

# IBM System z: The optimal platform for information management



## The more information you have, the more you need zEnterprise

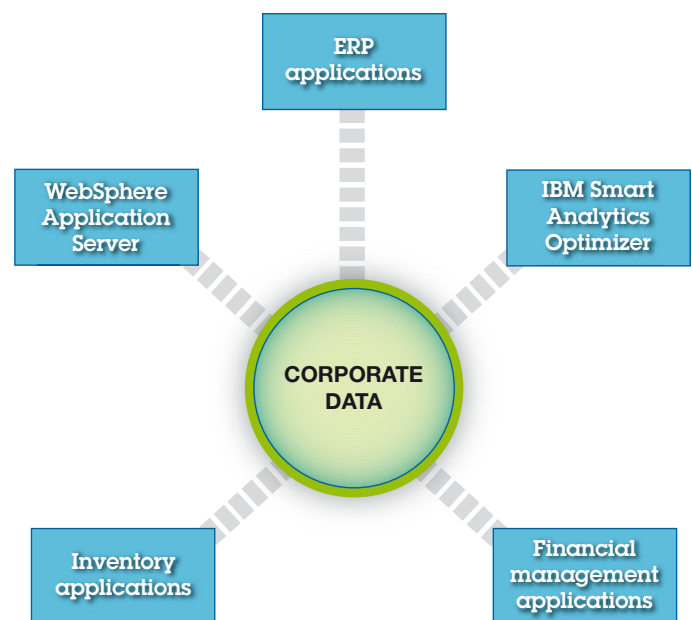
The latest IBM zEnterprise® technology enables you to take all the information from discrete, disparate databases and servers across your organization's diverse technology infrastructure—and manage it in an organized, simplified way, as a centralized, streamlined hardware environment.

zEnterprise technology enhances a hub-and-spoke architecture in which data that has long remained locked in silos across the organization becomes consistently accessible through a secure, reliable mainframe-based data repository. In this environment of integrated information, application servers are connected to the IBM System z® mainframe so that applications can request and quickly receive data as needed, while sharing server resources as workloads require.

The result is an integrated, unified infrastructure that frees you to manage complex business processes while meeting today's real-time requirements for accessing and using information. No longer do business users have to wait days or even hours to extract the data they need to answer questions. Now they are empowered to make critical cross-organizational decisions in a timely way based on rapidly changing information. With zEnterprise technology, data is immediately and continuously available to handle the dynamic business demands of the twenty-first century.

This new platform for information management harnesses the strengths of the System z platform—particularly its business resilience, workload balancing and security capabilities—to deliver an end-to-end view of application resources and maximize infrastructure flexibility.

### Information Management on zEnterprise



### Creating an integrated, organized environment for information management

Today, organizations have more data on hand for making critical business decisions than they ever have before. The problem is that the information is rarely available to them precisely when and where it's needed. This is the result of business data growing at phenomenal rates—and IT processes

being unable to keep up. Over time, data has ended up in siloed warehouses and applications. It's been replicated and duplicated into multiple forms across the organization. And it's been managed in a haphazard manner, with business units investing in an amalgam of applications in hopes of reducing processing time and costs. The unfortunate consequence has been a collection of heterogeneous servers and components that offer little consistency across the organization and that demand increasingly more time and money to maintain.

The latest generation of System z mainframes can free organizations from this maze of disparate pieces by providing a reliable, secure platform for managing information in a centralized, organized manner. The hub-and-spoke architecture enabled by zEnterprise technology makes it possible to centrally manage data and workloads across a heterogeneous environment, making critical, current data more accessible to the applications that consume it and to the business users who need it in order to make timely, informed decisions.

The System z mainframe is the ultimate hardware platform for data, used by 95 percent of Fortune 1000 companies to store their business data.\* Built to thwart the broadest variety of security threats, it includes multilevel security and hardware encryption services. It's designed for business resilience, with capabilities specifically aimed at optimizing system and application integrity, business process integration, and business continuity and high availability. And it includes partitioning and dynamic workload balancing for high performance and efficiency.

The security, resilience, and workload management capabilities of zEnterprise technology combine with the virtualization, scalability and availability of the hardware to make System z mainframes the ideal platform for centralized data management.

### **Building an information-based enterprise on zEnterprise**

By combining zEnterprise technology with a commitment to treat information as a trusted strategic asset, organizations can transform data into a powerful tool that can be rapidly leveraged across business applications, processes and decision points to create a competitive advantage.

To accomplish this, organizations must establish a common set of directives across IT and all lines of business for the shared use and delivery of information throughout the organization. This is the force behind a System z-based information infrastructure—an infrastructure that can be used to achieve the information agility that establishes a sustained competitive advantage.

