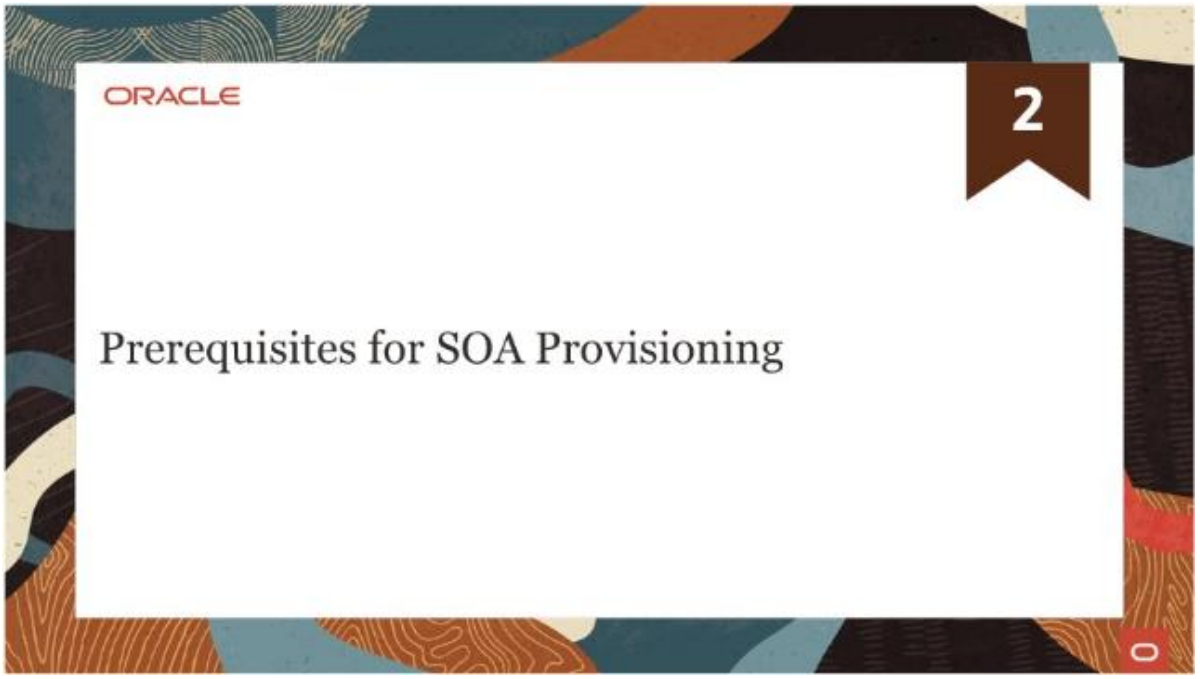

ORACLE
2
Prerequisites for SOA Provisioning

Objectives

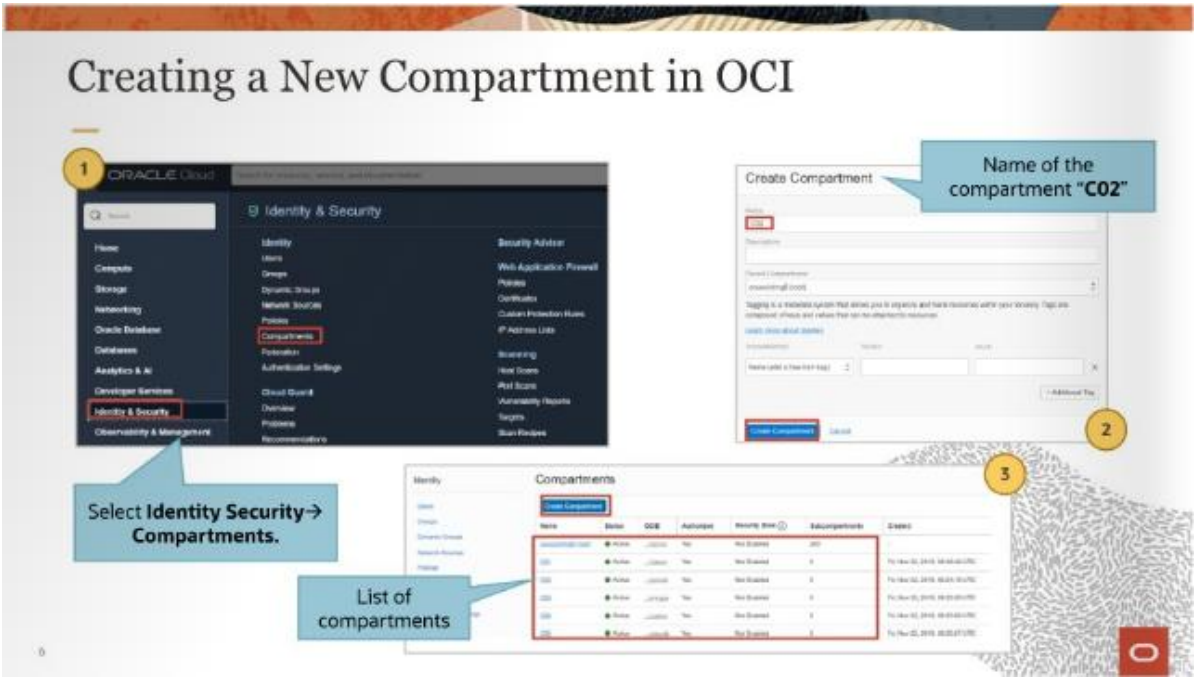
After completing this lesson, you should be able to:

- Explain the prerequisites for SOA Suite provisioning

Prerequisites for SOA Suite Provisioning

Prerequisites for SOA Suite Provisioning

Create a Compartment



If your tenancy does not already include the compartment for your SOA instance, you need to create a new one.

Here are the steps to create a compartment in OCI

1. Sign in to the OCI console.
2. Open the navigation menu and click **Identity & Security**. Under **Identity**, click **Compartments**.

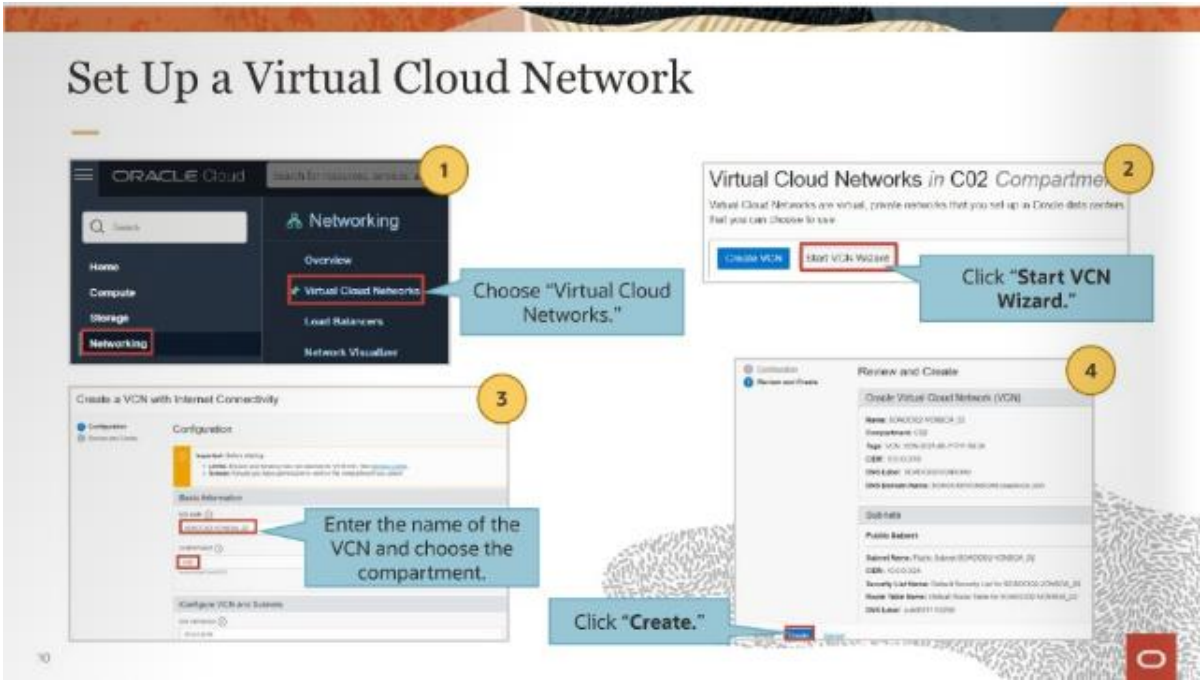
   A list of the existing compartments in your tenancy is displayed.
3. Click **Create Compartment**.
4. Provide a name and description for your compartment.
   - **Name**: Restrictions for compartment names are: Maximum 100 characters, including letters, numbers, periods, hyphens, and underscores. The name must be unique across all the compartments in your tenancy.
   - **Description**: A friendly description
5. Click **Create Compartment**.

