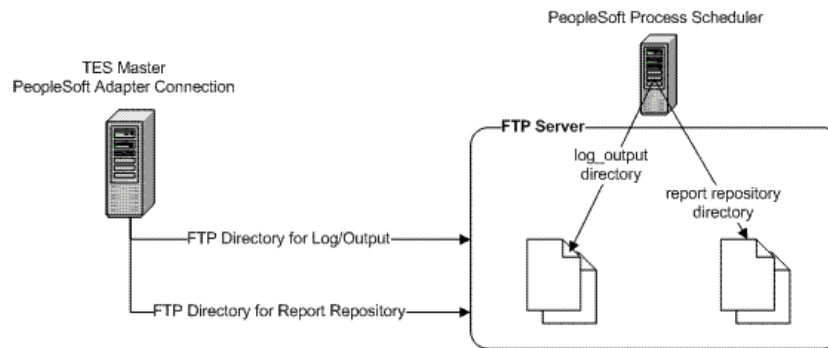
For example, from a Windows master, if the output is on a machine mapped by the Enterprise Scheduler master as the **O:** drive, but mapped on PeopleSoft as the **H:** drive, the path entered here should use the **O:** designation. You can also use UNC conventions and mapped drives to specify shared network locations.

If the process server is not running under Windows you need to have an NFS mount available (e.g., SAMBA) so that the Windows Scheduling master has access to the files, or preferably choose to use FTP.

The absolute pathname is needed. Provide the full pathname which includes the root directory and the descending series of subdirectories leading to the resulting output file.

If the job output is being transferred via FTP, the default path is not to a mapped drive or network share, so the path does not start with a drive letter. Instead, the path starts from the FTP login directory and continues to the desired directory. Refer to Step and Step .

Output filenames vary according to the application that created them. For example, an SQR program's output would be the name of the SQR program with a filename extension of *.lis* or other extension appropriate for the output format.

If no filename is specified, Enterprise Scheduler defaults to a directory, that corresponds to the subdirectory that the Peoplesoft Process Scheduler creates for each process request in its output directory.

The naming convention used for the subdirectory is: **<Process Type>_<Process Name>_<Process Instance>**, e.g., **SQR_XRFWIN_23**.

Step 15 In the **Log/Output Directory** field, enter the path to the PeopleSoft process log from the perspective of the Enterprise Scheduler master.

Do *not* include a filename. The **Log Path** field is used to specify the directory, usually on the process server, where the process server logs are stored. These logs are used primarily as a summary of the process run. Log filenames are created by concatenating the process name with the process instance.

Step 16 In the **Report Repository** field, enter the path to the report repository for reports that are posted to the Web.

Step 17 Select the **Use FTP** option if Enterprise Scheduler should FTP the PeopleSoft job log and output, rather than reading the file directly from a network share.

Step 18 If using FTP, from the **FTP User** list, select a user authorized to FTP a file from the FTP server.

The FTP authorization (and password) is part of the Windows/FTP authorization that is assigned on the **Password** tab of the user definition. (You may need to define a new runtime user to Enterprise Scheduler for this purpose.) See *Tidal Enterprise Scheduler User Guide, User Definition Dialog*.

Step 19 In the **Environment** section, select a parameter, then click **Edit** to display the **Parameter Value** dialog.

Step 20 Enter a new value into the **Value** field, then click **OK**.

Once defined in the **Environment** section, the values become global to all process requests submitted using this connection. You can override the parameters by specifying a different value on the **Command-Line Parameters** tab of the **Step Details** dialog of a particular process.

- **PS_HOME –** The high-level directory where PeopleSoft client executables reside

- **TOOLBIN –** PeopleTools executables, such as **\bin\client\winx86**

- **PS_MACH –** Overrides the default FTP host

- **WINWORD –** The path to MicroSoft Word executable, such as c:\Program Files\Microsoft Office\Office12\winword.exe. The value overrides applies to process type Winword and overrides the default path setup in PeopleTools.

- **LANGUAGE_CD –** When a job step runs, if the job step's command line parameter list contains a language code, such as the **–LG** parameter in **PSSQR**, that value can be specified in three locations: the job step definition, the connection definition, or the **LANGUAGE_CD** defined in **PSOPRDEFN** for the runtime user. This parameter defines the language code for the connection. This value is used if the job step definition does not have one specified.

- **TDL_NORMAL_STATUS_WAIT –** This parameter is used to specify the interval of time (in seconds) before doing the secondary status check after detecting a Completed status. This parameter is used only when the configuration parameter **PSFinalStatusWait** has a value of 0. See **PSFinalStatusWait** for additional information.

Most command-line parameters have been replaced by either People Tools pre-defined meta-strings or server-based environment variables. During runtime, Peoplesoft Process Scheduler evaluates and expands the strings using their internal values for the command line. Environment variables defined in this section take precedence over this. (You can also override variables on a process-by-process basis.)

Step 21 Click the **Options** tab.

This tab allows for the configuration of special web signon settings, polling interval and other configuration parameters. See Configuration Parameters for PeopleSoft Connections, page 4-51 for a list of available parameters.

Step 22   In the **Connection poll** field, select the number of seconds between each poll of the PeopleSoft database for status changes.

Polling is the method by which statuses of jobs are tracked and events are monitored. Reduce this value to make PeopleSoft adapter more responsive at the cost of higher performance overhead.

Step 23   To edit parameters, in the **Configuration Parameters** field, highlight a parameter and click **Edit** to display the **Parameter Value** dialog.

Step 24   In the **Value** field, enter the new parameter value.

Step 25   Click **OK** to return to the **Options** tab.

Step 26   Click **OK** to save your changes and close the **Connection Definition** dialog.

Verifying PeopleSoft Connection Status

If the PeopleSoft connection is not available to the master, the connection status light in the first column of the display is red. Note that this light is relative to the status of the connection from the Enterprise Scheduler master.

Once you have defined your PeopleSoft connection(s), Enterprise Scheduler master continually monitors:

☐ Database connection

Network problems and other physical factors can affect the database connection.

☐ **PSSERVERSTAT** table to check if server is active

This flag can be either **Active** or **Inactive**. **Inactive** status does not necessarily indicate an error condition, but PeopleSoft jobs will not execute while the server is **Inactive**, and a the light will be red.

☐ Heartbeat (**LASTUPDDTTM** field in **PSSERVERSTAT**)

The date/time stamp on the PeopleSoft Process Scheduler Server should be updated regularly as determined by the **HEARTBEAT** value in the Server definition, usually once every 60 seconds. If this value is not updated, the PeopleSoft Process Scheduler Server is not functioning properly, and the light will be red.

If the Enterprise Scheduler engine cannot connect or loses its connection to a PeopleSoft database, you will see a red status light next to your PeopleSoft connection in the **Connections** pane. The status light also turns red if the **PSSERVERSTAT** flag is set to **Inactive** and/or if the heartbeat is not up-to-date.

Defining a PeopleSoft Agent List

You can assign jobs to run using PeopleSoft agent/adapter lists similar to the way you assign them to individual agents. With PeopleSoft lists, however, you have access to useful functions not available with individual connections. You can specify alternate connection(s) to run your jobs if the primary connection is unavailable, you can balance the workload of many jobs among the process servers in the list, or you can broadcast jobs to run on all the servers in the list at the same time.

To define a PeopleSoft Agent list:

Step 1 From the **Navigator** pane, select **Definitions>Agent Lists>PeopleSoft** to display the **PeopleSoft Agent Lists** pane.

Step 2 Right-click on the **PeopleSoft Agent Lists** pane and select **Add Agent List** from the context menu.

-or-

Click the **Add** button 🗹 on the Enterprise Scheduler toolbar to display the **Agent List Definition** dialog.
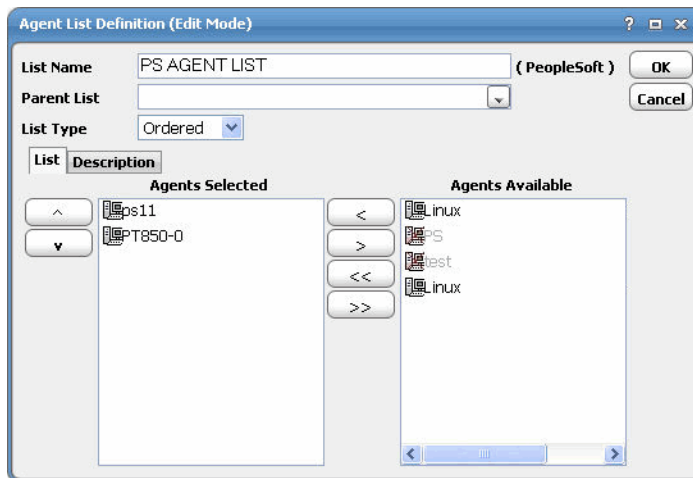
Step 3 In the **List Name** field, enter the name of the PeopleSoft adapter list (up to 60 characters).

Step 4 In the **Parent List** field, you can select a parent list if you want to create nested lists.

If you specify a parent list, the list you are editing will be a child list of the parent and will appear below its parent in the list hierarchy.

Step 5 From the **List Type** list, select the type of list based on how you want your jobs to be assigned to a PeopleSoft connection in the list.

- **Ordered** – In support of high-availability, Enterprise Scheduler chooses the first available agent to run the job based on the order that the connections appear in the **Agents Selected** section. For example, if the first (primary) connection in the list is not available, Enterprise Scheduler tries the second (alternative) connection in the list. You might want to use this list type for critical jobs where multiple connections are capable of processing the request.

