1   Bosh CheatSheet   VMware

- PDF Link: cheatsheet-bosh-A4.pdf, Category: vmware

- Blog URL: `https://cheatsheet.dennyzhang.com/cheatsheet-bosh-A4`

- Related posts: PKS CheatSheet, Tile CheatSheet, Chef CheatSheet, #denny-cheatsheets

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https://raw.githubusercontent.com/dennyzhang/cheatsheet-bosh-A4/master/bosh.jpg

1.1   Bosh Frequent-Used

Name	Command
List tasks	`bosh tasks -r=10`, `bosh -d $deployment tasks -ar`
Tail latest bosh task	`bosh task -a`, `bosh task -a --debug`
List deployments and vms	`bosh deployments`, `bosh -d $deployment vms`
Bosh get current task output	`bosh -d $deployment task $id --result`
Bosh get task all detail log	`bosh -d $deployment task -a --debug`, `bosh -d $deployment task $id --debug`
Delete a deployment	`bosh delete-deployment -d $deployment`, `bosh delete-deployment -d $deploym`
Upload release	`bosh -n upload-release`, `bosh -n upload-release /tmp/my-release-0.22.0.tgz`
Get deployment manifest yaml	`bosh -d $deployment manifest > my.yaml`
Run bosh deployment from yaml	`bosh -d $deployment deploy my.yaml`
Run errand, and avoid deleting the vms	`bosh -n -d $deployment run-errand $errand_name --keep-alive`
Common Bosh Releases	kubo-release, cfcr-etcd-release, docker-boshrelease, pxc-release, YouTube: BOSH Relea
Reference	Link: terminology, GitHub: cloudfoundry/bosh, CheatSheet: Cloudfoundry Tile & Op
Reference	PKS CheatSheet, Bosh CheatSheet, Tile CheatSheet, UAA CheatSheet

1.2   Bosh Challenges

Name	Comment
Create deployment is very slow	Need to compile packages again, and canary update for all VMs
Errands on non co-located vms	It takes 5+ minutes to spin up and destroy a VM
No repo mechanism for Bosh releases	Duplicate packages are required to make no external dependencies
Support `tail -f`	Personally I don't like the way of `bosh logs`
Retry a failed errand/task	Currently we can do it. But it's a lengthy manual process
More lightweight	Use `containers`, instead of `VMs` to run errands
Support rolling upgrade	Just like `kubectl rollout`
More declarative	End users define requirements via `yaml files`

1.3   Bosh Release

Name	Command
List release	`bosh -n releases`
Release folder	`/var/tempest/releases`
Create a local release	`bosh create-release --tarball=myrelease-0.4.0.tgz`
Export a release	`bosh -d $deployment export-release <my-release>/<release-version> ubuntu-xenial/170.9`
Inspect a release	`bosh inspect-release <my-release>/<release-version>`
Delete release	`bosh -n delete-release <my-release>/<release-version> --force`
Upload release	`bosh -n upload-release`, `bosh -n upload-release /tmp/my-release-0.22.0.tgz`
Reset release	`bosh reset-release` GitHub ticket
Reference	Link: Release creation

1.4 Bosh Basic

Name	Command
bosh	`apt install bosh-cli`, `/var/vcap/bosh/log`
Interpolates variables	`bosh int /tmp/build/4dcXX/pks-lock/metadata --path=/ops_manager/username`
List all bosh deployments	`bosh -n deployments`, `bosh -n deployments --json`
Download log files	`bosh -d $deployment_id logs`
Show deployment manifest	`bosh manifest -d $deployment`
bosh config	`bosh cloud-config`, `bosh configs`
List environment	`bosh env`, `bosh env --json`, `bosh envs`
List all instances	`bosh instances`
Get vms per deployment	`bosh -e $env -d $deployment vms`, `bosh instances`
Cloud consistency check	`bosh cloud-check -d $deployment`
List disks	`bosh disks -o`

1.5 Bosh Manifest

Name	Command
Show bosh manifest	`bosh manifest -d $deployment` Link: manifest

1.6 Bosh VM

Name	Command
List vms	`bosh -d $deployment vms`
List vms with verbose info	`bosh -d $deployment vms --vitals`
Delete a vm	`bosh -d $deployment delete-vm <vm-cid>`
SSH to vm	`bosh -e <env> -d $deployment ssh <vm-name>/<GUID>`
Run SSH commands	`bosh -e <env> -d $deployment ssh <vm-name>/<GUID> -c "sudo cat /etc/hosts"`

https://raw.githubusercontent.com/dennyzhang/cheatsheet-bosh-A4/master/bosh-workflow-intro.jpg

