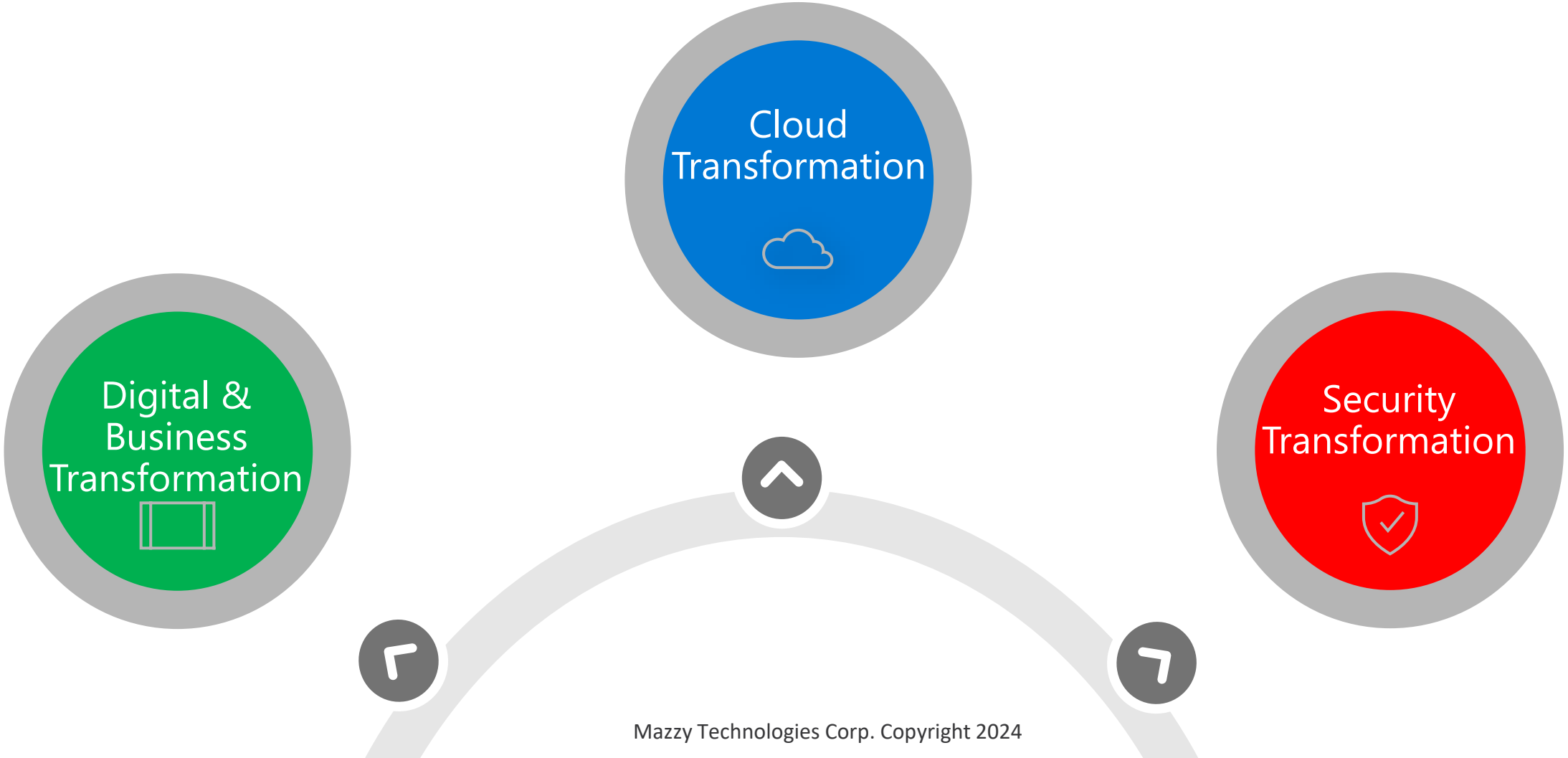
# Mazzy Technologies Oracle Database@Azure Elite

Date:

# Transformation

As the world goes through amazing transformation so are enterprises and governments.

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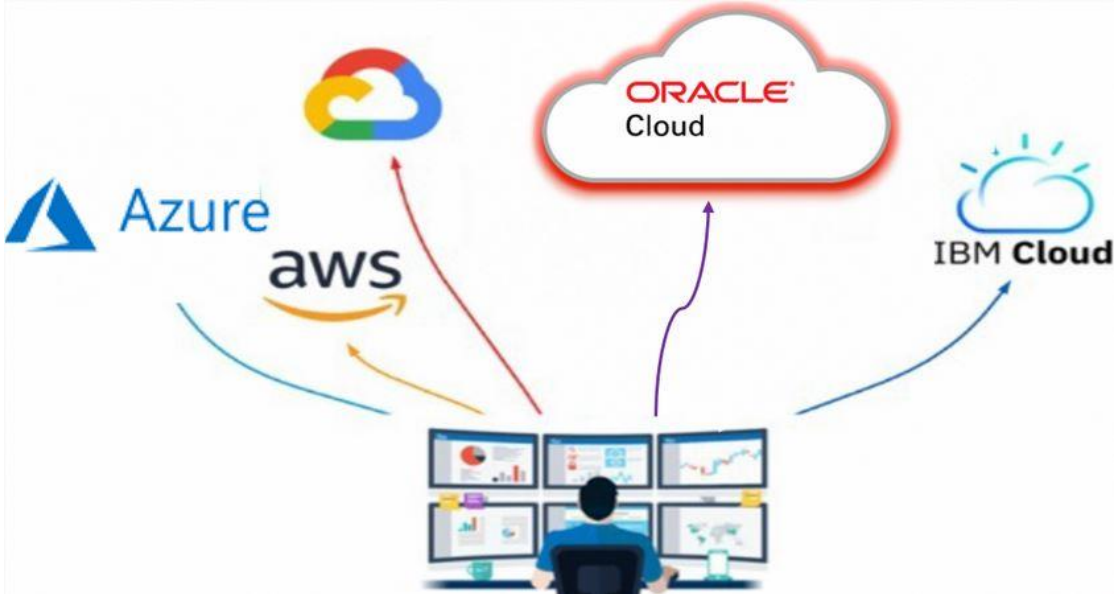
# Multicloud Approach

As the world goes through amazing transformation so are enterprises and governments.

Enterprises are increasingly adopting a multicloud strategy to enhance flexibility, avoid vendor lock-in, and optimize costs. This approach allows businesses to leverage the best features of various cloud providers to meet diverse operational needs. However, many organizations are choosing Azure as a cornerstone of their multicloud strategy due to its robust integration capabilities, comprehensive suite of enterprise-grade services, and strong focus on security and compliance. Azure's extensive global presence and advanced AI and analytics tools make it an ideal choice for enterprises looking to drive innovation and maintain competitive advantage in a rapidly evolving market.



# The Oracle and Microsoft Partnership History

**OCI Interconnect with Azure (2019):**

**Launch**: The partnership began with the introduction of the Oracle Cloud Infrastructure (OCI) and Microsoft Azure Interconnect. This service allowed customers to connect Oracle Cloud services and Azure services seamlessly.

**Benefit**: The interconnect enabled low-latency, high-throughput connectivity between OCI and Azure, allowing customers to run Oracle applications in a multi-cloud configuration and leverage Azure's AI, analytics, and compute services alongside Oracle's databases.

