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PeopleSoft Application Management Plug-in 13.4.1.1.0 for Oracle Enterprise Manager 13c Implementation Guide

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PeopleSoft Application Management Plug-in 13.4.1.1.0 for Oracle Enterprise Manager 13c
Implementation Guide
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Chapter 1

Getting Started with PeopleSoft Application Management Plug-in

Understanding PeopleSoft Application Management Plug-in

The PeopleSoft Application Management Plug-in uses Oracle Enterprise Manager to provide an integrated, graphical user interface for monitoring and managing components of a PeopleSoft environment.

The entities that Enterprise Manager monitors and manages are called *managed targets*, which are separately manageable and named entities within the enterprise, such as databases, application servers, Process Scheduler servers, web servers, and so on.

The Oracle Enterprise Manager product includes the Management Agent, Oracle Management Service, Management Repository Database, and the Cloud Control Console, which is a browser-based central console through which administrators can perform monitoring, administration, and configuration tasks for the enterprise.

Common Terms Used in This Book

Administrator Account	Administrator accounts provide users permission to perform administrative tasks and access administrative information. You can set up each administrator account to have its own privileges and notification rules. There are two types of administrator accounts: • Super Administrator • Administrator
Incidents	Indicates a potential problem; either a warning or critical threshold for a monitored metric has been crossed. An alert can also be generated for various target availability states. Enterprise Manager provides various options to respond to Incidents. Administrators can be notified automatically when an alert triggers and can set up corrective actions to resolve an alert condition automatically.
Beacon	A special target installed on an agent that runs a defined service test and reports the results to the Oracle Management Service to determine the status and performance of a service.

Dashboard	Presents information using intuitive icons and graphics that let you spot recent changes and quickly identify and respond to problems.
Discovery Process	The process of identifying and registering targets in Enterprise Manager so that they can be monitored and managed from the Enterprise Manager console. Targets are discovered one host at a time.
Enterprise Manager Cloud Control Console	The Oracle Enterprise Manager web-based user interface for centrally managing the entire PeopleSoft environment. It can be accessed from a client workstation running a browser that meets the minimum client requirements of the Enterprise Manager.
Management Agent	A process deployed as binaries on each of the monitored hosts. It is responsible for monitoring all targets in the host, communicating the information to the middle-tier management service, and managing and maintaining the host and its targets.
Management Repository	This is an Oracle database that contains all the available information about administrators, targets, and applications managed within Enterprise Manager. Captured data is uploaded to the repository through the Oracle Management Service. The Repository organizes the data and makes it available for retrieval—allowing the data to be shared between any administrators accessing the Cloud Control Console.
Oracle ADF	This is a Java EE framework for building enterprise applications through a visual and declarative development experience.
Oracle Management Service	A web application (J2EE-compliant) that renders the user interface for the Oracle Enterprise Manager Cloud Control Console. It works with all management agents to process monitoring and job information, and uses the Management Repository as its data store. The Oracle Management Service (OMS) runs within the Oracle WebLogic Server layer of the framework.
PeopleSoft System	A group of targets that are associated with a particular PeopleSoft application database. Depending upon how many PeopleSoft applications you have installed, you may have multiple PeopleSoft Systems to manage.
PeopleSoft Global Unique Identifier (GUID)	A unique identifier for each PeopleSoft database. The GUID ties each target to a specific database and defines all targets referencing the same database GUID as a system. The GUID is generated and stored at the database layer. During the discovery process, the application server connects to the PeopleSoft application database and retrieves the GUID for that database. This value is derived from the PeopleTools PSOPTIONS table.

Region	A region is a visual box with a title that can be expanded and collapsed. Regions can have charts, tables, label and value pairs, Chiclets, standard web widgets, and other UI elements.
Rules	Define the desired behavior or characteristics of systems. By using preconfigured or custom rules, automated assessments of systems and applications are performed. Through violation messages, you are notified of any deviations, such as inappropriate settings or incorrect system configurations.
Preferred Credentials	Simplify access to managed targets by storing target login credentials in the Management Repository. With preferred credentials set, users can access a target that recognizes those credentials without being prompted to log in to the target's host machine. Preferred credentials are set on a per user and per target basis, ensuring the security of the environment.
Service	An entity that models a business process or application. Examples of services are HCM applications, online banking, and email services. You can define services by creating one or more service tests that simulate common end-user functions. Using these service tests, you can measure the performance and availability of critical business functions, receive Incidents when there is a problem, identify common issues, and diagnose causes of failures.
System	A set of targets (hosts, databases, application servers, and so on) that function together to host one or more applications or services.
Super Administrator Account	Can manage all other administrator accounts and set up all administrator credentials. In addition, the super administrator can:

- Create privileges and roles.

- Perform the initial setup of Enterprise Manager.

- Add targets to Enterprise Manager.

- Perform actions on targets in the system.

Note: Enterprise Manager is installed with a default super administrator account named SYSMAN. You use the SYSMAN account for the initial login to Enterprise Manager. Then, create new super administrator accounts as needed in your system.

Train	The train is a guided workflow or wizard that walks users through a sequence of steps by stringing together a series of pages.The objective of these steps is to guide users through the task of achieving a specific goal.

Topology Viewer	Enables you to view the relationships between targets within the context of a system. You can perform some management actions from this view.

Features of the PeopleSoft Application Management Plug-in

The PeopleSoft Application Management Plug-in:

- Installs into and integrates with the Oracle Enterprise Management System.

- Discovers and registers PeopleSoft targets.

- Monitors and manages PeopleSoft targets, which includes viewing performance metrics and performing actions such as start, stop, configure, and other specific tasks relevant to each target type.

- Submits and monitors Process Scheduler requests.

- Displays configuration data in a graphical user interface driven by metadata.

  This ensures that you enter appropriate values and helps limit potential errors in configuration.

- Provides log management for PeopleSoft targets, including the ability to search, view, export, and purge log files.

- Creates a PeopleSoft system in Enterprise Manager based on the database.

  This enables you to group all the targets in the system related to a PeopleSoft application database.

- Generates a graphical topology that displays the relationships between targets.

- Creates a *service* that simulates a transaction, such as login and logout, to monitor the availability of an application.

  Using the Enterprise Manager Service Level Monitoring feature, you can also check the availability of a system or a feature of an application.

  The PeopleSoft Application Management Plug—in delivers a login and logout transaction service for a PeopleSoft system.

- Provides custom Compliance rules to evaluate configuration data for PeopleSoft target types.

Managing User Accounts

Defining user access for the Enterprise Manager and the PeopleSoft targets is important and should be considered prior to installing the PeopleSoft AMP to ensure you are aware of all the implications of the options. The options for managing the user accounts you use for installing, configuring, and implementing the PeopleSoft AMP are discussed in detail in the installation instructions.

See Also

Installation Guide: PeopleSoft Application Management Plug-in 13.4.1.1.0 for Oracle Enterprise Manager 13c.

PeopleSoft Application Management Plug-in Installation

You install the PeopleSoft Application Management Plug-in after you have installed the Oracle Enterprise Manager software and PeopleTools.

For detailed information about Enterprise Manager features, benefits, documentation, and downloads refer to the Oracle Enterprise Manager 13c overview page on the Oracle Technology Network.

For information related to the version of Oracle Enterprise Manager Cloud Control software that is required for the PeopleSoft Enterprise Manager Plug-in, see the PeopleSoft certification information posted on My Oracle Support.

See, Oracle Enterprise Manager Cloud Control Documentation 13c Release 1

PeopleSoft Target Discovery

After you have installed all of the required software, you can begin the discovery of the PeopleSoft targets. PeopleSoft targets refer to the elements of a PeopleSoft environment, such as an application server, application database, PeopleSoft website, and so on.

The discovery process identifies and registers PeopleSoft targets in Enterprise Manager so that they can be monitored and managed.

Discovery is the process of searching for and registering PeopleSoft targets so that Enterprise Manager can monitor and manage them. It is the first step to be performed after you have installed all of the required software.

During this process, you use a series of Enterprise Manager screens to:

- Select the target types to be discovered.

- Enter credentials so that Enterprise Manager has access to the host where discovery is to be performed.

- Register the discovered targets in Enterprise Manager.

- Enter the information required to connect to the PROCESSREQUEST web service.

- Identify and register the Process Monitor target.

- Set environment variables needed to connect to the PeopleSoft application database.

- Identify and register the associated application database.

- Review the registered targets.

Understanding PeopleSoft Target Types

After the PeopleSoft targets have been discovered you can begin monitoring and managing PeopleSoft systems and targets. Concepts and tasks relating to systems and targets are discussed in individual chapters devoted to each target type.

PeopleSoft Target Types

The following PeopleSoft specific target types allow monitoring and management of a PeopleSoft environment:

PS Application Database (PS App DB)

Refers to the PeopleSoft application database running the application, such as CRM or HCM. There can only be one PeopleSoft application for each installed application database.

PS Application Server Domain

Key target type of a PeopleSoft environment. It does all of the complex logic and computations and builds the contents that the web server uses to display pages.

PS Process Scheduler Domain

Enables batch job scheduling and processing.

PS Process Monitor

Enables you to monitor and submit processes configured to run on a Process Scheduler server.

PS PIA

Allows Enterprise Manager to manage the PIA component. It corresponds to a *Web domain* in Weblogic, *server* in WebSphere.This target type contains one or more PS Web Site targets.

PS Web Site

Comprises the specific web application and its corresponding HTML files, image files and resource files. It also includes configurations and page content. PS Web Site targets always belong to a PS PIA target.

Chapter 2

Understanding PeopleSoft Application Management Plug-in Pages

Understanding PeopleSoft Application Management Plug-in Pages

This section discusses:

- The Enterprise Manager homepage.

- The All PeopleSoft Targets homepage.

- The common elements used on the PeopleSoft target domain pages.

Understanding the Enterprise Manager Homepage

The Enterprise Manager homepage gives you a high-level view of the overall status of all the targets being monitored. It summarizes key information, such as availability across all managed targets, open alerts, rule violations, and recent problems with job executions. Links on this page enable you to drill down to access detailed performance information.

The homepage is the first page that appears when you log on to Enterprise Manager.

Image: Oracle Enterprise Manager Homepage

This example illustrates the fields and controls on the Oracle Enterprise Manager Homepage.
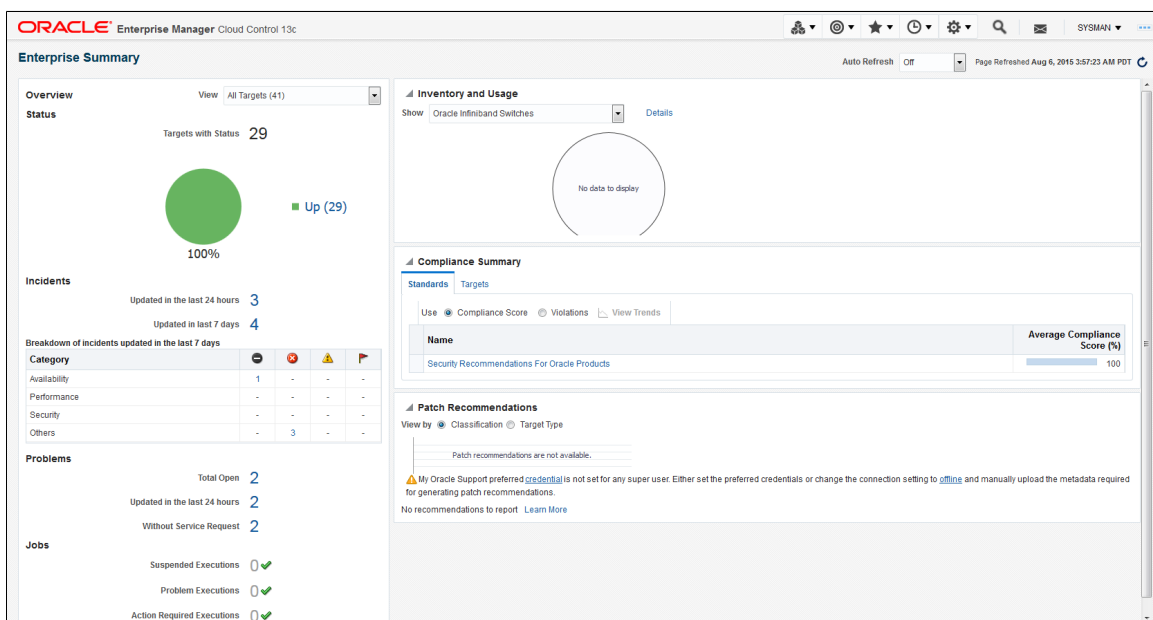
Understanding the All PeopleSoft Targets Homepage

The All PeopleSoft Targets page lists and displays the summary of all the PeopleSoft targets discovered and registered in Enterprise Manager. You can filter the view so that only specific target types are shown.

Access the All PeopleSoft Targets page to create, discover, organize, access, search, and monitor PeopleSoft targets (Targets >PeopleSoft).

Note: The target types that are displayed depend on the access rights or privileges that have been set for the user.

Image: All PeopleSoft Targets page

This example illustrates the fields and controls on the All PeopleSoft Targets page.
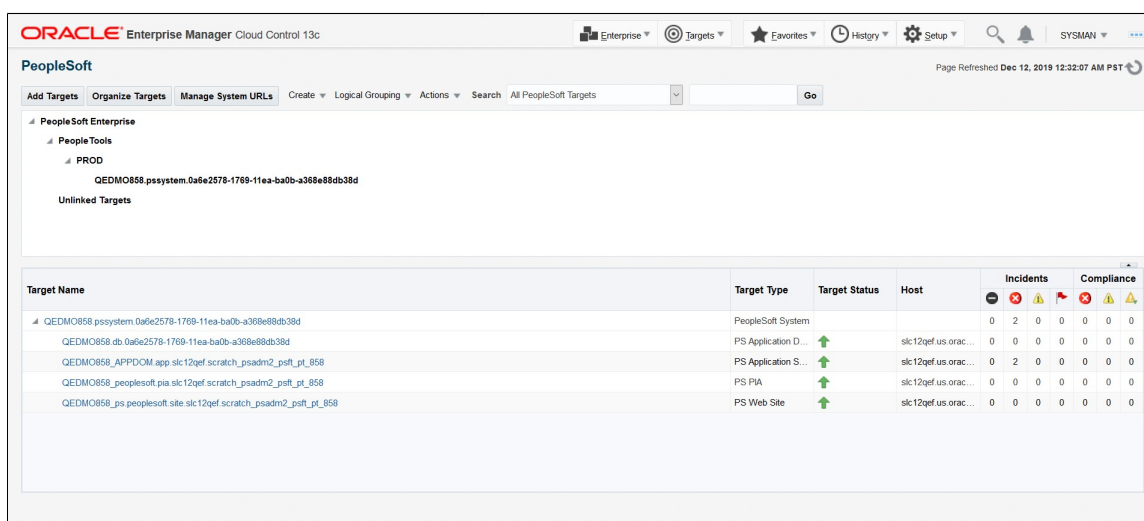
	Click this to show the most current status of the targets. .
Search	Select a target type to search for a specify target.
	For example, to search for only application server domains, select *PS Application Server Domain* from the Search list and then click Go.
Create	Use this to create an application server, process scheduler server, and PIA domain from the Enterprise Manager Console.
	The commands that is submitted from the Enterprise Manager are handled by an API layer that captures the commands and submits the appropriate, native, command line options on the host for the server type. For example, submitting the "configure domain" option in Enterprise Manager runs the following PSADMIN command:

```
psadmin -c configure -d domain
```

For more information about creating PS Application Server targets, see Creating PeopleSoft Application Server Domain Targets.

Logical Grouping	Click this to view the PeopleSoft targets by: • *Logical Group By Apps:* Displays the PeopleSoft targets according to the logical groups. Each target appears within an expandable node hierarchy grouped by PeopleSoft application or custom category in the order you choose. This enables you to easily identify and administer targets associated with a specific PeopleSoft application, such as HCM, or associated with a specific category of system, such as production, test, or demonstration. See Organizing PeopleSoft Targets. • *Host Based Grouping:* Displays the PeopleSoft targets according to the host on which they run. Each target appears within an expandable node representing the host. For example, if you need to bring down a server host for maintenance, you can view by host to identify the targets affected. **Note:** PeopleSoft targets not belonging to any logical group appear under Unlinked Targets. If, for example, a PS Application Database with child targets is removed from the environment, the system moves the child targets to Unlinked Targets to indicate that they are "orphaned." **Note:** Just after discovery, PeopleSoft targets may appear under Unlinked Targets until after a successful configuration collection.
Actions	Click this to start, stop or remove selected PeopleSoft targets.
Add Targets	Click this to discover and register all valid PeopleSoft targets of your host in Enterprise Manager. See, Adding Targets and Understanding the Discovery Process.
Organize Targets	Click this to access the Setup Logical Grouping page, where you can customize how PeopleSoft targets are grouped and displayed. For more information about organizing targets, see Organizing PeopleSoft Targets.
Target Name	Lists the targets discovered.
Target Type	Specify the target types. For more information about target types, see Understanding PeopleSoft Target Types.

Target Status	Specifies whether the target is running or has stopped.
Host	Specifies the host URL on which the target is running.
Incidents	Displays incidents that are generated. An alert is generated when a metric threshold value is reached. The most recent alerts are listed first. By clicking a specific alert message, you can drill down to explicit details about the metric in the alert.
Compliance	Delivers the rules and standards and deviations to system or application. For example, deviations about inappropriate settings and incorrect system configuration will be displayed.
Framework	Click to displays the industry-specified best practices guideline that deals with the underlying IT infrastructure, applications, business services, processes and how they are organized, managed, and monitored.
Standard	Click to displays the EM's representation of a compliance control that must be tested against some set of IT infrastructure to determine if the control is being followed.
Incidents	Displays incidents that are generated. An alert is generated when a metric threshold value is reached. The most recent alerts are listed first. By clicking a specific alert message, you can drill down to explicit details about the metric in the alert.

Creating PeopleSoft Targets

On the All PeopleSoft Targets homepage, click the Create tab.

Image: All PeopleSoft Targets - Create Tab

This example illustrates the fields and controls on the All PeopleSoft Targets page - Create list. You can find the definition of the fields and controls later on this page
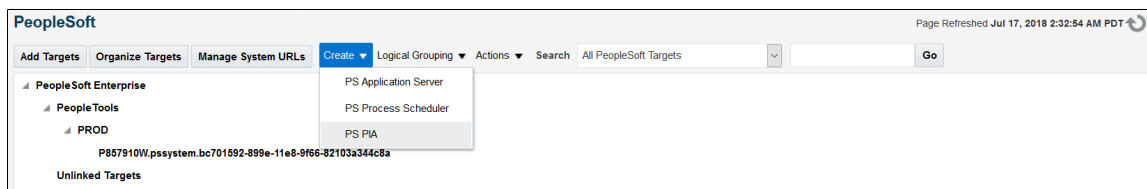
PS Application Server	See Creating PeopleSoft Application Server Domain Targets.
PS Process Scheduler	See Creating PS Process Scheduler Domain Targets.
PS PIA	See Creating PeopleSoft PIA Domains Target.

Adding Targets

The first discovery process should be run on a host containing any of the Tuxedo-based domain targets, which are PS Application Server and PS Process Scheduler. The host should have the same time zone

as the PS Application Database to which it's connected, and the same timezone of most of the other PeopleSoft servers or hosts. During this initial discovery, the system expects that the PS Application Database will be also be discovered.

The PeopleSoft Application Management Plug—in can monitor only PS Application Databases from Tuxedo domain targets that are in the same timezone. When the database is registered in Enterprise Manager, it must be the database of most of the Tuxedo domain targets.

For example, assume you have a PeopleSoft environment with four UNIX servers with PS Application Server domains in one timezone and one Windows server with a Process Scheduler domain in another timezone. You should execute the first discovery on one of the four UNIX servers. You should not execute the discovery first on the Windows server.

Note: You must first set up the preferred credential for the host before starting the discovery.

To add targets, follow these steps:

1. Select Targets > PeopleSoft. >Add Targets.

   Image: Add PeopleSoft Targets : Discovery Inputs page

   This example illustrates the fields and controls on the Add PeopleSoft Targets : Discovery Inputs page. You can find definition for the fields and controls later on this page.

   From this page, you can select one or more target types for the discovery process running on a single host.

PeopleSoft Target Types	All target types are selected by default. The PS_HOME/PS _CFG_HOME target check box cannot be cleared because Enterprise Manager must discover it first to establish the basis of the PeopleSoft system. When the PS_HOME and PS_CFG_HOME directories are found, the search continues for any PeopleSoft targets present (for example, an application server, web server, Process Scheduler, and so on).
	A PS Web Site cannot be registered without a parent PS PIA target having been registered in a current or a previous discovery process.

Note: Beginning with PeopleTools 8.50, with decoupled PIA_HOMEs and PS_CFG_HOMEs, provide the path to PS_CFG_HOME or PIA_HOME. If PS_HOME is secure (read-only) it may not contain any targets. The discovery process will discover all the selected targets in the specified path.

Host

Select the host on which your desired targets run. The system verifies that you have entered a valid host.

Note: The list of hosts only displays those hosts on which Enterprise Manager agents have been installed and registered with the OMS. By default, the system displays all hosts on which a registered Enterprise Manager agent exists, regardless of whether any PeopleSoft elements have been installed on that host.

Discovery Path

Enter the paths from which the search (crawl) should begin. Separate multiple paths with a semicolon.

The path should include PS_HOME, PS_CFG_HOME, and PIA_HOME, (as appropriate for your installation). A path with spaces should be enclosed with double quotes. For example:

"c:\Program Files(x86)\psft\pt\853"

Note: The discovery path does not support UNC mapping. The discovery path should contain only local drives. The PeopleSoft AMP does support a remote/shared read-only PS_HOME (with a UNC path) for Windows (on PeopleTools 8.50 or later). PS_CFG_HOME should be a local folder and provided in the discovery path. If the PS_CFG_HOME points to a remote PS_HOME (UNC path), PeopleSoft AMPdiscovers it.

Crawl Depth

Specify the number of nested directories that an agent crawls during the discovery process. The default is 2.

Crawl depth applies to each directory entered in the discovery path. For example, if you specify a value of 3 and have more than one discovery path listed, the agent searches 3 levels in each directory.

2. Click Next. to enter the credentials for the host machine on which you want to run the discovery process.

   You can either choose a preferred or a named credential for the selected host. The credential appearing on this screen would become the preferred and monitoring credential of the target.

Note: This credential for the host must match the user ID of the user who installed the PeopleTools environment on the host.

Click Next to view the discovery result on the Add PeopleSoft Targets : Discovery Results page.

3. Select a target and click Next to display the PeopleSoft targets whose databases are discovered.

    The Add PeopleSoft Targets : Discover Database page appears showing a list of targets for which environment variables may need to be set.

4. On the Add PeopleSoft Targets : Discover Database page, specify any required environment variables.

    Image: Discover Database page

    This example illustrates the fields and controls on the Add PeopleSoft Targets : Discovery Database page. You can find definition for the fields and controls later on this page
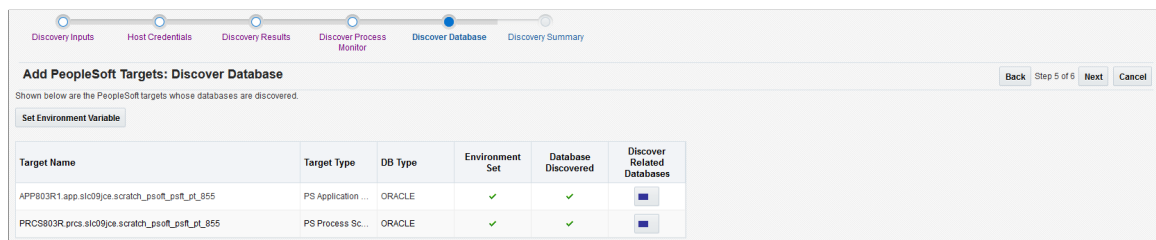
    Select a target and then set the parameters.

Set Environment Variables	Click to configure settings that enable connection to an application database.
	See Setting Environment Variables.
Target Name	Name of the PS Application Server Domain or Process Scheduler Domain that can have a PS Application Database.
	This value displays as a link to the target homepage, which you can select to open in a new window.
Target Type	The type of target being registered.
DB Type	The type of database to which the target is connecting.
Environment Set	Shows a green check mark when environment variables have been set for the database (if required for a specific database type). Shows a red X when environment variables have not been set.
	The environment variables referred to in this field are database connectivity parameters and vary depending on the database type.
Databases Discovered	Shows a green check mark when the application database is successfully discovered which means that Enterprise Manager can collect configuration data from the target and collect the PeopleSoft GUID from the application database.

Shows a red X when discovery is unsuccessful. Possible reasons are:

- The environment variables have not been set correctly. Verify them on the Set Environment Variables page.

- The database information is incorrect. Select the target to open it in a new window. Select the Administration tab, then Configure Domain to display configuration data. Validate database information here.

- The configuration collection has failed. Select the link for the target in the Name column. The target homepage appears where you can check for metric collection errors displayed above the Incidents section.

Discover Related Databases   Click this icon to initiate discovery.

5. Click OK on the Add PeopleSoft Targets : Discovery Summary page.

    Image: Discovery Summary page

    This example illustrates the fields and controls on the Discovery Summary page.
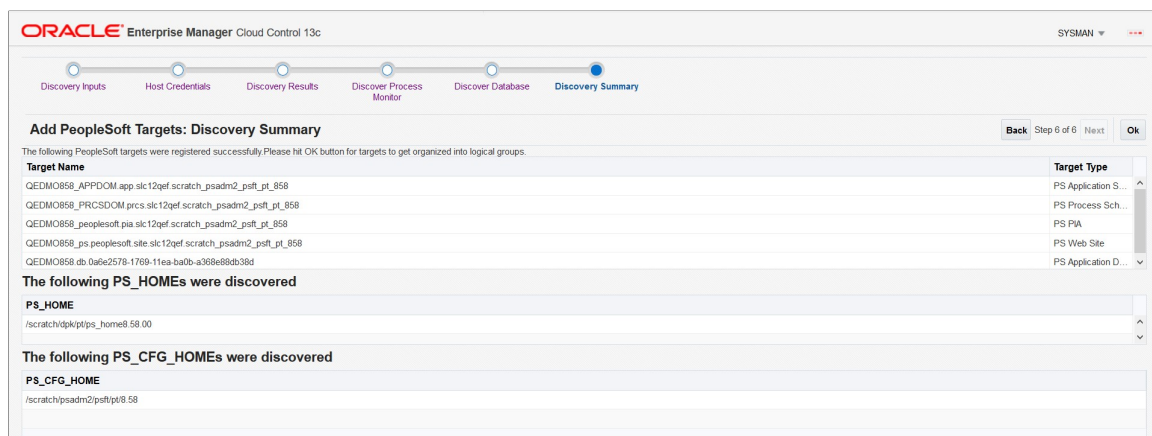
    This registers the targets and the target discovered appears on the All PeopleSoft page.

