Az Autonomous Database magas és maximális rendelkezésre állása

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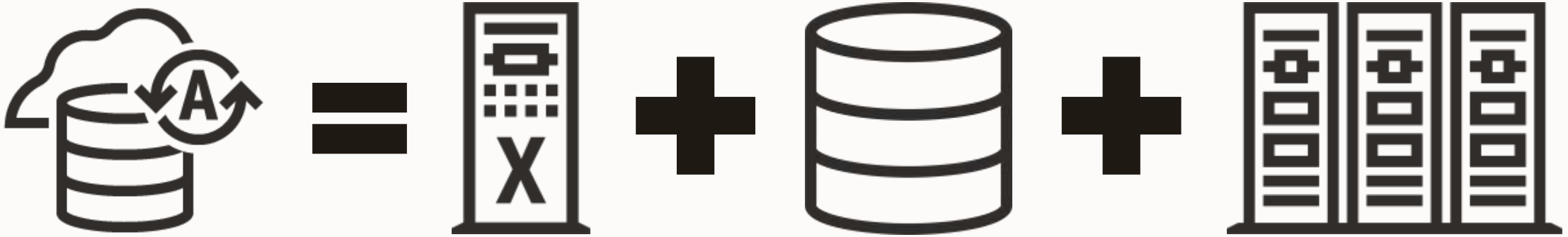
What is Autonomous Database?

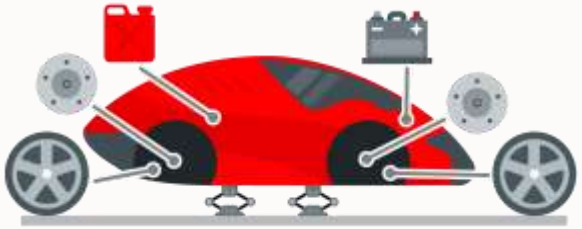
Using the Cloud to eliminate all the complexity of mission critical databases



Oracle Autonomous Database = **Complete Infrastructure Automation** + **Complete Database Automation** + **Automated Data Center Operations**

How does Autonomous Database work?

Full Database Lifecycle Automation



Provision

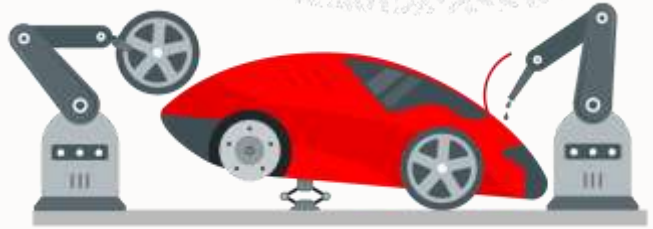
Rapidly and easily creates mission critical databases

- Creates **Exadata**[+] Cloud Infrastructure
- **Real Application Clusters**[+] scale-out database

Secure

Protects data from all external and internal threats

- Continuous threat detection
- Applies security **updates online**[+]
- Prevents admin snooping, **encrypts** all data



Manage

Automates all infrastructure and database maintenance

- Patches all software **online**[+]
- Tunes settings
- Performs **all OS and SYSDBA** operations

[+] Unique to Oracle

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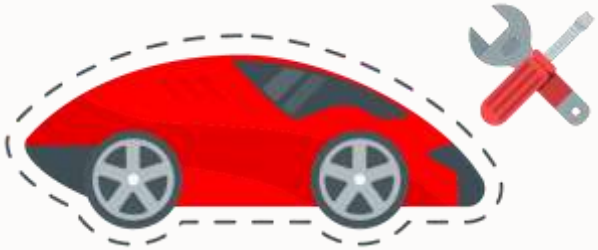
How does Autonomous Database work?

Full Database Lifecycle Automation



Protect

Recovers from any failure without downtime

- Automates backup, restore, **application transparent**[+] cluster failover, diagnoses and repairs **errors**[+]

Scale

Scales online for highest performance and lowest cost

- **Instant online elasticity**[+] of **serverless** compute and storage
- enables **true pay-per-use**[+]

Optimize

Optimally runs workloads without human direction

- Automatically optimizes **data formats**, **parallelism**[+] memory, and plans for each workload

[+] Unique to Oracle

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Fully automated data protection

Highly available out of the box, 99.95% SLA with cross-region Autonomous Data Guard

