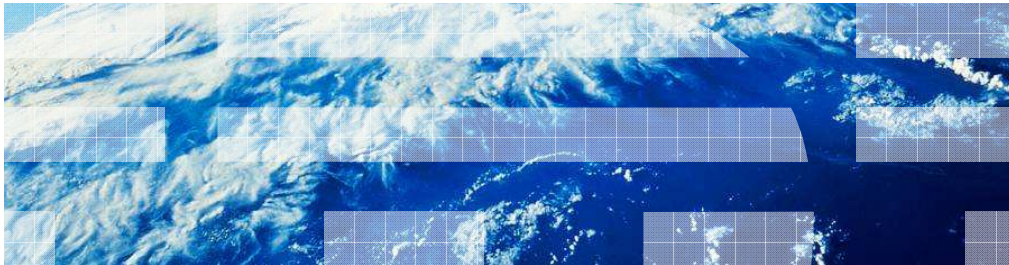


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# IBM WebSphere CloudBurst Appliance

## User permissions



This presentation provides an overview of the permissions that can be assigned to a user or group for V1.1 of the IBM WebSphere® CloudBurst™ Appliance.

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Understanding permissions and object access is critical to understanding user security in WebSphere CloudBurst.

This presentation starts with an overview of user permissions. The next section will focus on detailed permissions information and permission management for users and groups. Finally, how to grant access at the data level through fine grained access control is covered.

## ***Overview***

This section of the presentation provides an overview of the user permissions available in the WebSphere CloudBurst Appliance.

## Permissions overview

- Permissions grant a user or group of users access rights to specific features of WebSphere CloudBurst
- There are six permissions
  - Deploy patterns in the cloud
  - Create new patterns
  - Create new catalog content
  - Cloud administration
  - Appliance administration
  - License tracking

| Permissions:                        |                              |
|-------------------------------------|------------------------------|
| <input checked="" type="checkbox"/> | Deploy patterns in the cloud |
| <input type="checkbox"/>            | Create new patterns          |
| <input type="checkbox"/>            | Create new catalog content   |
| <input type="checkbox"/>            | Cloud administration         |
| <input type="checkbox"/>            | Appliance administration     |
| <input type="checkbox"/>            | License tracking             |

Just as you wouldn't want everyone to be able to sign on to the operating system as the root user, you wouldn't want everyone to be able to sign on to WebSphere CloudBurst with super user type authorities. You can separate roles by using the permissions to control the level of access for WebSphere CloudBurst users. Permissions govern each category of administrative tasks. What this means is that if you don't have the particular permission required, you are not allowed to perform the administrative tasks associated with that permission. Additionally, the content or viewable panels that are related to that permission will not be present in the WebSphere CloudBurst Web console.

There are a total of six permissions. Every user is granted "Deploy patterns in the cloud" permission by default. You can not remove this permission. It allows you to deploy existing patterns into the WebSphere cloud, but you can not add, remove or modify any items. The "Create new patterns" permission allows you to create and work with patterns. The "Create new catalog content" permission allows you to create and work with existing catalog content, such as virtual images, script packages, and emergency fixes. The "Cloud administration" permission allows you to configure cloud resources, such as IP Groups and hypervisors. The "Appliance administration" permission allows you to configure the appliance. In V1.1 of the IBM WebSphere CloudBurst Appliance, when you select the "Appliance administration" permission, all of the other permissions check boxes are selected automatically. The "License Tracking" permission allows the user to run licensing specific scripts or agents to gather data.

## ***Permissions***

This section of the presentation focuses on the “License Tracking” permission and the administration of user and group permissions.

## License tracking permission

- Pre-requisite: Configure the IBM License Metric Tool (ILMT) server to connect to the WebSphere CloudBurst Appliance
- The license tracking permission allows the user to invoke ILMT related REST API calls to discover and monitor the virtual machines in the WebSphere CloudBurst environment
- The specified user does not gain any additional administrative access to the appliance
- Permission must be manually added by an appliance administrator

To use the license tracking features of WebSphere CloudBurst, you must first configure the IBM License Metric Tool to connect to your WebSphere CloudBurst Appliance. Assigning the license tracking permission to a user will then allow the user to invoke IBM License Metric Tool related REST API calls. The license tracking permission is designed to give the user the ability to run specified licensing specific scripts or agents to discover and monitor virtual machines in the WebSphere CloudBurst environment, while limiting the ability to perform other administrative tasks on the appliance. This permission is not assigned by default and must be manually added by an appliance administrator after the user is created or registered.

You should not assign the license tracking permission to normal users because they might be able to use APIs to discover information about virtual machines that they are not entitled to. You should create a user with only license tracking permissions and then configure the ILMT with that user ID and password. Then only the ILMT server or anyone with access to the ILMT configuration is able to retrieve the licensing information about the WebSphere CloudBurst environment without gaining administrative access to WebSphere CloudBurst Appliance.

