

PeopleSoft Cloud Manager for Oracle Cloud Infrastructure

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ORACLE

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Preface

Understanding the PeopleSoft Online Help and PeopleBooks

The PeopleSoft Online Help is a website that enables you to view all help content for PeopleSoft applications and PeopleTools. The help provides standard navigation and full-text searching, as well as context-sensitive online help for PeopleSoft users.

Hosted PeopleSoft Online Help

You can access the hosted PeopleSoft Online Help on the <u>Oracle Help Center</u>. The hosted PeopleSoft Online Help is updated on a regular schedule, ensuring that you have access to the most current documentation. This reduces the need to view separate documentation posts for application maintenance on My Oracle Support. The hosted PeopleSoft Online Help is available in English only.

To configure the context-sensitive help for your PeopleSoft applications to use the Oracle Help Center, see <u>Configuring Context-Sensitive Help Using the Hosted Online Help Website</u>.

Locally Installed Help

If you're setting up an on-premise PeopleSoft environment, and your organization has firewall restrictions that prevent you from using the hosted PeopleSoft Online Help, you can install the online help locally. See <u>Configuring Context-Sensitive Help Using a Locally Installed Online Help Website</u>.

Downloadable PeopleBook PDF Files

You can access downloadable PDF versions of the help content in the traditional PeopleBook format on the <u>Oracle Help Center</u>. The content in the PeopleBook PDFs is the same as the content in the PeopleSoft Online Help, but it has a different structure and it does not include the interactive navigation features that are available in the online help.

Common Help Documentation

Common help documentation contains information that applies to multiple applications. The two main types of common help are:

- Application Fundamentals
- Using PeopleSoft Applications

Most product families provide a set of application fundamentals help topics that discuss essential information about the setup and design of your system. This information applies to many or all applications in the PeopleSoft product family. Whether you are implementing a single application, some combination of applications within the product family, or the entire product family, you should be familiar with the contents of the appropriate application fundamentals help. They provide the starting points for fundamental implementation tasks.

In addition, the *PeopleTools: Applications User's Guide* introduces you to the various elements of the PeopleSoft Pure Internet Architecture. It also explains how to use the navigational hierarchy, components, and pages to perform basic functions as you navigate through the system. While your application or implementation may differ, the topics in this user's guide provide general information about using PeopleSoft applications.

Field and Control Definitions

PeopleSoft documentation includes definitions for most fields and controls that appear on application pages. These definitions describe how to use a field or control, where populated values come from, the effects of selecting certain values, and so on. If a field or control is not defined, then it either requires no additional explanation or is documented in a common elements section earlier in the documentation. For example, the Date field rarely requires additional explanation and may not be defined in the documentation for some pages.

Typographical Conventions

Typographical Convention	Description
Key+Key	Indicates a key combination action. For example, a plus sign (+) between keys means that you must hold down the first key while you press the second key. For Alt+W, hold down the Alt key while you press the W key.
(ellipses)	Indicate that the preceding item or series can be repeated any number of times in PeopleCode syntax.
{ } (curly braces)	Indicate a choice between two options in PeopleCode syntax. Options are separated by a pipe ().
[] (square brackets)	Indicate optional items in PeopleCode syntax.
& (ampersand)	When placed before a parameter in PeopleCode syntax, an ampersand indicates that the parameter is an already instantiated object.Ampersands also precede all PeopleCode variables.
⇒	This continuation character has been inserted at the end of a line of code that has been wrapped at the page margin. The code should be viewed or entered as a single, continuous line of code without the continuation character.

The following table describes the typographical conventions that are used in the online help.

ISO Country and Currency Codes

PeopleSoft Online Help topics use International Organization for Standardization (ISO) country and currency codes to identify country-specific information and monetary amounts.

ISO country codes may appear as country identifiers, and ISO currency codes may appear as currency identifiers in your PeopleSoft documentation. Reference to an ISO country code in your documentation

does not imply that your application includes every ISO country code. The following example is a country-specific heading: "(FRA) Hiring an Employee."

The PeopleSoft Currency Code table (CURRENCY_CD_TBL) contains sample currency code data. The Currency Code table is based on ISO Standard 4217, "Codes for the representation of currencies," and also relies on ISO country codes in the Country table (COUNTRY_TBL). The navigation to the pages where you maintain currency code and country information depends on which PeopleSoft applications you are using. To access the pages for maintaining the Currency Code and Country tables, consult the online help for your applications for more information.

Region and Industry Identifiers

Information that applies only to a specific region or industry is preceded by a standard identifier in parentheses. This identifier typically appears at the beginning of a section heading, but it may also appear at the beginning of a note or other text.

Example of a region-specific heading: "(Latin America) Setting Up Depreciation"

Region Identifiers

Regions are identified by the region name. The following region identifiers may appear in the PeopleSoft Online Help:

- Asia Pacific
- Europe
- Latin America
- North America

Industry Identifiers

Industries are identified by the industry name or by an abbreviation for that industry. The following industry identifiers may appear in the PeopleSoft Online Help:

- USF (U.S. Federal)
- E&G (Education and Government)

Translations and Embedded Help

PeopleSoft 9.2 software applications include translated embedded help. With the 9.2 release, PeopleSoft aligns with the other Oracle applications by focusing our translation efforts on embedded help. We are not planning to translate our traditional online help and PeopleBooks documentation. Instead we offer very direct translated help at crucial spots within our application through our embedded help widgets. Additionally, we have a one-to-one mapping of application and help translations, meaning that the software and embedded help translation footprint is identical—something we were never able to accomplish in the past.

Using and Managing the PeopleSoft Online Help

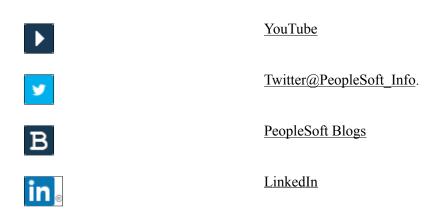
Select About This Help in the left navigation panel on any page in the PeopleSoft Online Help to see information on the following topics:

- Using the PeopleSoft Online Help
- Managing Hosted online help
- Managing locally installed PeopleSoft Online Help

Contact Us

Send your suggestions to <u>psoft-infodev_us@oracle.com</u>. Please include the applications update image or PeopleTools release that you're using.

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Chapter 1

Getting Started with PeopleSoft Cloud Manager

Understanding PeopleSoft Cloud Manager on Oracle Cloud Infrastructure

PeopleSoft Cloud Manager is an orchestration framework to provision and manage PeopleSoft environments on Oracle Cloud Infrastructure (OCI). The PeopleSoft Cloud Manger can help creating task specific environments that can last as long as the task is needed. PeopleSoft Cloud Manager will enable you to focus more on business and less on infrastructure management by taking away all the complexities involved in acquiring and managing the infrastructure to run PeopleSoft on OCI.

PeopleSoft Cloud Manager is an application available on the Oracle Cloud Marketplace. Any existing PeopleSoft customer can use it by taking advantage of the Oracle Cloud Service resources.

OCI is a set of complementary cloud services that enable you to build and run a wide range of applications and services in a highly available hosted environment.

Term	Description
DPK	PeopleSoft Deployment Packages
РСМ	PeopleSoft Cloud Manager
PI	PeopleSoft Image
PRP	PeopleSoft Release Patchset
PUM	PeopleSoft Update Manager
OCI	Oracle Cloud Infrastructure
AD	Availability Domain
VCN	Virtual Cloud Network
TDE	Transparent Data Encryption
OCID	Oracle Cloud ID

Common Abbreviations

Minimum Requirements for PeopleSoft Cloud Manager

Listed below are the minimum requirements for using PeopleSoft Cloud Manager:

- Minimum application version for managed environments is 9.1 for Interaction Hub (IH) and 9.2 for all other applications.
- Minimum PeopleTools version for managed environment is 8.55.12. For provisioning COBOL and Elasticsearch, the minimum tools version is 8.55.13.
- Minimum PeopleTools version for Kibana support by Cloud Manager is 8.58.
- COBOL provisioning with PeopleTools is supported from 8.56.09 onward. For PeopleTools 8.58 and above Visual COBOL is the only supported version.
- Minimum shape of Cloud Manager for OCI is VM.Standard 2.1 or VM.Standard.E2.1.

Note: Based on the tenancy, the availability of shapes may differ.

- Windows middle tier for PeopleSoft must be on PeopleTools 8.57 or above.
- Prepare the tenancy for PeopleSoft applications deployment. As part of preparing the tenancy, the following must be created:

See Refer to the OBE. Install Cloud Manager tutorials on Oracle Learning Library.

- At least one compartment for PeopleSoft deployments.
- An OCI user with sufficient privileges to create and manage resources in the identified compartment.
- A Virtual Cloud Network (VCN) with required number of subnets and security lists with proper ingress and egress rules.
- An object storage bucket.
- Oracle Cloud Infrastructure subscriptions.
 - A subscription to Oracle Cloud Infrastructure Compute is mandatory.
 - A subscription to Oracle Cloud Infrastructure Object Storage is mandatory.
 - A subscription to Oracle Database Cloud Service is optional.

PeopleSoft Cloud Manager – An Overview

Cloud Manager provides a framework for customers to provision and administer the life cycle of PeopleSoft environments on OCI. Cloud Manager brings in the agility to rapidly bring up PeopleSoft environments on demand, based on your infrastructure requirements.

Features of PeopleSoft Cloud Manager

PeopleSoft Cloud Manager provides the ability to:

• Provision PeopleSoft environments on OCI.

- Automate migration of on-premise environment to OCI.
- Support lifting and shifting of unicode or non-unicode database.
- Support lifting and shifting of PeopleSoft application environments which have TDE encrypted databases. The on-premise environments must be TDE encrypted before migrating.
- Support lifting and shifting of Transparent Data Encryption, or TDE, and Real Application Clusters, or RAC, for Database Systems.
- Orchestrate deployment of PeopleSoft 9.2 and IH 9.1 applications on OCI.
- Subscription model to auto download application PIs and PRPs.
- Create repeatable deployment templates.
- Self service provisioning of PeopleSoft environments.
- Fully automate deployment which is immune to manual errors and process delays.
- Manage multiple environments from a single page.
- Enable application lifecycle management in Oracle Cloud.
- Clone environments from running instances.
- Access log files through UI for easy troubleshooting.
- View the status of environment provisioning.
- Automated PRP updates for Cloud Manager instance.
- Define and configure web, app domains in topology/template definitions.
- Refresh DB System environments managed by Cloud Manager including PS_APP_HOME, PS_CUST_HOME, and database, or just the database, from a backup.
- Automate PeopleTools upgrade and updates.
- Self update of Cloud Manager to the most current image from the prior image.
- Enable creating or reusing file system service (FSS) and mount target from PeopleSoft Cloud Manager UI.
- Import environments from PeopleSoft environments that are running on Oracle Cloud.
- Can use Zero Downtime Migration (ZDM) to migrate database and middle tier into Cloud Manager.
- Multiple PeopleSoft Client environments are supported.
- Windows middle tier with Process Scheduler to support nVision.
- Database systems support multiple Oracle Database versions.
- Database systems support Exadata shapes.
- Stop and start environment in OCI from Cloud Manager. Customer is not billed for an environment while it is stopped.

- Ability to backup an environment and restore an environment from the backup from Cloud Manager UI.
- Share PS_HOME, PS_APP_HOME and PS_CUST_HOME in multiple middle tiers using File System Service.
- Ability to resume provisioning when a recoverable failure occurs.

Configuring Cloud Manager

Configuring Cloud Manager

Installation documentation for OCI is posted on the PeopleSoft Cloud Manager Home Page (My Oracle Support DOC ID: 2231255.2), Installation and Implementation tab. <u>PeopleSoft Cloud Manager Home Page</u>

Page Name	Definition Name	Usage
Cloud Manager Settings Tile	ECL_CMCONFG_FL_GBL (CREF for the tile)	To access the Cloud Manager Settings page.
Cloud Manager Settings page	ECL_CMCFG_OCI_FL	To change the system settings as per requirements in OCI.
Infrastructure Settings page	ECL_OCICFG_OCI_FL	To configure OCI-related settings for environment provisioning and management.
File Server Configuration page	ECL_CMFILESERV_FL	To configure file server as repository for Cloud Manager in OCI.
Manage PUM Connections	ECL_CMUPDATE_FL	To configure a PUM sources for updating the Cloud Manager application.
Manage Updates	ECL_CMSELFUPD_FL	To mange application updates delivered through PeopleSoft IH Updates and PRPs in OCI.
Logs	ECL_CM_FSLOGS_FL	To view Cloud Manager logs.

Pages Used to Configure Cloud Manager for OCI

Cloud Manager Settings Tile

Use the Cloud Manager Settings tile (ECL_CMCONFG_FL_GBL) to access the Cloud Manager Settings page.

Note: Only a Cloud Manager Administrator can view this tile on the Cloud Manager home page.

Navigation

The Cloud Manager Settings tile is delivered as part of the Cloud Manager home page.

Image: Cloud Manager Settings Tile

This example illustrates the Cloud Manager Settings tile.



Configuring Cloud Manager Settings for OCI

Configuring Cloud Manager

The steps involved in Cloud Manager Configuration for OCI are:

- Configuring Cloud Manager settings.
- Configuring Infrastructure settings.
- Configuring File Server.
- Managing Updates.

Cloud Manager Settings Page

Use the Cloud Manager Settings page (ECL_CMCFG_OCI_FL) to change the system settings as per requirements.

Navigation

Click the Cloud Manager Settings tile on the delivered Cloud Manager Fluid home page. Cloud Manager Settings page is displayed. By default, the details that were provided during Cloud Manager bootstrap process are displayed.

Image: Cloud Manager Settings page

This example illustrates the fields and controls on the Cloud Manager Settings page. You can find definitions for the fields and controls later on this page.

< Cloud Manager	Cloud Manager Settings 🔐 🤅 🧭
Cloud Manager Settings	Save Settings
Infrastructure Settings	My Oracle Support(MOS) Credentials
File Server	PeopleSeft Cloud Manager enables you to downhoad PeopleSeft Application Maintenance and PeopleTools Patches directly from MOS. To use MOS, you must create an Oracle Single SignCh (SSO) account and register at least one support Identifier(S) with MOS. Please ensure to enter the credentials of the registered account in this page. Use of MOS is subject to its terms of use and Oracle Privace Policy. See MICS Terms of use and oracle Privace Policy.
Manage Updates	User ID com
Logs	Password ••••
	Url https://updates.oracle.com
	PeopleSoft Credentials
	▶ REST Services
	User Credentials Lift & Shift Container
	Container Name pst. las
	Cobol License Server Express
	License Key
	Serial Number
	Visual Cobol License Type Authorization code
	Authorization code ab/BCcdDeElFgGNHIJLK 0 Version Visual Cobol 6
	VE 2001 TSUB COUL -
	Visual Cobol 4 Visual Cobol 6
	Visual Cobolity

My Oracle Support (MOS) Credentials

This refers to My Oracle Support (MOS) username and password inputs. Using this credential, Cloud Manager downloads the required updates, PIs and PRPs from MOS. The MOS credentials were provided through the Resource Manager Stack.

User ID	Enter the user ID for your My Oracle Support account.
URL	Enter the URL: https://updates.oracle.com.
Password	Enter the password for your My Oracle Support account.

Note: Read the MOS License information. Click the links to understand My Oracle Support terms of use and privacy policy.

PeopleSoft Credentials for REST Services

REST services are standard IB REST services available in the Cloud Manager instance. These REST services are used internally by Cloud Manager modules to send/receive the results of long-running, asynchronous activities.

Important! User credentials must be manually updated on the Cloud Manager instance before updating here. Updating credentials here does not update the Cloud Manager instance.

User Name	Enter the delivered Cloud Manager Administrator user name.
Password	Enter the Cloud Manager Administrator password.

Expand the User Credentials section and enter all the necessary passwords.

Image: REST Services - User Credentials

This example illustrates the fields for REST Services - User Credentials.

→ REST Se	rvices				
		Passwor		•••	
		User Nam	CLADM		
	→ User (Credentials			
				6 ro	
				î	٢
	1	Database Access Password			
	2	Gateway Administrator Username		administrator	
11	3	Gateway Administrator Password		••••••	
	4	Database Operator Password			
	5	Database Connect Password		••••••	
	6	Database Administrator Password			

Lift and Shift Container

This section refers to the Oracle Cloud Storage Container name in which the lifted DPKs (Lifted DPK means migrated environment from your on premise environment through Lift process) are stored. It is from this container that the list of lifted environments are displayed on the Lift and Shift page.

Container Name

Displays the container name. In the current version of Cloud Manager this name cannot be changed.

COBOL License

The Consolidated COBOL DPK contains both Server Express and Visual COBOL. The Consolidated COBOL DPK is included in the PeopleTools DPKs starting with PeopleTools 8.56.16 and PeopleTools 8.57.06. Visual COBOL is only supported for PeopleTools patches that include the Consolidated COBOL DPK.

Starting with PeopleTools 8.58 Visual COBOL is the only supported microfocus compilier.

Use this section to provide COBOL license details. COBOL installation is enabled on the topology by selecting COBOL field value as *Yes* in the Features section of Edit Node modal window. For details on topology, see <u>Enabling Topology with Cobol Feature as Yes</u>. To enable COBOL in the template, the topology for the template must have COBOL enabled. See <u>Configuring Custom Attributes</u>

Note: Oracle is the exclusive reseller of the Micro Focus COBOL compiler for use with PeopleSoft applications. Contact your Oracle sales representative for a license.

Server Express

Serial Number

Enter your COBOL serial number. For example, PEOPLESOFT-XXXXXX.

License Key	Enter your COBOL license key. For example, 010xx xxxxx xxxxx xXXX xXXX xLA.
Visual Cobol	
License Type	License Type can be:
	Authorization Code
	• File
	• Server
License	The license depends on the license type:
	Authorization Code
	Enter the authorization code.
	• File
	The license file must be copied to the Cloud Manager VM and placed in a location that is accessible to psadm2 user. Enter the path to the license file.
	• Server
	Enter the hostname or IP address of the license server. The server must be accessible from the current machine.
Version	Select the COBOL version. Visual COBOL 4 and Visual COBOL 6 are supported.

Infrastructure Settings Page

Use Cloud Manager Settings – Infrastructure Settings page (ECL_OCICFG_OCI_FL) to configure OCI related settings for instance provisioning and management.

Navigation

Click the Cloud Manager Settings tile on the delivered Cloud Manager Fluid home page. Cloud Manager Settings page is displayed. On the Cloud Manager Settings page, click the Infrastructure Settings link displayed on the left panel.

Image: Infrastructure Settings page

This example illustrates the fields and controls on the Infrastructure Settings page. You can find definitions for the fields and controls later on this page.

Cloud Manager Cloud Manager Settings		lef	frastructure Settings 💮 🛆 🗄 🔗
iouu munuger oettinga	Oracle Cloud Infrastructure Service	Int	frastructure Settings
frastructure Settings	Oracle Cloud Infrastructure Service		Refresh OCI Metadata Save
e Server			Last successful CCI metadata refresh at 08/11/2020 6.46/22AM
nage Updates			
gs		Tenancy Name IntPs	shEngt
		Tenancy OCID ocid	if.tenancy.ocf.a
	✓ User and Signing Keys	User Name	2 oracle.com
		User OCID ocid	11. user.oc1aaaaaaakdwaei6hxvu3s3ehqnq2o63myxw15b5vyi
	API S	igning Public Key /hor	me/psadm2/psft/data/cloud/ocihome/keys/oci_api_key_public.p
			5.12 ad 84-72-74-1d-5f 3a.ff ab-46-9d 03-66
			melpsadm2/psft/data/cloud/ocihome/keys/oci_api_key.pem
D	API Signing Pr wAPI Version and Region	/ Key Passphrase •••	
-	v a r reision and region	API Version 201	60918
		Home Region us-p	phoenix-1
	De	eployment Region us-a	ashburn-1
	Operating System Images		
	N		
			11. image.oc1 iad.aaaaaaaaaaaaaaaahvrbqad25ntyodo45ke3y5hjbyhsc 🤡 tomLinux_OEL7.8_20200428
	▼Windows Image		
			11.image.oc1.iad.aaaaaaaa5crbku6pw4idmsmdxdumanialfxhg4
	Co	image Name will2	1016_cloudbase_image
		•	ou use the Oracle Cloud Infrastructure API, you will net tenancy's OCID in order to sign the API requests. You
		your also can t Orac	bu use the Oracle Cloud Infrastructure API, you will new tenancy's OCID in order to sign the API requests. You use the tenancy ID in some of the IAM API operations find your tenancy's OCID displayed at the bottom of the cle Cloud Infrastructure Console pages. <u>Locating OCI Credentials</u> .
User OCID		your also can t Orac See	tenancy's OCID in order to sign the API requests. You use the tenancy ID in some of the IAM API operations find your tenancy's OCID displayed at the bottom of the cle Cloud Infrastructure Console pages. <u>Locating OCI Credentials</u> . que OCID for the user. You can find the user's OCID in cle Cloud Infrastructure Console page showing the user
Jser OCID		your also can t Orac See Unic Orac detai	tenancy's OCID in order to sign the API requests. You use the tenancy ID in some of the IAM API operations find your tenancy's OCID displayed at the bottom of the cle Cloud Infrastructure Console pages. <u>Locating OCI Credentials</u> . que OCID for the user. You can find the user's OCID in cle Cloud Infrastructure Console page showing the user
API Signing Pu	iblic Key and API	your also can t Orac See Unic Orac detai	tenancy's OCID in order to sign the API requests. You use the tenancy ID in some of the IAM API operations find your tenancy's OCID displayed at the bottom of the cloud Infrastructure Console pages. <u>Locating OCI Credentials</u> . que OCID for the user. You can find the user's OCID in cle Cloud Infrastructure Console page showing the user ils.
	-	your also can t Orac See Unic Orac detai See RSA Your Orac	tenancy's OCID in order to sign the API requests. You use the tenancy ID in some of the IAM API operations find your tenancy's OCID displayed at the bottom of the cle Cloud Infrastructure Console pages. <u>Locating OCI Credentials</u> . que OCID for the user. You can find the user's OCID in cle Cloud Infrastructure Console page showing the user ils. <u>Locating OCI Credentials</u> .

	Important! It is not recommended to modify these values without completely understanding the impact. If in case the public keys are required to be changed, then manually update the public keys for the user using the OCI Console.
API Signing Prv Key Passphrase	Displays the API signing private key encrypted with a passphrase.
API Version	API version is the Rest API version for OCI.
	The base path of the endpoint includes the desired API version (for example, 20160918).
Home Region	When you sign up for Oracle Cloud Infrastructure, Oracle creates a tenancy for you in one region. This is your home region. Your home region is where your IAM resources are defined. When you subscribe to a new region, your IAM resources are replicated in the new region, however, the master definitions reside in your home region and can only be changed there.
Deployment Region	The region where the PeopleSoft environments will be provisioned by Cloud Manager. Cloud Manager and the file server instance also reside on this same region.
Save	Click the Save button to save your settings.
Refresh OCI Metadata	Once all the Infrastructure settings are entered and saved, click the Refresh OCI Metadata button.
	When this button is clicked, the Cloud Manager will run a process scheduler job (Process Name: ECL_OCI_SYNC) which will fetch all the OCI-specific metadata required for the Cloud Manager to function properly.

Operating System Image

This refers to OS images in Oracle Cloud that CM uses to provision VMs during environment creation. For details on how windows image gets the path from Oracle Cloud console, refer the *PeopleSoft Cloud Manager Installation Guide*.

For Linux Image, you can either:

• Obtain the Oracle Linux Image customized for PeopleSoft from Marketplace.

See tutorial Prepare to Install PeopleSoft Cloud Manager.

• Create a custom Linux Image for PeopleSoft Cloud Manager.

See tutorial Create a Custom Linux Image for PeopleSoft Cloud Manager.

For Windows Image, you can either:

• Use an Oracle platform image for Microsoft Windows for PeopleSoft Cloud Manager.

See tutorial Prepare to Install PeopleSoft Cloud Manager.

• Create a custom Windows image for PeopleSoft Cloud Manager in Oracle Cloud Infrastructure.

See tutorial Create a Custom Windows Image for PeopleSoft Cloud Manager in Oracle Cloud Infrastructure.

Image: Operating System Image

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

Operating System Images	
↓ Linux Image	
Marketplace Image	NO
Image OCID	ocid1.image.oc1.iad.aaaaaaaaaaaaahvrbqad25ntyodo45ke3y5hjbyhsc
Image Name	CustomLinux_OEL7.8_20200426
✓Windows Image	
Image OCID	ocid1.image.oc1.iad.aaaaaaaaa5crbku6pw4idmsmdxdumanialfxhg4 🥑
Image Name	win2016_cloudbase_image
Compartment Name	apibrahi

To access the OCID for the Oracle Linux Image and the Windows Image:

- 1. Sign on to the OCI Console.
- 2. Select Compute, Custom Images.
- 3. Select the image (Oracle Linux or Windows).
- 4. In the details, click the Copy link for the OCID.
- 5. Paste the OCID in the appropriate Operating System Image.

Linux Image Image OCID	Select whether or not the Linux Image was obtained from Marketplace.
	Enter the OCID for the Linux Image.
	The image name will be displayed.
Windows Image Image OCID	Enter the OCID for the Windows Image.
	The image name will be displayed.

File Server Page

Use Cloud Manager Settings – File Server page (ECL_CMFILESERV_FL) to configure file server as repository for Cloud Manager.

Use the Cloud Manager File Server page to select or configure a File Storage Service (FSS) file system. If you are upgrading to Image 10, FSS will replace the existing Linux File Server and the contents will be migrated automatically.

See tutorial Use File Storage Service for PeopleSoft Cloud Manager Repository.

The following use cases apply while creating the file server:

- Create a new file server with new Mount Target
- Create file system and export with existing Mount Target •
- Use existing file system (Mount Target and Export Path) •
- Upgrade existing file server to FSS in upgrade environment •

The following ports need to be opened in the FSS mount target's subnet to allow NFS connections:

TCP Ports	111
	2048
	2049
	2050
UDP Ports	111
	2048

Navigation

Click the Cloud Manager Settings tile on the Cloud Manager home page. On the Cloud Manager Settings page, click the File Server link displayed on the left panel.

Image: File Server page

This example illustrates the fields and controls on the File Server page. You can find definitions for the fields and controls later on this page.

	File Server		â	07	:	٢
Use existing file system	NO					
File System Name	test.ad1sub.myworldnet.oraclevcn.com	0			Creat	•
Export	Atest.ad1sub.myworldnet.oraclevcn.com-export	0				
Use existing Mount Target	No 0					
Mount Target	MountTarget-Ad1					
Fss Status	Not Configured			Mo	re inf	ò
						_

The File Server settings provides the options to set up a new file system.

By default, options Use existing file system and Use existing Mount Target are set to No.

Use exiting file system	Set to No when creating a new file system.
File System Name	Name for the file system to be created.
Export Path	Path for instances to mount the file system through mount target.

Use existing Mount Target	Set to No when creating a new file system.
Mount Target	IP address or DNS name that is used in the mount command to connect NFS clients to a file system. A single mount target can export many file systems. By default, you can create two mount targets per account per availability domain.
Create button	Once the inputs are provided, Click the Create button to create the file system, mount target and export path.

Creating a New File System, Mount Target and Export

To create a new File system, mount target and export:

- 1. Enter the File System Name.
- 2. Enter the Export Path.
- 3. Enter the Mount Target.
- 4. Select No for Use existing file system.
- 5. Select No for Use existing Mount Target.
- 6. Click Create.

When the file system becomes available, you can subscribe to your desired download channels in the repository.

Creating New File System and Export with Existing Mount Target

As a mount target can export many file systems, a new File System can be created using an existing Mount Target.

To create a new file system and export with existing mount:

- 1. Select Infrastructure Settings from the left-side menu and click the Refresh OCI Metadata button.
- 2. Select File Server from the left-side menu.
- 3. Select Yes to use existing Mount Target.
- 4. Select the exiting Mount Target from the drop-down list.
- 5. Click Create.

Image: Creating New File System and Export with Existing Mount Target

This example illustrates the fields and controls on the File Server page for creating new file system and export with existing Mount Target.

	File Server		â	07	:	۲
Use existing file system	NO			_		
File System Name	test.ad1sub.myworldnet.oraclevcn.com	0			Crea	te
Export	/test.ad1sub.myworldnet.oraclevcn.com-export	0				
Use existing Mount Target Use existing Mount Target	Yes 🚺 🗊					
Mount Target OCID						
MountTarget Availability Domain	AncMountTargetAD3 PSFT-hcm92-fss-mt-ash-ad2					
MountTarget Compartment Fss Status	PSFT-hcm92-b-fssmt-ash-ad1 mountTarget sbp10d3			м	ore In	fo
	testf1				010 m	<u> </u>
••						

The existing mount is selected from Compartment->Availability Domain->Mount Target.

Using Existing File System

Instead of creating a new file system, an existing file system can be used. Select Use existing file system and enter the export path for the target FSS.

To create a file server from an existing file system:

- 1. Select Yes to Use existing file system.
- 2. Enter the Existing Mount path.
- 3. Click Create.

Image: Using Existing File System

This example illustrates the fields and controls on the File Server page for using existing file system.

	File Server		Â	07	:	٢
Use existing file system	YES				Crea	
Existing Mount path	10. exportNEWV34j	0			Grea	<u>te</u>
Fss Status	Not Configured			м	ore In	fo

Upgrading Existing File Server to FSS in Upgrade Environment

Once Cloud Manager is upgraded to Cloud Manager Image 10, the contents in the existing block volumes based file server need to be migrated to the newly created file systems.

The following actions will not be available until the migration is complete:

- Environment page will not be available.
- Use will not be able to subscribe to new channels.

• Shift is not allowed.

There are two options for migrating the old File Server.

• Create a new FSS with new mount target.

Image: Create FSS with new mount target

This example illustrates the fields and controls on the File Server page for creating a FSS with new mount target.

			File Server		Â	ا ا
Legacy Fi	ile Storage Service					
		File System Name	FSSpi10-Upgradeusecase	0		Create
		Export	/FSSpi10-Upgradeusecase	0		
		Use existing Mount Target	No 6			
		Mount Target				
		Fss Status				More Info

Enter the File System Name and Export path, then click Create.

• Create FSS using an existing mount target.

Image: Create FSS using an existing mount target

This example illustrates the fields and controls on the File Server page for creating a FSS using an existing mount target.

	File Server		: ⁰ 7 🏫	۲
Legacy File Storage Service				
File System Name	FSSpi10-Upgradeusecase	0	Creat	•
Export	/FSSpi10-Upgradeusecase	0		
Use existing Mount Target	Yes			
Use existing Mount Target	v	Validate network		
Mount Target OCID				
MountTarget Availablity Domain	AncMountTargetAD3 PSFT-hcm92-fss-mt-ash-ad2			
MountTarget Compartment	PSFT-hcm92-lb-fssmt-ash-ad1			
Fss Status	mountTarget			
	sbp10d3		More Inf	•
	testf1			

Select Yes to use Existing Mount Target and select the Mount Target, then click Create.

Once FSS is created Cloud Manager automatically starts the migration process. The progress of the migration can be shown by clicking the More Info button.

Image: More Info- Progress of Migration

This example illustrates the fields and controls on the More Info - progress of migration.

	More Info Page	
		б гом
		R _↓ Q ↑↓
	Task Name 🗇	Status
1	Create File Server	Complete 🥝
2	Mount FSS into temporary location	Complete 🥝
3	Unsubscribe Channels	Waiting 🛣
4	Copy Files	Walting 🔀
6	Mount FSS into Cloud Manager and Remove temporary location	Waiting 🔀
3	File Storage Service Sync Operation	Waiting 🛣

If a step fails, the error will be displayed. Once the error is corrected, use the Continue button to resume the migration process.

Image: Failed step in FSS migration

This example illustrates the fields and controls on the More Info page for a failed step.

	More Info	Page			×
					6 rows
Task Name ≎	Channel Name	Status	Command to Run on Error \Diamond	Exception \Diamond	Find
1 Create File Server		Complete 🥩			
2 Mount FSS into temporary location		Complete 🥩			
3 Unsubscribe Channels		Complete 🥑			
4 Copy Files		Complete 🥑			
5 Mount FSS into Cloud Manager and Remove temporary location	Continue	Failed 🜗	/UpgraseUsecas e-123 /cm_psft_dpks	Unable to unmount /cm_psft_dpks error :umount.nfs:	
6 File Storage Service Sync Operation		Waiting 🛣			

Completed FSS

Image: Completed File Server page

This example illustrates the fields and controls on the Completed File Server page.

< Cloud Manager		File Server	🕥 : 🚥 🏫
Cloud Manager Settings			
Infrastructure Settings		10 d8	Create
File Server	File Storage Service Mount point	io us	
Manage PUM Connections	File System Name	EXAFSSD8	
Manage Updates	Export	/exportexad8	
Logs	Mount Target	ancmounttargetad3.ad3si	
	Fss Status	FSS Configured	
			More Info
			.1
File Storage S		address or DNS name that is used in onnect NFS clients to a file system.	n the mount comm

File System Name	Name of the File System.
------------------	--------------------------

Export	Export path.
Mount Target	IP address or DNS name that is used in the mount command to connect NFS clients to a file system. A single mount target can export many file systems. By default, you can create two mount targets per account per availability domain.
FSS Status	File Server status. Different statuses are: Not Configured, FSS Configured, and Failed.
	• Not Configured: The FSS is not created or configured to store files.
	• FSS Configured: FSS is created and is ready to store files.
	• Failed: FSS creation failed. Check the More info page to correct the errors and continue. Reset option can also be used to re-create the FSS.
More Info	Select to view the progress of the migration. More Info contains the list of tasks that can be continued or retried in case of a failure or error.

Manage Updates Page

Use the Manage Updates page to apply Cloud Manager updates delivered through PeopleSoft IH Updates and PRPs.

Note: This feature is meant for the Cloud Manager application update only.

Navigation

Click the Cloud Manager Settings tile on the delivered Cloud Manager Fluid home page. The Cloud Manager Settings page is displayed. On the Cloud Manager Settings page, click the Manage Updates link displayed on the left panel.

For information on updating Cloud Manager see Updating Cloud Manager Overview.

Image: Manage Updates page

This example illustrates the fields and controls on the Manage Updates page when no updates are available.

Cloud Manager	Manage Updates	ŵ	۵	:	\oslash
Cloud Manager Settings	Edit PUM source attributes			Арј	ply
Infrastructure Settings	Cloud Manager Updates				
File Server	No Updates Available for Cloud Manager				
Manage Updates					
Logs					
				Clean-I	Up
	PUM Source Details				

Configuring My Settings

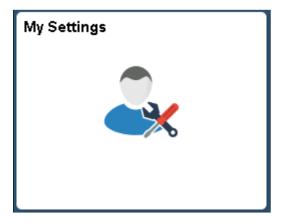
Use the My Settings tile (ECL_INFO_HOME_FL_GBL) to access My Settings page.

Navigation

My Settings tile is delivered as part of the Cloud Manager home page.

Image: My Settings tile

This example illustrates the My Settings tile.



My Settings Page

Use the My Settings page (ECL_INFO_HOME_FL) to enter or edit the public SSH key. The SSH key provided here can be used to input user's own SSH keys or any administrators SSH keys to help manage or troubleshoot issues by connecting over SSH.

Note: The SSH key will be automatically added into all environments that will be created by the user after adding this key here.

Navigation

Click the My Settings tile on the delivered Cloud Manager Fluid home page. The My Settings page is displayed.

Image: My Settings page

This example illustrates the fields and controls on the My Settings page for the tablet.

< Cloud Manager	My Settings
My SSH Public Key	
Save Edit	
Save Edit My SSH Public Key	Enter the SSH public key value.

Click Save to save the details.

Note: To edit existing key details, click the Edit button and replace the text; then click Save.

Provisioning Environment In PeopleSoft Cloud Manager

Managing Repository

Cloud Manager provides an easy way to automatically download and manage PeopleSoft Application Update Images (PIs), PeopleSoft Release Patchsets (PRPs), PeopleTools Product Patches and PeopleSoft Custom Images. Cloud Manager uses the file server to store downloaded artifacts from MOS. To streamline and automate downloads of various PeopleSoft application images and PRPs, Cloud Manager has introduced the concept of Subscription Channels. Each PeopleSoft application has an associated Channel, which an administrator can choose to subscribe in order to download the latest PIs and PRPs for that particular PeopleSoft application. Cloud Manager is delivered with channels for PeopleSoft applications, which are available after you complete the installation and configuration. An administrator can subscribe to multiple channels and download all necessary PIs and PRPs.

Cloud Manager uses an application called Download Manager to download updates from MOS, which is invoked through process scheduler in asynchronous mode every time a channel is subscribed.

On the Repository tile, Administrators can:

- Subscribe to release channels for latest PeopleSoft application updates.
- Manage downloaded PeopleSoft Images and PRPs.

Pages Used to Manage Cloud Manager Repository as an Administrator

Page Name	Definition Page	Usage
Repository Tile	ECL_REPOSITORY_FL_GBL (CREF for tile)	Access the various features such as, Channel Subscriptions and Download History, and functions such as, downloading logs and deleting downloads.
My Downloads Page	ECL_REPO_AMYDLS_FL	View the PRPs and PIs downloaded. New entries are added as soon as new artifacts are downloaded.
Download Subscriptions Page	ECL_REPO_BCHNL_FL	Create download channels and subscribe them to initiate downloads. You can also use predefined download channels to initiate downloads.
Download History Page	ECL_REPO_BDLHIS_FL	View the history of downloads, such as PIs and PRPs downloaded.

Page Name	Definition Page	Usage
Logs Page	ECL_REPO_MLOG_FL	View the download manager logs.
Upload Custom Scripts Page	ECL_UPLD_CUST_SCR	Upload Custom Scripts

Repository Tile

Use the Repository tile to access the following features and functions:

- View downloaded artifacts
- Channel subscriptions
- Download history
- Download logs
- Filter and delete downloads
- Manage custom scripts

Navigation

The Repository tile (ECL_REPOSITORY_FL_GBL) is delivered as part of the Cloud Manager home page.

Image: Repository Tile

This example illustrates the Repository Tile.



My Downloads Page

Use the My Downloads page (ECL_REPO_AMYDLS_FL) to view the artifacts downloaded. New entries are added as soon as new artifacts are downloaded.

Navigation

Click the Repository tile on the delivered Cloud Manager Fluid home page. My Downloads page is displayed by default.

Image: My Downloads page

This example illustrates the fields and controls on the My Downloads page. You can find definitions for the fields and controls later on this page.

Cloud Manager	My Downloads					G	ነ 🔎	: 0
My Downloads								109 rov
Download Subscriptions								
Jownload History	Name 🗘	Type 🗘	Product 0	Release 0	Version \Diamond	Platform 0	Size 🗘	
ogs	PAYROLL TAX FOR STATE PROVINCES 01 JULY 2020	MOS - PRP	HCM	9.2	34	Generic	2.19 MB	>
Ipload Custom Scripts	GP MEX: INFONAVIT LOAN PRORATION BASED ON BIMONTH PERIOD	MOS - PRP	HCM	9.2	34	Generic	2.44 MB	>
pload Gustom Scripts	PRINT PA PSD CODE OR PSD CODE + 2-DIGIT TCD IN FORM W-2C BOX 20	MOS - PRP	HCM	9.2	34	Generic	662.41 KB	>
	XML BULK FILING MASSACHUSETTS PAID FAMILY & MEDICAL LEAVE QUARTERLY REPORTING	MOS - PRP	HCM	9.2	34	Generic	730.06 KB	>
	ADD UPDATE BLANK CONFIGURATION FLAG TO TEMPLATE SECTION FIELDS	MOS - PRP	HCM	9.2	34	Generic	1.06 MB	>
	COMPANY CERTIFICATE IN CASE OF ERTE SHOULD PRINT CURRENT MONTH BASES	MOS - PRP	HCM	9.2	34	Generic	752.31 KB	>
	PEOPLESOFT HCM UPDATE IMAGE 9.2.034 - NATIVE OS	MOS - Application Update Image	HCM	9.2	34	Linux	23.02 GB	>
	PT-INFRA DPK FOR PEOPLETOOLS 8.58	MOS - Custom Image	Tools	8.58		Linux	2.82 GB	>
	II D PT 8.58.02 PRODUCT PATCH DPK	MOS - Product Patch	Tools	8.58	2	Linux	6.05 GB	>
	COBOL DPK FOR LINUX (CLOUD MANAGER ONLY)	MOS - Custom Image	Tools	8.58		Linux	174.12 MB	
	PT 8.58.03 PRODUCT PATCH DPK	MOS - Product Patch	Tools	8.58	3	Linux	6.03 GB	>

Note: Clicking an item in the My Downloads page displays additional details of the downloaded artifact.

Ŧ	Use the Filter icon to refine the search results based on search criteria.
Ũ	Use the Delete icon to delete downloaded PIs and PRPs. Select the check box corresponding to the row you want to delete, and then click Delete button.
Name	Name of the downloaded artifact.
Туре	Indicates the artifact type such as PI, PRP, Custom Image, and so on.
Product	Indicates the PeopleSoft application product pillar.
Release	Indicates the PeopleSoft application release.
Version	Indicates the application PI version.
Platform	Indicates the Operating System platform, such as Linux, or Windows.
Size	Total size of the PI or PRP.

Download Subscriptions Page

Use the Download Subscriptions page (ECL_REPO_BCHNL_FL) to subscribe to download channels and initiate downloads.

Note: Cloud Manager delivers default channels and those channels are available in the unsubscribed list of the Download Subscriptions page.

Navigation

Click the Repository tile on the delivered Cloud Manager Fluid home page. Select the Download Subscriptions tab in the left panel of the Cloud Manager home page.

Image: Download Subscriptions page

This example illustrates the fields and controls on the Download Subscriptions page. You can find definitions for the fields and controls later on this page.

Cloud Manager		Download S	ubscriptions				ራ	<u> (83</u> :	Ø
vly Downloads	+ Subscribed Unsubscrib	ed							6 ro
Download Subscriptions	Channel Name O	Description \diamond	Status	Latest Updates	Product 0	Release O	Platform 0	Source 0	
Download History	HCM_92_Linux 🕑	PeopleSoft HCM 9.2 Linux	0	±75	HCM	9.2	Linux	MOS	
.ogs	IH_91_Linux 🕑	PeopleSoft IH 9.1 Linux	۲	J12	IH	9.1	Linux	MOS	
Jpload Custom Scripts	Tools_857_Linux 🕑	PeopleSoft PeopleTools 8.57 Linux	0	4	Tools	8.57	Linux	MOS	
	Tools_857_Windows 🛞	PeopleSoft PeopleTools 8.57 Windows	0	1 2	Tools	8.57	Windows	MOS	
	Tools_858_Linux 🕑	PeopleSoft PeopleTools 8.58 Linux	0	T 1	Tools	8.58	Linux	MOS	
	Tools_858_Windows 🕢	PeopleSoft PeopleTools 8.58 Windows	Ω	T_0	Tools	8.58	Windows	MOS	

	To subscribe or unsubscribe channel, click the Related Actions button corresponding to the channel name. If you select the Subscribe option, Cloud Manager starts monitoring for any new PIs or PRPs and downloads them from My Oracle Support. If you select the Unsubscribe option, Cloud Manager will no longer monitor or download latest PIs or PRPs.			
	When a release channel is subscribed, Cloud Manager invokes the download manager application, which connects to MOS and downloads latest updates for the release channel. Please note that artifacts, such as Update Images, are large in size and can take a few hours to download. User can view the status of active downloads from the Download History page.			
Subscribed tab	Click this tab to view a list of subscribed channels.			
	When you select the Related Action to subscribe to a channel, that channel will be added to the Subscribed tab.			
	Note: This operation will renew the channel subscriptions for all channels present in the Subscribed tab. This means that Cloud Manager will check for updates and download them for all channels present in the Subscribed tab.			
Unsubscribed tab	Click this tab to view a list of unsubscribed channels. By default, newly created download channels are listed under the Unsubscribed tab.			
Status	Status will indicate current state.			
	• Success			



The Success icon indicates the download was successful. No further action is necessary.

• In-progress



The In-progress icon indicates the update is downloading. Click on the icon to view the status of the download.

• Error



The Error icon indicates the download failures. Click the icon to open the Download Error page.

Image: Download Subscriptions – Unsubscribed page

This example illustrates the fields and controls on the Download Subscriptions – Unsubscribed page. You can find definitions for the fields and controls later on this page.

My Downloads Image: Subscribed Unsubscribed Unsubscribed Example Subscribed Unsubscribed Unsubscribed Example Subscribed Unsubscribed	Platform \Diamond Linux	Source O MOS
Common Admit Admit Admit Common Admit Admi	Linux	
Logs CRM_02_Vindows @ PeopleSoft CRM 9.2 Vindows CRM 9.2 Upload Custom Scripts CS_92_Linux @ PeopleSoft CS 9.2 Linux CS 9.2		MOS
Upload Custom Scripts CS_92_Linux © PeopleSoft CS 92 Linux CS 92		
	Windows	MOS
CS_92_Windows PeopleSoft CS 92 Windows CS 92	Linux	MOS
	Windows	MOS
ELM_92_Linux PeopleSoft ELM 92 Linux ELM_92_Linux 92	Linux	MOS
ELM_92_Windows 📀 PeopleSoft ELM 9.2 Windows ŁM 9.2	Windows	MOS
FSCM_92_Linux @ PeopleSoft FSCM 9.2 Linux & & FSCM 9.2	Linux	MOS
FSCM_92_Windows PeopleSoft FSCM 9.2 Windows FSCM 92	Windows	MOS
HCM_92_Windows PeopleSoft HCM 9 2 Windows HCM 92	Windows	MOS
H_91_Windows PeopleSoft IH 9.1 Windows IH 9.1	Windows	MOS
Tools_855_Linux @ PeopleSoft PeopleTools 8.55 Linux & 🔮 Tools 8.55	Linux	MOS
Tools_866_Linux PeopleSoft PeopleTools 8.56 Linux Tools_866_Linux	Linux	MOS

Use the action button to subscribe to a channel.

Download Error Page

Click the failed icon on the Download page to view the Download Error popup page. There are two types of error popup pages, one for standard errors and another for invalid password. The invalid password popup only applies to password protected downloads.

Image: Download Error page

This example illustrates the fields and controls on the Download Error page. You can find definitions for the fields and controls later on this page.

<	Cloud Manager		Download Subs	cription	s			۴ 🏫	
My	Downloads	+ Subscribed	Unsubscribed						1
Do	vnload Subscriptions	Channel Name 🗘	Description \Diamond	Status	Latest Updates	Product 🛇	Release 🛇	Platform 🗘	Source
Dov	vnload History	CRM_92_Linux 😔	PeopleSoft CRM 9.2 Linux	0	T 5	CRM	9.2	Linux	MOS
Cancel Download Error									
	An error occurred while downloa	ading packages for c	hannel CRM_92_Linux						_
	For more details about the error	review download log	files. Unsubscribe and subs	cribe aga	in to retry downlo	ad			_

The download error message will indicate the error and direct the user to review the download log files. Error could be due to issues occurring during the download, such as network connection disruption (unable to reach MOS) or if there is no space available on the file server to save downloads.

Password Protected Subscription Password Error

When you subscribe to the a password protected download channel, the DownloadAssist file is downloaded from MOS to Cloud Manager. The DownloadAssist file contains the password required to download the packages.

Image: Download Error for Password Error

۲	Download Subscriptions			Downlo	oad Subscript	ions				Â	P276	: (
My	Downloads	+	Subscribed	Unsubscribed								1
Do	wnload Subscriptions	Chan	nel Name 🛇	Description \Diamond		Status	Latest Updates	Product \Diamond	Release 🛇	Platfo	rm 🌣	Source
Do	wnload History	Tools	_857_Linux 🕑	PeopleSoft People	eTools 8.57 Linux	0	T_	Tools	8.57	Linux		MOS
Log	Cancel	_		Dov	wnload Error	_		_		_	Ap	ply
	An error occurred while downloa	ding p	ackages for ch	annel Tools_857_	Linux							
	Password for one or more patch Oracle Support for more informa					e and sul	bscribe the chan	inel again to	retry downl	oad. R	efer My	
											4 ro	ows
	Bug Number \diamond Bug Description	\diamond					Patch Type	e 🌣 🛛 Passwe	ord 🗘			
	28223544 PT 8.57.01 PROD	UCT P/	ATCH LINUX DPK				Product Pa	tch		•••••	0	Ш
	28376619 COBOL DPK - DE	RIVED	FROM MICRO FO	DCUS SERVER EXI	PRESS 5.1 WRAP I	PACK 14	Product Pa	tch		•••••		
												_

This example illustrates a Download Error page displaying a password error.

This message will only appear if Cloud Manager is unable to retrieve the password due to an error in MOS. If this does occur, the user will need to request the password from Support and update it manually on this page.

If the issue is due to an expired password, user can do a unsubscribe to the channel and then re-subscribe to the channel. Any password changes will be updated in the DownloadAssist file that is posted in MOS. On re-subscribing to a channel, the new password should get automatically updated in Cloud Manager.

If a re-subscribing doesn't solve the problem, then there could be issues in Cloud Manager that is failing to retrieve and update the password automatically or an unforeseen issue in MOS which is not allowing the download of the DownloadAssist file. In such a scenario, the user is expected to get the password from support and update the same on the Download Error page.

Note: The next scheduled download will renew the subscription and include any password changes in the DownloadAssist file. See <u>Changing Download Interval</u>

Downloading PeopleTools Patches

Cloud Manager can download previous PeopleTools patch releases for the PeopleTools channel. But for Application channels, only latest patches get downloaded.

In case of Tools channel subscription, you are presented with a modal window for selecting the patch version you want to download.

Navigation

Click the Unsubscribed tab. Select any Tools channel. Click the Related Options menu and select Subscribe.

Image: Download Filter Modal Window

This example illustrates the fields and controls in Download Filter modal window.

	Download Filter : Tools_858_Windows				
If you want to download all PeopleTools Product Patches from MOS starting from a Minimum Product Patch (ex: 11), Provide the Minimum Product Patch Number. Leave the Minimum Product Patch Number empty for default behavior. i.e, to download only the latest PeopleTools Product Patch from MOS.					
Product Name	Tools				
Release Name	8.58				
Platform	Windows				
Minimum Product Patch Number	03				
ОК					

Enter the required product patch version in the Minimum Product Patch Number field. For example, if user enters 11 in this field, then CM will download tools patches 8.55.11, 8.55.12, 8.55.13 up to the latest.

Download History Page

Use the Download History page (ECL_REPO_BDLHIS_FL) to view the history of downloads.

Note: The entries in Download History page are updated based on the download interval. Clicking an entry in the Download History page displays the current state of the download channel (that is, a list of files already downloaded, another list of files in the download queue and those that are currently downloading).

the

Navigation

Click the Repository tile on the delivered Cloud Manager Fluid home page. Select the Download History tab in the left panel of the Cloud Manager home page.

Image: Download History page

This example illustrates the fields and controls on the Download History page. You can find definitions for the fields and controls later on this page.

Cloud Manager			Download Histo	у	ሰ 4	🧐 : 🧭	
My Downloads		Channel Name 🗘	Updates ≎	Start Time ≎	End Time ≎	8 rows	
Download Subscriptions		Tools 858 Windows	0	05/11/20 6:11AM	05/11/20 6:11AM		
Download History		Tools_858_Linux	0	05/11/20 6:09AM	05/11/20 6:09AM		
Upload Custom Scripts							
Logs		Tools_858_Windows	0	05/11/20 5:54AM	05/11/20 5:54AM	>	
		Tools_858_Linux	0	05/11/20 5:54AM	05/11/20 5:54AM	>	
		Tools_856_Linux	1	05/11/20 5:54AM	05/11/20 6:48AM	>	
		Tools_857_Windows	0	05/11/20 5:50AM	05/11/20 5:50AM	>	
	D	Tools_857_Linux	0	05/11/20 5:50AM	05/11/20 5:50AM	>	
		IH_91_Linux	0	05/11/20 5:49AM	05/11/20 5:49AM	>	
Channel Name			Name of the	download chann	el.		
U pdates			Number of up	odates download	led.		
Start Time and End Time		Indicates the time when downloads are started/finished release channel.					

Logs Page

Use the Logs page (ECL_REPO_MLOG_FL) to view the download logs corresponding to the subscribed channels. It displays download logs for all the files that get downloaded.

Navigation

Click the Repository tile on the delivered Cloud Manager Fluid home page. Select the Logs tab in the left panel of the Cloud Manager home page.

Image: Logs page

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

Cloud Manager	Ŀ	ogs	ሰ 💯 : Ø			
My Downloads	Channel Name	TOOLS_858_WINDOWS				
Download Subscriptions	*Log File	Tools_858_Windows195.log				
Download History	Number of Lines to Display	10	Default Value: 10			
Upload Custom Scripts	Search String		Search Disabled			
Logs	Log Data	Fetch Logs				
DEBUGI download_manager 2020-05-11 06:12:19,486 (MainThread) Skipping download PEOPLETOOLS-WIN-8.55 [DEBUG download_manager 2020-05-11 06:12:19,487 (MainThread) Skipping download PEOPLETOOLS-WIN-8.55 [DEBUG download_manager 2020-05-11 06:12:19,487 (MainThread) Skipping download PEOPLETOOLS-WIN-8.55 [DEBUG download_manager 2020-05-11 06:12:19,488 (MainThread) Skipping download PEOPLETOOLS-WIN-8.55 [DEBUG download_manager 2020-05-11 06:12:19,488 (MainThread) Skipping download ILOG-CPLEX-12.7.1_01.z [ERROR] download_manager 2020-05-11 06:12:19,488 (MainThread) Skipping download ILOG-CPLEX-12.7.1_01.z [ERROR] download_manager 2020-05-11 06:12:19,488 (MainThread) Skipping download ILOG-CPLEX-12.7.1_01.z [ERROR] download_manager 2020-05-11 06:12:19,488 (MainThread) Skipping download ILOG-CPLEX-12.7.1_01.z [ERBUG] download_manager 2020-05-11 06:12:19,488 (MainThread) Skipping download status update : [DEBUG] download_manager 2020-05-11 06:12:19,488 (MainThread) Sending download status update : [DEBUG] download_manager 2020-05-11 06:12:19,488 (MainThread) Sending download status': 'Sonc finished for channel_name': 'Tools_858_Windows195', 'patches': [])						
Channel Name	Name o	of the subscribed channe	1.			
Log File	-	es are generated when a riate log file in this field	channel is subscribed. Select a			
Number of Lines to I	Display Indicate	Indicates how many lines of the selected log file to be displayed				
Search String	inputs a those lin	Used to search for specific keywords in the log file. When user inputs a keyword, such as "ERROR" as an example, then only those lines are displayed which has an Error string in it. Here, only the specified number of lines are displayed.				
Regex Search		advanced searching, w gular expressions.	here a user can provide Unix			
Fetch Logs button		is button to fetch log da iser in the Logs page.	ata based on the input provided			

Re-synchronizing Repository Data with Downloaded List

Sometimes even after subscribing to a channel, you may not able to see some of the downloaded patches in Repository > My Downloads page. The logs may show that the downloads are being skipped. This indicates a situation where the patches are already downloaded but their metadata is not synced with Cloud Manager. In such situations re-sync the downloaded patches metadata with Cloud Manager using the following steps.

