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A Breakthrough in Service Delivery for Data Center Workloads – IBM CloudBurst

IT infrastructure is reaching a breaking point. The facts here are startling.

- In distributed computing environments, up to 85% of computing capacity sits idle
- Consumer product and retail industries lose about $40 billion annually, or 3.5 percent of their sales, due to supply chain inefficiencies.
- On average, 70% is spent on maintaining current IT infrastructures versus adding new capabilities.
- An explosion of information is driving a 54% growth in storage shipments every year to accommodate the data.
- Challenges to automation mean that highly skilled individuals are needed to support basic operational tasks in data centers rather than high business-value operations such as innovative ways of applying IT to serve its customers.

The result: new services to customers that are vital to the organizations bottom line are delayed. Worse yet are the problems that arise from human error associated with mundane, repetitive tasks that severely impact customer satisfaction.

The answer -- It's time to start thinking differently about IT infrastructure.

Over time business operations have industrialized to become smarter. For example, banks use automated teller machines to improve service and lower cost; manufacturers use robotics to improve quality and lower cost; and Telecommunications companies automate traffic through switches to assure service and lower cost.

Breakthroughs like these required the use of technology-based systems. What if you could industrialize the delivery of your services and reduce the headaches of integrating and maintaining servers, storage & software with a service management system that provide dramatic improvements in time to market, delivery of services to clients in minutes – rather than weeks -- through self-service, and hands free operational support that eliminates mundane tasks from skilled personnel, all with the lowest cost per unit?

Introducing IBM CloudBurst

IBM® CloudBurst™ is designed from IBM client cloud computing implementation experiences over the last two years and integrates a service management software system with servers, storage, and QuickStart services to quickly enable a private cloud in your IT environment. It takes the guess work out of establishing a private cloud by pre-installing and configuring the necessary software on the hardware and leveraging services for customization to your environment. All you need to do is install your applications and start leveraging the benefits of cloud computing, including virtualization, flexibility, scalability and a self-service portal for provisioning new services.

IBM CloudBurst provides an alternative to traditional IT infrastructure for IT executives seeking to enhance delivery of services and to transform the data center into a cost-effective Dynamic Infrastructure. IBM CloudBurst is "Built for performance", based on architectures and configurations required by specific workloads. It can enable the data center to accelerate the creation of services for a variety of workloads with a high degree of flexibility, reliability and resource optimization.

Revolutionary in Design, Evolutionary in Deployment and Use
IBM CloudBurst is built on the IBM BladeCenter® Platform and provides a fully integrated service management system pre-installed across the hardware, middleware and applications. In addition to the service management and automation stack, IBM CloudBurst includes a self-service portal, service catalog, and pre-packaged automation templates.

IBM CloudBurst is available in multiple configurations to meet your organization's specific needs:

Base Hardware Configuration
- 1 42U rack
- 1 BladeCenter Chassis
- 3650M2 Management Server, 8 cores, 24GB RAM
- 1 HS22 CloudBurst Management Blade, 8 cores, 48GB RAM
- 3 managed HS22 blades, 8 cores, 48GB RAM
- DS3400 FC attached storage SAN

Medium Hardware Configuration
- 1 42U Rack
- One BladeCenter Chassis
- 3650M2 Management Server, 8 cores, 24GB RAM
- 1 HS22 CloudBurst Management Blade, 8 cores, 48GB RAM
- 13 managed HS22 blades, 8 cores, 48GB RAM
- DS3400 FC attached storage SAN

Large Hardware Configuration
- One 42U Rack
- Two BladeCenter Chassis
- 3650M2 Management Server, 8 cores, 24GB RAM
- 1 HS22 CloudBurst Management Blade, 8 cores, 48GB RAM
- 28 HS22 Blades (27 managed and 1 managing)
- Two DS3400 FC attached storage SANs

Cloud Software Configuration
- Self-service portal and service catalog
- Automation software and pre-packaged automation templates
- Built-in virtualization software
- Metering, usage, and accounting software
- Energy management and enterprise scalability software
- High availability software (optional–available on medium and large configurations)
- Virtual network security platform (optional–separately priced)
- Novell SUSE Enterprise Linux SP10
- Hypervisor support (integrated VMware and/or KVM hypervisor)
- IBM Systems Director 6.1.1 with Active Energy Manager; IBM ToolsCenter 1.0; IBM DS Storage Manager for DS4000 v10.36

IBM CloudBurst is an integrated system complete with server, storage and network resources and both physical and virtual management including energy management and predictive failure analysis. It offers double the protection against major faults with *no single point of connection and no single point of failure.*

IBM CloudBurst includes QuickStart services from IBM Global Technology Services for rapid implementation of the hardware and software required to get a private cloud platform up and running in days. These CloudBurst QuickStart **services** provide install, configuration and knowledge transfer to implement a cloud computing platform. The IBM CloudBurst QuickStart services consist of the following major activities:
- Integrate and deploy BladeCenter hardware in the data center
- Configure user and security profiles
- Setup and discovery of virtualized compute, network and storage resources
- Configure self-service portal
- Platform verification
- Overview and hands-on training

Additionally, IBM Smart Business Test Cloud services have been enhanced to support IBM CloudBurst. With this new enhancement, IBM can help you rapidly set up a cloud platform with CloudBurst, then provide full customization and integration for a comprehensive, on-premise test environment based on a private cloud computing model. Smart Business Test Cloud also provides you the option to leverage your existing systems and storage for a complete cloud solution.

