



# Cloud at Customer Academy 3.0

Exadata Cloud - Backup & Restore

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Marcel Lamarca

Licenses and Systems

Alexandre Fagundes

OCI Databases & App's DBA

LAD Partner Enablement Knowledge Team

August, 2023



# Nuestros Valores

Integridad

Compliance

Trabajo en Equipo

Satisfacción del Cliente

Calidad

Ética

Innovación

Respeto Mutuo

Justicia

Comunicación

Como empresa líder en tecnología, aceptamos la **diversidad** en todas sus formas. Realmente creemos que la **innovación** comienza con la **inclusión**. Y esto solo se puede lograr con la cooperación de nuestros **partners**. Afirmamos nuestro **compromiso** de mantener un **ambiente respetuoso** y **libre de discriminación** y esperamos esto de nuestros **socios de negocios**.

Oracle espera que sus **partners** realicen negocios de manera **justa** y **ética**, cumplan con las leyes anticorrupción en todo el mundo, cooperen con las solicitudes de información de Oracle y eviten participar en cualquier actividad que implique incluso la apariencia de ser incorrecta.

Es vital que nuestros partners se adhieran al **Código de Ética y Conducta Comercial de Oracle**, que da los lineamientos sobre los valores que son esenciales para nuestro éxito como empresa. Estos valores son la base de todo lo que hacemos y lo que debemos vivir todos los días.



Utilice el código QR para acceder al Código de Ética y Conducta Comercial de Oracle.



# SQL> select \* from person where name = 'Marcel Lamarca'



Father, husband, Cooker and son!

Graduated in Business Administration (FMU-SP)

## Oracle DBA

21 Years dedicated to study and support Oracle Databases.  
12 Years working with Exadata (On-prem, C@C and Cloud Services) .  
4 Year working for Oracle do Brasil  
1 Year on Alliances LAD knowledge Team

## Oracle Cloud Specialist (OCS)

Exadata Database Machine X9M Certified Specialist  
OCI Foundation 2020 / 2023  
Oracle Autonomous Database Administrator  
Oracle Cloud Database Migration and Integration  
OCI Cloud Certified Architect Associate 2022  
OCI Cloud Certified Architect Professional 2022

## Oracle Certified Professional (OCP)

10g, 11g and 12c.

## Oracle Certified Specialist (OCE)

Grid/RAC Database Administrator 11g



**SQL> select \* from person where name = 'Alexandre Fagundes'**



Father, Son, Husband, Cloud Architect

**Bachelor of Information Systems**

Oracle Applications & Databases Administrator  
Certified Cloud Architect  
Autonomous Database Cloud Certified Professional  
Oracle Cloud Operations Certified Professional  
Oracle Cloud Security Certified Professional  
Oracle Database Migration/Integration Certified  
Professional

Last book: “**Database Reliability Engineering: Designing and Operating Resilient Database Systems**” Charity Majors

Oracle E-Business Suite & Database Consultancy Services  
since 2002

# Exadata Academy 3.0 | Register Now

## Oracle Exadata Cloud at Customer Academy

Para capacitar a nuestros Partners en Servicios OCI, creamos la nueva versión de la Academia Cloud at Customer.

Esta academia contará con **10 sesiones de capacitación**, a partir del **14 de julio**, que permitirán a los participantes conocer las principales características y funcionalidades de Oracle Exadata y PCA ¡También será una excelente oportunidad para aclarar todas sus dudas para obtener su certificación!

Únase a esta capacitación y descubra por qué Oracle Cloud at Customer es la forma más sencilla de mover cargas de trabajo críticas de Oracle Database de una organización a la nube.

Consulte la agenda a continuación e inscríbase. ¡Contamos con su participación!

### ExaC@C Overview

14 de julio

1:00 p.m. - 3:00 p.m. (Mexico Time)

[Regístrate](#)

### PCA - Private Cloud Appliance

26 de julio

1:00 p.m. - 3:00 p.m. (Mexico Time)

[Regístrate](#)

### C@C Patching – Demo Session

28 de julio

1:00 p.m. - 3:00 p.m. (Mexico Time)

[Regístrate](#)

### C@C Backup & Restore – Demo Session

3 de agosto

1:00 p.m. - 2:30 p.m. (Mexico Time)

[Regístrate](#)

### Migration and move to Cloud – Demo Session

10 de agosto

1:00 p.m. - 2:30 p.m. (Mexico Time)

### Troubleshooting tools – Demo Session

24 de agosto

1:00 p.m. - 2:30 p.m. (Mexico Time)

[Regístrate](#)

### Monitoring – Demo Session

31 de agosto

1:00 p.m. - 2:00 p.m. (Mexico Time)

[Regístrate](#)

### Smart Scan, HCC compression & In-Memory – Demo Session

14 de septiembre

1:00 p.m. - 3:00 p.m. (Mexico Time)

[Regístrate](#)

### A&Q for Certification

21 de septiembre

1:00 p.m. - 3:00 p.m. (Mexico Time)

[Regístrate](#)

### C@C New Features - Demo Session

28 de septiembre

1:00 p.m. - 3:00 p.m. (Mexico Time)

[Regístrate](#)

[Click Here](#)



# Agenda

ExaC@C Storage Backup Options

OCI Automatic Backups

ExaC@C Backup and Restore Tools

Oracle RAC and Security Backups

ExaC@C Backup Networks

Demo – Enabling Blocking Change Tracking

Demo – Creating backup destination OC

Demo – Backup ExaCC via dbaascli

# Why Backup and protect my data?



# Data protection goals in the cloud



## Minimize ransomware risk

- Reduce data loss exposure and downtime after an attack
- Protect against backup deletion or alteration during an attack
- Secure backups against unauthorized access and information disclosure



## Optimize operations

- Get rid of time-consuming and resource-intensive weekly full backups on production database services
- Eliminate backup validation resource consumption on production database services
- Simplify multistep recovery processes and make recovery times predictable
- Minimize backup-driven costs



## Reduce administration

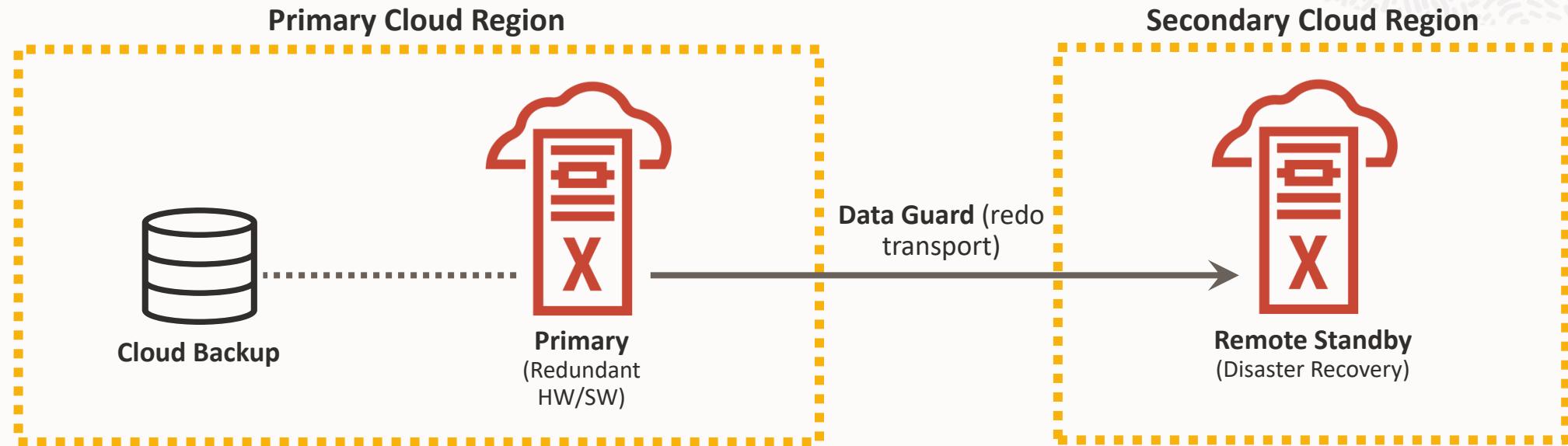
- Consistently apply backup policies across an organization
- Understand backup health and recoverability
- Plan for database backup space utilization

