



IBM Software Group

IBM WebSphere® CloudBurst

Backup and snapshots



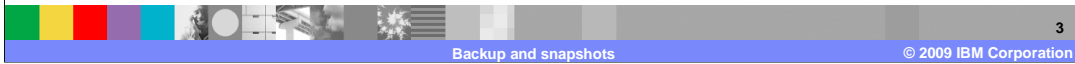
@business on demand.

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This presentation will cover CloudBurst's backup and snapshot capabilities.

Section

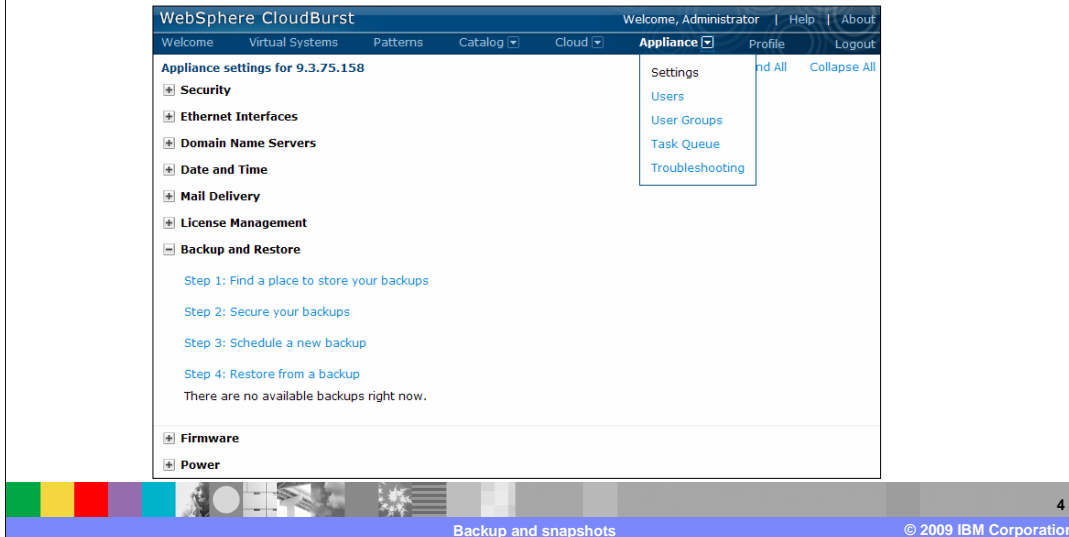
Appliance backup and restore



This section will cover the backup and restore feature of CloudBurst.

Backup and restore

- Backup your appliance to a remote location
- Restore your appliance from a previous backup



The backup and restore feature can be located by navigating to the “Appliance” tab and then to “Settings”.

Backup and restore

- Find a place to store your backup
- Secure your backups
 - ▶ Have CloudBurst generate a keypair
 - ▶ Upload your own certificate
- Schedule a new backup
- Restore from a backup

Backup and Restore

[Step 1: Find a place to store your backups](#)

This step is required. You must specify where backups will be stored.

Host:

Path:

User name:

Password: [\[edit\]](#)

⚠ You must provide a host name.

[Step 2: Secure your backups](#)

This step is required. You must generate a keypair or provide your own certificate.

Generate your own keypair

New password:

Verify password:

Upload your own certificate

[Step 3: Schedule a new backup](#)

Select a date and time to create the backup (the default is right now).

[Step 4: Restore from a backup](#)

There are no available backups right now.



This slide shows an expanded view of the backup and restore feature. As you can see there are four steps. Step one is the step in which you specify a location to send your backup to. Step two encrypts your backup. Step three schedules your backup. Step four restores your CloudBurst appliance to a previous backup. The next few slides will go over each of these steps in detail.

Step 1: Find a place to store your backups

- Enter remote location where you want your backup placed
 - ▶ SCP are used to transfer backup
 - ▶ 100GB required for as is CloudBurst

The screenshot shows a window titled "Backup and Restore" with a sub-header "Step 1: Find a place to store your backups". Below the sub-header, it states "This step is required. You must specify where backups will be stored." and lists the following configuration fields:

Host:	wsbeta161.austin.ibm.com
Path:	/download/backup1
User name:	root
Password: [edit]

Below the configuration fields, there are four links for subsequent steps:

- [Step 2: Secure your backups](#)
- [Step 3: Schedule a new backup](#)
- [Step 4: Restore from a backup](#)

The first step in creating a backup of your CloudBurst appliance is to determine a remote location that has at least 100GB of free space. This 100GB size requirement is based off an as is CloudBurst appliance. If you create or modify CloudBurst data your space requirements can be considerably more.