- **Random** – Chooses connections from the **Agents Selected** field randomly. This is a crude form of workload balancing. For more advanced load balancing, you should choose the **Balanced** option.

- **Rotation** – Enterprise Scheduler cycles through the list of connections in the **Agents Selected** field and launches jobs assigned to that list in rotation. When the end of the list is reached, the first connection in this list is chosen. This is a form of workload balancing where you can predict where the next job will run.

- **Balanced** – Enterprise Scheduler chooses a connection from the **Agents Selected** section based on lightest load when the job is ready to launch. The **Balanced Agent** list uses PeopleSoft connection load information to decide which connection in the list gets to run a job when its dependencies are met. You can choose this option to balance your workload across all the available connections in the list.

  PeopleSoft uses the following formula for calculating load information for a PeopleSoft connection:

  Number of Active Processes = Process requests that have a status of either **Pending**, **Queued**, **Initiated**, or **Processing**.

  Number of Max API Aware Concurrent Processes Defined For This Server = A field in PeopleSoft containing the configured limit for a process server. See **PeopleTools>Process Scheduler>Servers** to view the configured limit.

- **Broadcast** – Enterprise Scheduler runs the job on every connection in the **Agents Selected** section. For example, you can use this option to schedule a maintenance process on each machine in the list using the same job.

Step 6   From the **Agents Available** section on the **List** tab, highlight the appropriate PeopleSoft agent.

Step 7   Click the left arrow button `<` to add the selected connection to the list by moving it from the **Agents Available** section to the **Agents Selected** section. You can also drag and drop connections from one section to another.

> **Note**   Most PeopleSoft Adapter lists will refer to different process servers associated with the same database instance; this means that all processes and run control definitions will be available no matter which connection is selected for the job. If multiple databases are associated with the connections in the same list, they must mirror the processes, run controls and security for the jobs to run successfully.

Step 8   Click **OK**.

Working with PeopleSoft Jobs

Overview

Enterprise Scheduler can monitor and control PeopleSoft processes that are defined as jobs in Enterprise Scheduler. By specifying that a job should run using the Enterprise Scheduler PeopleSoft adapter, process requests are submitted from TES to the PeopleSoft Process TES. Enterprise Scheduler then monitors and controls these processes based on the scheduling rules you define for your business processing. The PeopleSoft Process TES's database table, **PSPRCSRQST**, is the main point of integration.

When you create a PeopleSoft job in TES, you refer to information from an existing PeopleSoft job or process.

Before sending a request to the Process TES to run a process on a PeopleSoft server, TES monitors any dependency conditions that were set for it. Once all dependencies are met and resources are available, TES inserts a request in the **PSPRCSRQST** (and related tables) with a **QUEUED** status to run as soon as possible. The Process TES reads this table and runs the process.

This chapter covers:

- Defining a PeopleSoft Job
- Working with PeopleSoft Processes
- Working with PSJobs
- Monitoring PeopleSoft Jobs
- Controlling Adapter and Agent Jobs

Defining a PeopleSoft Job

You can start creating and scheduling PeopleSoft jobs once you have:

- added the PeopleSoft database user to TES.
- added the operator ID(s) that you are going to use to run jobs.
- defined your PeopleSoft connection(s).

For more information on these items, see "Configuring the Adapter".

You can create a PeopleSoft job using the context menu within the **Jobs** pane. You can also edit, copy and delete an existing PeopleSoft job. If you **Add a PeopleSoft Job** to a TES job group, items common between the job group and the PeopleSoft job are inheritable. However, unless the parent group has a PeopleSoft adapter assigned to it, you must clear the **Inherited** option and choose an appropriate PeopleSoft connection on the **Run** tab.

Selecting the option to **Add a PeopleSoft Job** from the **Jobs** pane displays the **PeopleSoft Job Definition** dialog. Note that there are numerous types of processes that TES can launch within PeopleSoft, including:

- o Application Engine
- o COBOL SQL
- o CRW Online
- o Crystal Reports
- o Cube Builder
- o nVision-ReportBook
- o SQR Process
- o SQR Report
- o Winword

The PeopleSoft adapter supports all of the process types supported by the target PeopleSoft process server except for the process type, PSJob. A PSJob should be imported into Enterprise Scheduler using the **Copy From PeopleSoft Job** option. You can add processes to a PeopleSoft job from the available process types in the **Process Type** list in the **PeopleSoft Job Step Details** dialog as explained later in the section "Defining a Process Request".

To define a PeopleSoft job:

Step 1   From the **Navigator** pane, select **Definitions>Jobs** to display the **Jobs** pane.

Step 2   Click the **Add** button 🗒 from the TES toolbar or right-click in either the **Navigator** or **Jobs** pane and select **Add PeopleSoft Job** from the context menu to display the **PeopleSoft Job Definition** dialog.

Step 3 In the **Job Name** field, enter a name up to 50 characters in length for your job.

The **PeopleSoft Job Name** is an identifier for TES only. All of the other job definition information, such as **Job Class**, **Owner** and **Parent Group**, is also the same as non-PeopleSoft jobs and is used in the same way.

Step 4 Click the **Run** tab.

If your PeopleSoft job is in a group, unless the parent group selected has a PeopleSoft connection assigned, you must clear the **Inherited** option on the **Run** tab before you can select a PeopleSoft connection.

Step 5 In the **Agent/Adapter Information** section, select a PeopleSoft connection or list.

If no PeopleSoft connections are available from the menu, verify that a PeopleSoft connection has been defined, and that you are authorized to schedule jobs on that agent.

The **Agent/Adapter Name** or **Agent List Name** is used by TES to identify the PeopleSoft connection defined in the **PeopleSoft Connection Definition** dialog. It does not have to be the same as the actual PeopleSoft server machine name.

Note that the name in this text field represents all the information in the PeopleSoft agent connection definition, including connection type, database server, database user ID etc. To use different parameters, modify the connection definition, or define a new PeopleSoft connection with a new name and then use that connection definition

Alternatively, you can select a list from the **Agent List Name** list for broadcasting the job to multiple servers, for high availability and/or for load balancing. See "Defining a PeopleSoft Agent List".

Step 6   From the **Runtime User** list, select the PeopleSoft user created when "Defining PeopleSoft Users". This list defaults to the user specified as the default operator ID in the **PeopleSoft Connection Definition** dialog. The user defining the job must be authorized to use this runtime user.

Step 7   Click the **PeopleSoft** tab.

Step 8   Define the process(es) to run on the PeopleSoft process server that you selected.

Note Although you can have multiple processes in a single job, a recommended best practice is to only define one process per Enterprise Scheduler job and to use TES dependencies for better visibility and control over processes. Use job groups to organize PeopleSoft jobs into business processes.

In the **PeopleSoft Job Processes** section, specify which processes TES will run under this job definition.

There are several buttons available for configuring the processes that comprise this job definition:

- **Add** – Adds a process to the job definition
- **Edit** – Edits a selected process that is already part of the job definition
- **Delete** – Deletes a selected process from the job definition
- **Up** – Moves a selected process up in the run sequence
- **Down** – Moves a selected process down in the run sequence
- **Clear** – Removes all processes from the job definition

Note   Processes are executed in the sequence listed; the first process listed in the PeopleSoft Processes section of the PeopleSoft Job Definition dialog will be executed first, the second in the list will be executed second, etc. If you need processes to run concurrently, create multiple job definitions.

- **Search PSJobs** – Click to display the **Select a PS Job** dialog.
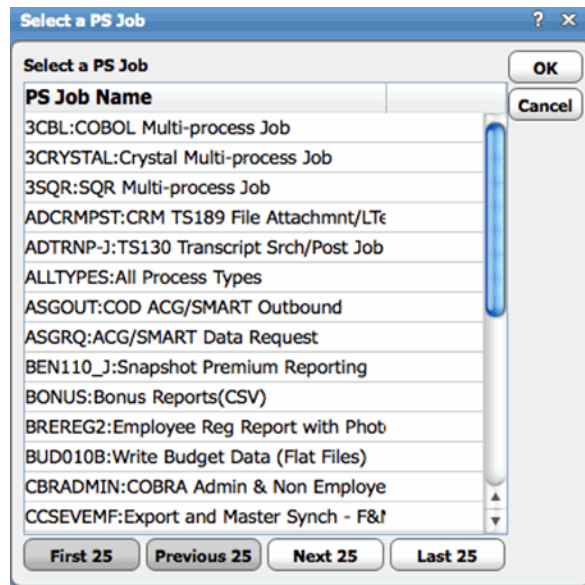
You can also use the **Copy From PeopleSoft Job** field to import an existing PeopleSoft job (PSJob) as a new TES job. By loading an existing PeopleSoft job, you load all of its associated processes and run controls. You can then keep the job definition as is or edit it. *This is the only way to run a PSJob process.* Note that once the information is loaded into TES, there is no longer an association between the TES job and the PeopleSoft job. See "Working with PSJobs" for more information.

Step 9   Configure the remainder of the PeopleSoft job definition in the same way that other TES jobs are configured. For more information, see your *Enterprise Scheduler User Guide*.