# Exadata C@C MAA Overview

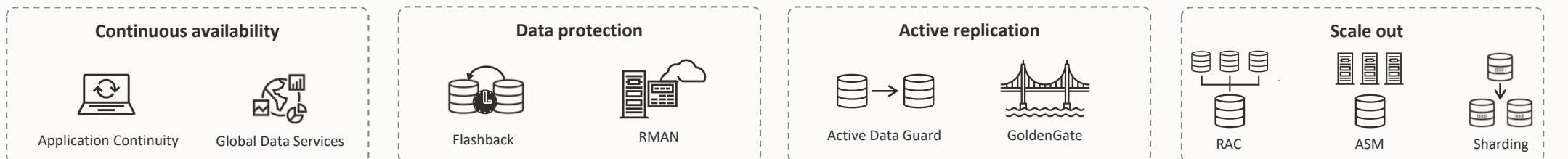


# Oracle Maximum Availability Architecture (MAA)

## High-Availability Blueprint in the Cloud



### Key Cloud MAA Technologies

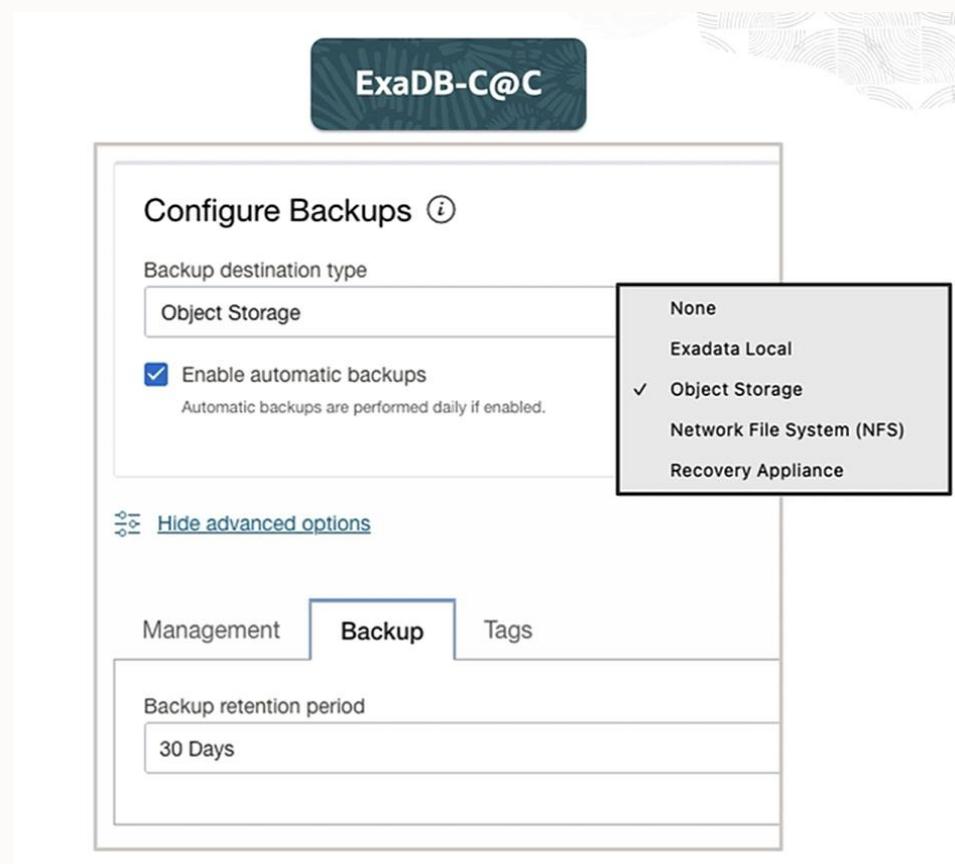


# Exadata C@C Backup Destinations



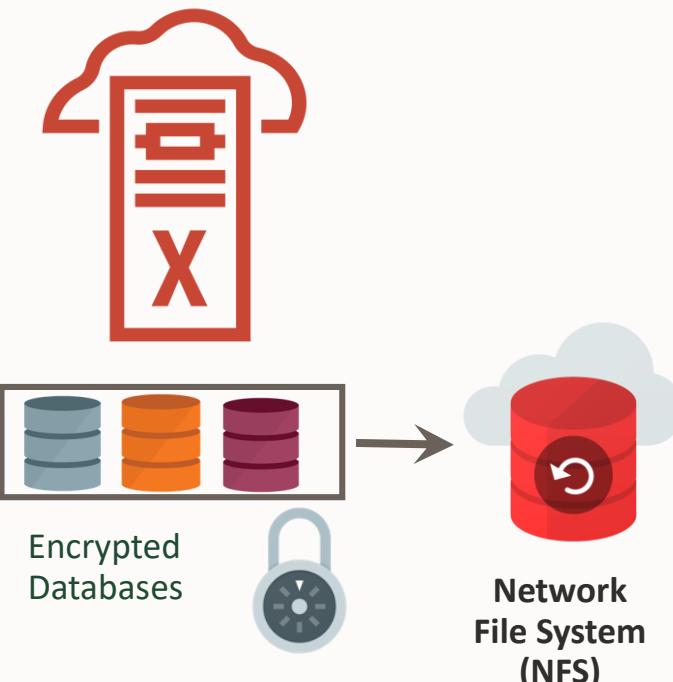
# Exadata C@C Database backup available destinations

Chose the best backup destination for your databases



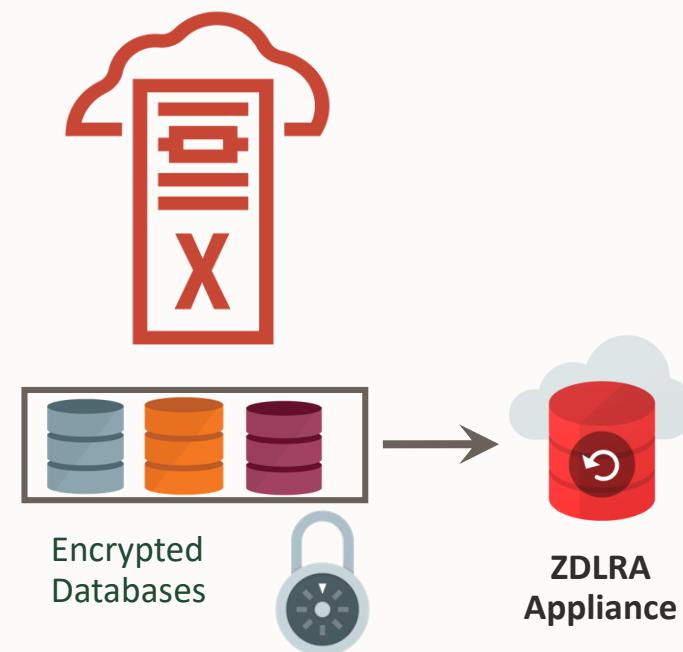
- Zero Data Loss Recovery Appliance (ZDLRA)
- NFS Storage
- Exadata Local Storage
- Object Storage
- None

# Prerequisites for Backup Exadata Cloud at Customer : NFS



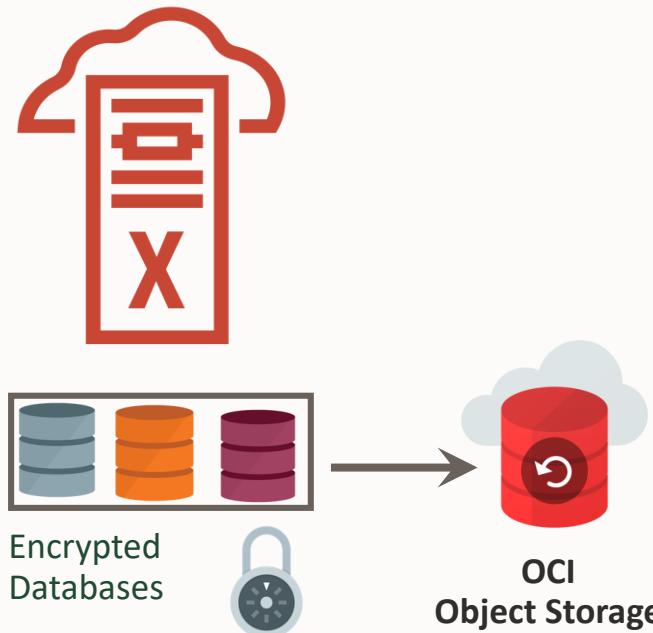
- You must mount the NFS server location to a local mount point directory on each node in the **VM Cluster**
- The local Directory path and the NFS Server location must each be the same across all the **VM Cluster** nodes
- You must ensure that the NFS mount is maintained continuously on all the **VM cluster Nodes**.
- The NFS-Mounted file system must be readable and writable by the **Oracle Operation System** user on all the **VM Cluster Nodes**

# Prerequisites for Backup Exadata Cloud at Customer : ZDLRA



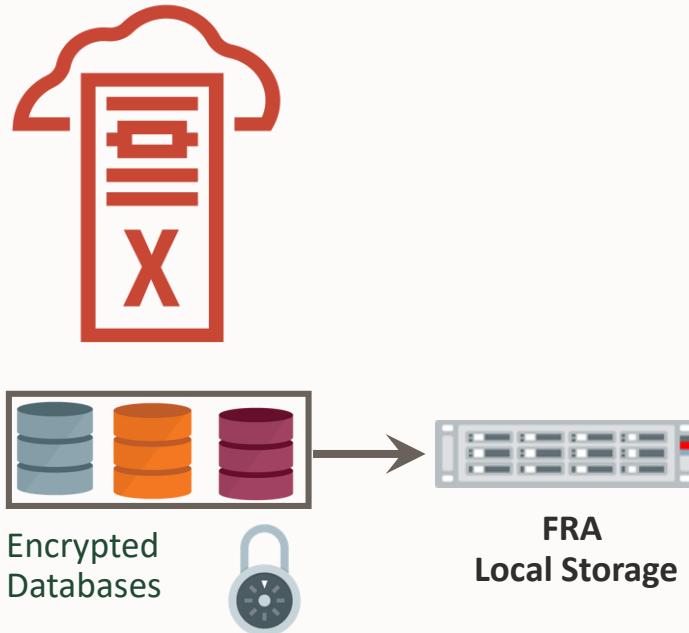
- The appliance must be configured with a virtual private catalog (VPC) user with is used for taking backups.
- The appliance must be configured with the unique database name of the database being backed up, and a mapping to the VPC user.
- The appliance must be accessible from the Cloud@Customer system using the Oracle Net Services connection string with is provided by the Zero Data Loss Recovery Appliance

