

## Managed Extended Cloud Infrastructure as a Service (IaaS) for IBM Z (zCloud)



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### Highlights

- Supports business needs by enabling improved flexibility, scalability and access to current technology
  - Helps reduce cost of computing with a cloud-based multi-tenant infrastructure and managed services
  - Supports high availability and security needs with robust service design and mature delivery capabilities
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*Adapt to changing business needs with a scalable, security-rich cloud*

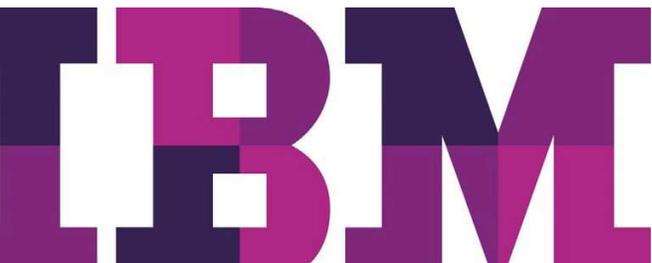
Leading organizations are striving to reinvent themselves to respond to today's competitive market. They are using mobile and social technologies to improve how they engage, and optimizing analytics to make better, faster decisions. At the same time, mission-critical workloads must be maintained more cost effectively.

Underlying these demands is a strong need for a more agile and scalable infrastructure. These leaders recognize that extending the role of the mainframe infrastructure to incorporate a cloud delivery model from a trusted vendor can provide the scalability and economies needed to support innovation and growth.

Managed Extended Cloud Infrastructure as a Service (IaaS) for IBM Z® builds on deep IT management expertise, the strengths of IBM Z, and industry-leading virtualization technology to deliver a security-rich, highly available Mainframe IaaS platform that can redefine IT efficiency, economics and agility. Featuring an environment designed for flexibility, managed by a global team of mainframe specialists and continually refreshed with the latest hardware and software, IBM's offering helps you meet your dynamic business needs more cost effectively.

### **Facilitates innovation by enabling improved scalability and current technology**

IBM's offering uses a cloud delivery model to provide you with access to a scalable, multi-tenant infrastructure, designed to be flexible and adaptable. You have your choice of either the IBM z/OS® or Red Hat Enterprise Linux (RHEL)<sup>1</sup> operating system as well as the latest versions of standardized software stacks to facilitate flexibility. We also support independent software vendors (ISVs) and additional IBM software on a custom basis. Compute, storage and tape capacity can all scale to meet your needs. And with RHEL solutions under IBM z/VM®, you can position yourself for hosting hybrid workloads.



