



Oracle Cloud DBA

Lear how to stay up to date on this Dbaas era

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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.

Agenda Day 1

OCI Database NoSQL Services

OCI Databases Backup and Restore

Exadata X10M What is new?

Demo – *NoSQL Table Provisioning*

Demo – *Dbaascli Tour*

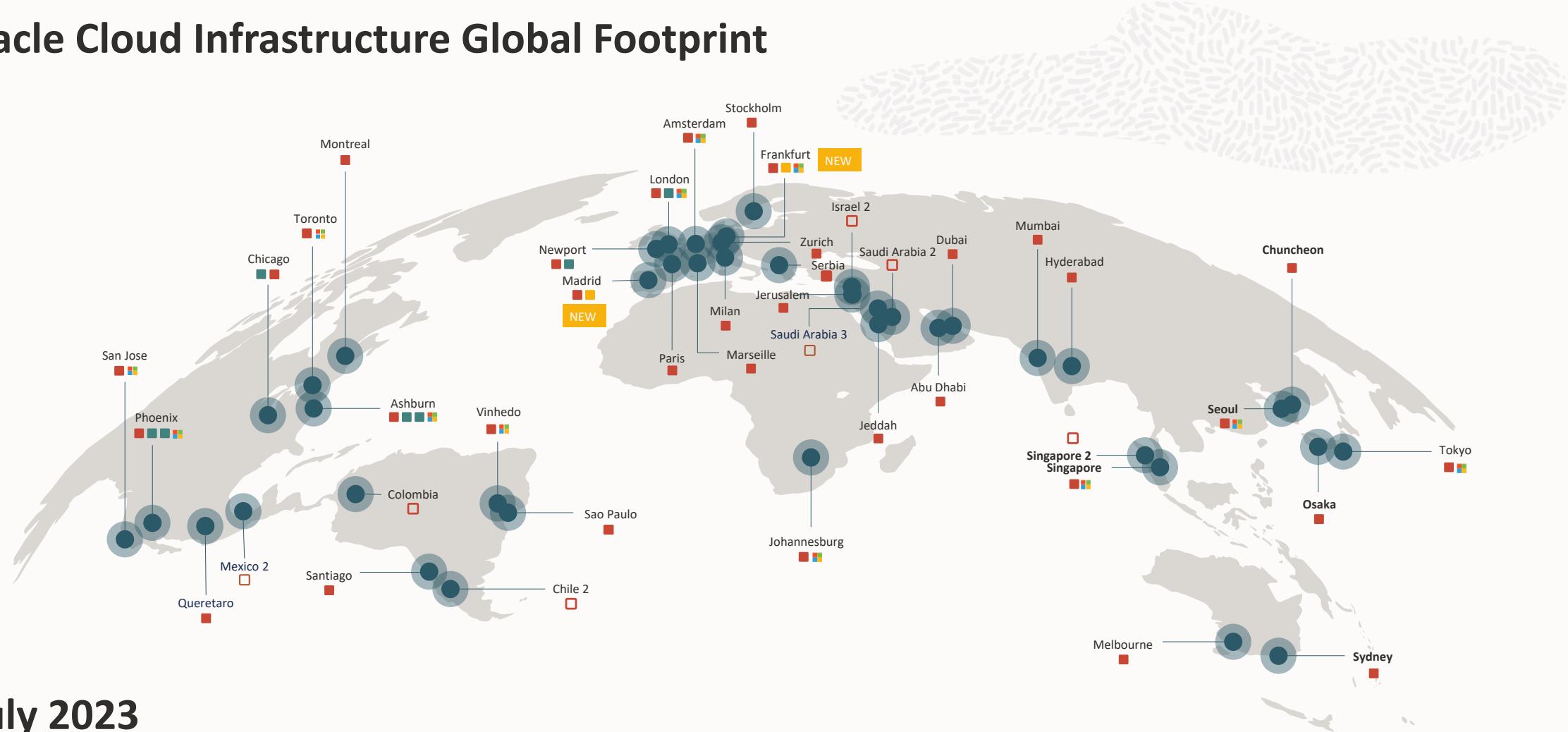
Demo – *Exadata OCI Console Tour*

OCI Cloud Region Map

Current Oracle Datacenter around the World



Oracle Cloud Infrastructure Global Footprint



July 2023

44 regions; 7 more planned
12 Azure Interconnect Regions

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

OCI Database Services



OCI Database Services

Resilient recovery with no data loss is a foundational requirement



Mission critical Cloud database service

- Exadata, RAC, Bare Metal, VM



Complete Lifecycle Automation

- Provisioning, Patching, Backup & Restore

High Availability and Scalability

- RAC & Data Guard
- Dynamic CPU and Storage Scaling



Security

- Infrastructure (IAM, Security Lists, Audit logs)
- Database (TDE, Encrypted RMAN backup / Block volume encryption)

OCI Platform integration

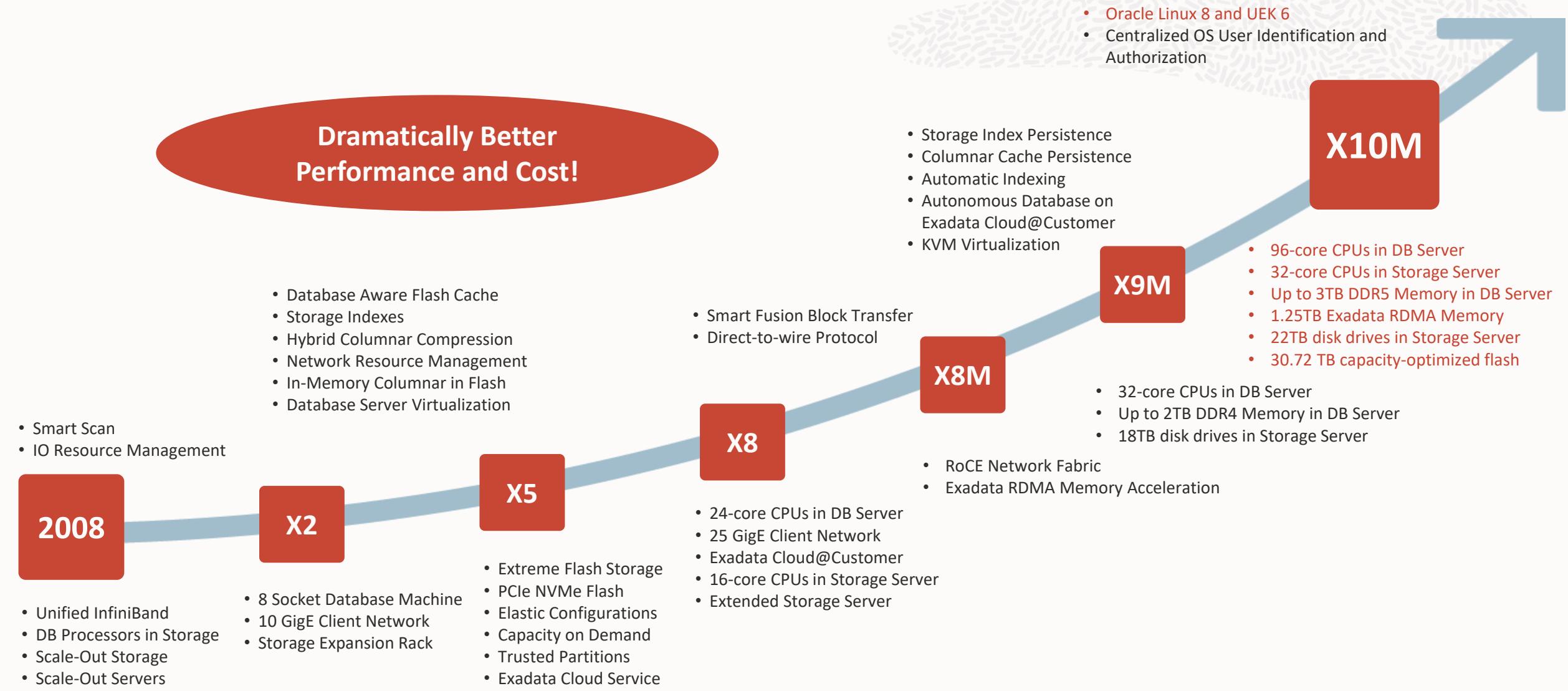
- Tagging, Limits and Usage integration



Oracle Exadata Cloud



Exadata Advantages Increase Every Year



Exadata runs everywhere

Identicality across deployments improves IT agility and reduces costs



On-premises



Exadata Database
Machine

[Click Here](#)

Public Cloud



Exadata in Oracle
Cloud Infrastructure
(OCI)

[Click Here](#)

Hybrid Cloud



Exadata
Cloud@Customer

[Click Here](#)

Multicloud

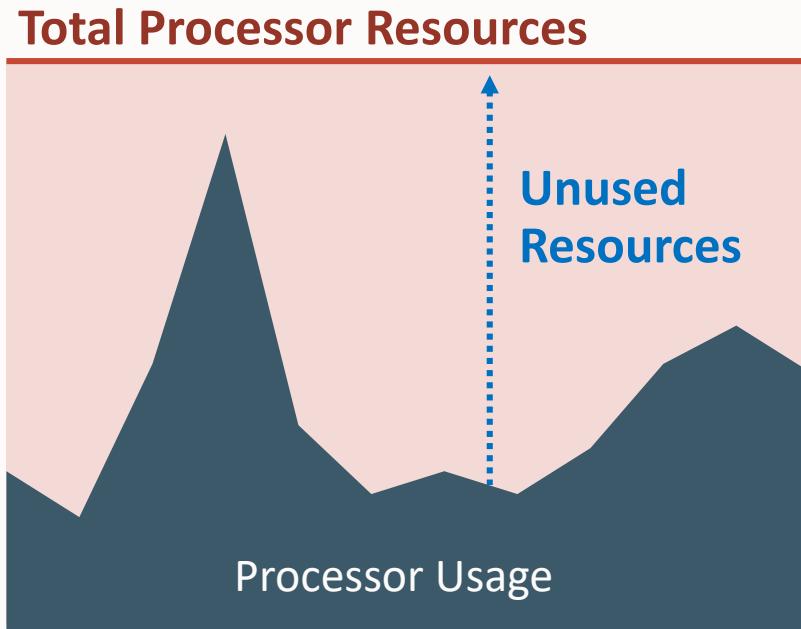


Exadata through Oracle
Database Service for
Azure

[Click Here](#)