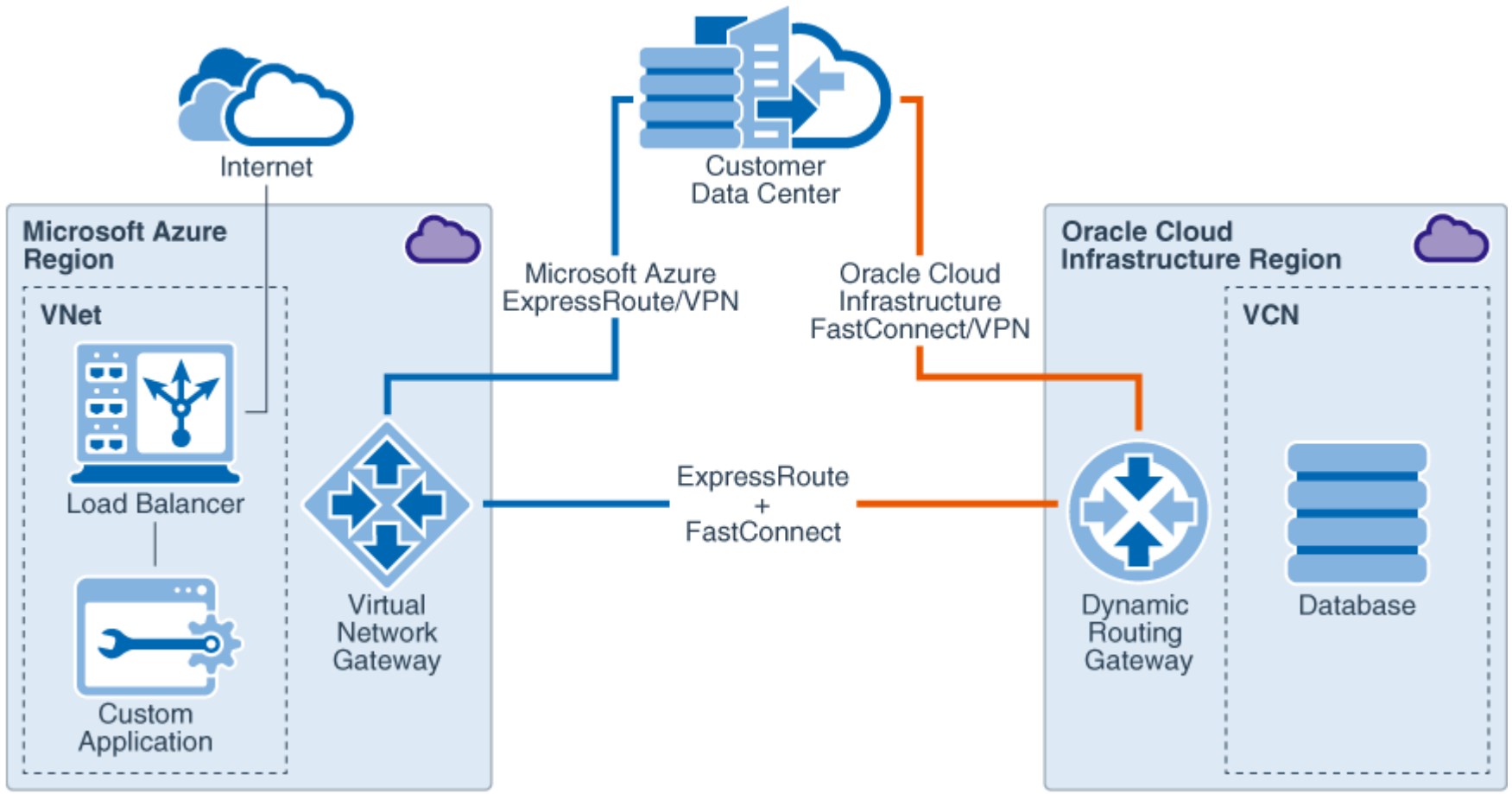
**Evolution to Oracle Database@Azure (2023):**

**Expansion**: Building on the success of the OCI interconnect, Oracle and Microsoft expanded their partnership by introducing Oracle Database@Azure.

**Offering**: This service allows customers to run Oracle database services on OCI hardware directly within Azure data centers. This deeper integration provides the same features and pricing as Oracle Exadata cloud service on OCI, but with the added benefits of Azure's comprehensive cloud services.

**Integration**: Customers can purchase Oracle Database@Azure through the Azure Marketplace, use existing Oracle licenses, and benefit from the combined capabilities of both cloud providers. This integration supports advanced technologies like Oracle Real Application Clusters (RAC), Oracle GoldenGate, and Oracle Data Guard.

# Direct Interconnection between Azure and Oracle Cloud Infrastructure (2019)



# Oracle Database@Azure brings the highest level of performance, scalability and availability

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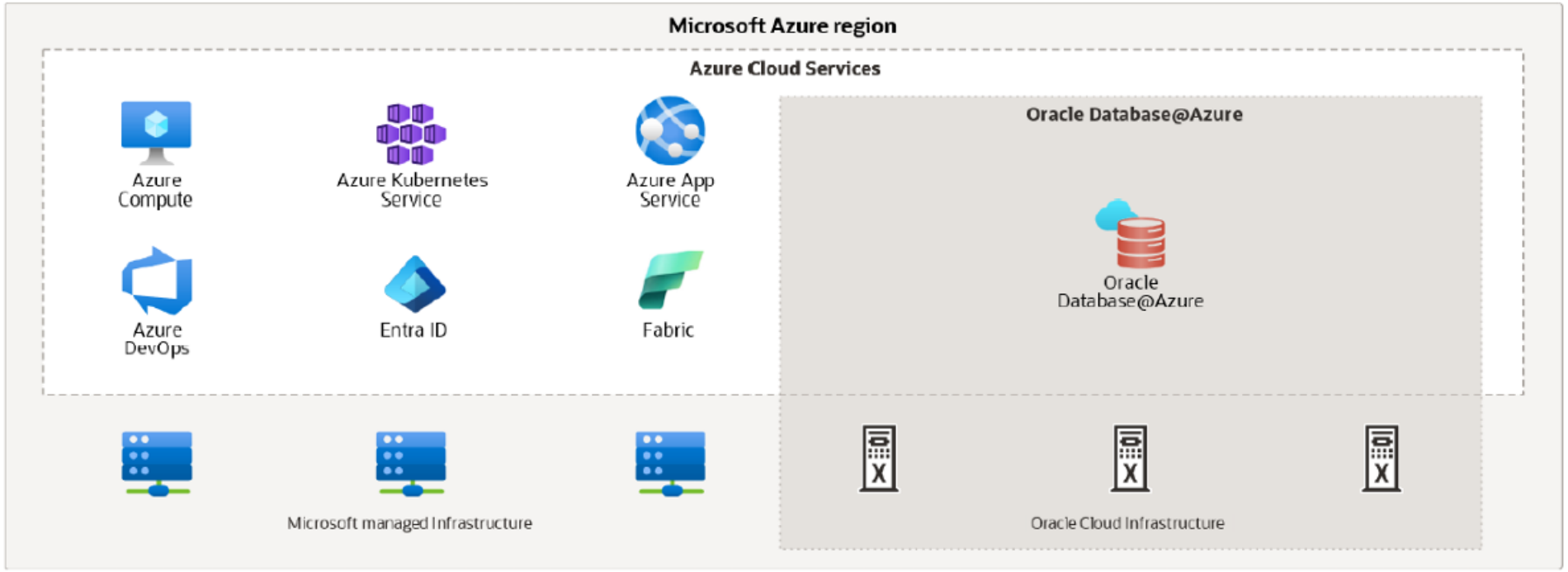
Run your workloads on Azure with the fully managed Oracle database services. Experience the highest level of Oracle Database performance, scale, availability, and feature and pricing parity. With familiar application development tools and frameworks Azure supports, you can now migrate, modernize, and innovate using Oracle database services and Azure resources such as Azure Compute and Azure Kubernetes.



# Benefits of Oracle Database@Azure

- **Optimized performance and latency**: Oracle database services in Azure are designed to offer high levels of performance, scale, security, and availability. By running OCI databases in Azure datacenters alongside other services in Azure, you can optimize latency and performance.
- **Streamlined migration**: You can use familiar and proven Oracle solutions like Oracle Zero Downtime Migration (ZDM) to migrate Oracle databases as is with no need for refactoring applications or databases.
- **Application modernization**: You can use the rich set of application services, development tools, and frameworks available in Azure to modernize your workloads and run cloud native applications with direct access to data in Oracle Database@Azure, with the same security and compliance across the entire solution.
- **Data and AI innovation**: You can unlock data insights and innovation when you apply Azure data analytics and AI services across your Oracle and non-Oracle data and applications between resources, and handle even mission-critical application.
- **Simplified operations**: You can deploy and manage Oracle Database@Azure infrastructure through the Azure portal and use native Azure tools to view metrics, events, and logs for all Oracle Database@Azure databases. You can also do database provisioning and management via OCI interfaces along with access to familiar tooling like Data Guard, GoldenGate, and others.
- **Feature and pricing parity with OCI**: You can enjoy the same features and pricing as Oracle Exadata cloud service on OCI with Oracle Database@Azure. And, you can use your existing Azure and Oracle commitments, program benefits, and licenses to do so.
- **Simplified purchasing**: You can purchase Oracle Database@Azure through the Azure Marketplace and take advantage of existing Azure and Oracle commitments and licenses. You'll also be eligible for Oracle Support Rewards, a program where you can earn rewards that you can use to reduce your Oracle technology license support bill.
- **Unified customer support**: You can contact either your Oracle or Microsoft support team for a unified support process.