Note: When the Percentage of Memory Growth parameter in the [PSAPPSRV] section of the application server domain configuration file (psappsrv.cfg) is uncommented, then the parameter needs to be uncommented in the corresponding metadata file, psappsrv.cfx, as well. This will ensure successful discovery of the PS Application Server Domain Target and Application Database Target when this parameter is uncommented.

Note: For Solaris platforms, to ensure successful discovery, unset LD_LIBRARY_PATH_64 environment variable. Do this by adding `unset LD_LIBRARY_PATH_64` to the .profile or in the `psemenv.sh` script accordingly.

Note: For Windows platform, use the same user name as the host to log on. The discovery fails if the user enters the domain_name\user_name to log into the host.

Setting up Preferred Credential

To set up the preferred credential:

1. Select Setup, Security, Preferred Credentials.

2. Click a host to set the preferred credential.

Working With Target Naming Conventions

Enterprise Manager requires that all discovered targets be assigned a unique name that serves as the target's key.

Target Type	Naming Convention	Example
PS Application Database	<DBName>+db.+<PeopleSoft GUID>	CRMPRD.db.66ce0b93-85bb-11d9-92af-fa37c30c4526 where DBName = CRMPRD GUID = 66ce0b93-85bb-11d9-92af-fa37c30c4526
PS Application Server Domain	<domain>+app+<host>+<PS_HOME>	CNVCRM.app.server1.usr_local where domain = CNVCRM Host = server1 PS_HOME = /usr/local
PS Process Scheduler Server Domain	<domain>+prcs+<host>+<PS_CFG_HOME>	CNVCRM.prcs.server1.usr_local
PS PIA using WebLogic or WebSphere	<PIA domain name>+pia+<host>+<PS_HOME>	peoplesoft.pia.server1.usr_local where PIA domain name = peoplesoft
PS Web Sites using WebLogic or WebSphere	<site name.PIA domain name>+site+<host>+<PS_HOME>	ps.peoplesoft.site.server1.usr_local where site name = ps
PS Process Monitor	prcs-mntr.<protocol>.<host>.<port>.<wsdl file name>	prcs-mntr.http.pta137.10180.PROCESSREQUEST_1_wsdl

Additional naming conventions:

• If the host name has the fully qualified DNS name, the name server1.peoplesoft.com becomes server1.

- A Windows path, for example C:\ptinstall\appserv, becomes c_ptinstall_appserv. Any dots (.) or colons (:) are removed, and backslashes (\) and spaces are replaced with an underscore (_).

Related Links

Understanding the Discovery Process

Organizing PeopleSoft Targets

Access the Setup Logical Grouping page to customize how PeopleSoft targets are logically grouped and displayed. (Click the Organize Targets tab.)

Image: Setup Logical Grouping

This example illustrates the fields and controls on the Setup Logical Grouping page.
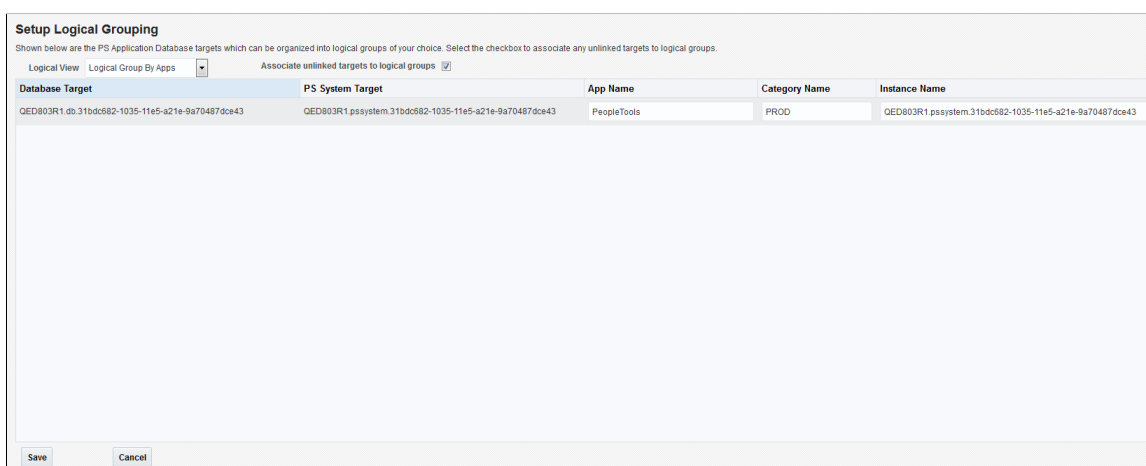
Logical View	Enables you to determine how the PeopleSoft targets will be grouped on the All PeopleSoft Targets page. The selection you choose determines the value of the View drop-down

• Logical Group by Apps: When selected, the PeopleSoft targets will be grouped by the App Name value as specified on this page. That is, they will be grouped first by App Name and then by Category Name.

• Logical Group by Category: When selected, the PeopleSoft targets will be grouped by the Category Name value as specified on this page. That is, they will be grouped first by Category Name and then by App Name.

Note: After PeopleSoft targets are discovered for the first time, Logical Group by Apps is enabled. |
| **Associate unlinked targets to logical groups** | Select to add any targets currently under the Unlinked Targets category to your logical groups, based on the unlinked target's association with an existing database. |
| **Database Target** | Displays the database target ID for the database associated with a system. |

PS System Target   Shows the system target ID associated with a specific
                                   PeopleSoft system.

App Name   Enables you to modify display names for PeopleSoft application
                                   targets. By default, the system gathers this information from the
                                   database type, showing *PeopleTools, HCM, CRM,* and so on.
                                    If you want to modify this value, use the App Name edit box
                                   to add your custom value. Make sure use a consistent naming
                                   convention.

Category Name   Enables you to modify display names for PeopleSoft application
                                   targets. By default, the assigned category name is *PROD* (for
                                   Production), but you may want to add values such as *TEST,
                                    DEMO,* and so on. If you want to modify this value, use the
                                   Category Name edit box to add your custom value. Make sure to
                                   use a consistent naming convention.

Instance Name   Defaults to the PS System Target ID value, such as *Q852107R.
                                   pssystem.22af5ff2-4af9-11e0-9d38-91c7730a9ea8.* If you'd like
                                   to modify this value, use the Instance Name edit box to add your
                                   value. You might consider just using the database name, or some
                                   other shorter value.

Save   You must click Save for any changes, including Logical View
                                   selection to take effect.

Common Elements on Targets Homepages

This section describes the following common elements that appear on PeopleSoft target home pages:

- Monitoring

- Control

- Job Activity

- Information Publisher Reports

- Performance

- Configuration Management

- Domain Management

- Log Management

- Configuration

- Compliance

- Target Setup

- Target Information

Note: Not all elements will appear on every target homepage. For example, some elements appear only for database targets, while others appear only for Process Scheduler targets.

Monitoring

This table lists the common elements that are available for monitoring targets.

All Metrics	Click this to display all of the metrics defined for the target.
Metrics and Collections Settings	Click this to display the metric thresholds and collection interval for the target.
Metrics Collection Errors	Click this to view the details about the errors encountered while obtaining target metrics. This helps to get the detail of the metric that do not represent the performance of the target accurately.
Status History	Click this to get information about target outages. This information is essential for troubleshooting target related incidents.
	For more information about status history, see *Oracle® Enterprise Manager Cloud Control Getting Started with Oracle Fusion Middleware Management Plug-in Release 13.4.1.1.0*, "Discovering and Monitoring Oracle Business Intelligence Instance and Oracle Essbase", Viewing Target Status and Availability History.
Incident Manager	Click this to get details about the various events, related to the PeopleSoft target, that negatively impact any hardware or software component. These events require user action. The details provided by this section, such as the incident summary, severity, target, target type, and so on, are essential for troubleshooting.
Alert History	Click this to displays a complete alert history of the target.
Blackouts	Click this to displays the blackouts that have been defined for the target history. You can also set up a blackout from this page.

Control

Click this to create or end blackouts.

Blackouts allow Enterprise Manager users to suspend management data collection activity on one or more managed targets. For example, administrators use blackouts to prevent data collection during scheduled maintenance or emergency operations. By blacking out the server, alert notifications are not sent.

Job Activity

Access this to search for a particular job and retrieve job details such as the owner, status, scheduled start time, and so on. From this page, you can perform target job administration tasks, such as creating, editing, suspending, and resuming a job.

Information Publisher Reports

Access this page to get the summary of the Service Level Agreement Compliance, Actual Service Level Achieved, Key Performance and Usage Metrics, and Status of Key Components.

Performance

Access the Performance page from the PeopleSoft application domain list.

The Performance page gives you a snapshot of the performance of the domain by displaying a graphical view of the domain's:

Note: This is an example from PS Application Server Domain Target.

- Host CPU usage.

- Host memory usage.

- Disk input/output utilization.

- Average number of queued processes per domain server process.

- PSAPPSRV handler counts.

- Total number of Tuxedo connections.

Use the View Data dropdown list to modify the time frame of the display. For example, you can view the last 24 hours, last week, last month, and so on.

If the PUBSUB (Integration Broker server processes) feature is not active, the graphs for Broker, Subscriber, and Publisher are blank.

The CPU and memory utilization shown on the PS Application Server Domain Performance page includes more detailed information than that on the homepage.

The frequency of the disk I/O (read/write frequency) indicates how much the application server is caching —this value may reflect the performance of the application. It also includes writing to log files.

The amount of queuing on the main processes of a PS Application Server Domain indicates if the defined handlers are sufficient for the domain. Larger queues cause a slow response on application functions, and this could indicate that more handlers or domains are required to handle user requests.

Note: A statement of no data found may appear in the graphic region. This occurs because there is no target data available in Enterprise Manager when this graph is rendered.

For more information about changing the view of performance data, see Enterprise Manager documentation.

Configuration Management

This table lists the common elements that are available for managing configuration of targets.

Configure Domain

Click this to access the Configure Domain page to edit domain configurations.

See the product documentation for *PeopleTools: System and Server Administration*, "Working With Domain Configurations"

- If this domain is up *and* the Allow dynamic changes property is selected, only dynamic fields can be edited. All others are disabled.

- If this domain is down, all fields are enabled.

  From the Configure Domain page, you can select Configure Environment Variables to edit settings that establish the connection from the domain to the application database. Depending on the database type of the domain, there are required, default environment settings shown for which you need to provide the appropriate values.

- Configuration details region.

  - Move the mouse over the information icon to display a description of the field.

  - If the dynamic icon is present, it means that the field is dynamic and a restart of the domain is not necessary if there were changes (and if the Allow dynamic changes option is set).

  - Enable check boxes display for some fields to accommodate any commented out properties within the configuration files. If desired, you can enable the commented out properties by selecting the check box.

See Setting Environment Variables.

Create Like Domain

Click this to import a domain from another PS Application Server Domain or PS Process Scheduler Domain. You can create a like domain only within the same host referencing the same PS_HOME.

Copy Configuration

Click this to copy configuration files from an existing domain to another domain within the same host. This overwrites the configuration files on the managed host.

Note: This feature does not work on domains that are currently running.

Discover Database

Click this to discover the Database associated with this target. This menu provides an alternate way to discover the database

target, if they did not get discovered in the main discovery workflow.

See Understanding the Discovery Process.

Domain Management

This table lists the common elements that are available for domain management of targets.

Start Domain	Click this to start an individual target. A serial boot starts server processes in a sequential order, with one process beginning to start after the previous process has completely started.
Start Domain (Parallel)	Click this to start server processes in parallel. This ensures shorter boot duration.
Stop Domain	Click this to shut down the domain and is equivalent to the normal shutdown option in PSADMIN.
Stop Domain (Forced)	Click this to stop an individual target. A forced shutdown is a non-quiescent shutdown that immediately terminates all of the processes in the domain. Use forced shutdown only when a Bulletin Board Liaison (BBL) process encounter errors and cannot be shut down normally.
Delete Domain	Click this to delete the domain on the host and remove it from Enterprise Manager. **Note:** The domain must be down before you can delete.

Log Management Page

Access the Log Management Page to:

• View log files.

• Search for strings in a log file.

• Add and remove log patterns.

Viewing Log File

Image: View Log File page

This example illustrates the fields and controls on the View Log File page. You can find definitions for the fields and controls later on this page.
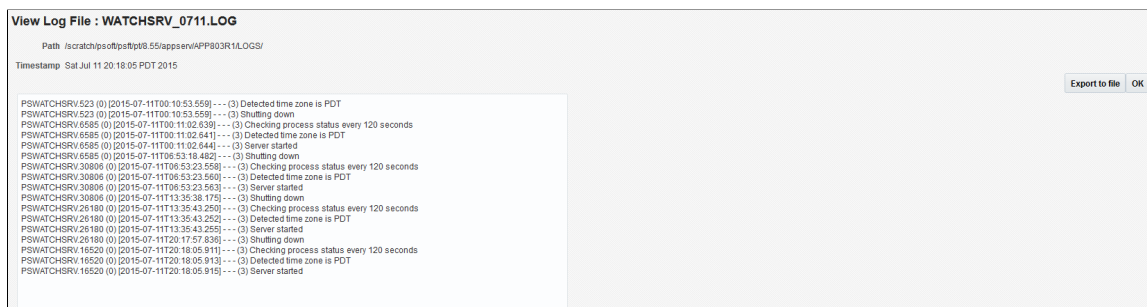
If you have searched for a string, you can also click the link by the line number or the string (in the results area) to display the View Log File page.

The initial view contains 500 lines and the string is the last one shown. Click Previous, Next, Top, or Bottom to navigate through the file.

The log filename is also available within the search results area.

Refresh	Click Refresh to refresh the screen.
Export to file	Click Export to File to export the log file. You can open the file in the Notepad or save the file to your workstation.

Searching for Strings in a Log File

To search for a string in a log file:

1. Click the file you want to search, using the radio button in the Select column.

2. Scroll to the bottom of the Logs page.

3. Enter the desired search string in the Search String edit box.

4. Click Search.

5. In the Search Results Cloud, review the instances of the search string found in the log file.

   Instances of the search string appear by line in the Search Results Cloud. The log information displayed includes the line number in the log file in which the string is found, the date and time, the server process involved, and the phrase or sentence containing the string.

Image: Logs page: Searching Log Files

This example illustrates the fields and controls on the Logs page: searching log files.

Line #	Date/Time	Process Name	Process ID	Text
5	N/A	PSWATCHSRV	6585	PSWATCHSRV.6585 (0) [2015-07-11T00:11:02.644] - - - (3) Server started
9	N/A	PSWATCHSRV	30806	PSWATCHSRV.30806 (0) [2015-07-11T06:53:23.563] - - - (3) Server started
13	N/A	PSWATCHSRV	26180	PSWATCHSRV.26180 (0) [2015-07-11T13:35:43.255] - - - (3) Server started
17	N/A	PSWATCHSRV	16520	PSWATCHSRV.16520 (0) [2015-07-11T20:18:05.915] - - - (3) Server started

Search String server started   Search
Filename: WATCHSRV_0711.LOG
Search Results

Date and Time fields refer to the Date and Time log within the file and not the timestamp of the file.

Setting up Log Management

On the Logs page, click the Log Management Setup link to display the Log Management Setup page where you can define the log file types to manage for each target. You can add and remove log file types as needed. From this page you can also schedule purge and archive jobs.

Image: Log Patterns page

This example illustrates the fields and controls on the Log Patterns page.

Log Patterns
These are the types of PeopleSoft logs for your target that you can manage. Add or Remove log types as necessary.

OK

Remove   Add   Schedule Purge and Archive Job

Log Paths and Patterns
/scratch/psoft/psft/pt/8.55/appserv/APP803R1/ULOG*.*
/scratch/psoft/psft/pt/8.55/appserv/APP803R1/stderr
/scratch/psoft/psft/pt/8.55/appserv/APP803R1/stdout
/scratch/psoft/psft/pt/8.55/appserv/APP803R1/LOGS/*.LOG
/scratch/psoft/psft/pt/8.55/appserv/APP803R1/LOGS/*.dmp
/scratch/psoft/psft/pt/8.55/appserv/APP803R1/LOGS/*.log
/scratch/psoft/psft/pt/8.55/appserv/APP803R1/LOGS/*.lp
/scratch/psoft/psft/pt/8.55/appserv/APP803R1/LOGS/*.mps
/scratch/psoft/psft/pt/8.55/appserv/APP803R1/LOGS/*.tracesql
/scratch/psoft/psft/pt/8.55/appserv/APP803R1/LOGS/*.trc
/scratch/psoft/psft/pt/8.55/appserv/APP803R1/LOGS/TUXLOG.*
/scratch/psoft/psft/pt/8.55/appserv/APP803R1/LOGS/peopletools_state*
/scratch/psoft/psft/pt/8.55/appserv/APP803R1/LOGS/process_state*
/scratch/psoft/psft/pt/8.55/appserv/core

Remove   Add

Configuration

This table lists the common elements that are available for configuration targets.

Last Collected	Click this to display the latest configuration data. The Last Collected Configuration link enables you to view from a central location key configuration metric and parameters for the target.
Compare	Click this to compare configurations of multiple nodes. This helps to identify performance bottlenecks caused by configuration changes.
Comparison Job Activity	Click this to monitor comparison job status.
Search	Click this to define the search criteria for configuration details across targets.
History	Click this to display the preserved configurations.
Save	Click this to save the configuration for a given target.

Saved   Click this to display the list of saved configurations for a given target.

Topology   Click this to display the topology configuration of the target type.

Compliance

This table lists the common elements that are available for viewing compliance of targets.

Results   Click this to evaluate the compliance of PeopleSoft targets and systems for configuration, security, and storage. In addition, compliance results provide advice on how to change configuration to bring the PeopleSoft targets and systems into compliance.

Standard Associations   Click this to associate the compliance standard for a target.

Real-time Observations   Click this to define a search criteria to query the compliance observations in the real time.

Target Setup

This table lists the common elements that are available for setting up targets.

Monitoring Configuration   Click this to display target properties such as domain name, PS_ HOME, and PeopleTools version.

Administrator Access   Click this to display access type and the privilege associated with the target. You can add an administrator to a target.

Remove Target   Click this to remove the current target from the system.

Add to Group   Click this to add a target to a group.

Properties   Click this to view and edit target properties.

Chapter 3

Discovering PeopleSoft Targets

Understanding the Discovery Process

Discovery is the process of an agent identifying predefined target types, registering them in Enterprise Manager, and collecting their target properties and initial configuration data. The agent sends this data to the Oracle Management Service, which processes the data and loads it into the Management Repository. From there, Enterprise Manager can access data about the target to monitor and manage it.

Note: Discovery requires that the Enterprise Manager user be assigned the role of a super administrator.

Understanding Steps in the Discovery Process

The following steps outline how to initiate the discovery of PeopleSoft targets:

- From the PeopleSoft homepage, click Add Targets where you select the target types to be discovered. Specify the host, discovery path for PS_HOMEs, PS_CFG_HOMEs, and PIA_HOMEs, and subdirectory crawl depth.

  See Adding Targets

- From the Target Credentials page, enter the credentials for the host where discovery executes.

- Select a target from the list of the PeopleSoft targets whose databases are discovered to register the specific target in Enterprise Manager.

- Enter the information required to connect to the PROCESSREQUEST web service.

- Identify and register the Process Monitor target.

- Set environment variables for platforms requiring them, and add a PeopleSoft application database (discovering a PS Application Database target).

  See Adding and Registering Targets.

Note: With the Logical Grouping feature, consider the implications of your choices on the final steps of the discovery process. In the final steps, the interface displays all the targets that the discovery process located. The note on that last screen mentions that you need to click the OK button for the discovered targets to become organized into Logical Groups for display on the All PeopleSoft Targets page. If the you do not click OK, then all the targets discovered will display within the Unlinked Targets node. You can organize the targets later into the correct logical grouping structure by using the Associate Unlinked Targets to Logical Groups option on the Setup Logical Grouping screen.

Understanding UNIX Login Shell Support

The PeopleSoft Application Management Plug—in supports the login shell for the user who installed PeopleTools or created domains. This requires the user profile (.profile) to be set prior to discovery of PeopleSoft targets. You must, first, setup the environment variables for PeopleSoft target discovery either in `.profile` or `psemenv.sh` script.

Login shell support provides these advantages:

- Automatic discovery of the PS Application Database.

- Setting environment variables for each Tuxedo-based domain is not required.

- Less environment related issues.

When using a login shell, consider the following:

- There is an additional step to create a user profile either in the `.profile` or `psemenv.sh` if one does not exist(if one does not exist).

- Only Bourne compatible shells (like sh, bash, and so on) are supported.

- Interactive login profiles are not supported.

Auto Discovery of Directly Discoverable Targets

The Auto Discovery feature enables you to automatically discover the targets. To discover the targets:

1. Login to Enterprise Manager

2. Navigate to Setup >Add Target >Configure Auto Discovery

   Image: Configure Auto Discovery

   Configure Auto Discovery
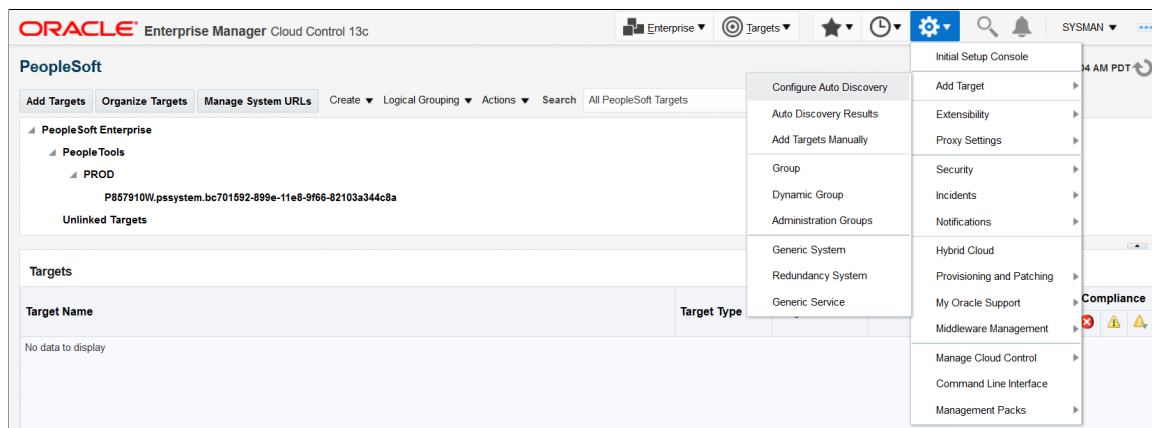
3. The Setup Auto Discovery Page Opens. Select the host and click on Discovery Modules.

Image: Setup Auto Discovery

Setup Auto Discovery page
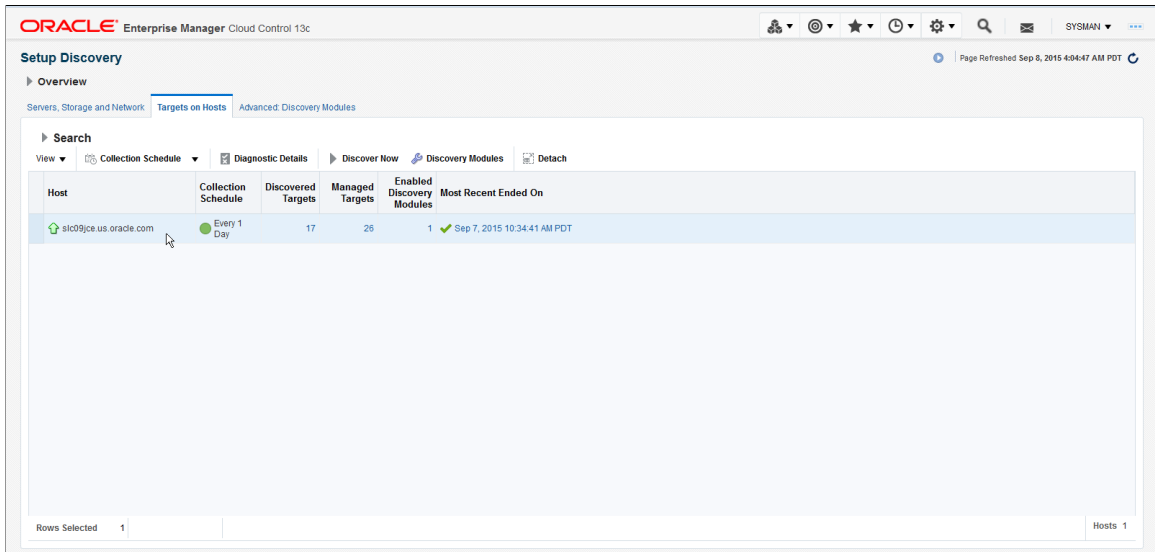
4. On the Discovery Modules Page, check the PeopleSoft Targets Discovery Module. As our intention is to discover just the PeopleSoft targets, the other modules can be disabled as they are not in our scope of interest at this point in time.

Image: PeopleSoft Targets discovery

PeopleSoft Targets discovery page
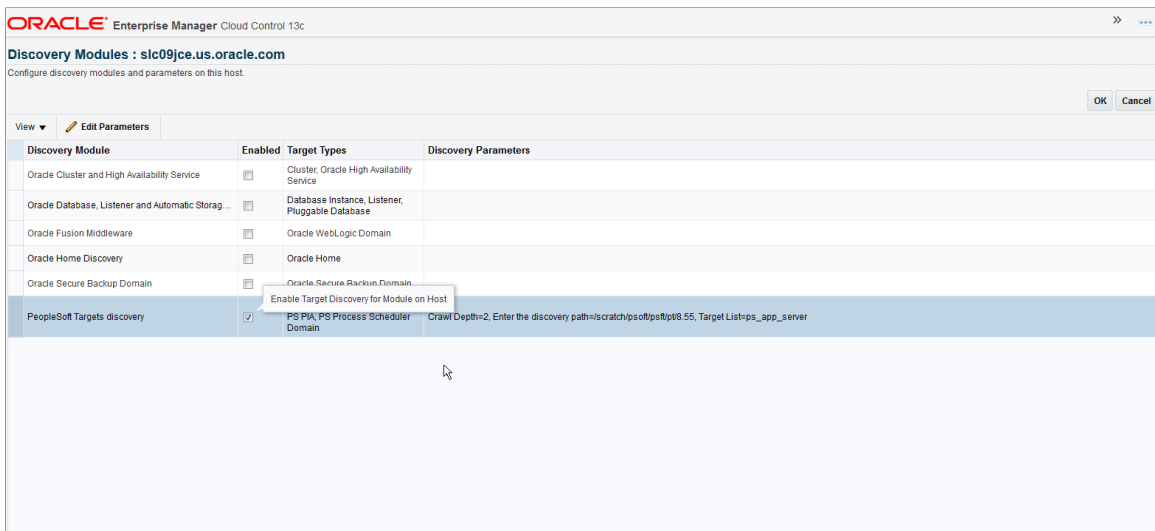
5. To Specify the Discovery Parameters, click Edit Parameters and fill out the required info (All Mandatory) as shown in the below screenshot as an example and click OK.