Online, Elastic Scaling with Exadata Cloud

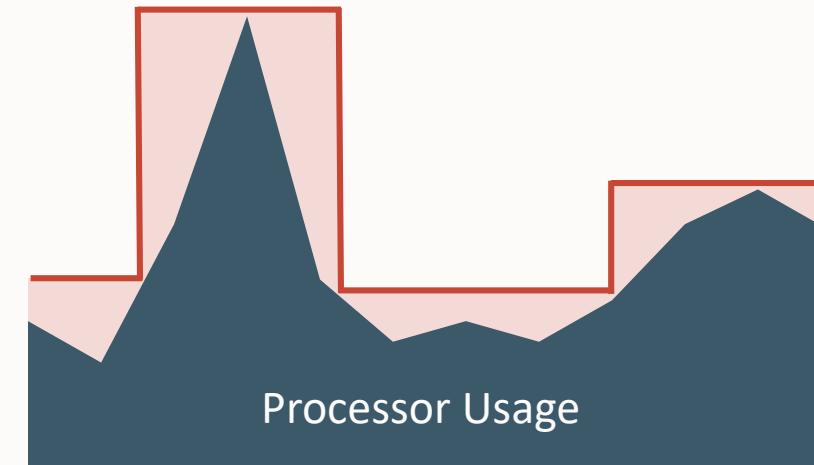
Pay Only for What You Use



On-Premises – Static

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

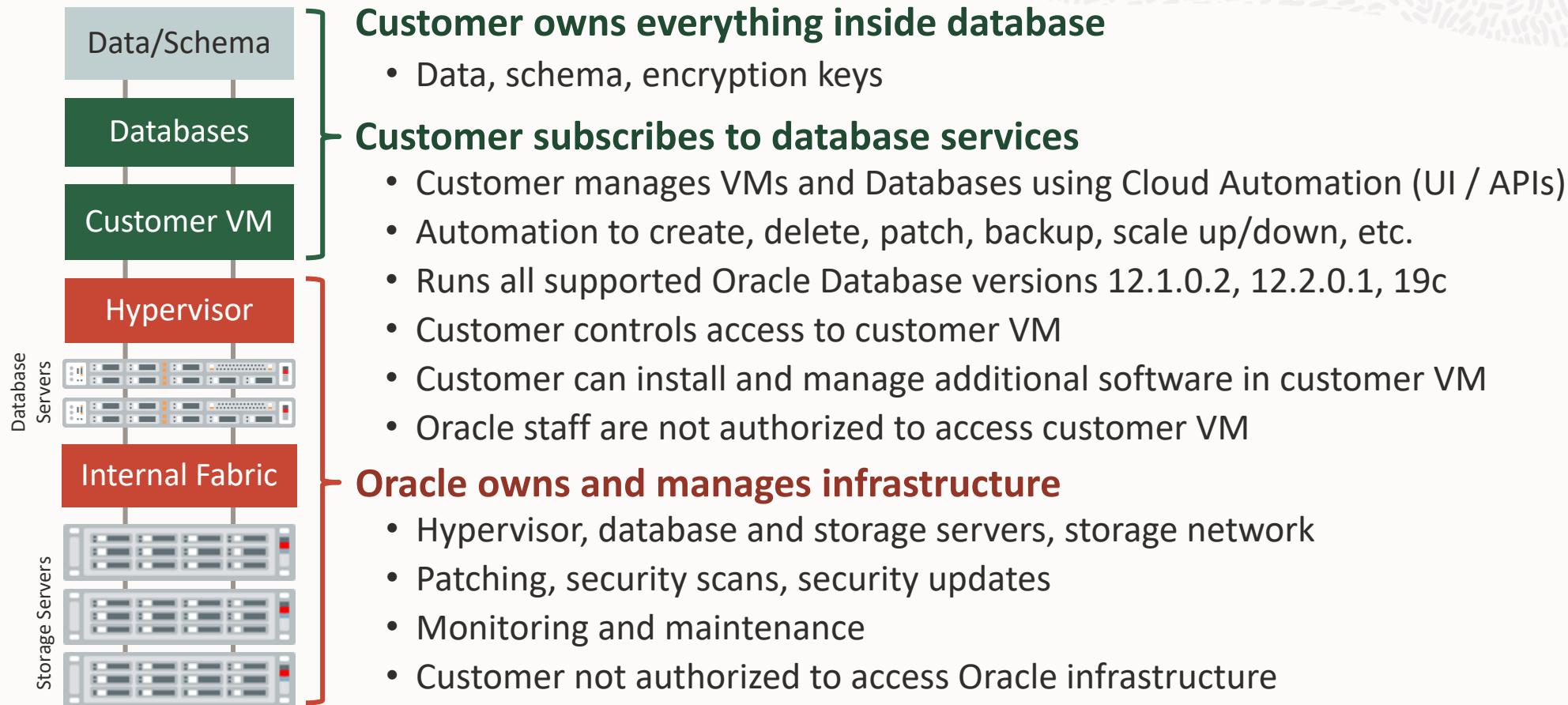
Manually Scaled vCPUs



Exadata Database Service – Elastic

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

Simple Cloud Management Model in Public Cloud



Database Cloud Service | Exadata

Understanding Oracle Exadata Cloud Service and Cloud at Customer



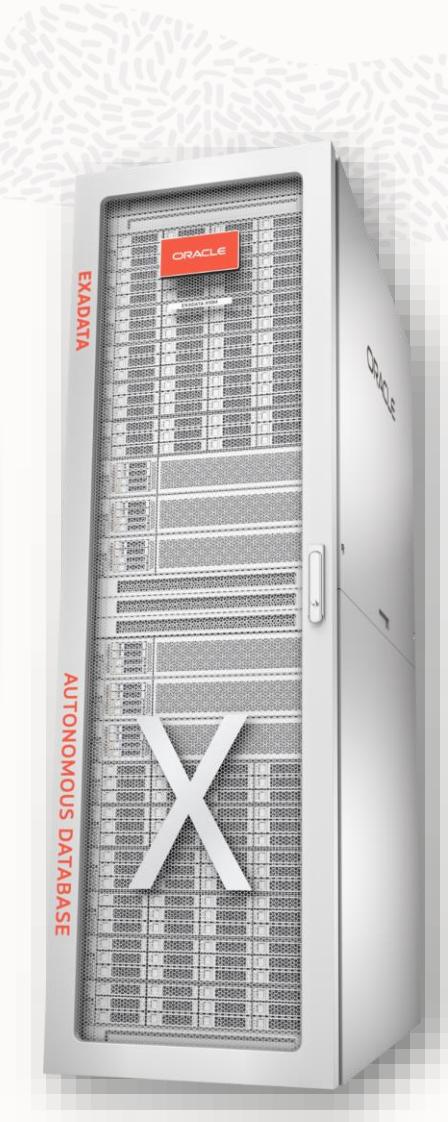
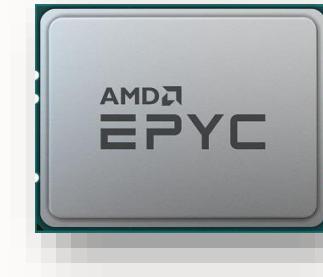
World's Best database machine, provisioning with GI

- As many databases as you want
- No Single Instance allowed. Just RAC!
- Start With 2 cores and Scale Up/Down OCPU's based on your requirement
- Data Guard with and across Ads
- Only Oracle Database Enterprise Editions allowed
- Exadata Cloud X9M Shapes (Base, Quarter, Half and Full Rack)
- Exadata Cloud X10M Shapes (Quarter Rack)
- Works with Autonomous Database on Dedicated Infrastructure



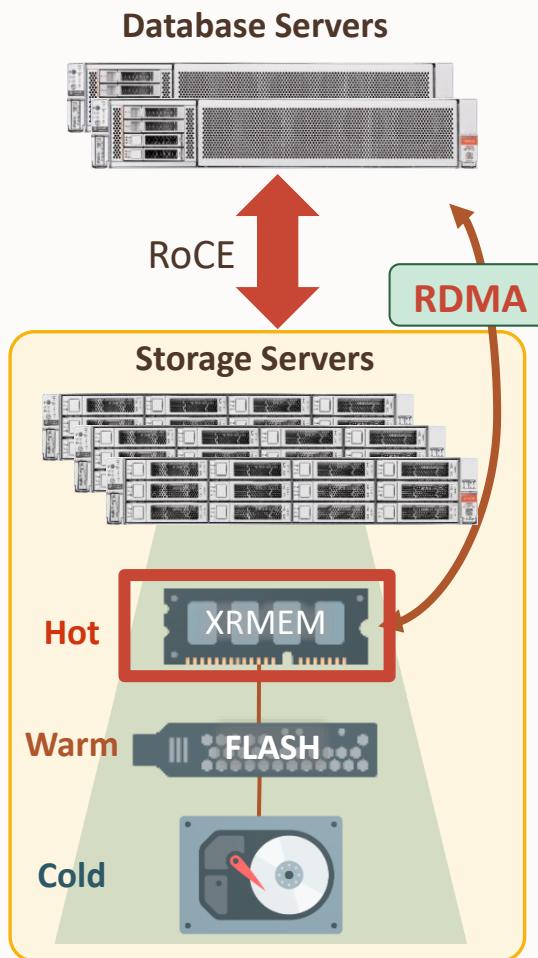
Nice to meet you! I'm Exadata X10M

Featuring AMD EPYC™ CPUs



[Click Here](#)

Exadata architecture – scale out with intelligent storage



Scale-out system architecture and software

- Independent, online scaling of database and storage servers
- Scales from 2 to 210 Exadata X10M database servers
- Scales from 3 to 264 Exadata X10M storage servers
- Redundancy with fast failover provides high availability

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

- Bypasses network and I/O software, interrupts, context switches
- Data is transparently managed in multiple storage tiers to minimize latency
- High-performance active-active 100 Gbit/s internal network maximizes throughput
- Speeds up both database reads and commits

Database cluster virtualization

- Deploy environments with different needs on the same system
 - Dev-Test, Staging, Production, DR
 - OLTP, Analytics, Mixed Workloads
- Share and manage pools of resources to increase efficiency and lower costs
- Isolate resources to meet differing security and predictability requirements

Comparison X9M vs X10M

Server Type

of Usable DB Cores per DB Server

Usable DRAM (GB) per DB Server / Total all Servers

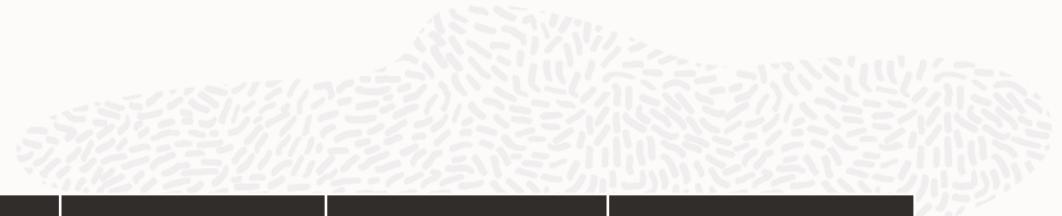
PMEM/XRMEM

Total Usable Disk Capacity (TB)

Max DB Size with no local backup (TB)

TB of Flash

X9M Quarter Rack	X10M Quarter Rack	X10M-L Quarter Rack	X10M-XL Quarter Rack
62		190	
1,390	1,390	2,090	2,800
4.5		3.75	
192		240	
154		192	
76		81	



Oracle Database

[Overview](#)

[Autonomous Database](#)

Autonomous Data Warehouse

Autonomous JSON Database

Autonomous Transaction Processing

[Autonomous Dedicated Infrastructure](#)

[Oracle Base Database \(VM, BM\)](#)

[Exadata on Oracle Public Cloud](#)

[Exadata Cloud@Customer](#)

[External Database](#)

[Data Safe - Database Security](#)

Overview

Security Assessment

User Assessment

Data Discovery

Data Masking

Activity Auditing

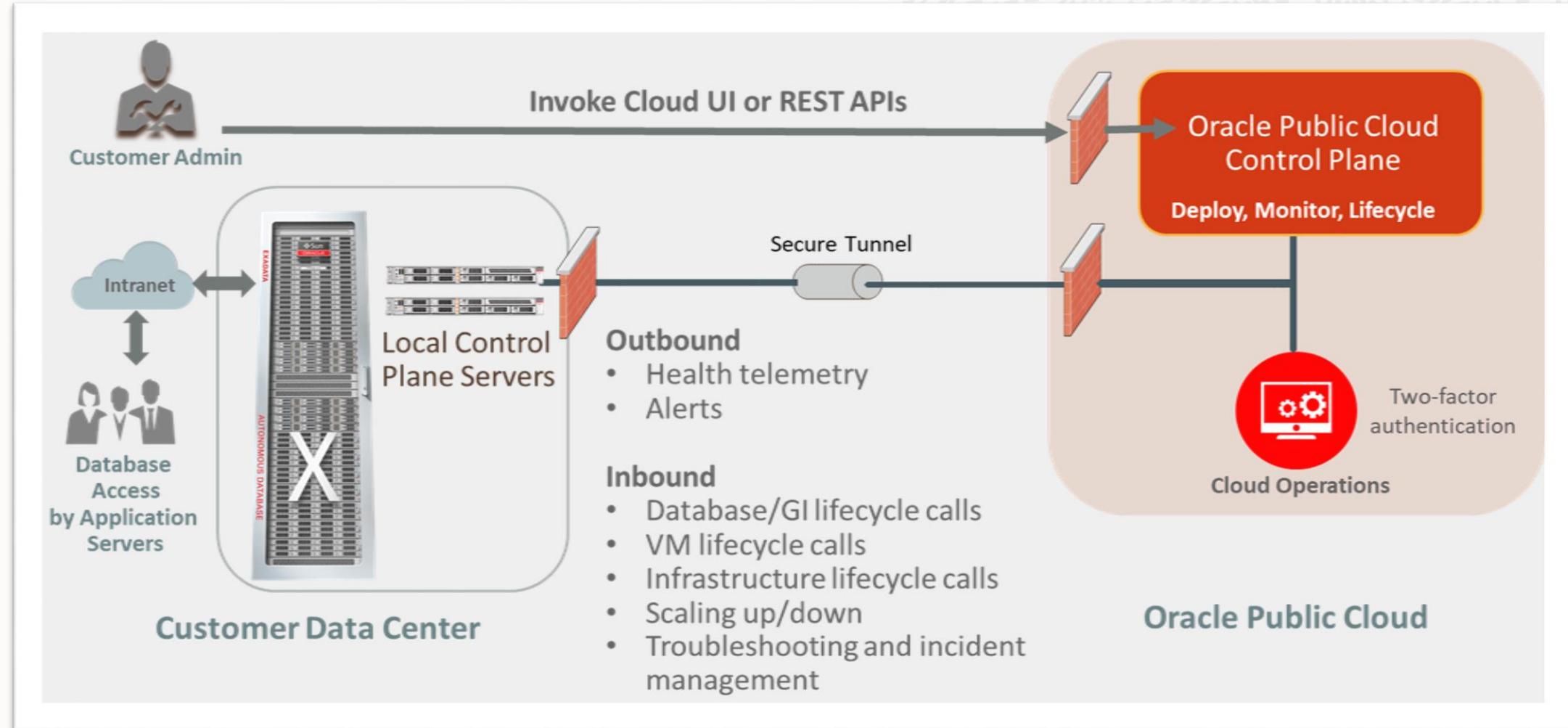
[Database Backups](#)

[GoldenGate](#)

[Operator Access Control](#)



