



IBM Software Group

# IBM WebSphere® CloudBurst

## *Command line interface*



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This presentation covers CloudBurst's command line interface.

## Agenda

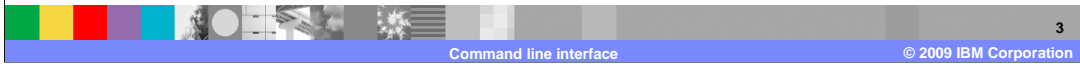
- Command line interface download and installation
- Command line interface syntax
- Command line interface examples



This presentation will cover the download and installation of the command line interface environment, command syntax and examples.

## Section

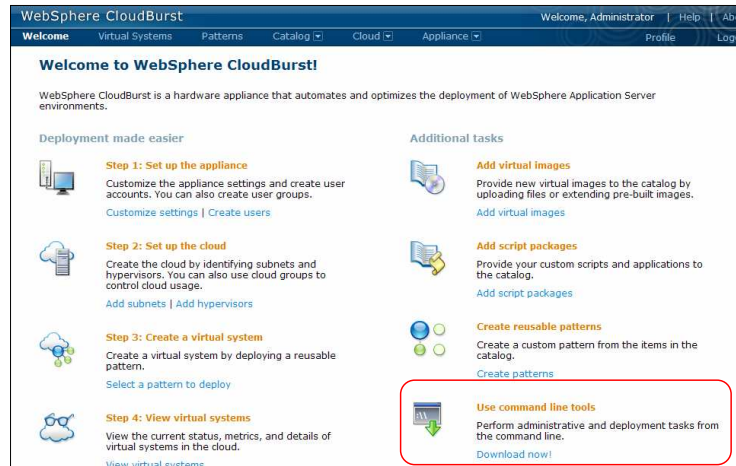
### ***Command line interface download and installation***



The next section will discuss the command line interface download and installation.

## Download command line interface

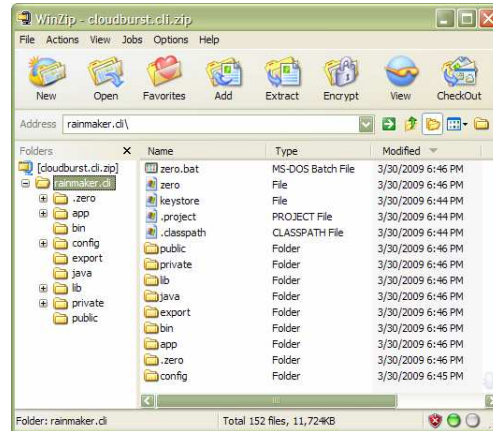
- Download the command line interface environment to your local system



Before you are able to interact with CloudBurst using the command line interface you will need to download the environment to your local system. It will come as a .zip file. The download link is located in the main welcome page under the “Use command line tools” section.

## Unzip command line interface

- Command line interface download is packaged as “cloudburst.cli.zip”
- Unzip into local file system
- The command line interface package contains both Windows® and Linux® utilities



The command line interface environment will come packaged in the .zip format. The actual file name is “cloudburst.cli.zip”. This single .zip file contains both the Windows and Linux versions of command line interface environment.

Unzip this package into a directory of your choosing. This will produce a directory called “cloudburst.cli”. The “cloudburst.cli” directory is where you will interact with CloudBurst by way of the command line interface.

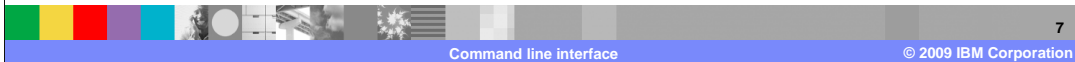
## Section

# ***Command line interface syntax***

This section will go through the various modes you can interact with the command line interface and the general syntax of the commands and data.

