

# IBM WebSphere CloudBurst Appliance

## Emergency fixes



This presentation will discuss WebSphere® CloudBurst™ emergency fixes.

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## Table of contents

- Emergency fixes
- Creating emergency fixes
- Applying service to virtual systems
- Summary

This presentation will discuss creating emergency fixes and applying fixes to your virtual systems.

## ***Emergency fixes***

This section will discuss an overview of WebSphere CloudBurst emergency fixes.

## Emergency fixes

- Emergency fixes
  - Fixes for WebSphere Application Server
  - Fixes for virtual system binaries
- Types of emergency fixes
  - Service packs
  - iFixes
  - Generic fixes
- Emergency fix size
  - Max size for emergency fix is 512 MB

Emergency fixes are patches that can be applied to WebSphere CloudBurst virtual systems. Emergency fixes exist for IBM WebSphere Application Server, and for the accompanying operating system files that are incorporated in the virtual system deployment when using WebSphere CloudBurst. Emergency fixes exist as iFixes and service packs that are available for download from IBM Fix Central. They are also available as service packs that are included with WebSphere Application Server Hypervisor Edition, and generic fixes that can be made and packaged by users of WebSphere CloudBurst.

## Generic fixes

- Generic fixes are packaged by the creator
  - Create the script to be run, can be any script supported by virtual system
    - For example a Linux® shell script
  - Create service.xml file
    - Describes execution of the script and targeted virtual systems
  - Zip contents into archive file
  - Create an emergency fix based on your generic fix archive in the WebSphere CloudBurst catalog

Generic fixes include a script package that is created by the administrators of WebSphere CloudBurst. A service.xml file is included in the generic fix to include extra information about the fix. This information includes WebSphere Application Server image prerequisites, the command that should be run to invoke the script, and the type of script. The script file and accompanying service.xml file are packaged into an archive, which is then added to WebSphere CloudBurst as an available fix package. The scripts included in a generic fix can perform any action that can be scripted and run on the WebSphere Hypervisor Edition virtual systems that are deployed by WebSphere CloudBurst. The generic fix that is packaged can also be any kind of operating system script to be run, or any kind of maintenance activities related to the operating system or WebSphere Application server that can be scripted. Complete instructions on creating a generic fix are available in the WebSphere CloudBurst information center.

## ***Approaches to applying emergency fixes***

This section will discuss applying service to your WebSphere Application Server environments using WebSphere CloudBurst.

## Approaches to applying maintenance

- There are three approaches
  - Redeploy virtual systems with updated images
    - Recommended approach
    - IBM provides updated images in this case
  - Apply fix packs and emergency fixes directly to virtual system
  - Apply fixes directly to virtual systems without WebSphere CloudBurst
    - Not recommended, but possible using existing fix automation tools

There are three ways in which you can apply maintenance fixes to your WebSphere Application Server environments that have been deployed using WebSphere CloudBurst. The first, and recommended approach, is to redeploy the virtual system with an updated image that includes the fix packs you want applied. These updated images are made available by IBM on a regular basis as fix packs are released. The second approach is to apply fix packs and emergency fixes directly to the virtual system, using the WebSphere CloudBurst fix packs feature. The third way you can apply fixes is to apply them directly to the virtual system bypassing WebSphere CloudBurst altogether and apply them as you can to a stand-alone version of WebSphere Application Server. This presentation does not discuss this third approach as it is not recommended.

## ***Creating emergency fixes***

This section will discuss the creation of emergency fixes using WebSphere CloudBurst.

## Ways to create an emergency fix

- Create an emergency fix by importing an iFix, service pack, or generic fix archive
  - Import the iFix, service pack, or archive into the WebSphere CloudBurst catalog
- Emergency fixes can be imported into the catalog using the command-line tools
- Service packs are made available by importing a new image OVF

You can use the WebSphere CloudBurst administrative console to import an iFix or generic emergency fix into the catalog. You can also import an emergency fix using the WebSphere CloudBurst command-line tools. When you import a new image OVF file, the service pack for the new image version is made available when you apply maintenance to a virtual system to an earlier version of WebSphere Application Server Hypervisor Edition. The service pack is not added to the catalog in the emergency fix page, but is available when applying maintenance to a deployed virtual system that has a version lower than the service pack level. For example, you have deployed a virtual system with WebSphere Application Server version 7.0.0.5; you can choose to apply maintenance to that virtual system, and provided you have imported the new version 7.0.0.7 OVF file into the catalog, you can apply the 7.0.0.7 service pack to your virtual system.

