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## Highlights

- Integration by design: management integration of physical and virtual compute, storage and networking resources from a single vantage point
  - Built-in expertise: automation and optimization expertise for dynamic allocation of resources through policy-driven virtualized system pools
  - Simplified experience: automation of repetitive management tasks to allow IT experts time to focus on higher value projects
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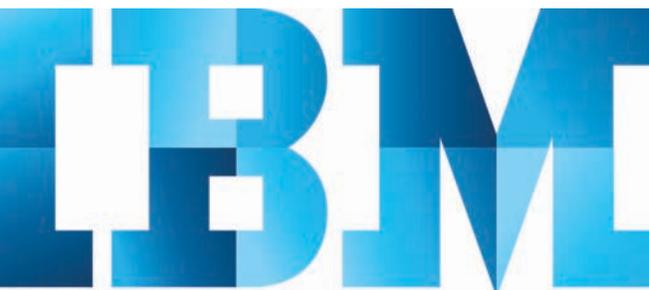
## IBM Flex System Manager

*Flexible integrated systems management across compute, storage and networking resources*

To meet today's complex and ever-changing business demands, you need a solid foundation of compute, storage, networking and software resources that is simple to deploy and can quickly and automatically adapt to changing conditions. You also need access to—and the ability to take advantage of—broad expertise and proven best practices in systems management, applications, hardware maintenance and more. IBM PureFlex Systems combine advanced IBM hardware and software along with patterns of expertise and integrate them into complete, ready-to-deploy solutions.

According to surveys, more than 70 percent of IT budgets are spent on operations and maintenance.<sup>1</sup> System administrators face extraordinary demands as they try to plan and document IT infrastructures, identifying capacity needs, getting the most out of current assets and looking for ways to save money. But they also need to deploy assets to meet current needs and optimize them for maximum performance. More and more customers are virtualizing and administrators face the daunting task of monitoring a complex infrastructure and fixing problems as they arise. This task may be complicated by multiple tools that aren't integrated and offer limited automation.

IBM Flex System™ Manager is designed to help you get the most out of your IBM PureFlex System while automating repetitive tasks. Flex System Manager can significantly reduce the number of manual navigational steps for typical management tasks. From simplified system set-up procedures with wizards and built-in expertise to consolidated monitoring for all of your physical and virtual resources—compute, storage and networking—Flex System Manager provides core management functionality along with automation so you can focus your efforts on business innovation.



## Workload management optimization through built-in expertise

Flex System Manager helps you gain more from infrastructure-wide virtualization. With cloud-ready management, Flex System Manager allows you to reduce the total cost of ownership of your virtualized environment—compute, storage, and networks—by decreasing management costs, increasing asset utilization, and linking infrastructure performance to goals. Flex System Manager simplifies the management of virtual environments across multiple virtualization technologies and hardware platforms, freeing you from “silos of virtualization” and delivering enterprise-wide visibility and control.

With a workload-optimized approach you can decrease infrastructure costs and improve service levels. A system pool is a group of virtualized system components that are managed as a single entity, allowing you to manage the pools with the simplicity of managing a single system—an essential capability for moving to cloud computing and a dynamic infrastructure.

Flex System Manager provides simplified virtualization management to support faster problem-solving, a higher return on investment and rapid responses to changing business goals and strategies. You can create and modify system pools using virtual workloads, make dynamic virtual workload adjustments and move workloads within system pools, resulting in an optimized virtual environment with increased resilience to cope with planned or unplanned down time.

From a single user interface you get:

- Management integration for physical and virtual compute, storage and networking resources
- Virtual image management for both POWER7 and Intel processor-based compute nodes
- Improved resource utilization through consolidation of system resources that are treated as a single virtualized pool



- Intelligent workload management to help give business applications the right level of dedicated system resources
- Dynamic workload mobility based on user performance and availability policies
- Automation and dynamic provisioning of new virtual workloads to scale a resource pool
- A fully-virtualized, cloud-ready infrastructure

Flex System Manager is a pre-installed and pre-configured solution to help reduce the amount of time and skill needed to build a fully integrated and virtualized environment. Flex System Manager can help reduce operational and infrastructure costs through increased efficiency and resource utilization. You will be able to eliminate the repetitive installation, configuration and maintenance costs of running complex software workloads with the ability to deploy workloads within minutes after the initial installation. Resources can be auto-discovered and placed into common resource pools. And you can reduce the amount of human intervention needed to manage your environment because Flex System Manager manages your system resources and workloads for you through automation and pre-defined policies. Intelligent workload management ensures that your critical business applications have the right level of resources available when they are needed and then adds those resources back to the system pool when the job is completed so they can be used by other business applications. This further drives productivity and cost savings in your IT environment.