# Prerequisites for Backup Exadata Cloud at Customer : Object Storage



- You must be granted security access in the ***AIM Policy***
- Must have connectivity for the Exadata Cloud to the ***Object Storage Service***
- Oracle recommends using a ***Service Gateway*** with The VCN to enable this Access

# Prerequisites for Backup Exadata Cloud at Customer : Local Storage



- You can configure your database to store Rman backups on database FRA area ASM (+RECO Disk Group)
- All Exadata Cloud at Customers uses ASM Triple mirror redundancy policy
- If you chose local backup destinations, you must disable automatic backups on OCI console
- You must use ***dbaascli*** tool to configure manual backups on local storage

# OCI Database Automatic backups



# Automatic Database backup Using the OCI Console



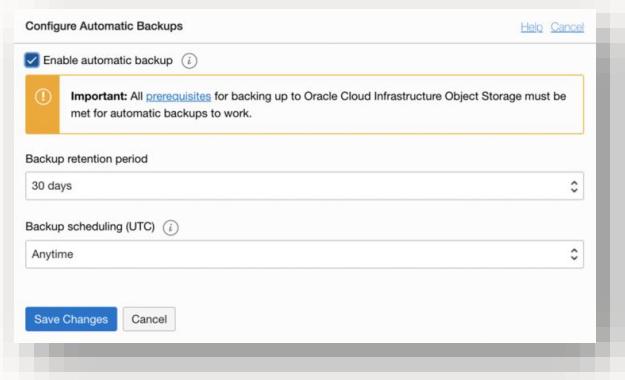
- Enable Automatic Incremental backups
- View the list of managed backups for a database
- Create full backups on demand is not allowed on Exadata @Customer
- Backup data is always automatically encrypted using Transparent Data Encryption
- Do not delete any necessary encryption keys from the wallet or vault because this causes database and backup protected by the key to become unavailable

The screenshot shows the 'Configure Automatic Backups' dialog box. It includes:

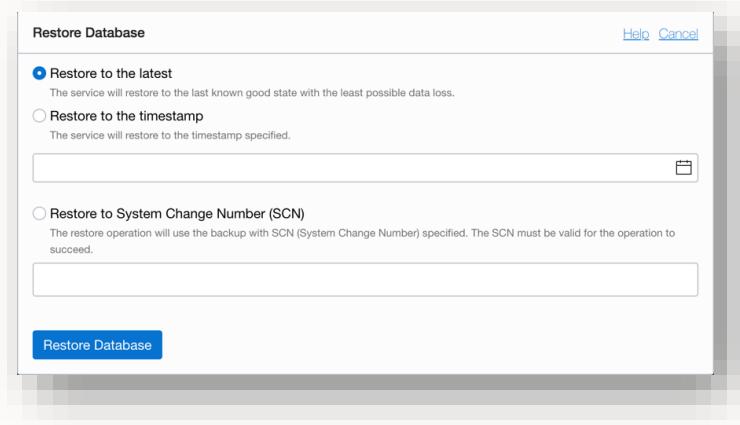
- A checked checkbox for 'Enable automatic backup'.
- A yellow warning box stating: 'Important: All [prerequisites](#) for backing up to Oracle Cloud Infrastructure Object Storage must be met for automatic backups to work.'
- A dropdown for 'Backup retention period' set to '30 days'.
- A dropdown for 'Backup scheduling (UTC)' set to 'Anytime'.
- Buttons for 'Save Changes' and 'Cancel' at the bottom.

# Automatic Backups for Exadata Database Service Characteristics

- Database Backup occur daily
- Archived redo log files are backed up every 30 minutes for ExaDB-C@C
- There is a 7-day backup cycle:
  - With one full backup
  - And daily incremental backups
- The default retention period is :
  - 30 days for backups to cloud object storage or NFS
  - 7 days for backup to local Exadata storage
  - Assigned ZDLRA Backup Policy will determine the retention period
- For database deployments with Oracle Data Guard, automatic backups are always executed on the original primary site



# Restoring Database from OCI Automatic Backup



- You can recover your database up to 3 options
  - Lasted point of fail or database unavailability
  - To a specific timestamp
  - Up to a specific System Change Number (SCN)

# Cloud Backup and Restore Tools



# Exadata Cloud Compute Node Backup and Restore Operations MOS Note: [2809393.1](#)

## SOLUTION

This note describes:

- i. How a customer can request a restore from an Oracle Cloud Managed Backup
- ii. How to perform a customer managed virtual machine backup

### Oracle Cloud managed virtual machine backups

Every Exadata virtual machine is backed up automatically and stored in the Exadata infrastructure if space exists.

The Oracle Cloud Operations team monitors and manages these backups. These backups can be used to resurrect a virtual machine that may have been completely damaged to the extent that it may not boot.

Oracle Cloud managed virtual machine backups frequency and retention:

1. The backup runs once a week
2. One backup copy is retained.

Oracle cloud operations, via SR, can help with any post actions to restore availability of the entire RAC cluster with Control Plane.

### Customer managed virtual machine backups

A backup can be performed from inside the virtual machine, which can then be used to restore one or more files of the virtual machine.

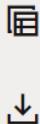
Oracle recommends a backup before and after virtual machine software, or hardware maintenance, or any frequency to preserve critical configuration or application data. For example, a backup should be made before and after the following procedures:

- Application of operating system patches
- Application of Oracle patches
- Reconfiguration of operating parameters
- Installation or reconfiguration of non-Oracle software
- Periodically to protect from complete loss of critical application or configuration files

# Don't Forget to Backup your OCR Register and Voting Files

Database / Oracle / Oracle Database / Release 19

## Clusterware Administration and Deployment Guide



### 6 Managing Oracle Cluster Registry and Voting Files

Oracle Clusterware includes two important components that manage configuration and node membership: Oracle Cluster Registry (OCR), which also includes the local component Oracle Local Registry (OLR), and voting files.

- OCR stores Oracle Clusterware and Oracle RAC database configuration information
- OLR resides on every node in the cluster and manages Oracle Clusterware configuration information for each particular node
- Voting files store information about node membership. Each voting file must be accessible by all nodes in the cluster for nodes to be members of the cluster

#### Notes:



#### 6 Managing Oracle Cluster Registry and Voting Files

Managing Oracle Cluster Registry and Oracle Local Registry

Managing Voting Files



# OCI ZDL Autonomous Recovery Services



# Zero Data Loss as a Service on OCI



A screenshot of a web page titled "Maximum Availability Architecture". The main heading on the page is "Maximum Availability Architecture". In the top right corner of the page, there is a "Follow:" button with a social media icon and a "SCAN ME" QR code.

Backup & Recovery

## Introducing the Oracle Database Zero Data Loss Autonomous Recovery Service

October 17, 2022 | 5 minute read



Kelly Smith

Senior Principal Product Manager

[Click Here](#)



# Oracle Database Zero Data Loss Autonomous Recovery Service

A fully managed, automated service for continuously protecting Oracle databases in OCI

## Ransomware resiliency

- Automatic and mandatory encryption to help prevent data theft
- Safeguards backups with enforced 14-day retention
- Optimizes backups in the background for fast recovery with zero data loss

