Oracle® Database

Using Oracle Blockchain Platform Enterprise Edition on Oracle Cloud Marketplace

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Getting Started with Oracle Blockchain Platform Enterprise Edition on Oracle Cloud Marketplace

Oracle Blockchain Platform Enterprise Edition for Oracle Cloud Infrastructure (OCI) Container Engine for Kubernetes (OKE) is available as an application in the OCI Marketplace.

Oracle Blockchain Platform Enterprise Edition is based on open-source Hyperledger Fabric, the industry's leading blockchain platform for business. Oracle Blockchain Platform Enterprise Edition for OKE supports simplified provisioning of Oracle Blockchain Platform configurations for development, deployment, and monitoring of permissioned blockchain on Oracle Cloud Infrastructure running Kubernetes.

Using the Marketplace stack, you can create Oracle Blockchain Platform Enterprise Edition deployments on OKE. It will initially launch the Blockchain Platform Manager which is used to create and administer Blockchain Platform instances. This Marketplace stack application will accept a set of inputs and provision the necessary underlying components, and provide a Blockchain Platform Manager URL to get started.

Licensing and Pricing

Two licensing options are available:

- Bring Your Own License (BYOL) images: If you already have a valid Oracle Blockchain Platform Enterprise Edition license, then you can bring that license to OCI to use the BYOL image. You will only pay for the charges associated with the infrastructure and the computing, such as OCPUs, storage, and anything else required by the Oracle Blockchain Platform Enterprise Edition application.
- Universal Credits Model (UCM) images: You are billed for the cost of the Oracle Blockchain Platform Enterprise Edition license (based on OCPUs per hour for the OKE worker nodes) in addition to the infrastructure cost of the compute, networking, and storage resources used by the OKE environment. The use of these images implies a license and support agreement, even though a contract is not required.

Bring Your Own License (BYOL)	Universal Credits Model (UCM)
User brings user's own license.	Oracle provides the license to the user.
User is charged only for the Cloud infrastructure.	User is charged for both the license and the infrastructure.

For pricing estimates, you can enter your services and resources into the OCI cost estimator: OCI Service Cost Estimator

Supported Compute Shapes

The following compute shapes are supported for Oracle Blockchain Platform Enterprise Edition:

Compute Shape	OCPUs	Memory (GB)
VM.Standard.E3.Flex	2 OCPU minimum, 32 OCPU maximum	32 GB minimum, 512 GB maximum
VM.Standard.E4.Flex	2 OCPU minimum, 64 OCPU maximum	32 GB minimum, 1024 GB maximum
VM.Standard.E5.Flex	2 OCPU minimum, 94 OCPU maximum	32 GB minimum, 1049 GB maximum

Resource Estimates

The Oracle Blockchain Platform Enterprise Edition stack on Oracle Cloud Marketplace contains the latest Oracle Blockchain Platform Enterprise Edition release that is available at the time of deployment.

The following table provides details on the minimum service and resource configuration used by Oracle Blockchain Platform Enterprise Edition on Oracle Cloud Marketplace.

Service or Resource	Estimated Base Usage
Oracle Kubernetes Engine (OKE)	1 OKE cluster
Compute Instances	Development OKE cluster: 1 instance, with: • 2 OCPUs • 32 GB memory • 100 GB of boot volume Production OKE cluster: 3 instances, each with a minimum of: • 2 OCPUs • 32 GB memory • 100 GB of boot volume Setup host: • 2 OCPUs • 32 GB memory • 47-50 GB of boot volume This is terminated after successfully creating the Blockchain Platform Manager. Total: 2-4 instances
Boot Volumes	3 OKE cluster worker nodes, each with • 100 GB Setup host instance • 47-50 GB Total: 350GB
Block Volume	No instances created: 50GB One Standard instance with one peer: 7 block volumes (50GB each), for a total 350 GB One Enterprise instance with one peer: 9 block volumes (50GB each), for a total 450 GB
Virtual Cloud Network (VCN)	1 VCN, three subnets
Container Registry (OCIR)	7.25-8 GB This is used to store container images for Oracle Blockchain Platform Enterprise Edition components.
Load Balancer	1
Network Address Translation (NAT) Gateway	1

2 Prerequisites

The following are the prerequisites for provisioning Oracle Blockchain Platform Enterprise Edition from Oracle Cloud Marketplace.