After you have found a remote location to house your backup the next step is to specify that information in Step 1. Enter the host name of the remote server and the path where you want it transferred to. Enter a username and password to connect securely to the remote server. CloudBurst will use the SCP utility to make the transfer.

Step 2: Secure your backups

- Upload your own certificate
- Have CloudBurst generate a keypair for you

The screenshot shows a web interface titled "Backup and Restore". It lists four steps: Step 1: Find a place to store your backups, Step 2: Secure your backups (the current step), Step 3: Schedule a new backup, and Step 4: Restore from a backup. Under "Step 2: Secure your backups", it states "This step is required. You must generate a keypair or provide your own certificate." There are two main options: "Generate your own keypair" and "Upload your own certificate". The "Generate your own keypair" option has two password input fields (one with a green checkmark) and a "Generate" button. Below it is a link: "Download the backup private key". The "Upload your own certificate" option has a "Browse..." text box and an "Upload" button.



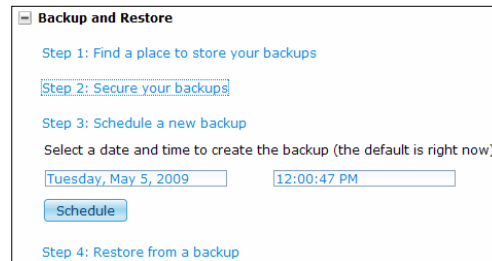
The second step in the creation of your backup is to encrypt the backup. You have two choices when encrypting your backup. Either you can upload your own certificate or you can have CloudBurst generate one for you.

Uploading your own can be accomplished by clicking the “Browse...” text box located under “Upload your own certificate”, choosing your certificate and then clicking the “Upload” button.

To have CloudBurst generate a new keypair to use for this backup requires you to enter a pass phrase which is located under “Generate your own keypair” and then pressing the “Generate” button. After you click the “Generate” button a link opens to the right of the button. Click this link to download the keypair to your system.

Step 3: Schedule a new backup

- Schedule a backup immediately or for a later time
- Backup can take quite some time depending on network bandwidth
- Progress can be view under the Appliance->Task Queue section



The screenshot shows a web interface titled "Backup and Restore". It lists four steps: Step 1: Find a place to store your backups; Step 2: Secure your backups; Step 3: Schedule a new backup; and Step 4: Restore from a backup. Step 3 is currently active, with the instruction "Select a date and time to create the backup (the default is right now)." Below this, there are two input fields: "Tuesday, May 5, 2009" and "12:00:47 PM". A blue "Schedule" button is positioned below these fields.



The final step in creating your backup is to schedule a time for the backup to take place. You can either schedule it immediately which is default or you can schedule it for a future date and time. Once you have chosen your time then click the “Schedule” button to start the backup process. The task is placed in the task queue. The “Task Queue” is located under the “Appliance” tab. You can monitor the progress from here. There is no progress indicator to track progress. Once the backup task is complete it will be removed from the task queue. Backing up your CloudBurst appliance can take quite a bit of time depending on the speed of your network.

Step 4: Restore from a backup

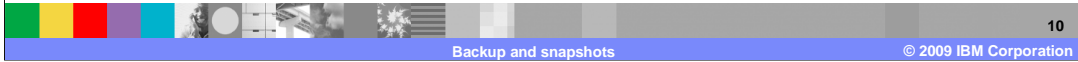
- Restore from one of the existing backups
- Backup location is defined in “Step 1”

Backup and Restore					
Step 1: Find a place to store your backups					
Step 2: Secure your backups					
Step 3: Schedule a new backup					
Step 4: Restore from a backup					
Archive file date	Firmware version	Certificate issuer	Certificate subject	Serial Number	
✘ 12:09 Tue, May 5, 2009	1.0.0-10580	O=IBM WebSphere Rainmaker CN=Backup and Restore	O=IBM WebSphere Rainmaker CN=Backup and Restore	11225234294829401408	Restore

When you need to restore from a previous backup you navigate to Step 4 of the Backup and Restore section. Click the “restore” link to the right of the backup you want to restore. The host and path to the backup was defined in Step 1. This feature was designed with one backup location in mind. For example if you made backup “A” in location “A” and then did another backup “B” in location “B” and now you wanted to restore backup “A” you would need to go back to Step 1 and reset the host and path information to point to backup “A”. This operation can take quite some time to complete. The status of process can be found in the “Task Queue” section of the “Appliance” tab. The only indication that is completed is that the task is removed from the queue.