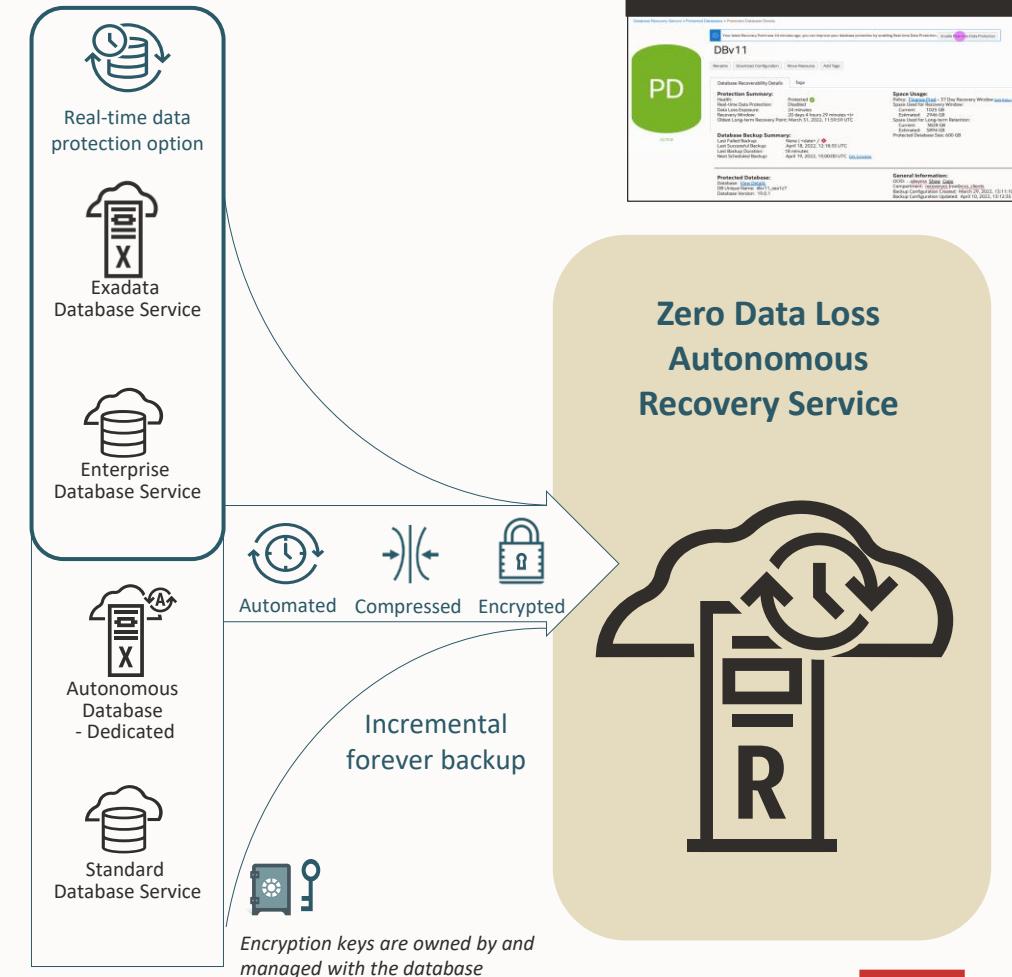
## Operational efficiency

- No more weekly full backups – eliminates production database overhead
- Shorter backup windows with incremental forever strategy
- Zero-impact database recovery validation for every backup

## Cloud simplicity

- Quickly configure database protection at scale with zero data loss
- Control costs with database-specific backup consumption metrics
- Gain deep data protection insights with granular recovery health dashboard

## Using proven Recovery Appliance technology

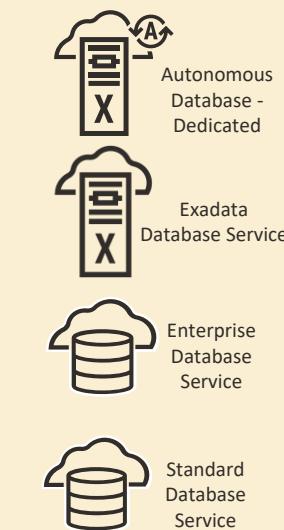


# Recovery Service eliminates weekly full backups

Incremental-forever backups reduce backup overhead on production database services



Time  
Machine

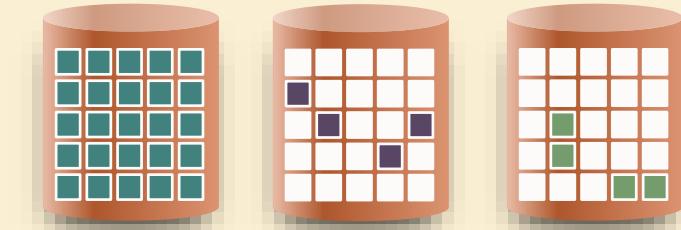


01001010110  
10010101101  
01001010110  
01001010010  
10010101100



Incremental forever backups  
of protected databases

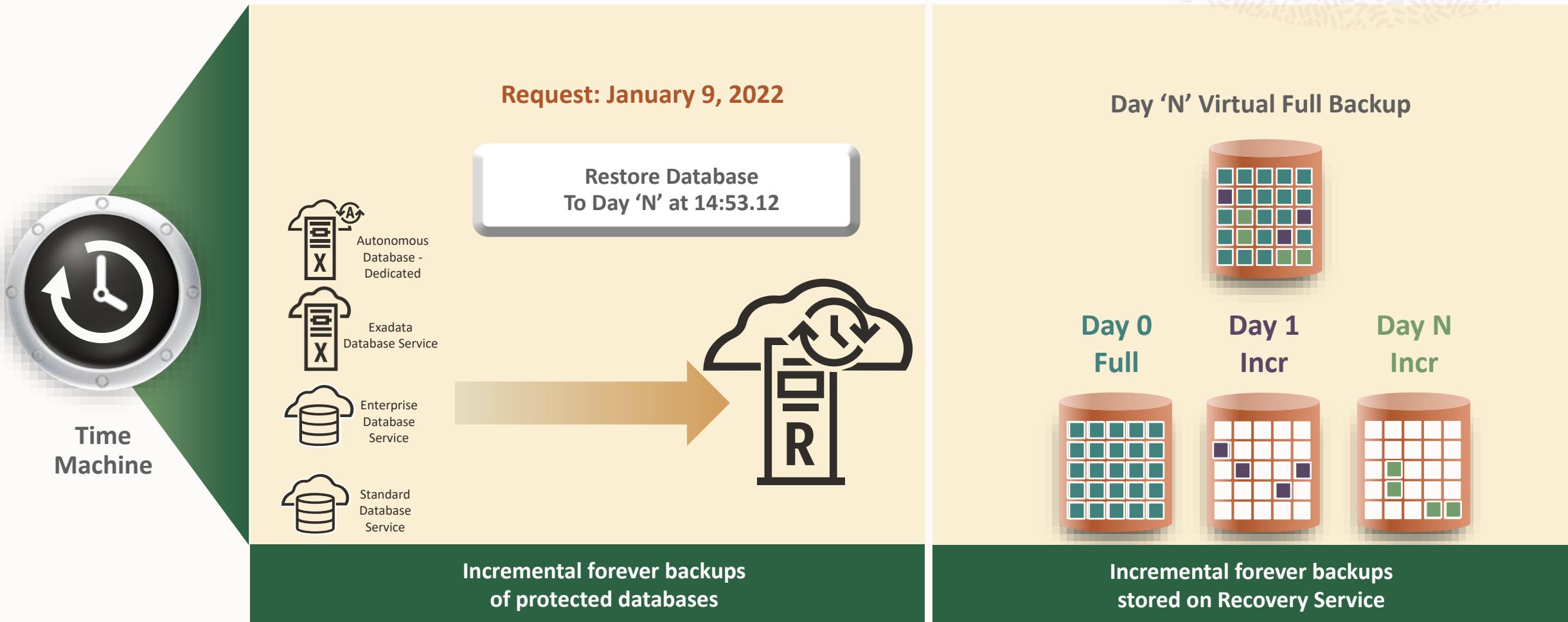
Day 0  
Full  
Day 1  
Incr  
Day N  
Incr



Incremental forever backups  
stored on Recovery Service

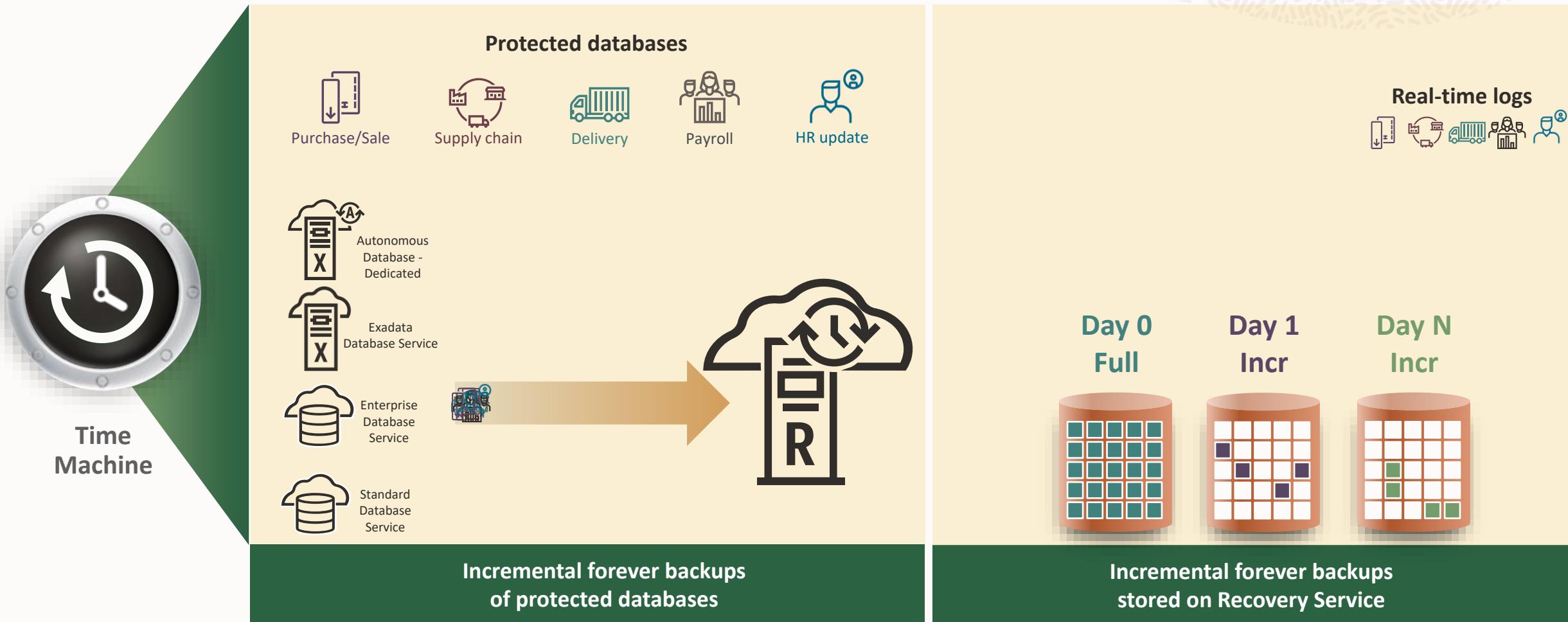
# Recovery Service simplifies database restores

