ORACLE

Multicloud Portfolio part 4:

Oracle Database Service for Microsoft Azure

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Implement Oracle Database Service for Azure

Explain the prerequisites and onboarding options for Oracle Database Service for Azure

Configure common Oracle Database Service for Azure database management tasks

https://mylearn.oracle.com/ou/learning-path/become-an-oci-multicloud-architect-associate-2023/120606

OCI's portfolio of multicloud and hybrid cloud services

Public / Government Cloud Regions

Hyperscale cloud regions in 39 worldwide locations

MySQL Heatwave

OLAP & OLTP at the same instance

Exadata Cloud@Customer

Cloud Autonomous Databases, running in your data center

Microsoft Azure Interconnect

Regional low-latency integration for multicloud architectures

NEW

Oracle Database Service for Azure

Fully managed service for Azure customers to use Oracle databases on OCI

Previous Azure customer options for running critical Oracle Databases

Stay in the datacenter

- Manual configurations
- Over-provisioned infra
- Hardware refresh
- Brittle/ Manual Scaling

Rewrite the application in the cloud

- Lengthy
- High risk
- Opportunity costs

App layer in the cloud, database in the datacenter

- Latency
- Management
- Network service providers

Deploy database software on Azure compute

- Complex configurations for HA/DR
- Performance risks
- Real App Clustering (RAC) & Exadata not available in Azure

What if you could combine the best of Microsoft Azure,

- Stream Analytics
- Synapse Analytics
- Kubernetes Services
- App Services
- Insight clusters
- Data Lake Analytics
- Cognitive Services
- IoT Central
- Azure Databricks

Microsoft Azure

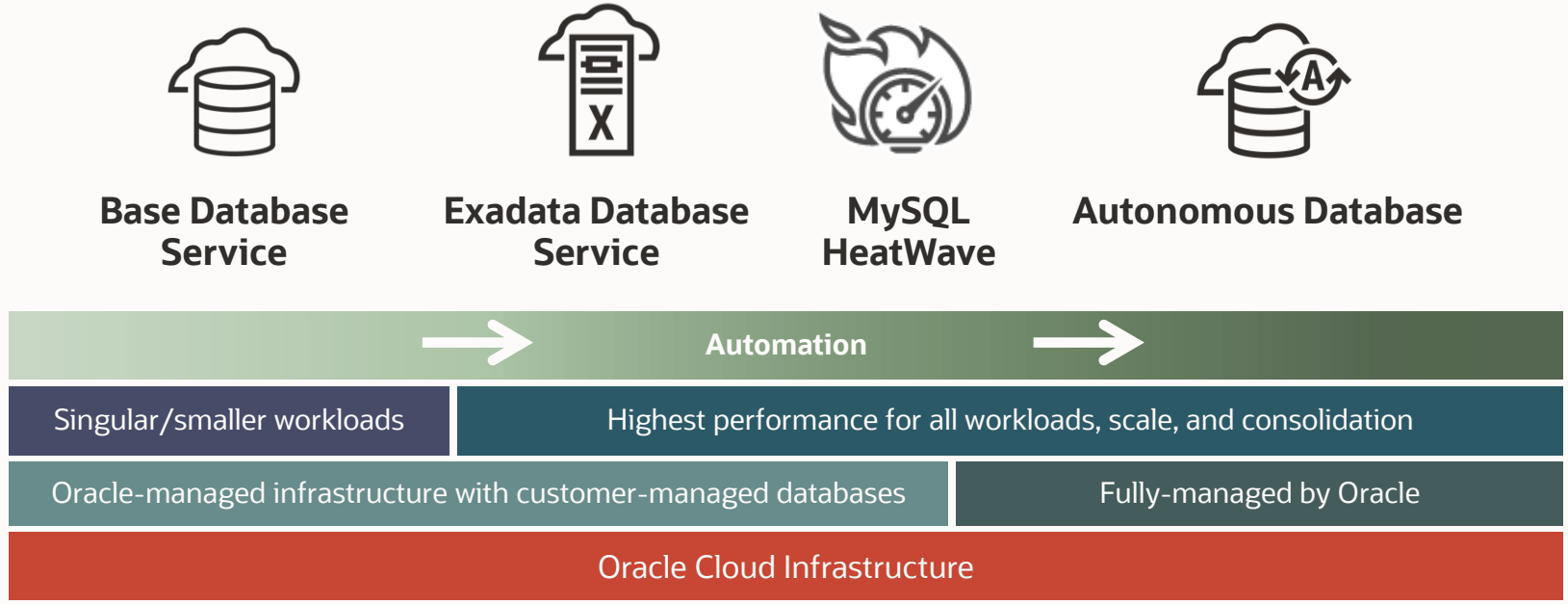
...and so much more.

What if you could combine the best of Microsoft Azure, and the best of OCI and Oracle Databases in the cloud?