1.7 Bosh Errand

Name	Command
List errands	`bosh errands -d $deployment`
Run errand in a new vm	`bosh -n -d $deployment run-errand <errand_name>` Link: run-errand
Run errand in a new vm with env alive	`bosh -n -d $deployment run-errand <errand_name> --keep-alive`
Run errand in an existing vm	`bosh -n -d $deployment run-errand <errand_name> --instance=worker/instanc`

1.8 Bosh Blob

Name	Command
Reference	Link: Working with Blobs
Configure credential	If you need to upload/download with S3/GCP buckets, make sure `config/private.yml` has been configu
Add local file to blob	`bosh add-blob /tmp/<telegraf:1.7-alpine.tgz> container-images/telegraf:1.7-alpine.tgz`
Upload blobs	`bosh upload-blobs`, make sure `config/private.yml` is correct. blobs.yml will be automatically update
List blob	`bosh blobs`
Remove blob	`bosh remove-blob container-images/cadvisor-v0.31.0.tgz`

1.9   Bosh Task

Name	Command
List recent tasks	`bosh -d $deployment tasks --recent`
List all tasks	`bosh -d $deployment tasks -ar`
Attach to current task	`bosh -d $deployment task -a`
Get task by id	`bosh -d $deployment task $id`
Get task detail msg	`bosh -d $deployment task $id --debug`
Get all logs for a deployment	`bosh -d $deployment logs`
Get log for one vm	`bosh -d $deployment logs $instance_name`
List bosh events	`bosh events`

1.10   Bosh Job - Skeleton

Name	Command
Reference	Example: kubo-release/jobs
provides	Export resources for other bosh releases
consumes	Use resources from other bosh releases
packages	Packages get installed by bosh
templates	Conf files

1.11   Bosh Deployment

Name	Command
List bosh deployments	`bosh deployments`
Show detail of one deployment	`bosh -d $deployment deployment`
Delete bosh deployment	`bosh -n -d $deployment delete-deployment --force`
Get deployment manifest yaml	`bosh -d $deployment manifest > my.yaml`
Run bosh deployment from yaml	`bosh -d $deployment deploy my.yaml`

1.12   Bosh vs Kubernetes

Bosh - VM Lifecycle Management	Kubernetes - Container Lifecycle Management
`Bosh Envs`	`Kubernetes Context`
`Bosh Deployment`	`Kubernetes Deployment`
`Bosh Stemcell`	`Docker Image`
`Bosh Manifest`	`Kubernetes Configmap & Yaml`
`Bosh Monit`	`Kubernetes Kubelet`
`Bosh Errand`	`Kubernetes Job`
`Bosh Release`	`Kubernetes Chart`
`Bosh Tile`	`Kubernetes Helm`
`Bosh Director`	`Kubernetes API server`
`Bosh Event`	`Kubernetes Event`
`Bosh Task`	
`Bosh Agent`	
`Bosh Addon`	
`Bosh Ops manager`	No related feature: UI to customize your service

1.13   Bosh Concepts List

Name	Comment
Bosh Stemcells	A versioned Operating System image. Download stemcell
Bosh Deployment	An encapsulation of software and configuration that BOSH can deploy to the cloud.
Bosh Release	Everything needed to make a software component deployable by BOSH.
Bosh Job	Each release job represents a specific chunk of work that the release performs.
Bosh Package	It contains vendored in software source and scripts to compile it.
Bosh Errand	A short-lived job that can be triggered by an operator any time after the deploy.
Bosh Tile	A *.pivotal file with everything needed to install/upgrade a PCF service. Tile CheatSheet
Bosh Manifest	A YAML file that identifies one or more releases, stemcells and configurations
Bosh ops file	A YAML file that includes multiple operations to be applied to a different YAML file.
Bosh Event	Actions taken by the Director (via user or system control) are recorded as events
Bosh Director	The Director is the orchestrator of deployments.
Bosh Addon	A release job that is colocated on all VMs managed by the Director.
Bosh Agent	A process that runs continuously on each VM that BOSH deploys. one Agent process per VM
Bosh Jumpbox	A VM that acts as a single access point for the Director and deployed VMs.
Director Blobstore	A repository where BOSH stores release artifacts, logs, stemcells, and other content, etc
Cloud ID (CID)	ID returned from the Cloud identifying particular resource such as VM or disk.

