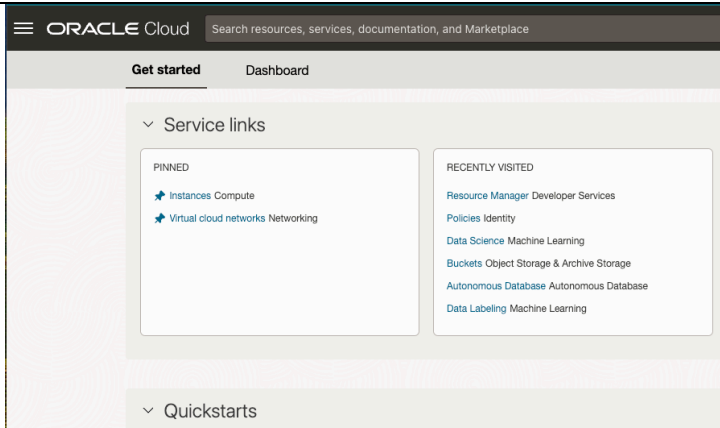
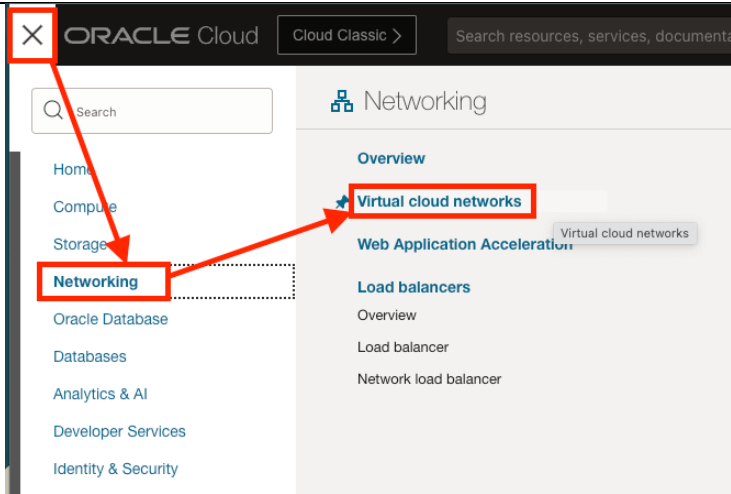
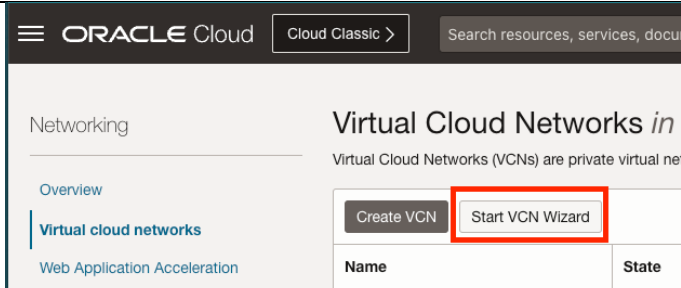


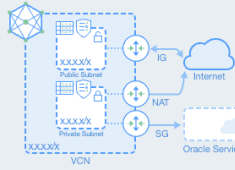
Provisioning Oracle Base DB Service 23ai

Description: The purpose of this guide is to provision Oracle Base Database Service 23ai.

Prerequisites: Privileges to manage all resources within a compartment.

