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## Highlights

- Speed private cloud implementation using a preinstalled, preintegrated system with software, servers and services
  - Automate service delivery and help save operating costs through a self-service portal and service catalog
  - Help decrease capital expenses by more effectively leveraging your investments
  - Minimize complexity and better control risk through automated management and superior reliability
  - Adapt to changing requirements with the ability to scale and manage additional platforms and workloads
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# IBM CloudBurst

*Rapidly create and manage a private cloud environment*

## A fast path to private cloud computing

Cloud computing offers many potential benefits, including improved service delivery and reduced capital and operating costs. Yet the challenges of installing and configuring a private cloud platform can be overwhelming. IBM CloudBurst™ provides a preintegrated and pre-loaded system with software, server, storage and QuickStart services to help you take the guess work out of establishing a private cloud computing environment. A fast, easy way to install, deploy and start realizing the benefits of cloud computing, CloudBurst can help you get up and running in days, not months. CloudBurst is built on the IBM System x® platform, bringing the advantages of the latest IBM BladeCenter® capabilities to the cloud environment—including rapid scaling, high resiliency and large network bandwidth capacity. IBM CloudBurst is available in multiple configuration sizes to meet your organization's specific needs.

## Deliver services more efficiently

The ability to efficiently and cost-effectively deliver quality services is vital to your bottom line. IBM CloudBurst helps address the high cost of administration by providing a self-service portal, service catalog and prepackaged automation templates. These capabilities can help you accelerate the creation and management of your service delivery capability for a variety of workloads with a high degree of flexibility,



reliability and resource optimization. With the web-based 2.0 self-service portal, users can request the services they need when they need them, for the duration they need them, eliminating manual processes for requesting resources. The service catalog provides a single repository for pre-engineered cloud services, enabling consistency of service delivery across the enterprise. The prepackaged automation templates facilitate fast, automatic provisioning of the required user environment, helping eliminate manual work and keep skilled employees focused on key projects. This integrated service management system allows management of both physical and virtual workloads through a single interface to servers, storage and networking resources assuring fast provisioning, de-provisioning and remediation of issues. Resources can be provisioned in minutes versus weeks in a consistent manner every time and quickly returned to the resources pool when no longer needed, helping deliver availability for other users and increasing the efficiency of data center assets. A “web replay” feature allows skilled employees to record provisioning tasks once, and this scripted library of scenarios is then available for common use.

### Maximize capital usage for greater savings

Private clouds built on IBM CloudBurst can help drive down your total cost of ownership by enabling you to more effectively manage and leverage your capital investments. Based on BladeCenter systems, it provides a large network bandwidth capacity, which enables rapid movement of virtual machine images, combined with a reduced cost of connectivity by up to 44 percent compared to traditional rack servers.<sup>1</sup> An energy-smart design and integrated power management capabilities help drive optimal utilization of valuable power and cooling resources. With greater visibility into key energy metrics across your IT and facility assets, you can identify areas where energy consumption can be reduced. Built-in virtualization helps create a simplified, flexible IT environment that can save up to half of your valuable data center space while allowing you to more effectively use fewer resources. Metering and accounting functions are also built in, which provides a way to easily do chargeback and assists in capacity planning. Storage virtualization is supported via the optional addition of IBM Systems Storage SAN Volume Controller, which also helps to increase management efficiency and resource utilization of heterogeneous storage assets.

### Automate to reduce complexity and risk

In addition to the advantages brought by automating your service delivery functions, IBM CloudBurst offers a highly resilient infrastructure with no single point of failure and advanced automation capabilities designed to simplify management. It includes IBM BladeCenter Open Fabric Manager,



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IBM CloudBurst provides extensive Cloud service management features

which automates network and storage address virtualization for faster failover recovery and easier expansion. Best-in-class systems management tools like Predictive Failure Analysis and light path diagnostics can minimize downtime, while remote access capabilities let you control both physical and virtual IT resources through a single interface. Integration with VMware vCenter lets you easily move virtual machines between servers to help decrease downtime and protect against unplanned outages. A high availability option is available for the Cloud Management and vCenter server.