Creation of virtual full backups eliminates multiple incremental restore & apply cycles



# Recovery Service continuously protects Oracle databases

Real-time protection of database changes increases resiliency with point-in-time recovery



# Recovery Service is easy to set up and use

Protect Oracle databases with less than 5 clicks in the OCI console

A fully managed OCI service with a simple UI

1. Enable automatic backups
2. Schedule daily incremental backups to meet your business schedule
3. Select Autonomous Recovery Service
4. Select protection window of 14 to 95 days
5. Enable real-time protection

## Configure automatic backups

Enable automatic backups [\(i\)](#)

**Important:** For automatic backups to function, all [prerequisites](#) must be met.

Backup scheduling (UTC) [\(i\)](#)

2:00AM - 4:00AM

Backup destination [\(i\)](#)

Autonomous Recovery Service

Protection policy in **ZDLRA** [\(i\)](#) ([Change Compartment](#))

Bronze (14-days recovery window)

Enable real-time data protection [\(i\)](#)

Deletion options after database termination [\(i\)](#)

Retain backups according to the protection policy retention period

Retain backups for 72 hours, then delete

[Save changes](#)

[Cancel](#)

[Help](#)



# Recovery Service protects against unauthorized access

Built-in security and resiliency help safeguard mission-critical data

## Encryption is mandatory

- Non-encrypted databases are rejected
- Keys are never stored in the Recovery Service

## Access and management controls

- No direct user access to storage – backup only
- Access granted per protected database
- 14-day minimum retention enables recovery from human error or malicious internal actors

## Resilient operations

- Fault-tolerant across all infrastructure components
- Highly available across Availability Domains and Fault Domain
- Load balanced within a region

The screenshot shows the Oracle Cloud interface for managing protected databases. At the top, there's a navigation bar with the Oracle Cloud logo, 'Cloud Classic', a search bar, and a dropdown for 'US East (Ashburn)'. Below the navigation is a breadcrumb trail: 'Database Backups > Protected Databases > Protected database details'. The main content area has a large green circular icon containing the letters 'PD' and the word 'ACTIVE' below it. To the right of this icon, the word 'FINANCE' is displayed. The page is divided into several sections: 'Protected database information' (which is currently selected), 'Tags', 'Protection summary' (showing Health: Protected, Real-time data protection: Disabled, Data loss exposure: 0 seconds, Protection policy: Bronze 14-day recovery window, Current recovery window: 14 d 11 h 45 m), 'Space usage' (Space used for recovery window: Current: 16,231.27 GB, Projected for policy: 16,216.83 GB, Protected database size: 5,790.931 GB), 'Database backup summary' (Last failed backup: —, Last completed backup: Mon, Oct 10, 2022, 02:56:02 UTC, Last backup duration: 4 m 53 s), 'Protected database' (Database details: FINANCE, OCID: ...4w7dxa, Show, Copy), and 'General information' (OCID: ...4w7dxa, Show, Copy). A small blue square icon with a white 'Q' is located in the bottom right corner of the main content area.

# Recovery Service provides insights into backup health and operations

Built-in dashboards and tools simplify reporting and planning

Continuous monitoring of potential business risks

- Data loss exposure
- Recovery window

Critical data for operational planning

- Capacity usage
- Protection policy

## Protected databases in ZDLRA Compartment

Protected databases offer an RMAN integrated 'incremental-forever' backup strategy to transfer Oracle Database backups to Oracle Cloud. Built to reduce network consumption and storage utilization, protected databases enable real-time data protection, backup validation and policy driven backup administration for all databases. [Learn more](#).

Name	State	Health	Source database	Real-time data protection	Data loss exposure	Current recovery window	Recovery window space used	Protection policy	Database size	⋮
<a href="#">FINANCE</a>	<span>● Active</span>	Protected <span> ⓘ</span>	<a href="#">FINANCE</a>	Enabled	0	7 d 7 h 54 m	8,121.12 GB	<a href="#">Bronze</a>	5,778 GB	⋮
<a href="#">SALES</a>	<span>● Active</span>	Protected <span> ⓘ</span>	<a href="#">SALES</a>	Disabled	29 m 47 s	7 d 8 h 12 m	9,022.26 GB	<a href="#">Silver</a>	3,944 GB	⋮
<a href="#">HRMS</a>	<span>● Active</span>	Protected <span> ⓘ</span>	<a href="#">HRMS</a>	Disabled	29 m 49 s	7 d 8 h 15 m	5,427.58 GB	<a href="#">Bronze</a>	3,909 GB	⋮

Real-time protection and data loss exposure

Recovery window and capacity used

Protection policy

# Recovery Service integrates with OCI observability and management

Comprehensive visibility across the full cloud stack

Integration with OCI Metrics Explorer provides common access to critical information

The screenshot shows the Oracle Cloud Metrics Explorer interface. The top navigation bar includes the Oracle Cloud logo, Cloud Classic, a search bar, and account information for US East (Ashburn). The left sidebar has a 'Monitoring' section with links for Service Metrics (selected), Metrics Explorer, Alarm Status, Alarm Definitions, and Health Checks. The main area is titled 'Service Metrics' and displays two line charts. The first chart, 'Space used for recovery window', shows usage in GB over time (Sep 18 to Oct 09) with a red line peaking around 15GB. The second chart, 'Protected Database Size', shows size in GB over the same period with a red line fluctuating between 4,000 and 6,000 GB. Both charts have dropdowns for 'Interval' (1 day), 'Statistic' (Max), and 'Metric namespace' (oci\_recovery\_service). A 'Dimensions' link is also present. The bottom of the page includes terms like 'Terms of Use and Privacy' and copyright information.

Alarms and notifications are created within OCI for consistent monitoring and management

The screenshot shows the Oracle Cloud Create Alarm interface. The top navigation bar is identical to the Metrics Explorer screenshot. The left sidebar has a 'Monitoring' section with links for Service Metrics, Metrics Explorer, Alarm Status, Alarm Definitions (selected), and Health Checks. The main area is titled 'Create Alarm' and has two main sections: 'Define alarm' and 'Metric description'. In 'Define alarm', fields include 'Alarm name' (Production Data Loss Exposure Alarm), 'Alarm severity' (Critical), and 'Alarm body' (optional notification content). In 'Metric description', fields include 'Compartment' (ZDLRA), 'Metric namespace' (oci\_recovery\_service), 'Resource group' (None), 'Metric name' (DataLossExposure), 'Interval' (1h), and 'Statistic' (Mean). A 'Tags (optional)' section is also present.



# Exadata Cloud backup and restore tools





SCAN ME

# Rman Database Backup and Recover 19c User's Guide

Database / Oracle / Oracle Database / Release 19

## Backup and Recovery User's Guide



Expand



Title and Copyright Information



Preface



Changes in This Release for Backup and Recovery User's Guide

Changes in Oracle Database Release 19c

Changes in Oracle Database Release 18c, Version 18.1



Part I Overview of Backup and Recovery



Part II Starting and Configuring RMAN and Flashback Database



Part III Backing Up and Archiving Data



Part IV Managing RMAN Backups



Part V Diagnosing and Responding to Failures



Part VI Tuning and Troubleshooting



Part VII Transferring Data with RMAN



Part VIII Performing User-Managed

## Changes in This Release for Backup and Recovery User's Guide

This preface contains:

- [Changes in Oracle Database Release 19c](#)
- [Changes in Oracle Database Release 18c, Version 18.1](#)

## Changes in Oracle Database Release 19c

The following are changes in the *Oracle Database Backup and Recovery User's Guide* for Oracle Database Release 19c.

- Recovery catalog support for PDBs

You can connect to a recovery catalog when the target database is a pluggable database (PDB).

See "[Connecting as Target to a PDB](#)".

- Automatic deletion of flashback logs

Flashback logs that are beyond the retention period are automatically deleted. Automatically deleting flashback logs simplifies the management of the fast recovery area and improves the performance of flashback database.