- Stream Analytics
- Synapse Analytics
- Kubernetes Services
- App Services
- Insight clusters
- Data Lake Analytics
- Cognitive Services
- IoT Central
- Azure Databricks

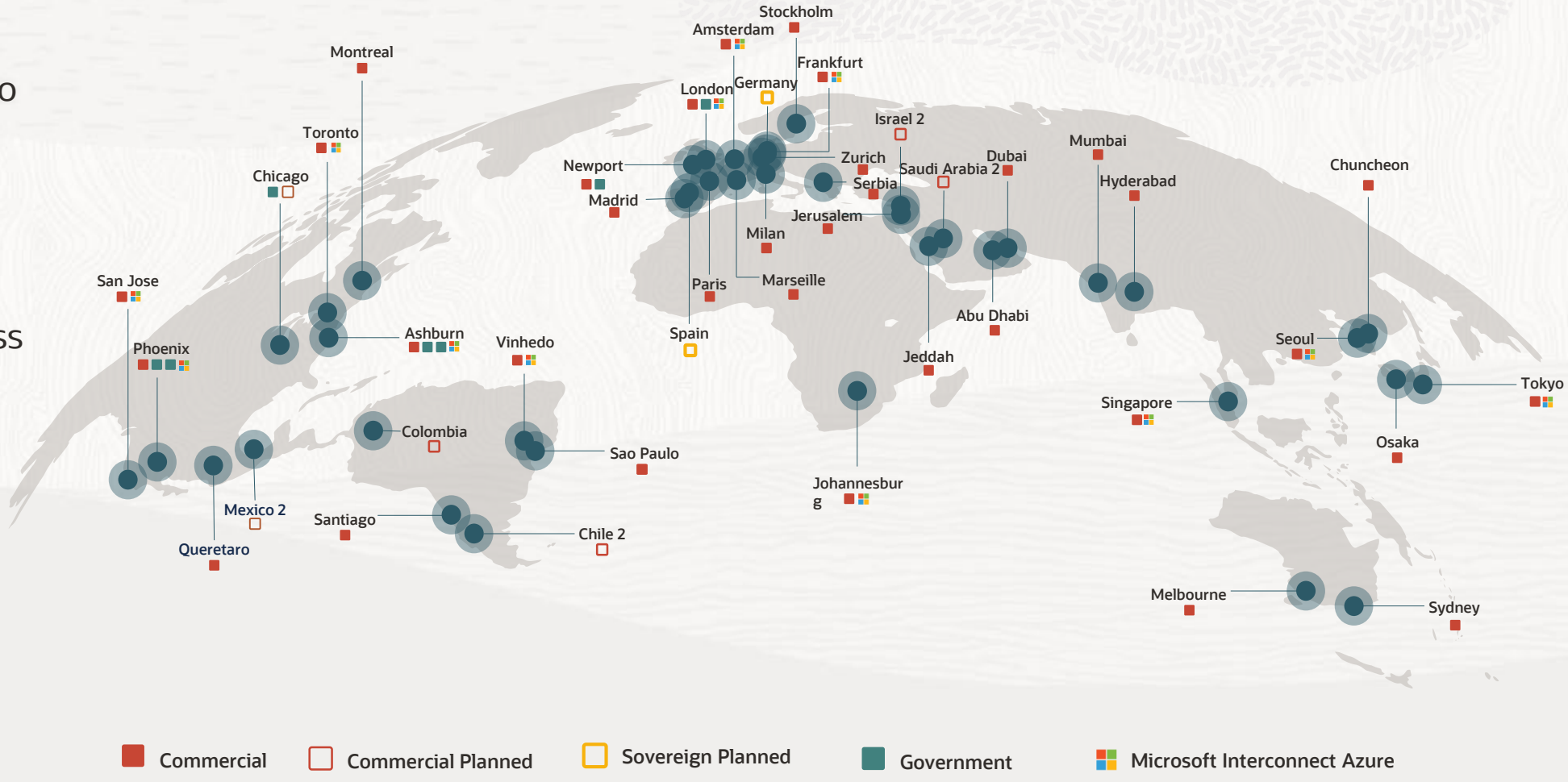
Microsoft Azure

...and so much more.