Working with PeopleSoft Processes
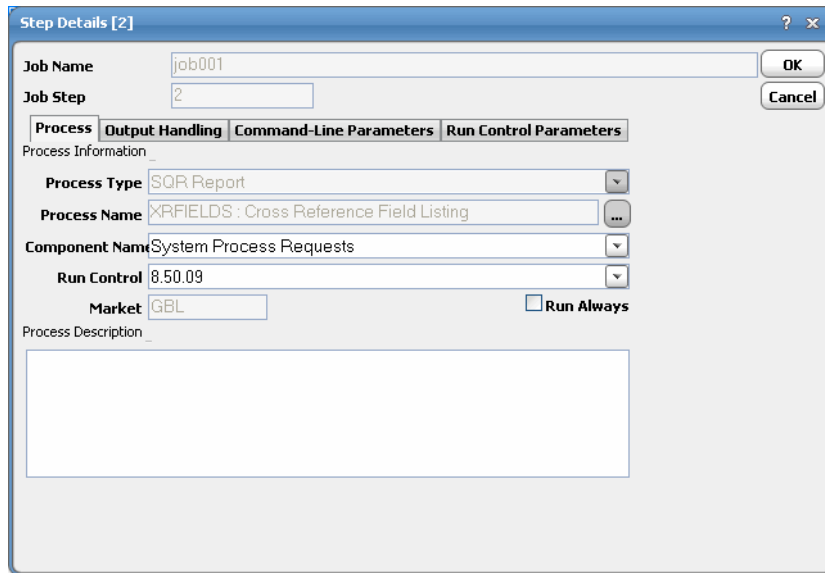
A PeopleSoft job consists of one or more processes executed in sequence. A process is any of the available process types such as SQR Reports, COBOL programs, Crystal Reports, Application Engines and so forth. The only exception is the PSJob type which is handled differently. To understand how PSJobs are handled, refer to "Working with PSJobs". You can change the sequence of the processes, edit a process or add and delete various processes according to your needs. Best results are obtained by maintaining one process per job; use job dependencies and queues to control sequence and concurrency.

You can add, edit, delete and move PeopleSoft process requests using buttons on the **PeopleSoft** tab of the **PeopleSoft Job Definition** dialog.

◻ To add a process, click **Add** to display the **PeopleSoft Job Step Details** dialog. From this dialog, you can add a new process for the job by entering the appropriate information.

◻ To edit the details for a process request, select a job step and click **Edit** to display the **PeopleSoft Job Step Details** dialog showing the characteristics of the selected job step.

◻ To delete a process step from a job, select it and click the **Delete** button.

◻ To change the sequence in which processes are executed, select the job step that you want to move and click the **Up** or **Down** buttons.

Defining a Process Request

From the **Step Details** dialog in TES you can select an existing process within PeopleSoft. This dialog provides four tabs of options to accommodate the variety of processes, output options and their associated run controls that are available to PeopleSoft users. The following options on the **Process** tab of this dialog manage the basic information about the process that is being scheduled to run from TES.

The **Job Name** field displays the name given to the Enterprise Scheduler job definition.

The **Job Step** number represents the sequence order for the process in the job. For example, if this is the first job step listed on the **PeopleSoft** tab of the **PeopleSoft Job Definition** dialog, the number is **1**.

Note It is recommended that Enterprise Scheduler jobs be limited to just one process. The job grouping, dependency and queuing features of TES can then be used to manage multiple jobs and their associated processes.

To define a process request:

Step 1 In the **Process Type** field, select the type of process being scheduled.

If a type of process for your PeopleSoft instance is not listed, your process server may not be configured to work with that particular process type. However, the **PSJob** process type is unavailable in the **Process Type** list.

To add a **PSJob** process, import the **PSJob** process as a multi-step job by selecting it in the **Copy From PeopleSoft Job** field at the bottom of the **PeopleSoft** tab of the job definition. Unlike other process types that have a single step, a **PSJob** is viewed as a multi-step Enterprise Scheduler job.

For more information on PSJobs, see "Working with PSJobs".

Step 2 In the **Process Name** field, select an existing authorized PeopleSoft process based on the process type selected previously.

To include an existing process, select it from the list. (You must type at least the first letters of the process name to quickly scroll through the list to pinpoint the desired process.)

You can also click the ellipses (...) in the **Process Name** field to display the **Select Process Name** dialog.
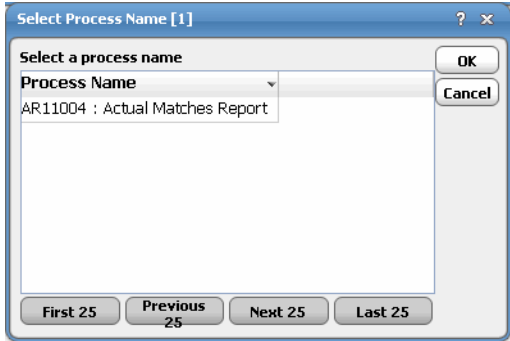
Step 3 The **Component Name** field is used for those processes that are associated with multiple PeopleSoft components.

Step 4 In the **Run Control** field, select a run control ID from the list of existing run control IDs available to the PeopleSoft operator ID associated with this process (the runtime user).

The **Market** field is populated automatically based on the chosen Component Name.

Step 5 Check the **Run Always** checkbox to force this process to run even if the previous process in this job failed.

If this process depends on the results of the previous process in the same job, do **not** check this checkbox.

The use of this option only applies to jobs with multiple steps, which is not recommended. Instead use multiple single process jobs in job groups with dependencies and queues to manage concurrency.

Step 6 Click the **Output Handling** tab to configure how to manage the PeopleSoft output from the process.
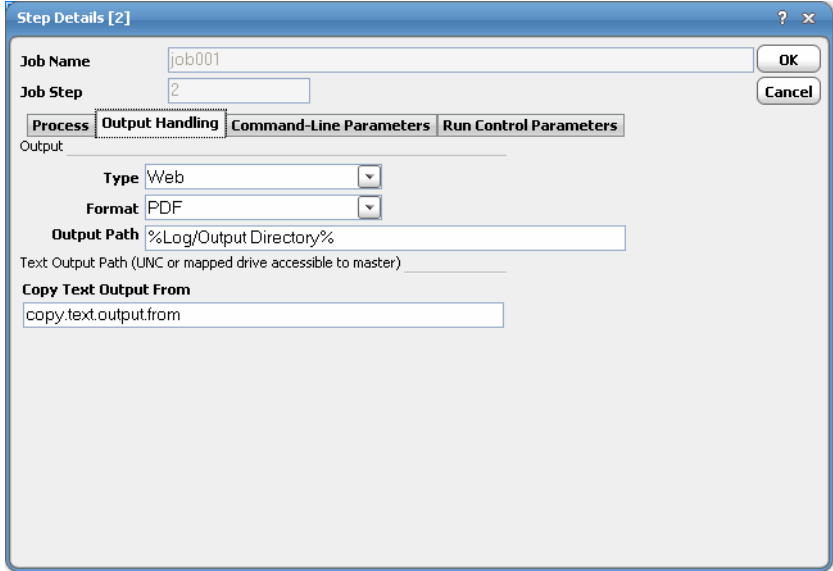
Step 7 In the **Type** field, select what kind of output you desire.

The options that are available may vary depending upon the selection in the **Process Type** field. There are five options:

- **File** – Writes the process output to a file that is specified in the **Output Path** field.

- **Printer** – Sends the job output to a printer specified in the **Printer** field or if not specified, to the printer defined for the process profile permissions of the person running the process. If the printer is not defined, then the default is the printer for the Process Scheduler.

- **Email** – Sends the process output in an email, usually to the person running the process, but optionally to an email list. This option is commonly used with SQR, PS/n Vision and Crystal reports.

- **Web** – Posts process output to the report repository in a format specified by the format list, typically HTML or PDF.

Note   Whenever posting job output to the web, the output location for the report and logs should be a shared directory or an FTP location. There may be a delay as the output is transferred and posted to the web server. The Output tab of the Job Detail dialog will display "Output Pending" until the output arrives. This delay (by default, 30 seconds) can be adjusted with the PSWaitOutput configuration parameter specified on the Options tab of the connection definition.
If a process does not generate a report, logs can still be posted to the web by selecting Web as the Type and Text as the Format option in the Job Step Details dialog.

Step 8   In the **Format** field, select the format of the output.

The options that are available vary depending upon the selection in the **Process Type** list.

Note   Only text formats will be available from the Output tab of the Job Details dialog in the Enterprise Scheduler console;e.g., TXT or HTML.

Step 9   In the **Output Path** field, enter a destination where the PeopleSoft process will write its output:

- if you selected the **Printer** option in the **Type** list, designate a printer.

- if you selected the **File** option in the **Type** list, enter a file path.

- if you selected the **Email** option in the **Type** list, enter an email address.

Step 10   Enter the output directory in the **Copy Text Output From** field where Enterprise Scheduler can retrieve the output. This is most likely to be either a UNC name or a mapped drive, unless you configured the connection to use FTP. TES will retrieve the job output from this designated location; a default is specified in the connection definition.

Note   The output directory specified in the Text Output Path section must be accessible to the TES master. Specify the output location relative to your TES's master or FTP host login.