A private test cloud environment with Smart Business Cloud services has a compelling value proposition and return on investment. Based on initial IBM projections, this private test cloud solution can potentially save clients as much as 50 to 75 percent on capital and licensing expenses, and as much as 30 to 50 percent on operating and labor costs through automated provisioning and configuration of virtualized test resources. Additionally, these services can improve quality and testing quality by reducing defects from faulty configurations and poor modeling by as much as 15 to 30 percent.

Why IBM CloudBurst?

IBM offers an innovative way to appreciably lower cost while significantly improving service and making heroes of IT Operations. IBM CloudBurst offers the capabilities needed for a dynamic infrastructure. Simply stated: it improves service and reduces cost while offering an easy way to order, implement and use cloud computing.

Specific benefits include:

Improved Service

- **Self-Service:** Improves customer satisfaction by accelerating service delivery through an easy to use Web 2.0 based portal. Users can request the services they need, when they need them, for the time they need them, eliminating manual processes for requesting resources.

- **Service Catalog**: Improves the consumability and the consistency of services and drives the usage of standard services across the enterprise. Provides a single repository for all cloud services where users can quickly find and request the services they need.

- **Simplified systems administration:** The integrated service management system allows management of both physical and virtual workloads - through a single interface to blade servers, storage and networking assures fast provisioning, de-provisioning and remediation of issues.

- **Integration with IBM WebSphere:** Speed delivery of WebSphere applications by leveraging IBM CloudBurst as an out-of-the box cloud platform for WebSphere applications delivered by the WebSphere CloudBurst Appliance.

Reduced Cost

- **Built in Virtualization:** Increases resource utilization for lower capital expense and creates a simplified, flexible IT environment. IBM CloudBurst can be extended to manage existing KVM implementations to further lower costs.

- **Energy efficiency:** Designed from the ground up to dramatically improve power utilization and reduce energy costs. Integrated power management to help you plan, predict, monitor and actively manage power consumption of your BladeCenter servers.

- **Automation Software**: Speeds delivery of services via easy-to-use provisioning based on standard images. 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 instead of sitting idle. A "Web Replay" feature allows skilled employees to record provisioning tasks once and this scripted library of scenarios is available for common provisioning tasks. This eliminates manual work and keeps skilled employees focused on key projects.

- **Faster time to value:** Delivered on site as a prepackaged and self contained service delivery platform for cloud computing with virtualization at its core.

<u>Production Ready</u>

- **Understand costs:** Collects resource usage and accounting data to provide reporting which allows for tracking, planning, budgeting, and chargeback of system resource usage.

- **Flexibility:** Scalable platform allows you to deploy now and easily scale as business needs change. Enables scalability across the enterprise by discovering and using other enterprise resources to meet business needs.

- **Superior reliability:** Keeps your virtualized infrastructure up and running - with multiple layers of redundancy built into the hardware platform resulting in no single point of failure. Leverage VMware hypervisor to easily move virtual machines between servers to decrease downtime.

- **Security:** Secure cloud environments with optional IBM Proventia Virtualized Network Security Platform. This allows the user to protect the IBM CloudBurst management server with Virtual Patch, Threat Detection and Prevention, Proventia Content Analysis, Proventia Web Application Security, and Network Policy enforcement.

<u>Easy</u>
- Single delivery
- Single installation
- QuickStart services
- Single price
- Single support process: one phone number to call for all support issues

A Smarter Planet requires IBM CloudBurst.

Our world is increasingly interconnected, instrumented and intelligent, creating unprecedented opportunities for business and society. Business success in the new smarter planet demands innovation accelerated time to market and reduced capital and operating expense. In the environment of IT, that means an evolution to a Dynamic Infrastructure that allows for greater collaboration, and flawless execution when responding to rapidly changing market conditions. The creation of internal private clouds requires a dynamic infrastructure, and IBM CloudBurst is the fastest path to private cloud implementation and is complementary to your existing IT environment, which simplifies your cloud computing acquisition and deployment.

For More Information
To learn more about IBM CloudBurst, please contact your IBM representative or visit the following Web site: **ibm.com**/cloud/cloudburst

IBM.