



Exadata Cloud at Customer Academy 2.0

Overview and My Oracle Support best practices

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Nossos Valores

Integridade

Compliance

Trabalho em Equipe

Satisfação do Cliente

Qualidade

Ética

Inovação

Respeito Mútuo

Justiça

Comunicação

Como empresa líder em tecnologia, abraçamos a **diversidade** em todas as suas formas. Acreditamos realmente que a **inovação** começa com a **inclusão**. E isso só pode ser alcançado com a cooperação de nossos **parceiros**. Afirmamos nosso **compromisso** em manter um **ambiente respeitoso** e **livre de discriminação** e esperamos isso dos nossos **parceiros de negócios**.

A Oracle espera que seus **parceiros** conduzam os negócios de forma **justa** e **ética**, para cumprir as leis anticorrupção em todo o mundo, para cooperar com os pedidos de informação da Oracle e evitar envolver-se em qualquer atividade que envolva até mesmo a aparência de impropriedade.

É vital que os nossos parceiros sejam aderentes aos valores do **Código de Ética e Conduta Empresarial da Oracle**, que baseia-se e implementa os valores que são essenciais para o nosso sucesso como empresa. Nossos valores são a base de tudo o que fazemos e todos nós devemos viver esses valores todos os dias.



Utilize o QR code para acessar o Código de Ética e Conduta Empresarial da Oracle.





Agenda

Overview

Exadata Features

ExaC@C Services Patching

ExaCS Security and MAA

MOS Best Practices for ExaC@C

Oracle CSM



Download me Here



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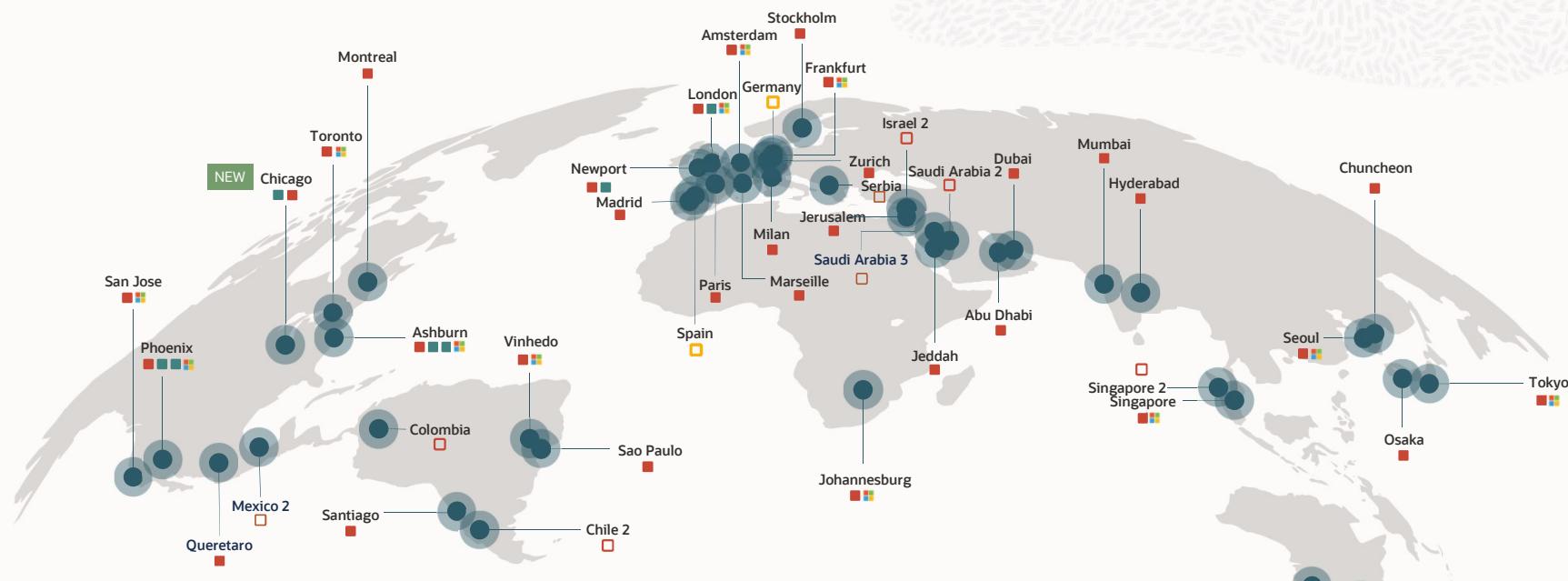
OCI Cloud Region Map

Current Oracle Datacenter around the World

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Oracle Cloud Infrastructure Global Locations



April 2023

**41 regions; 10 more planned
12 Azure Interconnect Regions**

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- Commercial
- Commercial Planned
- Sovereign Planned
- Government
- Microsoft Interconnect Azure



Exadata Cloud at Customer

Overview

Compatible Exadata On-Premises, Hybrid Cloud and Public Cloud

On-Premises

Exadata
Database Machine



Customer Data Center
Purchased
Customer Managed

Hybrid Cloud

Exadata
Cloud@Customer



Customer Data Center
Cloud Subscription
Oracle Managed

Public Cloud

Exadata
Cloud Infrastructure



Oracle Cloud
Cloud Subscription
Oracle Managed

39% of Fortune Global 100 have adopted Exadata Cloud

Exadata Cloud | OCI Console



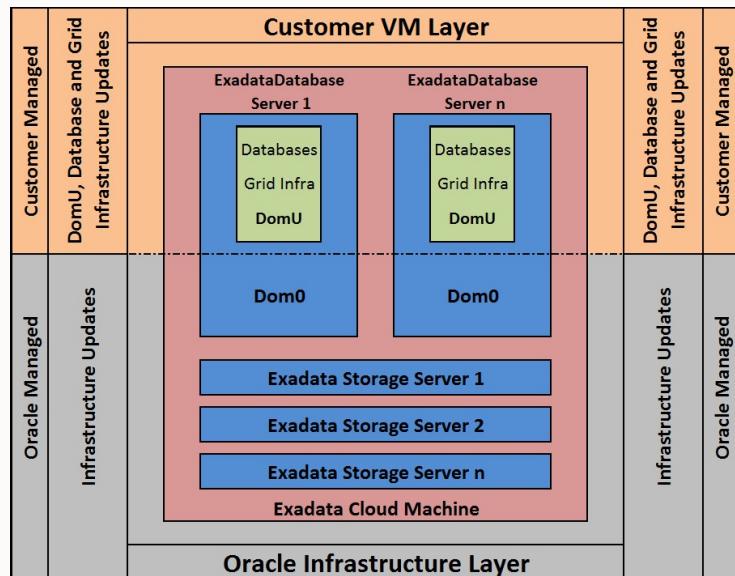
Oracle Database

| | | |
|--|---|---|
| Overview | Exadata Cloud@Customer | Database Backups |
| Autonomous Database | External Database | GoldenGate |
| Autonomous Data Warehouse | Data Safe - Database Security | Operator Access Control |
| Autonomous JSON Database | Overview | |
| Autonomous Transaction Processing | Security Assessment | |
| Autonomous Dedicated Infrastructure | User Assessment | |
| | Data Discovery | |
| Oracle Base Database (VM, BM) | Data Masking | |
| | Activity Auditing | |
| Exadata on Oracle Public Cloud | | |



Exadata Cloud at Customer - Dom0 and DomU

Roles vs Responsibilities physical and virtual environments



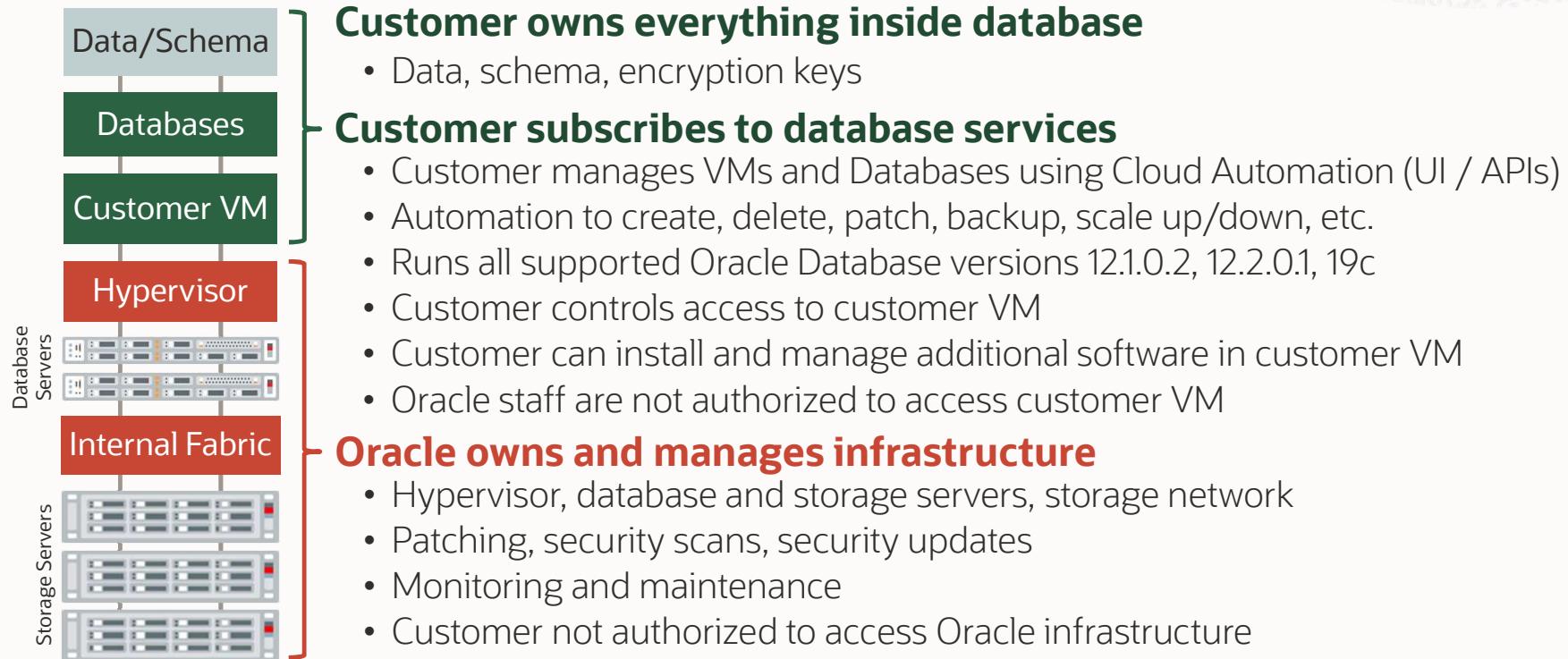
About *Dom0* Oracle Responsibilities

- Oracle Cloud Ops manage Exadata infrastructure (hardware, system software) & hypervisor (dom0);
- Oracle Support is responsible for update any version;
- For ExaCC gen1, Oracle Support open an SR and request customer formal approval;
- For Exacc Gen2, the customer is responsible for scheduling Dom0 maintenance and must provide at least 4 dates per year;