## Command line interface operational modes

- Execute in interactive mode
  - ▶ `cloudburst -h <host> -u <user> -p <password>`
- Execute in single command mode
  - ▶ `cloudburst -h <host> -u <user> -p <password> -c "<command>"`
- Execute in batch mode
  - ▶ `cloudburst -h <host> -u <user> -p <password> -f "<filepath>"`



There are three different ways in which you can interact with the command line interface. It has a interactive mode, single command mode and a batch mode.

Interactive mode requires you to start the interpreter first and then you are free to enter commands. This mode supports command history and a subset of the emacs commands.

Single command mode allows you to run a single command.

Batch mode allows you to pass in a file containing one or more commands.

## Command line interface syntax

- Command line interface commands are written in Jython

```
cloudburst.<object_type>[.<command[<data_or_file>]>]
```

- Data passed into the commands are in the JSON format
  - ▶ Passed in directly at command line
  - ▶ Placed in file and file location is passed into command

```
[  
  {  
    "name": "value",  
    ...  
  }  
]
```

The command line interface uses Jython syntax to construct the commands and uses JSON syntax to construct the data objects passed to the commands.

If you are not familiar with JSON you can either read up on it or just keep a few things in mind when constructing your JSON objects. JSON objects are created from name/value pairs. Both the name and value should be contained within quotation marks and separated by a colon. Each name/value pair should be separated by a comma. And finally all name/value pairs should be contained within a set of square and wiggly brackets. JSON data can be specified directly on the command line or placed in a file and the file location is passed to the command.



## Section

# *Command line interface examples*



This section contains a set of examples. These examples are run against the hypervisor object, but the same syntax and commands can be applied to any object type. This section by no means covers every command or syntax format, but it should provide you with enough information to increase your comfort level with the command line interface.

## Creating a hypervisor manually

- Create a hypervisor
  - ▶ `cloudburst.hypervisors.create(<DATA_OR_FILE_PATH>)`

```
>>> cloudburst.hypervisors.create(['address':'venus01.rainmaker.raleigh.ibm.com','userid':'root','t
ype':'ESX','name':'Venus01','password':'password'])
[{"address": "https://venus01.rainmaker.raleigh.ibm.com/sdk",
"certificate": (nested object),
"certified": "I",
"cloud": None,
"created": "Tue Mar 31 18:27:10 2009",
"currentmessage": "RM03106",
"currentmessage_text": "Maintenance mode (must add to a cloud group to start)",
"currentstatus": "RM01025",
"currentstatus_text": "Maintenance mode",
"desiredstatus": "RM01025",
"desiredstatus_text": "Maintenance mode",
"id": 2,
"name": "Venus01",
"networks": (nested object),
"password": "123854203095921",
"storage": (nested object),
"type": "ESX",
"updated": "Tue Mar 31 18:27:10 2009",
"userid": "root"}]
```

There are two ways to create each object type in CloudBurst. You can create using the manual method or using the CloudBurst wizard. The example in this slide is using the manual method. This approach requires that you pass the JSON data in at the command line directly or pass in a file that contains the JSON data.

## Creating a hypervisor using wizard

- Create a hypervisor using the CloudBurst wizard
  - cloudburst.hypervisors.create(cloudburst.wizard)
  - Will be prompted for each attribute

```
>>> cloudburst.hypervisors.create(cloudburst.wizard)
Enter ? for help.
name: Venus01
type: ESX
address: https://venus01.rainanker.raleigh.ibm.com/sdk
userid: root
password: password
{
  "address": "https://venus01.rainanker.raleigh.ibm.com/sdk",
  "certificate": <nested object>,
  "certified": "I",
  "cloud": None,
  "created": Tue Mar 31 18:32:05 2009,
  "currentmessage": "RM0106",
  "currentmessage_text": "Maintenance mode (must add to a cloud group to start)",
  "currentstatus": "RM01025",
  "currentstatus_text": "Maintenance mode",
  "desiredstatus": "RM01025",
  "desiredstatus_text": "Maintenance mode",
  "id": 3,
  "name": "Venus01",
  "networks": <nested object>,
  "password": "123854232431522",
  "storage": <nested object>,
  "type": "ESX",
  "updated": Tue Mar 31 18:32:05 2009,
  "userid": "root"
}
```

11

Command line interface

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This slide shows an example of using the CloudBurst wizard. When using the wizard you are not required to pass in the data in JSON format instead you are prompted for each piece of required data. Each object type can be created using the manual or wizard approach.