Step 11   Click the **Command-Line Parameters** tab.
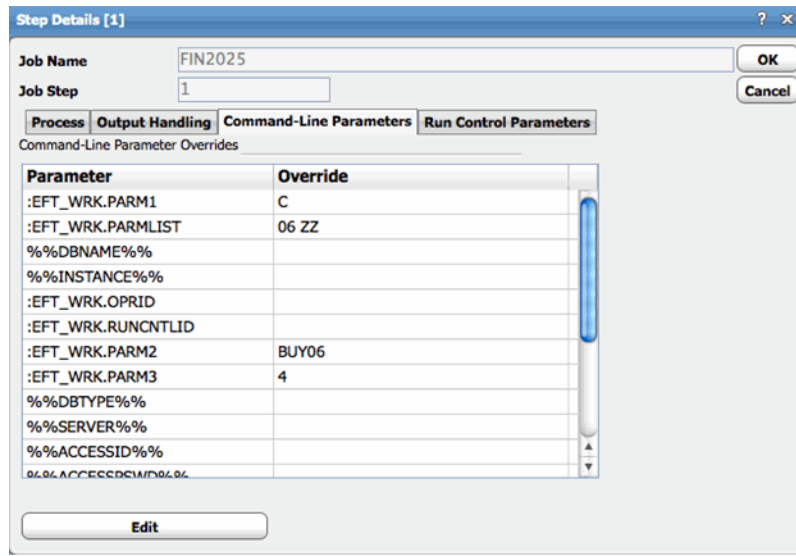
Command line parameters are displayed on this tab for any overrides that might be necessary. The command line parameters that are available for a process are listed in the **Parameters** column.

You can override the default parameter value by double-clicking a parameter and specifying parameter runtime overrides via the **Edit CommandLine Parameters** dialog.
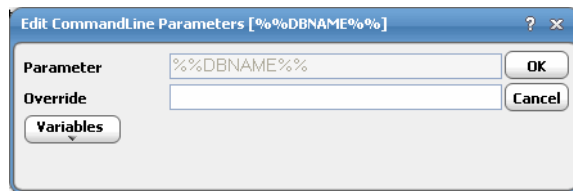
A **Variables** button at the bottom of the tab provides access to predefined variables in TES. These command line parameter values can be replaced from this tab as needed.

The **Command-Line Parameters** tab above illustrates Enterprise Scheduler's flexibility when using variables in command line parameters and shows a job definition in TES to run the PeopleSoft **SQR** process **FIN2025**, **Format EFT Files**. The process creates the **EFT** files to send to banks. The process can be triggered from four different locations in PeopleSoft:

- Accounts Receivables Direct Debits Remit to Bank
- Accounts Receivables Drafts Remit to Bank
- Accounts Receivables IPAC Processing
- Payables Pay Cycle Manager

The four bind variable parameters preceded by **:EFT_WRK** are required to run the **Format EFT Files** process. These are usually populated in the working memory of the tools application based on the context from which the process was initiated. If the process is run from the Pay Cycle Manager, PeopleTools automatically resolves the bind variables to:

- :EFT_WRK.PARM1 to "C",
- :EFT_WRK.PARM2 to the Pay Cycle Id

- **o** :EFT_WRK.PARM3 to the Pay Cycle Sequence Number

- **o** :EFT_WRK.PARMLIST is derived from the other three bind variables.

In our example, **:EFT_WRK.PARMLIST** should be "**06 ZZ**" (EFT File Number) since we defined the job to run as a part of the Pay Cycle process and the Pay Cycle Id and Sequence Number are "**BUY06**" (Payment to a Vendor) and "**4**" respectively.

While PeopleSoft processes are transaction oriented, Enterprise Scheduler is designed to work more generically. Enterprise Scheduler allows the user to provide the PeopleSoft Process Scheduler server with a transaction context for the process to run by specifying values for the command line parameters. With the use of Enterprise Scheduler, the user would not need to go through PeopleSoft menu navigation in order to run such a process.

Besides the bind variables illustrated on the Command Line Parameters tab above, the Process Scheduler also uses predefined PeopleTools meta-strings or server-based environment variables in the command line. These variables are enclosed in a set of double percent signs. There are rare situations when the user would need to override these variables as the TES and PeopleTools already manage these.

For example, the **Output Handling** tab gives the user the ability to specify Output Type, Output Format and Output Path. Specifying values other than the defaults for those is equivalent to overriding **%%OUTDESTTYPE%%**, **%%OUTDESTFORMAT%%** and **%%OUTDEST%%** on the **Command Line Parameters** tab. This is an option that advanced users more accustomed to writing command lines to run jobs may be interested in.

Step 12 Click the **Run Control Parameters** tab to provide parameter value overrides for any parameter contained in the definition of the run control for the process.
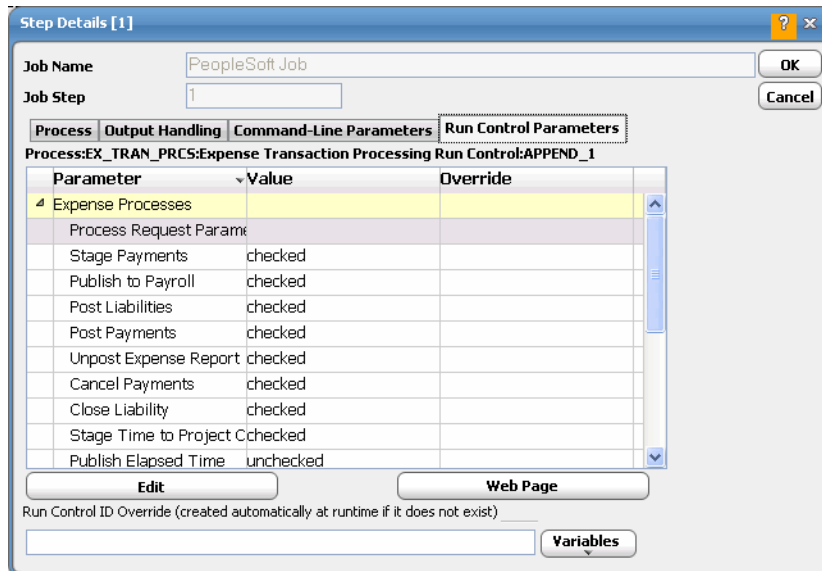
Enterprise Scheduler will read the run control definition in PeopleSoft and populate this tab with the run control parameters and their current values providing the TES user with complete control over the PeopleSoft process.

The **Parameter** column lists the names of the parameters and the Value column lists the current parameter values. These current parameter values can be overridden by double-clicking the parameter and entering a new value via the **Runcontrol Parameter Override** dialog.

A **Variables** button is available at the bottom of the dialog to insert a predefined TES variable into the **Override** column.

Step 13   Use the **Run Control ID Override** field to create a new run control ID from existing run control values.

- ❏ If this text field is left blank, any changes (or overrides) made to the run control on this tab will permanently modify the original run control definition.

- ❏ If a different run control ID is specified either directly or indirectly through a mask that resolves to an existing run control, that run control ID is updated with the modified values.

- ❏ If a run control ID with the name or mask specified in this text field does not exist, then a new run control ID will be created with current and override values specified on this tab. For example, by including the **<JobID>** or date/time variable in the name entered into this text field, each job instance will generate a new and unique run control. This provides a comprehensive audit trail, but will cause run controls to accumulate over time.

✎

Note   If a mask is specified that generates unique run control names, be advised that run controls will continue to accumulate; use this feature judiciously.

Step 14   Click the **Website** button to access a third-party Web search page.

Step 15   Click **OK**.

Run Control Parameter Example

PeopleSoft Receivables provides an **Automatic Maintenance** process to maintain customer account balances. It automatically matches debits and credits and writes off remaining balances that meet the write-off tolerances. The process places them in match groups based on the methods that you set up.

Typically the accounting staff would run two reports following the **Automatic Maintenance** process (Application Engine process AR_AUTOMNT) to review the results:

- ❏ **Actual Matches report** (SQR Report AR11004) – Lists new pending items that the Automatic Maintenance process created and set to post. The report indicates the maintenance group and match group that each item belongs to.

- ❏ **Potential Matches report** (SQR Report AR11005) – Lists new worksheet items that the Automatic Maintenance process put on maintenance worksheets. The report provides the worksheet ID and match group ID for each item.

To streamline the process, we can group the three jobs (the above mentioned PeopleSoft processes) into a job group to get all three jobs to run as a single business process. The job group "Automatic Maintenance and Reports" consists of three jobs – "Request Automatic Maintenance", "Actual Matches Report" and "Potential Matches Report." Note that the two report jobs depend on the "Request Automatic Maintenance" job since the reports should only include items from a specific run of "Request Automatic Maintenance" job.
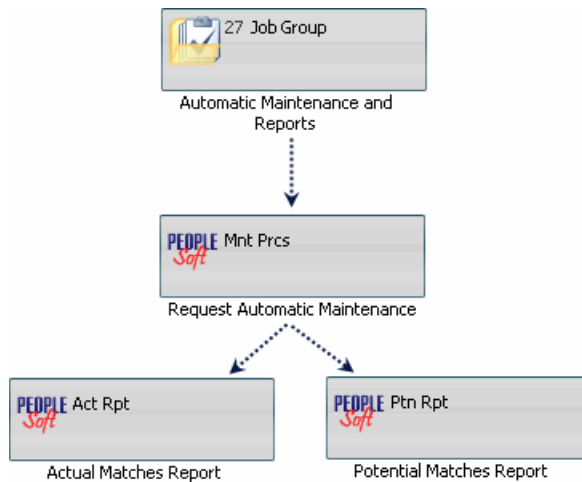
In PeopleSoft, the **Process Instance** represents a specific run of a process. For any particular run of the "Automatic Maintenance and Reports" job group, both report jobs would need the process instance of their predecessor job, **Request Automatic Maintenance**, for their **Process Instance** run control parameter in order for the report jobs to include corresponding data on the reports.