Image: Edit Parameteres

Edit parameters
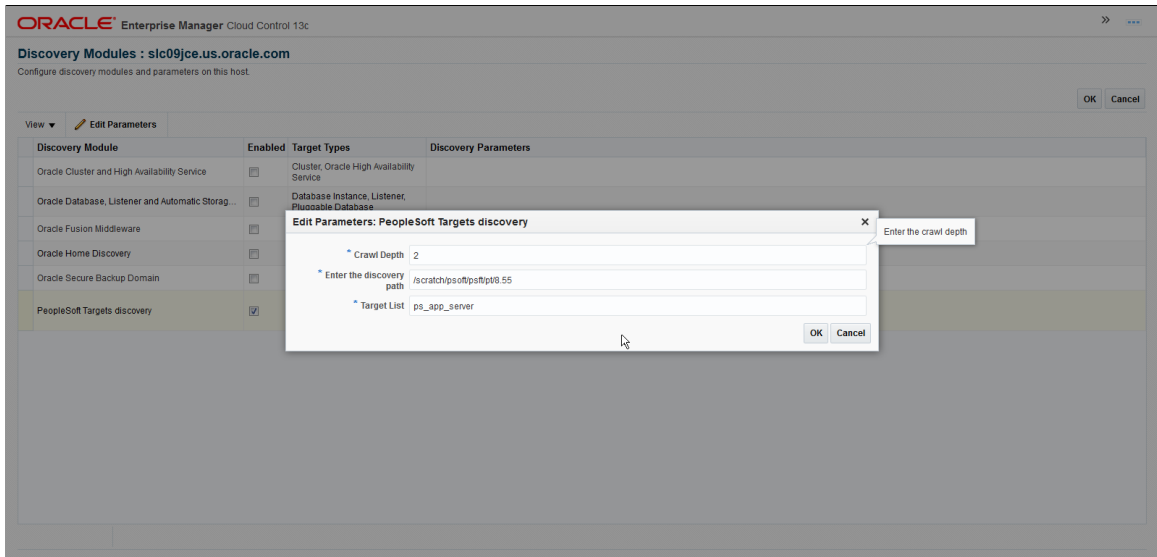
6. Navigate back to the Setup Discovery Page and click Discover Now.

Image: Discover Now

Discover Now
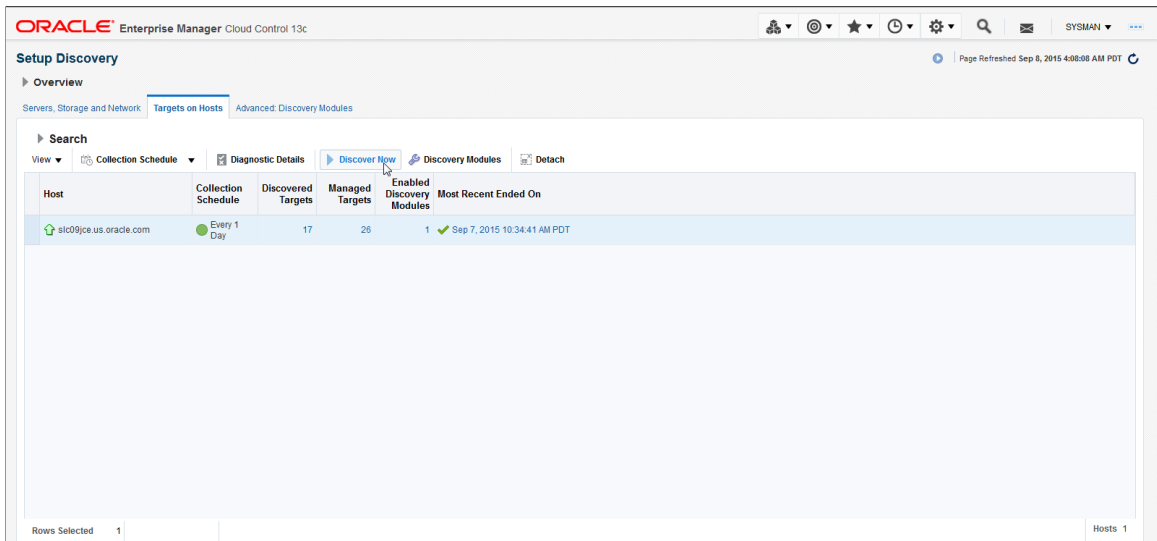
7. The Discover Now activity gets initiated.

Image: Discover Now — In Progress

Discover Now activity in progress
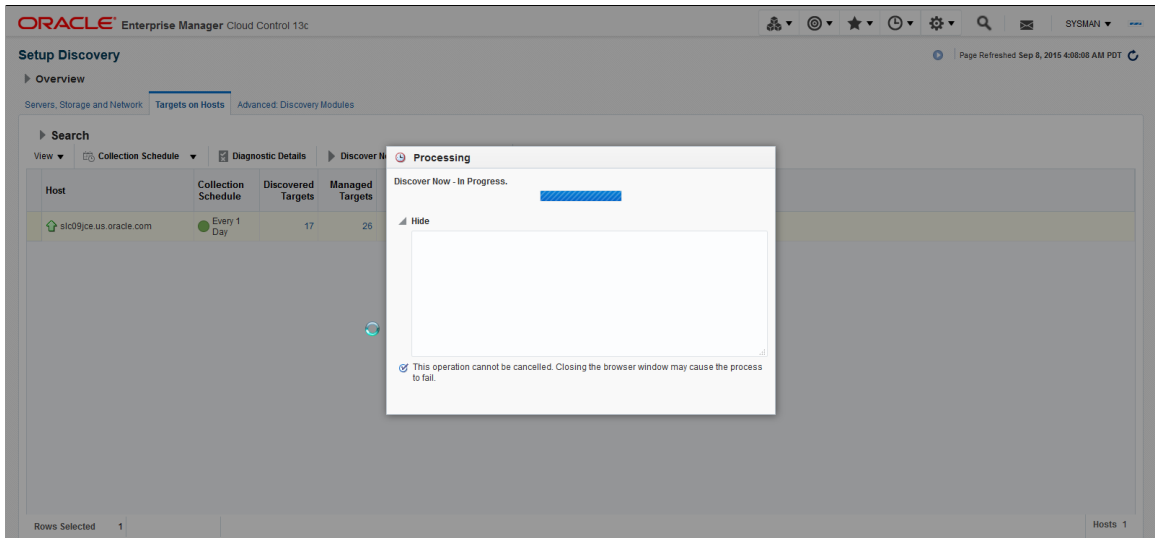
8. The Discover Now activity gets completed successfully.

Image: Discover Now — Completed

Discover Now activity completed.
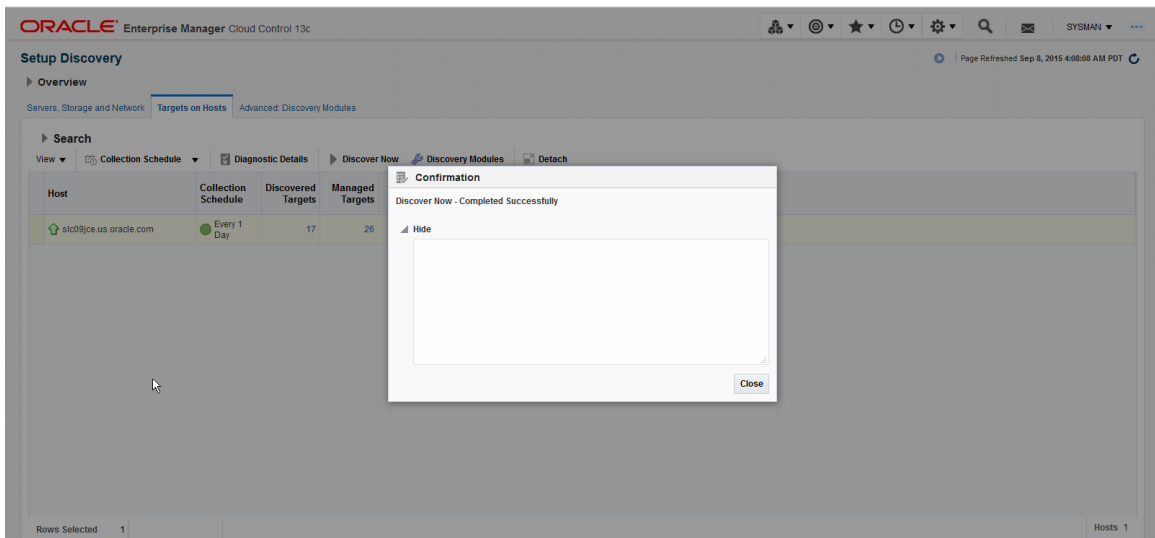
9. The results from this run of the discovery module can be seen in the Auto Discovery Results page that can be accessed by clicking on the link in Discovered Targets Column or via Setup >Add Target >Auto Discovery Results

Image: Auto Discovery results

Auto Discovery results
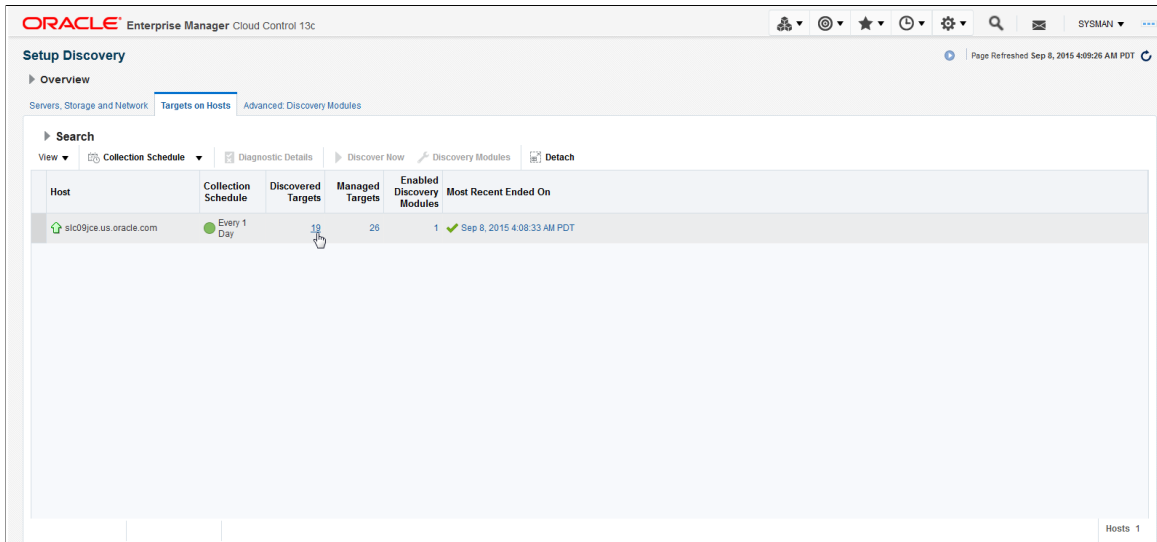
10. In the Auto Discovery Results page, the user should see the newly discovered PeopleSoft targets. These targets will be in Not-Yet-Managed (NYM) state and will need to be promoted by assigning Monitoring credentials.

Image: Promote Targets

Promote targets
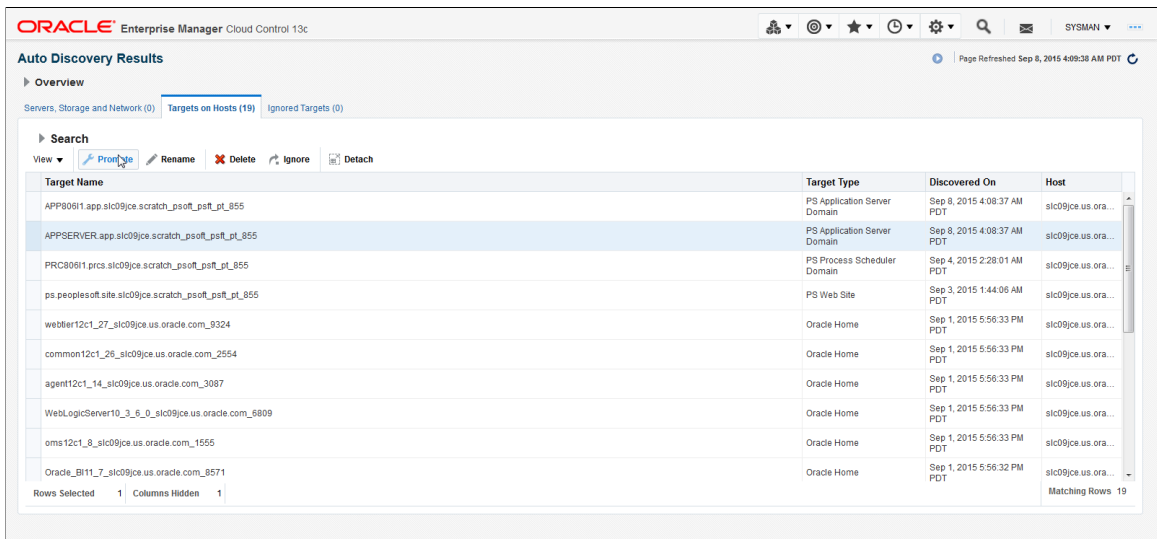
11. In the Promote Discovered Target page, fill the details under the PeopleSoft Monitoring Creds, PeopleSoft Secure Command Credentials and PeopleSoft Host Credentials sections and click Promote.

Image: Promote Discovered Targets

Promote Discovered targets page

12. The target gets Promoted Successfully.

Image: Promote Target — Success page

Promote Target — Success page

13. The target shows up on the PeopleSoft Home Page.

Image: Target on PeopleSoft Home Page

Target on PeopleSoft Home Page
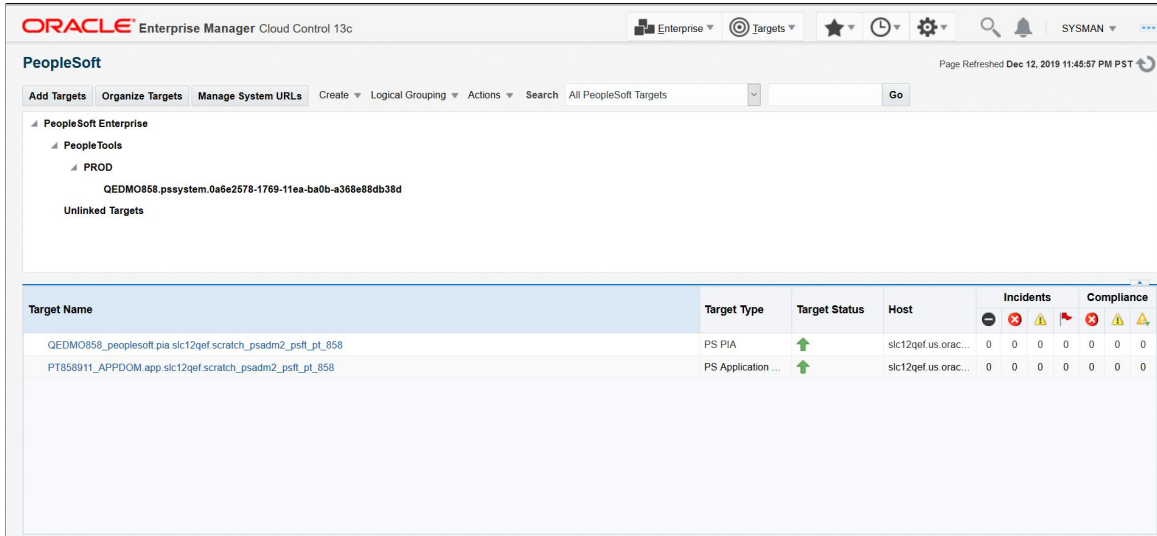
Note: If there are errors while running the Auto Discovery module, navigate to Configure Auto Discovery menu, on Targets on Hosts tab, select the desired host target and click the Diagnostic Details button. This page shows the error message from running discovery module. By selecting the PeopleSoft Discovery Module on this Diagnostic Details page, click on Log from Agent button to retrieve logs from Agent side as well.

Image: Diagnostic Details

Diagnostic Details
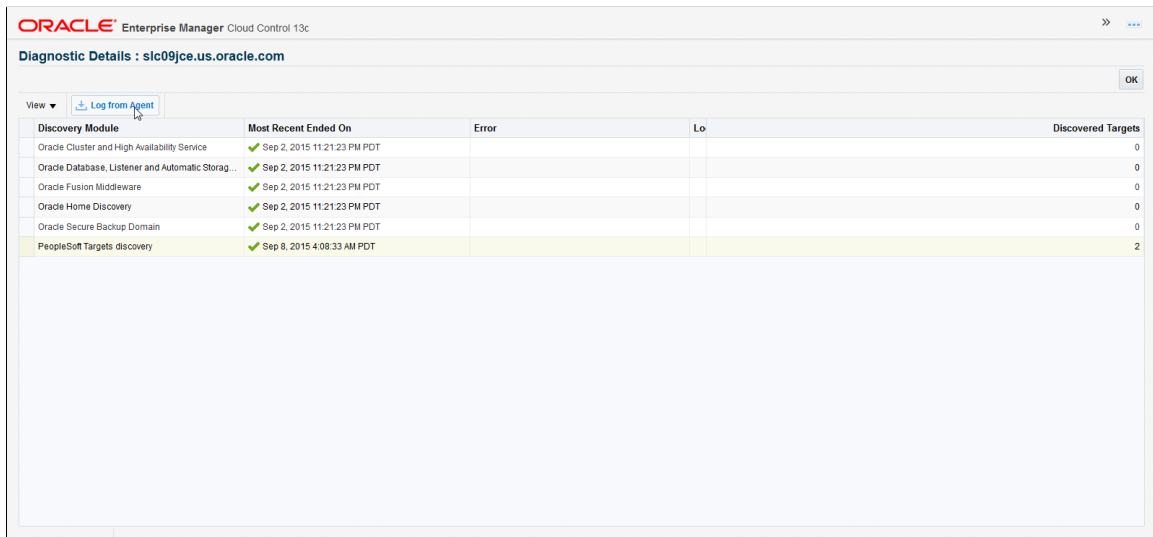
In the above context, the directly discoverable targets are the following:

• PS Application Server

• PS Process Scheduler

- PS PIA

- PS Website

The remaining two target types, i.e. PS Application Database and PS Process Monitor will still need to be discovered using either the existing guided discovery flow, or the EMCLI verb discovery approach.

Emcli verb based discovery of targets

There are three verbs defined for:

- psft_discover_direct_targets

- psft_discover_db_targets

- psft_discover_prcs_mntr_targets

Discovering directly discoverable targets

The verb psft_discover_direct_targets is used to discover the directly discoverable targets. To do this go to OMS_BIN and execute the following:

```
./emcli psft_discover_direct_targets -configFile="/ds1/home/emagent/Oracle/Middlewa⇒
re/oms/bin/inputDirectTargets.properties"
```

Field Name	Sample Value
host	<HOST_NAME>
crawlDepth	2
targetList	ps_app_serverps_piaps_home
discoveryPath	<PS_CFG_HOME>
credName	NC_PSOFT
credOwner	SYSMAN

Discovering Database Target

The verb psft_discover_db_targets is used to discover the directly discoverable targets. To do this go to OMS_BIN and execute the following:

```
./emcli psft_discover_db_targets -configFile="/ds1/home/emagent/Oracle/Middleware/o⇒
ms/bin/inputDbTargets.properties"
```

Field name	Sample Value
host	S854101R.app.slc06evj.ds1_home_psoft_psft_pt_854
targetName	S854101R.app.slc06evj.ds1_home_psoft_psft_pt_854

Field name	Sample Value
targetType	ps_app_server
credName	NC_PSOFT
credOwner	SYSMAN

At this point, only one db target gets discovered and this process does not create the system target. To create a system target and to associate the targets to the system, click the Organize target button and execute the logical grouping test case.

Discovering the Process Monitor Target

The verb psft_discover_prcs_mntr_targets is used to discover the directly discoverable targets. To do this, go to OMS_BIN and execute the following:

```
./emcli psft_discover_prcs_mntr_targets -  configFile="/ds1/home/emagent/Oracle/Mid⇒
dleware/oms/bin/inputPrcsMntrTargets.properties"
```

Field Name	Sample value
host	slc06evj.us.oracle.com
targetType	ps_pia
credName	NC_SLC06EVJ_PSOFT
credOwner	SYSMAN
piaName	S854903R.pia.slc06evj.ds1_home_psoft_psft_pt_854 wsdlUrl=http://<HOST_NAME>:<PORT>/PSIGW/ PeopleSoftServiceListeningConnector/QE_LOCAL/ PROCESSREQUEST.1.wsdl
userName	QEDMO
userPwd	QEDMO

At this point, only one prcs mntr target gets discovered. After discovery, the process monitor target needs to be manually associated through the logical grouping.

Note: The property file is a name, value pair. The names have to be exactly the same as mentioned in the above examples. The same applies to the format of the values to be passed.

Adding and Registering Targets

To add targets, see Adding Targets.

After the discovery process completes, you must register the targets in Enterprise Manager.

To register PeopleSoft targets:

1. When discovery is finished, examine the displayed list of targets, and deselect any that you do not want to register.

   When the discovery process completes, a page displays a list of the discovered PeopleSoft targets that are not yet registered in Enterprise Manager. Any targets previously discovered and registered are excluded from the list. All listed targets are selected by default on the Add PeopleSoft Targets page. Clear any discovered targets that you do not want to register.

   Note: A PS PIA target can be registered without a corresponding PS Web Site target. However, a PS Web Site target cannot be registered without also having a registered PS PIA (parent) target.

   Note: To register a PS Process Monitor target, there must be a corresponding PS PIA target.

   ---

2. Click Next.

   All targets selected are registered in Enterprise Manager. Their initial configuration values are collected and loaded into the repository.

   The discovery process continues for the Process Monitor setup if there are any PS PIA targets. After clicking Next, it continues for the PS Application Databases.

   Note: Before a PS Process Monitor target can be discovered, you need to configure the PROCESSREQUEST web service for use within Integration Broker and Process Scheduler.

   See Adding and Registering PS Process Monitor Targets.

3. Specify any required environment variables.

   The Add PeopleSoft Application Database page appears showing a list of targets for which environment variables may need to be set.

   This step is optional with the PeopleTools 8.50 and later versions of the PeopleSoft AMP. Verify that the user profile is correctly set with the required environment variables.

   The list includes all PS Application Server Domains and PS Process Scheduler Domains, are registered in Enterprise Manager in this or a previous discovery.

Set Environment Variables	Click to configure settings that enable connection to an application database—use this following your selection in the Select column.
Select	Check box to determine for which targets you want to allow editing of the environment variables.
Name	Name of the PS Application Server Domain and Process Scheduler Domain that can have a PS Application Database. This value displays as a link to the target homepage, which you can select to open in a new window.
Target Type	The type of target being registered.

DB Type	The type of database to which the target is connecting.
Environment Set	Shows a green check mark when environment variables have been set for the database (if required for a specific database type). Shows a red X when environment variables have not been set. The environment variables referred to in this field are database connectivity parameters and vary depending on the database type.
Databases Discovered	Shows a green check mark when the application database is successfully discovered which means that Enterprise Manager can collect configuration data from the target and collect the PeopleSoft GUID from the application database. Shows a red X when discovery is unsuccessful. Possible reasons are: • The environment variables have not been set correctly. Verify them on the Set Environment Variables page. • The database information is incorrect. Select the target to open it in a new window. Select the Administration tab, then Configure Domain to display configuration data. Validate database information here. • The configuration collection has failed. Select the link for the target in the Name column. The target homepage appears where you can check for metric collection errors displayed above the Incidents section.
Discover Related Databases	Click this icon to initiate discovery.

4. Click Next.

   The green check mark indicates that the application database associated with that target is registered in Enterprise Manager.

   Note: If you need to set environment variables, see the following section.

   ---

5. When prompted, click OK on the confirmation pages. When finished, click Next.

   The processing page for registering the specific application database appears. When complete, the system displays a page reporting the summary of discovery results. Once reviewed, click OK.

6. The PeopleSoft homepage appears showing the newly discovered targets.

   Note: There is a difference between creating a target and adding a target. If you use the create feature, Enterprise Manager creates a *new* domain on the managed host. If you use the add feature (Add PeopleSoft Targets), Enterprise Manager searches for *existing* domains in the managed host that have not been registered in the Enterprise Manager.

Setting Environment Variables

Setting environment variables means specifying basic database connectivity parameters for the database type you are using. When you select Set Environment Variables for any target, the Set Environment Variables page appears showing two columns listing the required environment variables and corresponding values.

Note: Setting environment variable entries are applicable when the profile is not set for a login shell script.

After you have entered the values on the Set Environment Variables page, they are added to the Environment Variables list if they do not already exist. Therefore, based on the database type previously configured, the regions on this page may have tables prepopulated with the required environment variables.

Database Type	*Required Environment Variables*
Oracle	$ORACLE_HOME
DB2OS390	$DB2DIR $DB2INSTANCE
DB2UNIX	$DB2DIR $DB2INSTANCE Get the correct values of DB2DIR and DB2INSTANCE from the command console on the host machine. For example: ``` pt-ibm03:$ . ./psconfig.sh pt-ibm03:$ echo $DB2DIR /opt/IBM/db2/V9.1 pt-ibm03:$ echo $DB2INSTANCE db2udb9 ```
Microsoft SQL Server	Entry of environment variables is not required. The default values from MSSQLSERVER are inserted.

Note: The environment variable values are not validated when you enter them. Furthermore, an agent does not inherit the environment variable values of the user initiating an action. For an action to be successful, values for environment variables must be set correctly.
By default, some environment variables appear on the Set Environment Variables page that displays during discovery (see table above), where you can set the values. However, other environment variables, such as LD_LIBRARY_PATH, PATH, SHLIB_PATH, and LIBPATH may also need to be set for each discovered domain.
If you have only one installed PeopleTools and Tuxedo version on a managed host machine, you can set environment variables for an agent prior to starting that agent. However, if you have multiple installed versions of PeopleTools or Tuxedo on a managed host machine, the environment variables must be set for each discovered domain as part of the discovery process.

When using a login shell script, the following variables are required to be defined in the $HOME/.profile (similar to the table above).

- Common environment variables: LD_LIBRARY_PATH, PATH, SHLIB_PATH, LIBPATH

- Database-specific variables: ORACLE_HOME, ORACLE_SID, TNS_ADMIN, DB2DIR, DB2INSTANCE

- Tuxedo: TUXDIR

Note: There are multiple ways to update $HOME/.profile. The following is only an example.

