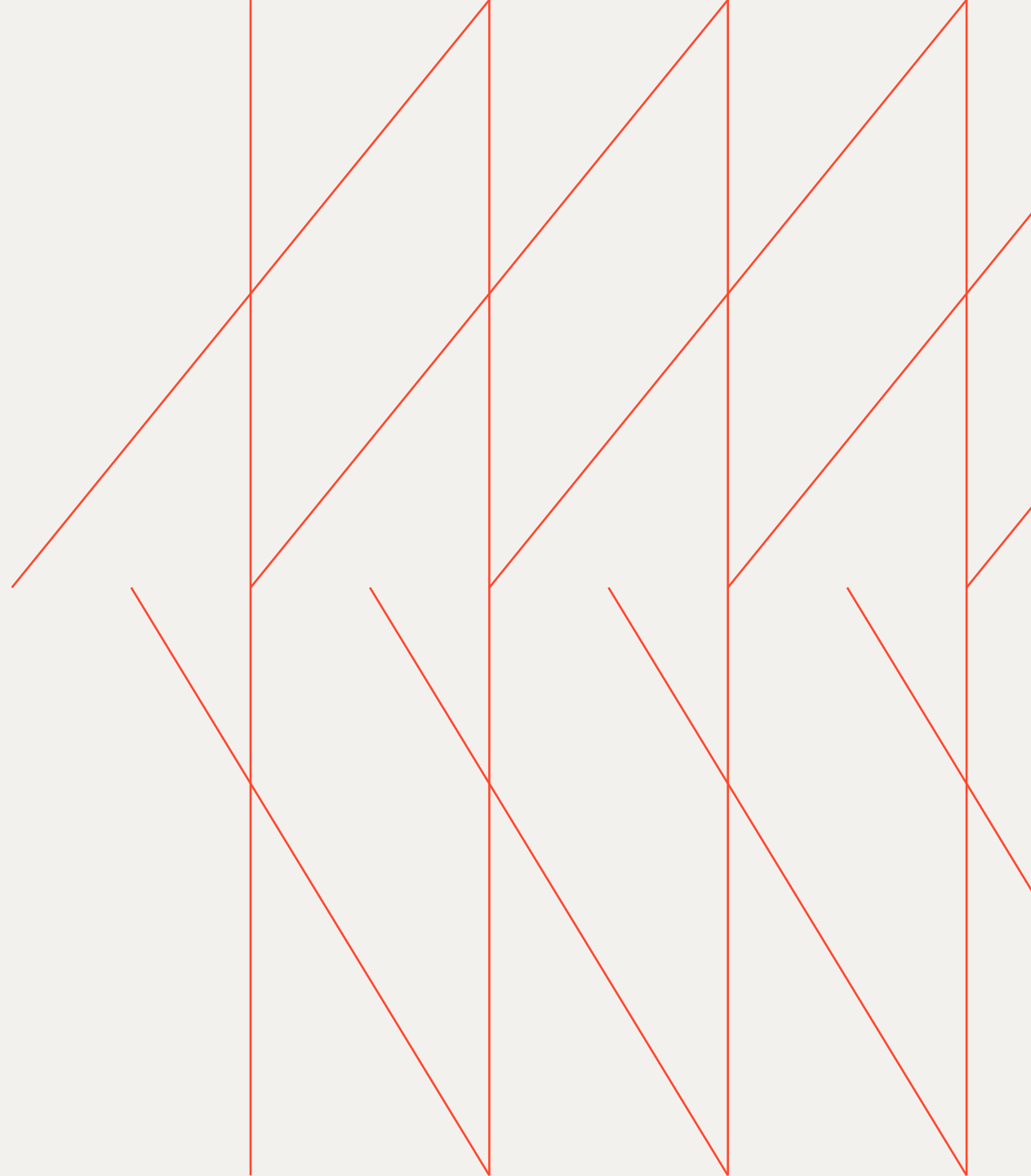# kyndryl

Database migration and modernization with Azure

Applications, Data and AI Practice

Together with alliances, Kyndryl designs, solutions, implements and operates the world's most complex technology estates

