VIEW POINT

ORACLE DATABASE@AZURE

A PRACTITIONER'S POINT OF VIEW

Abstract

As organizations accelerate their digital transformation journeys, adopting cloud technologies has become not just a strategic move but a practical way to stay agile, resilient, and innovative in today's fast-paced business environment. Enterprises are increasingly leveraging integrated native cloud service like analytics, generative AI, DevOps tools, and container platform to drive scalable application development and data-driven decision-making. The growing interoperability among leading hyperscalers is enabling seamless workload migration and integration across heterogeneous environments. A notable advancement in this space is the strategic partnership between Oracle Cloud Infrastructure (OCI) and Microsoft Azure, which delivers a unified, best-of-breed cloud ecosystem. By enabling Oracle Exadata systems to run natively within Azure, this alliance empowers enterprises to optimize both application performance and database efficiency—unlocking new levels of operational excellence and business value. This white paper explains how customers can benefit by adopting oracle Database@Azure(OD@A) with Oracle database hosted on Oracle Exadata systems for the application ecosystem hosted on Azure.

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Introduction

OD@A empowers enterprises with the flexibility to deploy workloads across multiple cloud providers, optimizing performance, cost, and compliance. Oracle has introduced OD@A by providing seamless integration between Exadata cloud service and Azure native cloud services . This provides Maximum availability architecture(MAA) in Azure.

The following key benefits illustrate the advantages of OD@A.

- Platform Flexibility
- Cost Optimization and Licensing Benefits
- Performance and Scalability
- Enhanced Security and Compliance

Platform Flexibility

Platform flexibility presents a significant opportunity to leverage the best native solutions offered by Azure and Oracle, thereby enabling users to maximize performance and efficiency. OD@A provides MAA for Oracle enterprise database and autonomous database on Exadata system in Azure environment.

Infosys OD@A solution incorporates established Azure cloud best practices, thereby creating an optimal service package to meet and excel customer requirements.

Features	Azure
Oracle Exadata Platform in Cloud	**ExaCS in Azure** **Autonomous DB in Azure**
Oracle real application cluster	Available
Containerization	Azure Kubernetes Service
DevOps Platform	Azure DevOps
Authentication	Microsoft Entra ID
Generative AI	Azure AI services
Server Less Features	Azure Function

Figure :1 : OD@A Native services

Key Benefits of Multicloud Adoption

Adopting a multicloud strategy offers a range of advantages for organizations seeking to modernize their IT landscape, as outlined in the following key benefits:

Commercial Benefits

MACC Consumption

Purchase of Oracle Database@Azure will contribute toward a customer's MACC

DB License Portability

Migrate existing Oracle Database licenses, including unlimited license agreements (ULAs) and Bring Your Own License (BYOL).

Oracle Rewards

Oracle support rewards up to 33% for every dollar spent on OCI

IT Landscape Modernization

Cloud Native solutions

Build and manage cloud native apps using Azure Kubernetes, Azure DevOps, Azure CI/CD, Azure OpenAI Service

Oracle Autonomous Database 23ai

Automated patching, secure and access controlled autonomous database

Microsoft Co-Pilot and OpenAI Interface

Harness integrated AI environment

Infosys driven value proposition

Committed Savings

- Infosys driven Licenses Optimization
- Infosys Cobalt Accelerators save up to 20-40% of TCO
- AIML Driven FinOps Model

Migration readiness

- Ready to use Tools ,toolkit and accelerators
- Migration Factory
- Ready to use HLD,LLD migration runbooks

Comprehensive security solution

- Database TDE Encryption
- Oracle Audit vault and Database Firewall
- Microsoft Entra integration

Largest SI Partner for Exadata Systems

- Infosys is 1st SI to be certified as CSP by Oracle and the 1st Oracle Catalyst Program Partner
- Exadata & Oracle DBA Managed Service Provider MSP with 500+ clients

Figure :2: Oracle Database@Azure Infosys Value Proposition

Cost Optimization and Licensing Benefits

Infosys provides comprehensive approach to cost optimization as an integral element of OD@A adoption solution to customers. It includes optimizing infrastructure sizing, licenses and services cost leading to an overall TCO reduction. Additionally, spend on OD@A contributes to reduce equivalent Microsoft Azure consumption commitment(MACC).

