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# Enterprise PeopleTools 8.50 PeopleBook: PeopleSoft Change Assistant

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**September 2009**

















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**Enable Production Database**

Enables a fourth database type to be defined within the upgrade environment for steps that need to run against the Production database. The database orientation of *Production* is available only for select step types to be run in an application upgrade environment.

## Specifying Upgrade Environment Database Settings

An upgrade environment includes these database types:

- Source
- Target
- Copy of Current Demo
- Production

Which database types you specify in your environment depends on the type of upgrade you are performing and the types of steps that need to be run.

<i>Database Type</i>	<i>Required/Optional</i>	<i>Used in PeopleTools Upgrade?</i>	<i>Used in Application Upgrade?</i>
Source	Required (for Application Upgrades)	No	Yes
Target	Required	Yes	Yes
Copy of Current Demo	Optional	No	Yes
Production	Optional	No	Yes

The Database Configuration Wizard provides a separate configuration page for each database type, containing these settings:

**Database Name**

Enter a name of up to 8 characters for the database.

**User ID and Password**

Enter the PeopleSoft user ID and password for the database that will be used to perform the upgrade. Examples of user IDs are VP1 and PS.

**SQL Server Host Name**

(Used for Microsoft SQL Server only). Enter the name of the host machine that runs the SQL Server database. It is used to run SQL commands and scripts in the command line.

**Database Server Name**

If applicable, enter a name of up to 256 characters for the database server name.

<b>Access ID</b>	<p>The access ID has full access to all objects in the database.</p> <p>Your access ID is <i>not</i> a PeopleSoft user ID, such as <i>VP1</i> or <i>PS</i>. Examples of access IDs are <i>sa</i> or <i>sysadm</i>.</p> <hr/> <p><b>Note.</b> The IDs and passwords are case-sensitive.</p> <hr/> <p><b>Note.</b> The access ID is often the database owner. It is not normally the same value as the connect ID, which has limited access to the database.</p> <hr/> <p>See <i>Enterprise PeopleTools 8.50 PeopleBook: Security Administration</i>, "Understanding PeopleSoft Security," Access IDs.</p>
<b>Owner ID</b>	(Used for DB2 z/OS only). Enter the owner ID used for the tables.
<b>Test Connection</b>	Click to confirm the database connection information you have entered.
<b>Enable Process Scheduler</b>	<p>Select this option to define up to two Process Scheduler servers to run ProcessScheduler steps during the upgrade job run.</p> <p>This option applies only to Source and Target databases in an application upgrade environment.</p>

## Specifying Upgrade Environment Process Scheduler Settings

If you have selected the Enable Process Scheduler check box for an applicable database definition, you must enter the required information for the host machine and the Process Scheduler server definitions associated with that database that will be running the ProcessScheduler steps. You assign an existing Process Scheduler server to either the SERVER1 or SERVER2 slots. When defining a ProcessScheduler step type, you specify which server will run the step, SERVER1 or SERVER2.

<b>Host Machine or IP</b>	Enter the host name or the IP address of the application server where the appropriate Process Scheduler server domain is running (PSPRCSSRV.EXE and so on).
<b>JSL Port</b>	Enter the domain's JSL port (listener port).
<b>Server Name</b>	Enter the name of the Process Scheduler server definition, such as PSUNIX.

<b>Method of retrieving Process Scheduler logs</b>	<p>You can download view the Process Scheduler logs from within Change Assistant so that you don't need to monitor the processes separately using Process Scheduler monitoring and logging. Similar to other Change Assistant log files, the downloaded Process Scheduler log files are saved to the Change Assistant output directory.</p> <ul style="list-style-type: none"> <li>• None: Disables the ability to view Process Scheduler log information from within Change Assistant.</li> <li>• FTP: Select if Process Scheduler is running on a UNIX server.</li> <li>• File Copy: Select if Process Scheduler is running on a Windows server.</li> </ul> <hr/> <p><b>Note.</b> If you have configured multiple Process Scheduler servers within your upgrade environment, and they each run processes within the job, as needed, note that the log information will reside in two locations, with each location containing the log information associated with the processes run on that server.</p> <hr/>
<b>Machine Name or IP</b>	(Applies only to FTP option). Enter the machine name or IP address of the FTP server where the Process Scheduler logs are located.
<b>Log/output Directory</b>	<p>(Applies to File Copy and FTP option). Enter the path to where the Process Scheduler logs are located on the server.</p> <ul style="list-style-type: none"> <li>• For the FTP option, enter the absolute path on the FTP server.</li> <li>• For the File Copy option, this is the (mapped) path on the Change Assistant workstation.</li> </ul>
<b>User ID and User Password</b>	(Applies only to FTP option). Enter the user ID and password required for connecting to the UNIX server (as if an FTP client were connecting).

## Importing and Exporting Upgrade Environments

To save time when creating other jobs or if you are accessing Change Assistant from multiple machines, you can export the environment configuration to a file after you've saved it. Change Assistant generates an XML file to store the upgrade environment information.

To export an environment:

1. Select File, Export Environment.
2. On the Environments screen, select the environment to export.
3. On the Export Environments dialog box, navigate to the directory where you want to store the exported XML file.

By default, the exported file assumes the name of the environment that you specified when you created it.

4. Click Export.

To import an environment:

1. Select File, Import Environment.
2. On the Import Environments dialog box, navigate to and select the XML file storing an exported upgrade environment.
3. Click Import.

## Deleting Upgrade Environments

If you decide to delete an upgrade environment, consider that all the job instances associated with that environment that you created will also be deleted.

To delete an upgrade environment:

1. Select File, Delete Environment.
2. On the Delete Environment dialog box, select the name of the environment to delete, and click OK.
3. Confirm that you are aware that all the jobs associated with the environment will also be deleted.

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## Creating Upgrade Jobs

You can create new upgrade jobs or use existing jobs.

To create a new upgrade job:

1. Select File, New Upgrade Job.
2. On the Use Template dialog box, select the template you want to use for the upgrade job, and click OK.
3. On the Environments dialog box, select the environment you want to use for the upgrade job, and click OK.
4. On the Type of Upgrade dialog box, select the type of upgrade to match the phase of your upgrade process.