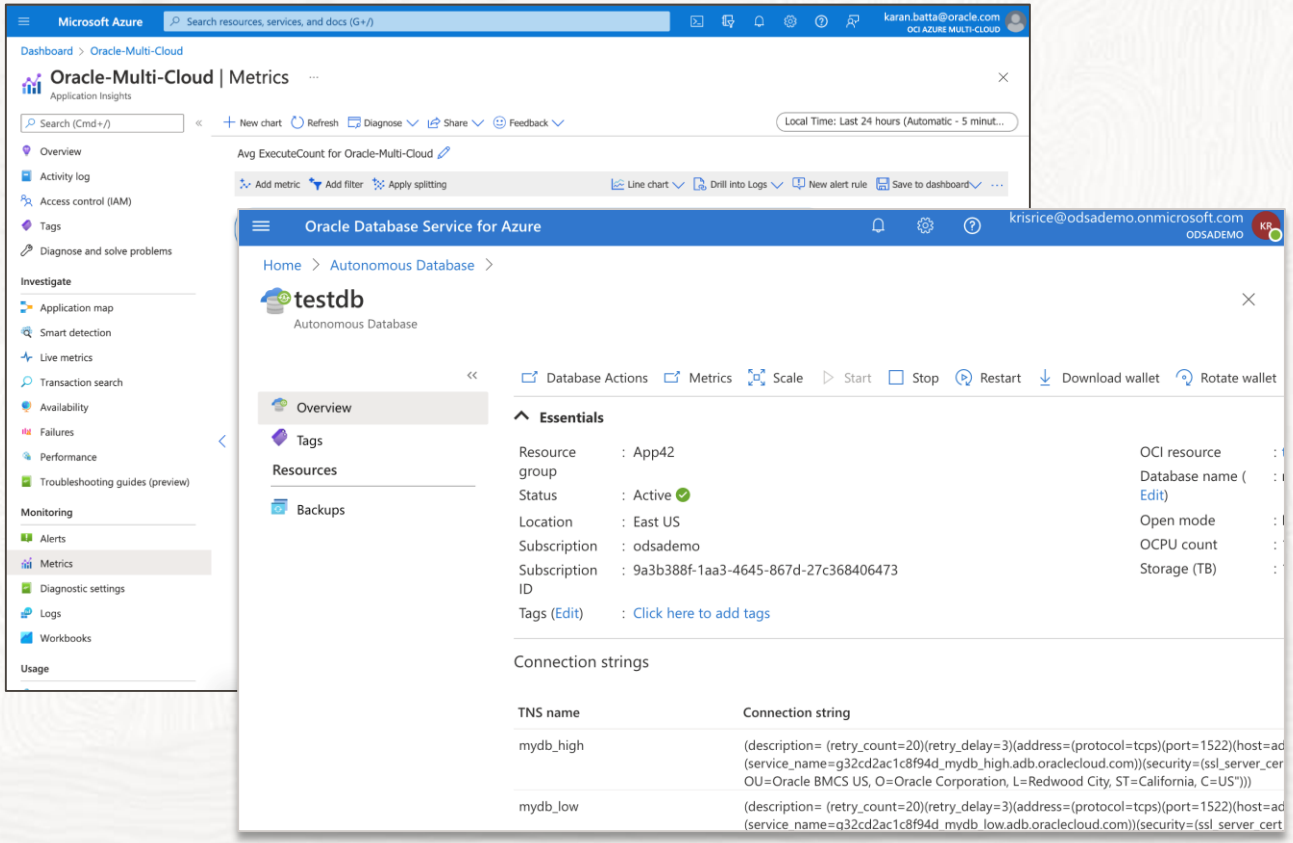
The OCI-Azure Interconnect created the network foundation

- 12 global regions to date
- < 2 millisecond latency private interconnection
- No egress or ingress charges for data
- End-to-end secure encrypted tunnel



Introducing the Oracle Database Service for Azure

An Oracle managed service that enables customers to easily provision and manage Oracle databases running on OCI using an Azure-native API and console experience.



1. Connect Azure and OCI
2. Provision OCI databases
3. Use your OCI database like an Azure resource
4. OCI manages Azure to OCI networking

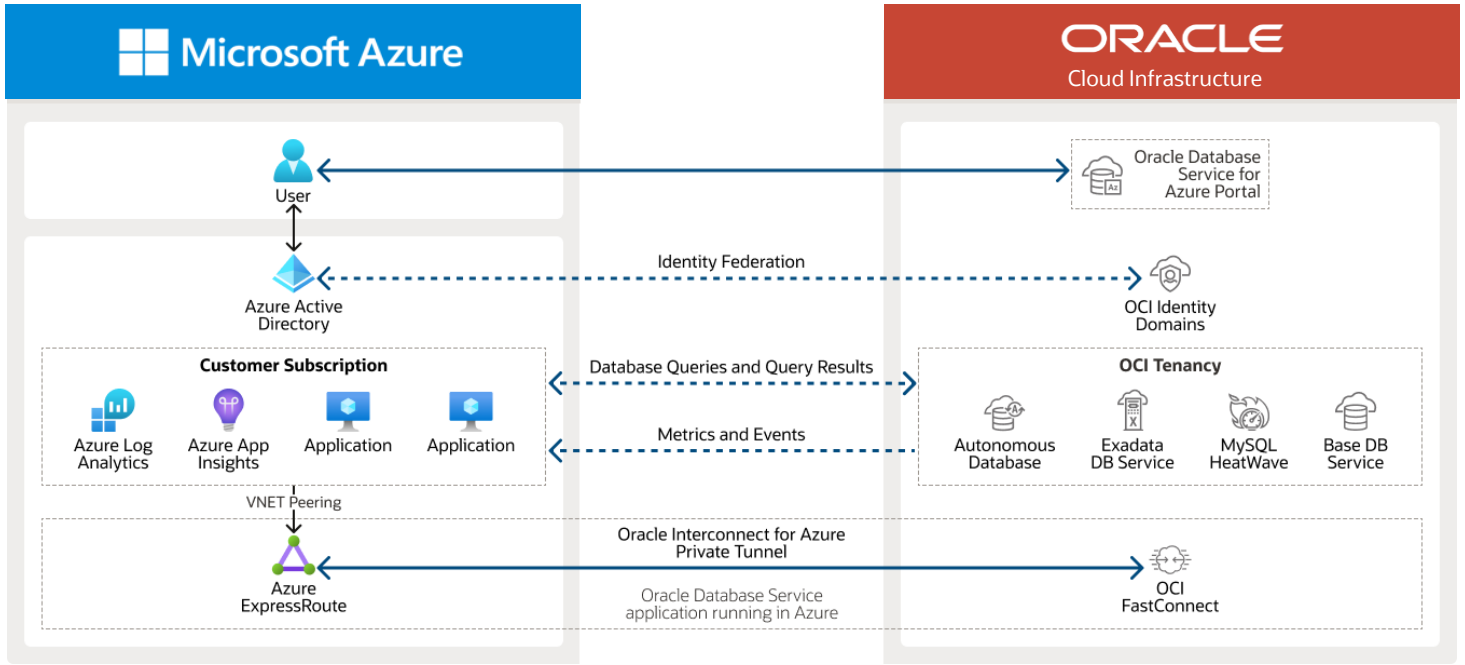
Oracle Database Service for Azure

Familiar Azure user experience

- Automated identity, networking, and monitoring integration
- < 2 ms latency private interconnect – suitable for nearly any app
- No additional cost

