



# INTEGRATION'S Importance

IBM z Systems clients must manage existing and emerging assets together to get the most value

**T**he challenge is perpetual: Enterprises must continually bridge the gap between existing and emerging technologies. Organizations that depend on the IBM z Systems\* mainframe have a unique perspective on this dynamic.

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Their mainframe is vitally important, housing applications and data assets that have driven business operations for decades, and they feel constant pressure to extract the highest possible value from the platform. At the same time, innovative technologies continually demand adoption. Years ago UNIX\* and Windows\* systems joined the IT mix. Then it was the World Wide Web. Today it's mobile, cloud, big data and analytics. Tomorrow it could be the Internet of Things.

## Managing Existing and Emerging

Analyst firm Gartner offers a conceptual model illustrating how business realities often drive the existing-emerging dynamic. Gartner's Pace-Layered Application Strategy ([gartner.com/newsroom/id/1923014](http://gartner.com/newsroom/id/1923014)) describes systems of record, systems of differentiation and systems of innovation. Virtually every enterprise relies on one or more systems of record, core enterprise platforms such as the mainframe running critical

applications and databases. Proven, trusted, often representing decades of investment, systems of record are the enterprise backbone.

Additionally, organizations look to newer technologies to move ahead of competitors. Such systems of differentiation might include automation systems that streamline customer service or unified front-end applications providing employees with access to systems enterprisewide for greater productivity and efficiency. Many

organizations want more—they want technologies that rewrite the rules. They see mobile, cloud, big data and analytics technologies as systems of innovation that will fundamentally change the business landscape.

As enterprises adopt newer technologies, their systems of record don't go away. In fact, they continue to provide the foundation for core business functions. Thus, inherent in the model is the existing-emerging dynamic and the question of how to negotiate it.

For the z Systems customer, the question might be framed this way: How can we manage existing and emerging technologies to grow, gain advantage and innovate within our industry? The answer, simply put, is to build flexible, dynamic bridges from mainframe applications and data assets—their systems of record—to every system they deploy.

This mainframe bridge building has been described as extension, modernization, revitalization, interoperation, integration and so on. For brevity, “integration” will be used as a catchall term.

The most effective way to integrate existing mainframes with emerging technologies is to leverage the same industry-standard technologies used by today's top mobile, cloud and data innovators. With this approach, organizations can make mainframe applications and data vital contributors to business growth, differentiation and innovation; renew the mainframe's economic viability; and add the deep value of the mainframe to any emerging system.

## Integration Investigation

When investigating mainframe integration technologies, enterprises can profitably apply three key principles gleaned from real-world experience:



Enterprises can profitably apply three key principles gleaned from real-world experience when planning mainframe integration:

1. Integration is a means to an end
2. Technologies should exploit existing z Systems infrastructure
3. Technologies must ensure universal interoperability, high performance and extreme fidelity to mainframe assets

**1. Integration is a means to an end.** Any integration project must create immediate value—often by reducing the cost of z Systems ownership—while facilitating strategic objectives. These can vary widely, from incorporating CICS\* applications into enterprise service or cloud architectures to extending DB2\* data to in-memory data stores replicated in near-real time across multiple platforms anywhere. Such initiatives can be the foundation for differentiation, innovation or both.

**2. Integration technologies should exploit existing z Systems infrastructure.** IBM continues to keep the z Systems line fresh. The IBM z13\* system, for example, provides not only more and faster processors but also up to 10 TB of memory. This combination of processing power and memory capacity can significantly impact client use of z Systems servers. Organizations contemplating any type of integration are advised to take advantage of every best-in-class technology z Systems has to offer, from the tried-and-true Link3270 bridge interface, which enables clean, flexible interaction with CICS applications; to the System z Integrated Information Processor (zIIP), which lets customers reduce processing costs, offers lower mainframe total cost of ownership and improved performance; to the expansive memory of the z13 platform.

**3. Integration technologies must ensure universal interoperability, high performance and extreme fidelity to mainframe assets.** Integration technologies must:

- Speak universal languages (i.e., common protocols and transports shared by the

mainframe and all distributed technologies that comprise enterprise IT). These languages, including XML, SOAP, JavaScript\*/JSON, REST and HTTP, are the basis of modern Web services.

- Ensure mainframe levels of performance and flawless rendering of mainframe transactions, logic and data to ensure always-reliable interoperation. Employed within a mainframe-resident integration engine, standards-based technologies do just that.

## Integration Is Essential

Enterprises that embrace strategic integration and implement industry-standard technologies can achieve remarkable results.

A credit union serving members worldwide seamlessly integrated CICS applications and DB2 and VSAM data with universal desktops for 10,000 employees, online banking systems, mobile banking apps and ATMs in all 24 time zones. Membership now exceeds 5 million and continues to climb, and the mainframe has proven itself to be a new business engine.

A national life insurance company has modernized its legacy applications by transforming screens into reusable objects that are called and assembled by higher level Web services into dynamic, fully interoperable business applications. The firm has enabled seamless integration with systems across the enterprise, particularly modern employee-facing apps.

The equation is simple. Integration is essential, and the same industry-standard technologies employed by today's top innovators provide the best means for integrating existing mainframes with mobile, cloud, big data analytics and whatever might emerge tomorrow. **Z**