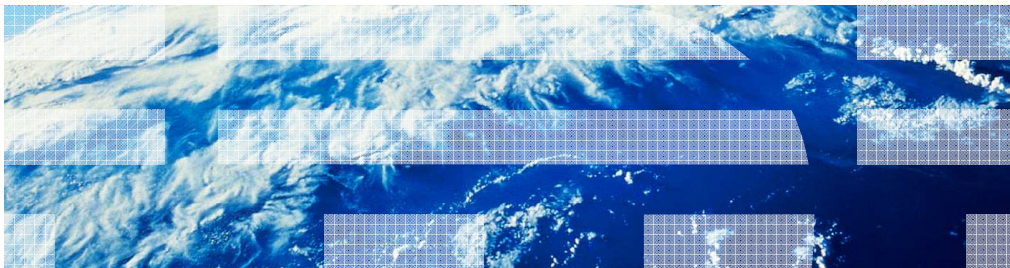

IBM WebSphere CloudBurst Appliance

Backup and restore



This presentation will discuss the IBM® WebSphere® CloudBurst™ Appliance backup and restore process.

Agenda

- Process overview
- Performing a backup
- Restoring the appliance

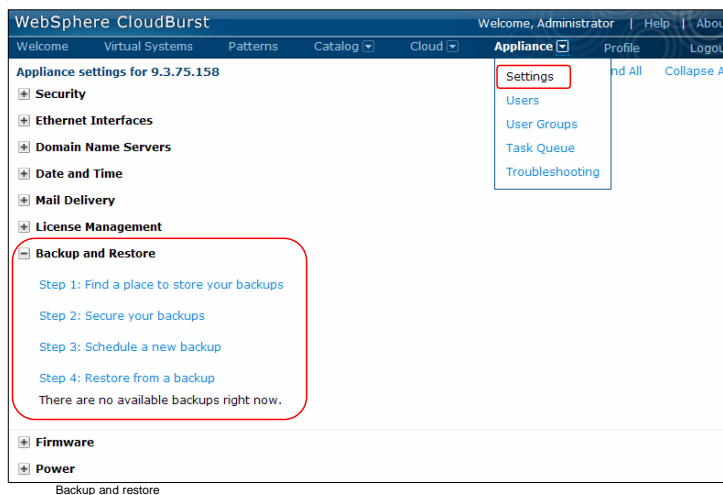
First you will walk through what is involved in backing up your IBM WebSphere CloudBurst Appliance and then you will go over what is involved in backing up your running virtual systems.

Appliance backup and restore

This section will cover the backup and restore feature of your IBM WebSphere CloudBurst Appliance.

Process overview


- 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**”. The backup function streams a backup image to a remote location, maintaining an identical state to the time it was backed up. The backup images contain all of the data that is needed to restore IBM WebSphere CloudBurst Appliance to the specific point in time the backup image was taken. Using the restore option, you can restore the virtual system to that previous state.

Process overview

- Find a place to store your backup
- Secure your backups
 - Have appliance 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: None provided
Path: None provided
User name: None provided
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 **Upload your own certificate**
New password:
Verify password:

[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 configures the encryption settings used for future backups. Step three schedules your backup. Step four restores your IBM WebSphere CloudBurst Appliance to a previous backup. The next few slides will go over each of these steps in detail.

Performing a backup

- Enter remote location where you want your backup placed
 - SSH is used to transfer backup
 - 100GB required for as is IBM WebSphere CloudBurst Appliance

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: `wsbeta161.austin.ibm.com`
Path: `/download/backup1`
User name: `root`
Password: `.....` [\[edit\]](#)

[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 IBM WebSphere CloudBurst Appliance is to determine a remote location that can hold your backup image. The size of your backup image is dependant on the content of your appliance, but backup images can be as large as 100 gigabytes in size. After you have found a remote location to house your backup the next step is to specify the information in step one, shown above.

The host field specifies the host name of the SSH server used for storing your backup images. The path field specifies the path to the directory on the SSH server where backup images are stored. The user name field specifies the user that is used to establish a connection with the SSH server and the password field specifies the password associated with the user defined in the user name field.