To modify the $HOME/.profile:

1. Start a new telnet session as the appropriate user ID (posft, emagent, and so on).

2. Select the correct values at the login prompt for database, SQR, COBOL, and so on.

3. Use <set> or <env> commands to retrieve the values of the necessary environment variables.

4. Update $HOME/.profile with these environment variables, using the VAR=<value>; export VAR syntax.

5. Logout and log into a new telnet session as the same user ID and make sure you see a message indicating that a .profile exists.

    For example:

    ```
    WARNING: .profile exists, bypassing /etc/profile
    ```

The following example illustrates a sample .profile for a PeopleSoft user in a multiuser configuration:

```
ORACLE_HOME=/ds1/home/oracle/Oracle/Database/product/11.2.0/dbhome_1; export ORACLE⇒
_HOME
TNS_ADMIN=/ds1/home/psoft; export TNS_ADMIN
TUXDIR=/ds1/home/psoft/bea/tuxedoPS2/tuxedo11gR1; export TUXDIR
LD_LIBRARY_PATH=$TUXDIR/lib:$ORACLE_HOME/lib:$LD_LIBRARY_PATH; export LD_LIBRARY_PA⇒
TH
SHLIB_PATH=$TUXDIR/lib:$ORACLE_HOME/lib:$SHLIB_PATH; export SHLIB_PATH
LIBPATH=$TUXDIR/lib:$ORACLE_HOME/lib:$LIBPATH; export LIBPATH
PATH=$TUXDIR/bin:$ORACLE_HOME/bin:$PATH; export PATH
```

Note: If you use the psemenv.sh script approach, you can set the same environment variables in the HOME directory or in the PS_CFG_HOME directory where you have created the PeopleTools domains. See, Using the PSEMENV.SH Script for Setting Environment Variables.

Adding and Registering PS Process Monitor Targets

This section provides an overview and discusses:

- Configuring PROCESSREQUEST Web Service.

- Adding PS Process Monitor Targets From Discovery Results Page.

- Adding PS Process Monitor Targets From the Process Monitor Setup Page.

- PS Process Monitor Configuration Variables.

- Working with custom SSL configurations.

Understanding PS Process Monitor Discovery

Registering PS Process Monitor targets requires a few additional steps that need to be completed prior to the discovery process. Before you can discover and register a PS Process Monitor target, at least one PS PIA target needs to be discovered, and the PROCESSREQUEST web service must be published through the Integration Gateway.

You discover and register PS Process Monitor targets using:

- Add PeopleSoft Targets: Discovery Results page.

- Process Monitor Setup page.

Note: From PeopleTools version 8.56, the PROCESSREQUEST web service is part of PeopleTools database. Users need to execute the IB Template available in Automatic Configuration Templates. This will perform the IB configuration. Once the IB configuration is done, Users can proceed to discover the Process Monitor. On Process Monitor Discover page, click the Fetch WSDL button to fetch the wsdl from the PeopleTools Database. Users can proceed to discover process monitor after entering the User Name and Password,

---

Note: If the Process Monitor Discovery did not complete successfully, then verify if all the steps mentioned in Configuring PROCESSREQUEST Web Service is in place.

The following information assumes that you have a working knowledge of PeopleSoft Integration Broker and have it configured in your environment.

See the product documentation for *PeopleTools: Integration Broker*.

Configuring PROCESSREQUEST Web Service

To configure the PROCESSREQUEST web service:

1. Configure Integration Broker for your environment.

   Make sure to specify a *Secure Target Location.*

   Note: The PROCESSREQUEST web service is enabled by default in PeopleTools 8.56 and PeopleSoft Applications built on PT8.58 and higher. Hence PeopleTools 8.56 and higher does not require you to perform the steps from 2 to 7.

   ---

2. Select PeopleTools > Integration Broker > Integration Setup > Services, enter PROCESSREQUEST, and click Search.

3. Open each service operation and verify that Security Verification is set to one of the following:

   - *Encrypt/Digital Sign or SSL*

   - *Encrypt or SSL*

   - *Digital Sign or SSL*

   - *SSL*

4. Select PeopleTools > Integration Broker > Web Services > Provide Web Service open PROCESSREQUEST on the Select Services page, and click Next.

5. On the Select Service Operations page, select Use Secure Target Location, (to create a secure end point address in WSDL), select these service operations, and then click Next.

   • FindRequests

   • GetParams

   • GetProcessNames

   • GetPrompt

   • GetReport

   • GetRequest

   • GetServerConstraints

   Note: GetServerConstraints service operation is included only for PeopleTools 8.54 version and above.

   • Schedule

   • UpdateRequest

   Note: Version v1 must be set as the default for FindRequest, GetPrompt, and GetRequest service operation. You must include v1 for FindRequest, GetPrompt, and GetRequest service operation in the PROCESSREQUEST web service.

   ---

6. On the View WSDL page, click View WSDL to verify the generated WSDL, and click Next.

7. On the Specify Publishing page, click Finish, and copy the generated WSDL URL, which you will need when you discover and set up the PS Process Monitor target.

8. Configure the distribution agent.

   a. Select PeopleTools, Process Scheduler, Report Nodes, select the Add a New Value tab, enter *PRCSMNTRNODE,* and click Add.

   b. Select Ftp/XCopy.

   c. Enter the URL as: *http://<host>:port/psreports/<site>*

   d. Enter Network Path as: *\\<host>\psreports*

   e. Click Save.

9. Configure server definition.

   a. Select PeopleTools, Process Scheduler, Servers.

   b. Select the appropriate server (PSNT, PSUNX, and so on).

c.   Select the Distribution tab and enter Distribution Node Name as *PRCSMNTRNODE.*

d.   Select the Transfer System Files to Report Repository check box.

e.   Click Save.

Note: The replicate PIA may fail due to redundancy in classpath. For workaround, see E-PSEM: Oracle Enterprise Manager - Setup Process Monitor for Peoplesoft PIA (Doc ID 1620052.1).

Adding PS Process Monitor Targets From Discovery Results Page

During the typical discovery process, you have the option to add and register PS Process Monitor targets. The Add PS Process Monitor page can be launched only if a PS PIA target has been discovered and selected.

Note: For discovering PS Process Monitor targets, the PeopleTools version for the PS PIA target must be at least PeopleTools 8.50.

Working With Custom SSL Configurations

During PS Process Monitor discovery, the EM Agent communicates with Integration Broker over HTTPS using the default SSL configuration setup.

The following process outlines the typical Process Monitor discovery workflow, which existed in previous releases, and is supported by default in the current release, as well.

Image: Discover Process Monitor

Discover Process Monitor

1.   Discover the PIA target.

2.   Use the PIA target in the All PeopleSoft Targets page, to discover the Process Monitor target.

3.   In the Process Monitor discovery page, enter the WSDL URL or click the *Generate WSDL URL* button to fetch the WSDL url.

4.   Discover the PS Process Monitor target.

This "typical" process:

•   uses the default SSL configuration.

•   makes no changes to the pskey.properties file.

- keeps the property useCustomSSLConfiguration set to false (the default).

Additionally, the PeopleSoft plug-in supports EM Agent communicating with Integration Broker using a custom SSL configuration. The high-level steps for setting up the custom SSL configuration are:

1. Export the default signer certificate presented by the web server (WebLogic or WebSphere) for HTTPS communication (using the keytool utility).

2. Import this signer certificate into the keystore pskey used by the EM Agent using the keytool utility.

3. In pskey.properties file, enable the following property for the custom configuration setup:

   ```
   useCustomSSLConfiguration=true
   ```

4. Restart the EM Agent and discover the Process Monitor target with the custom SSL configuration setup.

When using the custom SSL configuration, you import the signer certificate of the web server (WebLogic or WebSphere) into the agent's custom keystore file which by default is: $AgentHome/sysman/config/pskey.

Note: The EM Agent's keystore file (pskey) and properties file (pskey.properties) is required for implementing this feature and can be found in the directory $AgentHome/sysman/config.

Retrieving Signer Certificate from WebLogic

To retrieve the signer certificate:

1. Verify the signer certificate.

   a. Go to the PIA signon URL using an HTTPS port.

   b. Click View Certificates.

      The certificate is displayed.

   c. Click Export to export the certificate.

   d. Save the certificate.

2. Export this signer certificate from the WebLogic keystore file, cacerts, using the keytool utility.

   For example:

   ```
   $Agent_Home/jdk/bin/keytool -export -rfc -keystore cacerts -alias certgencab
   -file certgencab.cer -storepass changeit -keypass changeit
   ```

   Note: If using a custom SSL configuration on WebLogic, you may need to export the appropriate signer certificate from the keystore, cacerts.

   ---

3. Import the signer certificate file certgencab.cer into the Agent's custom keystore file, pskey, using the keytool utility.

   For example:

   ```
   $Agent_Home/jdk/bin/keytool -import -noprompt -trustcacerts -alias
   ```

```
certgencab -file certgencab.cer -keystore pskey -storepass password
```

4. Edit the pskey.properties file and ensure:

   • custom keystore location and other attributes are properly set.

   • useCustomSSLConfiguration is set to *true*.

Retrieving Signer Certificate from WebSphere

To retrieve the signer certificate from WebSphere:

1. Extract the signer certificate.

   Login to WebSphere administration console, and navigate to Security, SSL certificate and key management, Key stores and certificates, NodeDefaultTrustStore, Signer certificates.

   Select the default signer certificate, *root*, and click Extract.

   This will extract the certificate into the given location in ASCII text mode by default.

   Note: If you are using a custom SSL configuration on WebSphere, you may have to extract the appropriate signer certificate from the keystore, NodeDefaultTrustStore.

   ---

2. Import this signer certificate file, rootWAS.cer, into the Agent's custom keystore file, pskey, using the keytool utility.

   For example:

   ```
   $Agent_Home/jdk/bin/keytool -import -noprompt -trustcacerts -alias rootWAS
   -file rootWAS.cer -keystore pskey -storepass password
   ```

3. Edit the pskey.properties file to ensure:

   • the custom keystore location and other attributes are properly set.

   • useCustomSSLConfiguration is set to *true*.

Related Links

RSA Certificate Issues on WebSphere

Chapter 4

Managing PeopleSoft Application Database Targets

Understanding PeopleSoft Application Database Targets

The PeopleSoft Application Database target type refers to the database that contains the PeopleSoft application. The application database target type is not intended to manage the underlying database (RDBMS) itself. However, depending on your database type, Enterprise Manager may provide additional management and monitoring features.

If the database is Oracle, you can monitor and manage the database by selecting Targets > Database from the Enterprise Manager page.

Note: If you have backed up, and then restored a database, you must set the GUID in the database to blank before attempting the discovery process.
To get the current value of the database GUID, execute the following SQL Statement:
`select GUID from PSOPTIONS`
Then, depending on your database syntax, execute the appropriate update statement to set the GUID column in PSOPTIONS to ''. For example:
`update PSOPTIONS set GUID = ' '`
The next time an application server connects to the database, the system generates a new unique GUID for that database.

Accessing the PeopleSoft Application Database Page

From the All PeopleSoft Targets page, click the application database link.

Image: PS Application Database Target page

This example illustrates the fields and controls on the PS Application Database homepage

Click thePeopleSoft Application Database link to:

- Monitor the PeopleSoft Application Database.

  See Monitoring.

- Control the PeopleSoft Application Database.

  See Control.

- View job activity.

  See Job Activity.

- View information publisher reports.

  See Information Publisher Reports.

- Configure targets.

  See Configuration.

- Validate compliance.

  See Compliance.

- Setup target.

  See Target Setup

- View target Information.

  See Common Elements on Targets Homepages.

Chapter 5

Managing PeopleSoft Application Server Domain Targets

Understanding PeopleSoft Application Server Domain Targets Homepage

This target type enables an administrator to manage PeopleSoft application server domains.

Note: Many of the features and concepts in this section are described in *PeopleTools 8.58: System and Server Administration.*

Select Targets > PeopleSoft and then click the specific application server that you want to view.

Image: PS Application Server page

This example illustrates the fields and controls on the PS Application Server homepage
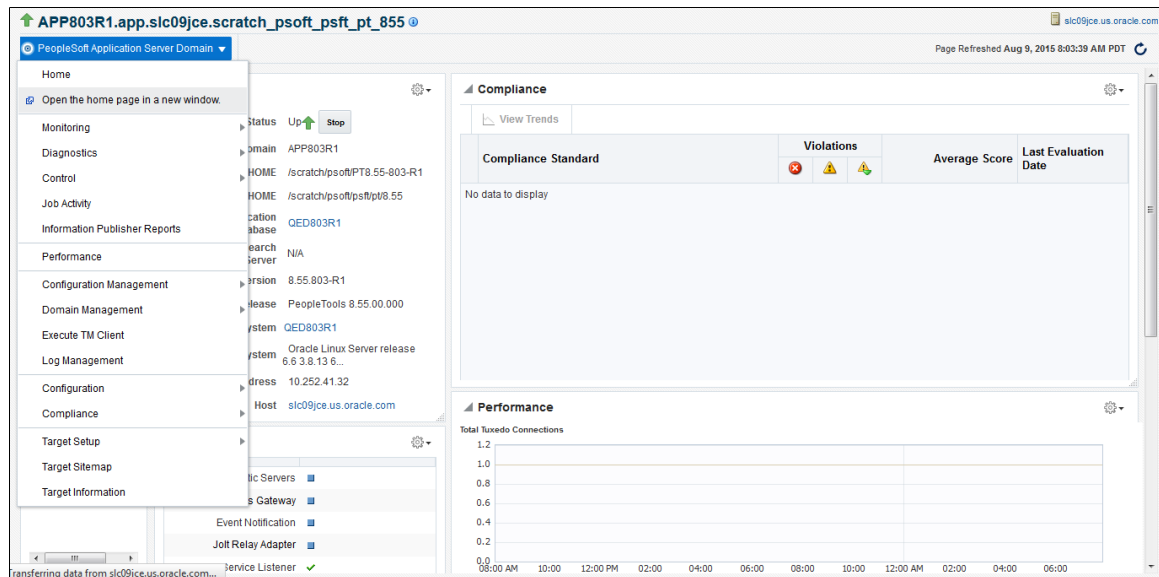
Click the PeopleSoft Application Server Domain link to:

*   Monitor the PS Application Server Domain.

    See Monitoring.

*   Control the PS Application Server Domain.

    See Control

*   View job activity.

See Job Activity

- View information publisher reports.

  See Information Publisher Reports.

- View performance.

  See Performance.

- Manage configuration.

  To configure domain, see Configuration Management, "Configure Domain".

  To create like domain, see Configuration Management, " Create Like Domain".

  To copy domain, see Configuration Management, " Copy Configuration".

  To discover database, see Understanding the Discovery Process and Creating and Configuring PeopleSoft Application Server Domain Targets

- Manage domain.

  See Domain Management.

- Manage logs.

  See Log Management Page

- Configure targets.

  See Configuration

- Validate compliance.

  See Compliance

- Setup target.

  See Target Setup

- View target Information.

  See Common Elements on Targets Homepages.

Creating and Configuring PeopleSoft Application Server Domain Targets

This section provides an overview of creating and configuring PeopleSoft targets and describes how to:

- Create PS Application Server domain targets.

- Configure PS Application Server domain targets.

Creating PeopleSoft Application Server Domain Targets

The Enterprise Manager user must have a super administrator privilege to create new application server domain target. It is important to set the correct environment variables for new domains created within Enterprise Manager. For more information about setting environment variables, see Setting Environment Variables.

1. Select Targets >PeopleSoft >Create to access the Create PeopleSoft Application Server Domain page.

   Image: Create PeopleSoft Application Server Domain page

   This example illustrates the fields and controls on the Create PS Application Server Domain page. You can find definitions for the fields and controls later on this page.

   Enter all the required parameters and then click OK.

Domain	Enter a unique name (within the host) not greater than 8 characters and not containing any spaces or punctuation marks.
Host	Click the icon to display the Host Target selection window, and select the host where you want to create the domain.
PS_HOME	Based on the host, the available list is limited to the PS_HOMEs on the host that contain the software necessary to create a domain. You can discover additional PS_HOMEs to augment this list. If you click Discover PS_HOMEs in the Related Links region of this page, the Add PeopleSoft Targets page with the PS_HOME/PS_CFG_HOME check box selected appears. Continue through the discovery process, when finished, control returns to this page.
PS_CFG_HOME	Specify the location of PS_CFG_HOME. • Existing: To use an existing PS_CFG_HOME location, select the value from the drop-down list. • New: To enter a new location (as opposed to using the existing location) enter that value in the New field.

	• Same as PS_HOME: To install the PS_CFG_HOME within the PS_HOME location, select this check box. The system automatically populates the New field with the specified PS_HOME.
Configuration Template	Select a template from the drop-down list.
	(Optional) Click Get Latest Configuration Templates in the Related Links region of this page to retrieve the latest template list from the host. You are required to enter your credentials in a subsequent page to connect with a managed host.
	The configuration template you select determines the default values of the domain.
	There are predefined configuration templates based on the number of concurrent users expected to connect to the domain. The following provides a *general* guideline:
	• Small (1-50 users)
	• Medium (50-500 users)
	• Large (500-1000 users)
	• Developer (for a development or test system)
Configure Domain	Default selection is to configure the domain. If selected, the Configure Domain page appears after the domain is created.
Import Domain Configuration from file	Select to enable the entry of the filename and path of the host's configuration file.
	Ensure that the source configuration file resides in the host or an error appears during the create process. Use the Find icon to verify the path or to populate this field by selecting the path to the file.
	The Browse and Select: File and Directory page opens in a separate browser. Select folders to drill down further until the desired file is found. Select the file and click Select.
	If you do not import the configuration from a file, click OK.
	The domain will be created without a configuration. You can configure the domain at a later time by selecting the Configure Domain link from the Administration tab of the target.
Import IB Master Domain from Configuration File	For Integration Broker environments, you can implement master-slave configurations with the Integration Broker server domains. Select this option to import previously configured master domain configurations.

See *PeopleTools 8.58: PeopleSoft Integration Broker Administration*

Filename in Host   Need Info

2. On the Enter Credentials for the host page, select the credentials and then click OK.

   For more information about preferred credential and named credential, see <link>

3. Click OK on the Confirmation page.

Image: Enter Credentials for the host page

This example illustrates the fields and controls on the Enter Credentials for the host page. You can find definitions for the fields and controls later on this page.

| **Credential** | Specify the credentials. The credential that you select becomes the preferred and monitoring credential for the discovered or newly created targets. |

Credential   Specify the credentials. The credential that you select becomes the preferred and monitoring credential for the discovered or newly created targets.

Preferred Credential Name   Target Preferred Credentials is a credential specifically applied to a single target for a particular user.

                                                   See Managing Target Preferred Credentials.

Credential Details   Specify the user name and password for the target.

More Details   Click this to view more details about the credential creation.

Configuring PeopleSoft Application Server Domain Targets

In the PeopleSoft environment, you would use PSADMIN to create and configure your domains. When using the PeopleSoft Application Management plug-in, you use the browser interface of the Enterprise Manager Cloud Control console. The options available in PSADMIN are replicated in the console. For information on each domain parameter, refer to the Oracle PeopleTools documentation.

See *PeopleTools 8.58: System and Server Administration, "Setting Application Server Domain Parameters"*

For example, when configuring a domain, you have the option to use the Quick Configuration interface, similar to the PSADMIN option. This appears if you selected Configure Domain on the Create PS Application Server Domain page, and after clicking OK on the page indicating your domain has been successfully created.

Image: Quick Configuration page

This example illustrates the fields and controls on the Quick Configuration page

If you need to drill into specific configuration sections, like performing a custom configuration in PSADMIN, click the specific link from the Configuration Sections pane to modify the parameters.

Note: You cannot edit the password field from the Quick Configuration section.

For more information about PSADMIN configuration, refer to the following:

- See the product documentation for *PeopleTools: System and Server Administration*, "Using the PSADMIN Utility," Understanding PSADMIN

- See the product documentation for *PeopleTools: System and Server Administration*, "Using PSADMIN Menus," Understanding PSADMIN Menus

- See the product documentation for *PeopleTools: System and Server Administration*, "Working with PSADMUTIL," Understanding PSADMUTIL

Chapter 6

Managing PeopleSoft Process Scheduler Domain Targets

Understanding the PeopleSoft Process Scheduler Domain page

This target type enables an administrator to manage PeopleSoft process scheduler domains.

Select Targets > PeopleSoft then select the desired PS Process Scheduler Domain target.

Image: PeopleSoft Process Scheduler Domain page

This example illustrates the fields and controls on the PS Process Scheduler Domain homepage.
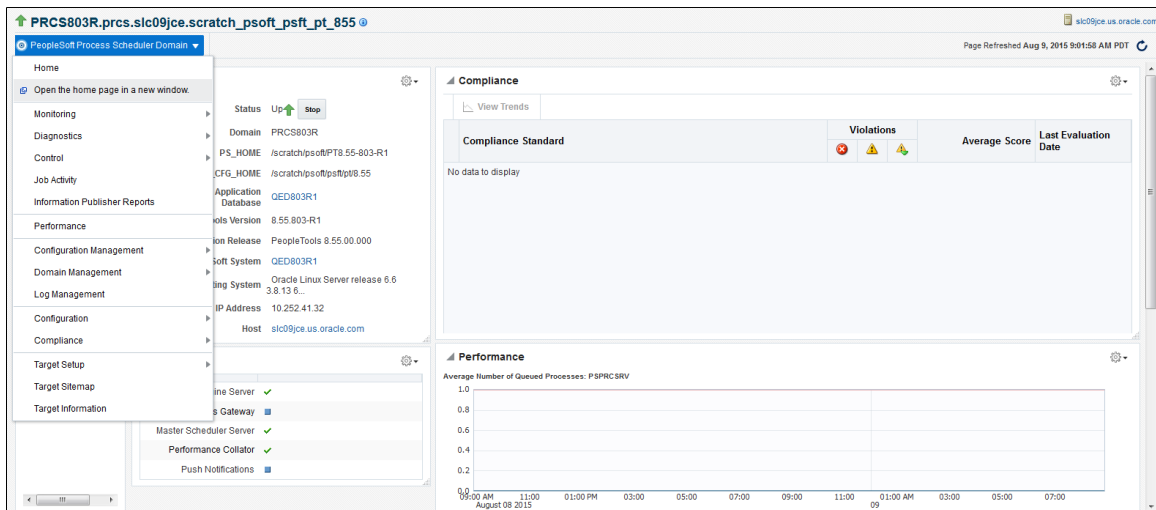
Click the PeopleSoft Process Scheduler Domain link to:

• Monitor the PS Process Scheduler Domain.

  see Monitoring..

• Control the PS ProcessScheduler Domain.

  See Control.

• View job activity.

  See Job Activity.

• View information publisher reports.

  See Information Publisher Reports.

• View performance.

See Performance

- Manage configuration.

    To configure domain, see Configure Domain.

    To create like domain, see Create Like Domain.

    To copy domain, see Copy Configuration.

    To discover database, see Understanding the Discovery Process and Creating and Configuring PeopleSoft Application Server Domain Targets

    See Domain Management.

- Manage logs.

    See Log Management Page.

- Configure targets.

    See Configuration.

- Validate compliance.

    See Compliance.

- Setup target.

    See Target Setup

- View target Information.

Creating PS Process Scheduler Domain Targets

You create a PS Process Scheduler domain in the same way that you create a PS Application Server domain.

See Creating PeopleSoft Application Server Domain Targets.

Chapter 7

Managing PS PIA and PS Web Site Targets

Understanding PeopleSoft PIA Targets

The PS PIA target acts as a container for one or more PS Web Site targets and together they are a PeopleSoft Web server.

The PS PIA target can be compared to a *domain* in Weblogic and a *server* in WebSphere.

Note: Before attempting to discover or access a PS PIA and PS Web Site in Enterprise Manager, verify that your PeopleSoft application is running and that you can log in from a PIA page.

Select Targets > PeopleSoft then select the desired PS PIA target.

Image: PeopleSoft PIA page

This example illustrates the fields and controls on the PS PIA homepage.
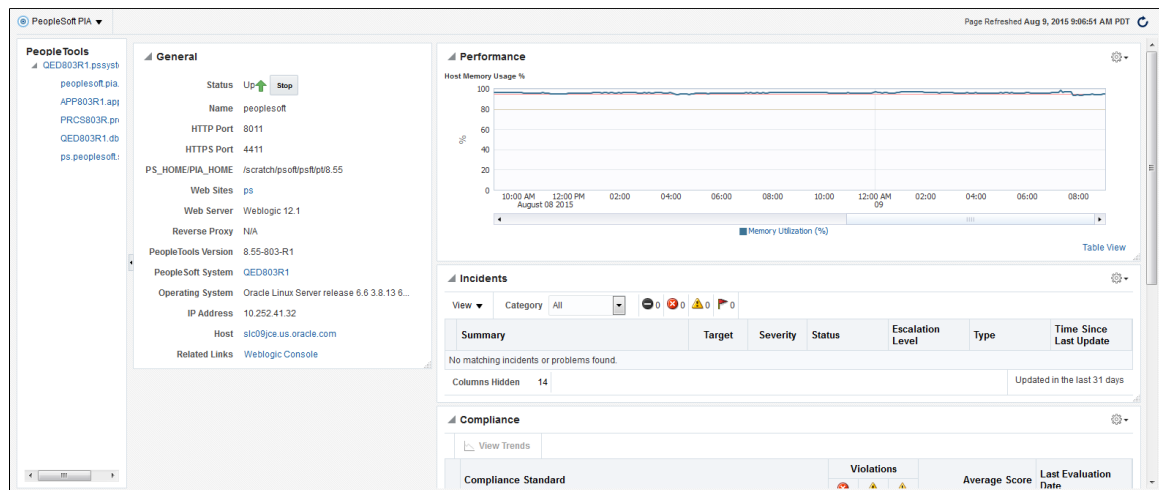
Click the PeopleSoft PIA link to:

- Monitor thePeopleSoft PIA Domain.

  See Monitoring

- Control the PeopleSoft PIA Domain.

  See Control

- View job activity.

  See Job Activity

- View information publisher reports.

See Information Publisher Reports

- View performance.

    See Performance.

- Manage PIA.

    See Managing PIA.

- Manage logs.

    See Log Management Page

- Configure targets.

    See Configuration

- Validate compliance.

    See Compliance

- Setup target.

    See Target Setup

- View target Information.

    See Common Elements on Targets Homepages

See the product documentation for *PeopleTools: Portal Technology*, "Configuring the Portal Environment."

Creating PeopleSoft PIA Domains Target

These instructions assume you have a working knowledge of the topics described in the PeopleTools installation guide and System and Server Administration PeopleBook related to the PeopleSoft Pure Internet Architecture implementation.