About *DomU* Customer Responsibilities

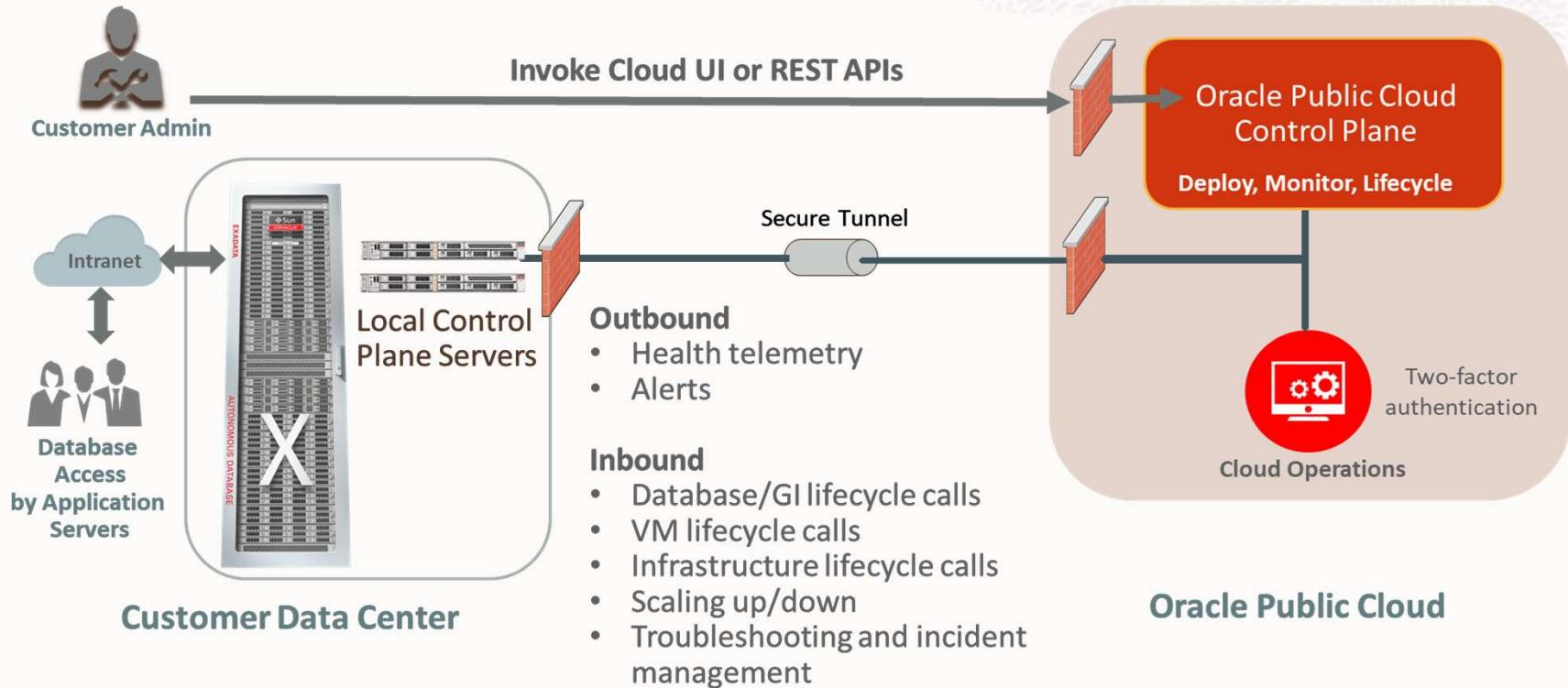
- Adjust license (BYOL or License included)
- Scale UP/Down resources
- For Exadata C@C Gen 1 DomU uses Xen for virtualization
- For Exadata Cloud at Customer Gen2 DomU uses KVM
- Customer have root access to domU;
- The customer is responsible for any update or configuration change on DomU;

Simple Cloud Management Model in Public Cloud



Exadata Cloud at Customer Control Plane

Management console overview and security diagram



Exadata Cloud Infrastructure Architecture

Exadata Components in the Cloud

- Database and Storage Servers connected by secure fabric
- Horizontally scalable database and storage
- Infrastructure managed by Oracle

Cloud Controls and Networking

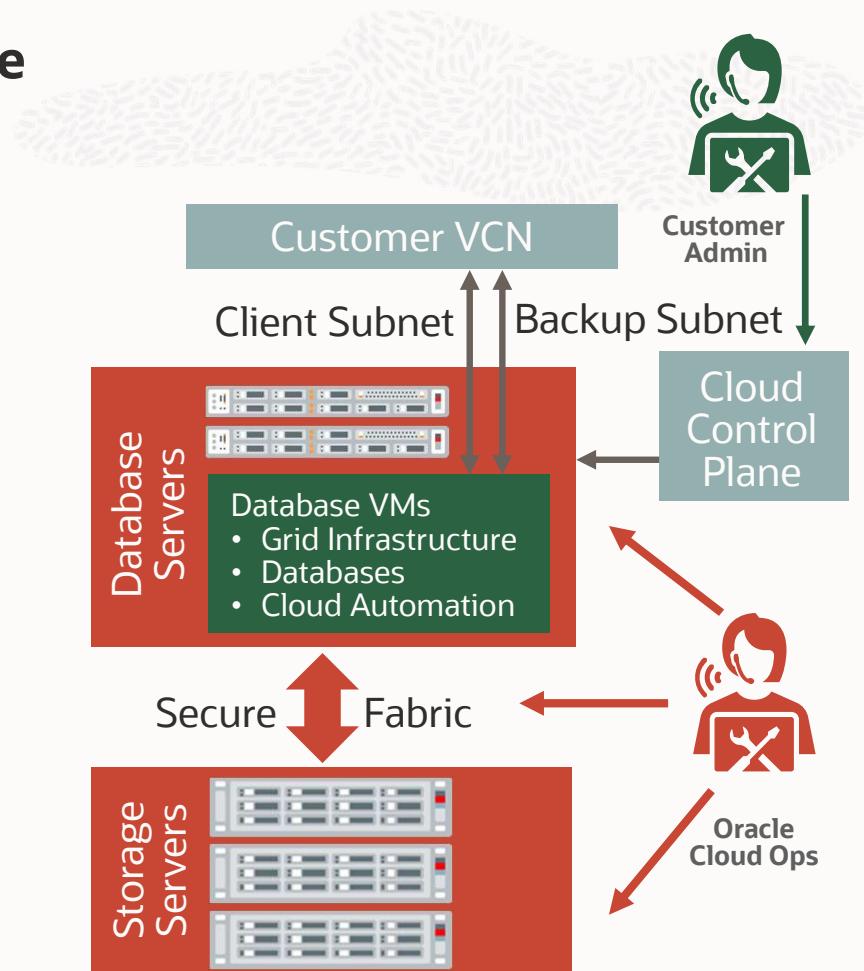
- Identity Management and policies to control access
- Virtual Cloud Network (VCN)
 - Software defined networks and isolation
- Compartments to organize cloud resources

Secure Isolation

- Databases run in secure virtual machines isolated from underlying infrastructure

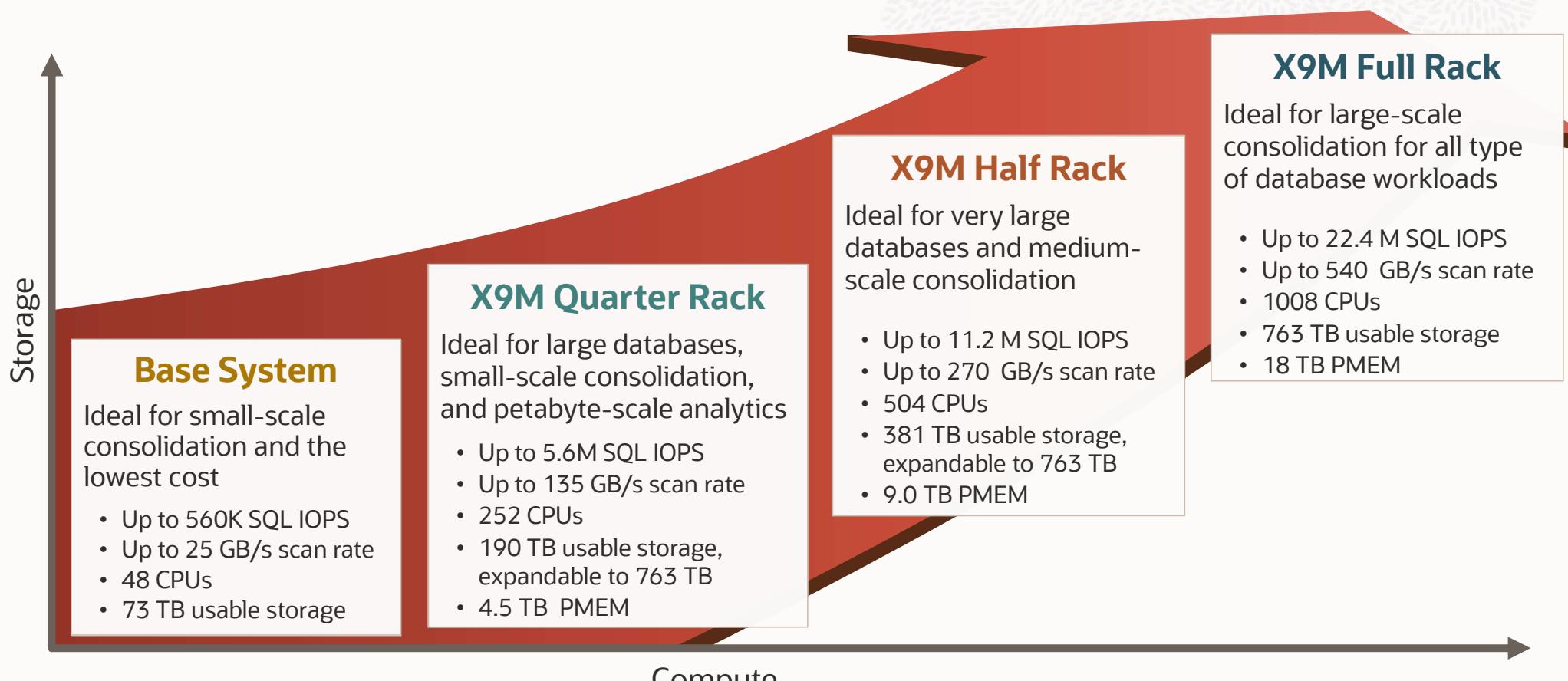
Control Plane

- Controls and manages Exadata infrastructure



Exadata Cloud X9M Flexible Shapes

Available in high-performance, cost-effective shapes to match enterprise needs



Fully-Elastic Configurations

Elastic compute and storage provisioning and expansion

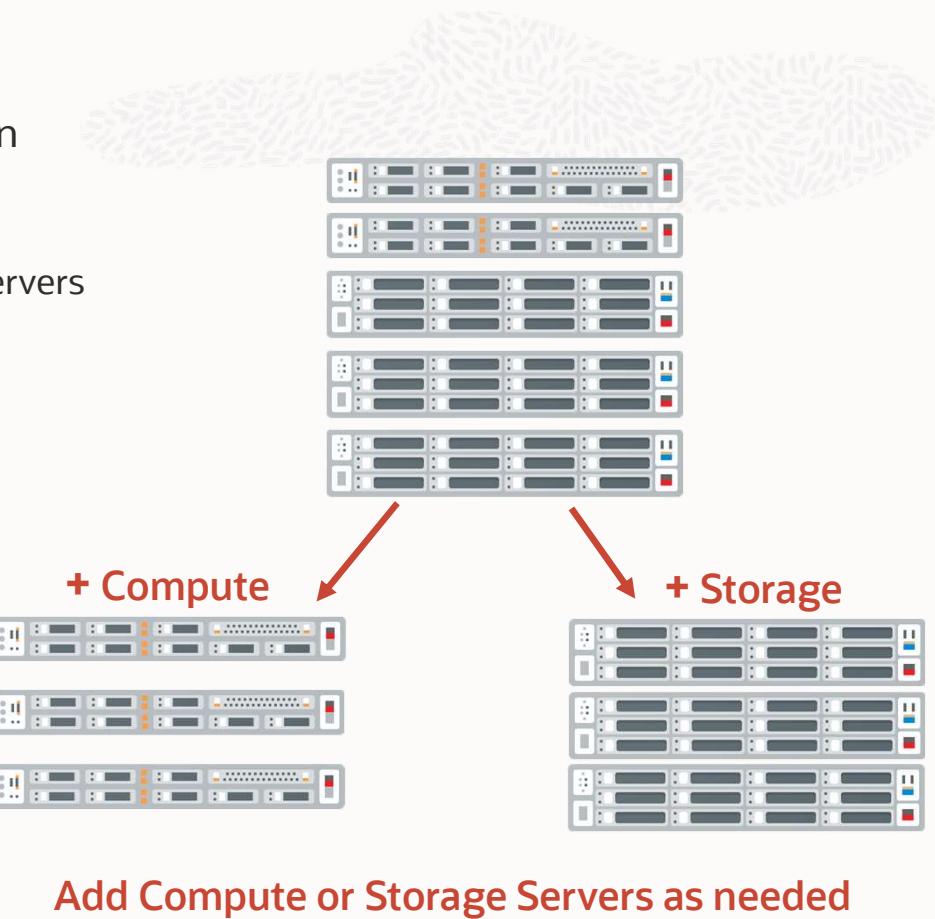
- Properly size hardware configurations to meet workload requirements during or post deployment
- Minimum configuration of 2 Database Servers, 3 Storage Servers
- Dedicated to you – no noisy or malicious neighbors

Scale-Out X9M Database Servers

- 126 AMD EPYC “Milan” Processor cores (Available to VM)
- 1,390 GB Memory
- 50 Gbps Network (Shared for Client/Backup)

Scale-Out Intelligent X9M Storage Servers

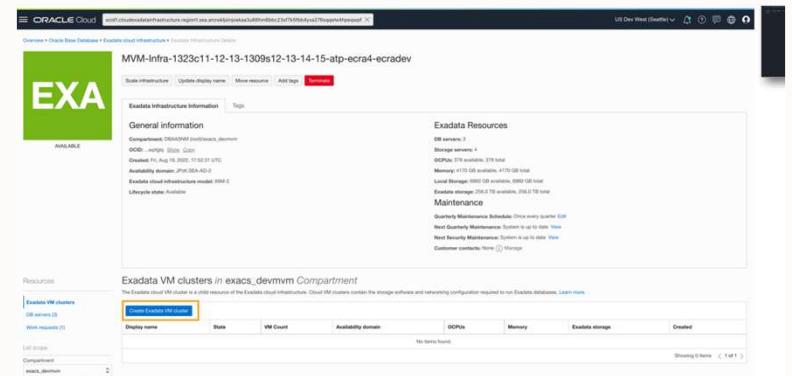
- 48 Intel Xeon “Ice Lake” Processor cores
- 1.5 TB PMem
- 25.6 TB NVMe Flash
- 63.6 TB HDD Usable Storage



Exadata Cloud Sercives Multi VM's Now is Possible!

