

# Oracle® Cloud

## Images for Oracle Tuxedo for OCI



Release 22c

F75080-04

May 2023

The Oracle logo, consisting of a solid red square with the word "ORACLE" in white, uppercase, sans-serif font centered within it.

ORACLE®

Oracle Cloud Images for Oracle Tuxedo for OCI, Release 22c

F75080-04

Copyright © 2022, 2023, Oracle and/or its affiliates.

Primary Author: Preeti Gandhe

Contributing Authors: Tulika Das

Contributors: Maggie Li, Yash Patil

# Contents

<b>1</b>	<b>Images for Oracle Tuxedo for OCI</b>	
<hr/>		
1.1	About Oracle Tuxedo for OCI Images	1-1
1.2	Software Requirements	1-3
1.3	Ongoing Maintenance and Patching Requirements	1-4
<b>2</b>	<b>Create an Instance</b>	
<hr/>		
2.1	Use an Image	2-1
2.2	Create Compartment Policies	2-2
2.3	Create an Instance Using the Compute Instance Console	2-3
2.4	Create an Instance Using the Marketplace	2-4

# 1

## Images for Oracle Tuxedo for OCI

Learn about the images in Oracle Tuxedo for Oracle Cloud Infrastructure (Oracle Tuxedo for OCI) and how to use these images to create instances in Oracle Tuxedo for Oracle Cloud Infrastructure.

### Topics:

- [About Oracle Tuxedo for OCI Images](#)
- [Software Requirements](#)
- [Ongoing Maintenance and Patching Requirements](#)

### 1.1 About Oracle Tuxedo for OCI Images

Oracle Tuxedo for OCI images are preinstalled with the Oracle Tuxedo software version 22.1.0.0.0, shipped with Rolling Patch 001 (RP001). The Oracle Tuxedo for OCI images use Oracle Linux 8.6 as the operating system.

Oracle Tuxedo for OCI supports:

- **Bring Your Own License (BYOL) Images:** If you already have a valid Tuxedo license and a support contract to use Tuxedo, then you can bring those licenses to OCI for using the BYOL images. You will only pay for the charges associated with the infrastructure and the computing, for example, OCPUs, storage, and anything else required by the Tuxedo application.
- **Universal Credits Model (UCM) Images:** Using UCM images incurs a fee per OCPU per hour for accessing the Tuxedo software. The use of these images implies a license and support agreement, even though a contract is not required.

**Table 1-1 Oracle Tuxedo OCI Marketplace Image billing options**

<b>Bring Your Own License (BYOL)</b>	<b>Universal Credits Model (UCM)</b>
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.

Oracle Tuxedo for OCI offers the following BYOL and UCM images:

#### **Oracle Tuxedo Image**

If you want to utilize only Oracle Tuxedo, without any add-on products.

#### **Oracle Tuxedo Enterprise Edition Image**

If you want to use at least one of the add-on products, in addition to Oracle Tuxedo. In addition to Oracle Tuxedo, the Enterprise Edition includes the following add-ons:

- Oracle® Tuxedo Advanced Performance Pack

- Oracle® Tuxedo Jolt
- Oracle® Service Architecture Leveraging Tuxedo

### **Oracle Tuxedo Mainframe Modernization Runtimes Image**

In addition to Oracle Tuxedo Enterprise, the Oracle Tuxedo Mainframe Modernization subscription enables you to use at least one Tuxedo Mainframe Modernization Runtimes. Oracle Tuxedo Mainframe Modernization Runtimes include the following add-ons:

- Oracle® Tuxedo Application Runtime for CICS
- Oracle® Tuxedo Application Runtime for Batch
- Oracle® Tuxedo Application Runtime for IMS
- Oracle® Tuxedo Application Rehosting Test Manager

### **Shapes for Oracle Tuxedo for OCI images**

You can use any of the following compute shapes to create an instance with Oracle Tuxedo for OCI images:

#### **Standard**

- VM.Standard1.1, VM.Standard1.16, VM.Standard1.2, VM.Standard1.4, VM.Standard1.8, VM.Standard2.1, VM.Standard2.16, VM.Standard2.2, VM.Standard2.24, VM.Standard2.4, VM.Standard2.8, VM.Standard.B1.1, VM.Standard.B1.16, VM.Standard.B1.2, VM.Standard.B1.4, VM.Standard.B1.8, VM.Standard.E2.1, VM.Standard.E2.2, VM.Standard.E2.4, VM.Standard.E2.8

#### **Flexible**

VM.Standard3.Flex (OCPU Constraint: 1 - 32, Memory Constraint: 1GBs - 512GBs) ,  
VM.Standard.E3.Flex (OCPU Constraint: 1 - 64, Memory Constraint: 1GBs - 1024GBs) ,  
VM.Standard.E4.Flex (OCPU Constraint: 1 - 64, Memory Constraint: 1GBs - 1024GBs)

#### **Optimized**

VM.Optimized3.Flex (OCPU Constraint: 1 - 18, Memory Constraint: 1GBs - 256GBs)

#### **Dense**

VM.DenseIO2.16, VM.DenseIO2.24, VM.DenseIO2.8

## 1.2 Software Requirements

**Table 1-2 Software Requirements for Tuxedo 22c**

Component	Requirement
COBOL Compiler	Micro Focus Visual COBOL v6.0 or later
Java 2 JRE for the Java run-time environment	Tested with JRE 1.8.0_341, 11.0.15.1, and 17.0.4 and OpenJDK 17
Java 2 Software Development Kit (SDK) for the Java development environment	Tested with JDK 1.8.0_341, 11.0.15.1, and 17.0.4 and OpenJDK 17
Database for CORBA C++ applications	Tested with Oracle Client 12c

For more additional information, please refer to [Oracle Tuxedo Installation Guide](#).

**Table 1-3 Software Requirements for Tuxedo Application Runtimes**

Component	Requirement
COBOL Compiler	<ul style="list-style-type: none"> <li>• Micro Focus Visual COBOL v6.0 or later</li> <li>• COBOL-IT Enterprise Edition 3.x(3.9.16 or later)</li> </ul>
Database	Oracle database 12c or later
Shell	ksh
perl	perl 5.28 or above with module Data::Dumper(perl-Data-Dumper) installed

 **Note:**

- When using Micro Focus Visual COBOL, make the following soft links in \$COBDIR/lib:
  - `ln -s libcobrts64.so.3 libcobrts64.so.2`
  - `ln -s libcobrts64_t.so.3 libcobrts64_t.so.2`
  - `ln -s libcobmisc64.so.3 libcobmisc64.so.2`
  - `ln -s libcobmisc64_t.so.3 libcobmisc64_t.so.2`
  - `ln -s libcobcrtn64.so.3 libcobcrtn64.so.2`
- Compiler version support policy:  
The compiler version is supported with the assumption that the version is supported on the Operating System of the image by the compiler vendor, and compiler vendor maintains binary compatibility among minor releases.

## 1.3 Ongoing Maintenance and Patching Requirements

Oracle strongly recommends that you download and apply the latest patch, and upgrade your Tuxedo release as and when required. By patching the software regularly, you can update any security vulnerabilities and include the latest bug fixes.

# 2

## Create an Instance

Learn how to create an Oracle Tuxedo for OCI compute instance using Oracle Tuxedo for OCI images.

### Topics:

- [Use an Image](#)
- [Create Compartment Policies](#)
- [Create an Instance Using the Compute Instance Console](#)
- [Create an Instance Using the Marketplace](#)

### 2.1 Use an Image

Utilizing the Oracle Tuxedo for OCI images, you can create Oracle Tuxedo domain nodes in the Oracle Cloud Infrastructure compute instances, with the entitlement to use Tuxedo software. The Oracle Tuxedo for OCI images contain the following two directories:

- `/u01/oraHome`: Tuxedo software is installed in this directory. It also includes other utilities such as Oracle JDK 1.8 and `OPatch`.
- `/u01/app/oraInventory`: Tuxedo inventory information is stored in this directory. Data files, installation logs, and Oracle home information are stored in it.

