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Mainframe modernization with Kyndryl Managed Extended Cloud Infrastructure as a Service for IBM Z

Use the modern mainframe as a cornerstone for building the infrastructure that enables your journey to hybrid cloud

Highlights

- Modernize infrastructure to get the most from your mainframe
- Enable a culture change at the heart of your journey to hybrid cloud
- Rely on zCloud to provide IBM Z® computing power using a security-rich, scalable cloud model

At Kyndryl™, we are committed to the concept that mainframe modernization is not about moving all your workloads and applications off of the high-performing, security-rich and highly available IBM Z platform—it's about using the capabilities of every platform in the hybrid cloud to host each application based on unique availability, performance, security, resiliency and other requirements.

The modern hybrid cloud ecosystem

Mainframe modernization efforts require enterprises with mainframes to keep modern solutions—like IBM Z—at the center of their hybrid cloud strategy. Hybrid cloud is about more than just re-platforming and going from one monolithic environment to another. The modern mainframe is designed to be open, supporting not just traditional workloads but also cloud-native applications that were built using languages familiar to developers on all platforms that can be implemented as microservices in containers.

Kyndryl Managed Extended Cloud Infrastructure as a Service for IBM Z—also known as zCloud—uses a cloud delivery model to provide you with access to a scalable, multitenant infrastructure that is designed for flexibility and adaptability. You have your choice of several operating systems, including IBM z/OS®, Red Hat® Enterprise Linux or other Linux platforms, and the latest versions of standardized software stacks to facilitate flexibility. zCloud can also support other IBM software as well as independent software vendor (ISV) software on a custom basis. Capacities for compute, storage and virtual tape are scalable to meet your enterprise's unique needs.

You can use Red Hat Enterprise Linux and the container capabilities of Red Hat OpenShift® Container Platform (OCP) for development in place. Combining these solutions with products like z/OS Connect to expose traditional mainframe middleware and data through APIs facilitates integration. Co-host these solutions on the same mainframe for fast networking and near-zero latency. Additionally, you can create microservices in containers on virtually any platform and integrate them to create consistency and drive agility.

Culture change is at the heart of mainframe modernization

The hybrid cloud, including the modern mainframe, can be managed consistently at the infrastructure and platform level using common and open tools. This support integrates into your enterprise's overall DevOps or DevSecOps processes. Striving toward agile processes is a necessary culture change that is at the heart of successful mainframe modernizations and hybrid cloud journeys.

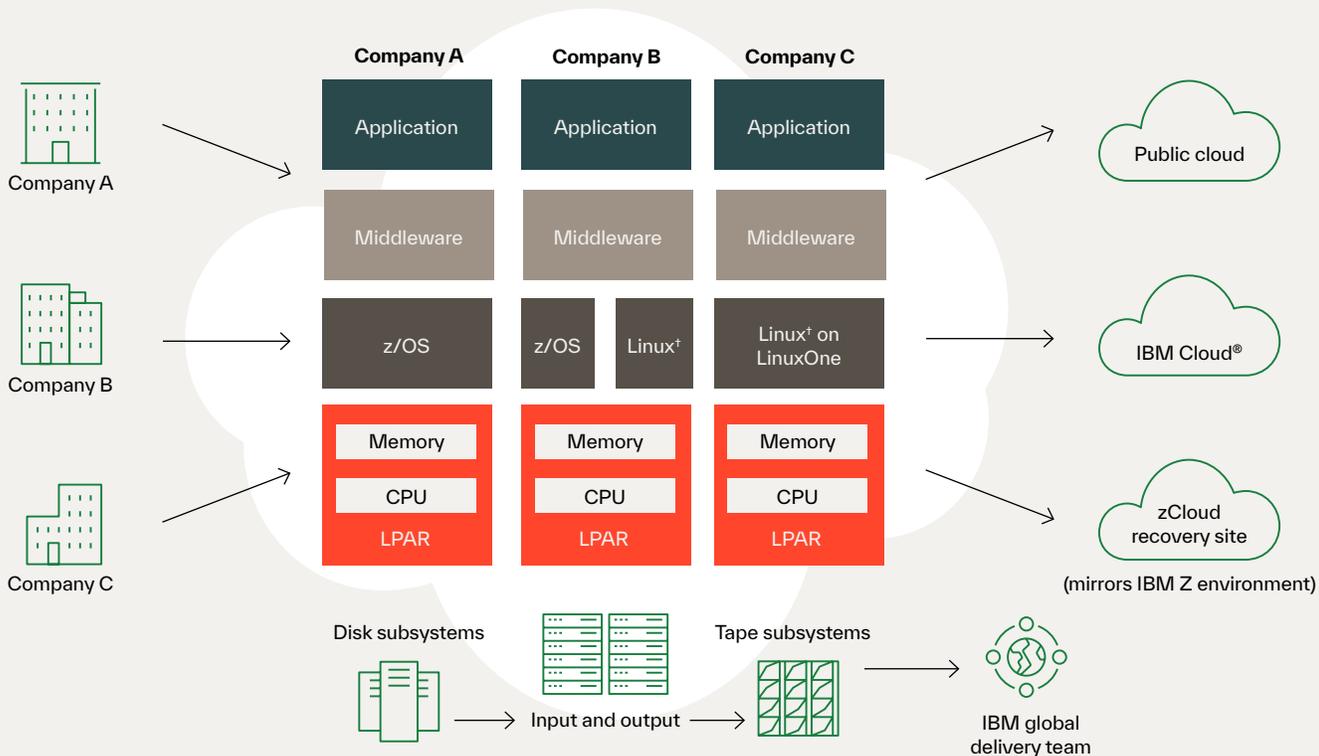## The right platform for the right workloads

