

# Transform your IT infrastructure to cloud-enabled hybrid open platforms

Optimize your hybrid cloud  
and mainframe investment  
with Core Enterprise  
Services from Kyndryl

kyndryl™





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# Customer needs and challenges

CIOs, CTOs, and business leaders are under more pressure than ever to deliver stronger results, better security, more flexibility, and transformative solutions – at minimum cost and risk. Organizations are looking to leverage existing infrastructure investments and control technology and labor costs. They also need to improve speed to market for applications that enable innovative business processes. The priorities are to identify, enhance, and grow key skills, eliminate silos, automate, and implement agile development processes.

Savvy technology professionals know that today's mainframe, midrange systems and software can work hand-in-hand with hybrid cloud and open-source technologies. Integrating existing technologies with hybrid and multi-cloud approaches should be a cornerstone of the transformation journey.

Improve your enterprise IT capabilities and efficiencies by updating and integrating IBM Z® mainframe or IBM® i systems into your hybrid cloud environment. This e-book defines how and why to optimize your investment in these key technologies.

## For your core enterprise, mission-critical systems

Kyndryl, formerly IBM Global Technology Services, is uniquely qualified to deliver infrastructure transformation as well as cloud migration services for high-volume, always-on computing environments. Core Enterprise Services from Kyndryl help you transform traditional IT into cloud-enabled hybrid, open platforms to gain agility and flexibility.

We provide secure, unified, fault-tolerant services using IBM Z and IBM i expertise to improve infrastructure for your mission-critical workloads.

Kyndryl works with hyperscalers to help you integrate and manage leading hybrid and cloud-native solutions. Examples include Linux® on IBM Z and IBM i, Red Hat® OpenShift® Container Platform, Red Hat Ansible® solutions, and integrations with Microsoft® Azure® cloud.

## Transform and integrate to improve existing infrastructure value

You don't have to risk expensive "rip and replace" efforts. Today's systems are built to interoperate with public cloud, private cloud, and other open technologies. Kyndryl helps you achieve those goals, whether you use multi-tenant cloud for IBM Z mainframe, IBM i or dedicated equipment hosted on- or off-premises. Our services and expertise with these solutions help you extend the value of your existing infrastructure with fast and flexible hybrid cloud approaches.



# 01

## Advisory and Implementation Services

Organizations want to optimize their mainframe and infrastructure investments. At the same time, they need new efficiencies with cloud solutions for more agility and quick development of applications. One of the biggest challenges for organizations today is keeping up with all the IT innovations that promise savings and business benefits.

How can you be confident that you are selecting the right platform for the right workload for each component of your organization's hybrid cloud applications?

And how do you execute transformative IT improvements without adding major capital investments or more network complexity?

Kyndryl helps customers gain agility and flexibility for the critical systems that are vital to operating the business — whether an SMB or larger enterprise. We help you transform and extend your infrastructure. Our Advisory and Implementation Services allow you to integrate solutions that unlock digital transformation with cloud-enabled hybrid, open platforms. Kyndryl offers project-based services and out-tasking so that you can accelerate transformation without adding headcount.

With automation, advanced analytics, updated technologies, and new ways of working, Kyndryl services help organizations transform their IT infrastructure, accelerate integration with cloud-native applications to deliver on business goals, and optimize costs.

Kyndryl advisory, design, and implementation services include:

- Mainframe and enterprise hybrid cloud strategy and architecture definition
- Technical health assessments
- Implementation of cloud processes and tools
- Migration and consolidation of Linux workloads to IBM Z

Optimize your infrastructure investment and plan for future business needs with Advisory and Implementation Services from Kyndryl. Address on-demand capacity planning and update aging components and private and hybrid cloud infrastructure.