See *PeopleTools 8.58 Installation for <your platform>*

See *PeopleTools: System and Server Administration*

To create a PIA domain from Enterprise Manager Cloud Control:

1. Navigate to Targets >PeopleSoft >Create >PS PIA.

2. On the Create PS PIA : Input Screen 1 page, enter the required details.

Image: Create PIA : Input Screen 1 page

This example illustrates the fields and controls on the Create PIA : Input Screen 1 page. You can find definitions for the fields and controls later on this page.

Domain	Enter the name of the new PS PIA domain.
Host	Select the host server where you intend to install the new PIA domain.
PS_HOME	Select the appropriate PS_HOME on the selected host.
PIA_HOME	Enter the location where you want to install the PIA domain files (the \webserv directory).

- *Existing:* Select from previously installed PIA_HOMEs, with the default displaying the configured PS_CFG_HOME location.

- *New:* If you intend to install the new PIA domain in a different location, enter that location in the New edit box.

- *Same as PS_HOME:* Select to install the PIA domain within the PS_HOME directory structure

Web Server	Select your web server product: Oracle WebLogic or IBM WebSphere.
Install Action	Select the type of domain you want to install, single or multiserver.

See *PeopleTools 8.58 Installation for <your platform>:* "Setting Up the PeopleSoft Pure Internet Architecture"

3. On the Create PIA : Input Screen 2 page, enter the required parameters.

Image: Create PIA : Input Screen 2 page

This example illustrates the fields and controls on the Create PS PIA (screen 2). You can find definitions for the fields and controls later on this page.
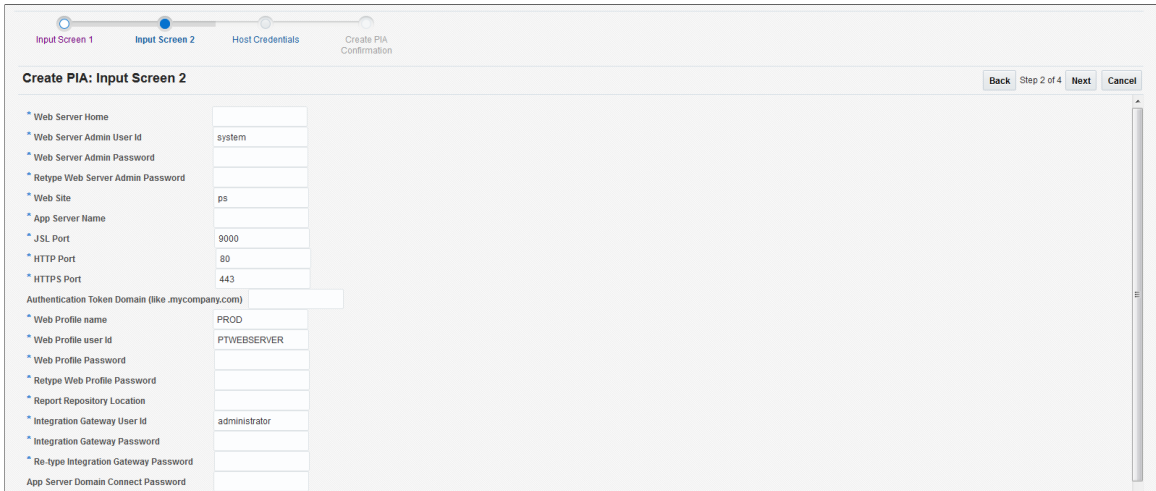
Web Server Home	The location of your web server product installation.
Web Server Admin User ID	Enter the user ID used to signon to the web server administration console.
Web Server Admin User Password	Enter the password used to signon to the web server administration console. (Retype the password to confirm your entry).

Retype Web Server Admin Password

Web Site	Enter the name of the web site included in the domain.
App Server Name	Enter the host on which the application server domain runs.
JSL Port	Enter the Jolt listening port for the application server domain.
HTTP Port	Enter the HTTP port on which the web server listens.
HTTPS Port	If SSL is configured, enter the HTTPS port on which the web server listens.
Authentication Token Domain	Enter the authentication token domain, if required.
Web Profile Name	Enter the name of the web profile to be used.
Web Profile User ID	Enter the user ID and password associated with the selected web profile. (Retype the password to confirm your entry).
Web Profile Password	Enter the Web profile password.
Retype Web Profile Password	Re-enter the Web profile password.

Report Repository Location	The Process Scheduler report output location.
Integration Gateway User Id	Enter the Integration Gateway ID.
Integration Gateway Password	Enter the Integration Gateway password.
Re-type Integration Gateway Password	Re-enter the Integration Gateway password.
App Server Domain Connect Password	Enter the App Server Domain Connect password.
Re-type App Server Domain Connect Password	Re-enter the App Server Domain Connect Password.

4. On the Target Credentials page, enter the credentials required to install a new domain on the selected host.

5. Monitor the PS PIA installation process using the on screen display.

6. When completed successfully, click OK on the PIA Installation Status page.

7. Start the PIA domain, and sign on to test the installation.

Starting and Stopping Targets Using Jobs

The Oracle Enterprise Manager framework allows the automation and delegation of routine tasks on multiple targets. These tasks are completed using jobs, which you define on the Jobs tab in the Enterprise Manager console. The PeopleSoft AMP provides these predefined jobs to manage selected PeopleSoft targets:

• Start PeopleSoft Domains

• Stop PeopleSoft Domains

Creating start and stop jobs applies to these PeopleSoft targets:

• PS PIA

• PS Application Server Domain

• PS Process Scheduler Domain

Note: Prior to including a target in a job, it must first have been discovered.

Note: If multiple targets are included in the job, they can reside on separate hosts.

Image: Create Job page

This example illustrates the fields and controls on the Create Job page.

To create a Start/Stop PeopleSoft Domain job:

1. Select Enterprise >Jobs >Activity.

2. On the Job Activity page, select one of the following from the Create Job dropdown:

    • *Start PeopleSoft Domains*

    • *Stop PeopleSoft Domains*

3. On the General subtab:

    • Enter a job name and description.

    • Select the appropriate value from the Target Type dropdown: *PS Application Server Domain, PS PIA, PS Process Scheduler Domain*

    • Click Add to display a list of applicable targets, and select the targets you wish to include in the job.

4. Skip the Parameters subtab (it does not apply).

5. On the Credentials subtab, select the credentials for the job to use.

6. On the Schedule subtab, specify whether the job should run immediately, a specific time in the future, or on a repeating schedule.

7. On the Access subtab, modify any required user access to the job.

To see the job result, select Jobs, Job Activity, and click the desired job on the Job Activity page.

Note: The Start PIA job for PIA domains running on Oracle WebLogic in a Microsoft Windows server environment will not terminate as "Succeeded" due to the limitation with startPIA script not running as a background process on Windows. The job status may be shown as "Running." See the job details output to confirm that the PIA domain has started.

For more information about Oracle Enterprise manager, see Oracle Enterprise Manager Cloud Control Documentation

Managing PIA

Click PeopleSoft PIA >PIA Management to:

Image: PeopleSoft PIA - PIA Management menu

This example illustrates the elements in the PIA Management menu
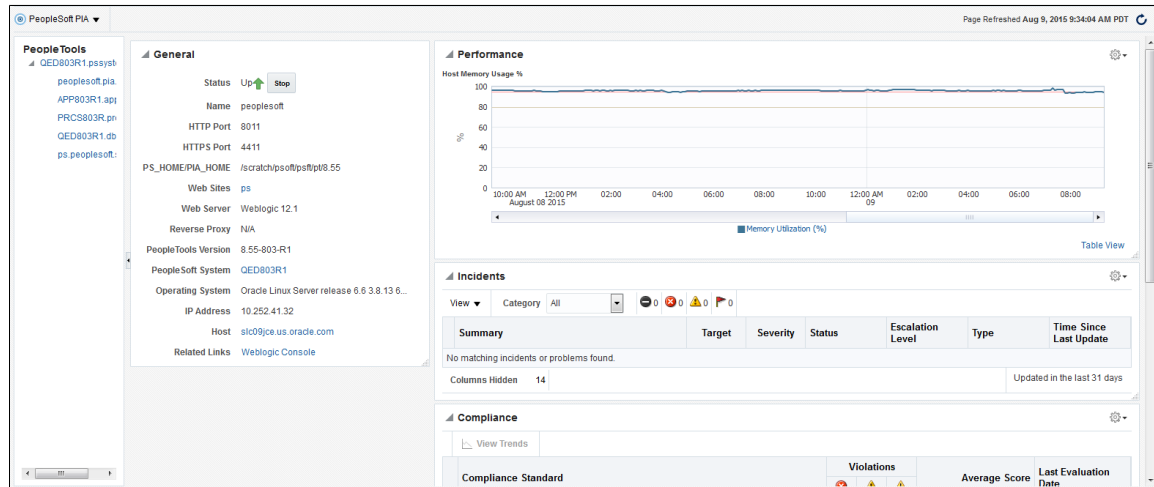
Redeploy PIA	See <u>Redeploy PIA Page</u>.
Recreate WebLogic Server Domain and Redeploy PIA	See <u>Recreate WebLogic Server Domain and Redeploy PIA Page</u>.
Install Additional PeopleSoft Site	See <u>Install Additional PeopleSoft Site Page</u>.
Replicate PIA	See <u>Replicate PIA</u>.
Start PIA	Click this to start PIA. Click OK on the confirmation page.
Stop PIA	Click this to stop PIA. Click OK on the confirmation page.
Setup Process Monitor	See <u>Setup Process Monitor</u>.

Redeploy PIA Page

This selection affects all of the PeopleSoft Pure Internet Architecture web applications installed to the local domain. Select this option to redeploy all of the class files and jar files that comprise web components of PeopleSoft Pure Internet Architecture. Server configuration files, scripts and any existing PeopleSoft (PORTAL) sites are not overwritten, unless you specify an existing PeopleSoft site during this setup.

1. Select PeopleSoft PIA >PIA Management >Redeploy PIA to access the Redeploy PIA : Input Screen 1 page.

2. Click Next to access the Redeploy PIA : Input Screen 2 page.

Image: Redeploy PIA : Input Form(Contd.) page

This example illustrates the fields and controls on the Redeploy PS PIA (Screen 2)

Notice that some of the fields are populated with existing values and cannot be edited.Enter the fields marked *.

Web Server Admin Password	Enter the password used to signon to the web server administration console.
App Server Name	Enter the host on which the application server domain runs.
Authentication Token Domain (like.mycompany.com)	Enter the authentication token domain.
Web Profile Password	Enter the Web profile password.
Retype Web Profile Password	Re-enter the Web profile password.
Report Repository Location	The Process Scheduler report output location.
Integration Gateway Password	Enter the Integration Gateway password.
Retype Integration Gateway Password	Re-enter the Integration Gateway password.
App Server Domain Connect Password	Enter the App Server Domain Connect password.
Re-type App Server Domain Connect Password	Re-enter the App Server Domain Connect password.

3. On the Redeploy PIA : Credential Screen, select the credentials and then click Next.

4. Click OK on the Redeploy PIA : Confirmation Screen.

See the product documentation for *PeopleSoft 9.2 Application Installation* for your database platform, "Setting Up the PeopleSoft Pure Internet Architecture"

Recreate WebLogic Server Domain and Redeploy PIA Page

This option applies only to Oracle WebLogic Server configuration and all of the PeopleSoft Pure Internet Architecture web applications installed to the local Oracle WebLogic domain. Select this option to completely remove an existing Oracle WebLogic domain and create the newly specified PeopleSoft site.

Note: Stop the PS PIA target before initiating PIA install action.

1. Select PeopleSoft PIA >PIA Management >Recreate WebLogic Server Domain and Redeploy PIA to access the Recreate WebLogic Server Domain and Redeploy PIA : Input Screen 1 page.

2. Select the Install Action to specify the type of domain you want to install, single or multiserver.

   See PeopleTools 8.58 Installation for <your platform>: "Setting Up the PeopleSoft Pure Internet Architecture"

3. Click Next to access the Recreate WebLogic Server Domain and Redeploy PIA : Input Screen 2 page.

   Image: Recreate Weblogic Server Domain and Redeploy PIA : Input Form(Contd.)

   This example illustrates the fields and controls on the Recreate WebLogic Server Domain and Redeploy PIA : Input Screen 2 page. You can find definitions for the fields and controls later on this page.

Some of the fields are populated with values. Enter the fields marked *.

App Server Name	Enter the host on which the application server domain runs.
Authentication Token Domain (like.mycompany.com)	Enter the authentication token domain.
Web Profile Password	Enter the Web profile password.
Retype Web Profile Password	Re-enter the Web profile password.
Report Repository Location	The Process Scheduler report output location.
Integration Gateway Password	Enter the Integration Gateway password.
Retype Integration Gateway Password	Re-enter the Integration Gateway password.

| App Server Domain Connect Password | Enter the App Server Domain Connect password. |
| Re-type App Server Domain Connect Password | Re-enter the App Server Domain Connect password. |

4. On the Recreate WebLogic Server Domain and Redeploy PIA : Credential Screen, select the credentials and then click Next.

5. Click OK on the Recreate WebLogic Server Domain and Redeploy PIA : Confirmation Screen.

Install Additional PeopleSoft Site Page

This option is relevant only to the PeopleSoft Portal web application, and does not modify or revert any other configuration settings. Select this option to install only the necessary files for defining an additional PeopleSoft site onto an existing web server configuration. The new site will be accessed using its name in the URL. For example, a site named "CRM" would be accessed using a URL similar to:

http://mywebserver_machine/CRM

To reset or re-create an existing PeopleSoft site, enter that site's name as the site to create.

1. Select PeopleSoft PIA >PIA Management >Install Additional PeopleSoft Site to access the Install Additional PeopleSoft Site : Input Screen 1 page.

   Note: All the fields are populated with values from the selected PIA target.

2. Click Next to access the Install Additional PeopleSoft Site : Input Screen 2 page.

   Image: Install Additional PeopleSoft Site : Input Screen 2 page

   This example illustrates the fields and controls on the Install Additional PeopleSoft Site : Input Screen 2. You can find definitions for the fields and controls later on this page
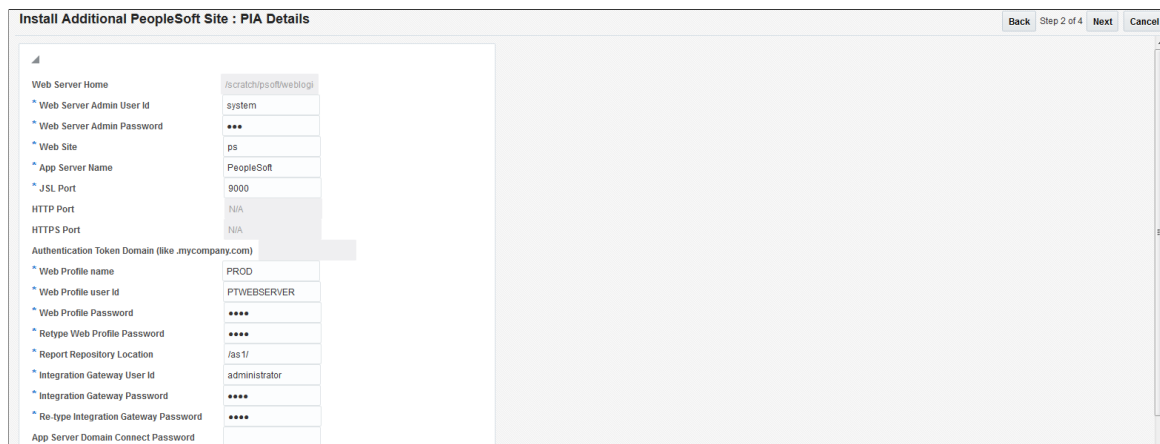
   Some of the fields are populated with values. Enter the fields marked *.

| App Server Name | Enter the host on which the application server domain runs. |
| Web Profile Password | Enter the Web profile password. |

Retype Web Profile Password	Re-enter the Web profile password.
Report Repository Location	The Process Scheduler report output location.
Integration Gateway Password	Enter the Integration Gateway password.
Retype Integration Gateway Password	Re-enter the Integration Gateway password.

3. On the Install Additional PeopleSoft Site : Credential Screen, select the credentials and then click Next.

    For more information about preferred credential and named credential, see <link>

4. Click OK on the Install Additional PeopleSoft Site : Confirmation Screen.

See the product documentation for *PeopleSoft 9.2 Application Installation* for your database platform, "Setting Up the PeopleSoft Pure Internet Architecture"

Replicate PIA

You can clone the WebServer domains. Replicate PIA creates a destination domain as a replica of source domain.

1. Select PeopleSoft PIA >PIA Management >Replicate PIA to access the Replicate PIA : Input Screen page.

    Image: Replicate PIA : Input Screen page

    This example illustrates the fields and controls on the Replicate PIA : Input Screen page. You can find definitions for the fields and controls later on this page

Target Domain Name	Enter the name of the new PS PIA domain.
Host	Select the host server where you intend to install the new PIA domain.
Web Sever Home	Specify the location of your web server product installation.

Web Server Admin User Id	Enter the user ID used to signon to the web server administration console.
Web Server Admin Password	Enter the password used to signon to the web server administration console.
Report Repository Location	Specify the Process Scheduler report output location.

2. Click Next.

3. On the Replicate PIA : Credential Screen, select the credentials and then click Next.

   For more information about preferred credential and named credential, see <link>

4. Click OK on the Replicate PIA : Confirmation Screen.

   The destination domain will be created with the same properties and websites as that of the source domain. Edit the configuration of the destination domain to change the http port to proceed with starting and accessing the PIA URL.

Setup Process Monitor

If you did not add the PS Process Monitor target during the typical discovery process, you can use the Process Monitor Setup page.

Select PeopleSoft PIA >PIA Management >Setup Process Monitor to access the Process Monitor Setup page.

Image: Process Monitor Setup page

This example illustrates the fields and controls on the Process Monitor Setup page
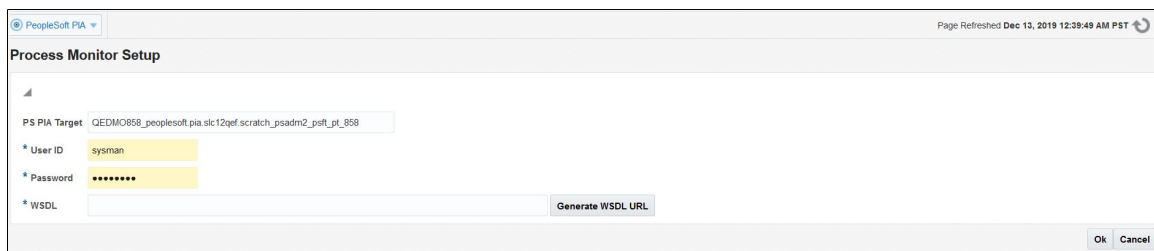
PS PIA Target	Select the appropriate PIA installation.
PROCESSREQUEST WebService URL	The Process Monitor target accesses the PeopleSoft system using a WSDL service managed by Integration Broker. Specify the URL for the WSDL file using the following syntax:
	http://\<host\>:\<port\>/ PSIGW/ PeopleSoftServiceListeningConnector/\<wsdl file name\>
	For example:
	http://pta123.bigcompany.com:10180/PSIGW/ PeopleSoftServiceListeningConnector/PROCESSREQUEST.1. wsdl

User ID/Password	Enter the PeopleSoft user ID and password that the Process Monitor will use to access the PeopleSoft system.

Accessing the PeopleSoft Web Site Targets

PS Web Site targets comprise the second part of a PeopleSoft web server. This level contains all of the PS PIA settings and files; hence, a PS Web Site target requires a tandem PS PIA target in order to be activated. There can be one or multiple sites attached to a PS PIA target. The PS Web Site's key role is configuration.

The PS Web Site homepage shows basic information for a web site. Select Targets > PeopleSoft and select the desired PS Web Site target. The PS Web Site homepage appears.

Image: PeopleSoft Website page

This example illustrates the fields and controls on the PS Web Site Homepage
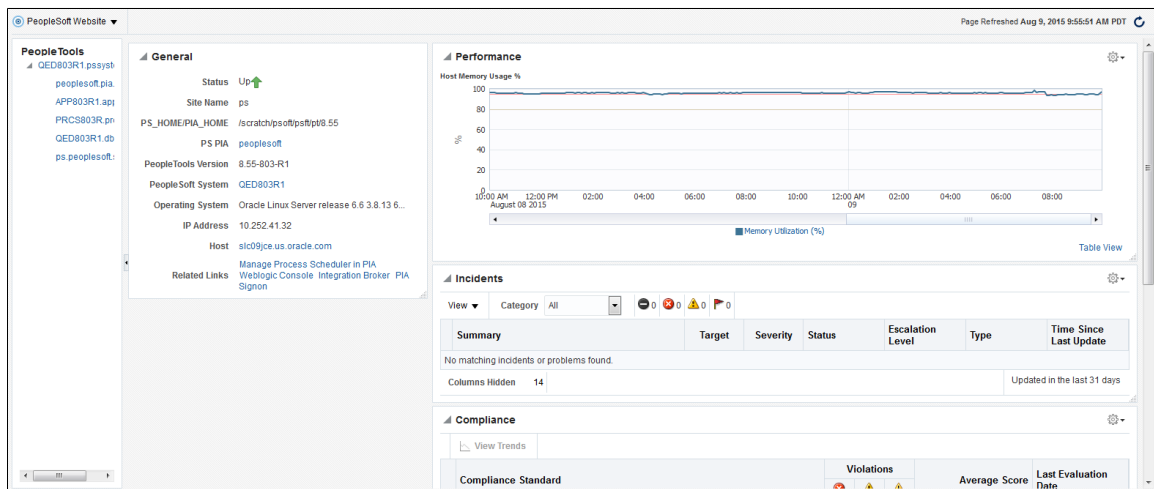
Click thePeopleSoft Website link to:

• Monitor the PeopleSoft Website.

   See Monitoring

• Control the PeopleSoft Website.

   See Control

• View job activity.

   See Job Activity

• View information publisher reports.

   See Information Publisher Reports

• View performance.

   See Performance

- Manage Configuration

  Configure Domain

  See <u>Configuration Management</u>

- Configure targets.

  See <u>Configuration</u>

- Validate compliance.

  See <u>Compliance</u>

- Setup target.

  See <u>Target Setup</u>

- View target Information.

  See <u>Common Elements on Targets Homepages</u>

Chapter 8

Managing PeopleSoft Process Monitor Targets

Accessing the PeopleSoft Process Monitor page

The PS Process Monitor homepage enables you to view and access PS Process Monitor information.

Select Targets > PeopleSoft then select the desired PS Process Monitor target.

Image: PeopleSoft Process Monitor page

This example illustrates the fields and controls on the PS Process Monitor homepage.
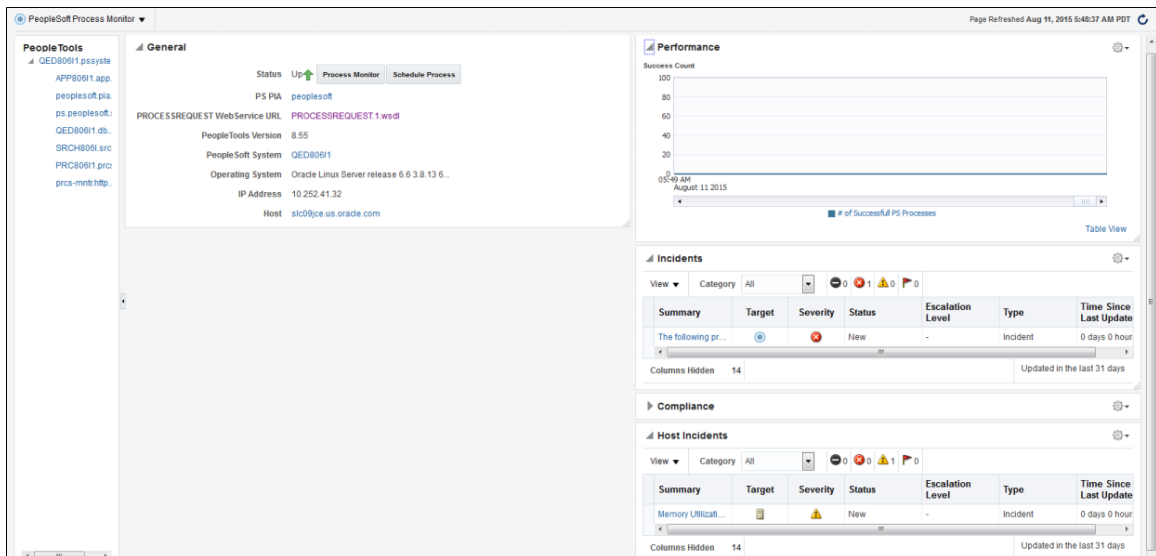
Click the PeopleSoft Process Monitor link to:

- Monitor the PeopleSoft Process Monitor.

    See Monitoring

- Control the PeopleSoft Process Monitor.

    See Control

- View job activity.

    See Job Activity.

- View information publisher reports.

    See Running the Process Monitor Metrics Report.

- View performance.

  For more information about viewing performance, see Viewing PeopleSoft Process Monitor Performance.

- Administer PeopleSoft Process Monitor.

  See Administering PeopleSoft Process Monitor

- Configure targets.

  For more information about configuring targets, see Configuration.

- Validate compliance.

  For more information about validating compliance, see Compliance.

- Setup target.

  See Target Setup.

- View target Information.

  For more information about viewing target information, see Common Elements on Targets Homepages.

Viewing PeopleSoft Process Monitor Performance

Select Performance to monitor PS Process Monitor performance. The PS Process Monitor performance page shows these metrics to help you monitor the status of submitted process requests:

Metric	Description
Success Count	The number of processes completed successfully in the last hour.
Fail Count	The number of processes failed in the last hour. These have a Run Status of "Error" or "No Success."
Run Count	The total number of processes run in the last hour.
Stuck Count	The number processes which have been the Run Status of "Processing" and meets the one of the criteria in the section below.
Not Posted Count	The number of processes with the Distribution Status "Not posted."
Posting For > 15 Minutes Count	The number of processes which have been in the Distribution Status of "Posting" for more than 15 minutes.
Pending Count	The number of processes which have the Run Status of "Queued" and have a Run Date and Time more than 30 minutes old.

Metric	Description
Initiated But Pending Count	The number of processes which have the Run Status of "Initiated" and have a Run Date and Time more than 30 minutes old.
Unallocated Count	The number of processes which have the Run Status of "Queued" and have a Run Date and Time more than 30 minutes old and have not been assigned to any server yet.

Stuck Count Criteria

The system retrieves the last 10 succeeded processes that have the same process type.

