ORACLE

Oracle Autonomous Transaction Processing

Modernize your applications on cloud

Agenda

1. Modern applications

2. Autonomous transaction processing

3. Features

4. Customer success

5. Next steps

# Modern Applications require reliable, intelligent and secure platform

Requirements

- **Availability** - Applications running 24x7 that can survive hardware and software failure

- **Experience** - Provide modern user engagement

- **Performance** - Scale, out and in, automatically on-demand

- **Agile** – Improvements and deployments in minutes with frequent updates.

- **Automated** - Error-free operation and management.

- **Security and privacy** - Built-in with prevention and detection.

Today's challenges

- Always-on service architectures often requires specialized architecture and operational skills

- High performance requires over provisioned resources, predictable low latency and manual performance tuning

- Scaling needs complex clustering setup and idle resources

- Complex, manual management results in errors and high operational cost

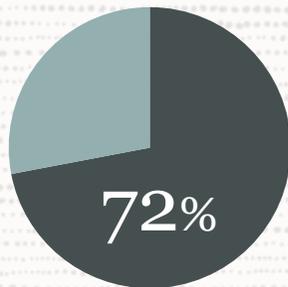- Security is highly manual and susceptible to human errors

90%
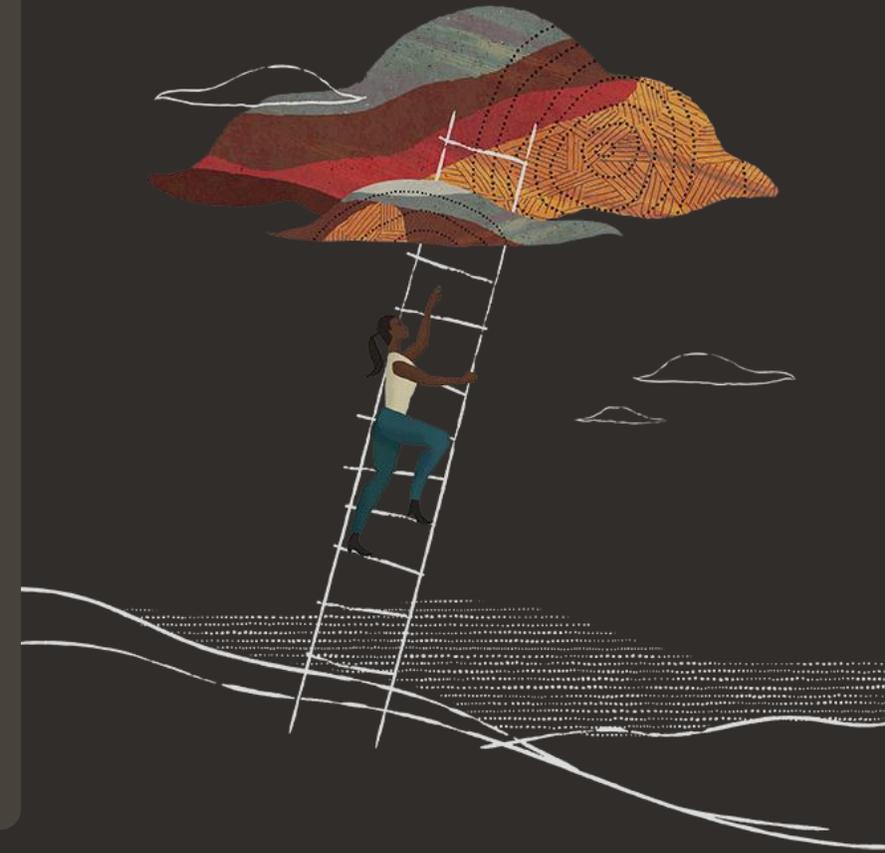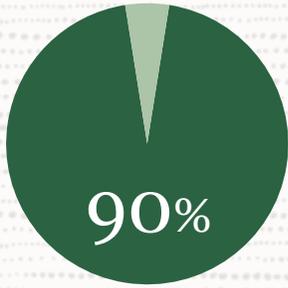
AppDev: updating databases delay application releases

