

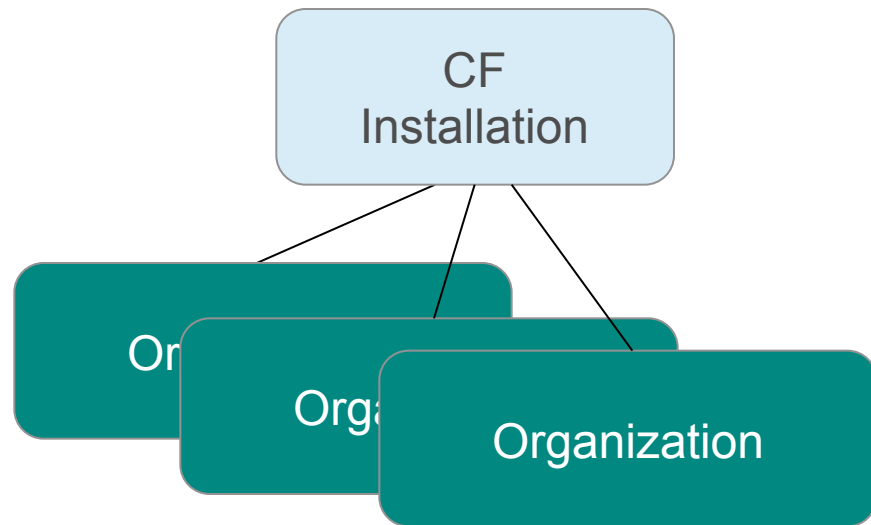
Organizations, Spaces, Users and Roles

Topics

- **Organizations and Spaces**
- Users and Roles

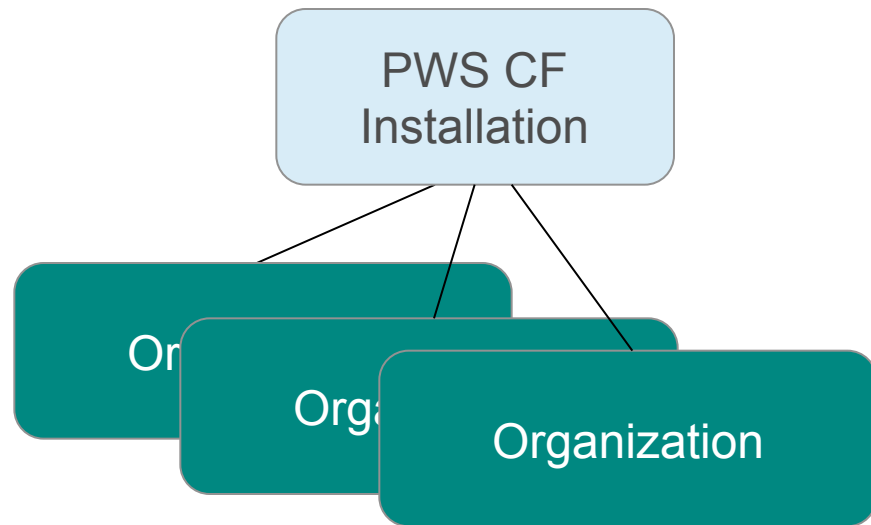
Organizations

- Top-most administrative unit
- Any Cloud Foundry installation can have multiple organizations defined in any way
 - A logical way to organize users and resources
 - Typically a company, department, application suite or large project
- Designed to support many users working collaboratively



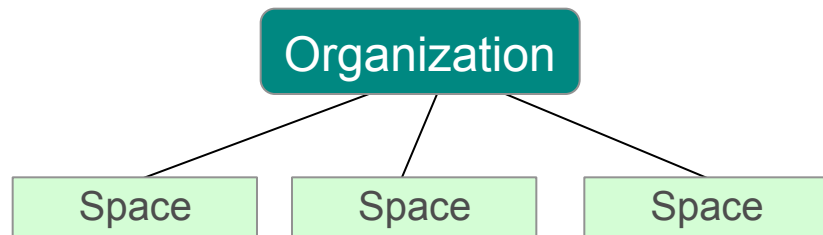
Organizations in PWS

- For Pivotal Web Services (PWS)
 - There is at least one organization per PWS account
 - Many PWS accounts share a single Cloud Foundry installation