Last Process Duration	Current Process Run duration	Tolerance After which to Generate Alert
For processes which are 1 minute or less.	X + 5 minutes	Wait for 5 more minutes before generating the alert.
For processes which are more than 1 minute but less than 60 minutes.	X + 15 min	Wait for 15 more minutes before generating the alert.
For processes which are more than 60 minutes but less than 120 minutes.	X + 20% of previous run time	Wait for 20% more minutes before generating the alert.
For processes which are more than 120 minutes	X + 10% of previous run time	Wait for 10% more minutes before generating the alert.

If there is no similar successful process found, the system generates an alert if it's in "Processing" for more than 30 minutes.

Administering PeopleSoft Process Monitor

This section describes how to administer PeopleSoft Process Monitor:

Note: This documentation assumes you have a working knowledge of scheduling processes to run within PeopleSoft systems.

The Additional Utility link appearing on this page is Execute Host Command.

See Common Elements on Targets Homepages.

Scheduling Process Monitor

PeopleSoft Application management Plug—in for Oracle Enterprise Manager enables you to submit process requests to be run on the Process Scheduler server, just as you would from the PIA interface. The same fields and controls you use to submit process requests in PIA are available in the Oracle Enterprise Manager interface.

To submit a process request from Oracle Enterprise Manager:

1. Select PeopleSoft Process Monitor >Administration >Schedule Process.

   Image: Schedule Process page

   This example illustrates the fields and controls on the Schedule Process page.
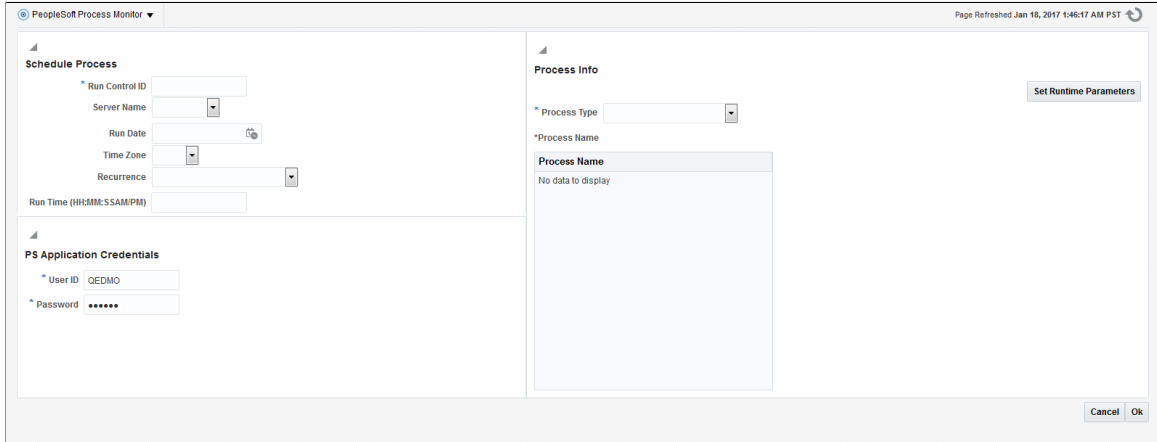
2. On the Schedule Process page, select all applicable values in the Schedule Info section, such as Run Control ID, Server Name, and so on.

3. In the Process Info section, select the process to run and any necessary runtime parameters.

   a. Click the lookup prompt (flashlight) to open the Select Process Type and Process Name page, where you select the Process Type, click Go, and select the desired Process Name from the search results.

   b. To set any runtime parameters, click the Set Runtime Parameter button.

4. In the PS Application Credentials section, enter the PeopleSoft user ID and password required to submit the process.

   Note: The default credentials will be those provided during the discovery and setup process.

For more information,

See the product documentation for *PeopleTools: Process Scheduler*, "Submitting and Scheduling Process Requests"

See the product documentation for *PeopleTools: Process Scheduler*, " Defining PeopleSoft Process Scheduler Support Information," Defining Process Definitions

Monitoring Process Monitor

PeopleSoft Application management Plug—in for Oracle Enterprise Manager enables you to monitor processes that have been submitted to run on the Process Scheduler server by displaying the Process List and Process Details interfaces. The same fields and controls you use to monitor process requests in PIA are available in the Oracle Enterprise Manager interface.

Image: Process Monitor page

This example illustrates the fields and controls on the Process Monitor page.

To monitor processes from Oracle Enterprise Manager:

1. Select PeopleSoft Process Monitor >Administration >Process Monitor.

2. On the Process Monitor page, in the Search Info section, enter the criteria for the processes you want to monitor, refining the search as needed.

3. In the PS Application Credentials section, enter the PeopleSoft user ID and password required to access the process list.

    Note: The default credentials will be those provided during the discovery and setup process.

4. Click Search.

5. View the processes in the Search Results list.

To view the process details:

1. Locate an individual process in the process list.

2. Click the link in the Instance column.

3. Review process details.

4. (If needed) In the Update Process section, select any applicable options.

5. Click OK.

Image: Process Detail page

This example illustrates the fields and controls on the Process Detail page.
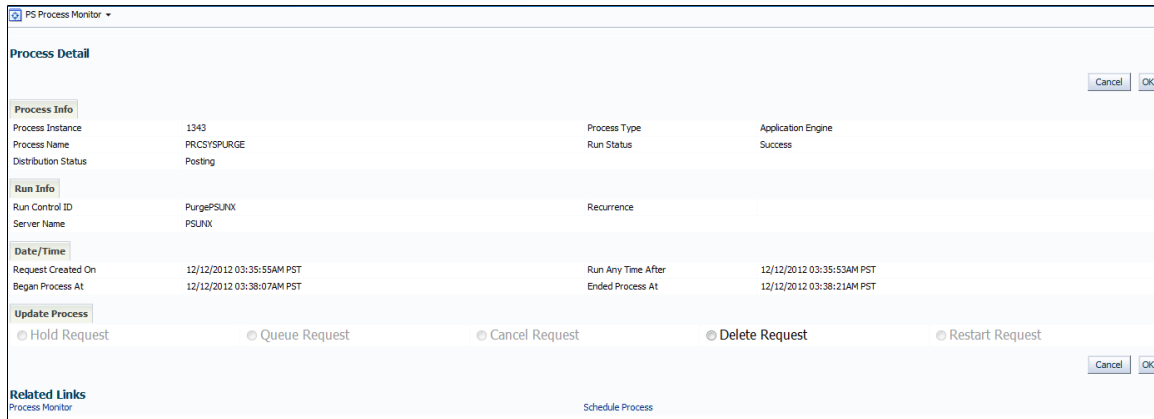
See the product documentation for *PeopleTools: Process Scheduler*, "Monitoring Process Request".

Running the Process Monitor Metrics Report

You can generate a report that displays a comprehensive view of the Process Monitor predefined metrics.

To generate an All Metrics report:

1. In the Enterprise Manager console and from the Enterprise menu item, select the Reports, Information Publisher Reports.

2. On the Report Definitions page, click the PeopleSoft Process Monitor - Report for All Metrics report.

   You can scroll down the reports list, or you can enter *PeopleSoft* in the Title search field and click Go.

3. On the Specify Target for Report page, select the Process Monitor target for which to run the report, and click Continue.

   Click the search icon for the PS Process Monitor field and select the appropriate target.

Image: PeopleSoft Process Monitor - Report for All Metrics page

This example illustrates the fields and controls on the Sample PS Process Monitor All Metrics report.

Chapter 9

Managing PeopleSoft Systems and Services

Understanding PeopleSoft Systems

PeopleSoft targets sharing the same application database can be grouped into a PeopleSoft system. A PeopleSoft system can comprise an application database, multiple PS PIA targets, PS Web Sites, PS Process Scheduler Domains, PS Process Monitor, and PS Application Server Domains. For example, a typical PeopleSoft system might be a production HCM application, which could include various PeopleSoft entities—like an application server, web server, Process Scheduler, Process Monitor, and an application database. The PeopleSoft application database is the common target that binds the other PeopleSoft targets together in the PeopleSoft system.

Note: If you use automated system creation, all PeopleSoft targets that are associated with a particular PeopleSoft application database are added to this system. Only PeopleSoft targets that have been registered in Enterprise Manager can be in a system.
PS PIA and PS Web Site targets do not appear in an automatically generated system, unless they have been logged into previously.

Understanding Services

A *service* is defined as an entity that provides a useful function to its users; specifically, it models a business process or application. An administrator defines a *service test* to determine whether or not the service is available and performing. A *beacon* is a target type in Enterprise Manager that performs a service test.

The PeopleSoft Application Management Plug—in delivers a service test that enables administrators to monitor the availability of a PeopleSoft application by simulating a login-logout activity.

Note: The delivered service test checks only the login and logout capability of the PeopleSoft application by simulating it (using the URL entered by the user). However, administrators can create their own services in Enterprise Manager to track specific areas of their applications, such as in payroll processing or call center services. They can also modify the generated service.

Creating PeopleSoft Systems

The section discusses:

- The PeopleSoft System homepage.

- Automated PeopleSoft system creation.

Accessing the PeopleSoft System page

1. Select Targets >Systems.

2. From the Systems page, select a PeopleSoft system.

Image: PeopleSoft System page

This example illustrates the fields and controls on the PeopleSoft System Homepage
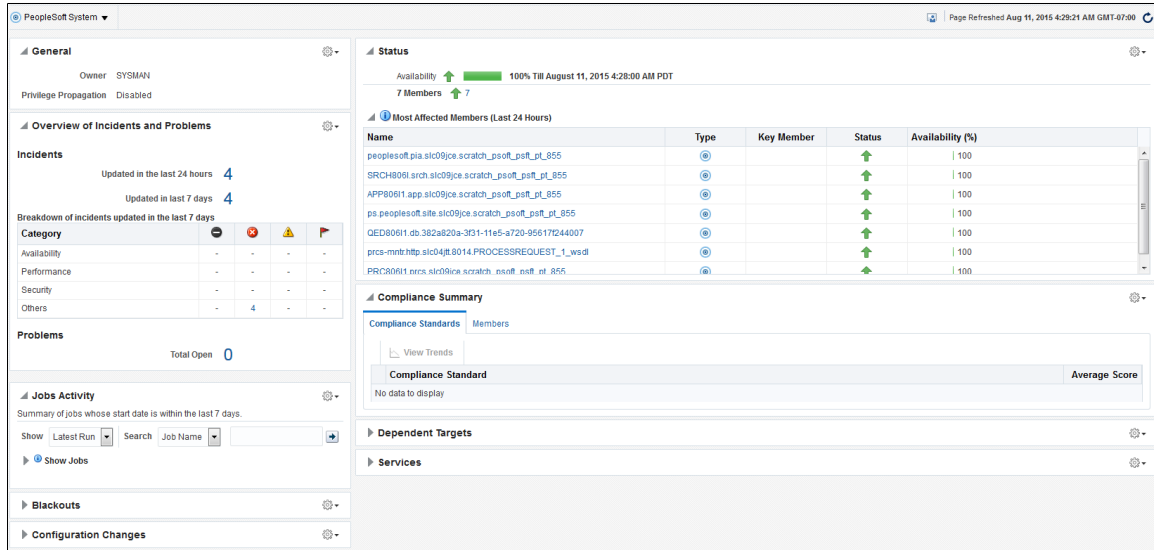
Automated PeopleSoft System Creation

To create a PeopleSoft system:

1. Select Targets > Systems.

2. Click the Add >PeopleSoft System to access the Create PeopleSoft System page.

Image: Create PeopleSoft System page

This example illustrates the fields and controls on the Create PeopleSoft System page. You can find definitions for the fields and controls later on this page

Automated PeopleSoft System Creation

PS App DB	Select the PeopleSoft database that should be associated to the new system. The list includes all the PS Application Databases that have been registered in Enterprise Manager.
System Name	Enter a new system name. Enterprise Manager automatically assigns a system name as *<DBName>+[01-99].PSSystem*. If there is already a system with that name, the new name increases incrementally by 1. You can change the system name to one that is more descriptive.
Timezone	Select the appropriate time zone. The default is the time zone of the Oracle Management Service.

Service Configuration

Create Service	(Optional) Select to configure the service that the PeopleSoft Application Management plug—in automatically creates for every valid PeopleSoft system. This service simulates the login-logout action to the PeopleSoft application.

If you leave the check box cleared, the remaining fields are unavailable for selection. |
Service Name	Enter a service name. The default is *<System Name>+. Service*.
Beacon	Click the icon to open a browser listing predefined beacons. Select the beacon you want associated with the service.
Timezone	Select the appropriate time zone for the service. The default is the time zone of the Oracle Management Service.
PS Web Sites and User IDs	Lists the PS Web Sites detected in the PeopleSoft system. You must define the URL for the PeopleSoft page of each PS Web Site and specify login credentials.

1. Enter the PeopleSoft application homepage URL (the first page to appear after the PeopleSoft login page). The format is:

    <protocol>://<hostname>/psp/<web site>/<portal>/<node>/h/<tab ID>

    For example:

    http://myserver.peoplesoft.com/psp/ps/EMPLOYEE/PT_LOCAL/h/?tab=DEFAULT

2. Enter a user ID and password for use as the login to these URLs.

3. To remove a web site from the service, click Delete at the end of the row. |

> **Note:** A service can be created only if there is at least one URL and one PS Web Site listed in the Cloud.

Click OK to proceed with the automated system creation.

> **Note:** All system properties are defaulted when the system is created automatically.
> There are no defaults for charts and metric data and they must be set up manually, if desired.

Removing PeopleSoft Systems

Removing a PeopleSoft system means you are removing a grouping of targets in Enterprise Manager. However, you are not removing the targets from the Enterprise Manager or their installations from the server. The member targets remain in Enterprise Manager and can be managed and used for building other systems.

To remove a PeopleSoft system:

1. Select Targets > Systems.

2. Select the existing system that you want to remove.

3. Click Remove.

Managing PeopleSoft Systems

This section discusses:

* PeopleSoft system members

* PeopleSoft system URL

* PeopleSoft system topology

PeopleSoft System Members

The PeopleSoft System Members page lists all of the PeopleSoft targets included in the system. You can click an individual target to display that target's homepage.

1. Select Targets > Systems.

2. Select PeopleSoft System >Members >> Show All

Image: PeopleSoft System Members page

This example illustrates the fields and controls on the PeopleSoft System Members page.
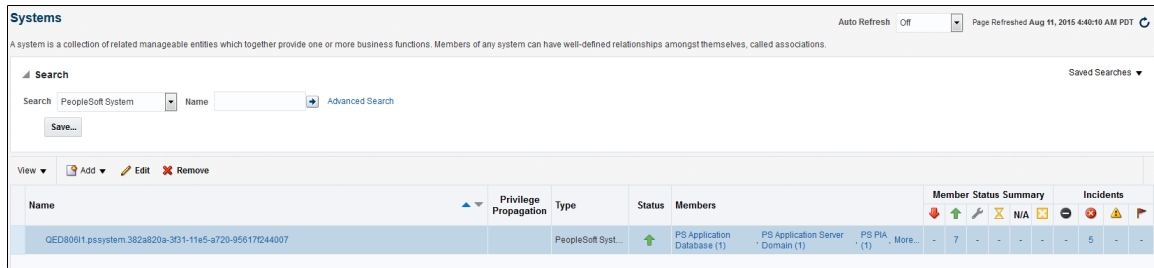
PeopleSoft System URLs

You can define different system URLs to be accessed in Enterprise Manager. Only users who have full target privileges can manage PeopleSoft system URLs in Enterprise Manager. To manage PeopleSoft URLs associated with a system, select the desired PeopleSoft system from the PeopleSoft Home Page and click the 'Manage System URLs' button

Image: Manage System URLs

Manage System URLs page
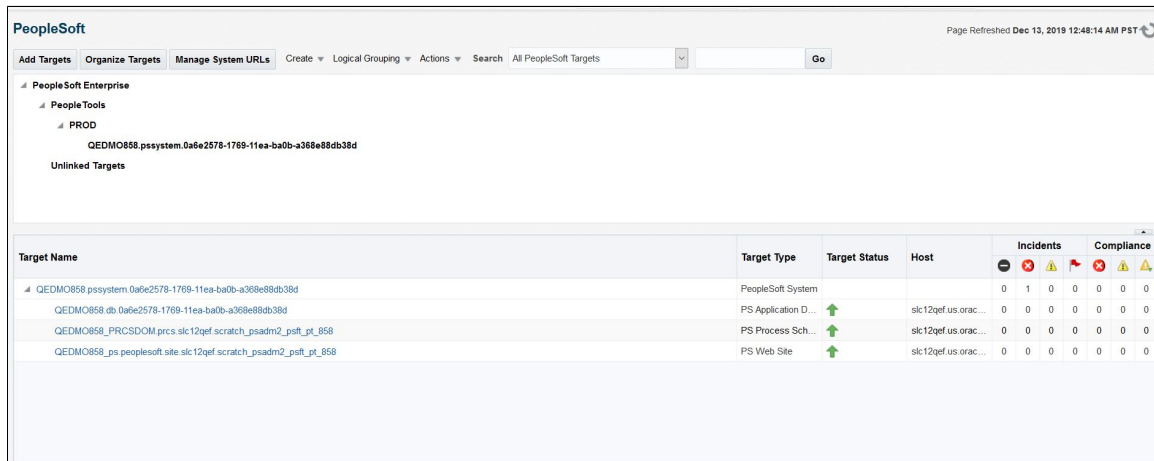
Note: The system administrator is responsible for populating the correct URL fields. The system does not verify the URL and by default, the URL fields are blank.

PeopleSoft delivers the following system URL types for you to create and associate URLs to your PeopleSoft system.

- Process Scheduler Management (targetType is PS Website)

  You can enter the URL for any of the submenus used in PeopleTools Process Scheduler. For example, Process Monitor and Application Engine. Once you have defined this system URL, you can access it by selecting Administration for the PS Process Scheduler Domain target, then click Manage Process Scheduler in PIA.

- Web Profile Search (targetType is PS Website)

This URL is associated with a PS Web Site target. Enter the URL from a PeopleSoft application to open its web profile page. The naming convention for this URL is <WebSite_Name>+_Web Profile Search.

- PIA Signon (targetType is PS Website)

  You may have multiple values for PIA—however, the PS Web Site is the primary key. The PS Web Site drop-down list in the Create URL page shows only the PS Web Sites that have been defined in the PeopleSoft system. If there are no PS Web Sites present in the PeopleSoft system you cannot create a PIA Signon URL entry. The naming convention for this URL is <WebSite_Name>+_PIA Signon.

- Integration Broker Monitor Message (targetType is PS Website)

  This URL is associated with a PS Web Site target. Enter the URL from a PeopleSoft application to open its Integration Broker profile page. The naming convention for this URL is <WebSite_Name>+_Integration Broker Monitor Message.

- Web Server Administration (targetType is PIA)

  This refers to WebSphere, Weblogic administration site. Enter the URL here to access the web server administration site from Enterprise Manager. You may have multiple values here, while the PS PIA target is the primary key. The naming convention for this URL is <PIA_Name>+_Web Server Administration.

These URLS can also be accessed via the Related Links option on the General Pane in their respective target owners' page. If no URL has been specified for the URL Type, you will be navigated to the Manage URLs Page where you can do it.

Image: Related Links option

Related Links option
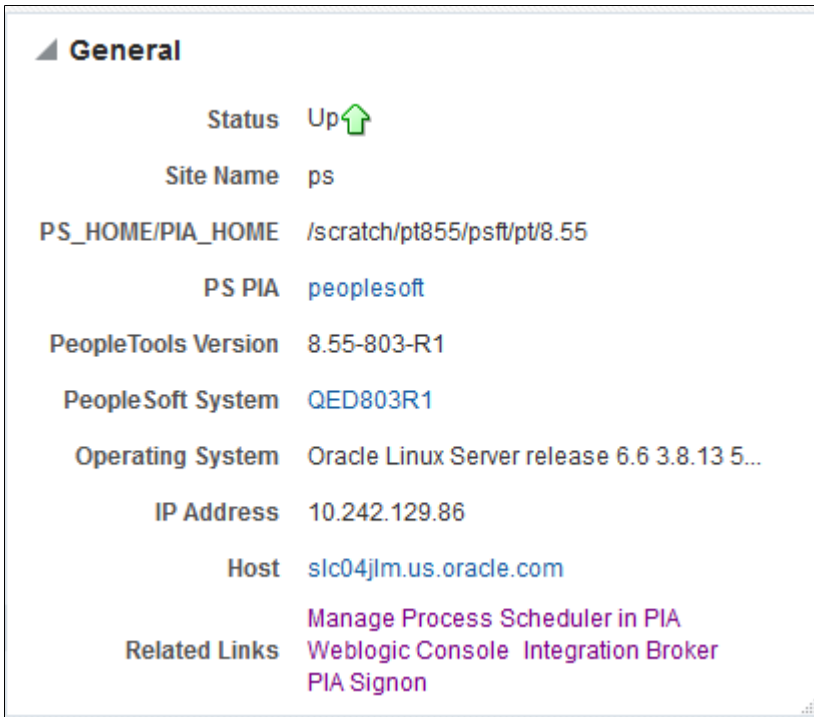
Click the PeopleSoft System URL Setup link in the Related Links region of the PeopleSoft System homepage to access the PeopleSoft System URL page.

Image: PeopleSoft System URL page

This example illustrates the fields and controls on the PeopleSoft System URL page. You can find definitions for the fields and controls later on this page.

Edit	Select a URL , then click to enter changes to previously created PeopleSoft system URLs.
Remove	Click to remove a PeopleSoft system URL.
Create	Click to display the Create PeopleSoft System URL page. Select the URL type and make other appropriate selections. Click Save.

Note: By default, the system prepends http:// to the front of the URL, if not already present, when saving the record.

PeopleSoft System Topology

The Topology page shows a graphical view of a PeopleSoft system and enables you to perform several tasks.

From the Topology page, you can:

*   See the status of each target—icons are green (up), red (down), light gray (unknown), dark gray (blackout).

*   Display data that is refreshed every 30 seconds, or manually if specified.

*   Zoom in and out by clicking the icons in the left-hand column. Show summary information on the number of Incidents and rule violations on a per target or system basis.

To view a PeopleSoft system in the Topology Viewer, On the PeopleSoft target page, Click the target menu item and then select Members >Topology and select a PeopleSoft system. The homepage appears, select Topology. The Topology Viewer opens.

Image: PeopleSoft System Topology

This example illustrates the fields and controls on the PeopleSoft System Topology.

Chapter 10
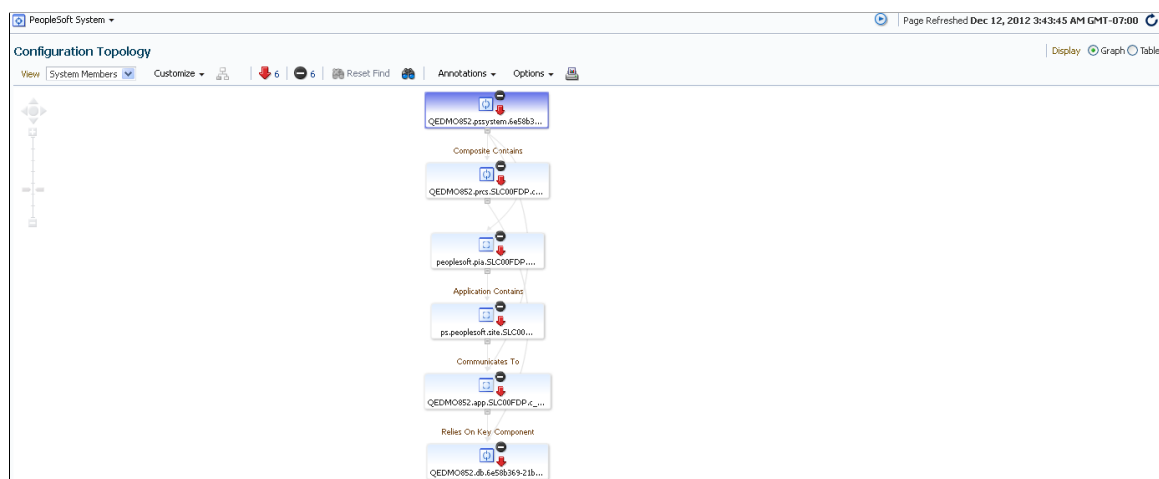
Security for PeopleSoft Application Management Plug-in

Understanding Enterprise Manager Security

The PeopleSoft Application Management Plug—in relies on Oracle Enterprise Manager's security framework for most security features.

Enterprise Manager identifies *administrators* to manage the Enterprise Manager administration accounts. These are the administrator access categories:

Administrator	This is considered the regular Enterprise Manager administrator.
Super Administrator	This is considered the most powerful Enterprise Manager administrator with full access privileges to all targets and administrator accounts within the Enterprise Manager environment. Only super administrators can perform administrative operations on regular administrator accounts.
Repository Owner	This is the database administrator for the Management Repository. This account cannot be modified, duplicated, or deleted.

From the Enterprise Manager Cloud Control Console, you can create and manage new administrator accounts. Each administrator account includes its own login credentials, and a set of privileges that are assigned to the account.

Important! In the current version of the PeopleSoft Application management Plug-in, roles are not supported. The PeopleSoft AMP only reads the system and target privileges that are added directly to the user. It does not currently recognize system and target privileges assigned to a user by way of a role. As such, system and target privileges must be added directly to the user account for managing PeopleSoft targets.

Working With Target Privileges

Target privileges enable an administrator to perform operations on a target. Certain privileges are automatically given to administrators based on other privileges. For example, granting any privileges on a target automatically grants the View target privilege on the host.

Target privileges are divided into these groups:

View	Enables the administrator to view properties, inventory, and monitor information about a target. The view privilege is

propagated to all members of aggregate targets such as groups and systems.

Note: The view privilege must also be assigned to the agent of the target.

Operator

Enables the administrator to perform the following operations on a target: startup, shutdown, edit target properties, view the components of the system, modify system membership, add charts to the system, create or edit system topology, customize the dashboard associated with the system, change the columns that appear on the System Members page, and black out the system and its components. The Operator Target privilege does not automatically propagate to members of the System.

Full

Implicitly grants all the target privileges and enables the administrator to delete a target and configure credentials for maintenance operations of a target.

When you create a system, you become its owner and automatically receive full privileges for the system and view on all targets. Certain privileges are automatically given to administrators based on other privileges. For example, granting any privileges on a target automatically grants the View target privilege on the host.

Related Links
Target Actions and Privileges

Managing Target Preferred Credentials

Target Preferred Credentials is a credential specifically applied to a single target for a particular user.

Preferred credentials simplify access to managed targets by storing target login credentials in the Management Repository. With preferred credentials set, users can access an Enterprise Manager target that recognizes those credentials without being prompted to log into the target. Preferred credentials are set on a per user, per target basis, thus ensuring the security of the managed enterprise environment.

When you create a domain, you are prompted to retain the same credential as the preferred host. You may choose to enter a new credential.