## Emergency fix location

- Emergency fixes are located under the “Catalog” tab



An emergency fix allows you to apply a WebSphere Application Server or virtual system operating system fix directly against the virtual system. You can access the emergency fixes page of the WebSphere CloudBurst administrative console under the catalog tab.

## Adding an emergency fix

- **Catalog > Emergency Fixes**
- The name of the emergency fix and a short description are required to start the process of creating an emergency fix

The screenshot shows the WebSphere CloudBurst administrative console. The main window is titled 'WebSphere CloudBurst' and has a navigation bar with 'Welcome', 'Virtual Systems', 'Patterns', 'Catalog', 'Cloud', 'Profile', and 'Log'. The 'Catalog' menu is selected. The main content area is titled 'Emergency Fixes' and has a search bar and a list of fixes, including 'Fix 20414'. A dialog box is open in the foreground, titled 'Describe the emergency fix you want to load into the catalog.' It contains two input fields: 'Emergency fix name:' with the placeholder text 'A unique emergency fix name' and 'Description:' with the text 'compare'. There are 'OK' and 'Cancel' buttons at the bottom of the dialog.

You can create a new emergency fix and add it to the WebSphere CloudBurst catalog. You do this on the emergency fix page of the administrative console. When you navigate to the emergency fix page, click the plus icon to add a new emergency fix to the catalog. When you add the emergency fix, you must supply a unique name for it. You can also provide a description for your emergency fix.

## Emergency fix attributes

- Emergency fix attributes view
  - File containing the fix
  - Give other users access to this fix
  - Set the severity level of this fix
  - Set which images this fix can be applied against

**Fix created on Linux**

Description: [None provided](#)

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Emergency fix files:

The script package is in test.zip. [Download](#)

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Access granted to: [Administrator \[owner\]](#)

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Severity:

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Applicable to: [myTestSingleServer \[remove\]](#)

[WebSphere Application Server 7.0.0.7 \[remove\]](#)

[Extended\\_Virtual\\_Image \[remove\]](#)

Before an emergency fix can be applied against a virtual system it needs to be uploaded to the catalog. This is done on the emergency fix page of the catalog tab in the WebSphere CloudBurst administrative console. You upload the fix file, specify which virtual images the fix is applicable to, set the severity of the fix, and grant access to WebSphere CloudBurst users and groups.

## ***Applying service to virtual systems***

This section will discuss applying services to virtual systems managed by WebSphere CloudBurst.

## Applying service to virtual systems

Describe your service request.

- Schedule service
- Select service level or fixes
  - Move to service level
  - Apply emergency fixes
    - 7007 fix

**ndTestSingleServer**

Created on:	Jan 18, 2010 9:56:45 PM
From pattern:	WebSphere single server
Current status:	<input checked="" type="checkbox"/> The virtual system has been deployed and is ready to use
Updated on:	Jan 18, 2010 10:03:00 PM

14      Emergency fixes      © 2010 IBM Corporation

To apply a fix pack using WebSphere CloudBurst, you will first locate the virtual system that you want to update. You choose the virtual system you want to apply the fix pack to on the Virtual Systems page of the administrative console. After selecting the virtual system link on the left side of the page, you will click the “Apply Service” button on the top right. This will bring up a window where you can choose to apply a service pack or emergency fix to your virtual system. If you choose to apply an emergency fix then you will need to choose the specific fix you want applied. The specific screen captures in this slide show the application of a V7.0.0.7 emergency fix. You can only apply an emergency fix to a virtual system once. If you try to apply it to the same virtual system again, the emergency fix is not displayed in the apply service dialog to be selected and applied. If you are applying maintenance to a virtual system and there is a newer updated image OVF file in the catalog, you can select to move your system to the new service level. For example, you are applying maintenance to a virtual system with WebSphere Application Server Hypervisor Edition 7.0.0.5. If you have imported a version 7.0.0.7 OVF image into the catalog, you will have the option to apply the new service pack to your deployed version 7.0.0.5 virtual system. This applies only to maintenance of a virtual system, and not to migration between different major versions of WebSphere Application Server Hypervisor Edition.