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# The fastest, most scalable Oracle Database service with cloud automation you control

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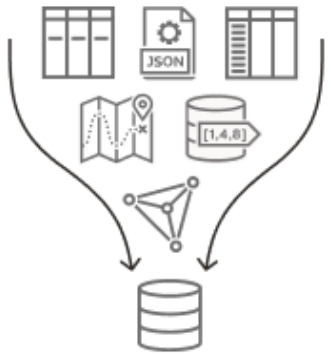
## Move as is



- All database workloads and development styles
- Database consolidation in the cloud

## Exadata Database Service

**Cloud automation simplifies management while administrators retain full operational control**

Exadata Database Service

**Shared**

OCI

Exascale Infrastructure

**Dedicated Exadata Infrastructure**

OCI

Exadata Cloud Infrastructure

Oracle Database@Azure

Exadata Cloud Infrastructure

Your data center

Exadata Cloud@Customer

## Benefits

- Fast, predictable performance
- Lower total cost of ownership
- Zero downtime scaling and patching
- On-demand resource scaling
- High-density consolidation
- One click HA provisioning
- Extreme availability
- Strong, built-in security

# Oracle Exadata Database Service on Azure

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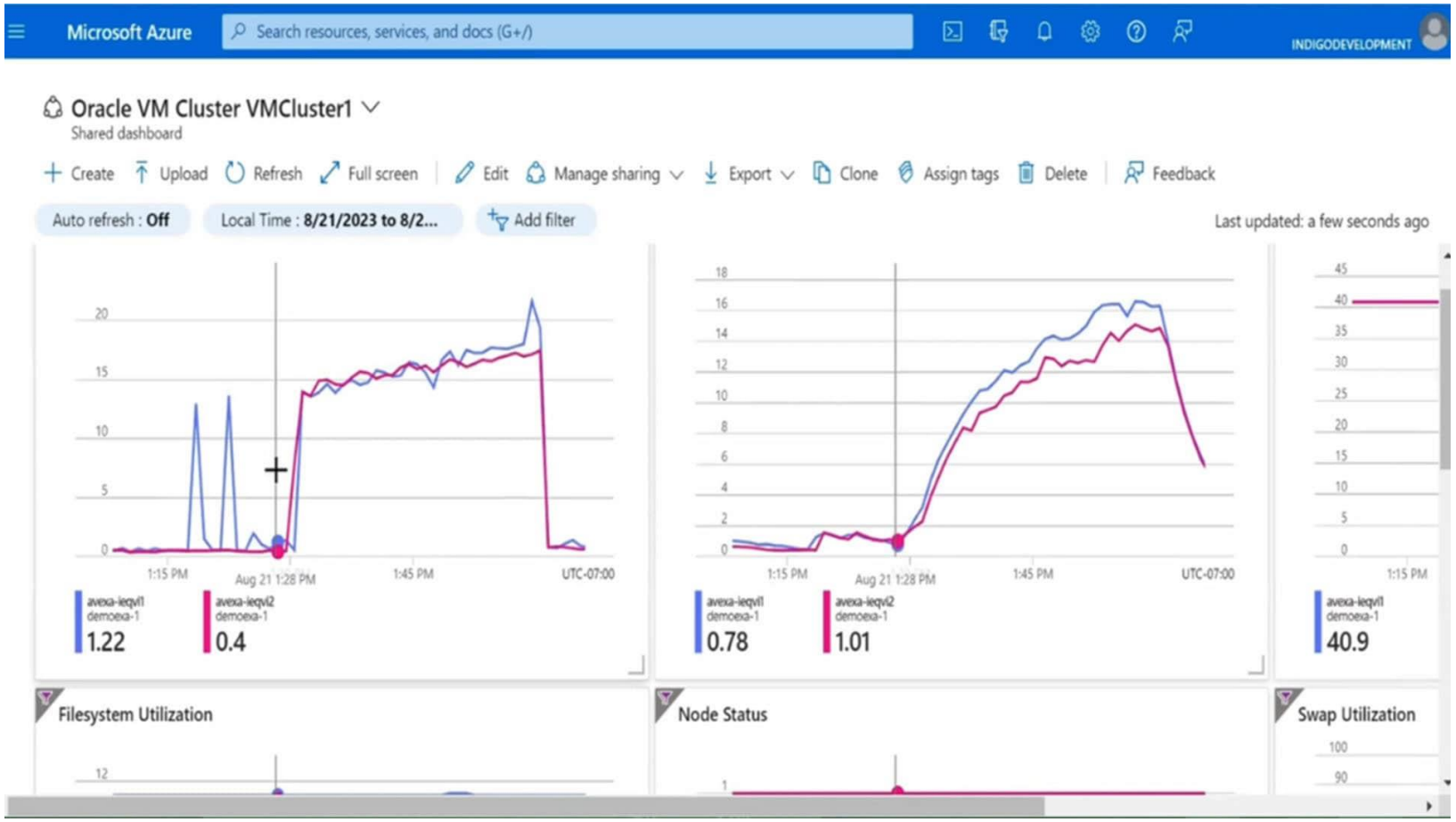
# Procure, deploy, and use Oracle database services in Azure



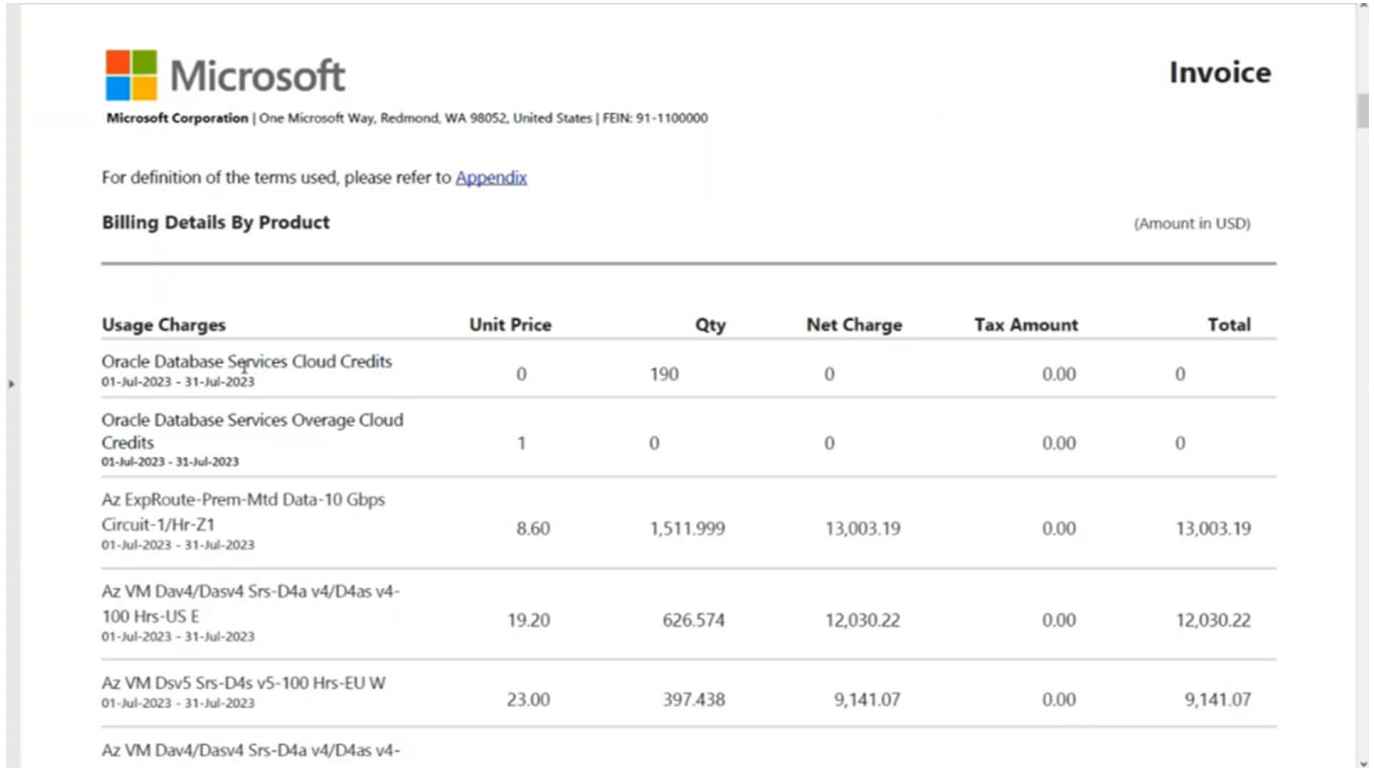

**Simplified monitoring and troubleshooting:**

Simplify monitoring and troubleshooting with Oracle Database service logs, metrics and events available directly in Azure