60%
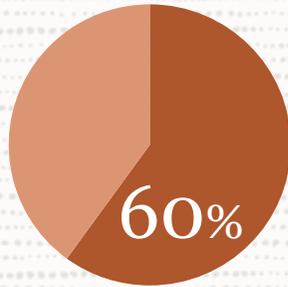
All*: Database release delays application release

72%

CIO: struggle to balance business innovation and operational excellence

Lack of platform automation prevents business and IT transformation

- Manual provisioning and maintenance increases time to market
- Patching, scaling requires downtime impacts business momentum
- Data security, privacy and integrity affects brand reputation
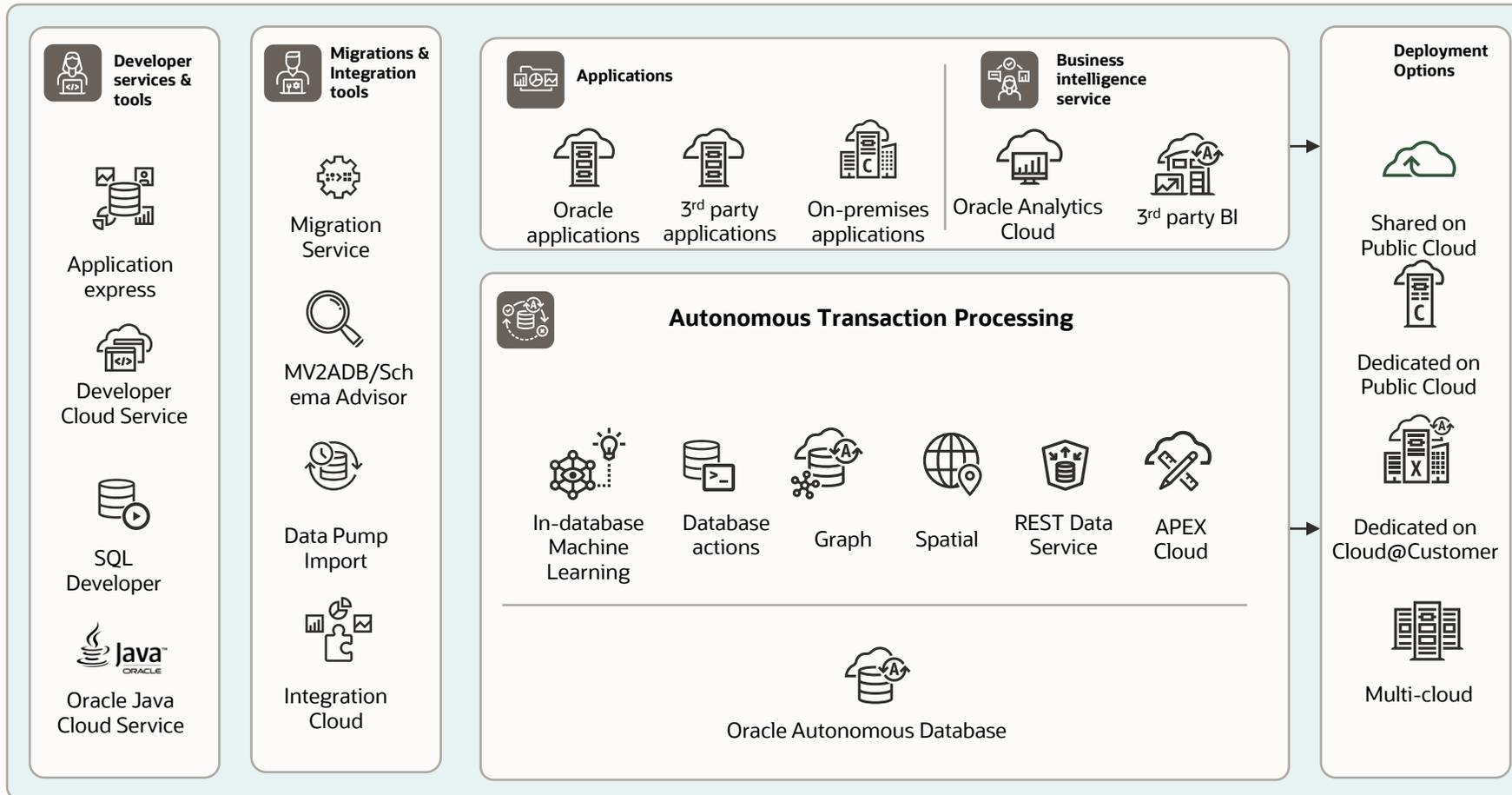- Limited data, different data sources causes lost revenue opportunities