## Listing hypervisors

- List a specific hypervisor by name
  - ▶ `cloudburst.hypervisors["HV-aimcp059"]`
- List all hypervisors
  - ▶ `cloudburst.hypervisors`

```
>>> cloudburst.hypervisors
{
  <
    "address": "https://aimcp059.austin.ibm.com/sdk",
    "certificate": (nested object),
    "certified": "I",
    "cloud": (nested object),
    "created": Tue Mar 31 10:58:35 2009,
    "currentmessage": "RM03103",
    "currentmessage_text": "Started (move to maintenance mode to make changes)",
    "currentstatus": "RM01006",
    "currentstatus_text": "Started",
    "desiredstatus": "RM01006",
    "desiredstatus_text": "Started",
    "id": 1,
    "name": "HV-aimcp059",
    "networks": (nested object),
    "password": "12385151154670",
    "storage": (nested object),
    "type": "ESX",
    "updated": Tue Mar 31 11:03:52 2009,
    "userid": "root"
  }
  <
    "address": "https://venus01.rainanker.raleigh.ibm.com/sdk",
    "certificate": (nested object),
    "certified": "I",
    "cloud": None,
    "created": Tue Mar 31 18:32:05 2009,
```

You can either list all objects by type or list a specific object using the name of the object. The screen capture in this slide shows the listing of all hypervisors using the `cloudburst.hypervisors` command.

## Modifying and deleting hypervisors

- Modifying an attribute is two steps
  - ▶ Get a handle to the object
  - ▶ Modify the attribute

```
>>> hyper=cloudburst.hypervisors["Venus01"]  
>>> hyper.name="New venus01"
```

- Delete an object by object ID

```
>>> cloudburst.hypervisors.delete(3)
```



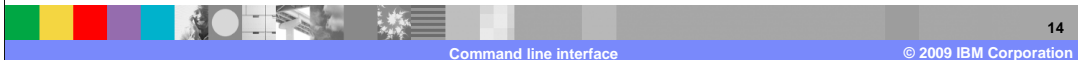
Modifying an attribute of an object and deleting an object is consistent across object types.

Modifying an attribute of an object is a two step process. The first step is to get a handle to the object. The second step is to modify the attribute.

Deleting an object is done by calling the delete method on the object type and passing in the ID of the object you want to delete.

## Section

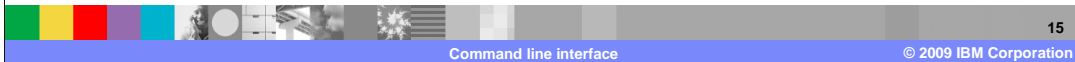
# *Summary*



The next section provides a summary of this presentation.

## Summary

- There are three ways to interact with CloudBurst
  - ▶ Administrative console
  - ▶ Rest APIs
  - ▶ Command line interface
- Setting up an operational command line interface environment is a five minute activity
  - ▶ Download
  - ▶ Unzip
- The CloudBurst command line interface syntax is simple yet flexible
- This presentation listed some but not all of the available commands



There are three ways to interact with the CloudBurst appliance and they are the administrative console, Rest APIs and the command line interface. If you are looking to automate certain tasks the command line interface can be an option.

Getting an operational command line interface environment can take as little as five minutes which is the amount of time it takes to download and extract the package.

This presentation went through just a subset of the available commands and syntax but it should have demonstrated to you just how flexible and easy it is to use.

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