- 1. Go to Repository > Download Subscriptions page and unsubscribe all channels that are currently subscribed.
- Navigate to PeopleTools > Process Scheduler > System Requests page and run the process "ECL_REPODM".

 Once the process finishes execution, you should be able to see the missing patches in Repository > My Downloads page.

Subscribing Channels using the Cloud Manager Repository

This section details the process flow for subscribing to channels using the Cloud Manager Repository.

Note: Cloud Manager has a process scheduler recurring job defined, which invokes the download manager for all the subscribed release channels once a week. This will make sure that latest updates for all the subscribed release channels are downloaded every week without any user interaction.

Prerequisites

The administrator needs to define My Oracle Support credentials prior to subscribing channels using the Cloud Manager Repository. For this, perform the following:

- 1. Select the Cloud Manager Settings tile.
- 2. Edit the value in the User ID field and My Oracle Support password field in the My Oracle Support (MOS) Credentials section.
- Click Save Settings to save the details.
 For details on the Cloud Manager settings, see <u>Cloud Manager Settings Page</u>.

Note: This is a one-time setup.

Perform the following steps to subscribe to channels using the Cloud Manager Repository tile:

- 1. Click the Repository home page available on the Cloud Manager home page.
- 2. Select Download Subscriptions on the left panel. The Download Subscriptions page is displayed.
- 3. Click Unsubscribed.
- 4. To subscribe to the release channel, perform the following:
 - a. Click the Related Actions button corresponding to the channel name.
 - b. Select Subscribe action. If there are any new updates, then the system starts downloading the new updates.

Changing Download Interval

By default, Cloud Manager polls My Oracle Support for new updates every week. The recurrence definition for download channel subscriptions is **CloudManager Repository Update**. To modify the download schedule to meet your organizational needs, modify the recurrence pattern to a pattern that meets your needs.

For example, if you want to poll for updates on alternate days, you would perform the following:

- 1. In Cloud Manager, navigate to PeopleTools, Process Scheduler, Recurrences.
- 2. Select the recurrence CloudManager Repository Update.

- 3. Select Recurrence Pattern to Weekly.
- 4. Select the alternating days as in Monday, Wednesday, and Friday or Sunday, Tuesday, Thursday.

Note: It is recommended to select alternate days.

5. Save the page.

Image: Recurrence Definition - CloudManager Repository Update

This example illustrates the fields and controls on the Recurrence Definition – Cloud Manager Repository Update where the occurrence is set to alternate days.

My Downloads			Recu	rrence Defi	nition		ሴ	<u>ل</u>	:	Ø
						New Window	Help	Persona	lize Paç	je 🕯
Recurrence Defini	tion Recurren	nce Exception								- 1
Recurrence Def	inition									
Recurre	nce Name Cloud	/lanager Reposito	ory Update		Schedule Next Rect Current request Prior recurrence	is initiated				
D	escription	lanager Reposito	ry Update			nus completed				
Recurrence Patte	ern									
O Daily	Weel	dy			Customize Dates					
Recurrence Pa	ttern Options									
🗹 Sunday	Monda		esday 🗆 V	Vednesday						
Thursda	y 🔲 Friday	Sat	urday		Recurrence 1 R	ecur every 1 weeks	6			
Start Request		End	Request		Repeat					
Date 01/01/199	99 🗰	Da	ate		Every	0 Minutes	•			
Time 12:30:00	AM	Tir	me		For	0 Hours	•			
🗹 Do not schedu	le any processes n	nissed from the r	recurrence patter	n.						
Run on Specific Da	tes									
E Q					I	1-1 of 1	•	ÞI		
Run Date (From)	Run Date (To)	Effective	e Until (Year)	Description						
							+	-		
				1						
Save Return	to Search No	otify				Add	Update/Di	isplay		

For more information on setting up recurring schedules, see Product documentation for *PeopleTools* : *Process Scheduler*, "Defining PeopleSoft Process Scheduler Support Information", Defining Recurrence Definitions.

Upload Custom Scripts Page

Starting with Cloud Manager Image 8 custom scripts can be run before or after provisioning a PeopleSoft environment.

Note: After a PeopleTools upgrade, you must edit the webserver property (configuration.properties) file to add or modify the HttpRepositoryPath as shown here: HttpRepositoryPath=/opt/oracle/psft/customscripts

Script Type	Where you can run the script
Python	Full Tier
	Middle Tier
	Database Tier
	PeopleSoft Client
	ELK Stack
	Database as a service (DBaaS)
Shell	Full Tier
	Middle Tier
	Database Tier
	ELK Stack
	Database as a service (DBaaS)
Batch	PeopleSoft Client

This table lists the script types and which tiers they can run on.

Scripts can call other scripts or multiple scripts from within the scripts and execute them. For example, a shell script can invoke multiple shells, Python or other scripts. You can also upload any kind of supporting files that are used by the scripts.

To upload a custom file:

- 1. From Cloud Manager homepage, select the Repository tile.
- 2. Select Upload Custom Scripts.
- 3. Click the Add icon.
- 4. The File Attachment pop up appears where you can choose files from your device by clicking on My Device option available.
- 5. Once you have selected the file, the Upload option appears.
- 6. Click the Upload button to upload the file to Cloud Manager.
- 7. When upload is complete, click Done to complete the process.

Image: Upload Custom Scripts page

This example illustrates the fields and controls on the Upload Custom Scripts page. You can find definitions for the fields and controls later on this page.

Cloud Manager	Upload Custom Scripts	Â	100	Ø
My Downloads	+ 0			
Download Subscriptions	□ Custom Script Name ◇	Custom Script Type 🛇		5 rows
Download History	testpythonpost.py	python		
Logs	□ testpresh.sh	shell		
Upload Custom Scripts	□ testprebat bat	batch		
	□ something3.exe	unknown		
	□ something.txt	text		
	11			

Environment Variables Allowed in Custom Scripts

Custom scripts provide an ability to extend Cloud Manager's provisioning flow. During provisioning orchestration, Cloud Manager provides access to following environment variables inside the custom scripts.

BASHOPTS BASH LINENO BASH SOURCE MAIL PATH **PIPESTATUS** PPID PSFT ACCESS ID PSFT ACCESS PWD PSFT ADMIN PWD PSFT APP DOMAINS PSFT APP TYPE PSFT COBOL SETUP PSFT CONNECT ID PSFT CONNECT PWD PSFT CUSTOMIZATION PSFT_CUSTOMIZATION_DATA PSFT_DB_INSTANCE_TYPE

PSFT_DB_IS_ML

PSFT_DB_NAME

PSFT_DB_PORT

PSFT_DB_SERVICE

PSFT DB TYPE

PSFT_ELASTIC_SEARCH

PSFT_EM_AGENT

PSFT_ENV_TYPE

PSFT_ES_ADMIN_PASSWD

PSFT_ES_HOSTNAME

PSFT_ES_PORT

PSFT_ES_PROXY_PASSWD

PSFT_GW_ADMIN_USER

PSFT_GW_ADMIN_USER_PWD

PSFT_INFRA_AVAILDOMAINPRIMARY

PSFT_INFRA_COMPARTMENT_ID

PSFT INFRA HOST

PSFT_INFRA_HOST_OS

PSFT INFRA PRIVATE IP

PSFT_INFRA_PUBLIC_IP

PSFT_INFRA_REGION

PSFT_INFRA_SSH_PRIVATE_KEY_PATH

PSFT INFRA SUBNET ID

PSFT_INFRA_TENANCY_ID

PSFT_INFRA_VCN

PSFT_OPR_ID

PSFT_OPR_PWD

PSFT_PIA_DOMAINS

PSFT_PI_IMAGE

PSFT PI NUMBER

PSFT POST PROVISION CUST SCRIPT

PSFT_PRCS_DOMAINS

PSFT_PRCS_PRCS01_APPENG

PSFT PRCS PRCS01 APPLICATION ENGINE

PSFT PRCS PRCS01 COBOL SQL

PSFT_PRCS_PRCS01_MAXAPIAWARE

PSFT_PRCS_PRCS01_MSTRSRV

PSFT_PRCS_PRCS01_OPTIMIZATION_ENGINE

PSFT_PRCS_PRCS01_PSAESRV_MAX_INSTANCES

PSFT PRCS PRCS01 PSAESRV MIN INSTANCES

PSFT_PRCS_PRCS01_PSDSTSRV_MAX_INSTANCES

PSFT_PRCS_PRCS01_PSDSTSRV_MIN_INSTANCES

PSFT_PRCS_PRCS01_SQR_PROCESS

PSFT_PRCS_PRCS01_SQR_REPORT

PSFT_PRCS_PRCS01_XML_PUBLISHER

PSFT_PRE_PROVISION_CUST_SCRIPT

PSFT_PSFT_BASE PSFT_WEBLOGIC_ADMIN_PWD

PSFT_WEBLOGIC_ADMIN_USER

PSFT_WEBPROFILE_USER_PWD

PSFT_WEB_WEBSERVER01_AUTH_TOKEN_DOMAIN

PSFT_WEB_WEBSERVER01_PEOPLESOFT01_APPSERVER_CONNECTIONS

PSFT_WEB_WEBSERVER01_WEBSERVER_HTTPS_PORT

PSFT_WEB_WEBSERVER01_WEBSERVER_HTTP_PORT

PWD

PYTHONPATH

SHELLOPTS

SHLVL

SUDO COMMAND

How to Access Environment Variables in or from Custom Scripts

This section shows some examples of using the environment variables.

```
Example for Python:

os.environ['PSFT_ACCESS_ID'] = ''xyz"

Example for Shell:

$PSFT_ACCESS_ID=xyz

Example for Batch:

$PSFT_ACCESS_ID% = xyz
```

Sample Batch File

This sample batch file will print the PATH and PSFT DB NAME and store it in a file.

```
set file=C:\temp\script_batch.log
@echo off
@echo Starting the provisioning script > %file%
@echo The value for variable PATH is: >> %file%
@echo %PATH% >> %file%
@echo The value for variable PSFT_DB_NAME is: >> %file%
@echo %PSFT_DB_NAME% >> %file%
@echo Ending the provisioning script >> %file%
```

Sample Python Script

This sample python script will print the PATH and PSFT_DB_NAME and store it in a file.

```
import os, time
millis = int(round(time.time() * 1000))
file_name = '/tmp/post-provision_python_{}.log'.format(millis)
f = open(file_name, 'w+')
f.write('Starting post-provisioning script')
f.write('The variable PATH value is: {}\n'.format(str(os.environ.get('PATH'))))
f.write('The variable PSFT_DB_NAME value is: {}\n'.format(str(os.environ.get('PSFT_⇒
DB_NAME'))))
f.write('Ending post-provisioning script')
f.close()
```

Sample Shell Script

This sample python script will print the PATH and PSFT_DB_NAME and store it in a file.

```
now=$(date +%d%m%Y%H%M%S)
file=/tmp/prov_$now.log
echo "Starting the provisioning script" > $file
echo "The value for variable PATH is: " >> $file
echo $PATH >> $file
echo "The value for variable PSFT_DB_NAME is: " >> $file
echo $PSFT_DB_NAME >> $file
echo "Ending the provisioning script" >> $file
```

Managing Topology

Topology defines the infrastructure layout that will be created on Oracle Cloud by Cloud Manager. Essentially, a topology defines a set of nodes, which is an abstraction of a virtual machine. While defining a node, you can set the values for node attributes, such as OS, VM shape, disk capacity, and PeopleSoft components to be installed.

The PeopleSoft administrators create topologies for PeopleSoft applications as per their organization requirements. By default, the Cloud Manager is delivered with the following topologies:

- Lift and Shift
- Lift and Shift DBaaS
- PUM Fulltier

Note: Users are not allowed to delete lift and shift topologies that are used for lift and shift process.

Pages Used to Manage Topology as an Administrator

Page Name	Definition Name	Usage
Topology Tile	ECL_TOPOLOGY_FL	To access the Topology landing page.
Topology Page	ECL_TOPO_COMP_FL	To create new topologies, edit or clone existing topologies.
Topology Definition Page	ECL_TOPO_COMP_FL	Create a new topology.

Topology Tile

Use the Topology tile to access the Topology landing page.

Navigation

The Topology tile is delivered as part of the Cloud Manager home page.

Image: Topology Tile

This example illustrates the Topology Tile.

Topology	
	6

Topology Page

Use the Topology page (ECL_TOPOLOGY_FL) to perform the following:

- Create a new topology
- Edit an existing topology
- Clone an existing topology
- Delete an existing topology

Navigation

Click the Topology tile on the delivered Cloud Manager home page. The Topology page is displayed.

Image: Topology Page

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

Cloud Manager	Тороlоду	🚊 🖓 🕄 🖉
		Add New Topology
pology Definitions		7 rows
lone		
Topology Name 🛇	Topology Description ♢	
DBSYS	Database system with middle tier	>
Fulltier	Full tier	>
Fulltier with ES	Fulltier with Elastic Search	>
MultiDomain	Multi domain topology	>
Lift and Shift - DBaaS	Lift and Shift topology where database is deployed on Database as a Service.	>
PUM Fulltier	Full-tier topology with one Linux node and one Windows Client.	>
Lift and Shift	Default topology for Lift and Shift.	>

Topology Name

Name of the topology.

Topology Description

Description for the topology.

Creating a New Topology

To create a new topology:

- 1. Click the Add New Topology button available on the upper-right corner of the Topology page.
- 2. In the Topology Definition page, enter the topology name and the corresponding description.
- 3. Click the Add Node button to create a node. This opens the Add Node page. Use the Add Node page to set the values for node attributes like OS, sizing parameter, disk to be attached, and the PeopleSoft component to be installed.
- 4. Click Save to save the details.

Validation Rules for Topology

The following are the set of current validation rules for topology:

If there is a full tier node, then you:

- Cannot have another full tier node.
- Cannot have a mid-tier node.
- Cannot have a database node.
- Cannot have a Database as a Service node.

If there is a mid-tier node, then you:

- Cannot have a full tier node.
- Must have either a Database as a Service node or a database node.

If there is a database node, then you:

- Cannot have another database node.
- Cannot have a Database as a Service node.
- Cannot have a full tier node.

If there is a Database as a Service node, then you:

- Cannot have another Database as a Service node.
- Cannot have database node.
- Cannot have a full tier node.

Apart from this, user may have a Windows Client Node in all the above mentioned cases and an optional ELK Stack Node.

Topology Definition Page

Use the Topology Definition page (ECL_TOPO_COMP_FL) to create a new topology.

Navigation

Click the Add New Topology button on the upper-right corner of the Topology page to access the Topology Definition page.

Image: Topology Definition page

This example illustrates the fields and controls on the Topology Definition page.

C Topology	Тороlоду	ሴ	(32	: 0
Topology Information				Save
Topology Name Description				
Nodes You dont have any nodes configured. Add Node				

Add Node Page

Use Add Node page to add nodes for creating a topology.

Image: Add Node page

This example illustrates the fields and controls on the Add Node page. You can find definitions for the fields and controls later on this page.

Cancel	Add Node	Done
*Operating System	T	
*Environment Type	T	
*Shape Name	T	
Operating System	Select the operating system (Linux or the topology.	Windows) used to cre
Environment Type	Select the PeopleSoft software compo the node.	onents to be deployed o
	The following environment types are operating system:	available for Linux
	• DB Systems: Database systems at running Oracle Linux, optimized Oracle databases. A DB System is resource. Cloud Manager support	for running one or moi s a Database Service

on OCI DB Systems. CM provisions 1 and 2 node Database systems on virtual machines.

The shape for DB systems can be BM (Bare metal), VM or Exadata.

See Adding DB Systems Node

- Database Tier: Deploys the PeopleSoft database on a compute node.
- ELK Stack: Sets up Elasticsearch (ES) and optionally Kibana on the node.

See Creating ELK Stack Node

- Full Tier: Deploys Database, Appserver, Webserver and Process Scheduler on the node. Additional features available for Fulltier include COBOL, Kibana, and Elasticsearch.
- Middle Tier: Deploys Appserver, Webserver and Process Scheduler on the node. If Process Scheduler is selected, you can add the COBOL feature.

See Adding Middle Tier Nodes

The following environment types are available for Windows operating system:

Note: For applying PeopleTools patch to an environment, it is mandatory to have a PeopleSoft client or a Windows middle tier node defined.

- PeopleSoft Client: Deploys Windows client components on the node.
- Middle Tier: Deploys Windows client with process scheduler. Optionally you can add nVision.

See Creating Windows Middle Tier Nodes

Select the required VM shape.

For DB systems, BM shapes, VM shapes as well as Exadata are supported.

Note: The Exadata DB System must already exist on OCI. When you select Exadata, the environment (shift) will create the databases within the Exadata DB system.

For non-DB system nodes, the list of VM shapes depends on the custom Linux and Windows image that is specified in the "Infrastructure Settings" page. In OCI, whenever a user creates a

Shape Name

Disk Space (GB)

custom Linux or Windows image, a set of shapes get associated with that image. CM shows that set of shapes, when end-user creates or modifies the nodes in a topology.

Note: The list of shapes will not appear until you do a Refresh of OCI Metadata after configuring the Operating System images in the Settings page. Some shapes may not be available in new tenancies.

Select the amount of disk space attached to the machine.

Note: Assume that if the lifted DPK is K size, then the disk size should be 2.5 times K.

Note: For DB System, only a limited set of pre-defined disk sizes are supported. The allowed disk sizes are:

- 256 GB
- 512 GB
- 1024 GB
- Multiples of 1024 GB

Note: For BM or Exadata DB system shapes, this field is not visible.

Adding DB Systems Node

Available shapes for Database Systems are:

- BM (Bare metal)
- VM
- Exadata

Note: Before performing an environment shift, you must modify the Lift and Shift - DBaaS topology with the required size and capacity of the database.

Database System Node on Exadata

When you select the shape name as Exadata, you are instructing Cloud Manager to create the environment (shift) with the databases on your existing Exadata DB System on OCI.

When you select Exadata for the DB Systems, disk space is not displayed.

Important! Exadata database is a RAC system which supports multiple nodes, you need to add Cloud Manager SSH public key on all nodes. See <u>Administering Oracle Database Exadata Cloud Service</u>

Image: Add Node page for DBS

This example illustrates the fields and controls on the Add Node page for DB systems on Exadata.

Cancel	Add Node					
*Operat	ting System	Linux	T			
*Enviro	nment Type	DB Systems	T			
*S	ihape Name	Exadata	T			

Database System Node on Bare Metal

When you select a bare metal shape for the DB Systems, disk space is not displayed.

Image: Add Node page for DB Systems on Bare Metal

This example illustrates the fields and controls on the Add Node page for database systems on Bare Metal.

Cancel	Add Node			
*Operating System	Linux	T		
*Environment Type	DB Systems	T		
*Shape Name	BM.DenselO1.36	¥		

Adding Middle Tier Nodes

When you add a middle tier node, the tiers section is displayed.

Image: Add Node page for Middle Tier

This example illustrates the fields and controls on the Add Node page for Middle Tier. You can find definitions for the fields and controls later on this page.

Cancel	Add Node		
*Operating System	Linux	^	
*Environment Type	Middle Tier ~		
*Shape Name	VM.Standard2.1 ~		
Disk Space(GB)	100		
Tiers		_	
Appserver	Yes		
Webserver	No		
Process Scheduler	Yes		
Features			
COBOL	No	~	

Select the tier or tiers for this node.

This table lists the supported combinations for the tiers:

Application Server	PIA	Process Scheduler
Yes	Yes	Yes
Yes	No	Yes
Yes	No	No
No	Yes	No
No	No	Yes

The VM.Standard.E3.Flex shape is also available for Linux Middle Tier and Fulltier nodes.

Image: Add Node page for VM.Standard.E3.Flex shape

This example illustrates the fields and controls on the Add Node page for VM.Standard.E3.Flex shape. You can find definitions for the fields and controls later on this page.

Cancel		Edit Node	Done
	*Operating System	Linux	^
	*Environment Type	Middle Tier	
	*Shape Name	VM.Standard.E3.Flex	
	Disk Space(GB)	100	
	OCPUs	1	
	Memory (GB)	16	
Tiers			
	Appserver	Yes	
	Webserver	No	Ŷ
OCPUs		Select from 1 to 64 OCPUs.	
Memory (GI	3)	For each OCPU, you can select up to 64 GE maximum of 1024 GB total.	B of memory, v

The minimum amount of memory allowed is either 8 GB or a value matching the number of OCPUs, whichever is greater.

Creating ELK Stack Node

Note the following regarding Elasticsearch and Kibana:

• Elasticsearch node configuration is automatically done by Cloud Manager.

For information on how to deploy and configure Elasticsearch refer Elasticsearch Home Page on My Oracle Support (Doc ID 2205540.2).

- Kibana is only available with PeopleTools 8.58 or higher.
- In order to provision Kibana, Elasticsearch must be selected.
- For environments configured with Elasticsearch, Kibana will be automatically installed as part of the PeopleTools upgrade to 8.58.

Image: Add Node page for ELK Stack

This example illustrates the fields and controls on the Add Node page for ELK Stack.

Cancel	Add Node		
*Operating System	Linux •		
*Environment Type	ELK Stack		
*Shape Name	VM.Standard2.2 •		
Disk Space(GB)	100		
Features			
Kibana	Yes		
Elasticsearch	Yes		

Creating Windows Middle Tier Nodes

Starting with Cloud Manager Image 10, you can create multiple Windows middle tier nodes. You can use either a custom Windows image or an OCI platform image. The image is selected on the Infrastructure Settings page.

Prerequisites

• Configure the Windows Image in Infrastructure Settings.

See Infrastructure Settings Page

• Subscribe to the Windows channel for your application.

See Download Subscriptions Page

Use the Add Node page to create a new Windows node.

This is an example of an existing Windows Node.

Image: Example Windows Node

This example illustrates the fields and controls on the Add Node page with Windows Operating System selected. You can find definitions for the fields and controls later on this page.

Cancel	Add Node	Done
*Operating System	Windows •	
*Environment Type	Middle Tier •	
*Shape Name	VM.Standard2.1 •	
Disk Space(GB)	100	
Tiers		
Process Scheduler	Yes	
Features		
nVision	Yes	
Operating System	Windows.	
Environment Type	Middle Tier	
Shape Name	Select the required VM shape.	
Disk Space (GB)	Select the amount of disk space attached	to the machine.
Tiers	Only Process Scheduler domain is suppo middle tier Node.	rted for Windows
	Windows Process Scheduler is required treports.	for running nVisio
Features	The nVision feature can be set either on	or off.

Creating Multi Domain and Multi Middle Tier Node Configurations

Cloud Manager Image 8 and above supports both horizontal and vertical elasticity by allowing multi node and multi domain configuration for the PeopleSoft environment.

Cloud Manager supports multiple middle tier and PIA domains on single node as well on multiple nodes. It also provides an option to enable Integration Broker in one application domain in an environment. This Domain Configuration feature extends the existing provisioning environment feature in Cloud Manager.

See Configuring AppServer Tier Domain Settings.

Image: Example Multi Domain Topology

This example illustrates the fields and controls on the Topology page for a topology with multiple middle tiers.

< Det	finition		Topology		ራ	💯 : (
					C	elete Save
ороі	logy Information	Topology Name Mult	iDomain			
		Description	i domain topology	A		
lode +	S					7 ro
	Environment Type	Shape Name	Operating System	Node Description	Disk Space(GB)	
1	PeopleSoft Client	VM.Standard2.1	Windows		100	;
2	Middle Tier	VM.Standard2.1	Linux	APPSERVER	100	:
3	Middle Tier	VM.Standard2.1	Linux	PIA	100	:
ł	Middle Tier	VM.Standard2.1	Linux	PRCS	100	:
5	ELK Stack	VM.Standard2.1	Linux		100	:
6	DB Systems	VM.Standard1.4	Linux		256	:
7	Middle Tier	VM.Standard2.2	Windows	PRCS	100	,

Enabling Topology with Cobol Feature as Yes

COBOL can only be enabled in the node only when environment type is Full Tier or Middle Tier with Process Scheduler enabled.

Image: Example Middle Tier node with Process Scheduler enabled

This example illustrates a middle tier node with Process Scheduler enabled.

Cancel		Add Node	Done
	*Operating System	Linux ~	^
	*Environment Type	Middle Tier ~	_
	*Shape Name	VM.Standard2.1 ~	
	Disk Space(GB)	100	
Tiers			
	Appserver	No	_
	Webserver	No	_
	Process Scheduler	Yes	
Features			
	COBOL	Yes	~

Note: Process Scheduler must be enabled in order to enable COBOL.

Editing an Existing Topology

To edit an existing topology, perform the following:

1. Click any existing topology in the Topology page. This displays the Topology Definition page of the topology which you want to edit.

Image: Topology Definition – Edit page

This example illustrates the fields and controls on the Topology Definition – Edit page. You can find definitions for the fields and controls later on this page.

< то	pology		Topolo	ogy	ଜ	<u>(82</u>	:	\oslash
					C	elete	Sav	е
Торо	logy Information							
		Topology Name D	BSYS					
		Description D	atabase system with middle tier	<i>i</i> ,				
		Information 'Di	BSYS' topology is used in 'DBsys' te	emplate. Hence no modifications are allowed on	this topology.			
Node	8						2 1	ows
+								
	Environment Type	Shape Name	Operating System	Node Description	Disk Space(GB)			
1	DB Systems	VM.Standard2.2	Linux		256			>
2	Middle Tier	VM.Standard2.2	Linux	APPSERVER PIA PRCS	100			>

- 2. You can edit the description, if required.
- 3. Click + to add new nodes.

See Add Node Page

4. To edit any node attribute value, click on any node row. This displays the Edit Node window.

Image: Edit Node window

This example illustrates the fields and controls on the Edit Node window.

Cancel		Edit Node Done
	*Operating System	Linux
	*Environment Type	Middle Tier v
	*Shape Name	VM.Standard2.2 ~
Tiers		
	Appserver	Yes
	Webserver	Yes
	Process Scheduler	Yes
Features		
	COBOL	No

- 5. Edit the fields as per requirement.
- 6. Click Done to save the edited details.

Cloning an Existing Topology

To clone an existing topology, perform the following:

- 1. Select the radio button corresponding to a topology that you want to clone.
- 2. Click Clone button in the Topology page. This displays the Clone Topology window.

Image: Clone Topology window

This example illustrates the fields and controls on the Clone Topology window.

Cancel	one Topology	Clone
New Topology Name		

3. Enter a new topology name and click Clone. The new topology is added to the topology list.

Deleting an Existing Topology

To delete an existing topology, perform the following:

- 1. Click any existing topology in the Topology page. This displays the Topology Definition page of the topology.
- 2. Click Delete, to delete the topology.

Image: Example Delete Topology page

This example illustrates the fields and controls on the Example Delete Topology page.

< De	finition		Topology		ඛ	🕼 : Ø
						Delete Save
Торо	logy Information					
		Topology Name	yTopology			
		Description Ex	ample			
Node	!S					3 rows
+						
	Environment Type	Shape Name	Operating System	Node Description	Disk Space(GB)	
1	Database Tier	VM.Standard2.1	Are you sure you want to delete MyTop	oology topology?	100	>
2	Middle Tier	VM.Standard2.1	Yes No	/ER PRCS	100	>
3	Middle Tier	VM.Standard2.1	Linux	PIA	100	>

Managing Template

An environment template is a repeatable blueprint that is used to deploy PeopleSoft environments using Cloud Manager. A template defines the topology to be used when deploying the PeopleSoft application DPK, which gets downloaded to the Repository. A template also defines environment attributes to enable streamlined deployments. Access to templates can be managed by defining security attributes of the templates.

Pages Used to Manage Environment Templates as a PeopleSoft Administrator

Page Name	Definition Name	Usage
Environment Template Tile	Understanding Governance <u>Framework</u> ECL_TEMPLATE_LP_FL_ GBL (This is the CREF for the tile.)	Access the Environment Template landing page.
Environment Template Page	ECL_TEMPLATE_FL	Create new templates or edit, delete or clone existing templates.

Page Name	Definition Name	Usage
Environment Template – General Details Page	ECL_TEMPL_GEN_FL	Enter the template name, description, and selecting a database.
Environment Template – Select Topology Page	ECL_TEMPL_TOP_FL	Select the topology that you have already defined.
Environment Template – Security and Policies Page	ECL_TEMPL_SEC_FL	Associate zones in which the environment is created, the roles that have access to the template, and policies that will be auto-enabled for the environment.
Environment Template – Summary Page	ECL_TEMPL_REV_FL	Displays the summary of the environment template that the user is about to create.

Environment Template Tile

Use the Environment Template tile (ECL_TEMPLATE_LP_FL_GBL) to access Environment Template landing page.

Navigation

The Environment Template tile is delivered as part of the Cloud Manager home page.

Image: Environment Template Tile

This example illustrates the Environment Template Tile.

Environment Template	
	3

Environment Template Page

Use the Environment Template page (ECL_TEMPLATE_FL) to create a new template, and edit, delete or clone an existing template.

Navigation

Click the Environment Template tile on the delivered Cloud Manager Fluid home page. The Environment Template page is displayed by default.

Image: Environment Template page

This example illustrates the fields and controls on the Environment Template page. You can find definitions for the fields and controls later on this page.

Add New Template Environment Template Definitions 3 rows Template Name PeopleSoft Image Default Topology Description O MultiTier MultiTier MultiTier	Cloud Manager		En	vironment Template 🏠 🖓	(125 :	Ø
Clone Delete Template Name PeopleSoft Image Default Topology Description				Add	New Temp	late
Template Name PeopleSoft Image Default Topology Description		late Definitions				3 rows
	Clone Delete					
MultiTier PEOPLESOFT HCM UPDATE IMAGE 9.2.036 - NATIVE OS MultiTier MultiDomain	Template Name	PeopleSoft Image	Default Topology	Description		
	 MultiTier 	PEOPLESOFT HCM UPDATE IMAGE 9.2.036 - NATIVE OS	MultiTier	MultiDomain		>
O Lift and Shift Lift and Shift This template is used during the Shift process, in which a customer environment will be moved to Oracle Public Cloud.	 Lift and Shift 		Lift and Shift	This template is used during the Shift process, in which a customer environment will be moved to Oracle Public	Cloud.	>
O HCMPUM PEOPLESOFT HCM UPDATE IMAGE 9.2.036 - NATIVE OS PUM Fulltier HCM PUM Image 36	O HCMPUM	PEOPLESOFT HCM UPDATE IMAGE 9.2.036 - NATIVE OS	PUM Fulltier	HCM PUM Image 36		>

Note: The Lift And Shift template is the default template displayed in the Environment Template page with no database associated with it.

Template Name	Name of the template.
Database	Indicates the PeopleSoft application DPK that gets installed when the template is deployed.
Default Topology	Default topology associated with the template.
Description	Add a description for the template.

Edit/Delete/Clone an Existing Template

User can edit, delete or clone the existing templates using the Environment Template landing page.

Note: It is recommended to recreate the existing templates to ensure that the new custom attributes are available in the template.

- To edit an existing template details, click a row and modify the details as per requirement.
- To delete an existing template, select the radio button corresponding to the template which you want to delete and click the Delete button. Users cannot delete a template, if it is already used for defining an environment.
- To clone an existing template, select the radio button corresponding to the template which you want to clone and click the Clone button available on the Environment Template landing page. The Clone Template modal window is displayed, wherein you can enter the new template name and click the Clone button. The new template is added to the template list.

Default Environment Templates

A default template is provided for Lift and Shift, which is used during environment shifting by default. This Lift and Shift template and its associated topology must be modified such that it is suitable for the environment being shifted. The Lift and shift topology is fixed in terms of number of nodes, but the shape and disk space parameters can be modified. For any environment to be provisioned in Cloud Manager, the administrator creates a template and a user uses that template to provision. In case of Lift and Shift, a default template is provided out of the box and there is no need to create any templates. When an administrator creates an environment on the Lift and Shift page, the process automatically chooses the default Lift and Shift template. This Lift and Shift template must be modified to suit the environment being shifted. For more details, see Understanding the Lift and Shift Process.

Creating a Template

Use the Environment Template wizard to create a new template using a step by step guided process.

By default, the create template guided process involves the following steps:

1. Entering general details.

See Environment Template – General Details Page

2. Selecting topologies.

See Environment Template - Select Topology Page

3. Defining security and policies.

See Environment Template - Security and Policies Page

4. Submitting the details.

See Environment Template – Summary Page

Environment Template – General Details Page

Use the Environment Template – General Details page to enter the template name, description, and select a database.

Navigation

Click the Add New Template button on the Environment Template landing page.

Image: Environment Template – General Details page

This example illustrates the fields and controls on the Environment Template – General Details page. You can find definitions for the fields and controls later on this page.

× Exit		Enviror	nment Template			<u>(125</u>
1 General Details		2 Select Topology		3 Security and Policies	4 Summary	Next >
General Settings						
Select PeopleSoft Image		PUMImage HCM PUM Image 36	.H			
	PeopleSoft Image	PEOPLESOFT HCM UPE Q				
Name		Name	of the ter	nplate which yo	ou want to create.	
Description		Add a	descripti	on for the templ	ate.	

Add a description for the template.

PeopleSoft Image Select a PeopleSoft

Select a PeopleSoft application DPK from the list of DPKs available in the Repository.

Environment Template – Select Topology Page

Use the Environment Template – Select Topology page to select the topology that you have already defined. You may edit the default attributes associated with the selected topology.

Navigation

- Click Next in the Environment Template General Details page.
- Click Step 2, Select Topology, at the top of the page to navigate to the Environment Template Select Topology page in the guided process.

Image: Select Topology page

This example illustrates the fields and controls on the Select Topology page. You can find definitions for the fields and controls later on this page.

× Exit Environment Template	(125)
1 3 4 General Details Select Topology Security and Policies Summary C Protein	/ evious Next >
Select Topology	2 rows
Default Topology \diamond Topology Name \diamond	
PUM Fulltier Q	+ -
DistributedMT Q	+ -
Custom Attributes Edit Custom Attributes Region and Availability Domains	Validate Network
> Full Tier > PeopleSoft Client	

Default Topology

Users can mark one of the topology associated with the template as the default topology. During the environment creation process using a template, you can override this default topology and select any other topology associated with that template. If you don't want to override, then the default topology will get used automatically.

Click + to add more topologies. A new row of empty fields appears below the existing record. You can configure the fields based on the requirements.

Note: Be sure to select the topology under the Override Topology section and then continue with the template creation.

Topology NameSelect the required topology that you want to include in the
template.

Note: While selecting a topology, the custom attributes associated with the selected topology is displayed. It is possible to override the default attributes based on the requirements.

Configuring Custom Attributes

- 1. Expand the Custom Attributes section.
- 2. Select the required topology.
- 3. Enter the required attributes and click Next.

Note: Cloud Manager allows users to add customization during template creation under Edit Custom Attributes section. This customization can be added only to middle tier and database tier. The customization will be available to users when they select this template. This facilitates the user to define custom attribute values for the environment being deployed.

4. After entering the required attributes, click the Validate Network button to ensure your infrastructure settings are correct and the network is valid.

This validates whether the port is open for an incoming/outgoing connection across different subnets and VCN. The connection can be:

- a. From Cloud Manager to VM
- b. From VM to Cloud Manager
- c. From VM to VM

Some of the validations are based on user input (Jolt Port, WSL Port, Database Server Port, HTTP PIA Port, HTTPS PIA Port).

The following implicit validations are performed:

From	То
Every subnet	Cloud Manager subnet: NFS ports TCP - 2049, 111, 892, 32803
Cloud Manager subnet	Every subnet (including itself) except Windows VM subnet: ssh port 22
Cloud Manager subnet	Windows VM's subnet : WinRM TCP Ports 5985, 5986
Cloud Manager subnet	Windows VM's subnet: CIFS ports TCP 445, 139, 138, 137

The following sections must be configured in every template.

- Region and Availability. See Configuring Region and Availability Domains
- Network for node. See Configuring Network Settings
- Network Security Groups (optional) for node. See <u>Configuring Network Security Group Settings</u>

• Fault domain for the node. See Configuring the Fault Domain

Note: DB Systems node does not have fault domain setting.

Advanced section. See <u>Configuring Advanced Section</u>

Note: Add Node operation and ELK nodes do no include an Advanced section.

The General Setting and Domain Settings depend on the type of node.

- Fulltier. See <u>Configuring Full Tier Template Settings</u>
- DB Systems. See <u>Configuring DB Systems Settings</u>
- Web Server. See <u>Configuring Web Server Tier Settings</u>
- Application Server. See <u>Configuring AppServer Tier Domain Settings</u>
- Process Scheduler. See <u>Configuring Process Scheduler General Setting</u> and <u>Configuring Process</u> <u>Scheduler Domain Settings</u>
- Windows. See Configuring Windows Middle Tier General Settings
- Database Tier. See Configuring Database Tier
- ELK Stack. See Configuring ELK Stack General Settings

Configuring Region and Availability Domains

Image: Region and Availability Domains section

This example illustrates the fields and controls on the Region and Availability Domains section. You can find definitions for the fields and controls later on this page.

		4 rows
1 Region	us-ashburn-1 ~	?
2 Primary Availability Domain	evQs:US-ASHBURN-AD-2	?
3 Default Compartment	dev_root ~	?
4 Default Virtual Cloud Network	vcn_ash(dev_common) ~	?
		ata centers located within a region. A everal availability domains.
	÷	ill provision and manage environments it is deployed. See <u>Infrastructure</u>
Primary Availability Domain	Availability domain in C	DCI.
Default Compartment	Compartments allow you to organize and control access to your cloud resources. A compartment is a collection of rela	

resources (such as instances, virtual cloud networks, block volumes) that can be accessed only by certain groups that have been given permission by an administrator.

Select a default compartment, this compartment will be used for all tiers in the template.

Note: You must use a compartment that is directly under the root compartment. Nested compartments, that is, lower-level subcompartments, are not supported for Cloud Manager, or for environments that you provision with Cloud Manager.

Default Virtual Cloud NetworkVirtual Cloud Network within OCI. A virtual cloud network is
a virtual version of a traditional network—including subnets,
route tables, and gateways on which your instances run.

Select the default Virtual Cloud Network, this will be the default VCN used for all tiers in the template.

For details on setting up the OCI environment, refer to the OBE Installing PeopleSoft Cloud Manager in Oracle Cloud Infrastructure.

Note: In OCI, the templates will not have any default values for Region and Availability Domains section. All templates must be updated with these settings before using it for deployment using the <u>Create</u> <u>Environment Page</u>.

Configuring Network Settings

Each node in the template must be configured for subnet where it will run. The compartment and VCN default to the values entered in the Region and Availability Domain section, these values can be changed to run in a different compartment or VCN. For more information on VCN peering see the tutorial *Use Multiple VCNs, Multiple Compartments, or Network Security Groups with PeopleSoft Cloud Manager (Optional)*.

Image: Network Setting section

This example illustrates the fields and controls on the Network Setting section. You can find definitions for the fields and controls later on this page.

₩N	→ Network Settings				
				3 rows	
1	Compartment	dev_root/	~	?	
2	Virtual Cloud Network	vcn_ash(dev_common)	~	?	
3	Subnet For Primary Instance	db	~	?	

Compartment

The default compartment is displayed, you can select a different compartment for the network.

Virtual Cloud Network	The default VCN is displayed, you can select a different VCN for this node.
Subnet For Primary Instance	Select the subnet where this node will run.

Configuring Network Security Group Settings

Cloud Manager supports Network Security Groups (NSG). Network Security Groups are set up outside of Cloud Manager. Up to 5 Network Security Groups can be assigned to a node.

See tutorial Network Security Groups with PeopleSoft Cloud Manager (Optional).

Image: Network Security Group Settings section

This example illustrates the fields and controls on the Network Security Group Settings section.

√Network Security Group Settings		
		2 rows
1 Network Security Group	nsg1(vcn_ash) v	?
2 Network Security Group	nsg2(vcn_ash) v	?

Configuring the Fault Domain

Each availability domain in OCI contains three fault domains for high availability. OCI randomizes the availability domains by tenancy to help balance capacity in data centers.

Use the Fault Domain Settings section to select which fault domain to use for a specific node. Select the fault domain from the drop down list, only fault domains in the availability domain for the node are listed and available.

If OCI Default is selected, OCI randomly selects the fault domain to use and customer is not aware of which fault domain is being used.

Note: DB Systems node does not have fault domain settings.

For more information on faults domains see Regions and Availability Domains.

Image: Fault Domain section

This example illustrates the fields and controls on the Fault Domain section.

General Settings		
Network Settings		
Network Security Group Settings		
✓ Fault Domain Settings		
Fault Domain Settings		
		1 ro
		1 rc
1 Fault domain for Primary Instance	OCI Default	1 re
Domain Settings	OCI Default	
1 Fault domain for Primary Instance ▶ Domain Settings ▶ Advanced	FAULT-DOMAIN-1	

Configuring Advanced Section

The Advanced section contains kernel parameters and Ulimit values. Expert administrators have the option to change these values.

Important! No validation is performed on these fields. Only Operating system experts should change these values.

Note: Add Node operation and ELK nodes do not include an Advanced section.

Image: Advanced section

This example illustrates the fields and controls on the Advanced section.

General Settings	
Network Settings	
Network Security Group Settings	
 Fault Domain Settings Domain Settings 	
▼Advanced	
Advanced	
Kernel Parameters	kernel.msgmnb = 65333 kernel.msgmni = 1111 kernel.msgmax = 66536 kernel.shmmax = 68719476736 kernel.shmma = 4294967296 kernel.core_uses_pid = 1 net.jv4 tcp_timestamps = 1 net.jv4 tcp_timestamps = 1 net.jv4 tcp_timestamps = 1 net.jv4 tip_local_port_range = 10000 65500
	group.hard.nofile = 65536 group.soft.nofile = 65536 group.hard.norc = 86536 group.hard.norc = 65636 group.hard.core = unlimited group.soft.core = unlimited group.hard.stack = 102400 group.soft.stack = 102400 user.hard.nofile = 131072 user.soft.nofile = 131072 user.hard.nofile = 131072 user.hard.norc = 131072 user.hard.core = unlimited user.soft.core = unlimited user.soft.core = unlimited user.soft.core = unlimited user.hard.core = unlimited
Ulimit Values	user.soft.memlock = 500000

Ulimits

This input field allows you to set ulimit values for the Linux node. Each line of the input represents one ulimit entry. The format to be used for each line is as follows:

[user|group].[soft|hard].<limit name> = <value>

The left-hand side of the expression represents a ulimit, and the right hand expression is a value of that ulimit. They are separated by a = sign.

user or group	The key word "user" represents a limit for a Linux user, and the key word "group" represents a limit for a user group. Exactly which users and groups are added to the Linux configuration files is internally determined by the environment deployment process. You cannot set those actual user/group names here.
soft or hard	The keyword "soft" denotes the limit a process can use. It can later be increased by the corresponding user/group.
	The keyword "hard" denotes the maximum limit to which the soft limit can be raised to.
limit name	This is the name of the limit. Please refer to table below for the list of names
value	This is either a numeric value or the string "unlimited". Please refer to table below for a list of values and the units in which they have to be expressed

This table lists the ulimit names.

Name	unit
сри	Seconds
fsize	Blocks
data	Kilobytes
stack	Kilobytes
core	Blocks
ISS	Kilobytes
nofile	Number of file descriptors
as	Kilobytes
nproc	Number of processes
memlock	Kilobytes

Name	unit
lock	Number of locks
sigpending	Number of queued signals
nice	Nice level (an integer)
rtprio	Realtime priority (an integer)
rttime	Number

Kernel Parameters

The kernel parameters input field can be used for setting Linux kernel parameters. Each line represents one Linux parameter. The format of each line should be as follows:

<kernel parameter name> = <value>

The list of all kernel parameters can be found from the main page of the Linux sysctl command.

Configuring Full Tier Template Settings

Example Full Tier Node with ELK Stack and COBOL

Based on the topology selected, the full tier contains the appropriate settings for the node. The examples in this section display full tier topology that includes ELK Stack and COBOL.

Image: Full Tier - General Settings (1 of 2)

This example illustrates the fields and controls on the Full Tier - General Settings (1 of 2). You can find definitions for the fields and controls later on this page.

- Gene	aral Settings		
			19 rows
1	Weblogic Administrator Username	system	?
2	Enable EM agent	NO	?
3	PeopleSoft Deployment Path	/u01/app/oracle/product	?
4	Database Access Id	SYSADM	?
5	Database Connect Id	people	?
6	Elasticsearch Port	9200	?
7	Database Type	DEMO	?
8	Enable Multi Language	NO	?
9	Database Name		?
10	Gateway Administrator Username	administrator	?

Image: Full Tier - General Settings (2 of 2)

This example illustrates the fields and controls on the Full Tier - General Settings (2 of 2). You can find definitions for the fields and controls later on this page.

11	Database Operator Id		?
12	Database Server Port	1522	?
13	Post Provision Custom Script	M	?
14	Kibana Port	5601	?
15	ELK Cluster Name	ESCL	?
16	Cobol Compiler Type	×	?
17	ELK Discovery Host Name	127.0.0.1	?
18	ELK Installation Directory	/u01/app/oracle/product	?
19	Pre Provision Custom Script	×	?
Netw	vork Settings		
Netw	vork Security Group Settings		
Fault	t Domain Settings		
Dom	ain Settings		
Adva	anced		

Elasticsearch Port	Elasticsearch port.
Weblogic Administrator Username	User name of the Weblogic administrator. This is used for accessing WebLogic console.
PeopleSoft Deployment Path	Location where the PeopleSoft application is deployed.
Database Access ID	Access Id for the database.
Database Connect ID	Connect Id for the database.
Enable EM Agent	Select either Yes or No to enable or disable EM agent.
Elasticsearch Port	Elasticsearch port.
Database Type	Select the required database type. Available database types a DEMO or SYS.
Enable Multi Language	Select either Yes or No to enable multi language support.
Database Name	Name of the database.
Gateway Administrator Username	User Id of gateway administrator.
Database Operator ID	Database Operator ID.
Database Server Port	Listener port number.
COBOL Compiler Type	If COBOL is enabled in the selected topology, you must selected topology, you must selected topology the Cobol compiler type, Server Express or Visual COBOL.

	Note: Server Express is not supported for PeopleTools 8.58 and onward.
	Note: The COBOL license must be configured on the Cloud Manager Settings page. See <u>Cloud Manager Settings Page</u>
ELK Discovery Host Name	Host names for any nodes that are already members of a cluster. Host names (or IP/DNS) are required for letting each Elasticsearch server know where it can ping and find other Elasticsearch servers during booting up.
ELK Installation Directory	ELK Installation Directory
Pre Provision Custom Script	Select an uploaded script to execute prior to provisioning the environment.
	See Upload Custom Scripts Page
Post Provision Custom Script	Select an uploaded script to run post provisioning.
	See Upload Custom Scripts Page
Kibana Port	Kibana port.
ELK Cluster Name	ELK cluster name.

Domain Settings Section

Full tier includes Web Server, Appserver and Process Scheduler.

Web Server Settings	For Web Server setting see <u>Configuring Web Server Tier</u> <u>Settings</u> .
Appserver Setting	For App Server Setting see <u>Configuring AppServer Tier Domain</u> <u>Settings</u> .
Process Scheduler Settings	For Process Scheduler Setting see <u>Configuring Process</u> Scheduler Domain Settings.
Process Scheduler Server Definition Parameters	For Process Scheduler Setting see <u>Configuring Process</u> Scheduler General Setting.

Configuring DB Systems Settings

DB Systems General Settings

The DB System options differ depending on whether the database system is on a VM, bare metal, or Exadata.

Image: DB Systems – General Settings

This example illustrates the fields and controls on the DB Systems – General Settings. You can find definitions for the fields and controls later on this page.

→ DB Systems			
	✓General Settings		
	-		13 rows
	1 Enable EM agent	NO	?
	2 Database Server Port	1521	?
	3 Character set	AL32UTF8	?
	4 Database Connect Id	people	?
	5 National Character set	UTF8	?
	6 Database Operator Id		?
	7 Database Access Id	SYSADM	?
	8 Database Type	DEMO	?
	9 Enable Multi Language	NO	?
	10 Database Name		?
	11 PDB Name	PSPDB	?
	12 Post Provision Custom Script	v	?
	13 Pre Provision Custom Script	×	?

Enable EM Agent	Select Yes to enable Environment Management agent for creating the infrastructure that is required to deploy an EM agent.
Database Server Port	Listener port number.
Character Set	The character set for the database.
Database Connect ID	Access ID for the database.
National Character Set	The national character set for the database.
Database Operator ID	Default database operator ID.
Database AccessID	Access ID for the database.
Database Type	Select the required database type. Available database types are DEMO or SYS.
Enable Multi Language	Select either Yes or No to enable multi language support.
Database Name	Name of the database.
PDB Name	Name of the Pluggable Database.
Pre Provision Custom Script	Select an uploaded script to execute prior to provisioning the environment.
	See Upload Custom Scripts Page
Post Provision Custom Script	Select an uploaded script to run post provisioning.

See Upload Custom Scripts Page

Image: DB System Options section for VM

This example illustrates the fields and controls on the DB System Options section for VM. You can find definitions for the fields and controls later on this page.

→ DB Systems			
	General Settings		
	Network Settings		
	▼DB System Options		
			7 rows
	1 Software Release	v	?
	2 Display Name		?
	3 Auto Backup	NO	?
	4 License Type	License Included v	?
	5 Node Count	1 v	?
	6 Software Edition	v	?
	7 Cluster Name		?
	Network Security Group Settings		
	Fault Domain Settings		

Software Release

Display Name

Auto Backup

License Type

Oracle database release version. Select the software release from the drop down list.

Staring in Image 10, the following software releases are supported in DBS.

- 12.1
- 12.2
- 18c
- 19c

The database release version must be chosen based on the database version in PeopleSoft Image or customer's lifted database version.

Display name for the DB system. The name doesn't need to be unique. An Oracle Cloud Identifier (OCID) will uniquely identify the DB system.

Displays whether automatic incremental backups for this database is enabled or disabled.

The type of license you want to use for the DB system. Your choice affects metering for billing. License included means the cost of the cloud service includes a license for the Database service. Bring Your Own License (BYOL) means you are an Oracle Database customer with an Unlimited License Agreement or Non-Unlimited License Agreement and want to

	use your license with Oracle Cloud Infrastructure. This removes the need for separate on-premise licenses and cloud licenses.
Node Count	The number of nodes in the DB system. The number depends on the shape you select. You can specify 1 or 2 nodes for virtual machine DB systems, except for VM.Standard2.1 and VM. Standard1.1, which are single-node DB systems.
	Note: Some shapes may not be available in new tenancies.
	Note: Except 1.1 and 2.1, all other shapes seem to be supported for RAC (2-node DB system).
Software Edition	The database edition supported by the DB system.
Cluster Name	A unique cluster name for a multi-node DB system. The name must begin with a letter and contain only letters (a-z and A-Z), numbers (0-9) and hyphens (-). The cluster name can be no longer than 11 characters and is not case sensitive.
Fault domain	Select the fault domain for the database node, if the DB System contains 2 nodes, you will be able to configure the fault domain for each node.

Example Database Systems on Bare Metal

Image: DB System Options for Bare Metal

This example illustrates the fields and controls for DB System Options for Bare Metal . You can find definitions for the fields and controls later on this page.

DB Systems			
	▶ General Settings		
	Network Settings		
	Network Security Group Settings		
	▼ DB System Options		
			9 rows
	1 Total Node Count	1	?
	2 CPU Core Count		?
	3 Data Storage Percentage	80%	?
	4 Disk Redundancy	High	?
	5 Software Release	×	?
	6 Display Name		?
	7 Auto Backup	NO	?
	8 License Type	License Included v	?
	9 Software Edition	×	?
	▶ Fault Domain Settings		

Total Node Count

The number of nodes in the DB system. Only single node DB systems are supported for BM shapes.

CPU Core Count	Number of CPU cores enabled on the database system. Cloud Manager does not validate the core count, therefore you must use the correct core count for the BM shape selected in the topology configuration or the deployment may fail.
Data Storage Percentage	Percentage assigned to DATA storage including user data and database files. The remaining percentage is assigned to RECO storage including database redo logs, archive logs, and recovery manager backups. Accepted values are 40% and 80%.
Disk Redundancy	Type of redundancy configured for the database system. Normal is 2-way redundancy. High is 3-way redundancy. Allowed values are High and Normal
Software Release	Oracle database release version. The database release version must be chosen based on the database version in PeopleSoft Image or customer's lifted database version.
Display Name	Display name for the DB system. The name doesn't need to be unique. An Oracle Cloud Identifier (OCID) will uniquely identify the DB system.
Auto Backup	Displays whether automatic incremental backups for this database is enabled or disabled.
License Type	The type of license you want to use for the DB system. Your choice affects metering for billing. License included means the cost of the cloud service includes a license for the Database service. Bring Your Own License (BYOL) means you are an Oracle Database customer with an Unlimited License Agreement or Non-Unlimited License Agreement and want to use your license with Oracle Cloud Infrastructure. This removes the need for separate on-premise licenses and cloud licenses.
Software Edition	The database edition supported by the DB system.
Fault Domain	Select the fault domain for the database node, if the DB System contains 2 nodes, you will be able to configure the fault domain for each node.

Example Database System on Exadata

Image: Database System Options on Exadata

This example illustrates the fields and controls on the database system options on Exadata. You can find definitions for the fields and controls later on this page.

		4 rows
1 Exadata DB System	Exadata Cloud Manager	?
2 Software Release	Oracle Database 12c Release 1	?
3 Auto Backup	NO	?
4 Database is RAC	YES	?
xadata DB System	Displays a list of Exadata DB syn availability domain. If there is or	
oftware Release	1 5 5	nly one Exadata DB Sys The database release ve abase version in Peoples
·	availability domain. If there is or value is auto-populated. Oracle database release version. must be chosen based on the data	aly one Exadata DB Sys The database release ve abase version in Peoples ase version.

Configuring Distributed Middle Tier Environment Template Settings

For templates using a topology with multiple middle tiers, you will configure the custom attributes for each middle tier.