Don't remain stuck with a rigid architecture unable to cope with rapid change

Source: CIO Magazine

* All = CIOs, DBAs and AppDev

Oracle Autonomous Transaction Processing
Modernize business applications and mixed workloads

Developer services & tools
- Application express
- Developer Cloud Service
- SQL Developer
- Oracle Java Cloud Service

Migrations & Integration tools
- Migration Service
- MV2ADB/Schema Advisor
- Data Pump Import
- Integration Cloud

Applications
- Oracle applications
- 3rd party applications
- On-premises applications

Business intelligence service
- Oracle Analytics Cloud
- 3rd party BI

Autonomous Transaction Processing
- In-database Machine Learning
- Database actions
- Graph
- Spatial
- REST Data Service
- APEX Cloud

Oracle Autonomous Database

Deployment Options
- Shared on Public Cloud
- Dedicated on Public Cloud
- Dedicated on Cloud@Customer
- Multi-cloud

1. Simplified application development
2. Autonomous operations
3. Complete data protection and security
4. High performance and availability above 99.95%

50x better storage latency than Amazon Aurora

Features

 Automatic provisioning

 Automatic configuration

 Automatic encryption

 Automatic online patching and updating

 Automatic elastic scaling

 Automatic tuning

No-code/Low-code development
Eliminate 98% of hand coding with built-in low-code application development platform, APEX.

In-database machine learning (ML) algorithms
Easily build ML models and analytical dashboards without moving data out of the database.

Self-service data tools
Quickly load any data, run queries, build sophisticated analytical models, visualize information.
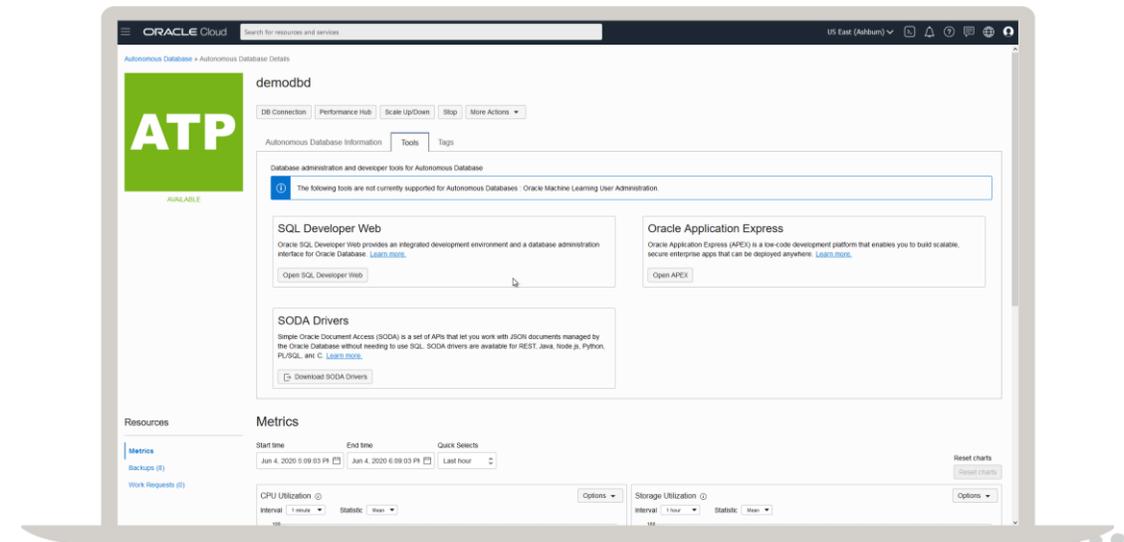
Native relational and nonrelational data models
Simpler application development using multiple data types including document, graph, spatial, JSON, XML, and more.

REST API support
Enable all your data for simpler and faster access.

Complete data protection and security

Always-on encryption
This ensures the data is always secure at rest and in motion.

Auto-patching
Applications continue to run as patching occurs.