**Kyndryl offers project-based services and out-tasking so that you can accelerate transformation without adding headcount.**



# 02

## Managed Infrastructure Services

A Kyndryl managed infrastructure helps deliver better availability and uptime—and also reduces the expense and headaches of a self-managed infrastructure. Core Enterprise Services from Kyndryl deliver end-to-end managed infrastructure services, whether for traditional remote on-premises mainframe management or dedicated management on a Kyndryl site. And as an option to our customers Kyndryl offers advanced security with protection of business-critical data using pervasive end-to-end encryption from the IBM Z environment.

For example, instead of using numerous data protection solutions, you can use Data Privacy Passports, a single consolidated data-centric audit and protection technology that protects the data after it leaves the system of record. This helps you use policy levels to set appropriate protection and address compliance requirements. You can reduce security breach risks for your users and enterprise.

Our broad portfolio of managed infrastructure services provides you with optimal choice — and multiple pricing models give you flexibility. Managed Infrastructure Services from Kyndryl are designed to help you improve scalability, availability and performance:

- Leverage the most robust technology and integrate cloud-native applications to unleash IBM Z supported hosting of traditional workloads.

- Enable modern programming languages and processes to power automation available through multiple hosting models.
- Consolidate Linux workloads to managed IBM Z environments to reduce cost and complexity.

Kyndryl Core Enterprise services has deep expertise with multiple operating system, such as IBM z/OS®, IBM i, Red Hat Enterprise Linux, and others. Our expertise also includes Red Hat OpenShift Container Platform, managed platform-as-a-service (PaaS), and Linux software and environments.



# Managed Extended Cloud IaaS for IBM Z or IBM i using a cloud model

Kyndryl zCloud and Cloud for IBM i infrastructure services for IBM Z and IBM i respectively are enterprise-grade, proven solutions. Explore secure services that gives you access to cost-effective new technologies and high-availability options. With options for single and multi-tenant infrastructure, on- or off-premises, managed infrastructure-as-a-service (IaaS) from Kyndryl delivers the complete infrastructure stack—all using a hybrid cloud model.

## Managed Extended Cloud IaaS for IBM Z

Kyndryl offers advanced security with protection of your business-critical data. Rely on Kyndryl Core Enterprise Services to improve your computing power with a security-rich, scalable cloud model. Through our Managed Extended Cloud IaaS for IBM Z services, we help you use the capabilities of every platform in the hybrid cloud to host each application based on unique availability, performance, security, resiliency, and other fit-for-purpose requirements.

Services from Kyndryl help you adopt new cloud-native technologies integrated with common tools and processes. This support integrates into your enterprise's overall DevOps or DevSecOps processes, to optimize both your capabilities and costs.

- Receive end-to-end infrastructure management of your IBM Z, including security and compliance and squad performance teams.
- Plan for future business needs and integrated management with third-party cloud providers and hyperscalers while retaining standard connectivity.
- Improve the infrastructure you already have in place and ensure hardware and software meet current and future needs.

Kyndryl's Managed Extended Cloud IaaS services are designed for flexibility, scalability, and adaptability. For instance, you can use Red Hat Enterprise Linux® and the container capabilities of Red Hat OpenShift Container Platform for development in place.

This will enable you to:

- Combine these solutions with products like z/OS Connect to expose traditional mainframe middleware and data. APIs facilitate the integration.
- Co-host these solutions on the same platform for fast networking with near-zero latency.

Kyndryl provides IT management expertise and deep experience with IBM Z. Virtualization experts help deliver a security-rich, highly available mainframe IaaS platform that can redefine your IT efficiency, cost, and agility.

Our fully managed services provide end-to-end management and monitoring, backed by the experience of thousands of mainframe specialists located around the world.



## Managed Extended Cloud IaaS for IBM i

Kyndryl offers managed extended cloud IaaS for IBM i Power® servers and systems. For smaller and medium-sized organizations, this service provides a multi-tenant, scalable, and security-rich IBM i environment which can be delivered through a managed IaaS cloud consumption model. This gives you the ability to provision IBM i partitions in a secure environment managed by experts.

- Move from a CapEx to an OpEx model, based on resource allocation and consumption.
- Accelerate your time to market and innovation in a cloud model.
- Manage your critical workloads with compliant and security-rich infrastructure.