Built-in highly-available, self-healing infrastructure

Automatic recovery for server/storage failures

Autonomous Data Guard

Enhanced protection against disasters

Now with cross-region standbys

Types of downtime and recovery objectives

Types of downtime

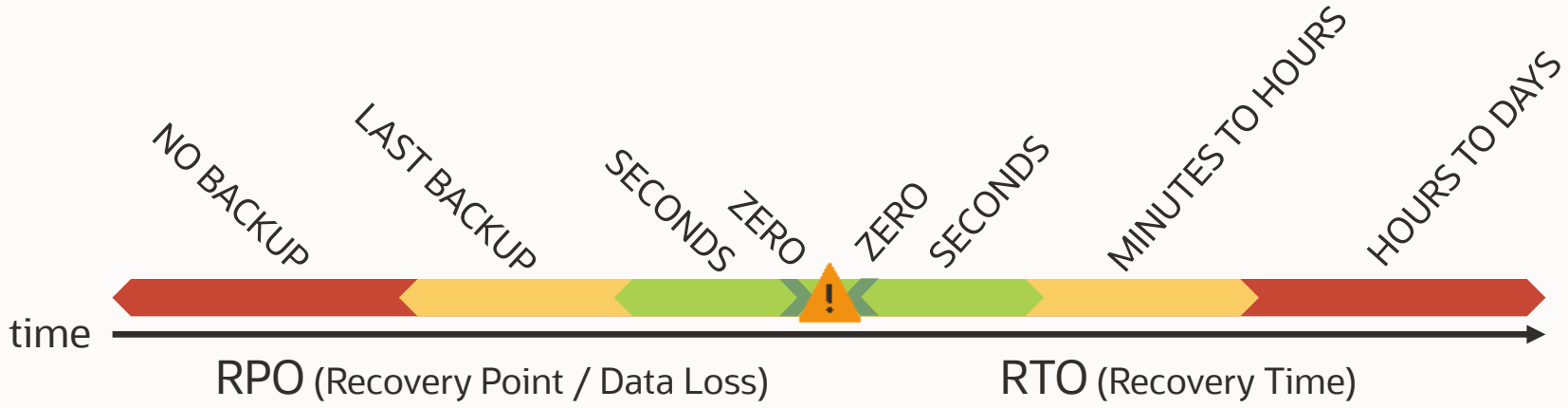
PLANNED MAINTENANCE

UPGRADE

RECOVERABLE LOCAL FAILURE

UNRECOVERABLE OR SITE FAILURE

Recovery objectives



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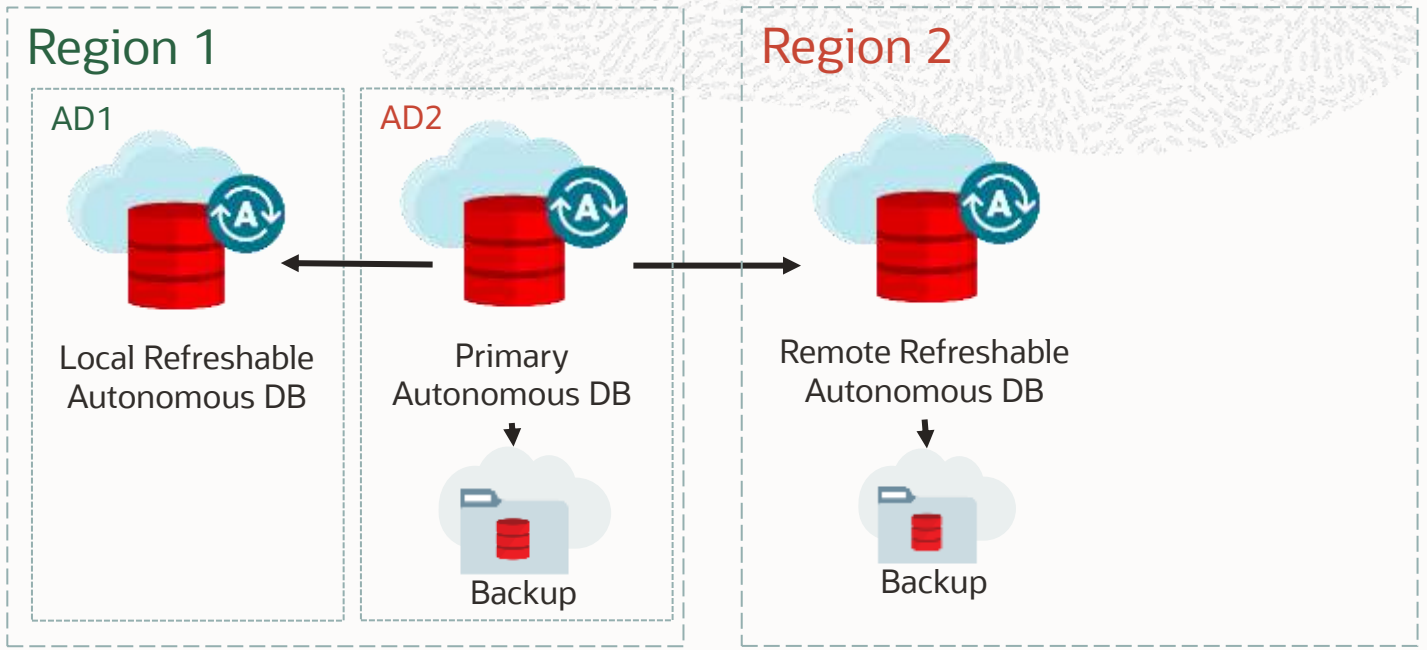
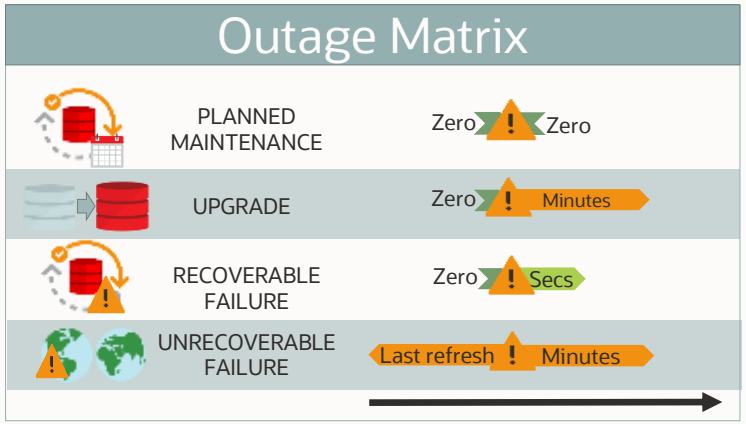
Autonomous Database - Shared: protection out of the box

