

Oracle® Exadata Cloud@Customer Elastic Storage Expansion



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Exadata Cloud@Customer Gen2 Elastic Storage Expansion

Learn about Elastic Storage Expansion and how you can dynamically increase your storage capacity to meet your business needs by adding storage on-demand.

- [Overview of Elastic Storage Expansion](#)
- [System Configuration Options for Oracle Exadata Cloud@Customer](#)
- [Using the Console to Scale Infrastructure Storage](#)
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Overview of Elastic Storage Expansion

With elastic storage expansion, you can dynamically increase your storage capacity to meet your growing workload requirements.

Expand the storage capacity on-demand by scaling up the infrastructure with additional storage servers without being constrained by the standard supported shapes. You can allocate additional storage capacity available from the newly added storage servers to the already deployed VM cluster without disrupting the current running workloads. Additional storage capacity from newly added storage servers is also available for provisioning new VM clusters on the infrastructure.

With the elastic storage expansion capability, you can now:

- Provision of new Exadata Infrastructure with custom storage capacity.
- Start with a smaller storage footprint for the Exadata Infrastructure at install time.
- Expand the storage capacity on existing deployed Exadata Infrastructure on-demand in an automated, elastic fashion.
- Allocate additional storage capacity available from newly added storage servers to already deployed VM clusters and/or use them for provisioning new VM clusters on the infrastructure.

X7-2 Key Additional Resources

Specification	Exadata Base System Storage Server X7-2	Exadata Storage Server X7-2
Additional Raw Flash Storage Capacity	6.4 TB	25.6 TB
Additional Raw Disk Storage Capacity	48 TB	120 TB
Additional Usable Storage Capacity	14 TB	35.3 TB

X8-2 Key Additional Resources

Specification	Exadata Base System Storage Server X8-2	Exadata Storage Server X8-2
---------------	---	-----------------------------

Specification	Exadata Base System Storage Server X8-2	Exadata Storage Server X8-2
Additional Raw Flash Storage Capacity	12.8 TB	25.6 TB
Additional Raw Disk Storage Capacity	84 TB	168 TB
Additional Usable Storage Capacity	24.6 TB	49.6 TB

X8M-2 Key Additional Resources

Specification	Exadata Base System Storage Server X8M-2	Exadata Storage Server X8M-2
Additional Raw Flash Storage Capacity	12.8 TB	25.6 TB
Additional Raw Disk Storage Capacity	84 TB	168 TB
Additional Usable Storage Capacity	24.6 TB	49.6 TB
Additional Persistent Memory	-	1.5 TB

Elastic scaling of Exadata Storage Servers is subject to the following conditions:

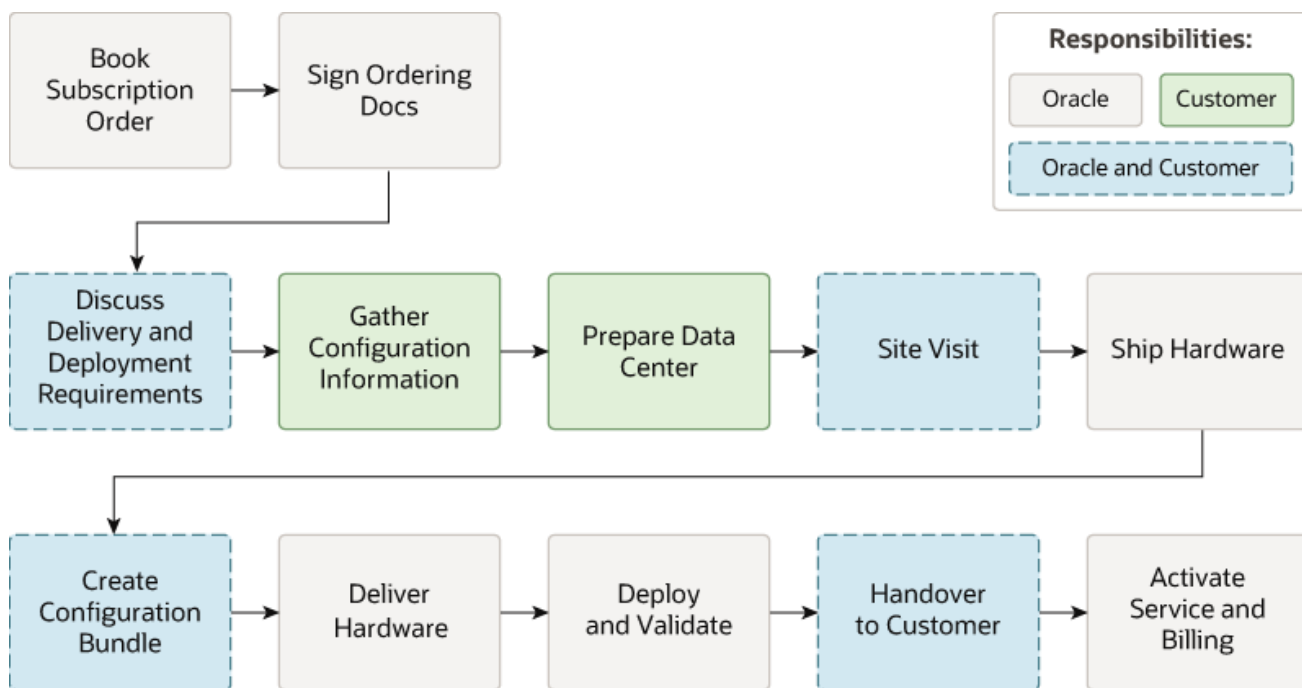
- The Exadata Cloud@Customer system configuration must be based on Oracle Exadata X7 hardware, Oracle Exadata X8 hardware, or Oracle Exadata X8M hardware.
- Each Exadata Cloud@Customer system configuration can have an absolute maximum of 12 Exadata Storage Servers.
- Exadata Infrastructure deployed with base configuration shape can only be expanded using base expansion SKU storage servers.
- Exadata Infrastructures deployed with X7 generation at install time can be scaled with X8 generation