Our customers

We work in partnership with thousands of customers and are dedicated to ensuring that each achieves peak digital performance

30+
... years of designing, building and managing mission-critical IT environments

Including
...of the Fortune Global 100 and more than half of the Fortune Global 500

60%

We manage vital environments in critical industries

5/5 of the top automotive companies by revenue

11/20 of the top insurance companies by revenue

4/5 of the top consumer staples retailers by revenue

3/5 of top telecom companies by total mobile connections

5/10 of top airlines by total revenue passenger miles (RPM)

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kyndryl / **Microsoft**

Microsoft Partner | **Azure Expert MSP**
Microsoft

6 Microsoft Azure Advanced Specializations

- Azure VMware Solution
- Analytics on Azure
- Kubernetes on Azure
- Azure Virtual Desktop
- Low Code Application Development
- SAP on Azure

5 Microsoft Solution Partner Designations

- Azure Infrastructure
- Azure Digital and App Innovation
- Security
- Azure Data and AI
- Modern Work

Kyndryl services

Cloud
Delivering seamless advisory, migration, modernization, and management services integrated with Microsoft Cloud

Core Enterprise and zCloud
Manage mission-critical workloads seamlessly by modernizing mainframes to handle high-volume, always-on computing with Microsoft Cloud

Digital Workplace
Accelerate hybrid work capabilities and enable collaboration from anywhere with strategy, design, architecture and implementation of Microsoft 365

Application, Data and AI
Providing full application platform hosting and expert assistance for application modernization to Microsoft Azure
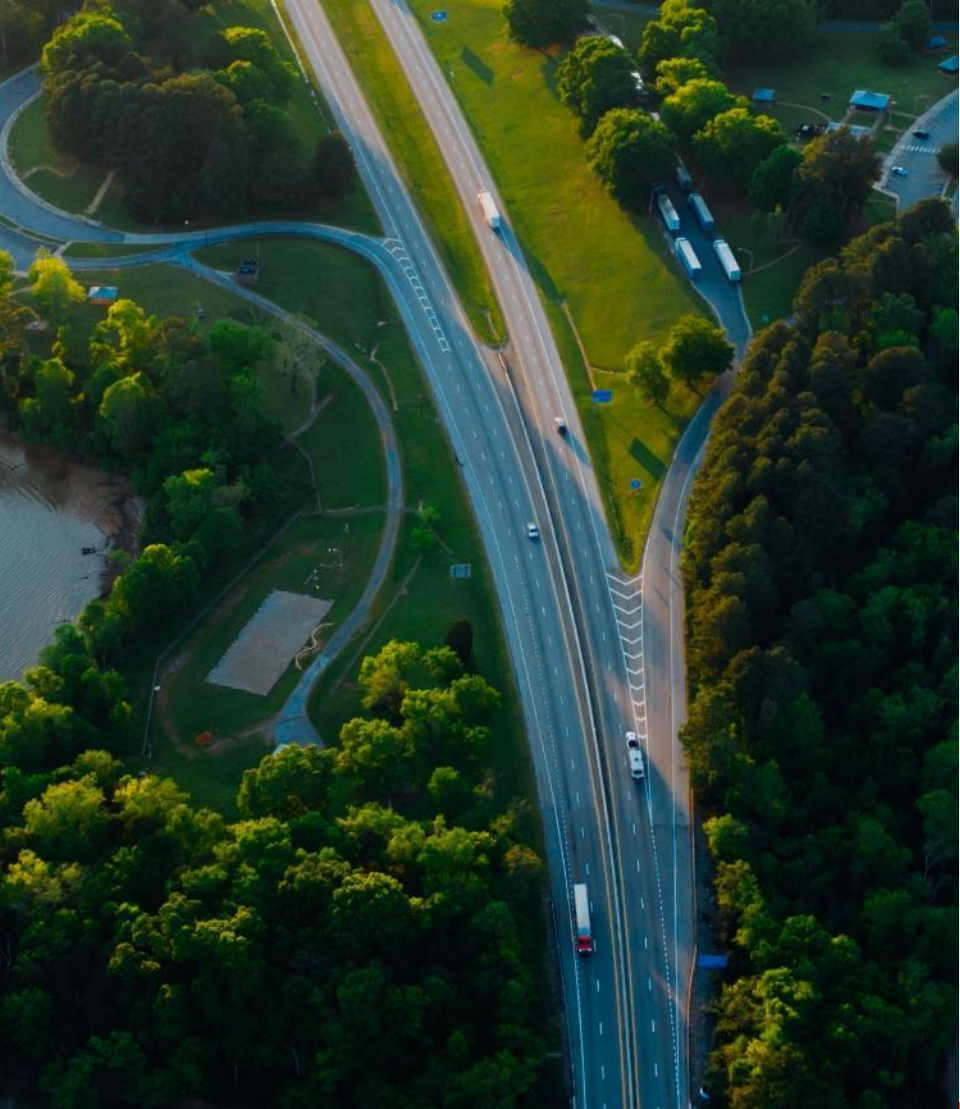
Network and
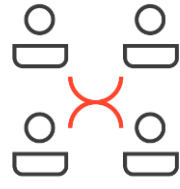Provides unified Network Services for Microsoft Cloud and data center connectivity