### Changes in This Release for Backup and Recovery User's Guide

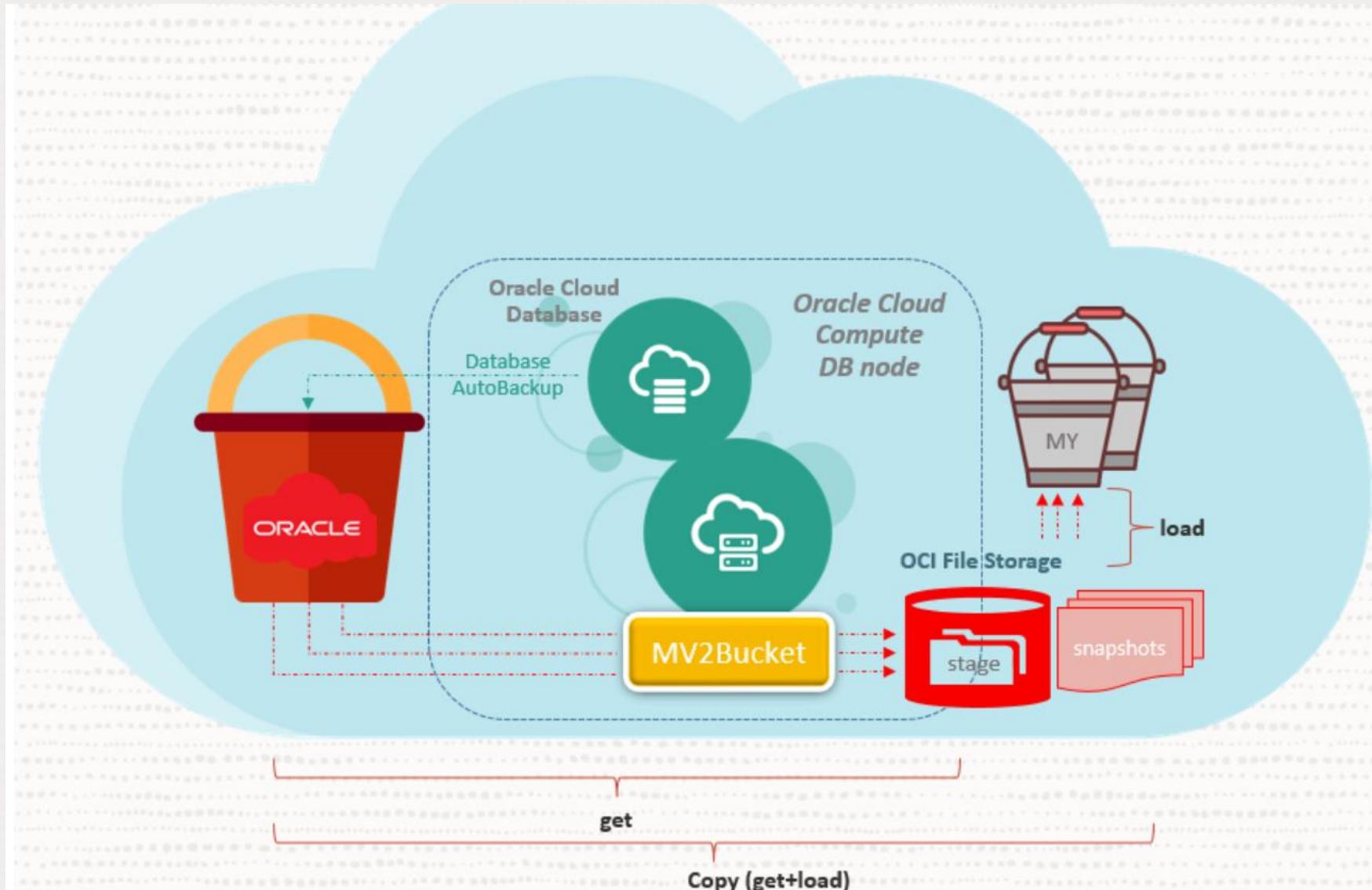
Changes in Oracle Database Release 19c

Changes in Oracle Database Release 18c, Version 18.1

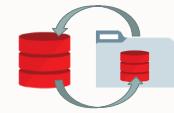


[Click Here](#)

## (OCI) mv2bucket - Oracle Managed Bucket Content Manager MOS Note: [2723911.1](#)



# Exadata Cloud Services: User Configured Backups



RMAN

RMAN backup via dbaascli and bkup\_api

	SCHEDULING	<ul style="list-style-type: none"><li>No Control Plane (Cloud Console) backup scheduling</li><li>Scheduled by cron job, runs from first node</li><li>Automatic archivelog backup every 30 minutes</li><li>Ability to change default backup time and LO backup day</li></ul>
	DESTINATION	<ul style="list-style-type: none"><li>Customer-created bucket (fully controlled by the customer, including replication)</li><li>No support for archive storage</li></ul>
	REPLICAS	<ul style="list-style-type: none"><li>Option to set up cross-region backup replication</li></ul>
	CREDENTIALS	<ul style="list-style-type: none"><li>Customer responsible for password rotation</li></ul>
	WALLET	<ul style="list-style-type: none"><li>TDE wallet backed up, but not its password or the autologin wallet</li></ul>
	RESTORE	<ul style="list-style-type: none"><li>Restore CDB and PDB capabilities</li><li>No duplicate on the same host via bkup_api</li></ul>
	FAILOVER	<ul style="list-style-type: none"><li>Backup initiated on a specific node.</li><li>Failure of the node will fail the current backup api call.</li></ul>
	STANDBY	<ul style="list-style-type: none"><li>No backup for standby database but can be configured to backup once role is primary</li></ul>
	CHARGING	<ul style="list-style-type: none"><li>For object storage space and number of requests (not for the backup module)</li></ul>



# Dbaascli Creating initial configuration file



```
[root@exacc06- [REDACTED] ~]# dbaascli database backup --configure --dbName Demo19c --configFile /root/demo19c.cfg
DBAAS CLI version 23.1.2.0.0
Executing command database backup --configure --dbName Demo19c --configFile /root/demo19c.cfg
[root@exacc06- [REDACTED] ~]# dbaascli database backup --getConfig --dbName Demo19c --configFile demo19c.cfg
DBAAS CLI version 23.1.2.0.0
Executing command database backup --getConfig --dbName Demo19c --configFile demo19c.cfg
Session log: /var/opt/oracle/log/Demo19c/database/backup/dbaastools_2023-07-29_07-38-59-PM_112477.log
DBaaS Backup API V1.5 @2023 Multi-Oracle home
-> Action : get_config
-> logfile: /var/opt/oracle/log/Demo19c/bkup_api_log/bkup_api_3f37b009_20230729193902.659225.log
File /root/demo19c.cfg created
dbaascli execution completed
-----
dbaascli execution completed
```



SCAN ME

# Dbaascli most used Database Backup commands

```
# dbaascli database backup --dbname      --list  [--backupType <value>]
                                         --start [--level0]  [--level1]
                                         [--archival --tag <value>]
                                         [--archivelog]
                                         --delete --backupTag <value>
                                         --status --uuid <value>
                                         --getBackupReport
                                         [--tag <value>]
                                         [--latest]
                                         --showHistory
                                         --configure
                                         --validate [--untilTime <value>]
                                         --getConfig [--configFile <value>]
```

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# Dbaascli most used pdb backup commands



```
# dbaascli pdb backup --pdbName <value> --dbname <value> --start  
                                [--level1]  
                                [--archival --tag <value>]  
                                --delete --backupTag <value>  
                                --status --uuid <value>  
                                --getBackupReport  
                                --list [--json <value>]
```

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## Dbaascli most used Databases recovery commands

```
# dbaascli database recover --dbname <value> --start [--untilTime <value>]  
[--untilSCN <value>]  
[--latest]  
[--tag <value>]  
--status --uuid <value>
```

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# Dbaascli most used Databases recovery commands



```
# dbaascli pdb recover --pdbName <value> --dbname <value> --start [--untilTime <value>]  
[--untilSCN <value>]  
[--latest]  
[--tag <value>]  
--status --uuid <value>
```

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# Exadata C@C Network





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# Exadata Cloud at Customer | VM Cluster Network

Resources

## VM Cluster Networks

**VM Cluster Networks**

Exadata VM Clusters

DB Servers

Autonomous Exadata VM Clusters

Work Requests (3)

Create VM Cluster Network

Display name	State	Created	⋮
[REDACTED]	Allocated	Fri, Aug 12, 2022, 15:42:12 UTC	⋮
[REDACTED]	Allocated	Wed, Mar 16, 2022, 20:37:30 UTC	⋮
[REDACTED]	Requires Validation	Fri, Jan 21, 2022, 14:33:07 UTC	⋮
[REDACTED]	Allocated	Sat, Jun 26, 2021, 00:40:53 UTC	⋮
[REDACTED]	Allocated	Fri, Jun 25, 2021, 20:34:28 UTC	⋮

Displaying 5 VM Cluster Networks < 1 of 1 >

[Click Here](#)



