IBM WebSphere CloudBurst Appliance firmware V2.0 manages multi-image patterns

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At a glance

New in WebSphere® CloudBurst Appliance firmware V2.0:

- Adds capability to use multiple virtual images in a single pattern
- Allows additional nodes to be added to a previously dispensed pattern
- Supports new WebSphere Application Server Hypervisor™ Edition for Red Hat Enterprise Linux® Server
- Supports new WebSphere Process Server Hypervisor Edition
- Supports new WebSphere Application Server Hypervisor Edition Intelligent Management Pack

WebSphere CloudBurst enables you to easily manage IBM® middleware products in a cloud environment across a pool of virtualized servers, providing significant value to your data center or business:

- Ensures security in a shared environment as the WebSphere CloudBurst Appliance serves as a secured, tamper-resistant vault for images and credentials
- Provides tooling supporting virtual image customization, which allows you to easily modify images to contain applications, monitors, and corporate governance agents
- Simplifies maintenance and updates to virtual images and patterns to ensure correctness and consistency
- Provides automated maintenance and updates to virtual images (both in storage and running) to ensure correctness and consistency in updating images
- Provides REST APIs to facilitate WebSphere CloudBurst integration into existing data center management environments

Overview

WebSphere CloudBurst supports VMware ESX, IBM PowerVM™, and IBM z/VM® hypervisors. For VMware ESX environments, WebSphere Application Server Hypervisor Edition adds support for Red Hat Enterprise Linux Server in addition to Novell SUSE Linux Enterprise Server. For additional information, refer to Software Announcement ZP10-0171, dated April 30, 2010.

New multi-image pattern support lays the groundwork for multi-product patterns. For example, virtual images of WebSphere Application Server, DB2, and WebSphere Process Server can be dispensed in the context of a single pattern to better capture the entirety of a particular topology. As additional images are released by IBM, they will be able to be dispensed in the context of multi-image patterns as well.

Patterns are more dynamic in WebSphere CloudBurst Appliance V2.0. Nodes may be added via manual request to previously dispensed patterns, allowing patterns to grow without being redeployed. The new WebSphere Application Server Hypervisor Edition Intelligent Management Pack brings another level of dynamics through service-policy-based management. Specifically, it allows enforcement of health policies and response time goals, in addition to managing the rollout of new application versions.

Key prerequisites

Server running a supported hypervisor:

- IBM z/VM
- IBM PowerVM
- VMware ESX

Planned availability date

- June 18, 2010: Firmware V2.0 on support site
- July 23, 2010: Firmware V2.0 ships on WebSphere Cloudburst appliances

Availability of programs with an encryption algorithm in France is subject to French government approval.

Description

New function and support

- Use of multiple virtual images in a single pattern
- Ability to add nodes to an existing dispensed pattern
- Support for WebSphere Application Server Hypervisor Edition for Red Hat Enterprise Linux Server
- Support for WebSphere Process Server Hypervisor Edition
- Support for WebSphere Application Server Hypervisor Edition Intelligent Management Pack

Build a managed cloud out of existing hardware

WebSphere CloudBurst requires a set of hardware running a supported hypervisor to serve as its managed cloud. WebSphere CloudBurst firmware V2.0 supports:

- System z® servers running z/VM V5.3, V5.4, or V6.1 hypervisor
- Power Series® servers running PowerVM V2.1.1 hypervisor (see Technical information section)
- x86 platform running VMware ESX v4.0, v3.5, or v3.0.3 hypervisor
To build a cloud, you simply enter connection and authentication information for each hypervisor to be included in the cloud. This creates an on-premise managed cloud environment into which WebSphere CloudBurst can dispense WebSphere Application Server-based workloads upon request.

**Manage your shared resource pool**

To help mitigate some challenges introduced by a shared resource model, WebSphere CloudBurst includes function for managing a shared pool. Users and groups can be used to control what is accessed by each person, team, or organization. WebSphere CloudBurst optionally connects to an external LDAP directory for authentication. User and group information is used to create reports indicating usage, timing, and location. WebSphere CloudBurst uses a proprietary placement algorithm, which considers resource usage, to determine where requested environments are placed in the managed cloud.