## Group-level permissions

- When a user is added to a group, the user's permissions are set to the group permissions
  - Any permissions set before adding the user to the group are lost
  - Modifications to group-level permissions apply to all members
- After being added to a group, permissions can no longer be changed at the user level
  - Does not include the **Everyone** group
- If included in multiple groups, a user has the combined permissions for all assigned groups
- A user will retain the permissions set from the last group it was assigned to if the user is removed from all groups

When a user is added to a group, the users' permissions are set at the group level. If any permissions were set before adding a user to a group, they are reset to the group permissions. WebSphere CloudBurst does not allow you to modify the user permissions from the User Panel if the user belongs to a group. The Everyone group does not count. When a user is included in multiple groups, his permissions set will reflect the combined permissions for all assigned groups.

## User in multiple user groups

The screenshot displays three panels illustrating user permissions:

- Cloud Administrators:**
  - Description: Cloud Administrators
  - Created on: Jan 19, 2010 5:40:54 AM
  - Updated on: Jan 19, 2010 5:40:54 AM
  - Group members: user1 [remove], user2 [remove], Add more...
  - Permissions:
    - Deploy patterns in the cloud
    - Create new patterns
    - Create new catalog content
    - Cloud administration
    - Appliance administration
    - License tracking
- Pattern Permissions Group:**
  - Description: Pattern Permissions Group
  - Created on: Jan 19, 2010 5:42:45 AM
  - Updated on: Jan 19, 2010 5:42:45 AM
  - Group members: user1 [remove], user3 [remove], Add more...
  - Permissions:
    - Deploy patterns in the cloud
    - Create new patterns
    - Create new catalog content
    - Cloud administration
    - Appliance administration
    - License tracking
- user1:**
  - User groups: Everyone, Cloud Administrators [remove], Pattern Permissions Group [remove], Add more...
  - Authorized patterns: (none)
  - Authorized cloud groups: (none)
  - In the cloud now: (none)
  - Permissions:
    - Deploy patterns in the cloud
    - Create new patterns
    - Create new catalog content
    - Cloud administration
    - Appliance administration
    - License tracking

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User permissions

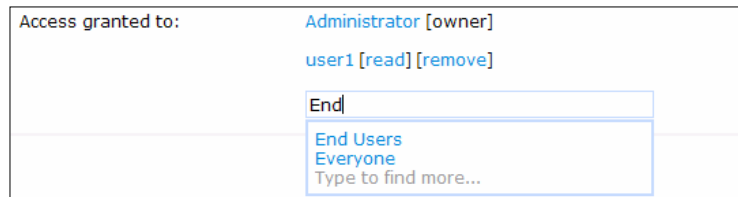
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When a user is included in multiple groups, his or her permissions set will reflect the combined permissions for all assigned groups. For example, if user1 were assigned to a group that set the “Cloud administration” permission and to another group that set the “Create new patterns” permission, then user1 is a cloud administrator and will be able to create new patterns.



## Cloud group access restrictions

- Non-administrative users can only deploy to a cloud group if they have read permission to the cloud group
  - The cloud group access permissions can be set from **Cloud > Cloud Groups > Access granted to** section



- When upgrading from 1.0:
  - The superuser cbadmin is set as the owner of all existing cloud groups
  - The **Everyone** group is given read permission to all existing cloud groups

You might not want all of the users on your appliance to be able to deploy to all virtual systems in your environment. For example, you may want to restrict access to certain virtual systems by department, so each group within your organization has access to a unique pool of resources. Or you may want to restrict access to your production virtual systems. Regardless of your motive, you can restrict which non-administrative users have access to a particular set of virtual systems by granting users or user groups access to different cloud groups in your environment. For example, you can have one cloud group that represents your production systems and another cloud group that represents your development and test environment with a different set of users permitted to access each.

When talking about cloud group permissions, only cloud or appliance administrators can add, edit or delete hypervisors from the cloud group. However, you can set cloud group access permissions to permit some non-administrative users access to deploy patterns to cloud groups. To set the cloud group access permissions, navigate to the “Cloud” menu from the top menu bar, select “Cloud Groups” and then permissions can be set from the “Access granted to:” section of the “Cloud Groups” panel. The users you add to this section are able to deploy patterns to a Cloud Group, even if they are non-administrative users.

If you are migrating your appliance from WebSphere CloudBurst V1.0 to V1.1, by default the cbadmin user is set as the owner of all existing cloud groups. Also, all users in the “Everyone” group are given read permission to all existing cloud groups. Therefore, you should login as cbadmin and set any needed cloud group access restrictions after performing the appliance upgrade.