Image: Custom Attributes section

This example illustrates the fields and controls on the Custom Attributes section showing multiple middle tiers.

× Exit		Environme	ent Template	<u>(124</u>
(1)- General Det	ails	2 Select Topology	3 Security and Policies	4 Summary C Previous Next >
Select Topology				1 row
	Default Topology 🛇	Topology Name 🛇		
		DistributedMT	٩	+ -
Custom Attributes Edit Custom Attributes Region and Availability D		DistributedMT v		Validate Network
DB Systems				
Middle Tier				
Middle Tier				
Middle Tier				
People Soft Client				

Configuring Web Server Tier Settings

General Settings

Image: Middle Tier - General Settings for Web Server

This example illustrates the fields and controls on the Middle Tier - General Settings for Web Server. You can find definitions for the fields and controls later on this page.

➡Middle Tier			
	✓General Settings		
	·		6 rows
	1 Enable EM agent	NO	?
	2 PeopleSoft Deployment Path	/u01/app/oracle/product	?
	3 Weblogic Administrator Username	system	?
	4 Gateway Administrator Username	administrator	?
	5 Post Provision Custom Script	~ ~	?
	6 Pre Provision Custom Script	~	?
	Network Settings		
	Network Security Group Settings		
	Fault Domain Settings		
	Domain Settings Advanced		
	P Auvanceu		

Enable EM Agent

Select either Yes or No to enable or disable EM agent.

Weblogic Administrator Username

User name of the Weblogic administrator. This is used for accessing the Weblogic console.

PeopleSoft Deployment Path	Location where the PeopleSoft application is deployed.
Gateway Administrator Username	User Id of gateway administrator.
Pre Provision Custom Script	Select an uploaded script to execute prior to provisioning the environment.
	See Upload Custom Scripts Page
Post Provision Custom Script	Select an uploaded script to run post provisioning.
	See Upload Custom Scripts Page

Domain Settings

Image: Middle Tier - Domain Settings for Web Server

This example illustrates the fields and controls on the Middle Tier - Domain Settings for Web Server. You can find definitions for the fields and controls later on this page.

▼Middle Tier						
General Settings						
Network Settings						
Network Security Group	Settings					
Fault Domain Settings						
✓ Domain Settings						
	✓Web Server Settings					
			4 rows			
	1 Number of Domains	1	?			
	2 Authentication Domain					
	2 Addienceation Domain		?			
	3 HTTP PIA Port	8000	?			
			· · ·			
	4 HTTPS PIA Port	8443	?			
Advanced						
Number of Domains	Enter the	number of web server do	mains Number of doma			
	can be 1	to 5.				
Authentication Domain	The dom	ain in which the portal is	running and across which			
	single sig	gn-on authentication token	n is valid.			
HTTP PIA Port	There wi	There will be as many ports, equal to the given number of				
		• • •	to the given number of			
	domains,	separated by comma.				
HTTPS PIA Port	There wi	ll be as many ports, equal	to the given number of			
		• • •	to the given number of			
	domains,	separated by comma.				

the

Configuring AppServer Tier Domain Settings

Image: Domain Settings for Appserver

This example illustrates the fields and controls on the Domain Settings for Appserver. You can find definitions for the fields and controls later on this page.

ttings			
	✓Appserver Settings		
			13 rows
	1 Number of Domains	1	?
	2 Number of App Server Instance (PSAPPSRV services) Per Domain	2	?
	3 Number of Query Server Instances(PSQRYSRV services) Per Domain	1	?
	4 Number of SQL Access App Server(PSSAMSRV services) Per Domain	1	?
	5 Number of Jolt Listener(Jolt Handler) Per Domain	3	?
	6 Jolt Port	9033	?
	7 WSL Port	7000	?
	8 Enable IB settings on first domain	YES	?
	9 Number of App Server instance(PSAPPSRV services) for IB	2	?
	10 Number of SQL Access App Server(PSSAMSRV services) for IB	1	?
	11 Number of PSBRKHND instances for IB	1	?
	12 Number of PSSUBHND instances for IB	1	?
	13 Number of PSPUBHND instances for IB	1	?

Number of Domains	Number of application server domains. Number of domains can be 1 to 5.
Number of App Server Instance Per Domain	Number of PSAPPSRV instances required. This configuration is applied to all App Server domains.
Number of Query Server Instances Per Domain	Number of PSQRYSRV instances required. This configuration is applied to all App Server domains.
Number of SQL Access App Server(PSSAMSRV) Per Domain	Number of PSSAMSRV instances required. This configuration is applied to all App Server domains.
Number of Jolt Listener per Domain	Number of Jolt Listener per Domain.
Jolt Port	There will be as many ports, equal to the given number of domains, separated by comma.
WSL Port	There will be as many ports, equal to the given number of domains, separated by comma.
Enable IB Domain on first Domain	If Yes is selected IB will be enabled in the first App Domain.
Number of App Server Instance (PSAPPSRV services) for IB	Number of App Server Instance (PSAPPSRV services) for IB.

Number of SQL Access App Server (PSSAMRSRV services) for IB	Number of SQL Access App Server (PSSAMRSRV services) for IB
Number of PSBRKHND instances for IB	Number of PSBRKHND instances for IB
Number of PSSUBHND instances for IB	• Number of PSSUBHND instances for IB

Number of PSPUBHND instances for Number of PSPUBHND instances for IB **IB**

Configuring Process Scheduler General Setting

If the middle tier is Process Scheduler and COBOL is enabled in the topology, the General Setting will include COBOL Complier Type.

Image: Process Scheduler Middle Tier - General Settings

This example illustrates a Process Scheduler middle tier node, where COBOL is enabled in the topology.

✓ General Settings	
	7 row
1 Enable EM agent	?
2 PeopleSoft Deployment Path /u01/apploracle/product	?
3 Weblogic Administrator Username system	?
4 Gateway Administrator Username administrator	?
5 Post Provision Custom Script	?
6 Cobol Compiler Type v	?
7 Pre Provision Custom Script	?

COBOL Compiler Type

If COBOL is enabled in the selected topology, you must select the COBOL compiler type, Server Express or Visual COBOL.

Note: Server Express is not supported for PeopleTools 8.58 onwards.

Note: The COBOL license must be configured on the Cloud Manager Settings page. See <u>Cloud Manager Settings Page</u>

Configuring Process Scheduler Domain Settings

Image: Domain Settings for Process Scheduler Settings and Process Scheduler Server Definition Parameters

This example illustrates the fields and controls on the Domain Settings for Process Scheduler Settings and Process Scheduler Server Definition Parameters. You can find definitions for the fields and controls later on this page.

▼Domain Settings				
-	Process Scheduler Settings			
				3 rows
1	1 Number of Domains		1	?
2	2 Number of App Engine Server Instances(PS	AESRV services) Per Domain	2	?
3	3 Number of App Engine Server Instances(PS	DSTSRV services) Per Domain	2	?
	Process Scheduler Server Definition Para	meters		
				7 rows
1	1 Application Engine	1		?
2	2 XML Publisher	1		?
3	3 COBOL SQL	1		?
4	4 Optimization Engine	1		?
6	5 SQR Process	1		?
e	6 SQR Report	1		?
7	7 Max Api Aware	1		?

Process Scheduler Settings

Number of Domains	Number of process scheduler domains.
Number of App Engine Server Instances(PSAESRV services) Per Domain	Number of application engines required.
Number of App Engine Server Instances(PSDSTSRV services) Per Domain	Number of application servers required.
Process Scheduler Server Definition Par	rameters
Application Engine	Number of application engine processes.
XML Publisher	Number of XML publishers.
COBOL SQL	Number of COBOL SQL processes.
Optimization Engine	Number of optimization engines.
SQR Process	Number of SQR processes.

SQR Report	Number of SQR reports.
Max Api Aware	Number of Max Api Aware.

Configuring Windows Middle Tier General Settings

Image: General Settings for Windows Middle Tier

This example illustrates the fields and controls on the General Settings for Windows Middle Tier. You can find definitions for the fields and controls later on this page.

General Settings		
		7 rows
1 Enable EM agent	ON	?
2 Weblogic Administrator Username	system	?
3 Gateway Administrator Username	administrator	?
4 Post Provision Custom Script	Y	?
5 NVision Mode	Open XML v	?
6 PeopleSoft Deployment Path	D:\psft	?
7 Pre Provision Custom Script	V	?
Network Settings		
Network Security Group Settings		
Network Security Group Settings		
▶ Fault Domain Settings		

Enable EM Agent	Select either Yes or No to enable or disable EM agent.
WebLogic Administrator Username	User name of the WebLogic administrator. This is used for accessing WebLogic console.
Gateway Administrator Username	User ID of Gateway.
Pre Provision Custom Script	Select an uploaded script to execute prior to provisioning the environment.
	See Upload Custom Scripts Page
Post Provision Custom Script	Select an uploaded script to run post provisioning.
	See Upload Custom Scripts Page
NVision Mode	Select either OpenXML or Excel.
PeopleSoft Deployment Path	Location where the PeopleSoft application is deployed.

Configuring Database Tier

The database tier includes general settings and subnet settings.

Image: Database Tier – General Settings

This example illustrates the fields and controls on the Database Tier – General Settings. You can find definitions for the fields and controls later on this page.

→ Database Tier		
	→ General Settings	
		12 rows
	1 Database Server Port 1522	?
	2 Database Connect Id people	?
	3 PeopleSoft Deployment Path /u01/app/oracle/product	?
	4 Enable EM agent NO	?
	5 Database Operator Id PS	?
	6 Database Access Id SYSADM	?
	7 Database Type DEMO v	?
	8 Enable Multi Language NO	?
	9 Database Name	?
	10 Post Provision Custom Script	?
	11 Is Database Unicode YES	?
	12 Pre Provision Custom Script	?

Database Server Port	Listener port number.	
Database Connect ID	Connect Id for the database.	
PeopleSoft Deployment Path	Location where the PeopleSoft application is deployed.	
Enable EM agent	Select Yes to enable Environment Management agent for creating the infrastructure that is required to deploy an EM agent.	
Database Operator ID	Default database operator ID.	
Database Access ID	Access ID for the database.	
Database Type	Select the required database type. Available database types are DEMO or SYS.	
Enable Multi Language	Select either Yes or No to enable multi language support.	
Database Name	Name of the database.	
Pre Provision Custom Script	Select an uploaded script to execute prior to provisioning the environment.	
	See Upload Custom Scripts Page	
Post Provision Custom Script	Select an uploaded script to run post provisioning.	
	See Upload Custom Scripts Page	
Is Database Unicode	Select either Yes or No.	

Configuring ELK Stack General Settings

Image: General Settings for ELK Stack Tier

This example illustrates the fields and controls on the General Settings for ELK Stack Tier. You can find definitions for the fields and controls later on this page.

➡ELK Stack			
	→ General Settings		
			8 rows
	1 PeopleSoft Deployment Path	/u01/app/oracle/product	?
	2 Discovery Host Name	127.0.0.1	?
	3 Port	9200	?
	4 Installation Directory	/u01/app/oracle/product	?
	5 Cluster Name	ESCL	?
	6 Post Provision Custom Script	Y	?
	7 Kibana Port	5601	?
	8 Pre Provision Custom Script	۲	?
Cluster Name		The name of the Elasticsearch cluster	r
PeopleSoft Dep	loyment Path	Location where the PeopleSoft applie	cation is deployed.
Discovery Host		The host name for any nodes that are already members of cluster.	
Discovery most	Name	2	e already members of a
Port	Name	2	e already members of a
·		cluster.	-
Port	ectory	cluster. Elasticsearch port.	or Kibana.
Port Installation Dir	ectory	cluster. Elasticsearch port. The path to install Elasticsearch and/ Select an uploaded script to execute p	or Kibana.
Port Installation Dir Pre Provision C	ectory	cluster. Elasticsearch port. The path to install Elasticsearch and/ Select an uploaded script to execute p environment.	or Kibana.
Port Installation Dir	ectory Custom Script	cluster. Elasticsearch port. The path to install Elasticsearch and/ Select an uploaded script to execute p environment. See <u>Upload Custom Scripts Page</u>	or Kibana. prior to provisioning th

Environment Template – Security and Policies Page

Use the Environment Template – Security and Policies page to associate the zone in which the environment is created, the role that will have access to the template and policies associated with the template.

Navigation

- Click Next on the Select Topology step.
- Click Step 3, Security and Policies, at the top of the page to navigate to the Environment Template Security and Policies page in the guided process.

Image: Environment Template – Security and Policies page

This example illustrates the fields and controls on the Environment Template — Security and Policies page. You can find definitions for the fields and controls later on this page.

× Exit				Environment Template		💯 :
	(1) General Details		2 Select Topology	3 Security and Policies	4 Summary	
Assian Te	mplate to Zone(s)				Previous	Next >
noongin to						1 row
1	Zone Name ≎	٩				+ –
Assign Te	mplate to Role(s)					
	Role Name ≎					3 rows
1	PACL_CAD	۹			•	+ –
2	PACL_PAD	٩				+ -
3	PACL_SSC	٩				+ -
	Policies with Template					
Add policies		ents created from the template will h	ave these policies	auto enabled.		1 row
1	Policy Name Stop Environment	Q				+ -
L					L	
Zone	Name			Indicates the zone in which the environme	ent is crea	ated.
Role I	Name			Indicates the roles that have access to the environments. Only the users belonging to will be able to access the template while o	o the role	specified
				The delivered Cloud Manager roles are:		
				Cloud Administrator (PACL_CAD)		
				Cloud PeopleSoft Administrator (PAC	CL_PAD)	
				• Self-Service User (PACL_SSC)		
Policy	y Name			Select policies for this template. The envi the template will have these policies auto		created fi
				See Using Policy Editor.		

Environment Template – Summary Page

Use the Environment Template – Summary page (ECL_TEMPL_REV_FL) to review and submit the template details.

Navigation

- Click Next on the Security and Policies step.
- Click step 4, Summary, at the top of the page to navigate to the Environment Template Summary page in the guided process.

Image: Environment Template – Summary page

This example illustrates the fields and controls on the Environment Template – Summary page. You can find definitions for the fields and controls later on this page.

× Exit	Environment Te	mplate	(22) :
	\sim	3	(4)
General Details	2 Select Topology	Security and Policies	Summary
			< Previous Submit
✓ General Details			
Template Name	HCMPUM		
Description	HCM PUM Image 36		
PeopleSoft Image	PEOPLESOFT HCM UPDATE IMAGE 9.2.036	- NATIVE OS	
▼ Topology			
Selected topolog	/ PUM Fulltier		
- Security			
Selected Zone	a Test		
Role Lis	t PACL_CAD, PACL_PAD, PACL_SSC		
Auto-generate Password	s No		
▼Policies			
Selected Policie	s Stop Environment		

The details provided in all the pages in the Environment Template wizard is displayed here.

Submit

Click this button to submit the details for template creation.

Managing Environments

Cloud Manager provisions PeopleSoft environments on-demand with just a few clicks. The entire provisioning process is automated. At the end of provisioning, a ready-to-use environment is available within a short time. The environments can be created by a three step process:

- 1. Create Topology
- 2. Create Template
- 3. Create Environment

Note: Prior to creating an environment, ensure that the required DPKs are already downloaded in the Repository.

An administrator defines a template for creating an environment. The topology is encapsulated inside the template. Users can select a template, override topologies, change any attributes, if needed and provision PeopleSoft environments on demand.

Users are allowed to perform actions on a running environment, such as stop, view details, create new template from it, and so on. For details, see the Actions on the Environment section under the <u>Create</u> Environment Page.

Note: Also, you must ensure to tune the servers, database, and PeopleSoft system for optimum performance once the deployment is completed.

Pages Used to Manage Environments Tile as an Administrator

Page Name	Definition Name	Usage
Environments Tile	ECL_ENVPROV_FL_GBL	Access the Environments landing page.
	(CREF for tile)	
Environments Page	ECL_ENVPRO_FL	Access the Environments landing page.
Create Environment Page	ECL_ENV_ADD_SCF	Create a new environment.
Environment Details Page	ECL_ENV_DET_FL	Access more details of the environment from one location.
Manage Attributes Page	ECL_ENV_RESET_FL	Update Cloud Manager with environment attributes, if a user modifies it outside Cloud Manager.
Manage PUM Connections Page	ECL_SA_MANAGEPM_FL	Manage PUM connections.
Apply PeopleTools Patch Page	ECL_ENV_PTCHUPD_FL	Apply latest patches.
Upgrade PeopleTools Page	ECL_ENV_UPGD_FL	Update PeopleTools version (major version changes).
Policies Page	ECL_POLICY_ENVS	Associate policies with the environment name.
Logs Page	ECL_ESEARCH_FL	View logs of all operations such as create, delete, actions performed on the environment, and the like.

Environments Tile

Use Environments tile (ECL_ENVPROV_FL_GBL) to access the Environments landing page.

Navigation

The the Environments tile is delivered as part of the Cloud Manager home page.

Image: Environments tile

This example illustrates the Environments tile.

Environments	
	2

Environments Page

Use the Environments page (ECL_ENVPRO_FL) to access the Environments landing page.

Navigation

Click the Environment tile on the delivered Cloud Manager Fluid home page. The Environments page is displayed.

Image: Environments page

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

Cloud Manager		Environments	ଜ 🚑 :
			Create Environment 📀 Import Environment 🗃
y Environments	Actions ×		3 ro
Card Grid	Details		<u>↑</u>
HCMPUM	Stop		SHIFTDB
Running	Delete		Stopped
Database : HCM Update Image 9.2.033 Description : HCM PUM	Manage Node	Jpdate Image 9.2.033 environment	Database : SFTPDB Description : shifted environment
Zone : Test	Clone Environment		Zone : Test
	Backup and Restore	\odot	✔ PIA URL 💿

Name

Name of the environment.

Note: Length of Environment name and identity domain name should not exceed 20 characters in OCI.

Status

Status of the environment provisioned through Cloud Manager.

The different statuses associated with the environment are:

- Initiating
- Provisioning
- Failed
- Stopping
- Starting
- Running
- Deleting
- Applying PeopleTools Patch.
- Upgrading PeopleTools.
- Refreshing
- Restoring
- Infra Creation Complete

Description	of the environment.
-------------	---------------------

Zone in which the environment is deployed.

Indicates the URL used to connect to the provisioned environment.

Create Environment button Click this button to access the Create Environment page, where you can create new environments.

Related Actions buttonClick this button to perform different actions for managing the
environment as a whole. .

Click this button to import a database system environment. See <u>Importing Environment</u>

Actions on the Environment

Import Environment button

Description

PIA URL

Zone

You can perform a variety of actions on the environment by using the Related Actions button corresponding to each environment. The actions can be:

- Details: Select this option to view environment details and to perform additional actions on the environment such as performing a health check, applying a PeopleTools patch, viewing logs, and managing PUM connections.
- Start: Select this option to start all the instances and then all the domains within them.
- Stop: Select this option to stop all domains and shutdown all the instances. In case of database, only compute database instances are shutdown.
- Delete: Select this option to remove the environment.

- Manage Node: Select this option to scale environment up or down.
- Clone Environment: Select this option to clone an existing environment.
- Refresh: Select this option to refresh the database or the database, ps app home and ps cust home.

This option is only available for DBaaS environments.

- Backup and Restore: Select this option to backup or restore an environment.
- Deploy: Select this option to continue deploying an environment that has paused after infrastructure creation.

Create Environment Page

Use the Create Environment page (ECL_ENV_ADD_SCF) to create a new environment.

Important! Before creating an environment in OCI, ensure that the template is updated with OCI-specific Infrastructure Settings such as region, compartment, VCN and subnet settings.

Note: Deploying a PI image requires a Windows image which is updated with latest Windows updates and patches must be used. If the Windows image is not on the latest updates and patches the provisioning of PeopleSoft Client will fail. Refer to the OBE. <u>Install Cloud Manager tutorials on Oracle Learning Library</u>.

Navigation

Click the Create Environment button on the Environments landing page.

Image: Create Environment page

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

Cancel	Create Environment Done	
Environment Name		
Description		
Template Name	•	
Pause after infra creation	NO	

Image: Create Environment page with Pause after infra creation selected

This example illustrates the fields and controls on the Create Environment page when Pause after infra creation is selected. You can find definitions for the fields and controls later on this page

Cancel	Create Environment Done
Description Template Name CM11 Pause after infra creation	t environment .d D7
Zone Test Environment Name	Name of the environment that you want to create.
	Note: Length of environment name must not exceed 20 characters in OCI.
Description	Description for the environment that you want to create.
Template Name	Select a template and the zone. On selecting the template, zone options are automatically displayed.
	For details on templates, see the Creating a Template section under Environment Template Page.
Pause after infra creation	Select Yes for the environment provisioning to pause after completion of the Infrastructure task. This provides the user the opportunity to do additional setup, actions, or operations on the newly created environment outside of Cloud Manager before proceeding with the PeopleSoft deployment.
	Note: When you are ready to proceed to the PeopleSoft deployment, select Deploy from the related actions on the Environment tile.
	Select No (default) to continue provisioning the environment when the infrastructure layer is complete.
Zone	Select the zone for the environment. If only one zone was defined on the environment template used for this environment, it will be displayed as read-only.

Image: Deploy after Infra structure creation

This example illustrates the actions on the Environments page after Infra structure creation is complete.

Cloud Manager			Environments			ଜ 💯 : Ø
My Environments Card Grid T					Create Environment 🗨	Import Environment 🗃 5 rows
CM11D7HCM2	HCMTGT	SHFTDBa	aS	SHFTDBaaSCM11V2	SHAREDHOME	
Running	Infra Creation Complete	Actions ×		Running	Running	
Database : HCM Update Image 9.2.034	Database : HCM Update Image 9.2.033	Details	DB	Database : SFTPDB	Database : HCM Update Image 9.2.033	
Description : CM11 D7 HCM	Description : Target HCM	betuns	ed DBaaS env	Description : SHIFT DBAAS NON TDE	Description : Example Shared home	
Zone : Test	Zone : Test	Delete		Zone : Production	Zone : Test	
🕈 PIA URL 🛛 🖉 😔	🕈 PIA URL 🛛 🛇	Deploy	0	🕈 PIA URL 🛛 😔	🕈 PIA URL 🛛 🛇	>

Creating an Environment

Important! Before creating an environment in OCI, ensure that the template is updated with OCI-specific Infrastructure Settings such as region, primary availability domain, default compartment, default VCN, network settings, and network security group.

To create an environment:

1. Enter the required environment attributes and credentials.

Note: Region and Availability Domains, Network Settings and Network Security sections are read only.

2. Click Done to start environment provisioning.

Alternately, you can override the default topology and environment attributes while environment provisioning.

The default database operator id for each PeopleSoft PUM instance is listed below:

- For HCM, default database operator id is PS.
- For FSCM, default database operator id is VP1.
- For CRM, default database operator id is VP1.
- For ELM, default database operator id is PS.
- For IH, default database operator id is VP1.
- For CS, default database operator id is PS.

Overriding Default Topology and Attributes

If the template contains multiple topologies, you can override default topology and attributes. To override the topology:

1. Select Yes in Override Topology field.

Image: Create Environment — Override Topology field

This example illustrates the fields and controls in the Topology section of the Create Environment page.

Cancel	Create Envir	ro
Environment Name	HCMCD	
Description	My HCM test environment	
Template Name	FulltierHCM •	
Pause after infra creation	NO	
Zone	Test 🔻	
✓ Topology		
Override Topology	Yes	
Тороlоду	Fulltier 🔻	
	Fulltier	
 Environment Attributes 	Fulltier with ES	

- 2. Select an appropriate Topology. Corresponding description is displayed in the below text area.
- 3. Input the required environment attributes. The different attributes are:
 - Full Tier: Full Tier is the VM where application server domain, process scheduler domain, and the web server domain are installed.
 - Middle Tier: Middle Tier Node can be created in either Linux or Windows. The Linux the Middle Tier is the VM where application server domain, process scheduler domain, and the web server domain are installed. The Windows the Middle Tier is the VM where Windows process scheduler is installed.
 - Database Tier: Database tier is the VM where the database (non-DbaaS) is installed for the new PSFT system.
 - PeopleSoft Client: PeopleSoft Client is the VM where PeopleTools client (for example, pside) and change assistant are pre-installed.
 - Database as a Service: PeopleSoft database is deployed on DBaaS.
 - ELK Stack: ELK Stack Tier is the VM where Elasticsearch server and Kibana are installed.
- 4. Enter the PeopleSoft Client credentials and other required attributes.

Note: In case of OCI, the password for the PeopleSoft Client instance should meet the password complexity as per the OCI requirement.

Some custom attributes are displayed based on the selected topology nodes. If you select an Elasticsearch node, then you need to provide a couple of input parameters and passwords. Currently, if you are using the ELK DPK setup script for installing Elasticsearch, then system will not prompt for the admin and proxy user names. Therefore, it is always esadmin and people for admin and proxy

respectively. Password must be of at least 9 characters long and contain a numeric and one uppercase letter. Special characters are not accepted.

5. Click Done to start environment provisioning.

Note: Please ensure to tune the servers, database, and PeopleSoft system for optimum performance once the deployment is completed.

Accepting Licensing Agreement

If you selected to use the Linux Image from Marketplace and this is the first time you are provisioning an environment in a specific compartment, a License agreement will be displayed and must be accepted to continue. Each compartment needs to accept the license if it has not already been accepted for that compartment.

See Infrastructure Settings Page.

Using Shared File System for Linux Middle Tier using File Storage Service

Multiple middle tiers in an environment can share PS_HOME, PS_APP_HOME and PS_CUST_HOME.

Note: Shared File System is only supported for Linux middle Tier. Windows middle tier is not supported.

User must first create a new File Storage Service (FSS) in the OCI. It is recommended that this new FSS be in the same availability domain (AD) where the middle tier of the environment is provisioned.

Important! You should not use the File Storage System that you created for the Cloud Manager repository as the file system for a middle tier node in a provisioned environment.

When creating the FSS, keep the following in mind:

• All VMs in the subnet should have read/write access.

See Plan the Virtual Cloud Network for PeopleSoft Cloud Manager (Optional)

- File storage mount target (TCP ports 111, 2048, 2049, 2050; UDP ports 111 and 2048) is specific to FSS ports, this has to be opened in Linux MT machines.
- FSS export path requires full read/write access.
- Network access (ports and security rules) must be configured to Mount Targets from the middle tier nodes.
- Mount Target must be a minimum of 1024 GB.

Image: Mount Target Details page

This example illustrates the fields and controls on the Mount Target Details page.

	Search for resources and services]	US East (Ashburn) 🗸 问	1 🗘 🖓 🖡	•
File Storage » Mount Targets » Mount Ta	rget Details					
МТ	ad1_reg Rename Move Resource Add Tags Delete Mount Target Information Tags		Virtual Cloud Network win, and			
ACTIVE	CCC: Create: Thu, Jan 2, 2020, 13 26 17 UTC Availability Domain: ev0s USA 5498081-AD-1 Compartment: infpsflengt (voot)v6ev_common Reported Size (dB): 1024 // ① Reported Inodes (dB): 1024 // ② Network Security Oroups: None Edit		vitual could return <u>kun san san</u> Subnet (m) IP Address: 10.1.1.8 Hostname: ad1-rog <i>µ</i> Fully Qualified Domain Name: ad1-rog cm vichash oraclevich co Export Set OCID:	om		
Resources	Exports					
Exports	Create Export Delete					
Metrics	Export Path	State	File System	Created		
Filters	/cm11d9irw1.cm.vcnash.oraclevcn.com-export	Active	cm11d9inv1.cm.vcnash.oraclevcn.com	Tue, Jun 2, 2020, 13:24:14 UT	c	1
STATE	/bkkar20200515.cm.vcnash.oraclevcn.com-export	Active	bkkar20200515.cm.vcnash.oraclevcn.com	Tue, Jun 2, 2020, 05:54:29 UT	c	÷
Any state 🗘	/aneasMTFSS03	Active	aneasMTFSS03	Thu, May 21, 2020, 06:27:39	итс	
	/aneasMTFSS02	 Active 	aneasMTFSS02	Fri, May 15, 2020, 12:25:54 U	тс	;
	CM11RMKESSEORMI	 Active 	<u>CM11RMKESSEORMI</u>	Mon, May 11, 2020, 07:42:51	итс	:
	/arpanick-sharedfs-20200504-1138	 Active 	arpanick-sharedfs-20200504-1138	Mon, May 4, 2020, 11:40:36 U	тс	:
	/arpanick-sharedfs-20200503	Active	arpanick-sharedfs-20200503	Mon, May 4, 2020, 05:40:51 U	тс	: .

• Once the environment is running, user can update the FSS export path read/write permission to Linux Middle Tier.

See Managing File Systems

Image: File System (Linux Midtier)

This example illustrates the fields and controls on the File System (Linux Midtier) section. You can find definitions for the fields and controls later on this page.

▼ File \$	System (Linux Midtier)		
			5 rows
1	Virtual Cloud Network	×	?
2	Use FSS for Linux Midtier	YES	?
3	File System	Y.	?
4	Mount Target	Y	?
5	Export path	Y	?

Image: File System warning message

This example illustrates the File System warning message.

→ File	System (Linux Midtier)		
		Warning: Potential data loss.Please ensure that is no critical data present in selected file system.	5 rows
1	Virtual Cloud Network	ОК	?
2	Use FSS for Linux Midtier	YES	?
3	File System	cdmtfss ~	?
4	Mount Target		?
5	Export path		?

Virtual Cloud Network

Select the Virtual Cloud Network.

Use FSS for Linux Midtier	Select Yes to use FSS for Linux Midtier
File System	Select the File System from the available file systems in OCI.
	Note: When you tab off the field, a warning is displayed for potential loss of data. The file system should not contain any critical data.
Mount Target	Select the Mount Target from the drop down list.
Export path	Select the Export path from the drop down list.

Adding a New Middle Tier

After creating an environment that shared file system, use the Manage Node action to add a new middle tier that will share the same PS_HOME, PS_APP_HOME and PS_CUST_HOME.

See Managing Nodes

Image: Manage Node page - Add Middle Tier with FSS

This example illustrates the fields and controls on the Manage Node page - Add Middle Tier with FSS.

Cancel	Cancel Manage Node						
- Selec	tActions						
Select the	e action to perform. To add a new tier to existing environment	select 'Add'. To remove a tier from existing environment, select "Remove'.					
	Action	Add 🗸					
	Туре	Middle Tier v					
	Operating System	Linux					
▼ Settin	igs						
Select no	de to copy configuration						
	Copy From	cdshared-Inxmt-2.mt.vcnash.oraclevcn.c ~					
	Use Clone	NO					
Region	n and Availability Domains						
→ File Sy	ystem (Linux Midtier)						
			5 rows				
	Virtual Cloud Network						
1	Virtual Cloud Network	vcn_ash(dev_common)	?				
2	Use FSS for Linux Midtier	YES	?				
3	File System	cdmtfss	?				
4	Mount Target	ad1_reg	?				
5	Export path	/cdmtfss	?				
Tier S	ettings						
Custor	m Attributes						

Environment Details Page

The Environment Details page (ECL_ENV_DET_FL) is a navigation collection that enables administrators to access more details of the environment from one location. It also enables the user to perform additional actions that can be performed on the environment such as performing applying a PeopleTools patch, viewing logs, and managing PUM connections.

Navigation

Click the Related Actions button corresponding to the environment. Select Details. The Environment Details page is displayed.

Image: Environment Details page

This example illustrates the fields and controls on the Environments Details Page. You can find definitions for the fields and controls later on this page.

C Environments				Environment De	tails	ଜ 💯 : Ø
Environment Details						2
Manage Attributes						Updated On 2021-01-15 04:15:27
Manage PUM Connections	Name	Status	Zone	Topology Name	Url	
Apply PeopleTools Patch	CDHCMPUM	Ø	Test	PUM Fulltier	http://c	
Upgrade PeopleTools	Process Scheduler	•				
Provision Task Status	Database On Comp	oute				
Policies	PeopleSoft Client					
	• Web Server					
Logs	Application Server					
Refresh button					efresh button, at the upper-rig current status of the environ	
Process Schedul	er			component The Proces	a provides details of the proce of the deployed PeopleSoft a s Scheduler is responsible fo s that typically do not happer ser request.	pplication environment. r processing scheduled
Database on: Co	ompute			deployed Pe applications PeopleSoft PeopleSoft (FSCM), Pe	a provides details of the datab copleSoft application environ refers to Oracle PeopleSoft Customer Relationship Manage Enterprise Learning Manage Financials and Supply Chair copleSoft Human Capital Ma Interaction Hub.	ment. The PeopleSoft products such as agement (CRM), ement (ELM), a Management
Webserver					provides details of the web eopleSoft application environ	-
Appserver				component	a provides details of the appli of the deployed PeopleSoft a ation server acts as the busine system.	pplication environment.
Database on: Dl	BaaS			deployed Pe applications PeopleSoft PeopleSoft (FSCM), Pe	a provides details of the datab copleSoft application environ refers to Oracle PeopleSoft Customer Relationship Manage Enterprise Learning Manage Financials and Supply Chair copleSoft Human Capital Ma Interaction Hub.	ment. The PeopleSoft products such as agement (CRM), ement (ELM), a Management

Note: The 'Database on: DBaaS' section is displayed only when a user selects 'Database as a Service' node in topology.

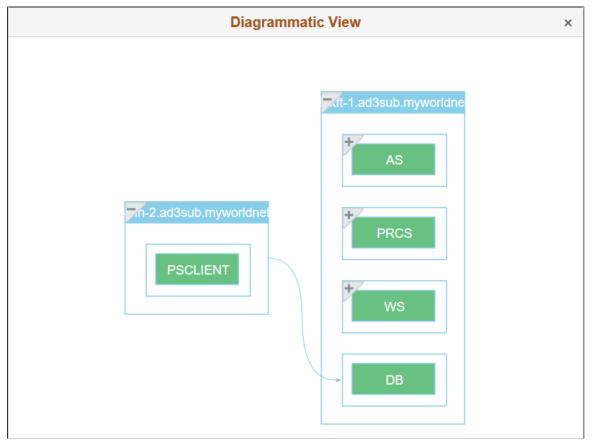
PeopleSoft ClientThis section provides details of the Windows Client of the
deployed PeopleSoft application environment. This is the
Microsoft Windows virtual machine on which PeopleSoft
Application Designer and PeopleSoft Change Assistant will be
installed.

Note: To access PSIDE (PeopleSoft Application Designer) and Change Assistant applications for this environment, you need to RDP to Windows VM using the IP address or hostnames provided under the PeopleSoft Client section.

Click the environment name to view a diagrammatic representation of all the instances and domains running inside the VMs as shown.

Image: Diagrammatic View

This example illustrates the fields and controls on the Diagrammatic View page.

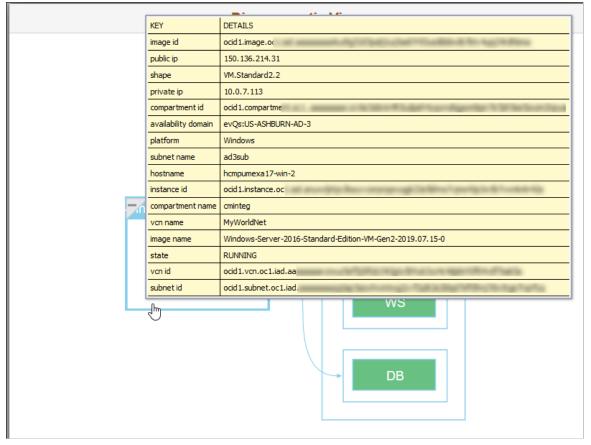


Hover the mouse over each instances for viewing the details.

You can view the status of different PeopleSoft services running within the VMs (application servers domains, process scheduler domains, web server domain, and the like) as shown:

Image: Diagrammatic View Instance Details

This example illustrates the fields and controls on the Diagrammatic View Instance Details page.



As an illustration, Process Scheduler domain details are described in the following section.

Process Scheduler Domain

This section provides details of the Process Scheduler component of the deployed PeopleSoft application environment. The Process Scheduler is responsible for processing scheduled tasks or jobs that typically do not happen during the course of a user's browser request.

Navigation

Expand Process Scheduler available on the Environment Details page.

Image: Process Scheduler Section

This example illustrates the fields and controls on the Process Scheduler section for Process Scheduler middle tier on Linux.

C Environments					Envir	onment Deta	ils			ଜ	4 128 : 0
Environment Details											2
Manage Attributes										Updated On 2	021-01-19 20:28:3
Manage PUM Connections	Na		Status	Zone	Topology		Url				
Apply PeopleTools Patch	CD	HCMPUM	\checkmark	Test	PUM Fullti	er	http:/	/cdh	al angles or an inte		
Ipgrade PeopleTools	▼ P	Process Scheduler									
rovision Task Status		Instance : cdhcmp	um-Inxft-1.ft.	vcnash.orad	elevcn.com						
		Name					Status	Туре	Platform	Host Name	
olicies		cdh					0	Full Tier Instance	Oracle Linux	cdhcmpum-lnx	dt-1
ogs		▼Domains									
		Name 🗘		s	tatus	prcs_server	name 🗘		db_	name ◇	
		PRCS01			⊘	PRCS1763			HCI	MPUM	
	-										
	D	Database On Comp	oute								
	► P	PeopleSoft Client									
	► V	Veb Server									
	► A	Application Server									

Image: Environment Details showing Process Scheduler section for a Windows instance

lame		Status	Туре	Platform	Host Name
nyadb-Inxmt-2.mt.	a lance com	S	Mid Tier Instance	Oracle Linux	myadb-Inxmt-2
✓Domains					
Name \diamond	Status	prcs_server_name \Diamond db_name \Diamond		ne 🗘	
PRCS01	O	PRCS6091		APADB	26
Instance : myadb-win-3.wi		PRCS6091 Status	Туре	APADB: Platform	26 Host Name
Instance : myadb-win-3.wi			Type Mid Tier Instance		
Instance : myadb-win-3.wi		Status		Platform	Host Name
Instance : myadb-win-3.wi Name nyadb-win-3.win		Status		Platform	Host Name myadb-win-3

This is an example of where Process Scheduler was configured on a Windows instance.

Instance Details Modal Window

Use Instance Details modal window to view more details about the virtual machine.

Navigation

Click on the instance name.

Image: Instance Details Modal Window

This example illustrates the instance details for PeopleSoft Client.

	Instance Details : hcmpum-win-2.wir	2
 Configuration 		
Attribute Name 🗘	Attribute Value 🛇	
availability domain	evQs:US-ASHBURN-AD-2	
compartment id	ocid1.compartment.oc1aa	
compartment name	rrmuthuk	
image id	ocid1.image.oc1.iad.aaa	
image name	Windows-Server-2016-Standard-Edition-VM-Gen2-2020.04.24-0	
instance id	ocid1.instance.oc1.iad.a	
private ip	10.	
public ip	150.	
shape	VM.Standard2.2	
state	RUNNING	
subnet id	ocid1.subnet.oc1.i	
subnet name	win	
vcn id	ocid1.vcn.oc1.iad.	
vcn name	vcn_ash	

Domain Details Modal Window

Use the Domain Details modal window to view domain details.

Navigation

Click on the domain name.

Image: Example Domain Details for Process Scheduler - Configuration

This example illustrates the configuration domain details for the Process Scheduler PRCS01.

	Domain Details : PRCS01	
- Configuration		
Attribute Name 🗘	Attribute Value 🛇	
PSAESRV/Max Instances	2	
PSDSTSRV/Min Instances	2	
PSAESRV/Min Instances	2	
PSDSTSRV/Max Instances	2	
connect_id	people	
db_name	HCMPDB	
prcs_server_name	PRCS1576	
opr_id	PS	
db_type	ORACLE	

Image: Example Domain Details for Process Scheduler - Enabled Features

This example illustrates the enabled features for the Process Scheduler domain PTCS01.

✓ Enabled Features					
Name 🗘					
Master Scheduler					
App Engine					
Perf Collator					

Master Scheduler, Application Engine, and Performance Monitor features can be enabled for the instance.

Accessing Provisioned Environments

To access PIA of provisioned environment, click on the PIA URL link on the environment card. This will launch PIA of the newly created environment. To view more details about the environment, refer to Environment Details Page.

Note: If environments are provisioned on private subnets, then use a Bastion server or a Windows instance as a jump host. The bastion or the Windows instance must be set up on a public subnet accessible from internet.

Linux instances can be accessed using SSH. SSH private keys are required to connect to the provisioned instances. There are two private keys that can be used:

- 1. Cloud Manager SSH Keys for Administration This is the SSH key pair that is created by Cloud Manager and the public key is automatically injected into the newly provisioned instances. The SSH private key file cm_adm_pvt_key is available under /home/psadm2/psft/data/cloud/ocihome/keys/.
- 2. User SSH key A Cloud Manager user can create a set of SSH key pair and configure the public key in My Settings page. Using the private key, user can connect to the provisioned instances. For more details refer <u>Configuring My Settings</u>.

Windows instances can be accessed using RDP. Ensure to enable RDP ports in OCI security lists, as well as in the client side firewalls.

The IP addresses for Linux and Windows instances can be determined from the Environment Details Page. See <u>Environment Details Page</u>.

Important! It is user's responsibility to backup SSH keys for Administration and User SSH Keys to avoid losing access to provisioned instances due to loss of Cloud Manager instance or any fatal failures.

Updating SSH Keys

In Oracle Cloud Infrastructure, SSH keys are used to provide secure access to all Linux instances. It is user's responsibility to manage and secure the SSH keys that are used in OCI. Cloud Manager also uses SSH keys for managing environment nodes. Cloud Manager injects two SSH public keys into any node that it provisions. The SSH keys are:

1. SSH keys for Administration

This key pair is generated by Cloud Manager at the time of installation (bootstrap). This key pair is used to connect and manage Linux instances provisioned as PeopleSoft environments. The key pair is available under the path - /home/psadm2/psft/data/cloud/ocihome/keys. The two files for this key pair are:

- Private key: cm_adm_pvt_key
- Public key: cm_adm_pvt_key.pub
- 2. User SSH keys

Users can create their own personal SSH key pair and configure an additional SSH key under <u>My</u> <u>Settings Page</u>. This gets automatically configured in a newly provisioned node, enabling users to use their own keys to access PeopleSoft instances. This key is optional and will be injected into provisioned instances only if it is configured.

Note: SSH keys for Administration will be injected into all provisioned instances, irrespective of User SSH key configuration.

Updating SSH Keys for Administration

Cloud Manager uses SSH keys to connect to Linux instances deployed and managed by Cloud Manager. The public and private SSH key pair used by Cloud Manager to manage instances are located under / home/psadm2/psft/data/cloud/ocihome/keys. The public key file is cm_adm_pvt_key.pub and the private key file is cm_adm_pvt_key. From time to time, an organization will want to update or rotate SSH keys. For example:

- 1. A employee who was a Cloud Administrator or Cloud Manager Administrator has left the organization.
- 2. As a company policy, it is mandated to update keys periodically.

In such situations, an administrator must ensure to update SSH keys on both Cloud Manager instance as well as on all the managed instances that were created by Cloud Manager. The administrator must create a new pair of Administration keys and update in two locations:

On Cloud Manager

Backup the existing keys and replace the keys cm_adm_pvt_key.pub and cm_adm_pvt_key under / home/psadm2/psft/data/cloud/ocihome/keys. The file names should be retained as it is.

Managed instances

Using the old private key, SSH into each of the instances provisioned by Cloud Manager as 'opc' user. On the managed instance, update the /home/opc/.ssh/authorized_keys. Remove the previous Administration public key entry and add the new public key.

Updating User SSH Keys

To update any user SSH keys that were injected by Cloud Manager:

- 1. Generate a new pair of user SSH keys.
- 2. Log in to the managed instance using either the existing User SSH key or the Cloud Manager's SSH key for Administration.
- 3. Update the file /home/opc/.ssh/authorized_keys with new key and remove the existing key. Please ensure to remove the correct entry.

Generating New SSH Keys

Guidelines for generating new SSH keys:

- 1. New SSH key pair must be generated using the openssh ssh-keygen utility. If the key pair is generated using any other utility, then it must be converted to openssh format before using them in Cloud Manager.
- 2. Cloud Manager does not support encrypted ssh key. That is, ssh keys should not be protected by a passphrase.
- 3. When new SSH keys for Administration are generated, ensure to retain the same names for the private and public key files. The permissions of these files should be as shown below.

-r-x----. 1 psadm2 oinstall 1675 Jan 21 08:08 cm_adm_pvt_key -r-x----. 1 psadm2 oinstall 382 Jan 21 08:08 cm_adm_pvt_key.pub 4. When new User SSH Keys are generated, the file names can be user defined but the permissions must be same as above.

Manage PUM Connections Page

Use the Manage PUM Connections page (ECL_SA_MANAGEPM_FL) for setting up environments for selective adoption. This page appears only for environments that were deployed using a PeopleSoft Update Image and has a PeopleSoft Client (Windows Client) as part of the environment. This environment can act as a PUM Source environment. You can manage target databases for the PUM Source from this page, which will add or remove specified target databases to the PUM source environments. After adding target databases, administrators can use the PIA URL shown on this page to access PUM Dashboard to define change packages. To create and apply change packages, access Change Assistant that is installed on the PeopleSoft client. To access Change Assistant, use remote desktop (RDP) to Windows Client.

Navigation

Click the Manage PUM Connections link available on the left panel of the Environment Details page. The Manage PUM Connections page is displayed in the right panel.

Image: Manage PUM Connections page

This example illustrates the fields and controls on the Manage PUM Connections page.

Environments		Manag	e PUM Connections			ŵ	(128)	: 0
Environment Details	→ PUM Source Details							
Manage Attributes		PUM Source	CDHCMPUM					
		Status	Running					
Manage PUM Connections		PI version	9.2.36					
Apply PeopleTools Patch		PIA	http://cdhcmp					
Upgrade PeopleTools	Target Databases							1 row
Provision Task Status	+							
	Target Environment \diamond Tar	get Database 🛇	Upload target to PUM Source $ \Diamond $	Client 🗘	Client Hostname 🛇		R	emove
Policies	1 MYADB APA	ADB26	in progress	Windows	cdhcmpum-win			Û
Logs								

The Upload target to PUM Source status is displayed as either In progress, Complete or Failed.

Adding Target Databases

To add a target database which you want to update, perform the following:

- 1. Click Add target button available in the Target Databases section.
- 2. Select the required target environment.

Image: Select Target modal window

This example illustrates the fields and controls on the Select Target modal window.

Cancel		Select Target	Add
	Target Environment	MYADB	
	Client	~	
		Windows - (cdhcmpum-win-2.wil)	

- 3. Select the client.
- 4. Click Add. This action starts the 'Add Target' and 'Upload to PUM Source' functionality. The status is displayed as either in progress, Complete or Failed.

Apply PeopleTools Patch Page

Use the Apply PeopleTools Patch page (ECL_ENV_PTCHUPD_FL) for applying latest PeopleTools patches.

It is recommended to take a backup of the environment prior to applying a PeopleTools patch.

Note: The Apply PeopleTools Patch link is available only if a Windows client node (PeopleSoft Client or Windows middle tier) is associated with the selected environment.

For environments on PeopleTools 8.57 or higher, customizations made to Application Server (psappsrv.cfg) and Process Scheduler Server (psprcs.cfg) are preserved during a PeopleTools Patch. The following Web Server files are also preserved.

- \$PS_CFG_HOME/webserv/WEBSERVER01/config/config.xml and any custom folders
- \$PS_CFG_HOME/webserv/WEBSERVER01/applications/peoplesoft/PORTAL.war/WEB-INF/ psftdocs

Note: User has to manually update other customization files in the webserver.

The PeopleTools patch process saves the configuration files during the unprovisioning task. The files are then imported using PSADMIN.

Navigation

Click the Apply PeopleTools Patch link available on the left panel of the Environment Details page. The Apply PeopleTools Patch page is displayed in the right panel.

Image: Apply PeopleTools Patch page

This example illustrates the fields and controls on the Apply PeopleTools Patch page. You can find definitions for the fields and controls later on this page.

C Environments		Apply PeopleTools Patch	🟠 🚛 : ⊘
Environment Details	Select PeopleTools Release		
Manage Attributes			
Apply People Tools Patch	Current People	eTools version 8.58.04	
	Select a	Patch to Apply ~	
Upgrade PeopleTools	Auto select Windows Cli	ent For Update YES	
Import	Microsoft Windows Client VM (Change As	isistant)	
Provision Task Status	Windows Client VM of this environment will be use	ed to apply selected PeopleTools patch.	
Policies	Microsoft Wind	ows Client VM myadb-win-3,	
Logs			
Select a Patch t	Note - Updated Change Assistant will be installed	Select an appropriate PeopleTools pa target environment.	tch to be applied on the
Update		Click this button to apply the change	S.
		Note: User can select the patch upda a window which shows the tasks exe process and their real-time status. Th failed tasks as complete so as to com case in failure scenarios.	cuted for the patch upda ere is provision to mark

Note: Ensure that the latest PeopleTools patch is already downloaded and available in the Repository.

Upgrade PeopleTools Page

Use Upgrade PeopleTools page (ECL_ENV_UPGD_FL) to upgrade PeopleTools version (major version changes).

It is recommended to take a backup of the environment prior to performing a PeopleTools upgrade.

For environments on PeopleTools 8.57 or higher, customizations made to Application Server (psappsrv.cfg) and Process Scheduler Server (psprcs.cfg) are preserved during a PeopleTools Upgrade. Webserver configurations are not preserved in a PeopleTools upgrade. The webserver will be redeployed.

The PeopleTools patch process saves the configuration files during the unprovisioning task. The files are then imported using PSADMIN.

Note: The Upgrade PeopleTools link is available only if a Windows client node (PeopleSoft Client or Windows middle tier) is associated with the selected environment.

Navigation

Click the Upgrade PeopleTools link available on the left panel of the Environment Details page. The Upgrade PeopleTools page is displayed in the right panel.

Image: Upgrade PeopleTools page

This example illustrates fields and controls on the Upgrade PeopleTools page.

< Environments	Upgrade PeopleTools	ଜ 🚑 : 🧭
Environment Details	Select PeopleTools Release	
Manage Attributes		4
Manage PUM Connections	Current PeopleTools version 8.58.06	
Apply PeopleTools Patch	Auto select Windows Client For Upgrade YES	
Upgrade PeopleTools	Microsoft Windows Client VM (Change Assistant)	
Provision Task Status	Windows Client VM of this environment will be used to apply selected PeopleTools pat	atch.
Policies	Microsoft Windows Client VM cdhcmpum-win-2.win.vcnash	sh.oraclevcn.com 🗸
Logs	Note – Updated Change Assistant will be installed on this VM and will replace the existin Upgrade	ing version.
U pgrade to	Select the major Peo	opleTools version.
Auto select Windo	ws Client For Select Yes to auto se	elect.
Upgrade		the Windows Client to use for the up Windows Client VM drop-down list
U pgrade	Click this button to a	apply the changes.
	Before doing Upgrad environment.	ade, user must ensure to take a backu

After clicking the Upgrade button, the job status will be displayed on the page.

Click on the link in the Status column to view the Job Status Information modal window where you can view detailed information regrading the job.

Image: Job Status Information Modal Window

This example illustrates the fields and controls on the Job Status Information Modal Window where the Job Status is Complete.

Cenvironments			Job	Status In	formation				>	< ^	
Environment Details	Select Peop		PUM Client myhcm-win-2.wi	n.vcnash.orac	:levcn.com						
Manage Attributes			Source tools version 8.57.11								
Manage PUM Connections			Target tools version 8.58.02								
			Job Status Database upgra		RUNNING						
Apply PeopleTools Patch			Start time 05/19/20 3:58:0	sPM							
Upgrade PeopleTools	Microsoft W		End time								
Provision Task Status	Windows Clier	Job Status									
Logs	Note – Update	Task 0	Host \Diamond	Status Star	rt Time 🗘	End time $ \bigcirc $	Retry	Mark As Complete	Mark As Failed		
	Upgrade	Domain Shutdown	myhcm-Inxmt-1.mt.vcnash.oraclevcn.com	O5/1	9/2020 3:58PM	05/19/2020 4:00PM	•	0	×		
	Job O	Domain Shutdown	myhcm-win-4.win.vcnash.oraclevcn.com	05/1	9/2020 3:58PM	05/19/2020 4:05PM	•	\odot	×		Delete H
	PeopleTools 8	Database Upgrade	myhcm-win-2.win.vcnash.oraclevcn.com	6 05/1	9/2020 4:05PM		•	\odot	×		1
	B	Database Update		\mathbf{X}			•	\odot	\times		
	w	Un-Provisioning MT		\mathbb{X}			•	\odot	\times		
		Un-Provisioning MT		\mathbf{X}			•	0	\times		
		Provisioning MT		X			•	\bigcirc	\times		
		Provisioning MT		X			•	\bigcirc	\times		
		MT PostBoot		\mathbf{X}			•	0	×		
		Job Status Log									
		Task Status 🌣	Host	0			Statu	s Updated At	•		
		Initiating domain shute	down task myho	m-win-4.win.v	cnash.oraclevci	.com	05/19/	2020 3:58:21	PM		
		Initiating domain shute	down task myho	m-Inxmt-1.mt	vcnash.oraclev	n.com	05/19/	2020 3:58:21	PM		
		Domain shutdown tas	k in progress mybr		cnash.oraclevci	com	05/10/	2020 3:58:21	DM		

You can view upgrade process details such as jobs executed successfully, jobs which are in pending status, and failed jobs.

Policies Page

Use the Policies page (ECL_POLICY_ENVS) to associate policies with the environment name.

Navigation

Click the Policies link available on the left panel of the Environment Details page.

Image: Environment Policies page

This example illustrates the fields and controls on the Environment Policies page. You can find definitions for the fields and controls later on this page.

C Environments			Policies		ଜ 💯 : Ø
Environment Details					Save
Manage Attributes	Associate the environm Policies available for		more policies by setting the Enabled field to 'Yes' t ment	for those policies	2 rows
Manage PUM Connections	Name 🗘	Type 🜣	Description \Diamond	Policy Group 🛇	Enabled \diamond
Apply PeopleTools Patch	Stop Environment	Schedule	Stop environments on a schedule		Yes
Upgrade PeopleTools	HCM PRP Apply	Event	Apply PRP on HCM environments	Event Driven Policies	No
Provision Task Status					
Policies					
Logs					
	D				

All the active policies defined by a Cloud Manager administrator or the user that created the environment are displayed. Use the Enabled column to associate the policy with the environment.

When a policy is enabled for an environment, the environment name will be appended to the Environment Names condition property or action parameter for the Policy. Likewise, if the policy is disabled, it will be removed from the Environment Names condition property or action parameter for the Policy.