The create VM Cluster workflow now includes selecting the DB servers on which customers want to host the VMs for the new cluster. By default, the create VM Cluster flow selects all the DB Servers in the infrastructure. Customers can change this selection to pick a subset of DB Servers to host VMs for the cluster

Customers can specify the placement of each VM in the cluster by selecting the DB server to host the VM for this cluster. All DB Servers part of the Exadata Infrastructure are listed and available for selection to place a VM.



Once the DB servers to host VMs for the cluster are selected, customers can specify the allocation for OCPU, memory, and local file system storage resources per VM using the presented controls. The maximum resources available for assignment per VM depend on the selected DB servers that will host these VMs for the cluster.

Exadata Cloud Features

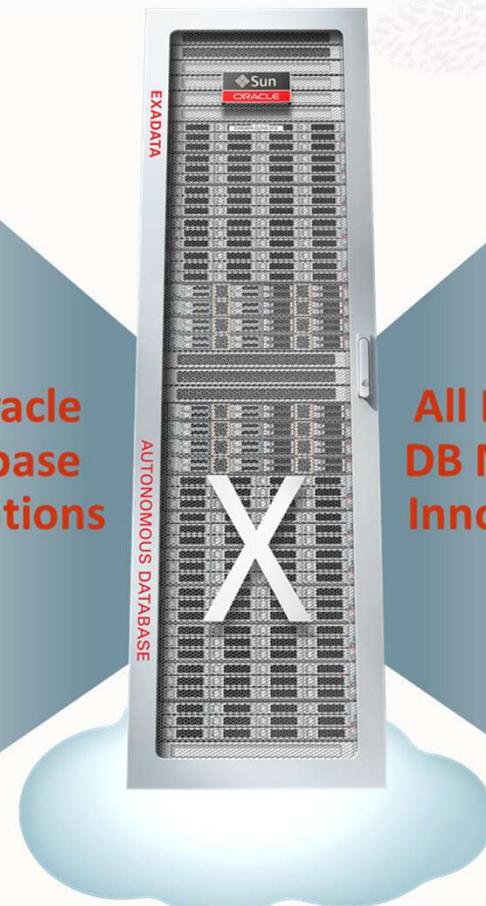
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Exadata Cloud Most Powerful Database + Platform

| | |
|--|---|
| | Multitenant |
| | In-Memory DB |
| | Real Application Clusters |
| | Active Data Guard |
| | Partitioning |
| | Advanced Compression |
| | Advanced Security, Label Security, DB Vault |
| | Real Application Testing |
| | Advanced Analytics, Spatial and Graph |
| | Management Packs for Oracle Database |

All Oracle Database Innovations



All Exadata DB Machine Innovations

| | |
|--|-----------------------------------|
| | Offload SQL to Storage |
| | InfiniBand Fabric |
| | Smart Flash Cache, Log |
| | Storage Indexes |
| | Columnar Flash Cache |
| | Hybrid Columnar Compression |
| | I/O Resource Management |
| | Network Resource Management |
| | In-Memory Fault Tolerance |
| | Exafusion Direct-to-Wire Protocol |

Fastest Cloud In Memory, Smart Scan and HCC

Unique: Smart Scan (SQL Offload)

- Data-intensive processing* runs in Exadata Storage, bypassing network bottlenecks and freeing up DB CPUs

Unique: Tiered Flash Cache

- Active data is automatically cached on PCI NVMe Flash, inactive data on low cost, high-capacity disks

Unique: Storage Indexes

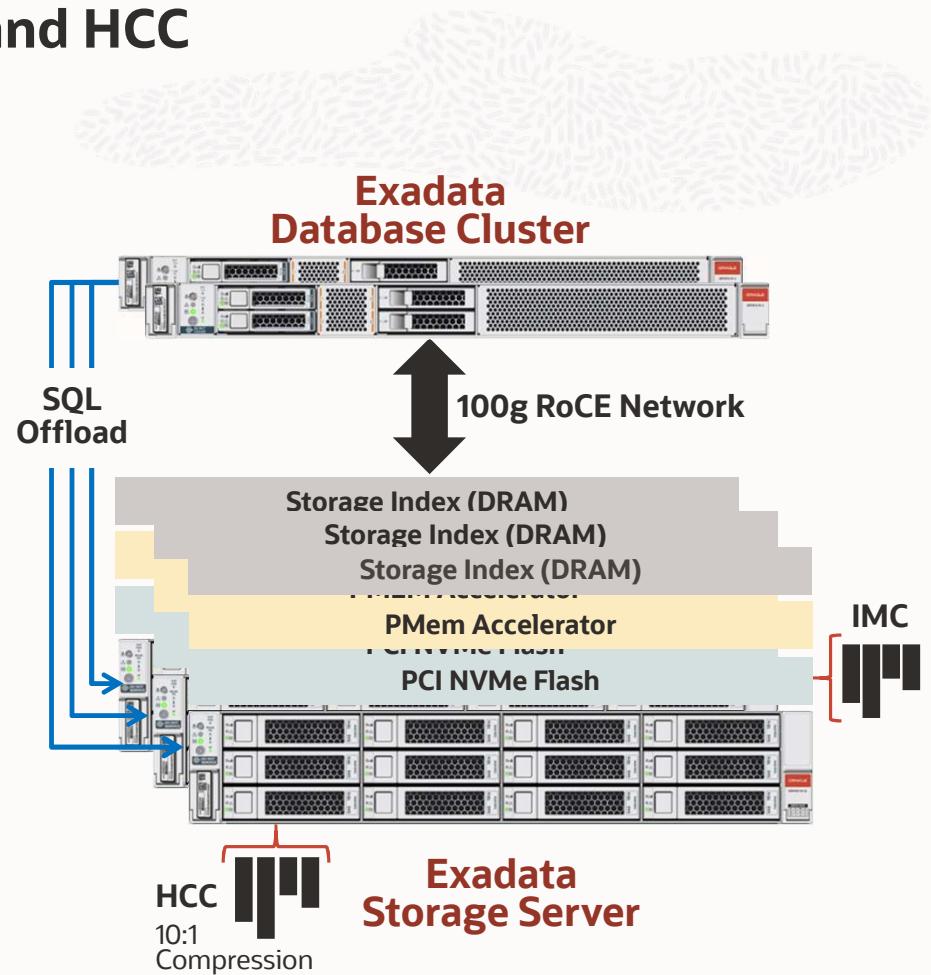
- Eliminates I/O not relevant to a particular query

Unique: Hybrid Columnar Compression (HCC)

- Compressed, columnar format in storage, saving space, reducing I/O, speeding analytic queries

Unique: In-Memory Columnar (IMC)

- Extends In-Memory database performance to higher capacity Flash memory in storage



*Includes long-running SQL queries, backups, decryption, aggregation, data mining



Fastest Cloud with RDMA for OLTP

Unique: Innovative, modern technologies tuned for high-volume, low-latency random I/O

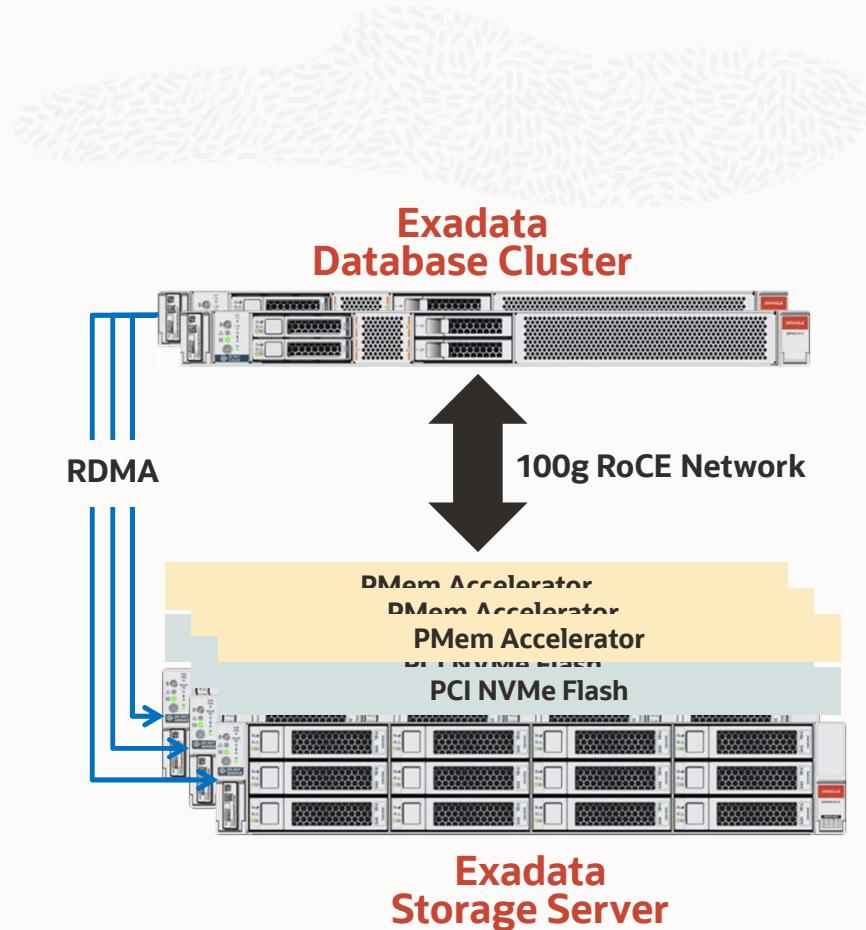
- 100 Gb/s RDMA over Converged Ethernet (RoCE) network fabric
- Persistent Memory (PMem) Data and Commit Accelerators
- Scale-out Database & Storage servers
- Automatic data tiering between PMem, Flash and Disk

Unique: Elimination of DB cluster coordination bottlenecks

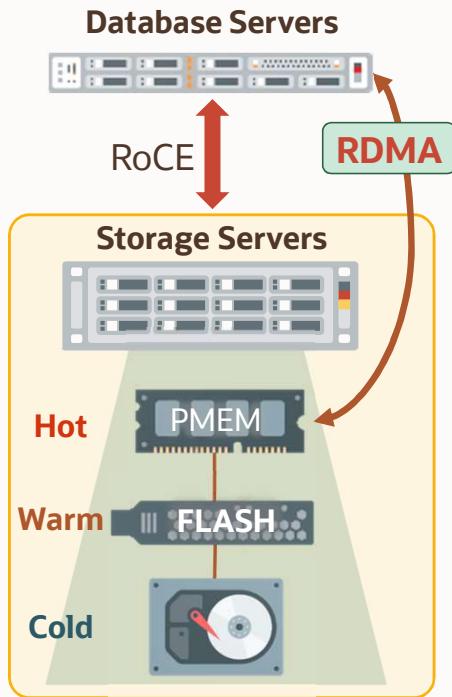
- Direct-to-Wire Protocol = 3x faster inter-node OLTP messaging
- Smart Fusion Block Transfer eliminates inter-node log write
- RDMA protocol coordinates transactions between nodes

Unique: Instant detection, handling of failed/failing components

- Automatic discovery of server failures without timeout
- Sub-second redirection of I/Os around sick devices



Exadata Architecture – Scale out design with persistent memory



Scale-out system architecture and software

- Oracle RAC across multiple database servers for scaling and high availability
- Smart Scan offload of SQL to parallel intelligent storage servers
- Speeds up queries and scans with local access to data

Database uses RDMA instead of I/O to read PMEM in Smart Storage

- Bypasses network and I/O software, interrupts, context switches
- Hottest data transparently managed in PMEM
- Automatic redundancy across multiple storage servers
- Speeds up both database reads and commits

Results - 19µs IO latency from Database to PMEM in Storage

- 10X faster than flash for OLTP

World's Only Shared Persistent Memory Optimized for Database

Cloud Automation for Common Lifecycle Tasks

Oracle Cloud Web base UI, REST APIs, SDK, CLI, Terraform

- Scale OCPUs
- Create Database Homes and Databases
- Schedule Infrastructure Maintenance
- Update Operating System, Grid Infrastructure, and Databases
- Backup and recovery
- Enable Data Guard

Create Database

Database name: XBMDB1

Database version: 19c

PDB name: Optional

Database Home:
 Select an existing Database Home Create a new Database Home
This DB system has no Database Homes for your selected database version. A new Database Home will be created.