For example, if you are running a test upgrade against a Copy of Production database or a Demo database, select *Initial Upgrade*, but if this job is running against your Production database, select *Move to Production*. This filters steps based on the Type of Upgrade step property.

See [Chapter 4, "Configuring Change Assistant," Specifying Change Assistant Options, page 31](#).

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**Note.** You can create multiple upgrade jobs from each upgrade template.

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## Configuring Remote Agent Processing

To improve performance and processing time for data intensive steps associated with, for example, data conversion, Build, and Alter scripts during the move to production upgrades, Change Assistant can run these step types through an EMF Agent running on a remote host:

- Application Engine
- Data Mover (User and Bootstrap)
- SQL (Script and Command)

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**Note.** Remote agent processing applies only to upgrades.

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In many cases, test runs against the Copy of Production database should provide reliable metrics with which you can determine which processes are candidates for remote processing. If a step appears to require a lot of time to complete, rather than running the process on the Windows workstation where Change Assistant is installed, you can elect to have the processes run on a high-powered server, where a PS\_HOME (and thereby an EMF Agent) is also installed. For optimal results using this option, make sure that the EMF Agent resides on the same server machine as the database, or on a high-powered server on the same backbone network.

To configure remote agent processing:

1. On the Change Assistant Options dialog box, select Enable Server Processing beneath Perform Application Upgrade.
2. On the Change Assistant Options dialog box, set the Remote Agent options.

The Remote Agent options are available only if you have selected both Perform Application Upgrade mode and Enable Server Processing.

<b>Host Name</b>	Name of the server machine where the agent to perform the remote processing is installed.
	<b>Note.</b> Use a fully-qualified machine name.
<b>Host PS_HOME (Complete Executable Path)</b>	<p>The complete path to Data Mover (psdmtx) and Application Engine (psae) executeables.</p> <p>For example:</p> <p>Windows: c:\PT85\bin\client\winx86\</p> <p>UNIX: /ds1/pt85/bin/</p>
<b>Host Output Directory</b>	Enter the directory in which you want the log files generated by the update process to reside.
<b>Host SQL Query Executable</b>	<p>The complete path and filename of the SQL query executable.</p> <p>For example:</p> <p>Windows: c:\oracle10\bin\sqlplus.exe</p> <p>UNIX: /ds1/oracle/bin/sqlplus</p>
<b>Host Maximum Concurrent Processes</b>	The maximum number of process that can be executed concurrently on the remote host.

3. Set the PS\_SERVER\_CFG environment variable to point to the PSPRCS.CFG file of the user ID starting the agent, using a fully-qualified machine name.

4. For the steps that you want to run on the remote host through the remote EMF Agent, in the Step Properties dialog, set Run Location to *Remote Agent*.

## Chapter 11

# Running Upgrade Jobs with Change Assistant

This chapter introduces you to running upgrade jobs in Change Assistant.

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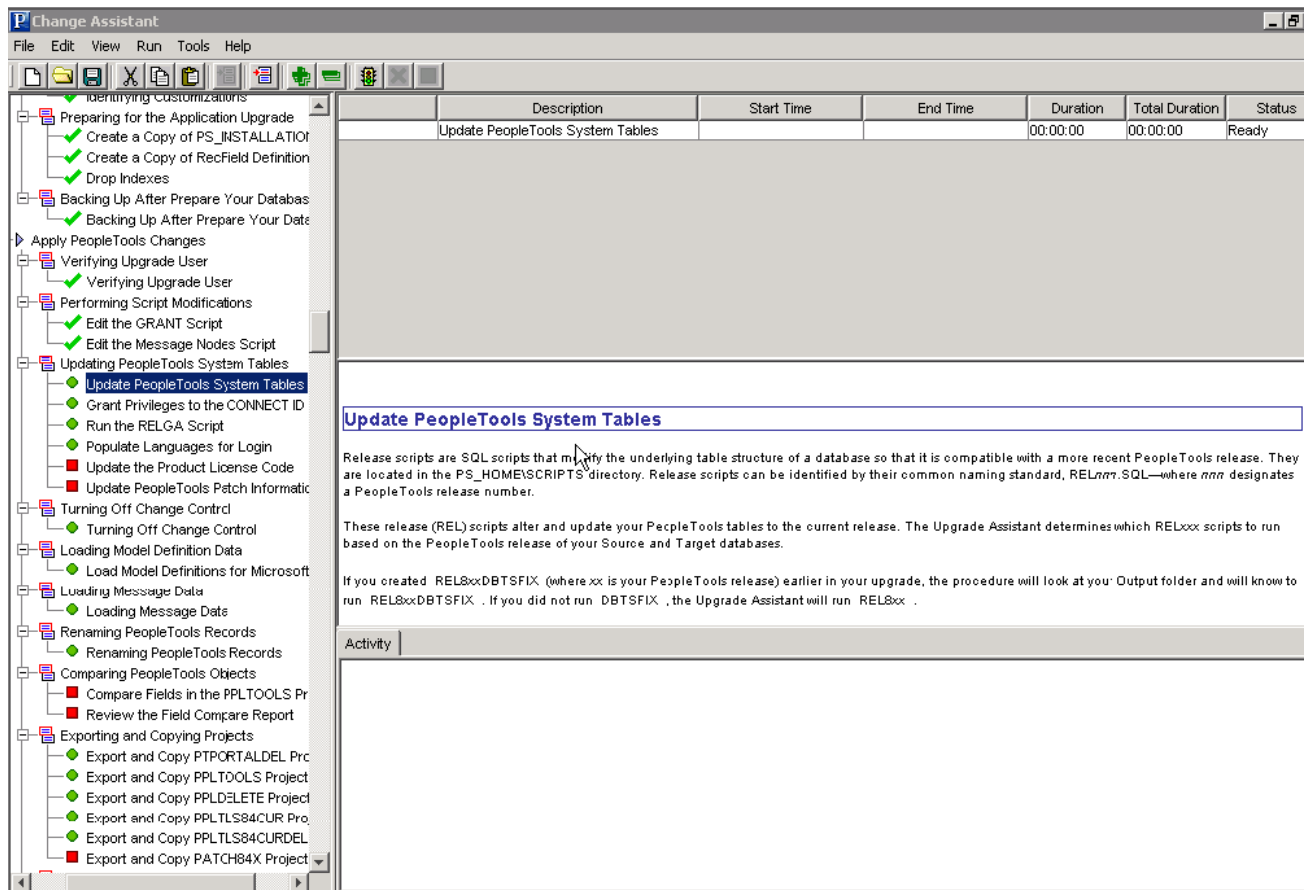
**Note.** When performing an upgrade, the majority of the documentation for your upgrade is in your specific upgrade documentation that you downloaded with your upgrade template. It contains detailed instructions for each step of your job.