Enable diagnostics collection and notifications to identify, track, and resolve guest VM issues quickly and effectively

Review the list of database and nondatabase health metrics

# Procurement Oracle database services in Azure



Microsoft

Invoice

**Microsoft Corporation** | One Microsoft Way, Redmond, WA 98052, United States | FEIN: 91-1100000

For definition of the terms used, please refer to Appendix

**Billing Details By Product**

(Amount in USD)

| Usage Charges | Unit Price | Qty | Net Charge | Tax Amount | Total |
|---|---|---|---|---|---|
| Oracle Database Services Cloud Credits<br>01-Jul-2023 - 31-Jul-2023 | 0 | 190 | 0 | 0.00 | 0 |
| Oracle Database Services Overage Cloud Credits<br>01-Jul-2023 - 31-Jul-2023 | 1 | 0 | 0 | 0.00 | 0 |
| Az ExpRoute-Prem-Mtd Data-10 Gbps Circuit-1/Hr-Z1<br>01-Jul-2023 - 31-Jul-2023 | 8.60 | 1,511.999 | 13,003.19 | 0.00 | 13,003.19 |
| Az VM Dav4/Dasv4 Srs-D4a v4/D4as v4-100 Hrs-US E<br>01-Jul-2023 - 31-Jul-2023 | 19.20 | 626.574 | 12,030.22 | 0.00 | 12,030.22 |
| Az VM Dsv5 Srs-D4s v5-100 Hrs-EU W<br>01-Jul-2023 - 31-Jul-2023 | 23.00 | 397.438 | 9,141.07 | 0.00 | 9,141.07 |

Az VM Dav4/Dasv4 Srs-D4a v4/D4as v4-

**Pricing parity and unified billing:**

Billing an payments for Oracle Database@Azure transacted through Azure. Pricing is the same as for Oracle Exadata Database Service running on OCI

Purchases of Oracle Database@Azure can be applied to Microsoft Azure Consumption Commitments (MACCs). Existing Oracle Database software customers can use Oracle Bring Your Own Licenses (BYOL) or an unlimited license agreement (ULA).

Charges for Oracle Database@Azure appear alongside charges for other Azure services on the AzureBNilling statement.

# Autonomous Database on Azure

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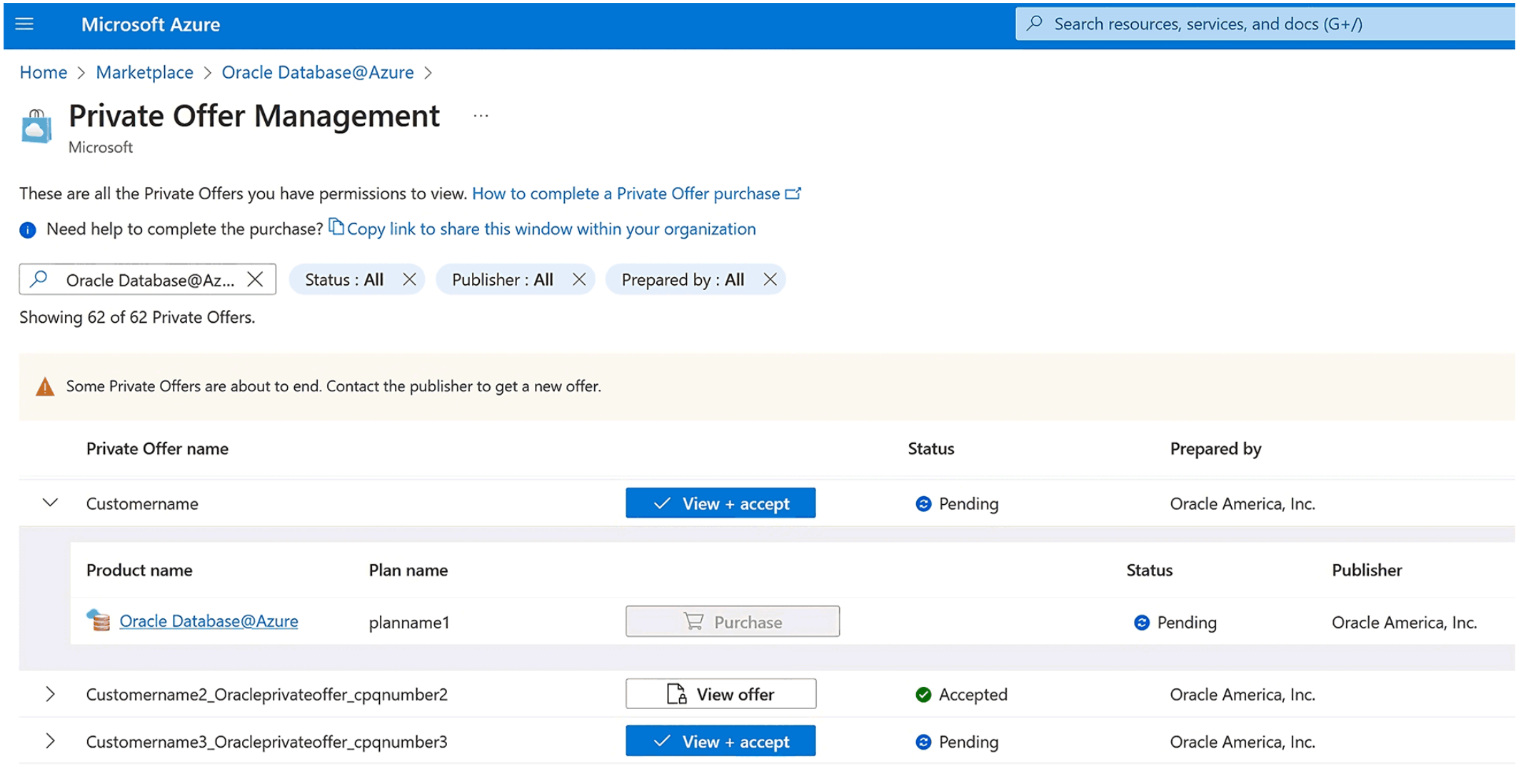
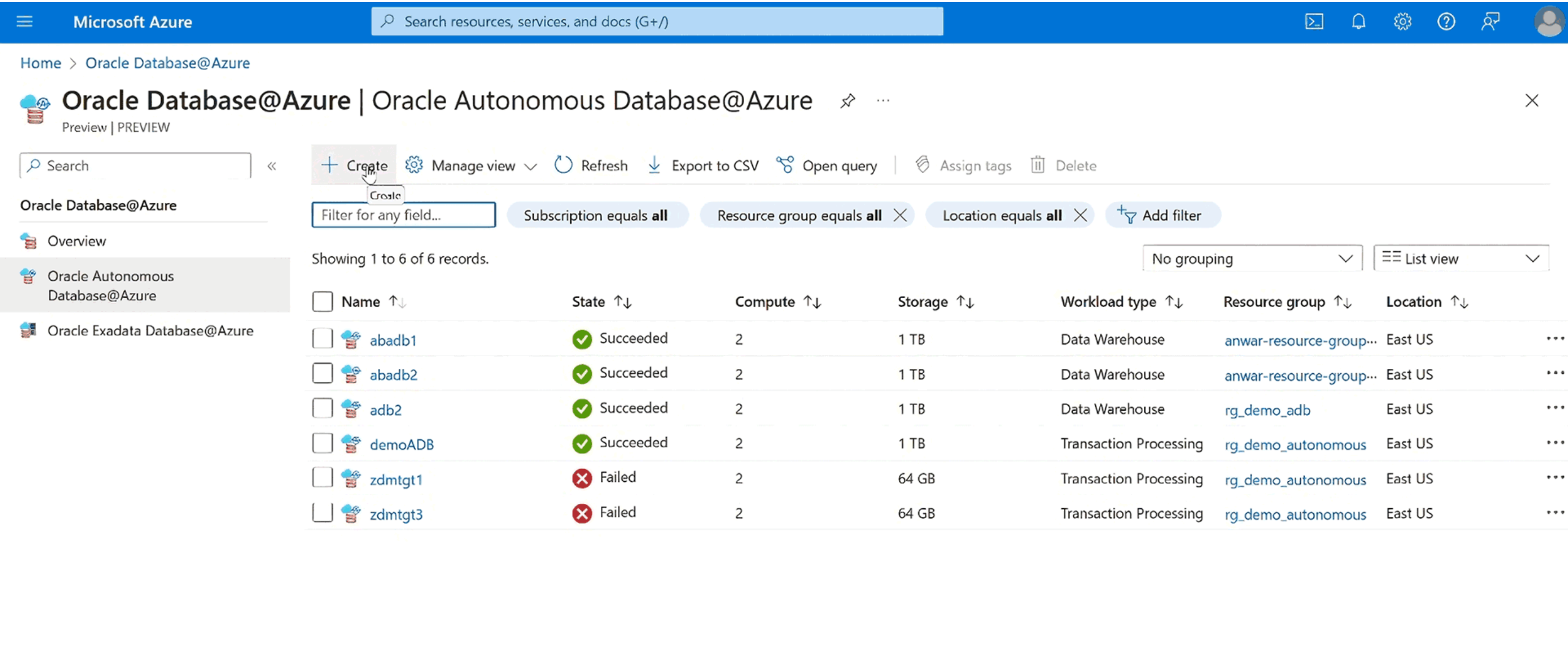
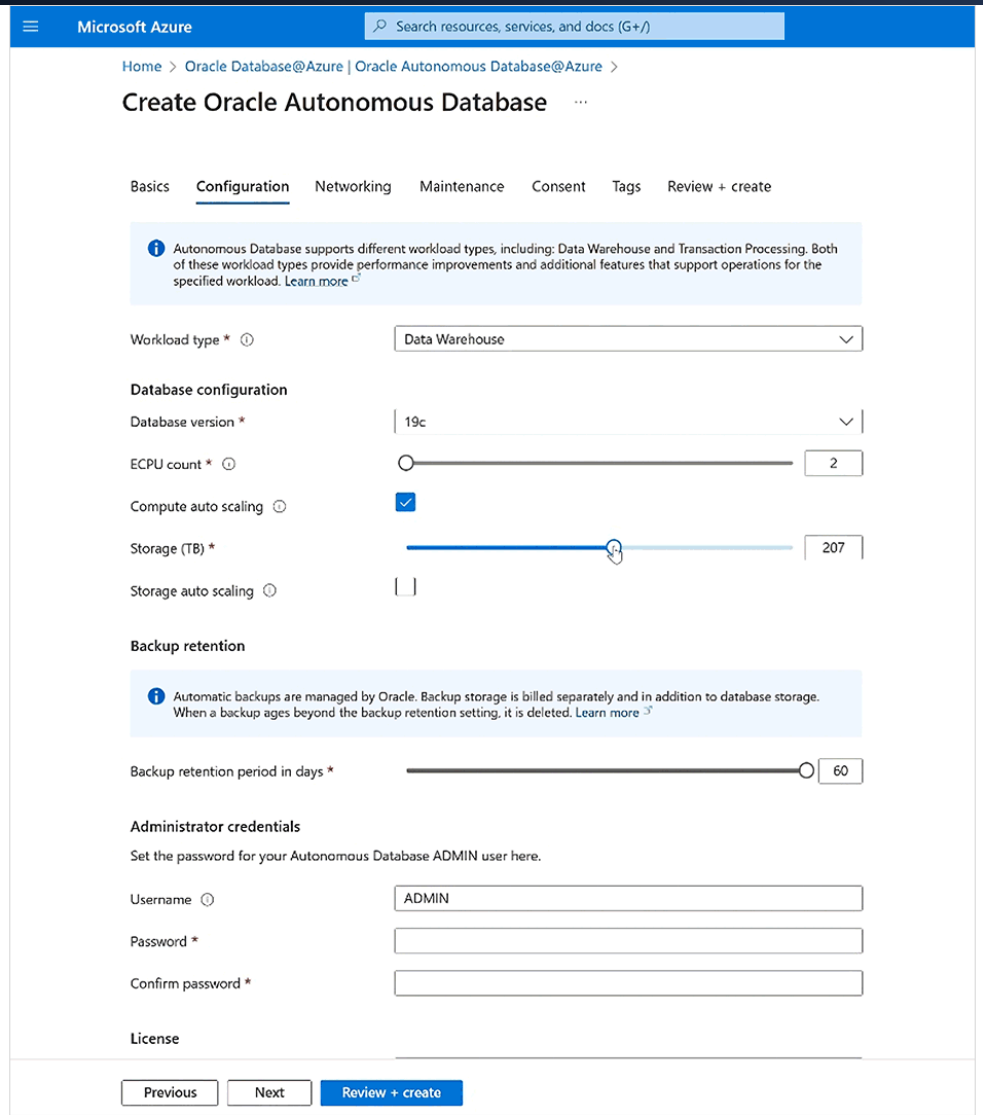
# Purchase right on Azure Marketplace