Database Home display name: XBMDBHome1

Create administrator credentials

[Create Database](#) [Cancel](#)

Scale VM Cluster

Configure the VM cluster

Specify OCPU count per virtual machine: 10

Requested OCPU count for the Exadata VM cluster: 40

Current allocation: 10. Minimum allocation: 0. Available OCPUs (including the current allocation): 30

Current Exadata storage: 150.528 TB

[Update](#) [Cancel](#)

Create Backup

Name:

If you previously used RMAN or dbcli to configure backups and then you switch to using the Console or the API for backups, a new backup configuration is created and associated with your database. This means that you can no longer rely on your previously configured unmanaged backups to work.

[Create Backup](#) [Cancel](#)

Enable Data Guard

Data Guard association details

Protection mode: Maximum Performance

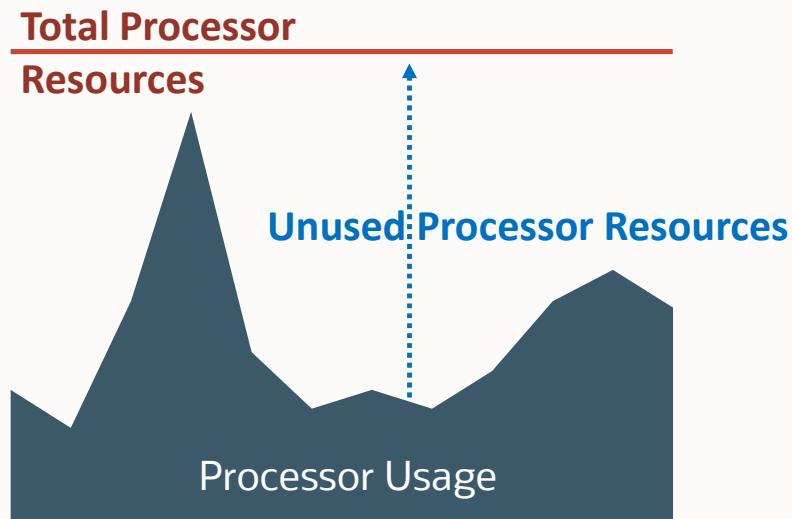
Transport type: Read-Only
Sync

Select Peer VM Cluster

Peer region: Read-Only
US East (Ashburn)

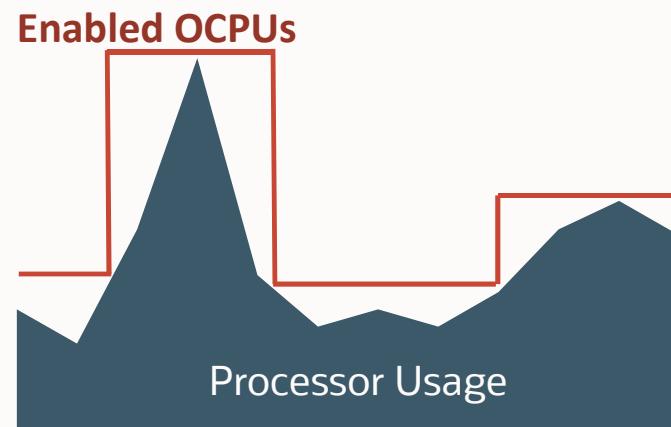


Elastic OCPU Scaling - Pay Only for What You Use



On-Premises - Static

Purchase server processors and software licenses for **highest projected peak load**



Cloud - Elastic

Adjust enabled OCPUs to match **actual workload** via APIs and web UI - OCPUs are charged per second



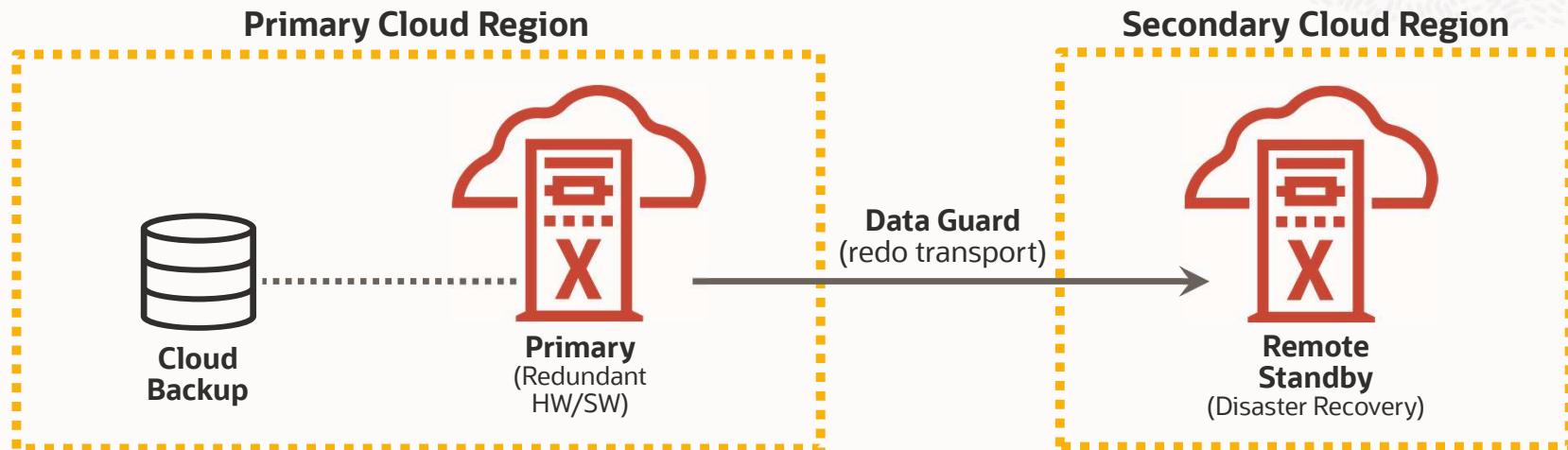
Exadata Cloud MAA Architecture

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Oracle Maximum Availability Architecture (MAA)

High-Availability Blueprint in the Cloud



Key Cloud MAA Technologies

Continuous availability



Application Continuity



Global Data Services

Data protection



Flashback



RMAN

Active replication



Active Data Guard



GoldenGate

Scale out



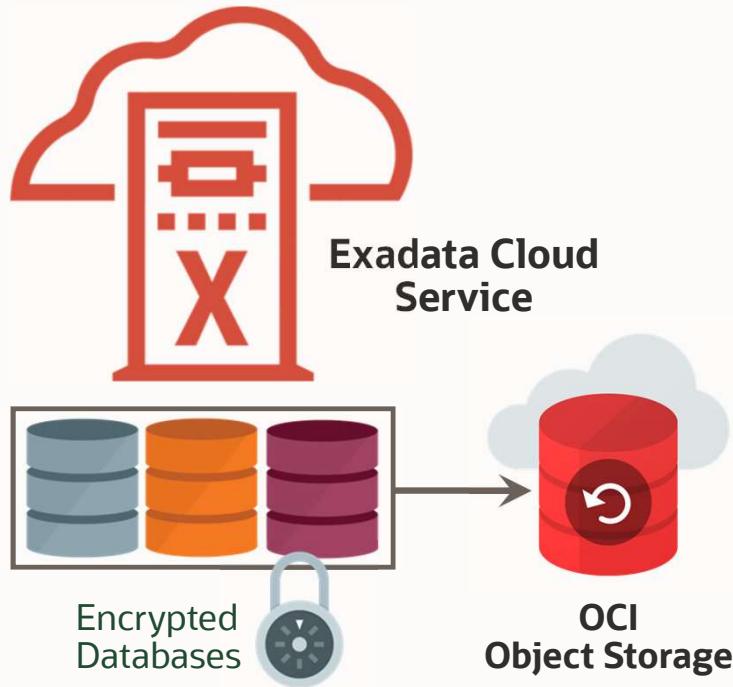
RAC



ASM

Sharding

Database Backup



The screenshot shows two overlapping configuration panels. The top panel is titled 'Configure Automatic Backups' and includes a checkbox for 'Enable automatic backup' and a note about prerequisites for backing up to Oracle Cloud Infrastructure Object Storage. The bottom panel is titled 'Restore Database' and offers three options: 'Restore to the latest', 'Restore to the timestamp', and 'Restore to System Change Number (SCN)'. Each option has a detailed description below it. At the bottom of both panels are 'Save Changes' and 'Cancel' buttons.

Backup and restore with Object Storage

- Schedule automatic backups and retention policy
- Create on-demand backups
- Create databases from backup
- Receive notifications for successful and failed backups
- Restore databases to the latest backup or point-in-time



Patching Exadata Cloud

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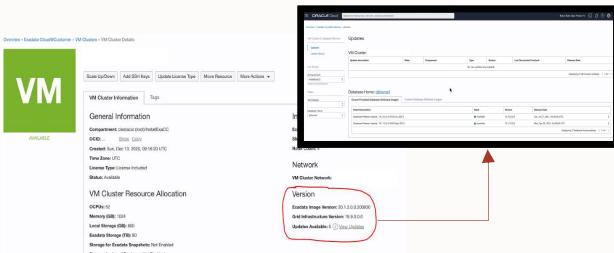
Exadata Cloud at Customer Pathing Overview

Pathing dom0, domU, Tooling, Grid and Oracle home, how and how to do

DOMU - CUSTOMER RESPONSIBILITY

Maintaining a secure Exadata Service instance in the best working order requires you to perform the following tasks regularly:

- Patching Grid Infrastructure.
- Patching Database software.
- Patching Exadata Software Image (SO).
- Patching Tooling (dbaaScli).
- Patching other components installed on DomU.



DOM0 - ORACLE RESPONSIBILITY

Oracle manages quarterly infrastructure maintenance updates of all other infrastructure components:

- Patching Database Servers (Dom0).
- Patching Storage servers.
- Patching Network switches.
- Patching Control Planes.

Quarterly maintenance updates may require a restart of the customer-managed guest virtual servers.

Quarter 1

- JANUARY
- FEBRUARY
- MARCH

Quarter 2

- APRIL
- MAY
- JUNE

Quarter 3

- JULY
- AUGUST
- SEPTEMBER

Quarter 4

- OCTOBER
- NOVEMBER
- DECEMBER

Oracle CSM Roles and Responsibilities

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What is a Cloud Specialist?

A cloud specialist (CSM) is a technical expert to guide customer about best practices

Oracle Cloud Specialist is an Oracle organization dedicated to pursuing customer satisfaction through the best use of our solutions.