storage servers. X8 storage servers used to scale X7 infrastructure will only present the same total usable capacity as all other X7 storage servers that are already part of the infrastructure.

- Exadata Infrastructures deployed with X8M generation at install time can only be scaled with X8M or higher generation storage servers.

Exadata Infrastructures deployed with additional storage servers will be configured as an Elastic shape with the total number of storage servers and usable capacity clearly called out for the given infrastructure.

Before you can scale the number of Exadata storage servers, review the site and network requirements, and the checklists to prepare and deploy Exadata Cloud@Customer. Ensure that you have worked with sales and followed the procurement process. The following figure provides you an overview of the order and deployment process.



System Configuration Options for Oracle Exadata Cloud@Customer

To meet the needs of your enterprise, you can select from one of the three Oracle Exadata X8M-2, X8-2, or X7-2 System Models.

Exadata Cloud@Customer is offered in the following Exadata System Shapes:

- **Base System:** Contains two database servers and three Oracle Exadata Storage Servers. A Base System is an entry-level configuration. Compared to other configurations, a Base System contains Oracle Exadata Storage Servers with significantly less storage capacity, and database servers with significantly less memory and processing power.
- **Quarter Rack:** Contains two database servers and three Oracle Exadata Storage Servers.
- **Half Rack:** Contains four database servers and six Oracle Exadata Storage Servers.
- **Full Rack:** Contains eight database servers and 12 Oracle Exadata Storage Servers.

Each Exadata System Shape is equipped with a fixed amount of memory, storage, and network resources. All Shapes are based on Oracle Exadata X8M-2, X8-2, or X7-2 System Models.

- [Oracle Exadata X8M-2 System Model Specifications](#)
- [Oracle Exadata X8-2 System Model Specifications](#)
- [Oracle Exadata X7-2 System Model Specifications](#)

Oracle Exadata X8M-2 System Model Specifications

Property	Base Rack	Quarter Rack	Half Rack	Full Rack
Number of Database Servers	2	2	4	8
Total Maximum Number of Enabled CPU Cores	48	100	200	400
Total RAM Capacity	656 GB	2780 GB	5560 GB	11120 GB
Persistent Memory	0	4.6 TB	9.2 TB	18.4 TB
Number of Exadata Storage Servers	3	3	6	12
Total Raw Flash Storage Capacity	38.4 TB	76.8 TB	153.6 TB	307.2 TB
Total Usable Storage Capacity**	73.8 TB	148.8 TB	297.6 TB	595.2 TB
Maximum Number of VMs	4	8	8	8

**** TB=1024^4**

Oracle Exadata X8-2 System Model Specifications

Property	Base System	Quarter Rack	Half Rack	Full Rack
Total Usable Storage Capacity	73.8 TB	148.8 TB	297.6 TB	595.2 TB
Total Raw Flash Storage Capacity	38.4 TB	76.8 TB	153.6 TB	307.2 TB
Total Raw Disk Storage Capacity	252 TB	504 TB	1008 TB	2016 TB
Total RAM Capacity	720 GB	1440 GB	2880 GB	5760 GB
Total Maximum Number of Enabled CPU Cores	48	100	200	400
Number of Exadata Storage Servers	3	3	6	12
Number of Database Servers	2	2	4	8
Maximum Number of VMs	5	5	5	5

Oracle Exadata X7-2 System Model Specifications

Property	Base System	Quarter Rack	Half Rack	Full Rack
Number of Database Servers	2	2	4	8
Total Maximum Number of Enabled CPU Cores	44	92	184	368
Total RAM Capacity	480 GB	1440 GB	2880 GB	5760 GB
Number of Exadata Storage Servers	3	3	6	12
Total Raw Flash Storage Capacity	19.2 TB	76.8 TB	153.6 TB	307.2 TB
Total Raw Disk Storage Capacity	144 TB	360 TB	720 TB	1440 TB
Total Usable Storage Capacity	42 TB	105.9 TB	211.8 TB	423.6 TB
Maximum Number of VMs	6	6	6	6

Using the Console to Scale Infrastructure Storage

To scale infrastructure storage, complete this procedure.