6. Once the compartment is created, ask your administrator to grant the following manage and use permissions in the compartment:
   - allow group *groupName* to manage instance-family in compartment *compartmentName*
   - allow group *groupName* to manage virtual-network-family in compartment *compartmentName*
   - allow group *groupName* to manage volume-family in compartment *compartmentName*
   - allow group *groupName* to use database-family in compartment *compartmentName*
   - allow group *groupName* to use autonomous-database-family in compartment *compartmentName*

   where *groupName* is the name of the group to which you belong and *compartmentName* is the name of the compartment where Oracle SOA Suite on Marketplace instances will be created

View the Compartment Details

Set Up a Virtual Cloud Network



Steps to set up a VCN are:

1. In the Oracle Cloud Infrastructure Console, from the **Regions** menu, select the region in which you want to create your Oracle SOA Suite on Marketplace instance.
2. From the **Compartment** list, select the compartment you created.
3. Open the navigation menu, click **Networking**, and then click **Virtual Cloud Networks**.
4. Click **Start VCN Wizard**.
5. Select **VCN with Internet Connectivity**, and then click **Start VCN Wizard**.
6. Enter the following:
   - **VCN Name**: Enter a name for your cloud network, for example, *your_initials*_Network (for example, LB_Network). The name is incorporated into the names of all the related resources that are automatically created. Avoid entering confidential information.
   - **Compartment**: Leave the default value (the compartment you're currently working in). All the resources will be created in this compartment.
   - **VCN CIDR Block**: Enter a valid CIDR block for the VCN, for example, 10.0.0.0/16.
   - **Public Subnet CIDR Block**: Enter a valid CIDR block for the subnet. The value must be within the VCN's CIDR block, for example, **10.0.0.0/24.**
   - **Private Subnet CIDR Block**: Enter a valid CIDR block for the subnet. The value must be within the VCN's CIDR block and not overlap with the public subnet's CIDR block, for example, 10.0.1.0/24.
   - Accept the defaults for any other fields.
7. Click **Next**.
8. Review the list of resources that the workflow will create for you. Notice that the workflow will set up security list rules and route table rules to enable basic access for the VCN.
9. Click **Create** to start the short workflow.