Trust Advisor



Adoption



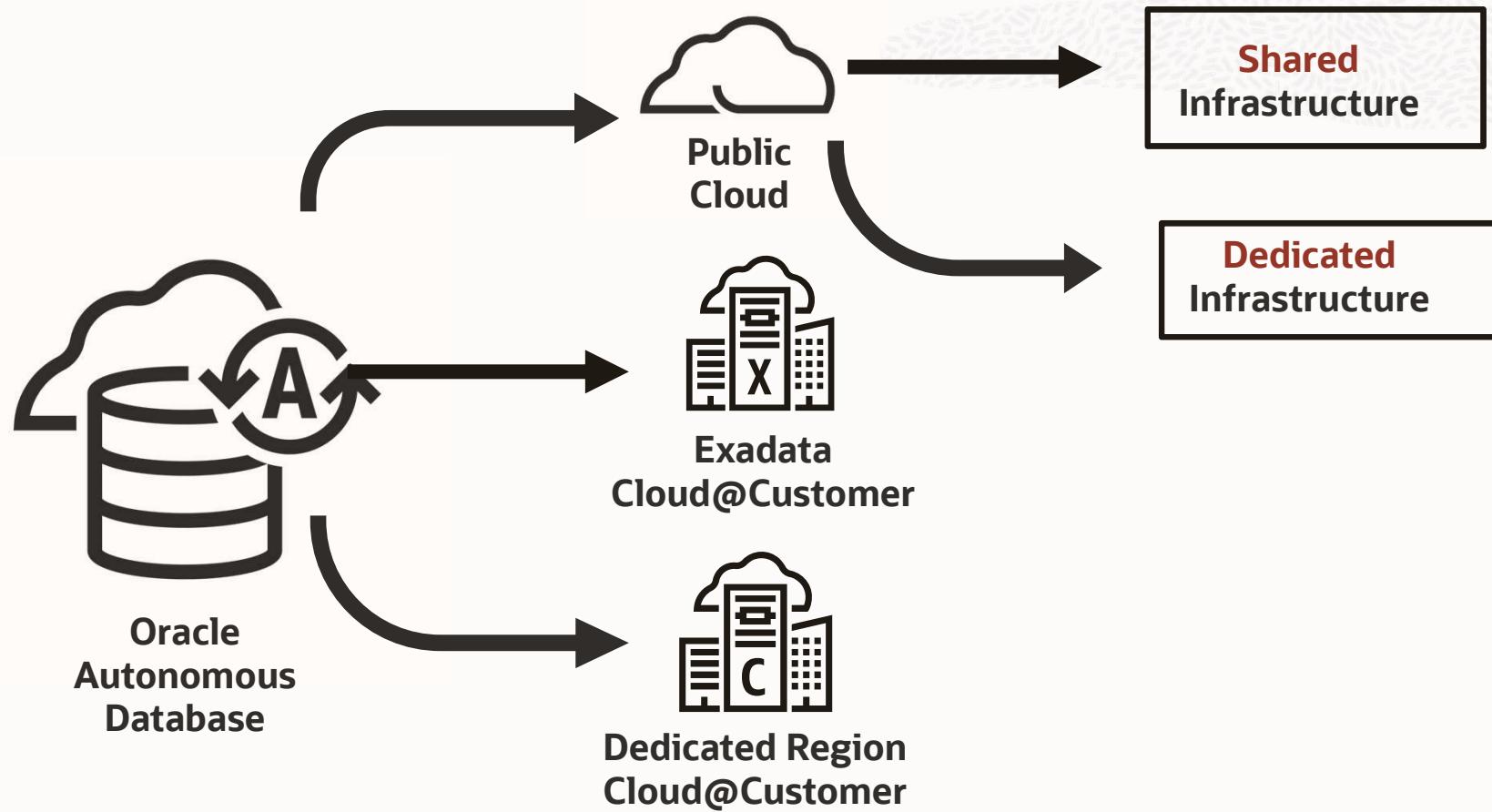
Customer Satisfaction

Autonomous Database

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Multiple Deployment Choices



Oracle DBCS Bare Metal Console Management

Create DB system

1 DB system information
2 Database information

Select an availability domain

AD-1 wBCz:US-ASHBURN-AD-1 ✓ AD-2 wBCz:US-ASHBURN-AD-2 AD-3 wBCz:US-ASHBURN-AD-3

Select a shape type

Virtual Machine **Bare Metal** ✓

Select a shape

BM.DenseIO1.36 2 Available Core Count Change shape

Browse All Shapes

A shape determines the options for resources such as node count, core count, and storage. For information about shapes, see [Shapes for Bare Metal DB Systems](#).

| Name | Maximum Core Count | Minimum Core Count |
|--|--------------------|----------------------------|
| <input checked="" type="checkbox"/> BM.DenseIO1.36 | 36 | 2 |
| <input type="checkbox"/> BM.DenseIO2.52 | 52 | 2 |
| 1 Selected | | Showing 2 Items < 1 of 1 > |

Configure storage

Data storage percentage

80%

Configure the DB system

Total node count

1

The node count for the selected shape cannot be changed

Oracle Database software edition

Enterprise Edition High Performance

Select an Oracle Database Software Edition

Standard Edition

Enterprise Edition

Enterprise Edition High Performance

Enterprise Edition Extreme Performance

<https://docs.oracle.com/en-us/iaas/dbcs/doc/bare-metal-db-systems.html>

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Exadata Cloud Console infrastructure options

Exadata Infrastructure in ExaCC6 Compartment

Exadata Cloud@Customer infrastructure is the top-level resource representing the Exadata system hardware located in your data center. This resource also includes the networking configuration that allows the Exadata hardware to communicate with Oracle Cloud Infrastructure. [Learn more](#)

| Create Exadata Infrastructure | | | | | Deployment Assistant |
|--|----------|------------------------------|--------------|---------------------------------|----------------------|
| Display name | State | System model | Shape | Created | ⋮ |
| osc-lad-exacc6 | ● Active | Exadata Cloud@Customer X8M-2 | Quarter Rack | Tue, Jun 22, 2021, 02:14:53 UTC | ⋮ |
| Displaying 1 Exadata Infrastructure < 1 of 1 > | | | | | |

Deployment Assistant

Pre-Installation Onsite Installation Post-Installation

Welcome to Oracle Exadata Cloud@Customer Deployment Assistant, a step-by-step guide to setup your Oracle Exadata Cloud@Customer machines and launch your first Virtual Machines and Oracle Database.

Choose a deployment type

New Deployment
Creates an Exadata Cloud@Customer infrastructure and all the resources needed to create your first Oracle Database.

Existing Deployment
Uses an existing Exadata Cloud@Customer infrastructure and guides you through completing the deployment.

Select a compartment (i)
ExaCC6
oscnas001 (root)/ExaCC/ExaCC6

Select an Exadata Cloud@Customer Infrastructure
osc-lad-exacc6

Select a VM Cluster Network
Create New

Infrastructure Information Tags

General information

Compartment: oscnas001 (root)/ExaCC/ExaCC6

OCID: ...u2k7lq [Show](#) [Copy](#)

Created: Tue, Jun 22, 2021, 02:14:53 UTC

Time zone: UTC

Shape: Quarter Rack

Rack serial number: -

System model: Exadata Cloud@Customer X8M-2

Lifecycle state: Active

Exadata Resources

DB Servers: 2

Storage Servers: 3

OCPUs: 56 available, 100 total

Memory (GB): 472 available, 2780 total

Local storage (GB): 240 available, 4680 total

Exadata storage (TB): 63.4 available, 149.0 total

<https://docs.oracle.com/en-us/iaas/dbcs/doc/bare-metal-db-systems.html>



Exadata Cloud Console infrastructure options

VM Cluster Networks

Create VM Cluster Network

| Display name | State | Created | ⋮ |
|----------------------|---------------------|---------------------------------|---|
| ExaCC6-CLU3 | Allocated | Fri, Aug 12, 2022, 15:42:12 UTC | ⋮ |
| ExaCC6-AUT | Allocated | Wed, Mar 16, 2022, 20:37:30 UTC | ⋮ |
| exacc6_net_terraform | Requires Validation | Fri, Jan 21, 2022, 14:33:07 UTC | ⋮ |
| ExaCC6-Clu2 | Allocated | Sat, Jun 26, 2021, 00:40:53 UTC | ⋮ |
| ExaCC6-Clu1 | Allocated | Fri, Jun 25, 2021, 20:34:28 UTC | ⋮ |

Displaying 5 VM Cluster Networks < 1 of 1 >

Scale Infrastructure

Help

Select the Exadata system model for additional database servers ⓘ

Exadata Cloud@Customer X9M-2

Current system model X8M Quarter Rack. Only compatible models are shown in the list.

| Additional database servers | Current database servers Read-only | Total database servers Read-only |
|-----------------------------|------------------------------------|----------------------------------|
| 0 | 2 | 2 |

Maximum: 30, Additional OCPUs: 0, memory: 0 GB Current OCPUs: 100, memory: 2780 GB Total OCPUs: 100, memory: 2780 GB

Storage

| Additional storage servers | Current storage servers Read-only | Total storage servers Read-only |
|----------------------------|-----------------------------------|---------------------------------|
| 0 | 3 | 3 |

Maximum: 61, Additional storage capacity: 0.0 TB Current storage capacity: 148.8 TB Total Storage capacity: 148.8 TB

Configure maintenance

Help

Configure Maintenance Method ⓘ

Rolling
The system updates the servers one at a time with no downtime.

Non-rolling
The system shuts down and updates the servers in parallel. This method minimizes maintenance time but incurs a full system downtime.

Enable custom action before performing maintenance on DB servers ⓘ

Maintenance Schedule

By default, the system assigns a date and time for Exadata Infrastructure maintenance. You can also create a custom maintenance schedule by providing your preference.

Configure the automatic maintenance schedule

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

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

Maintenance

Maintenance Method Preference: Rolling

Quarterly Maintenance Schedule: Custom schedule

Next Quarterly Maintenance: Sat, May 27, 2023, 13:00:00 UTC [View](#)

Next Security Maintenance: Thu, May 25, 2023, 05:00:00 UTC [View](#)

Customer Support Identifier (CSI): --

Primary Contact: Diego Teruel

Version ⓘ

DB Server Version: 22.1.7.0.0.230113 (230407) ⓘ

Storage Server Version: 22.1.9.0.0.230302



Exadata Cloud Console infrastructure options



Resources

DB Servers

| Display name | State | Available CPUs | Available Memory (GB) | Available Local Storage (GB) | Model | VM count |
|--------------|-----------|----------------|-----------------------|------------------------------|-------|----------|
| dbServer-1 | Available | 28 | 236 | 120 | X8M | 4 |
| dbServer-2 | Available | 28 | 236 | 120 | X8M | 4 |

Showing 2 Items < 1 of 1

Autonomous Exadata VM Clusters in ExaCC6 Compartment

Create Autonomous Exadata VM Cluster

| Display name | State | CPUs | Reclaimable CPUs | Storage (TB) | ACD | Memory per CPU | Created |
|--------------|-------|------|------------------|--------------|-----|----------------|---------|
| No items | | | | | | | |

Displaying 0 Autonomous VM Clusters < 1 of 1



Exadata Cloud Console infrastructure options

Pluggable databases



Create Pluggable Database

| Display name | State | Created | ▼ |
|--------------|-------------|---------------------------------|---|
| PDB1 | ● Available | Fri, Apr 14, 2023, 21:02:38 UTC | ⋮ |

Showing 1 Item < 1 of 1 >



Stop Node

Work request information

Stop Node

Accepted

0% complete

Operation: Stop Node

Accepted: Fri, May 19, 2023, 15:54:31 UTC

OCID: ...2yafhq [Show](#) [Copy](#)

Started: —

Compartment: oscnas001 (root)/ExaCC/ExaCC6/Exacc6vm3

Finished: —



Exadata Cloud Console infrastructure options

Associated resources

| Resource | Resource type | State | ⋮ |
|---------------------------------|---------------|---|---|
| exacc06-vm01c03 | Node | ● In progress | ⋮ |
| ExaCC6-CLU3 | VM Cluster | ● In progress | ⋮ |

Showing 2 Items < 1 of 1 >



Exadata Cloud Console infrastructure options

Enable Data Guard

Select Peer VM Cluster

Peer region (i)

US East (Ashburn)

Exadata Cloud@Customer infrastructure in **Exacc6vm3** (Change Compartment)

No data available

Primary database in Exadata infrastructure "osc-lad-exacc6".