You can scale infrastructure storage when the current state of the Oracle Exadata infrastructure is **Active** or **Requires Activation**.

1. Open the navigation menu. Under **Oracle Database**, click **Exadata Cloud@Customer**.
2. Choose the **Region** and **Compartment** that contains the Oracle Exadata infrastructure that you are interested in.
3. Click **Exadata Infrastructure**.
4. Click the name of the Oracle Exadata infrastructure for which you want to download a file containing the infrastructure configuration details.

The **Infrastructure Details** page displays information about the selected Oracle Exadata infrastructure.

5. Click **Scale Infrastructure Storage**.
6. Select the number of storage servers from the **Additional storage servers** field.
7. Click **Scale Infrastructure**.

Using the Console to Download Scale Infrastructure Storage Configuration File

To download an Oracle Exadata Cloud@Customer scale configuration file, complete this procedure.

1. Open the navigation menu. Under **Oracle Database**, click **Exadata Cloud@Customer**.
2. Choose the **Region** and **Compartment** that contains the Oracle Exadata infrastructure that you are interested in.
3. Click **Exadata Infrastructure**.
4. Click the name of the Oracle Exadata infrastructure for which you want to download a file containing the infrastructure configuration details.

The **Infrastructure Details** page displays information about the selected Oracle Exadata infrastructure.

5. Click **Download New Configuration**.

Your browser downloads a file containing the infrastructure configuration details.



Note

When you provide the generated infrastructure configuration file to Oracle, ensure that it has not been altered in any way. Also, ensure that you do not edit the Oracle Exadata infrastructure after you download the configuration file and provide it to Oracle.

Using the Console to Activate New Storage Servers

To download an Oracle Exadata Cloud@Customer scale configuration file, complete this procedure.

Upload the activation file once the field engineer finishes deploying the storage servers and shares the activation file with you.

Note



Once the activation file is uploaded and the activate process is initiated, you cannot change the Scale Infrastructure request or cancel this whole operation. If there is an activation failure, then contact the field engineer to resolve the issue.

1. Download the activation file.
2. Open the navigation menu. Under **Oracle Database**, click **Exadata Cloud@Customer**.
3. Choose the **Region** and **Compartment** that contains the Oracle Exadata infrastructure that you are interested in.
4. Click **Exadata Infrastructure**.
5. Click the name of the Oracle Exadata infrastructure that you want to activate.

The **Infrastructure Details** page displays information about the selected Oracle Exadata infrastructure.

6. Click **Activate New Storage Server(s)**.

The **Activate** button is only available if the Oracle Exadata infrastructure requires activation. You cannot activate Oracle Exadata infrastructure multiple times.

7. Use the **Activate New Server** dialog to upload the activation file, and then click **Activate Now**.

After activation, the state of the Oracle Exadata infrastructure changes to **Active**.

Using the Console to Make Storage Capacity from New Server Available for VM Clusters Consumption

To make storage capacity from the new servers for VM clusters consumption, complete this procedure.

1. Download the activation file.
2. Open the navigation menu. Under **Oracle Databases**, click **Exadata Cloud@Customer**.
3. Choose the **Region** and **Compartment** that contains the Oracle Exadata infrastructure that you are interested in.
4. Click **Exadata Infrastructure**.
5. Click the name of the Oracle Exadata infrastructure that you want to activate.

The **Infrastructure Details** page displays information about the selected Oracle Exadata infrastructure.

6. Click **Add Storage Capacity**.
7. Review the advisory on the **Add Storage Capacity** dialog, and then click **Add Storage Capacity**.

Note

While Add Storage Capacity operation is in progress,



- The system rebalances the storage to ensure that the capacity from the newly added storage servers is available for VM cluster consumption.
- You cannot create or delete VM clusters.
- Existing VM clusters provisioned are in the Available life cycle state. However, they do not support scale up or down of resources allocated to the VM cluster, except for OCPU allocation. OCPU allocation changes are allowed even while Add Storage Capacity operation is in progress.