To support IBM sub-capacity licensing, WebSphere CloudBurst includes IBM License Metric Tool in each virtual image dispensed into the managed cloud.

**Customize your virtual environment**

In WebSphere CloudBurst, **patterns** represent multiserver arrangements or **topologies**. WebSphere CloudBurst ships with predefined **patterns** of WebSphere Application Server Hypervisor Edition images, and allows you to customize environments to suit your needs. WebSphere CloudBurst includes drag and drop functionality for cloning and modifying existing patterns. It includes similar functionality to allow creation of new patterns. Tooling is also provided for modifying individual images to include monitoring agents, corporate governance agents, application code, and drivers. Each modification of an image or pattern results in a new version of that resource being created, such that previous states of an image can be recalled at a later time.

New with V2.0, WebSphere CloudBurst Appliance supports multiple images in a single pattern. This function, coupled with the simultaneous release of WebSphere Process Server Hypervisor Edition, enables a higher level of value around multi-product topologies. Specifically, a topology containing application servers, process servers, and database servers can now be represented and deployed by a single pattern.

**Versatile management of a cloud environment**

Users may interact with the WebSphere CloudBurst Appliance in three different ways:

- Command line interface (CLI)
- Web user interface (Web UI)
- REST APIs

Both the CLI and Web UI invoke REST APIs. As such, this product is fully programmable and scriptable, and can be manipulated from broader data center automation suites like Tivoli® Provisioning Manager and Tivoli Service Automation Manager. Updates to the appliance are performed as a full firmware replacement, which is as simple as pointing the appliance at the update URL and clicking a button.

WebSphere CloudBurst is simple to learn and use. As a hardware appliance, it is truly plug and play. To get started, simply load the inventory of server, network, and storage resources to be managed, and a cloud environment is formed. WebSphere CloudBurst requires exclusive control over the pool of machines it manages, to prevent problems associated with multiple users performing conflicting optimization actions.

WebSphere CloudBurst now supports dynamic runtime management capability of WebSphere application environments with the new WebSphere Application Server Hypervisor Edition Intelligent Management Pack. Specifically the WebSphere Application Server Hypervisor Edition Intelligent Management Pack provides
application edition management to orchestrate the roll-out of new application versions, policy-based management in the form of health management, and service policy management to reduce risk of downtime and make fine-grained resource allocation decisions based on observed demand and configured policy. The WebSphere Application Server Hypervisor Edition Intelligent Management Pack is included in the WebSphere Application Server Hypervisor Edition V7.0 images as a separately licensed option.

For convenience, WebSphere CloudBurst is shipped with preloaded WebSphere Application Server Hypervisor Edition virtual images and patterns (7.0 images include WebSphere Application Server Hypervisor Edition Intelligent Management Pack). DB2 Enterprise Trial images are also preloaded. Licenses to use WebSphere Application Server Hypervisor Edition and the WebSphere Application Server Hypervisor Edition Intelligent Management Pack must be purchased separately via Passport Advantage®.

**WebSphere CloudBurst Appliance and Rational® Automation Framework for WebSphere integration**

WebSphere CloudBurst Appliance customers can further enhance the returns on their investments with Rational Automation Framework for WebSphere (RAFW). You can combine the rapid WebSphere pattern deployment of WebSphere CloudBurst Appliance with extensive automated configuration management and application deployment of RAFW. You can capture your WebSphere CloudBurst patterns in an initial run and replicate them accurately for provisioning any future environments. RAFW further helps you keep centralized audit records of all actions performed in your middleware environments.

For additional information on WebSphere Cloudburst Appliance, visit

http://www.ibm.com/cloudburst

For additional information on WebSphere Application Server Hypervisor Edition, visit

http://www.ibm.com/software/webservers/appserv/hypervisor/

Instructions for downloading WebSphere CloudBurst Appliance firmware are provided at

http://www.ibm.com/software/webservers/cloudburst/support/

**Reference information**


For information on the initial WebSphere CloudBurst Appliance offering, refer to Hardware Announcement ZG09-0220, dated June 02, 2009.


For information on WebSphere Application Server Hypervisor Edition for AIX, refer to Software Announcement ZP09-0443, dated November 17, 2009.