Step	Description
<p>Login to your OCI Cloud Console at cloud.oracle.com</p>	
<p>First, we will create a network to host our Oracle DB 23ai Deployment.</p> <p>Login to cloud.oracle.com</p> <p>From Menu navigate to Networking > Virtual Cloud Networks.</p>	
<p>Click Start VCN Wizard.</p>	



<p>Select Create VCN with Internet Connectivity.</p> <p>Click Start VCN Wizard.</p>	<div data-bbox="523 197 1299 640"> <h3>Start VCN Wizard</h3> <div> <input checked="" type="radio"/> Create VCN with Internet Connectivity <input type="radio"/> Add Internet Connectivity and Site-to-Site VPN to a VCN </div>  <p>Creates a VCN with a public subnet that can be reached from the internet. Also creates a private subnet that can connect to the internet through a NAT gateway, and also privately connect to the Oracle Services Network.</p> <p>Includes: VCN, public subnet, private subnet, internet gateway (IG), NAT gateway (NAT), service gateway (SG).</p> <div> <input checked="" type="button" value="Start VCN Wizard"/> <input type="button" value="Cancel"/> </div> </div>
<p>Give your VCN a name and select the compartment.</p>	<div data-bbox="523 678 1260 1122"> <div> <div>ORACLE Cloud</div> <div>Cloud Classic ></div> <div>Search resources, services, documentation, and Marketplace</div> </div> <h3>Create a VCN with internet connectivity</h3> <div> <div>1 Configuration</div> <div>2 Review and create</div> </div> <div> <div>Resource availability checked successfully.</div> <div> <h4>Basic information</h4> <div>VCN name <input type="text"/></div> <div>Compartment <input type="text"/></div> </div> </div> </div>
<p>Enter an IP CIDR Block.</p> <p>Select use DNS hostnames in this VCN.</p> <p>Select the IPv4 CIDR block for both your public and private subnets.</p> <p>Click Next.</p>	<div data-bbox="523 1167 1321 2011"> <div> <h3>Configure VCN</h3> <div>VCN IPv4 CIDR block <input type="text"/></div> <p>If you plan to peer this VCN with another VCN, the VCNs must not have overlapping CIDR blocks. Learn more.</p> <p>IPv6 prefixes <i>Optional</i></p> <p><input type="checkbox"/> Enable IPv6 in this VCN</p> <p>DNS resolution</p> <p><input checked="" type="checkbox"/> Use DNS hostnames in this VCN</p> <p><small>Required for instance hostname assignment: if you plan to use VCN DNS or a third-party DNS. This choice cannot be changed after the VCN is created.</small></p> </div> <div> <h3>Configure public subnet</h3> <div> <div>IP address type</div> <div>IPv4 CIDR block</div> </div> <div> <div>IPv4 CIDR block</div> <div>Example: 172.16.0.0/16.</div> </div> <p>(Maximum number of items added)</p> </div> <div> <h3>Configure private subnet</h3> <div> <div>IP address type</div> <div>IPv4 CIDR block</div> </div> <div> <div>IPv4 CIDR block</div> <div>Example: 172.16.0.0/16.</div> </div> <p>(Maximum number of items added)</p> </div> </div>

<p>Review all the VCN configurations and click on Create.</p>	<div><div>Create a VCN with internet connectivity</div><div><div><div>1 Configuration</div><div>2 Review and create</div></div><div><div>Review and create</div><div><div><div><div><div><div></div></div><div>Resource availability checked successfully.</div></div></div><div><div>Oracle VCN</div><div><div>Name: <div></div></div><div>Compartment: <div></div></div><div>Tags: <div></div></div><div>IPv4 CIDR block: <div></div></div><div>DNS label: <div></div></div><div>DNS domain name: <div></div></div></div><div><div>Subnets</div><div>Public subnet</div></div></div></div></div></div></div></div>				
<p>Once created, click on your Public Subnet.</p>	<div><div>Subnets in <div></div> compartment</div><div><div>Create Subnet</div><table><thead><tr><th>Name</th><th>State</th></tr></thead><tbody><tr><td><div>Public Subnet <div></div></div></td><td><div><div></div> Available</div></td></tr></tbody></table></div></div>	Name	State	<div>Public Subnet <div></div></div>	<div><div></div> Available</div>
Name	State				
<div>Public Subnet <div></div></div>	<div><div></div> Available</div>				
<p>Then select your Security List.</p>	<div><div>Security Lists</div><div><div>Add Security List</div><table><thead><tr><th>Name</th><th>State</th></tr></thead><tbody><tr><td><div>Default Security List for <div></div></div></td><td><div><div></div> Available</div></td></tr></tbody></table></div></div>	Name	State	<div>Default Security List for <div></div></div>	<div><div></div> Available</div>
Name	State				
<div>Default Security List for <div></div></div>	<div><div></div> Available</div>				
<p>Click Add Ingress Rule.</p>	<div><div>Ingress Rules</div><div><div><div>Add Ingress Rules</div><div>Edit</div><div>Remove</div></div><table><tbody><tr><td><div><div></div></div></td><td><div>Stateless ▾</div></td><td><div>Source</div></td></tr></tbody></table></div></div>	<div><div></div></div>	<div>Stateless ▾</div>	<div>Source</div>	
<div><div></div></div>	<div>Stateless ▾</div>	<div>Source</div>			