Access OCI database services

- Zero downtime high availability with native Oracle RAC
- Scales up to 31 PB data warehouses and 10 million+ SQL IOPS
- Completely hands-off, multi-modal Autonomous Database



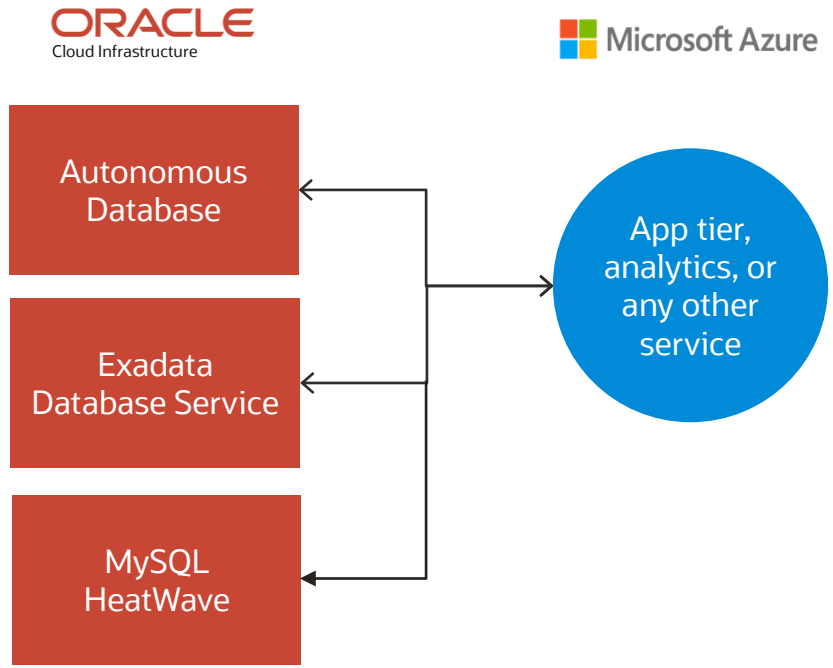
Oracle Database Service for Azure benefits

Seamless and secure interoperability

- Private interconnect and networking
- Use Microsoft Azure services with OCI databases together
- Collaborative support

Enterprise-grade cloud services

- Combine OLTP, OLAP, and ML into one MySQL Database service with MySQL HeatWave
- Database Consolidation with Exadata



Oracle Database Service for Azure testimonials

"Having access to data in multiple clouds is something we've always wanted. Oracle Database Service for Azure would enable FedEx to use Oracle databases on OCI with big data and analytics capabilities of Azure."

Rob Carter, Executive Vice President

"Multicloud architectures enable us to choose the best cloud provider for each workload based on capabilities, performance, and price. The OCI and Azure partnership integrates the capabilities of two major cloud providers, including OCI's Oracle Database services and Azure's application development capabilities."

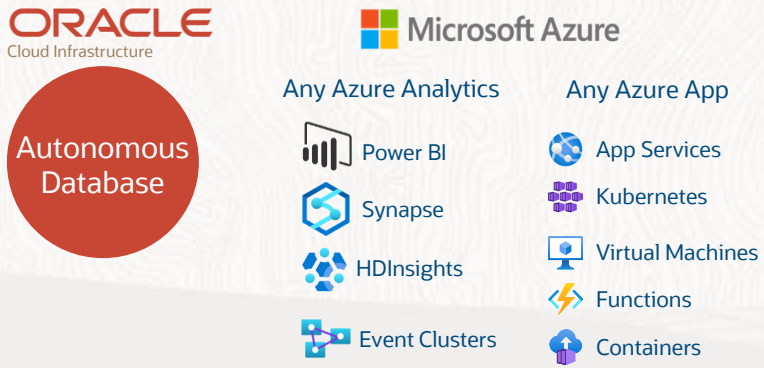
Naveen Manga, CTO

"Oracle Database Service for Azure has simplified use of a multicloud environment for data analytics. We were able to easily analyze large volumes of data hosted by Oracle Exadata Database Service on OCI, using Azure Synapse. We are pleased with the service's throughput and performance."

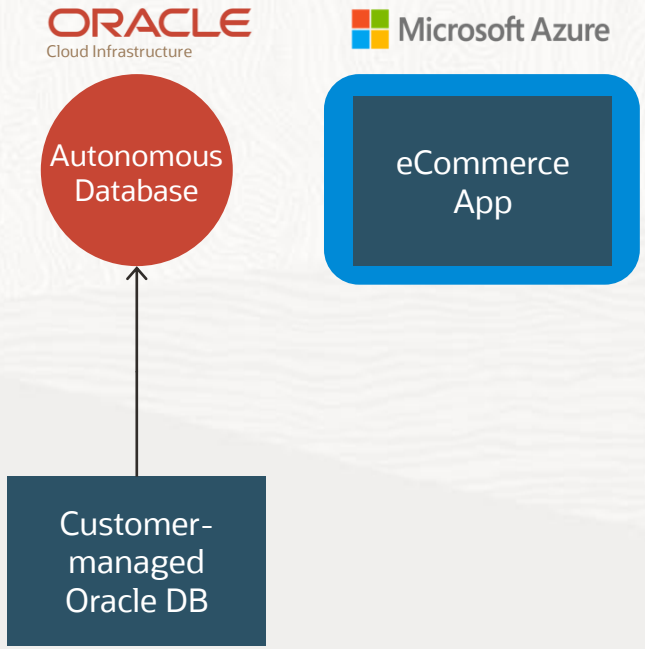
Jane Zhu, SVP & CIO, Corporate Operations