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## Running the Upgrade Job

When you create a new upgrade job, you will see a job view similar to the following example:



## Upgrade View

In the job area on the left-hand side of the screen, you'll see one of the following icons next to the steps.



Indicates each step that must be performed manually. The status of manual steps can be set only to Stop or Complete.



Indicates that Change Assistant can automatically run this step. You can set the status to Stop, Run, Restart, or Complete.

If you set the status to Stop, this indicates that you want to stop the upgrade job at that step or that a milestone has been reached. The status can be reset to Run when desired.

When you are ready to run your upgrade job, select Run from the Change Assistant toolbar. Monitor the status of the automated upgrade steps in the Step Details box. After a automated step is completed running in Change Assistant, you can view logs, scripts and update job properties for individual steps.

**Note.** Change Assistant uses Application Designer and Data Mover in the background to perform many of the tasks. When using Change Assistant, make sure that any current Application Designer and Data Mover sessions running on the same workstation as Change Assistant are closed before running Change Assistant.

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## Viewing Upgrade Logs

You can view all the logs generated by the automated processes. After the process runs, you can select a step to view.

To view a log:

1. Highlight or select the step.
2. Select Edit, View Log.
3. Click OK

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**Note.** If a step encounters an error, Change Assistant will automatically display the View Log.

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**Note.** On the left side of the file list, Change Assistant displays both error and success symbols. These indicate which step logs contain errors to help you troubleshoot.

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## Viewing Scripts

You can view SQL and Data Mover scripts that are used to automate processes. Before the step that contains the script runs, you can view or modify the original script. After the process runs, you can view or modify the updated script and then restart the step.

To view a script:

1. Highlight or select the step.
2. Select Edit, View Script.
3. On the View Script dialog box, select the script you wish to view and click OK.

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## Modifying Job Properties

You may want to maintain a record of how long your upgrade takes. In that case, you can view and change the dates and durations for steps in the View/Edit Job Properties dialog box.

Change Assistant allows you to set the status for these sub-steps: DBTSFIX, UpgradePeopleTools and LoadBaseData.

To modify job properties:

1. Highlight or select the step.
2. Select Edit, Job Properties.

3. Enter changes to a specific job property, or add comments, and click OK.

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## Running ProcessScheduler Steps

This section discusses how to:

- determine when to run Process Scheduler steps.
- prepare to run Process Scheduler steps.
- work with Process Scheduler steps.
- ensure Process Scheduler security authentication.

## Determining When to Run Process Scheduler Steps

Running the ProcessScheduler step type is designed to improve performance and quicken completion times of long-running, data-intensive steps, that can be run in parallel in an application upgrade. In most cases, the steps that would require Process Scheduler processing are delivered in your upgrade template configured to run on a Process Scheduler server. However, if you are creating a custom template, decide that improved performance can be gained by running a step through Process Scheduler, as opposed to running through a remote agent, you can configure a process to be run by a ProcessScheduler step.

Before setting up an upgrade process to be run through Process Scheduler:

- always consult your specific upgrade documentation for any recommendations, considerations, or restrictions.
- make sure Process Scheduler is configured and defined within your upgrade environment.

### See Also

PeopleSoft upgrade documentation for your upgrade path

## Preparing to Run Process Scheduler Steps

Before running an upgrade process though Process Scheduler, the following items need to addressed:

<b>Task</b>	<b>Documentation Reference</b>
Set up Process Scheduler.	See <i>Enterprise PeopleTools 8.50 PeopleBook: PeopleSoft Process Scheduler</i> , "Setting Server Definitions."
Define Process Scheduler servers in your upgrade environment.	See <a href="#">Chapter 10, "Configuring Change Assistant for Upgrades," Configuring and Working With The Upgrade Environment, page 93.</a>

<b>Task</b>	<b>Documentation Reference</b>
Include a ProcessScheduler step type in your upgrade template.	See <a href="#">Appendix A, "Modifying Step Properties and Parameters,"</a> page 107.

## Working With Process Scheduler Steps

This section discusses how to:

- View Process Scheduler logs.
- Restart Process Scheduler steps.
- Cancel Process Scheduler steps.

### Viewing Process Scheduler Logs

If in your upgrade environment you have configured Change Assistant to be able to access Process Scheduler logging information, you can view the Process Scheduler processing information from within Change Assistant just as you would for any other step (click on the step and select Edit, View Log).

### Restarting Process Scheduler Steps

If a Process Scheduler step has failed or has been stopped, you can restart the process by setting the step to Restart. This is most useful for restart-aware process definitions using Application Engine. When a step has been set to Restart, Change Assistant resubmits the process requests to Process Scheduler.

### Canceling Process Scheduler Steps

While Change Assistant is executing the ProcessScheduler step, you can kill the step, by clicking on the step and selecting Run, Kill. This is equivalent to stopping or cancelling scheduled processes on the Process Scheduler. When you 'kill' the step, Change Assistant connects to the Process Scheduler, which issues "cancel" commands to the appropriate processes.

## Ensuring Process Scheduler Security Authentication

PeopleSoft Change Assistant uses the PROCESSREQUEST component interface object to submit jobs to run on the PeopleSoft Process Scheduler server. You must ensure the user submitting the process has the appropriate authentication set for the PROCESSREQUEST object in the database the process runs against. You must edit security permissions to run the PROCESSREQUEST object.

To set up PROCESSREQUEST component interface security:

1. Log in to PeopleSoft through the browser.
2. Select PeopleTools, Security, Permissions & Roles, Permission Lists.
3. Select the permission list for which you want to set security. The Permission List component appears.
4. Access the component interfaces page and select the PROCESSREQUEST component interface.