Data privacy
Enables database administrators to perform all administrative tasks without ever seeing customer data.

Security for sensitive data
Oracle Data Safe, makes it easy to discover sensitive data, evaluate security risks, mask sensitive data, and implement and monitor security controls.

Advanced auditing
You can log & monitor all events with minimal impact on performance – analysis, forensics, and compliance.

High performance
Delivers 80% lower latency and more than 5X throughput than other cloud providers by utilizing database-optimized hardware, automated tuning, and indexing.

Always online
Provides more than 99.95% availability using a combination of Oracle's Gen 2 Cloud Infrastructure, Oracle RAC, Autonomous Data Guard, and daily automatic backups.

Protection from human error
Oracle Flashback, provided with Autonomous Transaction Processing, instantly rewinds accidental changes to application schemas, protecting users from human errors. It supports recovery at all levels including row, transaction, and table—and across the entire database.
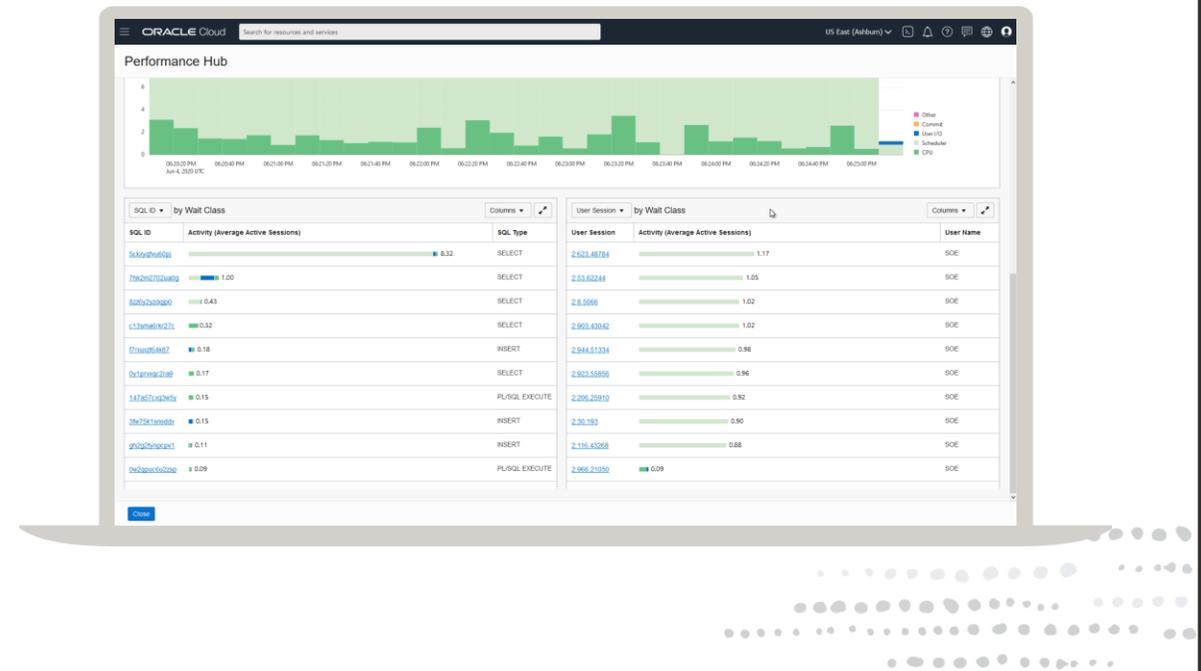
Choice of Deployment to meet business needs

Shared

A simple and elastic choice. Oracle autonomously operates all aspects of the database life cycle from database placement to backup and updates.
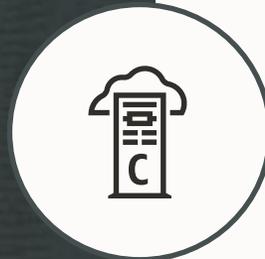
Dedicated on public cloud

A customizable dedicated compute, storage, network and database service for only a single tenant, providing for the highest levels of security isolation and governance.

Dedicated on cloud@customer

Autonomous Database on dedicated infrastructure running on Exadata Database Machine system in *your* data center, together with the networking configuration that connects it to Oracle Cloud.