Performance and Scalability

Infosys-driven capacity planning guarantees optimal infrastructure and precise storage sizing. The Exadata system delivers exceptional performance, ensuring low latency and high throughput. With its dynamic scaling and autonomous database capabilities, it effectively manages dynamic workloads with unmatched efficiency.

Enhanced Enterprise Security and Compliance

The Infosys security framework effectively integrates Oracle and Azure's robust security measures with essential cloud compliance certifications. Security framework encompasses all layers of IT landscape.

Compliance / Governance	Client Security Policies, procedures and Guidelines/ Azure Policy	Cloud Security | MCSB | ASB	Microsoft Defender for Cloud	SOC 1 / SOC 2	Periodic Reporting | Azure Governance Visualizer
Endpoint / Application	Anti Malware | CrowdStrike/ Secure boot	Vulnerability | Qualys Guard/ MS Defender	Penetration Testing	WAF | BOT Protection	Patch Management/ Azure Update Manager
Access Control	Active Directory Microsoft Entra ID	SSO | Site minder / PING	Identity Mgmt | PING	Access Mgmt | RBAC	Microsoft Defender for Cloud
Data Security	Data Segregation/ Microsoft Fabric	Encryption | TDE | Azure Key Vault	Data Masking | OKV Tokenization | DB Audit	File Activity Monitoring | Varonis	Data Loss Prevention | MS Purview/Symantec DLP
Operating system Security	Boot time Malware | Secure boot	Hardening | CIS	Vulnerability | Qualys	Tripwire | Microsoft Defender for Cloud	Antivirus | Tread Micro | Defender
Network / Infra Security	3rd party Firewall | Palo Alto/ Guardicore/ NSG	SIEM | Sentinel	Proxy | Symantec	Secure Communication | Express Route/IPSec VPN	VPN | C2S VPN | Palo Alto
Business Resiliency	Availability Zones	High Availability	Back-up | Veeam | Commvault | Cohesity	Recovery Plan/ Azure site Recovery	Resiliency Process
Hypervisor Security	Azure Cloud Service Provider – Cerberus Chip				
Physical Security	ISO 27001, HIPAA, FedRAMP, Australia IRAP, UK G-Cloud, and Singapore MTCS				

Figure :3 : Infosys Layer wise security framework for OD@A

Oracle Database@Azure Enablement workflow

Infosys has established a standardized enablement workflow for implementing Oracle Database in the Azure environment. This framework includes a comprehensive template that details all key activities—from assessment, sizing, and procurement to deployment and support of application workloads on the cloud, with the database hosted on Oracle Database@Azure (OD@A). This workflow provides a templated, efficient, and accelerated approach to adopting Oracle Database@Azure, ensuring a quick turnaround time.