The IBM i operating system delivers a robust architecture and high availability to help promote business resilience and cost-efficient operation.

Kyndryl Managed Extended Cloud IaaS for IBM i helps you gain cost flexibility and speed to market in a secured solution. Core IBM i applications have served many organizations successfully for decades as the basis of business operations. And Kyndryl services can help enhance IBM i value with innovative hybrid cloud capabilities to achieve new levels of scalability, resiliency, and flexibility.

IBM i is the integrated operating environment for IBM Power Systems servers. Application transformation plays a key role in activating new technologies. For instance, Red Hat OpenShift clusters can be quickly deployed on your IBM Power Systems Virtual Server. We can also help seamlessly integrate the Red Hat Ansible Automation Platform with Power servers. These steps are key to delivering a comprehensive enterprise-grade solution for open-source based containerization and IT automation for IBM i.

## The transformative value of Kyndryl services for IBM Z

Kyndryl's managed IaaS model for IBM Z helps deliver greater performance, resiliency, availability and uptime while reducing the expense and headaches of a self-managed infrastructure.

- Up to 99.99999% availability or 3.8 seconds average unplanned outages per year<sup>1</sup>
- 500 immutable copies of data storage for analysis and restore

Enable implementation of modern programming languages and processes, leveraging automation available through multiple hosting models for IBM Z.

- Integrated design for cross-platform monitoring and built-in automation functionality
- Emerging options for AI-enabled automation to drive further improvements

We help you consolidate Linux workloads to managed IBM Z environments, reducing cost and complexity. Improve scalability, availability, and performance.

- Multiple operating system support options, including IBM Z-exclusive and multiple Linux versions
- Approaches to native and cross-platform container solutions support for virtually any application language
- Full open tooling support to drive DevOps and other agile processes
- Rapid execution of up to 1 trillion HTTPS transactions

The Kyndryl LPAR-based model is designed to offer the highest levels of security with Evaluation Assurance Level 5 (EAL5) accreditation. Subsystem isolation helps protect your IBM Z data, applications, test and production environments.

- Cost-effective Encryption Everywhere capabilities, including at rest
- Solution integration with support for multi-factor authentication and IBM Resource Access Control Facility (RACF)



# Application Operations

Application development and support teams need to keep up with software user demands for frequent, innovative new features with uninterrupted performance and availability. Large volumes of critical business data are typically kept on mainframes because of compliance, security, and manageability requirements. Hybrid cloud transformation opens access to the data for use in cloud-native applications that help deliver on dynamic business requirements. And cloud-native applications today are deployed in containers and managed at scale with open-source container orchestration.

**Application Operations** from Kyndryl leverage DevOps and agile practices to enable teams to execute faster and deploy error-free code releases, integrating with all CI/CD cloud-native technologies. We help update your existing native Z and IBM i applications and their platform infrastructure, architecture, and code. With Kyndryl services, you can align infrastructure and application services under a single agile governance model and improve your speed to market.

Integrated with powerful IBM Z or IBM i capabilities, modernized applications can efficiently support your organizations most complex and critical computing needs—and accelerate DevOps. Examples of services from Kyndryl Application Operations include:

- Application performance management, maintenance, and monitoring
- Application transformation

- DevOps tooling and automation deployment and management
- DevOps implementation
- Site reliability engineering
- Application incident remediation
- Linux with IBM Z and IBM i container management
- Red Hat OpenShift and Red Hat Ansible Automation Platform

Kyndryl manages Linux on Z, z/OS native containers (zCX), and the Red Hat OpenShift Container Platform on both dedicated IBM Z and Core Enterprise Services for Z on cloud. IBM Z can be a massively scaled platform for Linux workloads. Hosting cloud-native applications, co-located and integrated with traditional apps, reduces or eliminates network latency and can greatly decrease cost.