See Setting Policy Conditions and Action.

Manage Attributes Page

Use the Manage Attributes page (ECL_ENV_RESET_FL) to update managed environment attributes, if user modified any parameter outside Cloud Manager and for adding the PeopleSoft (Windows) Client.

Note: The Manage Attributes page must be updated only when a user modifies the environment attributes directly on the instance. For example, if a user modifies the OPRID Password on the instance directly, then user must update and save the password for Cloud Manager to store in its database. Otherwise, the password stored in Cloud Manager will be stale and any operation that is dependent on this OPRID Password will fail. Click the Refresh button on the environment details page to fetch the current status of the environment node.

Navigation

Click the Manage Attributes link available on the left panel of the Environment Details page. The Manage Attributes page is displayed in the right panel.

Image: Manage Attributes page

This example illustrates the fields and controls on the Manage Attributes page.

C Environments		Ма	anage Attributes	ሰ 🗯 (
Environment Details	Current enviror	nment attributes are listed below. Update attribute	values in case of any modifications on the environment outside Cloud Manager.	Update
Manage Attributes		Ferdermant		Opuale
Apply PeopleTools Patch		Environment		
Upgrade PeopleTools				
Import				4 rows
Provision Task Status		Name	Value	
Policies		1 Database Access Password	•••••	?
Logs		2 Database Operator Password	••••••	?
		3 Database Connect Password		?
		4 Database Administrator Password	•••••••	?
		dle Tier (myadb dle Tier (myadb)	

You can edit the required parameters by expanding each domain and click save. For details on environment attributes, see Environment Attribute Details section in <u>Managing Template</u>.

Logs Page

Use the Logs page (ECL_ESEARCH_FL) to view the logs for all actions that are performed on the environment.

Note: The contents of the log files are displayed in reverse (latest first) order.

Navigation

Click the Logs link available on the left panel of the Environment Details page. The Logs page is displayed in the right panel.

Image: Logs page

This example illustrates the fields and controls on the Logs page.

< Environments		Logs		ŵ	(<u>133</u> :	Ø
Environment Details	Action	DEPLOY_instance_2_20210115				
Manage Attributes	Log	DEPLOY_instance_2_20210115_215640 ~				
Apply PeopleTools Patch	Log File	out.log 🗸				
Upgrade PeopleTools	Number of Lines to Display	10	Default Value: 10			
Import	Search String		Regex Search Disabled			
Provision Task Status		Fetch Logs				
Policies	Log Data	- /				
Logs	2021-01-15 23:34:33,362 DEBUG psc_event_sender.py 86 Re: 2021-01-15 23:34:33,362 DEBUG psc_event_sender.py 92 Eve 2021-01-15 23:34:33,362 DEBUG psc_io_adapter_handler.py 2	entSender:send_event end 237 Inside send_task_result end				
	2021-01-16 23 34 33 362 DEBUG psc_achwity_executory 32 2021-01-16 23 43 33 362 DEBUG psc_achwity_executory 37 2021-01-15 23 44 33 362 DEBUG psc_achwity_executory 17 2021-01-15 23 43 33 363 DEBUG psc_achwity_executory 17 2021-01-15 23 43 33 363 DEBUG psc_achwity_executory 41 2021-01-15 23 34 33 363 DEBUG psc_achwity_executory y410	3 PsftActivityExecutor:update_final_status stop 4 PsftActivityExecutor:execute_activities end 7 0 D PsftActivityExecutor:process_input_request er				

Action

Select the Action from the drop down.

Actions include:

- ADD_NODE
- CREATE_DB_BACKUP
- ES_UNPROVISION
- LIFT
- OCI_CLONE
- POSTBOOT_CONFIG
- PTU_PEOPLETOOLS_PATCH_UPDATE
- PTU_PEOPLETOOLS_UPGRADE
- PTU REPROV MT
- PTU_STOP
- PTU_UNPROV_MT
- REMOVE_NODE
- SHIFT_DEPLOY_TDE
- SHIFT DEPLOY
- ADD_TARGET
- START

	• STOP
Log	Select the log associated with the action.
Log File	• console.log
	• out.log
	• tf.err
	Terraforma error log
	• tf.out
	Terraforma log
Number of Lines to Display	Enter number of lines to display.
Search String	Enter a search string.
Fetch Logs	Click to fetch the logs.

Cloning Environment

Use the Clone Environment action to duplicate an exact copy of an existing PeopleSoft environment running in Cloud Manager. The new environment is built by reconfiguring the disks from deep clone, saving installation and deployment time.

The following restrictions apply:

- Parallel cloning for same source environment is not supported.
- Clone feature will not be able to trigger a clone if a previous clone for the same source environment is in a failed state.

Delete the failed cloned environment using Cloud Manager. Cloud Manager will clean up all the resources relating to the failed OCI clone environment.

· Clone feature does not support BM instance cloning.

Use cases for cloning environments include:

- Creating a duplicate environment with Database, Middle Tier, Elastic Node including Kibana, Web Server and Windows client running in distributed nodes with the exact configuration and data as the source environment.
- Creating a scaled down copy of the production environment with just the database.
- Creating a scaled down copy with Database, Middle Tier and WebServer for a test environment.

Note: The cloned environment is an exact copy of the existing environment. Once the cloned environment is running, you can perform scaling and Lifecycle Management actions. See <u>Managing Nodes</u>.

Scenarios for cloning an environment include:

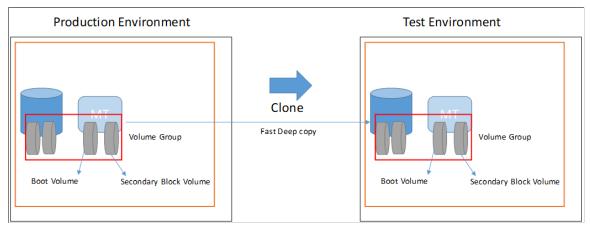
- All environment components are running on compute instances.
- Database is running on DBS (Database as Service Platform as Service) and other components are running on compute instances (Infrastructure as a Service).
- Database is running on ATP-Dedicated (Autonomous Transaction Processing Database) and other components are running on compute instances (Infrastructure as a Service).

Cloning Compute Instances

When all of the components for the PeopleSoft environment are running on Compute, the clone process uses OCI Cloud APIs to clone the boot volume and secondary block volume into a volume group. The volume group is then used to create a new instance of the environment.

Image: Fast Cloning for Compute

This diagram illustrates that the cloning operation will copy both the boot volume and the secondary block volume into a volume group, then perform a fast deep copy to create a new environment that is the exact copy of the source.



To clone an environment with all components running on compute instances :

- 1. From the Cloud Manager Homepage, select the Environments tile.
- 2. Click on the Related Actions button corresponding to the environment to be cloned and select Clone Environment.
- 3. The Clone Window displays all the components for the environment.

Image: Clone Environment — Compute Instance

This is an example of the Clone page where all components are running on compute.

Car	ncel		Clo	one	Clone
		*New Environment Name Database Name 1			
Com	pute Nodes				4 rows
	Node Type	Shape Name	Operating System	Source Hostname	
1	Middle Tier	VM.Standard2.2	Linux	an an an ann ann ann an ann an ann an an	
2	Database Tier	VM.Standard2.2	Linux	an(
3	PeopleSoft Client	VM.Standard2.2	Windows	ani an' amin' amin' any amin' any amin'	
4	Elastic Search Server	VM.Standard2.2	Linux	armanförställeselin ein 1 alpha myseolidet analison can	

- 4. Enter a New Environment Name.
- 5. Click the Clone button.
- 6. Select Yes to confirm. Cloning will initiate.

The cloning process will take 10 to 15 minutes.

7. Use the Refresh button to view the status. Status will change from Initiating to Provisioning and then to Running.

Cloning an Environment With Database is Running on DBS and Other Nodes on Compute

For environments with database on DBS, the Clone operation requires a database backup to create the corresponding database node in the cloned environment. There are two options for the database backup:

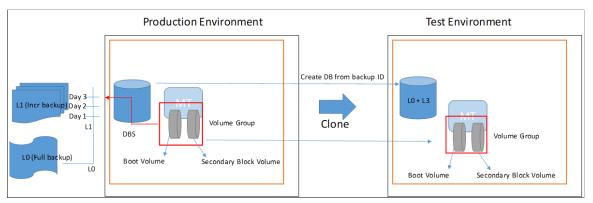
• Create a new database backup as part of the clone operation.

Note: This is the default operation to create a new a point-in-time fullback up to use for cloning the database instances.

• Use an existing database backup from the OCI backup services, in this case both database backup and middle tier versions should be in synch.

Image: Fast Cloning for DBS Environment

This diagram illustrates backing up the database from a full backup and the latest incremental backup to create the cloned database environment.



To clone an environment where the database is running in DBS and other nodes are on compute:

- 1. From the Cloud Manager Homepage, select the Environments tile.
- 2. Click on the Related Actions button corresponding to the DBS environment to be cloned and select Clone Environment.
- 3. The Clone Window displays two sections, one for the Compute Nodes and one for the database system.

Image: Clone Environment on DBS

This example illustrates the fields and controls on the Clone page for an environment where the database is running as a service. You can find definitions for the fields and controls later on this page.

			с	lone		Clo
	'New	Environment Name DBSCLONE0 Database Name PSPDB				
Compute Nodes						2
Node Type	Shape Name	Operating Sy	tem	Source Hostname		
1 Middle Tier	VM.Standard2.2	Linux		areas "lident isent 1 apra nyworkhel aractech can		
2 PeopleSoft Client	VM.Standard2.2	Windows		and		
DBS Nodes						1
Node Type Shape Name	Operating System	Source Hostname		Latest Backup Available	Create New Backup	*Enter New Backup Name
1 DB Systems VM.Standard1.1	Linux	anes "lident hads I ages myse	but anycleven care	New_DBBackup2019-09-06 09:15:04.000128	Yes	DBS_BACKUP
Create New B	ackup			les to create a new point	in time bac	kup of the
			databas		aviating has	Jaw
				e. <i>Io</i> if you want to use an	existing bac	ekup.
Enter New Ba	ckup Nan	ne	Select <i>N</i> If you s		ew backup,	•

- 4. After entering the environment name and selecting the backup preference, click the Clone button.
- 5. Select Yes to confirm. Cloning will initiate.
- 6. Use the Refresh button to view the status. Status will change from Initiating to Provisioning and then to Running.

Cloning Imported Autonomous Database Environment

To clone an imported Autonomous Database (ADB) environment:

- 1. From the Cloud Manager Homepage, select the Environments tile.
- 2. Click on the Related Actions button corresponding to the ATP-D environment to be cloned and select Clone Environment.
- 3. Enter the values on the Clone page.

Note: ATP-D supports direct cloning from the source ATP-D.

Image: Clone page for ATP-Dedicated environment

This example illustrates the fields and controls on the Clone page for ATP-Dedicated environment. You can find definitions for the fields and controls later on this page.

ancel	J			Clone		Clo
		*New Environment Name				
		*Autonomous Database Name				
		*Database Admin Password				
		*Autonomous Container Database	CDB_1 ~			
Com	npute Nodes					1 row
	Node Type	Shape Name	Operating System	Source Hostname		
1	Middle Tier	VM.Standard2.2	Linux	myadb-Inxmt-2.mt.vcnash.oraclevcn.com		
Auto	onomous Database					1 row
Auto	onomous Database Database Name	Databa	ise Version	CDB Name	Туре	1 row

New Environment NameEnter the name for the new environment.Autonomous Database NameThe autonomous database name must be unique throughout
the tenancy.Database Admin PasswordEnter the database administrator password.Autonomous Container DatabaseSelect the container from the drop down list. You can clone
to a the same or a different container. The container must be
under the same Encryption Key management.

4. Click Clone.

Importing Environment

Cloud Manager supports importing PeopleSoft environments that are running on Oracle Cloud into Cloud Manager as a managed instance.

• Database is running on DB System (Database as a Service).

ExaCS, DB-VM, and DB-BM are supported

- ATP-Dedicated database running in OCI.
- Other components are running on compute instances (Infrastructure as a Service).

Note: Databases created manually on Compute (VM or Bare Metal) are not supported.

Prerequisites

You must perform the following prerequisites:

1. OCI Credentials

Get the following OCI Credentials for the components you want to import from the OCI Console:

- Database Credentials for DB System
- Database System OCID
- Database OCID
- Database Private IP

The node for the database contains the private ip.

- Autonomous Database OCID
- Midtier OCID
- PeopleSoft Client OCID
- Elastic Search OCID
- Windows middle tier OCID
- 2. User Profile Credentials
 - Default OPC user
 - DPK user profiles like psadm2, psadm3 should be present in the environment.
- 3. Copy Cloud Manager SSH public key to all the nodes that will be imported.
 - a. Login to the Cloud Manager putty as psadm2

sudo su – psadm2

Open and copy the pub key from /home/psadm2/psft/data/cloud/ocihome/keys/ cm_adm_pvt_key.pub

- b. Next log into the Database system as opc, access .ssh/authorized_keys and paste the key from step a into it. This is required to authenticate Cloud Manager to access the Database environment to import the database system.
- c. Log onto each additional node to be imported (Middle Tier, PeopleSoft Client, Elastic Search, Windows middle tier), access .ssh/authorized_keys and paste the key from step a into it.
- 4. Make sure that the tns entry is present in tnsnames.ora on the database system you are importing.
- 5. D drive is mandatory for a Windows client.
- 6. Oratab entry for db home is required in this format <Oracle_SID>:<DB_HOME_PATH>.

Importing Environment

To import an environment:

- 1. From Cloud Manager homepage, select Environment Tile.
- 2. Select Import Environment button.

Image: Import Environment page

This example illustrates the fields and controls on the Import Environment page. You can find definitions for the fields and controls later on this page.

Cancel	Import		
	Environment Name	MYIMPORT	
	Environment Description	example import	
	Add	d Node	
Environment Name	Enter a	name for the new environment.	
Environment Description	Enter a	description for the new environment.	

Select to add a node to the environment.

Add Node	
----------	--

- 3. Click the Add Node button.
- 4. Select the instance type from the drop down list. Six types of tiers can be imported:
 - ATP-Dedicated
 - Database System
 - ELK Stack
 - Middle Tier
 - PeopleSoft Client
 - Windows Middle Tier
- 5. The Add Node page for the instance type is displayed.
- 6. Enter the values for the instance type and click OK.
- 7. To add another instance type, click the + icon and select the instance type.

Note: Each instance type is added separately.

8. Once you have included all the nodes for the environment, click Done.

Image: Example Import with Multiple Nodes

This example illustrates the fields and controls on the Example Import with Multiple Nodes.

Cancel		Import	Done
		Environment Name MYNUPORT Environment Description	
			4 rows
	Instance Type \Diamond	Remarks \diamond	
1	DB Systems	Completed	+ -
2	Middle Tier	Completed	+ -
3	PeopleSoft Client	Completed	+ -
4	ELK Stack	Completed	+ -

9. The respective tile is added to the Environments page with the status of *ImportingMultipleTier*.

10. To view the status of the import, select Details action for the respective tile on the Environments page.

Database System Instance Type

For the database system node, all the values are mandatory.

Image: Import DB Systems node

This example illustrates the fields and controls on the Add Node page for DB Systems. You can find definitions for the fields and controls later on this page.

Cancel	Add Node	ок	
1	nstance Type DB Systems V		
	Exadata NO		
		1	
		12 rows	
Database System OCID		?	
Database OCID		r ?	
Private IP address		?	
ssh User		?	
Peoplesoft Operator ID		?	
Peoplesoft Operator Password		?	
Peoplesoft Connect ID		?	
Peoplesoft Connect ID Password		?	
Peoplesoft Access ID		?	
Peoplesoft Access Password		?	
DB Administrator Password		?	
PDB Name		?	
Exadata	Select Yes if the DB System Container Database Name w	is Exadata. An additional field fo ill be added.	
Database System OCID	Database System OCID for the target database.		
Database OCID	Database OCID for the targe	t database.	
Private IP Address	Private IP address for the tar	get the Database environment.	
ssh User	ssh user on the database systemeters	em being imported	
PeopleSoft Operator ID	PeopleSoft Operator ID		
PeopleSoft Operator Password	PeopleSoft Operator Password		
PeopleSoft Connect ID	PeopleSoft Connect ID		
PeopleSoft Connect Password	PeopleSoft Connect Password		
PeopleSoft Access ID	PeopleSoft Access ID		
PeopleSoft Access Password	PeopleSoft Access Password		
e opicion meess i assivi u			

DB Administrator Password	DB Administrator Password
PDB Name	Pluggable Database Name
	This is the database name in the tnsnames.ora file.
Container Database Name	For Exadata DB systems enter the container database name.

ATP-Dedicated Instance Type

For the ATP Dedicated node, all the values are mandatory.

Image: Add ATP-Dedicated Node

This example illustrates the fields and controls on the Add Node page for ATP-Dedicated Node. You can find definitions for the fields and controls later on this page.

Cancel	Add Node	O
	Instance Type ATP-Dedicated ~	
		8 rows
Autonomous Database OCID		?
Peoplesoft Operator ID		?
Peoplesoft Operator Password		?
Peoplesoft Connect ID		?
Peoplesoft Connect ID Password		?
Peoplesoft Access ID		?
Peoplesoft Access Password		?
DB Administrator Password		?

Autonomous Database OCID	Autonomous Database OCID for the target database.
PeopleSoft Operator ID	PeopleSoft Operator ID.
PeopleSoft Operator Password	PeopleSoft Operator Password.
PeopleSoft Connect ID	PeopleSoft Connect ID.
PeopleSoft Connect Password	PeopleSoft Connect Password.
PeopleSoft Access ID	PeopleSoft Access ID.
PeopleSoft Access Password	PeopleSoft Access Password.
DB Administrator Password	DB Administrator Password

Middle Tier Instance Type

To import a Middle Tier node:

- 1. Click the + icon on the Import page.
- 2. Select Middle Tier Instance Type.
- 3. Enter the Middle Tier OCID.
- 4. Click Discover.

Image: Add Middle Tier Node

This is an example of discovering the Middle Tier Node.

Cancel	Add Node	ОК
	Instance Type Middle Tier v	
Discours		
Discover		
		1 row
OCID of Mid-Tier Node	6ua46a3ylz36cetevpjnma	?

- 5. Discover will ssh into the machine and find the servers(app/web/scheduler) that are present, the PeopleSoft deployment path and whether COBOL is enabled or not.
- 6. Based on the servers that are present, a popup message will appear listing the servers that were discovered. Click OK.
- 7. Enter the credentials for the Middle Tier, then click OK.

Image: Add Middle Tier Node Credentials

This is an example of the credentials required for App Server, Web Server and Process Scheduler.

Cancel	Edit Middle Tier Node	ОК
Instance	Type Middle Tier ~	
Discover		
		7 rows
OCID of Mid-Tier Node	ocid1.instance.oc1.iad.an	?
PeopleSoft Deployment Path	/u01/app/oracle/product	?
Gateway Admin User	administrator	?
Gateway Admin Password	•••••••	?
Weblogic Admin User	system	?
Weblogic Admin Password	•••••••	?
Webprofile User Password	•••••••	?

PeopleSoft Client Node

To import a PeopleSoft Client node:

- 1. Click the + icon on the Import page.
- 2. Select PeopleSoft Client Instance Type.
- 3. Enter the PeopleSoft Client OCID and password.

Image: Add PeopleSoft Client Node

This example illustrates the fields and controls on the Add PeopleSoft Client Node page.

Cancel	Add Node	ОК
	Instance Type PeopleSoft Client ~	
		2 rows
OCID of Windows Client Node	ocid1.instance.oc1.iad.an	?
Administrator Password	••••••	?

4. Click OK.

ELK Stack Node

To import an ELK Stack node:

- 1. Click the + icon on the Import page.
- 2. Select ELK Stack Instance Type.
- 3. Enter the ELK Stack node OCID.
- 4. Click Discover.
- 5. Click OK on the message that the Elasticsearch Server details were discovered.
- 6. Enter the credentials and click OK.

Image: Add ELK Stack Node

This example illustrates the fields and controls on the Add ELK Stack Node.

Cancel	Add Node	ОК
Instance	Type ELK Stack ~	
Discover		
		8 rows
		₽ Q ↑
OCID of ELK Stack Node		
OGD OF ELK Stack Node	ocid1.instance.oc1.iad.an	?
Administrator Password	•••••	?
Proxy Password		?
Cluster Name	ESCL	?
PeopleSoft Deployment Path	/u01/app/oracle/product/	?
Installation Directory	/u01/app/oracle/product/	?
Discovery Host Name	127.0.0.1	?
Port	9200	?

Environment Details — Import Status

To view the status of the import:

- 1. The respective tile is added to the Environments page with the status of ImportingMultipleTier.
- 2. To view the status of the import, select Details action on the tile.
- 3. Select Import from the left-side menu.

The Detailed status page shows the import steps and status of Import activity.

Image: Status of Environment being imported

This example illustrates the import status.

< Environments		Import Database Instance		ଜ 🔎 : 🕫
Environment Details	In	port		
Manage Attributes		Environment Name MYMPORT		
Import		Status		
Provision Task Status				11 rows
Logs				Status
		Discover DB Instance		VIEW
		Discover database	•	EDIT
		Discover Linux MT Instance	X	
		Synch Linux MT Instance	X	
		Crawl Linux MT Instance	X	
		ACM Exec Linux MT Instance	X	
		Discover Windows Client Instance		
		Synch Windows Client Instance	X	
		Discover Elastic Search Instance	X	
		Synch Elastic Search Instance	X	
		Import as Managed Environment	X	
_	ror			
		Incorrect ssh user key or Cloud Manag	ger key not copied	
		Continue		

The Status column will display one of the following buttons:

• View

Displays the output of that particular step.

• Edit

Displays the inputs for a step that fails. You can edit the inputs and retry the step.

• None

Some steps do not contain any output.

After the completion of each step, View button will be displayed to view the respective input parameters.

Status Icons



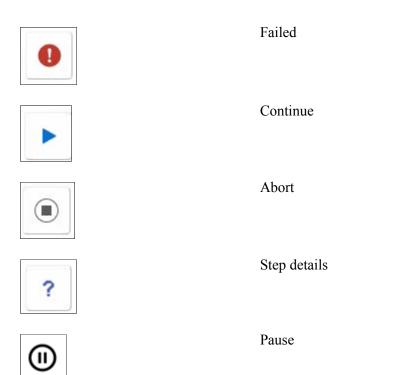
Pending



Success



In Progress



If there are any errors in a step, then Errors will be shown and Edit button will be displayed to view and edit the respective input parameters.

Location of Database Import log files:

- Import Database instance terraforma logs are located */home/psadm2/psft/data/cloud/cmlogs/envs/* <*Import envName>*. Log on as psadm2 user.
- Import Database psp.log is located /home/psadm2/psft/pt/<pt release number>/appserv/prcs/ PRCSDOM/LOGS. Log on as psadm2 user.
- Discover UI logs psp.log is located /home/psadm2/psft/pt/<pt release number>/appserv/ APPDOM/LOGS. Log on as psadm2 user.

Once edited, select Continue button to re-try the failed and subsequent steps.

If the steps succeed target Database becomes a managed instance under Cloud Manager.

Image: Import Environment Status

This example illustrates the fields and controls on the Import Environment Status.

< Environments		Import Database Instance	🗎 : 🕬 : 👔
Environment Details	Import		
Manage Attributes	Er	nvironment Name ImportDemo	
Apply PeopleTools Patch	Status		
Upgrade PeopleTools			11 rows
Import			Status
Logs	Discover DB Instance	٢	VIEW
	Discover database		VIEW
	Discover Linux MT Instance		VIEW
	Synch Linux MT Instance	•	NONE
	Crawl Linux MT Instance	•	VIEW
	ACM Exec Linux MT Instance	•	VIEW
	Discover Windows Client Instan	ice 📀	VIEW
	Synch Windows Client Instance	•	NONE
	Discover Elastic Search Instanc	ce 📀	VIEW
	Synch Elastic Search Instance	٢	NONE
	Import as Managed Environment	nt 📀	NONE

If a step has no specific output, a disabled None button is displayed instead of the View button.

Post Import Actions

Imported environment supports the following functions:

• Review environment details and manage attributes.

See Manage Attributes Page

• On Demand Scale Up and Scale down.

See Managing Nodes

- Start
- Stop
- Delete

The database node regardless of whether it is running on Database systems or compute is not deleted.

- Upgrade
- Update

Lifecycle activities like "Apply PeopleTools Patch" and "Upgrade PeopleTools" can be done on the imported environment just like any other Cloud Manager provisioned environment.

Deleting Environment for Imported Nodes

If you select to delete an imported node in Cloud Manager, the following occurs:

- Deletes the scaled up environment.
- Cleans up Metadata stored in Cloud Manager.

Note: Database Systems node is not deleted.

Managing Nodes

Cloud Manager supports on-demand scaling in OCI, which is the ability to scale up or down (horizontal scaling) by adding or removing nodes to an active running PeopleSoft environment as necessary. Using Manage Nodes, you can:

- Add additional middle tiers to a running database or middle tier. (Scale up)
 - Middle tier nodes are added one at a time.
 - Multiple middle tiers (Application Server, Web Server, Process Scheduler Server and Windows) are supported.

Note: Add or remove node is not supported for full tier environment.

- Remove middle tier node from an environment. (Scale down)
- Add PeopleSoft Client.

Note: Multiple PeopleSoft Clients are supported.

• Add an ELK Stack node.

Adding ELK Stack node to an environment requires an IB domain that was configured in the environment by Cloud Manager. If not, the ELK Stack option will not be available when adding a node through Manage Node option. In such scenario, add a new Middle Tier node with IB enabled and then add the ELK Stack node.

ELK Stack supports two nodes:

- If Elasticsearch is already running in a node, Kibana cannot be installed in that node.
- To install Kibana, ELK Stack is required. So the user has to provision ELK Stack and Kibana in a new node.

Adding Nodes

To add a node to a running environment:

- 1. Click the Related Actions button corresponding to the environment.
- 2. Select Manage Node.
- 3. Select Add action.
- 4. Select Type.

- 5. Select the Operating System.
- 6. If the type is Middle Tier then the there is an option to select an existing MT node from which configuration/custom configuration can be copied for the node being added.
- 7. Enter the required credentials and settings.
- 8. Click Submit and confirm.
- 9. Scale Up process status are:
 - InitiatingScaleup
 - ScaleUpInProgress
 - Running
 - ScaleupFailed

Navigation

Click the Related Actions button corresponding to the environment. Select Manage Node. The Manage Node page is displayed.

Image: Manage Node page – Add Middle Tier Windows Node

This example illustrates the fields and controls on the Manage Node page for adding a Windows middle tier node.

Cancel		Manage Node Sut	bmit
- Select Actions			
Select the action to perform. To add a new tier to e	existing environment sel	select 'Add'. To remove a tier from existing environment, select "Remove'.	
	Action Add	Ŧ	
	Type Middle Tie	Tier •	
Operating	g System Windows	vs 🔻	
✓ Settings			
Please provide app home and cust home path rela	ative to file server path /	th /cm_psft_dpks/ to be used for app deployment.	
APP_HO	ME Path:		
CUST_HO	ME Path:		
Region and Availability Domains			
➡ Tier Settings			
✓ Shapes			
	*Shape Name	ne 🔹 🔻	
	Disk Space(GB)		
_	Disk Space(OD)		
▼Tiers			—
	Process Scheduler	er Yes	
✓ Features			
	nVision	on Yes	
Custom Attributes			

Note: Windows Middle Tier node is only supported for PeopleTools 8.57 and above. It is not supported on PeopleTools 8.55 or 8.56 environments.

The APP_HOME Path and CUST_HOME paths are not mandatory when adding a windows middle tier. However if you want to copy app home and/or cust home contents to the Windows middle tier perform the following:

- 1. Create a directory inside file server mount in the Cloud Manager. For example:
 - a. Create a directory ps_app_home_win inside /cm_psft_dpks.
 - b. Place the app_home contents as a zip file inside this directory.
 - c. Create a directory ps_cust_home_win inside /cm_psft_dpks.
 - d. Place the cust_home contents as a zip file inside this directory
- 2. Provide the path to PS_APP_HOME and/or PS_CUST_HOME. For example: ps_app_home_win and ps_cust_home_win.
- 3. When the Windows mid-tier node is provisioned, the contents in the zip file will be extracted to the machine.

See Creating Windows Middle Tier Nodes.

Image: Manage Node page – Add ELK Stack Node

This example illustrates the fields and controls on the Manage Node page for adding a ELK Stack node.

Cancel	Manage Node Submit
✓ Select Actions	
Select the action to perform. To add a new tier to existing environment select 'Add'.	To remove a tier from existing environment, select "Remove'.
Action Add	d v
Type ELF	K Stack 🗸
Operating System	NIX ~
✓ Settings	
▶ Region and Availability Domains ← Tier Settings	
*Sha	ape Name 👻
Disk Sp	pace(GB) 100
✓Features	
Elast	ticsearch Yes
	Kibana 🛛 Yes
▶ Custom Attributes	

You must select at least one feature. Elasticsearch and Kibana can be added in the same node.

See Creating ELK Stack Node.

Adding Middle Tier Node

This is an example of adding a middle tier node to an environment.

Image: Add Middle Tier Node example

This example illustrates the fields and controls on the Manage Node page to add a Linux middle tier node.

Cancel	Manag	e Node Submit
- Select Actions		
Select the action to perform. To add a new tier to existing envi	ronment select 'Add'. To remove	a tier from existing environment, select "Remove'.
Action	Add •	
Туре	Middle Tier •	
Operating System	Linux •	

In the Settings section, select the location of the Application DPK.

• Object Store

When you select Object Store, the DPK Object Name drop down list will display all the application DPK files in Object Store.

Image: Application DPK in Object Store

This example illustrates the fields and controls on the Manage Node page where the Application DPK location is Object Store.

Region and Availability	Domains	Manage Node	Sul
Select Actions			
- Settings			
	APP DPK Location	Object Storage •	
	DPK Object Name	Inux/HCM/CATCAT/APP-DPK-LNX-HCM-CATCAT-10/3.zip Inux/HCM/CDBHCM/APP-DPK-LNX-HCM-CDBHCM-10/3.zip	
➡ Tier Settings		linux/HCM/CLDNU856/APP-DPK-LNX-HCM-CLDNU856-1of3.zip linux/HCM/CMPSDB/APP-DPK-LNX-HCM-CMPSDB-1of3.zip linux/HCM/FTEPDB/APP-DPK-LNX-HCM-FTEPDB-1of3.zip	
	> Shapes > Tiers	linux/HCM/GP856/APP-DPK-LNX-HCM-GP856-1of3.zip linux/HCM/HCM92856/APP-DPK-LNX-HCM-HCM92856-1of3.zip	
	> Features	linux/HCM/HCM92857/APP-DPK-LNX-HCM-HCM92857-1of3.zip linux/HCM/HCMDB/APP-DPK-LNX-HCM-HCMDB-1of3.zip	
Custom Attributes		IIIIuuHCMICMDB 114PP-DPK-LIXX-HCM-HCMDB1-163.2p IIIIuuHCMICMHCMEDS285084P-DPK-LIXX-HCM-HCMHCBE2868-163.2p IIIIIuuHCMIMTEDS285084P-DPK-LIXX-HCM-HITENB56-163.2p IIIIIIIUUHCMIMTEDS014PP-DPK-LIXX-HCM-HB506167 IIIIIIUUHCMIMTEDS04PP-DPK-LIXX-HCM-HB506163.2p IIIIIIUUHCMINTEDS04PP-DPK-LIXX-HCM-HB506163.2p IIIIIIUUHCMINTEDS04PP-DPK-LIXX-HCM-HB5163.163.2p IIIIIIUUHCMINTEDS04PP-DPK-LIXX-HCM-HB5163.163.2p IIIIIIUUHCMINTEDS04PP-DPK-LIXX-HCM-HB5163.163.2p IIIIIIUUHCMINTESS4PP-DPK-LIXX-HCM-HUB56163.163.2p IIIIIIUUHCMINTESS4PP-DPK-LIXX-HCM-HUB56163.163.2p IIIIIIIUUHCMINTESS4PP-DPK-LIXX-HCM-HUB56163.163.2p	, ,

• File Server

If you manually copied app home and cust home to the file server provide the relative path to the file server.

Image: Application DPK in File Server

This example illustrates the fields and controls on the Manage Node page where the Application DPK location is File Server.

Region and Availability	Domains	Manage Node	Submit
Select Actions			
- Settings			
	APP DPK Location	File Server •	
Please provide app home a	and cust home path relative to file server path /cm_psft_dpks/ to be us	d for app deployment.	
	APP_HOME Path:		
	CUST_HOME Path:		
➡ Tier Settings			
	Shapes		
	▶ Tiers		
	▶ Features		
Custom Attributes			

Adding Additional Middle Tier Nodes

Image: Manage Node page – Add Middle Tier Node

This example illustrates the fields and controls on the Manage Node page for adding a Linux middle tier node.

Cancel	Manage Node Submit
✓ Select Actions	
Select the action to perform. To add a new tier to existing enviro	onment select 'Add'. To remove a tier from existing environment, select "Remove'.
Action	Add 🔹
Туре	Middle Tier 🔹
Operating System	Linux •
✓ Settings	
Select node to copy configuration	
Copy From	myhcm-Inx •
 Region and Availability Domains Tier Settings 	
✓ Her Settings	
- Shapes	
*Sha	pe Name VM.Standard2.16 •
Disk Sp	bace(GB) 100
▼ Tiers	
A	ppserver Yes
Process S	cheduler Yes
w	ebserver Yes
✓ Features	
	Cobol No
Custom Attributes	

Expand the sections.

Action

Available actions are:

- Add
- Remove

Туре	Available Types are:
	• Middle Tier
	PeopleSoft Client
	• ELK Stack
	Note: The options are enabled based on which node is already available in the environment.
Operating System	Select either Linux or Windows.
Copy From	If a middle tier exists for the environment, select the middle tier node from the drop down list. The configuration/custom configuration will be retrieved.
Regions and Availability Domains	Defaults to the Regions and Availability settings of the environment to which new node is being added. These fields are read only.
Tier Settings	Enter the required Shapes and Tiers.
	See Environment Template – Select Topology Page
Custom Attributes	Enter Credentials, General Settings, Network Settings, Network Security Group Settings, Fault Domain Settings and Domain Settings.
	Network Settings for compartment and virtual cloud network are read only. Select the subnet for the primary instance.
	See Configuring Custom Attributes

Removing Nodes

To remove a node:

- 1. Click the Related Actions button corresponding to the environment.
- 2. Select Manage Node.
- 3. Select Remove action.
- 4. Select Type.
- 5. Available Nodes will be displayed.

Note: Database node can not be deleted.

- 6. Select the node to remove.
- 7. Click Submit and confirm.

Image: Manage Node page – Remove Middle Tier Node

This example illustrates the fields and controls on the Manage Node page for removing a node.

Cancel	Manage Node	Submit
- Select Actions		
Select the action to perform. To add a new tier to existing environment select 'Add'. To remove a	tier from existing environment, select "Remove".	
Action	Remove v	
Туре	Middle Tier v	
Operating System	Linux 🗸	
▼ Select Node		
Select the node to be removed from the environment.		
	2 rows	
Instance		
⊖ vy856tde n		
○ vy856tc		

Retrying and Resuming Provisioning

Cloud Manager provides the ability to resume provisioning when a recoverable failure occurs. This applies to provisioning a new environment, shifting an environment or adding nodes using Manage Node action.

To view the failed task:

- 1. Select the Environments tile.
- 2. Select Details for the environment.
- 3. Select Provision Task Status.
- 4. Click on the Failed icon to view the error.

Image: Provision Task Status showing failed task

This example illustrates the fields and controls on the Provision Task Status showing failed task.

		Provision Task	Status		
Environment Details					0/5 Completed
Manage Attributes					Retry/Resume History
Manage PUM Connections	✓ Infrastructure Task				1 row
Provision Task Status	Activities 0	Status	Action 0	Start time 0	End time 0
Logs	Terraform infrastructure operation	ion: apply	×	11/05/2020, 14:41:00	11/05/2020, 14:46:56
	- Deployment Tasks				
	D	Error Detail Fror The windows instance password does not meet the password policy reque Action Update windows instance password through managed attributes page and In case of password issues, the failure can be retried by resetting	umantal refry		

- 5. The Error Details will indicate the action to be performed to correct the error. The logs will also provide error details.
- 6. After correcting the error, return to the Provision Task Status.

7. Select the action from the drop down list..

Note: Only activities can be retried.

Image: Provision Task Status Retry/Resume

This example illustrates the fields and controls on the Provision Task Status Retry/Resume.

< Environments		Provision Task	Status		ଜ 🔎	: 0
Environment Details					0/5	Completed
anage Attributes					Retry/Resur	ne History
Aanage PUM Connections	✓ Infrastructure Task					1 row
rovision Task Status	Activities 0	Status	Action 0	Start time 0	End time 0	1104
Logs	Terraform infrastructure operation: apply	0	~	11/05/2020, 14:41:00	11/05/2020, 14:46:56	
	✓ Deployment Tasks		Mark As Complete			
			Retry			
viark as Co	omplete	If you mai	nually correct	ted the error, se	elect this action	1 to
VIARK AS CO	omplete	2	2	ted the error, se complete and c		
Mark as Co	omplete	mark the f task.	ailed task as Manually co	,	continue with t	he n

attributes.

- 8. The Failed task is retried and provisioning continues.
- 9. Use the Retry/Resume History button to review any failed tasks.

Image: Retry/Resume History page

This example illustrates the fields and controls on the Retry/Resume History page where provisioning is complete.

				Provision Task Status			<u>ہ</u> (۵	≥: ⊘
Environment Details								
Manage Attributes							Retry/Res	ume History
Manage PUM Connections		Infrastructure Task						
Apply PeopleTools Patch		Activities 0		Status	Action 0	Start time O	End time 0	
Upgrade PeopleTools		Terraform infrastructure operatio	n: scale_up	0		12/05/2020, 19:29:45	12/05/2020, 19:30:11	
Provision Task Status		Deployment Tasks						
Logs		✓ Mid Tier Instance (Task Id: 15	89309613880-752745)					
		Host FQDN O	Re	try/Resume History		×	Public IP 0	
		myhom-win-4.win.vcnash.oracle	Action	- \$		_	129.213.202.197	
		Activities O	Date Time ○ Task Type ○ Action	Error 🗘		me O	End time O	13 rows
		Performing PsftActivityWindo	12/05/2020, 19:29:27 Infrastructure Retried	The windows instance password	does not meet the par	020, 19:30:35	12/05/2020, 19:33:07	
	D.	Performing Windows Middle 1				020, 19:35:12	12/05/2020, 20:21:08	
	-	> PscWindowsFileServer.mc				020, 19:35:12	12/05/2020, 19:35:12	
		> PscWindowsFileSystem.sr				020, 19:35:12	12/05/2020, 19:35:12	
		> PscDpk.setup_dpks				020, 19:35:12	12/05/2020, 19:50:23	
		> PscWindowsTools.install_;	4		-	• ,020, 19:50:23	12/05/2020, 19:51:25	
		> PscWindowsTools.install_e	yaml		>	12/05/2020, 19:51:25	12/05/2020, 19:51:40	
		> PscWindowsTools.generate	e_eyaml_keys	•	>	12/05/2020, 19:51:40	12/05/2020, 19:51:43	
		> PscPuppet.hot_patch_pupp	pet	•	>	12/05/2020, 19:51:56	12/05/2020, 19:52:00	
		> PscPuppet_setup_puppet_d	iata	¢	2	12/05/2020, 19:52:00	12/05/2020, 19:52:00	
		> PscPuppet_puppet_pre_run		e	>	12/05/2020, 19:52:00	12/05/2020, 19:52:00	
		> PscPuppet_puppet_current	_run	•	>	12/05/2020, 19:52:00	12/05/2020, 20:19:11	
wascriptwoid(0);					•	40.000000 00.40.44	10050000 00.40.44	

Backing Up and Restoring Environment

Use the Backup and Restore action to take a backup or restore an environment from the backup. Backup action will backup all nodes in the environment.

The time to backup and restore depends on the size of the database. The system will be online and reads are not affected. Import, Clone, Update and Instance restarts might affect the backup process.

Backing Up the Environment

It is recommended to take a backup:

- Before applying a PeopleTools Patch.
- Before applying a PeopleTools upgrade.
- Before adding or removing a node.

To create a backup:

- 1. On the Environments page, select related actions for the environment and select Backup/Restore.
- 2. Any existing backup for the environment will be displayed.
- 3. Click the Create Backup button.
- 4. Enter the backup name and click Backup. The backup name has to be unique.

Image: Environment Backup page

This example illustrates the fields and controls on the Environment Backup page. You can find definitions for the fields and controls later on this page.

Can	cel		Environment backup		Backup
Com	pute Nodes	Backup Name HCMT Environment Name HCMTE			2 rows
	Node Type	Shape Name	Operating System	Hostname	21003
1	Full Tier	VM.Standard2.2	Linux	hcmtest-Inxft-1.ft.vcnash.oraclevcn.com	
2	PeopleSoft Client	VM.Standard2.1	Windows	hcmtest-win-2.win.vcnash.oraclevcn.com	

The nodes for the environment are displayed on the Environment Backup page.

The backups for an environment are displayed with the status.

Image: Backup Status

This example illustrates the fields and controls on the Environment Backup page showing the current status. You can find definitions for the fields and controls later on this page.

Cancel		Environment backup	Environment backup				
				4 rows			
Create Backup Backup Name ≎	Backup Status ≎	Timestamp ≎	Scheduled 🛇				
BACKUP050420	Completed	Mon May 04 14:35:55 GMT 2020	N	1			
BACKUP0505	Completed	Tue May 05 16:35:54 GMT 2020	Ν				
HCMTESTBK1	Creating		Ν	Ē			
Backup Name		Name of the backup	Name of the backup				
Backup Status		Displays the current stat Error.	Displays the current status, Creating, In-Progress, Completed o Error.				
Timestamp		Time the backup was cr	eated.				
Scheduled		Currently backups can not be scheduled, so this column will have N.					
Delete icon		Click the delete icon to	Click the delete icon to delete an existing backup.				
		2	Only backups in the Completed status can be deleted. The del will clear all the block volumes and other dependency resource in OCI.				

Restoring an Environment

When you select to restore an environment from a backup:

- The Restore overwrites all the data on the target instance.
- The Target instance will be unavailable during the restore process.

Image: Restoring Environment

This example illustrates the fields and controls on the Environments page when an environment is restoring.

Cloud Manager		Environments				ሰ 💯 :			
Environments								Create Environment 📀	Import Environment
Card Grid T									
CM11D7HCM2		SHFTDBaaS		SHFTDBaaSCM11V2		SHAREDHOME			
Running		Restoring		Running		Running			
Database : HCM Update Image 9.2.	.034	Database : SFTPDB		Database : SFTPDB		Database : HCM Update Image 9.2.0	3		
Description : CM11 D7 HCM		Description : Shifted DBaaS env		Description : SHIFT DBAAS NON TOP	-	Description : Example Shared home			
Zone : Test		Zone : Test		Zone : Production		Zone : Test			
🕈 PIA URL		🚽 PIA URL	\odot	1 PIA URL		🕈 PIA URL			

• Only one instance at a time can be restored on a target instance.

To restore an environment:

- 1. On the Environments page, select related actions for the environment and select Backup/Restore.
- 2. Any existing backup for the environment will be displayed.
- 3. Select the radio button corresponding to the backup you want to restore.
- 4. Click the Restore button.
- 5. All the nodes for the selected environment will be restored to the same instance.

Use Provision Task Status on the environment details page to check the progress of the restore operation.

Image: Provision Task Status for restore operation

This example illustrates the fields and controls on the Provision Task Status for restore operation. You can review the deployment tasks.

< Environments		Provision Task Status		ଜ 🕮 :
Environment Details				
Manage Attributes				Retry/Resume Hist
Apply PeopleTools Patch	✓ Infrastructure Task			
Jpgrade PeopleTools	Activities \diamond	Status Action O	Start time 0	End time $ \bigcirc $
Provision Task Status	Terraform infrastructure operation: apply	O	26/05/2020, 17:26:41	26/05/2020, 19:31:37
Logs	✓ Deployment Tasks			
	→ Database Instance - DBaaS (Task Id: 1590513517423-809593)			
	Host FQDN \diamond		Private IP O	Public IP O
	shftdbaas-Inxdb-2-scan.db.vcnash.oraclevcn.com		10.1.2.189	
				:
	Activities 🗘	Status Action O	Start time 🌣	End time ◇
	Cloud Folder Sync Activity	0	26/05/2020, 19:32:20	26/05/2020, 19:33:04
	Performing DB tier OCI Clone Activity	O	26/05/2020, 19:33:08	26/05/2020, 19:33:10
	Mid Tier Instance (Task Id: 1589264344355-993335)			
	Mid Tier Instance (Task ld: 1589264344381-616997)			
	Mid Tier Instance (Task Id: 1590513517435-274762)			
	Client Instance (Task Id: 1589264344372-411995)			
	Locally executed activities (Task Id: 1590513517428-608039)			
	Mid Tier Instance (Task Id: 1590513517418-736393)			

Refreshing DB Systems Environment

You can refresh DB Systems environments managed by Cloud Manager from a backup in Object Store or from another DB system managed by Cloud Manager.

• The RMAN database backup for an on premise environment lifted to Cloud Manager resides in the Object Store.

See Running Lift Using Hot Backup (RMAN)

• Backups for other DB Systems environments in Cloud Manager are stored in OCI block storage.

See Backing Up and Restoring Environment

Refresh supports:

- Refresh database only.
- Refresh environment which includes database, PS App Home and PS Cust Home.

Important! The source and target database must be on the same version. Source environment backup must contain spfile.

To refresh an environment:

- 1. Navigate to the Environment tile.
- 2. Select Refresh from the actions for the DB Systems environment you want to refresh.
- 3. On the Refresh page, select the Source Type.
- 4. Enter the values for the backup.
- 5. Click Refresh.

Note: Perform a backup of the environment prior to the refresh. Before starting the Refresh, ensure that the backup has completed.

Refreshing from Object Store

Image: Add Refresh page where Source Type is Object Store

This example illustrates the fields and controls on the Add Refresh page where Source Type is Object Store. You can find definitions for the fields and controls later on this page.

Cancel	Add Refresh Done	
✓ Source Details	^	
*Source Type	Object Store v	
*Compartment Name	٩	
*Bucket Name	٩	
App Refresh	٩	
→ Other Details		
Source TDE Key File Path		
Source TDE KeyStore (Wallet) Password		
*OCI Auth Token		
*Source PDB Name		
*Source DBID		
Source Tag Name		
*Source RMAN Backup Password		
ource Type	Select the Object Store from the drop down list.	
Compartment Name Bucket Name	Select the compartment used when the backup was taken usir DBCLI (database command line interface) or Oracle Databas Cloud Backup Module (ODCBM).	
	Select the bucket name used when the backup was taken using DBCLI (database command line interface) or Oracle Database Cloud Backup Module (ODCBM).	
App Refresh	Select the name of the application backup to refresh PS App Home and PS Cust home.	
	Leave this field blank if you want to refresh the database only	
Source TDE Key File Path	If TDE is enabled on the source database enter the TDE key f path.	
Source TDE KeyStore (Wallet Password) If TDE is enabled on the source database enter the TDE KeyStore (Wallet) Password.	
OCI Auth Token	Enter the OCI Auth Token for the source database.	
Source PDB Name	Select the name used when the backup was taken using DBCLI (database command line interface) or Oracle Database Cloud Backup Module (ODCBM).	
The source DBID is available during the RMAN backup user must have the source DBID available.		

Source Tag Name	The tag name that was specified during the RMAN backup.
Source RMAN Backup Password	Enter the RMAN backup password. This field only applies to non-TDE databases.
Pre Refresh Custom script	Select an uploaded script to execute prior to refreshing the environment. This script is run from a middle tier belonging to the target environment.
Post Refresh Custom script	Select an uploaded script to execute post refreshing the environment. This script is run from a middle tier belonging to the target environment.
Target MT DMS Path	Path to Data Mover scripts on the target middle tier node.

Note: Application DPK contains the absolute path in Cloud Manager for PS_APP_HOME and PS_CUST_HOME. If application DPK only includes PS_APP_HOME, only PS_APP_HOME of target will be refreshed, otherwise both PS_APP_HOME and PS_CUST_HOME will be refreshed.

Refreshing from OCI Backup

Image: Add Refresh page where Source Type is OCI Backup

This example illustrates the fields and controls on the Add Refresh page where Source Type is OCI Backup. You can find definitions for the fields and controls later on this page.

Cancel Add Refresh Done		
- Source Details		
*Source Type	OCI Backup ~	
*Environment Name	٩	
*Backup ID	٩	
Use Latest Backup	NO	
App Refresh	NO	
✓ Other Details		
*Source TDE KeyStore (Wallet) Password		
Pre Refresh Custom script	~	
Post Refresh Custom script	~	
- Advanced		
Target MT DMS Path	/home/opc/cloud/psc_cloud/ps	
File Server App DPK Location	ex: /cm_psft_dpks/ <appdpki< th=""></appdpki<>	
Source Type	Select OCI Backup from the drop down list.	

Environment Name	Select the environment to refresh from the drop down list.	
Backup ID	Select the Backup ID from the drop down list.	
Use Latest Backup	Select Yes to use the latest backup.	
App Refresh	Select Yes to refresh PS App Home and PS Cust Home as well as the database.	

	Select No for a database refresh only.
Source TDE KeyStore (Wallet) Password	The Source Wallet password is the same as the Database Administrator password.
Pre Refresh Custom script	Select an uploaded script to execute prior to refreshing the environment. This script is run from a middle tier belonging to the target environment.
Post Refresh Custom script	Select an uploaded script to execute post refreshing the environment. This script is run from a middle tier belonging to the target environment.
Target MT DMS Path	Path to Data Mover scripts on the target middle tier node.

Retrieving Failed Refresh

Important! Before doing refresh make sure that an environment backup is done.

To retrieve failed refresh:

1. Select Details > Environment Details and click Refresh.

Environment may come to Running state.

- 2. If status updates to Not Started, check the following:
 - PDB, CDB name after refresh may differ from the actual. Correct the names.
 - DB Admin, access usernames and passwords may differ from actual. Correct DB credentials.
- 3. If status still results in failed status, check Details > Provision Task Status.
 - If failure is in INFRA task, retry from Provision Task Status page.
 - If that does not work, use the backup and restore feature to restore the environment.
 - Make sure spfile is present.

Refreshing ATP-D Environment

To refresh a ATP-D environments, select the Refresh from the actions for the ATP-D environment you want to refresh.

The Source Type option is read only because the target is created from source directly without taking a backup of the source.

Image: Add Refresh page for ATP-D environment

This example illustrates the fields and controls on the Add Refresh page for ATP-D environment. You can find definitions for the fields and controls later on this page.

Cancel	Add Refresh Done	
▼ Source Details		
*Source Type OCI Bac	kup v	
*Environment Name	✓	
App Refresh NO		
▼ Other Details		
Pre Refresh Custom script	↓ ·	
Post Refresh Custom script	↓ v	
- Advanced		
Target MT DMS Path		
File Server App DPK Location		
Environment Name	Select the environment to refresh from the drop down list.	
App Refresh	Select Yes to refresh PS App Home and PS Cust Home as we as the database.	
	Select No for a database refresh only.	
Pre Refresh Custom script	Select an uploaded script to execute prior to refreshing the environment. This script is run from a middle tier belonging the target environment.	
Select an uploaded script to execute post refreshing the environment. This script is run from a middle tier below the target environment.		
Target MT DMS Path	et MT DMS Path Path to Data Mover scripts on the target middle tier node.	
File Server App DPK Location	Location of Application DPK.	

Using Governance Framework

Understanding Governance Framework

Cloud Manger provides the ability to define and manage policies. Using the governance framework, administrators can manage life cycle activities of environments. Policies can be scheduled or executed realtime by connecting through events.

A policy is made up of two parts - conditions and actions. For example, the policy for backing up of all environments every Friday at 10 PM would have the following condition and action:

- Condition: Execute the policy at 10PM every Friday
- Action: Backup of all environments

After defining policies, the policies can be associated with environments using one of the following:

• Specify the environments for the policy when creating the policy using the Policy Editor.

See Setting Policy Conditions and Action

• Specify policies for an environment from the Environment Policies page.

See Policies Page

• Specify the policies in the Environment Template used to create the environment.

See Environment Template – Security and Policies Page

Using Policy Editor

To access the Policy Editor (ECL POLICY EDITOR), select the Governance tile.

The Policy Editor is used to add policies, as well as manage existing policies. Policies will be displayed by Policy Group. Policy groups are optional and can be used to group policies together for display. Any policies that are not associated with a specific policy group will be shown under Default Policies.

See Creating Policy Groups

Adding a Policy

When you add a policy, the owner is the user who defined the policy. The owner can be an administrator user or a self service user.

Policies defined by an administrator can be applied on any policy object artifact. For example, if an administrator adds a policy for stopping environments, then all the environments available in the Cloud Manager instance (irrespective of which user created the environment) can be associated with the policies.

Policies created by a self service user can be applied to the environments created by that user.

To add a policy:

- 1. Select the Governance tile.
- 2. Click the Add Policy button.

Image: Add Policy page

This example illustrates the fields and controls on the Add Policy page. You can find definitions for the fields and controls later on this page.

Cloud Manager		Add Policy 🟠 🕼 😧	
Policy Editor		Save Cancel	
Policy Monitor	Name	ne	
Policy Groups	Description	on	
	Policy Group		
	Security Role	le Q	
	Policy Type	pe Schedule	
	Policy Object	ct v	
	Policy Conditions	Environment	
	Policy Action	Repository Artifact	
	Policy Expression		
Name	Ente	ter a name for the policy.	
Description	Ente	Enter a description for the policy.	
Policy Group	Policy groups are used to group policies together. The policy does not need to belong to a group.		
Security Role	Sele	Select the security role that can edit the policy.	
Policy Type	Sele	Select the policy type.	
	•	Schedule	
		Policy can be scheduled for a start date and time or recurrence.	
	•]	Event	
]	Based on an event, for example PRPs are downloaded.	
Schedule		is button is available when the policy type is Schedule. Set the policy schedule.	
	See	e Setting Policy Schedule	

Policy Object

A Policy object exposes properties and actions, which are used by the Policy editor to set policy conditions and action for the policy.

Built-in policy objects are:

• Environment

Used for creating policies for lifecyle activities on environments, for example start and stop.

• Repository Artifact

Used for creating policies based on artifacts in the repository.

Setting Policy Schedule

When you select the Schedule button from the Add Policy page, you can select to create an adhoc schedule or a recurrence.