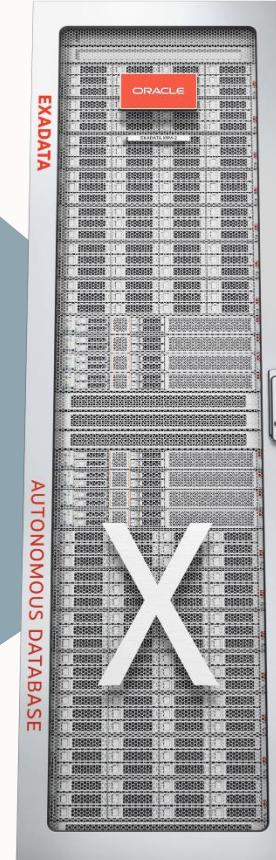
Exadata Cloud | Control Plane Workflow



Oracle Exadata Database and Platform Innovations

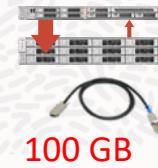
- Multitenant
- In-Memory DB
- Real Application Clusters
- Active Data Guard
- Partitioning
- Advanced Compression
- Advanced Security, Label Security, DB Vault
- Real Application Testing
- Advanced Analytics, Spatial and Graph
- Management Packs for Oracle Database

All Oracle Database Innovations



All Exadata Innovations

Offload SQL to Storage



RoCE Fabric



PMEM Commit and Data Accelerators



Smart Flash Cache



Storage Indexes



Columnar Flash Cache



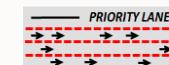
Hybrid Columnar Compression



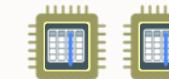
I/O Resource Management



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

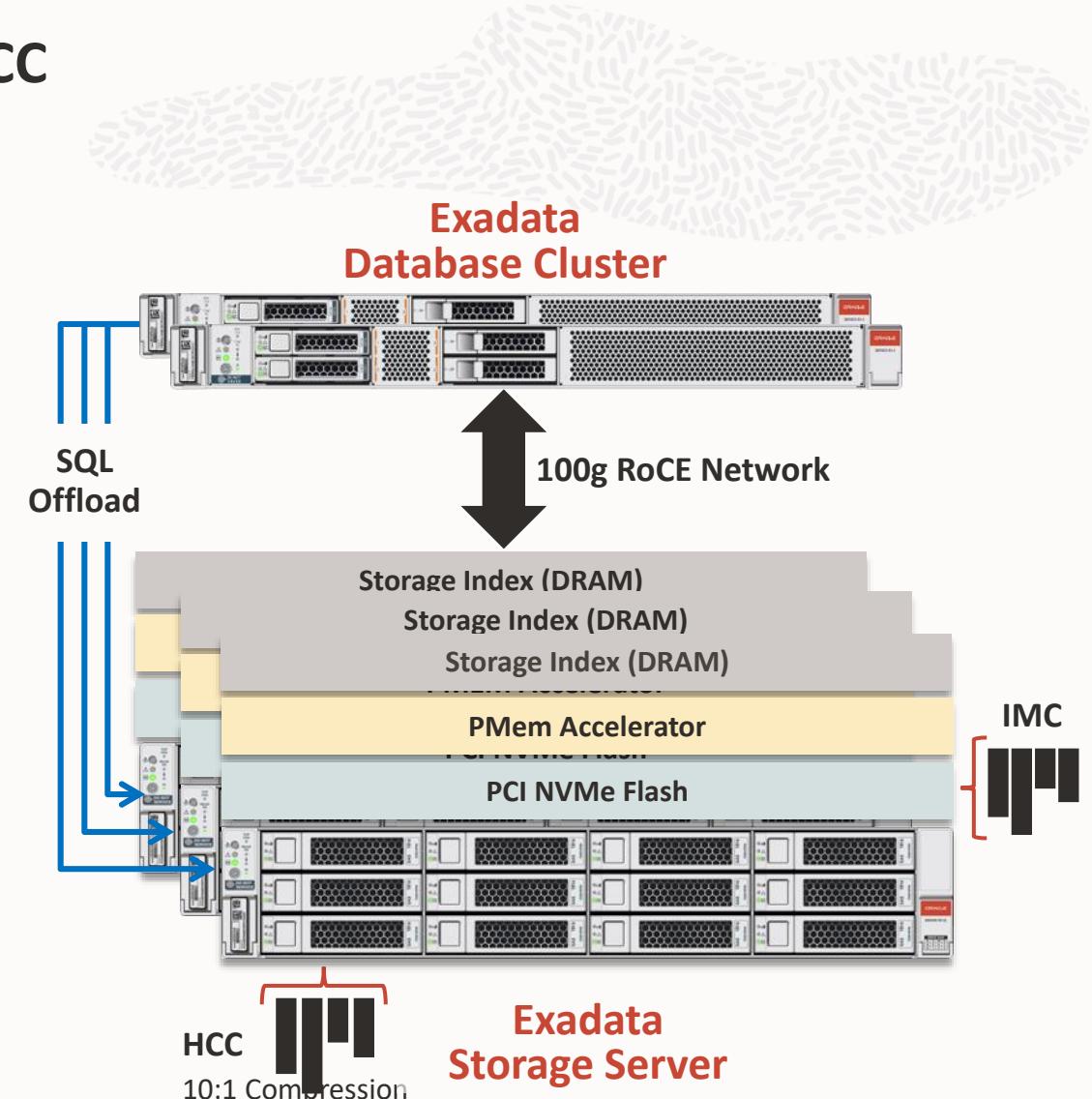
- Eliminates I/O not relevant to a particular query

Unique: Hybrid Columnar Compression (HCC)

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

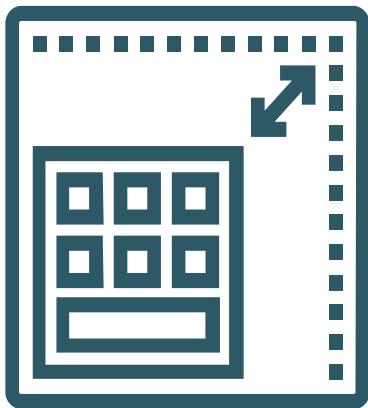
Unique: In-Memory Columnar (IMC)

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



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

Vertical vs Horizontal Scaling concept



Vertical scaling (or "scaling up")

- Adding more hardware to an existing machine
- Run the same workload on better specs;
- For example, if a server requires more processing power, vertically scaling the device would mean upgrading its CPU.



Horizontal scaling (or "scaling out")

- Add more nodes;
- Do not improve the specifications of the existing machine;
- Add more same-size servers to the cluster and share the workload across more devices.

Exadata Unique Cloud-Scale Database-Optimized Architecture

Unique Next Generation RAC Scale-Out for Any Workload

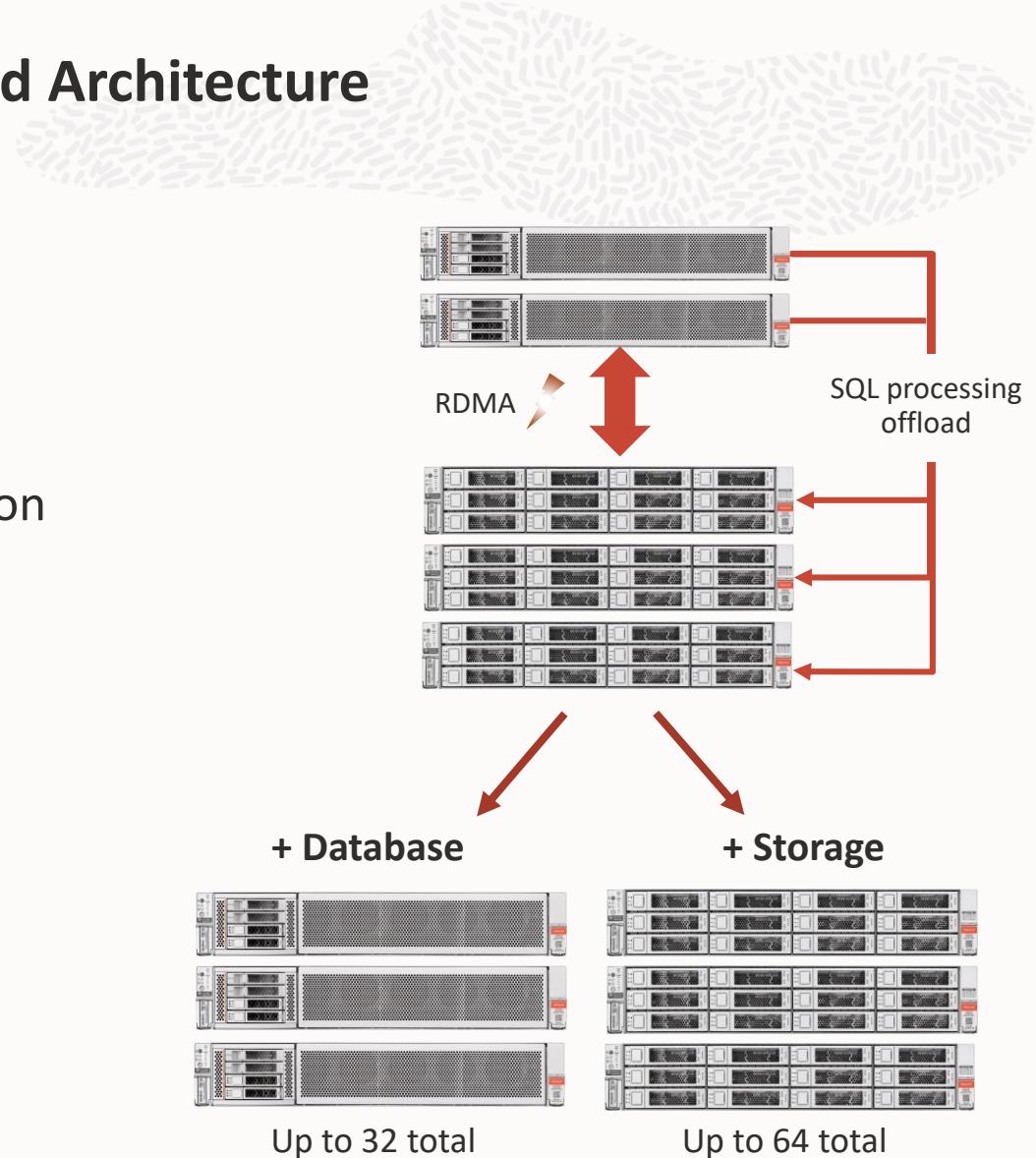
- Application-transparent database scalability & availability

Start small with minimum size High Availability configuration

- 2 Compute Servers, 3 Storage Servers
- Dedicated to you – no noisy or malicious neighbors

Add individual Database or Storage servers as needed

Expansion happens **fully online**



Exadata Cloud@Customer X10M Shapes

All Configurations greater than a Quarter Rack are elastic



Start with a Standard Configuration

- Quarter Rack
- Quarter Rack-L
- Quarter Rack – XL

Elastically Expand Rack with Servers

- Database Server
- Storage Server
- Can NOT mix Database Servers with different memory configurations
 - e.g. X10M cannot be mixed with X10M-XL

Continue to Expand Servers using Expansion Rack(s)

- Up to 6 Racks including primary rack
- Max 32 Database Servers
- Max 64 Storage Servers
- Max 5 Expansion Racks

Oracle Exadata management Console



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

The image shows two side-by-side Oracle Cloud configuration pages. On the left is the 'Create Database' page, where a new database named 'X8MDB1' is being created for the '19c' version. It includes fields for PDB name (optional), Database Home (selected 'Create a new Database Home'), and Database Home display name ('X8MDBHome1'). On the right is the 'Scale VM Cluster' page, which allows configuring the OCPU count per virtual machine (set to 10) and the requested OCPU count for the Exadata VM cluster (set to 40). It also displays current Exadata storage at 150.528 TB.

The image shows two Oracle Cloud configuration pages. The top section is the 'Create Backup' page, which prompts for a backup name and includes a note about switching from RMAN/dbcli to the console/API. The bottom section is the 'Enable Data Guard' page, which details Data Guard association settings like Protection mode (Maximum Performance) and Transport type (Read-Only, Async), and a 'Select Peer VM Cluster' section with a dropdown for the Peer region (US East (Ashburn)).

Exadata Cloud Command Line Interface (*dbaascli*)

How to upgrade DBAAS Cloud Tooling using dbaascli (Doc ID 2350471.1)



Database Commands

- *dbaascli* database create
- *dbaascli* pdb create
- *dbaascli* pdb relocate



Backup Commands

- *dbaascli* database backup
- *dbaascli* database recover
- *dbaascli* create-dbstorage



Database Home Patch

- *dbaascli* database upgrade
- *dbaascli* db home patch
- *dbaascli* grid patch
- *dbaascli* update-dbhomedir



[Click Here](#)

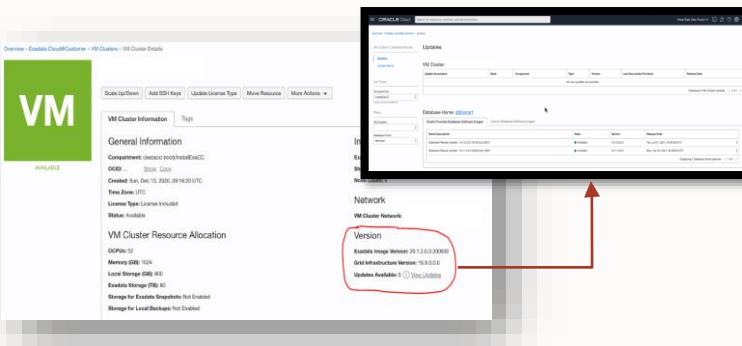
Exadata Cloud Pathing

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.