"With Oracle Autonomous Database, JASCI is revolutionizing logistics so our customers can deliver orders of an ever-expanding product line faster and successfully compete in the age of next-day shipping."

Craig Wilensky
JASCI Software
The story

Autonomous transaction processing to transforming business

Moving your apps to autonomous transaction processing cloud database service is the easiest path to modernization

Custom and 3rd party apps
Move application to cloud redesigning database
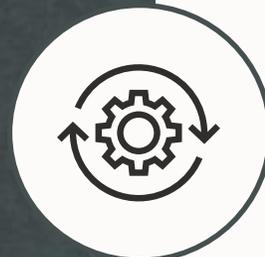Gain higher performance
Improve availability
Improve security

Oracle applications
Incrementally refactor
Reduce manual work with autonomous services
Improve agility
Automate your database lifecycle

ISV applications
Extend your applications
Improve user experience with performance and availability
Expand app use with new APIs
Increase value with integrations to other apps

Optimize and extend **Peoplesoft** applications with autonomous transaction processing service
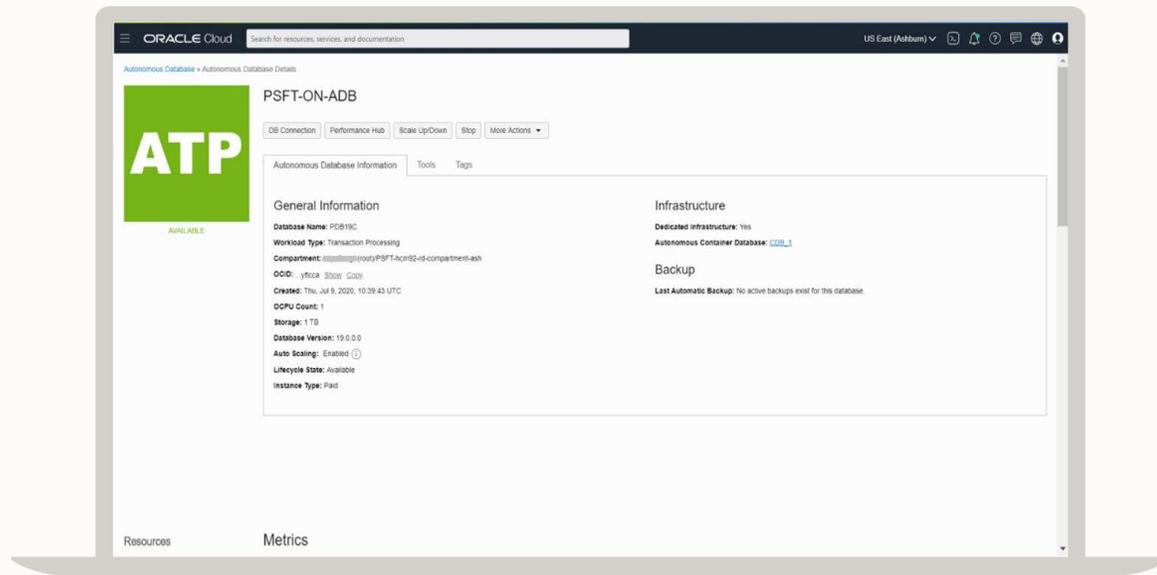
[Peoplesoft on Oracle Autonomous Database](#)

- **High-performance**, highly resilient database platform. The only cloud service w/SLAs for performance, availability, and manageability
- **Integrated full-stack management** for Shared, Dedicated and Cloud@customer deployments
- **Autonomous–**automated migration, patching and upgrades. Automated cloning and self-service provisioning
- **Enrich and expand user experience** with new interfaces, APIs and integration other cloud services

Optimize and Extend Oracle Siebel applications with Autonomous Transaction Processing service

