IBM Systems and Technology Group

IBM Systems agenda for On Demand Business

Contents

An On Demand Business is an enterprise whose business processes — integrated end-to-end across the company and with key partners, suppliers and customers — can respond with flexibility and speed to customer demands, market opportunities or external threats.

Executive summary

The ability to stand out in a crowded marketplace. To better serve customers. To deliver innovative products and services faster. To operate in a more streamlined manner. The fundamental goals of business never change. But the most expeditious approach to achieving them changes continuously, often driven by evolving technology. Today, we're on the cusp of a major change in approach — a shift that is necessary to help enable the next generation of advances in the On Demand Business evolution.

This evolving form of processing is known as collaborative processing. And its emergence is being driven by two distinct trends: the need for the real-time exchange of ideas, insights and experiences that fuel a fully on demand organization; and the evolution of technological capabilities that support a rich exchange of digital information between collaborators.

To supply the capabilities needed to support collaborative processing, we are announcing the IBM Systems agenda for On Demand Business. At its core, it is a fundamental focus on leveraging the breadth of IBM and its sustained history of technology innovation to deliver the next generation of systems based on the fundamental design principles of virtualization, openness and collaborative innovation.

For some, the transition to an On Demand Business can be challenging. For example, the IT systems originally built to support most business environments were not specifically designed with pure online transaction processing in mind. Companies like eBay, with their intuitive applications and disruptive business models, forced us all to rethink our notions of buying and selling — and inspired transformation in the way businesses conduct transactions internally and with consumers.

The advent of collaborative processing

Now, market forces are fueling another such change. For On Demand Business, the real-time exchange of ideas, insights and experiences is critical. A new generation of interactive devices and rich media applications, together with the ability to enable a rich flow of digital information between those engaged in the exchange both across the enterprise and its value chain, is giving rise to the next wave of computing: *collaborative processing*.

Collaborative processing doesn't replace transaction processing — but builds on it. It represents the progression from point-to-point transactions to multidirectional interactions, where people work together dynamically in an open and shared environment that may involve hundreds or even thousands of individuals. This type of interaction helps give people and companies more freedom to innovate, and can allow resources to be used much more efficiently. And because people need to interact in this fashion, their IT resources must do the same.

Consider the market proving grounds of online games, where an entire subculture is already involved with collaborative processing. People interact with players half a world away in an environment that is media rich, real time and untethered. It is a virtual world, open to others to play the same or different games, or to develop innovative new games. Above all, participants collaborate to achieve results.

In the business world, IBM expects that collaborative processing will become increasingly experiential and real time — both inside and outside the enterprise, giving everyone greater access to needed resources, business applications and data, with the goal of producing far greater results than are possible today.

Collaborative processing is the progression of IT to help bridge organizational silos so that companies can innovate faster and deliver more business value. Driven by the needs of an On Demand Business, it uses integration to enable more interactive, real-time applications and create an IT environment that is more open, shared and dynamic. This environment must react swiftly to the dynamic requests of users, adding and reallocating information and resources to serve the needs of the business.

And now the IT environment must evolve again. Systems must become easier to integrate across the enterprise. Systems management must be simplified dramatically, so that concerns over security and availability issues can become a thing of the past — and utilization of assets can soar, freeing business to invest more resources in meeting the demands of customers and partners instead of IT.

The agenda for enabling change

At IBM, we're focusing our efforts to create systems capable of supporting this collaborative processing environment. Systems that are more open, that can more easily interoperate with others and yet are secure and available to those who need them when they're needed. Systems that help simplify IT management.

The IBM Systems agenda, over the next five years, is designed to help businesses like yours:

- Virtualize everything: The move to virtualize everything can offer an improved approach to systems design, development and delivery, which can dramatically enhance the ability to simplify IT and improve utilization.
- Commit to openness: Don't just design and build based on open and industry standards, but share in such a way that systems can integrate better and more easily.
- Collaborate to innovate: Opportunities to collaborate extend from within a department to the entire company — even beyond to industry-based communities and clients.

IBM is accelerating its focus to help break down barriers between components and enable them to be integrated into more complete systems, where the goal is that the whole is greater than the sum of the parts. The new family name of IBM Systems was chosen to highlight this strategy.

Virtualize everything

Businesses of all sizes continue to struggle with the complexity inherent in most IT environments. Over the years, many attempts at simplification have been proposed. While some attempts — like server consolidation — have worked to some degree, none have, on their own, achieved the levels of simplification needed.