# Exadata Cloud at Customer | Backup Network

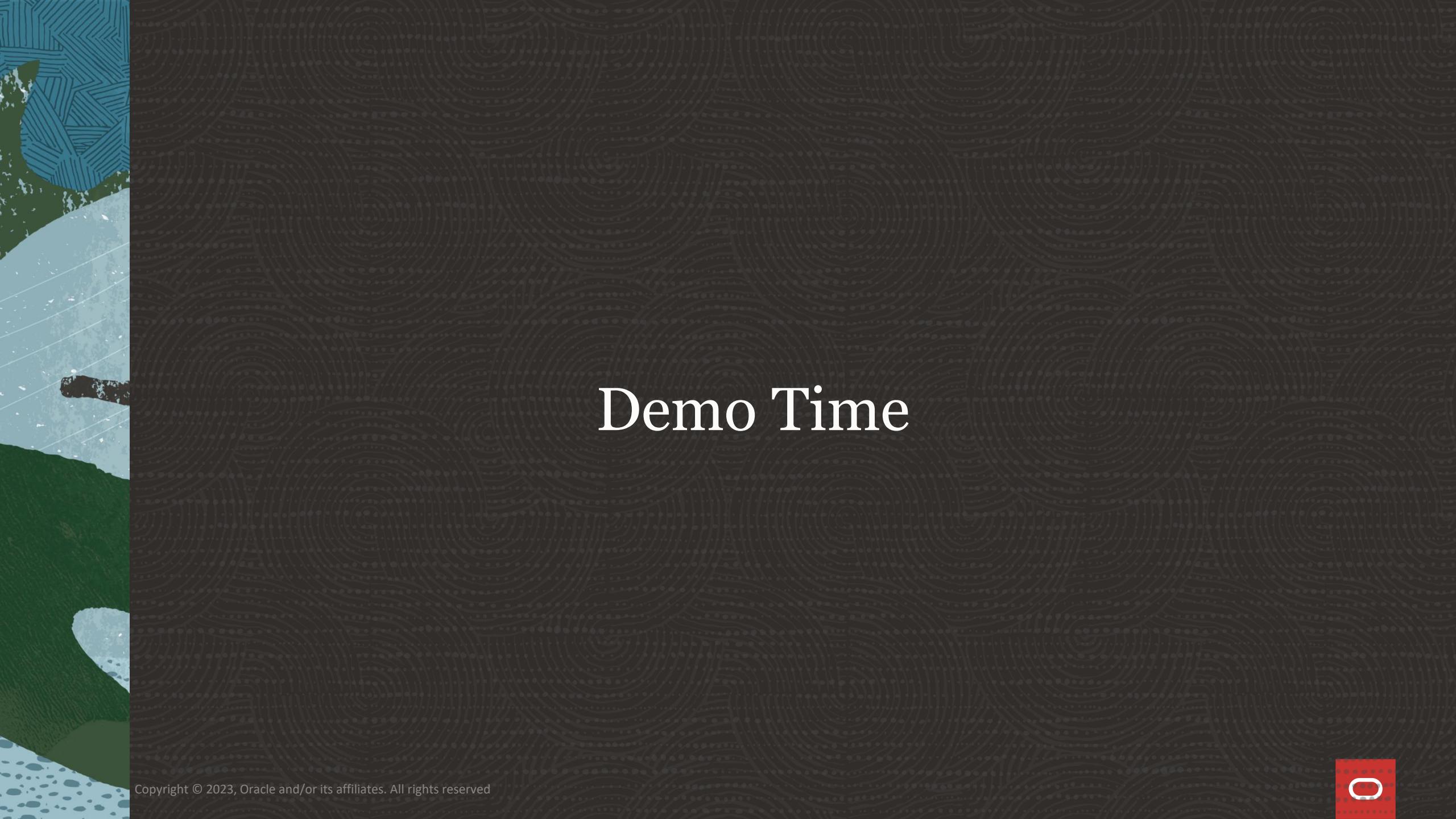
## Backup Network

VLAN ID: 16

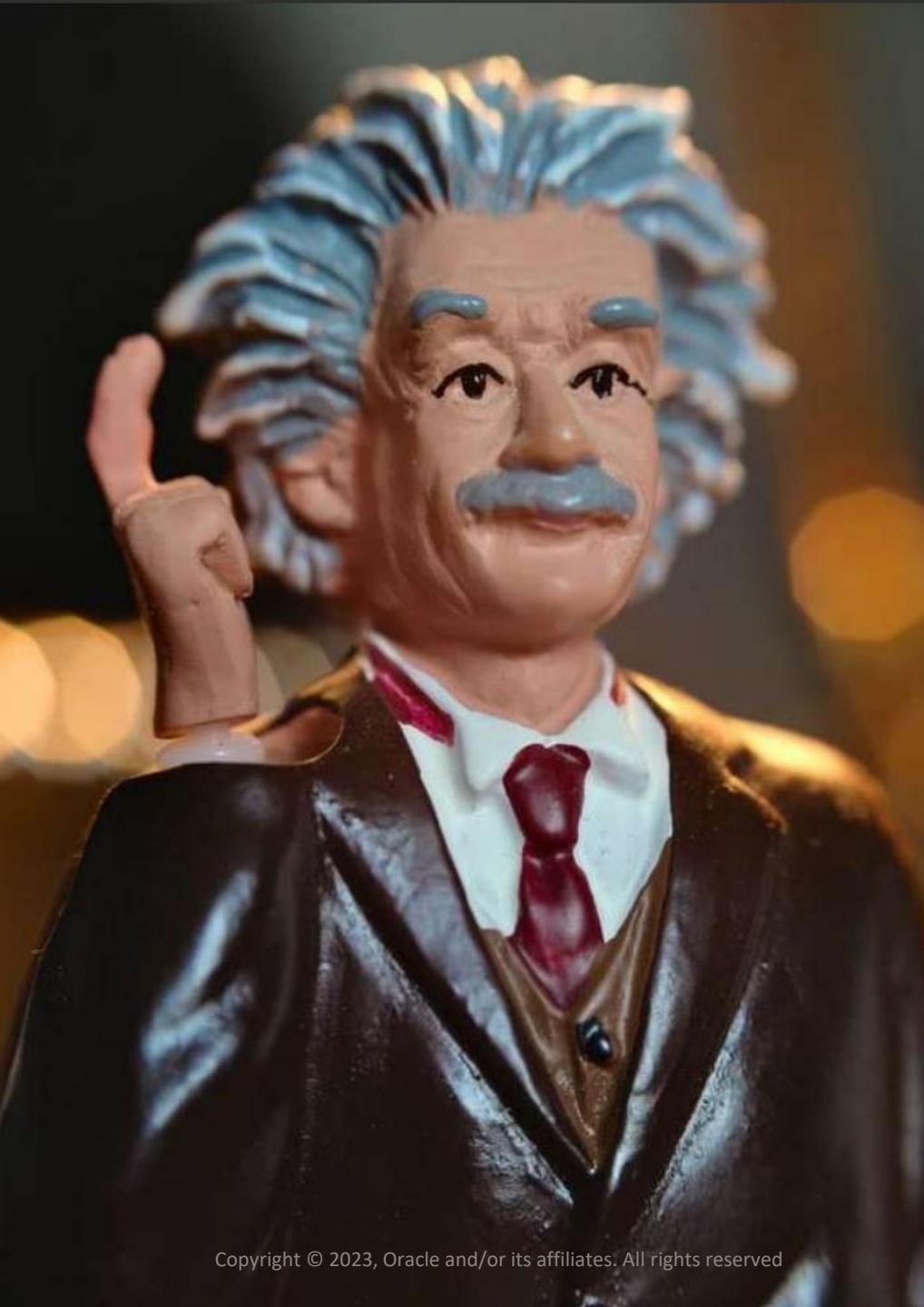
Netmask: 255.255.255.0

Gateway: 10.0.0.1

Database servers	State	Address Type	Hostname	Fully Qualified Domain Name	IP Address	
dbServer-1	Allocated	Backup network interface	exacc6-01-00-11-00-00-00	bkp.br.osc.oracle.com	10.0.0.100	⋮
dbServer-2	Allocated	Backup network interface	exacc6-02-00-11-00-00-00	bkp.br.osc.oracle.com	10.0.0.101	⋮
Showing 2 Items						



# Demo Time



## Demo 1 – OCI backup provisioning

- Configuring Automatic backup Via OCI Console
- Restore Database Using OCI Console



## Demo 2 – Backing up via *dbaascli*

- Backing up Database and PDB's using *dbaascli*
- Backing up *TDE encryption* key using *dbaascli*
- Checking Database and PDB's backup history using *dbaascli*

## Demo 3 – Tuning Rman Backup

- Enabling Oracle *Rman Block Change Tracking*
- Run *incremental backup level 1*
- Run the same *incremental level 1* again
- Compare both times

# Resources



# Exadata Cloud at Customer X9M Data Sheet



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## Oracle Exadata Cloud@Customer X9M

Run the world's most advanced database services - Oracle Autonomous Database and Oracle Exadata Database Service - on the most powerful, available, and secure database cloud platform, in your data center

### EXADATA CLOUD@CUSTOMER

Exadata Cloud@Customer is a hybrid cloud platform for Oracle databases. It is the database cloud platform for customers who desire cloud benefits, but require

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# Exadata Cloud at Customer X10M Data Sheet



ORACLE

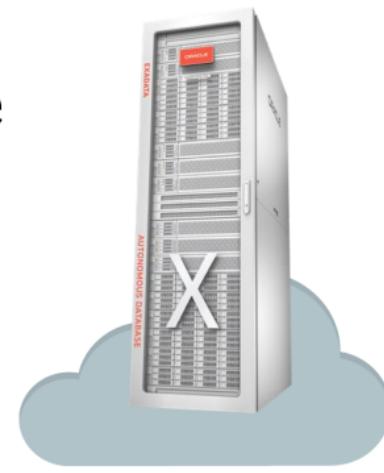
## Oracle Exadata Database Service on Cloud@Customer X10M

Run Oracle's most powerful, available, and flexible cloud database service – Oracle Exadata Database Service – in your data center on Exadata Cloud@Customer

### Exadata Database Service

Exadata Database Service combines the world's #1 database technology, Oracle Database, with Exadata, in a choice of either Oracle public cloud or customer data centers, delivering the simplicity, elasticity, and economics of a cloud-based deployment. It offers fully-featured Oracle Enterprise Edition databases with pay per use software licensing on Exadata infrastructure subscribed to as a service. Exadata Database Service is co-managed by Oracle and customers. Oracle manages the infrastructure while customers manage their operating environments.

