

# 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

File me Issues or star this repo.

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

## 1.1 Bosh Frequent-Used

Name	Command
List tasks	<code>bosh tasks -r=10, bosh -d \$deployment tasks -ar</code>
Tail latest bosh task	<code>bosh task -a, bosh task -a --debug</code>
List deployments and vms	<code>bosh deployments, bosh -d \$deployment vms</code>
Bosh get current task output	<code>bosh -d \$deployment task \$id --result</code>
Bosh get task all detail log	<code>bosh -d \$deployment task -a --debug, bosh -d \$deployment task \$id --debug</code>
Delete a deployment	<code>bosh delete-deployment -d \$deployment, bosh delete-deployment -d \$deployment</code>
Upload release	<code>bosh -n upload-release, bosh -n upload-release /tmp/my-release-0.22.0.tgz</code>
Create bosh release tar from source code	<code>bosh-create-release.md</code>
Get deployment manifest yaml	<code>bosh -d \$deployment manifest &gt; my.yaml</code>
Run bosh deployment from yaml	<code>bosh -d \$deployment deploy my.yaml</code>
Run errand, and avoid deleting the vms	<code>bosh -n -d \$deployment run-errand \$errand_name --keep-alive</code>
Delete all or a given bosh deployment	<code>cleanup-bosh-deployment.sh</code>
Delete all or a given bosh release	<code>cleanup-bosh-releases.sh</code>
Common Bosh Releases	kubo-release, cfc-etc-release, docker-boshrelease, pxc-release, YouTube: BOSH Releases
Reference	Link: terminology, GitHub: cloudfoundry/bosh, CheatSheet: Cloudfoundry Tile & Ops
Reference	PKS CheatSheet, Bosh CheatSheet, Tile CheatSheet, UAA CheatSheet

## 1.2 Bosh Release

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

## 1.3 Bosh Basic

Name	Command
bosh	<code>apt install bosh-cli, /var/vcap/bosh/log, /var/vcap/sys/log</code>
List all bosh deployments	<code>bosh -n deployments, bosh -n deployments --json</code>
Download log files	<code>bosh -d \$deployment_id logs</code>
Show deployment manifest	<code>bosh manifest -d \$deployment</code>
Show current cloud config	<code>bosh cloud-config, bosh cc, bosh configs</code>
Show current CPI config	<code>bosh cpi-config</code>
List environment	<code>bosh env, bosh env --json, bosh envs</code>
List all instances	<code>bosh instances, bosh -d \$deployment_id instances --ps</code>
Get vms per deployment	<code>bosh -e \$env -d \$deployment vms, bosh instances</code>
Cloud consistency check	<code>bosh cloud-check -d \$deployment</code>
List disks	<code>bosh disks -o</code>

## 1.4 Bosh Interpolate

Name	Command
Bosh Interpolates variables	<code>bosh int /tmp/build/4dcXX/pks-lock/metadata --path=/ops_manager/username</code>
Bosh use a property within a template	<code>&lt;%= p('some-property') %&gt;</code>
Bosh use a property with default value	<code>&lt;%= p('cluster-name', &lt;%= spec.deployment %&gt;) %&gt;</code>
Bosh use a property conditionally	<code>bosh-if-property.md</code>
Parse json output	<code>bosh int --path=/uuid -, similar to jq command</code>

## 1.5 Bosh Manifest

Name	Command
Show bosh manifest	<code>bosh manifest -d \$deployment</code>
Run bosh deployment from manifest	<code>bosh -d \$deployment deploy my.yaml</code>

## 1.6 Bosh VM

Name	Command
List vms	<code>bosh -d \$deployment vms</code>
List vms with verbose info	<code>bosh -d \$deployment vms --vitals</code>
Delete a vm	<code>bosh -d \$deployment delete-vm &lt;vm-cid&gt;</code>
SSH to vm	<code>bosh -d \$deployment ssh \$vm_name/\$GUID</code>
Run SSH commands	<code>bosh -d \$deployment ssh \$vm_name&gt;/\$GUID -c "sudo cat /etc/hosts"</code>
bosh scp	<code>bosh -d \$deployment scp /tmp/myfile \$vm_name/\$GUID:/tmp/</code>