5. Click Edit.

The Component Interface Permissions page appears, showing all of the methods (both standard and user-defined) in the component interface and their method access.

6. Set the access permission for each method.

Select Full Access or No Access. You must grant full access to at least one method to make the component interface available for testing and other online use.

7. Click OK, and then Save.

## Appendix A

# Modifying Step Properties and Parameters

This appendix discusses:

- Step types.
- Step parameters.

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**Note.** In most situations, you do not need to modify steps delivered in an a change package or upgrade.

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## Step Types

When creating custom steps, select one of these step types.

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**Note.** When creating step types that Application Designer executes, such as Build Project or Compare and Report, if there are specific settings that need to be set for Application Designer, make sure to specify those using the Build, Upgrade, or Object Types buttons that appear to the right of the Step Type dropdown list. Use these buttons to save any necessary settings to the Change Assistant template. At run time, any Application Designer settings saved in the template override the current settings for Application Designer on the machine where an Application Designer process runs.

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<b>Step Type</b>	<b>Definition</b>
Application Engine	Runs the Application Engine process indicated by the Script/Procedure value under Step Properties.
Build Project	<p>Builds the project specified in the step properties parameter as #Project= (for example, #Project=ALLTABS). The project is built through the PeopleTools command line.</p> <p>Use the Build button to select options based on the instructions in the update documentation for your product and path.</p> <p><b>Note.</b> The Build dialog box that appears displays identical options to Application Designer.</p> <p>See <i>Enterprise PeopleTools 8.50 PeopleBook: PeopleSoft Application Designer Developer's Guide</i>, "Administering Data," Selecting Build Options and Running the Build Process.</p>

<b>Step Type</b>	<b>Definition</b>
Compare And Report	<p>Runs the project compare (which produces compare reports) process using the project specified in the step properties parameter as #Project= (for example, #Project=ALLTABS). The compare is performed through the PeopleTools command line.</p> <p>For the Compare and Report and all Copy ... step types, use the Upgrade button to select the appropriate options, which are identical to those provided for Upgrade Options in Application Designer.</p> <p>See <i>Enterprise PeopleTools 8.50 PeopleBook: PeopleSoft Application Designer Lifecycle Management Guide</i>, "Upgrading with PeopleSoft Application Designer," Setting Upgrade Options.</p>
Copy Database	Copies a project from the source database to the target database as specified under the Step Properties. The project used is the one specified in the step properties parameter as #Project= (for example, #Project=ALLTABS). The copy is performed through the PeopleTools command line.
Copy from file	Copies a project from a file. This is used in conjunction with the Copy To File. It uses the project specified in the Step Properties parameter as #Project= (for example #Project=ALLTABS).
Copy to file	Copies a project to a file. This is used in conjunction with the Copy From File option. It uses the project specified in the Step Properties parameter as #Project= (for example #Project=ALLTABS).
Create project	<p>Creates a project within Change Assistant. Use the Object Type button to launch the Create Project dialog box where you can select any combination of definition types to include in the project, such as pages, records, fields and so on.</p> <p><b>Note.</b> If you select Pages, the system inserts all the page types into the project, including pages, subpage and secondary pages.</p>
Merge project	<p>Merges two project definitions.</p> <p>For example, this is used in upgrades during the "Merge IB Project" step, which merges pre and post-PeopleTools 8.48 Integration Broker metadata.</p>
Data Mover-Bootstrap	Runs Data Mover scripts as the access ID specified in the credentials panel in the Apply Wizard (bootstrap mode).

<b>Step Type</b>	<b>Definition</b>
Data Mover-User	Runs Data Mover scripts as the user ID specified in the credentials panel in the Apply Wizard (non-bootstrap mode).
DBTSFIX	(Applies to DB2 z/OS, DB2 UDB, Oracle, and Informix). Change Assistant determines the source and target releases of the databases defined under Step Properties as Source and Target. Once this is completed, Change Assistant determines which release scripts need to be generated by the DBTSFIX sqm to produce release scripts for your environment.
Deploy file	Deploys files in change packages to different servers.
Execute process	<p>Enables you to include custom processes, such as bat files, that you can run as part of a Change Assistant job.</p> <p>Enter the file path to the file in the Parameters edit box. For example, if you want to run backup.bat, enter the following in the Parameters edit box:</p> <p><i>c:\bat\backup.bat</i></p> <p><b>Note.</b> Your custom file needs to be able to close without needing human interaction. Change Assistant does not officially recognize the step as being successfully completed until the processes ran by the bat file have been closed.</p>
Load Base Data	Change Assistant determines the source and target releases when running either the DBTSFIX or UpgradePeopleTools steps (depending on your database type). Once these are determined, Change Assistant will dynamically define which Load Base Data scripts need to be run for the original target release and the languages that you have installed.
Manual Stop	Defined as a step you must run manually. Change Assistant automatically sets the run status to Stop. After you have manually completed the step, you must change the Job Status to Complete.

<b>Step Type</b>	<b>Definition</b>
ProcessScheduler	<p>Runs the specified upgrade process through Process Scheduler. To further define the step, you use these <i>required</i> parameters:</p> <pre>#USE_PRCs_SERVER= #PROCESS_TYPE= #PROCESS_NAME= #RUNCONTROLID= #NUM_INSTANCES=</pre> <p><b>Note.</b> If you don't specify the value to each parameter correctly, the step will fail.</p> <p>Example: To run one instance of an Application Engine program on SERVER1, specify parameters as:  <pre>#USE_PRCs_SERVER=SERVER1 #PROCESS_TYPE=Application Engine #PROCESS_NAME=MYAE #RUNCONTROLID=TEST #NUM_INSTANCES=1</pre></p> <p>Example: To run three instances of an SQR report (XRFWIN) on SERVER2, specify parameters as:  <pre>#USE_PRCs_SERVER=SERVER2 #PROCESS_TYPE=SQR Report #PROCESS_NAME=XRFWIN #RUNCONTROLID=MYID #NUM_INSTANCES=3</pre></p> <p>See <a href="#">Appendix A, "Modifying Step Properties and Parameters," Step Parameters, page 111.</a></p>
SQL Command	<p>Runs the SQL command defined in the Parameters value under the Step Properties. Change Assistant runs the command using the SQL Query tool specified in the Database Configuration dialog box.</p> <p>For most SQL Query Tools, Change Assistant stops on an error.</p>
SQL Script	<p>Runs the SQL script defined in the Script/Procedure value under the Step Properties. Change Assistant runs the script using the SQL Query tools specified on the Database Configuration.</p> <p>For most SQL Query Tools, Change Assistant stops on an error.</p>
SQR Report	<p>Runs SQRs using the pssqr command line. If parameters are included in the Parameters section of the step properties, Change Assistant will obtain the SQR settings from Configuration Manager for the Profile selected in the Job Database Configuration.</p>