Kyndryl provides many options for hosting and managing your IBM Z and LinuxOne environments. We can support you where you are in your data center or in one of our purpose-built data centers. You can choose a dedicated server model or accelerate your journey to hybrid cloud with zCloud. Either way, we provide IT management expertise, deep experience with IBM Z, using tried-and-tested virtualization technology to deliver a security-rich, highly available mainframe IaaS platform that can redefine IT efficiency, cost and agility.

Reduce costs with IBM Z and managed services

zCloud can help you reduce costs, making funding available that you can redirect toward other modernization initiatives. This financial efficiency helps reduce or even eliminate the capital and overall expenditures associated with running your own data center, such as hardware, floor space, power and cooling costs. Our IaaS solution can also help you rationalize your software portfolio and offers predictable consumption-based pricing with monthly billing to help you manage costs.

Consolidating Linux workloads from distributed systems and platforms to IBM Z can also reduce complexity and help you save on software licensing costs—yielding you additional funding for modernization and other business-critical projects.

Our fully managed services are designed to provide end-to-end management and monitoring, backed by the experience of thousands of mainframe specialists located around the world. Kyndryl uses innovative technologies, effective tools and processes, and automation to help prevent problems in your environment before they occur. Kyndryl mainframe specialists for service delivery can also remove the challenge and cost of hiring and retaining talent with this increasingly scarce skillset, allowing your staff to focus on other areas of innovation. Using open solutions like Zowe™ or other integrated, graphical user interface (GUI)-based tools, we can also help boost productivity in your non-mainframe personnel by reducing the need for in-house knowledge specific to IBM Z.