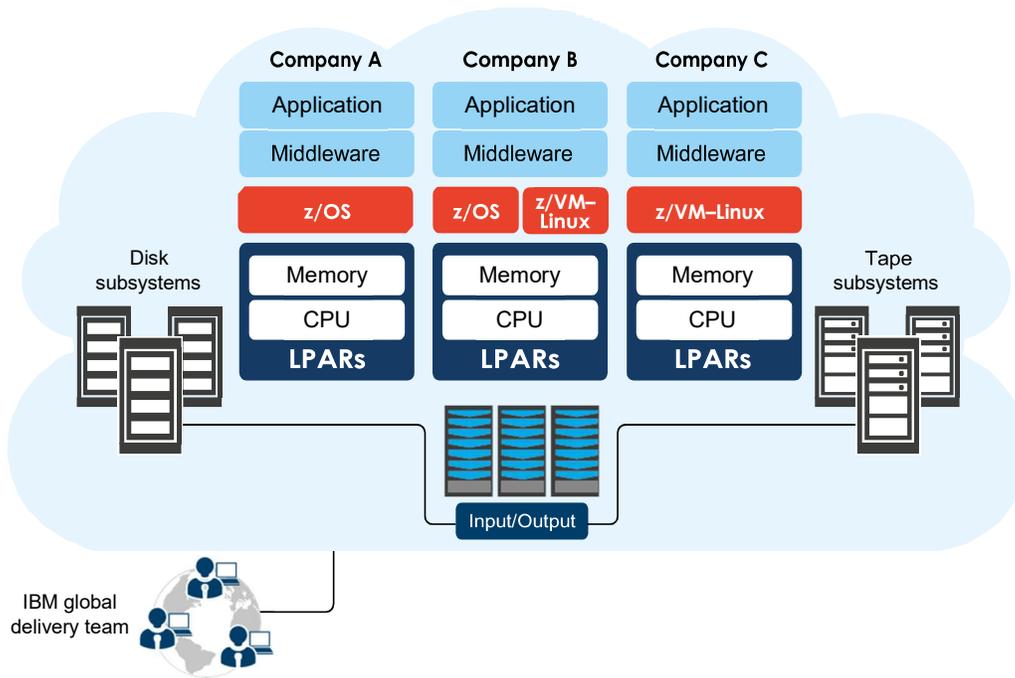


Figure 1. Highly secure LPARs and storage subsystems provide advanced virtualization in an IBM-managed environment.

## Helps reduce costs with zCloud and managed services

This platform can help you realize up to 30 percent reduced costs for your IBM Z computing infrastructure.<sup>2</sup> We have built a Mainframe IaaS environment, hosted in IBM data centers, by using advanced virtualization with secured logical partitions (LPARs) to help you reduce capital expenses associated with running your own data center, such as hardware, floor space, power and cooling costs. IBM's solution also rationalizes your software portfolio and offers a more predictable consumption-based pricing model with monthly billing to help you manage costs.

Our fully managed services are designed to provide end-to-end management and monitoring, leveraging the experience of more than 6,500 mainframe specialists located around the world. IBM uses innovative technologies, effective IBM tools and processes, and automation to help prevent problems before they occur. Relying on IBM's mainframe specialists for service delivery can remove the challenge and cost of hiring and retaining this increasingly scarce skillset allowing your staff to focus on other areas of innovation.

## Supports high availability and security with mature service design

IBM Z mainframes are housed in purpose-built, highly resilient and security-rich IBM 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, and is designed to enable end-to-end encryption, including for tape, storage and in-flight data across the network. For additional access controls, IBM's offering is supported by leading 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 IBM's deep security domain expertise in its delivery processes and capabilities. As a Data Processor that is completely European Union (EU) General Data Protection Regulation (GDPR) compliant, IBM and zCloud enables your compliance.

IBM can also work with you to apply the correct enterprise-class security processes, systems, networks and tools that are designed 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.

IBM offers configurable options for high availability so that you can cost-effectively accommodate both critical and noncritical business applications. Configurable options beyond Standard for z/OS include Hot Standby and High Availability with service level agreements (SLAs) up to 99.99 percent. With each option, you choose the server, disk and tape storage resources that you need. (see Figure 2)

For RHEL, the Standard option meets most client requirements. A carefully scheduled maintenance and update program further supports platform resiliency.