<b>Step Type</b>	<b>Definition</b>
UpgradePeopleTools	Change Assistant determines the source and target releases of the databases defined under Step Properties as Source and Target. Once this is completed, Change Assistant then determines which Release scripts to run in order to upgrade your PeopleTools release from the original source release to the new target release.

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**Note.** There is no limitation to the number of steps you can add to a template.

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## Step Parameters

Depending on the step type, you may need to include additional parameters in the Parameter edit box of the Step Properties dialog box.

<b>Parameter</b>	<b>Description</b>
#Project=	Used primarily for functions that require a project name, like Build Project, Create Project, and Merge Project.  For the Merge Project step type, you can specify two projects separated by a comma. For example,  <code>#PROJECT=PRJ656265,PRJ656265_IB_PRE848</code>
#Directory=	Used when you need to run a script that is not located in the <PS_HOME>\scripts directory, for example, STOREPT. In this case, you could enter:  <code>#Directory=#PTPS_HOME\src\cbl\base\</code>
#P1= through #P5=	Used to pass parameters to SQR reports, for example, TEST.sqr. In this case, you would pass the necessary value, such as:  <code>#P1=#OutputDirectory</code>
#PS_HOME=	Used to specify the <i>PS_HOME</i> variable that is defined on the Directory tab of the Change Assistant options (for Updates) or the Environment Configuration Wizard (for Upgrades) (Options, Change Assistant, Directories tab).
#SOURCE_HOME=	Used to specify the <PS_HOME> variable that is defined on the Environment Configuration Wizard (for Upgrades). Change Assistant will use the Source <PS_HOME> instead of the targets per the value specified under Step Properties.

<b>Parameter</b>	<b>Description</b>
#OutputDirectory=	Used to specify the Output Directory variable that is defined in the Options, Change Assistant, Directories screen.
#NT=	Used for DB2 Command Center, for Non-Terminated SQL Scripts.  <b>Note.</b> The #NT parameter applies to DB2 UDB only. It is ignored for DB2 z/OS.
#Type=	Enables you to specify the type of record to insert into the project. Choose from the following record types: All Records, Table, View/Query, View/Derived, SubRecord, Stored Procedure, Temporary Table, Dynamic View.
#RCID=	Enables the user to override the run control ID used for Application Engine processes.
#CI =	Connect ID (Used for Data Mover – Tools).
#CW =	Connect password (Used for Data Mover – Tools).
#EXTRACT_DMS=	Extracts DMS export script from file (Used for Data Mover – Tools).
#DBSETUP=	Extracts dbsetup DMS import script from file and database connectivity parameters (Used for Data Mover – Tools).
#UNICODE=	Generates DMS script for UNICODE database (default is NON-UNICODE) (Used for Data Mover – Tools).
#TABLESPACE=	Default tablespace (PTMINITS) (Used for Data Mover – Tools, DB2 UDB, Oracle and Informix only).
#DBSPACE=	Physical dbname.tablespace (PTMINIDB.TABLESPACE) ) (Used for Data Mover – Tools, DB2 z/OS only).
#STOGROUP_TS=	Storage group for tablespace (Used for Data Mover – Tools, DB2 z/OS only).

<i><b>Parameter</b></i>	<i><b>Description</b></i>
#STOGROUP_IDX=	Storage group for index (Used for Data Mover – Tools, DB2 z/OS only).
#TABLEOWNER=	Database owner ID (same as sqld and tableowner) (Used for Data Mover – Tools, DB2 z/OS only).
#INDEXSPC=	Default tablespace (PTMINITS) (Used for Data Mover – Tools, Informix only).
#USE_PRCS_SERVER=	(Used only for ProcessScheduler step types). Enter the name of the Process Scheduler server to run the step. Valid values are SERVER1 or SERVER2, which correlate to the Process Scheduler server definitions you have defined in your upgrade environment.
#PROCESS_TYPE=	(Used only for ProcessScheduler step types). Enter the process type, as defined in Process Scheduler. For example, Application Engine, SQR Report, Data Mover, and so on.
#PROCESS_NAME=	(Used only for ProcessScheduler step types). Enter the process name, such as DDDAUDIT.
#RUNCONTROLID=	(Used only for ProcessScheduler step types). Enter the appropriate run control ID.  <b>Note.</b> Change Assistant appends unique sequence numbers to the end of the Run Control ID before requests are submitted to the Process Scheduler. This is required for submitting multiple instances of the same process.
#NUM_INSTANCES=	(Used only for ProcessScheduler step types). Used by Change Assistant to schedule multiple processes through Process Scheduler as individual process requests. However, the actual number of instances simultaneously executed on the Process Server is controlled by the Max Concurrent setting for the process type in the Process Scheduler server definition.



## Appendix B

# Clearing Environment Management Framework Cache

To ensure consistent behavior across all the elements of the Environment Management Framework, at times, it is necessary to clear the cache stored within each element. Clearing the cache just on the web server for the Hub, for example, is not sufficient. To re-initialize the entire framework, you need to perform this cleanup on:

- All agents
- Change Assistant
- Viewer
- Hub

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## When to Clear Environment Management Framework Cache

After analyzing customer environments and consulting PeopleSoft support, the following list reflects the most common situations in which it is recommended that you clear cache files:

- After applying a maintenance pack. Maintenance packs deliver a large number of files. Clearing the cache after applying a maintenance pack may increase performance for applying future updates.
- After applying a PeopleTools patch. Information related to previous PeopleTools releases stored in the cached directories can cause a variety of issues for Change Assistant.
- After receiving a warning during file deploys or during the validate process (Tools, Validate). This is typically related to cached references to peer IDs that are no longer used. Clearing the cache removes references to unused peer IDs.
- After Change Assistant hangs during re-validation. This is often a sign of cache issues.
- After receiving notifications that you need to apply prerequisites that have already been applied.