1.14   Bosh Stemcell

Name	Command
Floating stemcell	Floating stemcells allow upgrade to the minor versions of stemcells but not the major versions.
Upload stemcell	`bosh -n upload-stemcell /tmp/stemcell.tgz`
List stemcells	`bosh -n stemcells`
Delete a stemcell	`bosh delete-stemcell <stemcell-name>/<stemcell-version>`

1.15   Bosh Monit

Name	Comment
List bosh deployed daemon processes	`sudo su -`, `monit summary`
Restart a given daemon processes	`monit restart <process_name>`

1.16   Bosh Tools

Name	Comment
bbr bosh-backup-and-restore	A framework for backing up and restoring BOSH deployments and BOSH Directors.
bbl bosh-bootloader	A command line utility for standing up BOSH on multi-clouds
bpm BOSH process manager	Isolation of BOSH jobs to make they run on many different work schedulers instead of monit only

1.17   Online Help Usage

```
kubo@jumper:~$ bosh --help
Usage:
  bosh [OPTIONS] <command>


Application Options:
  -v, --version          Show CLI version
      --config=          Config file path (default: ~/.bosh/config) [$BOSH_CONFIG]
  -e, --environment=     Director environment name or URL [$BOSH_ENVIRONMENT]
      --ca-cert=         Director CA certificate path or value [$BOSH_CA_CERT]
      --sha2             Use SHA256 checksums [$BOSH_SHA2]
      --parallel=        The max number of parallel operations (default: 5)
      --client=          Override username or UAA client [$BOSH_CLIENT]
      --client-secret=   Override password or UAA client secret [$BOSH_CLIENT_SECRET]
  -d, --deployment=      Deployment name [$BOSH_DEPLOYMENT]
      --column=          Filter to show only given column(s)
      --json             Output as JSON
      --tty              Force TTY-like output
```

```
      --no-color          Toggle colorized output
  -n, --non-interactive  Don't ask for user input [$BOSH_NON_INTERACTIVE]


Help Options:
  -h, --help              Show this help message


Available commands:
  add-blob                Add blob                                           https://bosh.io/docs/cli-v2#add-b
  alias-env               Alias environment to save URL and CA certificate   https://bosh.io/docs/cli-v2#alias
  attach-disk             Attaches disk to an instance                       https://bosh.io/docs/cli-v2#attac
  blobs                   List blobs                                         https://bosh.io/docs/cli-v2#blobs
  cancel-task             Cancel task at its next checkpoint                 https://bosh.io/docs/cli-v2#cance
  clean-up                Clean up releases, stemcells, disks, etc.          https://bosh.io/docs/cli-v2#clean
  cloud-check             Cloud consistency check and interactive repair     https://bosh.io/docs/cli-v2#cloud
  cloud-config            Show current cloud config                          https://bosh.io/docs/cli-v2#cloud
  config                  Show current config for either ID or both type and name https://bosh.io/docs/cli-v2#
  configs                 List configs                                       https://bosh.io/docs/cli-v2#confi
  cpi-config              Show current CPI config                            https://bosh.io/docs/cli-v2#cpi-c
  create-env              Create or update BOSH environment                  https://bosh.io/docs/cli-v2#creat
  create-release          Create release                                     https://bosh.io/docs/cli-v2#creat
  delete-config           Delete config                                      https://bosh.io/docs/cli-v2#delet
  delete-deployment       Delete deployment                                  https://bosh.io/docs/cli-v2#delet
  delete-disk             Delete disk                                        https://bosh.io/docs/cli-v2#delet
  delete-env              Delete BOSH environment                            https://bosh.io/docs/cli-v2#delet
  delete-release          Delete release                                     https://bosh.io/docs/cli-v2#delet
  delete-snapshot         Delete snapshot                                    https://bosh.io/docs/cli-v2#delet
  delete-snapshots        Delete all snapshots in a deployment               https://bosh.io/docs/cli-v2#delet
  delete-stemcell         Delete stemcell                                    https://bosh.io/docs/cli-v2#delet
  delete-vm               Delete VM                                          https://bosh.io/docs/cli-v2#delet
  deploy                  Update deployment                                  https://bosh.io/docs/cli-v2#deplo
  deployment              Show deployment information                        https://bosh.io/docs/cli-v2#deplo
  deployments             List deployments                                   https://bosh.io/docs/cli-v2#deplo
  diff-config             Diff two configs by ID                             https://bosh.io/docs/cli-v2#diff-
  disks                   List disks                                         https://bosh.io/docs/cli-v2#disks
  environment             Show environment                                   https://bosh.io/docs/cli-v2#envir
  environments            List environments                                  https://bosh.io/docs/cli-v2#envir
  errands                 List errands                                       https://bosh.io/docs/cli-v2#erran
  event                   Show event details                                 https://bosh.io/docs/cli-v2#event