Peer VM cluster in **Exacc6vm3** (Change Compartment)

Select VM Cluster

Primary Data Guard Type

Active Data Guard

Active Data Guard is a licensed option to the Oracle Database Enterprise Edition and enables advanced capabilities that extend the basic Data Guard functionality. These capabilities include Real-Time Query and DML Offload, Automatic Block Repair, Standby Block Change Tracking, Far Sync, Global Data Services, and Application Continuity. [Learn more](#)

Data guard

Oracle Data Guard ensures high availability, data protection, and disaster recovery for enterprise data. Data Guard provides a comprehensive set of services that create, maintain, manage, and monitor one or more standby databases to enable production Oracle databases to survive disasters and data corruptions. Data Guard maintains these standby databases as transactionally consistent copies of the production database. [Learn more](#)

Protection mode

Maximum Performance

Transport type *Read-only*

Async

Database Homes

Create Database Home

| Help | State | Version | Number of Databases | Created |
|------|-----------|-----------------|---------------------|--------------------------------|
| | Available | 19.18.0.0.0 | 1 | Mon, Dec 5, 2022, 14:59:41 UTC |
| | Available | 11.2.0.4.220719 | 0 | Sat, Oct 8, 2022, 13:17:27 UTC |

Displaying 2 Database Homes < 1 of

Configure standby database

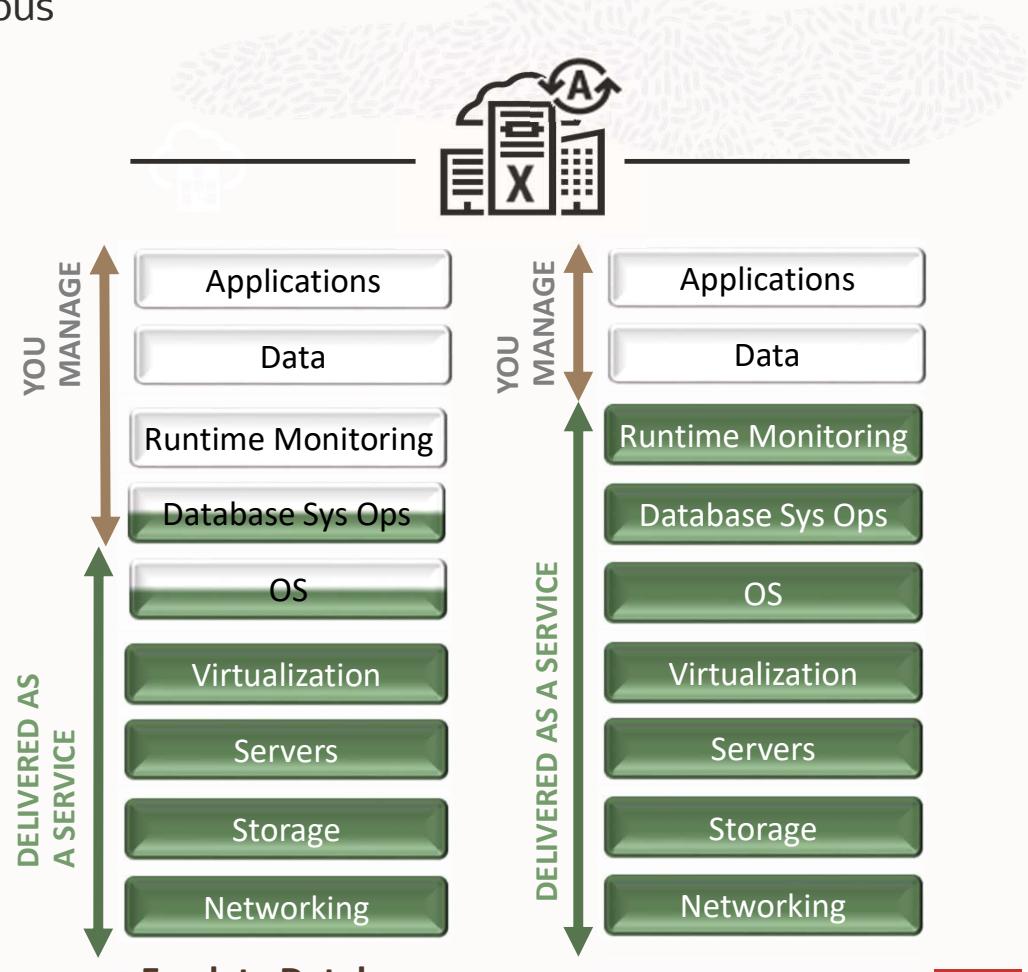
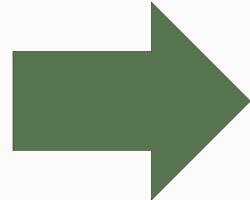
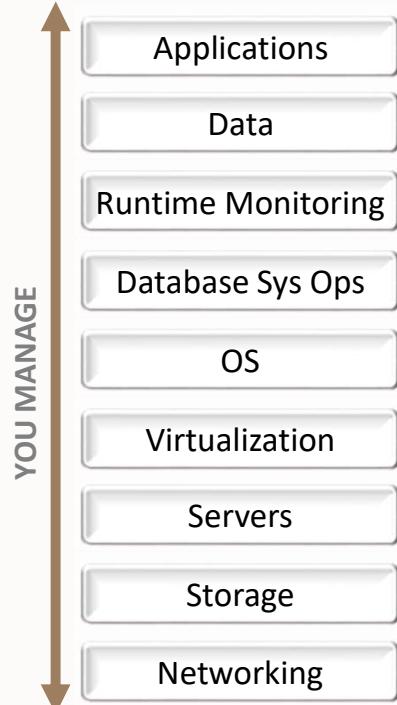
Provide a unique name for the database Optional



Transfer more responsibility to the service while lowering costs

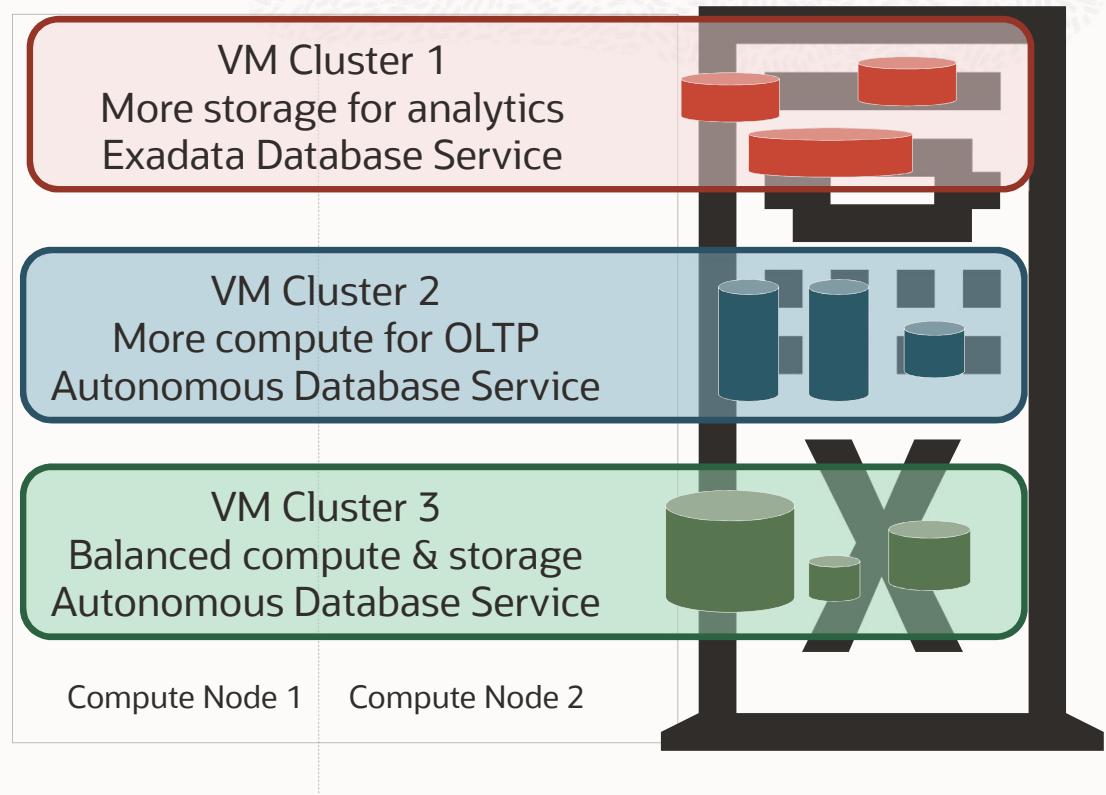
Same cost per OCPU, greater value with Autonomous

Traditional IT



Aumente a **eficiência** na utilização de recursos e **consolide** seu ambiente

1. Multiplos VM clusters podem ser criados no Exadata Cloud@Customer Infrastructure
2. Cada VM cluster pode ser configurado para atender as necessidades específicas de cada negócio.
3. Cada VM cluster pode ser usado por ambos Autonomous ou Exadata Database Service
4. Mais VM clusters podem ser adicionados conforme a necessidade de crescimento do ambiente
5. O consumo em cada cluster pode ser dimensionado de forma independente (e automaticamente com Autonomous Database)



Disponível a partir do Exadata Cloud@Customer Infrastructure X7



MOS Service Request Options

Autonomous Database - Dedicated Operator Access Control (OpCtl)

Now available for Autonomous Database - Exadata Cloud@Customer

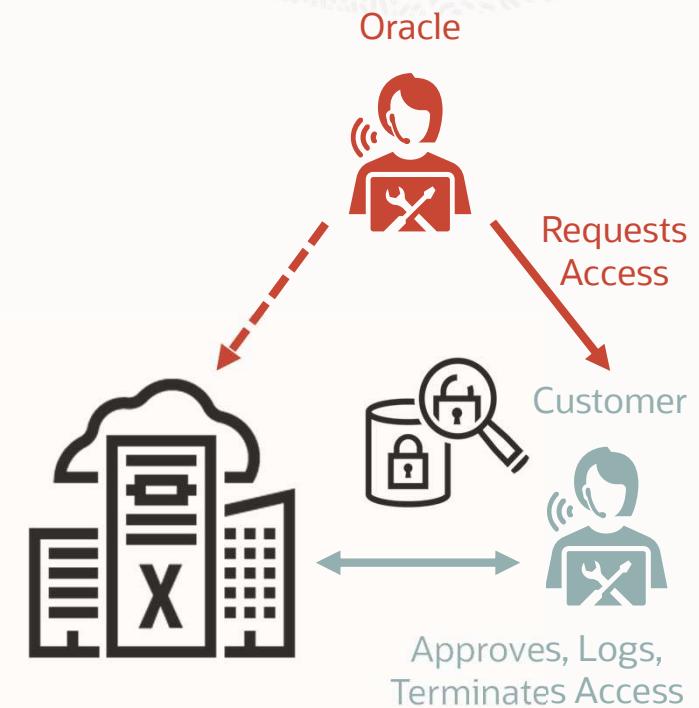
OpCtl enables customers to grant, audit, and revoke access to Exadata Cloud@Customer managed by Oracle

Customers control access to Exadata Infrastructure and Autonomous VM Clusters by Oracle operators to limit:

- when they have access
- components they can access
- commands they can execute

Observe and record Oracle operator commands and keystrokes that Oracle staff execute

Terminate Oracle operator connections at discretion



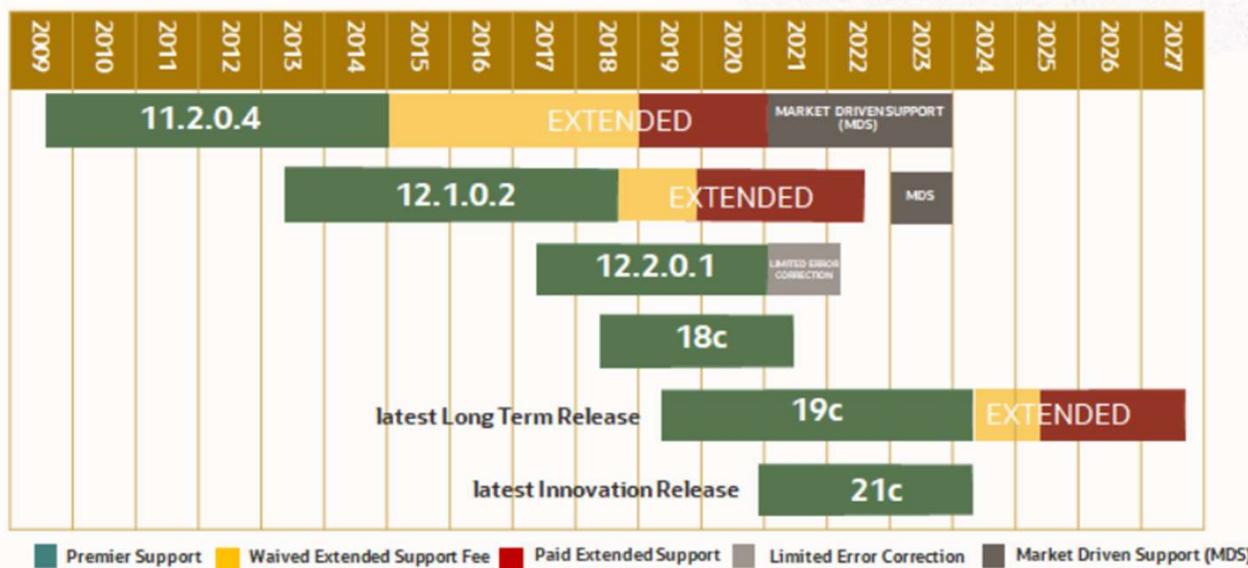
Enhanced Security for Regulated Industries



MOS – Database Releases and Support Timelines

Understanding How to Deal with MOS Note (Doc ID 742060.1)

Database Releases and Support Timelines



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My Oracle Support - Severity level and Options

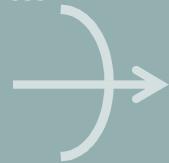
Severity level 3

- Use this option in case you are facing a no-business impact issue
- Can be used to request technical doc Id's
- Use this option to inform a scheduled maintenance
- Used to create a Breaking Glass SR



Severity Level 2

- Use this Severity level in case you are facing a no business impact issue but need support attention to check some recent log errors for example
- You can use to reduce Severity 1 from Serenity 2 in case you decided to keep the same Oracle support Engineer work on your SR
- Can be used to Request RCA after a serv1 issue with business impact



Severity level 1

- This Severity is used when you are facing total or partial unavailability in your environment
- Can be Opened with 12 x 7 or 8 x 5
- For Cloud environments, no Business impact is required to open Serv 1 Requests



Exadata Cloud command Line Interface (*dbasscli*)

OCI Command Line Interface Database Options and doc references

Backup & Recover Commands

- *dbasscli* database backup
- *dbasscli* orec –options
- *And More...*



DB Database Management

- *dbaascli* database start
- *dbaascli* database stop
- *dbaascli* bounce
- *dbaascli* database update

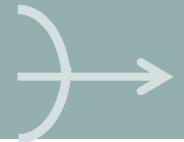
And more...