Virtualizing everything can dramatically enhance simplification. The required breakthrough in infrastructure simplification, however, will not be achieved until virtualization capabilities can be applied across the entire infrastructure in a holistic manner.

Define and deliver a systems-level approach that profoundly simplifies IT management

The IBM Virtualization Engine™ platform delivers capabilities that enable simplification within a server or storage environment, or across an infrastructure. Enterprise Workload Management, which is available today, is a systems management and performance component that helps virtualize a multiplatform infrastructure. Continued enhancements to the Virtualization Engine platform will further simplify implementation of systems and workload management services, integrating many of the features into the base architecture of the systems itself.

For small and midsize businesses with limited IT resources, Virtualization Engine functions will further simplify platform management and virtualization technology. Over the next five years, we plan to make IBM products easier to manage, out of the box, by making Virtualization Engine technology a crucial component of all IBM server and storage systems.

Audi Hungaria Motor

The fourth largest engine plant in the world redesigned, standardized and integrated key processes like materials handling, warehouse management and logistics. The company also deployed an automated systems management platform to make the supply chain system more flexible, robust and manageable.

The result?

Audi Hungaria Motor increased dramatically the speed of its material requirement planning cycle, simplified systems management, reduced integration costs and improved IT productivity.

GHY International

As a leading provider of international trade brokerage services, GHY International continues to evolve development of its award-winning, highly virtualized IT computing environment into a more simplified, virtualized environment with the IBM @server® iSeries™ system. In the process it moved from a manually virtualized environment to an automated one with IBM Virtualization Engine™ technology.

The result?

GHY simplified its environment, supporting multiple operating systems on a single footprint. The company also improved its ability to provide timely and compliant trade data across the entire supply chain — balancing the information requests of government trade agencies in the United States and Canada.

Provide systems with greater levels of availability and security capabilities

By enhancing select virtualization and automation functionality in the hardware and operating systems, it is possible to enhance system availability and security. And by further enabling virtualization capabilities on the server platform, we plan to make IBM Systems better able to monitor and manage themselves. Doing so can help increase continuous availability in a single system with fewer software requirements or dedicated personnel to manage the system.

For example, security in many organizations is software on top of the operating system, which comprises tens of millions of lines of code and constantly changes — presenting a significant challenge to ensuring IT security. Building selected security features into the hardware and operating system layers creates both a new, more effective division of responsibilities and a new integration point. As a result, basic security can be dramatically enhanced, and a key systems management headache reduced.

Extend virtualization throughout the infrastructure

At the core of our strategy is a new development approach based on taking our experience and innovation in virtualization to a whole new level of capability and value. Technology building blocks are available for each of our systems that can be combined into a "virtualization fabric" across an enterprise. For example, workload management functionality is included in our servers. Within the storage environment, virtualization products allow you to pool storage devices logically to gain greater utilization across a heterogeneous environment. For larger enterprises, IBM Systems and IBM Tivoli® management software collaborate to manage the virtualization fabric.

Commit to openness

IBM has long been a champion of openness and open standards. But for us, this means much more than just helping to reduce licensing costs by eliminating the need to buy and manage proprietary solutions. Openness can help maximize your value and reduce risk through freedom of choice. Openness can also help you leverage technology innovation to meet the needs of any IT environment.

Drive open industry standards by working closely with your company, IBM Business Partners and others in the industry

Open standards and openness will continue to be a part of our solutions. As one of the industry's leading advocates of industry standards, we're active in every way, from participation in standards bodies to contribution of key technologies. We're also heavily focused on *extending and improving* open standards.

Deliver a choice of systems that leverage technology innovation and fit within any IT environment

Capable of fitting within any IT environment, from small businesses with limited resources dedicated to running their IT systems to large multinational corporations where IT teams are stretched thin running very complex infrastructures, our systems will continue to be based on a common set of attributes. These attributes can help you create a more reliable and responsive infrastructure that is easier to manage and dramatically improves the economics of your IT environment.

A focus on integration is also at the heart of the IBM Systems agenda. IBM's goal is to meet your needs in two different — but highly synergistic — ways. If you are looking for a tightly integrated solution, we will improve on the delivery of systems that will allow a combination of servers, operating systems, storage, middleware, networking and applications that enable rapid deployment of a business solution — with an emphasis on open and industry standards. This approach will help enable interoperability between IBM products and products from other companies.