ODSA creates more options for customers to harness cloud innovation

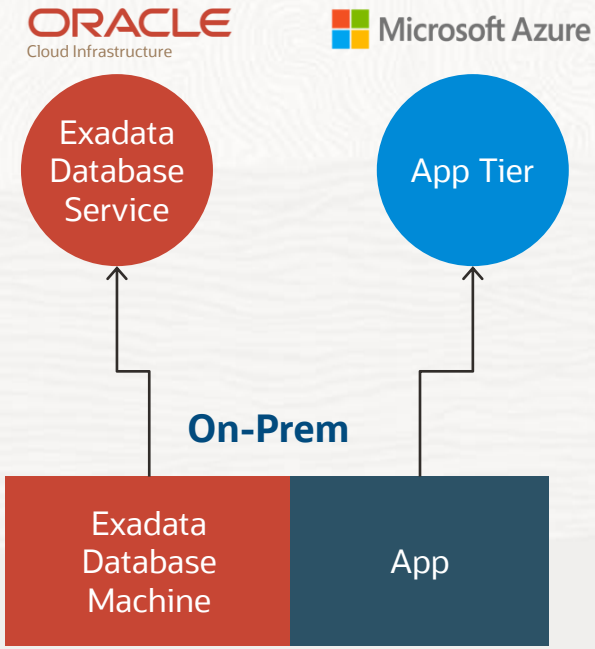
Build with the best of OCI and Azure services



Use fully managed Oracle Databases with Azure



Run exclusive OCI database services with Azure



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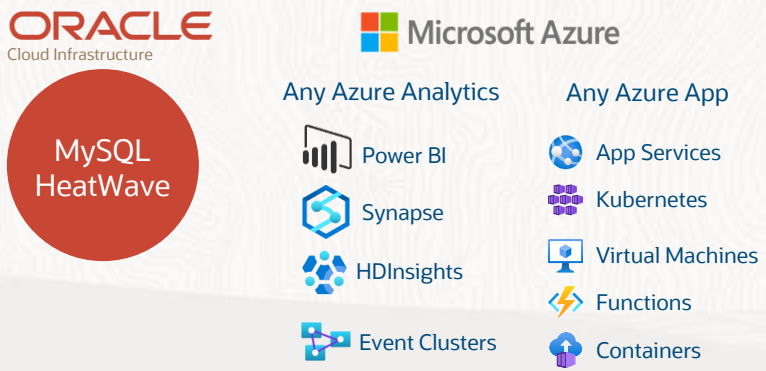

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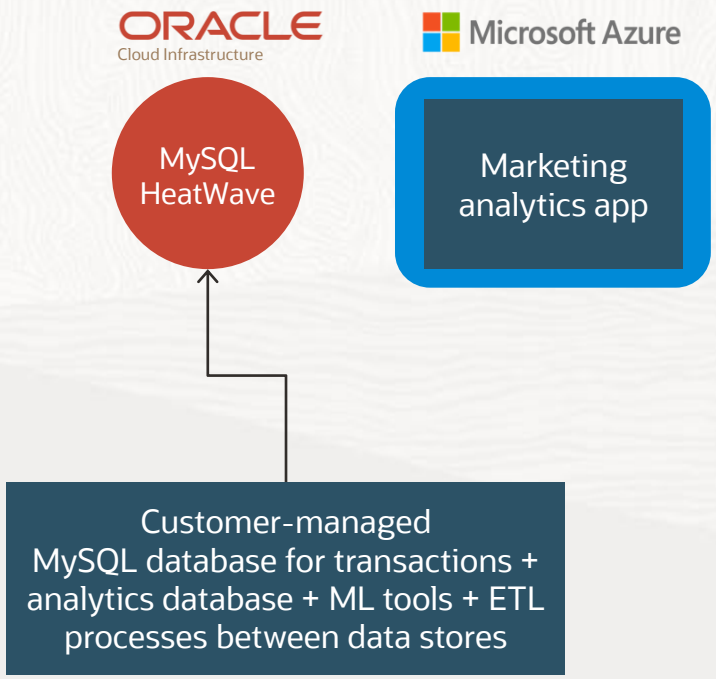


WIKIBON

"The MySQL HeatWave technology is by far the **best in the market now**...Wikibon strongly recommends that enterprise IT departments set a three-year plan to **eliminate separate OLAP databases and ETL** from MySQL transactional databases."