Spaces

- Organizations contains multiple spaces
 - Default PWS space: *development*
 - Spaces also can be defined in any way
 - A logical way to organize users and resources
 - For example, *staging* and *production*



Spaces: Applications, Services and Users

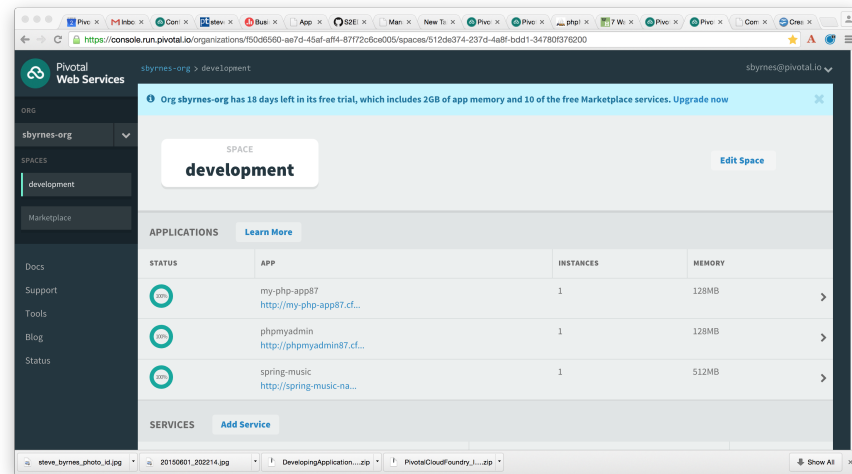
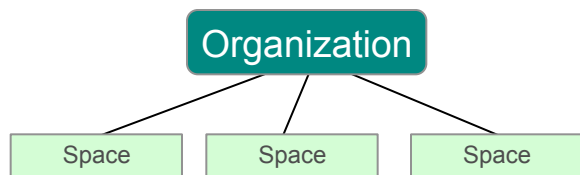
- Applications and services are scoped to a space
- Provides a set of users access for:
 - Application development
 - Functionality and/or performance testing
 - Quality assurance
 - Deployment to production
 - Maintenance

space: *development*

apps: *myApp1, myApp2*
services: *MySQL*
users: *developerA, developerB*

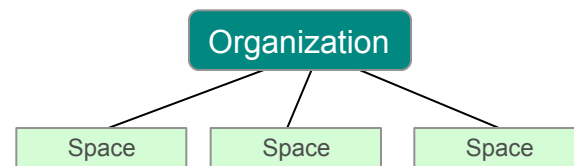
Organizations and Spaces in Apps Manager

- When you log into PWS using a browser, you are using Apps Manager
 - <https://console.run.pivotal.io>
- You can view/modify organizations and spaces in Apps Manager



Organizations and Spaces with the cf CLI

- You can use the cf CLI to work with organizations and spaces
- From **cf help**...



```
PivotalCloudFoundry_ICM — bash — 95x17

ORGS:
  orgs, o          List all orgs
  org              Show org info

  create-org, co   Create an org
  delete-org       Delete an org
  rename-org       Rename an org

SPACES:
  spaces           List all spaces in an org
  space            Show space info

  create-space     Create a space
  delete-space     Delete a space
  rename-space     Rename a space
```


Topics

- Organizations and Spaces
- **Users and Roles**

Users and Roles



- Users are members of an organization
 - Usually they are operators or developers (not application end users)
 - Users are sent an email invite and asked to create an account
- Users have specific organization and space roles
 - Organization roles grant permissions in an organization
 - Space roles grant permissions in a particular space
 - A combination defines the user's overall permissions