## ***Fine grained access control***

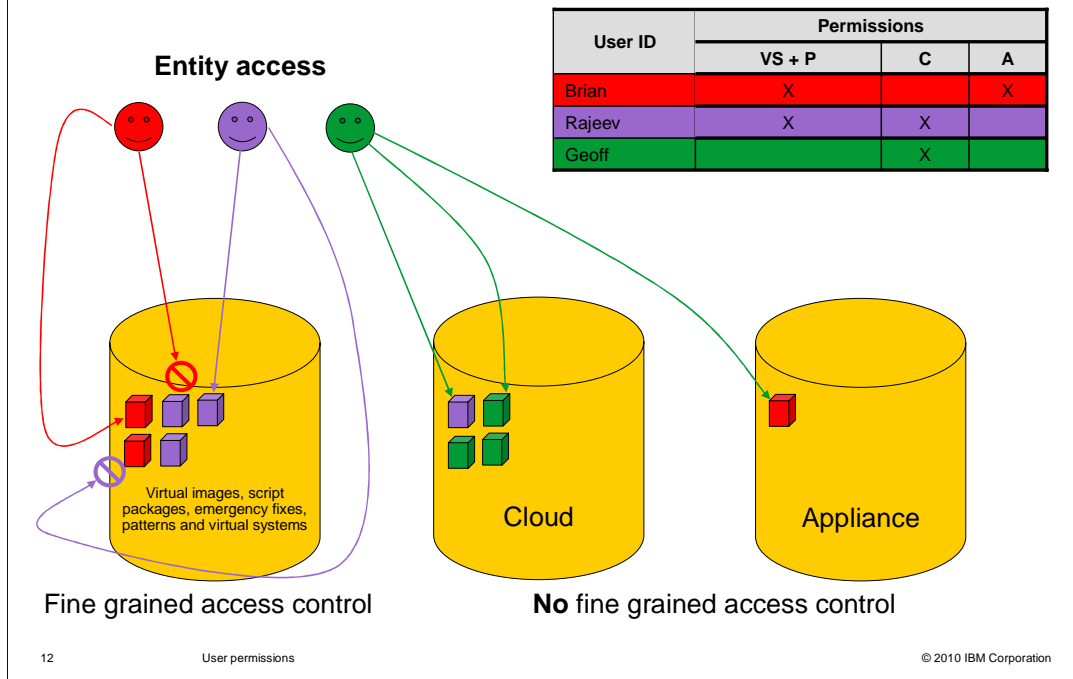
This section of the presentation focuses on fined grained access control.

## Fine-grained access control

- Permissions provide administrative access to features, but not to all WebSphere objects
- Explicit access must be granted to work with many of the WebSphere CloudBurst objects, unless you created the object or are assigned the “Cloud administration” permission
- Fine-grained access control is available for:
  - Virtual images
  - Script packages
  - Emergency fixes
  - Patterns
  - Virtual systems

While permissions give you administrative access to certain features, you will not likely have access to all the data or WebSphere objects associated with that feature. The additional security mechanism required is called fine-grained access control. You must explicitly be granted access to work with many of the objects that make up your WebSphere CloudBurst environment, unless you created that object or have Cloud administration permission. The following objects are restricted by fine-grained access control; virtual images, script packages, emergency fixes, patterns and virtual systems.

## Permissions and entity access example



This example is provided to help clarify the difference between permissions and fine grained access control. The table above shows the specific permissions for the three users in this example. It shows that Brian created two virtual systems and patterns as defined by the red blocks. The graphic also shows that Rajeev created three virtual systems and patterns defined by the purple blocks. Both Rajeev and Brian can create patterns and virtual systems because they both are assigned the “Deploy patterns in the cloud” and “Create new patterns” permissions.

Now here is where fine grained access control comes into the picture. Even though both Rajeev and Brian have the “Deploy patterns in the cloud” and “Create new patterns” permissions this does not imply that they can view patterns and virtual systems created by someone else. So Rajeev cannot view Brian’s data and Brian cannot view Rajeev’s data. If Rajeev, for example, needed to view or modify Brian’s patterns or virtual systems then Brian would need to specifically grant access to Rajeev.

Section

## ***Summary***

This section is the summary.

## Summary

- Permissions grant a user or group of users access rights to specific features of WebSphere CloudBurst
- Permissions can be set all at once for members of a user group
- Fine-grained access control permits users to access WebSphere CloudBurst objects and data components

User permissions are defined to control the level of access to the WebSphere CloudBurst Appliance and to determine which Web console panels are viewable and modifiable. Permissions can be set for multiple users at once at the group level. To manage the data components of a particular feature, fine grained access control is used. Understanding permissions and object access is critical to understanding user security in WebSphere CloudBurst.



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