In other words, the value for the jobs' **Process Instance** parameter should be the previous **Process Instance** within a particular run of a job group.

To refer to the runtime value of the previous job's **Process Instance** within a particular run of a job group, use the Enterprise Scheduler variable: **Job Run Variables>Request Automatic Maintenance>External ID**. Note that predecessor job names only appear in the **Job Variables** menu after dependencies have been defined.
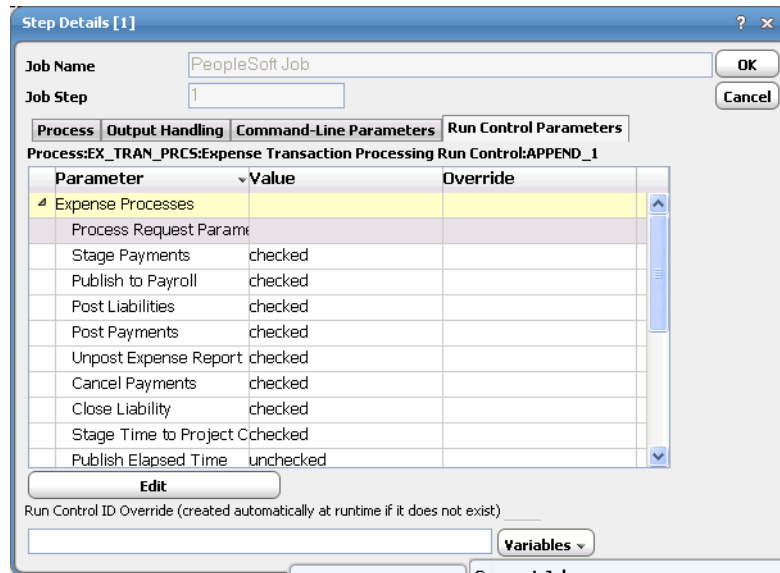
Working with PSJobs

This section describes the basics of working with PeopleSoft jobs in TES:

- ❏ PSJob Job Definition
- ❏ PSJob Structure Validation
- ❏ Copy from PeopleSoft Job Option

PSJob Job Definition

After importing the PSJob, edit each step for runtime data for each child process, such as run control, component, output type and format. In order for a PSJob to run successfully, all child processes should share the same run control and component.
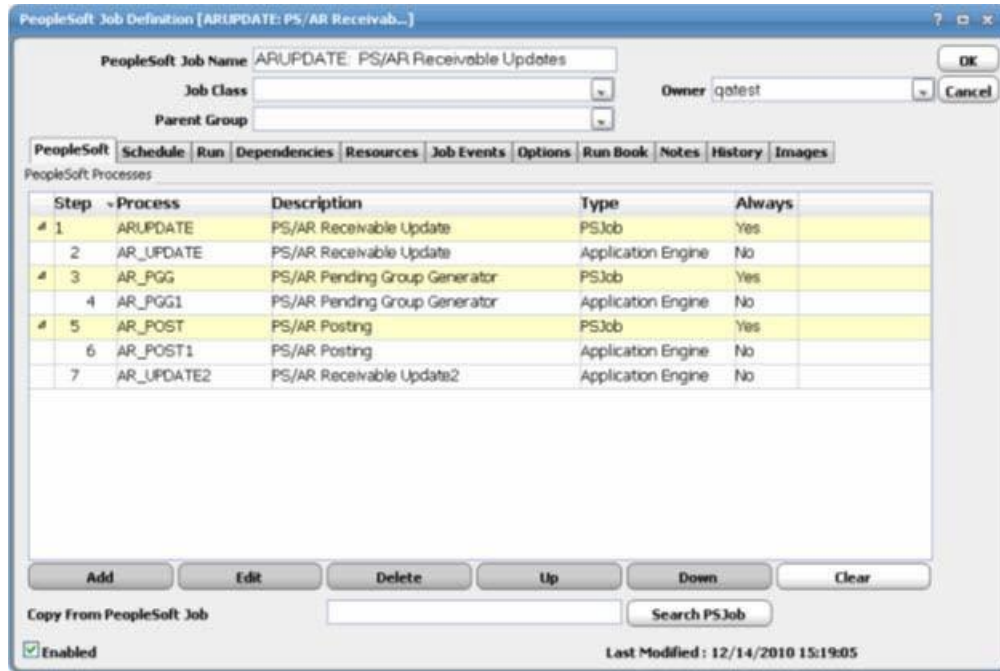
PSJob Structure Validation

When a PSJob is run, Enterprise Scheduler validates the definition against what is currently in PeopleSoft. If a structural difference is detected, the PSJob definition was changed in PeopleSoft after it was imported and saved in Enterprise Scheduler. The job ends with an **Error Occurred** status, indicating the discrepancy. The PSJob should be re-imported in order to be run.

Copy from PeopleSoft Job Option

Use the **Copy From PeopleSoft Job** option to import a PSJob into Enterprise Scheduler as a multi-step job. After the PSJob is imported, the **Add**, **Delete**, **Up** and **Down** buttons are disabled so that no structural changes can be made to the PSJob.

⚠️ **Warning** This option is not appropriate for using an existing PeopleSoft job as a template.

If the selected PSJob is nested (the copied PSJob has other PSJobs as its child processes), Enterprise Scheduler will display the child processes with proper indentation in order to illustrate the relationship between them. There is no limit as to how many generations there can be in a PSJob family.

Monitoring PeopleSoft Jobs

Note that in the Enterprise Scheduler **Job Activity** pane, the **Job No.** column refers to the Enterprise Scheduler job number, not the PeopleSoft Process Instance. The PeopleSoft Process Instance is displayed in the **Ext ID** column (External ID).

Double-clicking on a job listed in the **Job Activity** pane displays the **Job Details** dialog where the operator can examine various aspects of the job, both after it has completed and while it is still running.

Note   The external ID on this page refers to the process instance ID of the first request in the job for jobs with multiple processes.

This section describes how you can monitor PeopleSoft jobs in TES:

- ❏ PeopleSoft Tab
- ❏ Run Info Tab
- ❏ Viewing PeopleSoft Job Output

PeopleSoft Tab

The **PeopleSoft** tab of the **Job Details** dialog contains the request with the variables used when this job was submitted. This tab allows you to provide last-minute overrides to parameter values or other process details prior to the initial run or rerun.
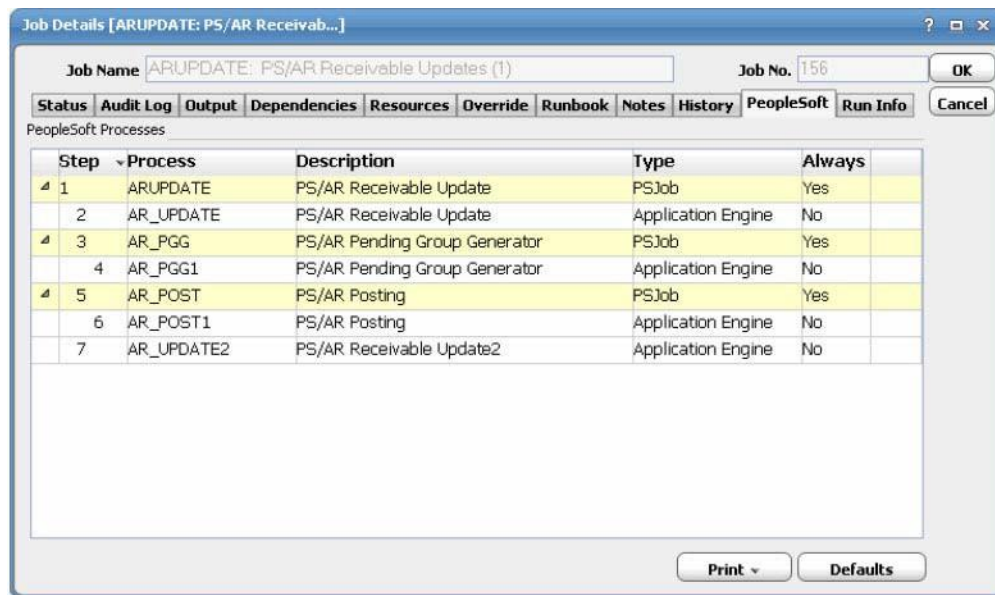
You can examine the definition of each listed process in detail by double-clicking on a process to display the **PeopleSoft Job Step Details** dialog.