Supported Browsers

Oracle Cloud Infrastructure supports the latest desktop versions of Google Chrome, Microsoft Edge, Safari, Firefox, and Firefox ESR.

Note that mobile browsers and private browsing mode are not supported for Firefox or Edge.

Prerequisites to Deploy Oracle Blockchain Platform Enterprise Edition from Oracle Cloud Marketplace

In order to deploy Oracle Blockchain Platform Enterprise Edition, you must have the following:

- An Oracle Cloud account:
  - Sign up for an Oracle Cloud account: How Do I Sign Up?
  - Sign in for the first time: Sign In to Oracle Cloud For the First Time
  - Sign in to Oracle Cloud: Oracle Cloud Account
- Access to an assigned Oracle Cloud tenancy. You must create a compartment in Oracle Cloud Infrastructure in your assigned tenancy. See:
  - Setting Up Your Tenancy
  - Managing Compartments
- Generate an OCIR Auth Token. You can generate this in your OCI My Profile under Auth Tokens, Generate Token. See Getting an Auth Token.

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Provisioning Oracle Blockchain Platform Enterprise Edition from Oracle Cloud Marketplace

As an Oracle Cloud Infrastructure administrator, you can create and set up an Oracle Blockchain Platform Manager for your organization.

To find Oracle Blockchain Platform Enterprise Edition in Oracle Cloud Marketplace:

1. Log in to Oracle Cloud Marketplace.
2. From the Oracle Cloud Marketplace home page, use the search box under Applications and search for the keywords `Oracle Blockchain Platform`.
3. From the search results, select Oracle Blockchain Platform Enterprise Edition.

After finding Oracle Blockchain Platform Enterprise Edition listing in Oracle Cloud Marketplace, you can deploy Oracle Blockchain Platform using the provided stack listing. The Terraform stack prompts you for specific information and then builds an Oracle Kubernetes Engine Cluster with Oracle Blockchain Enterprise Edition installed.

1. From the Marketplace page, select Oracle Blockchain Platform Enterprise Edition.
2. On the Oracle Blockchain Platform application page, provide the following information:
   a. Select Version

      Provides a list of versions that are available. Select the version of Oracle Blockchain Platform Enterprise Edition you want to provision.

   b. Select Compartment

      Specifies the compartment where the resources will be built.

   c. Terms of Use

      Review the licenses before proceeding with the instance creation.

   Click **Launch Stack** to launch the stack in the OCI environment.
3. Optionally customize the **Stack Information** fields. All fields are completed with defaults.
   a. Custom provider

      Custom providers are not supported at this time.

   b. Name

      Name of the stack. It has a default name and provides a date time stamp. You can edit this if desired.

   c. Description

      Description of the stack that you are creating.

   d. Create in compartment

      Defaults to the compartment you selected on the Oracle Blockchain Platform Marketplace page.

e. Terraform version

Ensure version 1.1.x or later is selected.

f. Tags

Optional. Tags are a convenient way to assign a tracking mechanism.

Click **Next**.

4. Fill in the required details to configure the platform on the **Configure Variables** page.

Blockchain Platform Configurations

a. Domain Name

The domain name that will be used for your Oracle Blockchain Platform Manager. This will be used in the Platform Manager URL as described in step 7.

b. Admin User Password

This is used to set the Blockchain Platform Manager admin user's password.

c. LDAP User Password

This is used to set the admin user's password for the LDAP authentication server.

