ORACLE

Introduction to Oracle PCA X9-2 Administration

An overview the different administrative vectors used with an Oracle PCA X9-2 with practical usage examples

PURPOSE STATEMENT

This document provides an overview of administrative features included in release 3.0.1 of the Oracle PCA X9-2. It is intended solely to help you assess the business benefits of using release 3.0.1 of the Oracle PCA X9-2 to plan your I.T. projects.

DISCLAIMER

This document in any form, software or printed matter, contains proprietary information that is the exclusive property of Oracle. Your access to and use of this confidential material is subject to the terms and conditions of your Oracle software license and service agreement, which has been executed and with which you agree to comply. This document and information contained herein may not be disclosed, copied, reproduced or distributed to anyone outside Oracle without prior written consent of Oracle. This document is not part of your license agreement nor can it be incorporated into any contractual agreement with Oracle or its subsidiaries or affiliates.

This document is for informational purposes only and is intended solely to assist you in planning for the implementation and upgrade of the product features described. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any features or functionality described in this document remains at the sole discretion of Oracle.

Due to the nature of the product architecture, it may not be possible to safely include all features described in this document without risking significant destabilization of the code.

TABLE OF CONTENTS

INTRODUCTION

The PCA X9-2 administrative experience is very different from previous generations of PCA. In fact, there is very little that has been carried over from the older platform. While it is completely new for the PCA product line - it is not something that is completely new for Oracle Cloud Infrastructure (OCI) users. This reflects one of the main goals that our developers had - to create an on-premise product that looks and acts like our OCI products. If you are familiar with the OCI Console and the OCI CLI, then by default, you are already ahead of the curve and your experience with the PCA X9-2 will be a very easy transition.

However, since the PCA X9-2 is an on-premise solution and OCI is of course a cloud solution, there will be some fundamental things that users of the PCA X9-2 will be responsible for which users of OCI would never be responsible. For example, in OCI we have an operations team that maintains the hardware that the services run on. With an on-premise solution, that responsibility typically falls to the customer. To enable this, we have created two different and distinct control planes that a customer will operate. The first is the Compute Enclave, which corresponds to the interaction that OCI users have with the OCI Console and the OCI CLI. The second is the Service Enclave, which is the on-premises equivalent of the OCI operations team. This is where the hardware is maintained and cared for.
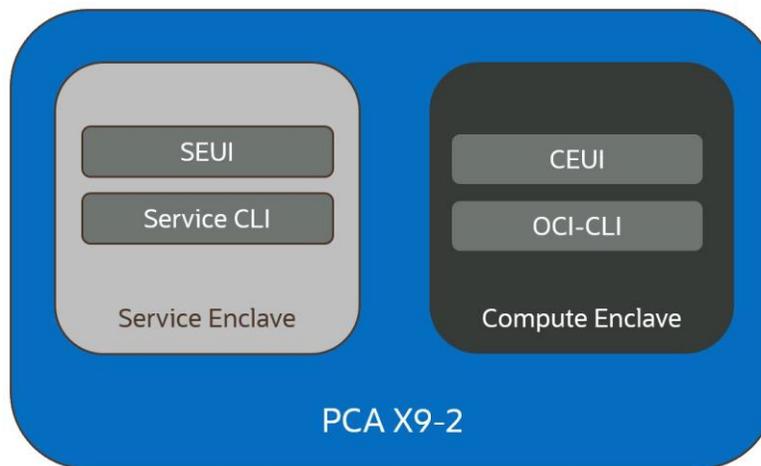

Image 1: Enclave Overview

THE SERVICE CLI AND SERVICE ENCLAVE

The Service Enclave consists of two parts - a CLI called the Service CLI as well as a graphical UI called the Service Enclave UI. Previously we mentioned that there is very little that has been carried over, and the Service CLI is one thing that has. The syntax used here vs the pca-admin utility in previous PCA generations is different, but a lot of the functionality you saw in the older pca-admin is still present in the new Serivice CLI.

