



# Exadata Database Service

## User-Managed Maintenance Tasks

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SENIOR TECHNICAL PRODUCT MANAGER  
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Customer Responsibility

# Exadata Database Service

## Managing Maintenance Updates



oracle.com is now full screen

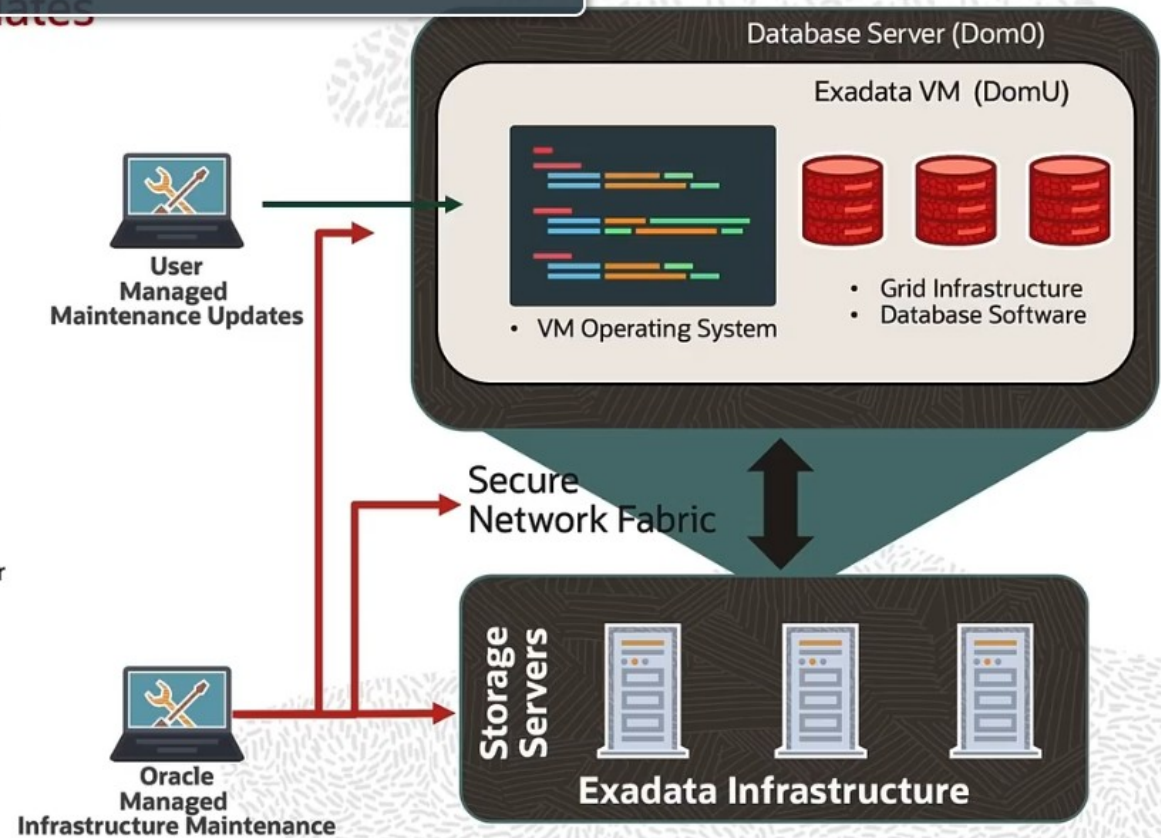
Exit Full Screen (Esc)

### ▪ User-Managed Maintenance Updates

- Patch Database Home Software
- Patch Oracle Grid Infrastructure (GI)
- Update Operating System of the VM

### ▪ Oracle-Managed Infrastructure Maintenance Updates

- Apply Quarterly Infrastructure Updates to:
  - Physical Compute and root VM on Database Server
  - Exadata Storage Servers
  - Internal Network Switches
  - Power Distribution Units (PDU)
  - ILOM Interfaces
  - All Firmware & BIOS



# Exadata Database Service

## Prerequisites & Best Practices for Applying Updates & Patches

- Back up your databases before you apply any updates to the DB Home
- Move the database to a new DB Home if possible instead of updating the DB Home
- Update Grid Infrastructure before updating or creating a DB Home
- Before you apply any update, run the precheck operation
- Ensure all servers and database instances are up and running
- Ensure /u01 (**GI Home directory**) has 15GB of free space before a Grid Infrastructure update
- Ensure /u02 (**DB Home directory**) has 15GB free space before a DB Home update
- Use the OCI Management Interfaces to perform the update & patching operations



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# Exadata Database Service

**Finding Available Updates & Patches,  
& Viewing Update History**

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# Find Current Patch Levels

Overview • Oracle Exadata Database Service on Dedicated Infrastructure • Exadata VM Clusters • Exadata VM Cluster Details