The transformation to an information-based enterprise doesn't require a complete rip-and-replace strategy; as such approaches can be prohibitively expensive and time-consuming. The transformation requires only that applications be realigned into an architecture that's designed to simplify management while centralizing data in a robust database.

### The center of a simplified architecture

zEnterprise functions as the central hub in a simplified hub-and-spoke architecture, where application servers function as spokes that are connected via a private secure network to the mainframe. In this environment, options for application-server deployment include IBM z/OS® and Linux® on the System z server, as well as IBM AIX®-deployed workloads on the zEnterprise BladeCenter® Extension. In this way, zEnterprise offers the maximum flexibility for organizations to work with whatever application servers they like, using whatever operating system they prefer, while streamlining and simplifying the infrastructure management tasks to support the business. Now you can depend on the z/OS environment to deliver your mission-critical workloads while allowing less sensitive applications to be deployed in either a Linux-based logical partition (LPAR) or within the latest BladeCenter technology—all under System z control.

Designed for optimal management of the extended environment, zEnterprise offers the capability to centrally handle operational and management tasks for the zEnterprise BladeCenter Extension. This includes the day-to-day tasks of tracking the management and delivery of firmware and hardware for the BladeCenter, while allowing critical error information from the BladeCenter to be sent through the mainframe to IBM. Within this hub-and-spoke architecture, organizations can use the zEnterprise BladeCenter Extension environment to easily share resources among applications as workloads require. This means that server capacity is no

longer isolated across a company where entire systems are dedicated to single applications and are unavailable for other tasks. Now it's easier to exploit existing processing capacity to derive the maximum value from server investments.

### A robust core for data centralization

Fundamental to the hub-and-spoke architecture is the requirement to centralize data in a secure, highly available database. zEnterprise technology offers tight synergy with the world's leading enterprise data server, IBM DB2® for z/OS. Designed to leverage the strengths of System z, DB2 for z/OS is a database performance leader, able to deliver continuous availability of business data.

System z mainframes, z/OS, and DB2 are all well known for their strong security features and systems security certification. Communication between external application servers and the DB2 database is encrypted for an added level of security. IBM also offers hardware-assisted encryption processing that is separate from the main System z processes that execute the DB2 application workload. This separation avoids consuming valuable processor resources for security processing, eliminating the overhead that is so common in other software-based security packages.

### Unlocking the full potential of business data with zEnterprise

Centralizing information management on the latest zEnterprise technology is a critical step in empowering organizations to do much more with the data they have.

Information infrastructures built on zEnterprise are ideal platforms for data-transforming capabilities such as data governance and business intelligence.

#### **The opportunity to transform data into a strategic asset**

Data governance defines the processes and technologies to help transform data into a trusted strategic asset that can be leveraged across the organization to lower cost and risk, increase profitability and maintain a competitive advantage. It's a holistic approach—driven by business value—that can be used to address issues such as information protection, information quality, information compliance and information life-cycle management.

For organizations with System z mainframes, the platform's business-focused capabilities—including its advanced features for security, business continuity and dynamic workload balancing—make it an excellent platform to support the data governance processes within organizations. And because so much of the world's data is on DB2, it's important to apply strong data governance rules and policies to that data.

#### **The ability to turn data into business insights**

Today's often siloed approach to data warehouse and smart systems has disconnected business intelligence from business decisions. Now zEnterprise technology offers an environment that can bridge the information gap and make relevant and current business information accessible across the enterprise.

The accessibility of accurate information can enable decision makers across the organization to understand, oversee and drive the business forward. Only through effective business intelligence solutions can decision makers gain a clear understanding of what happened and why. Such an understanding is essential to establishing a forward-looking view of the business and to measuring and monitoring actual outcomes against forecasts, so that actions can be better aligned with organizational objectives.

Making the most of business information requires business intelligence capabilities that are built on a powerful, highly scalable platform. The expanding scope of business intelligence, along with the continuing imperative to control costs and keep data secure, makes zEnterprise an attractive platform for business intelligence capabilities. It's ideal for hosting business intelligence solutions as well as the transactional systems that house the raw data.

#### **The case for information management on zEnterprise**

An information infrastructure built as an open, flexible environment is critical for the successful transformation of a company into an information-led enterprise. With zEnterprise, IBM delivers a best-in-class, open and flexible environment based on shared metadata that can help organizations unlock the full value of their information and use it to optimize business outcomes.

## For more information

To learn more about using zEnterprise to centralize and streamline information management in your organization, please contact your IBM representative or IBM Business Partner, or visit: [ibm.com/systems/z](http://ibm.com/systems/z)

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\* Moutsos, Kim, “IMS at 40 – Stronger then ever,” IBM Database Magazine, November 2008.

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