To override the parameter value listed:

Step 1   In the **PeopleSoft Processes** section, double-click on the appropriate step to display the **Step Details** dialog.
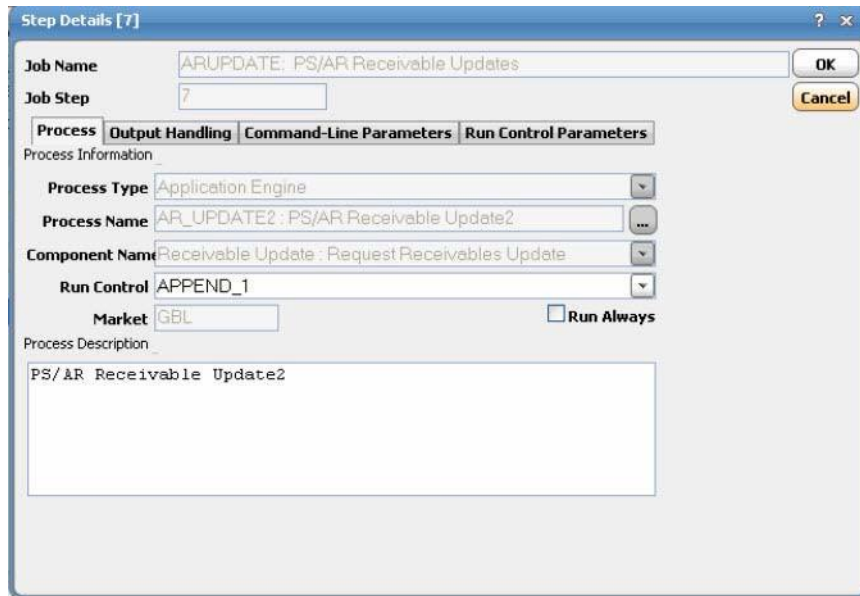
Step 2   Click the **Run Control Parameters** tab.
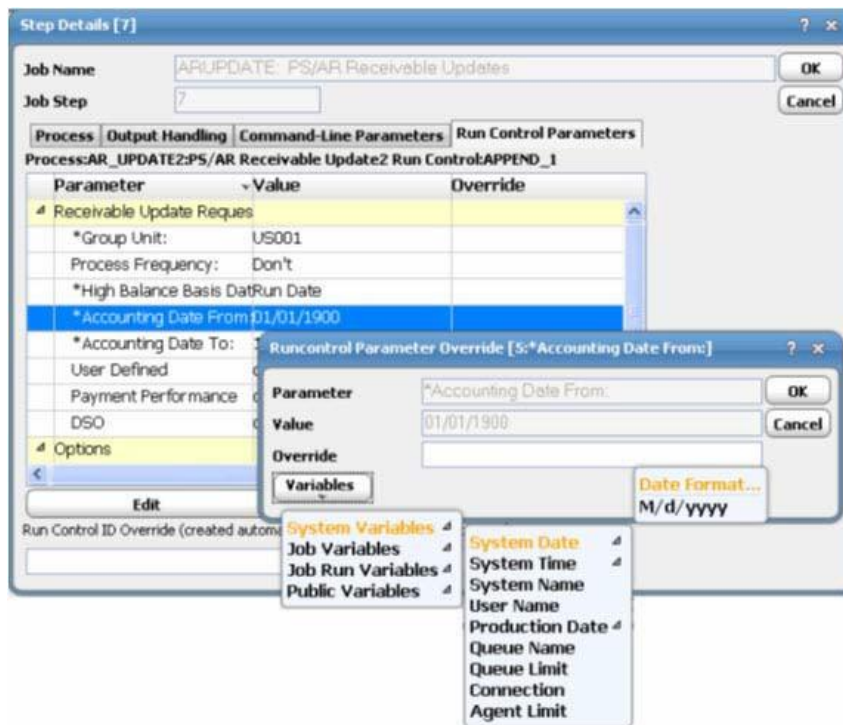
Step 3   Double-click the parameter to display the **Runcontrol Parameter Override** dialog.

-or-

Highlight the parameter and click **Edit**.

Step 4   Enter a new parameter value or click **Variables** to select a Enterprise Scheduler-defined variable.

Step 5   Click **OK** on the **Runcontrol Parameter Override** dialog.

Step 6   Click **OK** on the **Step Details** dialog.

If this job has already completed, and you want it to run again with your overrides, on the **Job Activity** pane, right-click on this job and select **Job Control>Rerun** from the context menu.

Run Info Tab

The **Run Info** tab of the **Job Detail** dialog contains the request with the variables used when this instance of the job was last run. This tab is read-only.

You can examine each listed process in detail by double-clicking on a process or selecting the process and clicking the **View Process** button to display the **Process Information** dialog.

Although similiar to the **PeopleSoft Job Step Details** dialog in the Job Activity context, this dialog contains the following differences:

o The **Process Instance** field displays the PeopleSoft process instance number for the last time the process ran. If the job is rerun, it will be assigned a new number (unless the process is "Restart Enabled").

o The **Status** field displays the current PeopleSoft status for the latest run of this process.

On occasion, you may need to rerun a PeopleSoft job without starting from the beginning. You can restart a PeopleSoft job starting from any process in the job by highlighting the step, then clicking **Restart From**.

Viewing PeopleSoft Job Output

As with any other Enterprise Scheduler job, you can view the output from a PeopleSoft job in the **Output** tab of the **Job Details** dialog.

To view job output:

Step 1   Double-click on a job listed in the **Job Activity** pane to display the **Job Details** dialog.

Step 2   Click the **Output** tab.
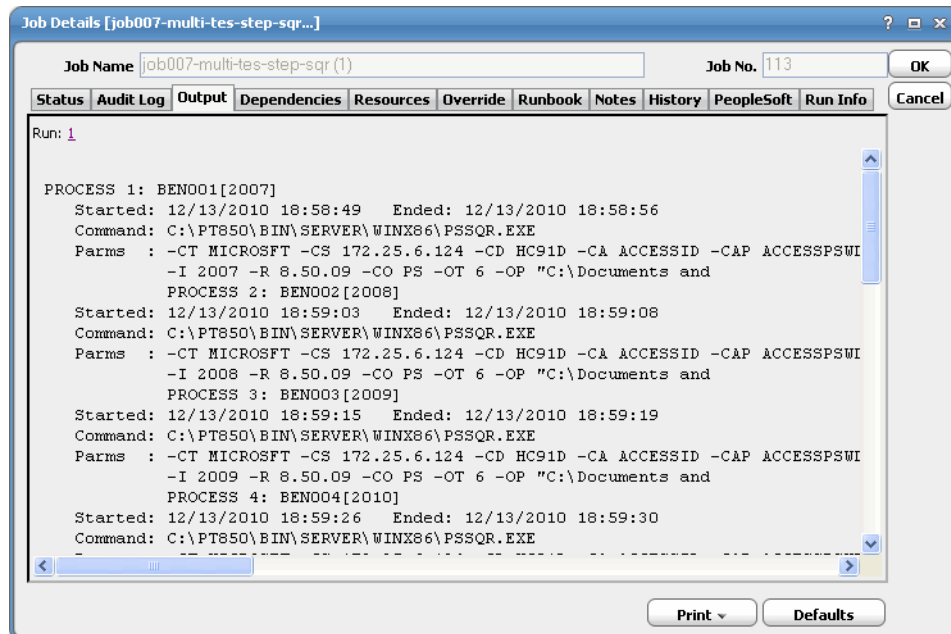
The **Output** tab displays a job summary followed by the PeopleSoft logs generated and any report output if available and configured to be saved.

Note The command line will contain strings that begin and end with a % (percent sign). The percent signs signify that a variable is being displayed instead of the actual value used. For example, %ACCESSPSWD% will be displayed rather than the actual password that %ACCESSPSWD% represents.

Controlling Adapter and Agent Jobs

Scheduler provides the following job control capabilities for either the process currently running or the job as a whole:

- Holding a Job—Hold a job waiting to run.
- Aborting a Job—Abort an active job.
- Rerunning a Job—Rerun a job that completed.
- Making One Time Changes to an Adapter or Agent Job Instance—Make last minute changes to a job.
- Deleting a Job Instance before It Has Run—Delete a job instance before it has run.

Holding a Job

Adapter/agent jobs are held in the same way as any other Scheduler jobs.

Adapter/agent jobs can only be held before they are launched. Once a job reaches the Adapter/Agent system, it cannot be held or suspended.

To hold a job:

Step 1   From the **Job Activity** pane, right-click on the job.

Step 2   Select **Job Control>Hold/Stop**.

Aborting a Job

Adapter/agent jobs are aborted in the same way as any other Scheduler jobs.

To abort a job:

Step 1   From the **Job Activity** pane, right-click on the job.

Step 2   Select **Job Control>Cancel/Abort**.

Rerunning a Job

On occasion, you may need to rerun an Adapter/Agent job. You can override parameter values first, if necessary, from the Adapter/Agent tab.

To rerun a job:

Step 1   From the **Job Activity** pane, right-click the Adapter/Agent job you need to rerun.

Step 2   Select **Job Control>Rerun** option from the context menu.

Making One Time Changes to an Adapter or Agent Job Instance

Prior to a run or rerun, you can edit data on the specific **Adapter/Agent** tab. To ensure that there is an opportunity to edit the job prior to its run, you can set the **Require operator release** option on the **Options** tab in the Adapter **Job Definition** dialog. Use this function to make changes to an Adapter job after it enters Waiting on Operator status as described in the following procedure.

To make last minute changes:

Step 1   From the **Job Activity** pane, double-click the Adapter/Agent job to display the **Job Details** dialog.

Step 2   Click the Adapter tab.

Step 3   Make the desired changes to the job and click **OK** to close the **Job Details** dialog.

Step 4   If this job is Waiting on Operator, perform one of the following tasks:

   o To release the job, select **Job Control->Release**.

   o To rerun the job with changes, select **Job Control->Rerun**.

Deleting a Job Instance before It Has Run

Adapter/Agent job instances are deleted in the same way as any other Scheduler job.

Deleting a job from the **Job Activity** pane removes the job from the Scheduler job activity only. The original definition is left in tact.

To delete a job instance:

Step 1   From the **Job Activity** pane, right-click the Adapter/Agent job to be deleted.

Step 2   Select **Remove Job(s) From Schedule**.