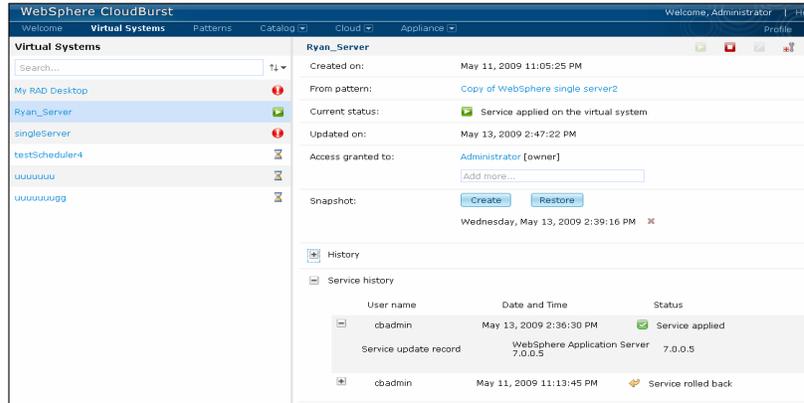
## Process flow of applying service

- The application of service packs and emergency fixes both follow the same process
  - WebSphere CloudBurst will
    - Stop WebSphere Application Server services
    - Take snapshot
    - Apply service packs and emergency fixes using Update Installer

When applying an emergency fix or a fix pack to a virtual system, WebSphere CloudBurst follows a specific process. First, all services related to the virtual system are stopped. Next a snapshot of the virtual system is taken. This allows you to back out your service later if you want to remove the applied maintenance. Next, the fix pack or emergency fix is applied to the virtual system. Update Installer is included in each virtual system deployment, and it is invoked to apply the emergency fixes including generic fixes.

## Service history maintained

- Service history maintained
  - Allows you to back out service upgrade



WebSphere CloudBurst maintains the service history of fixes applied to your virtual systems. From the service history subsection of the Virtual Systems details page, you can view the service updates that have been applied. Any time an emergency fix is applied, the service history for the virtual system is updated. This keeps a record of all the fixes that have been applied to this virtual system. If you restore your virtual system from the snapshot image or from a backup image, then you will have a clear record on the service level of the restored virtual system. You are able to roll back maintenance that has been applied to your virtual systems. To roll back the maintenance, you must restore the snapshot that is automatically taken when you apply the fix pack to the virtual system. You can only back out the latest applied maintenance using the restore from snapshot feature.

## ***Summary***

This section will summarize the emergency fix capabilities of WebSphere CloudBurst.

## Summary

- IFixes and generic fixes
- Redeploy virtual systems with updated images
- Apply service packs and emergency fixes directly to virtual system using WebSphere CloudBurst
- Fix history is maintained
- Roll back applied fixes

In this presentation you have seen that you can use the WebSphere CloudBurst features to apply fixes to managed virtual systems. The recommended approach when applying fixes to the versions of WebSphere Application Server that are deployed is to redeploy the virtual systems using the new updated versions of WebSphere Application Server images provided by IBM. For example, if you have WebSphere Application Server version 7.0.0.5 deployed and you want to upgrade it to version 7.0.0.7, you should deploy the new WebSphere Application Server 7.0.0.7 image. You can also choose to apply individual IFix maintenance packages to your deployed virtual systems. You can create generic fixes using scripts to perform any action that you want to perform and apply them to your virtual systems using the emergency fix features of WebSphere CloudBurst. WebSphere CloudBurst will maintain a history of the fixes that you have applied to your virtual systems, and you can roll them back at any time.



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