Follow these instructions to use the Oracle Tuxedo for OCI images:

- When you create an instance using an image, you must specify an SSH key. You require this SSH key to access the instance and launch it.
- You can connect to an instance using the SSH command as the `opc` user.
- **SSH Private key:** The private key associated with the public key is used during provisioning. For example, `$ssh -I <private_key> opc@< ip_address>`
- The user public key was provided during provisioning. Log in directly with the following command: `$ssh opc@< ip_address>`

#### See Also:

[Connecting to a Linux Instance in Oracle Cloud Infrastructure documentation](#)

- When you have logged in as the OPC user, switch to the Oracle user by using the following command: `$sudo su oracle`
- Use the source command to load Tuxedo environment variables such as `TUXDIR`, and `JAVA_HOME` from the `tux.env` file, which is required to run Tuxedo.



- Run the following command to load the Tuxedo environment variable:

```
source /u01/oraHome/tuxedo22.1.0.0.0/tux.env
```

- By default, tlisten is not configured. Oracle TSAM plus and MP/clustered mode configuration require tlisten. Follow the instructions to set the tlisten password:
  - `cd /u01/oraHome/tuxedo22.1.0.0.0/`
  - `./tux.env`
  - `tlistpwd $TUXDIR`
- Tuxedo supports TLS by default. It is optional to use LDAP. When using Oracle Wallet, LDAP is not required. A user is required to configure LDAP only if any of the following conditions are met.
  - The use of legacy security credentials
  - The local host must use a port other than 389 for LDAP
  - There is no LDAP server running on localhost
- **LDAP configuration:** Use the `epifregedt` command to modify the registry.
- Use the following 3 commands after initialization to modify the TLS LDAP information:
  1. `epifregedt -s -k SYSTEM/impl/security/BEA/key_management -a Params=privateKeyDir=file:///TUXDIR/udataobj/security/keys`
  2. `epifregedt -s -k SYSTEM/impl/security/BEA/certificate_validation -a Params=caCertificateFile=file:///TUXDIR/udataobj/security/certs/trust_ca.cer -a Params=peerValidationRuleFile=file:///TUXDIR/udataobj/security/certs/peer_val.rul`
  3. `epifregedt -s -k SYSTEM/impl/security/BEA/certificate_lookup -a Params=userCertificateLdap=ldap://*LDAP_SERVICE_NAME*:LDAP_PORTID* -a Params=ldapBaseObject=*LDAP_BASE_OBJECT* -a Params=filterFileLocation=file:///LDAP_FILTER_FILE_LOCATION*`
- On Unix, the Tuxedo registry is located at `$TUXDIR/udataobj/System.rdp`. Using the command `epifregedt -g`, you can print the current registry. The first command modifies the key management object to specify a particular private key directory.
- Please run the following command and instructions to reset the administrator password for Oracle® Tuxedo Application Rehosting Test Manager.
  - `$ORA_HOME/art_tm12.2.2.0.0/config.sh`
- Following links (if any) for creating a Tuxedo Domain: [Using the Tuxedo Domains Component](#).

## 2.2 Create Compartment Policies

You must be granted management access to Marketplace applications and Resource Manager if you are not an Oracle Cloud Infrastructure administrator. Oracle Tuxedo for OCI images allows you to create compute instances.

The following are sample policies:

```
Allow group
  MyGroup to use app-catalog-listing in compartment MyCompartmentAllow
group
  MyGroup to manage instance-family in compartment MyCompartmentAllow
group
  MyGroup to manage orm-family in compartment MyCompartmentAllow group
  MyGroup to manage virtual-network-family in compartment
MyNetworkCompartment
```



#### See Also:

Refer to Common Policies in the Oracle Cloud Infrastructure documentation, [Managing Policies](#).

## 2.3 Create an Instance Using the Compute Instance Console

The compute instance console enables you to create a new instance using Oracle Tuxedo for OCI images.