OCIR Image Configurations

a. OCIR Username

User name used to log into Oracle Cloud Infrastructure Registry. Enter the name of the user in the format:

```
<tenancy-namespace>/<username>
```

where `<tenancy-namespace>` is the auto-generated Object Storage namespace string of the tenancy in which to create repositories (as shown on the **Tenancy Information** page). For example

```
ansh81vru1zp/jdoe@example.com
```

Note that for some older tenancies, the namespace string might be the same as the tenancy name in all lower-case letters. For example,

```
example-dev
```

If your tenancy is federated with Oracle Identity Cloud Service, use the format

```
<tenancy-namespace>/oracleidentitycloudservice/<username>
```

See Logging in to Oracle Cloud Infrastructure Registry.

b. OCIR Auth Token

The auth token used to access OCIR.

Kubernetes Cluster Configurations

a. Cluster Name

Name of the OCI Kubernetes Engine cluster that will be created.

b. Node Pool Name

Name of the node pool for the worker nodes.

c. Enable Cluster Autoscaler for Node Pool

This will enable node pools to autoscale based on resource usage and will add and remove worker nodes as needed.

d. Minimum Number of Worker Nodes

The minimum number of nodes in the node pool. If autoscaling has not been enabled, this is the total number of worker nodes available. At a minimum, three worker nodes are required.

e. Maximum Number of Worker Nodes

The maximum number of nodes in the node pool. This is only available if autoscaling has been enabled.

f. Worker Nodes Instance Shape

Select the appropriate compute shape. For information on supported shapes and their configurations, see: Supported Compute Shapes

g. Worker Node OCPU Count

The number of OCPUs for each worker node compute instance. The minimum is 2 OCPUs.

h. Worker Node Memory (GB)

The amount of memory for each worker node compute instance. The minimum is 32GB.

5. On the **Review** page, review the information you provided and click **Create**.

- **Run Apply** is selected by default. It will run the stack and setup your Blockchain Platform Manager.
- If **Run Apply** was not selected, click **Apply** and select **Automatically Approve** for **Apply job plan resolution**.

It will take approximately 30 minutes to complete the installation.

6. After the job has completed, a new tab is available: **Application Information**.

a. Copy the **Domain Hosts Entry** field and append it to your client machine's hosts file:

- macOS or Linux: `/etc/hosts`
- Windows: `C:\Windows\System32\drivers\etc\hosts`

b. Optional: Copy the **Kubernetes Configuration** field and append it to your client machine's kubeconfig file (`~/.kube/config`) to access the cluster.

7. You can now go to the Blockchain Platform Manager at the following URL:

`https://controlplane.<domain_name>/console/index.html`

Where <*domain_name*> corresponds to the domain name that was submitted in the Blockchain Platform Configurations details in step 4.

For example: `https://controlplane.obpee.com/console/index.html`

Signing Into Blockchain Platform Manager for the First Time

Once you've deployed Oracle Blockchain Platform, you can log into Blockchain Platform Manager which allows you to provision an Oracle Blockchain Platform instance.

Once you've accessed Blockchain Platform Manager at `https://controlplane.<domain_name>/console/index.html`:

1. Enter the default admin credentials.
   a. User name: `obpadmin`
   b. Password: the admin user password submitted in the Blockchain Platform Configurations details in step 4.
2. You will be prompted to configure LDAP. Proceed by clicking **OK**.

   The **Configuration** tab opens.
3. The LDAP configuration has already been created but the admin user must set it to active. Click **Set Active** to activate your LDAP configuration. A prompt will appear for confirmation; click **Confirm**.
4. You need to add at least one user to create Oracle Blockchain Platform instances since the default admin user does not have this privilege. Click **Add User** and enter all required details. Click **Submit**.
5. Sign out of Blockchain Platform Manager.
6. Log in with the new user added to create instances.
7. Click **Create Instance** to create your Oracle Blockchain Platform instance. Follow the steps outlined in Provision An Instance.

Next Steps

You're now ready to work with your Oracle Blockchain Platform Enterprise Edition instance as described in Using Oracle Blockchain Platform.