Organization Roles



- Organization Manager
 - Can do things like invite/manage users and roles, manage spaces, view application usage
- Organization Auditor
 - View only access to all org and space info, settings, reports
- Billing Manager
 - Sets org spending limits, and works with invoices and payments
 - Only relevant for Cloud Foundry environments deployed with a billing engine

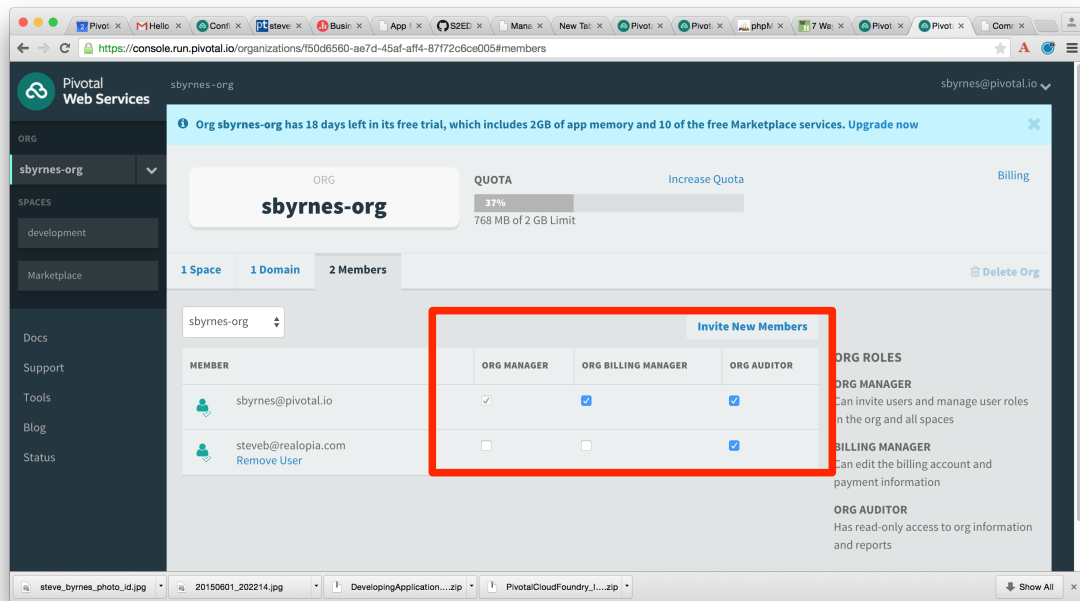
Space Roles



- Space Manager
 - Can invite/manage users, enable features for a given space
 - Can manage applications and services in a space
- Space Developer
 - Can create, delete, manage applications and services, full access to all usage reports and logs
- Space Auditor
 - View only access to all space information, settings, reports, logs