AVAILABILITY / AUTOMATION *	
RMAN	Backup from primary and standby to 3-way mirrored object storage via Autonomous Backups
RAC	Exadata inherent HA, QoS and Performance benefits Services out of the box
AUTONOMOUS DATA GUARD	Via console (max 2 Standbys: 1 local and 1 remote, ADB-S only) [1] Automatic failover if zero data loss
GOLDEN GATE	Manual (capture & delivery)
MAA LEVEL	Out of the box + AuDG





*
- Out of the box
- Automated via control plane
- Manual setup
- Not available/possible

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ADB Is A Complete End-to-End Self-Service Platform

Built-in tools expand the Autonomous vision to empower business innovators

Oracle + Partner
Visualization Services/Tools

Graph Studio

ML Notebooks

APEX

Oracle + Partner
Development Services/Tools

Data Loading

Transformations

Business Modeling

Data Insights

Graph Analytics

Spatial Analytics

Machine Learning Models

Oracle + 3rd Party Applications

Oracle + 3rd Party Databases

Files

Oracle + 3rd Party Streaming Services

Data Lakes over Object Stores

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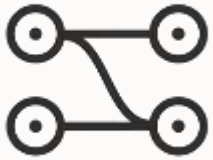
Database Actions – new suite of self-service tools for non-IT users

Load

Simple drag & drop loading (DEMO)

Transforms



Declarative transformations and data cleansing (DEMO)

Data Analysis

Automatically create powerful business models (DEMO)

Guided discovery of hidden patterns and anomalies (DEMO)

Graph

Prepare and explore graph data (DEMO)

ML Model

Easily create models with AutoML (DEMO)

Deploy

Integrate ML models into apps via REST or SQL (DEMO)

Build

Low-Code app-dev platform (APEX)

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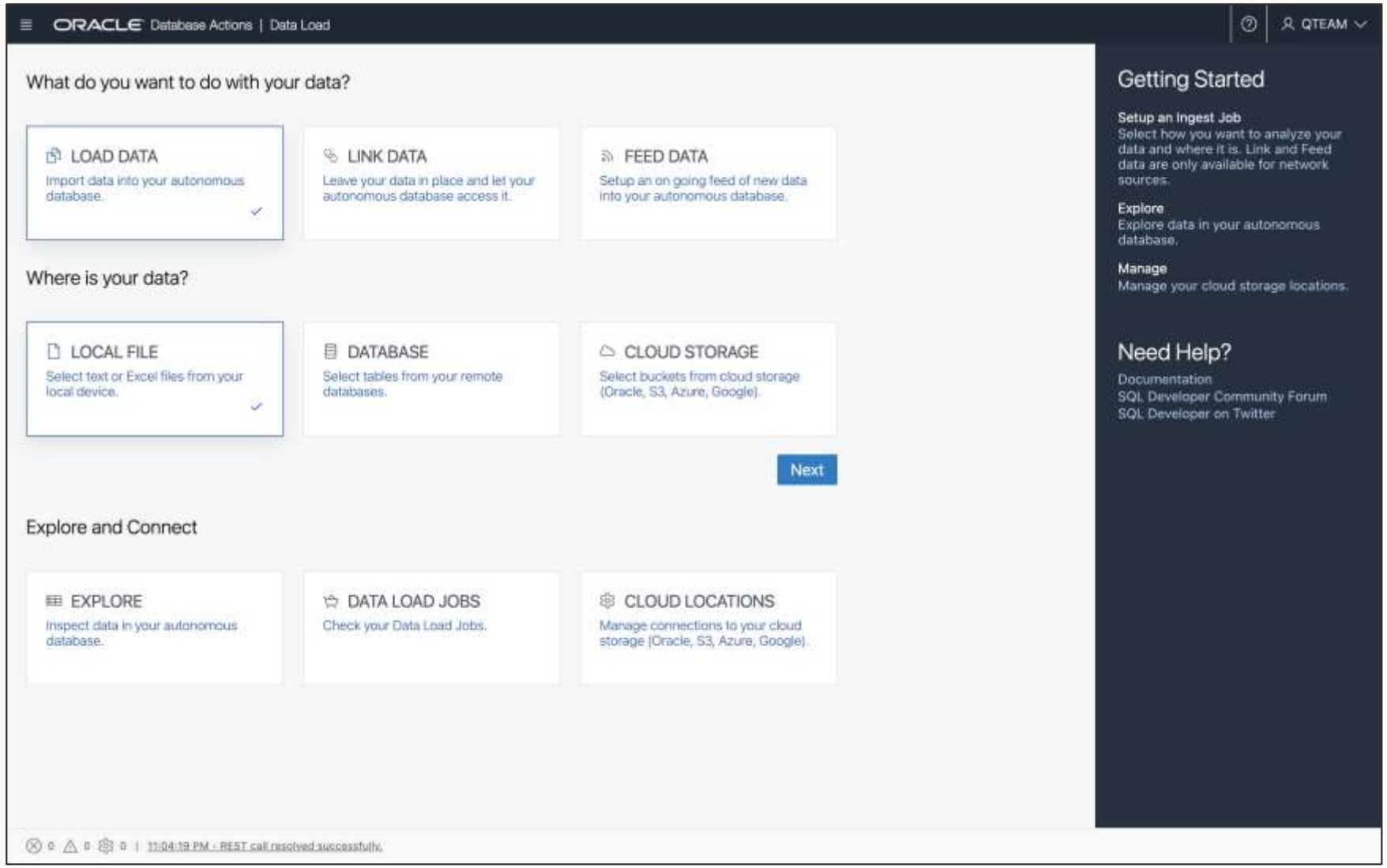
Built-in zero-code intelligent data loading tool