View the Virtual Cloud Network Details

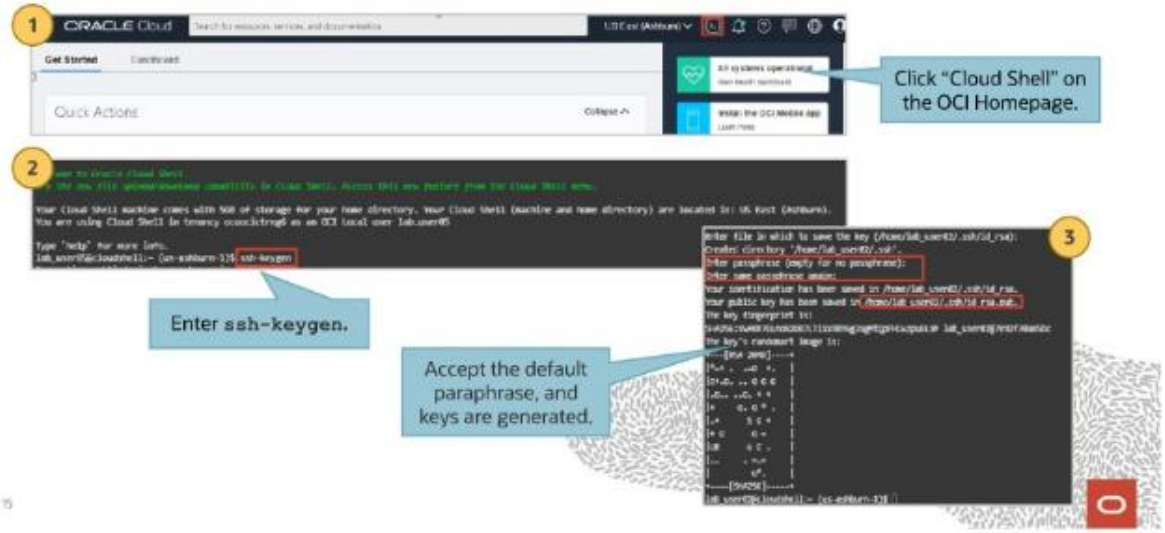
Configure Security Lists

- The provisioning process will not create any security lists to open ports in the subnets, when instance is provisioned in an existing subnet.
- You must open the ports explicitly before provisioning.
- The following ports should be opened as required -

	Private Subnet		Public Subnet	
	with LB	without LB	with LB	without LB
Bastion instance subnet	Port 22 to Oracle Marketplace server CIDRs [Port 1]	Port 22 to Oracle Marketplace server CIDRs [Port 1]	N/A	N/A
Oracle SOA Suite on Marketplace instance subnet	Port 22 to Bastion subnet CIDR	Port 22 to Bastion subnet CIDR	Port 22 to Oracle Marketplace server CIDRs [Port 1]	Port 22 to Oracle Marketplace server CIDRs [Port 1]
	Port 9075 to load balancer subnet's CIDR	N/A	Port 9075 to load balancer subnet's CIDR	Port 9074 to public
	All ports to within the same subnet CIDR	All ports to within the same subnet CIDR	All ports to within the same subnet CIDR	All ports to within the same subnet CIDR
Load balancer subnet	Port 443 to public internet (0.0.0.0/0) to allow SOA runtime traffic	Port 443 to public internet (0.0.0.0/0) to allow SOA runtime traffic	Port 443 to public internet (0.0.0.0/0) to allow SOA runtime traffic	N/A
DB connectivity	Port 1521 to SOA subnet CIDR	Port 1521 to SOA subnet CIDR	Port 1521 to SOA subnet CIDR	Port 1521 to SOA subnet CIDR