Security and Resiliency
Providing full application platform hosting and expert assistance for application modernization

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Visit our website to learn more

Kyndryl brings talent, expertise and a proven service design to help you co-create solutions that deliver innovative customer experiences

Rich experience and deep expertise through our **people**, best-practice **frameworks** and **IP**

Reliable services across hybrid and multicloud environments with **minimal business disruption**

Innovate with **Kyndryl Bridge** digital integrations and cocreate with designer-led **Kyndryl Vital** teams

Kyndryl offers an integrated portfolio of services to help you unlock the full value of your applications

kyndryl bridge

An open integration platform delivering IT solutions by leveraging Kyndryl's core strengths, data-driven insights and expertise

kyndryl vital.

Our designer-led co-creation experience that brings partners and customers together to solve complex business problems

Mapping Azure platforms and Kyndryl services

Microsoft AI Design Win Solutions	Kyndryl Services

AI
- Azure OpenAI
- Azure machine learning
- Azure Studio
- Model-as-a-service (MaaS)
- Azure AI Service

- AI-infused application development
- Application integration and automation

Application
- Azure Kubernetes Service
- Azure Container apps
- Azure functions
- Azure API management
- Azure app Services

- Application Assessment
- Monolithic to Microservices
- Web Application Modernization

- LCNC Adoption
- Ui and UX Moderniation
- Containerization

Data
- Azure SQL database
- Azure Cosmos DB
- Azure database for PostgreSQL
- Microsoft Fabric
- Azure AI

- Microsoft Fabric and Azure AI
- DB consolidation Assessment
- DB Modernization Assessment

- DB Migration
- Hetrogenous DB Migration

Kyndryl's services for database migration and modernization to Azure

Assess source databases and determine a migration and modernization path

Source

– SQL Server (on-premises)

– MySQL (on-premises)

– PostgreSQL (on-premises)

– MongoDB

– MariaDB

Target

– Azure SQL Database

– Azure Database for PostgreSQL

– Azure Database for MariaDB

– Azure Cache for Redis

– Mongo DB Atlas on Azure

– Azure Cosmos DB

– Elastic on Azure

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Database migration and modernization scenarios

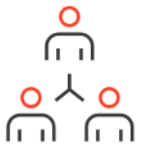Industry-leading guidance for every stage of your database transformation journey
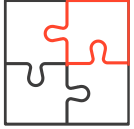
I want to reduce hardware, database sprawl and licenses of database landscape to simplify management
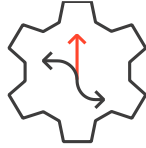
I want to consolidate or move my database servers

I want to reduce my total cost of ownership (TCO) by adopting database services on Azure

I want to change or replatform my database product to reduce TCO and support application modernization requirements

I want to upgrade my end of live (EOL) database products on my existing servers deployed on premises or cloud environments