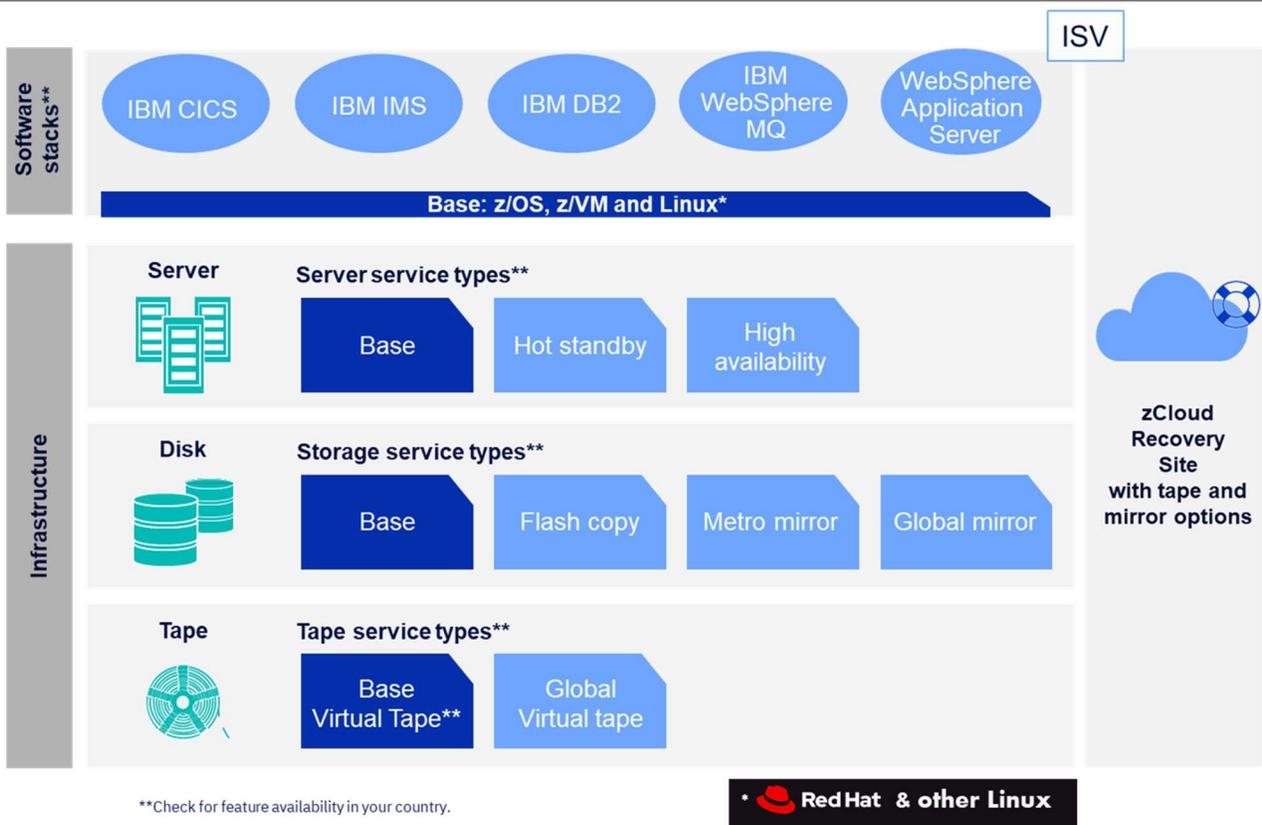


Figure 2. IBM Managed Extended Cloud IaaS for IBM Z is highly configurable. You can choose from multiple operating systems and standardized software stacks as well as the server, disk and tape options that best suit your availability needs.

## Why IBM?

IBM brings deep mainframe and data center management expertise with more than 40 years of managing enterprise data centers around the world and support for hundreds of main-frame clients. zCloud enables your mainframes as you journey to cloud by delivering the power of IBM Z using IBM's cloud model using current software technology. This can help you deliver the services you need to support your company's mission-critical workloads and opportunities in mobile, analytics and social growth areas with a reduced cost structure.

IBM is a leader in all three (3) 2019 Gartner Magic Quadrants for Data Center Outsourcing and Hybrid Infrastructure Management Services, North America<sup>3</sup>, Europe<sup>4</sup> and Asia/Pacific.<sup>5</sup>

## For more information

Talk to a [specialist](#) to learn how you can avoid the cost and complexity of migrating mainframe applications. For more information, visit the following website:  
[http://ibm.biz/zcloud\\_offering](http://ibm.biz/zcloud_offering)

<sup>1</sup> Check with your local country contact for availability.

<sup>2</sup> Based on client engagements. Actual results may vary by client.

<sup>3</sup> Gartner, Magic Quadrant for Data Center Outsourcing and Hybrid Infrastructure Managed Services, North America June 13, 2019, ID: G00378824.

<sup>4</sup> Gartner, Magic Quadrant for Data Center Outsourcing and Hybrid Infrastructure Managed Services, Europe June 18, 2019, ID: G00367508.

<sup>5</sup> Gartner, Magic Quadrant for Data Center Outsourcing and Hybrid Infrastructure Managed Services, Asia/Pacific July 24, 2019, ID: G00368782.



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