Red Hat OpenShift is an open-source based container technology designed to improve the flexibility and economics of hybrid cloud infrastructure. Red Hat Ansible Automation Platform enables an intelligent multi-cloud automation environment. As one of Red Hat's leading global systems integrator partner, Kyndryl offers a deep portfolio of services for Red Hat container and automated platform solutions.

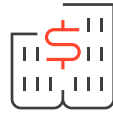
These capabilities are core to **mainframe transformation**. Kyndryl Managed Extended Cloud IaaS for IBM i provides a multi-tenant, scalable, security-rich and managed IBM i environment.



## Kyndryl strategic alliances and partnerships

Kyndryl is committed to working with a broad partner ecosystem to deliver transformational solutions for our customers' unique needs.

**Our partners** include a wide range of hyperscalers, as-a-service technology providers, strategic advisors, independent software vendors, and technology vendors. Some examples are IBM, Red Hat, Inc., Microsoft, and Google Cloud.

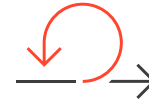


- Kyndryl is a spin-off company that was formerly IBM GTS Infrastructure Services. Through our partnership with IBM, Kyndryl delivers a wealth of services for IBM infrastructure offerings. Ask us about updating and improving the worth of your IBM technology investment.



- Kyndryl is one of the largest global systems integrators of Red Hat technologies, with a long history of working together on open technologies. We design, deploy, and manage hybrid and multi-cloud environments using Red Hat solutions. Kyndryl successfully transforms and

manages mainframe workloads with Red Hat Enterprise Linux, Red Hat OpenShift, and Red Hat Ansible Automation Platform as the cornerstone of hybrid cloud environments.



- The Kyndryl and Microsoft alliance is designed to deliver state-of-the-art solutions and relevant use cases that advance customer's digital transformation projects. Examples include solutions that advance legacy transformation projects for mission-critical workloads. Kyndryl delivers capabilities to integrate with Azure, reduce latency, provide a single pane view for management, and integrate data and applications.

Our experts will help you design a best-fit roadmap for a secure, repeatable and scalable pathway to integrate the mainframe with **Azure hosted workloads**.



- Kyndryl has worked with Google Cloud for more than 10 years. Dedicated experts from both companies drive joint development and tight field collaboration of industry-specific services. Kyndryl offers Google Cloud-enabled support for areas including applications, data and AI, cloud services, core enterprise, and digital workplace.

# 06

## Conclusion and next steps

In industries such as banking and the financial services sector, retail and consumer packaged goods, healthcare, government, and manufacturing, the mainframe continues to be central to compliance, privacy, and resiliency IT strategies. Meanwhile, data center and capital costs are rising. This risk is partly mitigated by integrating state-of-the-art hybrid cloud processes and automation with existing mainframe environments across the hybrid cloud.

Kyndryl Core Enterprise Services can help your organization with deep and broad transformation and management services. As one of the world's largest and only providers that continues to grow full-stack services talent, we reach across the ecosystem to deliver simple and complex engagements.

### About us

Kyndryl operates from over 100 countries. We have more than 88,400 skilled professionals with 10 years of experience on average. Our global customer base includes 75 of the Fortune 100 companies. Kyndryl is committed to the success of our customers, collaborating with them and helping them to realize their ambitions.

### Next steps

Explore Kyndryl advisory, implementation, application, and management services further at the [Core Enterprise Services](#) and [Managed Cloud IaaS](#) webpages. Better yet, [schedule a consultation](#) with a Kyndryl sales representative, or with an [Alliance Partner](#). Or visit us at [kyndryl.com](http://kyndryl.com)





07

## Why Kyndryl?

Kyndryl has deep expertise in designing, running, and managing the most modern, efficient, and reliable technology infrastructure that the world depends on every day. We are deeply committed to advancing the critical infrastructure that powers human progress. We're building on our foundation of excellence by creating systems in new ways: bringing in the right partners, investing in our business, and working side-by-side with our customers to unlock potential.



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1. ITIC 2021 Global Server Hardware, Server OS Reliability Report June/July 2021 <https://www.ibm.com/downloads/cas/A856LOWK>