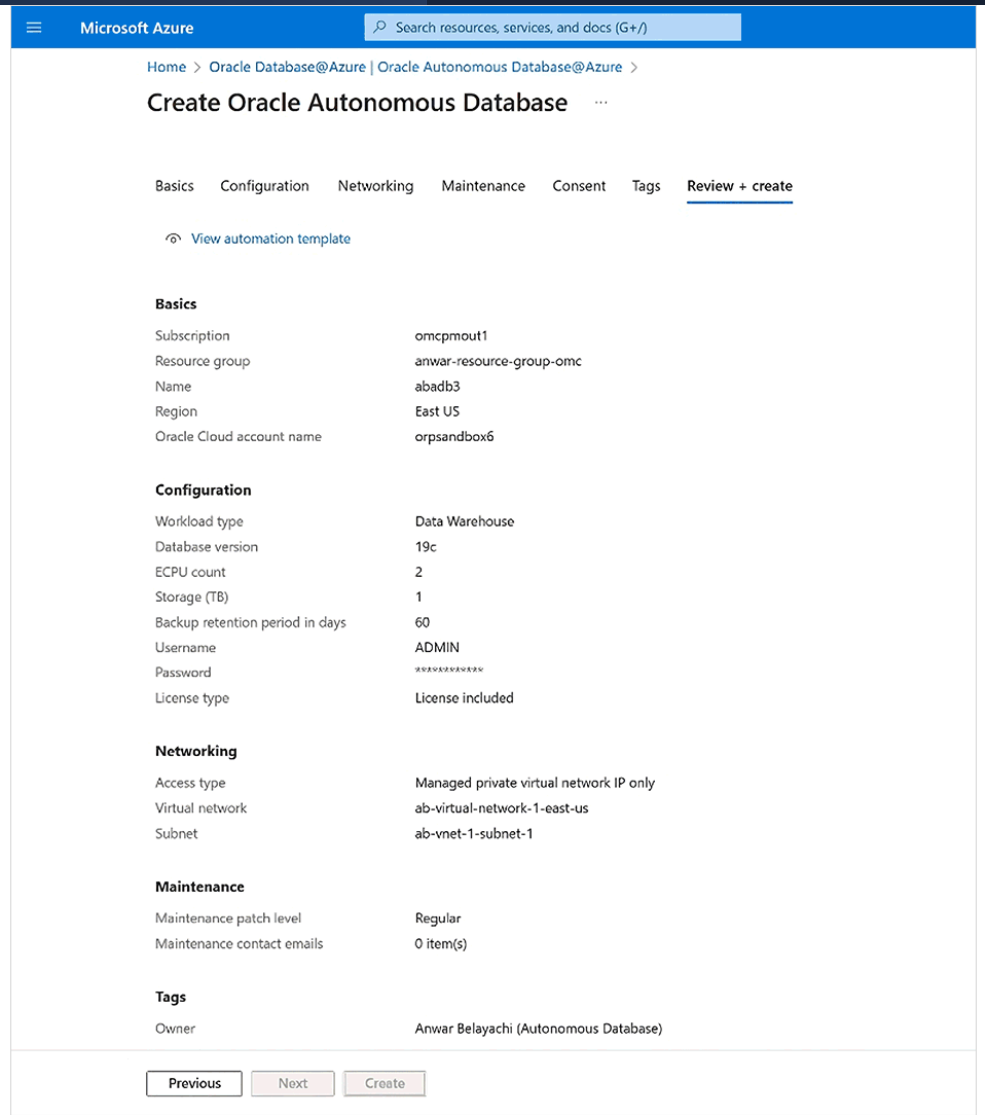


# Provision via familiar deployment workflows

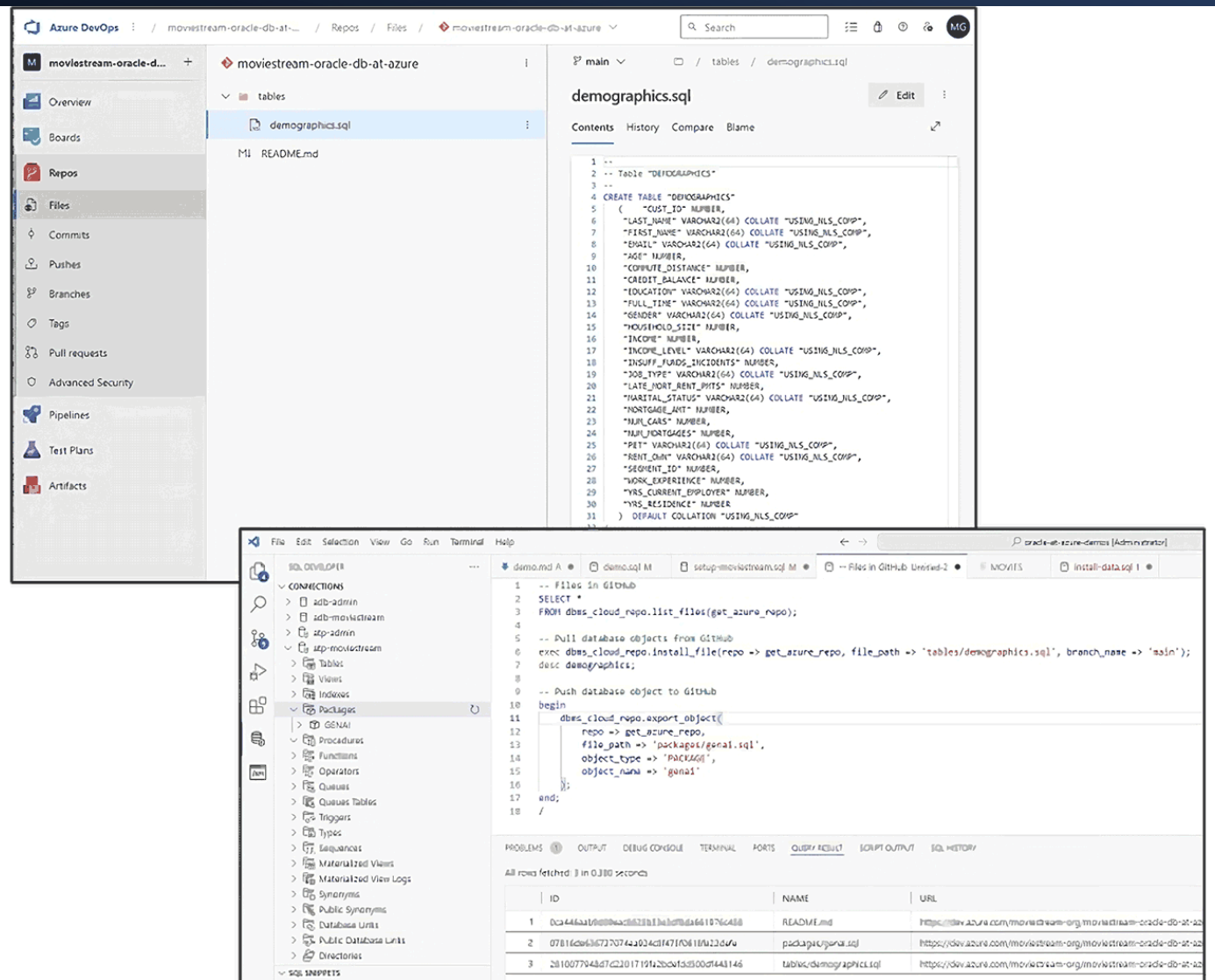


# Configure and manage with built-in tools



# Single converged platform for all data




Accelerate development velocity by converging