Using the Console to View Details of Exadata Cloud@Customer Infrastructure with Scaled Storage Capacity

To view scaled storage capacity from the new servers, complete this procedure.

1. Open the navigation menu. Under **Oracle Database**, click **Exadata Cloud@Customer**.
2. Choose the **Region** and **Compartment** that contains the Oracle Exadata infrastructure that you are interested in.
3. Click **Exadata Infrastructure**.
After changing the storage capacity, **Shape** will change to either **Elastic** or **Elastic Base**.

Note



When you perform scale VM Cluster Exadata storage operation, newly added Exadata storage capacity is also available for consumption. Similarly, when you create a VM cluster, the Console displays the newly added Exadata storage capacity (shared Exadata storage) as available storage.

Using the Console to Create Infrastructure

To create your Oracle Exadata Cloud@Customer infrastructure, be prepared to provide values for the fields required for configuring the infrastructure.

1. Open the navigation menu. Under **Oracle Database**, click **Exadata Cloud@Customer**.
2. Under **Region**, select the region that you want to associate with the Oracle Exadata infrastructure.

The region that is associated with your Oracle Exadata infrastructure cannot be changed after the Oracle Exadata infrastructure is created. Therefore, ensure that you select the most appropriate region for your infrastructure. Consider the following factors:

- Consider any business policies or regulations that preclude the use of a particular region. For example, you can be required to maintain all operations within national boundaries.
- Consider the physical proximity of the region to your data center. Needless extra physical separation adds unnecessary latency to network communications between Oracle Cloud Infrastructure and your corporate data center.

3. Click **Exadata Infrastructure**.
4. Click **Create Exadata Infrastructure**.
5. In the **Create Exadata Infrastructure** page, provide the requested information:

- **Oracle Cloud Infrastructure region:** The region that is associated with your Oracle Exadata infrastructure cannot be changed after the Oracle Exadata infrastructure is created. Therefore, check the displayed region to ensure that you are using the most appropriate region for your infrastructure.

See step 2 (earlier in this procedure) for further considerations. To switch regions now, use the Region menu at the top of the console.

- **Choose a compartment:** From the list of available compartments, choose the compartment that you want to contain the Oracle Exadata infrastructure.

For more information, see [Understanding Compartments](#).

- **Provide the display name:** The display name is a user-friendly name that you can use to identify the Exadata infrastructure. The name doesn't need to be unique, because an Oracle Cloud Identifier (OCID) uniquely identifies the Oracle Exadata infrastructure.
- **Select the Exadata system model:** From the list, choose the model of the Oracle Exadata hardware that is being used.

The Oracle Exadata system model and system shape combine to define the amount of CPU, memory, and storage resources that are available in the Exadata infrastructure.

- **Select an Exadata system shape:** Together with the Oracle Exadata system model, the Oracle Exadata system shape defines the amount of CPU, memory, and storage resources that are available in the Oracle Exadata infrastructure.

- **Base System:** includes two compute nodes and three Oracle Exadata Storage Servers. A Base System is an entry-level configuration. Compared to other configurations, a Base System contains Oracle Exadata Storage Servers with significantly less storage capacity, and compute nodes with significantly less memory and processing power.
- **Quarter Rack:** includes two compute nodes and three Oracle Exadata Storage Servers.
- **Half Rack:** includes four compute nodes and six Oracle Exadata Storage Servers.
- **Full Rack:** includes eight compute nodes and 12 Oracle Exadata Storage Servers.
- **Storage Configuration:** You can add a minimum of 3 and extend up to a maximum of 12 storage servers. For each storage server you add, the storage capacity that will be added is displayed on the right.
- **Configure the cloud control plane server network**

Each Oracle Exadata Cloud@Customer system contains two control plane servers, which enable connectivity to Oracle Cloud Infrastructure. The control plane servers are connected to the control plane network, which is a subnet on your corporate network. The following settings define the network parameters:

- **Control Plane Server 1 IP Address:** Provide the IP address for the first control plane server. This IP address is for the network interface that connects the first control plane server to your corporate network using the control plane network.
- **Control Plane Server 2 IP Address:** Provide the IP address for the second control plane server. This IP address is for the network interface that connects the second control plane server to your corporate network using the control plane network.
- **Netmask:** Specify the IP netmask for the control plane network.
- **Gateway:** Specify the IP address of the control plane network gateway.
- **HTTP Proxy:** (Optional) You can choose to use this field to specify your corporate HTTP proxy. The expected format is as follows, where `server` is the server name, `domain` is the domain name, and `port` is the assigned port:

```
http://server.domain:port
```

For example:

```
http://proxy.example.com:80
```

For enhanced security, when possible, Oracle recommends that you use an HTTP proxy.