IDC

"HeatWave ML promises to be **a game-changer for application developers and a broad range of data analysts and scientists.**"

2. Use fully managed Oracle Databases with Azure

Customer Profile

Applications using Oracle database software, regardless of deployment location or feature set

Triggers:

- Higher availability or resilience needs
- Higher performance needs
- Greater database capacity needed
- Desire reduction in database maintenance

Oracle Database Service for Azure

Benefits to IT staff:

- No OCI or new Oracle Database skills needed
- On-demand provisioning in minutes
- 80% reduction in admin tasks
- Operate like other Azure resources

Technical benefits of Autonomous Database:

- Zero downtime configurations (for failures and planned maintenance)
- Non-disruptive scaling

3. Run exclusive OCI database services with Azure

Customer Profile

Applications using Oracle databases

- Exadata Database Machine
- Databases with Real Application Clusters (RAC)

Triggers:

- Azure migration
- Hardware refresh
- IT strategy change

With Oracle Database Service for Azure

Benefits to IT staff:

- No OCI or new Oracle Database skills needed
- On-demand provisioning in minutes
- No application re-architecture required

Technical benefits:

Exadata Database Service:

- **Scalability:** Up to 31 PB databases with Exadata Database Service
- **Performance:** 10's of millions of IOPs

Real Application Clusters (RAC) on OCI:

- High availability
- Fast scaling

4. Run exclusive OCI database services with Azure

Customer Profile

Applications using MySQL databases

- MySQL HeatWave

Triggers:

- Need for real-time analytics/higher query performance
- Eliminate separate analytics databases
- Eliminate separate ML tools
- Eliminate the complexity, latency, and security risks of ETL between data stores
- Increase automation
- Reduce costs

With Oracle Database Service for Azure

Benefits to IT staff:

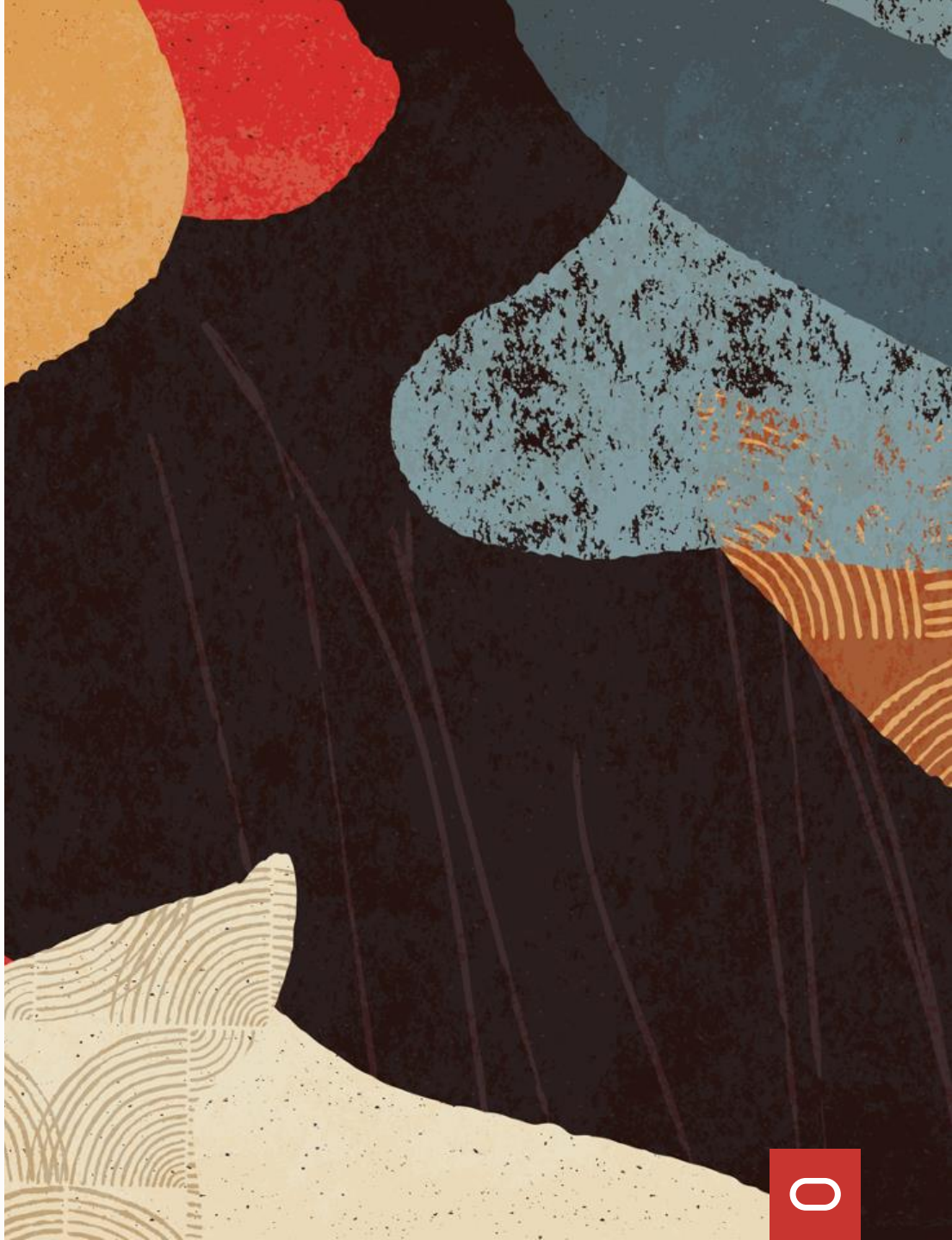
- No OCI or new Oracle Database skills needed
- On-demand provisioning in minutes
- No application re-architecture required

Technical benefits:

MySQL HeatWave:

- Single database for transaction processing and real-time analytics
- No ETL/ELT processes and tools
- In-database Machine Learning
- ML-powered automation with MySQL Autopilot
- Increased security (no data movement and built-in advanced security features)

FAQ



What's the difference between the Oracle Database Service for Azure and the OCI-Azure Interconnect?