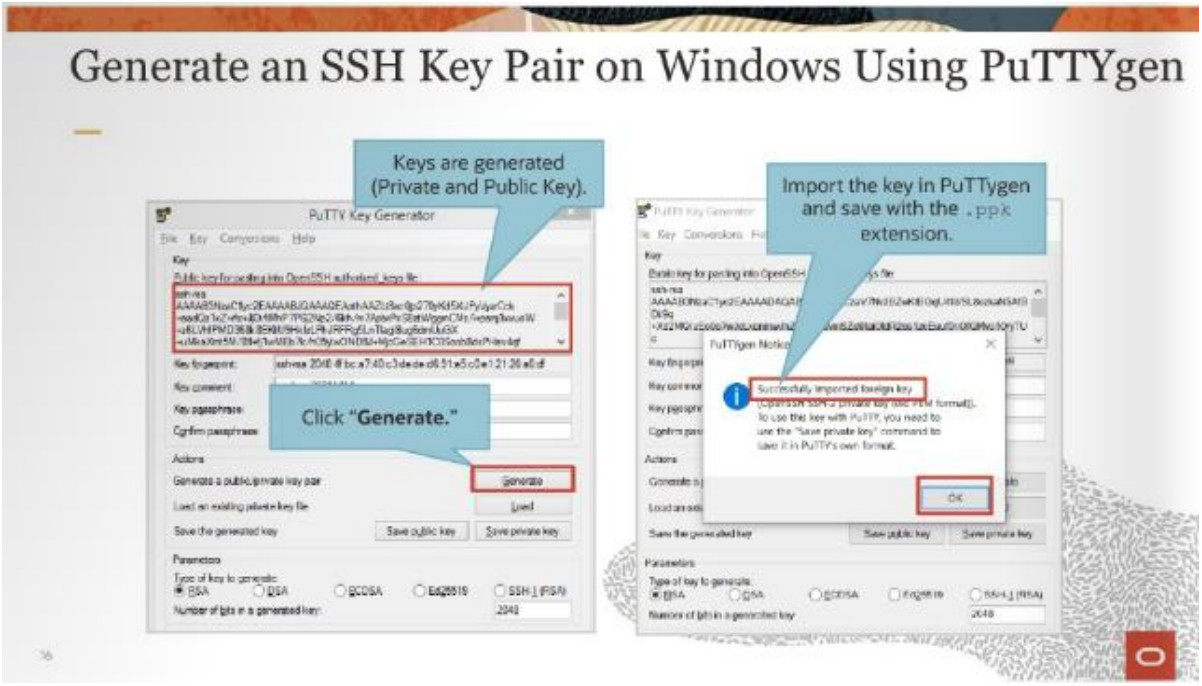
Generate an SSH Key Pair

Generating the SSH Keys from Cloud Shell



About SSH Keys:

- To access an Oracle SOA Suite on Marketplace virtual machine (VM) with a secure shell (SSH) client, you must create a public/private key pair and configure the service instance with the public key.
- When you create an Oracle SOA Suite on Marketplace instance, you are prompted to supply the public key.
- To connect to a VM in an Oracle SOA Suite on Marketplace instance, you supply the paired private key when logging in to the machine using an SSH client.
- You can provide an existing public key that you previously created with an external tool, or Oracle SOA Suite on Marketplace can create a new key pair for you.
- You can also use the same SSH public/private key pair that you used for creating an Oracle Cloud Infrastructure database deployment.



To generate an SSH key pair on Windows using the PuTTYgen program:

Download and install PuTTY or PuTTYgen.

To download PuTTY or PuTTYgen, go to http://www.putty.org/ and click the download link.

Run the PuTTYgen program.

The PuTTY Key Generator window is displayed.

Click Generate and save the private and public key.

Notes:

Although a passphrase is not required, you should specify one as a security measure to protect the private key from unauthorized use. When you specify a passphrase, a user must enter the passphrase every time the private key is used.

The `.ppk` file extension indicates that the private key is in PuTTY's proprietary format. You must use a key of this format when using PuTTY as your SSH client. It cannot be used with other SSH client tools. Refer to the PuTTY documentation to convert a private key in this format to a different format.

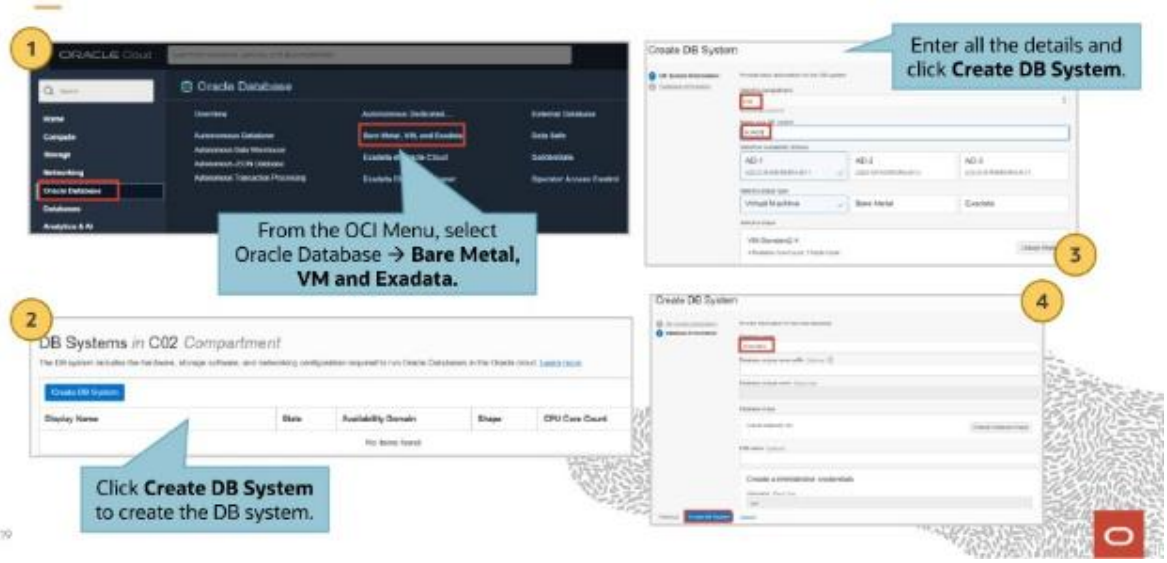
Create an Oracle Database for Oracle SOA Suite