- **Configure the Oracle Exadata system networks**

Each Oracle Exadata Cloud@Customer system contains two system networks, which are not connected to your corporate network. The following settings define IP address allocations for these networks:

- **Administration Network CIDR Block:** Specifies the IP address range for the administration network using CIDR notation. The administration network provides connectivity that enables Oracle to administer the Exadata system components, such as the Exadata compute servers, storage servers, network switches, and power distribution units.

You can accept the suggested default, or specify a custom value.

The maximum CIDR block prefix length is `/23`, which defines the smallest block of IP addresses that are required for the network. To allow for possible future expansion within Exadata Cloud@Customer, a smaller CIDR block prefix length is recommended, which reserves more IP addresses for the network. The minimum CIDR block prefix length is `/16`.

Ensure that the IP address range does not conflict with other hosts of your corporate network, and does not overlap with the InfiniBand network CIDR block.

- **InfiniBand Network CIDR Block:** Specifies the IP address range for the Exadata InfiniBand network using CIDR notation. The Exadata InfiniBand network provides the high-speed low-latency interconnect used by Exadata software for internal communications between various system components. You can accept the suggested default, or specify a custom value.

The maximum CIDR block prefix length is `/22`, which defines the smallest block of IP addresses that are required for the network. To allow for possible future expansion within Exadata Cloud@Customer, a smaller CIDR block prefix length is recommended, which reserves more IP addresses for the network. The minimum CIDR block prefix length is `/19`.

Ensure that the IP address range does not conflict with other hosts of your corporate network, and does not overlap with the administration network CIDR block.

- **Configure DNS and NTP services**

Each Exadata Cloud@Customer system requires access to Domain Names System (DNS) and Network Time Protocol (NTP) services. The following settings specify the servers that provide these services to the Exadata infrastructure:

- **DNS Servers:** Provide the IP address of a DNS server that is accessible using the control plane network. You may specify up to three DNS servers.
- **NTP Servers:** Provide the IP address of an NTP server that is accessible using the control plane network. You may specify up to three NTP servers.
- **Time Zone:** The default time zone for the Exadata Infrastructure is UTC, but you can specify a different time zone. The time zone options are those supported in both the `java.util.TimeZone` class and the Oracle Linux operating system.

Note



If you want to set a time zone other than UTC or the browser-detected time zone, then select the **Select another time zone** option, select a **Region** or **country**, and then select the corresponding **Time zone**.

If you do not see the region or country you want, then select **Miscellaneous**, and then select an appropriate **Time zone**.

- **Provide maintenance details**

- Configure automatic maintenance

Click **Modify Maintenance**.

In the **Edit Automatic Maintenance** dialog that opens, configure the automatic maintenance schedule.

No preference: The system assigns a date and start time for infrastructure maintenance.

Specify a schedule: Choose your preferred month, week, weekday, start time, and lead time for infrastructure maintenance.

Lead Time: Specify the minimum number of weeks ahead of the maintenance event you would like to receive a notification message.

- **Provide maintenance contacts**

Maintenance contacts are required for service request-based communications for hardware replacement and other maintenance events.

You can skip adding maintenance contacts while creating your infrastructure. However, you must add a primary contact prior to activating your infrastructure. Ensure that you provide the details of the contact that you used while registering the Customer Support Identifier (CSI) associated with this infrastructure, as a primary contact.

Optionally, you can add a maximum of nine secondary contacts. Both the primary and secondary contacts receive all notifications about hardware replacement, network issues, and software maintenance runs. Note that you can promote any secondary contacts as the primary anytime you want. When you promote a secondary contact to primary, the current primary contact will be demoted automatically to secondary.

- **Show Advanced Options**

You have the option to configure advanced options.

- **Tags:** (Optional) You can choose to apply tags. If you have permission to create a resource, then you also have permission to apply free-form tags to that resource. To apply a defined tag, you must have permission to use the tag namespace. For more information about tagging, see [Resource Tags](#). If you are not sure if you should apply tags, then skip this option (you can apply tags later) or ask your administrator.

6. Click **Create Exadata Infrastructure**.

If all of your inputs are valid, then the Infrastructure Details page appears. The page outlines the next steps in the provisioning process. Initially, after creation, the state of the Oracle Exadata infrastructure is **Requires-Activation**.

Using the Console to Download a File Containing Configuration Data

To download an Oracle Exadata Cloud@Customer configuration file, complete this procedure.

1. Open the navigation menu. Under **Oracle Database**, click **Exadata Cloud@Customer**.
2. Choose the **Region** and **Compartment** that contains the Oracle Exadata infrastructure for which you want to download a file containing the infrastructure configuration details.
3. Click **Exadata Infrastructure**.
4. Click the name of the Oracle Exadata infrastructure for which you want to download a file containing the infrastructure configuration details.

The **Infrastructure Details** page displays information about the selected Oracle Exadata infrastructure.