To access the Service CLI, you need to ssh to one of the three management nodes in the PCA X9-2, using the admin account that was created during the installation of the system (see previous blog post on PCA X9-2 Site Prep and Installation). In addition to using that account, you will be ssh'ing to port 30006. For example:

```
$ ssh admin@[mgmtVipHostname] -p 30006

Password authentication Password:

PCA-ADMIN>
```

In this example, we have ssh'd to port 30006 on the PCA X9-2's management node VIP address using an account named "admin". The [mgmtVipHostname] value should be registered with your environment's DNS and should be exactly as specified during the system's Initial Setup. The Initial Setup steps are outlined in the Private Cloud Appliance Installation Guide for Release 3.0.1, section 5.2. Once you are at the PCA-ADMIN> prompt, you have several classes of commands that you can use, all of which are all documented here in Section 1.2 of the PCA X9-2 Administrator Guide for Release 3.0.1.

To get to the Service Enclave UI (SEUI) you will use a supported browser to go to the following URL:

https://adminconsole.pcax9-2.example.com

In this example, "pcax9-2" is the system name you selected during system's Initial Setup, and "example.com" is the domain used in your internal network, which was also specified during the system's Initial Setup. Here you will enter the same credentials that you used for accessing the Service CLI, which were created during the installation of the system. Once in, you will be at the Service Enclave UI Dashboard.
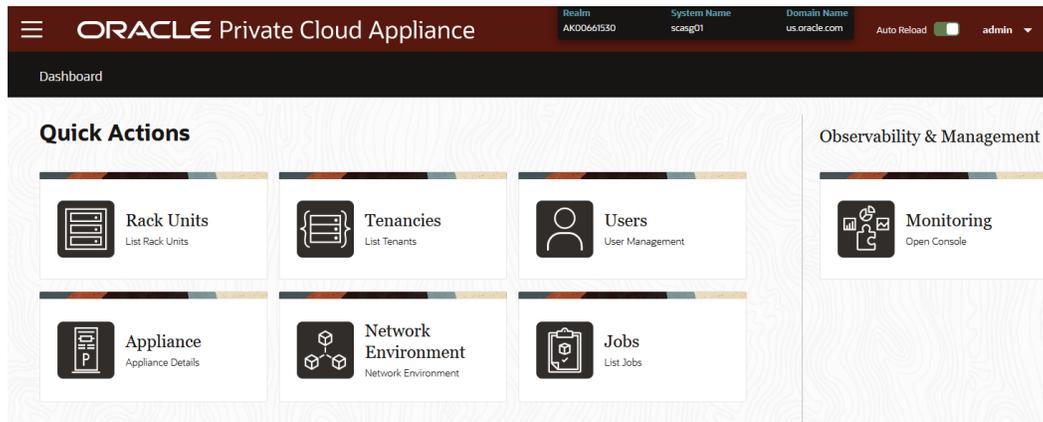
Image 2: The Oracle PCA X9-2 Service Enclave UI Dashboard

In the Dashboard, you will see the most commonly used actions:

- **Rack Units** - Used to see the hardware inventory of the rack and the status of each element
- **Tenancies** - This is the list of Tenancies that have been created on the system
- **Users** - These users have been created to administer the Service Enclave itself. Note that these are users not the same that exist in each of the Compute Enclave tenancies. Those are separate and maintained solely in the Compute Enclave
- **Appliance** - These are the configured names of the appliance created during system installation
- **Network Environment** - This section has the complete network configuration of the system
- **Jobs** - This is a list of the last 50 jobs that ran in the Service Enclave, and details about each
- **Monitoring** - Clicking here will open the system's Grafana dashboard, which can be directly accessed using https://grafana.pcax9-2.example.com (using the above naming example)

THE OCI CLI AND COMPUTE ENCLAVE

Since one of the fundamental design principles of the PCA X9-2 was to achieve API parity with OCI, most tools that were designed for OCI that utilize their API will also work with the PCA X9-2. This includes OCI's own CLI. Instead of creating a completely new CLI, it therefore made sense to re-use the OCI CLI that OCI has already developed. This benefits customers because any custom scripts that have been developed will also probably work with very little modification, if any at all.