Oracle Siebel on Autonomous Database

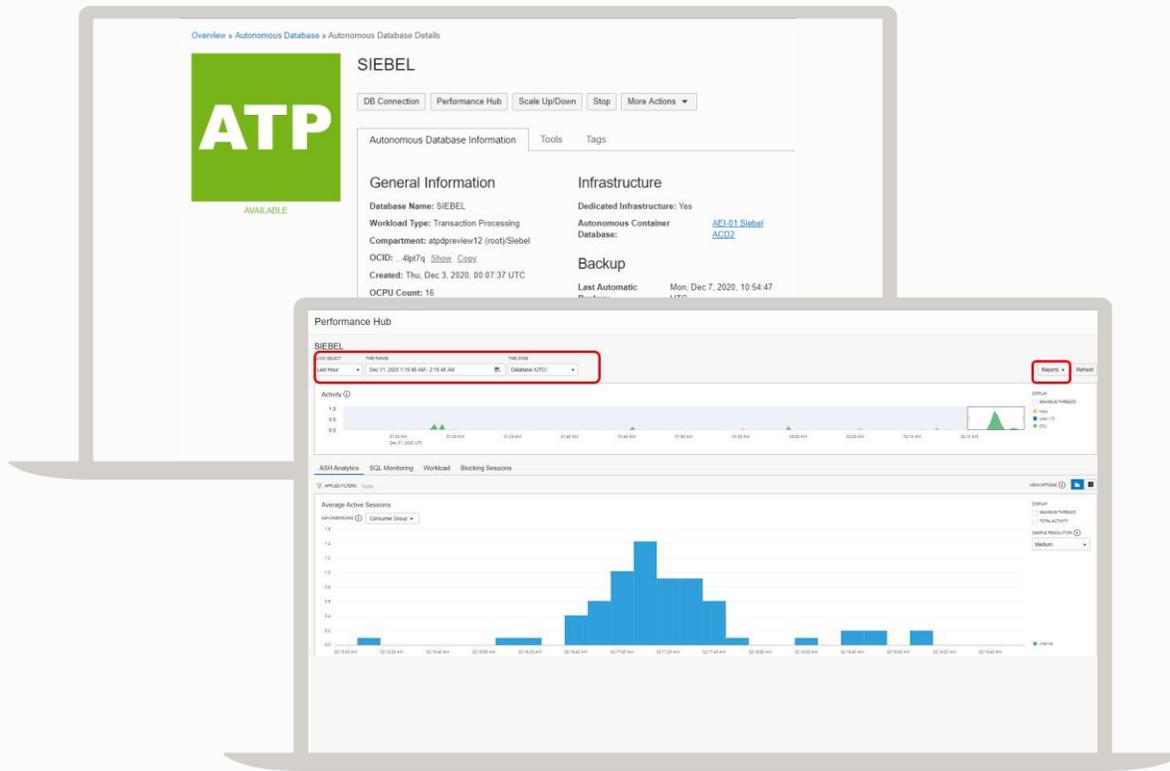- **High-performance**, highly resilient database platform. The only cloud service w/SLAs for performance, availability, and manageability

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Extend your applications with modern services

Multi-cloud

Oracle Azure Interconnect
Enables access to both clouds as one for all your workloads

Portability
Strong support for open standards like Terraform, Kafka, Docker make it easy to move

Intelligent

Data science and machine learning
Build, train, and manage machine learning models

Digital assistant
Automate operations and drive innovation with pre-built services

Enrichment

Graph
Make it easier to manage, represent, and interact with complex relationships in data

Spatial
Manage different types of geospatial data, perform hundreds of spatial analytic operations, and use interactive map visualization tools

Simpler integration

Integration cloud
Migrate/build integrations to a broad ecosystem of SaaS and other applications

API gateway
Securely serve and manage APIs for external or internal customers

Easy to move to from on-premises to autonomous transaction processing
Maximize TCO, minimize risk, accelerate your business

Flexible licensing, volume discounts

Bring your own license

BYOL from on-prem to OCI

Extend your Oracle apps support to the cloud

Universal credits

Credits that can be used for any infrastructure or platform services worldwide

Volume discounts

Ability to ramp consumption, and increase predictability

Easy to migrate, no re-architecture, strong SLAs

No re-architecture

Application and data move as-is

Keep customizations, integrations

No retraining required

Availability, performance, and manageability SLAs

With high-availability compute, block volume, object storage, and FastConnect

The first major cloud vendor to guarantee performance

Migration Tools

The Autonomous Database (ADB) schema advisor
Highlights the schema objects that can be migrated, as well as those that can be migrated with changes