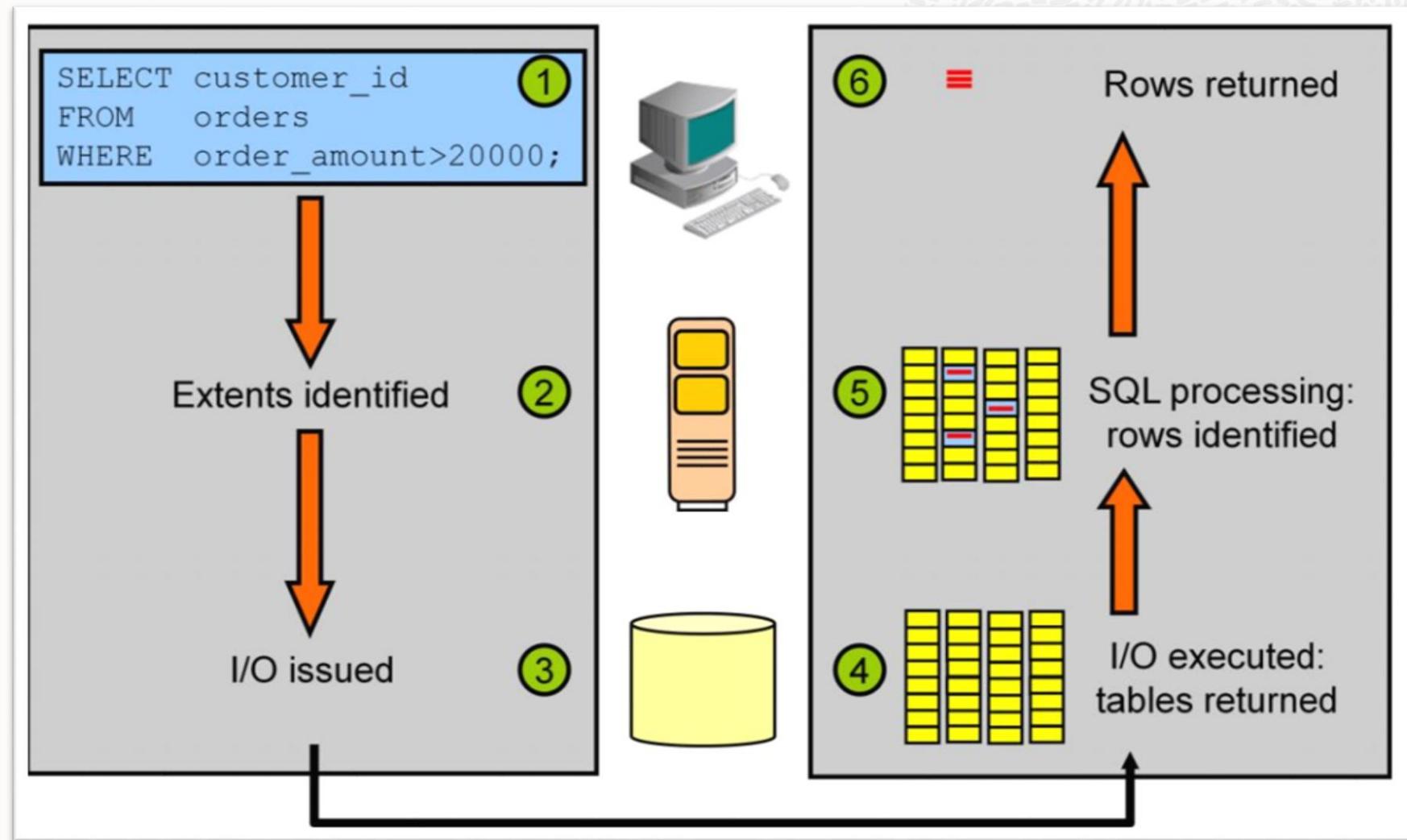
Quarterly maintenance updates may require a restart of the customer-managed guest virtual servers.

Quarter 1	Quarter 2	Quarter 3	Quarter 4
<input checked="" type="checkbox"/> JANUARY	<input checked="" type="checkbox"/> APRIL	<input checked="" type="checkbox"/> JULY	<input checked="" type="checkbox"/> OCTOBER
<input checked="" type="checkbox"/> FEBRUARY	<input checked="" type="checkbox"/> MAY	<input checked="" type="checkbox"/> AUGUST	<input checked="" type="checkbox"/> NOVEMBER
<input checked="" type="checkbox"/> MARCH	<input checked="" type="checkbox"/> JUNE	<input checked="" type="checkbox"/> SEPTEMBER	<input checked="" type="checkbox"/> DECEMBER

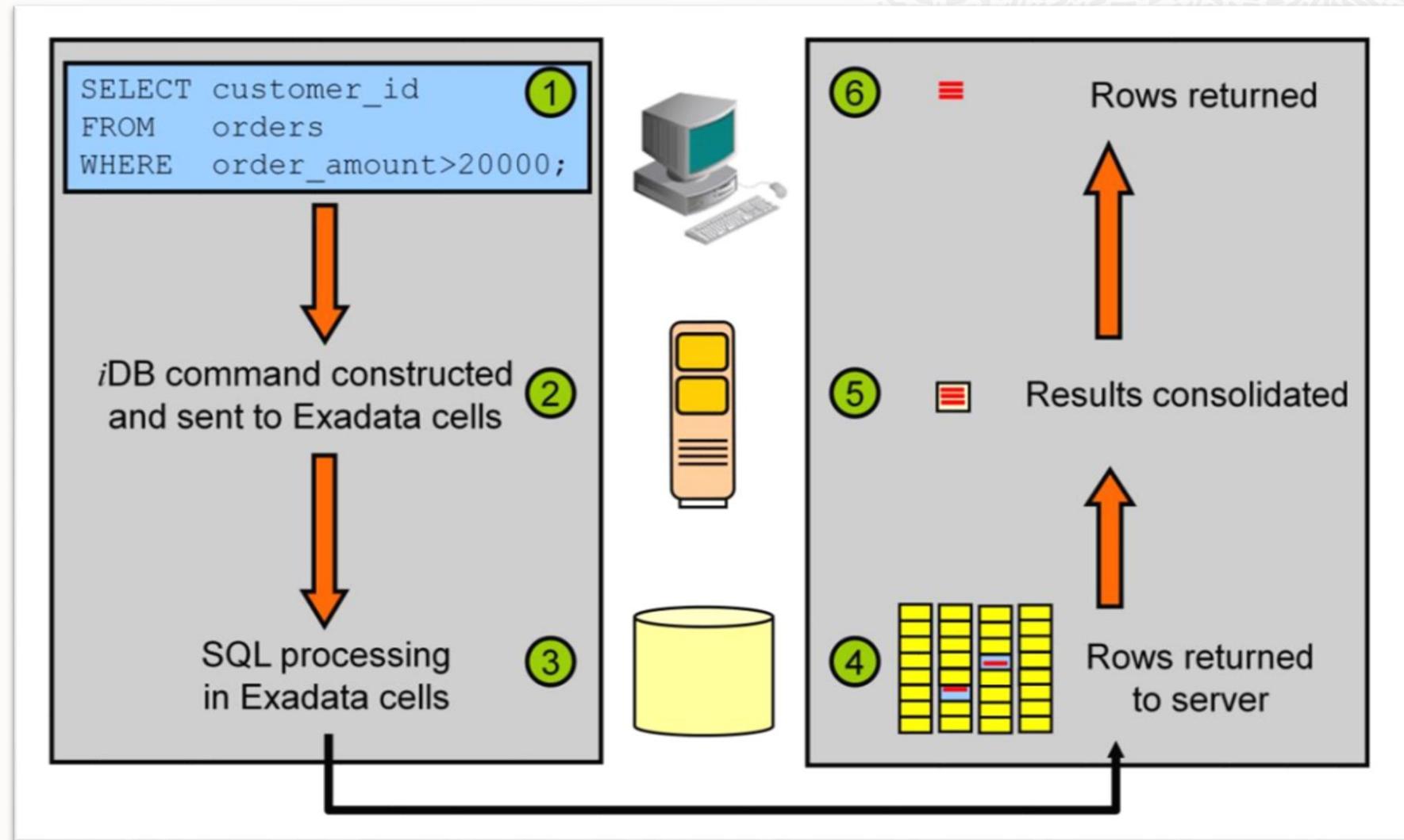
Exadata Cloud Smart Scan



Oracle Database | No Exadata System



Exadata Cloud a Smart Scan | Off Load Querying



Query Execution plan | Traditional Database Vs Exadata System

```
SQL> select * from table(dbms_xplan.display);
```

```
PLAN_TABLE_OUTPUT
```

```
Plan hash value: 970577077
```

Id Operation	Name	Rows	Bytes	Cost	(%CPU)	Time
0 SELECT STATEMENT		902	23452	10	(0)	00:00:01
1 TABLE ACCESS BY INDEX ROWID BATCHED	CUSTOMERS	902	23452	10	(0)	00:00:01
* 2 INDEX RANGE SCAN	CUSTOMERS_ID_PK	902		6	(0)	00:00:01

```
Predicate Information (identified by operation id):
```



```
PLAN_TABLE_OUTPUT
```

```
Plan hash value: 2008213504
```

Id Operation	Name	Rows	Bytes	Cost	(%CPU)	Time
0 SELECT STATEMENT		902	23452	306K	(1)	00:00:12
* 1 TABLE ACCESS STORAGE FULL	CUSTOMERS	902	23452	306K	(1)	00:00:12

```
Predicate Information (identified by operation id):
```

```
1 - storage("ID"<=1000 AND "ID">>=100)
      filter("ID"<=1000 AND "ID">>=100)
```



Exadata Smart Scan Why it's not working?

- Scan performed on a partitioned table
- A Scan is performed on an index-organized table
- Fast full scan is performed on a compressed index
- Full scan is performed on a reverse key index
- Table has row-level dependency tracking enabled.
- Optimizer wants the scan to return rows in ROWID order
- A LONG column is being selected or queried
- A select from flashback query is being executed
- A query that has been referenced

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](#)



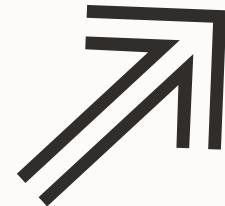
Backup Your Cloud Database

Continuous protection of Oracle Database in OCI



Ransomware is a major concern

Contar com um plano sólido de segurança é fundamental



62%

More ransomware attacks in the US in 2021 to more than **3,500** on an annual basis
(source: US Treasury)



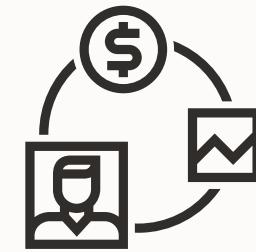
37%

Das corporações Globais foram atacadas pelo ransomware em 2022
(source: IDC)



\$1.85M

Average total cost of remediating a ransomware attack
(source: Sophos)



180%

More annualized losses from ransomware attacks in the US during 2021 to **\$1.18B** on an annual basis
(source: US Treasury)

One minute of data loss due to ransomware attack could impact 100s to 1000s of business transactions in enterprise databases

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

Cloud Backup | Oracle Database Backup Cloud Service page

Help Center Database Backup Service Search

[Get Started](#)

Home / Cloud / Cloud Platform / Database Backup Service

Oracle Database Backup Cloud Service

Get Started

Use Oracle Database Backup Cloud Service to store Oracle Database backups in the cloud.

Use Oracle Database Backup Cloud Service to store Oracle Database backups in the cloud.