Installing the OCI CLI is simple, and instructions for how to do so are in the Private Cloud Appliance User Guide for Release 3.0.1, section 1.2.2, found here:

https://docs.oracle.com/en/engineered-systems/private-cloud-appliance/3.0/user-3.0.1/usr-comp-enclave.html#usr-cli-install

Once installed, the process to create resources is identical to what is done when working in OCI. At a high level, the process of creating your first instance is as follows:

- Import an Image to use for the Instance
- Create a VCN
- Create a Subnet
- Launch the Instance using the imported image and subnet you just created

To use the Compute Enclave UI (CEUI) you will use a supported browser to go to the following URL, similar to what you did to access the SEUI:

> https://console.pcax9-2.example.com

Once in, you will be at the Compute Enclave UI Dashboard:
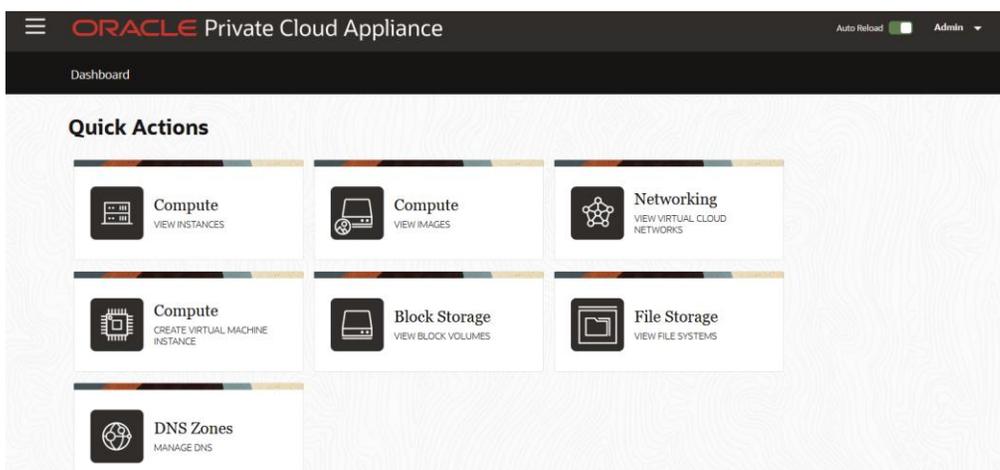
Image 2: The Oracle PCA X9-2 Compute Enclave UI Dashboard

As with the SEUI, you will initially land on the Dashboard with shortcuts to the following administrative items:

- **Compute/View Instances** - View a list of instances defined in the tenancy, including their status and other details
- **Compute/View Images** - Shows a list of images that have been imported into the system and their status
- **Networking/View VCNs** - These are the VCNs that have been created on the system, including status, CIDR, and DNS information for each
- **Compute/Create VM Instance** - Clicking on this launches you straight into the Instance Creation Wizard
- **Block Storage/View Block Volumes** - Shows a list of all block volumes that have been created, along with their status, size, and if a backup policy has been created for them
- **File Storage/View File Systems** - Like Block Volumes, shows a list of all file systems that have been created with their state, metered bytes, and other details
- **DNS Zones/Manage DNS** - Presents a list of all Zones created on the system along with details of each

Many more administrative activities are available in the CEUI than what is listed in the above shortcuts. More information on each of them can be found in the PCA X9-2 User Guide for Release 3.0.1, found here:

> https://docs.oracle.com/en/engineered-systems/private-cloud-appliance/

NEXT STEPS

Now that you have an overview of the ways you can manage the PCA X9-2 appliance, you can get more information on the details of system management from the Oracle Documentation Admin Guide for PCA X9-2 release 3.0.1, which is found here:

https://docs.oracle.com/en/engineered-systems/private-cloud-appliance/3.0/admin-3.0.1/index.html

Finally, be sure to refer to the PCA X9-2 Learning Library for new videos and tutorials on using the PCA X9-2. The Learning Library can be found here:

https://apexapps.oracle.com/pls/apex/f?p=44785:141:7362546576406:::RP,141:P141_PAGE_ID,P141_SECTION_ID:573,3844

CONNECT WITH US

Call +1.800.ORACLE1 or visit oracle.com.
Outside North America, find your local office at oracle.com/contact.

b blogs.oracle.com **f** facebook.com/oracle **y** twitter.com/oracle

Introduction to Oracle
PCA X9-2 Administration
April 2222
Author: [OPTIONAL]
Contributing Authors: [OPTIONAL]