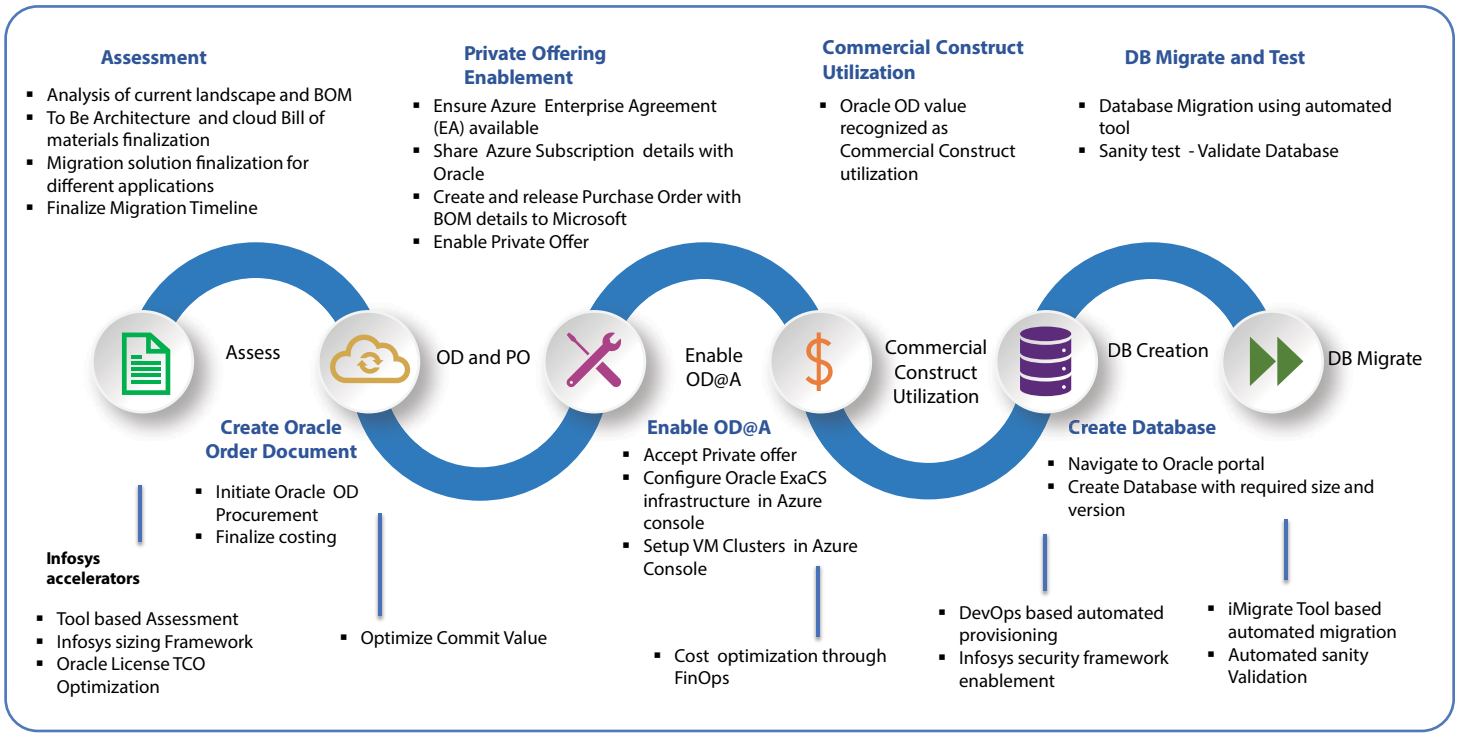