5. Click **Download Configuration**.

Your browser downloads a file containing the infrastructure configuration details.

The generated configuration file includes all the relevant configuration details for the additional storage servers included as part of the create infrastructure flow.

When you provide the generated infrastructure configuration file to Oracle, ensure that it has not been altered in any way. Also, ensure that you do not edit the Oracle Exadata infrastructure after you download the configuration file and provide it to Oracle.

Using the Console to Activate Exadata Cloud@Customer Infrastructure

To activate Oracle Exadata Cloud@Customer infrastructure, ensure that you meet the prerequisites, and complete this procedure.

- Ensure that you have added a primary contact. You cannot activate your infrastructure without adding a primary maintenance contact.
- Locate the activation file. This file is supplied to you by Oracle after the installation and initial configuration of your Oracle Exadata Cloud@Customer system.
- Ensure that the current state of your infrastructure is **Requires Activation**. You can only activate Oracle Exadata if its state is **Requires Activation**.

1. Download the activation file.
2. Open the navigation menu. Under **Oracle Database**, click **Exadata Cloud@Customer**.
3. Choose **Region** and **Compartment**, and select the region and compartment that contains the Oracle Exadata infrastructure that you want to activate.
4. Click **Exadata Infrastructure**.
5. Click the name of the Oracle Exadata infrastructure that you want to activate.

The **Infrastructure Details** page displays information about the selected Oracle Exadata infrastructure.

6. Click **Activate**.

The **Activate** button is only available if the Oracle Exadata infrastructure requires activation. You cannot activate Oracle Exadata infrastructure multiple times.

7. Use the **Activate** dialog to upload the activation file, and then click **Activate Now**.

The activation file includes all the relevant details for the additional storage servers included as part of the create infrastructure flow.

After activation, the state of the Oracle Exadata infrastructure changes to **Active**.

Using the API to Manage Exadata Cloud@Customer Infrastructure

Oracle Exadata Cloud@Customer uses the same API as Oracle Cloud Infrastructure. For information about using the API and signing requests, see [REST APIs](#) and [Security Credentials](#). For information about SDKs, see [Software Development Kits and Command Line Interface](#).

Use these API operations to manage Exadata Cloud@Customer infrastructure:

Operation	REST API Endpoint
Activates the specified Exadata infrastructure resource.	ActivateExadataInfrastructure
Makes the storage capacity from additional storage servers available for VM Cluster consumption.	AddStorageCapacityExadataInfrastructure
Creates an Exadata infrastructure resource.	CreateExadataInfrastructure
Deletes the Exadata Cloud@Customer infrastructure.	DeleteExadataInfrastructure
Downloads the configuration file for the specified Exadata Cloud@Customer infrastructure.	DownloadExadataInfrastructureConfigFile
Generates a recommended Cloud@Customer VM cluster network configuration.	GenerateRecommendedVmClusterNetwork
Gets information about the specified Exadata infrastructure.	GetExadataInfrastructure
Lists the Exadata infrastructure resources in the specified compartment.	ListExadataInfrastructures
Updates the Exadata infrastructure resource.	UpdateExadataInfrastructure

Permissions Required for Each API Operation

For information about permissions, see [Permissions](#).

API Operation	Permissions Required to Use the Operation
ActivateExadataInfrastructure	EXADATA_INFRASTRUCTURE_UPDATE
AddStorageCapacityExadataInfrastructure	EXADATA_INFRASTRUCTURE_UPDATE
ChangeExadataInfrastructureCompartment	EXADATA_INFRASTRUCTURE_INSPECT and EXADATA_INFRASTRUCTURE_UPDATE
CreateExadataInfrastructure	EXADATA_INFRASTRUCTURE_CREATE
DeleteExadataInfrastructure	EXADATA_INFRASTRUCTURE_DELETE
DownloadExadataInfrastructureConfigFile	EXADATA_INFRASTRUCTURE_CONTENT_READ
GenerateRecommendedNetworkDetails	EXADATA_INFRASTRUCTURE_INSPECT
GetExadataInfrastructure	EXADATA_INFRASTRUCTURE_INSPECT
ListExadataInfrastructures	EXADATA_INFRASTRUCTURE_INSPECT
UpdateExadataInfrastructure	EXADATA_INFRASTRUCTURE_UPDATE

Details for Verb + Resource-Type Combinations

Review the list of permissions and API operations covered by each verb. For more information, see [Permissions](#), [Verbs](#), and [Resource-Types](#).

- [exadata-infrastructures](#)

exadata-infrastructures

Review the list of permissions and API operations for `exadata-infrastructures` resource-type. Granting permissions on `exadata-infrastructures` resources grants permissions on associated `vmcluster-network` resources.