Troubleshooting and Maintenance

Overview

This chapter covers various topics that can help you maintain, use best practices, and troubleshoot the PeopleSoft Adapter including:

- ❍ Performing Recommended Maintenance
- ❍ Best Practices
- ❍ Troubleshooting
- ❍ Frequently Asked Questions
- ❍ PeopleSoft Tables Used by Enterprise Scheduler
- ❍ Configuration Parameters for PeopleSoft Connections

Performing Recommended Maintenance

Request records are created in the **PSRCSRQST** table(s) each time a process in a PeopleSoft job is submitted by Enterprise Scheduler. Gradually, these records may accumulate. Periodically, you may want to delete these old request records from the **PSPRCSRQST** and related tables as a routine maintenance task.

PeopleSoft provides an application engine process called **PRCSYSPURGE** to purge Process Scheduler tables and process files. You can configure this process to run on a regular basis within PeopleSoft from the **System Purge Options** tab displayed by selecting **PeopleTools>Process Scheduler>System Settings**. You can also schedule the process to run as a job in Enterprise Scheduler.

Best Practices

The following is a list of recommendations for maximizing your success with the PeopleSoft module:

- ❍ Choose the PeopleSoft database owner as the database user discussed in Minimum Software Requirements, page 1-6.
- ❍ Create a PeopleSoft operator called **Batch** (or some other identifier no more than 8 characters in length). Then, add this PeopleSoft operator ID to Enterprise Scheduler and have **Batch** as the runtime user for all Enterprise Scheduler PeopleSoft jobs. This will make it easy to identify jobs originating from Enterprise Scheduler in the PeopleSoft environment.

Note Ensure that this new PeopleSoft operator ID has the rights to run all of the processes you would like it to manage via Enterprise Scheduler.

o A Enterprise Scheduler PeopleSoft job should optimally contain only one PeopleSoft process. This allows Enterprise Scheduler to control all dependencies, and allows greater visibility and control via Enterprise Scheduler.

o Perform maintenance on your PeopleSoft database by running the Application Engine process, **PRCSYSPURGE**, to purge old request records that accumulate in the database. You can configure the Peoplesoft Process Scheduler server to run the **PRCSYSPURGE** on a regular basis.

Troubleshooting

This section lists some error conditions and how to determine possible causes and remedies for the conditions:

If the master cannot connect to the PeopleSoft database

Enterprise Scheduler checks the installed version number of PeopleSoft. If the version does not match one of the supported PeopleSoft releases, specified in "Configuring the Adapter", you will be unable to connect. The connection status light will be red. You can check Enterprise Scheduler's logs or the **Event** log for error messages. In this case, the error message will specify "invalid version."

If you cannot see the output from a Enterprise Scheduler PeopleSoft job

If you cannot see the output from a Enterprise Scheduler PeopleSoft job, verify that the **Save Output** option on the **Options** tab of the **Job Definition** dialog is set to either the **Append** or **Replace** option.

Another possibility when you cannot see output from a Enterprise Scheduler PeopleSoft job is that the master service is configured as the local system account. This is a problem if a mapped drive is used to specify the location of PeopleSoft job output and the master service on Windows does not have access to that path. In this case, you must add the drive, by mapping from the Enterprise Scheduler master machine and setting the master service to logon to an account with access to the same drive letter as specified in the output location path.

Frequently Asked Questions

How do you specify locations in the Default Output Location field?

You can use UNC conventions and mapped drives to specify shared locations on remote machines. Do not include the filename. Note that the full path is needed; a full path is a designation of the location of a file which includes the root directory and the descending series of subdirectories leading to the end file.

What is UNC?

UNC stands for Uniform Naming Convention or Universal Naming Convention. UNC is a way of specifying directories, servers, and other resources on a network, indicating path or directory levels within the computer. For example: \\computer_name\directory_name.

Why is the connection status light red/yellow?

The **Connections** pane shows the PeopleSoft adapter along with all of the other defined Enterprise Scheduler agents. If the PeopleSoft connection is not available to the master, the connection status light in the first column of the display will be red. This light is relative to the Enterprise Scheduler master.

PeopleSoft Tables Used by Enterprise Scheduler

Enterprise Scheduler reads from the following PeopleSoft tables but only updates those tables indicated by **.

⚠️ **Caution**   Be sure that the database user specified in the connection definition can read from all of the following PeopleSoft data tables. Only the tables marked by a ** require write access.

Table Name	Description of Use
PSAUTHITEM	Used to get menu items accessible to the operator.
PSAUTHPRCS	Used to get process groups (and hence processes and jobs) accessible to the operator.
PS_CDM_AUTH**	Enterprise Scheduler inserts into this table. This table is used to authorize user access to content. (output, logs, etc.)
PS_CDM_DIST_NODE	Used to get the posting directory.
PS_CDM_FILE_LIST	Used to determine output filenames generated by a process.
PS_CDM_LIST**	Enterprise Scheduler inserts into this table. Creates row in distribution table. The field PRCSOUTPUTDIR contains a generated directory name.
PSCLOCK	A one-row, dummy table used to select the date and time.
PSMENUITEM	Used to get the panel groups associated with menu items.
PSMSGCATDEFN	Used to get text of messages generated by the Process Scheduler.
PSOPRCLS	Used to determine which operator classes an operator is a member of, to determine which processes the operator can run.
PSOPRDEFN	Retrieves the process profile class for an operator (used to enforce override security).
PS_OUTDESTFORMAT	Used to obtain the list of output destination formats for each process. The primary key of this table has a foreign key in PSPRCSRQST and PSPRCSQUE.
PS_OUTDESTTYPE	Used to obtain a list of appropriate output types and descriptions for a particular process.
PSPNLFIELD	Used to get information about Run Control parameters.
PSPNLGROUP	Used to get the panels that comprise a panel group.
PSPNLGRPDEFN	Used to get the search records (and hence the run control records) associated with a panel group.
PS_PRCSDEFNCNTDIST	Used to get overrides to distribution defaults.

Table Name	Description of Use
PS_PRCSDEFN	Used to get basic information about each process defined in the PeopleSoft system. This includes overrides to standard command line parameters, and to input and output locations, etc.
PS_PRCSDEFNGRP	Used to determine the process groups that a process is assigned to. This is used in conjunction with PSAUTHPRCS to determine which processes an operator can run.
PS_PRCSDEFNPNL	Used to get the panel group associated with a process definition, in order to access that process's run control.
PS_PRCSJOBDEFN	Used to generate list of jobs (groups of processes). This is the parent of PS_PRCSJOBITEM (see below).
PS_PRCSJOBGRP	Used to determine the process groups that a job is assigned to. This is used in conjunction with **PSAUTHPRCS** to determine which jobs an operator can run.
PS_PRCSJOBITEM	Used to get the individual processes that comprise a job. (See entry for **PS_PRCSJOBDEFN**.)
PS_PRCSJOBPNL	Used to get the panel group associated with a process job to access that job's run control.
PSPRCSPARMS**	Used to schedule processes. Enterprise Scheduler selects from, inserts into, and updates this table.
PSPRCSPRFL	Used to get the security settings for an operator governing what the operator can access and/or modify when using the Process Scheduler and Process Monitor.
PSPRCSRQST**	Used to schedule processes. Enterprise Scheduler selects from, inserts into, and updates this table.
PSPRCSQUE**	Used to queue scheduled processes. Enterprise Scheduler selects from, inserts into, and updates this table.
PS_PRCSRQSTDIST**	Enterprise Scheduler inserts into this table. It is used to specify the target of report distribution.
PSPRCSRQSTTEXT**	Enterprise Scheduler inserts into this table. This table contains all long text fields associated with a process request. It is used primarily to specify the needed information for email distribution.
PSPRCSRUNCNTL	Used to get the last settings selected by an operator for a particular run ID concerning run location, output destination, etc.
PS_PRCSTYPEDEFN	Used to generate a list of process types, and to get the default command line parameters for each process type.
PSROLECLASS	Used to authorize classes of roles.
PSROLEUSER	Used to authorize users with defined roles.
PS_SERVERCLASS	Used to get the process types that may be run on a particular Process Scheduler server.
PS_SERVERDEFN	Used to get basic information about the Process Scheduler server, including how many processes can run concurrently.
PSSERVERSTAT	Used to get the status of a process server.
PSSTATUS (PeopleTools 8+)	Used to get the PeopleSoft Tools version number.

Table Name	Description of Use
PS_PRCSSEQUENCE** (PeopleTools 8+)	Used to get and increment the process instance number and the distribution content ID.
PS_PRCSRUNCNTL	Demonstrates how run control values are passed to processes that run within the Process Scheduler.

Configuration Parameters for PeopleSoft Connections

The following table lists the configuration parameters for PeopleSoft connections with their defaults. It describes the PeopleSoft options that you can override on the **Options** tab of a connection definition. The values are case-sensitive so be sure to capitalize as shown in the table entries. Parameters are listed in alphabetical order.

Parameter Name	Default Value	Description
DebugRuncontrol	Y	Used for diagnostic purposes to troubleshoot issues related to overriding run control values during job definition. If set, it will include a tab where you can view the run control HTML, as well as write this file in the corresponding services directory by GUID for the PeopleSoft service.
ENCRYPTPW	Y	Turn on/off the encryption of the password.
HTTPAUTH	1	A flag to specify if the username and password should be included in the URL when logging into PeopleSoft webserver for runtime parameter overrides. 0–Include username and password in URL NON ZERO (1)–Do not include username and password in URL
PSCheckServer	Y	Turns on/off checking of the Process Scheduler's heartbeat.
PSDBConnection	5	Specifies the maximum number of concurrent connections opened to the PeopleSoft database.
PSDISPOSEWAIT	20	This parameter specifies the number of seconds to wait for output to be posted before recognizing the process as a completed process. The default value for PSDISPOSEWAIT is 20 seconds. Set PSDISPOSEWAIT to 0 if the adapter should wait (indefinitely) till the output is posted. Lastly setting PSDISPOSEWAIT to -1 will cause the adapter to ignore the posting status and job will complete as soon a the process finishes.