multiple data types and workloads into a single platform

# Benefits of Oracle Database@Azure

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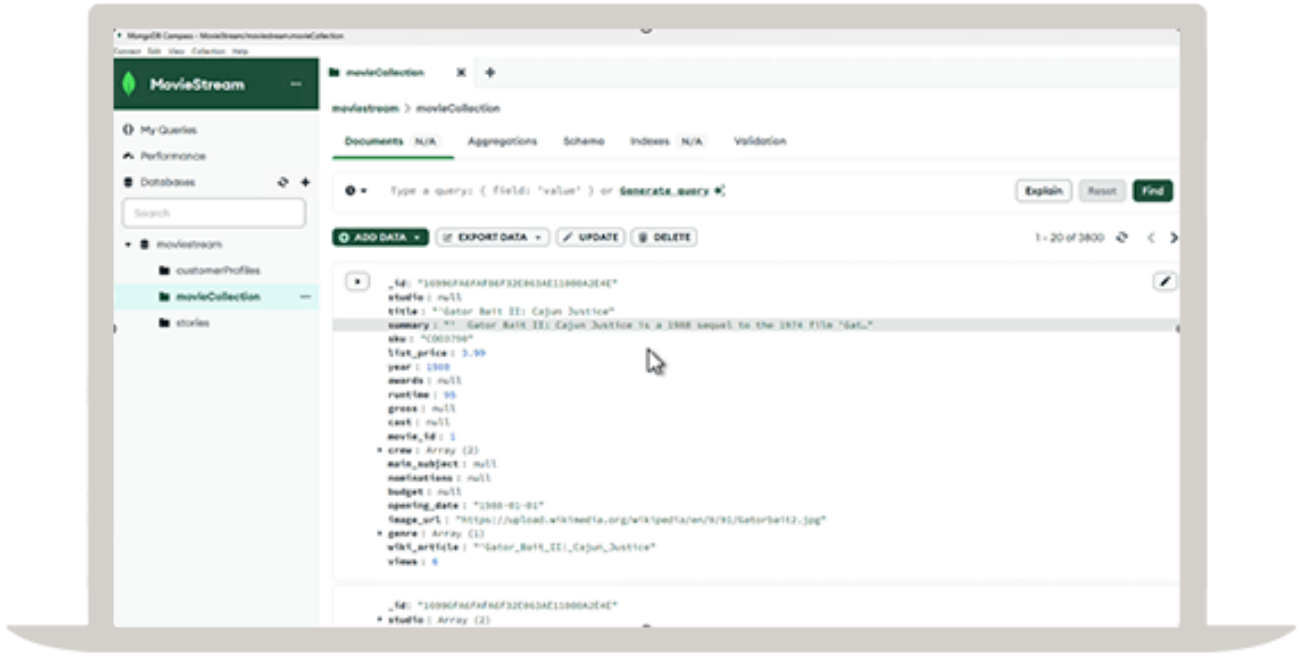
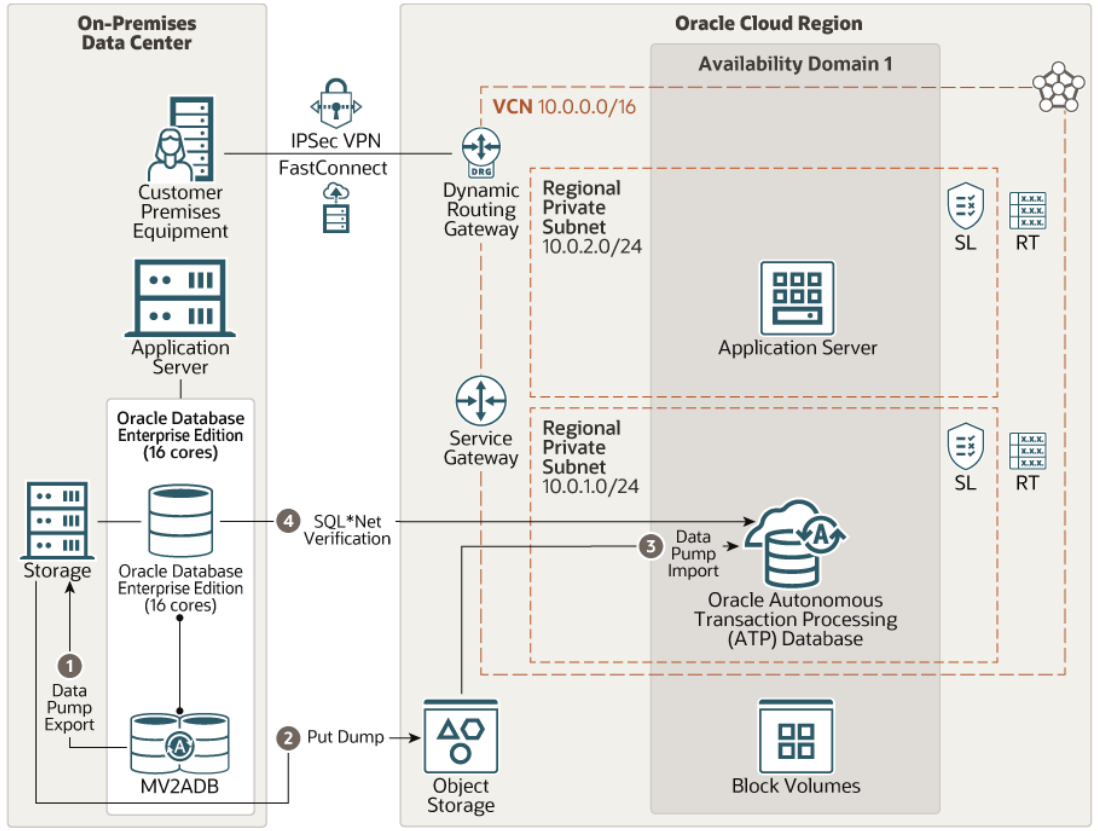
# Innovate with Oracle and Microsoft Services