Follow the instructions to create an instance:

1. Sign in to the *Oracle Cloud Infrastructure* console.
2. Click Navigation from the menu, select **Compute** and under the **Compute** group, click **Instances**.
3. Click **Create Instance**.  
If required, you can modify the name of the instance.
4. Select the compartment in which to create the instance.
5. Under **Placement**, select the **Availability Domain** for creating the instance. Click **Show advanced options**.
6. Under **Image and Shape**, click **Change Image** and follow the instructions:
  - a. From the **Image source** drop-down, select *Marketplace*, and you can either use **Search** or select one of the following Oracle Tuxedo for OCI images:
    - **Oracle Tuxedo BYOL Image**
    - **Oracle Tuxedo Enterprise BYOL Image**
    - **Oracle Tuxedo UCM Image**
    - **Oracle Tuxedo Enterprise UCM Image**
    - **Oracle Tuxedo Mainframe Modernization Runtimes BYOL Image**
    - **Oracle Tuxedo Mainframe Modernization Runtimes UCM Image**
  - b. For the selected image, click **Arrow** on the right, and then select the image build version for the BYOL or UCM images. For example, Oracle Linux 8.6 (labeled as `<release>-ol8.6-<build>-<timestamp>`)

- c. Review the *terms and conditions* and select the **Oracle Terms of Use** check box and click **Select Image**.
7. Under **Image and Shape**, click **Change Shape**. Select the **Instance Type** and select the shape.  
While creating a virtual machine, under **Shape series**, select a processor group, and then select a shape. To know the supported shapes, see [Shapes for the images](#).
8. Configure the network for the instance. Click **Show advanced options** to specify advanced network settings.
9. Under **Add SSH keys**, generate a key, upload your public key, or paste the keys.
10. Under **Boot Volume**, specify the size and encryption options for the instance's boot volume.
11. Click **Show advanced options** to configure advanced settings.
12. Click **Create**.  
For more details, see [Creating a Linux instance](#) in *Oracle Cloud Infrastructure documentation*.

## 2.4 Create an Instance Using the Marketplace

By using the Oracle Tuxedo for OCI images available on the Marketplace, you can create a new instance.

Follow the instructions to create an instance using the Marketplace:

1. Sign in to the *Oracle Cloud Infrastructure* console.
2. Click the navigation menu, select **Marketplace**, and then click **All Applications**.
3. Select one of the following Oracle Tuxedo for OCI images (BYOL or UCM) :
  - **Oracle Tuxedo BYOL Image**
  - **Oracle Tuxedo Enterprise BYOL Image**
  - **Oracle Tuxedo UCM Image**
  - **Oracle Tuxedo Enterprise UCM Image**
  - **Oracle Tuxedo Mainframe Modernization Runtimes BYOL Image**
  - **Oracle Tuxedo Mainframe Modernization Runtimes UCM Image**
4. From the **Version** drop down, select the image build version.  
Every image is built for a specific operating system, which may not support all operating systems.
  - Oracle Linux 8.6 (labeled as `<release>-ol8.6-<build>-<timestamp>`)
5. Review the *terms and conditions* and select the **Oracle Terms of Use** check box.
6. Click **Launch Instance**.
7. Select the compartment in which you want to create the instance.
8. Under **Placement**, select the **Availability Domain** for creating an Instance. Click **Show advanced options** to specify capacity type and fault domain.
9. Under **Image and Shape**, click **Change Shape**. Select the **Instance Type** and select the shape.

While creating a virtual machine, under **Shape series**, select a processor group, and then select a shape. To know the supported shapes, see [Shapes for the images](#).

10. Configure the network for the instance and click **Show advanced options** to specify advanced network settings.
11. Under **Add SSH keys**, generate a key, upload your public key, or paste the keys.
12. Under **Boot Volume**, specify the size and encryption options for the instance's boot volume.
13. Click **Show advanced options** to configure advanced settings.
14. Click **Create**.  
For more details, see [Creating a Linux instance](#) in *Oracle Cloud Infrastructure documentation*.