Customers have the flexibility to control many aspects of the service, which

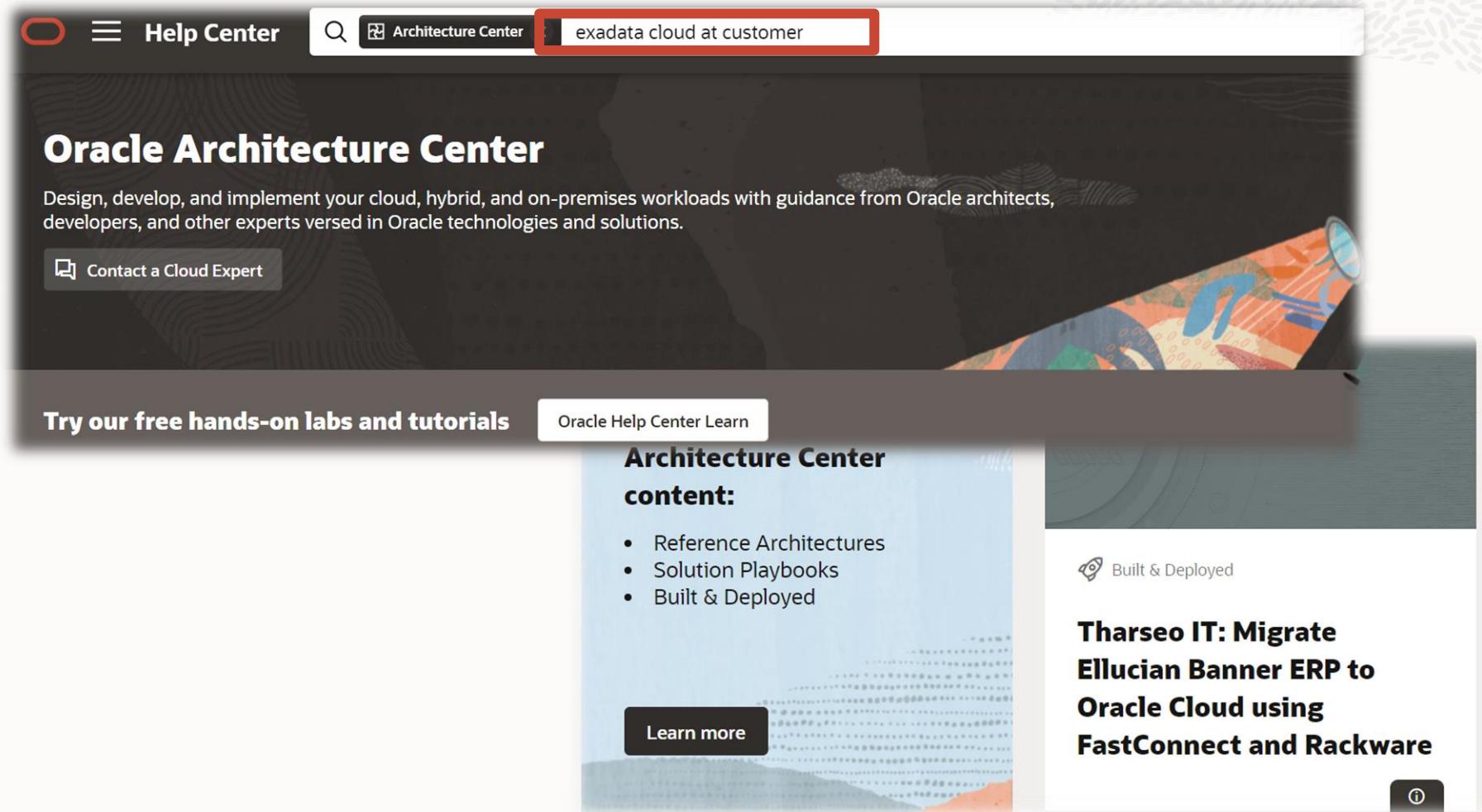


Oracle Exadata  
Cloud@Customer X10M

"Exadata Cloud@Customer enables us to keep very low latency between the database engine and the applications, which we couldn't achieve otherwise. The machine is very reliable,

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# Exadata Cloud Oracle on Architecture Center



The screenshot shows the Oracle Architecture Center homepage with a search bar containing the query "exadata cloud at customer". Below the search bar, there's a large banner for "Oracle Architecture Center" with a subtext: "Design, develop, and implement your cloud, hybrid, and on-premises workloads with guidance from Oracle architects, developers, and other experts versed in Oracle technologies and solutions." A "Contact a Cloud Expert" button is visible. On the left, a callout box says "Try our free hands-on labs and tutorials" and "Oracle Help Center Learn". It lists "Architecture Center content:" which includes "Reference Architectures", "Solution Playbooks", and "Built & Deployed". A "Learn more" button is present. To the right, there are two cards: one for "Tharseo IT: Migrate Ellucian Banner ERP to Oracle Cloud using FastConnect and Rackware" (status: "Built & Deployed") and another for "Deploy a containerized Jenkins CI/CD pipeline by using Terraform on Oracle Cloud Infrastructure" (status: "Automation Available"). Both cards have a "Reference Architecture" link.

[Click here](#)



# Exadata Cloud on Oracle Live Labs



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## Oracle Autonomous Database Dedicated for Fleet Administrators



As fleet administrator, set up your dedicated ADB platform in the OCI and on Exadata Cloud@Customer.

⌚ 7 hrs

5463 Views

## Oracle Exadata Platform Performance Features



Get hands-on with Oracle Exadata, Exadata Database Service on Cloud@Customer, and Exadata Database (...)

⌚ 1 hr, 20 mins

717 Views

## Get Started with Oracle Exadata Database Service on Cloud@Customer



Explore getting started with Oracle Exadata Database Service on Cloud@Customer.

⌚ 1 hr

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# OPN Web Page

Oracle PartnerNetwork (OPN) Members

## Welcome to the OPN Portal!

Expertise is the cornerstone of OPN - customer success is the reward.

The OPN Portal provides guidance to enable your journey to customer success and make partnering with Oracle as simple as possible.

- **Build Expertise** leveraging skills transfer, environments and technical assistance
- **Go-to-Market** using tools and guidance on how to take your solutions and services to market
- **Stay Connected** with the latest OPN has to offer and ask questions in our Partner Community Forums
- **Manage Your Membership** by monitoring your Expertise achievements, executing agreements, updating your Partner Finder profile, and more

*We are stronger together. Log in today and let's get started!*



Have you heard?



### 4 Steps to Marketing Success

Take a quick tour now of the marketing resources available to you from Oracle. This Partner's Guide to Oracle Marketing Resources infographic will help you explore and discover valuable steps to boost your business.

[Get Started](#)

[Click here](#)



# Stay Connected with the Latin America Partner Community!

Information, collaboration and training all in a single spot.

The [\*\*LAD Partner Community\*\*](#) is a space dedicated to our partners in Latin America, where you can find information and stay up to date on what OPN has to offer.

In the Community, you will find all the information that we communicate to our ecosystem by email.

- Explore [\*\*Categories\*\*](#): organized by grouping publications on a same topic;
- Access the [\*\*Recent Discussions\*\*](#) tab to check the latest posts published;
- Take part in [\*\*Groups\*\*](#) and interact with Oracle Experts and other partners;
- Recordings.

**Important:** An Oracle SSO account is required to access the Community and other OPN resources. If you don't have this account yet, access [this link](#) or the QR code below.

Access the Community:



Create your SSO account:





**Thank You 😊**

**Questions / Feedback / Training Suggestions**

[alexandre.af.fagundes@oracle.com](mailto:alexandre.af.fagundes@oracle.com)

[marcel.lamarca@oracle.com](mailto:marcel.lamarca@oracle.com)

**Ask for help 😊**

ORACLE