## MyDemoVMCluster

Scale VM cluster Add SSH keys Update license type Enable IORM More actions

### VM Cluster Information

#### General information

Compartment: ocidbaasprnt (root)/bednar/MyDemo  
Availability domain: vPty/EU-FRANKFURT-1-AD-1  
OCID: ...wHnra [Show](#) [Copy](#)  
Created: Wed, Sep 27, 2023, 19:23:39 UTC  
Cluster name: MyDemoClus  
Time zone: UTC  
License type: Bring Your Own License (BYOL)  
Lifecycle state: Available  
IORM status: Disabled  
Diagnostics collection: Disabled [Edit](#)

#### Resource allocation

VM Count: 2  
Enabled OCPUs: 8  
Memory: 240 GB  
Local storage (vul02) (GB): 480 GB  
Local storage (additional file systems) (GB): 866 GB  
Exadata storage: 2 TB  
Storage for local backups: Not enabled  
Storage for Exadata sparse snapshots: Not enabled

#### Infrastructure

Exadata cloud infrastructure: [MyExadata](#)

### Network

Virtual cloud network: [MyDemoVCN](#)  
Client subnet: private subnet-MyDemoVCN  
Backup subnet: MyPrivateBackup01  
Hostname domain name: sub04142120101... [Show](#) [Copy](#)  
SCAN DNS name: myexademohost-sqwb-scan... [Show](#) [Copy](#)  
SCAN IP address: 10.0.1.148, 10.0.1.49, 10.0.1.146  
Client network security groups: None [Edit](#)  
Backup network security groups: None [Edit](#)  
SCAN listener port: 1521  
Private view: [MyDemoVCN](#)  
Private zone: sub04142120101.mydemovcn.oracleon.com

### Version

Exadata image version: 22.1.13.0.0.230818  
Grid infrastructure version: 19.19.0.0.0  
Grid infrastructure software image: Oracle supplied  
Updates available: 16 [View updates](#)

### Databases

Create database

Name	State	Database unique name	Database version	Data guard role	Created
<a href="#">MyExaDB</a>	Available	MyDemoDB	19.20.0.0.0	---	Mon, May 20, 2024, 17:32:22 UTC
<a href="#">MyRCvCDB</a>	Available	MyDemoRCvBipCDB	19.20.0.0.0	---	Tue, Feb 6, 2024, 18:44:26 UTC
<a href="#">MyCDB02</a>	Available	MyCDB02_MyExaCDB04	19.20.0.0.0	---	Mon, Oct 9, 2023, 05:14:45 UTC

### Resources

Databases (7)  
Database homes (3)  
Virtual IP address (3)  
Virtual Machines (2)  
Metrics  
Work requests (12)

# Find Available Updates & Patches

Overview • Oracle Exadata Database Service on Dedicated Infrastructure • Available VM Clusters • Available VM Cluster Details • Updates

Oracle Exadata Database Service on Dedicated Infrastructure

Announcements

• Exadata Fleet Update orchestrates your software updates across multiple database cloud resources in a single operation. Try out Exadata Fleet Update here

Updates

Exadata VM Cluster: [MyDemoVMCluster](#)

Update History

Scope

Exadata VM Clusters

MyDemoVMCluster

Database Home

My19cDBHome3

### OS updates

Update description	State	Component	Type	Version	Last Successful Precheck	Release date
Virtual Machine OS Update to 23.1.22.0.0.240416.1	Available	Exadata Image	Update	23.1.22.0.0.240416.1	NA	Mon, Apr 29, 2024, 03:21:00 UTC
Virtual Machine OS Update to 23.1.18.0.0.240416.1	Available	Exadata Image	Update	23.1.18.0.0.240416.1	NA	Wed, Apr 24, 2024, 03:36:43 UTC
Virtual Machine OS Update to 23.1.21.0.0.240208	Available	Exadata Image	Update	23.1.21.0.0.240208	NA	Mon, Apr 15, 2024, 03:49:28 UTC
Virtual Machine OS Update to 23.1.13.0.0.240322	Available	Exadata Image	Update	23.1.13.0.0.240322	NA	Tue, Apr 2, 2024, 01:53:02 UTC
Virtual Machine OS Update to 23.1.11.0.0.240208	Available	Exadata Image	Update	23.1.11.0.0.240208	NA	Mon, Feb 13, 2024, 10:28:54 UTC
Virtual Machine OS Update to 23.1.28.0.0.240201	Available	Exadata Image	Update	23.1.28.0.0.240201	NA	Wed, Feb 14, 2024, 00:48:48 UTC
Virtual Machine OS Update to 23.1.18.0.0.240119	Available	Exadata Image	Update	23.1.18.0.0.240119	NA	Mon, Jan 29, 2024, 05:27:41 UTC
Virtual Machine OS Update to 23.1.18.0.0.240119	Available	Exadata Image	Update	23.1.18.0.0.240119	NA	Mon, Jan 29, 2024, 05:29:19 UTC
Virtual Machine OS Update to 23.1.8.0.0.231215.1	Available	Exadata Image	Update	23.1.8.0.0.231215.1	NA	Thu, Jan 4, 2024, 08:20:44 UTC
Virtual Machine OS Update to 23.1.18.0.0.231208	Available	Exadata Image	Update	23.1.18.0.0.231208	NA	Thu, Jan 4, 2024, 08:24:29 UTC

