



# CloudBurst 1.2 Technical Demonstration



## Transcript

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## Introduction

The IBM CloudBurst Family is a line of pre-integrated service delivery platforms including hardware, storage, networking, virtualization, and service management software, which will enable you to create a private cloud environment.

It's a Purpose-Built Infrastructure that ...

- is built on proven technologies deployed at multiple customer sites,
- includes prepackaged hardware & software with a robust service management system,
- provides Self-service, Zero-touch administration,
- features a new embedded automated service management layer,
- provides for "lights-out" automated operation, and
- includes a reusable image library for rapid deployment

This demonstration shows how easy it is to administer and provision your cloud environment with IBM CloudBurst's self-service user interface.

## Demonstration

We'll start by logging in to Cloudburst as a typical end user. Once we're in, we see a streamlined self-service user interface. Cloudburst uses Tivoli Service Automation Manager to deliver the self service request and provisioning capabilities.

On the right hand side of the screen, you'll see the status of previous requests and projects. And on the left hand side, you'll see a menu of available actions. We need to provision a couple of new servers to support a front office application so we choose to create a new project using VMware servers. A project is a group of computing resources, virtual machines for example, that are used for a common purpose.

Creating a project is simply a matter of filling out this form. We'll start by giving the project a name and description. Next, we select the Team that needs access to the project resources. We'll choose our department, which is 815. Cloudburst uses teams not only for access control but also for tracking accounting and usage, which we'll see a bit later.

The next thing to specify is the date range for the project. This controls when the servers are provisioned and de-provisioned. We'll leave the start date alone but we could easily schedule the project to start in the future. For the end date, we have a few choices. If we select the indefinite option, then this project will be provisioned and remain in existence until we specifically cancel the project. We could also specify a fixed duration, such as two months. In this case, we'll just pick an end date from the pop-up calendar.

At the bottom of the form, we specify what type of server we need. In this setup there are 3 pre-configured server types to choose from. We'll choose the Gold windows 2003 server system because it matches the CPU, memory and storage specifications that we need. If none of the pre-configured server specifications meet our needs, we can fine tune the number of CPUs... the amount of memory... and the amount of disk space.

Finally, we specify that we need 2 servers for this project.

As we make our selections for server type and quantity, memory, CPU and disk, the CloudBurst reservation system dynamically updates the available resources to ensure that the request can be fulfilled.

Now that we've picked a time frame and the resources we need, we can check this box to install the Tivoli Monitoring agent on our servers. This enables us to easily add monitoring capabilities to our virtual servers so we can gather monitoring data from each virtual machine.

So, now that we have everything filled in, we'll hit the OK button to submit the request. CloudBurst creates the project and in the next few seconds we'll see the new request show up on our request list. Wait a few seconds more and we'll see the request move into a "waiting for approval" state. Cloudburst is currently configured to require an approval for all new projects but this setting is customizable if auto-approval is desired.

At this point we're waiting for an administrator to approve this request. So we'll log off, and log back in as a cloud administrator to see what the administrative interface looks like.

You'll notice that the cloud administrator has an additional view on his home page called "My Approvals." This is where we'll find the approval request for the project we just created. Clicking on the request brings up the details of the project. These details show who requested what resource and for how long. After reviewing the details, we choose to approve the request... (pause)... and the request status changes to "Queued." Behind the scenes, the Tivoli Process Automation Engine gets to work provisioning the servers.

While we're waiting for the servers to be provisioned, let's look at a few of the other Cloudburst capabilities.

If we go into Virtual server management, we can see that cloudburst has the capability to provision KVM servers as well as VMware servers. We also have the capability to provision servers that leverage WebSphere cloudburst patterns. A pattern is a WebSphere application server configuration that defines topology, settings, and applications.

The cloud administrator can also manage the image library. The Register Image area is where the administrator would go to make new images available through Cloudburst. The image definition references a pre-discovered image and defines minimum and recommended settings for CPU, memory and disk space.

Another powerful capability of CloudBurst is 1.2 takes advantage of integration with IBM Tivoli Usage and Accounting Manager. To show you how this works, we'll bring up the teams definition.

If we look at the "department 815" team, we'll see that it's linked with project account dept0815. This account code is used by Tivoli Usage and Accounting Manager (or "TUAM") when it's collecting resource usage. With this information, TUAM is able to create detailed utilization and chargeback reports. This sample report shows utilized server hours, CPU hours, and memory usage per hour. Each resource is assigned a cost rate and the total charge for this project is about \$1,152. Billing rates and report structure are all customizable in Tivoli Usage and Accounting Manager.

Our servers are probably almost provisioned by now so let's log out and log back in as our end user.

Notice that our Front office web app project now shows up under "My projects" and is operational. When we click on the project we get a panel with the details of the project and a list of the provisioned servers.

Recall that in our request, we specified that the Tivoli monitoring agent be installed on our servers. We can now see that the monitoring agent is reporting the memory, CPU, and Disk utilization.

Above the server list is a row of buttons that allow us to perform a range of operations on our servers. We have full control – to stop ... start ... or restart our servers. The button on the far right resets the server password and the buttons on the left can restore a server image or create a new server image from the present state .... and, if we no longer need a server in our project, we can remove it.

Our servers are provisioned and are ready to be put to work...

## **Conclusion**

In this demonstration, we have seen how IBM CloudBurst can easily administer and provision your cloud environment with an easy-to-use self-service user interface.