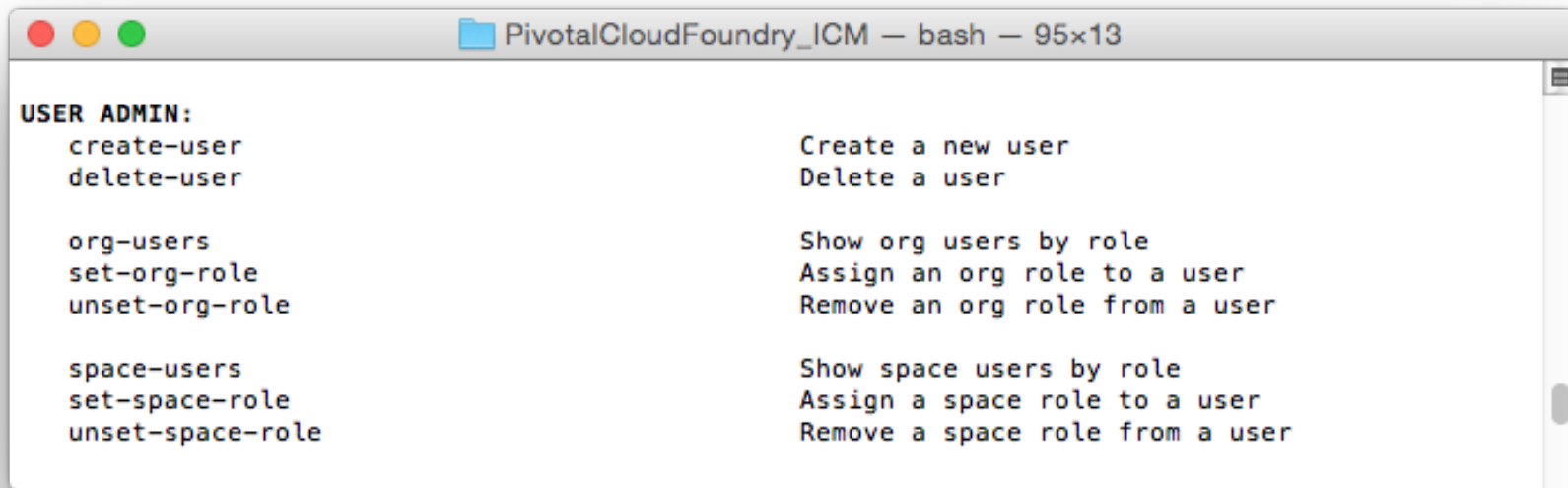
Users and Roles with Apps Manager

- Invite members and assign roles with Apps Manager



Users and Roles with the CLI

- You can use the cf CLI to work with users and roles
- From `cf help`...



A terminal window titled "PivotalCloudFoundry_ICM — bash — 95x13" displays the output of the `cf help` command. The output is organized into sections for user administration, categorized by the scope of the action: USER ADMIN, org-level, and space-level. Each command is listed with its corresponding description.

```
USER ADMIN:
  create-user      Create a new user
  delete-user      Delete a user

org-users
  set-org-role      Assign an org role to a user
  unset-org-role    Remove an org role from a user

space-users
  set-space-role    Assign a space role to a user
  unset-space-role  Remove a space role from a user
```

Roles when Creating a Space

- Creating a space adds new roles for the organization manager in the new space
 - SpaceManager
 - SpaceDeveloper



```
PivotalCloudFoundry_ICM — bash — 124x10
greylag:PivotalCloudFoundry_ICM sbyrnes$ cf create-space "labtest"
Creating space labtest in org sbyrnes-org as sbyrnes@pivotal.io...
OK
Assigning role SpaceManager to user sbyrnes@pivotal.io in org sbyrnes-org / space labtest as sbyrnes@pivotal.io...
OK
Assigning role SpaceDeveloper to user sbyrnes@pivotal.io in org sbyrnes-org / space labtest as sbyrnes@pivotal.io...
OK

TIP: Use 'cf target -o sbyrnes-org -s labtest' to target new space
greylag:PivotalCloudFoundry_ICM sbyrnes$
```

The Administrator User



- Special Administrator user / role defined
 - Defined for the Cloud Foundry installation
 - Separate from users defined at organization / space
- Several `cf` commands restricted to Administrator only
 - Setting organization and space quotas
 - Defining security groups
 - Administering services
 - Adding, modifying and removing user accounts
- Use without the right role, the `cf` CLI returns:

```
Server error, status code: 403, error code: 10003, message: You are not
authorized to perform the requested action
```


Quotas and Plans

Different quota limits (e.g. “small”, “enterprise”, “default”, “runaway”) must be assigned per Organization, and may be assigned per space

Quota defines

- Max Memory
- App Instance Limit
- Total # of Services
- Total # of Routes
- Total Reserved Route Ports



<http://docs.pivotal.io/pivotalcf/1-9/adminguide/quota-plans.html>

Topics

- Organizations and Spaces
- Users and Roles

Lab

Manage organizations and spaces

Manage users and roles