Performing a backup

- Backup encryption is accomplished either by:
 - uploading your certificate
 - OR
 - appliance generated keypair

The screenshot shows a web interface titled "Backup and Restore" with a sub-header "Step 2: Secure your backups". Below the sub-header, 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". Under "Generate your own keypair", there are two password input fields (the second has a green checkmark), a "Generate" button, and a link "Download the backup private key". Under "Upload your own certificate", there is a "Browse..." text box and an "Upload" button. Navigation links for "Step 1: Find a place to store your backups", "Step 3: Schedule a new backup", and "Step 4: Restore from a backup" are also visible.

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 WebSphere CloudBurst generate one for you.

Uploading your own certificate can be accomplished by clicking the “**Browse...**” text box located under “**Upload your own certificate**”, choosing your certificate and then clicking the “**Upload**” button. The certificate needs to be a valid X509 compliant certificate.

To have WebSphere 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.

Performing a backup

- Schedule a backup immediately or for a later time
- Backup can take quite some time depending on network bandwidth
- Progress can be viewed under the **Appliance > Task Queue** section
- Once in progress, all incoming tasks are queued until backup is complete

Backup and Restore

Step 1: Find a place to store your backups

Step 2: Secure your backups

Step 3: Schedule a new backup

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

Tuesday, May 5, 2009 12:00:47 PM

Schedule

Step 4: Restore from a backup

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 the 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.

While the backup task is running, all incoming tasks are placed in the queue and do not begin until after the backup task has completed.

There is no progress indicator to track progress. Once the backup task is complete it is removed from the task queue. Backing up your IBM WebSphere CloudBurst Appliance can take quite a bit of time depending on the speed of your network.

Restoring the appliance

- Before beginning
 - Ensure Step1 points to the correct backup location to restore
 - Verify the firmware level on appliance and backup match
 - Ensure you have key to decrypt backup

Step 1: Find a place to store your backups

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

Host: plague.rainmaker.raleigh.ibm.com
Path: </build/jobs/trunk/builds/2507/archive/trunk/build/output/artifacts/backup>
User name: [root](#)
Password: [edit]

When you need to restore from a previous backup you must ensure that the host and pathname defined in step one are correct. The restore 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 have to go back to step one and reset the host and path information to point to backup “A”. By default the information saved in step one is the last information entered. The firmware level on your appliance must match the firmware level from the backup. You will need the encryption key to decrypt the backup. The backup operation can take quite some time to complete. The status of the process can be found in the “**Task Queue**” section of the “**Appliance**” tab. The only indication that it is completed is that the task is removed from the queue.

Restoring the appliance

Step 4: Restore from a backup

Archive file date	Firmware version	Certificate issuer	Certificate subject	Serial Number	
✘ 11:08 Sat, Nov 21, 2009	1.1.0.0-17266	O=IBM WebSphere Rainmaker CN=Backup and Restore	O=IBM WebSphere Rainmaker CN=Backup and Restore	17349526172274787650	Restore

backupPrivateKey
.....
[Upload] [Restore]

The private key has been uploaded - you can now start the restore.

Task Queue status message

Task Flow	Status
✘ Restoring appliance data	Active [CWZCO3018]: Restore dry run completed successfully and verified backup image integrity. Continuing restore.

When you need to restore from a previous backup you navigate to step four of the backup and restore section. Click the “**Restore**” link to the right of the backup you want to restore. You must upload the key / password to do the restore. The appliance will do a dry run to ensure the archive is valid. Once the restore is in progress, you will see a percentage indicator throughout the restore. Once the restore is complete, the IBM WebSphere CloudBurst appliance will restart.

Summary

This section will summarize the backup and restore presentation.

Summary

- IBM WebSphere CloudBurst Appliance provides a mechanism by which you can back up and restore your appliance

In summary, IBM WebSphere CloudBurst Appliance provides a mechanism by which you can back up and restore your appliance using the backup and restore feature under the appliance -> settings option.



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