Showing 10 items < 1 of 1 >

### Grid Infrastructure updates

Oracle Grid Infrastructure software images

Custom Grid Infrastructure software images

Update description	State	Component	Type	Version	Last Successful Precheck	Release date
22.4 Grid Infrastructure upgrade	Available	Grid Infrastructure	Upgrade	22.4.0.24.06	NA	Wed, May 15, 2024, 01:57:37 UTC
Apr 2024 19c On System patch	Available	Grid Infrastructure	Patch	19.23.0.0.0	NA	Sun, Apr 28, 2024, 07:30:04 UTC
Jan 2024 19c On System patch	Available	Grid Infrastructure	Patch	19.22.0.0.0	NA	Mon, Jan 29, 2024, 12:08:00 UTC
Grid Infrastructure Release Update: 19.21.0.0.0 (Oct 2023)	Available	Grid Infrastructure	Patch	19.21.0.0.0	NA	Mon, Oct 23, 2023, 08:29:04 UTC
Jul 2023 19c On System patch	Available	Grid Infrastructure	Patch	19.20.0.0.0	NA	Tue, Jul 25, 2023, 03:58:58 UTC

Showing 5 items < 1 of 1 >

### Database Home: [My19cDBHome3](#)

Oracle Database Software Images

Custom Database Software Images

Patch description	State	Version	Release date
Apr 2024 19c Database patch	Available	19.23.0.0.0	Sun, Apr 28, 2024, 07:30:03 UTC
Jan 2024 19c Database patch	Available	19.22.0.0.0	Mon, Jan 29, 2024, 12:05:02 UTC
Oct 2023 19c Database patch	Available	19.21.0.0.0	Mon, Oct 23, 2023, 08:19:22 UTC

Showing 3 items < 1 of 1 >

# View Update & Patch History

Overview • Oracle Base Database • Exadata VM Clusters • Exadata VM Cluster Details • Update History

Oracle Base Database

## Update History

Updates

**Update History**

Scope

Exadata VM Clusters

MyExaVMCluster

Database Home

My19Cdbhome

Exadata VM Cluster: [MyExaVMCluster](#)

Description	State	Version	Component	Operation Type	Started	Ended
Virtual Machine OS Update to 22.1.8.0.0.230211	Applied	22.1.8.0.0.230211	Exadata Image	Rolling Apply	Tue, Mar 7, 2023, 15:58:17 UTC	Tue, Mar 7, 2023, 17:02:39 UTC
Virtual Machine OS Update to 22.1.8.0.0.230211	Precheck Passed	22.1.8.0.0.230211	Exadata Image	Precheck	Tue, Mar 7, 2023, 15:30:04 UTC	Tue, Mar 7, 2023, 15:47:15 UTC
Jan 2023 19c Db System patch	Applied	19.18.0.0.0	Grid Infrastructure	Rolling Apply	Mon, Mar 6, 2023, 21:38:55 UTC	Mon, Mar 6, 2023, 22:23:24 UTC
Jan 2023 19c Db System patch	Precheck Passed	19.18.0.0.0	Grid Infrastructure	Precheck	Mon, Mar 6, 2023, 19:30:01 UTC	Mon, Mar 6, 2023, 19:37:10 UTC

Showing 4 Items < 1 of 1 >

Database Home: [My19Cdbhome](#)

Name	State	Version	Operation type	Started	Ended
Jan 2023 19c Database patch	Applied	19.18.0.0.0	Apply	Tue, Mar 7, 2023, 03:11:30 UTC	Tue, Mar 7, 2023, 03:41:12 UTC
Jan 2023 19c Database patch	Precheck Passed	19.18.0.0.0	Precheck	Tue, Mar 7, 2023, 02:03:00 UTC	Tue, Mar 7, 2023, 02:11:10 UTC