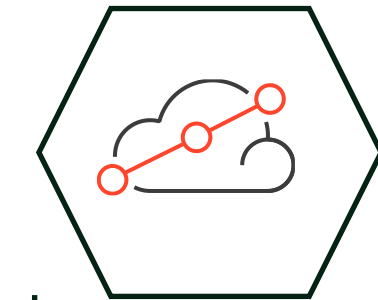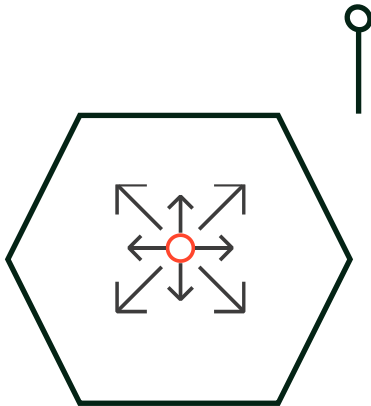I want ease of maintenance and administration of databases (production or nonproduction regions)
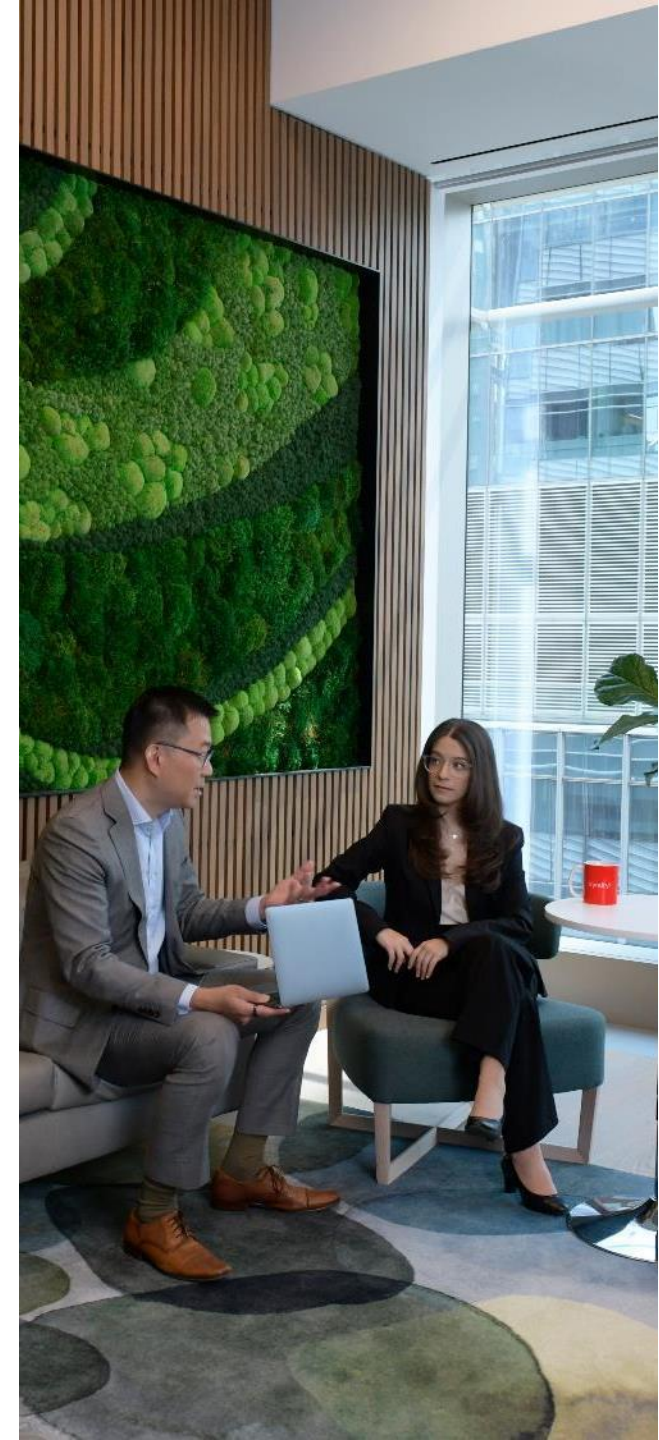
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Kyndryl's migration and modernization methodology