	Oracle Database Service for Azure	OCI and Microsoft Azure Interconnect
Primary Use	Azure customers who want to connect Azure resources to Oracle Databases on OCI.	Customized bi-directional scenarios. Usable with all OCI and Azure resources.
What is it?	A guided experience to automate and simplify account linkage, user entitlements, and provides a portal on Azure to manage OCI database services with a UX experience familiar to Azure users.	Direct connectivity between OCI and Azure built on Oracle FastConnect and Azure ExpressRoute to create low-latency, high throughput, and redundant connections in multiple regions with unified identity and access management between Azure and OCI.
Support	Collaborative support model (same as interconnect)	Collaborative support model
Network Cost	No interconnection port or ingress/egress charges.	Interconnection ports (FastConnect and ExpressRoute) Zero data ingress/egress charges
Network scaling	Fully managed by OCI	Customer managed in the customer's tenancy
Monitoring	Consolidated metrics and events consumed in Azure App Insights and Azure Log Analytics	Customer managed
Pricing	No cost for Oracle Database Service for Azure. Pay only for Azure and OCI service consumption.	Interconnection ports (FastConnect and ExpressRoute), plus Azure and OCI service consumption

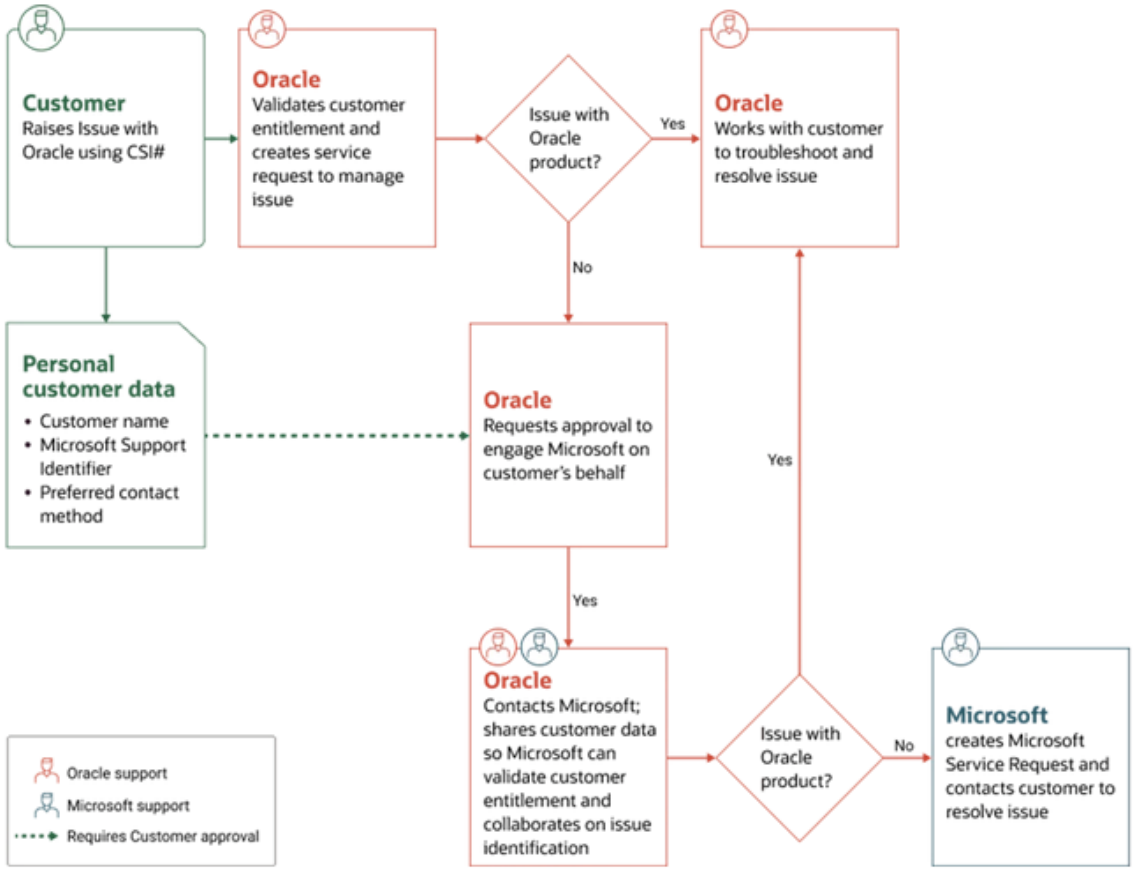
What database features are available in Oracle Database Service for Azure today?