Learn About Database Backup Cloud Service

Watch an overview video
Related Video

Learn about the service
Learn about the backup module
See the FAQ

Get a Subscription

Manage and monitor services
Set up cloud users, administrators, and SFTP users
See important details about subscriptions

Get Started with Database Backup Cloud Service

Understand the backup workflow
Download and install the backup module
Perform configuration and backup tasks

<https://docs.oracle.com/en/cloud/paas/db-backup-cloud>



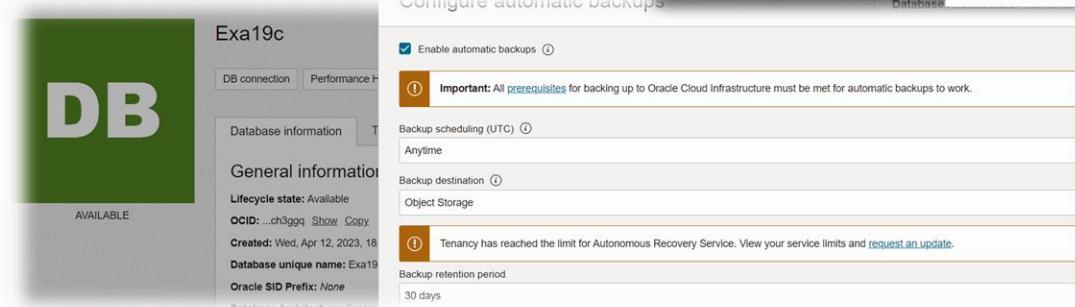
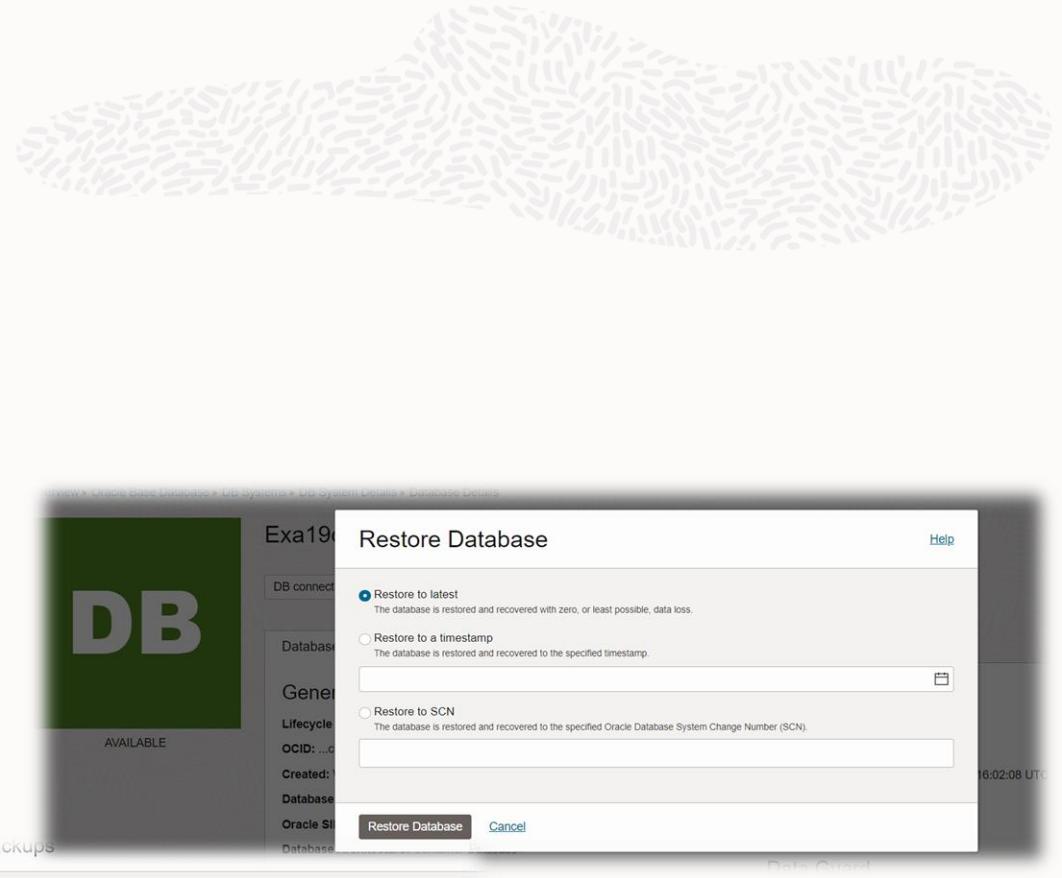
Traditional OCI | Backup and Restore

Manage backup and restore feature for VM/BM DB System

- Backup stored in Object or Local storage
- DB System in private subnets can leverage Service Gateway
- Start With 2 cores and Scale Up/Down OCPU's based on your requirement

Backup Options

- It is not possible to create a non-CDB via the console - use dbcli

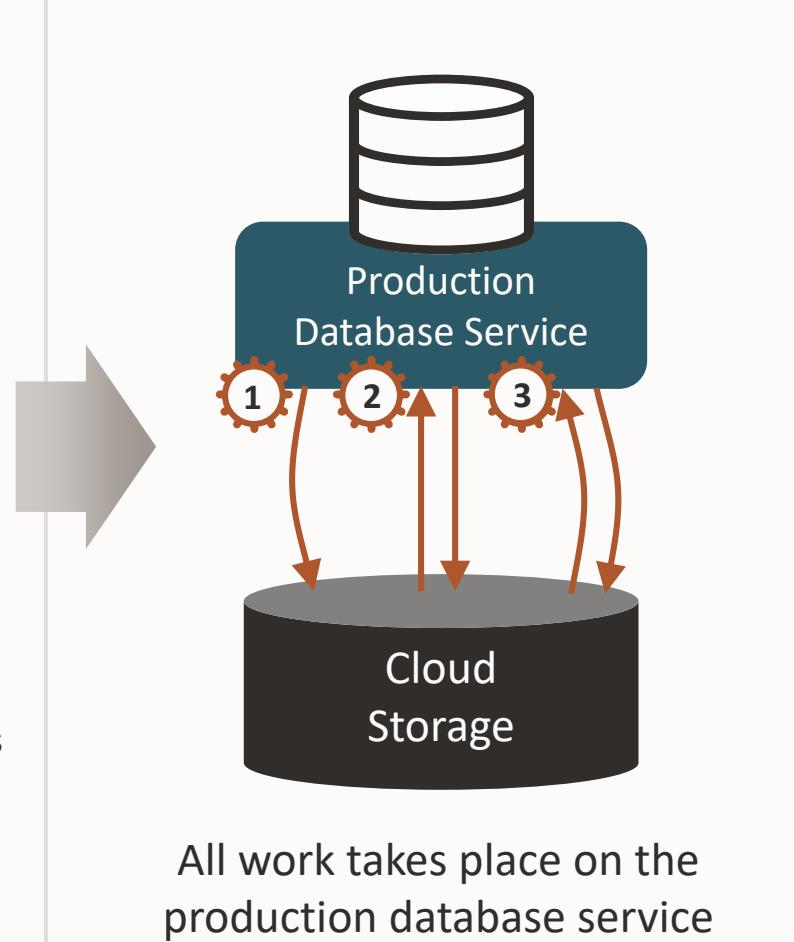


Recovery Service offloads backup validation

All backups are checked for recoverability, reducing database service overhead

Traditional cloud backup

1. Backup (full or incremental) is created on the production database service and stored in object storage
2. Production service reads the backup from object store, validates it, and fixes issues **doubling the impact on production database services**
3. Periodic revalidation **increases production database consumption**
4. Resulting in:
 - a. Lower production performance if resource constrained, or
 - b. Higher consumption costs if resources are unconstrained, or
 - c. Decision to not validate backups or revalidate them, increasing risk



OCI ZDL Recovery Services

Continuous protection of Oracle Database in OCI



Zero Data Loss as a Service on OCI



A screenshot of a blog post titled "Maximum Availability Architecture" from the "Backup & Recovery" category. The post is about introducing the Oracle Database Zero Data Loss Autonomous Recovery Service. It was published on October 17, 2022, and is a 5-minute read. The author is Kelly Smith, a Senior Principal Product Manager. The post includes a "Follow" button and a 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](#)





SCAN ME

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

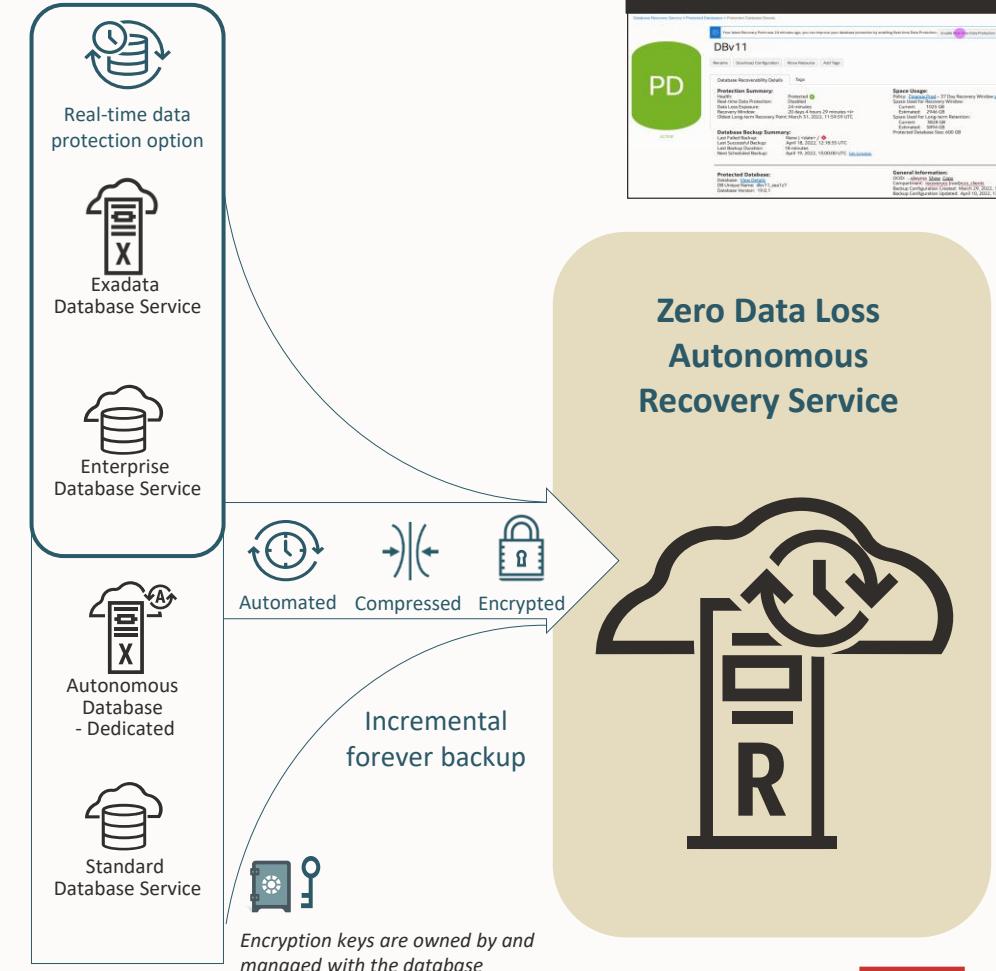
Operational efficiency

- 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

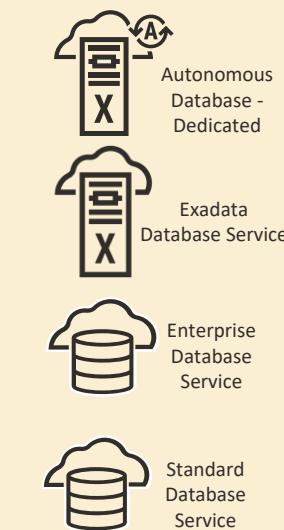


Recovery Service eliminates weekly full backups

Incremental-forever backups reduce backup overhead on production database services