To manage Enterprise Manager preferred credentials:

1. On the Enterprise Manager Cloud Control page, select Setup, Security, Preferred Credentials.

   Enterprise Manager displays the Preferred Credentials page. The first column lists all the target types.

2. Click the Manage Preferred Credentials button.

3. In the Default Credential Section, select a row and then click Set.

4. In the Select Named Credential dialog box, enter the required parameters and then click Save.

Working With Target Credentials

Each of the target privilege levels are assigned actions that can be performed whenever the privilege is assigned to a role or user.

See Target Actions and Privileges.

The Target Credentials page is used to verify credentials.

Depending on what actions you want to perform, you may be required to enter host credentials in the Target Credentials page.

If desired, you can select the Saved Preferred Credentials check box, and the system will not prompt for credentials the next time you initiate the action for this target (when you are the current user in Enterprise Manager).

When the user is creating a new target or discovering an existing target, you can choose to select the preferred credentials or the named credentials. The credential that you select becomes the preferred and monitoring credential for the discovered or newly created targets.

Image: Preferred Credentials for Target Host

This example illustrates the fields and controls on the Preferred Credentials for Target Host.

Image: Named Credential for Target Host

This example illustrates the fields and controls on the Named Credential for Target Host.

Note: If the preferred credential is already set then you will not be prompted for credential when invoking administrative actions from the Target Administration tab.

If the preferred credential is not set for the target, you will be prompted to either select a new credential or a named credential. The selected credentials is used to run the administrative action on the target.

Image: New Credentials for Target Host

This example illustrates the fields and controls on the New Credentials for Target Host.

Working With Enterprise Manager User Accounts

There are a variety of user accounts that you may use with your Enterprise Manager system. Which accounts you use and how you manage them with your PeopleSoft system depends on a variety of factors, including your security implementation and your operating system. Because the topic of user accounts should be considered at the time of your installation, this topic is discussed in detail within the PeopleSoft Application Management Plug—in installation documentation that is provided with the plug-in software.

See, *Installation Guide: PeopleSoft Application Management Plug—in 13.4.1.1.0 for Oracle Enterprise Manager 13c*.

Updating Target Credentials for PeopleSoft Targets

Target credentials are stored for each PeopleSoft target when it is discovered or created on Enterprise Manager Cloud Console. The target credentials are stored in $AGENT_HOME\sysman\emd\targets.xml and used for target metric collection. Due to security restrictions, it is likely that the password will expire eventually for hosts. If the password expires, metric collection fails for the PeopleSoft targets.

If the password for target credentials expires, one of the following solutions can be used to change the password for the PeopleSoft targets.

• Remove the target from your system in Enterprise Manager, and rediscover it.

    See Understanding the Discovery Process.

• Use the Enterprise Manager Command Line Interface (EM CLI).

EM CLI installation and setup instructions are available at the following local Enterprise Manager Cloud Console link.

https://<machinename>:<portnumber>/em/console/emcli/download

For example:

https://st-hp16.peoplesoft.com:7880/em/console/emcli/download

For more information on EM CLI refer to the EM CLI documentation provided by Oracle.

The syntax of the EM CLI command to change the password is:

```
emcli update_password
-target_type="ttype"
-target_name="tname"
-credential_type="cred_type"
-key_column="column_name:column_value"
-non_key_column="col:oldvalue:newvalue;..."
```

For example, the following command changes the password for target credentials of an application server target:

```
>emcli update_password
-target_type=ps_app_server
-target_name=newapp1.app.st-hpp03.ds1_home_psoft_psft_pt_853-809-I1
-credential_type=PsoftHostCreds
-key_column="HOST_USERNAME:psoft"
-non_key_column="HOST_PASSWORD:psoft456:psoft"
```

Similarly, the password can be changed for other PeopleSoft target types. Change the target name, type, username and password in the above command for other PeopleSoft targets.

Target	*target_type Value*
PS Application Server Domain	ps_app_server
PS Search Server Domain	ps_search_server
PS PIA	ps_pia
PS Website	ps_web_site
PS Process Monitor	ps_process_monitor
PS Application Database	ps_app_db

Note: To change the password for multiple targets, the change password commands for multiple targets can be stored in a script and run once to update multiple passwords.

Chapter 11

Validating Rules

Understanding Compliance for PeopleSoft Application Management Plug-in

The Oracle Environment Management Compliance Management solution provides the capability to define, customize, and manage Compliance Frameworks and Compliance Standards. It also provides the tools to evaluate targets and systems for compliance with business best practices in terms of configuration, security, storage, and so on.

The compliance solution

* Automatically determines if targets and systems have valid configuration settings.

* Automatically determines if targets and systems are exposed to configuration-related vulnerabilities.

* Advises how to change configuration to bring targets and systems into compliance with respect to best practices.

* Provides real-time monitoring of a target's files, process, users, Windows registry entries, and more to let EM users know where configuration change is taking place in their environment.

* Determines if real-time detected configuration changes were authorized by open change management requests. Violations are created when an action is determined to be unauthorized.

* Provides out-of-box Compliance Frameworks (PCI, CIS, for example) and compliance standards to map to Compliance Standard Rules. This mapping makes it possible to visualize how out of compliance settings and actions will affect any compliance framework an organization follows.

Compliance Feature Overview

Compliance Framework	A compliance framework is an industry-specified best practices guideline that deals with the underlying IT infrastructure, applications, business services and processes, and how they are organized, managed and monitored.
Compliance Standard	Compliance Standard is EM's representation of a compliance control that must be tested against some set of IT infrastructure to determine if the control is being followed. Compliance standards can be mapped to Compliance Frameworks so that violations can result in a compliance score impact on the Compliance Framework.

Compliance Standard Rule
Compliance standard rules specify the actual check that is going to happen. These rules are mapped to one or more Compliance Standard.

Image: Compliance Standards

This example illustrates the fields and controls on the Compliance Standards tab.
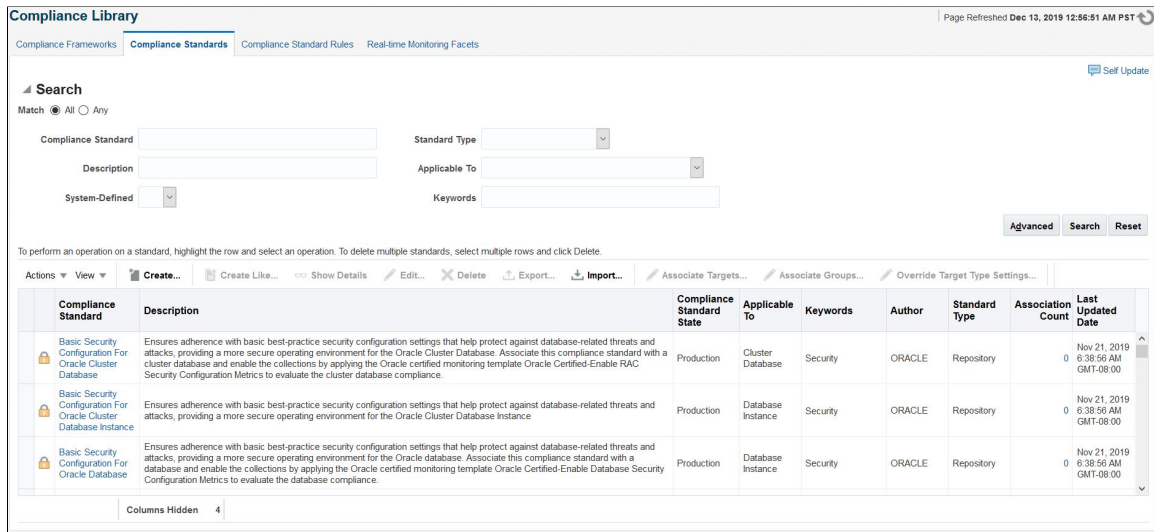
Image: Compliance Standard Rules

This example illustrates the fields and controls on the Compliance Standard Rules.
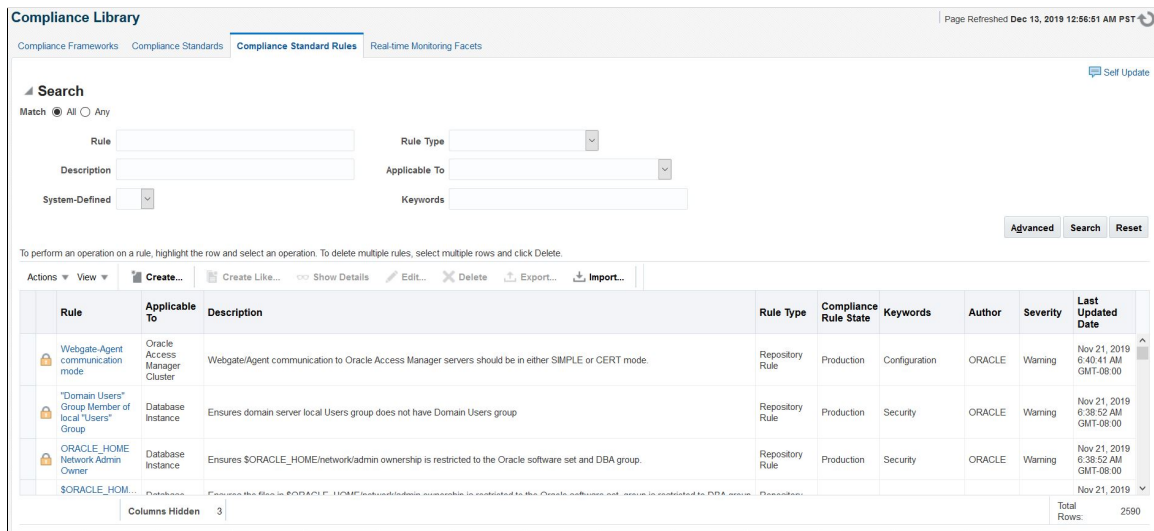
Associating Compliance Standard to a PeopleSoft Target

When you deploy PeopleSoft AMP on OMS, the PeopleSoft compliance entities like rules, standards , standard group, and the framework appear in the compliance library. To view these entities, select Enterprise, Compliance, Library.

Compliance rules are available to PS Application Server, PS PIA, and PS WebSite targets only. After a compliance standard is available for a target type, you must manually associated each target to a PeopleSoft target to generate violation.

1. Select Enterprise, Compliance, Library.

2. Click the Compliance Standard tab.

3. Search and select the standards for PeopleSoft target.

4. Click the Associate Targets button.

5. Click Add.

6. Select the target and then click OK.

Viewing the Violation Message

1. Select Enterprise >Compliance >Results.

2. Click Standard and then click Show Details.

Image: Compliance Standard Result Details

This example illustrates the fields and controls on the Compliance Standard Result Details.

Chapter 12

Configuration and Metric Data Collected

Configuration Data Collected

Enterprise Manager collects configuration data from each target type's configuration. Configuration data is collected on a regular basis—the default is once a day—and is transmitted to the Oracle Management Service. The first configuration collection occurs after the initial discovery process.

For subsequent configuration collections, the Oracle Management Service receives and parses the data and saves updates to the Management Repository. In addition to the regularly scheduled configuration collection process, collections are triggered every time you change a target's configuration from within Enterprise Manager.

PeopleSoft Target Type	*Data in These Files*
PS Application Database	PeopleTools tables
PS Application Server Domain	psappsrv.cfg, psappsrv.ubx
PS Process Scheduler Domain	psprcs.cfg, psprcs.ubx
PS PIA	piaInstallLog.xml, config_prop, setEnv.sh/cmd or opmn.xml or server.xml
PS Web Site	web.xml, configuration.properties, integrationGateway. properties, pstools.properties, config_prop
PS Process Monitor	For the PS Process Monitor target configuration, only the PeopleTools version and the WSDL URL is collected as part of configuration metrics. These two properties are collected from the PS Process Monitor target properties that are stored in $AGENT_HOME/sysman/emd/targets.xml.

Metric Data Collected

Metric data refers to the collection of data that changes frequently, such as status, memory, disk utilization, and so on. PeopleSoft delivers predefined metric types and default collection times for each target type. The metrics can be viewed by clicking the All Metrics link on each target homepage.

The metric data collected is saved to the Management Repository and is compared to predefined thresholds for each target. If a threshold has been reached, the system generates an alert. The Incidents display on each target's homepage.

Target Type	Attribute Name	Collection Schedule	Description
PS Application Database	Availability/Response	10 minutes	Checks the status of the PS Application Database
PS Application Server Domain	Availability/Response	1 minute	Checks the status of PS Application Server Domain
PS Application Server Domain	# of Process Queued for App Server	10 minutes	Monitors the number of PSAPPSRV processes queued for a PS Application Server Domain. Generates an alert if the defined threshold is reached.
PS Application Server Domain	# of Process Queued for BRK Dispatcher (if enabled)	13 minutes	Monitors the number of PSBRKDSP processes queued for a PS Application Server Domain. Generates an alert if the defined threshold is reached.
PS Application Server Domain	# of Process Queued for BRK Handler (if enabled)	14 minutes	Monitors the number of PSBRKHND processes queued for a PS Application Server Domain. Generates an alert if the defined threshold is reached.
PS Application Server Domain	# of Process Queued for PUB Dispatcher (if enabled)	12 minutes	Monitors the number of PSPUBDSP processes queued for a PS Application Server Domain. Generates an alert if the defined threshold is reached.
PS Application Server Domain	# of Process Queued for PUB Handler (if enabled)	15 minutes	Monitors the number of PSPUBHND processes queued for a PS Application Server Domain. Generates an alert if the defined threshold is reached.
PS Application Server Domain	# of Process Queued for SUB Dispatcher (if enabled)	16 minutes	Monitors the number of PSSUBDSP processes queued for a PS Application Server Domain. Generates an alert if the defined threshold is reached.
PS Application Server Domain	# of Process Queued for SUB Handler (if enabled)	17 minutes	Monitors the number of PSSUBHND processes queued for a PS Application Server Domain. Generates an alert if the defined threshold is reached.

Target Type	Attribute Name	Collection Schedule	Description
PS Application Server Domain	PSAPPSRV Handler Count	5 minutes	Monitors the number of active PSAPPSRV processes. Generates Incidents if the count is above the specified value.
PS Application Server Domain	Total Tuxedo Connections	5 minutes	Counts the number of Tuxedo connections to the PS Application Server Domain. Generates Incidents if the count is above the specified value.
PS Application Server Domain	Failed Processes	5 minutes	Shows the number of server processes that are down within a domain. The domain configuration should be verified against the server status. It generates Incidents if the failed processes count is greater than or equal to 1.
PS Application Server Domain	JSH Aborts	5 minutes	Shows the number of application server domain JSH Aborts. If the value exceeds the threshold, the system logs and alert.
PS Application Server Domain	JSH Load	5 minutes	The number of JSHs loaded. Formula for this count is: (Sum of Bgn values for JSH handlers in the client status) - (Sum of Cmmt values for JSH handlers in the client status). If the value exceeds the threshold, the system logs an alert.
PS Application Server Domain	WSH Aborts	5 minutes	Shows the number of PS Application Server Domain WSH Aborts. If the value exceeds the threshold, the system logs and alert.
PS Application Server Domain	WSH Loads	5 minutes	The number of WSHs loaded. Formula for this count is: (Sum of Bgn values for WSH handlers in the client status) - (Sum of Cmmt values for WSH handlers in the client status). If the value exceeds the threshold, the system logs and alert.

Target Type	Attribute Name	Collection Schedule	Description
PS Application Server Domain	PS Application Server Client/Queue Server/Status	Real time	Displays the status of the client, queue, and server elements of the domain. This is equivalent to using the Domain Status menu options in PSADMIN.
PS Application Server Domain	Long Running Service Request Count	1 hour	Monitors the number of Service Requests that are long running (more than 10 secs). Generates alerts with multiple severity levels if this count exceeds pre-defined thresholds
PS Application Server Domain	Memory Usage	1 hour	Monitors the memory footprint used by App Server processes. Generates alerts when it exceeds the pre-defined threshold.
PS Application Server Domain	Tuxedo File Count	1 day	Monitors the number of tuxedo files created in temporary directory. This is an indicator of Tuxedo memory queue size. Generates alerts when it exceeds the pre-defined threshold.
PS Application Server Domain	Memory Usage Growth	15 minutes	Monitors the memory footprint growth pattern of the App Server. Generates alerts with multiple levels of severity if the number of spikes in memory usage growth exceeds pre-defined thresholds
PS Application Server Domain	PeopleTools State Files Count	1 hour	Monitors the number of PeopleTools State files generated in the domain logs directory. Generates alerts if the count exceeds a pre-defined threshold.
PS Application Server Domain	Tuxedo Service Error Count	1 hour	Monitors the number of Tuxedo Service errors in the App Server log files. Generates alerts with multiple levels of severity if the count exceeds pre-defined thresholds.
PS Application Server Domain	Paging Count	15 minutes	Monitors the paging activity on the AppServer. Generates alerts if the paging is happening very frequently.

Target Type	Attribute Name	Collection Schedule	Description
PS Application Server Domain	App Server Queues Wait Count	15 minutes	Monitors the count of App Server Queues experiencing wait times. Generates alerts with multiple levels of severity if the count exceeds pre-defined thresholds.
PS Application Server Domain	IB Queue Flowing	15 minutes	Monitors the movement of the IB Queue. Generates alert if it is stuck.
PS Application Server Domain	Heavy Transaction Activity	15 minutes	Monitors heavy transaction activity to file system. Generates alert if the heavy activity persists for more than a pre-defined period of time.
PS Application Server Domain	App Server Restart Error Count	15 minutes	Monitors if there are App Server restart related errors in the log files. Generates alerts if there are any such restart errors in the logs.
PS Application Server Domain	Low Disk Space	1 day	Monitors the disk space in the host on which the database, App Server or PIA targets exists is running.Generate alert if the disk space is low.
PS Application Server Domain	Archive TraceSql Files	1 day	Monitors the TraceSql files that are huge or old that requires archiving. Generates alerts if such files exist.
PS Application Server Domain	Archive Old Log Files	1 day	Monitors existing old log files that is to be archived. Generates alerts if such files exist.
PS Application Server Domain	Highly Frequent GC Count	1 hour	Monitors the number of highly frequent (within 15 seconds apart) Garbage Collections that are occurring in Web Servers. Generates alerts with multiple severity levels if this count exceeds the pre-defined thresholds.
PS Application Database Domain	Low Disk Space	1 day	Monitors the disk space in the host on which the database, App Server or PIA targets exists is running.Generate alert if the disk space is low.
PS Process Scheduler Domain	Availability/Response	1 minutes	Checks the status of PS Process Scheduler Domain.

Target Type	Attribute Name	Collection Schedule	Description
PS Process Scheduler Domain	# Queued Processes for Process Scheduler (PSPRCSRV)	15 minutes	Monitors the number of PSPRCSRV processes queued for a PS Process Scheduler Domain. Generates an alert if the defined threshold has been reached.
PS Process Scheduler Domain	# Queued Processes for Distribution Server (PSDSTSRV)	15 minutes	Monitors the number of PSDSTSRV processes queued for a PS Process Scheduler Domain. Generates an alert if the defined threshold has been reached.
PS Process Scheduler Domain	Failed Processes	5 minutes	Displays the current number of failed or down server processes within the domain. It generates Incidents if the failed processes count is greater than or equal to 1.
PS Process Scheduler Domain	PS Server Queue/Server Status	Real time	Displays the status of the queue and server elements of the domain. This is equivalent to using the Domain Status menu options in PSADMIN.
PS Process Scheduler	PS Process Scheduler Log Monitor	5 Minutes	This metric contains the details of the limit on the number of sub folders inside the Peoplesoft Process Scheduler Log Location .An alert message is generated if the number of sub folders exceeds the os_limit.
PS PIA	Availability/Response	1 minute	Checks the status of PS PIA.
PS PIA	Highly Frequent GC Count	1 hour	Monitors the number of highly frequent (within 15 seconds apart) Garbage Collections that are occurring in Web Servers. Generates alerts with multiple severity levels if this count exceeds the pre-defined thresholds.
PS PIA	Fatal Error Count	1 hour	Monitors the number of fatal errors in the servlet logs. Generates alerts with multiple severity levels if this count exceeds the pre-defined thresholds.

Target Type	Attribute Name	Collection Schedule	Description
PS PIA	WAIT State Socket Count	1 hour	Monitors the number of Web Server Sockets that are in WAIT State. Generates alerts with multiple severity levels if this count exceeds the pre-defined thresholds.
PS PIA	GC Frequency	15 minutes	Monitors the frequency with which garbage collection happens in the Web Server. Generates alerts with multiple levels of severity if the frequency of garbage collection exceeds pre-defined thresholds.
PS PIA	Web Profile Load Error Count	1 hour	Monitors the number of Web Profile Load errors in the Web Server log. Generates alert if the error count exceeds pre-defined threshold.
PS PIA	Low Disk Space	1 day	Monitors the disk space in the host on which the database, App Server or PIA targets exists is running.Generate alert if the disk space is low.
PS Web Site	Availability/Response	1 minute	Checks the status of PS PIA where the PS Web Site is connected.
PS WebSite	PS FTP Log Monitor	5 Minutes	This metric contains the details of the limit on the number of sub folders inside the Peoplesoft PIA FTP Location .An alert message is generated if the number of sub folders exceeds the os_limit.s
PS WebSite	PS Reports Monitor	5 Minutes	This metric contains the details of the limit on the number of sub folders inside the Peoplesoft PIA Report Repository Location .An alert message is generated if the number of sub folders exceeds the os_limit.s.
PS WebSite	Report Repository Size	1 day	This is also called *PS Reports Monitor* in PeopleSoft plug-in.
PS Process Monitor	Availability/Response	1 minute	Checks the status of the PS Process Monitor.

Target Type	Attribute Name	Collection Schedule	Description
PS Process Monitor	# of Running PeopleSoft Processes	30 minutes	Monitors the count of running processes (Run Status = Processing) in the last 1 hour.
PS Process Monitor	# of Successful PeopleSoft Processes	30 minutes	Monitors the count of successfully completed processes (Run Status = Success) in the last 1 hour.
PS Process Monitor	Failed count	30 minutes	Displays the failed process count using Reporting web service. Run Status include "Error" and "No Success. " Generates Incidents if the metric value exceeds threshold value.
PS Process Monitor	Not Posted count	30 minutes	Displays the process count of those not posted. Distribution Status is "Not posted. " Generates Incidents if the metric value exceeds threshold value.
PS Process Monitor	Processes posted for more than 15 minutes	30 minutes	Displays the processes count for processes in the posting state for more than 15 minutes. Generates Incidents if the metric value exceeds threshold value.
PS Process Monitor	Batch Processes stuck count	30 minutes	Checks the processes which are stuck. Run Status would be "Processing" for more than 30 minutes. Generates Incidents if the metric value exceeds threshold value.
PS Process Monitor	Pending processes count	30 minutes	Checks the processes which are pending. Run Status would be "Queued" for greater than or equal to 30 minutes. Generates Incidents if the metric value exceeds threshold value.
PS Process Monitor	Initiated but pending processes count	30 minutes	Checks the processes which are initiated but pending. Run Status should be "Initiated" for greater than or equal to 30 minutes. Generates Incidents if the metric value exceeds threshold value.

Target Type	Attribute Name	Collection Schedule	Description
PS Process Monitor	Failed PS Process Metrics Data	Real time	Displays the failed processes using Reporting web service. Run Status include "Error" and "No Success."
PS Process Monitor	Initiated But Pending PS Process Metrics Data	Real time	Displays the processes which are initiated but pending. Run Status should be "Initiated" for greater than or equal to 30 minutes.
PS Process Monitor	Not Posted PS Process Metrics Data	Real time	Displays the processes that are not posted. Distribution Status is "Not posted."
PS Process Monitor	Pending Process Metrics Data	Real time	Displays the processes which are pending. Run Status would be "Queued" for greater than or equal to 30 minutes.
PS Process Monitor	Posting For More Than 15 Minutes Process Metrics Data	Real time	Displays the processes that are in the posting state for more than 15 minutes.
PS Process Monitor	Stuck PS Process Metrics Data	Real time	Displays the processes which are stuck. Run Status would be "Processing" for more than 30 minutes.
PS Process Monitor	Unallocated	Real Time	The number of processes which have the Run Status of "Queued" and have a Run Date and Time more than 30 minutes old and have not been assigned to any server yet.
PS Process Monitor	PS Process Scheduler Suspended Status	5 Minutes	This metric contains the details of the Process Scheduler domains that are active but not responding. The Process Monitor is used for determining the hang status of the process scheduler domains. The collection interval is 5 minutes. This metric would determine the number of servers in the hang state and appropriately display the alert message as "The server(s) is(are) not responding".

To activate the metrics establish the JMX connection. In the *psappsrv.cfg* file, scroll to the *PSTOOLS* section to update the following:

- Enable Remote Administration = 1

- Enter *admin* as the remote administration User ID.

- Enter *{V1.1}7m4OtVwXFNyLc1j6pZG69Q==* as the remote administration password.

Note: Enter the password either in plain text or encrypt using PSCipher

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Note: The AppServer Minimum Process Count Value is implemented as a compliance rule that is applicable to PS Application server . A violation is generated if the Appserver's minimum process count value is less than 5.

Note: WAIT State Socket Count, GC Frequency, Fatal Error Count are not applicable to WebSphere domain.

Chapter 13

Working with Privileges

Target Actions and Privileges

Important! In the current version of the PeopleSoft Application management Plug-in, roles are not supported. The PeopleSoft AMP only reads the system and target privileges that are added directly to the user. It does not currently recognize system and target privileges assigned to a user by way of a role. As such, system and target privileges must be added directly to the user account for managing PeopleSoft targets.

The following table lists target actions for each of the target types and actions for systems and logs.

Note: Users assigned a super administrator role can perform all actions for all target types, systems, and logs.

Target Actions and Privileges Tables

This section includes tables showing target actions, credentials, and privileges.