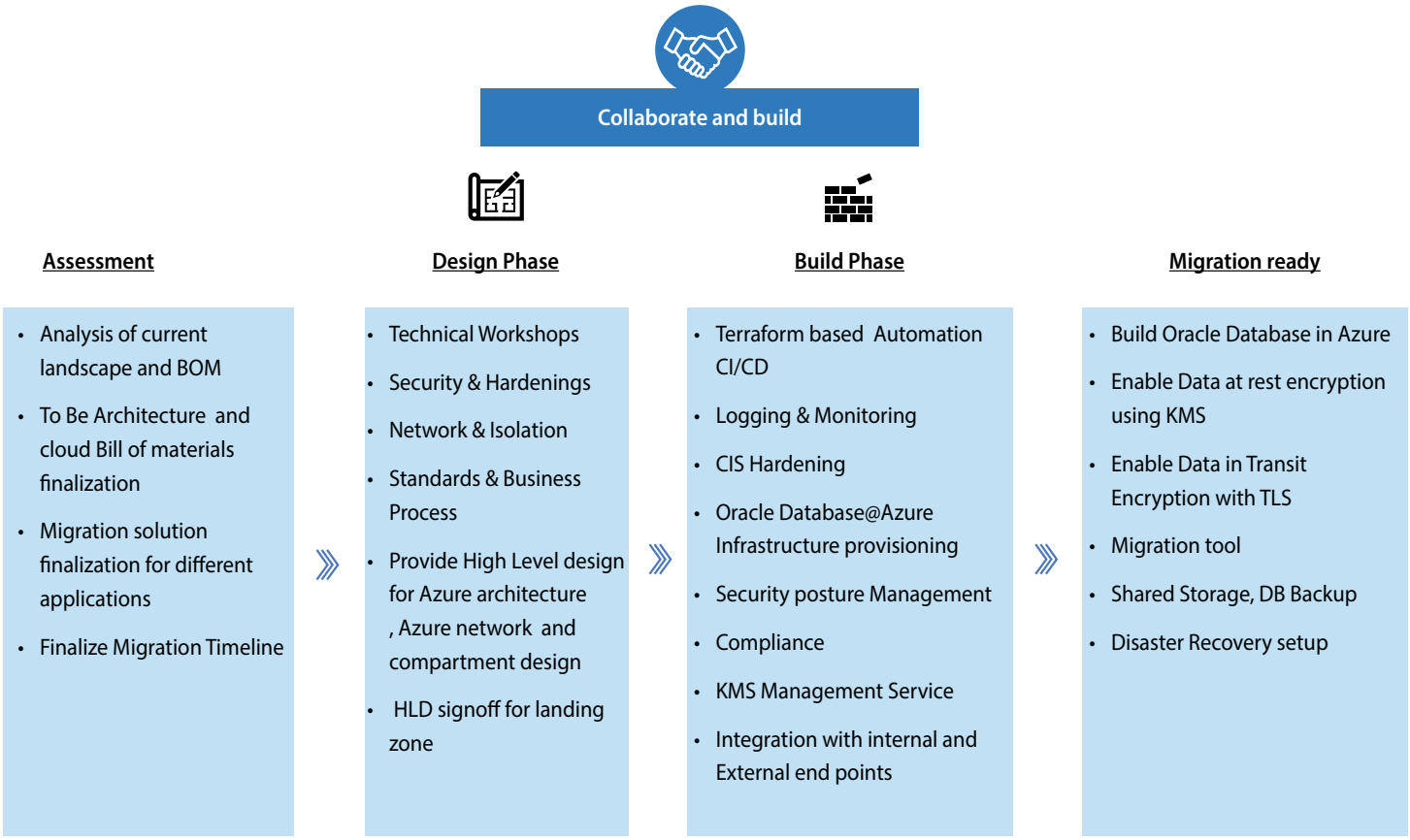