Adhoc

Select Adhoc if you want to schedule the policy for a specific data and time.

Image: Adhoc Policy Schedule

This example illustrates the fields and controls on the Adhoc Policy Schedule page. You can find definitions for the fields and controls later on this page.

Cancel	Policy Schedule Save			Save
Adhoc	Recurrence			
	Start Date	01/07/2021		
	Start Time	12:00AM	(HH:MM AM/PM. Example: 4:30PM)	
	Time Zone	PST Q		
Start Date	Select the start date.			
Start Time	Enter the start time.			
Time Zone	Select the time zone.			

Recurrence

Select Recurrence if you want the policy to be executed on a recurrence schedule.

Image: Recurrence Policy Schedule

This example illustrates the fields and controls on the Recurrence Policy Schedule page. You can find definitions for the fields and controls later on this page.

Cancel	Policy Schedule Sa			
Adhoc	Recurrence			
	Recurrence Add a	► C new process scheduler recurrence definition		
Override t	the start date and/o	r time for the recurrence (Optional)		
	Start Date			
Start Time Time Zone PST Q		(HH:MM AM/PM. Example: 4:30PM)		
Recurrence		Select an existing process scheduler recurrence schedule.		
-	dd a new process schedulerSelect this link if you want to add a new recurrence definitioncurrence definitionThis link will open the Process Scheduler Recurrence Def page.			
Start Date		Optionally, you can enter a start date for this recurrence.		
Start Time		Optionally, you can enter a start time for this recurrence.		
Fime Zone		Optionally, you can enter a time zone for this recurrence.		

Setting Policy Conditions and Action

Based on the policy object selected, the policy conditions and action will change.

Ē

Environment Example

Image: Example Adding Environment Policy

This example illustrates the fields and controls on the Add Policy page where the Object Type is Environment. You can find definitions for the fields and controls later on this page.

Cloud Manager	Add Policy	ଜ 🦉 🗜 🧭
Policy Editor		Save Cancel
Policy Monitor	Name Stop Environment	
Policy Groups	Description Stop environments on a schedule	
,	Policy Group Q	
	Security Role PACL_CAD Q	
	Policy Type Schedule	
	Policy Object Environment ~	
	II Property Name Operator Property Value	Relation
	Name	(i) And • + -
	Status V Is V Running	• + -
	✓ Policy Action	
	Action Stop V	
	Policy Expression	
	IF 'Environment'.'Name' In 'CDHCMPUM' AND 'Environment'.'Status' Is 'Running' THEN 'Environme	ent'.'Stop'
Property Name	Select the property name:	
	• Event Type	
	Only applies to event based polici	ies.
	• Name	
	• Status	
Operator	Select either In or Is.	
Property Value	Enter the property value.	
	Enter a single value or a comma sepa	rated list of values.
0	Mouse over this icon for an explanati example values.	on of the property a
Relation	Select the relation.	
	Select to add another condition.	

Action

If the policy object is Environment, the available actions are:

• Backup

Select to delete a condition.

- Refresh
- ScaleDown
- ScaleUp
- Start
- Stop

Action Parameters

Depending on the policy action selected, the action parameters are displayed. Mandatory actions parameters are prefixed with an asterisk (*) and must be entered. Mouse over the Info icon for the action parameter for information on how to enter the parameter value.

Policy Action	Action Parameters
Backup	Backup Prefix
Refresh	Environment Name
	Backup ID
	Use Latest Backup
	App Refresh
	Source TDE KeyStore (Wallet) Password
	Pre Refresh Custom script
	Post Refresh Custom script
	Target MT DMS Path
	File Server App DPK Location
	See <u>Refreshing DB Systems Environment</u>

Policy Action	Action Parameters
ScaleDown	Node Count
	Auto Scale
	Application Server Domain
	Process Scheduler Domain
	PIA Domain
ScaleUp	Node Count
	Auto Scale
	Application Server Domain
	Process Scheduler Domain
	PIA Domain

Repository Artifact Example

Image: Example Adding Repository Artifact Policy

This example illustrates the fields and controls on the Add Policy page where the Object Type is Repository Artifact. You can find definitions for the fields and controls later on this page.

Cloud Manager	Ad	d Policy			ŵ	Ø	: Ø
Policy Editor					Sav	e	Cancel
Policy Monitor	Name	HCM PRP Apply					
Policy Groups	Description	Apply PRP on HCM environments					
	Policy Group	Event Driven Policies Q					
	Security Role	PACL_CAD Q					
	Policy Type	Event ~	Schedule				
	Policy Object	Repository Artifact					
	 Policy Conditions 						
	Property Name Operator	Property Value		F	Relation		
	Event Type 🔹 Is 👻	Patch Download	li	0	And 🗸	+	-
	I Product V Is V	HCM	1	0	And 🗸	+	-
	Release V Is V	9.2	11	0	~	+	-
	- Policy Action						
	Action Deservations	Apply PRPs V					
	Action Parameters Parameter Name Pa	arameter Value					
	Environment Names	DHCMPUM	1			[0
	Policy Expression						
	IF 'Repository Artifact'.'Event Type' Is 'F Artifact'.'Release' Is '9.2' THEN 'Reposi	'atch Download' AND 'Repository Artif tory Artifact'.'Apply PRPs'	fact'.'Product' Is 'HCN	1' AND 'F	Repository		
Property Name	Select	the property name:					
roperty runne		the property nume.					
	• Ev	ent Type					
	• Pro	oduct					
	• Re	lease					
Operator	Select	either In or Is.					
Property Value		over the Info icon property, the only su					
	Use th	e Info icon to view	available	value	es.		

Managing Policies

All defined policies are available and grouped by policy group.

Image: Policy Editor page

This example illustrates the fields and controls on the Policy Editor page. You can find definitions for the fields and controls later on this page.

Cloud Manager			Policy Editor			ŵ	⁄ n i 🖉
Policy Editor	Add Policy						
Policy Monitor	✓ Default Policies	1					
Policy Groups	Name 🛇	Type 🗘	Description 🗘	Security Role 🛇	Active 🗘	Delete	1 row View / Edit
	Stop Environment	Schedule	Stop environments on a sche	PACL_CAD	Yes	8	>
	← Event Driven Po	olicies					
	Name ◇	Type 🛇	Description 🗘	Security Role 🛇	Active 🛇	Delete	1 row View / Edit
	HCM PRP Apply	Event	Apply PRP on HCM environments	PACL_CAD	Yes	8	>
			Once a policy is executed.	inactivated, it wil	l be susp	ended	and wil
Delete			Use the Delete ic	con to remove a p	olicy.		
/iew/Edit			Click the edit icc				

Editing the Policy

When you select to edit or view the policy, the policy is displayed.

Image: Example Edit Policy

This example illustrates the fields and controls on the Add Policy page when you select to edit or view a policy.

Cloud Manager	Add Policy	r 🕼 🔅 🖉
Policy Editor		Save Cancel
Policy Monitor	Name Stop Environment	
Policy Groups	Description Stop environments on a schedule	
	Policy Group Q	
	Security Role PACL_CAD Q	
	Policy Type Schedule Schedule	
	Policy Object Environment ~	
	▼ Policy Conditions	
	Property Name Operator Property Value	Relation
	Name v In v CDHCMPUM	③ And ✓ + −
	Status v Is v Running	• • -
	- Policy Action	
	Action Stop 🗸	
	Policy Expression	
	IF 'Environment'. Name' In 'CDHCMPUM' AND 'Environment'. Status' Is 'Running' THEN 'Environment'. Stop'	

Note: Environments can be added to or removed from a policy directly from the Environment Details page. See <u>Policies Page</u>

Creating Policy Groups

Policy groups are optional and are used to group policies together for display.

To view or add a policy group, select the Governance tile, then select Policy Group.

Image: Policy Groups page

This example illustrates the fields and controls on the Policy Groups page. You can find definitions for the fields and controls later on this page.

Cloud Manager		Policy Groups						
Policy Editor	Deliny groups are entired a	Ind can be used to group policies together for display			Sa	ave		
Policy Monitor						1 row		
Policy Groups	Name ◇	Description Policies that are triggered through events			Ē			
	Event Driven Folicies	Folicies that are triggered through events		11	Ľ			

When policy groups are created, they will display as such on the Policy Editor page.

Image: Policy Editor with Policy Groups

This example illustrates the fields and controls on the Policy Editor page that contains Policy Groups.

Cloud Manager				Policy Editor		1	ଜ 🇳	D: @
Policy Editor		Add Policy						
Policy Monitor	-	Default Policie	5					
								1 row
Policy Groups	1	Name 🗘	Type 🗘	> Description <>	Security Role 🗘	Active 🗘	Delete	View / Edit
	5	Stop Environment	Schedu	Ile Stop environments on a sche	PACL_CAD	Yes	8	>
		- Event Driven P	olicies					
								1 row
	I I	Name 🗘	Type 🗘	Description \Diamond	Security Role 🛇	Active \Diamond	Delete	View / Edit
		HCM PRP Apply	Event	Apply PRP on HCM environments	PACL_CAD	Yes	8	>
	-							

Using Policy Monitor

Use the Policy Monitor page to track the execution status of the policies.

Image: Policy Monitor page

This example illustrates the fields and controls on the Policy Monitor page. You can find definitions for the fields and controls later on this page.

Cloud Manager			Policy Monitor	ሰ	💯 : Ø
Policy Editor	Name 🌣	Type 🛇	Description ≎	Date/Time ≎	6 rows Status
Policy Monitor	HCM PRP Apply	Event	Apply PRP on HCM environments	01/15/2021 6:29:54PM	
Policy Groups	HCM PRP Apply	Event	Apply PRP on HCM environments	01/15/2021 3:00:42PM	>
	HCM PRP Apply	Event	Apply PRP on HCM environments	01/13/2021 11:49:52PM	>
	Start Environment	Schedule	Start environment according	01/12/2021 10:25:20PM	>
	Stop Environment	Schedule	Stop environments on a sche	01/12/2021 8:08:12PM	>
	Start Adhoc	Schedule	Start Adhoc on schedule	01/11/2021 3:13:15PM	>

Select the > icon to view the policy execution status.

Image: Policy Execution Status page

This example illustrates the fields and controls on the Policy Execution Status page.

Policy Execution Status							
olicy Artifact	ts				1 rov		
owner 🛇	name 🗘	status 🛇		Policy Execution Status 🛇			
CLADM	CDHCMPUM	Running	\bigcirc	Policy conditions met. Executing action: Stop			

Managing Alerts and Notifications

Viewing Alerts and Notifications

Alerts and Notifications are used to notify users that new patches have been downloaded and are available for Cloud Manager, as well as the patch details and priority.

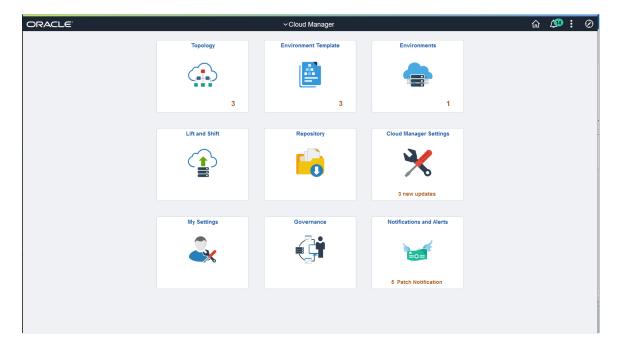
Note: You must subscribe to the IH_91_Linux download channel.

Use the Manage Updates page in Cloud Manager Settings to apply the PRPs. See <u>Updating Cloud</u> <u>Manager Overview</u>

The Alerts and Notifications tile is displayed on the Cloud Manager Homepage. If new patches are available the tile will indicate the number of notifications.

Image: Alerts and Notifications tile

This example illustrates the fields and controls on the Alerts and Notifications tile. You can find definitions for the fields and controls later on this page.



Using the Patch Notifications Page

Select the Alerts and Notifications tile to view the Patch Notifications page.

Note: Only unapplied patch notifications are displayed.

Image: Patch Notifications page

This example illustrates the fields and controls on the Patch Notifications page. You can find definitions for the fields and controls later on this page.

Cloud Manager	Patch Notifications	ŵ	(1	:	\otimes
Patch Notifications			×	Q	5 rows
Notifications Settings	Notifications \Diamond				
	1 Please apply the PRP2 fix to Provisioning HCM Instance			:	>
	2 Please apply the PRP2 fix to Provisioning HCM Instance with tools type greater than 8.59			:	>
	3 Please apply the PRP2 fix to Provisioning Instance with tools type less than 8.59			:	>
	4 Please apply the PRP2 fix to run HCM Environment Update			:	>
	5 Please apply the PRP2 fix to run Environment Update with tools verson greater than 8.57			:	>

Patch notifications are displayed. Use the > button to view the notification information.

Image: Notification Information

This example illustrates the fields and controls on the Notification Information. You can find definitions for the fields and controls later on this page.

	Notification Information	×
Notifications	Please apply the PRP2 fix to Provisioning HCM Instance	
Description	Please apply PRP2 to continue with Provisioning HCM Instance	
Priority	warning	
Patch Information		
Patch	UPD-CDM: PI11-PRP02 COMMON CHECK-IN	
Patch Type	MOS - PRP	
Release	9.1	
Cloud Manager Version	11	
Patch Size	19.53 MB	
	AVAILABLE	

The notification information includes a description and priority, as well as the patch information.

Enabling Notifications

When you enable notifications, you will be alerted if you perform an activity in Cloud Manager that is affected by the patch. For example, you want to create a new environment or apply a PeopleTools patch. To enable notifications, select the Alerts and Notification tile, then select Notification Settings.

Image: Notification Settings page

This example illustrates the fields and controls on the Notification Settings page. You can find definitions for the fields and controls later on this page.

Cloud Manager	Notifications Settings	ራ	(14	:	Ø
Patch Notifications				Sa	ave
Notifications Settings	Enable Alert Notifications Yes				_
	Communication of the second				
Enable Alert Notifi	cations Select Yes to enable notifications.				

If you select No, you will not receive a notification when performing an activity affected by the patch.

Example Creating Environment

If notifications are enabled and a patch affects creating an environment, a message will be displayed.

Image: Notification when creating an environment

This example illustrates a notification on the Create Environment page, when a patch is available and notifications are enabled.

Cancel	Notification Information	× ^	Done
Environme			
	Issue List		
De	Notifications Please apply the PRP2 fix to Provisioning HCM Instance		
	Description Please apply PRP2 to continue with Provisioning HCM Instance		
Templa	Priority warning		
Pause after infra	Patch Infomation		
	Patch UPD-CDM: PI11-PRP02 COMMON CHECK-IN		
	Patch Type MOS - PRP		
	Release 9.1		
	Cloud Manager Version 11		
	Patch Size 19.53 MB		
	Patch State AVAILABLE		
	Issue List		
	Notifications Please apply the PRP2 fix to Provisioning Instance with tools type less	than (
	Description Please apply the PRP2 fix to Provisioning Instance with tools type less	than +	
	Priority warning		
	Patch Infomation		
	Patch UPD-CDM: PI11-PRP02 COMMON CHECK-IN		
	Patch Type MOS - PRP		
	Release 9.1		
	Cloud Manager Version 11		
	Patch Size 19.53 MB		
	Patch State AVAILABLE		
	Cancel Ignore and continue	- 1	
		~	
	¢	>	

Cancel

Select to cancel.

Apply the patch using the Manage Updates page.

Ignore and continue

Select to ignore the notification and continue.

Example Apply PeopleTools Patch

If notifications are enabled and a patch affects applying a PeopleTools patch, a message will be displayed.

Image: Notification when applying a PeopleTools patch

This example illustrates a notification on the Apply PeopleTools Patch page, when a patch is available and notifications are enabled.

C Environments		Notification Information	× ^	r 🕫 : Ø
Environment Details	Select PeopleTools Release		- 6	
Manage Attributes		Issue List	- 88	\$
Manage PUM Connections		Notifications Please apply the PRP2 fix to run HCM Environment Update	- 88	
Manage POM Connections		Description Please apply the PRP2 fix to run HCM Environment Update	- 88	
Apply PeopleTools Patch		Priority warning	- 88	
Upgrade PeopleTools	Microsoft Windows Client VM	Patch Infomation	- 88	
Provision Task Status	Windows Client VM of this environm	Patch UPD-CDM: PI11-PRP02 COMMON CHECK-IN	- 88	
		Patch Type MOS - PRP	- 88	
Policies		Release 9.1	- 88	
Logs		Cloud Manager Version 11	- 88	
	Note – Updated Change Assistant w	Patch Size 19.53 MB	- 88	
	Update	Patch State AVAILABLE	- 88	
			- 88	
			- 88	
	m	Issue List	- 88	
	W	Notifications Please apply the PRP2 fix to run Environment Update with tools verson great	ter tha	
		Description Please apply the PRP2 fix to run Environment Update with tools verson great	ter tha	
		Priority warning	- 88	
		Patch Infomation	- 88	
		Patch UPD-CDM: PI11-PRP02 COMMON CHECK-IN	- 88	
		Patch Type MOS - PRP	- 88	
		Release 9.1	- 88	
		Cloud Manager Version 11	- 88	
		Patch Size 19.53 MB	- 88	
		Patch State AVAILABLE	- 88	
			- 88	
			- 88	
			- 88	
		Cancel Ignore and continue	- 18	
			v	
	(>	

Cancel

Select to cancel.

Apply the patch using the Manage Updates page.

Ignore and continue

Select to ignore the notification and continue.

Chapter 6

Using the Lift and Shift Process to Migrate On-Premise Environments to Oracle Cloud

Understanding the Lift and Shift Process

The Lift and Shift process in Cloud Manager enables the automated migration of on-premise PeopleSoft environments to Oracle Cloud. Migration to Cloud is achieved in two steps:

 Lift: Using the lift utility provided in Cloud Manager, PeopleSoft Application environment data (for example, PS_APP_HOME, PS_CUST_HOME) is packaged into DPK format and PeopleSoft Oracle database is backed up using RMAN and uploaded to Oracle Object Storage.

The Lift utility provided in Cloud Manager lifts the application tier (middle tier) and packages it into a DPK. The database tier is independently packaged into a separate DPK.

Cloud Manager supports database lift using hot backup. Hot backup is performed with RMAN (Recovery Manager) using Oracle Database Cloud Backup Module (ODCBM) that is bundled with the lift utility.

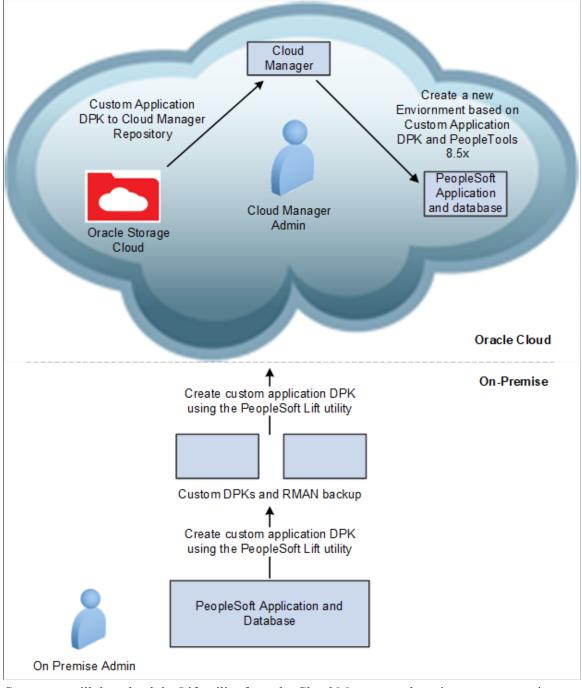
Note: The DPKs that were lifted using older versions of CM, may not be successfully shifted in later CM versions.

• Shift: Cloud Manager downloads the lifted DPKs and RMAN backup. It then creates a new environment on Oracle Cloud. Once shifted, customers can use Cloud Manager to further manage, scale up or scale down or clone these environments.

Note: Before doing a Shift action, Lift and Shift topology must be updated with the right VM shapes for each node.

Image: Lift and Shift Process

Overview of the Lift and Shift process



Customers will download the Lift utility from the Cloud Manager and run it on an on-premise environment to create and upload customer application DPKs to the Oracle Cloud Service. Then using Cloud Manager, they use the customer application DPK to create a running application environment intact with all the customizations that have been done on-premise. It is a two-step process that simplifies days of laborious tasks. The Lift and Shift process is helpful to migrate many of your different environments such as demo, development, test and training environments to the Oracle Cloud. Once an environment has been lifted, you can provision as many separate instances as you need. To migrate a PeopleSoft environment from on-premise to Oracle Cloud using Cloud Manager, it must be on Linux (OEL/RHEL) 6 or above, running application version 9.2 or above. The database must be on Oracle 12c or above and PeopleTools version 8.55 or above.

Using the Lift Process to Migrate an Environment to the Oracle Cloud Infrastructure (OCI)

Pages Used to Migrate the Environment to Oracle Cloud

Page Name	Definition Name	Usage
Lift and Shift Tile	ECL_LAS_HOME_FL_GBL (CREF for the tile)	To access Lift and Shift landing page.
Lift and Shift Page	ECL_LAS_HOME_FL	The landing page containing the lift utility and the lifted containers.

Lift and Shift Tile

Use the Lift and Shift tile (ECL_LAS_HOME_FL_GBL) to access Lift and Shift landing page. The Lift and Shift tile is delivered as part of the Cloud Manager home page.

Image: Lift and Shift Tile

This example illustrates the Lift and Shift tile.

Lift and Shift	

Lift and Shift Page

Use the Lift and Shift landing page (ECL_LAS_HOME_FL_GBL) to view and access the lifted environments (uploaded customer DPKs in Oracle Cloud for Cloud Manager).

Navigation

Click the Lift and Shift tile on the delivered Cloud Manager Fluid Home page. The Lift and Shift page is displayed.

Image: Lift and Shift page

This example illustrates the fields and controls on the Lift and Shift page.

oud Manager			Lift and	Shift				: 🍽 🏫	Ø
tility									
kage your environ	ment into Customer Applic	ation DPK and upload to Orac	le Cloud using Lift Utility	oud.					
formation on how t	o lift an on-premise enviror	nment refer to help pages.							
load Lift Utility - 🛄	FT_UTILITY.ZIP								
able Applicatio	n packages from Oracle	e Cloud Storage							
t Object Store Ite	ms								
r object otore ne								1	13 row
Name 🗘	TDE Enabled \Diamond	Character Set 🗘	National Character Set 🗘	Type 🗘	Platform \diamond	Size 🗘	Uploaded On 🛇	Action \Diamond	
GP856	FALSE	UTF8	AL32UTF8	HCM	linux	2.20 GB	02/05/2018 19:43:54	Action 😔	
ELVINI	TRUE	UTF8	AL32UTF8	HCM	linux	3.17 GB	02/26/2018 07:52:39	Action 😔	
ELVINII	FALSE	UTF8	WE8ISO8859P1	HCM	linux	4.30 GB	02/26/2018 12:00:04	Action 🕑	
IRWPDB3	FALSE	UTF8	AL32UTF8	HCM	linux	1.91 GB	02/02/2018 09:43:45	Action 🕑	
NC85515	FALSE	UTF8	WE8ISO8859P1	HCM	linux	6.17 GB	01/08/2018 18:45:10	Action 🕑	
NTDE855	FALSE	UTF8	AL32UTF8	HCM	linux	1.68 GB	01/08/2018 18:46:11	Action 🕑	
NUNI856	FALSE	UTF8	WE8ISO8859P1	HCM	linux	12.39 GB	01/08/2018 18:45:10	Action 😔	
	ikage your environ aded DPKs will b formation on how fi load Lift Utility - 11 able Application t Object Store Ite Name ○ GP856 ELVINI ELVINI IRWPDB3 NC85515 NTDE855	Name TDE Enabled GP866 FALSE ELVINI FALSE INVPDB3 FALSE NC85515 FALSE	Name o TDE Enabled o Character Set O GP866 FALSE UTF8 ELVINI TRUE UTF8 IRWPDB3 FALSE UTF8 NC68515 FALSE UTF8 IRVPDB3 FALSE UTF8	Name o TDE Enabled o Character Set o National Character Set o Reprod TDE Enabled o Character Set o AL32UTF8 ELVINI TRUE UTF8 AL32UTF8 ELVINI FALSE UTF8 AL32UTF8 Noc85515 FALSE UTF8 AL32UTF8	Name of TDE Enabled of Character Set of	Name of TDE Enabled of Character Set Output Set Outpu	Name of TDE Enabled of Character Set Oracle Cloud using Lift Utility. Name of TDE Enabled of Character Set Oracle Cloud using Lift Utility. Name of TDE Enabled of Character Set Oracle Cloud using Lift Utility. Name of TDE Enabled of Character Set Oracle Cloud using Lift Utility. Name of TDE Enabled of Character Set Oracle Cloud. State Set Oracle Cloud.	Note that the set of th	Automation of the process is also step process. Image of the process is also step process is also step process is also step process. Image of the process. Image o

Note: Currently, in PeopleSoft Cloud Manager, an updated version of the Lift utility is available that captures more details from on premise environment. DPKs that were lifted earlier using Lift Utility from Cloud Manager Image 8 or older can no longer be deployed in Cloud Manager Image 10. Hence, you must delete those old DPKs and do a lift operation again on the on-premise environments.

Name	Name of the lifted environment.			
TDE Enabled	Whether the database has encrypted tablespaces or not.			
Character Set	The database character set used for lift operation.			
National Character Set	Whether the database is unicode or non unicode. AL32UTF8 indicates unicode database and the value WE8ISO8859P1 indicates non unicode database.			
Туре	Shows the PeopleSoft application product pillar.			
Platform	Indicates the Operating System platform.			
Size	Total size of the lifted DPKs.			
	Note: Assume that if the lifted DPK size is K, then the disk size should be 2.5 times K.			
Uploaded On	The date and time on which the DPKs were uploaded in Oracle Cloud.			
Action	Use this button to perform a variety of related actions, such as viewing the details of each of the lifted DPKs, provisioning a new environment, and to delete a lifted DPK.			

List Object Store Items

Click this button to refresh the lifted application list and make it current.

Downloading the Lift Utility

Navigate to the Lift and Shift page and click on the LIFT_UTILITY.ZIP. Please make sure you have applied any PRPs or fixes to Cloud Manager before downloading the utility. Copy the utility to the on-premise PeopleSoft system that needs to be migrated.

Image: Lift and Shift page

This example illustrates the link to the Lift utility.

Cloud Manager	Lift and Shift	Â	9 5	:	۲
Lift Utility					
1. Package your envir 2. Uploaded DPKs wil	ft environment from your data center is a two step process. onment into Customer Application DPK and upload to Oracle Cloud using Lift Utility. I be listed below. Select "Create Environment" action to initiate environment provisioning on Oracle Cloud. v to lift an on-premise environment refer to help pages. LIFT_UTILITY.ZIP				

Installing Lift Prerequisites

Required Lift Prerequisites Applications

Lift prerequisite applications include:

- Python 3.6
- YUM Modules (gcc, libffi-devel, openssl-devel, zlib, wget)
- PIP Modules (oci-cli, pyyaml, xmltodict, requests, ensurepip)
- Java 1.8 (For database tier instance for RMAN)

Using the Automatic Lift Prerequisite Utility

The Lift prerequisite install feature will verify and install the applications required to perform Application Lift and Database (RMAN) Lift based on the user input.

This Lift prerequisite validation will be triggered in silent mode when the user triggers the Lift utility (psft-osl.sh) to validate the user environment before invoking the Lift to OCI.

Warning! Automatically installing the pre-requisites may update or overwrite any existing version on the system. Please review the packages that will be installed automatically.

Requirements for using this utility:

- Ensure the necessary proxy and ports are set in order to access Internet, download and install the required prerequisite applications.
- Script must be triggered by the root user to install the applications.
- If the customer doesn't permit installation or in an event of failure during installation, the script will exit and the customer would need to install the prerequisites manually.

See Manually Installing Lift Prerequisites

To automatically install the Lift prerequisite applications:

- 1. Download and copy the Lift Utility to the On Premise instance.
- 2. Login as root to the On Premise instance.
- 3. Extract the Lift utility zip to a temporary folder and set full permissions to the folder.

```
$ mkdir /tmp/CM9_LIFT
$ unzip LIFT_UTILITY.zip -d <LIFT_UTILITY_PATH>
$ chmod -R 777 <LIFT_UTILITY_PATH>
```

- 4. Navigate to the below path:
 - \$ cd <LIFT_UTILITY_PATH>/setup
- 5. Trigger the Lift Prerequisite install script.

\$ sh psft-lift-setup.sh

6. Generate the Oracle Cloud Infrastructure Auth Token. See <u>Generating Oracle Cloud Infrastructure</u> <u>Auth Token</u>.

Script Examples for Automatic Lift Prerequisite Utility

When you run the utility, it will ask if this is a database environment or an application environment.

```
Is <environment> a Database Environment: (yes/no):
```

• Application environment (answer no at above prompt)

The system will scan the environment and indicate the applications that need to be installed.

•

Image: Example PeopleSoft Lift Prerequisite Setup Script for Application Environment

This example illustrates applications that are required for an application lift.

PeopleSoft Lift Pre-requsite Setup Script
Scanning the environment to install PeopleSoft Lift Pre-requisite applications:
Python 2.6.6
=====> Need to Install Python 3.6.2 Python 2.6.6
======> Need to Install ensurepip oci-cli pyyaml xmltodict requests pip modules
Above are the identified applications that need to be installed. If installing these applications impacts the behaviour of elv3262603-lnxft-1 host please exit this script and manually install the above listed applications
Enter 'yes' to Confirm Installing the above applications:

Database environment (answer yes at above prompt)

The system will scan the environment and indicate the applications that need to be installed.

Image: Example PeopleSoft Lift Prerequisite Setup Script for Database Environment

This example illustrates applications that are required for a database lift.

PeopleSoft Lift Pre-requsite Setup Script
elv3262603-lnxft-1 is confirmed as a Database environment
Do you want to setup elv3262603-lnxft-1 environment for RMAN Lift:(yes/no): yes
Scanning the environment to install PeopleSoft Lift Pre-requisite applications:
Python 2.6.6
=====> Need to Install Python 3.6.2 Python 2.6.6
=====> Need to Install ensurepip oci-cli pyyaml xmltodict requests pip modules
=====> Need to Install Java 1.8
Above are the identified applications that need to be installed. If installing these applications impacts the behaviour of elv3262603-lnxft-1 host please exit this script and manually install the above listed applications
Enter 'yes' to Confirm Installing the above applications:

• To confirm installing the applications, enter yes at the prompt.

Enter 'yes' to Confirm Installing the above applications:

Warning! If installing the applications impacts the behavior of your environment, then enter no. You will need to install the applications manually.

During installation of the prerequisite applications the utility will prompt for user confirmation, in order to continue installing certain dependencies. Not installing dependencies may result in Lift failure.

When all the applications are successfully installed, you will get a message "Complete!".

Image: Example Lift Prerequisites Complete

This example illustrates all desired applications for PeopleSoft Lift are installed.

<pre>Verifying : libfortenc-1.1.2-3.el6.x86_64 Verifying : lkstp=tois=1.e.1.67.al5.x86_64 Verifying : strg=11-forts=1ye1.7.2.1.el6.noarch Verifying : gtk=2.1.4.2.3.9.el6.x86_64 Verifying : paper.1.a.5.acmedde=1.8.0.201.t00=2.el6_10.x86_64 Verifying : libkc=2.3.2.el6.x86_64 Verifying : libkt=3.2.2.el6.x86_64 Verifying : libkt=3.2.2.el6.x86_64 Verifying : stk=3.4.6.1.2.3.el6.x86_64 Verifying : stk=3.4.6.1.el6.x86_64 Verifying : stk=3.4.6.1.el6.x86_64 Verifying : gtk=3.6.3.el6.x86_64 Verifying : gtk=3.6.3.el6.x86_64 Verifying : gtk=3.6.3.el6.x86_64 Verifying : gtk=3.6.3.el6.x86_64 Verifying : gtk=3.6.3.el6.x86_64 Verifying : gtk=3.6.3.el6.x86_64 Verifying : gtk=3.6.3.el6.x86_64</pre>		1 1 1 1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2
java-1.8.6-openjdk.x86_64 1:1.8.0.201.b09-2.e16_10 Dependency Installed: atk.x86_64 0:1.3.0.9-1.e16 gtf7:b.x86_64 0:1.8.8-5.e16_6 gtf7:b.x86_64 0:1.2.6-2.e16 libXffixes.x86_64 0:1.7.5-3.1.e16 libXffixes.x86_64 0:1.2.3-2.e16 libXfixes.x86_64 0:1.2.2-2.e16 libXfixes.x86_64 0:1.2.2-2.e16 libXfixes.x86_64 0:1.2.2-2.e16 libXfixes.x86_64 0:1.2.2-2.e16 libXfixes.x86_64 0:1.2.2-2.2-2.e16 libXfixes.x86_64 0:1.2.2-2.2-2.e16 libXfixes.x86_64 0:1.2.2-2.2-2.2-2.2-2.2-2.2-2.2-2.2-2.2-2-2.2-2-2.2	fontconfig.x86_64 0:2.8.0-5.el6 hicolor-icon-theme.narch 0:0.11-1.1.el6 libXtrsor.x86_64 0:1.1.4-2.1.el6 libXfr.x86_64 0:2.3.2-1.el6 pango.x86_64 0:2.3.2-1.el6 tzdata-java.noarch 0:2019a-1.el6	freetype.x86_64 0:2.3.11-17.el6 java-1.8.0-openjdk-headless.x86_64 1:1.8.0.201.b09-2.el6_10 (1bXdamage.x86_64 0:1.1.2-3.el6 (1bfortenc.x86_64 0:1.1.2-3.el6 psc=\tte=\tbs.x86_64 0:1.5.2-16.el6 xorg-x11-font-utils.x86_64 1:7.2-11.el6
Complete] All desired applications for PeopleSoft Life are Installed [rootQelv3262683-inxft-1 setup]# [rootQelv3262683-inxft-1 setup]# [rootQelv3262683-inxft-1 setup]#		
[rootgelv3262883-Inxf-1 dsta]# Is -ltr total 2786 -mwrxwrmx.1 opc opc 944255 Nov 9 05:45 oci_install.jar -mwrxwrmx.1 opc opc 14312 Mar 13 10:36 puppet.rip -mwrxwrmx.1 opc opc 537 Mar 13 10:36 pstc.cm_rms.json -mwrxwrmx.1 opc opc 4976 Mar 13 10:36 noncdt, bc.pdb.sql -mwrxwrmx.1 opc opc 4976 Mar 13 10:36 noncdt, bc.pdb.sql -mwrxwrmx.1 opc opc 560 Mar 13 10:36 expet.scripts -mwrxwrmx.1 opc opc 5168 Mar 13 10:36 expet.scripts -mwrxwrmx.1 opc opc 5168 Mar 13 10:36 expet.scripts -mwrxwrmx.1 opc opc 5256 Mar 13 10:36 expet.scripts		
-maxmarma. 1 opc opc 2128 Mar 13 10:36 Mar 13.10:36 Mar 1		
<pre>('unp/LiftUtility_04pr19/data [roctpelv3252803-Inxt-1 data] ('nop/LiftUtility_04pr19/datu [roctpelv3252603-Inxt-1 setup] m pit-1ift-setup.sh</pre>		

You can list the files and view the logs that were created for the install. The logs located at <Lift_Utility>/ data/psft_lift_setup_<PID>.log

When you are ready to run the Lift Utility, it will verify that all the prerequisites have been installed.

Manually Installing Lift Prerequisites

Note: Please use the manual method in case the automated method fails to install all prerequisites.

In the On Premise PeopleSoft instance, you must perform the following steps to manually install the lift prerequisites:

1. Extract the Lift Utility in a certain path on the respective application and database instance:

mkdir -p <LIFT_UTILITY_PATH>
unzip LIFT UTILITY.zip -d <LIFT UTILITY PATH>

2. Install Python 3.6:

a. Remove any old Python files present within the lift base directory by executing the command.

```
rm -rf <LIFT_UTILITY_PATH>/lnx_python
mkdir -p <LIFT_UTILITY_PATH>/lnx_python
```

b. Install the prerequisites by executing the following commands:

```
sudo yum install gcc
sudo yum install libffi-devel
sudo yum install openssl-devel
sudo yum install zlib
sudo yum install wget
```

c. Download Python 3.6.2 by executing the following commands:

```
cd <LIFT_UTILITY_PATH>
wget https://www.python.org/ftp/python/3.6.2/Python-3.6.2.tgz
tar xzf Python-3.6.2.tgz
cd Python-3.6.2.tgz
```

d. Configure and compile the source by executing this command:

```
./configure --prefix=<LIFT_UTILITY_PATH>/lnx_python
make altinstall
```

e. Create a soft link for the Python executable by running the following commands:

```
cd <LIFT_UTILITY_PATH>/lnx_python
ln -s bin/python3.6 python
```

f. Set environment variables. Do the following:

```
export PYTHON_HOME=<LIFT_UTILITY_PATH>/lnx_python
export PYTHONPATH=<LIFT_UTILITY_PATH>/lnx_python
export PATH=<LIFT_UTILITY_PATH>/lnx_python/bin:<LIFT_UTILITY_PATH>/lnx_py⇒
thon/:$PATH
export LANG=en_US.utf-8
export LC_ALL=en_US.utf-8
```

g. Install PIP with this command:

<LIFT_UTILITY_PATH>/lnx_python/python -m ensurepip

- 3. Install the below PIP packages.
 - a. Install the oci-cli package with this command:

```
pip install oci-cli
```

b. Install PYYAML with this command:

```
pip install pyyaml
```

c. Install XMLTODICT with this command:

pip install xmltodict

4. Install Java version 1.8 (JRE) using Java Official Documentation.

Verify Java is Installed by running the below commands.

\$ java -version

```
java version "1.8.0_144"
Java(TM) SE Runtime Environment (build 1.8.0_144-b01)
Java HotSpot(TM) 64-Bit Server VM (build 25.144-b01, mixed mode)
$ echo $JAVA HOME
/usr/lib/jvm/java-1.8.0-openjdk/jre
```

5. Generate the Oracle Cloud Infrastructure Auth Token. See <u>Generating Oracle Cloud Infrastructure</u> <u>Auth Token</u>.

Performing Application Lift

Application Lift means lifting the middle tier which consists of the Application Server, Web Server and Process Scheduler of PeopleSoft Application.

- 1. Use only the PeopleSoft Admin user (for example, psadm2) to perform Application Lift.
- 2. Make sure to have sufficient free disk space for Application Lift (based on PS_APP_HOME and PS_CUST_HOME size). A minimum disk space of 10GB is required.
- 3. Ensure PS_APP_HOME and PS_CUST_HOME directories are available.
- 4. Ensure that the user running the Lift utility has the permission to create files or directories at the user's home directory, Lift utility directories, and the destination directory where the DPKs are saved, /tmp, PS_APP_HOME, and PS_CUST_HOME directories.

Note: Installing OCI-CLI is a prerequisite for the lift utility. See Installing Lift Prerequisites

To perform the one-step Lift automation procedure for the application:

- 1. Download the Lift utility from the Lift and Shift page. For this, perform the following:
 - a. Navigate to the Lift and Shift tile.
 - b. Copy the "LIFT_UTILITY.zip" utility to the target machine to perform lift.

Note: If you have recently updated Cloud Manager with any PRPs that has fixes to the lift utility, then SSH to the Cloud Manager instance and delete the stale zip file form /tmp/LIFT_UTILITY.ZIP.

2. Navigate to the below folder after extracting the LIFT_UTILITY.zip and set permissions:

chmod -R 777 <LIFT_UTILITY_PATH> cd <LIFT UTILITY_PATH>/setup

- 3. For Linux, run the sh psft-osl.sh command to perform lift.
- 4. Select 1 at the prompt to select the type of environment to lift.

Image: Application Environment Lift prompt

This example illustrates the prompt to lift the Application Environment Lift prompt.

PeopleSoft One Step Lift
Please select the type of environment to lift : 1. Application Environment (APP_HOME and CUST_HOME) 2. Database Environment
Please enter your selection: (1 or 2): 1

5. To create the PeopleSoft App Server DPK, you need to provide the database name (or PDB name in case of Oracle 12c or higher multi-tenant database) and destination directory.

Note: If the utility is unable to fetch the data from the environment (for example, app_type/ oracle_home), it will prompt the user to input the same.

6. Choose any one of the below options:

1. Create and Save DPK in APP/DB Environment.

2. Create, Save DPK in APP/DB Environment and Upload the DPK to Oracle Cloud Infrastructure (Object Storage).

- 7. If you select option 1. Create and Save DPK in APP/DB Environment, you will need to manually upload the DPK to Object Storage. See <u>Uploading the DPK Manually to Oracle Cloud Infrastructure</u>.
- 8. If option 2 to upload the DPK to Oracle Object Storage is selected, then the script prompts the user to input the Oracle Cloud tenancy credentials as mentioned below in order to upload the DPK once created:

See Locating OCI Credentials

- Oracle Cloud Infrastructure Region Name
- Oracle Cloud Infrastructure Tenancy Name
- Oracle Cloud Infrastructure Tenancy ID
- Oracle Cloud Infrastructure User ID

- Private Key Location, indicates the API signing private key that was created during CM configuration and must be copied to the instance where lift utility will be run. This input refers to the full path to the file.

- Passphrase, refers to the passphrase that was used to encrypt the API signing keys.

Note: You need to manually copy the key file or copy the key file contents and save locally in the machine where you perform the lift. This is the corresponding Private Key to the Public Key that was set in the API Keys of the user setting.

9. After Application Lift is complete, following Application DPK will be created based on the PeopleTools version on the application instance.

- For 8.55: APP-DPK-<platform>-<app_type>-<db_name>-1of2.zip

- For 8.56/8.57/8.58: APP-DPK-<platform>-<app_type>-<db_name>-1of3.zip.

Note: The APP-DPK*-3of3.zip will not be created as part of the Lift utility, however the APP-DPK*-3of3.zip DPK will be available from the PeopleTools DPK when the shift is triggered from Cloud Manager.

The Lifted DPKs created are available in the destination directory. If you had chosen to create and upload DPK to Oracle Object Storage, then the uploaded DPKs are available in Oracle Object Storage and listed in the Lift and Shift page of Cloud Manager.

Performing the Database Lift

The Database lift means lifting the database of PeopleSoft instance as a hot backup using RMAN.

Note: Database Lift using hot backup can only be performed on a database instance that has access to the internet.

It is recommended to bring the database patch level of the on-premise environment equivalent to that of the database patch level of the Oracle Database Cloud Service before starting the Lift and Shift process. If the patch levels are different, then Cloud Manager will try to either rollback or update the patch. It is possible that there could be some incompatibilities during lift and shift due to rollbacks or updates. Users will then need to manually verify and rectify it.

Installing OCI-CLI is a prerequisite for the lift utility. See Installing Lift Prerequisites

Considerations Before Running Database Lift

- 1. Lift can be performed on the DB instance (Local Lift) only.
- 2. Ensure to use only the Database owner user (for example, oracle) to perform DB Lift.
- 3. Ensure to have sufficient free disk space for DB Lift based on DB size.
- 4. Oracle versions 12.1.0.1.0 and higher are supported.
- 5. Ensure to take the back up of your Database environment and the RMAN configurations before performing DB Lift. Optionally, it is recommended to use a clone of the environment for the Lift operation.

Note: During the Lift process, the ORACLE Database will not be shut down.

- 6. Ensure to back up the ORACLE_HOME.
- 7. Ensure that the user running the lift utility has permission to create files/directories at the user's home directory, Lift utility destination directory where the DPKs are saved, /tmp, and ORACLE_HOME directory.

Note: If you want to encrypt the database before lifting using TDE, see <u>Encrypting Tablespaces Using</u> <u>Transparent Data Encryption</u>.

Using RMAN for Hot Backup Database Lift

RMAN Lift and Shift supports the following Oracle Databases:

- Oracle 12c, 18c and 19c
- Container Databases
- Unicode and Non-Unicode Databases
- TDE enabled Database
- Database on ASM

Note: During Lift and Shift with RMAN the Oracle Database Cloud Backup Module (ODCBM) is used under the hood to perform full RMAN Backup and Restore operations.

During Database Lift with RMAN the Lift Utility will create a fresh Bucket in the OCI Object storage and then the RMAN Backup of the source (On Premise) Database environment will be compressed and encrypted before being wired to the bucket in the OCI Object Storage. Along with the RMAN backup the "APP-DPK-<platform>-<app_type>-<db_name>-2of<X>.zip" is created to capture the sqlpatches, database parameter file and other metadata information.

The "APP-DPK-<platform>-<app_type>-<db_name>-2of<X>.zip" will be small, since we are not packaging the Database files (*.dbf) within this zip.

RMAN Lift and Shift does not support:

- RAC Database
- RMAN (L1) Incremental Backup.

Note: It is recommended that the DB Tier Database is started with a spfile. Ensure the Database "Archive Log Mode" is enabled (Oracle support Doc ID 371139.1). Ensure the proxy (if needed) is correctly specified and the proxy authentication does not have any special characters.

To perform an RMAN Lift of a PeopleSoft environment that was already lifted using the older version of Cloud Manager (Lift Utility), it is recommended to delete the existing Lifted DPK from the Cloud Manager "Lift and Shift" UI and then trigger a RMAN lift for the same.

Running Lift Using Hot Backup (RMAN)

To perform the Lift using Hot Backup:

- 1. Navigate to the Lift and Shift tile.
- 2. Download and copy the "LIFT_UTILITY.zip" to the target machine to perform lift.

Note: If you have updated Cloud Manager with PRP (find PRP name/number), then SSH to Cloud Manager VM and delete the stale zip file from /tmp/LIFT_UTILITY.zip.

3. Navigate to the below folder after extracting the LIFT UTILITY.zip and set permissions:

chmod -R 777 <LIFT_UTILITY_PATH>
cd <LIFT_UTILITY_PATH>/setup

4. Export Java home.

export JAVA_HOME=/tmp/java18/jre

- 5. For Linux, run the sh psft-osl.sh command to perform lift.
- 6. At the prompt "Do you want to Lift the Application Environment", enter "N" to Lift the DB instance.
- 7. At the prompt input the following:
 - Container Database name (applicable only for Multitenant database)
 - Database name
- 8. Performing Lift using Hot Backup requires the OCI details:

See Locating OCI Credentials

- Oracle Cloud Infrastructure Region Name
- Oracle Cloud Infrastructure Tenancy Name
- Oracle Cloud Infrastructure Tenancy ID
- Oracle Cloud Infrastructure User ID

– Private Key Location, indicates the API signing private key that was created during CM configuration and must be copied to the instance where lift utility will be run. This input refers to the full path to the file.

- Passphrase, refers to the passphrase that was used to encrypt the keys.

Note: You need to manually copy the key file or copy the key file contents and save locally in machine where you perform a lift. This is the corresponding Private Key to the Public Key that was set in the API Keys of the user setting.

– OCI User name

- OCI Auth Token

Note: Ensure not to delete this OCI Auth Token (for the user) from OCI console. Since the User name/Token will be used for Lift and Shift process. The OCI Auth Token is also required for an on-premise to Cloud refresh.

- OCI Infrastructure Compartment ID (OCID)
- 9. To create the PeopleSoft Database DPK, you need to provide the following:
 - Container Database name (Applicable only for Oracle 12c, 18c and 19c Multitenant database)
 - Database name
 - Number of channels (threads) for RMAN backup (Value between 1-8)
 - TDE KeyStore (Wallet) Password (If TDE is enabled on source Database)
 - RMAN Backup Encryption Password (If TDE is not enabled on source Database)
 - DB environment Proxy Host (* If Any)
 - DB environment Proxy Port (* If Any)
 - Destination Directory

Note: If the utility is unable to fetch the data from the environment, it will prompt the user to input the same.

- 10. The script will then display the details captured from the user and prompts for the user's confirmation to proceed. The utility allows the user to modify the above listed inputs, if required.
- 11. The entire execution is logged into psft_lift_session_<session_name>_<session_count>_<PID>.log file.
- 12. After DB Lift is complete, the following DB DPK will be created based on the PeopleTools version on the database instance.

- For PeopleTools 8.55: APP-DPK-<platform>-<app_type>-<db_name>-2of2.zip.

- For PeopleTools 8.56/8.57/8.58: APP-DPK-<platform>-<app_type>-<db_name>-2of3.zip.

Note: The APP-DPK*-3of3.zip will not be created as part of the Lift utility, however the APP-DPK*-3of3.zip DPK will be available from the PeopleTools DPK when the shift is triggered from Cloud Manager.

Uploading the DPK Manually to Oracle Cloud Infrastructure

During the process to upload the lifted APP DPKs to OCI Object Storage, if you chose to only create and save the DPK in the APP environment, you will need to manually upload the DPKs.

To manually upload the DPKs to OCI Object Storage:

- 1. Set the following environment variables:
 - a. export PYTHON_HOME=<*LIFT_UTILITY_PATH*>/lnx_python.
 - b. export PYTHONPATH==<*LIFT_UTILITY_PATH*>/lnx_python.

- c. export PATH=\$PATH:=<*LIFT_UTILITY_PATH*>/lnx_python/bin.
- 2. Create an OCI_Config file with the below contents:
 - a. [DEFAULT]
 - b. user=<*user OCID*>
 - c. fingerprint=<*Finger print*>
 - d. key_file=<private key file location>

Note: You can use the same API Signing Key pair that was created when setting up Cloud Manager, or you can create a new one. If you create a new pair then, you must add the newly created public API key under the User Settings using OCI UI.

- e. pass phrase=<*Passphrase for the private key*>
- f. tenancy=<*tenancy OCID*>
- g. region=<*region name*>

For example:

Image: Example of OCI_Config file

Example of OCI Config file.

3. If you are uploading for the first time, create the container psft_oci_las with the following command:

```
<LIFT_UTILITY_PATH>/lnx_python/bin/oci --config-file /tmp/oci_config os bucket>
create -ns <tenancy name> --name psft_oci_las --compartment-id <Compartment I>
D>.
```

For example,

4. Run the following command to upload the APP DPK. Replace the variables in the command with the actual file and path names:

Note: The <Bucket Name > should be *psft_oci_las*. Please do not specify any other bucket name.

```
<LIFT_UTILITY_PATH>/lnx_python/python upload_dpk_to_oci.py -d <Tenancy Name> -> c psft_oci_las -s <Source folder containing DPK file> -t <Target Folder Name>->
```

f <INI file location generated during lift operation> -g <Full path of oci con $\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!$ fig file>

Variable	Description
-d	Tenancy name to which the DPKs will be uploaded to.
-c	psft_oci_las - The container to which the DPKs will be uploaded. This value should not be changed.
-S	Source folder where the DPK files are saved during lift.
-t	Target folder Name on OCI. Should be Platform/AppType/ DBName where AppType is application type [HCM,FSCM, ELS, ELM, CRM] and DBName is the name of the database. For example: linux/HCM/MYHCMDB.
	Important! Please ensure the target folder name to be as shown in the example above. There must be no preceding or trailing '/' in the target folder path.
-f	INI file location that was generated during lift operation.
-g	Path to OCI config file that will be used to connect to OCI to upload DPKs.

Locating OCI Credentials

When performing the Lift process, you will be prompted for OCI credentials.

Locating Oracle Cloud Infrastructure Tenancy and Region Name

From the OCI home page, use the navigation menu in the upper left to navigate to your cloud resources.

To view the tenancy details, open the Profile Menu and click Tenancy:<your_tenancy_name>.



Profile menu

Image: Tenancy and Region

This example illustrates the fields and controls on the Tenancy and Region.

≡	ORACLE Cloud			Q	US East (Ashburn) 🗸	\$ 0	ē	۲	0
	т	MyCloud Edit Audit Retention Policy Edit Object Storage Settings Apply Tagta Tenancy Information Tags							~
		Tenancy Information	Home Region: US West (Phoenix)						
	ACTIVE	Aname: In:PartEngt ① Audit Retention Period: 90 Days If your recently updated the audit retention period, please allow several minutes for the value to take effect.	CSI Number: –						
		Object Storage Settings Amazon 53 Compatibility API Designated Compartment: mycloud(root) Object Storage Namespace: mycloud	SWIFT API Designated Compartment: (11)	ycloud	'(root)				

You can use the Copy link to copy the tenancy OCID.

Locating Oracle Cloud Infrastructure User ID

To view the user details open the Profile Menu and click User Settings.

Image: User Information page

This example illustrates the fields and controls on the User Information page.

E ORACLE Cloud				\bigcirc US East (Ashburn) \checkmark	1) 🗐 🌐	0
Identity » Users » User Details						Live Chat	^
	cuser_name@example.com Description:						
	Create/Reset Password Enable Multi-Factor Authentication	Edit User Capabilities Unblock	Delete Apply Tag(s)				
	User Information Tags						
	OCID:huj5vq Show Copy		Status: Active				
ACTIVE	Created: Wed, 13 Jun 2018 08:34:24 UTC		Federated: No				
ACTIVE .	Multi-factor authentication: Disabled						
	Email : 🧪						
	Capabilities						
	Local password: Yes		SMTP credentials: Yes				
	API keys: Yes		Customer secret keys: Yes				
	Auth tokens: Yes						
Resources	API Keys					No API Ke	ys
API Keys (0)	Add Public Key						
Auth Tokens (0)							
SMTP Credentials (0)		There are no AP	I Keys for this User.				
Customer Secret Keys (0)							~

You can use the Copy link to copy the user OCID.

Locating Oracle Cloud Infrastructure Fingerprint

To locate the OCI fingerprint:

1. Open the Profile Menu and click User Settings.

2. Select API keys from the menu displayed on the left.

Image: API Keys

This example illustrates the API Keys page, which contains the fingerprint.

API Key	/S		Displaying 3 API Keys
Add Public Key			
РК	Fingerprint: ce	Time Created: Wed, 23 Oct 2019 23:47:17 UTC	

Generating Oracle Cloud Infrastructure Auth Token

To generate the OCI Auth Token:

- 1. Click Profile Menu in the top-right corner of the Console, and then click User Settings.
- 2. Select Auth Tokens from the menu displayed on the left.
- 3. Click on "Generate Token" and save the Auth Token displayed.

Important! Please ensure to note or save the Auth Token immediately as you will not be able to retrieve the Auth Token once the page is closed.

This Auth Token will be needed for performing Lift and Shift.

Note: Please refrain from deleting the Auth Token after performing the Lift as this new token will be used to perform Shift. If Auth Token is deleted after performing a Lift, you will need to generate a fresh Auth Token and perform a fresh Lift .

Image: Auth Tokens

This example illustrates Auth Tokens page in OCI console.