For information on WebSphere CloudBurst Support registration, refer to Software Announcement ZP09-0228, dated June 02, 2009.

**Existing WebSphere CloudBurst machine models:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Machine</th>
<th>Model</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM WebSphere CloudBurst Appliance</td>
<td>9235</td>
<td>72X</td>
<td></td>
</tr>
<tr>
<td>IBM WebSphere CloudBurst Cloud Capacity</td>
<td>9231</td>
<td>200</td>
<td></td>
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<tr>
<td>Entitlement (in PVU)</td>
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<td>1773</td>
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</table>

**Feature rule**

9231-200 WebSphere CloudBurst feature option 1773 is required and available only with the initial order of each 9235-72X model.

**Specify features**

There are no changes to this information. For details, refer to Hardware Announcement **ZG09-0220**, dated June 02, 2009.

**Model conversions**

Not applicable

**Publications**

WebSphere CloudBurst hardware publications are available on the Documentation CD included with the WebSphere CloudBurst Appliance.

**Displayable softcopy publications**

The product hardware publications are offered in displayable softcopy form. All hardware publications are included. The files are shipped on CD-ROM with the WebSphere CloudBurst Appliance.

**Services**

**Global Technology Services**

IBM services include business consulting, outsourcing, hosting services, applications, and other technology management.

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For details on education offerings related to specific products, visit http://www.ibm.com/services/learning/index.html

Select your country, and then select the product as the category.

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Technical information

**Specified operating environment**

**Hardware requirements**

For requirements for first-time configuration of the software, refer to Hardware Announcement ZG09-0220, dated June 02, 2009.

WebSphere CloudBurst firmware V2.0 requires one of the following:

- System z server hardware supported by z/VM V5.3, V5.4, or V6.1
- Power Series server hardware supported by VM Control V2.1
- x86 server supported by VMware ESX v4.0, v3.5, or v3.0.3

**Software requirements**

The 9235 Model 72X WebSphere CloudBurst Appliance comes with IBM-supplied firmware. Firmware updates are available at FixCentral

http://www.ibm.com/support/fixcentral/

WebSphere CloudBurst firmware V2.0 requires one of the following:

- z/VM V5.3, V5.4, or V6.1 including:
  - Directory Manager (DIRM)
  - Resource Access Control Facility (RACF®)
- VMware ESX v4.0, v3.5, or v3.0.3
- PowerVM VMControl V2.1 with these detailed specifications:
  
  All of the following:
  
  - Services contract for IBM Implementation Services for Power Systems™ AIX V6.1 and IBM Migration Services for Power Systems AIX V6.1
    
    For information, refer to Services Announcement ZS08-0150, dated June 24, 2008.
    
    - AIX V6.1.3 (5765-G62) license is required with
      
      -- IBM Network Installation Manager Server V6.1
      -- IBM System Director V6.1
      
      - IBM Systems Director VMControl Image Manager V2.1 (5765-I2P)
      - IBM Systems Director for Power Systems, V6.1 (5765-DRP)
      - IBM Hardware Management Console (7042-CR5) with firmware V7.3.4.0.3, or later (dedicated)

  One of the following machines:
– IBM Power® System P5 with firmware SF240_382, or later
– IBM Power System P6 with firmware EL340_095, or later

**Security, auditability, and control**

The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communications facilities.

**Global Technology Services**

Contact your IBM representative for the list of selected services available in your country, either as standard or customized offerings, for the efficient installation, implementation, and/or integration of this product.

**Terms and conditions**

**Usage plan machine**

No

**IBM hourly service rate classification**

Not applicable

When a type of service involves the exchange of a machine part, the replacement may not be new, but will be in good working order.

**Field-installable features**

No

**Model conversions**

No

**Machine installation**

Customer setup. Customers are responsible for installation according to the instructions IBM provides with the machine.

**Graduated program license charges apply**

No

**Licensed internal code**

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**License Information form number**

IBM WebSphere CloudBurst Appliance V2.0 firmware

L-AJOS-84CSXU

The program License Information will be available for review on the IBM Software License Agreement Web site


**Pricing**

There are no changes to this information. For details, refer to Hardware Announcement ZG09-0220, dated June 02, 2009.

For all local charges, contact your IBM representative.

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