Configure the source CIDR how you see fit. For this demo I have gone for the following:

- Source CIDR: 0.0.0.0/0
- IP Protocol: TCP
- Destination Port: 1521

Click Add.

Ingress Rule 1

Allows TCP traffic 1521

☐ Stateless ⓘ

Source Type: CIDR

Source CIDR: 0.0.0.0/0

IP Protocol: TCP

Specified IP addresses: 0.0.0.0-255.255.255.255 (4,294,967,296 IP addresses)

Source Port Range: Optional ⓘ: All

Destination Port Range: Optional ⓘ: 1521

Examples: 80, 20-22

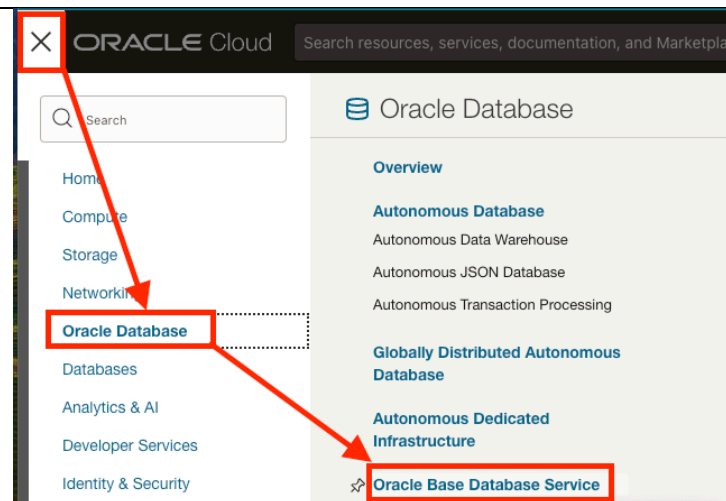
Description: Optional

Access to Oracle Database

Maximum 255 characters

Next, we will create our DBCS Instance.

Navigate to OCI Menu > Oracle Database > Oracle Base Database Service.



Select **Create DB system.**



<p>Select:</p> <p>Compartment</p> <p>DB System Name</p> <p>Availability Domain</p> <p>Compute Shape – I have gone for Flex Shape with 4 OCPUs and 64 GB Memory.</p>	<p>Provide basic information for the DB system</p> <p>Select a compartment</p> <p>Name your DB system</p> <p>Select an availability domain</p> <p>Configure shape</p>
<p>Select:</p> <p>Storage – I went for 256 GB</p> <p>Nodes – Single Node</p> <p>DB Edition - Enterprise Edition High Performance.</p>	<p>Configure storage</p> <p>Configure the DB system</p>
<p>Generate and save your SSH Keys.</p>	<p>Add SSH keys</p>
<p>Choose your Licence Type.</p>	<p>Choose a license type</p>