Time
Machine

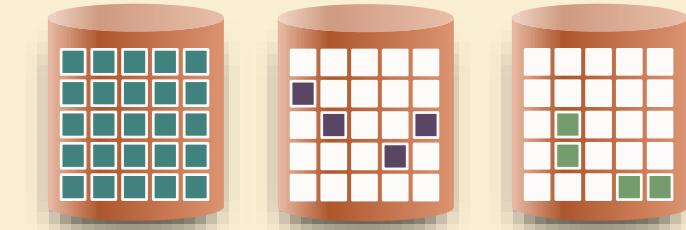


01001010110
10010101101
01001010110
01001010010
10010101100



Incremental forever backups
of protected databases

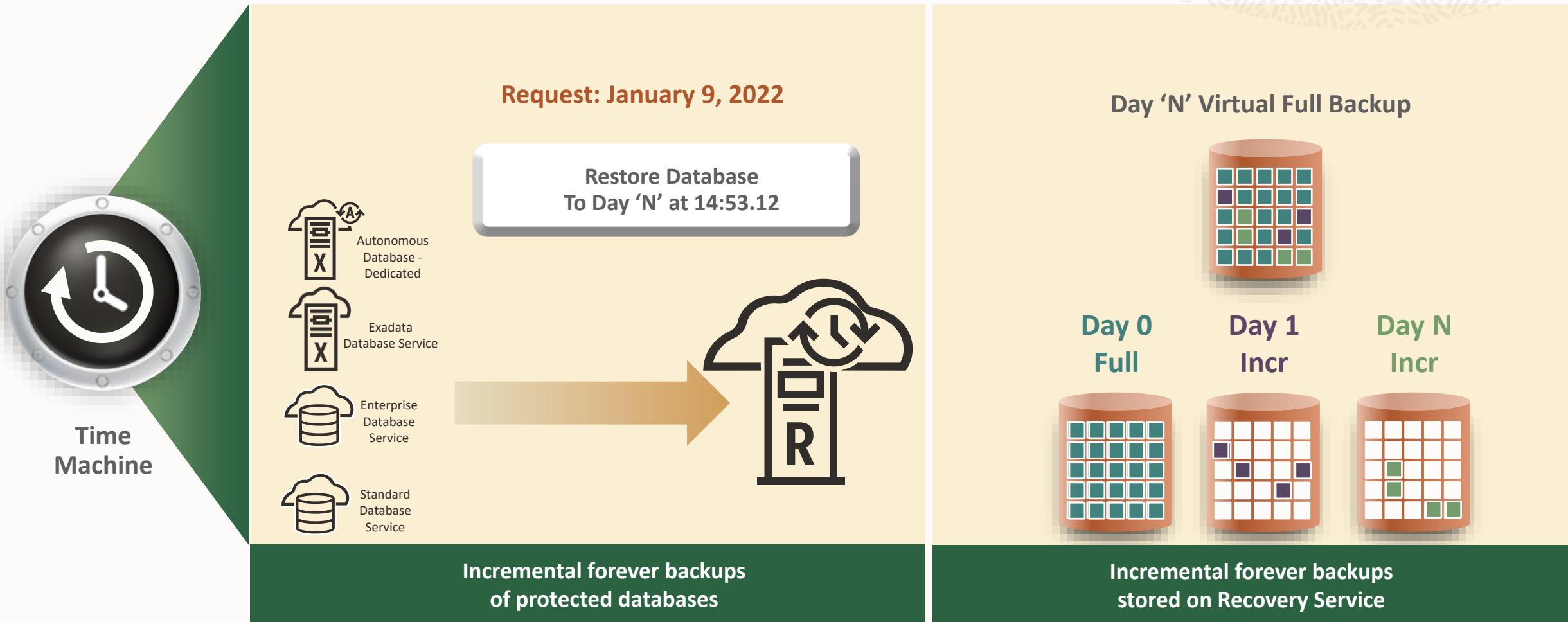
Day 0
Full
Day 1
Incr
Day N
Incr



Incremental forever backups
stored on Recovery Service

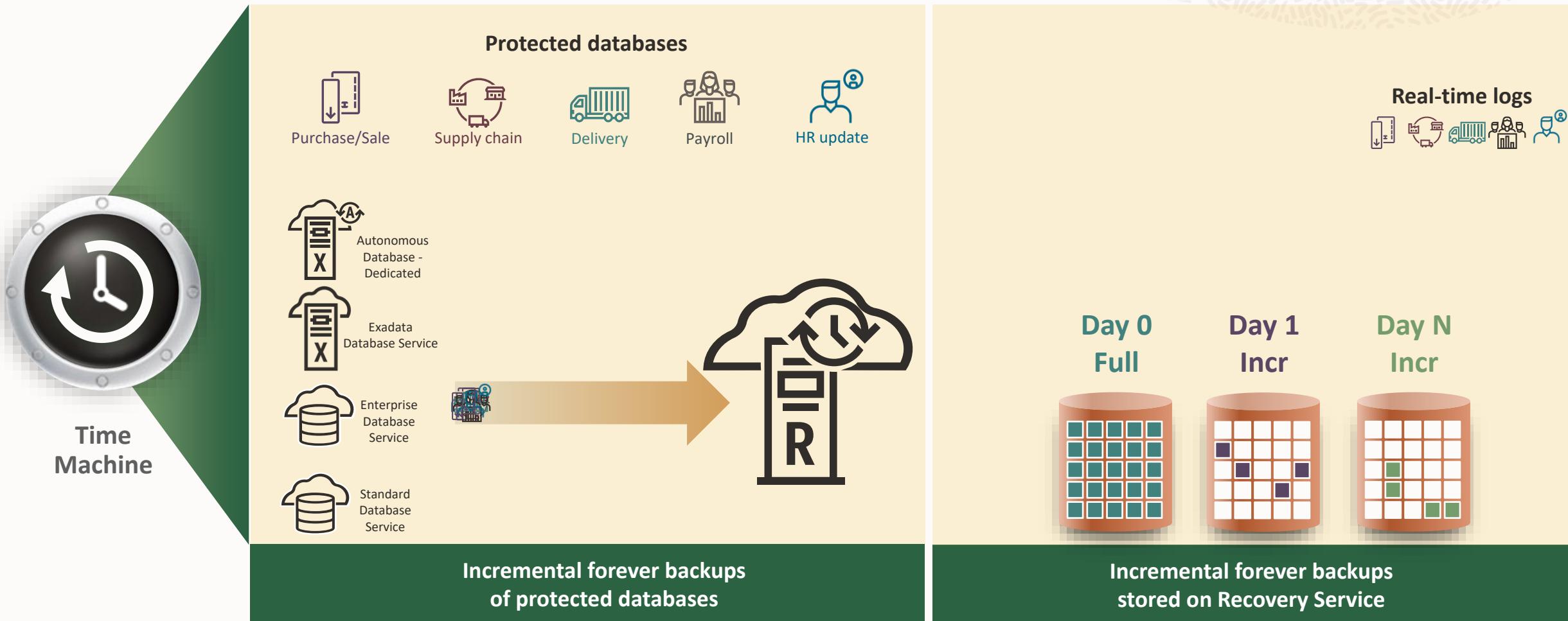
Recovery Service simplifies database restores

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

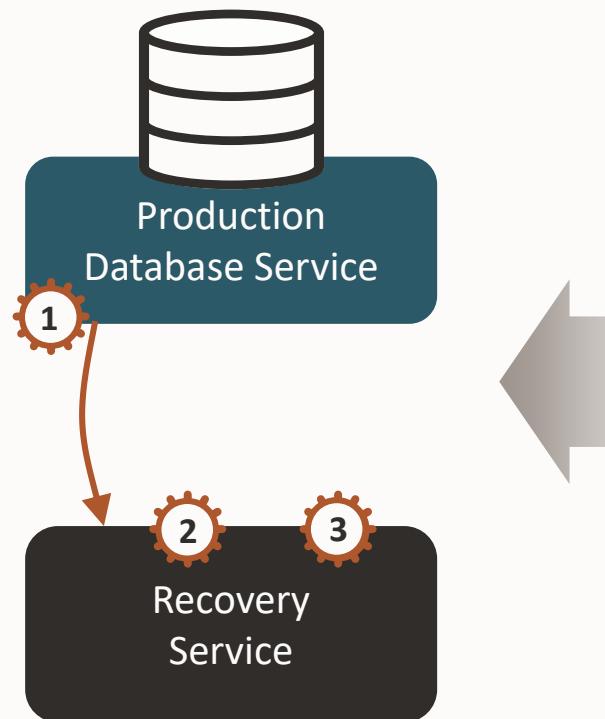


Recovery Service offloads backup validation

All backups are checked for recoverability, reducing database service overhead

Traditional cloud backup

1. Backup (full or incremental) is created on the production database service and stored in object storage
2. Production service reads the backup from object store, validates it, and fixes issues **doubling the impact on production database services**
3. Periodic revalidation **increases production database consumption**
4. Resulting in:
 - a. Lower production performance if resource constrained, or
 - b. Higher consumption costs if resources are unconstrained, or
 - c. Decision to not validate backups or revalidate them, increasing risk



Most work takes place on the Recovery Service

Recovery Service backup

1. Incremental forever backup is created on the production database service and stored in the Recovery Service
2. The Recovery Service uses **internal Oracle Database knowledge** to check examine and fix backups when ingested, with **no impact on production databases**
3. The Recovery Service periodically revalidates backups with **no production database consumption**
4. Resulting in:
 - a. **Minimal backup impact on production databases**
 - b. **No additional production database service costs**
 - c. **Higher recoverability & lower risk**



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](#)



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	⋮
FINANCE	● Active	Protected ⓘ	FINANCE	Enabled	0	7 d 7 h 54 m	8,121.12 GB	Bronze	5,778 GB	⋮
SALES	● Active	Protected ⓘ	SALES	Disabled	29 m 47 s	7 d 8 h 12 m	9,022.26 GB	Silver	3,944 GB	⋮
HRMS	● Active	Protected ⓘ	HRMS	Disabled	29 m 49 s	7 d 8 h 15 m	5,427.58 GB	Bronze	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.



Oracle NoSQL Cloud Service





Oracle NoSQL Database Services on OCI Console

Easy provisioning and Management

The screenshot shows the OCI Console interface for managing databases. On the left, there's a sidebar with a "Databases" icon and a list of services: MySQL, DB Systems, Backups, Channels, Configurations, MySQL HeatWave on AWS, and Administration. The "MySQL" section is expanded, showing sub-options like DB Systems, Backups, Channels, and Configurations. The "MySQL HeatWave on AWS" section is also expanded, showing Administration. In the main content area, there are two sections: "Oracle NoSQL Database" and "OpenSearch". The "Oracle NoSQL Database" section has a red border around its title and a sub-option for "Tables". The "OpenSearch" section has sub-options for "Clusters" and "Backups".

Databases

MySQL

- DB Systems
- Backups
- Channels
- Configurations

MySQL HeatWave on AWS

- Administration

Oracle NoSQL Database

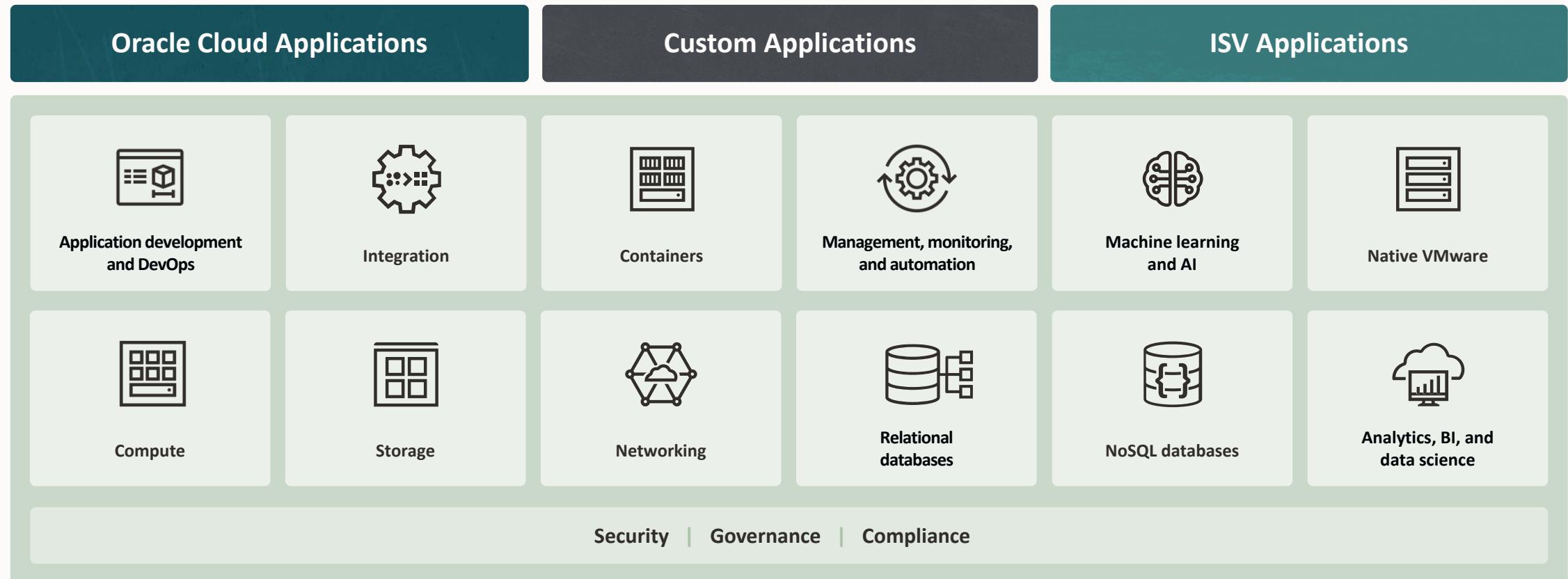
- Tables

OpenSearch

- Clusters
- Backups

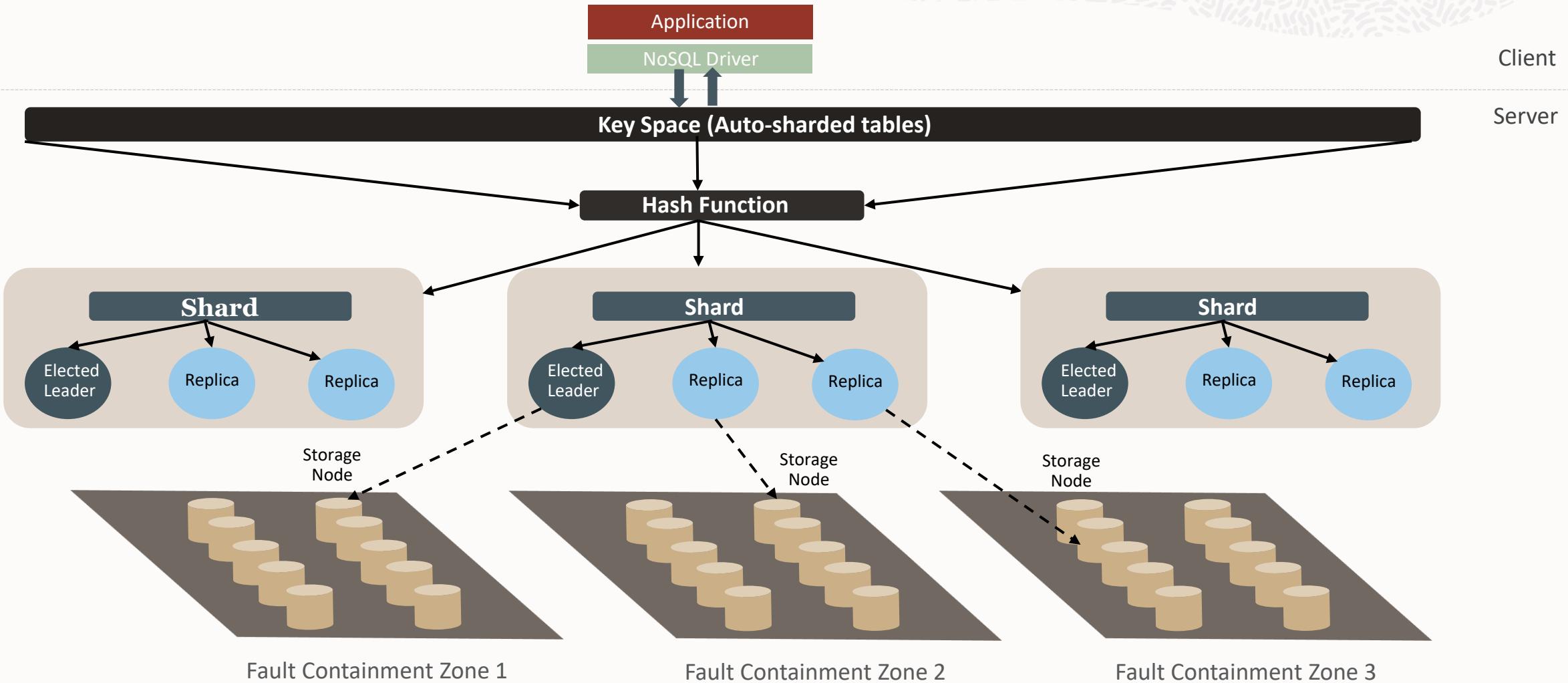
[Click Here](#)