Seamlessly evolve your database infrastructure with Kyndryl and Azure

Discover and assess

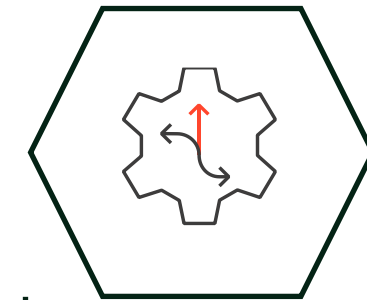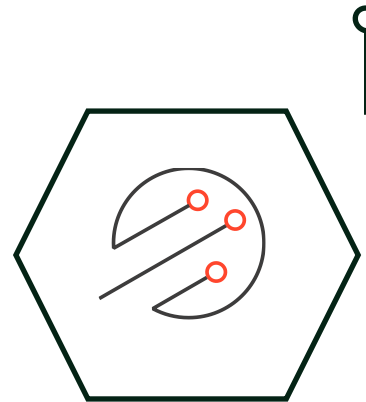Assess legacy on prem databases and determine modernization plan

Design and implement

Design and build the Azure environment for databases
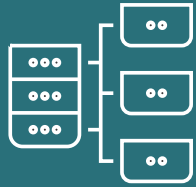
Migrate and deploy

Perform database migrations leveraging Azure native and partner tools for schema conversion and migration

Manage and optimize

Monitor, operate and govern the DBs leveraging Azure native management tools

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Assessment for Database Consolidation

Strategic database consolidation

Enable customers to understand their database sprawl and determine opportunities for consolidation into Azure Database Services

Triggers:
- High infrastructure maintenance cost
- High **licensing and operational cost**

Customer challenges:
- Maintaining multiple versions and database deployment models
- High operational costs, managing multiple hardware and OS version

Value proposition:
- Technical debt remediation through Azure's modern database platforms
- Optimized performance using Azure's auto-scaling and serverless options
- Reduced costs by leveraging Azure's pay-as-you-go model and managed services
- Simplified management using Azure's native monitoring and governance tools

Service features:
- Identify opportunities to standardize and consolidate databases to Azure managed services, reducing infrastructure and operational costs
- Optimize licensing costs through Azure consumption models and identify Azure-native solutions to reduce IT overhead
- Analyze workload characteristics to recommend optimal Azure database service tiers and deployment options

- **Tools:** Kyndryl automation scripts, Azure Database Migration Assistant (DMA), Microsoft Assessment and Planning (MAP) toolkit, Azure migrate and Azure cost management

- **Supported databases:** Microsoft SQL, Azure SQL, Azure VMware Solution (AVS), PostgreSQL, MySQL Oracle on Azure

Source databases: Microsoft SQL Server, Oracle
Target platforms: Azure SQL Database, Azure Database for PostgreSQL, Azure Database for MySQL

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Lift and shift migration for databases

Lift, shift, transform

As-Is migration of databases from on-premises and legacy platforms to Azure Database Services

Triggers
- TCO reduction and modernization
- Scalability requirements
- Aging infrastructure

Customer challenges
- Higher license and **operational cost** and **scalability**
- Lack of expertise
- Data integration and access issues

Value proposition
- Transform databases to Azure managed services for cost optimization
- Leverage Azure's native scaling and high availability features
- Combined Kyndryl and Azure expertise for seamless migration

Service features:
- Discover and assess source databases for Azure platform readiness
- Accelerate migration using Azure native tools and Kyndryl automated methods
- Consolidate databases on Azure managed services
- Migrate to appropriate Azure database platforms: Azure SQL Database, Azure Database for MySQL or PostgreSQL, Azure Cosmos DB, Oracle on Azure

- **Tools:** Kyndryl database scripts and Azure Database Migration Service (DMS)

- **Supported source databases**: Oracle, DB2, MySQL, Microsoft SQL, PostgreSQL, MariaDB and Azure Cosmos DB API for MongoDB

Assessment for Modernization and Cloud Adoption
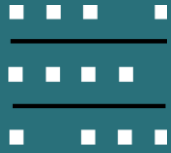
Platform assessment and strategy

Analyze database complexity and readiness for Azure re-platforming, recommend migration approach and select appropriate tools

Triggers:
- Eliminate vendor lock-in
- Database modernization

Customer challenges:
- Lack of **skills,** methods, tools and bandwidth to support a database migration or **modernization** project
- Data migration complexity