## Manage all of your resources with one solution

Beginning with deployment through maintenance, upgrades and problem resolution, Flex System Manager is designed to provide all of the key management functions for your integrated IT resources from a single easy to use interface. From your office or remotely through secure web, you can manage your compute, storage, network and virtualized resources.

### Compute

Compute nodes are the key resource in your data center and the core of your IBM PureFlex System. Auto discovery and setup wizards make deploying compute nodes quick and easy with the Flex System Manager. Once deployed Flex System Manager provides real time updates for compute node “health” summaries. With the ability to define performance thresholds to trigger alerts, you can automate responses to potential problems to help keep your critical business applications running at peak performance. Flex System Manager can detect many problems with essential system resources and recover automatically. Flex System Manager can also perform trend analysis to forecast and prevent future problems—problems that otherwise might lead to expensive system outages. And since you don’t want to spend days and nights in your data center, many functions can be accessed remotely through the web.

### Storage

Your applications—and your business—depend on data. As the amount of data you store grows, managing the devices that store that data can become a challenge. Flex System Manager helps you address these challenges from device deployment and through the data lifecycle. Storage deployment capabilities in the Flex System Manager include storage device discovery and simple logical and physical device configuration from a single

interface. Flex System Manager can provide physical and logical storage topology views and can show relationships between storage and server resources, giving you the ability to track key resources based on their business use. Provisioning capabilities include image management for simple virtual machine creation, deployment and cloning. You can also manage storage system pools for data lifecycle management and storage placement based on business policies.

### Networking

Networking resources allow your virtualized compute and storage resources to communicate and function in the cloud. Managed properly you may never notice your network, but when bottlenecks occur, problems may arise. Flex System Manager delivers end-to-end network management for your PureFlex System from a single tool. Flex System Manager supports automated network discovery to speed deployments. It also offers a graphical view of the network from the integrated user interface. Network resources are pooled and virtualized. With logical network profiles, you can quickly and easily specify the network connectivity characteristics of a virtual machine. Flex System Manager supports automatic provisioning and simple movements of virtual LANs for virtual machines. And you can manage MAC addresses for virtual network interface cards. Flex System Manager provides detailed network usage and performance statistics for virtual machines and physical compute nodes so you can track valuable network resources and manage them based on your business needs. And because Flex System Manager is integrated across your infrastructure, you get consolidated views with compute, storage and virtualization resources to give you the full picture of your data center.

## Virtualization

To get the most out of today's high-performance IT assets, more and more companies rely on virtualization. Managing virtualized assets can be complicated, but Flex System Manager makes it easy by simplifying the management tasks. The basic virtualization functions in the Flex System Manager begin with the ability to create and manage virtual servers from pooled resources. Flex System Manager takes this capability further through the application of built-in expertise to make provisioning and deployment of virtual machines fast and easy. Once virtual machines are deployed, the virtualization features of Flex System Manager are designed to help you manage these virtualized resources efficiently. Automation features like dynamic virtual machine placement, automated optimization and resource balancing help simplify virtualization management. Flex System Manager also helps you keep your virtual machines up and running with support for non-disruptive updates, virtual machine mobility, and a range of other resilience features. And integration with IBM Storwize® V7000 built-in virtualization features allows you to virtualize your entire infrastructure, not just your servers.

## IBM has decades of experience delivering essential IT

IBM has taken knowledge, expertise and technology gained from decades of experience and investment in IT solutions for business problems and integrated it into the PureFlex System. And with a commitment to open standards you can integrate IBM solutions with other elements of your own environment with your network of partners, customers and suppliers.

With a broad ecosystem of partners with technical and industry expertise, and the unique ability and skill to integrate it all together for you—along with an unwavering commitment to your success—you can rely on IBM and your PureFlex System.

## For more information

To learn more about the IBM Flex System Manager software, visit: [ibm.com/systems/flex/software/systems-management](http://ibm.com/systems/flex/software/systems-management) or contact your IBM representative or IBM Business Partner.



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<sup>1</sup>IBM Market Intelligence Time to Value Study, National Analysts, Nov 2011.



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