Simple “drag-and-drop” data loading

- Files on local computer
- Files in Cloud Storage (including AWS S3 & Azure Blob Storage)
- Oracle Databases (on-premises and in cloud)

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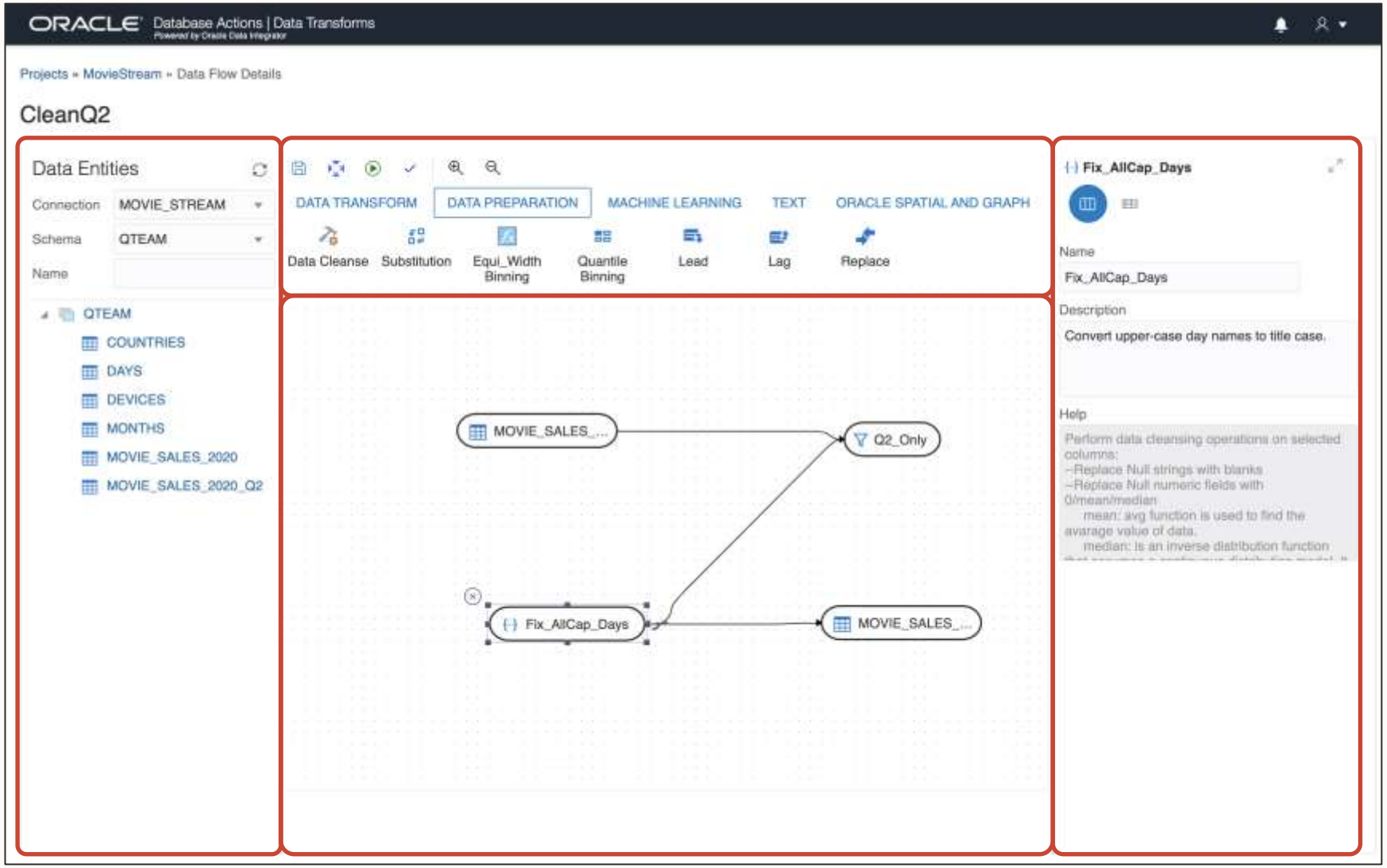
Built-in zero-code declarative data transformation tool



Simple “drag-and-drop” data transformations

- Auto code generation for all ODI sources and targets including Fusion, NetSuite and Salesforce
- Built-in data quality

Based on Oracle Data Integrator

- New, easy-to-use web UI
- Simple migration to ADB for ODI customers
- Exposes all built-in database operators

