

Oracle Data Infrastructure Forum

# Database Modernization with Oracle Autonomous Database

以自治資料庫實現企業現代化資料平台

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資深系統顧問

美商甲骨文 Hybrid Cloud Systems

Nov, 2021



# 您的資料平台已經是數位轉型的核心

Gene therapy



Marketing analytics



Factory of the future



Data monetization



Smart cities



Fraud detection



Code / song Auto-completion



Precision agriculture



Customer experience



# 您的資料平台已經是數位轉型的核心

Success in new dynamic markets depends on managing the data deluge

E-Commerce



Mobile



Hospitality



Rideshare



Bots



Virtual Assistant



AI



Travel and Entertainment



Geolocation



IoT



VR



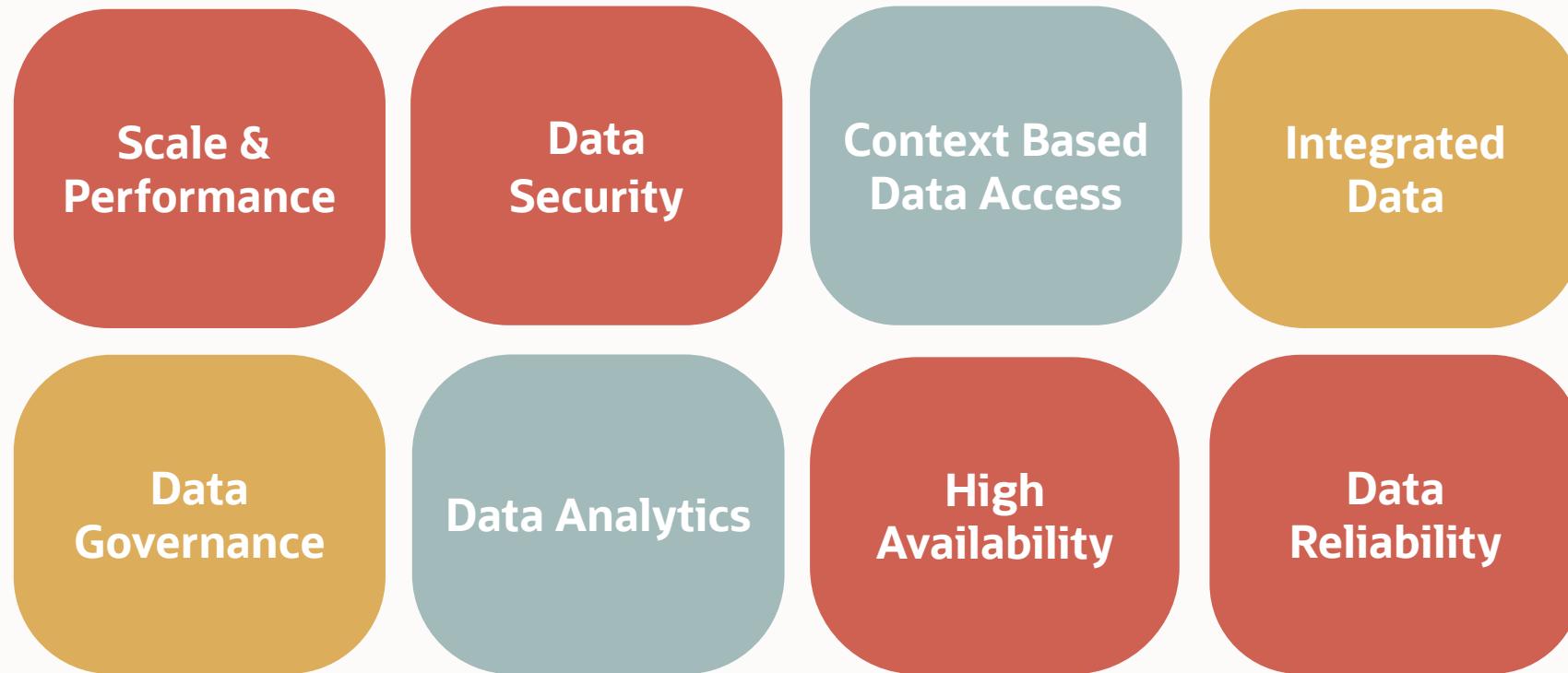
Crypto



Machine Learning

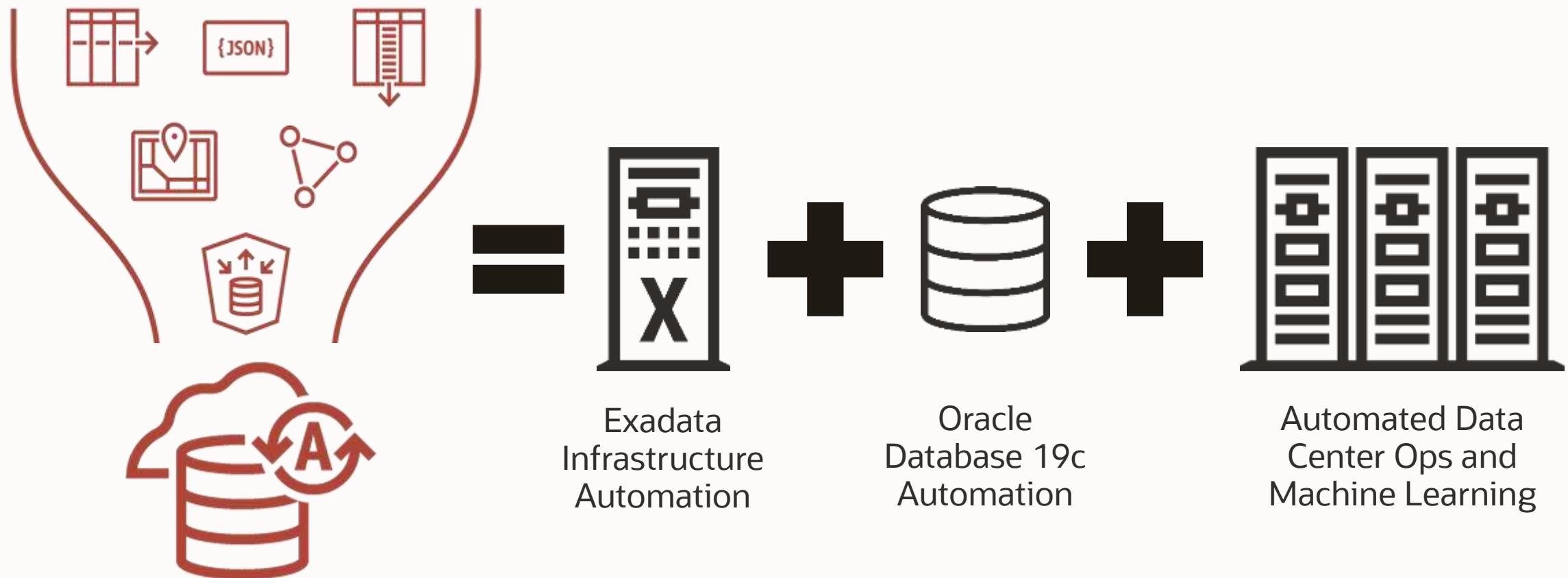


# 資料平台數位轉型的架構原則



# Oracle Autonomous Database is a **Fully Managed Cloud Service**

With automation across all components driven by AI and ML



# Oracle Autonomous Database

Delivers simplified data management for all

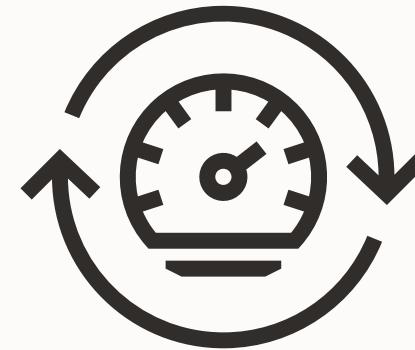


## Enterprise-Class



Security, availability,  
scalability, and performance

## Self-Driving



Fully autonomous plus  
true cloud-elasticity  
for low cost

## Most Productive



Self-service tools for business  