INSPECT

Permission	APIs Fully Covered	APIs Partially Covered
EXADATA_INFRASTRUCTURE_INSPECT	ListExadataInfrastructure s GetExadataInfrastructure GenerateRecommendedNetworkDetails	ChangeExadataInfrastructureCompartment

READ

Permissions	APIs Fully Covered	APIs Partially Covered
INSPECT + EXADATA_INFRASTRUCTURE_CONTENT_READ	DownloadExadataInfrastructureConfigFile	<i>none</i>

USE

Permissions	APIs Fully Covered	APIs Partially Covered
-------------	--------------------	------------------------

Permissions	APIs Fully Covered	APIs Partially Covered
READ + EXADATA_INFRASTRUCTURE_UPDATE	ActivateExadataInfrastructure UpdateExadataInfrastructure ChangeExadataInfrastructureCompartment AddStorageCapacityExadataInfrastructure	CreateVmCluster (also needs manage vmclusters) UpdateVmCluster (also needs use vmclusters) ChangeExadataInfrastructureCompartment

MANAGE

Permissions	APIs Fully Covered	APIs Partially Covered
USE + EXADATA_INFRASTRUCTURE_CREATE EXADATA_INFRASTRUCTURE_DELETE	CreateExadataInfrastructure DeleteExadataInfrastructure downloadExadataInfrastructureConfigFile	<i>none</i>

Oracle Exadata Cloud@Customer Events

The Oracle Database resources emit events, which are structured messages that indicate changes in resources.

- [Exadata Infrastructure Event Types](#)
- [Storage Expansion Event Types](#)

Exadata Infrastructure Event Types

Friendly Name	Event Type
Activate Begin	com.oraclecloud.databaseservice.activateexadatainfrastructure.begin
Activate End	com.oraclecloud.databaseservice.activateexadatainfrastructure.end
Change Compartment	com.oraclecloud.databaseservice.changeexadatainfrastructurecompartment
Configuration File Download	com.oraclecloud.databaseservice.downloadexadatainfrastructureconfigfile
Create Begin	com.oraclecloud.databaseservice.createexadatainfrastructure.begin
Create End	com.oraclecloud.databaseservice.createexadatainfrastructure.end
Delete Begin	com.oraclecloud.databaseservice.deleteexadatainfrastructure.begin
Delete End	com.oraclecloud.databaseservice.deleteexadatainfrastructure.end
Update Begin	com.oraclecloud.databaseservice.updateexadatainfrastructure.begin
Update End	com.oraclecloud.databaseservice.updateexadatainfrastructure.end
Exadata Infrastructure - Connectivity Status	com.oraclecloud.databaseservice.exadatainfrastructureconnectstatus

Exadata Infrastructure Examples

This is a reference event for Exadata Infrastructure instances

```
{
  "cloudEventsVersion": "0.1",
  "eventID": "60600c06-d6a7-4e85-b56a-1de3e6042f57",
  "eventType": "com.oraclecloud.databaseservice.createexadatainfrastructure.be
gin",
  "source": "databaseservice",
  "eventTypeVersion": "version",
  "eventTime": "2019-08-29T21:16:04Z",
  "contentType": "application/json",
  "extensions": {
    "compartmentId": "ocidl.compartment.oc1..unique_ID"
  },
  "data": {
    "compartmentId": "ocidl.compartment.oc1..unique_ID",
    "compartmentName": "example_name",
    "resourceName": "my_exadata_infra",
    "resourceId": "ExadataInfra-unique_ID",
    "availabilityDomain": "all",
    "freeFormTags": {},
    "definedTags": {},
    "additionalDetails": {
      "id": "ocidl.id..oc1...unique_ID",
      "lifecycleState": "AVAILABLE",
      "timeCreated": "2019-08-29T12:00:00.000Z",
      "timeUpdated": "2019-08-29T12:30:00.000Z",
      "lifecycleDetails": "detail message",
      "shape": "ExadataCC.Base3.48",
      "timeZone": "US/Pacific",
      "displayName": "testDisplayName"
    }
  }
}
```