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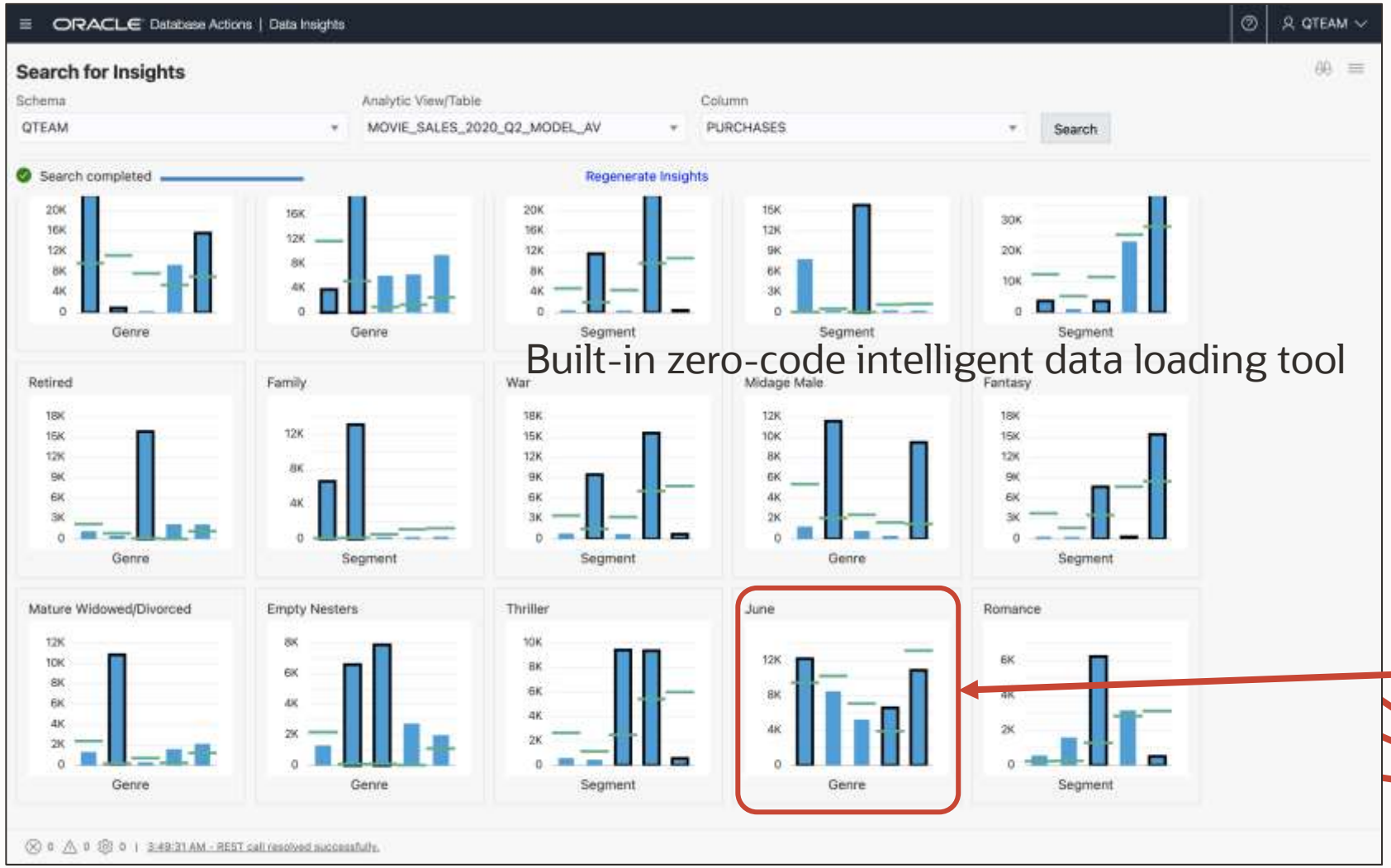
Data Analysis tool:
Machine learning driven anomaly and outlier detection



Built-in zero-code intelligent data loading tool

Automatic insight discovery

- Crawls over business model, running as background process
- Discovers hidden patterns, anomalies and outliers
- Variety of algorithms including regression slope

Usage

- Drill down on specific insight
- Significant differences between predicted and actual values highlighted

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ADB Partnering With Other Tools + Services

Expanding the Autonomous vision with partner tools and services

Oracle + Partner
Visualization Services/Tools

- Oracle ML Notebook
- Oracle Analytics Cloud
- Partner BI Tools
- Spreadsheets

Oracle + Partner
Development Services/Tools

- Application Express
- IDEs
- Partner Development Tools

Oracle + 3rd Party
Applications

- ORACLE FUSION APPLICATIONS
- ORACLE SIEBEL
- ORACLE PEOPLESOFT
- ORACLE E-BUSINESS SUITE
- SAP
- salesforce
- ORACLE NETSUITE

Oracle + 3rd Party
Databases

- NoSQL

Files

- CSV
- JSON
- XML
- DMP
- ZIP
- Parquet
- AVRO

Oracle + 3rd Party
ETL/Streaming Services

- GoldenGate
- kafka
- informatica
- IBM DataStage

Data Lakes over
Object Stores

- OCI Object Storage
- Amazon S3
- Microsoft Azure Blob Storage

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Further Information

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Automation Available

Reference Architecture

Deploy Django Web Framework with Oracle Autonomous Database on OKE

Learn how to deploy Django using one of the managed database services provided by Oracle Cloud…