OCI: A complete cloud infrastructure platform



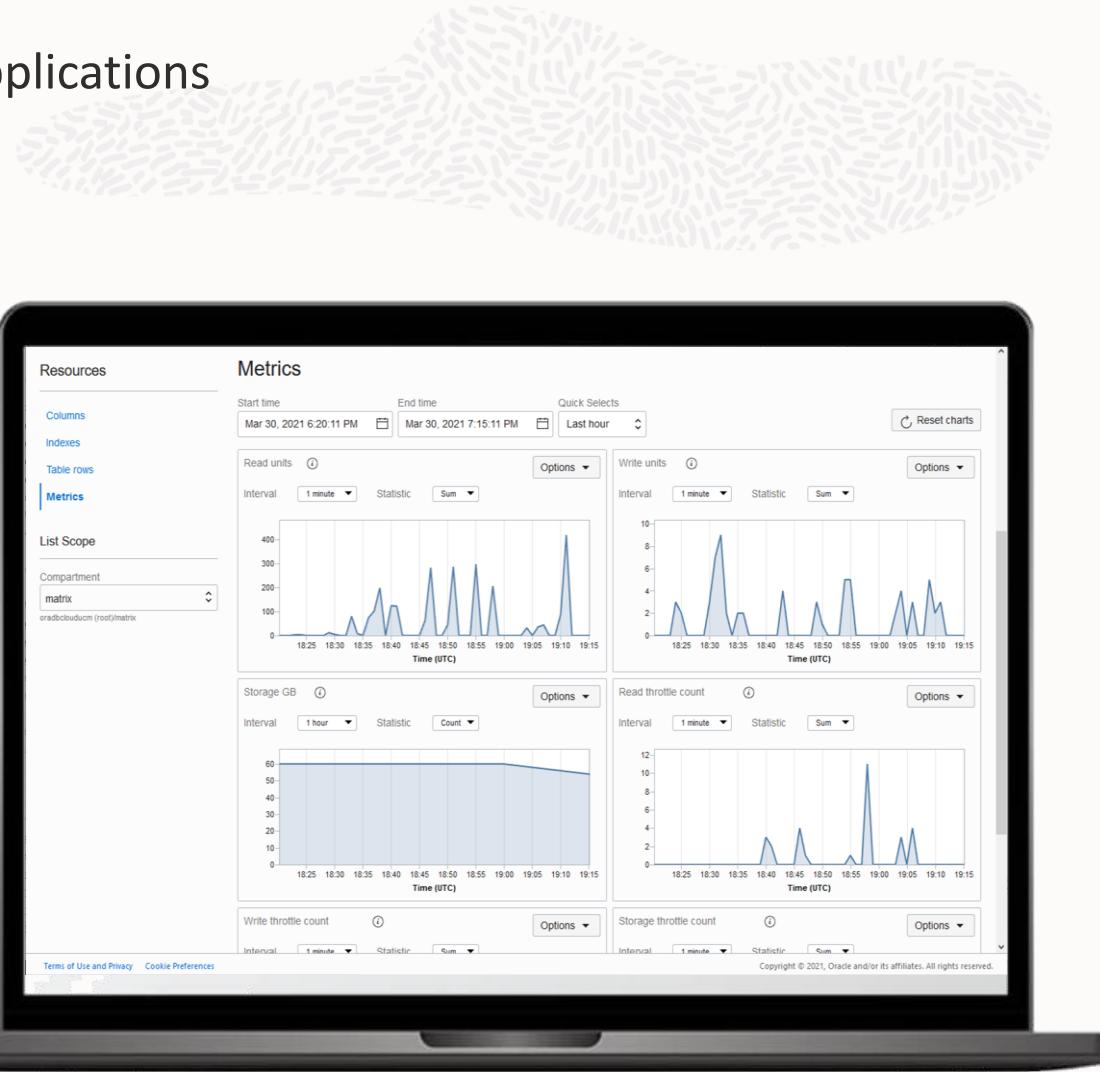
Oracle NoSQL Database Architecture Overview

A distributed, shared nothing key/value data store architected for HA



Oracle NoSQL Database Cloud Service

Built for extreme, dynamic workloads of today's modern applications



Fast, Flexible NoSQL Database Service at any scale

- Fully managed, serverless NoSQL database **table service**
- Single digit millisecond and **predictable** latency at any scale
- Linear throughput scaling for **extreme** workloads
- Multi-model support (document, fixed schema, key/value)
- Built-in **high availability** for business continuity
- Fully **ACID compliant** and **adjustable** read consistency
- Serverless computing through Oracle Functions
- Available in 30 OCI commercial regions worldwide (Mar 2022)

Differentiated Use Cases

- Request level granularity for extreme workloads, and handles **spikes and drops optimally**
- Fast, constant, high-volume workloads requiring **predictable low latency** for **highly responsive applications**
- Designed for business applications requiring **scale, performance, and high availability** with flexible consistency

Oracle NoSQL Database Cloud Service - Metrics

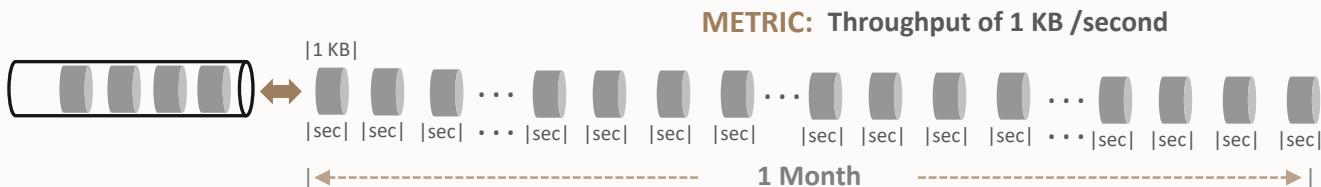
Throughput provisioning

1 Write Unit

- The throughput of up to 1 kilobyte (KB) of data per second for a write operation over a one-month period
- Approximately 2.67 million writes per month

1 Read Unit

- The throughput of up to 1 kilobyte (KB) of data per second for an eventually consistent read operation
- Approximately 2.67 million eventually consistent reads per month
- 2 Read units are needed for an absolute consistent read



Oracle NoSQL Database Cloud Service – Capacity

Provisioned capacity vs. on-demand capacity

Provisioned Capacity

- Must determine read/write units in advance
- Adjustments done via API or console
- Increasing unlimited
- Decreases limited to 4 per day
- Pay for what you provision
- Deep understanding of workload needed

On-Demand Capacity

- Automatic scaling
- No rate limiting in your application
- No workload characterization
- Simple to use
- Pay for what consumed



Oracle NoSQL Database Cloud Service – Provisioned Capacity

Provisioned throughput

- Provision reads/sec, writes/sec, GB storage at table creation time
 - Dynamically increase
 - Dynamically decrease

2000 read units 100 write units 500 GB Storage

JAVA code sample:

```
TableRequest tableRequest = new TableRequest()  
    .setStatement("create table if not exists foo (id integer,  
value JSON)")  
    .setTableLimits(new TableLimits(2000, 100, 500))  
    .setTimeout(1000);  
TableResult res = NoSQLHandle.tableRequest(tableRequest);
```

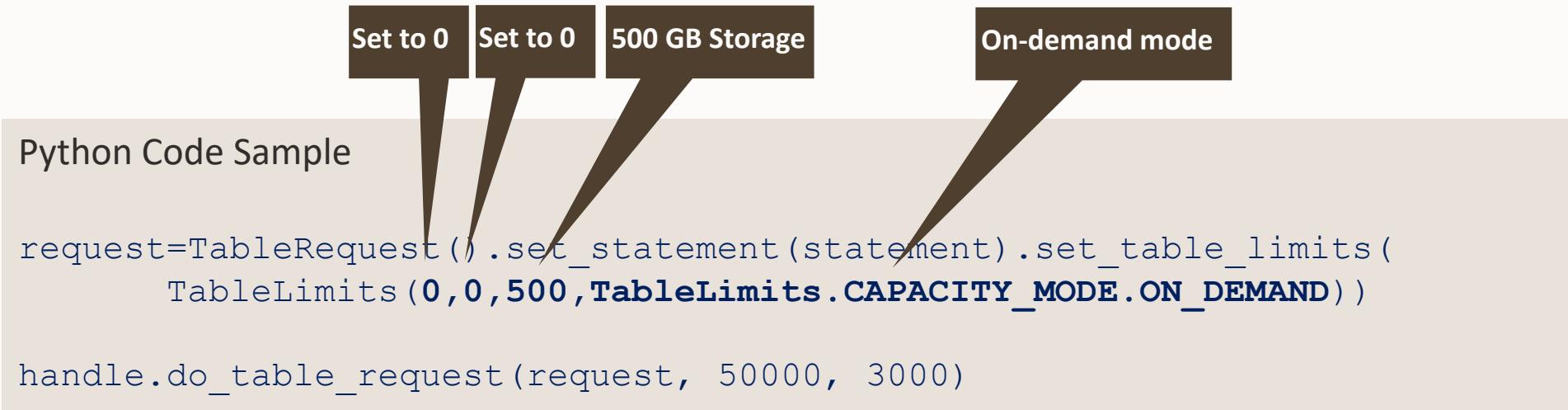
Modify the table lowering the read units to 1000

```
tableRequest.setTableLimits(new TableLimits(1000, 100, 500))
```

Note: Every TableRequest is a DDL call to the NoSQL store and may be performed 4 times within a minute.

Oracle NoSQL Database Cloud Service – On-Demand Capacity

Auto-scaling throughput



Pay-Per Use

Provisioned

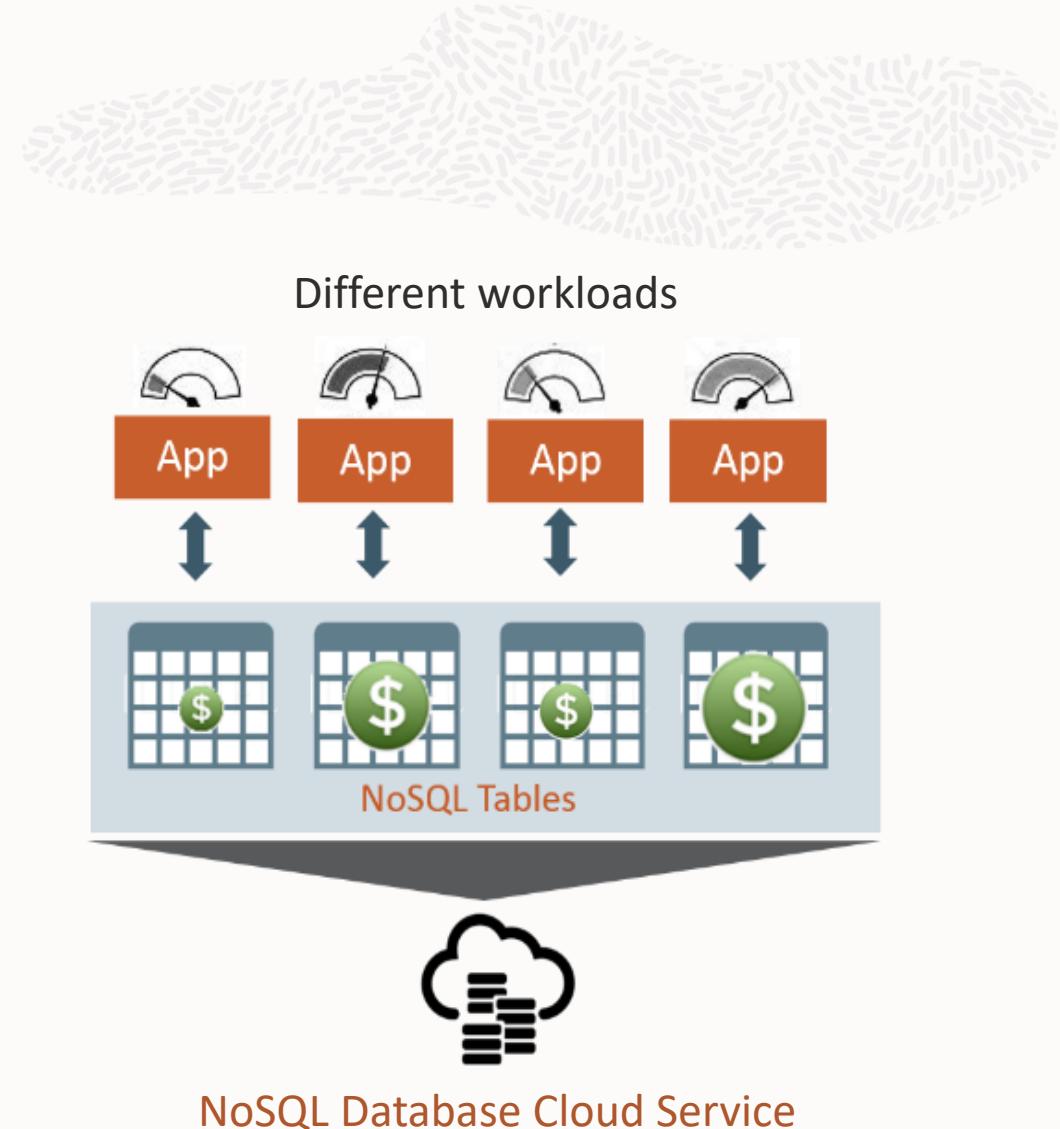
Pay per table capacity provisioned

- Different table with different capacity to serve different workloads
- Pay per throughput and storage capacity provisioned - Table level read units, write units, storage in GB