Section

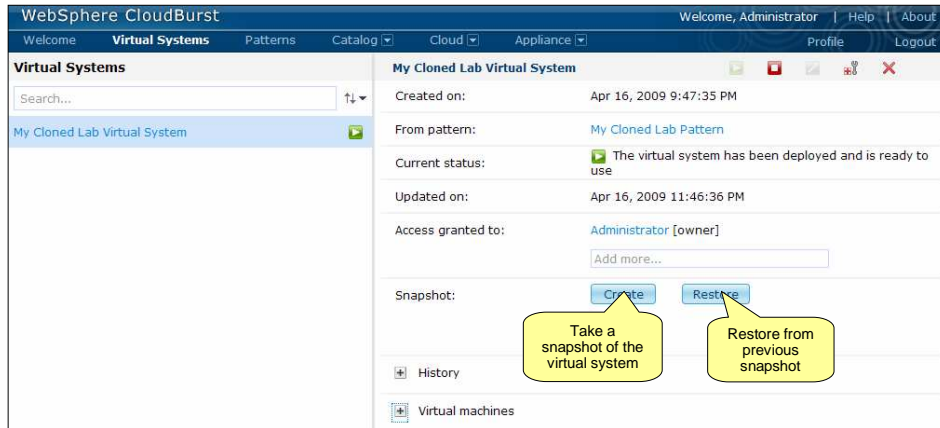
Virtual system snapshot



This section will cover the virtual system snapshot capabilities of CloudBurst.

Virtual system snapshot

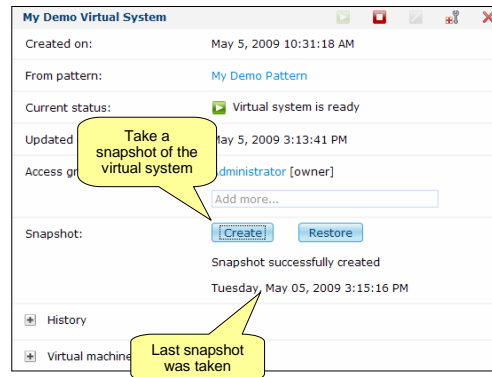
- Virtual system view provides a mechanism by which you can initiate a snapshot of the entire virtual system



Virtual system view provides options to both create a snapshot and restore from a snapshot.

Creating a virtual system snapshot

- CloudBurst calls out to the hypervisor to initiate a snapshot create
- Snapshot is stored on the hypervisor

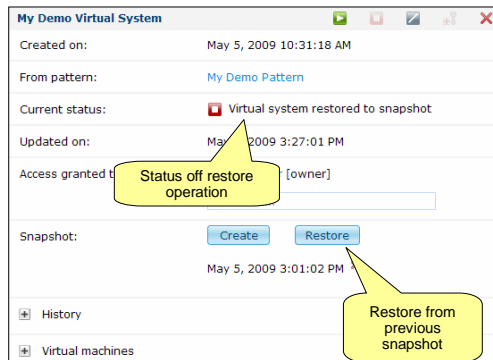


Creating a virtual system snapshot will take a snapshot of each virtual machine that makes up the virtual system. CloudBurst will contact each hypervisor hosting the virtual machine and invoke a snapshot using the hypervisor's native capabilities.

Snapshots are stored on the hypervisor and not on the CloudBurst appliance. Snapshots make very efficient use of space. When you create a snapshot it initially starts off at around 20MB and will grow depending on the number of changes you make. In fact one of the first things that occurs when CloudBurst deploys a pattern is that it creates a snapshot of the original virtual system, so you can always revert back to the freshly installed virtual system.

Restoring from a virtual system snapshot

- CloudBurst calls out to the hypervisor to initiate a snapshot restore
- Virtual system is shut down during the restore operation



Restoring a virtual system from a snapshot will restore each virtual machine that makes up the virtual system. CloudBurst will contact each hypervisor hosting the virtual machine and invoke a restore operation using the hypervisors's native capabilities.

The restore operation will stop the virtual system. Once the restore operation completes you will need to start the virtual system.

Summary

- CloudBurst provides to mechanisms by which you can practice backing up and restoring
 - ▶ Appliance backup and restore
 - ▶ Virtual system snapshot



In summary, CloudBurst provides two mechanisms by which you can practice backing up and restoring. Those two mechanisms are the backup and restore feature of the appliance and the snapshot capabilities of the virtual system.

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