<p>Select the VCN and Public Subnet that we created earlier.</p> <p>Give a hostname prefix. I used the same name as I gave to my database system.</p> <p>Click Next.</p>	<div>Specify the network information</div> <div>Virtual cloud network in [redacted] (Change compartment)</div> <div>[redacted]-vcn</div> <div>Client subnet in DataScience (Change compartment)</div> <div>public subnet-[redacted]</div> <div><small>Do not use a subnet that overlaps with 192.168.16.16/28, which is used by the Oracle Clusterware private interconnect on the database instance.</small></div> <div><input type="checkbox"/> Use network security groups to control traffic ⓘ</div> <div>Hostname prefix ⓘ</div> <div>datascience-vector-dbc</div> <div>Host domain name <i>Read-only</i></div> <div>[redacted]</div> <div><small>This value is determined by the client subnet.</small></div> <div>Host and domain URL <i>Read-only</i></div> <div>[redacted]</div> <div><small>This value is determined by the hostname prefix and the host domain name.</small></div> <div>Private IP address <i>Optional</i></div> <div><input type="text"/></div> <div><small>Enter a private IP address within the CIDR 10.0.0.0/24.</small></div>
<p>Give the Database a Name and Unique Name Suffix, this will auto generate the Database Unique Name.</p> <p>Select the Database Version as Oracle Database 23ai.</p>	<div>Database name</div> <div>[redacted]</div> <div>Database unique name suffix <i>Optional</i> ⓘ</div> <div>[redacted]</div> <div>Database unique name <i>Read-only</i></div> <div>[redacted]</div> <div>Database image</div> <div>Oracle Database 23ai</div>
<p>Define the password for the admin user sys.</p>	<div>Create administrator credentials</div> <div>Username <i>Read-only</i></div> <div>sys</div> <div>Password ⓘ</div> <div>.....</div> <div>Confirm password</div> <div>.....</div> <div><input checked="" type="checkbox"/> Use the administrator password for the TDE wallet ⓘ</div> <div><small>If you are going to use customer-managed keys stored in a vault, the TDE wallet is not applicable.</small></div>



We will turn off Automatic Backups for this tutorial. Feel free to enable and configure if required.

Click Create DB System.

Configure database backups

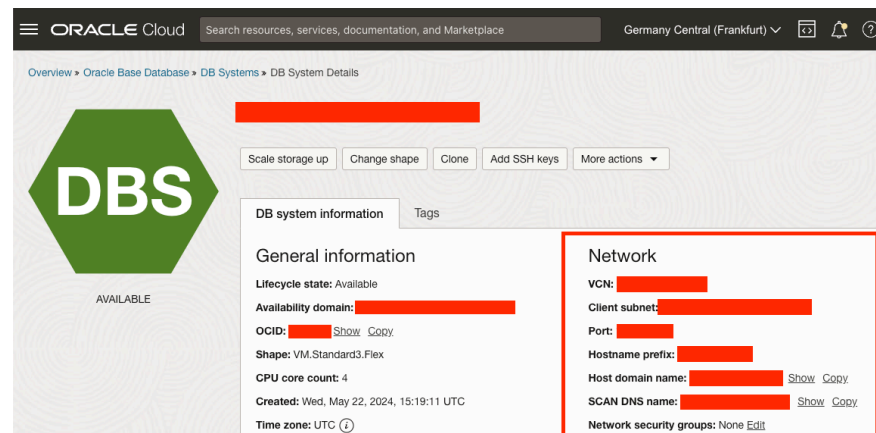
☐ Enable automatic backups ⓘ

 [Show advanced options](#)

This might take about an hour to provision.

Once done the Database will become **Available**.

Make note of the Network information on the right-hand side. We will need this information later.