- Build new cloud native apps using Azure services, such as Azure Kubernetes and Azure OpenAI Service, with Oracle Autonomous Database.
- Enhance existing apps with natural language and other generative AI capabilities.
- Quickly react to business demands using one converged, fully automated database that's optimized for all workloads and data formats.



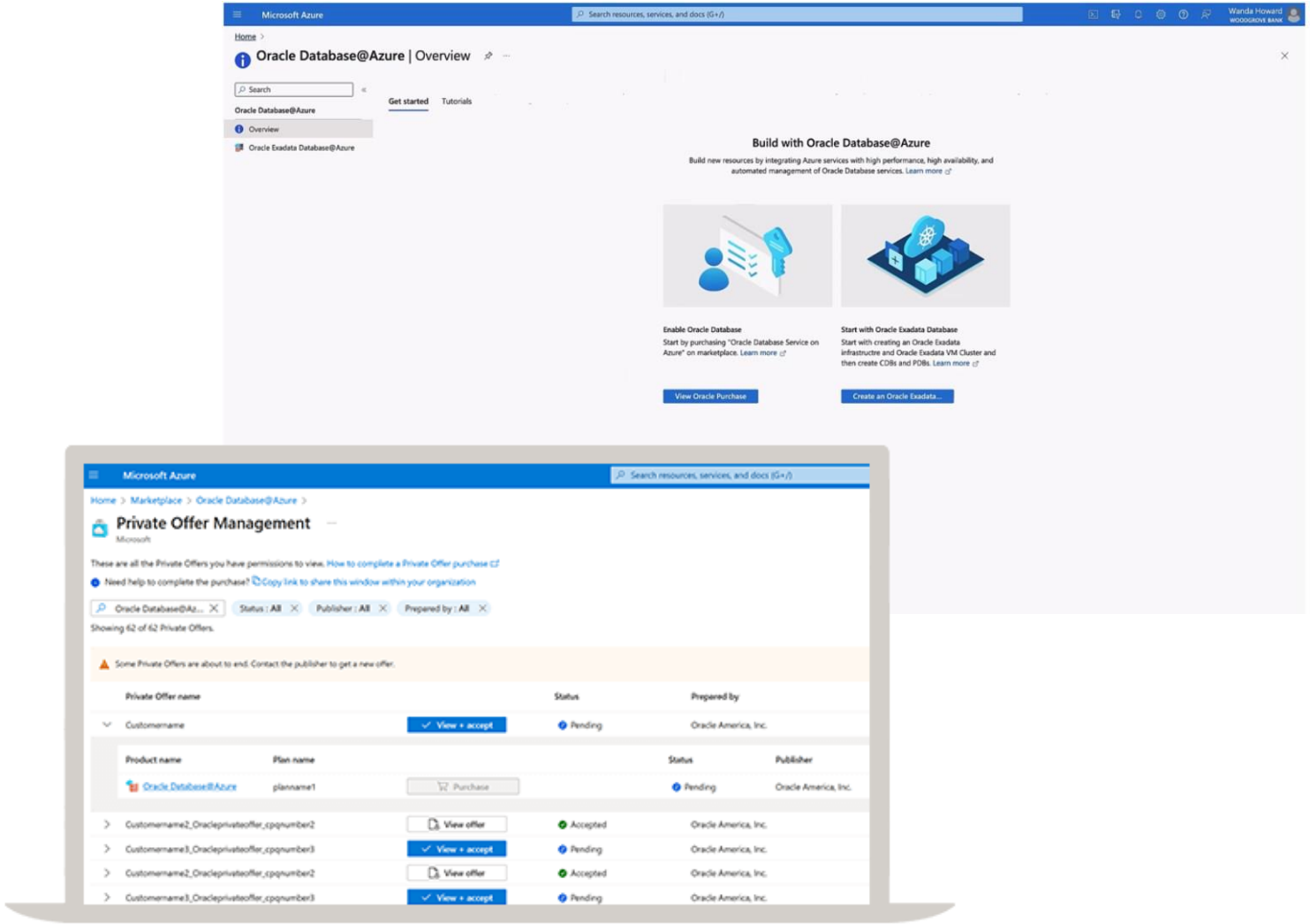
# Migrate and consolidate Oracle databases to Microsoft Azure




- Simplify workload migration and consolidation via full compatibility with on-premises Oracle Database and Oracle Exadata deployments.
- Experience the same high levels of Oracle Database performance, security, and availability as in Oracle Cloud Infrastructure (OCI), and benefit from unique optimizations for transaction processing, analytics, and mixed workloads.
- Migrate on-premises databases to Oracle Database@Azure using Oracle's proven migration solutions.

# Simplify purchasing and operations

- Purchase Oracle database services through the Azure Marketplace using your Microsoft Azure Consumption Commitments (MACCs) and get a single bill for Oracle Database and Microsoft Azure services.
- Use existing Oracle Database licenses and accrue the same Oracle Support Rewards as when using OCI directly.
- Automate manual administrative tasks such as database provisioning, backups, and monitoring.



# Why Choose MT's Oracle Database@Azure Elite

**Oracle Azure Elite** by Mazzy Technologies is designed for enterprises seeking a cutting-edge solution for their most demanding applications. With our proven expertise and innovative approach, we help you unlock the full potential of Oracle on Azure, driving business growth and technological advancement.

- **Innovation-Driven Approach:** Stay ahead with our innovative solutions, integrating the latest technologies and best practices.
- **Global Reach:** Our services cater to the largest enterprises worldwide, ensuring your operations are globally scalable and locally optimized.
- **Unmatched Expertise:** Benefit from our deep expertise in both Oracle and Azure platforms, ensuring your migration and configuration are handled by the best in the industry.

This solution offering combines strategic planning, seamless migration, state-of-the-art configuration, and ongoing optimization to ensure that the largest companies in the world can harness the full power of Oracle databases on Azure.

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# Oracle Database@Azure Elite

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1. **Strategic Planning and Consultation**

   - ✓ Comprehensive Assessment: Our team conducts an in-depth analysis of your current infrastructure, including existing Oracle databases, to develop a tailored migration strategy that aligns with your business goals.
   - ✓ Roadmap Development: We create a detailed migration roadmap, ensuring all phases of the project are meticulously planned, from initial assessment to final deployment.

2. **Seamless Migration and Integration**

   - ✓ Advanced Migration Tools: Utilizing Azure Migrate and other leading-edge tools, we ensure a smooth and efficient migration of your Oracle databases to Azure. This includes data replication, real-time synchronization, and minimal downtime.
   - ✓ Multi-Cloud Interconnect: For businesses utilizing multiple cloud environments, our solution seamlessly integrates Oracle databases with Azure services, leveraging the OCI-Azure interconnect for optimal performance.

3. **State-of-the-Art Configuration**

   - ✓ Custom Configuration: We configure your Oracle databases on Azure to meet your specific business requirements, optimizing for performance, security, and compliance.
   - ✓ High Availability and Disaster Recovery: Implementing advanced features like Oracle Real Application Clusters (RAC) and Oracle Data Guard, we ensure your databases are resilient, highly available, and disaster-proof.