analysts, developers and more

# A Choice of Autonomous Database Services

Each service is optimized for specific workload use cases



Autonomous  
Transaction Processing



Autonomous  
Data Warehouse



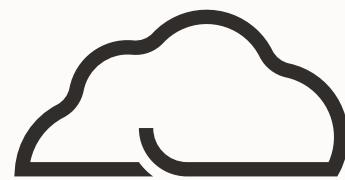
Autonomous  
JSON



Autonomous  
APEX AppDev

# A Choice of Deployment Platforms

Same autonomous database service available in the Cloud and on-premises



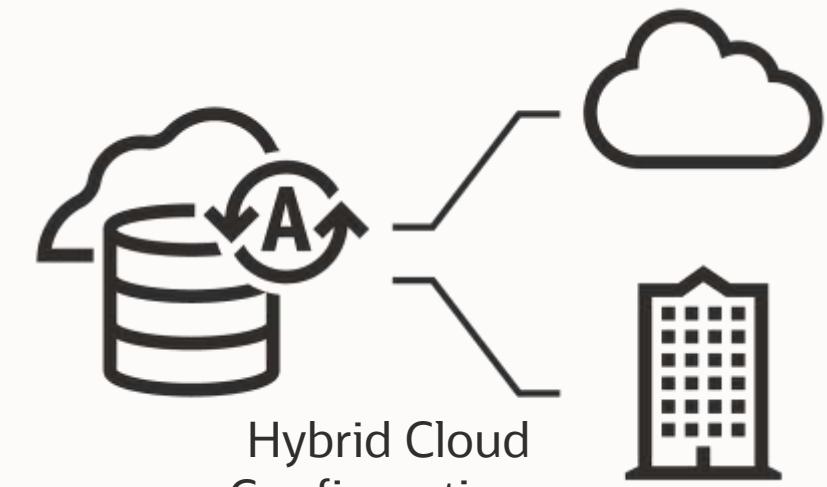
Oracle Cloud  
Infrastructure



Exadata  
Cloud at Customer



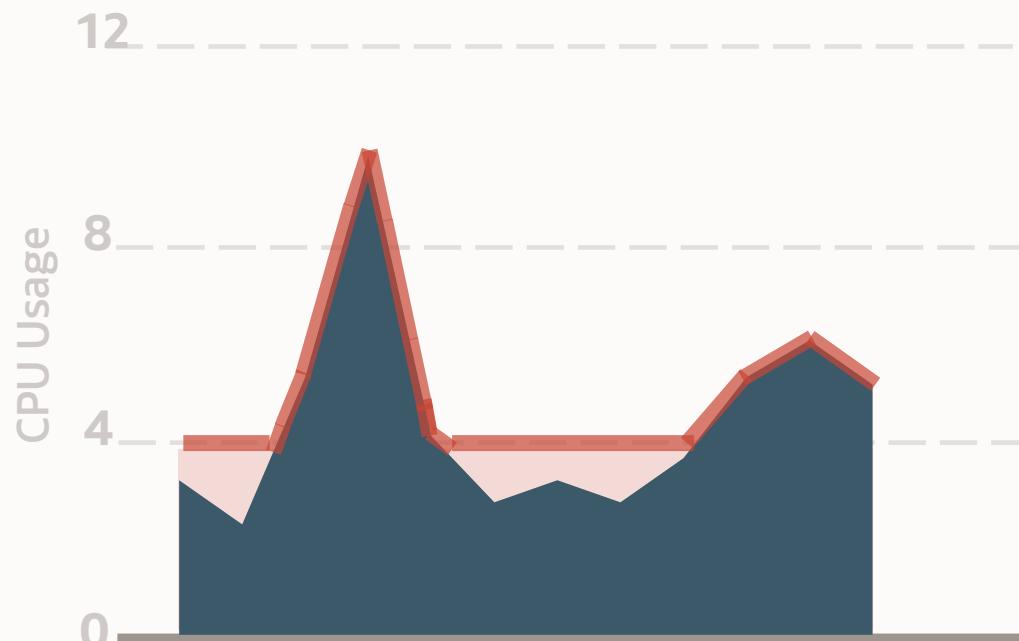
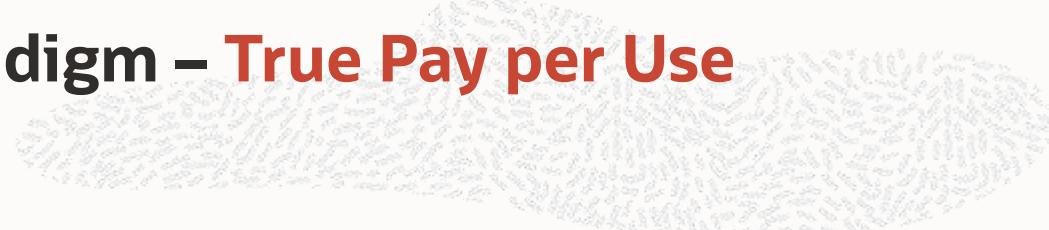
Dedicated Region  
Cloud at Customer