Move to Autonomous Database (MV2ADB)
Loads data and migration from "on-premises" to Autonomous Database Cloud leveraging on Oracle Data Pump and within one command

Data pump import
Imports data from Oracle Cloud Infrastructure Object Storage

Oracle Support Rewards

Earn rewards to reduce your tech license support bill, even down to zero

Earn 25 cents for every $1 you spend on OCI

No limits to rewards you can earn, or how much you can apply

Partner applications on autonomous transaction processing

Migrating to Oracle Autonomous Transaction Processing

OCI Database Migration Service (DMS)

- Free of charge
- Fully managed
- Online and offline migrations
- Autonomous targets only

Zero Downtime Migration (ZDM)

- User-managed expert tool
- Logical and Physical Migrations
- Migrations to all cloud targets
- Limited cross-platform migration
- Free of charge

Assortment of tools

- RMAN, Data Guard, Datapump, GoldenGate, SQL Developer
- Enterprise Manager Migration
- Data Transfer Appliance for oversized databases (avoid transfer of data via network)

Why customers love Oracle Autonomous Transaction Processing

1 Greater availability & performance

2 Automated

3 Better user experience

4 Higher security and privacy

5 Agile development & deployment

Next steps

Try our free tier

Build, test, and deploy applications on Oracle Cloud—for free

Utilize our architecture center

With 130+ different workload patterns for you to test within your environment

Continue the conversation with us or a partner

Let's discuss your specific requirements and the OCI resources we can leverage—including Oracle Cloud Lift Services—to help you onboard

Resources

https://docs.oracle.com/cd/E52319_01/infoportal/autonomous_database.html

Backup slides

Alternative customer examples

Customer logo slides

Optimize
Database services for all your app needs

Exadata Cloud at Customer

For data control, sovereignty, privacy req. of mission critical workloads managed by Oracle

Database Cloud Service

Oracle Database Workloads running on BM or VM in public cloud

MySQL Database Service

Open-source based fully managed MySQL service with Heatwave real-time analytics engine

Exadata Cloud Service

High performance DB workloads on Exadata in public cloud

Autonomous Database

For apps that require fully automated data management

Customer managed   **Co-managed**   **Autonomous**

JASCI modernizes logistics, improves performance 100x

- Leader in SaaS warehouse management with AI and ML for billions of transactions

- Use ATP for scaling and securing mission-critical, sub-second order fulfillment

- 100X improved database performance and 20X improved compute performance

- Eliminated human error in database administration and added automatic disaster recovery

- 2X orders processed with 1/2 the labor cost to focus resources on improving customer service

Autonomous operations

Auto-provisioning

Deploys fault-tolerant and highly available databases in minutes.

Auto-scaling

Scales compute resources automatically to meet performance and throughput requirements without any downtime. Enables true pay-per-use experience with online dynamic scaling.

Auto-tuning

Configures and tunes databases automatically even as data and schema change over time. The memory configuration, data formats, indexes, and access structures are automatically optimized to improve performance.

Automated backups

Performs weekly full and daily incremental backups of the database in Oracle's object storage and retains them for up to 60 days to restore and recover to any point in time.

Auto-repairing

Fixes hardware and software faults by continuously monitoring and predicting failures. Requests are immediately redirected to healthy devices, maintaining database performance.

Auto-failover

Eliminates site downtime by maintaining a real-time remote copy of a production database and automatically switching from primary to remote copy using Autonomous Data Guard.

Oracle Applications on autonomous transaction processing

	PeopleSoft People Tools (8.57 and later) PeopleSoft 9.2 (HCM, FSCM, CRM, ELM, CS) DB version: 19c	JD Edwards (9.2.4.3 and later)	Oracle Fusion Middleware (12.2.1.4.0)	Siebel Enterprise Server (21.x)	Oracle E-Business Suite (12.2.3 and later)	Oracle Fusion Applications	SAP NetWeaver 7.x
ATP Dedicated	✓	✓	✓	✓	In-progress	In-progress	
ATP Dedicated ExaC@C	✓	✓	✓	✓			
ATP Shared	✓	Planned	Planned	In-progress			

* Certification details as of June 2021

Optimize and extend Oracle JD Edwards applications with autonomous transaction processing service

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JD Edwards on Autonomous Database