Automation Available

Built & Deployed

Retraced: Blockchain platform deployment in a Kubernetes cluster on Oracle Cloud

Modern App Development

- Core requirements
- Design principles
- Architecture patterns
- Technology recommendations

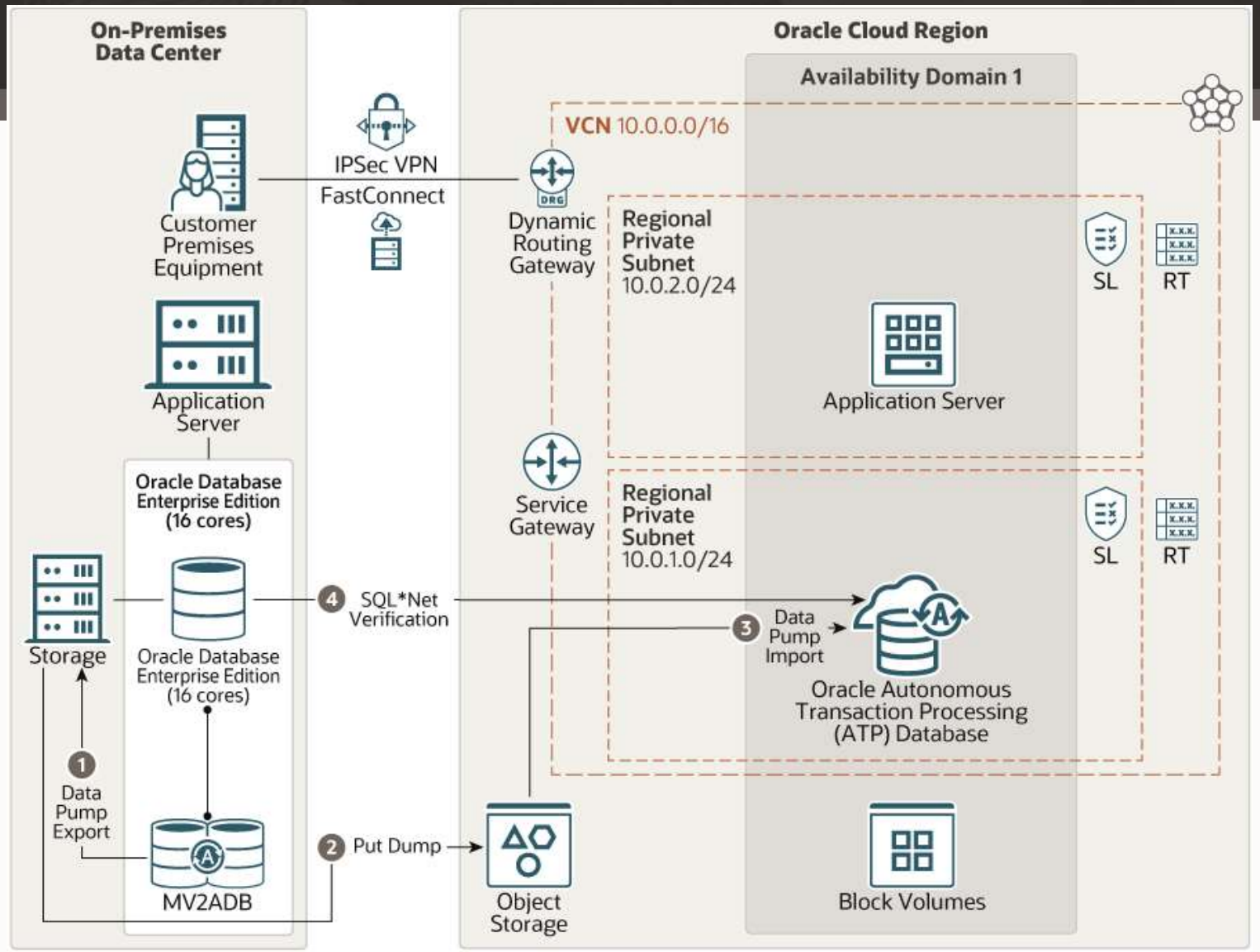
Learn more

HashiCorp Terraform

GitHub

Oracle Architecture Center

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.