If you want the flexibility to customize the systems in your environment, we will deliver components that can be more easily integrated — components based on standards that have been built, tested and proven to work together.

Collaborate to innovate

The final principle of our agenda is to deliver IBM systems that combine technologies and capabilities from across IBM to accelerate and better enable collaboration *and* innovation. Moving forward, collaboration will take on many forms, including better collaboration within a department and across an enterprise or business. It will also allow for greater collaboration between IBM and its clients and third party vendors, to deliver unique solutions within the industry and to help design and develop new technologies that help accelerate innovation.

Enhance collaboration across the enterprise

On Demand Business requires a seamless flow of information — information that empowers your business to respond to change and to predict new opportunities, while seeing a total picture of your business. We call this *information on demand*. It requires simplification of the infrastructure, helping to assure data security and protection, and managing information efficiently over its lifecycle. IBM information and storage management solutions help make this a reality today.

Collaborate with IBM Business Partners to help deliver customized solutions

IBM systems are being designed and delivered to better serve collectively as the infrastructure for complete business solutions. With 90,000 IBM Business Partners worldwide — including independent software vendors (ISVs) and systems integrators — we can combine a broad range of applications and services with industry and technology knowledge to help you quickly maximize the return your company sees on its IT investment. IBM will continue to focus on supporting these companies with an array of tools and offerings to help them implement solutions quickly and efficiently.

Collaborate within the industry to accelerate innovation

IBM systems are built on a long history of innovation — much of it incubated in IBM laboratories. By working together, we help to foster innovation — creating new technologies that help you drive better business results.

Our ongoing participation within communities of innovators and the application of IBM resources helps enable breakthroughs in multiple industries. One example of such collaboration is the formation of Power.org, an open development community based around IBM Power Architecture™ technology. Another example is IBM Engineering & Technology Services. Collaborating with skills as well as technology, this utility engineering services provider can bring your company access to top-tier engineers who are highly experienced in integrating and embedding technology into unique solutions.

Getting there from here

It's one thing to offer an agenda — a vision of the future. It's entirely another thing to provide solutions today to build toward that future. And we're doing that.

With the IBM System z9 family

Collaborative processing requires an easily managed IT infrastructure that is secure and built upon a virtualized foundation, allowing the growth and flexibility your company needs. The new IBM System z9™ platform has at its core important capabilities like outstanding resiliency, rich security features, virtualization, intelligent workload management and autonomic functionality. And it is designed to run at up to 100 percent utilization.

The design for this new mainframe starts with a server that is highly secure and available, scalable and runs a choice of operating systems, including IBM z/OS®, IBM z/VM® and Linux®. The latest IBM software helps to further enhance the interoperability of the systems that support applications, manage the breadth of the infrastructure and simplify IT operations. And next-generation IBM networking and storage technology can be leveraged to help further improve responsiveness, availability, return on investment and recoverability.

With the next generation of IBM Virtualization Engine platform

The IBM Virtualization Engine platform now helps companies like yours unify management in heterogeneous environments. Servers and storage devices will be built with virtualization capabilities including dynamic partitioning and system-level workload management. The Virtualization Engine platform also includes new tools for simplified logical partition (LPAR) configuration and systems deployment, as well as a collection of virtual management capabilities. Components include a console to view and manage this virtualized infrastructure, as well as products for cross-system workload and performance management.

With Blade.org — a planned industry community

We intend to create a collaborative organization and developer community focused on accelerating the expansion of blade solutions and the IBM and Intel® blade ecosystem. This organization is intended to foster new solutions that will offer companies more choices and speed time to market for innovative solutions.

Transforming vision to reality

Simplification through virtualization. More openness for more options. Collaborative innovation that accelerates the possible as well as things never imagined possible. We continue to innovate, to lead the marketplace with what may seem like lofty aspirations. But we're also known for making vision reality.

IBM has long stood for technology innovation that matters. Moving forward, your company can benefit from our next generation of systems designed and delivered to fuel On Demand Business, providing the technology breakthroughs necessary to help you compete and win.

For more information

Begin to transform your IT environment to support collaborative processing, and reap the benefits. To learn more about how to make that first step, please visit:

ibm.com/systems/agenda

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U.S.A.

Produced in the United States of America
07-05

GXXX-XXXX-XX