Key capabilities	Oracle Database Service for Azure Portal	OCI Console
Manual Backup	✓	✓
Automated Backup	✓	✓
Restore to existing database	✓	✓
License Management	✓	✓
RAC	✓	✓
Service Requests	✓	✓
Data Guard	Coming soon	✓
Scaling Infrastructure	Coming soon	✓
Autoscaling	Coming soon	✓

Coming soon features can be managed via the OCI portal

Collaborative support

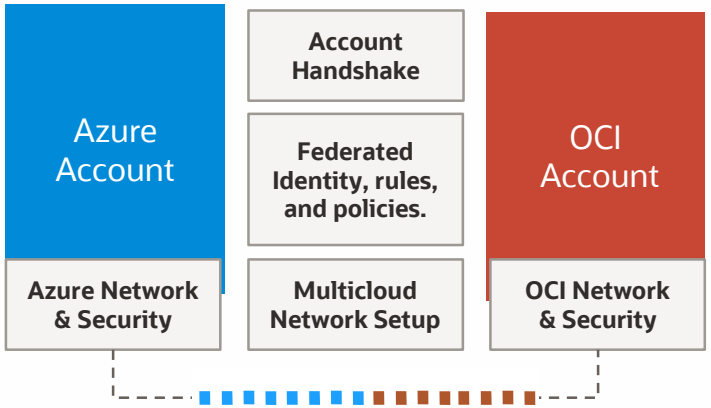
1. Raise issues with Oracle or Microsoft
2. Joint resolution by both cloud vendors
3. Customer approves support organization engagement between Microsoft and Oracle



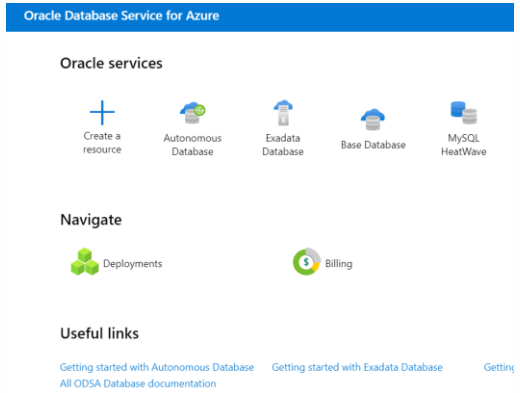
https://www.oracle.com/cloud/azure-interconnect/
Click on collaborative support

How does the Oracle Database Service for Azure work?

1 Guided cloud to cloud setup and configuration

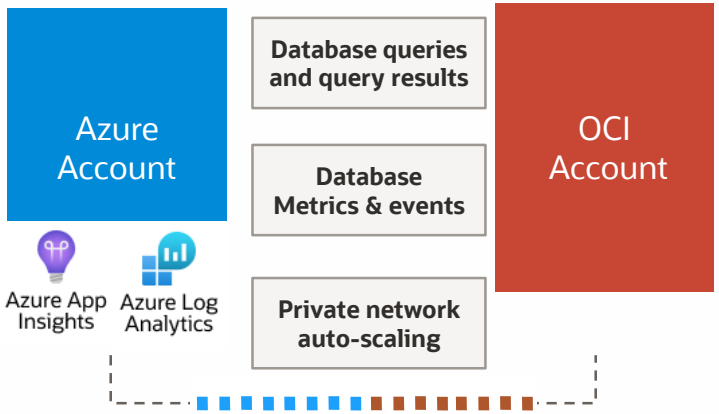


2 Provision and operate OCI Database services



- Configure
- Deploy
- Automated Backup
- Restore from backup
- Manual Backup
- License Management
- User roles and permissions
- Real Application Clusters (RAC)

3 Database access and managed connectivity



Your largest customers run Oracle Exadata

88% of the Fortune Global 100 run Exadata | **39%** run Exadata Database Service

- **Petabyte data warehouses**
- **Mission-critical OLTP**
  - Financial Trading
  - Manufacturing
  - E-commerce
- **Complex applications**
  - SAP, Fusion Apps, E-Business Suite, Netsuite, Siebel, PeopleSoft, …
- **Database consolidation**

MySQL HeatWave customer momentum

Marketing analytics
Real-time analysis of advertising/ marketing campaigns performance

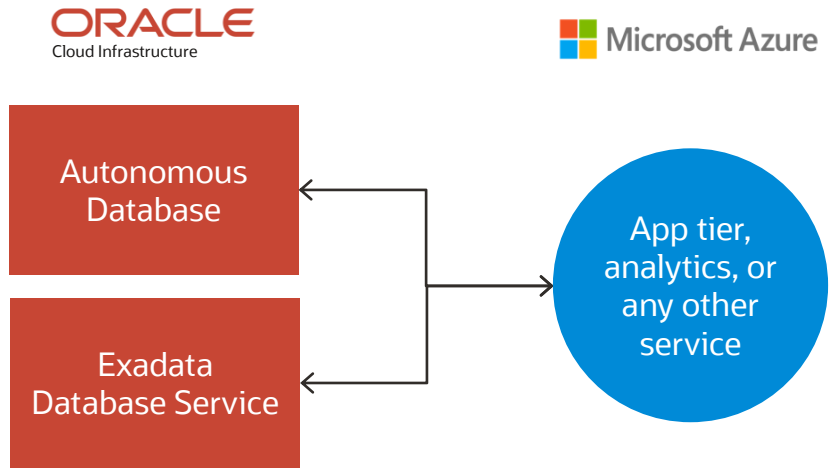
Gaming analytics
To improve the players' experience and adjust the difficulty level

Real-time monitoring of diabetes
To improve patients' lives

Keep in mind

Seamless and secure interoperability

- Familiar Azure-native user experience
- Automated identity, networking, and monitoring integration
- Private interconnect and networking
- Use Microsoft Azure services with OCI databases together
- Collaborative support



Enterprise-grade cloud services

- < 2 ms latency private interconnect – suitable for nearly any app
- Zero downtime high availability with native Oracle RAC
- Scales up to 31 PB data warehouses and 10 million+ SQL IOPS
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Any doubts? Is it not that clear?

Ping me

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