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**Note.** The above list reflects the most common situations when cache should be cleared, not every possible situation. If you are encountering unexpected behavior, one element of your troubleshooting should be clearing the cache.

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## Clearing EMF Cache

To clear EMF cache:

1. Close the Change Assistant, stop all agents, and stop PSEMHUB.
2. Delete cache files from Change Assistant, agents, and Viewer.
  - a. Navigate to the following EMF locations:

<b>EMF Element</b>	<b>Location</b>
Change Assistant	Change Assistant installation location. For example, c:\Program Files\PeopleSoft\Change Assistant\envmetadata
Agents	PS_HOME\PSEMAgent\envmetadata
Viewer	PS_HOME\PSEMViewer\envmetadata

- b. Delete the following directories:

\PersistentStorage

\ScratchPad

\transactions (if it exists)

\data\ids

- c. For Change Assistant and agents only, delete the following file:

\data\search-results.xml

3. Delete cached files on PSEMHUB.

- a. On the web server, navigate to PIA\_HOME\webserv\peoplesoft\applications\domain\PSEMHUB\envmetadata.

- b. Delete the files stored in these directories:

\scratchpad

\PersistentStorage

\transactions (if it exists)

- c. Delete all objects in \data (files and subdirectories, but not the \data directory).

For example,

\data\\*.\*

4. Restart PSEMHUB.

5. Restart all agents.
6. Restart Change Assistant and Environment Management Viewer as needed.



## Appendix C

# Updating Scripts

Before Change Assistant runs SQL and Data Mover scripts, it determines whether the scripts need updating. This ensures that logs are sent to directories that are known to Change Assistant and that the scripts run properly.

---

## Process, Scripts, and Syntax

The following table shows the processes, what scripts are updated, and the updated syntax.

<i><b>Process</b></i>	<i><b>Script Files</b></i>	<i><b>Updated Syntax</b></i>
DataMoverBootstrap DataMoverUser LoadBaseData	<process name>.dms	SET LOG statements
DB2 z/OS SQL Commands SQL Scripts UpdatePeopleTools	<process name>.sql	CONNECT TO ... SET CURRENT SQLID =
Oracle SQL Commands SQL Scripts UpdatePeopleTools	<process name>.sql	WHENEVER SQLERROR EXIT SET ECHO ON SET TIME ON SPOOL... SPOOL OFF EXIT
Informix SQL Commands SQL Scripts UpdatePeopleTools	<process name>.sql	CONNECT TO ...
DB2 UDB SQL Commands SQL Scripts UpdatePeopleTools	<process name>.sql	CONNECT TO ...



## Appendix D

# Troubleshooting Change Assistant and EMF

This appendix covers topics related to troubleshooting the configuration and operation of Change Assistant and the Environment Management Framework.

---

## Peer Cannot Connect to the Hub

When an Environment Management peer (typically an agent or the viewer) can't communicate with the hub, the following error messages appear in the logs and stdout:

```
Broken connection - attempting to reconnect
RemoteException while connecting to server - retrying attempt 1
RemoteException while connecting to server - retrying attempt 2
RemoteException while connecting to server - retrying attempt 3
```

The peer periodically attempts to reconnect to the hub (by default every ten seconds) with the parameters that are specified in the configuration.properties file.

### ***Determining the Error Condition***

The peer may not be able to communicate with the hub for one of the following reasons:

- The peer is started but the hub is not started.

The peer reconnects once the hub is started.

- The peer is started but the web server is configured to run on a different machine.

Edit the configuration.properties file and change the hubURL parameter.

- The peer is started but the web server is configured to listen on a different port.

Users continue to see the error messages described previously. Edit the configuration.properties file and change the port number for the hubURL parameter. Shut down and restart the peer.

- The peer is running and communicating with the hub, and the PIA web server is shut down.

Users see the broken connection error message. Once the PIA web server is started, the connection is restored.

When the peer has a pinginterval configuration parameter set to a high value (60 seconds or more), the following exception might appear in the log:

```
INFO Thread-48 org.apache.commons.httpclient.HttpMethodBase - Recoverable
exception caught when processing request WARN Thread-48 org.apache.commons.httpclient.HttpMethodBase
- Recoverable exception caught but MethodRetryHandler.retryMethod() returned
false, rethrowing exception Broken connection - attempting to reconnect
Sending pulse from 'com.peoplesoft.emf.peer:id=5'
```

This is due to an HTTP client connection timeout which does not affect functionality.

### ***Ensuring the Correct Configuration***

To ensure that you've configured the peer (agent or viewer) to properly connect with the hub, try each of the following actions in turn:

- Ping the hub host machine.

At a command prompt, enter `ping machinename`, using the machine name configured in the `hubURL` setting. You should see messages indicating a reply from the machine.

- Ping the hub host domain.

At a command prompt, enter `ping hostdomain`, using the fully qualified domain name as it's configured in the `hubURL` setting; for example, `mymachine.mydomain.com`. You should see messages indicating a reply from the machine.

- Use an IP address in the `hubURL`.

In `configuration.properties`, replace the domain name in the `hubURL` setting with the machine's IP address, then restart the peer.

- Ensure that you specify the right port number in the `hubURL`.

In `configuration.properties`, the port number in the `hubURL` setting must be `<PIA port>` if you set up PIA for a single server. In single server configurations, the hub uses the same port to which PIA is configured.

In multi-server configurations, the hub uses the application default port, which is 8001. If you need to change this setting, it must be done in the web server configuration files.

### ***Agent-Specific Resolutions***

If an agent is still experiencing connection difficulties, delete the following agent directories if they exist:

- `PS_HOME\PSEMAgent\envmetadata\data\ids`
- `PS_HOME\PSEMAgent\envmetadata\PersistentStorage`
- `PS_HOME\PSEMAgent\envmetadata\transactions`

---

**Note.** You must also delete these directories after you install an additional hub on the same machine which doesn't replace the existing hub, then shut down the old hub and start the new hub using the same settings.