Database Home Commands

- *dbaascli* dbhome create
- *dbaascli* dbhome delete
- *dbaascli* dbhome getdetails

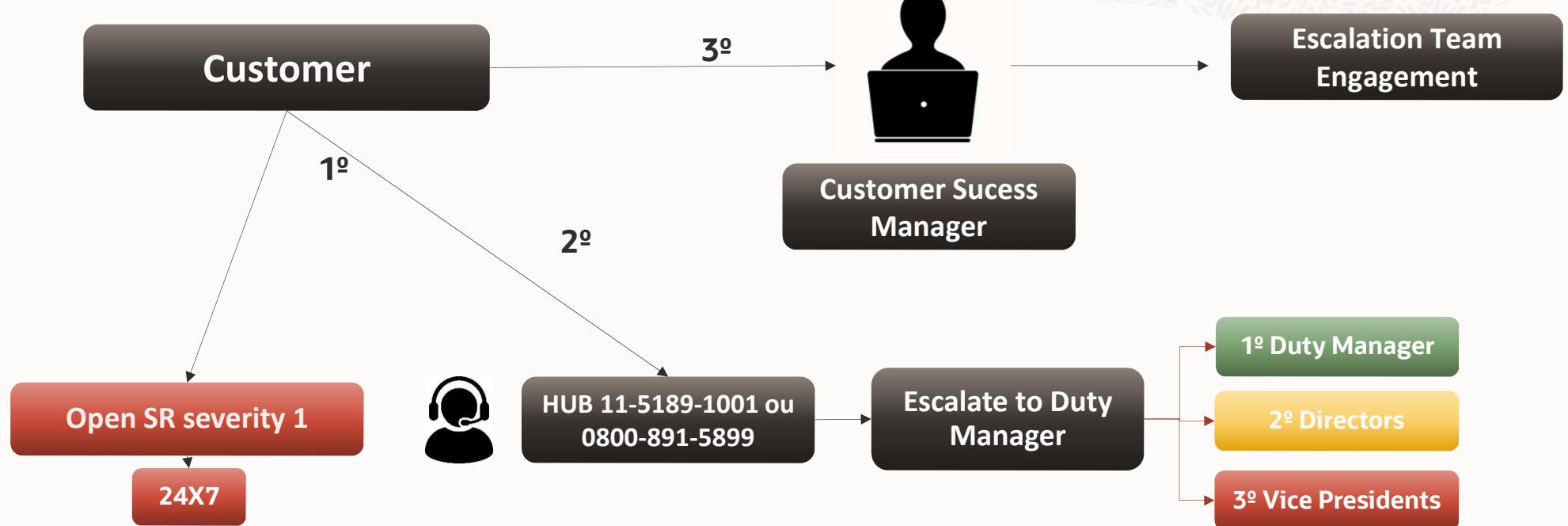
And more....



[Click Here](#)

Workflow Maximum Attention on Service Request

MOS escalation roles, responsibilities and golden tips to deal with Oracle Support



How To Request Management Attention on a Service Request (SR) with Oracle Support Services (Doc ID 199389.1)



What is a Breking Glass Service Request ?

Understanding when it is needed and how to open this SR

A Breaking Glass Service request is a formal process to request and allow Oracle support to get into your Exadata Cloud at Customer Virtual Machines (DomU) and fix the issue customer reported.

The customer must to open this SR and share this SR number on parent SR as soon as possible.

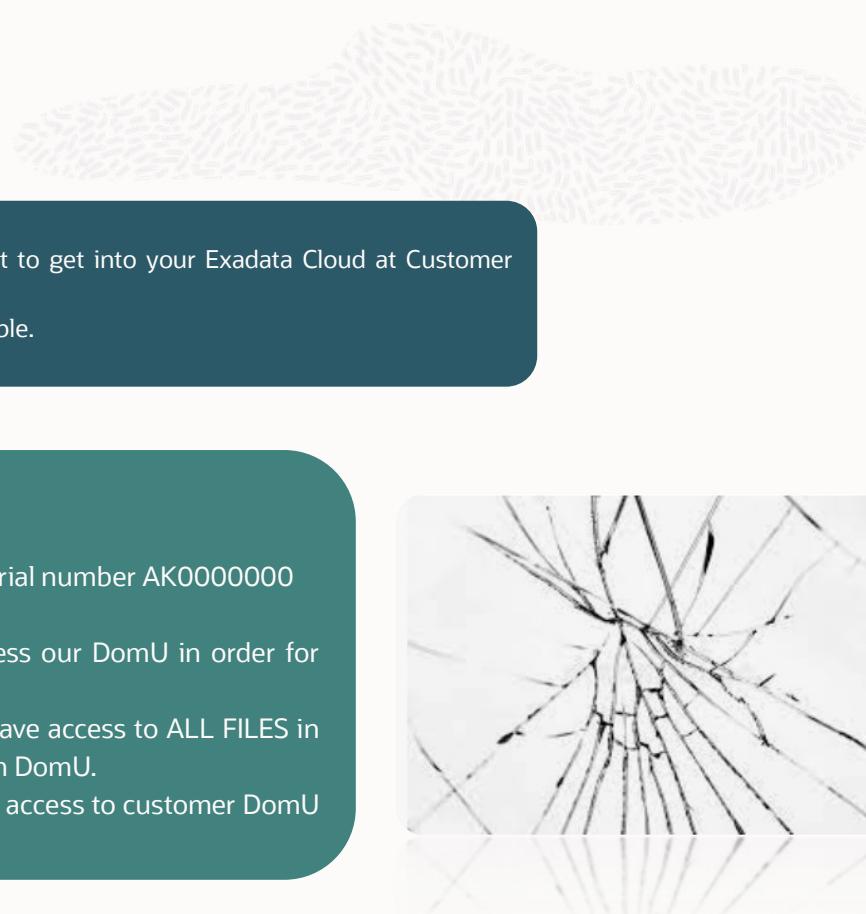
Breaking Glass Text template

SR Title: SR granting Oracle explicit permission to access DomU of ExaCC with AK serial number AK0000000

SR Content: We are opening this SR to grant explicit permission to Oracle to access our DomU in order for support to help resolve issue described in **SR# 3-XXXXXXX**

We acknowledge that by providing this permission, we understand that Oracle will have access to ALL FILES in DomU and agree that there are no confidential files stored in any of the file systems in DomU.

In addition, we also agree that customer security team has authorized Oracle to have access to customer DomU in order to resolve the issue described in the above SR.”



What is a Root Cause Analysis?

Understanding how and when this formal report is needed



A RCA (Root Cause Analysis) is a formal request that the customer or partner request on parent SR to figure out what caused the issue and avoid future issues.

The screenshot shows the Oracle My Oracle Support website. The top navigation bar includes links for 'New user? Register here', 'Watch', and 'Explore'. The main content area features a 'My Oracle Support: Year of Innovation' banner and a 'Welcome to My Oracle Support!' section. This section includes a 'Sign In' form, a 'Forgot User ID / Password?' link, and a 'New user? Register here' link. Below this are sections for 'FAQ & Support' and 'COLLECT ANALYZE ACT'.

- It's important to be focused on parent SR and provide any new evidence to help Oracle support identify the root cause.
- If the customer or partner didn't agree with Oracle support feedback, it's up to the customer to request another engineer to review.

It must be requested on the same parent SR that the issue is reported and as soon as possible to avoid SR close. Oracle support needs up to 15 days to provide that information and the SR number can be used as an official doc.



Autonomous on dedicated infra ExaCS

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Multiple VM Autonomous Database

Resource Allocation

- Simplified resource allocation
 - Max # of ACDs customer plans to create in the Autonomous VM cluster
 - OCPU per node
 - Memory per OCPU for the Autonomous Database
 - Total Autonomous Database Storage
- Aggregate resource required on the Exadata Infrastructure displayed on the right

Configure Autonomous VM Cluster Resources

Node Count: 2 i

Maximum number of Autonomous Container Databases for the Autonomous VM Cluster

OCPUs count per Node i

Database memory per OCPU (GB) i

Allocate storage for local backups i

Autonomous Database storage for the Autonomous VM Cluster (TB) i

Total Resources Requested for Autonomous VM Cluster

OCPUs Count: 10
OCPUs Count per Node x Node Count

Memory: 200 GB
[OCPUs Count per Node x Database Memory per OCPU + Internal Database Service Memory: (40GB)] x Node Count

Local Storage: 300 GB
Internal Local Service Storage: (100GB + 50GB x ACD Count) x Node Count

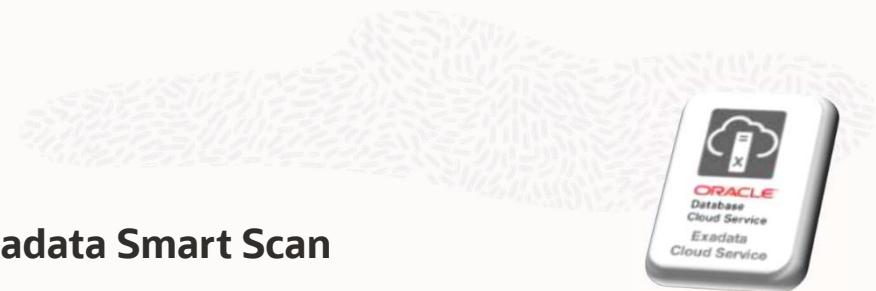
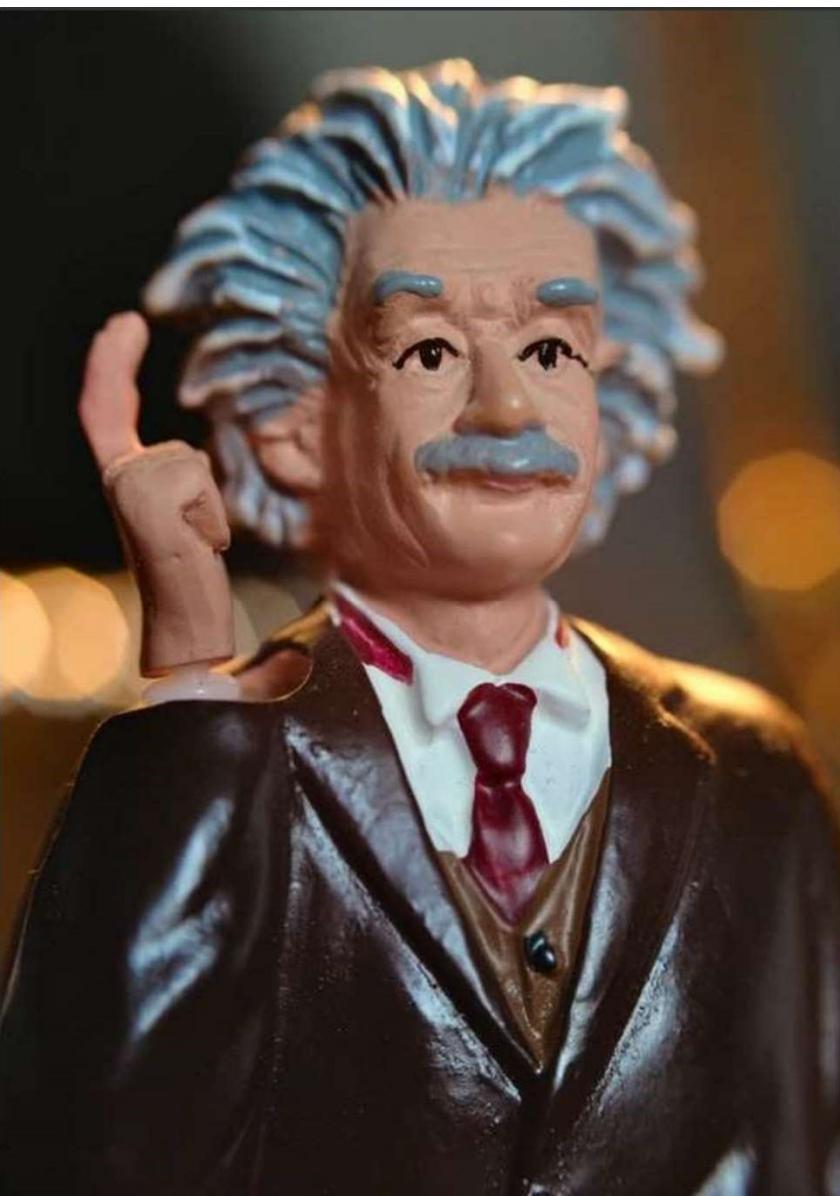
Exadata Storage: 1.75 TB
[User Data Storage + Internal Database Service Storage: (200GB + 100GB x ACD Count x Node Count)] x 1.25