PS Application Server Domain

Target Actions	*Target Credentials Required*	*Full Privilege*	*Operator Privilege*	*Viewer Privilege*
Create domain	Yes	Yes, with target system privileges		
Configure domain	Yes	Yes		
Import domain configuration from file	Yes	Yes, with target system privileges		
Create like domain	Yes	Yes, with target system privileges		
Compare to multiple configurations (jobs)		Yes		
Last collected configuration		Yes		
View saved configuration		Yes		

Target Actions	Target Credentials Required	Full Privilege	Operator Privilege	Viewer Privilege
History		Yes		
Copy configurations	Yes	Yes		
Create service (Windows only)	Yes	Yes		
Create messaging server	Yes	Yes		
Configure messaging server	Yes	Yes		
Delete messaging server	Yes	Yes		
Create service (Windows only)	Yes	Yes		
Configure service (Windows only)	Yes	Yes		
Install service (Windows only)	Yes	Yes		
Delete service (Windows only)	Yes	Yes		
Start domain (parallel and serial)	Yes	Yes	Yes	
Stop domain (forced and normal)	Yes	Yes	Yes	
Access Tuxedo command line (TMADMIN)	Yes	Yes	Yes	
Purge/archive cache	Yes	Yes	Yes	
View domain processes status		Yes	Yes	Yes
View domain queue status		Yes	Yes	Yes

Target Actions	Target Credentials Required	Full Privilege	Operator Privilege	Viewer Privilege
View domain client status		Yes	Yes	Yes
Delete domain	Yes	Yes		
Preload file cache	Yes	Yes	Yes	
Clean IPC resources	Yes	Yes	Yes	
Execute host command	Yes	Yes	Yes	
View domain status (stopped or running)		Yes	Yes	Yes

PS Process Scheduler Domain

Target Actions	Target Credentials Required	Full Privilege	Operator Privilege	Viewer Privilege
Create domain	Yes	Yes, with target system privileges		
Configure domain	Yes	Yes		
Import domain configuration from file	Yes	Yes, with target system privileges		
Create like domain	Yes	Yes, with target system privileges		
Compare to multiple configurations (Job)		Yes		
Last collected configuration		Yes		
View saved configuration		Yes		
History		Yes		
Copy configurations	Yes	Yes		
Create service (Windows only)	Yes	Yes		

Target Actions	Target Credentials Required	Full Privilege	Operator Privilege	Viewer Privilege
Configure service (Windows only)	Yes	Yes		
Install service (Windows only)	Yes	Yes		
Delete service (Windows only)	Yes	Yes		
Start domain	Yes	Yes	Yes	
Stop domain (forced and normal)	Yes	Yes	Yes	
Delete domain	Yes	Yes		
Clean IPC resources	Yes	Yes	Yes	
View domain processes status		Yes	Yes	Yes
View domain queue status		Yes	Yes	Yes
View domain status (stopped or running)		Yes	Yes	Yes
Execute host command	Yes	Yes	Yes	
Manage Process Scheduler in PIA	Yes, also prompted for PIA login	Yes	Yes	

PS PIA

Target Actions	Target Credentials Required	Full Privilege	Operator Privilege	Viewer Privilege
Edit setEnv	Yes	Yes		
Edit web.xml	Yes	Yes		
Compare to multiple configurations		Yes		
Last collected configuration		Yes		

Target Actions	Target Credentials Required	Full Privilege	Operator Privilege	Viewer Privilege
View saved configuration		Yes		
History		Yes		
Start PIA	Yes	Yes	Yes	
Stop PIA	Yes	Yes	Yes	
Web server type administration console	Yes, also prompted for PIA login	Yes	Yes	Yes
Customize start/stop scripts		Yes		
Execute host command	Yes	Yes	Yes	
View web domain status (if stopped or running)		Yes	Yes	Yes
Process Monitor Setup	Yes	Yes, with target system privileges		

PS Process Monitor

Target Actions	Target Credentials Required	Full Privilege	Operator Privilege	Viewer Privilege
Compare domain configurations		Yes		
Compare to multiple configurations		Yes		
Last collected configuration		Yes		
View saved configuration		Yes		
History		Yes		
Execute host command	Yes	Yes	Yes	
Process Monitor	Yes	Yes	Yes	

Target Actions	*Target Credentials Required*	*Full Privilege*	*Operator Privilege*	*Viewer Privilege*
Schedule Process	Yes	Yes	Yes	
View predefined process metrics	No	Yes	Yes	Yes

PS Web Site

Target Actions	*Target Credentials Required*	*Full Privilege*	*Operator Privilege*	*Viewer Privilege*
Configure site	Yes	Yes		
Web profile	Yes, also prompted for PIA login	Yes	Yes	
Integration Broker	Yes, also prompted for PIA login	Yes	Yes	
Compare configurations		Yes		
Compare to multiple configurations (jobs)		Yes		
Last collected configuration		Yes		
View saved configuration		Yes		
History		Yes		
PIA signon	Yes, also prompted for PIA login	Yes	Yes	Yes
View web site status		Yes	Yes	Yes

PS Application Database

Target Actions	*Target Credentials Required*	*Full Privilege*	*Operator Privilege*	*Viewer Privilege*
View status		Yes	Yes	Yes

Log Management (All Targets Except PS Web Site, PS Process Monitor, and PS Application DB)

Target Actions	Target Credentials Required	Full Role	Operator Role	Viewer Role
Search logs	Yes	Yes	Yes	Yes
View logs	Yes	Yes	Yes	Yes
Purge logs	Yes	Yes	Yes	
Log management setup		Yes		

Management Actions

Target Actions	Target Credentials Required	Full Privilege	Operator Privilege	Viewer Privilege
Create PeopleSoft system (only super administrator)				
Edit PeopleSoft system		Yes, if target access granted	Yes, if target access granted	
Delete PeopleSoft system		Yes, with target system privileges		
View PeopleSoft system		Yes, if target access granted	Yes, if target access granted	Yes, if target access granted
Add PeopleSoft URL		Yes		
Delete PeopleSoft URL		Yes		
Edit PeopleSoft URL		Yes		
Access PeopleSoft system URLs		Yes	Yes	Yes
Add PeopleSoft targets (super administrator)				
Remove target		Yes, with target system privileges		

Target Actions	Target Credentials Required	Full Privilege	Operator Privilege	Viewer Privilege
Start/Stop multiple domains (from PeopleSoft targets page)	Yes	Yes	Yes	

Chapter 14

Target Log Files

Default Target Log Files

This section lists default log file locations and types for:

- PS PIA targets.

- PS Application Server Domains.

- PS Process Scheduler Domains.

PS PIA Log Files

File Location	*Log File Type*
If using Weblogic: <PIA_HOME>/webserv/<Domain>/applications/peoplesoft/PSEMHUB/envmetadata/logs If using WebSphere: <PIA_HOME>/webserv/<cellname>_<nodename>_<servername>/peoplesoft.ear/PSEMHUB/envmetadata/logs	*.txt
<PIA_HOME>/webserv/<Domain>/logs	*.log
<PIA_HOME>/webserv/<Domain>/logs/replaydump	*.bug
<OAS_HOME>/j2ee/<Domain>/log/<Domain>_default_island_1/	*.log
<WEBSPHERE_HOME>/logs/<server_name>	*.log
<WEBSPHERE_HOME>/logs	*.log

PS Application Server Domain Log Files

File Location	*Log File Type*
<PS_CFG_HOME>/appserv/<appserver_domain>/LOGS	*.LOG TUXLOG.* *.trc *.tracesql *.mps *.lp process_state* *.dmp peopletools_state*
<PS_CFG_HOME>/appserv/<appserver_domain>	ULOG.<date> stderr stdout
<PS_CFG_HOME>/appserv	core

PS Process Scheduler Server Log Files

File Location	*Log File Type*
<PS_CFG_HOME>/appserv/	core
<PS_CFG_HOME>/appserv/prcs/<prcs_domain>/	stderr stdout ULOG*
<PS_CFG_HOME>/appserv/prcs/<prcs_domain>/LOGS/	*.LOG process_state* peopletools_state* TUXLOG*
<PS_CFG_HOME>/appserv/prcs/<prcs_domain>/log_output/	delete_*.txt
<PS_CFG_HOME>/appserv/prcs/<prcs_domain>/log_output/ _PSPRCSRVLOG/	*.*
<PS_CFG_HOME>/appserv/prcs/<prcs_domain>/log_output/ _PSDSTSRVLOG	*.*

File Location	Log File Type
<PS_CFG_HOME>/appserv/prcs/<prcs_domain>/log_output/ _TUXLOG/	*.*
<PS_CFG_HOME>/appserv/prcs/<prcs_domain>files/	*.*

Chapter 15

Target Rules

PS Application Server Domain Rules

Rule	*Definition*	*Severity*
Client Cleanup Timeout	The value should be <= 20 minutes. If it is greater than 20, a violation should be called out. Setting the value to 20 or less avoids having many idle client connections connected to the host. With client cleanup time out at a minimum value, it is a more effective use of the server's memory and CPU and improves performance.	Warning
PSAPPSRV Recycle Count	Value should be >= 5000. Setting this at zero or too low may cause memory swapping.	Warning
Enable Server Caching	Recommend a setting of 2 to minimize the cost of recycling the application servers.	Informational
PSQRYSRV Min Handler	Set this to 1 if the PUBSUB server for the domain was activated.	Informational
PSBRKDSP Allowed Consec Service Failures	Set to > 1 to enable the system to recycle on its own in an event of a service failure.	Informational
PSPUBDSP Allowed Consec Service Failures	Set to > 1 to enable the system to recycle on its own in an event of a service failure.	Informational
PSSUBDSP Allowed Consec Service Failures	Set to > 1 to enable the system to recycle on its own in an event of a service failure.	Informational
PSBRKHND Allowed Consec Service Failures	Set to > 1 to enable the system to recycle on its own in an event of a service failure.	Informational
PSPUBHND Allowed Consec Service Failures	Set to > 1 to enable the system to recycle on its own in an event of a service failure.	Informational
PSSUBHND Allowed Consec Service Failures	Set to > 1 to enable the system to recycle on its own in an event of a service failure.	Informational

PS PIA Rule

Rule	Definition	Severity	Configuration File
JVM Heap size	Minimum and maximum heap size should be set to equal and it should be >= 256MB	Warning	SetEnv/opmn.xml/server.xml

PS Web Site Rules

Rule	Definition	Severity	Configuration File
Ig.isc.serverURL	The application server and WSL port combination should relate to a valid application server domain whose PUBSUB feature is set to active or true.	Warning	IntegrationGateway.properties
Ig.isc.toolsRel	The PeopleTools version specified should be equal to the PeopleTools version of the web server domain up to the patch level.	Warning	IntegrationGateway.properties
Compress Responses	Should be activated or set to true to enable faster transfer of transactional messages across the network.	Informational	Web Profile
Compress Response Reference	Should be activated or set to true to activate the compression from the web server to browser.	Informational	Web Profile
Cache Portal Objects	Should be activated to improve system performance by reducing service requests from the web server to the application server.	Informational	Web Profile
Cache Proxied Javascripts	These should be set to true for improved performance.	Informational	Web Profile
Cache Target Contents	These should be set to true for improved performance.	Informational	Web Profile
Cache homepage	These should be set to true for improved performance.	Informational	Web Profile
Cache Generated HTML	These should be set to true for improved performance.	Informational	Web Profile

Rule	Definition	Severity	Configuration File
METAXP	Should be equal to Cache Stale Interval. Cache Stale Interval value is seconds while METAXP is in minutes. So there should be a conversion that happens to detect a violation.	Warning	PeopleTools, Personalization, Personalization Options. Option Category Level = PPTL

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Chapter 16

Target Relationships

Links That Display on Homepages

Link Displayed	Where	What It Means
PS Application Database	Homepage of PS Application Server or PS Process Scheduler	Successful discovery of the PS Application Database to which the target is connected.
PeopleSoft System	Homepage of all targets	The target is an element of a PeopleSoft system.
Messaging Server	PS Application Server page	Domain was created using a template (small, medium, large or custom) with these default sections of PUBSUB: PSBRKDSP_dflt, PSBRKHND_dlft, PSSUBDSP_dlft, PSSUBHND_dlft, PSPUBDSP_dlft, PSPUBHND_dlft
Windows Services Management	PS Application Server page and PS Process Scheduler page	Host operating system is Windows
Manage Process Scheduler in PIA	PS Process Scheduler page	PS Process Scheduler Domain is an element in a PeopleSoft system and has a URL defined for it.
Web Sites	PS PIA homepage	Successful discovery of PS Web Site, contained in this PS PIA target.
PS PIA	PS Web Site homepage PS Process Monitor homepage	Successful discovery of PS PIA in which the web site is contained.
PS Process Monitor	PS PIA homepage	Successful setup of Process Monitor with PS PIA.
PROCESSREQUEST WebService URL	PS Process Monitor homepage	Location of web service definition file configured using PeopleSoft Integration Broker. Process Monitor uses this web service to schedule and monitor PeopleSoft processes.

Link Displayed	Where	What It Means
Reverse Proxy	PS PIA homepage	Yes value means the target is connected to a reverse proxy server. N/A value means the target is not connected to a reverse proxy server. Reverse proxy server data comes from the web profile's Virtual Addressing page.
Web Server Console	PS PIA page	PS PIA is an element in a PeopleSoft system and has a Web Server Administration URL defined for it.
Web Profile	PS Web Site page .	PS Web Site is an element of a PeopleSoft system and has a Web Profile URL defined for it.
Integration Broker	PS Web Site page	PS Web Site is an element of a PeopleSoft system and has a Integration Broker URL defined for it.
PIA Signon	PS Web Site page	PS Web Site is an element of a PeopleSoft system and has a PIA Signon URL defined for it.

Relationships on Topology Page

Topology Page Relationships	Established How
PS PIA and PS Web Site	Defined by a discovery search on web server directories and paths.
PS Web Site and PS Application Server	Depends on the psserver value in the PS Web Site's configuration.properties file. Valid entry is the application server's fully qualified host name and its Jolt port.
PS Application Server and PS Application Database PS Process Scheduler and PS Application Database	Defined by the database GUID, which is generated when an application server connects to the database the first time.
PS Process Monitor and PS PIA	Defined by user during Discovery or Process Monitor Setup. Process Monitor can be registered in repository with pre-discovered PS PIA target.

Chapter 17

Troubleshooting

PeopleSoft AMP Agent Logs

PeopleSoft AMP Issues on Management Agent

The log files are located in the USER_HOME directory for each host.

To debug PSFT plugin issues on Management Agent, navigate to the log files for the host here, USER_HOME/psft/pt/emplugin/logs.

PeopleSoft AMP on Enterprise Manager 13c on Oracle Management Service

Navigate to MW_HOME/gc_inst/em/EMGC_OMS1/sysman/log - emoms.trc & emoms.log.

Enable DEBUG Logging on Oracle Management Service

Run the emctl command, `OMS_HOME/bin/emctl set property -name log4j.rootCategory -value "DEBUG, emlogAppender, emtrcAppender" -module logging`.

Enable DEBUG Logging on Management Agent

Navigate to `AGENT_HOME/plugins/oracle.apps.psft.agent.plugin_13.4.1.1.0/config/psemagentlogging.properties` to enable debug logging.

To enable diagnostic logging feature, enable diagnostic logger Read more about enabling diagnostic logging in PeopleSoft AMP Diagnostic Utility section in this Appendix Note: To enable DEBUG logging for metrics/monitoring issues, enable it in psemmetricslogging.properties and to debug discovery issues enable it in psemdiscoverylogging.properities (found under PSFT Discovery PLUGIN_ROOT location - AGENT_HOME/plugins/oracle.apps.psft.discovery.plugin_13.4.1.1.0/config/psemdiscoverylogging.properties)

Enable DEBUG Logging on rootCategory Logger

Set `log4j.rootCategory=DEBUG, emagentlogAppender, emagenttrcAppender`.

Enable Diagnostic Logging

Set `log4j.category.com.peoplesoft.pt.psem.toolsadmin.common.diagnostics=DEBUG, emagentdiagAppender`.

For more information about diagnostic utility, see PeopleSoft AMP Diagnostics Utility.

> **Note:** To enable DEBUG logging for metrics and monitoring issues, enable *psemmetricslogging.properties* and to debug discovery issues enable *psemdiscoverylogging.properities*. Navigate to PSFT Discovery PLUGIN_ROOT location - AGENT_HOME/plugins/ oracle.apps.psft.discovery.plugin_13.4.1.1.0/config/psemdiscoverylogging.properties to modify the files.

RSA Certificate Issues on WebSphere

On some operating systems running WebSphere, root certificates of type RSA are not supported and will generate errors.

Issue

In some situations where the default signer certificate "root" from WebSphere is an RSA certificate type, you may see the following exception in the psemagent.log file during the PS Process Monitor discovery:

```
javax.net.ssl.SSLKeyException: RSA premaster secret error
```

This indicates that the agent's JDK on the specific operating system does not support RSA certificates.

Solution

To resolve RSA certificate issues:

1. Create a self-signed certificate of type "DSA" using the keytool utility.

   For example, the following command creates a custom keystore "pskey" with one self-signed DSA certificate.

   ```
   $Agent_Home/jdk/bin/keytool -genkey -alias dsakey -keystore pskey
   -keyalg DSA -sigalg SHA1withDSA -storepass password -keypass password
   -storetype JKS -dname "cn=localhost"
   ```

   In the following steps, you will import this DSA certificate into WebSphere, and make it the default signer certificate for SSL communication.

2. Login to the WebSphere administration console, and select Security, SSL certificate and key management, Key stores and certificates.

3. Create a new keystore *custompskey* and import the above DSA certificate from that "pskey" keystore into this new keystore *custompskey*.

4. Select SSL certificate and key management, SSL configurations, and create a new SSL configuration named *customSSLConfiguration*.

5. Associate the SSL configuration (customSSLConfiguration) with the keystore custompskey and the DSA key within it.

6. On the SSL certificate and key management screen click the Manage endpoint security configurations link and replace the "DefaultNodeSSLSettings" with "customSSLConfiguration" settings at the "node" scope level for both inbound and outbound routes.

7. Verify the certificate by signing on to PeopleSoft.

Sign on through the HTTPS port, and click "View Certificates" from the dialog box WebSphere presents for the certificate. It should show the DSA certificate imported in the previous steps.

8. Copy the "pskey" keystore with the DSA certificate to a directory under $AgentHome, and set the pskey.properties file appropriately.

Discovery of Process Monitor target should be successful.

Using the PSEMENV.SH Script for Setting Environment Variables

This section discusses using the psemenv.sh script for setting environment variables instead of the .profile.

Issue

PeopleSoft Add-on Target Discovery and Target Management processes for UNIX and Linux environments need relevant environment variables (like PATH, LD_LIBRARY_PATH, TUXDIR, ORACLE_HOME, TNS_ADMIN etc) to be set on the host machine in the .profile file. Some environments have customized the .profile file with interactive prompts designed so for interactive login sessions. However, PeopleSoft Add-on Target Discovery and Target Management processes prefer the .profile to be non-interactive (as in, not prompting for user inputs).

Solution

If you do not want to modify your .profile to accommodate the PeopleSoft Add-on Target Discovery and Target Management processes, PeopleTools provides an alternate mechanism to set the required environment variables. This enables you to set all the required environment variables needed for Target Discovery and Target Management in a script named psemenv.sh.

To use psemenv.sh:

1. Navigate to the *psemconfig.properties* file set *enableProfile = false*:

    *   AGENT_HOME/plugins/oracle.apps.psft.discovery.plugin_13.4.1.1.0/config/ psemconfig.properties

    *   AGENT_HOME/plugins/oracle.apps.psft.agent.plugin_13.4.1.1.0/config/psemconfig.properties

    Note: The enableProfile property in psemconfig.properties file is set to *true* by default, which means the PeopleSoft Add-on process will read the environment variables from the .profile file by default. You need to set the property, enableProfile, explicitly to *false* if you want the PeopleSoft Add-on process to read the environment variables from psemenv.sh script instead.

2. Create the script file named psemenv.sh under the User HOME folder or in PS_CFG_HOME folder.

    This script file should have all the relevant environment variables necessary for PeopleSoft Add-on Target Discovery and Target Management. Alternately this script file can be created both under User HOME and PS_CFG_HOME folders, with some common environment variables set in the

psemenv.sh script under User HOME folder and some PeopleTools version specific environment variables set in the psemenv.sh script under PS_CFG_HOME folder.

Mandatory Environment Variables for Discovery

The following environment variables must be included in the `.profile` or `psemenv.sh` script:

- ORACLE_HOME=/ds1/home/oracle/Oracle/Database/product/11.2.0/dbhome_1; export ORACLE_HOME

- TNS_ADMIN=/ds1/home/psoft; export TNS_ADMIN

- TUXDIR=/ds1/home/psoft/bea/tuxedoPS2/tuxedo11gR1; export TUXDIR

- LD_LIBRARY_PATH=$TUXDIR/lib:$ORACLE_HOME/lib:$LD_LIBRARY_PATH; export LD_LIBRARY_PATH

- SHLIB_PATH=$TUXDIR/lib:$ORACLE_HOME/lib:$SHLIB_PATH; export SHLIB_PATH

- LIBPATH=$TUXDIR/lib:$ORACLE_HOME/lib:$LIBPATH; export LIBPATH

- PATH=$TUXDIR/bin:$ORACLE_HOME/bin:$PATH; export PATH

Process Monitor Target Setup Fails When Using SUDO Credentials

This section describes how to resolve sudo credential issues when setting up Process Monitor targets.

Issue

The agent-side plug-in element is not able to get the EMHOME environment variable when it's invoked by a sudo user. This is because the "env_reset" command in the sudo configuration file. The sudo env_reset command in the sudoers file (/etc/sudoers) resets the environment to a default set of variables. After the reset, the variable EMHOME gets set to blank. The plug-in fails to discover or setup the Process Monitor due to the blank value in EMHOME.

Solution

Remove/comment "env_reset" command in the sudoers configuration file (((/etc/sudoers)) for sudo in the host.

PeopleSoft AMP Diagnostics Utility

With the PSFT AMP diagnostics utility, you can troubleshoot issues to:

- Captures PeopleSoft AMP run-time environment.

- Capture important PeopleSoft domain configuration files to get an idea about any customization on them.

- Ascertain diagnostic hints in the diagnostic log files as to what environment related settings might be missing.

- Capture the output of any PeopleSoft admin commands.

PeopleSoft AMP has a built-in feature on EM Agent diagnosing issues related to environment set up. For more information, see <u>E-PSEM: Diagnostic Utility to troubleshoot issues with PeopleSoft Plug-in for Enterprise Manager (Doc ID 1614036.1)</u> to troubleshoot issues with PeopleSoft AMP for Enterprise Manager.

1. 2. r 3. Additionally it is recommended to set the generic logging to "debug" mode when enabling diagnostics because we can correlate actions better between generic log messages and diagnostics log messages.

- AGENT_HOME/plugins/oracle.apps.psft.agent.plugin_13.4.1.1.0/config/agentLogging.xml

- AGENT_HOME/plugins/oracle.apps.psft.agent.plugin_13.4.1.1.0/config/metricLogging.xml

- AGENT_HOME/plugins/oracle.apps.psft.discovery.plugin_13.4.1.1.0/config/discoveryLogging.xml

```
<Loggers>
   <Logger name="com.peoplesoft.pt.psem.toolsadmin.common.diagnostics" level="debug⇒
" additivity="false">
   <AppenderRef ref="emagentdiagAppender"/>
  <AppenderRef ref="emagenttrcAppender"/>
 </Logger>
 <Root level="debug">
   <AppenderRef ref="emagenttrcAppender"/>
  <AppenderRef ref="emagentlogAppender"/>
 </Root>
</Loggers>
```

Note: It would be better to turn-on diagnostics only when needed as it generates too many log messages into diagnostic log files. Before starting to diagnose an issue, it is a good practice to clean up all old logs from under "$HOME/psft/pt/emplugin/log" and "$HOME/psft/pt/emplugin/log/ diag" locations. To search for Diagnostic Hints thrown by PeopleSoft AMP into the diagnostic log files - psemdiscoverydiag.trc, psemagentdiag.trc & psemmetricsdiag.trc search for the string pattern - "XXX DIAGNOSTIC HINT XXX" Note: Enabling Diagnostic utility creates a "diag" folder under the Agent logging location - $HOME/psft/pt/emplugin/log/diag - only upon first discovery of a target. However if you are investigating diagnostics for Monitoring or Target Management issue, then you can manually create this "diag" folder - $HOME/psft/pt/emplugin/log/diag - to avoid seeing exceptions related to this folder not being found.

Enabling Diagnostic Logging

To enable diagnostics utility You must set the following:

1. Navigate to, AGENT_HOME/plugins/oracle.apps.psft.agent.plugin_13.4.1.1.0/config/ psemconfig.properties and AGENT_HOME/plugins/oracle.apps.psft.discovery.plugin_13.4.1.1.0/ config/psemconfig.properties to set enableDiagnostics=true.

2. Navigate to the following files:

   - AGENT_HOME/plugins/oracle.apps.psft.agent.plugin_13.4.1.1.0/config/agentLogging.xml

- AGENT_HOME/plugins/oracle.apps.psft.agent.plugin_13.4.1.1.0/config/metricLogging.xml

- AGENT_HOME/plugins/oracle.apps.psft.discovery.plugin_13.4.1.1.0/config/
  discoveryLogging.xml

Switch the level attribute to debug:

```
<Loggers>
 <Logger name="com.peoplesoft.pt.psem.toolsadmin.common.diagnostics" level="debug" ⇒
additivity="false">
      <AppenderRef ref="emagentdiagAppender"/>
    <AppenderRef ref="emagenttrcAppender"/>
  </Logger>
 <Root level="debug">
   <AppenderRef ref="emagenttrcAppender"/>
    <AppenderRef ref="emagentlogAppender"/>
    </Root>
</Loggers>
```

Creating WebLogic PIA Domain Issues on the AIX platform

Issues are encountered on while creating Weblogic PIA domain on AIX platform.

Issue

Creating PIA domain on WebLogic fails because *hostname* and *chmod* could not run on the AIX platform.

Solution

To resolve this issue, set the following **PATH** in the **PsMpPIAInstaller Setup** script:

```
PS_HOME/setup/PsMpPIAInstall/setup.sh
main()
{
PATH=/jre/prod/1.7.0/bin:/bin:/sbin:/usr/sbin:/usr/bin:/usr/local/bin:/usr/etc:/usr⇒
/ccs/bin:/usr/bin/X11:/usr/ucb:.:/tuxedo/prod/12.1.1.0-j12-
64bit/bin:/cobol/prod/svrexp-5.1_wp6-64bit/bin:/products/oracle/11.2.0.2.0/bin; exp⇒
ort PATH
```

Replicate PIA Issue

The replicate PIA may fail due to redundancy in classpath.

Solution

1. Backup *PLUGIN_ROOT*/scripts/psem/PSEM_MASTER.pl.

2. Open *PLUGIN_ROOT*/scripts/psem/PSEM_Master.pl and remove the following line:

    ```
    $ENV{'EMDROOT'} . $sep . 'lib' . $sep . 'xmlparserv2.jar' . $jarsep.
    ```

3. Restore the CLASSPATH to include `xmlparserv2.jar` in the *PSEM_Master.pl* script after the replication of PIA.

PIA Target Status Issues on Solaris and Unix Platforms

The PIA target status displays incorrect message.

Issue

Incorrect display of the PIA target status on EM console due wrong pointing of − `/bin/sh` to a wrong Unix shell.

Solutions

Repoint the `/bin/sh` link to `/bin/bash` (Bourne Shell). It is commonly known that Bourne Shell fixes issues such as this on UNIX platform.