Hybrid Cloud  
Configurations

# Auto Scaling Delivers New Database Paradigm – True Pay per Use

Dynamic Auto-Scale with Per-Second Billing



## Dynamic Auto-Scale

Automatically scale up to 3X  
Scaling with zero downtime

## Autonomous Database

Automatically scales compute resources when needed by workload.

All scaling occurs online, while the application continuously runs.

Enables true pay per use.





Oracle Autonomous Database placed  
**first for all four Operational Use Cases and**  
**first or second for all four Analytical Use Cases**  
in 2020 Gartner Critical Capabilities for Cloud DBMS Reports

Source: Gartner *Critical Capabilities for Cloud DBMS for Operational Use Cases*, Merv Adrian, Donald Feinberg, Rick Greenwald, Adam Ronthal, Henry Cook and Gartner *Critical Capabilities for Cloud DBMS for Analytical Use Cases*, Henry Cook, Donald Feinberg, Merv Adrian, Rick Greenwald, Adam Ronthal, November 2020

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# Autonomous Database

## Industries and use cases



## Health Care



## SaaS



## Finance



# Autonomous Database

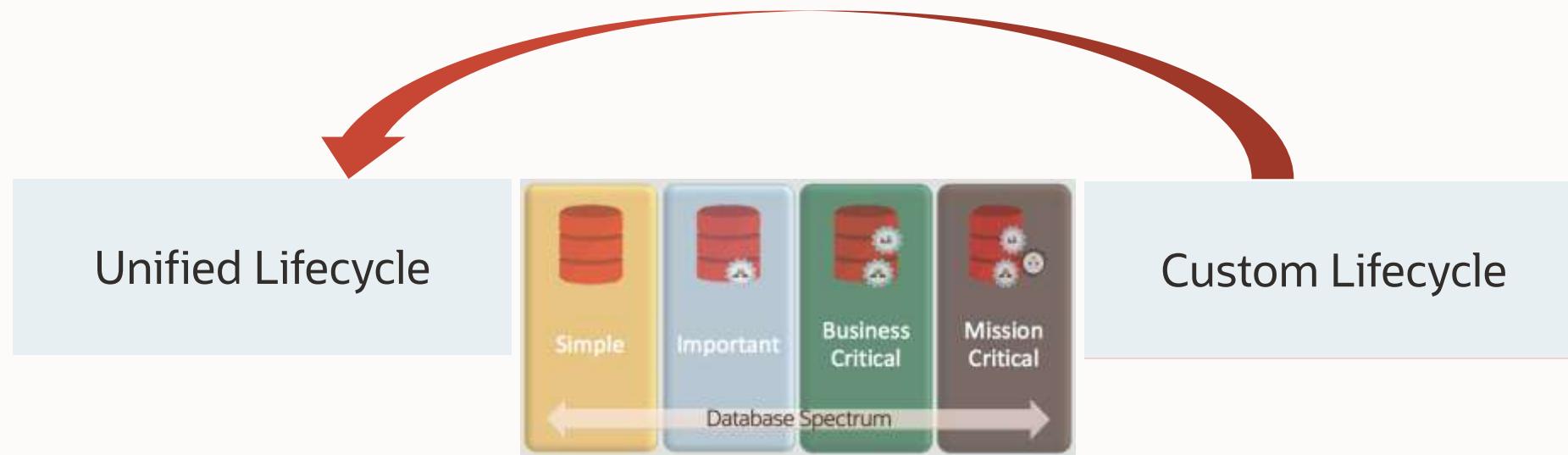
## Key Themes



Software Version: 19.11

- More **Autonomous**
- More **Mission-Critical**
- More **Usable**

# Database Modernization with Autonomous Database



**Autonomous Journey**  
Trust and Verify, with time Unify Operations

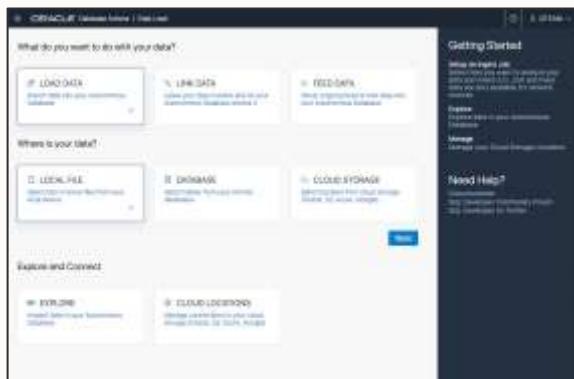
# Something New on Autonomous Database

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# Self-Service Tools for Data Analysts

