

## Mainframe Modernization with Microsoft Cloud

### Highlights

- End-to-end services help drive innovation and value by moving mainframe workloads to Microsoft Cloud
- Accelerate mainframe application migration while unlocking AI insights and generative AI capabilities through Microsoft technologies like Azure OpenAI, Microsoft 365 Copilot and Azure DevOps
- Data governance - by synchronizing mainframe data using Microsoft Azure MSSQL and mainframe-based replication software, customers can immediately implement and enforce data governance practices with Azure Purview across cloud and mainframe estates
- AI deployment - Kyndryl has extensive AI expertise to help customers unlock value from mainframe data and drive innovation with Microsoft Fabric

Kyndryl is well positioned to help customers move data and mission critical workloads onto the Microsoft Cloud. Kyndryl understands the mission critical and often complex regulatory requirements around mainframes to create customized plans that minimize risk and maximize success.

Kyndryl's strong partnership with Microsoft, decades of mainframe experience and thousands of skilled domain experts enable us to advise and guide customers on mainframe modernization initiatives to unlock AI insights and generative AI capabilities through Microsoft technologies including Azure OpenAI, Microsoft 365 Copilot and Azure DevOps.



## Customer challenges

Kyndryl's mainframe modernization with Microsoft Cloud suite of solutions addresses several key customer challenges:

- **Actionable Data Insights:** Many organizations struggle to transform mainframe data into actionable intelligence and insights. Exposing mainframe operational data to the cloud making it accessible to analytics, machine learning, and AI applications, organizations can improve decision-making with data-driven solutions designed to deliver immediate business value
- **Skills Gaps:** There is an ongoing challenge of finding skilled professionals to manage and maintain mainframe systems. Modernizing and moving off the mainframe can help bridge this skill gap by utilizing more widely available and modern technologies
- **Scalability and Flexibility:** Traditional mainframe systems can be rigid and difficult to scale. By moving off the mainframe, customers can benefit from the scalability and flexibility of cloud environments, which can better accommodate varying business unit requirements and end-user needs
- **Integration with Modern Technologies:** Customers often struggle with integrating legacy mainframe applications with modern technologies and platforms. Moving off the mainframe allows for better integration with cloud services and other modern technologies, enhancing overall business agility and innovation
- **Enterprise-Wide Observability:** Achieving enterprise-wide observability in hybrid IT environments is a challenge. Kyndryl's solution helps organizations overcome this by providing the necessary tools and expertise

These challenges highlight the importance of a well-planned and executed mainframe modernization strategy including consulting, integration of modern technology, and ongoing management of the data and applications in Azure which can help customers achieve their long-term goals and drive business success.

## State of Mainframe Survey

According to the recent Kyndryl [State of Mainframe Modernization Survey](#), 86% of enterprises are moving fast to adopt AI to accelerate mainframe modernization. Additionally, almost half aim to use generative AI to unlock and transform critical mainframe data into actionable insights. Furthermore, 96% of respondents are migrating some workloads, on average 36%, to the cloud.



Interest in using generative AI on the mainframe is exploding, and it is a game changer



Hybrid IT is the way forward for almost all organizations due to flexibility, speed and addressing budget requirements



Security is the number one driver of mainframe modernization investments



Enterprise-wide observability is a must-have; however, it is often lacking in hybrid IT environments



Skills gap remains an inhibitor

## 5 Paths to Mainframe Modernization

**1 Systems Integration** - Kyndryl Consult provides integration services that enable customers to create new cloud-native applications using the Microsoft Cloud Adoption Framework for Azure and to re-platform other applications in parallel. Kyndryl extends Microsoft Azure DevSecOps pipelines to the mainframe, ensuring both cloud and mainframe applications are part of the agile development process. This allows for automated testing and code scanning for both source and target, ensuring consistency across the mainframe and Azure platforms.