Figure 4: Oracle Database@Azure– Infosys driven Enablement Workflow

Infosys framework to accelerate cloud migration

Infosys provides a comprehensive cloud migration framework that encompasses the entire process, from tool-driven assessment to efficient, automated migration within an optimal timeframe.



Planning and scheduling the migration by leveraging DevOps practices, beginning with a pilot phase, utilizing the Infosys factory model and an automated migration tool.

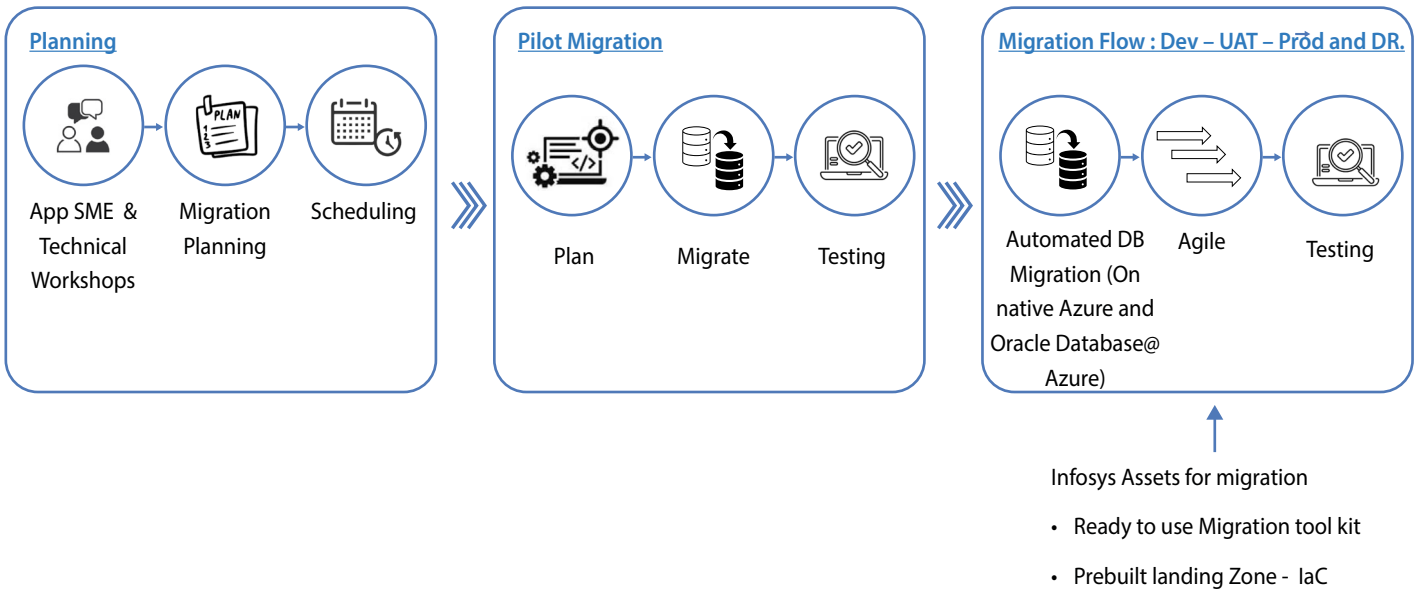


Figure 5: Infosys framework to accelerate cloud migration

Pilot Project – Oracle EBS migration on Azure with DB migration on OD@A

Infosys successfully migrated Oracle EBS 12.2.14 and the SOA Suite from on-premises environments to Azure, utilizing Oracle Database@Azure (OD@A) for the database tier and Azure Virtual Machines for the application tiers. Monitoring was configured using Azure Monitor and Oracle Enterprise Manager (OEM). Additionally, Infosys deployed its proprietary AI use cases for SQL generation and intelligent knowledge search on Oracle 23ai using a vector database, which were successfully tested on OD@A

Infosys Security & Monitoring Posture

Infosys adopted industry standard security and monitoring best practices. Following is the list of security and monitoring postures implemented in PoC.

Security & Monitoring Posture	Tool
Operating system (OS) hardening	Center for Internet Security (CIS) standards
Vulnerability management	Enterprise TruRisk Platform
Malware protection	FireEye
Firewall protection	Palo Alto Networks firewall
Backup protection	Veeam Backup and Replication
Port and network filtering	Virtual machine (VM) firewall
Traffic filtering	Oracle Network security group (NSG)
Data leakage prevention	Symantec Data Loss Prevention (DLP)
Single sign-on (SSO)	HashiCorp Vault
Role-based access control (RBAC)	Microsoft Entra ID
Database encryption	Transparent data encryption (TDE)
Micro segmentation	Guardicore
Performance monitoring	Microsoft Azure Monitor
Application/database monitoring	Oracle Enterprise Manager (OEM)
Cost, performance, and security review	Oracle Cloud Advisor
Security incident detection	Microsoft Sentinel
Software inventory management	Flexera Software Asset Management (SAM)

Figure 6: Infosys security framework components enabled in Pilot

Performance Benchmark in Pilot

SN#	Program/Report	On-Prem Response time (Min)	On Azure Cloud with OD@A Response Time(Min)	% Performance improvement
1	Gather Stat for All the schema in Oracle EBS Application	80	20	75
2	PO Receipt BO Extract	9.65	6.38	33.89
3	Open Sales Order Report	16.00	10.95	31.56
4	PO EXTRACT	173.36	120.9	30.25
5	Requisition Inbound Interface	2.74	1.92	29.87
6	GPAO Receipt Import	54.68	40.07	26.71
7	AP Invoice Hold Report	12.30	9.20	25.20
8	AP Invoice Interface Import	5.59	4.27	23.61
9	FA Fixed Assets Statement Report	25.87	22.25	13.99
10	Requisition Import	0.21	0.19	9.52
11	PO Print Wrap Program	41.55	40.14	3.39

Figure 7: Performance Benchmark in Pilot

Conclusion

As a trusted partner in enterprise cloud transformation, Infosys empowers organizations to fully realize the value of Oracle Database@Azure (OD@A) adoption. Through this offering, businesses gain the strategic insights needed to make informed decisions throughout their cloud journey. Additionally, the autonomous database capabilities within OD@A deliver intelligent, self-managing operations that significantly enhance performance while reducing administrative overhead.

With deep expertise in orchestrating complex, large-scale cloud migrations, Infosys ensures seamless transitions across industries—enabling operational resilience, cost optimization, and faster time-to-value. Our tailored services, grounded in industry-specific knowledge and proven best practices, help minimize risk, reduce downtime, and accelerate cloud adoption.

Driven by a commitment to innovation and customer-centric execution, Infosys stands as a catalyst for long-term success in today's dynamic multi-cloud environment. Through OD@A, Infosys helps enterprises navigate their transformation journey with confidence, agility, and strategic clarity.

About the Authors

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Dambaru has over 20 years of extensive experience in Oracle and Platform technologies involving design, implementation, and upgrades. He has been working extensively in Exadata engineered solutions and Database-as-a-Service (DBaaS) solutions for both Oracle and non-Oracle workloads to various clients.

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Girish has over 25+ Years of extensive experience in Oracle technologies. He is currently leading Database-as-a-Service COE providing end-to-end transformation solutions in Exadata, Oracle ERP and Multicloud.

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