Building Your First BOSH Release
What is BOSH?
Recovery mechanisms
Infrastructure provisioning
Rolling updates
Release engineering
OS updates

More than configuration management
How BOSH works?
name: my-deployment
director_uuid: uuid
deployment info

stemcells

releases

update

instance groups

```yaml
stemcells:
  - alias: ubuntu-latest
    os: ubuntu-trusty
    version: latest
  - alias: centos-patched
    os: centos-7
    version: 3232.2
```
deployment info

stemcells

releases

- name: redis
  version: 12.2.4

- name: web
  version: latest

update

instance groups
update:
  canaries: 1
  max_in_flight: 10
  canary_watch_time: 30000 - 90000
  update_watch_time: 30000 - 90000
deployment info
stemcells
releases
update
instance groups

**update:**
- **canaries:** 1
- **max_in_flight:** 10
- **canary_watch_time:** 30000 - 90000
- **update_watch_time:** 30000 - 90000
deployment info

stemcells

releases

update

instance groups

```
instance_groups:
- name: redis-master
  instances: 1
  stemcell: ubuntu-latest
  jobs:
    - name: redis-server
      release: redis
    vm_type: fast
  networks:
    - name: private
```
Release structure

- sources
- blobs
- packages
- jobs
Job Lifecycle

Existing job:
- drain
- stop
- install

New job:
- post-deploy
- post-start
- start
- pre-start
bosh init release

-> bosh create release

bosh upload release

-> bosh deploy
Configuring Release

Release
./jobs/mysql/spec

```
name: mysql
templates:
  config.tpl: my.cnf
properties:
  username:
    description: Database username
  password:
    description: Database password
  port:
    description: Database port
    default: 3306
```

./jobs/mysql/templates/config.tpl

```
[client]
username = <%= p("username") %>
password = <%= p("password") %>
port = <%= p("port") %>
```

Manifest

```
instance_groups:
  - name: db
    jobs:
      - name: mysql
        release: mysql-release
        properties:
          username: my-username
          password: my-password
```
Linking Services

Web Server Release
./jobs/web/spec

```yaml
name: web
consumes:
  - name: db
    type: mysql
properties:
  - username
  - password
  - port
```

Mysql Release
./jobs/mysql/spec

```yaml
name: mysql
provides:
  - name: db
    type: mysql
properties:
  - username
  - password
  - port
```
Linking Services

Web Server Release

./jobs/web/templates/config.json

```<% db = link("db") %>
{
    "database": {
        "username": <%= db.p("username") %>,
        "password": <%= db.p("password") %>,
        "port": <%= db.p("port") %>,
        "host": <%= db.instances.first.address %>
    }
}
```
Linking Services

Deployment Manifest

```yaml
instance_groups:
  - name: db
    jobs:
      - name: mysql
        release: mysql-release
        provides:
          db: {as: mysql_db}

  - name: web
    jobs:
      - name: web
        release: web-release
        consumes:
          db: {from: mysql_db}
```
Release Collocation

releases:
- {name: mysql-release, version: 1.0}
- {name: web-release, version: 2.0}

instance_groups:
- name: collocated
  jobs:
  - name: mysql
    release: mysql-release
  - name: web
    release: web-release
Addons

bosh update runtime-config runtime.yml

```yaml
releases:
  - {name: strongswan, version: 1.0.0}

addons:
  - name: ipsec
    jobs:
      - name: strongswan
        release: strongswan
```
Versioning

dev releases

0+dev.1
1.0.0+dev.1
1.0.0+dev.2
1.5.0+dev.1
1.5.0+dev.2

final releases

bosh create release --final
bosh finalize release ./path-to-release.tgz
Thanks

mariash.github.io/learn-bosh/
bosh.io

github.com/cloudfoundry/bosh