Demo Time

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Demo 1 – Exadata Smart Scan

- Changing Table execution plan using Index
- Change index to invisible and enable Smart Scan

Demo 2 - OCI Console Tour

- Dom0 Patching scheduling
- Database Provisioning
- Exadata Pathing prechk on Console
- Exadata Cloud Shape and Version

MOS Useful link's and Documents

Free MOS training and certifications

ORACLE MY ORACLE SUPPORT

My Oracle Support: Year of Innovation
My Oracle Support continues to evolve as the one-stop support solution for Oracle Premier Support Customers. Learn about the exciting changes implemented this year and how customers play an important role in future enhancements. Watch now!

New to My Oracle Support?

1 New user? Register here Create your account 2 Watch Learn the basics in minutes 3 Explore Sign in for more quick training videos

Welcome to My Oracle Support!
The one-stop support solution for Oracle Premier Support Customers.

- Search for solutions
- Download patches and updates
- Access proactive support tools
- Collaborate in the My Oracle Support Community
- Create a Service Request

Register, sign in, and visit the User Resource Center to learn more.

FAQ & Support

- Registration FAQ
- My Oracle Support FAQ
- Contact Support
- Accessibility Features

Join the Oracle Customer Advisory Panel

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- First contact for resolution, support and technical assistance through Service Request (SR) ticketing system.
- Online Resources via My Oracle Support Portal.
- Knowledge Base
 - Known issues and bugs.
 - Guides and tutorials.
- Updated information on patches, bug fixes, security, alerts, new features
- How to use My Oracle Support -How-to Training Video Series (Doc ID 603505.1)



Exadata Cloud at Customer - General

ExaCC General Useful doc's and tips



- Oracle Exadata Best Practices (Doc ID 757552.1)
- Exadata Critical Issues (Doc ID 1270094.1)
- Exadata Cloud Support Information Center (Doc ID 2522950.2)
- Getting Started with Oracle E-Business Suite on Oracle Exadata Cloud@Customer Gen 2 (Doc ID 2774983.1)
- Cloud@Customer Gen 2 (Doc ID2758998.1)
- Cloud Infrastructure or Oracle Cloud at Customer (Doc ID 2368508.1)
- Release Schedule of Current Database Releases (Doc ID 742060.1)

Exadata Cloud - Troublesoothing Mos Documents and Link's

- How To Collect Sosreport on Oracle Linux (Doc ID 1500235.1)
 - How to Create Sosreport in Alternate Location? (Doc ID 2163668.1)
 - Oracle Exadata Database Machine EXAChk (Doc ID 1070954.1)
 - Autonomous Health Framework (AHF) - Including TFA and ORAChk/EXAChk (Doc ID 2550798.1)
 - HugePages on Oracle Linux 64-bit (Doc ID 361468.1)
 - When And Why To Use HugePages on Linux x86-64? (Doc ID 2314903.1)
 - USE_LARGE_PAGES To Enable HugePages (Doc ID 1392497.1)
 - HugePages on Linux: What It Is... and What It Is Not... (Doc ID 361323.1)
 - Shell Script to Calculate Values Recommended Linux HugePages / HugeTLB Configuration (Doc ID 401749.1)
 - Quick Instructions For Obtaining The Automatic Workload Repository (AWR) Report (Doc ID 1086120.1)
 - Performance Diagnosis with Automatic Workload Repository (AWR) (Doc ID 1674086.1)
 - ExaWatcher Utility On Exadata and SuperCluster Compute and Storage Nodes (Doc ID 1617454.1)
-
- Autonomous Health Framework Compliance Checks and Diagnostics: <https://docs.oracle.com/en/engineered-systems/health-diagnostics/autonomous-health-framework>
 - Troubleshooting Exadata Database Service on Cloud@Customer Systems : <https://docs.oracle.com/en-us/iaas/exadata/doc/ecc-troubleshooting-systems.html#GUID-84CF1009-A4FA-4C73-8C16-5EC556D8F1A1>



Exadata Cloud - Upgrade Mos Documents and Link's



- 19c Database Self-Guided Upgrade with Best Practices (Doc ID 1919.2)
- Oracle 19c Complete Checklist for upgrading Oracle 12c, 18c Container Database (CDB)
- to Oracle 19c Release using DBUA (Doc ID 2543981.1)
- Upgrading to 19c Oracle Grid Infrastructure on Exadata Cloud Service (ExaCS) and Exadata Cloud at Customer Gen2 (ExaCC) (Doc ID 2624992.1)
- Exadata Cloud at Customer Gen2 ExaCC (Doc ID 2624992.1)
- Upgrading to 19c Oracle Grid Infrastructure on Gen 1 Exadata Cloud at Customer (Doc ID 2709296.1)
- Upgrading to 19c Oracle Database on Gen 1 Exadata Cloud at Customer (Doc ID 2709284.1)



Exadata Cloud - *Patching* MOS Document's and Link's

- Patch Set Updates for Oracle Products (Doc ID 854428.1)
- Primary Note for Database Proactive Patch Program (Doc ID 888.1)
- Updating Exadata Database Server Software using the DBNodeUpdate Utility and patchmgr (Doc ID 1553103.1)
- Exadata System Software Certification (Doc ID 2075007.1)
- Exadata Cloud Compute Node Backup and Restore Operations (Doc ID 2809393.1)
- How to boot Exadata database server with diagnostic ISO image (Doc ID 1947114.1)
- OPatch Error - Inventory load failed... OPatch cannot load inventory for the given Oracle Home (Doc ID 2075765.1)
- Steps to shut down or reboot an Exadata storage cell without affecting ASM (Doc ID 1188080.1)
- Gen 1 - Patching Exadata Cloud at Customer: <https://docs.oracle.com/en/cloud/cloud-at-customer/exadata-cloud-at-customer/exacc/patch.html>
- Gen 1 - Rolling Back a Patch or Failed Patch: <https://docs.oracle.com/en/cloud/cloud-at-customer/exadata-cloud-at-customer/exacc/roll-back-patch.html#GUID-0D1B9B1E-62E4-4A66-8D5D-6D1AC2B69A3F>
- Atualização do cloud tooling sem utilizar dbaascli (necessário em versões antigas):
<https://docs.oracle.com/en/cloud/paas/database-dbaas-cloud/csdbi/problems-administering-deployments.html#GUID-14724B31-FE0B-4D8C-BE36-CEE81FC84A5B>



Exadata Cloud at Customer - Monitoring Useful Link's

Monitoring useful doc's and tips

- ❑ Privilege Analysis is not Working in a Procedure PL/SQL block Using DBMS_PRIVILEGE_CAPTURE (Doc ID 2891332.1)
- ❑ Using Privilege Analysis - a feature of Oracle Database Enterprise Edition (Doc ID 2588251.1)
- ❑ <https://community.oracle.com/mosc/discussion/3913477/without-database-vault-installed-use-of-dbms-privilege-capture-needs-licence>
- ❑ <https://community.oracle.com/mosc/discussion/4517433/how-to-use-dbms-privilege-capture-generate-result-when-using-database-wide-capture-and-database-link>
- ❑ https://docs.oracle.com/en/database/oracle/oracle-database/21/arpls/DBMS_PRIVILEGE_CAPTURE.html
- ❑ https://docs.oracle.com/en/database/oracle/oracle-database/19/arpls/DBMS_PRIVILEGE_CAPTURE.html
- ❑ https://docs.oracle.com/en/database/oracle/oracle-database/18/arpls/DBMS_PRIVILEGE_CAPTURE.html
- ❑ https://docs.oracle.com/en/database/oracle/oracle-database/12.2/arpls/DBMS_PRIVILEGE_CAPTURE.html



Exadata Cloud at Customer - Migration Useful Link's

ExaCC Migration useful doc's and tips

- Creating a Physical Standby Database for 11g Through 19c Databases (Doc ID 2275154.1)
- Creating a Physical Standby using RMAN Duplicate (RAC or Non-RAC) (Doc ID 1617946.1)
- Using Transportable Tablespaces to Migrate Oracle E-Business Suite Release 12.2 Using Oracle Database 19c Enterprise Edition On a Multitenant Environment (Doc ID 2674405.1)
- V4 Reduce Transportable Tablespace Downtime using Cross Platform Incremental Backup (Doc ID 2471245.1)
- Cross Platform Database Migration using ZDLRA (Doc ID 2460552.1)
- Is GG certified for EBS Database Migrations and upgrades (Doc ID 2491869.1)
- [BACKUP AND RECOVER BEST PRACTICES FOR RECOVER APPLIANCE] <https://www.oracle.com/a/otn/docs/oda-backup-recovery-technical-brief.pdf>
- [WALLET MANAGER] <https://docs.oracle.com/en/database/oracle/oracle-database/19/dbimi/using-oracle-wallet-manager.html#GUID-D0AA8373-B0AC-4DD8-9FA9-403E345E5A71>
- [ORACLE DATABASE 19C SECURITY GUIDE] <https://docs.oracle.com/en/database/oracle/oracle-database/19/dbseg>
- <https://www.oracle.com/webfolder/s/assets/webtool/cloud-migration-advisor/index.html>
- <https://docs.oracle.com/en-us/iaas/Content/Database/Tasks/mig-onprembackup.htm>
- <https://docs.oracle.com/en/cloud/paas/database-dbaas-cloud/csdbi/create-hybrid-dr-deployment.html>



Exadata Cloud at Customer - Smart Scan Feature

ExaCC Smar-Scan useful doc's and tips

- Creating a Physical Standby Database for 11g Through 19c Databases (Doc ID 2275154.1)
- Creating a Physical Standby using RMAN Duplicate (RAC or Non-RAC) (Doc ID 1617946.1)
- Using Transportable Tablespaces to Migrate Oracle E-Business Suite Release 12.2 Using Oracle Database 19c Enterprise Edition On a Multitenant Environment (Doc ID 2674405.1)
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- [WALLET MANAGER] <https://docs.oracle.com/en/database/oracle/oracle-database/19/dbimi/using-oracle-wallet-manager.html#GUID-D0AA8373-B0AC-4DD8-9FA9-403E345E5A71>
- [ORACLE DATABASE 19C SECURITY GUIDE] <https://docs.oracle.com/en/database/oracle/oracle-database/19/dbseg/>
- <https://www.oracle.com/webfolder/s/assets/webtool/cloud-migration-advisor/index.html>
- <https://docs.oracle.com/en-us/iaas/Content/Database/Tasks/mig-onprembackup.htm>
- <https://docs.oracle.com/en/cloud/paas/database-dbaas-cloud/csdbi/create-hybrid-dr-deployment.html>





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