Value proposition:
- Optimize costs with Azure's pay-as-you-go model, managed services and auto-scaling
- Expertise in Azure databases and enterprise Azure migrations

Service features:
- Assess current database costs and develop Azure-specific licensing strategy using Azure Hybrid Benefits and reserved capacity options
- Evaluate database workloads for compatibility with Azure database services (Azure SQL, Azure MySQL, Azure PostgreSQL, Azure Cosmos DB) and recommend optimal Azure migration tools
- Analyze source database components and features for mapping to equivalent Azure database capabilities and services
- Generate comprehensive assessment report with Azure-specific recommendations and migration roadmap

- **Tools:** SQL Server Migration Assistant (SSMA), Kyndryl scripts, Ispirer and Ora2Pg (only oracle)

- **Supported source databases** : Oracle, DB2, MongoDB, PostgreSQL (non-Azure), MySQL (non-Azure), Microsoft SQL Server

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Database Modernization and Cloud Adoption

Modernize Databases on Azure

Execute cross-platform database migrations from legacy systems to Azure SQL and open-source solutions

Triggers:

- Adopt **newer, cloud-native database engines** for new functions and features, enhance security and performance
- Reduced licensing
- Eliminate vendor lock-in

Customer challenges:

- **Uncertain approach** to business transformation
- Lack skill and experience
- Data migration complexity

Value Proposition

- Proven framework for modernizing diverse databases to Azure's managed services, aligned with business goals
- Expertise in legacy databases and Azure services ensures successful migrations to Azure SQL and open-source solutions

Service features:

- Migrate databases to Azure SQL and Azure-managed open-source solutions to reduce TCO and eliminate vendor lock-in
- Leverage Azure's modern database platforms to enhance agility and enable microservices-based application architectures
- Transform legacy databases to Azure Database for PostgreSQL and MySQL, embracing Azure's managed open-source solutions

- **Tools**: SSMA, Azure DMS, Ispirer

- **Supported databases**: Oracle, DB2 , MongoDB , SQL Server , PostgreSQL ,MySQL .

- Source databases: DB2,MongoDB, PostgreSQL (on-premises), MySQL (on-premises), Microsoft SQL Server
- Target Azure Services: Azure SQL Database, Azure Database for PostgreSQL, Azure Database for MySQL, Azure Cosmos DB

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Benefits of Kyndryl's Azure migration and modernization database services

Kyndryl can help customers assess their legacy databases and provide a migration and modernization path to Azure

Improve operational efficiency with quick deployments and minimal on-going operations

Enable security and compliance with built-in encryption and network isolation constructs

Cater to application demands by leveraging performance and scalability options

Modernize application ecosystem through integration with the Azure ecosystem and migration to Azure Managed Cloud Databases

Meet stringent high availability and disaster requirements with multiple availability zones and multi-region deployments

Drive innovation through a focus on core business functionality through improved productivity

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Kyndryl accelerators

SDMM automation framework features and benefits

Automation framework enables "low-touch" to "zero-touch" automation of repeatable manual tasks in the premigration, migration and post-migration phases.

Discovery → Planning and design → Build → Automated premigration → Automated migration → Automated post migration → Manage →

Automation outcomes

› Consistent and predictable outcomes

› Reduction of human error rates

› Reduction in migration duration

› Eliminate mundane, time-consuming and repetitive tasks

› Enrichment of inputs to human engineering

› Handle complex tasks during high volume of workload migrations.

› Focus on higher value tasks

Premigration

› Tool check
› Collect data from servers (Report)
› Validate server
› Add/edit/remove server

10x
Faster Migrations

Migration

› Migrate server
› Cancel migration

20%
Schedule Reduction

Post migration

› Collect data (Report)
› Compare pre and post migration data (Report)
› Post migration tasks
› Update routes
› NTP configuration
› Domain joining
› Mount/Del NFS
› VNic port group config
› Update VMware tools
› Activate Windows OS
› Host entries update
› Verify network connectivity
› Update hardware version
› Reboot servers

35%
Effort Reduction

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Thank You