  events                  List events                                        https://bosh.io/docs/cli-v2#event
  export-release          Export the compiled release to a tarball           https://bosh.io/docs/cli-v2#expor
  finalize-release        Create final release from dev release tarball      https://bosh.io/docs/cli-v2#final
  generate-job            Generate job                                       https://bosh.io/docs/cli-v2#gener
  generate-package        Generate package                                   https://bosh.io/docs/cli-v2#gener
  help                    Show this help message                             https://bosh.io/docs/cli-v2#help
  ignore                  Ignore an instance                                 https://bosh.io/docs/cli-v2#ignor
  init-release            Initialize release                                 https://bosh.io/docs/cli-v2#init-
  inspect-release         List release contents such as jobs                 https://bosh.io/docs/cli-v2#inspe
  instances               List all instances in a deployment                 https://bosh.io/docs/cli-v2#insta
  interpolate             Interpolates variables into a manifest             https://bosh.io/docs/cli-v2#inter
  locks                   List current locks                                 https://bosh.io/docs/cli-v2#locks
  log-in                  Log in                                             https://bosh.io/docs/cli-v2#log-i
  log-out                 Log out                                            https://bosh.io/docs/cli-v2#log-o
  logs                    Fetch logs from instance(s)                        https://bosh.io/docs/cli-v2#logs
  manifest                Show deployment manifest                           https://bosh.io/docs/cli-v2#manif
  orphan-disk             Orphan disk                                        https://bosh.io/docs/cli-v2#orpha
  recreate                Recreate instance(s)                               https://bosh.io/docs/cli-v2#recre
  releases                List releases                                      https://bosh.io/docs/cli-v2#relea
  remove-blob             Remove blob                                        https://bosh.io/docs/cli-v2#remov
  repack-stemcell         Repack stemcell                                    https://bosh.io/docs/cli-v2#repac
```

```
reset-release          Reset release                                      https://bosh.io/docs/cli-v2#reset
restart                Restart instance(s)                                https://bosh.io/docs/cli-v2#resta
run-errand             Run errand                                         https://bosh.io/docs/cli-v2#run-e
runtime-config         Show current runtime config                        https://bosh.io/docs/cli-v2#runti
scp                    SCP to/from instance(s)                            https://bosh.io/docs/cli-v2#scp
snapshots              List snapshots                                     https://bosh.io/docs/cli-v2#snaps
ssh                    SSH into instance(s)                               https://bosh.io/docs/cli-v2#ssh
start                  Start instance(s)                                  https://bosh.io/docs/cli-v2#start
stemcells              List stemcells                                     https://bosh.io/docs/cli-v2#stemc
stop                   Stop instance(s)                                   https://bosh.io/docs/cli-v2#stop
sync-blobs             Sync blobs                                         https://bosh.io/docs/cli-v2#sync-
take-snapshot          Take snapshot                                      https://bosh.io/docs/cli-v2#take-
task                   Show task status and start tracking its output     https://bosh.io/docs/cli-v2#task
tasks                  List running or recent tasks                       https://bosh.io/docs/cli-v2#tasks
unignore               Unignore an instance                               https://bosh.io/docs/cli-v2#unign
update-cloud-config    Update current cloud config                        https://bosh.io/docs/cli-v2#updat
update-config          Update config                                      https://bosh.io/docs/cli-v2#updat
update-cpi-config      Update current CPI config                          https://bosh.io/docs/cli-v2#updat
update-resurrection    Enable/disable resurrection                        https://bosh.io/docs/cli-v2#updat
update-runtime-config  Update current runtime config                      https://bosh.io/docs/cli-v2#updat
upload-blobs           Upload blobs                                       https://bosh.io/docs/cli-v2#uploa
upload-release         Upload release                                     https://bosh.io/docs/cli-v2#uploa
upload-stemcell        Upload stemcell                                    https://bosh.io/docs/cli-v2#uploa
variables              List variables                                     https://bosh.io/docs/cli-v2#varia
vendor-package         Vendor package                                     https://bosh.io/docs/cli-v2#vendo
vms                    List all VMs in all deployments                    https://bosh.io/docs/cli-v2#vms
```

```
Succeeded
```

1.18   More Resources

```
https://github.com/bosh-tips/tips
```
   http://engineering.pivotal.io/post/compiled-releases-for-pipelines/
   License: Code is licensed under MIT License.