Create an Oracle Database for Oracle SOA Suite

To create an Oracle SOA Suite on Marketplace instance, use either a **Oracle Cloud Infrastructure Database** or a **Autonomous Transaction Processing Database.**

- **OCI Database:**
  - It specializes in bare metal servers, off-box networking and high-speed storage.
  - OCI offers single-node DB systems on bare metal or virtual machines and 2-node RAC DB systems on virtual machines.
- **Autonomous Transaction Processing (ATP):**
  - It is a self-driving, self-securing, and self-repairing database service.
  - It is targeted for transactions, and handles complex workloads such as batch or reporting and IOT.

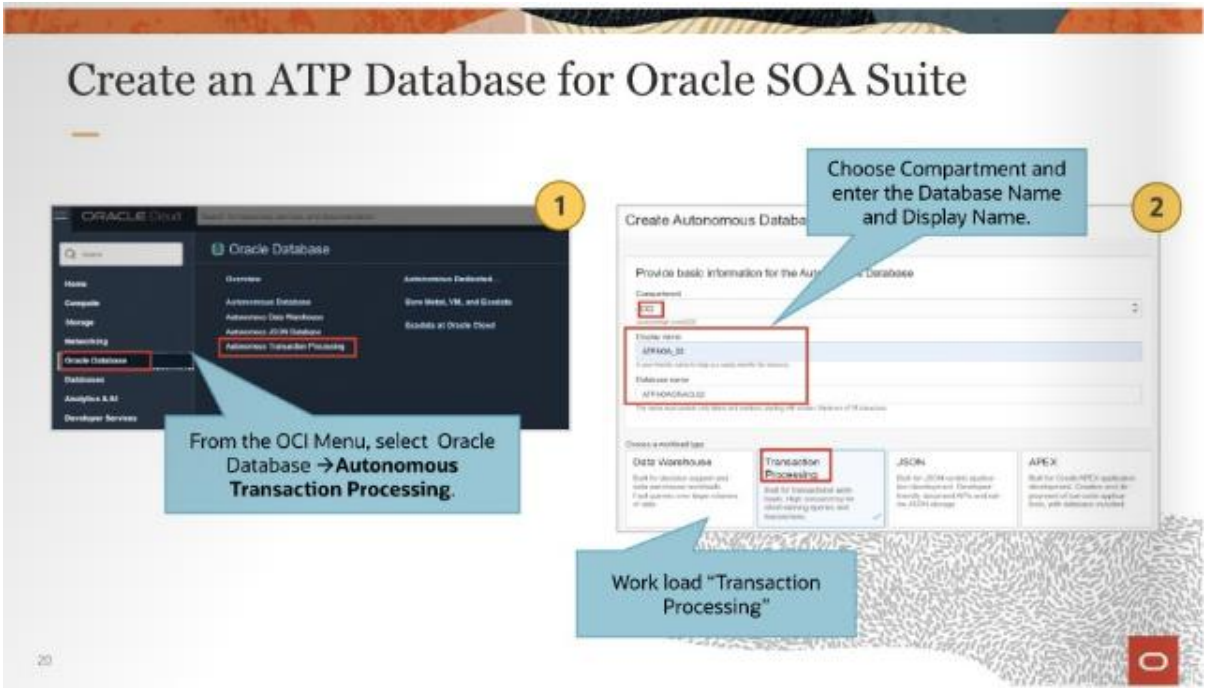
Create an OCI Database for Oracle SOA Suite



Steps:

To create an Oracle Cloud Infrastructure database for Oracle SOA Suite on Marketplace:

1. Sign in to the Oracle Cloud Infrastructure Console.
2. Open the navigation menu, click Oracle Database, and then click Bare Metal, VM, and Exadata.
3. Choose the Compartment in which to create the database, and then click Create DB System.
4. In the Create DB System Wizard, provide the information for the database. See the Oracle Cloud Infrastructure documentation for field descriptions.
5. Click **Create DB System**. The DB system appears in the list with a status of Provisioning. The DB system's icon changes from yellow to green (or red to indicate errors).
6. Wait for the DB system's icon to turn green, with a status of Available, and then click the highlighted DB system name.