ORACLE Cloud Search resources, services, documentation, and Marketplace Germany Central (Frankfurt) ⓘ ⓘ ⓘ ⓘ

Overview > Oracle Base Database > DB Systems > DB System Details

DBS AVAILABLE

Scale storage up Change shape Clone Add SSH keys More actions ▾

DB system information Tags

General information

Lifecycle state: Available

Availability domain: [REDACTED]

OCID: [REDACTED] [Show](#) [Copy](#)

Shape: VM.Standard3.Flex

CPU core count: 4

Created: Wed, May 22, 2024, 15:19:11 UTC

Time zone: UTC ⓘ

Network

VCN: [REDACTED]

Client subnet: [REDACTED]

Port: [REDACTED]

Hostname prefix: [REDACTED]

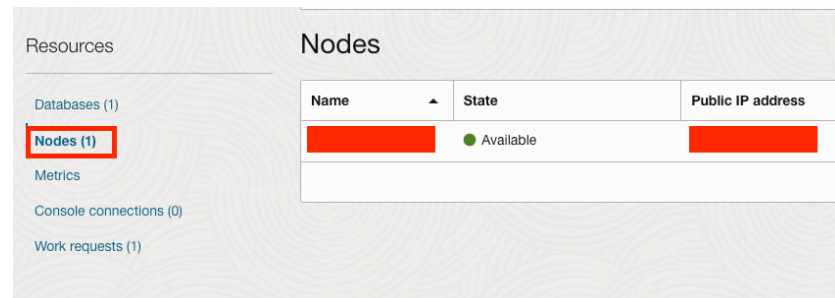
Host domain name: [REDACTED] [Show](#) [Copy](#)

SCAN DNS name: [REDACTED] [Show](#) [Copy](#)

Network security groups: None [Edit](#)

Scroll down on the Database System Page and **Click on Nodes** to view the **IP Address**.

Make a note of this as we will use it later.



Resources

Databases (1)

Nodes (1)

Metrics

Console connections (0)

Work requests (1)

Nodes

Name	State	Public IP address
[REDACTED]	Available	[REDACTED]

Click on Databases and **select our Database** we created.



Resources

Databases (1)

Nodes (1)

Metrics

Console connections (0)

Work requests (1)

Databases

Name	State
[REDACTED]	Available



<p>Scroll down and select Pluggable Databases and select the Pluggable database displayed.</p>	<div><div>Resources</div><div><div>Metrics</div><div>Backups (0)</div><div>Data Guard Associations (0)</div><div>Pluggable Databases (1)</div><div>Work requests (1)</div></div><div><div>Pluggable Databases</div><div>Create pluggable database</div><table><thead><tr><th>Name</th><th>State</th></tr></thead><tbody><tr><td></td><td>Available</td></tr></tbody></table></div></div>	Name	State		Available					
Name	State									
	Available									
<p>Make note of the Pluggable Database Name at the top and then select PDB Connection.</p>	<div><div>ORACLE Cloud</div><div>Search resources, services, documentation, and Marketplace</div><div>Overview » Oracle Base Database » DB Systems » DB System Details » Database Details » Pluggable Database</div><div><div><div>PDB</div></div><div><div><div>vectordb_pdb1</div><div>Launch SQL Worksheet</div><div>PDB connection</div></div><div><div>Database information</div><div>Tags</div></div><div>General information</div></div></div></div>									
<p>Make note of the Easy Connection String as you will use this later to connect to the Oracle DB.</p>	<div><div>Connection Strings</div><div>Use the following connection strings to connect from within your VCN. To connect from a public IP address, see the documentation.</div><table><thead><tr><th>Format</th><th>Name</th><th>Connection String</th></tr></thead><tbody><tr><td>Easy Connect</td><td>pdb_default</td><td>...b...Show Copy</td></tr><tr><td>Long</td><td>pdb_ip_default</td><td>...db...Show Copy</td></tr></tbody></table><div>Showing 2 items < 1 of 1 ></div></div>	Format	Name	Connection String	Easy Connect	pdb_default	...b... Show Copy	Long	pdb_ip_default	...db... Show Copy
Format	Name	Connection String								
Easy Connect	pdb_default	...b... Show Copy								
Long	pdb_ip_default	...db... Show Copy								