Resources	Auth Tokens			Displaying 1 Auth Tokens
API Keys (0)	Generate Token			
Auth Tokens (1)	OCID:uxnlda Show Copy	Description: MyAuthToken	Created: Fri, 01 Nov 2019 21:20:13 UTC	
SMTP Credentials (0)	AT			000
Customer Secret Keys (0)				

Deleting Oracle Cloud Infrastructure Bucket and Objects

To delete the OCI Bucket Objects and the Bucket for RMAN Lift:

1. Delete all OCI Bucket Objects (This does not prompt for confirmation (--force))

```
oci os object bulk-delete -ns <Tenancy_Name> -bn <Bucket_Name> --config-file <⇒ oci config> --force
```

2. Delete all OCI Bucket

```
oci os bucket delete -ns <Tenancy_Name> --name <Bucket_Name> --config-file <o\Rightarrow ci_config>
```

Example:

```
Tenancy_Name = Intxxxxx
Bucket Name = PSPDB 1348135976 25092018
oci config = <oci config filepath>
oci config filepath:
 [DEFAULT]
 user=ocid1.user.oc1..aaaaaaaas2j6qedkoucwpfqdku7e7cinwue2mz6vqv6nfmk2zjinb4bv⇒
skha
 fingerprint=36:d6:c7:9b:d4:21:d7:ad:10:70:4f:58:b7:70:0f:fb
 key file=/tmp/key.pem
pass_phrase=XXXXXXXXXXX
 tenancy=ocid1.tenancy.oc1..aaaaaaaaayy35pigzces6ly7aslibgt7a4u7o3tlt42nxg4idzr⇒
sui52gma5a
 region=us-ashburn-1
 oci username=xxxxx.xxx@oracle.com
 oci token=YYYYYYYYYYYYY
 oci_tenancy_name=intxxxxx
```

Using the Shift Process to Provision the Migrated Environment on the Oracle Cloud

Use the Shift process to deploy packaged environment in Oracle Cloud.

Prerequisites

• The Lift and Shift topology must be modified with the required size and disk capacity of the database and middle-tier nodes. If shifting to DBaaS, then modify the Lift and Shift - DBaaS topology.

Note: The disk space of the database node must be configured based on the size of the lifted database. The recommended disk space on the database node is at least 2.5 times the lifted database size.

- During the Shift process, Cloud Manager can update the PeopleTools patch of the lifted environment. To update the PeopleTools patch during shift, make sure to have the required PeopleTools DPK already downloaded and available in the repository.
- The Shift process makes use of the latest PeopleSoft Image for the application type. For example, if
 your lifted environment is an HCM environment, then make sure you have the latest HCM PeopleSoft
 Image downloaded in the repository.
- Before shifting, the Lift and Shift related topologies must be edited and saved to add shape name and disk capacity where applicable.

See Editing an Existing Topology

Note: Verify the Lift and Shift topology; be sure to select the right topology based on the choice of database to be created on Compute or on DBaaS. You also need to verify the sizing and disk space based on the lifted DPK size and desired environment, a minimum allocation should be provided. For database node, you need to provide a size that is equivalent to 2.5 times of the actual lifted DPK size (not zipped).

• For Exadata database:

You need to add Cloud Manager SSH public key on all nodes. See <u>Administering Oracle Database</u> <u>Exadata Cloud Service</u>

On the Infrastructure Setting page, click the Refresh OCI Metadata button to sync the Exadata DB Systems provisioned in OCI. After refreshing the metadata, the instance will appear in the DB Systems section on the provisioning page.

- The DB Admin password and the Wallet password are the same and if the customer wishes to change the Wallet password they would need to do that manually.
- The database operator Ids used during the Shift operation should have specific permissions to perform various actions. The permissions are listed below:
 - For ACM (Automated Configuration Manager)— ACM administrator
 - For IB (Integration Broker)— Integration administrator
 - For ES (Elastic Search)— Search Administrator, Search Server, Search Developer
 - For Process Scheduler PeopleSoft Administrator, ProcessSchedulerAdmin, ReportDistAdmin
 - For Portal PeopleTools, Portal Administrator
- Supported databases are listed in the Support Matrix for Shift Provisioning on Target Database posted on the <u>PeopleSoft Cloud Manager</u> Homepage.

Pages Used to Provision the Migrated Environment on the Oracle Cloud

Page Name	Definition Name	Usage
Lift and Shift – Create Environment Wizard	ECL_LAS_GENERAL_FL	Use the Lift and Shift – Create Environment wizard to perform shift operation by means of a guided process.
Lift and Shift – Advanced Options Page	ECL_LAS_ADV_FL	Use Lift and Shift – Advanced Options page for defining target database details.
Lift and Shift – Custom Attributes Page	ECL_LAS_CUSTATR_FL	Use Lift and Shift – Custom Attributes page for defining the custom attributes as per the lifted environment.
Lift and Shift – Review and Submit Page	ECL_LAS_REVIE_FL	Use Lift and Shift – Review and Submit page to review and submit the entered environment details.

Lift and Shift Page

Once an environment is lifted, it will be available on the Lift and Shift page. Click the List Object Store Items button to view all items.

Image: Lift and Shift page

This example illustrates the fields and controls on the Lift and Shift page. You can find definitions for the fields and controls later on this page.

< c	vailable Application packages from Oracle Cloud Storage List Object Store Items Name ≜ TDE Enabled ◊ Character Set ◊ National Character Set ◊ Type ◊ Platform ◊ Size ◊ Upload ATDEDB TRUE AL32UTF8 UTF8 HCM linux 33.79 GB 04/22/2	ଜ	1	:	Ć							
.ift	Utility											
. Pi	ackage your environn	nent into Customer App	blication DPK and upload	to Oracle Cloud using Lift Utility.	ng on Oracle (Cloud.						
or i	information on how to	lift an on-premise envi	ironment refer to help pa	ges.								
ow	rnload Lift Utility - LIF	T_UTILITY.ZIP								_		
va	ilable Application	packages from Ora	cle Cloud Storage						Actions	×		
Li	ist Object Store Items	5							View Details			
	,								Create Environ	ment	35	rov
	Name ≜	TDE Enabled 🗘	Character Set 🛇	National Character Set 🗘	Type 🗘	Platform \Diamond	Size 🗘	Upload		1	n ¢	
1											n ≎ n ⊙	
1 2	ATDEDB	TRUE	AL32UTF8	UTF8	HCM	linux	33.79 GB	04/22/20	Delete			
	ATDEDB	TRUE	AL32UTF8	UTF8	HCM	linux	33.79 GB	04/22/20	Delete		n 🕑	
1 2 3	ATDEDB	TRUE	AL32UTF8 AL32UTF8	UTF8	нсм	linux	33.79 GB 22.82 GB	04/22/20	Delete 019 08:02:48	Actio	n 🕑 n 🎯	

For description of this page see Lift and Shift Page

Lift and Shift actions:

View Details	Click to verify the lift details. The type of the DB zip file (2of3. zip or 2of2.zip file) will be <i>db_rman</i> .
Create Environment	Click to Shift the environment.
	See Lift and Shift – Create Environment Wizard.
Delete	Click to delete.

Image: View Details

This example illustrates the fields and controls on the View Details page, showing the type as db_rman for the database zip file.

				View	Details					
	File Name 🗘	Name 🗘	Type 🗘	TDE Enabled ≎	Database Version ≎	Character Set ≎	National Character Set ≎	Product ≎	Uploaded On \Diamond	Version ¢
1	APP-DPK-LNX-HCM-SFTPDB-1of3.zip	SFTPDB	app	NA	NA	NA	NA	HCM	01/02/2020 06:37:31	8.57.07
2	APP-DPK-LNX-HCM-SFTPDB-2of3.zip	SFTPDB	db rman	FALSE	12.1.0.2.0	AL32UTF8	UTF8	HCM	01/05/2020 15:27:02	8.57

Lift and Shift – Create Environment Wizard

Use the Lift and Shift – Create Environment wizard (ECL_LAS_GENERAL_FL) to perform the Shift operation. The Shift operation facilitates provisioning a new environment using the lifted DPKs.

In Lift and Shift provisioning, you can:

- Select the desired topology based on DB on Oracle Cloud (Compute or DBaaS).
- Modify the sizing and disk space.

Note: The Database type must be set to DEMO on the Lift and Shift template. This field does not appear in the lift and shift provision pages.

Navigation

Click the Related Action button corresponding to the lifted application. Select Create Environment option. By default, the Lift and Shift - General Details page is displayed.

Image: Lift and Shift - Create Environment Wizard

This example illustrates the fields and controls on the Lift and Shift - General Details page.

× Exit	Lift and S	Shift	(<u>111</u>) :
General	2 Advanced Options	3 Custom Attributes	Review and Submit
New Environment Information			
Environment Name			
Description			
Template Name	Lift and Shift		
Zone	~		
Environment Name	Enter the	name of the environn	nent which you want to create.
		gth of environment r t exceed 25 character	name and identity domain name s.
Description	Enter a de	scription for the envi	ronment.
Template Name	Displays t environme	-	b be attached with the
Zone	Select the	zone on which the er	nvironment should be created.

Lift and Shift – Advanced Options Page

Use the Lift and Shift – Advanced Options page (ECL_LAS_ADV_FL) for defining target database details.

Navigation

Click step 2 or Next at the top of the Lift and Shift guided process.

Image: Lift and Shift - Advanced Options Page

This example illustrates the fields and controls on the Lift and Shift – Advanced Options page. You can find definitions for the fields and controls later on this page.

× Exit	Lift ar	nd Shift	L
(1) General	2 Advanced Options	3 Custom Attributes	Review and Submit Previous Next >
Advanced Options			
Source Data	abase SFTPDB		
Target Databas	se On DBaaS ~		
Target People Tools Ve	PeopleTools 8.57.12		
Pause after infra cre	eation NO		
Target Database On	Select th	he Target Database On ((Compute or DBaaS).
		or TDE enabled environ which cannot be change	nments, Target Database On is ed.
Target PeopleTools Version	Select the environment	he PeopleTools version ment.	to be applied on the
Pause after infra creation	complet opportu newly c	tion of the Infrastructure nity to do additional set	provisioning to pause after e task. This provides the user the tup, actions, or operations on the side of Cloud Manager before t deployment.
	deployn	5 5 1	roceed to the PeopleSoft n the related actions on the
		No (default) to continue le infrastructure layer is	provisioning the environment complete.

Lift and Shift – Custom Attributes Page

Use Lift and Shift – Custom Attributes page for defining the custom attributes as per the lifted environment.

Navigation

Click step 3 or Next at the top of the Lift and Shift guided process.

Image: Lift and Shift - Region and Availability Domains

This example illustrates the fields and controls on the Lift and Shift – Region and Availability Domains. You can find definitions for the fields and controls later on this page.

xit			Lift	and Shift		<u>(</u> 23)
	(1)		2	3	(4)	
	General		Advanced Options	Custom Attributes	Review and Sub	mit
						Previous Next
nviro	nment Attributes					
						Validate Network
- Reg	jion and Availability Domains					Validate IVetwork
						4 rov
1	Region		us-ashbum-1	~		?
2	Primary Availability Domain		evQs:US-ASHBURN-AD-1	v		?
	Default Compartment			~		
3	Default Compartment		dev_root/a	Ÿ		?
4	Default Virtual Cloud Network		vcn_ash(dev_common)	U		?
	System (Linux Midtier)					
- Mid	dle Tier					
		Credentials General Settings				
		Network Settings				
		• Network Settings			3 rows	
		Name	Value			
		1 Compartment	dev_root/ar	~	?	
		2 Virtual Cloud Network	vcn_ash(dev_comr	non) v	?	
		2	ven_esn(dev_com		?	
				~	?	
		3 Subnet For Primary Instance				
		3 Subnet For Primary Instance				

The Network Settings defaults to the compartment and VCN in the Region and Availability Domains section, these values can be changed for each tier.

See Configuring Region and Availability Domainsand Configuring Network Settings.

Image: Lift and Shift - Middle Tier Section

This example illustrates the fields and controls on the Lift and Shift – Middle Tier Section.

			Validate Netwo
Regi	ion and Availability Domains		
File	System (Linux Midtier)		
			5
	Virtual Cloud Network	v	?
	Use FSS for Linux Midtier	NO	?
	File System	Y	?
	Mount Target	₽.	?
	Export path	V	?
Alde	dle Tier		
inac		Credentials	
		General Settings	
	+ T	Network Settings	
) I	Network Security Group Settings	
	> F	Fault Domain Settings	
		Domain Settings	

Image: Lift and Shift - DB Systems Section

This example illustrates the fields and controls on the Lift and Shift - DB Systems Section.

▼DB Systems			
			8 rows
	Name	Value	
	1 Database Administrator Password	?	
	2 Database Operator Id	PS ?	
	3 Database Operator Password	?	
	4 Database Connect Id	people ?	
	5 Database Connect Password	?	
	6 Database Access Id	SYSADM ?	
	7 Database Access Password	?	
	8 RMAN Backup Encryption Password	?	
	General Settings		
	Network Settings		
	DB System Options		
	Network Security Group Settings		
	▶ Fault Domain Settings		

Image: Lift and Shift - DB Systems General Settings

This example illustrates the fields and controls on the Lift and Shift – DB Systems General Settings. You can find definitions for the fields and controls later on this page.

▼DB Systems				
	Cred			
	→ Gene	eral Settings		
				9 rows
	1	Name	Value	
	1	Database Server Port	1521	?
	2	Database Name	CDBHCM	?
	3	PDB Name	PSPDB	?
	4	Character set	AL32UTF8	?
	5	National Character set	UTF8	?
	6	Enable EM agent	NO	?
	7	Enable Multi Language	NO	?
	8	Post Provision Custom Script	×	?
	9	Pre Provision Custom Script	~	?
	Network	rork Settings		
	DB S	system Options		
	Netw	vork Security Group Settings		
	► Fault	Domain Settings		

Note: When creating a new shifted environment of a lifted RMAN backup, you must provide a different CDB name than the CDB name of the source database on which the RMAN lift was performed. The shift will fail if the same CDB name is used.

Image: Lift and Shift – PeopleSoft Client Section

This example illustrates the fields and controls on the Lift and Shift – PeopleSoft Client Section.

		1 row
Name	Value	
1 Windows Administrator Password		?
General Settings		
Network Settings		
Network Security Group Settings		
▶ Fault Domain Settings		

Enter the custom attributes as per the lifted on-premise environment. It is recommended that the custom attribute values entered on this page match the on-premise configuration.

For details on custom attributes, see Environment Attributes Details for OCI Environments Page.

Character Set Section

The Character Set and National Character Set attributes are configured with values same as the onpremise database configuration.

Note: The database character sets to be used for the Shift operation are AL32UTF8 and National Character Set AL16UTF16. Possible values of National Character Set when character set is AL32UTF8 are AL16UTF16 and UTF8. There can be multiple possible values of character set such as UTF8 WE8ISO8859P15. If shifting to DBaaS, you need to modify the character sets based on the database selected.

If the customer is using the Cloud Manager UI to initiate a DBCS Shift; the "DBaaS Charset" and "DBaaS National Charset" configuration (under Database Tier section) should match with the "Charset" and "National Charset" of the Database environment where the DB Lift operation is performed. If there is any mismatch in the Charset data, the DBCS shift will fail.

To find the Charset and National Charset information from the lifted environment, run the below SQL commands on the DB (lifted) environment.

select VALUE from nls_database_parameters where parameter='NLS_CHARACTERSET'; select VALUE from nls_database_parameters where parameter='NLS_NCHAR_CHARACTERSET'; Output: SQL> SELECT value\$ FROM sys.props\$ WHERE name = 'NLS_CHARACTERSET' ; VALUE\$ AL32UTF8 SQL> SELECT value\$ FROM sys.props\$ WHERE name = 'NLS_NCHAR_CHARACTERSET'; VALUE\$ UTF8

Lift and Shift – Review and Submit Page

Use the Lift and Shift – Review and Submit page (ECL_LAS_CUSTATR_FL) to review and submit the entered environment details.

Navigation

Click step 4 or Next at the top of the Lift and Shift guided process.

Image: Lift and Shift - Review and Submit page

This example illustrates the fields and controls on the Lift and Shift – Review and Submit page.

× Exit		Lift an	d Shift		▶ 244
(1)		2	3		
General		Advanced Options	Custom Attributes	Re	view and Submit
					<pre></pre>
New Environment Informat	ion				^
	Environment Name	demo1			
	Environment Description				
	Zone	Test			
Advanced Options					
	Source Database	HCMDB			
	Target Database On	DBaaS			
	Target People Tools Version	8.57.07			
▼Environment Attributes					
Region and Availability Dor	nains				
→ Middle Tier					
	➡Credentials				
				5 rows	
	Name		Value		
	1 Weblogic Administrator U	sername	system		
	2 Weblogic Administrator P	assword	******		

Review the details that were entered for the environment.

Click the Submit button to initiate the creation of a lifted environment in Oracle Cloud based on the details provided.

Once the environment is ready, you will be able to view it under the Environments tile. For details, see <u>Environments Tile</u>.

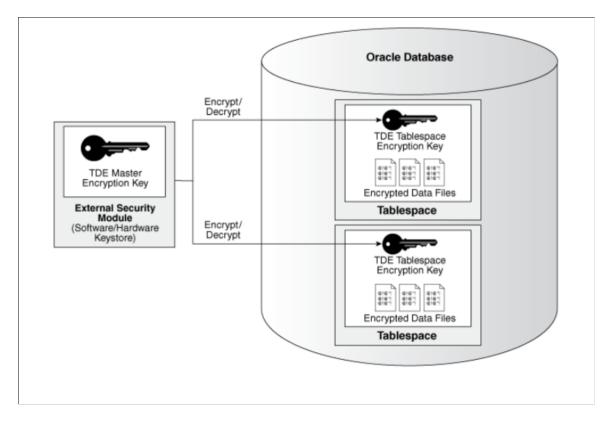
Migrating TDE Enabled Database to Oracle Cloud Using PeopleSoft Cloud Manager

Transparent Data Encryption (TDE) enables customers to encrypt sensitive data, such as Personally Identifiable Information (PII), that are stored in tables and tablespaces.

After the data is encrypted, this data is transparently decrypted for authorized users or applications when they access this data. TDE helps protect data stored on media (also called data at rest) in the event that the storage media or data file is compromised.

Image: Transparent Data Encryption for Cloud Manager

This is a graphical representation of the Transparent Data Encryption for Cloud Manager.



Prerequisites

Below requirements must be satisfied to successfully migrate a TDE enabled database.

- Database being migrated must have TDE enabled and required tablespaces already encrypted.
- Minimum PeopleTools version on the on-premise environment must be 8.55.20. On-premise environments on any version of PeopleTools 8.56 and above are supported.
- Minimum PeopleTools version on the Shifted environment must be 8.55.20.
- Database must be on Oracle 12c, 18c or 19c container.
- Must be a Unicode, non-RAC and non-ASM database.
- Must have a subscription to OCI DBaaS.
- Migration to Compute instance is not supported.
- Remote lift is not supported on TDE.

Lifting TDE Encrypted Database

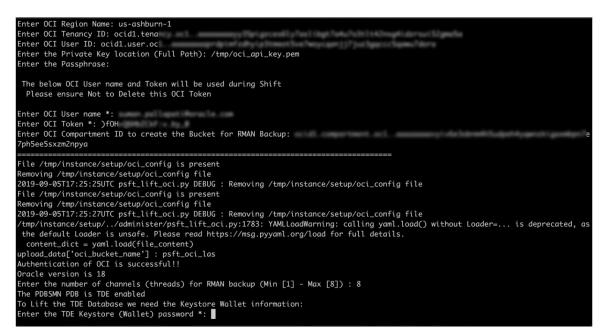
After the lift process is completed, DPKs are created and the TDE Encryption Keys are exported to a file. This exported file must be securely stored and later provided as input when deploying the lifted DPKs.

1. Download the latest lift utility.

- 2. Copy and extract the utility on the on-premise environment.
- 3. Run the lift utility to package database and middle-tier environment into DPKs. The Lift utility when triggered on a TDE Enabled Database prompts for TDE Keystore (Wallet) Password.

Image: Lift Utility for TDE enabled database

This example illustrates the Lift Utility for TDE enabled database which prompts for the TDE Keystore (Wallet) password..



4. Lift utility uploads the DPKs to Oracle Cloud Infrastructure Object Storage.

See Running Lift Using Hot Backup (RMAN) .

5. The TDE encryption wallet directory will be packaged on the on-premise system in a zip file under / <LIFT_UTILITY_PATH>/data/masterkey.zip. The lift log file will have the path to the zip file as shown in the example below. This zip file must be backed up and available when shifting.

Image: Lift Log File

Lift Log File (/<Lift_Utility>/data/psft_lift_session_<PDBNAME>_<SESSIONID>_<PID>.log)

Shifting TDE Encrypted Database

After the lifted DPKs are uploaded to Oracle Cloud Infrastructure Object Storage, navigate to the Lift and Shift page in Cloud Manager and click the button to 'List Object Store Items' to refresh the list. Follow below steps to deploy the lifted DPKs.

1. Securely copy the TDE encryption key export file (masterkey.zip, this should be accessible for psadm2 users) to Cloud Manager instance using your favorite SCP tool.

Note: The length of the path to the zip file must be less than 30 characters.

- 2. Identify the lifted DPK that must be shifted and initiate shift process by selecting 'Create Environment' in the Actions menu.
- 3. Provide all the New Environment Information and click Next.
- 4. In Advanced Options, 'Target Database On' Option is set to DBaaS. Compute option is not supported when migrating a TDE encrypted database. Select the PeopleTools patch version and click Next.

Image: Lift and Shift – Advanced Options page

This example illustrates the fields and controls on the Lift and Shift - Advanced Options page.

× Exit		L	Lift and Shift			(<u>199</u> :
1-		2		3		
General	A	dvanced Options		Custom Attributes	Review and Submit	
					Previous	Next >
Advanced Options						
	Source Database	ATDEDB				
	Target Database On	DBaaS	\sim			
	Target People Tools Version	PeopleTools 8.57.15	~			
	Pause after infra creation	NO				
Advanced Options	Target Database On Target People Tools Version	DBaaS PeopleTools 8.57.15	> *			

Note: Minimum PeopleTools version on the Shifted environment is 8.55.20.

5. In Custom Attributes page, TDE related inputs are listed under DB Systems > Credentials. Provide the path to the masterkey.zip file from step 1 as input to TDE Master Key file location and the secret password. Provide all other required inputs and click Next.

Note: User is only prompted for TDE Wallet password during Lift, however during Shift the user will be prompted for both TDE Wallet and Master Key secret passwords. Master key secret password is user specific with no restrictions.

Image: TDE Specific Fields in Custom Attributes Page

This example illustrates the fields and controls on the TDE Specific Fields in Custom Attributes Page.

8 TDE Enabled	YES	?
9 TDE Master Key file Location		?
10 TDE Master Key secret password		?
11 Source TDE Keystore (Wallet) password		?

6. Finally, review all inputs and submit the request to start provisioning the lifted DPKs.

Shifting to RAC on DBaaS

Cloud Manager only supports shift to RAC on DBaaS.

Before shifting the database to RAC, you must modify the Lift and Shift - DBaaS topology with the required shape, and disk capacity of the database and middle-tier nodes.

Note: The VM shape needs to be supported for RAC (2-node DB system). During Shift, Multi node RAC provisioning needs DHCP Options to be set as "DNS Type: Internet and VCN Resolver" for database subnet.

See Editing an Existing Topology

In order to shift to RAC in OCI, follow the procedure for shifting the migrated environment to the Cloud. See <u>Using the Shift Process to Provision the Migrated Environment on the Oracle Cloud</u>.

• On the Lift and Shift – Advanced Options page, select *DBaaS* for Target Database On field.

Note: Refer to the Support Matrix for Shift Provisioning on Target Database posted on the <u>PeopleSoft</u> <u>Cloud Manager Home Page</u>.

• On the DB System Options page, the Node Count must be 2.

The number of nodes in the database system depends on the shape you select. The shape selected in the topology must support 2 nodes.

Image: DB System Options

This example illustrates the fields and controls on the DB System Options.

▼D	B System Options		
			7 rows
	Name	Value	
1	Software Release	Oracle Database 12c Release 2	
2	Display Name	HR Production DB	
3	Auto Backup	<u>NO</u> ?	
4	License Type	License Included ~	
5	Node Count	2 ~ ?	
6	Software Edition	Enterprise Edition - Extreme Performance ?	
7	Cluster Name	hrproddb ?	

Encrypting Tablespaces Using Transparent Data Encryption

Note: The procedure explained below to encrypt an existing database must be performed on the source environment before performing the lift.

This topic summarizes the procedure to enable Transparent Data Encryption (TDE) Tablespaces Offline Encryption for an Oracle PeopleSoft Applications database. This process is referred to as using the *Fast Offline Conversion* method to convert existing clear data (residing in non TDE encrypted tablespaces) to TDE encrypted tablespaces. In order to use this feature, the PeopleSoft Applications database requires downtime, as the tablespace(s) to be encrypted need to be temporarily offline. As the encryption is transparent to the application, code does not have to be rewritten, and existing SQL statements work as they are. Transparent also means that any authorized database session can read the encrypted data without any problem: the encryption only applies to data-at-rest, meaning the database data files and any backups of them.

This new functionality, introduced in Oracle release 12.2, is enabled by a patch for 12.1.0.2 that can be downloaded from Oracle Support. See My Oracle Support Knowledge Document 2148746.1 for the specific patch number(s) along with instructions on how to access the patch. Once installed, the patch enables offline, in-place TDE conversion of data files. This process is the recommended Oracle Maximum Availability Architecture best practice for converting to TDE with minimal downtime and the least complexity.

Prerequisites

- This procedure can be used with Oracle PeopleSoft Applications Database on Enterprise Edition Version 12.1.0.2 through 19c.
- Refer to <u>My Oracle Support Knowledge Document 2148746.1</u> for the most recent information on the patch required to enable this process, and the procedure to apply it to an Oracle PeopleSoft Applications database.
- Understand TDE implications and restrictions and develop a process for maintaining wallets and keys. Refer to the *Oracle Database Advanced Security Administrator's Guide* for further details.
- Ensure the compatible database parameter is set to the appropriate database version, 12.1.0.2 or above.
- Always take a full backup of your database before starting the procedure.

TDE Offline Datafile Encryption Restrictions

The following restrictions apply to implementing Tablespace Encryption using Fast Offline Conversion:

- It can only be performed for application tablespace data files. SYSTEM, SYSAUX, UNDO and TEMP tablespaces cannot be encrypted.
- External Large Objects (BFILEs) cannot be encrypted using TDE tablespace encryption because these files reside outside the database. PeopleSoft applications do not utilize BFILEs.

Procedure to Perform TDE Tablespace Offline

To perform TDE Tablespace Offline Encryption for an Oracle PeopleSoft Applications database, follow the steps below:

- Shut down application server processes. Shut down all Applications server processes and make sure all jobs are completed cleanly before continuing further. Users should be prevented from using the Applications database until the encryption process is completed.
- 2. Source your Oracle PeopleSoft Applications Database Oracle Home.
- Create a wallet by specifying the wallet location in the sqlnet.ora file under the \$TNS_ADMIN directory:
 - a. Add the following entry to the sqlnet.ora:

```
ENCRYPTION_WALLET_LOCATION = (SOURCE = (METHOD = FILE) (METHOD_DATA = (DI⇒
RECTORY = $ORACLE_HOME/admin/TDE/$ORACLE_SID)))
```

b. Create the corresponding directory manually:

```
$ mkdir -p /$ORACLE_HOME/admin/TDE/$ORACLE_SID
```

c. Check wallet location and status:

```
$ sqlplus / as sysdba;
SQL>select * from V$encryption wallet;
```

4. Create a Keystore in the wallet.

```
SQL>ADMINISTER KEY MANAGEMENT CREATE KEYSTORE '/$ORACLE_HOME/ADMIN/tde/$ORACLE⇒
_SID' IDENTIFIED BY "<Strong password>";
```

5. Open the Keystore create in step 4. As we are in a multitenant environment, we have to specify CONTAINER=ALL in order to set the keystore in all the PDBs:

SQL>ADMINISTER KEY MANAGEMENT SET KEYSTORE OPEN IDENTIFIED BY PASSWORD CONTAIN \Rightarrow ER=ALL;

6. Set the master encryption key:

```
SQL>ADMINSTER KEY MANAGEMENT SET KEY IDENTIFIED by "<Strong password>" CONTAIN\Rightarrow ER=ALL;
```

Note: The password must be enclosed in double quotes as shown.

7. Bounce the database:

```
SQL> shutdown normal;
SQL> exit;
```

8. Startup the database normally, ensuring that the wallet is open:

```
sqlplus "/ as sysdba"
SQL>startup;
SQL>ADMINISTER KEY MANAGEMENT SET KEYSTORE OPEN IDENTIFIED BY "<Strong passwor⇒
d>" CONTAINER=ALL;
```

9. Switch to the PeopleSoft PDB.

SQL> ALTER SESSION SET CONTAINER=<PDBNAME>;

10. Identify all the temporary and undo tablespaces in the database:

```
SQL>select tablespace_name from dba_tablespaces where contents='TEMPORARY' and⇒
STATUS='ONLINE';
SQL>select tablespace_name from dba_tablespaces where contents='UNDO' and STAT⇒
US='ONLINE';
```

11. While still in the PDB, generate three scripts which will be used perform the TDE offline data conversion.

ALTDATAFILESOFFLINE.SQL

ALTDATAFILESENCRYPT.SQL

ALTDATAFILESONLINE.SQL

a. Script one takes specific data files offline. Create a script file with the following statements and save file as generatealtdatafilesoffline.sql.

```
sqlplus "/ as sysdba"
SET LINESIZE 256
SET HEADING OFF;
SET TERM OFF;
SET FEED OFF;
SPOOL ALTDATAFILESOFFLINE.SQL
select 'alter database datafile '''|b.file name|| ''' offline;'
from dba_tablespaces a, DBA_DATA_FILES b
where a.tablespace name not in ('SYSTEM','SYSAUX','TEMP','PSTEMP','PSGTTO⇒
1') and a.tablespace name=b.tablespace name
Spool off
Exit.
If you call the generation script GENERATEALTDATAFILESOFFLINE.SQL using @⇒
from SQLPLUS, then you will not have to do any additional editing of the⇒
generated script.
SQL>alter session set container=<PDBNAME>
System altered.
SQL>@generatealtdatafilesoffline.sql
Disconnected from Oracle Database 12c Enterprise Edition Release 12.1.0.2⇒
.0 - 64bit Production
With the Partitioning, OLAP, Advanced Analytics and Real Application Test⇒
ing options
Ś
```

b. Script two offline encrypts data files offline. Create a script file with the following statements and save file as generatealtdatafilesencrypt.sql.

```
sqlplus "/ as sysdba"
SET LINESIZE 256
SET HEADING OFF;
SET TERM OFF;
SET FEED OFF;
SPOOL altdatafilesencrypt.sql
select 'alter database datafile '''||b.file_name|| ''' ENCRYPT;'
from dba_tablespaces a, DBA_DATA_FILES b
where a.tablespace_name not in ('SYSTEM','SYSAUX','TEMP','PSTEMP','PSGTTO⇒
1')and a.tablespace_name=b.tablespace_name
;
Spool off
Exit
If you call the generation script GENERATEALTDATAFILESENCRYPT.SQL using @⇒
```

```
from SQLPLUS, then you will not have to do any additional editing of the⇒
generated script.
SQL>alter session set container=<PDBNAME>;
System altered.
SQL>@generatealtdatfilesencrypt.sql
Disconnected from Oracle Database 12c Enterprise Edition Release 12.1.0.2⇒
.0 - 64bit Production
With the Partitioning, OLAP, Advanced Analytics and Real Application Test⇒
ing options
S
```

c. Script three brings data files back online. Create a script file with the following statements and save file as generatealtdatafilesonline.sql.

```
sqlplus "/ as sysdba"
SET LINESIZE 256
SET HEADING OFF;
SET TERM OFF;
SET FEED OFF;
SPOOL altdatafilesoonlineexec.sql
select 'alter database datafile '''|b.file name|| ''' online;'
from dba tablespaces a, DBA DATA FILES b
where a.tablespace_name not in ('SYSTEM','SYSAUX','TEMP','PSTEMP','PSGTT0⇒
1') and a.tablespace name=b.tablespace name
Spool off
Exit
If you call the generation script GENERATEALTDATAFILESONLINE.SQL using @ \Rightarrow
from SQLPLUS, then you will not have to do any additional editing of the \Rightarrow
generated script.
SQL>alter session set container=<PDBNAME>;
System altered.
SQL>@generatealtdatafilesonline.sgl
Disconnected from Oracle Database 12c Enterprise Edition Release 12.1.0.2⇒
```

```
.0 - 64bit Production
With the Partitioning, OLAP, Advanced Analytics and Real Application Test⇒
ing options
S
```

d. Then get back to root or the CDB level.

SQL> ALTER SESSION SET CONTAINER=CDB\$ROOT;

e. Close the PDB. We want the state to be in 'MOUNT' mode.

SQL> ALTER PLUGGABLE DATABASE <PDBNAME> CLOSE IMMEDIATE;

f. Switch to the PeopleSoft PDB.

SQL> ALTER SESSION SET CONTAINER=<PDBNAME>;

12. Bring all the specified tablespaces offline by connecting to SQL*Plus as sysdba, and executing the script altdatafilesoffline.sql.

```
$ sqlplus / as sysdba
SQL> @altdatafilesoffline.sql;
```

13. Encrypt your datafiles by running the altdatafilesencrypt.sql offline encryption script from SQL*Plus as sysdba:

```
$ sqlplus / as sysdba
SQL>@altdatafilesencrypt.sql;
```

Note: If you have a large number of data files, you can parallelize their encryption by creating subscripts and running the sub-scripts from parallel SQL*Plus sessions.

14. Bring all the specified tablespaces online by connecting to SQL*Plus as sysdba, and executing the script altdatafilesonline.sql.

\$ sqlplus / as sysdba
SQL> @altdatafilesonline.sql;

Note: Some tablespaces may take time to show as online. These are probably tablespaces that are encrypted.

Check the status of tablespace encryption by connecting to SQL*Plus / as sysdba and running the query shown:

```
$ sqlplus / as sysdba
SQL>select tablespace_name, encrypted from dba_tablespaces;
```

Note: Unless an auto login keystore is created, every time the database is started up, the wallet will need to be opened as in Step 8 above.

For 12c, to make the wallet auto login, run the following command:

```
\ sqlplus / as sysdba \ administer key management create AUTO LOGIN keystore from keystore "<Wallet \Rightarrow Path>" identified by "<Wallet Password>";
```

Bounce the database.

Chapter 7

Using Zero Downtime Migration to Migrate Environment to Cloud Manager

Understanding Zero Downtime Migration (ZDM)

Zero Downtime Migration (ZDM) gives you a quick and easy way to move on-premises databases and Oracle Cloud Infrastructure Classic instances to Oracle Cloud Infrastructure, Exadata Cloud at Customer, and Exadata Cloud Service without incurring any significant downtime, by leveraging technologies such as Oracle Active Data Guard.

For information on ZDM see Zero Downtime Migration 19.2

Using Zero Downtime Migration to migrate your database involves creating a backup of the source database and restoring it to the target database in OCI.

Once the database is migrated to OCI, you can import the DB System in Cloud Manager and add the middle tier node.

Migrating Environment Using Zero Downtime Migration (ZDM)

To migrate an environment to Cloud Manager using ZDM, perform the following steps:

- 1. Create a DB System in OCI.
- 2. Use ZDM to migrate the database to the DB System in OCI.
- 3. Import the DB System environment in Cloud Manager.
- 4. Perform an application lift to lift ps app home and ps cust home.
- 5. Add middle tier node to the running database environment.

Creating a DB System in OCI

Refer to Creating DB System to create the DB System.

The DB System needs to be accessible to Cloud Manager. Keep the following in mind when creating the DB System:

- Passwords used while creating DB System should be same as source database.
- Container Database (CDB) Name should be same as source database.
- Oracle Database software version should be the same as the source database.

• Cloud Manager must be able to access the DB System.

It is not necessary for Cloud Manager and the DB System to be in the same VCN, however if they are in different VCNs, then VCN peering has to be done before the database import.

See VCN Peering.

• Cloud Manager SSH public key must be added to the DB System in order for the import to work.

Add the SSH key with one of these methods:

- OCI Console, see Creating DB System.
- SSH to DB System, see <u>Connecting to a DB System</u> and add the Cloud Manager key.

Using ZDM to Migrate the Database to the DB System in OCI

Prerequisites

• ZDM tool is installed and configured.

See Zero Downtime Migration 19.2.

• DB System created in OCI.

See Creating a DB System in OCI

• Source and Target Database environments must be accessible by ZDM tool.

Migrating the Database

Follow the steps in the ZDM documentation for <u>Migrating Your Database with Zero Downtime</u> <u>Migration</u>.

Note: Migration method in the ZDM response file should be "MIGRATION_METHOD=BACKUP_RESTORE_OSS".

Importing the DB System Environment

Import the DB System Environment. See Importing Environment for Add DB System Node.

Perform an Application Lift

Perform an application lift to create the Application DPK which includes ps app home and ps cust home.

See Performing Application Lift

Adding Middle Tier Node

To add the middle tier node to the running database environment:

1. Select the Environments tile.

- 2. Select Manage Node action for your imported DB System environment.
- 3. Expand the Select Action section and add a middle tier node.

Image: Add Middle Tier Node example

This example illustrates the fields and controls on the Manage Node page to add a Linux middle tier node.

Cancel	Manage Node	Submit
← Select Actions		
Select the action to perform. To add a new tier to existing envi	ironment select 'Add'. To remove a tier from existing environment, select "Remove'.	
Action	Add	
Туре	Middle Tier •	
Operating System	Linux •	

- 4. Expand the Settings section and select the location for the Application DPK.
 - Object Store

When you select Object Store, the DPK Object Name drop down list will display all the application DPK files in Object Store.

Image: Application DPK in Object Store

This example illustrates the fields and controls on the Manage Node page where the Application DPK location is Object Store.

Region and Availability	Domains	Manage Node	s
Select Actions			
- Settings			
		APP DPK Location Object Storage •	
		DPK Object Name	
		linux/HCM/CATCAT/APP-DPK-LNX-HCM-CATCAT-1of3.zip	
➡ Tier Settings		InuxHCMCDBHCMMPPDHCLVXCHGMCDBHCM16d3 pp InuxHCMCDBH05APPDPFCLVXCHCHCDUB65101 2p InuxHCMCMPSDBAPPDPKLVXCHGMCMSDB-165 zp InuxHCMCMPSDBAPPDDFLVXCHGMCDBD-165 zp	
	Shapes	linux/HCM/GP856/APP-DPK-LNX-HCM-GP856-1of3.zip linux/HCM/HCM92856/APP-DPK-LNX-HCM-HCM92856-1of3.zip	
	Tiers	IIITUXHCIWHCIWII2650/APP-UPX-LIXX-HCIW-HCIWII2657-103.zip	
	Features	inuxHCMHCMDB/APP-DPK-LNX-HCM-HCMDB-1d3.zip	
F Custom Attributes		ImusHCMHHCMB1APP-DPK-LNX-HCM-HCMDB1-1d5.zp ImusHCMHCMDTB2538APP-DPK-LNX-HCM-HCMDB2-1d5.zp ImusHCMHATTENB65APP-DPK-LNX-HCM-HATTENB65-1d5.zp ImusHCMHATTENB65APP-DPK-LNX-HCM-HATTENB65-1d5.zp ImusHCMHSHDB4PP-DPK-LNX-HCM-HSHD5-1d5.zp ImusHCMHLEVISAPP-DPK-LNX-HCM-HSHD5-1d5.zp ImusHCMNNDFD84PP-DPK-LNX-HCM-HSHD5-1d5.zp ImusHCMNNDFD84PP-DPK-LNX-HCM-NNDFD8-1d5.zp ImusHCMNNDFD84PP-DPK-LNX-HCM-NNDFD8-1d5.zp ImusHCMNNDFD84PP-DPK-LNX-HCM-NNDFD8-1d5.zp ImusHCMNNDFB84PP-DPK-LNX-HCM-NNDFD8-1d5.zp ImusHCMNNDFB84PP-DPK-LNX-HCM-NNDFB8-1d5.zp ImusHCMNNDFB84PP-DPK-LNX-HCM-NNDFB8-1d5.zp	

• File Server

If you manually copied app home and cust home to the file server provide the relative path to the file server.

Image: Application DPK in File Server

This example illustrates the fields and controls on the Manage Node page where the Application DPK location is File Server.

Region and Availability	Domains	Manage Node	Submit
Select Actions			
- Settings			
	APP DPK Location	File Server •	
Please provide app home a	and cust home path relative to file server path /cm_psft_dpks/ to be us	d for app deployment.	
	APP_HOME Path:		
	CUST_HOME Path:		
➡ Tier Settings			
	> Shapes		
	Tiers		
	Features		
Custom Attributes			
1			

5. Enter the remaining required credentials and submit.

Chapter 8

Migrating Autonomous Database Environment to Cloud Manager

Migrating ATP-Dedicated Environment

To migrate a PeopleSoft autonomous database environment to Cloud Manager, perform the following steps:

 Follow the steps in <u>PeopleSoft Application with Oracle Database Migration Guide (Doc ID</u> <u>2699931.1</u> to migrate the autonomous on-premise database to ATP-D (Autonomous Transaction Processing Database – Dedicated) on OCI.

This procedure uses the Oracle Solution "MV2ADB: move data to Autonomous Database in oneclick".

2. Import the ATP-D database environment in Cloud Manager.

See the ATP-Dedicated Instance Type section in Importing Environment.

- 3. Lift the APP DPK to the object store using the Application Lift (see <u>Performing Application Lift</u>) or copy the APP_DPK to a path relative to the FSS of the Cloud Manager Instance.
- 4. Use Manage Node on the imported environment to add the middle tier node.

See Managing Nodes.

5. If the source and target database have different passwords, it is recommended to reset the passwords to 12 character passwords on both source and target databases.

Note: To support the refresh operation on Cloud Manager, it is advised to reset the passwords to 12 character passwords before migration or after migration to ATP-D.

Chapter 9

Enabling Selective Adoption in Cloud Manager

Enabling Selective Adoption in Cloud Manager

Cloud Manager enables customers to take advantage of Selective Adoption by:

- Quickly creating PUM environments in Oracle Cloud.
- Automating configuration of target databases in PUM source.

Once target databases are configured, standard procedure should be followed to apply updates to target environments. For details on the selective adoption process, refer <u>Selective Adoption</u>.

Before creating a new PUM source environment, a PeopleSoft administrator needs to:

- 1. Ensure that the latest required PI is downloaded in the repository.
- 2. Create a new environment template using the latest downloaded PI and PUM topology.
- 3. Enable user access to the newly created PUM source environment template.

Creating PUM Environments

To create a new PUM source environment using Cloud Manager:

- 1. Click the Create Environment button on the Environments landing page.
- 2. Enter the required environment attributes inputs.
- 3. Select the PUM source environment template to deploy.
- 4. Click Done.

See Create Environment Page

Adding Targets to PUM Sources

After the PUM source environment is deployed and is in a running state, you can add the target database to the PUM source by performing the following:

- 1. Click the Environments tile available on the Cloud Manager home page.
- 2. Click the Related Actions button corresponding to the PUM source environment.
- 3. Navigate to the Environment Details page.

4. Select the Manage PUM Connections link available on the left panel of the Environment Details page. The Manage PUM Connections page is displayed as shown.

Image: Manage PUM Connections page

This example illustrates the fields and controls on the Manage PUM Connections page.

C Environments	Manage PUM Connections	ŵ	(<u>199</u>	Ø
Environment Details	→ PUM Source Details			
Manage Attributes	PUM Source CM11D7HCM2			
Manage DUM Comparting	Status Running			
Manage PUM Connections	Pl version 9.2.34			
Apply PeopleTools Patch	Windows client NULL			
Upgrade PeopleTools	PIA http:// com:8000			
Provision Task Status	Target Databases			
Logs	Add target			

5. Click the Add target button to add any environment of the same application type as the PUM source. This displays a modal window for selecting a target database as shown.

Image: Select Target modal window

This example illustrates the fields and controls on the Select Target modal window.

Cancel	Select Target Add			
	Target Environment	HCMTGT	~	

- 6. Select a target environment.
- 7. Click the Add button to add the target database.

Adding the target database takes a few minutes to complete. The target database is configured in Change Assistant and the target database information is uploaded to the PUM source database. The status is displayed as *In Progress* when the job to add the target is running. The status is changed to *Completed* if the target is added successfully, and to *Failed* if the job did not run successfully.

Accessing Change Assistant in Windows Client

Change package can be defined, created, and applied to target environments using the Change Assistant and the PUM source PIA.

To access Change Assistant, perform the following:

1. Determine the IP address or hostname of the PeopleSoft Client that was deployed as part of the PUM source environment from the Environment Details page.

The IP address and Oracle Cloud name is displayed in PeopleSoft Client section of the Environment Details page.

- 2. Connect to the Windows Client using remote desktop connection.
- 3. To apply PRPs to PUM Source environment, you need to copy the downloaded PRPs from the file repository to the Windows Client VM. All downloaded PRPs are accessible to Windows Client VM as a samba share. To access the PRP share on the Windows VM, perform the following:
 - RDP to Windows Client VM.
 - Connect to the samba share using \\<File_Server_IP>\PRP.
 - Copy the required PRPs to D:\psft\pum_download directory on the Windows Client.
 - Use Change Assistant to apply the copied PRPs to the PUM Source environment.
- 4. Follow the standard selective adoption procedures by:
 - Applying PRPs to the PUM Source environment.
 - Defining the change package by connecting to the PUM source database.
 - Creating and applying the change package.

Updating Cloud Manager

Updating Cloud Manager Overview

Similar to any PeopleSoft application, Cloud Manager updates are released as PeopleSoft Update Images and PRPs. Cloud Manager updates are available as part of Interaction Hub Update Images and corresponding PRPs. These updates can be applied either using an automated method or manually using selective adoption.

• Automatically Applying Updates using Manage Updates

See Automatically Applying Updates Using Manage Updates

• Manually Applying Updates using Selective Adoption

See Manually Applying Updates Using Selective Adoption

Note: Please backup both the boot volume and block volume of the Cloud Manager instance before applying the updates. See <u>Using Automated Backup and Restore Utility</u>. If Cloud Manager instance is on a previous version (image 8 or older), then use the manual method to backup, see <u>Manually Backing Up</u> and Restoring Cloud Manager Using Block Volume Backups for OCI.

Automatically Applying Updates Using Manage Updates

The Automated Cloud Manager Update feature facilitates automatic self-update to the latest Cloud Manager Update Image and automatic PeopleTools update or upgrade when required for the latest Cloud Manager Update image. This feature is also used to apply PRPs to the Cloud Manager image.

The update process will:

- 1. Provision a new PUM Source instance and a Windows Client
- 2. Apply PRPs (if any) on the PUM Source
- 3. Upgrade PeopleTools
- 4. Install and Configure Change Assistant on Windows Client
- 5. Define a Change Package
- 6. Create Change Package
- 7. Apply Change Package
- 8. Reboot domains (as needed)

Whenever there is a new Interaction Hub (IH) PI or new PRPs are available, Cloud Manager will show a notification on the Cloud Manager Update page. You need to click on the Apply button, which will ask for a set of credentials and spin up a IH PUM Source instance. Once the PUM source is up and running, the new updates will be applied to the Cloud Manager instance.

Image: Manage Updates page showing that updates are available

This example illustrates the fields and controls on the Manage Updates page showing that updates are available. You can find definitions for the fields and controls later on this page.

< Cloud Manager		Manage Updates		
Cloud Manager Settings	Edit	it Attributes		an Apply
nfrastructure Settings	Cloud	Cloud Manager Updates		
le Server	A new	A new Cloud Manager update image 11 is available with new features.		
	This up	This update requires Peopletools version: 8.58.03. As part of this update process, the current Peopletools version 8.57.09 will be upgraded to Peopletools 8.58.03 or above.		
anage Updates	The Pe	eopleTools update or upgrade step will stop the Cloud Man de, they have to be resolved manually.	ager and hence the Manage Updates page will not t	be accessible. If there are errors during PeopleTools update or
ogs				
			ager instance using command line utility. Please clic	k on the Info button at any time for command line utility options.
		ixes are available for Cloud Manager and ready to apply - age Details		
				10 rows
		Update Step	Status	Step Details
				-
	-	1 Validate Self Update	0	?
		Validate Self Update Create new environment template to deploy PUM		?
		•		
		2 Create new environment template to deploy PUM	source	?
		Create new environment template to deploy PUM Deploy PUM source environment	source	?
		Create new environment template to deploy PUM Deploy PUM source environment Install Change Assistant and configure PUM source	source	?

You need to perform the following steps prior to triggering the update:

• Subscribe to Interaction Hub (IH) download channel. The latest updates for IH must be downloaded before starting the upgrade process.

See Download Subscriptions Page.

Important! The latest updates for the IH channel will be downloaded based on the download interval (see <u>Changing Download Interval</u>) to download the updates immediately unsubscribe and re-subscribe to the IH download channel.

• Subscribe to PeopleTools version of the IH PUM source.

Note: The Update Image manifest for the IH PUM source image will list the PeopleTools version.

- Ensure a Windows Image is available in your account.
- Configure Windows Image OCID in Cloud Manager Settings page.
- Inform users that Cloud Manager will not be available during the upgrade.
- Ensure to take a backup of Cloud Manager before updating.

Note: If the Cloud Manager update is initiated with jobs currently running, those jobs may fail. The administrator must clean up and resubmit any jobs that failed.

To trigger automated Cloud Manager application update, perform the following:

- 1. Log in to Cloud Manager as a user having PACL_CAD user role.
- 2. Click on Cloud Manager Settings tile, then select Manage Updates.
- 3. Click the Edit Attributes button to input credentials that will be used to deploy a PUM Source environment.

Note: The Database Operator Id field value should always be set as VP1.

Image: Environment Update Attribute page

This example illustrates the fields and controls on the Environment Update Attribute page.

	Envir	onment Update Attribute Page	
	Cancel		Save
	Template Name CE	DMSLFUPD8648	
	Environment Name CE	DMSLFUPD8648	
Re	gions and Availability Domain		
			4 rows
1	Region		~
2	Primary Availability Domain		~
3	Default Compartment		~
4	Default Virtual Cloud Network		~
Cu	stom Attributes		
	Full Tier		
	PeopleSoft Client		

Note: Note: Starting with Cloud Manager Image 12, the Virtual Cloud Network for Full Tier and PeopleSoft Client will default to the Default Virtual Cloud Network specified in the Region and Availability Domain section. If VCN peering is set up, the VCN can be changed for the Full Tier or PeopleSoft Client. See the tutorial *Use Multiple VCNs, Multiple Compartments, or Network Security Groups with PeopleSoft Cloud Manager (Optional).*

- 4. Click Save.
- 5. Click Apply to initiate Cloud Manger Update. The update steps and status are displayed.

Image: Manage Updates page showing Cloud Manager Update Steps

This example illustrates the Manage Updates page showing Cloud Manager Update Steps.

Manage Updates		Manage Updat	es		: 🔍 🏠
loud Manager Settings	Edit A	Attributes			apply Apply
frastructure Settings	Cloud M	Manager Updates			
le Server		Update Step	Status	12 rows Step Details	
nage PUM Connections		1 Validate Self Update	2	. ?	
nage Updates		2 Create new environment template to deploy PUM source	X	?	
IS		3 Deploy PUM source environment	 	?	
		4 Pre Tools update or upgrade validation	×	?	
		5 Cloud Manager Peopletools upgrade	X	?	
		6 Install Change Assistant and configure PUM source and target database	X	?	
		7 Apply PRP to PUM source	X	?	
		8 Define a make me current change package	×	?	
		9 Create make me current change package from definition	X	?	
		10 Apply change package to Cloud Manager target database	2	?	
		11 Update files on Cloud Manager target	2	?	
		12 Post Self Update Validation	2	?	

This table lists the update steps:

Step	Description
Validate Self Update	This step validates that all of the dependencies for the automation are available and the system is ready to begin the update process.
Create new environment template to deploy PUM source	In this step, a new environment template <i>CDMSLFUPD</i> < <i>randomly selected number</i> >is created that will be used to deploy PUM source environment using the latest PeopleSoft Image. The template name can be obtained from the Edit Attributes page.
	If the status is <i>Success</i> - A new template was successfully created.
	If the status is <i>Failure</i> - Template creation failed. In this case, the Retry is enabled. You can delete the template if it was created incorrectly and retry the step.

Step	Description
Deploy PUM source environment	 In this step, a new PUM source environment named <i>CDMSLFUPD1<randomly number="" selected=""></randomly></i> is created using the template that was created in the previous step. If the status is <i>Success</i> - A new PUM source is created and the details are provided in the PUM Source Details section. If the status is <i>Failure</i> - Creating a new PUM source environment failed. In this case, the Retry is enabled. Remedial Action - Clean up the failed environment and any instances from both Cloud Manager UI and Oracle Cloud Infrastructure Console that were created and retry the step. The Continue option is disabled until the clean up is complete.
Manual Step	This step is not always present. If present, this step pauses the self update and provides instructions in the task list. After completing the instructions, select to mark the task as Manually Completed.
Pre Tools update or upgrade validation	This step performs validations on the existing PeopleTools.
Install Change Assistant and configure PUM source and target database	 This step executes the processes such as install Change Assistant on the PeopleSoft Client VM instance, configure Change Assistant to add source and target database, and upload target database information to PUM source. If the status is <i>Success</i> - Change Assistant is installed and configured with source and target database information. If the status is <i>Failure</i> - Failed to install or configure Change Assistant. In this case, the Retry is enabled. Remedial Action - Retry step. Alternatively choose to skip this step after configuring the source and target database manually using Change Assistant and retry.
Apply PRPs on PUM source	 In this step, any PRPs that were downloaded are applied and available in Repository on the PUM source. If the status is <i>Success</i> - All PRPs were successfully applied on the PUM source environment. If the status is <i>Failure</i> - Failed to apply one or more PRPs. In this case, the Retry is enabled. Remedial Action - Retry step. Alternatively choose to skip this step after manually applying all PRPs using Change Assistant. The required PRPs will be available on the PeopleSoft Client VM, if not copy from File Server PRP share.