### **Scale to the enterprise**

IBM CloudBurst offers a high degree of flexibility, enabling you to deploy now and scale as your business requirements change. Standard IBM CloudBurst configurations offer the ability to scale up to 2,000 virtual machines, and additional server blades can be added as needed. In addition, the ability to discover, enroll, manage and use other heterogeneous resources such as existing KVM and IBM POWER® and System z® systems outside of the initial CloudBurst environment can be enabled via licensing and allows you to scale across the enterprise with automated workflows included.



## Why IBM?

Built on technologies deployed at customer sites across the globe, IBM CloudBurst can help you simplify and accelerate your cloud computing acquisition and deployment. Time-tested private cloud implementation methods and best practices gained from IBM's own internal cloud network—which serves more than 100,000 professionals—have already helped

clients plan, develop, test and optimize their IT environments for successful cloud computing deployments. We offer multiple, scalable configurations to meet specific business and IT requirements. Three standard configurations are available, from small (four blade servers) to large (28 blade servers), with the capability to create even larger configurations.

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### IBM CloudBurst at a glance

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#### Systems

Cloud management/Cloud compute nodes	IBM BladeCenter H, HS22V blades with dual-socket Intel® Xeon® 5660 2.8 GHz 6-core processors, 72 GB memory
Server management node	IBM System x3550 M3 with dual-socket Intel Xeon 5620 2.4 GHz 4-core processors

#### Interconnects

Ethernet switches	10 Gb Ethernet switches for normal operations 1 Gb Ethernet switches for out-of-band management
Ethernet adapter	Dual 10 Gb Ethernet ports included on each blade
Fibre Channel SAN switch	8 Gb SAN switches
Fibre Channel adapters	Dual 8 Gb Fibre Channel adapters on each blade server

#### External storage

Storage servers	IBM System Storage® DS3400; optional IBM Systems Storage SAN Volume Controller
Storage expansion	EXP3000 storage expansion units

#### Software

Blade operating system	VMware ESXi 4.1
Server management node software	Microsoft® Windows® 2008 R2 Standard Edition 64-bit; IBM Systems Director including Network Control and Active Energy Manager; BladeCenter Open Fabric Manager <sup>2</sup>
Cloud management node software	VMware vCenter 4.1; IBM CloudBurst cloud management stack; Optional high availability

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**IBM CloudBurst at a glance**

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**Rack cabinets**

e1350 42U Rack Cabinet	79.5" H x 25.5" W x 43.5" D (2020 mm x 648 mm x 1105 mm)
Scalability	3 predefined configurations
Small	1 cloud management blade, 3 cloud compute blades, 7.2 TB storage
Medium	1 cloud management blade (optional second for high availability), 4 - 13 cloud compute blades, up to 29 TB storage
Large	1 cloud management blade (optional second for high availability), 14 - 27 cloud compute blades, up to 58 TB of storage Note: large uses top of rack SAN switches
Expansion nodes	Additional compute nodes (blades) can be added after installation
<b>Services</b>	Hardware and software are preintegrated in factory; IBM Global Technology Services QuickStart services are included to provide initial setup in customer environment and provide on-site training Optionally, IBM Systems Storage SAN Volume Controller implementation provided as a an on-site service
<b>Warranty</b>	3-year parts, customer replaceable unit or on-site labor, limited warranty with individual nodes retaining the warranty and service upgrade offerings for that IBM machine type; optional warranty service upgrades

## For more information

To learn more about IBM CloudBurst, visit [ibm.com/systems/x/solutions/infrastructure/cloud/index.html](http://ibm.com/systems/x/solutions/infrastructure/cloud/index.html) or contact your IBM marketing representative or IBM Business Partner.

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<sup>1</sup> Based on IBM comparisons of 14-server connectivity costs of IBM BladeCenter servers to 14-server connectivity costs of Hewlett-Packard rack servers from price information available on [ibm.com](http://ibm.com) and [www.hp.com](http://www.hp.com) as of July 23, 2010.

<sup>2</sup> BladeCenter Open Fabric Manager runs in the BladeCenter Advanced Management Module



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