On-demand

Pay based on the read/write units consumed

- Pay per throughput used - Table level read units, write units
- Pay no throughput costs when idle
- Pay for storage capacity provisioned – storage in GB
- Ideal for unpredictable, seldom used, or new workloads



Resources



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Exadata Cloud Oracle on Architecture Center

The screenshot shows the Oracle Architecture Center homepage. At the top, there's a navigation bar with a magnifying glass icon, the text "Architecture Center", and a search bar containing "exadata cloud at customer". Below the header, a large banner features the text "Oracle Architecture Center" and a subtext about designing, developing, and implementing workloads. A "Contact a Cloud Expert" button is visible. To the right, there are three main content cards:

- Reference Architecture**: Shows a "Built & Deployed" section with a thumbnail of a person working on a server.
- Deploy a containerized Jenkins CI/CD pipeline by using Terraform on Oracle Cloud Infrastructure**: Describes how to deploy a Jenkins pipeline using Terraform on Oracle Cloud. It includes a "Automation Available" button.
- Tharseo IT: Migrate Ellucian Banner ERP to Oracle Cloud using FastConnect and Rackware**: Details a migration project from Ellucian Banner ERP to Oracle Cloud using FastConnect and Rackware. It also has a "Automation Available" button.

[Click here](#)



Ask Tom Oracle Site

The screenshot shows the top navigation bar of the website. It includes a logo for 'ASK TOM', a search bar with placeholder text 'Search Questions...', and a 'Sign In' button. Below the navigation bar, there are five main menu items: 'Questions', 'Office Hours' (which is currently selected), 'Videos', 'Resources', and 'Classes'. The 'Office Hours' section features a large heading 'Office Hours' and a sub-section 'Free training, how-tos and Q&A with Oracle experts. [FAQ](#)'. There is also a QR code in the top right corner.

This screenshot shows the 'Upcoming Sessions' section with a count of 44. It lists two sessions: 'Forms, Tipuri de rapoarte și metode de căutare într-un raport' on June 12 at 14:00 and 'Oracle Database In-Memory Summit 2023 Session 1' on June 13 at 15:00. Below this, the 'Recently Answered' section displays two questions. The first question is about 'JSON_QUERY for varchar2 limitation' and the second is about 'dbms_lock.sleep procedure'. Both questions include a user profile picture, the question title, and a brief description of the problem.

[Click Here](#)



Oracle Cloud Free Tier



What's included with Oracle Cloud Free Tier?

Always Free services

Services you can use for an unlimited time.

- Two Oracle Autonomous Databases with powerful tools like Oracle APEX and Oracle SQL Developer
- Two AMD Compute VMs
- Up to 4 instances of ARM Ampere A1 Compute with 3,000 OCPU hours and 18,000 GB hours per month
- Block, Object, and Archive Storage; Load Balancer and data egress; Monitoring and Notifications

[See below for a list of eligible services](#)



Start with a US\$300 cloud credit

You'll have 30 days to use it—in addition to Always Free services.

- Access to a wide range of Oracle Cloud services for 30 days, including Databases, Analytics, Compute, and Container Engine for Kubernetes
- Up to eight instances across all available services
- Up to 5 TB of storage

What are Always Free services?

Infrastructure

- 2 AMD based Compute VMs with 1/8 OCPU** and 1 GB memory each
- Arm-based Ampere A1 cores and 24 GB of memory usable as 1 VM or up to 4 VMs with 3,000 OCPU hours and 18,000 GB hours per month
- 2 Block Volumes Storage, 200 GB total
- 10 GB Object Storage – Standard
- 10 GB Object Storage – Infrequent Access
- 10 GB Archive Storage
- Resource Manager: managed Terraform
- 5 OCI Bastions

Databases

- Your choice of Oracle Autonomous Transaction Processing, Autonomous Data Warehouse, Autonomous JSON Database, or APEX Application Development. Two databases total, each with 1 OCPU** and 20 GB storage.
- NoSQL Database with 133 million reads per month, 133 million writes per month, 25 GB storage per table, up to 3 tables.

Observability and Management

- Monitoring: 500 million ingestion datapoints, 1 billion retrieval datapoints
- Application Performance Monitoring: 1000 tracing events and 10 Synthetic runs per hour
- Logging: 10 GB per month
- Notifications: 1 million sent through https per month, 1000 sent through email per month
- Service Connector Hub: 2 service connectors

Additional services

- Flexible Load Balancer: 1 instance, 10 Mbps
- Flexible Network Load Balancer
- Outbound Data Transfer: 10 TB per month
- Virtual Cloud Networks (VCN): Maximum of 2 VCNs, includes IPv4 and IPv6 support
- VCN Flow Logs: Up to 10 GB per month shared across OCI Logging services
- Site-to-Site VPN: 50 IPSec connections
- Content Management Starter Edition: 5000 assets per month
- Certificates: 5 Private CA and 150 private TLS certificates
- Email Delivery: 3,000 emails sent per day

[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:



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.

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- **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

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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.

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June 1 – August 31, 2023

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Oracle Cloud Applications

Prepare for success. Start your cloud implementation project with Oracle Cloud Applications Business Process training.

[Free Training and Certification](#)

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Exadata Cloud at Customer on Up to August, 31th 2023



SCAN ME

The screenshot shows a video player interface. At the top, there's a navigation bar with 'MyLearn | Oracle University' and a search bar 'What do you want to learn?'. Below the search bar are icons for 'Home', 'Community', and a menu. The main content area shows a video thumbnail for 'Course : Oracle Base Database Services Professional Workshop'. The thumbnail features a dark background with a white 'X' icon and the text 'Mission-critical cloud database capabilities where you need them'. To the right of the thumbnail, the course title 'Oracle Base Database Services Professional Workshop' is displayed. The video player controls show a progress bar at 28:56 / 30:20. The video content itself shows a slide with the number '1' and the heading 'Exceptional Performance, Availability, and Security' followed by a bulleted list: 'Superior architecture with unique software optimizations', 'Full-stack redundancy and integrated disaster recovery', and 'Defense in-depth security'. The bottom of the video player has a 'Data Architect' button.

Database Services Oracle Base Database Services Professional (2023)

Data Architect

[Click Here](#)

The screenshot shows the 'Playlist' tab of the course interface. At the top, there are tabs for 'Playlist' (which is selected), 'Student Guides', and 'About'. Below the tabs, the course title 'Course 7h 41m' is shown with a progress bar at 2%. There are three buttons: 'SEARCH', 'SKILL CHECKS', and 'AUTOPLAY' (which is turned on). The main content area is titled '2 : Exadata Database Service' with a collapse arrow. It lists five video items: 'Exadata Database Service Overview' (selected, 30m), 'Exadata: Network, Infrastructure, VM Cluster Overview' (28m), 'Exadata Infrastructure and VM Cluster Management' (28m), 'Database Lifecycle Management' (New, 38m), and 'Management Tools' (New, 21m).





Thank You 😊

Questions / Feedback / Training Suggestions

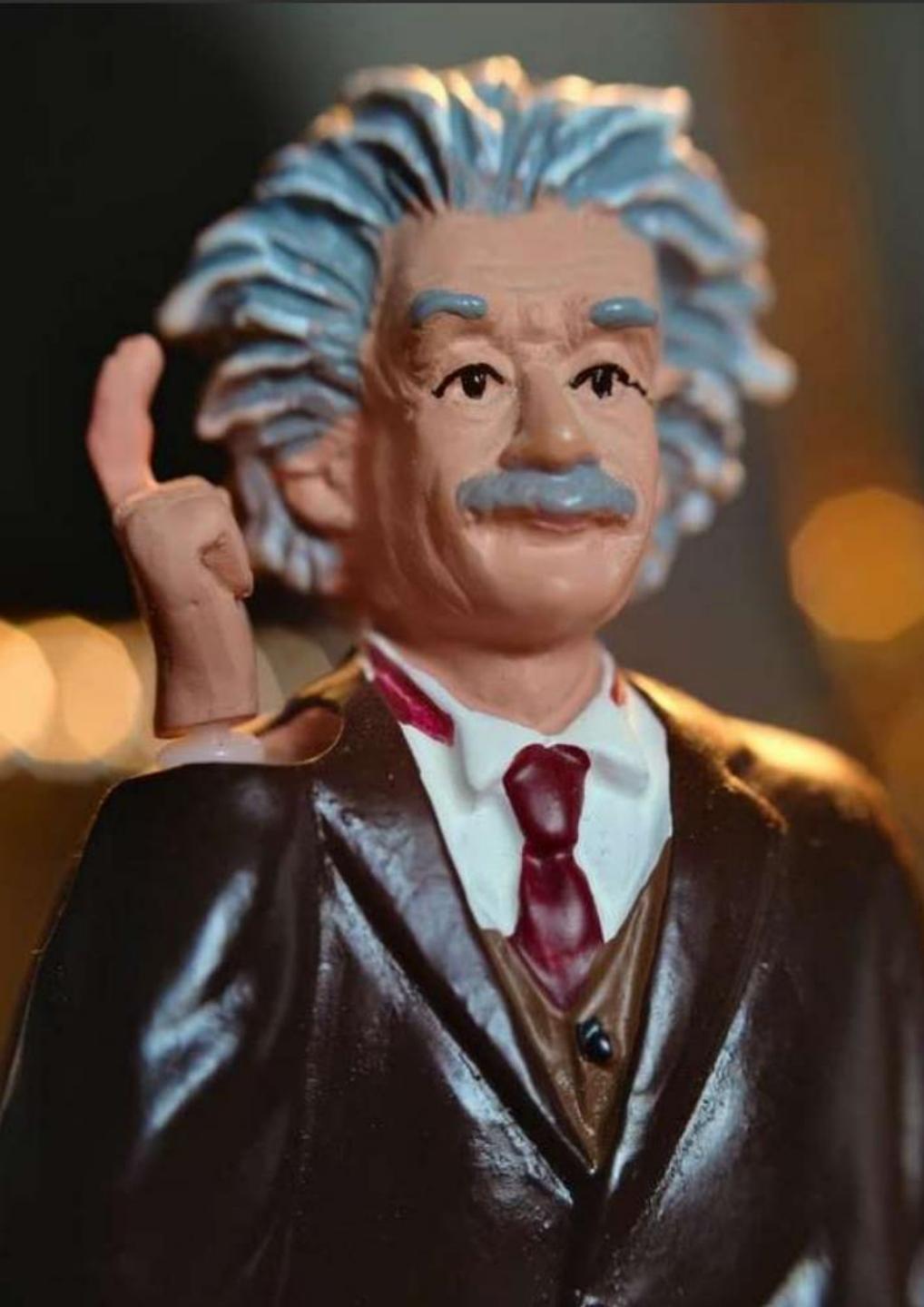
andre.sousa@oracle.com

marcel.lamarca@oracle.com

Ask for help 😊

ORACLE





Demo 1 – OCI NoSQL Services

- NoSQL Table provisioning
- NoSQL Table Insert using OCI Console
- Exadata Cloud Shape and Versions



Demo 2 – Exadata Cloud At Customer OCI Tour

- Dom0 Maintenance
- VM Clusters
- Oracle Homes and backup informations
- Create A new PDB using OCI Console



Demo 3 – Dbaascli Tour

- Check Current Version
- Check Oracle Home Status
- Check **Dbaascli** Options
- Create A new PDB using OCI Console