†Red Hat® and other Linux

Figure 1. Security-rich LPARs and storage subsystems provide advanced virtualization in a Kyndryl-managed environment.
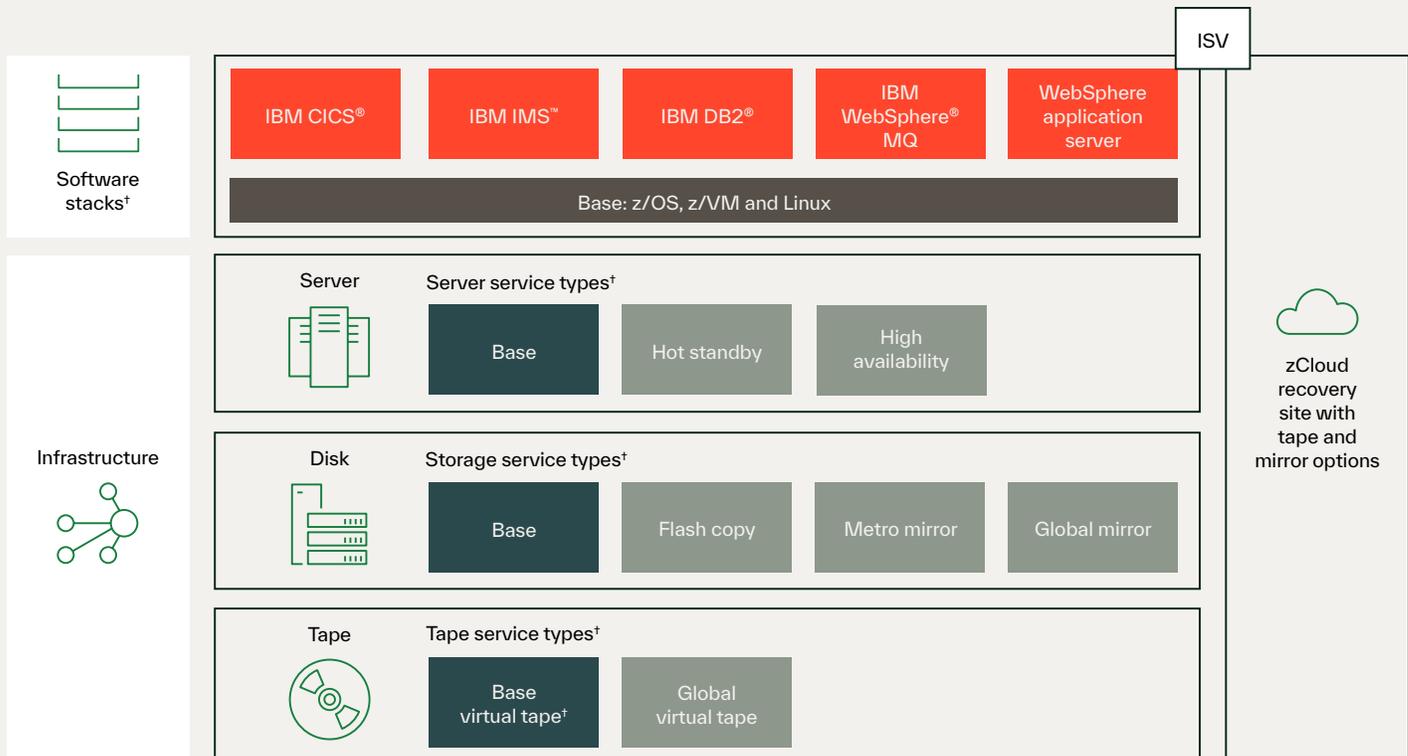
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Support high availability and security with mature service design

The zCloud mainframe capacity we provide and manage is housed in purpose-built, highly resilient and security-rich data centers around the world. Our LPAR-based model is designed to offer the highest levels of security with the system achieving Evaluation Assurance Level 5 (EAL5) accreditation. Additional subsystem isolation helps protect your data, applications, test and production environments. The solution is designed to enable end-to-end encryption, including for virtual tape, storage and in-flight data across the network. For additional access controls, IBM Z is supported by robust security management products for mainframes, including IBM Resource Access Control Facility (RACF), CA Top Secret and CA Access Control Facility (ACF2), all of which are complemented by Kyndryl's deep security domain expertise. And as a data processor that's designed to be completely compliant with the General Data Protection Regulation (GDPR), Kyndryl and zCloud can help enable enhanced data privacy. Kyndryl can also work with you to apply the appropriate enterprise-grade security processes, systems, networks and tools to help support your specific compliance needs, such as Payment Card Industry (PCI), Health Insurance Portability and Accountability Act (HIPAA) and Federal Financial Institutions Examination Council (FFIEC) requirements.

Additionally, Kyndryl offers configurable options for high availability so that we can accommodate both critical and noncritical business applications in a cost-effective manner. zCloud offers configurable options beyond the standard options for z/OS including Hot Standby and High Availability with service-level agreements (SLAs) up to 99.999%. With each option, you choose the server, disk and virtual tape storage resources that you need (see Figure 2). For Red Hat Enterprise Linux, the standard option is sufficient to meet most client requirements, but Kyndryl can satisfy custom Linux requirements as well. A carefully scheduled maintenance and update program further supports platform resiliency.

Extending the capabilities of IBM Z to the hybrid cloud

Kyndryl can support you in your hybrid cloud journey. Our support is designed to be integrated across any platform—whether that be all on IBM Z or through standard connections to the other hybrid cloud platforms for applications better suited to other platforms.

†Check for feature availability in your country.

Figure 2. Kyndryl Managed Extended Cloud IaaS for IBM Z is highly configurable. You can choose from multiple operating systems and standardized software stacks as well as the server, disk and tape options that best suit your avalability need.

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.

To learn more about how zCloud or any of our other mainframe managed services offerings can help you avoid the cost and complexity of migrating mainframe applications, contact your Kyndryl representative or visit us at ibm.com/kyndryl

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