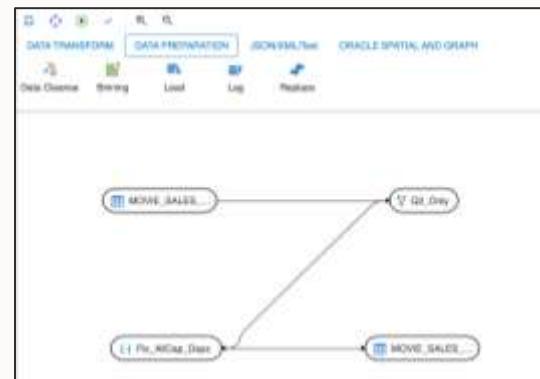
From data to insights with built-in self-service data tools

## NEW Load



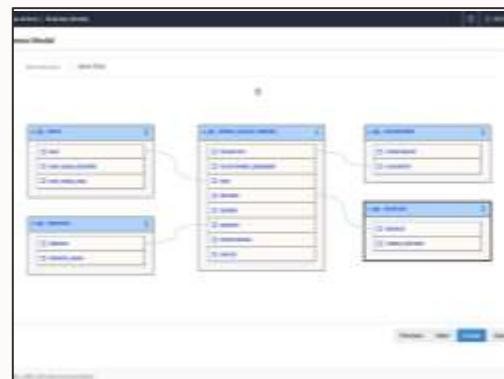
Simple drag & drop loading

## NEW Transforms



Declarative transformations and data cleansing

## NEW Business Model



Automatically create business models

## NEW Data Insights



Automatically discover hidden patterns and anomalies



# Export Data As JSON To Object Storage

## OVERVIEW

ADB now has a procedure to export a query as JSON directly to Object Storage bucket.

The query can be an advanced query - includes joins or subqueries.

Specify `format` parameter with `compression` option to compress the output files.

Use `DBMS_CLOUD.DELETE_OBJECT` to delete the files

## LEARN MORE

DOC

## VALUE

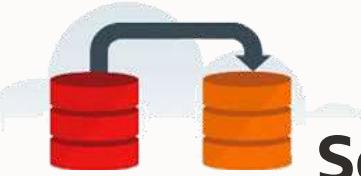
Simplifies process for scripting a procedure to push data from a query to Object Storage bucket for archiving or sharing with other cloud services/tools

## HOW IT WORKS

### BEGIN

```
DBMS_CLOUD.EXPORT_DATA(  
  credential_name => 'DEF_CRED_NAME',  
  file_uri_list => 'bucketname/filename',  
  query => 'SELECT * FROM DEPT',  
  format => JSON_OBJECT('type' value 'json'));
```

END; /



# Set Patch Level When Creating A Clone

## OVERVIEW

When you provision or clone an Autonomous Database instance you can select a patch level to apply upcoming patches.

There are two patch level options: **Regular** and **Early**.