Step	Description
Define make me current change package	In this step, a new change package is defined.
	If the status is <i>Success</i> - Successfully defined a change package which includes all bugs for CM product code.
	If the status is <i>Failure</i> - Failed to define a change package. In this case, the Retry is enabled.
	Remedial Action - Login to Update Manager PIA of PUM source and delete the change package definition in error and retry step. The name of the definition is in the format CMCHGPKG[n], where n is the sequence number. Alternatively, create the make me current change package definition in Change Assistant. Name the change package CMCHGPKG[n], where n is the sequence number. Mark the failed step as COMPLETED MANUALLY.
Create make me current change package from definition	In this step, a change package using the definition that was created in previous step.
	If the status is <i>Success</i> - Successfully created a change package.
	If the status is <i>Failure</i> - Failed to create a change package. In this case, the Retry is enabled.
	Remedial Action - Retry step. Alternatively, skip the step after creating the change package manually using Change Assistant with the same name as the definition created in previous step.
Apply change package to Cloud Manager target database	In this step, the change package that was created in the previous step is applied.
	If the status is <i>Success</i> - Successfully applied the change package.
	If the status is Failure - Failed to apply the change package.
	Remedial Action - Complete the apply step manually using the Change Assistant and continue with next step.
	<i>Warning!</i> : Reapplying a change package is not recommended as it may apply the fix again.
Update files on Cloud Manager target	In this step, the new and updated files are copied to Cloud Manager target.
	If the status is Success - Successfully copied all file updates
	<i>Failure</i> - Failed to copy one or more files. In this case, the Retry is enabled.
	Remedial Action - Retry step.
Post Self Update Validation	This step validates that the update is complete and the newly created domains are running.

When the update is complete, perform the following steps:

1. Run as root the script post_upgrade_script.sh in \$PS_APP_HOME/cloud/.

\$> ./ post_upgrade_script.sh

- 2. Using PSADMIN, restart application server domain, process scheduler domain and web domain on the Cloud Manager instance to ensure the latest updates are running.
- 3. Navigate to Cloud Manager Settings > Infrastructure Setting and click the Refresh OCI Metadata button. This will update the Fault Domain Settings.
- 4. The PUM Source environment can then be cleaned up using the Clean-up button.

Important! The post update script must be run prior to selecting Clean-up.

Monitoring Update Steps

The status of the update is displayed on the Manage Updates page.

Image: Manage Updates Status

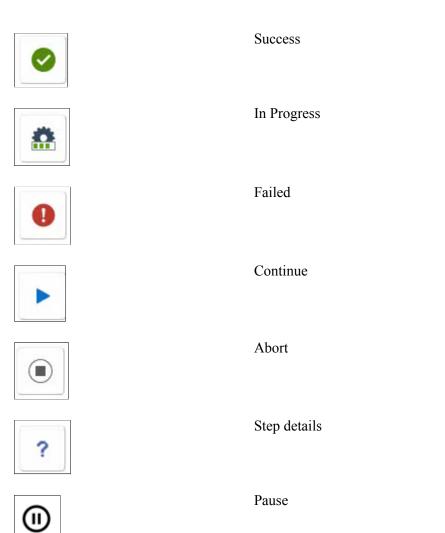
This example illustrates the fields and controls on the Manage Updates page when the steps are running.

			Manage Updates				Â	9 7	: (ø
Cloud Manager Settings	Edit A	tributes						A	oply	^
Infrastructure Settings	Cloud M	anager U	pdates							
File Server						10 rows				
Manage PUM Connections		Update	Step	Status		Step Details				
Manage Updates	1	Validate	Self Update	0		?				
Logs	2	Create	new environment template to deploy PUM source	0		?				
	3	Deploy	PUM source environment	٨	۲	?				
	4	Install C	hange Assistant and configure PUM source and target database	X		?				
	5	Apply P	RP to PUM source	X		?				
	6	Define a	n make me current change package	X		?				
	7	Create	nake me current change package from definition	X		?				
	8	Apply c	nange package to Cloud Manager target database	X		?				
	g	Update	files on Cloud Manager target	X		?				
	1	0 Post Se	If Update Validation	X		?				

Status Icons



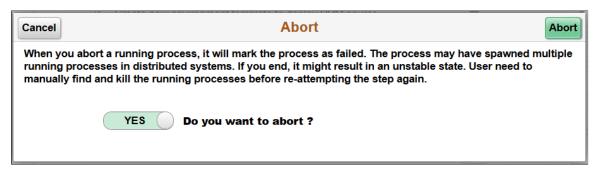
Pending



The Abort icon is shown when a step is running. When you click the Abort icon, the modal window is displayed.

Image: Abort Modal window

This example illustrates the Abort Modal window.



Caution should be used when aborting a step, it is possible that not all processes that were spawned will be aborted. It is recommended to reboot the Cloud Manager instance after aborting a process.

Failed Steps

If a step fails, the process will stop and the Continue icon will appear.

An administrator must resolve the issue and come back to Cloud Manager to continue the update process. For example, if applying change package failed, then the administrator must connect to the Windows Client VM, launch Change Assistant and run the update job to completion. The administrator will then return to the Cloud Manager Update page and continue the automated update process.

All reported errors must be resolved manually by the user. After fixing or manually completing the failed step, click the Continue icon.

Image: Example: Failed Step

This example illustrates a failed step in the Cloud Manger Update process.

		Manage Updates		
Cloud Manager Settings	Edit	it Attributes		
Infrastructure Settings	Cloud	d Manager Updates		
File Server		Update Step	Status	10 rows Step Details
Manage PUM Connections				
Manage Updates	1	1 Validate Self Update	e	?
Logs		2 Create new environment template to deploy PUM source	۲	?
Logs		3 Deploy PUM source environment	0	> ?
		4 Install Change Assistant and configure PUM source and target database	X	?
	L	5 Apply PRP to PUM source	X	?
	н	6 Define a make me current change package	X	?
		7 Create make me current change package from definition	X	?
		8 Apply change package to Cloud Manager target database	$\overline{\mathbb{X}}$?
		9 Update files on Cloud Manager target	$\overline{\mathbf{x}}$?
		10 Post Self Update Validation	X	?
	Bulleti	in		
	Error: E	Environment not in running state		

On clicking the Continue button, three options are shown as below:

Image: Options for failed step

This example illustrates the options for the failed step. You can find definitions for the fields and controls later on this page.

Cancel	Continue
continue will mark fai	d to complete the failed steps manually and select an option below to Continue. Opting to ed step as manually completed and proceeds to next pending step. To complete the entire update lect option to mark all steps as manually completed.
	YES Retry Failed Step
\bigcirc	NO Mark Only Failed Step as 'COMPLETED MANUALLY'
\bigcirc	NO Mark the Failed and Rest of the Steps as 'COMPLETED MANUALLY'

- 1. Retry Failed Step retry the step again.
- 2. Mark only failed step as 'Completed Manually' skip the failed step and continue from subsequent step to completion.

3. Mark the failed and rest of the pending steps as 'Completed Manually' - skip all steps and set update as complete.

Note: If you mark all steps as manually complete after any failures at the step to *Install Change Assistant and configure PUM source and target database* or lower, then follow the selective adoption procedure to manually update from latest IH PeopleSoft Image. See <u>Manually Applying Updates Using Selective Adoption</u>.

After selecting 'Yes' in the Retry Failed Step field, a Continue button is displayed in the top right corner of the Continue modal window.

Monitoring PeopleTools Upgrade

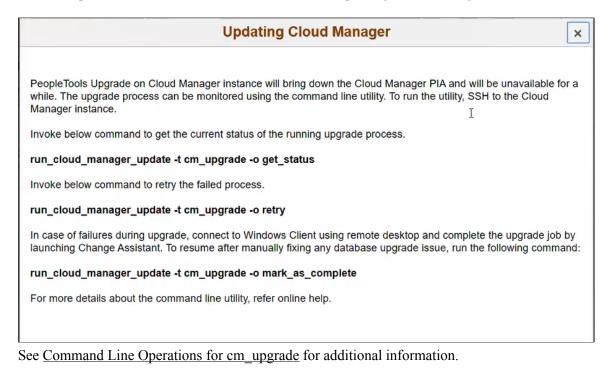
The automated Cloud Manager update process will trigger PeopleTools upgrade when the newly released Cloud Manager (IH) Update Image has a dependency on a particular PeopleTools version. During the update process, when it reaches the step to upgrade PeopleTools, the Cloud Manager PIA UI will be shutdown and the status of PeopleTools upgrade is no longer available on the UI.

To monitor the PeopleTools upgrade, you need to SSH into the Cloud Manager instance and use the PeopleTools upgrade command line.

The Info icon on the Cloud Manager Updates page, displays the command line options to use for monitoring the PeopleTools upgrade.

Image: Updating Cloud Manager modal window

This example illustrates the fields and controls on the Updating Cloud Manager modal window.



Manually Applying Updates Using Selective Adoption

It is highly recommended to update Cloud Manager as soon as a new image is available. Cloud Manager Image 9 to Image 11 cannot be automatically updated.

Updating to latest Cloud Manager from Cloud Manager Image 9 or lower, involves two steps. The latest version has dependencies on PeopleTools 8.58 and hence requires updating PeopleTools on the existing Cloud Manager instance.

1. Update Cloud Manager application using Selective Adoption method.

See Updating Cloud Manager Application Using Selective Adoption

2. Upgrade PeopleTools on Cloud Manager to 8.58 using the command line utility.

See Upgrading Cloud Manager PeopleTools Using Command Line

Updating Cloud Manager Application Using Selective Adoption

Note: Backup the Cloud Manager instance before applying updates.

To apply updates to Cloud Manager, perform the following:

1. Deploy the Interaction Hub (IH) PUM source.

To deploy an IH PI environment using Cloud Manager, perform the following.

- a. Subscribe to the IH download channel. The IH 9.1 Linux channel will download IH PI and PRPs, which have Cloud Manager fixes.
- b. Create a template to deploy the PeopleSoft Interaction Hub 9.1 database on a PUM topology.
- c. Deploy a new PUM source using the newly created template.

Image: Example Deployed PUM Source

This example illustrates the running PUM source.

pumenvfordocara				
Running				
Database : IH Update Image 9.1.00.X				
Description :				
Zone : Test				
🕈 PIA URL	\odot			

Note the Windows Client IP on the Environment Details page in the PeopleSoft Client section.

2. Modify PI Home share permissions on PUM source.

Note: This step is optional if there are no PRPs to apply.

By default, the PI Home share on PUM Source is read-only. You can verify this by accessing the PI Home (\\<PUM SRC IP>\pi_home) on the Windows client (that was deployed using PUM topology) and trying to create a folder in it. Cloud Manager PRPs need to update files on PI HOME, therefore you must modify the share permissions. Modify or add the [pi_home] section in the smb.conf file:

- a. SSH to Cloud Manager.
- b. From Cloud Manager ssh to the PUM source instance (pumenvfordcoara-lnxft-1)

```
[opc@pi6cmdoc ~]$ sudo su - psadm2
[psadm2@pi6cmdoc ~]$ ssh -i /home/psadm2/psft/data/cloud/ocihome/keys/cm_→
adm pvt key opc@pumenvfordcoara-lnxft-1
```

c. Set SMB password for user psadm3.

```
[opc@pumenvfordcoara-lnxft-1~]$ sudo smbpasswd -a psadm3
New SMB password:
Retype new SMB password:
```

d. Add or update pi_home share on the PUM source. Ensure the following section is changed or added in the smb.conf file as shown here:

Note: For OCI, please append the entire section given above in /etc/samba/smb.conf file.

e. Restart samba service

```
[opc@pumenvfordcoara-lnxft-1~]$ sudo service smb restart
Shutting down SMB services: [ OK ]
Starting SMB services: [ OK ]
```

[opc@pumenvfordcoara-lnxft-1~]\$

f. Open firewall to allow samba ports on PUM source using below command.

```
[opc@pumenvfordcoara-lnxft-1~]sudo iptables -I INPUT -p tcp -m state --st⇒
ate NEW -m tcp --dport 137 -s 0.0.0.0/0 -j ACCEPT
[opc@pumenvfordcoara-lnxft-1~]sudo iptables -I INPUT -p tcp -m state --st⇒
ate NEW -m tcp --dport 138 -s 0.0.0.0/0 -j ACCEPT
[opc@pumenvfordcoara-lnxft-1~]sudo iptables -I INPUT -p tcp -m state --st⇒
ate NEW -m tcp --dport 139 -s 0.0.0.0/0 -j ACCEPT
[opc@pumenvfordcoara-lnxft-1~]sudo iptables -I INPUT -p tcp -m state --st⇒
ate NEW -m tcp --dport 139 -s 0.0.0.0/0 -j ACCEPT
```

[opc@pumenvfordcoara-lnxft-1~]sudo service iptables save

g. Enable secure linux to allow samba share.

```
[opc@pumenvfordcoara-lnxft-1~]sudo chcon -t samba_share_t /u01/app/oracle⇒ /product/pt/ps_pi_home
```

3. RDP to the windows client of PUM source.

Windows Client IP can be determined by going into the Environment Details page and looking at PeopleSoft Client section.

4. Configure Windows firewall (if not already configured)

Add new rule(CIFS) to open ports 137,138,139,445. This is an optional step if its already configured this can be skipped. To manually add the rules:

a. In Windows Client Navigate to Start >Windows Firewall with Advanced Security

Image: Windows Firewall with Advanced Security

This example illustrates the Windows Firewall with Advanced Security window.

ile Action View Help						
• 🔿 🙍 📰 🗟 💼						
Windows Firewall with Advance	Inbound Rules					Actions
🔣 Inbound Rules	Name	Group	Profile	Enabled	^	Inbound Rules
Cutbound Rules	Allow WinRM HTTPS		All	Yes		🗱 New Rule
Lonnection Security Rules	☑ CIFS		All	Yes		-
A Monitoring	🕑 Open Port 5985		All	Yes		Filter by Profile
	🕑 Open Port 5986		All	Yes		Filter by State
	BranchCache Content Retrieval (HTTP-In)	BranchCache - Content Retr	All	No	≡	Filter by Group
	BranchCache Hosted Cache Server (HTT	BranchCache - Hosted Cach	All	No		View
	BranchCache Peer Discovery (WSD-In)	BranchCache - Peer Discove	All	No		
	COM+ Network Access (DCOM-In)	COM+ Network Access	All	No		(Refresh
	COM+ Remote Administration (DCOM-In)	COM+ Remote Administrati	All	No		📑 Export List
	🔇 Core Networking - Destination Unreacha	Core Networking	All	Yes		P Help
	🔇 Core Networking - Destination Unreacha	Core Networking	All	Yes		
	🔇 Core Networking - Dynamic Host Config	Core Networking	All	Yes		
	🔇 Core Networking - Dynamic Host Config	Core Networking	All	Yes		
	🔇 Core Networking - Internet Group Mana	Core Networking	All	Yes		
	🔇 Core Networking - IPHTTPS (TCP-In)	Core Networking	All	Yes		
	🕑 Core Networking - IPv6 (IPv6-In)	Core Networking	All	Yes		
	🕑 Core Networking - Multicast Listener Do	Core Networking	All	Yes		
	🕑 Core Networking - Multicast Listener Qu	Core Networking	All	Yes		
	🕑 Core Networking - Multicast Listener Rep	Core Networking	All	Yes		
	🔇 Core Networking - Multicast Listener Rep	Core Networking	All	Yes		
	🔇 Core Networking - Neighbor Discovery A	Core Networking	All	Yes		
	🔇 Core Networking - Neighbor Discovery S	Core Networking	All	Yes		
	🔇 Core Networking - Packet Too Big (ICMP	Core Networking	All	Yes		
	🕑 Core Networking - Parameter Problem (I	Core Networking	All	Yes		
	🕑 Core Networking - Router Advertisement		All	Yes		
	🕑 Core Networking - Router Solicitation (IC	Core Networking	All	Yes		
	🕑 Core Networking - Teredo (UDP-In)	Core Networking	All	Yes		
	🔇 Core Networking - Time Exceeded (ICMP	Core Networking	All	Yes		
	Distributed Transaction Coordinator (RPC)	Distributed Transaction Coo	All	No		
	Distributed Transaction Coordinator (RP	Distributed Transaction Coo	All	No		
	Distributed Transaction Coordinator (TC	Distributed Transaction Coo	All	No		
	🕑 File and Printer Sharing (Echo Request - I	File and Printer Sharing	All	Yes	$\overline{}$	
	< III			>		

- b. Click Inbound Rules > New Rules.
- c. On the Rule Type window, select Port and click Next.

Image: New Inbound Rule Wizard

This example illustrates the New Inbound Rule Wizard window.

@	New Inbound Rule Wizard
Rule Type Select the type of firewall rule t	o create.
Steps: a Rule Type b Protocol and Ports	What type of rule would you like to create?
ActionProfileName	 Program Rule that controls connections for a program. Port Rule that controls connections for a TCP or UDP port.
	 Predefined: BranchCache - Content Retrieval (Uses HTTP) Rule that controls connections for a Windows experience. Custom Custom rule.

d. On the Protocol and Ports window, select TCP and Specific local ports. Enter ports 137,138,139,445 and Next.

Image: New Inbound Rule Wizard - Protocol and Ports

This example illustrates the specific local ports required for Cloud Manager access to Windows client.

@	New Inbound Rule Wizard				
Protocol and Ports Specify the protocols and ports to	which this rule applies.				
Steps: Protocol and Ports Action Profile Name	Does this rule apply to TCP or U TCP UDP Does this rule apply to all local pr All local ports Specific local ports:				

e. On the Action window, select Allow the connection and click Next.

Image: New Inbound Rule Wizard – Action window

This example illustrates the fields and controls on the New Inbound Rule Wizard – Action window.

@	New Inbound Rule Wizard	x
Action Specify the action to be taken wh	en a connection matches the conditions specified in the rule.	
Steps: Protocol and Ports Action Profile Name	 What action should be taken when a connection matches the specified conditions? Allow the connection This includes connections that are protected with IPsec as well as those are not. Allow the connection if it is secure This includes only connections that have been authenticated by using IPsec. Connections will be secured using the settings in IPsec properties and rules in the Connection Security Rule node. Customize Block the connection 	

f. On the Profile window, select when the rule applies and click Next.

Image: New Inbound Rule Wizard - Profile window

This example illustrates the fields and controls on the New Inbound Rule Wizard – Profile window.

@	New Inbound Rule Wizard	x
Profile Specify the profiles for which this n	ule applies.	
Steps: Protocol and Ports Action Profile Name	When does this rule apply? ✓ Domain Applies when a computer is connected to its corporate domain. ✓ Private Applies when a computer is connected to a private network location, such as a home or work place. ✓ Public Applies when a computer is connected to a public network location.	ł

g. On the Name window, provide the name as CIFS and Finish.

Image: New Inbound Rule Wizard – Name window

This example illustrates the fields and controls on the New Inbound Rule Wizard - Name window.

@	New Inbound Rule Wizard	X
Name		
Specify the name and descript	ion of this rule.	
Steps:		
Rule Type		
Protocol and Ports		
Action		
Profile	Name: CIFS	
Name	CIFS	
	Description (optional):	
	< Back Finish Cance	el l

5. In Windows Client, provide the tns entry of PUM source and Cloud Manager target database in D: \oracle\product\12.1.0\client 1\network\admin\tnsnames.ora.

In this example DEMODB is the PUM source database and CMPSDB is the target Cloud Manager database.

Image: Example tnsnames.ora file

This example illustrates the tnsnames.ora file that contains the source and target databases.

This the second		-		x	
File Edit Format View Help					
DEMODB=(DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=pumenvfordocara-lnxft-1. <subnet dns="" label="">.<vc< td=""><td>N DN</td><td>5 la</td><td>bel></td><td></td><td></td></vc<></subnet>	N DN	5 la	bel>		
<pre>CMPSDB = (DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL = TCP)(HOST = pi6cmdoc.<subnet dns="" label="">.<vcn dns="" label="">.oraclevcn.com)(PORT = 15) (CONNECT_DATA = (SERVICE_NAME = CMPSDB)))</vcn></subnet></pre>	21))				1
K III				> ,	

Note: The tnsnames.ora file would include the actual subnet and vcn names.

6. Install the required version of PeopleTools Client (PTC) on the Windows Client if the installed version is different from what is required for Selective Adoption. For example, when updating from Cloud Manager Image 8 or lower to Cloud Manager Image 9, PeopleTools Client must be used from PeopleTools 8.56.12 onwards. Obtain the DPK from file server or download from My Oracle Support. The PTC DPK on the file server can be accessed on the Windows Client using CIFS Share - \\<FileServer_Pvt_IP>\u01\app\oracle\product\dpk\linux\IH\09\IH-910-UPD-009-OVA_5of13.zip \PTC-DPK-WIN8.56.12-1of1.zip.

To install the PeopleTools Client:

- a. Extract the PTC-DPK-WIN8.56.12-1of1.zip file to a directory. This directory will contain SetupPTClient.bat.
- b. Open a command window running as administrator.
- c. Change directory to the location where you unzipped PTC-DPK-WIN8.56.12-1of1.zip file.
- d. Run SetupPTClient.bat -t.
- e. Answer yes when asked if you want to deploy PeopleTools client.
- f. Specify an installation directory, the RDBMS, and other information for your environment. The default installation directory is C:\PT<release_number>_Client_<database_type>.
- g. At the prompt Please make your selection for the Tools Client deployment, specify option 3 -None of the above to install PeopleTools client PS_HOME.
- h. Answer n (no) when asked if you want to install Change Assistant.

Note: Do not install PeopleTools Client under D:\psft. This path is used by Cloud Manager for deployment automation. Choose a different path when installing PeopleTools Client manually on a Windows Client that was provisioned by Cloud Manager.

7. Configure Cloud Manager target and IH PUM source databases manually in Change Assistant.

To configure the source and target databases in Change Assistant:

- a. In Windows Client, launch Change Assistant as administrator.
- b. In Change Assistant select File, New Database.

Image: Define Database

This example illustrates the fields and controls on the Define Database page. You can find definitions for the fields and controls later on this page.

P		Database Wizard	×	
	Define Database			
Task Steps	Type: Oracle		•	
Define Database	Database Name: CMPS)B		
	User Information			
	User ID: PS	User Password: **		
	Access ID: SYSADM	Access Password: ******		
	Connect ID: people	Connect Password: ******		
	Set DB Owner Cred		_	
	DBOwner ID:	DBOwner Password:		
	SQL Client Tool:			
	Current Homes			
	PS Home:			
	PS App Home:			
	PS Cust Home:		<u> </u>	
	SQR Settings			
	SQR Executables (SC	2RBIN) <ps_home>\bin\sqr\<plat>\binw</plat></ps_home>		
	SQR Flags (PSSQRF	LAGS)	_	
	PSSQR Path	3gingDir>sqr; <cust_home>sqr;<app_home>sqr;<ps_home></ps_home></app_home></cust_home>	sqr	
		Back Einish	Cancel	
Туре		Database type is Oracle.		
Database Name		Enter the name of the database.		
User ID and Passw	vord	Enter the PeopleSoft User ID and password for database that used during the Cloud Manager b process.		
Access ID and Pass	sword	Enter the Access ID and password for the data used during the Cloud Manager bootstrap proc		
ConnectID and Password		Enter the ConnectID and password for the database that used during the Cloud Manager bootstrap process.		
SQL Client Tool		Browse for SQL client tool in D:\oracle\product\12.1. 0\client_1\bin\sqlplus.exe.		
Current Homes PS	Home	Enter the location of your current PS_HOME		
Current Homes PS	App Home	Enter the location of your current PS_APP_HC	OME	

Current Homes PS Cust Home	Enter the location of your current PS_CUST_HOME
SQR Settings SQR Executables (SQRBIN)	The SQRBIN value is read only and derived from the PS Home and platform setting.
SQR Settings SQR Flags (PSSQRFLAGS)	By default, the -ZIF parameter is to set the full path and name of the SQR initialization file, SQR.INI
SQR Settings PSSQR Path	This field is read-only and will contain the path that is used in Change Assistant.

c. Click Next, to bring up Additional Database Details window.

Image: Additional Database Details window

This example illustrates the fields and controls on the Additional Database Details window.

P		Database Wizard	x
	Additional Da	tabase Details	
Task Steps	Unicode:	Unicode Database 🔻	
 Define Database Additional Details 	Industry:	All	
0	Product Line:	PORTAL SOLUTIONS	
	Products:	UPG,EO,CO	
	Base Language:	ENG	
	Languages:	ENG	
	Database Version:	8.56.07	

- d. Review the window and click Next.
- e. On the Confirm Settings page, click Finish.
- f. Repeat steps b thru e to define the PUM source database.

Note: To confirm both databases have been defined in Change Assistant, select File, Open Databases. You will see two databases defined.

8. Configure Change Assistant Options for Updates.

To configure Change Assistant Options for Updates:

- a. Create directories in the Windows client for pum_staging, pum_output and pum_download under D:\psft\.
- b. In Change Assistant, select Tools, Options.
- c. On the General tab, enter the directories.

Image: Update Manager Options – General page

This example illustrates the fields and controls on the Update Manager Options – General page. You can find definitions for the fields and controls later on this page.

P		Update N	Manager Options		x
General PUM	I Source	EM Hub Additional			
Settings		· · ·			-
oot			🗹 Show Welcome I	Page	
Maximum Cor	ncurrent	Processes:	1		
PS Home Ser	ver TCP	Port Range:	6151	- 6320	
PS Home Ser	ver Maxir	num Instances:	5]	
Time Out for L	.ocking(S	Seconds,Max=99999):	300		
Data Mover Co	onsolida	tion Maximum Script Lin	nit: 1000		
Directories					
*PS Home:		D:\psft\85607_PS_HO	ME\		
*Staging Dire	ctory:	D:\psft\pum_staging\			
*Output Direct	tory:	D:\psft\pum_output\			
*Download Di	irectory:	D:\psft\pum_download	Λ		
*SQL Query T	ool:	D:\oracle\product\12.1.	0\client_1\bin\sqlplus.ex	e	
PS Home			er the full path for Pe adows Client machine	opleTools client installed on a	the
Staging Director	у	Ente	er the staging director	ry defined in step a.	
Output Director	У	Ente	Enter the output directory defined in step a.		
Download Direc	tory	Ente	Enter the download directory defined in step a.		
SQL Query Tool	l	Ente	er the path to sqlplus.	exe.	

d. On the PUM Source page, enter the PUM Source information.

Image: Update Manager Options – PUM Source page

This example illustrates the fields and controls on the Update Manager Options – PUM Source page. You can find definitions for the fields and controls later on this page.

P		Update Manager Options	x
Gene	eral <u>P</u> UM Source <u>E</u> M	I Hub Additional	_
PU	M Source Details	Define PUM Source	
*PU	M Source Database:	DEMODB Create	
*PU	M(PI_HOME) Directory:	iocara-Inxft-1.xxxxxxxx.xxxxxx.oraclevcn.com\pi_home	
*PU	M Source PIA URL:	vfordocara-Inxft-1xxxxxx.xxxxxx.oraclevcn.com:8000	
			,
Define P	UM Source	Select this check box to define the PUM Source.	
PUM Sou	urce Database	Select the PUM source database from the drop down	ı list.
PUM(PI_	_HOME) Directory	Use the share that was modified in step 2. Access the share path on the windows client and verify access. Use directory path as shown in the address bar of th explorer window.	
PUM Sou	urce PIA URL	Enter the URL to sign on to the PUM Source.	

e. On the EMHUB page, enter the EMHub information.

Image: Update Manager Options – EM Hub page

This example illustrates the fields and controls on the Update Manager Options – EM Hub page. You can find definitions for the fields and controls later on this page.

P		Update Manager Options	x
	<u>General</u> <u>P</u> UM Sourc	e <u>E</u> M Hub <u>A</u> dditional	
	Environment Manag	ement Configure EMHub For Deploy File	
	*Server Host Name:	pumenvfordocara-Inxft-1. xxxxxxx.xxxxxx.oraclecvn.com	
	*Server Host Port:	8000	
	*Chunk Size:	1048576	
	*Ping Interval:	10000	
	*Drives To Crawl:	c: d:	
	Ping	Viev	v
Con	figure EMHub Fo	Deploy File Select this check box if you want to use EMHub deploy.	for file
Serv	er Host Name	Enter PUM source server host name.	
Serv	er Host Port	Indicates the port in which to connect to the	

Environment Management hub.

9. Backup Cloud Manager.

Take a Cloud Manager backup before applying any updates. See <u>Understanding Cloud Manager</u> <u>Backup and Restore</u>.

10. Apply PRPs to the IH PUM source.

If there are PRPs to be applied on the PUM source, copy all PRPs to the Windows Client under the D: \psft\pum download location. PRPs must be copied from the file server share.

To copy the PRPs to the file share:

- a. Identify the private IP address of file server on the Instances tab in the Oracle Compute Cloud Service Console.
- b. Log on to the Windows Client of the environment.
- c. Connect to the samba share using \\<File_Server_IP>\PRP.

User will be prompted for user name and password that was configured in step 2.

Note: In OCI, if the samba share is not accessible on the Windows client VM, check the ingress security rules for the samba share on the subnet where the windows client is connected. In OCI, the Cloud Manager subnet must allow incoming connections from the subnet on which the PUM source is set up.

- d. Copy the required PRPs to D:\psft\pum download directory on the Windows Client.
- e. In Change Assistant, select Tools, Apply PeopleSoft Release Patchset.
- f. Verify the download location is set to the directory used in step c (D:\psft\pum) and click Next.
- g. Select all PRPs to be applied and click Next.

Note: In some cases, selecting and applying all PRPs together might show errors. In such a case, select one PRP at a time and apply individually.

- h. Change Assistant will verify that the package is compatible with the PI version. If it is not compatible, you will receive a message to Apply Compatible Packages Only.
- i. Click OK to apply only compatible packages and Change Assistant will verify the PRPs.
- j. Click Next and you will see the summary page.
- k. Click Finish. The Change Assistant job is created. Run this job as you would any other change package.
- 11. Start PSEMAgent on target Cloud Manager.

To start PSEMAgent:

a. Change ownership of PSEMAgent dir from psadm1 to psadm3.

```
[psadm3@c6e65e ~]$ chown -R psadm3:appinst /opt/oracle/psft/pt/ps_home8.5⇒
6.07/PSEMAgent/
[psadm3@c6e65e ~]$ cd /opt/oracle/psft/pt/ps_home8.56.07/PSEMAgent/
[psadm3@c6e65e PSEMAgent]$ 11
total 44
-rwxr-xr-x 1 psadm3 appinst 2742 Sep 11 2015 StartAgent.sh
-rwxr-xr-x 1 psadm3 appinst 2426 Sep 11 2015 StopAgent.sh
drwxr-xr-x 8 psadm3 appinst 4096 Jan 6 05:11 envmetadata
drwxr-xr-x 2 psadm3 appinst 4096 Sep 23 06:11 lib
```

b. Configure the agent configuration properties file. The configuration. properties file is located in the ps home directory/PSEMAgent/envmetadata/config.

This is an example of the configuration.properties file:

```
#hubURL= this is the host and port the agents talk to
hubURL=http://pumenvfordcoara-lnxft-1.<subnet DNS label>.<vcn DNS label>.⇒
oraclevcn.com:8000/PSEMHUB/hub
agentport=5283
#ping interval in milliseconds for the peer to contact the hub for new me⇒
ssages
pinginterval=10000
#Windows directories need to use the forward slash ('/') character. For m⇒
ultiple directories, use a '|' character as separator
```

```
windowsdrivestocrawl=c:|d:
unixdrivestocrawl=/opt/oracle/psft/pt|/home/psadm2/psft/pt/8.56
#The time interval in hours for the hub to issue a recrawl command to the⇒
agents
recrawlinterval=24
#The time interval in hours for the hub to issue a revalidate command to ⇒
the agents
revalidateinterval=6
#Setting for large file transfer.default is 1024 * 1024 bytes
chunksize=1048576
```

c. Export PS APP HOME before starting agent.

\$ export PS_APP_HOME=/opt/oracle/psft/pt/ps_app_home.

d. Start PSEMAgent using user psadm3.

\$ /opt/oracle/psft/pt/ps_home8.56.07/PSEMAgent/StartAgent.sh

Optionally run the agent in background by appending & to the above command.

12. Upload target database information to IH PUM source.

To upload target database information:

- a. In Change Assistant, upload the target database information. Select Tools, Upload Target Database Information to Image.
- b. Select the target database from the drop-down.

Image: Upload Target Database Information to Image

This example illustrates the fields and controls on the Upload Target Database Information to Image.

🗜 Change Package W	izard	×
	Upload Target Database Information to Image	
Task Steps Select Target	PUM Source Database P91PUMSC	
	Target Database In order to create Change Packages - one or more Target Databases must be defined in the PUM Source Database.	٦
	P91CMDMO Create	
	Upload Target Database Information to PUM Source	
	Update Target Database Definition in Change Assistant Environment Proceed to Define a New Change Package Wizard after Target Information Upload	
	There are beine a new change hackage wizard alter harget information optioad	

c. Click Finish.

Target Database information is uploaded.

- 13. Define a make me current change package in Change Assistant..
 - a. Select Tools, Define Change Package.
 - b. Select Define a New Change Package in Change Assistant radio button.
 - c. Enter the package information.
 - d. Select Standard Search Option Criteria radio button.

Image: Define a New Change Package in Change Assistant

This example illustrates the fields and controls on the Define Change Package in Change Assistant with Define a New Change Package in Change Assistant selected.

Define	Change Package		
	Source Database		
🔵 De	fine a New Change Packa	ge in Update Manager Dashboard	
	Click Here to Open B	rowser and Connect to the PUM Source D	atabase
-	fine a New Change Packa		
ſ			
	fine a New Change Packa Package Definition	ge in Change Assistant	
	fine a New Change Packa Package Definition Target Database:	ge in Change Assistant P91CMDMO	
	fine a New Change Packa P ackage Definition Target Database: Package Name:	ge in Change Assistant P91CMDMO MMC	

- e. Click Next.
- f. Select All Updates Not Applied.

Image: All Updates Not Applied

This example illustrates the fields and controls on the Define Change Package page with the option All Updates Not Applied selected.

		Change Package ource Database	
Oefine CP Select	P91PU	/ISC	
) Search	Packag Target	ge Database: P91CMDMO	
	-	ge Name: MMC	
	Tools I	- Release: 8.56.02	
	Select	Description	Detail
	\bigcirc	All Unapplied Updates for Installed Products	9
	\bigcirc	All Critical Unapplied Updates for Installed Products	9
	\bigcirc	All Critical Updates Not Applied	9
	\bigcirc	All Tax Updates Not Applied	9
	\bigcirc	All True Requisites Not Applied	9
	۲	All Updates Not Applied	Ð
	Proce		

Optionally, select the Proceed to Create Change Package Definition check box to create the change package. If this option is selected, the Next button is enabled.

- g. Click Finish.
- 14. Create change package in Change Assistant.

To create the change package in Change Assistant:

Note: If you selected the Proceed to Create Change Package Definition check box in step 13, the change package is already created and you can skip this step.

- a. Select Tools, Create Change Package.
- b. Select the change package definition that was just created in PUM and click Finish.

Image: Create a New Change Package page

This example illustrates the fields and controls on the Create a New Change Package page. You can find definitions for the fields and controls later on this page.

P Change Pack	kage Wizard		×
	Create a New Cha	ange Package	
<u>Create CP</u>	PUM Source Databa	se	
	Create a New Chang Change Packages ar Download Directory:	re Package re Created using Definitions in the PUM Source D:\psft\pum_download	1
	Change Package:	MMC	
		Create Selected Change Package Definition Proceed to Apply Change Package Wizard after Package Creation	

Optionally select the proceed to Apply Change Package Wizard after Package Creation.

c. Click Finish.

The change package is generated in the Download Directory.

15. Apply change package in Change Assistant.

To apply the generated change package:

- a. Select Tools, Apply Change Package.
- b. Select the change package to apply. Apply type is Initial Pass.
- c. Click Next.
- d. Select the target database (your target Cloud Manager database) from the drop-down and click Next.
- e. Ensure there are no errors in the compatibility click and click Next.
- f. On the Summary page, click Finish.
- g. When the job is complete, there will be a confirmation. If there are any errors found while executing the job, those must be manually fixed.
- 16. Manually copy the customization script.

Copy a post update customization script from the PUM source instance to the target Cloud Manager instance. Use scp to copy.

a. SSH to Cloud Manager VM.

- b. Change to root user \$sudo bash.
- c. Securely copy the customization script.

```
scp -i /home/psadm2/psft/data/cloud/ocihome/keys/cm_adm_pvt_key opc@<pum_⇒
src_hostname>:<pum_source_base_dir>/pt/ps_pi_home/cl/Unix/AppBatch/bse/cl⇒
oud/cm_update_customization.sh $PS_APP_HOME/cloud
```

Where:pum_src_hostnameHostname of PUM source instance. The hostname can
be determined in the Environment Details page for the
PUM source environment.PS_APP_HOMEPath to PS_APP_HOME on Cloud Manager. For
example: /opt/oracle/psft/pt/ps_app_home.pum_source_base_dirPeopleSoft deployment directory. The base directory
can be determined in the Manage Attributes page, under
Manage Environment > Full Tier > Other Attributes
PeopleSoft Deployment Path. This is a mandatory input.

17. Run the customization script to complete the updates on target Cloud Manager.

The script does the following tasks:

- Update files from PUM source
- Synchronize code to File Server
- Cleanup old jar files
- Restart the domains

To execute the post update utility script for MMC package updates, perform the following steps:

If you are running Cloud Manager in OCI:

- a. Login to Cloud Manager VM.
- b. Change to root user \$sudo bash.
- c. Change directory to /opt/oracle/psft/pt/ps_app_home.
- d. Execute the cm_update_customization.sh script as root user with ps_app_home directory as current working directory.

```
$ sudo bash
$ cd /opt/oracle/psft/pt/ps_app_home/
$ sh cloud/cm_update_customization.sh <pum_source_host_name> <pum_source_>
base_dir>
```

Where:

pum_source_host_name

Hostname of PUM source instance. The hostname can be determined in the Environment Details page for the

PUM source environment. Do not use a fully qualified hostname. This is a mandatory input.

PeopleSoft deployment directory. The base directory
can be determined in the Manage Attributes page, under
Manage Environment > Full Tier > Other Attributes
PeopleSoft Deployment Path. This is a mandatory input.

18. Reboot Web (PIA) Server domain.

pum source base dir

19. Verify changes on Target Cloud Manager

You need to manually verify the modifications done on the target Cloud Manager.

For more details on Change Assistant configurations, refer to online help for Change Assistant and Update Manager.

Once Cloud Manager is upgraded proceed to step 2 <u>Upgrading Cloud Manager PeopleTools Using</u> <u>Command Line</u>.

Upgrading Cloud Manager PeopleTools Using Command Line

The Cloud Manager command line option can be used for triggering the PeopleTools upgrade and monitoring the upgrade status. This command line utility can be used to upgrade PeopleTools for Cloud Manager instances that are on PeopleTools below 8.58. If self update was used (Cloud Manager Image 10 to Image 11), the PeopleTools upgrade is included in the process. For Cloud manager 9 and below, a PeopleTools upgrade is required.

Note: If you are running Cloud Manager Image 8 or lower, you must upgrade to Cloud Manager Image 11 using selective adoption to obtain the command line utility for automated PeopleTools upgrade.

To use the command line utility to upgrade PeopleTools:

1. Subscribe to the PeopleTools download channel. Ensure that the download is complete.

For example: Interaction Hub PI 9.1.11 has PeopleTools version 8.58.03, therefore you must subscribe to PeopleTools 8.58 Linux download channel with a minimum patch version of 8.58.03. To determine the PeopleTools version on the IH PUM Source, SSH into the IH PUM Source, switch user to psadm2 and run **psadmin -v** command. See <u>Accessing Provisioned Environments</u>

- 2. Log into the Cloud Manger machine using SSH.
- 3. Create a response file.

See Creating Response File

4. Backup Cloud Manager instance. See Using Automated Backup and Restore Utility.

Important! The backup will be available in case of any failures in the PeopleTools upgrade process, allowing you to restore to this point.

5. Run the command line to execute the upgrade.

```
run_cloud_manager_update -t <task_name> -o <operation_name > -r <response_fil⇒
e.json>
```

Example: run_cloud_manager_update -t cm_upgrade -o execute -r /tmp/cm_update_rsponse_file.json

See Command Line Operations for cm upgrade

Understanding the Command Line

The command line has the following Hierarchy:

Command > Task > Operation > Subtask >Activity

• Command

The command is **run_cloud_manager_update**.

Task

For Cloud Manager Image 9, the only supported task is cm_upgrade [-t option].

• Operation

Multiple operation s [-o option] are available for a task. For cm_upgrade operations see <u>Command</u> <u>Line Operations for cm_upgrade</u>

Subtasks

Each operation contains one or more subtasks. See <u>Subtasks for PeopleTools Upgrade [PTU] in Cloud</u> <u>Manager Instance</u>.

• Activity

Each subtask may have multiple activities.

Command Line Operations for cm_upgrade

The task *cm_upgrade* is used to perform a PeopleTools Upgrade [PTU] in Cloud Manager instance. The input values are given as response file. The format is:

run_cloud_manager_update -t cm_upgrade -o <operation_name> -r <response_file.json>⇒

This table lists the operation/subtask details.

Operation Type [-o]	Description/Details
execute	This operation is used for executing the current task. If the response file is present it will read the response file and that will be used for creating the input values for the task execution.

Operation Type [-o]	Description/Details
get_status	This operation is used to display the current task status in the console. The status will show the execution status at the activity level.
	-v [verbose] option can be used for the detailed status.
	The activity status will be updated, only after the execution completes. The statuses supported by activities are:
	PENDING/UNKNOWN
	• SUCCESS
	• FAILURE
retry	This operation is used for rerunning failed activities. This can be executed with or with out a response file. The response file should be used when the task execution failed due to input value error and the response file has been updated.
	Retry will:
	• Check if a response file is provided. If provided the response file is used for creating input data. If the response file is not provided, the utility will get the input data from the previous or failed run.
	• Automatically determine the current activity name in failure state.
	• Execute the rollback step for the current failed activity and skip all other successful activities and subtasks.
	• Execute the activity from the failed step forward
	Note: In the status summary RETRY is displayed for the activity that was in a failed state. In verbose summary, the activity status will be the current failed status. Once the execution of the activities completes, the activity status and task status will be updated properly.
mark_as_complete	This operation is used to mark an activity as manually fixed. The user manually fixes the failed activity and then runs this operation. This operation will then skip the current failed activity and mark it as MANUAL_SUCCESS, then resume to next subtask.
	Note: The status summary will show the MANUAL_SUCCESS status for the particular sub task . In verbose status the activity status is not changed. This is because the task or activity is not rerun, therefore the verbose status display the old status.
mark_all_steps_complete	This operation is used to skip all the subtask execution in case of failure. In this case the user can manually fix all pending and failed subtasks.
	Note: The status summary will show the MANUAL_SUCCESS status for the particular subtask . In verbose status the activity status will be the current status [in FAILED / PENDING/SUCCESS state]. Since the subtask or activity is not rerun, the verbose status displays the old status.

Subtasks for PeopleTools Upgrade [PTU] in Cloud Manager Instance

The **cm_upgrade** task is used to perform a PeopleTools Upgrade [PTU] in Cloud Manager instance. The input values should given as response file. This task will upgrade PeopleTools on the Cloud Manager instance with no manual stop.

The following sub tasks are performed.

1. Validate the Cloud Manager PTU response file input values.

The validation activity (PsftCMUpdateValidationActivity) will validate:

- WinRm connectivity to the Windows client instance
- Windows client user id and password
- File server validation
- Current PeopleTools version
- PeopleTools DPK for the new PeopleTools version
- Database information in TNS entry
- PIA port http and https
- psftserver values and jolt port in wls config
- WLS port and Jolt port in Application domain
- Operator id/password
- WLS admin is/password
- Web profile user id/password
- DB admin password
- Operator id and password
- Connect id and password
- Access id and password
- All user input mandatory values
- 2. Take a backup of current CM_PS_HOME and PS_CFG_HOME.

The activity to prepare for the update (PsftPrepareCMUpdateActivity) will:

- Backup of PS_HOME and PS_CFG_HOME
- Back up of PTU specific files.
- Copy the PTC and ODC DPK from CM DPKs to the file server.
- 3. Stop the Cloud Manager psft domains.

The activity to shut down PSFT domains (PsftCMDomainRestartActivity) will execute.

4. Cloud Manager PTU upgrade process.

This subtask contains multiple activities:

- Copy the Cloud folder from Cloud Manager file server to Windows client.
- Install the PeopleTools client for current CM PeopleTools version.
- Install the PeopleTools client for new CM PeopleTools version.
- Configuration Change Assistant for CM PeopleTools Upgrade process.
- Trigger the Change Assistant PTU command line process.
- 5. Cloud Manager PTP update process.

This subtask contains multiple activities:

- Copy the Cloud folder from Cloud Manager file server to Windows client.
- Install the PeopleTools client for new CM PeopleTools version.
- Configuration Change Assistant for CM PeopleTools Update process.
- Trigger the Change Assistant PTP command line process.
- 6. Uninstall the Cloud Manager middle tier.

The activity to uninstall the middle tier will:

- Uninstall middle tier from the Cloud Manager instance.
- Call the puppet clean up command using the root user.
- 7. Re-provision the Cloud Manager middle tier.

This subtask contains multiple activities:

- Provision middle tier:
 - Installation of new PeopleTools middle tier in the Cloud Manager middle tier.
 - Restore old configuration files in Cloud Manager.
 - Restore log4j, open ssl, puppet config and execution scripts.
 - Will do Cloud Manager specific configuration in Cloud Manager puppet yaml file and will trigger the Cloud Manager specific puppet profiles.
 - Use puppet apply execution using root user for recreating the middle tier.
- Place holder for doing the post MT creation steps, if any.
- 8. Cloud Manager PTU post update settings.

The activity for PTU post update settings will:

- Post the upgrade task.
- Execute the application engine program for notifying the UI about the execution status.
- 9. Restarting the Cloud Manager domains.

The activity will restart all Cloud Manager psft domains.

Creating Response File

Create a json file that includes all the mandatory values, the other values will be discovered in job execution. If the mandatory values are not included in the response file, job execution will throw an error.

This is an example of the response file containing the mandatory values:

```
{
  "pum source": {
    "windows client": {
      "private ip": "<windows client private IP>",
      "remote_password": "<Windows Client Password>"
    }
  },
  "pum_target": {
    "psft": {
      "access_pwd": "<Access Password>",
      "opr pwd": "<Operator Password>",
      "admin pwd": "<DB Admin Password>",
      "connect pwd": "<Connect Password>",
      "gw admin user pwd": "<Gateway User Password>",
      "webprofile user pwd": "<Web Profile User Password>",
      "weblogic admin pwd": "<Webserver Admin Password>"
    }
  }
}
```

The response file can also contain additional values, however the mandatory values must be included. This is an example of a response file with additional values:

```
{
   "file_server": {
```

```
"hostname": "anneshfsfs.ad2sub.myworldnet.oraclevcn.com"
},
"pum source": {
  "windows_client": {
    "host name": "win client hostname",
    "private ip": "10.0.6.244",
    "remote password": "Psoft123##Psoft123"
  }
},
"pum target": {
  "psft": {
    "opr id": "CLADM",
    "connect id": "people",
    "access id": "SYSADM",
    "weblogic_admin_user": "system",
    "gw admin user": "administrator",
    "db_name": "CMPSDB",
    "db service name": "CMPSDB",
    "db host": "aneesh2702.ad2sub.myworldnet.oraclevcn.com",
    "psft server": "aneesh2702.ad2sub.myworldnet.oraclevcn.com",
    "wsl port": "7000",
    "jolt port": "9033",
    "pia https port": "8443",
    "pia http port": "8000",
    "db port": "1522",
    "tools version": "8.56.12",
    "new tools version": "8.57.03",
    "pi number": "8",
    "access_pwd": "EMDB0123",
    "opr pwd": "CLADM",
    "admin pwd": "Passw0rd#",
    "connect pwd": "people",
    "gw admin user pwd": "password",
    "webprofile user pwd": "WEBPROFILE USER PWD",
    "weblogic admin pwd": "WEBSERVER ADMIN PWD"
```

}

```
}
```

Getting Status of PeopleTools Upgrade Job

Use the following command to get the current status of the PeopleTools Upgrade:

run cloud manager update -t CM UPGRADE -o get status

When the PeopleTools Upgrade begins, the status will show in progress and you can see what step is executing.

Image: Cloud Manager PeopleTools Upgrade Status showing in-progress.

This example illustrates Cloud Manager PeopleTools Upgrade Status.

 CLO	UD MANAGER PEOPLETOOLS UPGE	RADE STATUS			
	HESTRATION ID: 0:26:158869]	CM_ORCH_PTU_2	0190501_154931	[Time:	2019-05-01
	SCHEDULE STATUS:	SUCCESS			
JOB	STATUS:	IN_PROGRESS			
1. 2. 3. 4. 5. 6. 7. 8.	Validating Input Data: Cloud Manager Pre-Update S Stopping the Cloud Manager Cloud Manager PeopleTools Cloud Manager PeopleTools Un-Provisioning the Middle Re-Provisioning the Middle Cloud Manager Post Update	Settings: PSFT Domains: Upgrade [PTU]: Update [PTP]: Tier of Cloud Tier of Cloud		PENDIN PENDIN	

If a step fails, the status will show failure. You will need to correct the failure and either retry or mark the step as complete in order to continue.

Image: Cloud Manager PeopleTools Upgrade Status with failed step.

This example illustrates Cloud Manager PeopleTools Upgrade Status where a step has failed.

CLOUD MANAGER PEOPLETOOLS UPGR	ADE STATUS	
ORCHESTRATION ID:	CM_ORCH_PTU_20190429_082823	[Time: 2019-04-29
08:29:17:737108]		
JOB SCHEDULE STATUS:	SUCCESS	
JOB STATUS:	FAILURE	
 Validating Input Data: Cloud Manager Pre-Update So Stopping the Cloud Manager Cloud Manager PeopleTools Cloud Manager PeopleTools Un-Provisioning the Middle Re-Provisioning the Middle Cloud Manager Post Update 	ettings: PENDING PSFT Domains: PENDING Upgrade [PTU]: PENDING Update [PTP]: PENDING Tier of Cloud Manager: Tier of Cloud Manager:	PENDING PENDING

Image: Cloud Manager PeopleTools Upgrade Status

This example illustrates Cloud Manager PeopleTools Upgrade Status where all steps are successful.

CLOUD MANAGER PEOPLETOOLS UPGRAD	STATUS
16:09:57:122185]	_ORCH_PTU_20190501_160902 [Time: 2019-05-01
	CCESS
 Validating Input Data: SU Cloud Manager Pre-Update Set Stopping the Cloud Manager F Cloud Manager PeopleTools Up Cloud Manager PeopleTools Up Un-Provisioning the Middle T Re-Provisioning the Middle T 	ings: SUCCESS FT Domains: SUCCESS rade [PTU]: SUCCESS ate [PTP]: SUCCESS er of Cloud Manager: SUCCESS

Verbose

To display the verbose status, add the -v verbose option:

run_cloud_manager_update -t CM_UPGRADE -o get_status -v

This is an example of the verbose Cloud Manager PeopleTools Upgrade Status:

```
_____
 CLOUD MANAGER PEOPLETOOLS UPGRADE STATUS
_____
 ORCHESTRATION ID:
                            CM ORCH PTU 20190501 160902 [Time: 2019-05-01 16⇒
:09:57:122185]
                         SUCCESS
 JOB SCHEDULE STATUS:
 JOB STATUS:
                            SUCCESS
 JOB DETAILS:
                            Successfully completed
 JOB LOG:
                             /home/psadm2/psft/data/cloud/cmlogs/envs/CLOUD MAN⇒
AGER INSTANCE/CM_ORCH_PTU_20190501_160902/cm_job_psft_cm_ptu_job_0_20190501_160903_⇒
out.log
 JOB SCHEDULER LOG:
                              /home/psadm2/psft/data/cloud/cmlogs/envs/CLOUD MAN⇒
AGER_INSTANCE/CM_ORCH_PTU_20190501_160902/out.log
 JOB STATUS CHECK LOG: /home/psadm2/psft/data/cloud/cmlogs/envs/CLOUD MAN⇒
AGER INSTANCE/CM DATA/out 20190501.log
 1. Validating Input Data: SUCCESS
                    Successfully completed
/home/psadm2/psft/data/cloud/cmlogs/envs/CLOUD_MANA⇒
     TASK DETAILS:
     TASK LOG:
GER INSTANCE/CM PTU VALIDATE_0_20190501_160906/out.log
                                         SUCCESS
     1.1 CM Update Validation Process:
          Details: Successfully completed
 2. Cloud Manager Pre-Update Settings:
                                          SUCCESS
     TASK DETAILS:
                             Successfully completed
     TASK LOG:
                             /home/psadm2/psft/data/cloud/cmlogs/envs/CLOUD MANA⇒
GER INSTANCE/CM PRE UPDATE 0 20190501_160912/out.log
     2.1 Cloud Manager Prepare Update Process:
                                                  SUCCESS
          Details: Successfully completed
 3. Stopping the Cloud Manager PSFT Domains: SUCCESS
     TASK DETAILS: Successfully completed
     TASK LOG:
                             /home/psadm2/psft/data/cloud/cmlogs/envs/CLOUD MANA⇒
GER INSTANCE/CM DOMAIN STOP 0 20190501 160918/out.log
     3.1 CM Domain Restart/Stop Process:
                                          SUCCESS
```

Details: Successfully completed 4. Cloud Manager PeopleTools Upgrade [PTU]: SUCCESS TASK DETAILS: Successfully completed TASK LOG: /home/psadm2/psft/data/cloud/cmlogs/envs/CLOUD MANA⇒ GER INSTANCE/CM PTU UPGRADE 0 20190501 160924/out.log 4.1 Performing PsftActivityWindowsCloudFolderSync: SUCCESS Details: Successfully completed 4.2 Performing Cloud Manager Windows Client Install Activity [Source PeopleT⇒ ools]: SUCCESS Details: Successfully completed 4.3 Performing Windows Client Install Activity: SUCCESS Details: Successfully completed 4.4 Adding Environment Info to CA: SUCCESS Details: Successfully completed 4.5 CA PTU Apply Process: SUCCESS Details: Successfully completed 5. Cloud Manager PeopleTools Update [PTP]: SUCCESS TASK DETAILS: Successfully completed TASK LOG: /home/psadm2/psft/data/cloud/cmlogs/envs/CLOUD MANA⇒ GER INSTANCE/CM PTP UPDATE 0 20190501 160930/out.log 5.1 Performing PsftActivityWindowsCloudFolderSync: SUCCESS Details: Successfully completed 5.2 Performing Windows Client Install Activity: SUCCESS Details: Successfully completed 5.3 Adding Environment Info to CA: SUCCESS Details: Successfully completed 5.4 CA PTP Apply Process: SUCCESS Details: Successfully completed 6. Un-Provisioning the Middle Tier of Cloud Manager: SUCCESS Successfully completed TASK DETAILS: TASK LOG: /home/psadm2/psft/data/cloud/cmlogs/envs/CLOUD MANA⇒ GER_INSTANCE/CM_UNPROV_MT_0_20190501_160936/out.log 6.1 Performing Unprovision MT: SUCCESS Details: Successfully completed 7. Re-Provisioning the Middle Tier of Cloud Manager: SUCCESS TASK DETAILS: Successfully completed TASK LOG: /home/psadm2/psft/data/cloud/cmlogs/envs/CLOUD MANA⇒ GER INSTANCE/CM REPROV MT 0 20190501 160942/out.log 7.1 Performing Reprovision MT: SUCCESS Details: Successfully completed 7.2 Cloud Manager Post MT Reprovision Process: SUCCESS Details: Successfully completed Cloud Manager Post Update Settings: 8. SUCCESS TASK DETAILS: Successfully completed /home/psadm2/psft/data/cloud/cmlogs/envs/CLOUD MANA⇒ TASK LOG: GER_INSTANCE/CM_POST_UPDATE_0_20190501_160948/out.log 8.1 Cloud Manager Post Update Process: SUCCESS Details: Successfully completed

Troubleshooting PeopleTools Upgrade Failures

Several logs are available to assist the users in troubleshooting errors that may occur during the upgrade process.