---

### ***Viewer-Specific Resolutions***

If the viewer Java application can't connect to the hub, first ensure that you specify the right port number when launching the viewer program.

If you set up PIA for a single server, 80 is the default port number, if you set up PIA for multiple servers, 8081 is the default listening port number for PSEMHUB.

If the viewer is still experiencing connection difficulties, delete the following viewer directories if they exist:

- *PS\_HOME*\PSEMViewer\envmetadata\data\ids
- *PS\_HOME*\PSEMViewer\envmetadata\PersistentStorage
- *PS\_HOME*\PSEMViewer\envmetadata\transactions

---

**Note.** You must also delete these directories after you install an additional hub on the same machine which doesn't replace the existing hub, then shut down the old hub and start the new hub using the same settings.

---

---

## Servlet Request Processor Exception

When running WebSphere on multiple servers the following error can occur in the stdout log of the server running PSEMHUB:

```
[10/21/03 20:32:44:826 PDT] 136aa03 OSEListenerDi E PLGN0021E:
Servlet Request Processor Exception:
Virtual Host/WebGroup Not Found : The host pt-lnx03.peoplesoft.com
on port 6080 has not been defined
```

Use the following steps to correct the error: . (the host now can accept redirected queries from your reverse proxy. Normally this configuration is applied during PIA install).

1. Open your WebSphere administration console.
2. Select Environment, Virtual Hosts, default\_host, Host Aliases.
3. Add \*.\* so the host now can accept redirected queries from the reverse proxy.

Normally this configuration is applied during PIA install.

---

## Error Initializing Agent

When starting agents, if you receive the following error message, determine whether an agent is already running:

```
Error initializing agent. Verify if another agent is not
running on this machine or if you have the required permission to run the
agent.
```

If the console for the agent is not visible, check the task manager for the list of Java processes that are currently running. Stop a running agent by invoking the scripts to stop the agents and then restart the desired agent.

Determine whether the agent port is available. If not, choose a different port to start the agent.

---

## Distributed Object Manager Errors

When running process, such as Application Engine, through the Process Scheduler (by way of Change Assistant) the following error can occur if you do not have security set appropriately for the PROCESSREQUEST.

```
Connecting to App Server: 10.138.124.216:9000
Error, exception caught: Distributed Object Manager: Page=Create Language=%2 (1,4)
```

See [Chapter 11, "Running Upgrade Jobs with Change Assistant," Ensuring Process Scheduler Security Authentication, page 105.](#)

---

## Cloned Databases Not Being Unique

When copying databases, it is extremely important to delete the GUID value in the new (copied) database. If not deleted, the hub will assume that the two environments are the same, leading to confusing environment records.

To resolve this, set the value of the GUID field in the PSOPTIONS table to <space> in the new database. You can insert the blank value in the PSOPTIONS table using the SQL tool at your site. The next time an application server connects to the database, the system generates a new, unique GUID.

---

## Large SQL Scripts Fail on Microsoft SQL Server

In some situations, depending on various factors, such as memory available on the Change Assistant workstation, large SQL scripts can fail when run against Microsoft SQL Server. For example, this can occur when running the Microsoft conversion script during an upgrade.

To resolve this issue:

- Set the step executing the SQL script to run manually.
- Split the script into at least three separate scripts and run them individually.

---

## Process Scheduler Logs Retrieved Using FTP Losing Formatting

When reviewing Process Scheduler files retrieved by way of FTP, in some cases formatting is lost.

This is typically an issue with the ANSI setting on the FTP server. For example, on a vsftpd server, in the vsftpd.conf file, make sure `ascii_download_enable` is set to *YES*. If not, stop the FTP daemon, modify the setting, and restart the FTP daemon. (Adjust this information as needed for your FTP server).

## Errors Found in Log Files

Change Assistant scans log files that are generated when various processes run, such as SQL, Data Mover, SQR, CopyDatabase and so on. The following table describes what logs are produced and what Change Assistant determines to be an error:

<i><b>Processes</b></i>	<i><b>Log File</b></i>	<i><b>Error</b></i>	<i><b>Warning Status</b></i>
Application Engine	<process name>_out.log	Restart Failed. Invalid, Error. Abended. Abort. Not Defined.	Warning.
Build Project CompareAndReport CopyDatabase CopyFromFile CopyToFile CreateProject	<process name>.log	Error. Invalid PeopleCode. Copy process cancelled. Project <xxx> does not exist.	Warning.
DataMoverBootstrap DataMoverTools DataMoverUser LoadBaseData	<process name>_out.log  <b>Note.</b> Any logs generated by the Data Mover SET LOG statement will also be available.	Unsuccessful. PSDMTX Error.	Warning.
DBTSFIX SQRReport	<process name>_0.out <process name>_out.log  <b>Note.</b> Change Assistant retrieves the SQR log files using the SQR settings in the Configuration Manager.	TNS Error. Program Aborting. Not Defined Error.	NA
Deploy File	<process name>_out.log	Failure. <ul style="list-style-type: none"><li>• Unable to connect.</li><li>• Environment Management Components are Unavailable.</li></ul> Warning status.	NA

<b>Processes</b>	<b>Log File</b>	<b>Error</b>	<b>Warning Status</b>
DSAutoGeneration DSCompile DSCustomReport DSPatchCorrection DSPatchImport	<process name>_out.log <process name>.log	Failed. Warning status.	NA
DSGetLogs DSInitialImport DSRunJob	<process name>_out.log <process name>_detailed.log <process name>.log	Failed. Warning status.	NA
SQLCommand SQLScript UpdatePeopleTools	<process name>.log	DB2 z/OS and DB2 UDB: <ul style="list-style-type: none"> <li>SQLSTATE=value (value cannot be 02000).</li> <li>SQLxxxxxN.</li> <li>DB2xxxxxE.</li> </ul> Oracle: ORA. Informix: <ul style="list-style-type: none"> <li>Error.</li> <li>Transaction rolled back.</li> </ul> Sybase: Msg Microsoft SQL Server: <ul style="list-style-type: none"> <li>Msg[Microsoft].</li> <li>Cannot open database, access denied.</li> <li>Specified SQL Server not found.</li> </ul> Transaction rolled back. <ul style="list-style-type: none"> <li>ConnectionOpen (Connect()).</li> <li>Login failed.</li> </ul>	Warning.