## LEARN MORE

DOC

## HOW IT WORKS

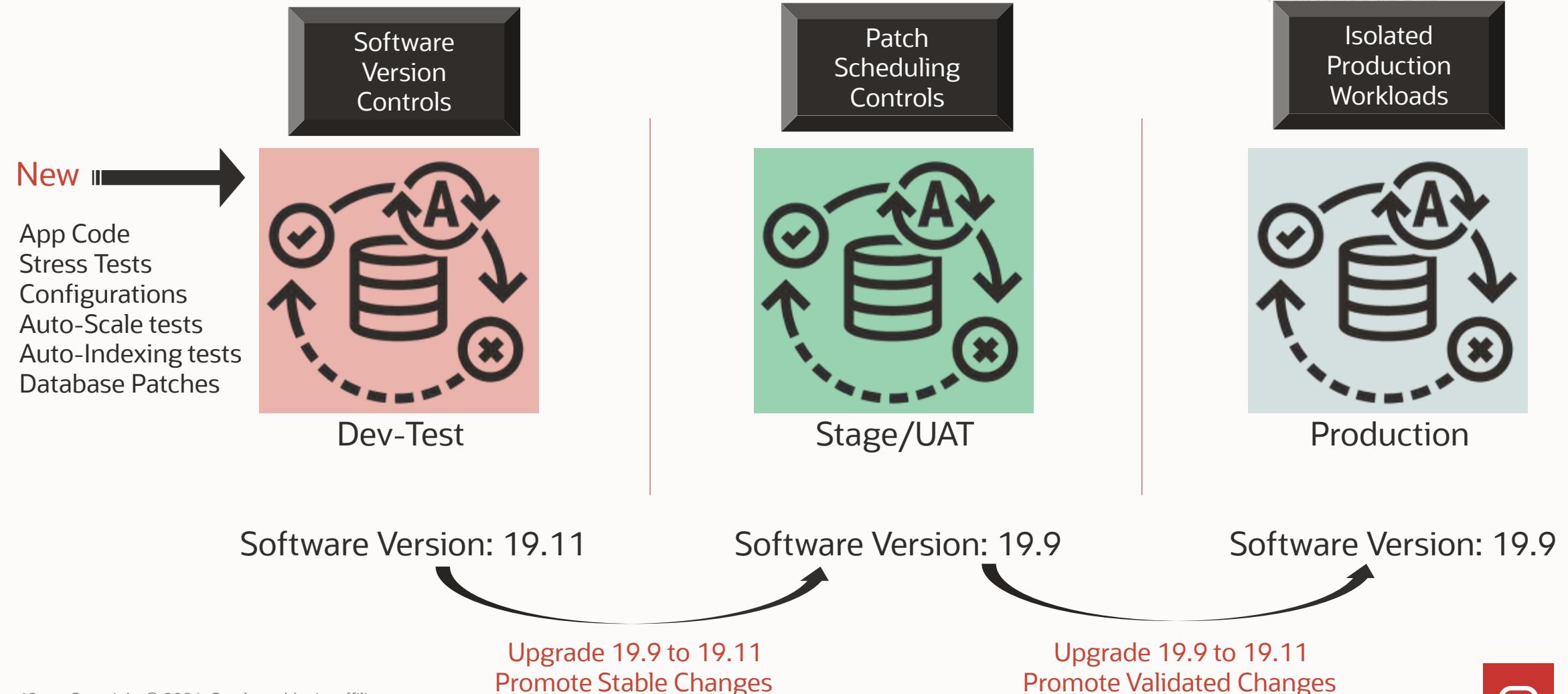
The screenshot shows the Oracle Cloud Infrastructure (OCI) console interface for creating an Autonomous Database Clone. The top section, 'Create Autonomous Database Clone', includes a 'Choose a clone type' dropdown with 'Full Clone' selected. Below this, the 'Clone source' section shows 'Clone from a database instance' selected. The main configuration area, 'Configure the database', includes sections for 'Clone database settings' (Title, CPU/Memory, Storage), 'Patch level' (with options: Early, Regular, or Previous), and 'Auto scaling' (checkbox). The 'Patch level' section is highlighted with a black bar.

## VALUE

**EARLY Patch Level** - provides advanced access to upcoming maintenance patches 1 week before the regular patching cycle. Makes it easier to test applications and tools in advance of the automatic matching cycle.