This is a reference event for Exadata Infrastructure - Connectivity Status

```
{
  "eventType" : "com.oraclecloud.databaseservice.exadatainfrastructureconnectsta
tus",
  "cloudEventsVersion" : "0.1",
  "eventTypeVersion" : "2.0",
  "source" : "DatabaseService",
  "eventTime" : "2020-06-02T06:07:40.141Z",
  "contentType" : "application/json",
```

```

"data" : {
  "compartmentId" : "ocidl.compartment.oc1..aaaaaaaayrygl4guhpl05rtiumx3eh4mk7
grrkrqspzaltmvmvbxecnbvhkrga",
  "compartmentName" : "DBaaSInteg20160918ExaccTest",
  "resourceName" : "MM_HR",
  "resourceId" : "ocidl.exadatainfrastructure.oc1.ap-hyderabad-1.abuhsjlrp2vzz
enmqmctqciwro6euhhsmlrewiiemiktov5xyfsu5hiufjsq",
  "availabilityDomain" : "",
  "additionalDetails" : {
    "timeCreated" : "2020-05-28T00:23:18Z",
    "timeUpdated" : "2020-06-02T06:07:40Z",
    "lifecycleState" : "DISCONNECTED",
    "lifecycleDetails" : "Exadata Infrastructure is not reachable. Please lodg
e a Service Request (SR) with Oracle Support and provide Infrastructure-id: ocid
1.exadatainfrastructure.oc1.ap-hyderabad-1.abuhsjlrp2vzzenmqmctqciwro6euhhsmlrew
iiemiktov5xyfsu5hiufjsq.",
    "shape" : "ExadataCC.Half3.200",
    "timeZone" : "UTC"
  },
  "definedTags" : {
    "Oracle-Tags" : {
      "CreatedBy" : "test-user@example.com",
      "CreatedOn" : "2020-05-28T00:23:18.291Z"
    }
  },
  "eventID" : "cde92d45-a06b-4b69-a125-6005dd8c2f0c",
  "extensions" : {
    "compartmentId" : "ocidl.compartment.oc1..aaaaaaaayrygl4guhpl05rtiumx3eh4mk7
grrkrqspzaltmvmvbxecnbvhkrga"
  }
}

```

Storage Expansion Event Types

Friendly Name	Event Type
Exadata Infrastructure - Add Storage Capacity Begin	com.oraclecloud.databaseservice.addstoragecapacityexadatainfrastructure.begin
Exadata Infrastructure - Add Storage Capacity End	com.oraclecloud.databaseservice.addstoragecapacityexadatainfrastructure.end

Storage Expansion Events Examples

This is a reference event for Exadata Infrastructure - Add Storage Capacity Begin

```

"exampleEvent": {
  "cloudEventsVersion": "0.1",
  "eventID": "60600c06-d6a7-4e85-b56a-1de3e6042f57",
  "eventType": "com.oraclecloud.databaseservice.addstoragecapacityexadatainfrastructure.begin",
  "source": "databaseservice",
  "eventTypeVersion": "1.0",
  "eventTime": "2019-08-29T21:16:04.000Z",
  "contentType": "application/json",
  "extensions": {
    "compartmentId": "ocidl.compartment.oc1..unique_ID"
  },
  "data": {
    "compartmentId": "ocidl.compartment.oc1..unique_ID",
    "compartmentName": "example_name",
    "resourceName": "my_exadata_infra",
    "resourceId": "ExadataInfra-unique_ID",
    "availabilityDomain": "all",
    "freeFormTags": {},
    "definedTags": {},
    "additionalDetails": {
      "id": "ocidl.id.oc1..unique_ID",
      "lifecycleState": "AVAILABLE",
      "timeCreated": "2019-08-29T12:00:00.000Z",
      "timeUpdated": "2019-08-29T12:30:00.000Z",
      "lifecycleDetails": "detail message",
      "shape": "ExadataCC.X8",
      "timeZone": "US/Pacific",
      "displayName": "testDisplayName"
    }
  }
}

```



```

    }
  }
}

```

This is a reference event for Exadata Infrastructure - Add Storage Capacity End

```

"exampleEvent": {
  "cloudEventsVersion": "0.1",
  "eventID": "60600c06-d6a7-4e85-b56a-1de3e6042f57",
  "eventType": "com.oraclecloud.databaseservice.addstoragecapacityexadatainfrastr
  ructure.end",
  "source": "databaseservice",
  "eventTypeVersion": "1.0",
  "eventTime": "2019-08-29T21:16:04.000Z",
  "contentType": "application/json",
  "extensions": {
    "compartmentId": "ocidl.compartment.oc1..unique_ID"
  },
  "data": {
    "compartmentId": "ocidl.compartment.oc1..unique_ID",
    "compartmentName": "example_name",
    "resourceName": "my_exadata_infra",
    "resourceId": "ExadataInfra-unique_ID",
    "availabilityDomain": "all",
    "freeFormTags": {},
    "definedTags": {},
    "additionalDetails": {
      "id": "ocidl.id.oc1...unique_ID",
      "lifecycleState": "AVAILABLE",
      "timeCreated": "2019-08-29T12:00:00.000Z",
      "timeUpdated": "2019-08-29T12:30:00.000Z",
      "lifecycleDetails": "detail message",
      "shape": "ExadataCC.X8",
      "timeZone": "US/Pacific",
      "displayName": "testDisplayName"
    }
  }
}
}

```