**2 Data governance** - By synchronizing mainframe data using Azure SQL Managed Instance and mainframe-based replication software, customers can immediately implement and enforce data governance practices with Azure Purview across cloud and mainframe estates. This capability works to maintain access to sensitive data throughout the transformation journey.

**3 Application modernization** - Kyndryl's approach to application development enables customers to innovate rapidly by incorporating Azure cloud-native architectures, microservices, DevOps support and built-in monitoring to modernize the mainframe application portfolio.

**4 AI deployment** - Kyndryl has extensive AI expertise to help customers unlock value from mainframe data and drive innovation with Microsoft Fabric. By incorporating cloud-based contextualized data with a real-time copy of mainframe data, customers can take advantage of cloud-based analytics, Microsoft 365 Copilot and Power BI to provide insights, visualizations and graphical dashboards without impacting mainframe utilization.

**5 Security** - Kyndryl's security capabilities integrate Azure Sentinel and authentication and policy frameworks with the mainframe, enabling a single auditable control plane across the hybrid estate. Establishing a day-one zero-trust security posture helps customers ensure regulatory compliance.



### Customer Benefits

Kyndryl's approach to the 5 Paths to Mainframe Modernization allows Customers to choose the right path(s) in line with their business priorities. As mainframe workloads and data move to Azure, the expected business outcomes are realized and can include:

- **Realtime analytics and visualization:** Obtain business insights on mainframe data in real time with dashboards and graphs.
- **Monitoring:** Azure's collaboration with Kyndryl's Modern Ops Portfolio provide solutions enabling both environments upon one control plane, combining the power of AIOps and Kyndryl Bridge enabling early detection of anomalies and solving deviations before becoming issues thus mitigating interruption of services across the hybrid environment.
- **Advanced DevOps processing** is required to be integrated directly into the development life cycle and migration process to provide central management of the life cycle of the engagement.
- **Talent Pool Expansion:** By moving workloads to Azure businesses can tap into a wider pool of IT talent familiar with modern technologies.

## Step 1: 1-2 day Consult Led Engagement

This is a joint session held with key Kyndryl and Customer stakeholders. The purpose is to review your mainframe estate and business requirements and produce an assessment report identifying the required business drivers, required outcomes, mainframe transformation scope and high level milestones.

## Step 2: 4 week Discovery

This step identifies and solutions any of the 5 mainframe transformation path(s) which the Customer wants to pursue. Together, we work with the Customer teams to discover the best path based on your business priorities.

The outcome of the assessment is a Statement of Work identifying the transformation and service delivery scope and associated pricing.

*\* 4 Weeks duration, depending on complexity.*

## Step 3: Mainframe Modernization Transformation

This step activates the transformation work that realizes the Customer business outcomes. The scope, timeline, milestones and deliverables have been defined in Step 2. Kyndryl utilizes its delivery excellence in managing the transformation while maintaining system availability through change and risk management rigor.

## Step 4: Service Delivery

Upon completion of the transformation, focus is concentrated on the ongoing management of the data and applications in Azure. This is a key step that realizes the business outcomes for Customers and utilizes the integration into Kyndryl Bridge. Kyndryl's service delivery scope can include Observability, FinOps, AIOps, App development, App support, and sustainability. The scope is dependent upon specific Customer requirements defined in Step 2.



## Why Kyndryl?

### 6.2 million

Kyndryl manages **6.2M+** MIPS and over **60%** of the IBM z MIPS (millions of instructions per second)

### 7.5 thousand

**7.5k+** global, highly skilled, mainframe experts keeping a currency of **expertise and deep skills** through a dedicated education program

### Over 60 years

**60+** years of experience across **22K+** subsystems, and **100+** million batch jobs per day

### A top service provider

Kyndryl was named as a top three service provider across mainframe services delivering superior customer satisfaction and value ([Mainframe Services Enterprise Pulse 2024 - Top Three Providers Delivering Superior Value](#))

## Learn more

To learn more visit

[kyndryl.com/us/en/about-us/alliances/microsoft](https://kyndryl.com/us/en/about-us/alliances/microsoft)



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