# Autonomous Database – Cloud@Customer

Autonomous on Dedicated Infrastructure with added Operational Controls



# Always Free Autonomous Database Services



All Oracle Cloud tenancies get at least two Always Free Autonomous Databases

Choose from any of the workload types:

Autonomous Transaction Processing

Autonomous Data Warehouse

Autonomous JSON Database

- Each instance includes 1 OCPU, up to 20 GB of storage, up to 20 simultaneous database sessions
- APEX application development included with all instances
- One-click promotion to full Autonomous Database

**Try Yourself for Free**  
**Always Free**

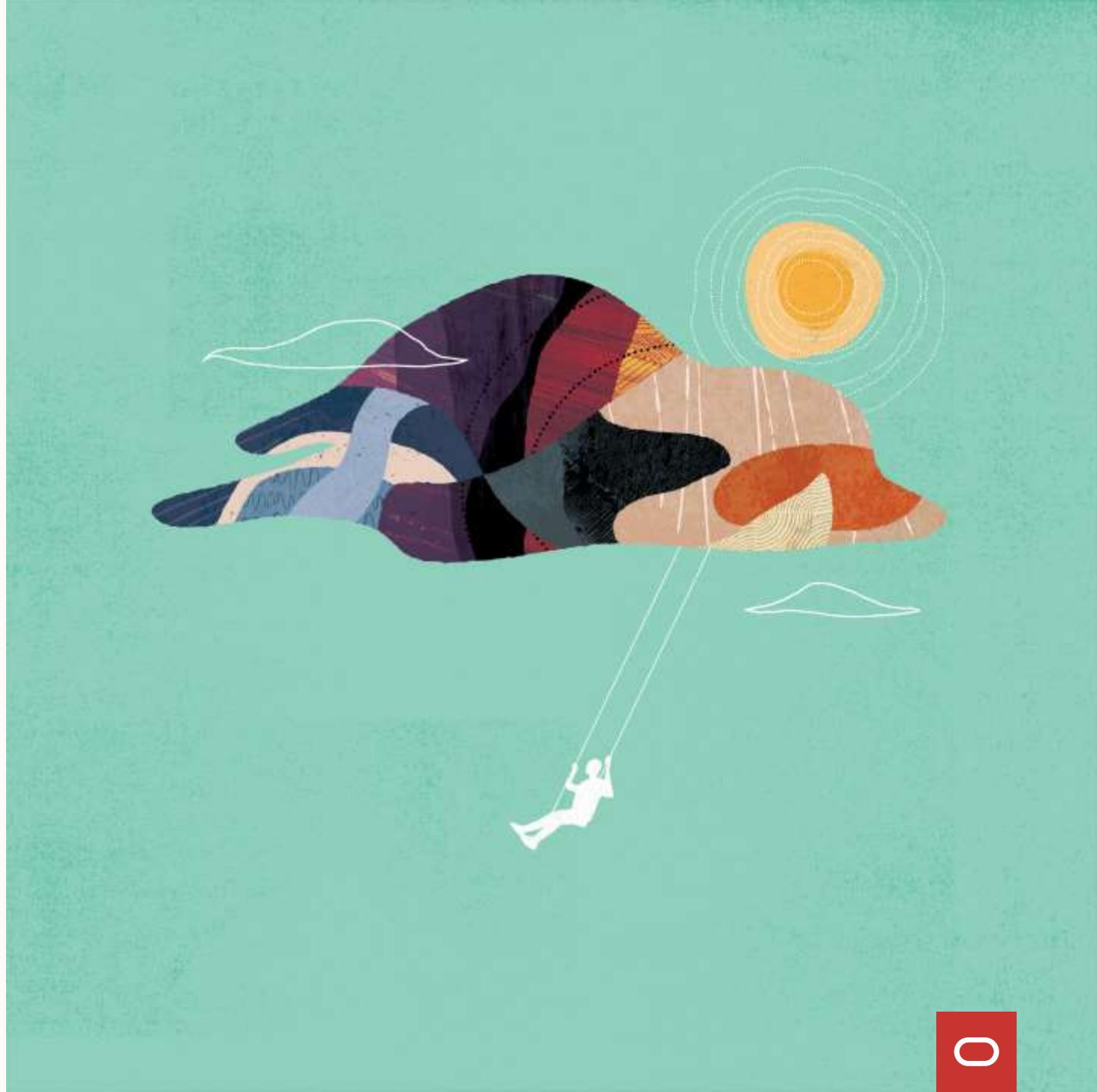
Autonomous Database  
Service you can use for  
unlimited time



[www.oracle.com/cloud/free/](http://www.oracle.com/cloud/free/)

# Thank you

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ORACLE