Log	Location/Example log file name
JOB LOG	/home/psadm2/psft/data/cloud/cmlogs/envs/CLOUD_MANAGER_INSTANCE/CM _ORCH_PTU_20190308_054432/cm_job_psft_cm_ptu_job_0_20190308_054432 _out.log
JOB SCHEDULER LOG	/home/psadm2/psft/data/cloud/cmlogs/envs/CLOUD_MANAGER_INSTANCE/CM _ORCH_PTU_20190308_054432/out.log
JOB STATUS CHECK LOG	/home/psadm2/psft/data/cloud/cmlogs/envs/CLOUD_MANAGER_INSTANCE/CM _ORCH_PTU_20190308_054607/out.log
TASK LOG	/home/psadm2/psft/data/cloud/cmlogs/envs/CLOUD_MANAGER_INSTANCE/CM _POST_UPDATE_0_20190308_054441/out.log

Note: The log file names are only examples, the file name in a customer environment will vary.

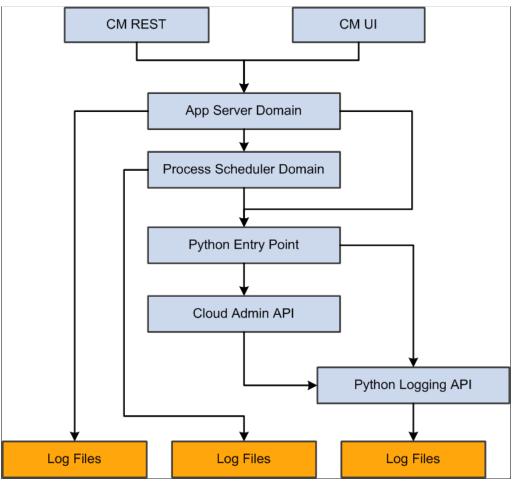
Cloud Manager Logs

Understanding PeopleSoft Cloud Manager Logs

Logs contain useful information for analyzing any environment related issues or failures that may occur in the system.

Image: Logging Process Overview in Cloud Manager

The flow diagram below illustrates an overview of logging process in Cloud Manager.



Cloud Manager logs include:

- Python logs
- Environment Action logs
- Download Manager logs

- Patching logs
- App Server Domain logs
- Process Scheduler Domain logs
- Puppet logs in Provisioned VMs
- Terraform logs

Describing Cloud Manager Logs

Python Logs

- All Python environment action logs will be under the following folder:
- All logs related to a particular environment <env name> will be under: <CM Python Log Root>/envs/ <env name>/.The path of <CM Python Log Root> is /home/psadm2/psft/data/cloud/cmlogs.
- All logs related to the action <Type> on the environment denoted by <env name> will be under: <CM Python Log Root>/envs/<env name>/<Type>_TimeStamp
- The actions can be:
 - CREATE
 - DEPLOY (Only for OCI)
 - REMOVE
 - ACTIONS (Start, Stop, and so on)
 - ADD_TARGET
 - UPGRADE
 - BACKUP
 - RESTORE
 - CLONE
 - REFRESH

Download Manger Logs

Log files generated by the download manager are available in the following folder: <CM Python Log Root>/dm/

Note: A contextual logs UI that can be accessed from the environment details page is available in Cloud Manager for administrator and end users while debugging issues in their environments.

Since the number of folders and files under cmlogs will grow over time, an archiving process for older files is included in Cloud Manager.

Note: When the user deletes an environment, the log files are automatically moved to an archive directory, for example: CM Python Log Root>/envs/archive_dir

Cloud Manager Patching Logs

Log files generated by the Cloud Manager patch process are available as shown in this table.

Description	Path
Detailed log about the process to download Cloud Manager update patches.	/opt/oracle/psft/home/psadm2/psft/data/cloud/ocihome/ cmpatch/logs/output.log
Detailed log about the process to apply Cloud Manager update patches.	/opt/oracle/psft/home/psadm2/psft/data/cloud/ocihome/ cmpatch/logs/cmpatch_apply.log
Other database project log files, depending upon the patch	/opt/oracle/psft/home/psadm2/psft/data/cloud/ocihome/ cmpatch/logs/

Application Server Domain Logs

Application Server Domain logs are written in the default application server domain logs directory. \$PS_CFG_HOME/appserv/APPDOM/LOGS

Puppet Logs in Provisioned VMs

To locate puppet logs on Linux VM:

1. Logon into the provisioned VM using "opc" account with ssh.

Use the private key corresponding to the public key provided in the My Settings page, or use the Cloud Manager administrative key available in the Cloud Manager VM. See <u>My Settings Page</u>

2. The log files can be found at: /home/opc/cloud/admin/scripts/cloud_setup_psft.log.

To locate puppet logs on Windows VM:

- 1. Log into Windows VM as administrator.
- 2. The log files can be found at: C:\cloud_setup_psft.txt.

PeopleSoft Cloud Manager Log Levels

The log levels that can be configured by the customer are:

- Critical
- Error
- Warning
- Debug

Note: Logging formats and levels are controlled using Python Logging configuration. The default log level is Debug.

Attribute name	Format	Description
asctime	%(asctime)s	Human-readable time when the LogRecord was created. By default this is of the form '2003-07-08 16:49:45,896' (the numbers after the comma are millisecond portion of the time).
created	%(created)f	Time when the LogRecord was created (as returned by time.time()).
filename	%(filename)s	Filename portion of pathname.
funcName	%(funcName)s	Name of function containing the logging call.
levelname	%(levelname)s	Text logging level for the message ('DEBUG', 'INFO', 'WARNING', 'ERROR', 'CRITICAL').
levelno	%(levelno)s	Numeric logging level for the message (DEBUG, INFO, WARNING, ERROR, CRITICAL).
lineno	%(lineno)d	Source line number where the logging call was issued (if available).
message	%(message)s	The logged message, computed as msg % args. This is set when Formatter. format() is invoked.
module	%(module)s	Module (name portion of filename).
msecs	%(msecs)d	Millisecond portion of the time when the LogRecord was created.
name	%(name)s	Name of the logger used to log the call.
pathname	%(pathname)s	Full pathname of the source file where the logging call was issued (if available).
process	%(process)d	Process ID (if available).
processName	%(processName)s	Process name (if available).
relativeCreated	%(relativeCreated)d	Time in milliseconds when the LogRecord was created, relative to the time the logging module was loaded.
thread	%(thread)d	Thread ID (if available).
threadName	%(threadName)s	Thread name (if available).

Configurable Log Root: /home/psadm2/psft/data/cloud/cmlogs will be the Cloud Manager Python Log Root.

Changing Log Levels

The customer can edit psc_constants.py and pca_int.conf files to set the log level.

The default logging level is *Debug*. To customize it to another level, modify the following entry in the file:

```
<PS_APP_HOME>\cloud\psc_cloud\psc_utils\psc_constants.py logging_level = logging.DE⇒
BUG
```

Note: You do not need to restart the domains after the changing the log levels.

Important! In OCI, for Python logging configuration, two locations have to be configured. cloud/pca_int.conf - This controls the log level in Download Manager and Terraform handler. cloud/psc_cloud/psc_utils/psc_constants.py - This controls the log level in PSFT deployment code.

Terraform Logs for OCI

When Cloud Manager is used for provisioning environments, the provisioning of infrastructure is the first task that is executed. The Terraform log files generated during the execution can be found under the logs directory for the environment: /home/psadm2/psft/data/cloud/cmlogs/envs/<Environemnt Name>/ CREATE_<Time Stamp>/

Log File Type	Description
tf.out	This is the Output Log, which contains the Terraform's stdout stream output.
tf.err	This is the Error Log, which contains the Terraform's stderr stream output.
out.log	This is the Driver Output generated by the Cloud Manager module that invokes Terraform.
console.log	This contains the uncaught exceptions.

Terraform Input and Output Files

The Terraform input/output files used by Cloud Manager for provisioning an environment can be found under: /home/psadm2/psft/data/cloud/ocihome/envs/<Environment Name>/

Log File Type	Description
terraform.tf.json	The .json file contains the specification of the VMs, storage volumes, database systems etc.
variables.tf	This file contains the tenancy OCID, user OCID, API key paths, finger print etc.
tf.result.json	This file contains a summary of the resources that were successfully created by Terraform.

Cloud Manager Logs

Backing Up and Restoring Cloud Manager

Understanding Cloud Manager Backup and Restore

There are two methods for backing up and restoring Cloud Manager.

1. Automated Backup and Restore Utility.

See Using Automated Backup and Restore Utility.

2. Backup and restore using Block Volume Backups for OCI.

See Manually Backing Up and Restoring Cloud Manager Using Block Volume Backups for OCI

Important! If your Cloud Manager instance was created using a custom fqdn, the PRESERVE_HOSTINFO field must be set to 0 before doing CM backup. If this value is not set as 0, there is a chance that the Cloud Manager restore will fail as OCI will not be able to configure the new instance with new IP details in /etc/hosts file. See tutorial *Install the PeopleSoft Cloud Manager Stack with Resource Manager*.

Warning! Backing up or restoring Cloud Manager will shutdown all services. Please ensure that no provisioning or lifecycle jobs are running. Any running jobs will be abruptly ended and may result in an unstable or unusable state.

Important! Ensure the process scheduler does not have any jobs in its queue. If there are pending jobs in the queue, those may get scheduled to run whenever a backup is restored.

Using Automated Backup and Restore Utility

The automated backup and restore utility provides the ability to create a backup of the Cloud Manager instance. This backup/restore utility provides the following options:

- Backup and restore Cloud Manager Instance block volume.
- Backup Cloud Manager Instance boot volume.
- Delete backups.
- List Cloud Manager backups in OCI.
- Create an OCI config file.

To run the automated backup and restore utility:

- 1. Log into Cloud Manager instance using SSH as user opc.
- 2. Change the directory to /home/opc/bootstrap/cm_backup_and_restore.
- 3. Copy 2 files (cm_backup_restore.py and cm_backup_restore.sh) from */opt/oracle/psft/pt/ ps_app_home/cloud/psc_cloud/psc_utils/* to */home/opc/bootstrap/cm_backup_and_restore*.
- 4. Run the shell script cm_backup_restore.sh.

Understanding the Backup and Restore Shell Script

For a summary of the usage and optional arguments for shell script **cm_backup_restore.sh**, use the -h option.

This is an example of the help.

Image: Example: cm_backup_restore.sh -h

This example illustrates running cm backup restore.sh -h.

	<pre>p_and_restore]\$ sh cm_backup_restore.sh -h e.py [-h] -o option [-n backupname] [-t {BLOCK,BOOT}]</pre>	
Utility to Backup/Restor	re storage volume of Cloud Manager Instance	
optional arguments: -h,help -o option	show this help message and exit Provide an option to Backup/Restore/Delete/Display	
	backup(for taking backup of the Cloud Manager Instance)restore(for restoring block volume of Cloud Manager Instance)delete(for deleting backup from OCI)list(to display list of Cloud Manager Instance backups in OCI)createconfig (to create oci config file)	
-n backupname	Custom Backup Name [Optional] Default format:' <vol type="">_VOLBKP_<cm instance="" name=""><timestamp(ddmmyyyy)>_<timestamp(hhmmss)>' (this field is mandatory for Restore and Delete operations)</timestamp(hhmmss)></timestamp(ddmmyyyy)></cm></vol>	
-t {BLOCK,BOOT}	Backup Volume Type [Optional] Default : BLOCK (this field is required for Backup operation)	
-c DB_ACCESS_ID DB_ACC	CESS_PWD_PDB_NAME Provide Database Access Id, Password and PDB Name Example <db_access_id> <db_access_pwd> <pdb_name> (separated by space)</pdb_name></db_access_pwd></db_access_id>	

Creating Config File

You need to create a config file if:

- This is the first time you are running the automated backup and restore utility.
- You want to run the utility with different OCI user credentials.

To create the Config file:

1. Run the utility with the createconfig option and provide the Cloud Manager database Access ID and password.

```
sh cm_backup_restore.sh -o createconfig -c <DB_ACCESS_ID> <DB_ACCESS_PWD> <PDB\rightarrow _NAME>
```

- 2. This option will read OCI User ID, Tenancy ID, Fingerprint and Private Key File Path from database and display on screen.
- 3. Check the displayed values.

- If the values are correct, press y to confirm and the configuration file will be created.
- If you want to change the values, press *n* and provide Tenancy ID, User ID, Fingerprint, Private Key File Path, Region details to create config file.

Image: Example accepting default values

This example illustrates accepting default values.

```
[opc@smncml2r1 cm_backup_and_restore]$ sh cm_backup_restore.sh -o createconfig -c EMDBO Water123 CMPSDB
Please check whether below OCI details are correct
Tenancy OCID : 'ocidl.tenancy.ocl..aaaaaaaaayy35pigzces6ly7aslibgt7a4u7o3tlt42nxg4idzrsui52gma5a'
User OCID: 'ocidl.user.ocl..aaaaaaaaprdpimfzdhyip3tmeot5ve7woycqanjj7juz3gqccc5qawu7dora'
Fingerprint of Public Key : '49:4f:45:64:2a:lc:dl:11:2f:61:6a:09:95:97:b4:74'
Private Key Path : 'home/psadm2/psft/data/cloud/ocihome/keys/oci_api_key.pem'
Region : 'us-ashburn-1'
Enter y if above values are correct : y
2021-02-10 13:35:06 - INFO - 406 : Created config file 'config.json'
[opc@smncml2r1 cm_backup_and_restore]$
```

Image: Example modifying default values

This example illustrates modifying default values.

```
[opc@smncml2r1 cm_backup_and_restore]$ sh cm_backup_restore.sh -o createconfig -c EMDBO Water123 CMPSDB
Please check whether below OCI details are correct
Tenancy OCID : 'ocidl.tenancy.ocl..aaaaaaaayy35pigzces6ly7aslibgt7a4u7o3tlt42nxg4idzrsui52gma5a'
User OCID: 'ocidl.user.ocl..aaaaaaaaprdpimfzdhyip3tmeot5ve7woycganjj7juz3ggccc5qawu7dora'
Fingerprint of Public Key : '49:4f:45:64:2a:lc:dl:ll:2f:61:6a:09:95:97:b4:74'
Private Key Path : '/home/psadm2/psft/data/cloud/ocihome/keys/oci_api_key.pem'
Region : 'us-ashburn-1'
Enter y if above values are correct : n
Enter Tenancy OCID : ocidl.tenancy.ocl..aaaaaaaayy35pigzces6ly7aslibgt7a4u7o3tlt42nxg4idzrsui52gma5a
Enter Jser OCID : ocidl.tenancy.ocl..aaaaaaaaayy35pigzces6ly7aslibgt7a4u7o3tlt42nxg4idzrsui52gma5a
Enter User OCID : ocidl.tenancy.ocl..aaaaaaaaayy35pigzces6ly7aslibgt7a4u7o3tlt42nxg4idzrsui52gma5a
Enter Jser OCID : ocidl.tenancy.ocl..aaaaaaaaayy35pigzces6ly7aslibgt7a4u7o3tlt42nxg4idzrsui52gma5a
Enter Jser OCID : ocidl.tenancy.ocl..aaaaaaaaayy35pigzces6ly7aslibgt7a4u7o3tlt42nxg4idzrsui52gma5a
Enter Jser OCID : ocidl.tenancy.ocl..aaaaaaaaprdpimfzdhyip3tmeot5ve7woycqanjj7juz3ggccc5qawu7dora
Enter Fingerprint of Public Key : 49:4f:45:64:2a:lc:dl:ll:2f:61:6a:09:95:97:b4:74
Enter region : us-ashburn-1
Enter Private Key File Path : /home/psadm2/psft/data/cloud/ocihome/keys/oci_api_key.pem
2021-02-10 13:37:00 - INFO - 406 : Created config file 'config.json'
[opc@smncml2r1 cm_backup_and_restore]$
```

Note: If config.json is already present, this utility will replace the existing one.

Creating Backups

When creating a backup of Cloud Manager, backup both block (data) volume and the boot volume. This will ensure creating a pair of time consistent backups that can be restored together when restoring the entire Cloud Manager instance in case of boot volume issues or failures.

Backups can be created using the default name which is *<Vol Type>_VOLBKP_<CM Instance Name>_<timestamp(ddmmyyyy)>_<timestamp(HHMMSS)>* or you can provide a custom name for the backup. Use the optional argument *-n <Custom Backup Name>* to create a backup with a custom name.

The default backup type is BLOCK.

Cloud Manager data is saved in two locations: Oracle Database files on data volume and configuration files on boot volume. Both must be backed-up to restore to a consistent point. The backup utility creates a full backup of both data volume as well as files on boot volume automatically.

Creating the Block Volume Backup

To create the block volume backup:

1. Run the utility with the backup option.

sh cm_backup_restore.sh -o backup

Note: Default value for volume type (-t) is BLOCK.

2. Optional arguments include name (-n) and volume type (-t).

sh cm_backup_restore.sh -o backup -n SMNCM_CST_BKP_BLK

In the above example the backup name is SMNCM_CST_BKP_BLK.

- 3. User will be prompted that the backup task will stop Database, Application Server, Process Scheduler and PIA services. Press *y* to continue.
- 4. User will be prompted to enter a passphrase for the private API signing key.

Enter the passphrase if it exists or press enter.

- 5. The backup automation process will:
 - Shut down the database and domains.
 - Backup files on boot volume and save them on data volume as /opt/oracle/psft/dpks/ cm_boot_vol_files.tar.gz. Files backed up include:
 - All files under PS_CFG_HOME
 - /home/psadm1/.bashrc
 - /home/psadm2/.bashrc
 - /home/psadm3/.bashrc
 - /home/oracle2/.bashrc
 - /home/esadm1/.bashrc
 - /etc/profile
 - /etc/bashrc
 - /usr/lib/systemd/system/psft-db-<DB NAME>.service
 - /usr/lib/systemd/system/psft-appserver-APPDOM.service
 - /usr/lib/systemd/system/psft-prcs-PRCSDOM.service
 - /usr/lib/systemd/system/psft-pia-peoplesoft.service
 - Create a backup of data volume.
 - Restart the database and domains.

Example:

[opc@smncm cm_backup_and_restore]\$ sh cm_backup_restore.sh -o backup

```
Backup task will stop Database, Application Server, Process Scheduler and PIA servi\Rightarrow
ces
Do you want to continue (y/n) ? y
Please Enter Private Key Pass Phrase :
2019-04-19 08:36:22 -
                        INFO - 408 : Compressing BOOT volume directories/files '⇒
/home/psadm1/.bashrc,/home/psadm2/.bashrc,/home/psadm3/.bashrc,/home/oracle2/.bashr⇒
c,/home/esadm1/.bashrc,/etc/profile,/etc/bashrc,/etc/init.d/psft-db,/etc/init.d/psf⇒
t-appserver,/etc/init.d/psft-prcs,/etc/init.d/psft-pia' and moving to '/opt/oracle/⇒
psft/dpks/cm boot vol files.tar.gz'
                         INFO - 418 : $PS_CFG_HOME directory '/home/psadm2/psft/p⇒
2019-04-19 08:36:22 -
t/8.57'
2019-04-19 08:36:22 -
                         INFO - 427 : Compressed BOOT volume directories/files '/⇒
home/psadm1/.bashrc,/home/psadm2/.bashrc,/home/psadm3/.bashrc,/home/oracle2/.bashrc⇒
,/home/esadm1/.bashrc,/etc/profile,/etc/bashrc,/etc/init.d/psft-db,/etc/init.d/psft⇒
-appserver,/etc/init.d/psft-prcs,/etc/init.d/psft-pia,/home/psadm2/psft/pt/8.57' an⇒
d moving to '/opt/oracle/psft/dpks/cm boot vol files.tar.gz'
2019-04-19 08:37:00 -
                        INFO - 598 : Cloud Manager Instance Backup Volume Id :oc⇒
2019-04-19 08:37:00 - INFO - 448 : Changing DB service state to 'Stop'
                         INFO - 481 : DB service is in 'Stop' state
2019-04-19 08:37:27 -
2019-04-19 08:37:27 -
                        INFO - 448 : Changing APPSERVER service state to 'Stop'
2019-04-19 08:37:43 -
                     INFO - 481 : APPSERVER service is in 'Stop' state
2019-04-19 08:37:43 -
                       INFO - 448 : Changing PRCS service state to 'Stop'
2019-04-19 08:42:35 -
                        INFO -
                                481 : PRCS service is in 'Stop' state
                         INFO - 448 : Changing PIA service state to 'Stop'
2019-04-19 08:42:35 -
2019-04-19 08:42:54 -
                        INFO - 481 : PIA service is in 'Stop' state
2019-04-19 08:42:54 -
                        INFO - 875 : Created input.json for BLOCK Volume Backup ⇒
: BLOCK VOLBKP SMNCM 20190419 084254
2019-04-19 08:42:54 -
                        INFO - 876 : Creating BLOCK Volume Backup : BLOCK VOLBKP⇒
SMNCM 20190419 084254
2019-04-19 08:44:15 -
                        INFO - 897 : Created BLOCK volume backup 'BLOCK VOLBKP S⇒
MNCM 20190419 084254'
2019-04-19 08:44:15 -
                        INFO -
                                 448 : Changing DB service state to 'Start'
2019-04-19 08:44:24 -
                         INFO -
                                 481 : DB service is in 'Start' state
                        INFO -
2019-04-19 08:44:24 -
                                448 : Changing APPSERVER service state to 'Start'
2019-04-19 08:44:49 -
                        INFO - 481 : APPSERVER service is in 'Start' state
2019-04-19 08:44:49 -
                        INFO - 448 : Changing PRCS service state to 'Start'
2019-04-19 08:46:45 -
                        INFO -
                                481 : PRCS service is in 'Start' state
2019-04-19 08:46:45 -
                         INFO -
                                448 : Changing PIA service state to 'Start'
2019-04-19 08:46:46 -
                        INFO - 481 : PIA service is in 'Start' state
```

Creating Boot Volume Backup

Boot volume backups must be restored manually using OCI console. This backup can be used if the CM instance becomes unusable and inaccessible.

Note: When restoring a boot volume backup ensure to create the Cloud Manager instance with the same IP addresses as the original instance. The original instance must be terminated before creating a new instance. If unable to reuse the same IP address, then all references to old IP addresses in Cloud Manager application and domains must be manually updated to reflect the new IP address of the instance.

Warning! If the backup is not restored correctly, the Cloud Manager instance may not come up with the proper network configuration which could result in losing the ability to manage already provisioned environments.

To create a boot volume backup:

1. Run the utility with the backup option.

```
sh cm_backup_restore.sh -o backup -t BOOT
```

2. Optionally you can provide a custom backup name using the -n argument..

sh cm backup restore.sh -o backup -n CUSTOM NAME -t BOOT

In the above example the backup name is CUSTOM NAME.

- 3. User will be prompted that the backup task will stop Database, Application Server, Process Scheduler and PIA services. Press *y* to continue.
- 4. User will be prompted to enter a passphrase for the private API signing key.

Enter the passphrase if it exists or press enter.

- 5. The backup process will:
 - Shut down the database and domains.
 - Create the backup.
 - Restart the database and domains.

Example:

```
[opc@smncm cm backup and restore]$ sh cm backup restore.sh -o backup -t BOOT
 Backup task will stop Database, Application Server, Process Scheduler and PIA servi⇒
 ces
 Do you want to continue (y/n) ? y
 Please Enter Private Key Pass Phrase :
 2019-04-19 09:58:54 - INFO - 598 : Cloud Manager Instance Backup Volume Id :oc⇒
 idl.bootvolume.ocl.iad.abuwcljrhcuapoaveqp2yf2oof2pc6lsurxx4xu2fmjarjjrz4qyfkif3wpq
 2019-04-19 09:58:54 - INFO - 448 : Changing DB service state to 'Stop'

      2019-04-19
      09:58:54 -
      INFO
      INFO
      INFO
      INFO
      INFO
      Store
      Store

 2019-04-19 10:07:35 -
                                                                   INFO - 875 : Created input.json for BOOT Volume Backup :⇒
  BOOT VOLBKP SMNCM 20190419 100735
 2019-04-19 10:07:35 - INFO - 876 : Creating BOOT Volume Backup : BOOT VOLBKP S⇒
MNCM_20190419_100735
 MNCM_20190419_100735
2019-04-19 10:09:17 - INFO - 897 : Created BOOT volume backup 'BOOT_VOLBKP_SMN⇒
 CM 20190419 100735'

      CM 20190419 100735'

      2019-04-19 10:09:17 -

      2019-04-19 10:09:26 -

      2019-04-19 10:09:26 -

      2019-04-19 10:09:26 -

      2019-04-19 10:09:26 -

      2019-04-19 10:09:51 -

      2019-04-19 10:09:51 -

      2019-04-19 10:09:51 -

      2019-04-19 10:109:51 -

      2019-04-19 10:11:47 -

      2019-04-19 10:11:47 -

      2019-04-19 10:11:47 -

      2019-04-19 10:11:47 -

      2019-04-19 10:11:47 -

      2019-04-19 10:11:47 -

      2019-04-19 10:11:47 -

      2019-04-19 10:11:47 -

                                                                  INFO - 448 : Changing APPSERVER service state to 'Start'
```

Listing Existing Backups

To list existing block and boot volume backups:

1. Run the utility with the list option:

sh cm_backup_restore.sh -o list

2. User will be prompted to enter a passphrase for the private API signing key.

Enter the passphrase if it exists or press enter.

3. The list of backups is displayed.

Example:

```
[opc@smncm cm_backup_and_restore]$ sh cm_backup_restore.sh -o list
Please Enter Private Key Pass Phrase :
  BLOCK volume backup list :
  * BLOCK_VOLBKP_SMNCM_20190410_110419
BOOT volume backup list :
  No BOOT volume backups found
```

Restoring from a Backup

Both data volume and a set of files on boot volume must be replaced from a backup to restore Cloud Manager instance to a certain back up point.

First step is to restore the data volume. To restore a block (data) volume backup the user must provide a backup name. User can list the existing backups and then select the backup to restore.

To restore a block (data) volume backup:

- 1. While you are still on the latest version, before restoring the data volume, generate the list of IP addresses of all managed instances provisioned by Cloud Manager. This is required later in the restore process to synchronize the '/cm_psft_dpks/cloud' directory to all managed nodes in case the files are not up-to-date. This step is required whenever restoring from a latest Cloud Manager version to an older version. For example, restoring back from Cloud Manager Image 10 to Cloud Manager Image 9.
 - SSH to Cloud Manager
 - Switch user to psadm2
 - \$ sudo su psadm2
 - Change directory to PS APP HOME/cloud
 - \$ cd /opt/oracle/psft/pt/ps_app_home/cloud
 - · Generate the list of IP addresses into file /home/psadm2/managedenvironments.txt
 - \$ get_managed_envs.sh \$PS_CFG_HOME
 - Take backup of /home/psadm2/managedenvironments.txt
 - \$ cp /home/psadm2/managedenvironments.txt <backup_path>
- 2. Run the utility with the restore option.

sh cm_backup_restore.sh -o restore -n <backup_name>

- 3. User will be warned with a message that backup automation will stop Database, Application Server, Process Scheduler and PIA services. Press *y* to continue.
- 4. User will be prompted to enter a passphrase for the private API signing key.

Enter the passphrase if it exists or press enter.

- 5. The restore process will:
 - Shut down the database and domains.
 - Restore from the identified volume backup .
 - Restart the database and domains.

Example:

```
[opc@smncm cm backup and restore]$ sh cm backup restore.sh -o restore -n BLOCK⇒
VOLBKP SMNCM 20190419 084254
Restore task will stop Database, Application Server, Process Scheduler and PIA⇒
services
Do you want to continue (y/n) ? y
Please Enter Private Key Pass Phrase :
2019-04-19 09:14:20 - INFO - 658 : Getting BLOCK volume backup 'BLOCK VOL⇒
BKP SMNCM 20190419 084254' details from OCI
2019-04-19 09:14:20 - INFO - 666 : BLOCK volume backup 'BLOCK VOLEKP SMNC⇒
M 20190419 084254' Id : 'ocid1.volumebackup.oc1.iad.abuwcljryiuqzxut5ldxtb2hma⇒
xgj5w65ykxukza6ztmz7odk323yiip3r7a'
2019-04-19 09:14:20 -
                        INFO - 824 : Creating storage volume 'StorageVol sm⇒
ncm 19APRIL2019 0914' from Backup 'ocid1.volumebackup.oc1.iad.abuwcljryiuqzxut⇒
5ldxtb2hmaxgj5w65ykxukza6ztmz7odk323yiip3r7a'
2019-04-19 09:15:01 -
                         INFO - 853 : Created storage volume Name:'StorageVo⇒
1 smncm 19APRIL2019 0914',
Id:'ocid1.volume.oc1.iad.abuwcljrf2hcy3ff5mxhbumnldvftljsp5yz66n73wzsxllreleoh⇒
sqe2vcq'
                         INFO - 598 : Cloud Manager Instance Backup Volume I⇒
2019-04-19 09:15:01 -
d :ocid1.volume.oc1.iad.abuwcljr7k4bq4eqw3nfoyl7vxdsykzyrrthzgrco7jnwiyg5f6zga⇒
ghlmva
2019-04-19 09:15:01 -
                         INFO - 448 : Changing DB service state to 'Stop'
2019-04-19 09:15:22 -
                         INFO - 481 : DB service is in 'Stop' state
2019-04-19 09:15:22 -
                         INFO - 448 : Changing APPSERVER service state to 'S⇒
top'
2019-04-19 09:15:34 -
                         INFO - 481 : APPSERVER service is in 'Stop' state
2019-04-19 09:15:34 -
                         INFO - 448 : Changing PRCS service state to 'Stop'
                         INFO - 481 : PRCS service is in 'Stop' state
2019-04-19 09:20:41 -
2019-04-19 09:20:41 -
                         INFO - 448 : Changing PIA service state to 'Stop'
2019-04-19 09:20:57 -
                        INFO - 481 : PIA service is in 'Stop' state
2019-04-19 09:20:57 -
                         INFO - 497 : Kill some of the running 'psadm' proce⇒
sses
2019-04-19 09:21:02 -
                         INFO - 530 : Unmounted block volume '/opt/oracle/ps⇒
ft'
2019-04-19 09:21:02 -
                         INFO - 688 : Running ISCSI command to logout of sto⇒
rage volume iqn.2015-12.com.oracleiaas:22afb62d-a893-4ab4-a8fe-6dd14053c61b
2019-04-19 09:21:02 - INFO - 698 : Logged out of storage volume iqn.2015-⇒
12.com.oracleiaas:22afb62d-a893-4ab4-a8fe-6dd14053c61b
2019-04-19 09:21:02 -
                        INFO - 700 : Running ISCSI command to delete storag⇒
e device iqn.2015-12.com.oracleiaas:22afb62d-a893-4ab4-a8fe-6dd14053c61b
2019-04-19 09:21:02 -
                        INFO - 709 : Deleted storage device iqn.2015-12.com⇒
.oracleiaas:22afb62d-a893-4ab4-a8fe-6dd14053c61b
2019-04-19 09:21:02 -
                        INFO - 793 : Initiated REST Call to Detach storage ⇒
volume ocid1.volumeattachment.oc1.iad.abuwcljrfnxyjammza3scounohq7qzawelzslmqi⇒
accvef7cm6w7m2wxjxuq
2019-04-19 09:21:23 -
                         INFO - 802 : Detached storage volume ocid1.volumeat⇒
tachment.oc1.iad.abuwcljrfnxyjammza3scounohq7qzawelzslmqiaccvef7cm6w7m2wxjxuq
2019-04-19 09:21:23 -
                         INFO - 915 : Attaching storage volume 'ocid1.volume\Rightarrow
.oc1.iad.abuwcljrf2hcy3ff5mxhbumnldvftljsp5yz66n73wzsxllreleohsqe2vcq'
2019-04-19 09:21:23 -
                         INFO - 918 : Creating input.json for attaching bloc⇒
k volume 'ocid1.volume.oc1.iad.abuwcljrf2hcy3ff5mxhbumnldvftljsp5yz66n73wzsxll⇒
```

releohsge2vcg' 2019-04-19 09:21:23 -INFO - 920 : Created input.json for attaching block⇒ volume 'ocid1.volume.oc1.iad.abuwcljrf2hcy3ff5mxhbumnldvftljsp5yz66n73wzsxllr⇒ eleohsqe2vcq' 2019-04-19 09:21:23 -INFO - 928 : Initiated REST Call to attach storage ⇒ volume ocid1.volume.oc1.iad.abuwcljrf2hcy3ff5mxhbumnldvftljsp5yz66n73wzsxllrel⇒ eohsqe2vcq 2019-04-19 09:22:04 -INFO - 935 : Attached storage volume 'ocid1.volume.⇒ oc1.iad.abuwcljrf2hcy3ff5mxhbumnldvftljsp5yz66n73wzsxllreleohsqe2vcq' 2019-04-19 09:22:04 -INFO - 598 : Cloud Manager Instance Backup Volume I⇒ d :ocid1.volume.oc1.iad.abuwcljrf2hcy3ff5mxhbumnldvftljsp5yz66n73wzsxllreleohs⇒ qe2vcq INFO - 718 : Running ISCSI Attach Commands 2019-04-19 09:22:04 -INFO - 733 : Running ISCSI command to add new node \Rightarrow 2019-04-19 09:22:04 ign.2015-12.com.oracleiaas:f6f08414-d96f-4fd2-a852-69c0208ca8b2 2019-04-19 09:22:04 - INFO - 739 : Added new node ign.2015-12.com.oraclei⇒ aas:f6f08414-d96f-4fd2-a852-69c0208ca8b2 2019-04-19 09:22:04 - INFO - 741 : Running ISCSI command to start node on⇒ boot iqn.2015-12.com.oracleiaas:f6f08414-d96f-4fd2-a852-69c0208ca8b2 2019-04-19 09:22:04 - INFO - 747 : Updated node iqn.2015-12.com.oracleiaa⇒ s:f6f08414-d96f-4fd2-a852-69c0208ca8b2 settings to start on boot 2019-04-19 09:22:04 - INFO - 749 : Running ISCSI command to login to node⇒ iqn.2015-12.com.oracleiaas:f6f08414-d96f-4fd2-a852-69c0208ca8b2 INFO - 755 : Logged in to node iqn.2015-12.com.orac⇒ 2019-04-19 09:22:04 leiaas:f6f08414-d96f-4fd2-a852-69c0208ca8b2 2019-04-19 09:22:04 - INFO - 543 : Mounted block volume '/opt/oracle/psft⇒ 2019-04-19 09:22:13 -2019-04-19 09:22:25 -INFO - 448 : Changing DB service state to 'Start' INFO - 481 : DB service is in 'Start' state 2019-04-19 09:22:25 -INFO - 448 : Changing APPSERVER service state to 'S \Rightarrow tart' 2019-04-19 09:22:56 -INFO - 481 : APPSERVER service is in 'Start' state 2019-04-19 09:22:56 -INFO - 448 : Changing PRCS service state to 'Start' 2019-04-19 09:24:52 -INFO - 481 : PRCS service is in 'Start' state 2019-04-19 09:24:52 -INFO -448 : Changing PIA service state to 'Start' 2019-04-19 09:24:52 -INFO - 481 : PIA service is in 'Start' state INFO - 947 : Getting storage volume name for Id : ' \Rightarrow 2019-04-19 09:24:52 ocid1.volume.oc1.iad.abuwcljr7k4bq4eqw3nfoyl7vxdsykzyrrthzgrco7jnwiyg5f6zgaghl⇒ mva' INFO - 957 : Storage volume name for Id 'ocid1.volu⇒ 2019-04-19 09:24:52 me.oc1.iad.abuwc1jr7k4bq4eqw3nfoy17vxdsykzyrrthzgrco7jnwiyg5f6zgaghlmva' is 'S⇒ torageVol smncm 18APR2019 1044' 2019-04-19 09:24:52 -INFO - 1061 : Please remove detached volume 'Storage⇒ Vol smncm 18APR2019 1044' from OCI manually

6. Manually restore boot volume files from the backup /opt/oracle/psft/dpks/cm boot vol files.tar.gz

Next restore files on boot volume. To restore, execute following set of commands and set appropriate ownership on restored files.

- 1. SSH to Cloud Manager instance
- 2. Switch user to root.

\$ sudo bash

 Uncompress and extract boot volume files backup that were saved as /opt/oracle/psft/dpks/ cm boot vol files.tar.gz to /tmp/CMbkup

```
$ mkdir /tmp/CMbkup
$ cd /tmp/CMbkup
$ tar -xvf /opt/oracle/psft/dpks/cm boot vol files.tar.gz
```

4. Restore PS_CFG_HOME files. The PS_CFG_HOME path varies if the PeopleTools version before backup was different. Ensure to use the right path.

```
$ cp -r /tmp/CMbkup/home/psadm2/psft/pt/* /home/psadm2/psft/pt/
$ chown -R psadm2:oinstall /home/psadm2/psft/pt/
$ chmod 755 -R /home/psadm2/psft/pt/
```

5. Copy profile files for users psadm1, psadm2, psadm3, oracle2 and esadm1.

```
$ cp /tmp/CMbkup/etc/profile /etc/profile
$ cp /tmp/CMbkup/etc/bashrc /etc/bashrc
$ chown root:root /etc/profile /etc/bashrc
$ chmod 644 /etc/profile /etc/bashrc
$ cp /tmp/CMbkup/home/psadm1/.bashrc /home/psadm1/.bashrc
$ chown psadm1:oinstall /home/psadm1/.bashrc
$ chmod 644 /home/psadm1/.bashrc
$ cp /tmp/CMbkup/home/psadm2/.bashrc /home/psadm2/.bashrc
$ chown psadm2:oinstall /home/psadm2/.bashrc
$ chmod 644 /home/psadm2/.bashrc
$ cp /tmp/CMbkup/home/psadm3/.bashrc /home/psadm3/.bashrc
$ chown psadm3:appinst /home/psadm3/.bashrc
$ chmod 644 /home/psadm3/.bashrc
$ cp /tmp/CMbkup/home/oracle2/.bashrc /home/oracle2/.bashrc
$ chown oracle2:oinstall /home/oracle2/.bashrc
$ chmod 644 /home/oracle2/.bashrc
$ cp /tmp/CMbkup/home/esadm1/.bashrc /home/esadm1/.bashrc
$ chown esadm1:oinstall /home/esadm1/.bashrc
$ chmod 644 /home/esadm1/.bashrc
```

6. Copy init scripts.

\$ cp /tmp/CMbkup/usr/lib/systemd/system/psft-db-<DB_NAME>.service /usr/lib/sys>
temd/system/

\$ cp /tmp/CMbkup/usr/lib/systemd/system/psft-appserver-APPDOM.service /usr/lib>
/systemd/system/

\$ cp /tmp/CMbkup/usr/lib/systemd/system/psft-prcs-PRCSDOM.service /usr/lib/sys⇒ temd/system/

\$ cp /tmp/CMbkup/usr/lib/systemd/system/psft-pia-peoplesoft.service /usr/lib/s⇒ ystemd/system/

\$ chown root:root /usr/lib/systemd/system/psft-db-<DB_NAME>.service /usr/lib/s⇒ ystemd/system/psft-appserver-APPDOM.service /usr/lib/systemd/system/psft-prcs-⇒ PRCSDOM.service /usr/lib/systemd/system/psft-pia-peoplesoft.service

\$ chmod 755 /usr/lib/systemd/system/psft-db-<DB_NAME>.service /usr/lib/systemd>
/system/psft-appserver-APPDOM.service /usr/lib/systemd/system/psft-prcs-PRCSDO>
M.service /usr/lib/systemd/system/psft-pia-peoplesoft.service

7. Sync files to FS cloud directory.

```
$ mv /cm_psft_dpks/cloud /cm_psft_dpks/cloud_upgbkup
$ cp -r /opt/oracle/psft/pt/ps_app_home/cloud /cm_psft_dpks
$ chown -R root:root /cm_psft_dpks/cloud
$ chmod 755 -R /cm_psft_dpks/cloud
```

8. Verify the permission and ownership of files using below command.

```
$ 1s -1 /home/psadm1/.bashrc /home/psadm2/.bashrc /home/psadm3/.bashrc /home/o⇒
racle2/.bashrc /home/esadm1/.bashrc /etc/profile /usr/lib/systemd/system/psft-⇒
db-<DB_NAME>.service /usr/lib/systemd/system/psft-appserver-APPDOM.service /us⇒
r/lib/systemd/system/psft-prcs-PRCSDOM.service /usr/lib/systemd/system/psft-pi⇒
a-peoplesoft.service
-rw-r--r-. 1 root root 3182 May 2 05:43 /etc/bashrc
-rwxr-xr-x. 1 root root 1908 Apr 29 15:30 /usr/lib/systemd/system/psft-⇒
```

```
appserver-APPDOM.service

-rwxr-xr-x. 1 root root 6891 Apr 29 15:24 /usr/lib/systemd/system/psft-⇒

db-<DB_NAME>.service

-rwxr-xr-x. 1 root root 1773 Apr 29 15:36 /usr/lib/systemd/system/psft-⇒

pia-peoplesoft.service

-rwxr-xr-x. 1 root root 1900 Apr 29 15:33 /usr/lib/systemd/system/psft-⇒

prcs-PRCSDOM.service

-rw-r--r-. 1 root root 2354 May 2 05:43 /etc/profile

-rw-r--r-. 1 esadm1 oinstall 974 Apr 29 15:12 /home/esadm1/.bashrc

-rw-r--r-. 1 psadm1 oinstall 878 Apr 29 15:12 /home/psadm1/.bashrc

-rw-r--r-. 1 psadm2 oinstall 1097 Apr 29 15:12 /home/psadm2/.bashrc

-rw-r--r-. 1 psadm3 appinst 929 Apr 29 15:12 /home/psadm3/.bashrc
```

9. Start Cloud Manager using below commands or use the psadmin utility.

\$ sudo systemctl start psft-db-<DBName>.service \$ sudo systemctl start psft-appserver-APPDOM.service \$ sudo systemctl start psft-prcs-PRCSDOM.service \$ sudo systemctl start psft-pia-peoplesoft.service

 Restore the /cm_psft_dpks/cloud folder to all managed instances. This step is required if restoring from a latest Cloud Manager version to an older version. For example, restoring back to Cloud Manager Image 8 from Cloud Manager Image 9.

Restoring to Linux instances

- a. SSH into Cloud Manager.
- b. Switch user to psadm2.
 - \$ sudo su psadm2
- c. Securely copy the cloud directory from Cloud Manager to a managed node.

```
$ scp -i /home/psadm2/psft/data/cloud/ocihome/keys/cm_adm_pvt_key -r /cm_⇒
psft_dpks/cloud/ opc@< Instance1 IPADDRESS>:/home/opc/cloud
```

Where <Instance1 IPADDRESS> is the first item in each row having unix as second field in backed up file /home/psadm2/managedenvironments.txt.

d. Repeat the above copy step for all IP addresses tagged as unix in the file managedenvironments.txt.

Restoring to Windows instances

- a. RDP into any Windows instance in the same VCN as the Cloud Manager.
- b. From the above Windows machine, RDP into each Windows instance listed in the backed up file managedenvironments.txt. The password is also captured in the same file.
- c. Access fileserver machine by opening the share $\ensuremath{\sc line server_IP>\u01\app\oracle\product}$.
- d. Copy cloud folder from fileserver into D:\cloud.

Important! Please delete the managedenvironments.txt file after completing the cloud folder restores on all nodes.

Deleting Backup

To delete a block volume backup, the user must provide the backup name. User can list the existing backups then select the backup name to delete.

To delete a block (data) volume backup:

1. Run the utility with the restore option.

sh cm_backup_restore.sh -o delete -n <backup_name>

2. User will be prompted to enter a passphrase for the private API signing key.

Enter the passphrase if it exists or press enter.

3. The backup volume will be deleted.

Example:

```
[opc@smncm cm_backup_and_restore]$ sh cm_backup_restore.sh -o delete -n BLOCK_VOLBK⇒
P_SMNCM_20190410_110419
Please Enter Private Key Pass Phrase :
2019-04-19 10:16:02 - INFO - 658 : Getting BLOCK volume backup 'BLOCK_VOLBKP_S⇒
MNCM_20190410_110419' details from OCI
2019-04-19 10:16:02 - INFO - 666 : BLOCK volume backup 'BLOCK_VOLBKP_SMNCM_201⇒
90410_110419' Id : 'ocid1.volumebackup.oc1.iad.abuwcljre6zjpqrmk6ceqim3vu5jnmwt5zw4⇒
zb5vostgq55umw2bij5tt7cq'
2019-04-19 10:16:02 - INFO - 1146 : Deleting volume backup : BLOCK_VOLBKP_SMNCM⇒
_20190410_110419
2019-04-19 10:16:02 - INFO - 1157 : Deleted BLOCK volume backup 'BLOCK_VOLBKP_S⇒
MNCM_20190410_110419'
```

Manually Backing Up and Restoring Cloud Manager Using Block Volume Backups for OCI

Using block volume backup feature in OCI, the Cloud Manager data can be backed up and restored on demand.

Backing Up Cloud Manager

To backup Cloud Manager instance for OCI using block volumes, perform the following:

1. To create a consistent backup, shutdown the database, application, PIA and process scheduler domains.

Note: Please make sure there are no provisioning or lifecycle jobs running. If there are, they will be abruptly ended and may result in environments in an unstable or unusable state.

2. SSH into the Cloud Manager instance and run following commands or use the psadmin utility.

```
$ sudo systemctl stop psft-pia-peoplesoft.service
$ sudo systemctl stop psft-prcs-PRCSDOM.service
$ sudo systemctl stop psft-appserver-APPDOM.service
$ sudo systemctl stop psft-db-<DBName>.service
```

3. Backup the set of files on boot volume that are listed below on to local file system on CM instance or any remote instance.

Note: Use the environment variable PS_CFG_HOME to determine the exact path. Make a note of this in case the path gets modified during PeopleTools upgrade.

- All files under PS_APP_HOME/cloud (/opt/oracle/psft/pt/ps_app_home/cloud)
- All files under PS_CFG_HOME
- /home/psadm1/.bashrc
- /home/psadm2/.bashrc
- /home/psadm3/.bashrc
- /home/oracle2/.bashrc
- /home/esadm1/.bashrc
- /etc/profile
- /etc/bashrc
- /usr/lib/system/system/psft-db-<DB_NAME>.service
- /usr/lib/systemd/system/psft-appserver-APPDOM.service
- /usr/lib/systemd/system/psft-prcs-PRCSDOM.service
- /usr/lib/systemd/system/psft-pia-peoplesoft.service
- 4. On the OCI console, navigate to Compute | Instances | Cloud Manager instance.
- 5. Navigate to Cloud Manager Instance Details page.
- 6. Scroll down to the Attached Block Volumes section. Click on the attached volume name which will have a name in the format StorageVol_<CMinstance>_<timestamp>. This volume is available as disk /dev/sdb in Cloud Manager instance. It is mounted on /u01/app/oracle/product, where Cloud Manager application is installed.
- 7. This will bring up the volume details. On this page, click on 'Create Backup'.
- 8. Optionally, create a backup of the boot volume in similar way.
- 9. Provide a name for the backup and click 'Create Backup'.
- 10. After few minutes a backup is created.
- 11. Start the database, pia, app and prcs domains. Use below commands or psadmin utility.

\$ sudo systemctl start psft-db-<DBName>.service \$ sudo systemctl start psft-appserver-APPDOM.service \$ sudo systemctl start psft-prcs-PRCSDOM.service \$ sudo systemctl start psft-pia-peoplesoft.service

Restoring Cloud Manager

To restore a backup using block volumes, perform the following:

- 1. If restoring to an older version of Cloud Manager from a newer version, then generate the list of IP address of all managed instances that were provisioned by Cloud Manager. Follow step 1 in <u>Restoring from a Backup</u>.
- 2. On the OCI console, navigate to Storage | Backups.
- 3. Select the backup to restore and click 'Create Block Volume' using menu on the right.
- 4. Enter a name for the block volume and choose the Availability Domain in which the volume will be created. Ensure to choose the same Availability Domain where Cloud Manager instance is deployed.
- 5. A new volume is created in few seconds.
- 6. SSH to the Cloud Manager instance and shutdown database, pia, app and prcs domains using commands below or psadmin utility.

\$ sudo systemctl stop psft-pia-peoplesoft.service \$ sudo systemctl stop psft-prcs-PRCSDOM.service \$ sudo systemctl stop psft-appserver-APPDOM.service \$ sudo systemctl stop psft-db-<DBName>.service

7. Clean up any running processes that might be using the data volume that needs to be restored.

\$ ps -ef | grep psadm psadm2 2969 1 0 Feb01 ? 00:00:19 rmiregistry 10100 psadm2 3495 1 0 Feb01 ? 00:00:20 rmiregistry 10200 \$ sudo kill 2969 3495

8. Unmount /dev/sdb which is mounted on /opt/oracle/psft.

\$ sudo umount /opt/oracle/psft

- 9. Navigate to OCI | Compute | Instances | Cloud Manager instance. Scroll down to the Attached Block Volumes. Select the volume to be restored and click Detach.
- 10. On the Detach Block Volume page, copy all DETACH COMMANDS.
- 11. Run the detach commands on the Cloud Manager instance.
- 12. Click 'Continue Detachment' (from step 9) and confirm detachment.
- 13. Verify in OCI UI for the instance that the volume is now removed.
- 14. Now restore the volume backup. Click Attach Block Volume. Select ISCSI attachment type. Select the block volume compartment where the backup volume was restored and select the restored volume. Select read-write access mode.
- 15. Click Attach to attach the restored volume to Cloud Manager instance.
- 16. After the status shows Attached. Retrieve the iSCSI commands that must be run on the instance to attach the volume in the OS. Click the Actions icon (Actions icon) next to the volume, and then click iSCSI Commands and Information. Copy all ATTACH COMMANDS.
- 17. SSH to the Cloud Manager instance and run the copied attach commands.

18. Verify the disk is attached using "sudo fdisk -l" command. There should now be an entry for /dev/sdb.

Disk /dev/sdb: 107.4 GB, 107374182400 bytes 255 heads, 63 sectors/track, 13054 cylinders Units = cylinders of 16065 * 512 = 8225280 bytes Sector size (logical/physical): 512 bytes / 4096 bytes I/O size (minimum/optimal): 4096 bytes / 4096 bytes Disk identifier: 0x0000000

- 19. Restore below set of files that were backed up from boot volume. Ensure to restore the PS_CFG_HOME files to the right path in case the backup contains files from an older PeopleTools release.
 - · Restore /cm psft dpks/cloud/ from backup of PS APP HOME/cloud
 - All files under PS_CFG_HOME
 - /home/psadm1/.bashrc
 - /home/psadm2/.bashrc
 - /home/psadm3/.bashrc
 - /home/oracle2/.bashrc
 - /home/esadm1/.bashrc
 - /etc/profile
 - /etc/bashrc
 - /usr/lib/systemd/system/psft-db-<DB_NAME>.service
 - /usr/lib/systemd/system/psft-appserver-APPDOM.service
 - /usr/lib/systemd/system/psft-prcs-PRCSDOM.service
 - /usr/lib/systemd/system/psft-pia-peoplesoft.service
- Run 'mount -a' command on the CM instance and reboot the instance. Check status of Cloud Manager domains using following commands.

```
$ sudo systemctl status psft-db-<DBName>.service
PeopleSoft Container Database CDBHCM Status is Up
PeopleSoft Pluggable Database PSPDB Status is Open
PeopleSoft Database Listener is Up
$ sudo systemctl status psft-prcs-PRCSDOM.service
PeopleSoft Process Scheduler Domain PRCSDOM is Up
$ sudo systemctl status psft-appserver-APPDOM.service
PeopleSoft Application Server Domain APPDOM is Up
$ sudo systemctl status psft-pia-peoplesoft.service
PeopleSoft PIA Domain peoplesoft is Up
```

If database and domains do not come up automatically then start them using the following commands. Reboot only if necessary.

\$ sudo systemctl start psft-db-<DBName>.service \$ sudo systemctl start psft-appserver-APPDOM.service \$ sudo systemctl start psft-prcs-PRCSDOM.service \$ sudo systemctl start psft-pia-peoplesoft.service If the database or domains don't start successfully, then the restored backup may have issues, In such scenario, there are two options at this point:

- a. Restore the original volume. Follow steps 5 to 18 described under 'How to restore a backup' section.
- b. Troubleshoot the reason for failures and bring up the database or domains manually.
- 21. SSH into Cloud Manager and remove the directory /home/psadm2/psft/data/cloud/dm/cache/.
- 22. Before accessing the restored Cloud Manager PIA URL, you need to clear the application domain cache. To clear cache:
 - a. SSH into Cloud Manager instance.
 - b. Switch user to psadm2.

sudo su - psadm2

- c. Start psadmin.
- d. Select 1) Application Server.
- e. Select 1) Administer a domain.
- f. Select 1) APPDOM.
- g. Select 8) Purge Cache.
- 23. If restoring to an older version from a newer version of Cloud Manager, copy the restored / cm_psft_dpks/cloud to all the managed instances. Follow step 10 in <u>Restoring from a Backup</u>.

Note: If you want specific downloads to begin, unsubscribe and then subscribe to the required download channels. Otherwise, the downloads will begin at the next scheduled time.