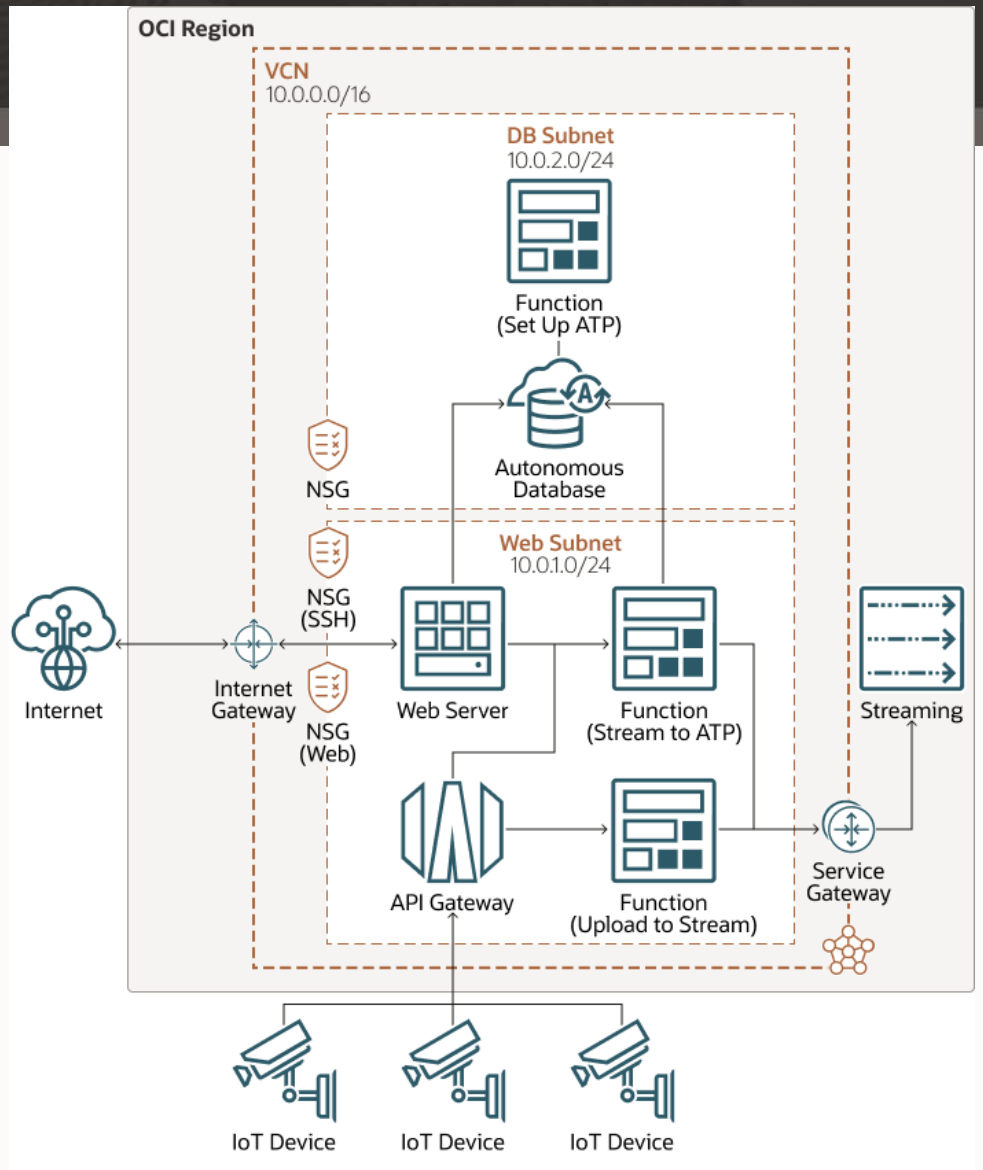
Migrate an on-premises Oracle Database deployment to an autonomous database

Deploy to Oracle Cloud

Go to GitHub

Oracle Architecture Center

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.



Stream IoT data to an autonomous database using serverless functions

Deploy to Oracle Cloud

Go to GitHub

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Featured Workshops

New

Monitor Traces for WebLogic on Kubernetes utilizing Oracle Application Performance Monitoring

Enable OpenTracing for a WebLogic app on Kubernetes using Oracle Application Performance Monitoring

Launch *740 Views* 1 hr, 30 mins

New

DBA Essentials - Remove Oracle Database 21c from your host system

Learn how to remove the Oracle Database software and delete the database.

Launch 45 mins

Featured

DB Security - ASO (Transparent Data Encryption & Data Redaction)

Explore Transparent Data Encryption (TDE) and Data Redaction, both part of Oracle Advanced Security

Launch *8363 Views* 1 hr

Featured

Action! MovieStream Analytics Produce the Best Picture with Oracle (E)

Explore how Oracle Database can quickly and easily help MovieStream capitalize on massive volume