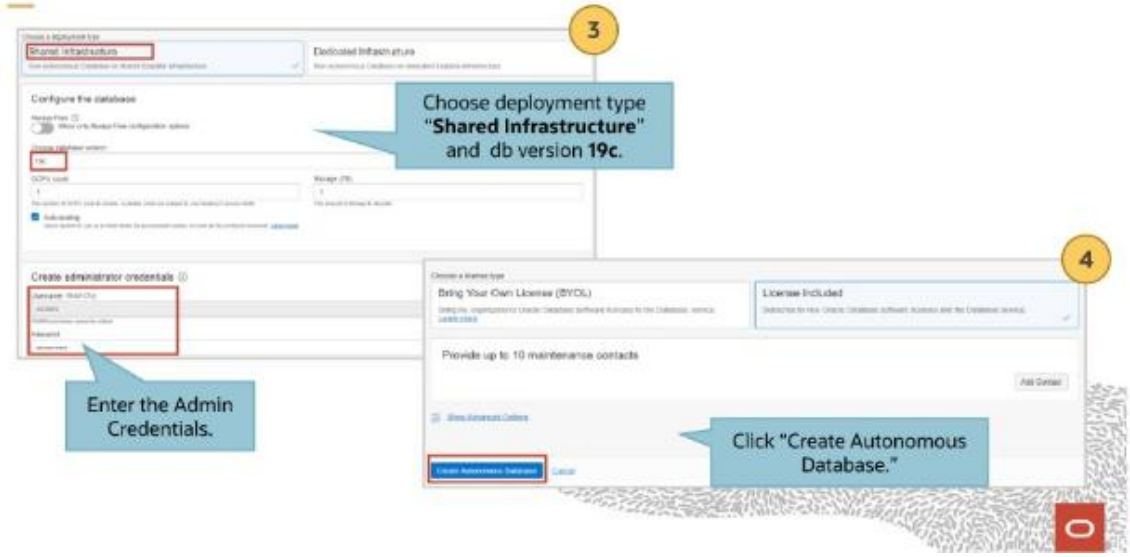


To create an Oracle Autonomous Transaction Processing (ATP) database for Oracle SOA Suite on Marketplace:

1. Sign in to the Oracle Cloud Infrastructure Console.
2. Open the navigation menu and click **Oracle Database**. Under **Autonomous Database**, click **Autonomous Transaction Processing**.
3. In the Create Autonomous Database Wizard, provide the information for the database.
   - **Display Name:** Enter a name for the data warehouse for display purposes.
   - **Database Name:** Use letters and numbers only, starting with a letter. Maximum length is 14 characters. (Underscores not initially supported)

   Choose the workload type "Data Warehouse or Transaction Processing or JSON or APEX.

Create an ATP Database for Oracle SOA Suite



4. Choose the deployment type as Shared Infrastructure or Dedicated Infrastructure.
5. Choose the database version "19C."
6. In **OCPU Count**, enter the number of CPUs for your service.
7. In **Storage (TB)**, select your storage capacity in terabytes. It is the actual space available to your service instance, including system-related space allocations.
8. **Administrator Credentials**- Password for `ADMIN` user of the service instance. The password must meet the following requirements:
   - The password must be between 12 and 60 characters long and must include at least one uppercase letter, one lowercase letter, and one numeric character.
   - The password cannot contain the double quote (") character.
   - The password must be different from the last four passwords used.
9. **License Type -** Select whether you are bringing your own license or subscribing to new database software licenses.
10. Click "Create Autonomous Database."

Autonomous Processing Database Details

Summary

In this lesson, you should have learned:

- About the prerequisites for SOA Suite provisioning

Practice 2: Prerequisites for SOA Provisioning

- Practice 2-1: Exploring the Oracle Cloud Infrastructure Console
- Practice 2-2: Generating SSH Keys from OCI Cloud Shell
- Practice 2-3: Setting Up PuTTY on Your Local Windows System
- Practice 2-4: Provisioning the Autonomous Transaction Processing Instance