# Oracle Database@Azure Elite

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4. **Performance Optimization**

- ✓ Continuous Monitoring: Leveraging Azure Monitor and Oracle Enterprise Manager, we provide continuous monitoring and real-time analytics to maintain peak performance and swiftly address any issues.
- ✓ Resource Optimization: Our experts continuously fine-tune your cloud resources, ensuring cost-efficiency without compromising on performance.

5. **Security and Compliance**

- ✓ Robust Security Measures: We implement comprehensive security protocols, including encryption, identity management, and access controls, to safeguard your data against threats.
- ✓ Compliance Management: Ensuring adherence to industry standards and regulatory requirements, we help you navigate complex compliance landscapes effortlessly.

6. **Expert Training and Support**

- ✓ Tailored Training Programs: Our training sessions equip your IT team with the necessary skills to manage and operate Oracle on Azure effectively.
- ✓ 24/7 Support: Our dedicated support team is available around the clock to assist with any technical issues, ensuring your operations run smoothly without interruptions.

# Oracle Maximum Availability Architecture for Oracle Database@Azure

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# Oracle Database@Azure Architecture Considerations

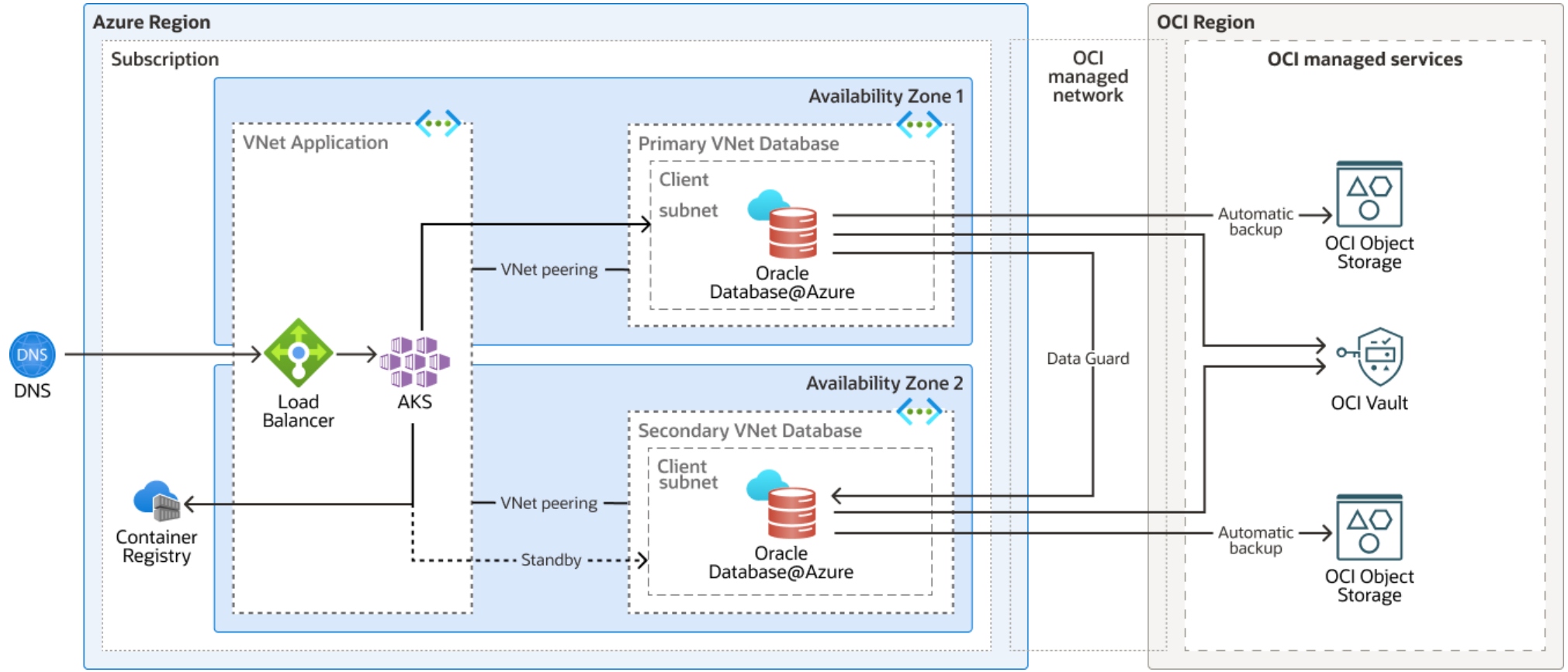
When designing mission-critical database applications, business continuity practices and high availability topologies should always be considered.

Oracle Database@Azure brings Oracle technologies, such as Oracle Exadata Database Service, Oracle Real Application Clusters (Oracle RAC), and Oracle Data Guard, into the Azure platform. The service uses Azure networking and Azure Virtual Network (VNet) access. Users manage the service on the Azure console or using Azure automation tools. The service benefits from the simplicity, security, and low latency of a single operating environment within Azure. Microsoft Entra ID provides federated identity and access management for Oracle Database@Azure.
We recommend the following principles:

- Oracle Exadata Database Service on Dedicated Infrastructure (ExaDB-D). Each Exadata infrastructure deployment has at least one Exadata VM cluster in a separate virtual network (VNet) to form the primary and standby environments.
- Primary and standby client and backup subnets are separated VNets without overlapping IP CIDR ranges.
- The application tier spans at least two AZs, and the VNet is peered with each VNet of primary and standby VM clusters.
- Database backups and restore operations are achieved using OCI Object Storage, the built-in Oracle Database automatic backup mechanism.

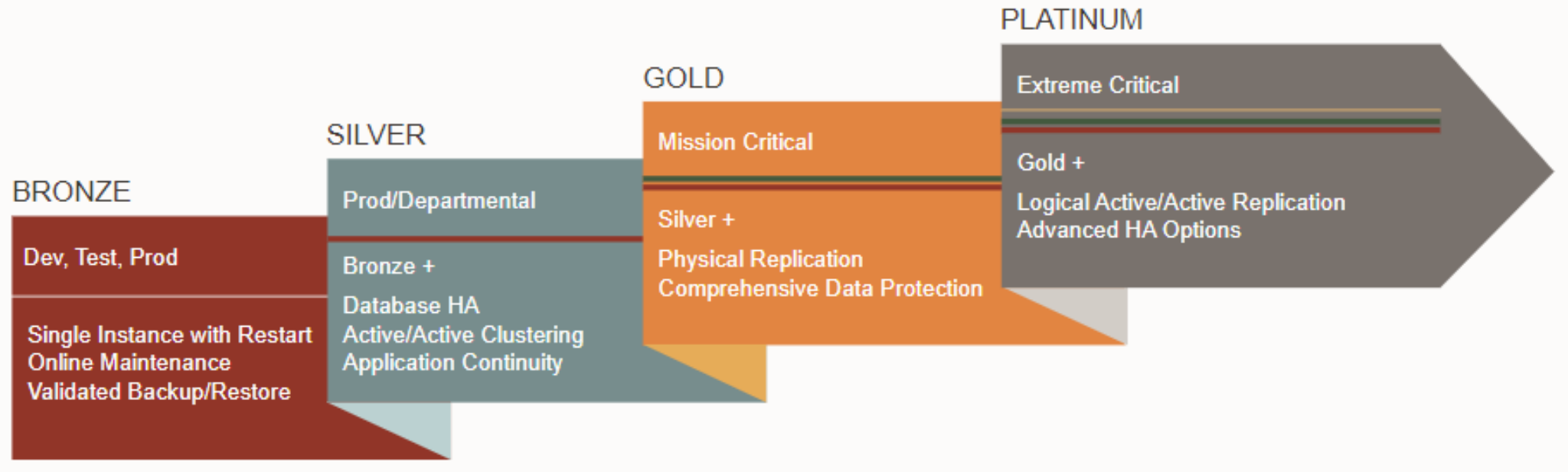
# Oracle Database@Azure Architecture

This architecture shares the best practice for a cross-availability zone (AZ) Oracle Data Guard solution.



# Oracle Maximum Availability Architecture (MAA)

Oracle Maximum Availability Architecture (MAA) provides architecture, configuration, and life cycle best practices for your Oracle database to meet your high availability service levels for Oracle databases residing in on-premises, Oracle Public Cloud, Oracle Database@Azure, or hybrid database architecture consisting of both on-premise and cloud databases.



# Questions & Next Steps?

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# Thank You!

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