Showing 2 Items < 1 of 1 >



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# Exadata Database Service

## Guest VM OS Image Updates

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8:03 / 12:25





# Exadata VM OS Image Update

## Exadata Image contains the virtual machine OS (Oracle Linux) updates

- Provides **precheck** function to ensure virtual machine update readiness
- Option to rollback in case any issues are encountered during the update process
- Minor & Major version updates to OS image version can be done from the UI and REST APIs
- To maintain secure systems, only the 4 latest Exadata Image minor version updates are available in the console

# Exadata VM OS Image Update

OS updates						
Update description	State	Component	Type	Version	Last Successful Precheck	Release date
Virtual Machine OS Update to 22.1.22.0.0.240410.1	Available	Exadata Image	Update	22.1.22.0.0.240410.1	NA	Mon, Apr 29, 2024, 03:21:50 UTC
Virtual Machine OS Update to 23.1.13.0.0.240410.1	Available	Exadata Image	Update	23.1.13.0.0.240410.1	NA	Wed, Apr 24, 2024, 03:38:43 UTC
Virtual Machine OS Update to 22.1.21.0.0.240308	Available	Exadata Image	Update	22.1.21.0.0.240308	NA	Mon, Apr 15, 2024, 03:49:28 UTC
Virtual Machine OS Update to 23.1.12.0.0.240322	Available	Exadata Image	Update	23.1.12.0.0.240322	NA	Tue, Apr 2, 2024, 01:53:02 UTC
Virtual Machine OS Update to 23.1.11.0.0.240208	Available	Exadata Image	Update	23.1.11.0.0.240208	NA	Mon, Feb 19, 2024, 10:26:04 UTC
Virtual Machine OS Update to 22.1.20.0.0.240201	Available	Exadata Image	Update	22.1.20.0.0.240201	NA	Wed, Feb 14, 2024, 00:46:48 UTC
Virtual Machine OS Update to 23.1.10.0.0.240119	Available	Exadata Image	Update	23.1.10.0.0.240119	NA	Mon, Jan 29, 2024, 05:27:41 UTC
Virtual Machine OS Update to 22.1.19.0.0.240119	Available	Exadata Image	Update	22.1.19.0.0.240119	NA	Mon, Jan 29, 2024, 05:20:15 UTC
Virtual Machine OS Update to 23.1.9.0.0.231215.1	Available	Exadata Image	Update	23.1.9.0.0.231215.1	NA	Thu, Jan 4, 2024, 08:26:44 UTC
Virtual Machine OS Update to 22.1.18.0.0.231208	Available	Exadata Image	Update	22.1.18.0.0.231208	NA	Thu, Jan 4, 2024, 08:24:20 UTC
Showing 10 items < 1 of 1 >						

[Run Precheck](#)  
[Apply Exadata OS Image Update](#)  
[Copy OCID](#)

## Update Update Exadata VM OS Image:

- Update OS Image using OCI Console or REST APIs
- Choose desired OS Image version
- Run **Precheck for update** prior to maintenance window to validate system readiness

### Apply Exadata OS Image Update

Exadata OS image updates are applied to the VM cluster's virtual machines in a rolling manner. Databases remain available during the update operation.

Do you want to update the OS image of VM cluster **MyDemoVMCluster** from version 22.1.13.0.0.230818 to version 22.1.23.0.0.240501.1?

**i** Last successful precheck was run at Thu, May 23, 2024, 08:31:13 UTC.

[Apply Exadata Image Update](#) [Cancel](#)

# Exadata Database Service

## Patch Grid Infrastructure Software

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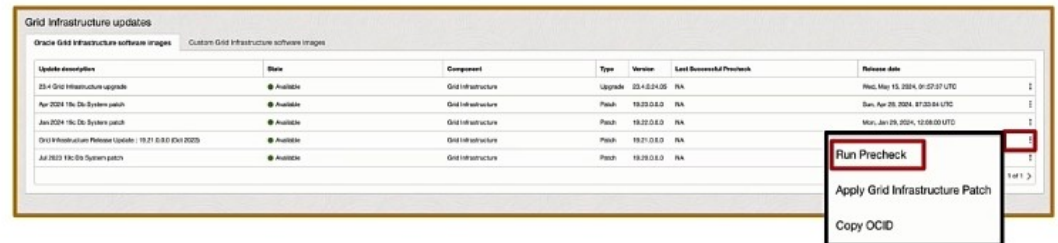




# Grid Infrastructure (GI) Patching

## Update Grid Infrastructure (GI):

- Update GI using OCI Console or REST APIs
- Choose desired Grid Infrastructure version
- Run **Precheck for update** prior to maintenance window to validate system readiness



## GI Update is performed in a rolling fashion

- Database instances in the virtual machine undergoing a GI update will not be available