# Index

## A

- access ID 96
- agents
  - initialization error 123
  - remote 33
  - remote processing 98
  - secure PS\_HOME 20

## C

- Candidate Updates page 62
- Change Assistant
  - configuring for upgrades 91
  - defined 7
  - directory maintenance 54
  - documentation directory 53
  - email 33
  - environment settings 35
  - identifying environment 31
  - installing 29
  - interface (GUI) 39
  - menus 41
  - modes 32
  - PATH variable 30
  - scanning workstation 30
  - setting up options 31
  - templates *See* templates
  - troubleshooting 121
  - updating 11
  - validating settings 36
  - versions 11
  - viewing documentation 53
  - web services 34
- Change Assistant template
  - See* Change Assistant template
  - entering text 78
  - modifying 83
  - understanding 82
- change log 65
- Change Packager feature
  - change packages *See Also* change packages
  - modifying the Change Assistant template 83
  - understanding output 82
- change packages
  - automation 84
  - creating 80
  - downloading 64
  - finalizing 83
  - identifying needed updates 59
  - ProjectFilter 84
  - ProjectInspector 85
  - ReleaseAdaptor 84
  - setting project properties 76
  - understanding 75
  - using 75
- change project
  - creating 76
- change projects

- creating file reference definitions 77
- file type codes, defining 77
- finalizing 83
- modifying upgrade definition types 79
- setting properties 76
- chapters
  - deleting 45
- clearing cache 115
- cloned database issues 124
- command-line
  - environment management agent 23
- components
  - manageable
    - See Also* manageable components
- concurrent processing 33
- configuring
  - Change Assistant for upgrades 91
  - confirming PATH for upgrades 92
  - upgrade documentation directory 92
- configuring environment management
  - components 15
- consequences of resuming jobs 73
- crawling 10, 15, 19, 22
- creating a change package 80

## D

- database name 95
- databases
  - source 13
  - target 13
- database server name 95
- definitions
  - file reference *See Also* file references
- deleting environments 98
- deploying files
  - automatically deploying files to different servers 72
- documentation
  - creating 53
  - editing 53
  - finalizing 54
  - setting directory 53, 92
  - viewing 53
- Download Change Packages screen 64
- downloading template and documentation 91

## E

- email 33
- Enable Copy of Current Demo Database 94
- Enable Process Scheduler 96
- Enable Production Database 94
- environment data
  - information collected 58
  - uploading 57
- environment management
  - agent functions 19

- configuring/starting the agent on z/OS 27
- crawling 22
- errors 121
- GUID 10
- heartbeat 9
- manageable components 9
- monitoring agent status 26
- Oracle Configuration Manager 27
- peer 9
- revalidating 10, 23
- running the agent 21
- running the hub 16
- running the viewer 26
- troubleshooting 121
- environment management agent
  - command-line arguments 23
  - configuring 19
  - defined 8
  - PSEMAgent service 24
  - running 21
  - secure PS\_HOME 20
  - starting automatically in Windows 24
  - starting automatically on UNIX 24
- environment management components
  - configuring and running 15
- environment management framework
  - defined 7
- environment management hub
  - crawling 10
  - defined 7
  - functions 15
  - running on a single server 17
  - running on multiple servers 17
- Environment Management viewer
  - defined 9
- environments
  - deleting 98
  - importing and exporting in upgrades 97
- errors
  - environment management 121
  - found in log files 125
  - Process Scheduler 124
  - Process Scheduler logs 124
  - security 124
  - servlet request processor 123
- exceptions *See Also* errors
  - environment management 121
  - revalidating environment management 23

## F

- file references
  - creating definitions 77
  - defining file type codes 77
  - executing 79
  - understanding the File References folder 82
  - using the Change Assistant template 82
- File Reference window 77
- files
  - deploying 72
  - file reference 77
  - type codes 77
- File Type Code dialog box 77
- file type codes
  - defining 77
  - using the File References folder 82

- folders
  - Change Assistant template 82
  - Change Packager output 82
  - File References 82
  - Project 82
- From Tools Release 48

## G

- globally unique identifier *See* GUID
- GUID 10

## H

- heartbeats 9
- HTTP connectors, security 16

## I

- importing and exporting environments 97
- installation
  - Change Assistant 29
  - identifying environment 31
  - Oracle Configuration Manager 27
  - PATH variable 30
  - prerequisites 4
  - quick start 4
  - scanning workstation 30

## J

- job properties
  - modifying 103
- jobs
  - creating 98
  - exporting 46
  - properties 103
  - running 101

## L

- log files
  - errors in 125
  - Process Scheduler 124
- logging
  - environment management agent 20
  - environment management hub 16
- logs
  - Process Scheduler 97
  - upgrade logs 103

## M

- manageable components
  - crawling 10



- applying with database compare or copy 72
  - applying without database compare 69
  - change log 65
  - discovering 59
  - for Change Assistant 11
  - logs 59
  - process 12
  - Update Wizard *See* Update Wizard
- Update Wizard
  - understanding 59
- updating scripts 119
- upgrade
  - types 49
- upgrade environment
  - creating 93
  - database settings 95
  - deleting 98
  - general settings 93
  - importing and exporting 97
  - Process Scheduler settings 96
  - setting up 93
- upgrade jobs
  - creating 98
  - running with Change Assistant 101
- upgrade logs
  - viewing 103
- upgrade process 89
- upgrades
  - orientation 49
  - process 13
  - remote agents 98
- upgrade template
  - downloading 91
- upgrading applications
  - change packages *See Also* change packages
- upload environment 57

## V

- validate 36
- viewing scripts 103
- viewing upgrade logs 103

## W

- WebLogic
  - starting environment management hub on multiple servers 17
  - stopping environment management hub on multiple servers 18
- web services 34
- WebSphere
  - starting environment management hub on multiple servers 18
  - stopping environment management hub on multiple servers 19

## X

- XML files
  - Change Packager output 82

## Z

- z/OS
  - configuring/starting the environment management agent 27