Parameter Name	Default Value	Description
PSFinalStatusWait	0 (no status check)	Specifies an interval of time (in seconds) before doing a secondary status check after detecting a Completed status. This is an additional buffer of time to accommodate those occasions when PeopleTools switches final status shortly after the job completes. This value can be subtracted from the PSWaitOutput value if both parameters are used to delay output after completion. If this parameter is greater than 30 seconds, set the PSWaitOutput to 0.
PSOutputPostingTimeout	0	After the step is completed, if the status of the process is stuck in POSTING, this specifies the number of seconds TES Master should wait before marking the step as UNSUCCESSFUL.
PSRunServerOption	1	The default server the adapter should use to submit process requests when running PeopleTools version 8.45 and later. There are four options: 1–Any (default) 2– Specific 3–Specific OS 4–Primary
PSStatusGetRetryCnt	5	The number of retries the TES Master should performed when checking the status of the process and found none. This value is intended for internal use.
PSStatusGetRetryCnt	3	The number of retries the TES Master should performed when establishing a connection to the PeopleSoft database before marking the connection as failed.
PSTimeout	3 x the heartbeat stipulated in the Process Schedule server definition(180 seconds)	The interval in seconds without a heartbeat before considering that the PeopleSoft server is not responsive.
PSUseRunStatus	N	When running API aware processes in PeopleSoft and this parameter is set to Y, the adapter ignores the PRCSRTNCODE value and uses the RUNSTATUS to determine the Scheduler job status.
PSWaitOutput	30	Number of seconds to wait for PeopleSoft job output. If used with PSFinalStatusWait, this value can be reduced by the value specified in that parameter. If the PSFinalStatusWait value is greater than 30 seconds, set this value to 0.

Parameter Name	Default Value	Description
REQUESTTIMEOUT	300	The timeout interval (in seconds) when sending requests to server during job definition. A timeout error is displayed to the user if the request, such as get process name or get run control, does not complete within the time specified here.
RETENTIONDAYS	7	The number of days the process result is viewable in PeopleSoft Process Monitor before it is purged by Process Scheduler. The value populates the PeopleTools table field PSPRCSQUE.PT_RETENTION_DAYS at runtime.

CHAPTER **5**

Configuring service.props

About Configuring service.props

The **service.props** file is used to configure adapter behavior. **service.props** is located in the \config directory located under the Adapter's GUID directory, You can create both the directory and file if it does not yet exist. Properties that can be specified in service.props control things like logging and connection configuration. Many of the properties are specific to certain adapters; others are common across all adapters.

service.props Properties

The table below lists many of the parameters that can be specified in service.props. Some properties apply to all adapters (shaded in the table) and some properties are adapter-specific as indicated by the **Applicable Adapter(s)** column. The properties are listed in alphabetical order.

Property	Applicable Adapter(s)	Default	What It Controls
BYPASS_SEC_VALIDATION	Oracle Apps	N	If set to Y, the secondary user validation is bypassed. If not, secondary user validation is performed.
CLASSPATH	All	<none>	(Optional) – The path to the JDBC driver. If the default CLASSPATH used when the Adapter process is started does not include an appropriate JDBC driver jar required to connect to the PowerCenter Repository Database, you will need to specify this *service.props* configuration
CONN_SYNC	All	N	Setting this flag to Y allows synchronous connections without overloading the RDOnly Thread. If set to N, the adapter might stop trying to reconnect after an outage or downtime.
DISCONN_ON_LOSTCONN	Informatica	N	Setting this flag to Y avoids an unnecessary logout call to the Informatica server when the connection is lost. This logout call usually hangs.

Property	Applicable Adapter(s)	Default	What It Controls
EnableDynamicPollingInterval	All	N	Use to avoid frequent polling on long-running jobs. When set to Y in service.props of a particular adapter, these properties are enabled: MinDynamicPollInterval—Minimum value should be 5 seconds. MaxDynamicPollIntervalInMin—Maximum value should be 5 minutes. PercentOfEstDuration—Default value is 5.
IGNORE_CODES	Informatica	\<none\>	This parameter can be set in service.props, job configuration and connection configuration parameters. The order of precedence is service.props (applicable for all jobs running in all connections), job level (only for that particular job), and connection (applicable for all jobs in the connection). This parameter is used to specify Informatica-specific error codes, separated by commas (,), that you want to ignore while running a job.
IGNORESUBREQ	Oracle Apps	N	Y or N. Setting this flag to Y stops huge job xml file transfers back and forth between the adapter and the AdapterHost during polls when a single request set has multiple sub-requests of more than 100. The default value is N or empty.
jarlib	Hive and MapReduce	\<none\>	Specifies the specific Java library to use for the adapter: ❍ For Apache 1.1.2, add: **jarlib=apache1.1.2** ❍ For Cloudera 3, add: **jarlib=cloudera** ❍ For Cloudera 4, add: **jarlib=cdh4** ❍ For MapR add: **jarlib=apache1.1.2**
kerbrealm	MapReduce	\<none\>	If the Hadoop cluster is Kerberos secured, use this value to specify the Kerberos Realm. For example, **kerbrealm=TIDALSOFT.LOCAL**
kerbkdc	MapReduce	\<none\>	If the Hadoop cluster is Kerberos secured, use this value to specify the KDC Server. For example, **kerbkdc=172.25.6.112**

Property	Applicable Adapter(s)	Default	What It Controls
Keystore	BusinessObjects, BusinessObjects BI, BusinessObjects DS, Cognos, JD Edwards, Oracle Applications, UCS Manager, VMware, Web Service	\<none\>	Specify `Keystore=c:\\<adapter_certifica te_directory>\\<your_trusted_ke ystore>.keystore` when importing certificates into a Java keystore.
LAUNCH_DELAY (in milliseconds)	Informatica	\<none\>	This parameter can be set in service.props, job configuration and connection configuration parameters. The order of precedence is service.props (applicable for all jobs running in all connections), job level (only for that particular job), and connection (applicable for all jobs in the connection). If a non-zero value is set for this parameter, then the jobs are delayed for the specified number of milliseconds before being submitted to Informatica.
LoginConfig	BusinessObjects BI Platform, BusinessObjects Data Services	\<none\>	Specifies the location of the login configuration if using WinAD or LDAP authentication. For example: `LoginConfig=c:\\windows\\bscLo gin.conf` where `"c:\\windows\\bscLogin.conf"` is the location of the login configuration information. Note the use of \\ if this is a Windows location.
MaxLogFiles	Informatica, JDBC	50	(Optional) – Number of logs to retain. Defaults to 50 if not specified.
OUTPUT_ASYNC_LOGOUT	Informatica	N	Setting this flag to Y avoids jobs getting stuck in Gathering Output status.
OUTPUT_SYNC	All	Y	Enables concurrent output gathering on a connection. To enable this feature, set the value to N in service.props of this adapter.
POLL_SYNC	All	Y	Enables concurrent polling on connections of the same type. This is helpful when there is a heavily load on one connection of an adapter. The heavily loaded connection will not affect the other adapter connection. To enable this feature, set the value to N in the service.props of this adapter.
QUERY_TIMEOUT	Oracle Apps	N	Y or N. If set to Y, the timeout value defined using the parameter QUERY_TIMEOUT_VALUE is applied to the SQL queries. Default value is N or empty.

Property	Applicable Adapter(s)	Default	What It Controls
QUERY_TIMEOUT_VALUE	Oracle Apps	unset	The time period in seconds that SQL queries wait before timeout. If 0 or not set, there is no timeout.
READPCHAINLOG	SAP	Y	Used to control the log gathering in SAP Process Chain jobs. This property depends on the Summary Only check box of the job definition Options tab.
SCANFOR_SESSIONSTATS	Informatica	Y	Y or N - Set this parameter to N to turn off the default behavior of Informatica jobs collecting the session statistics during the job run.
SCANFOR_SESSIONSTATS_AFTER_WF_ENDS	Informatica	N	Y or N - Set this parameter to Y to turn off the gathering of session statistics during each poll for the status of Informatica jobs.
TDLINFA_LOCALE	Informatica	\<none\>	Points to the Load Manager Library locale directory. See "Configuring the Informatica Adapter" in the *Informatica Adapter Guide* for how to set this for Windows and Unix environments.
TDLJDBC_LIBPATH	JDBC (Windows only, optional)	\<none\>	An alternate path to the JDBC library files. The library file path should have been configured given system environment variables. This option is available in case you wish to use an alternate set of libraries and may be helpful for trouble-shooting purposes.
TDLJDBC_LOCALE	JDBC	\<none\>	The path to the JDBC locale files.
TDLINFA_REQUESTTIMEOUT	Informatica	\<none\>	(Optional) – The number of seconds before an API request times out. The default is 120 seconds, if not specified.
TRANSACTION_LOG_BATCH_SIZE	MS SQL	5000	Set this parameter if more than 5000 lines need to be read from the transaction table.
version_pre898	JD Edwards	N	If running on a JD Edwards server version that is less than 8.9.8, set version_pre898=Y.