Launch *4727 Views* 2 hrs

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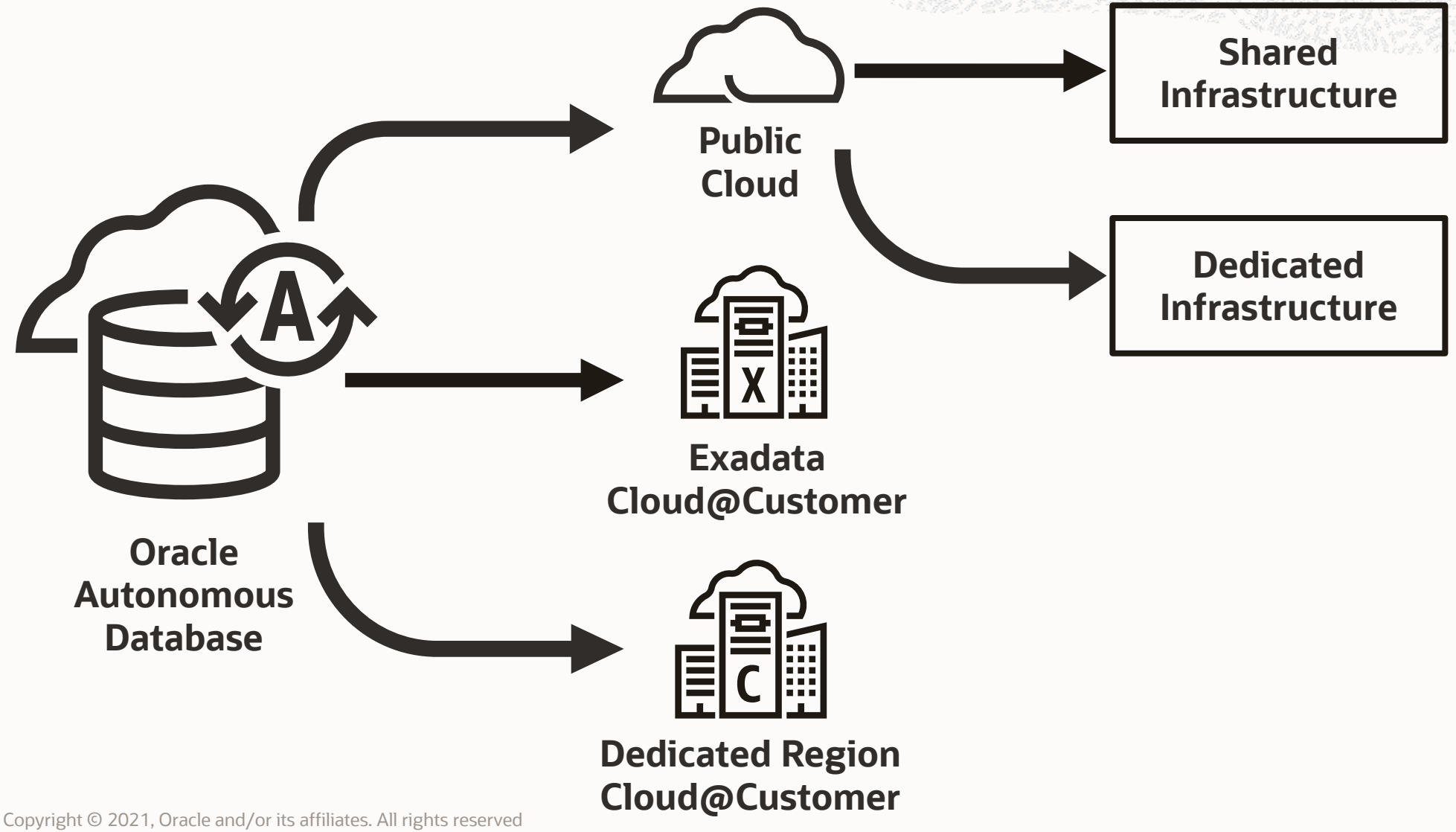
ORACLE

What is Autonomous Database?

Multiple Deployment Choices



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What is Autonomous Database?

Family of products based on a common platform, optimized for specific workloads

Autonomous
Data Warehouse

Optimized
for Low-Code

Optimized
for JSON

Autonomous
Transaction Processing

Optimized
for Graph

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Autonomous Database - Shared: automatic backup

RMAN

	SCHEDULING	• Automatically done by the service (full every 60 days, daily incremental, weekly cumulative, hourly archivelog)
	DESTINATION	• Service-managed bucket, no direct customer access
	REPLICAS	• 3-ways mirrored backup
	CREDENTIALS	• Managed internally • Automatic password rotation
	WALLET	• TDE wallet managed and backed up by Oracle
	RESTORE	• In-place restore only • Duplicate from backup is supported if the source is available or if within the retention window
	FAILOVER	• Backup runs independently of node availability
	STANDBY	• Backup follows the primary automatically after role change. No standby backup.
	CHARGING	• No charge for automatic backups • For object storage and number of requests, when doing manual backups

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Autonomous Database - Shared: Autonomous Data Guard via control plane

Autonomous DATA GUARD

SETUP	• 1-click setup from control plane • Only via PDB hot clone
TOPOLOGY	• Setup of 1 standby within region (across ADs where applicable) and 1 across regions • Remote region destinations predefined based on latency • Only possible between ADB-S
PROTECTION	• Asynchronous configuration (RPO up to 1 minutes, RTO up to 2 minutes) • Automatic failover available if no data loss can be guaranteed • RTO does not include detection time
ROLE CHANGES	• Switchover and failover available through control plane • Connection string does not change
OPEN MODE	• No access to standby database • Additional read-only clones can be created and refreshed manually
PATCHING UPGRADE	• Primary and standby are patched independently • PDB can be relocated to upgraded database

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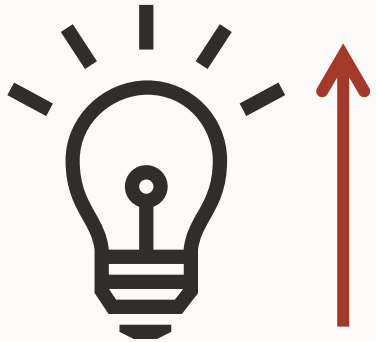
Autonomous Database Training Plans

Key benefits of Autonomous Database

Spend Less

- Reduce administration cost
- Reduce runtime cost



Innovate More

- Refocus talent
- Develop faster

Reduce Risk

- Prevent cyber-attacks
- Always available
- Proven, ease of migration

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