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

## 1.7 Bosh Errand

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

## 1.8 Bosh Blob

Name	Command
Reference	Link: Working with Blobs
Configure credential	Prepare <code>config/private.yml</code>
Add local file to blob	<code>bosh add-blob /tmp/&lt;telegraf:1.7-alpine.tgz&gt; container-images/telegraf:1.7-alpine.tgz</code>
Upload blobs	<code>bosh upload-blobs</code>
List blob	<code>bosh blobs</code>
Remove blob	<code>bosh remove-blob container-images/cadvisor-v0.31.0.tgz</code>

## 1.9 Bosh Task

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

## 1.10 Bosh Job - Skeleton

Name	Command
Reference	Example: <code>kubo-release/jobs</code>
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	<code>bosh deployments</code>
Show detail of one deployment	<code>bosh -d \$deployment deployment</code>
Delete bosh deployment	<code>bosh -n -d \$deployment delete-deployment --force</code>
Get deployment manifest yaml	<code>bosh -d \$deployment manifest &gt; my.yaml</code>
Run bosh deployment from yaml	<code>bosh -d \$deployment deploy my.yaml</code>

## 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	<code>bosh -n upload-stemcell /tmp/stemcell.tgz</code>
List stemcells	<code>bosh -n stemcells</code>
Delete a stemcell	<code>bosh delete-stemcell &lt;stemcell-name&gt;/&lt;stemcell-version&gt;</code>

## 1.15 Bosh Monit

Name	Comment
List bosh deployed daemon processes	<code>sudo su -, monit summary, watch 'monit summary'</code>
Restart a given daemon processes	<code>monit restart &lt;process_name&gt;</code>
Check a given daemon processes status	<code>monit status &lt;process_name&gt;</code>

## 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 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 <code>tail -f</code>	Personally I don't like the way of <code>bosh logs</code>
Retry a failed errand/task	Currently we can do it. But it's a lengthy manual process
More lightweight	Use <code>containers</code> , instead of <code>VMs</code> to run errands
Support rolling upgrade	Just like <code>kubect1 rollout</code>
More declarative	End users define requirements via <code>yaml files</code>

## 1.18 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 [$BOSH_DEPLOYMENT]
--column=              Filter to show only given column(s)
--json                 Output as JSON
--tty                  Force TTY-like output
--no-color              Toggle colored output
-n, --non-interactive  Don't ask for user input [$BOSH_NON_INTERACTIVE]
```

Help Options:

```

-h, --help            Show this help message
```

Available commands:

add-blob	Add blob	<a href="https://bosh.io/docs/cli-v2#add-blob">https://bosh.io/docs/cli-v2#add-blob</a>
alias-env	Alias environment to save URL and CA certificate	<a href="https://bosh.io/docs/cli-v2#alias-env">https://bosh.io/docs/cli-v2#alias-env</a>
attach-disk	Attaches disk to an instance	<a href="https://bosh.io/docs/cli-v2#attach-disk">https://bosh.io/docs/cli-v2#attach-disk</a>
blobs	List blobs	<a href="https://bosh.io/docs/cli-v2#blobs">https://bosh.io/docs/cli-v2#blobs</a>
cancel-task	Cancel task at its next checkpoint	<a href="https://bosh.io/docs/cli-v2#cancel-task">https://bosh.io/docs/cli-v2#cancel-task</a>
clean-up	Clean up releases, stemcells, disks, etc.	<a href="https://bosh.io/docs/cli-v2#clean-up">https://bosh.io/docs/cli-v2#clean-up</a>
cloud-check	Cloud consistency check and interactive repair	<a href="https://bosh.io/docs/cli-v2#cloud-check">https://bosh.io/docs/cli-v2#cloud-check</a>
cloud-config	Show current cloud config	<a href="https://bosh.io/docs/cli-v2#cloud-config">https://bosh.io/docs/cli-v2#cloud-config</a>
config	Show current config for either ID or both type and name	<a href="https://bosh.io/docs/cli-v2#config">https://bosh.io/docs/cli-v2#config</a>
configs	List configs	<a href="https://bosh.io/docs/cli-v2#configs">https://bosh.io/docs/cli-v2#configs</a>
cpi-config	Show current CPI config	<a href="https://bosh.io/docs/cli-v2#cpi-config">https://bosh.io/docs/cli-v2#cpi-config</a>
create-env	Create or update BOSH environment	<a href="https://bosh.io/docs/cli-v2#create-env">https://bosh.io/docs/cli-v2#create-env</a>
create-release	Create release	<a href="https://bosh.io/docs/cli-v2#create-release">https://bosh.io/docs/cli-v2#create-release</a>
delete-config	Delete config	<a href="https://bosh.io/docs/cli-v2#delete-config">https://bosh.io/docs/cli-v2#delete-config</a>
delete-deployment	Delete deployment	<a href="https://bosh.io/docs/cli-v2#delete-deployment">https://bosh.io/docs/cli-v2#delete-deployment</a>
delete-disk	Delete disk	<a href="https://bosh.io/docs/cli-v2#delete-disk">https://bosh.io/docs/cli-v2#delete-disk</a>
delete-env	Delete BOSH environment	<a href="https://bosh.io/docs/cli-v2#delete-env">https://bosh.io/docs/cli-v2#delete-env</a>
delete-release	Delete release	<a href="https://bosh.io/docs/cli-v2#delete-release">https://bosh.io/docs/cli-v2#delete-release</a>
delete-snapshot	Delete snapshot	<a href="https://bosh.io/docs/cli-v2#delete-snapshot">https://bosh.io/docs/cli-v2#delete-snapshot</a>
delete-snapshots	Delete all snapshots in a deployment	<a href="https://bosh.io/docs/cli-v2#delete-snapshots">https://bosh.io/docs/cli-v2#delete-snapshots</a>
delete-stemcell	Delete stemcell	<a href="https://bosh.io/docs/cli-v2#delete-stemcell">https://bosh.io/docs/cli-v2#delete-stemcell</a>
delete-vm	Delete VM	<a href="https://bosh.io/docs/cli-v2#delete-vm">https://bosh.io/docs/cli-v2#delete-vm</a>
deploy	Update deployment	<a href="https://bosh.io/docs/cli-v2#deploy">https://bosh.io/docs/cli-v2#deploy</a>
deployment	Show deployment information	<a href="https://bosh.io/docs/cli-v2#deployment">https://bosh.io/docs/cli-v2#deployment</a>
deployments	List deployments	<a href="https://bosh.io/docs/cli-v2#deployments">https://bosh.io/docs/cli-v2#deployments</a>
diff-config	Diff two configs by ID	<a href="https://bosh.io/docs/cli-v2#diff-config">https://bosh.io/docs/cli-v2#diff-config</a>
disks	List disks	<a href="https://bosh.io/docs/cli-v2#disks">https://bosh.io/docs/cli-v2#disks</a>
environment	Show environment	<a href="https://bosh.io/docs/cli-v2#environment">https://bosh.io/docs/cli-v2#environment</a>
environments	List environments	<a href="https://bosh.io/docs/cli-v2#environments">https://bosh.io/docs/cli-v2#environments</a>
errands	List errands	<a href="https://bosh.io/docs/cli-v2#errands">https://bosh.io/docs/cli-v2#errands</a>
event	Show event details	<a href="https://bosh.io/docs/cli-v2#event">https://bosh.io/docs/cli-v2#event</a>
events	List events	<a href="https://bosh.io/docs/cli-v2#events">https://bosh.io/docs/cli-v2#events</a>
export-release	Export the compiled release to a tarball	<a href="https://bosh.io/docs/cli-v2#export-release">https://bosh.io/docs/cli-v2#export-release</a>
finalize-release	Create final release from dev release tarball	<a href="https://bosh.io/docs/cli-v2#finalize-release">https://bosh.io/docs/cli-v2#finalize-release</a>
generate-job	Generate job	<a href="https://bosh.io/docs/cli-v2#generate-job">https://bosh.io/docs/cli-v2#generate-job</a>
generate-package	Generate package	<a href="https://bosh.io/docs/cli-v2#generate-package">https://bosh.io/docs/cli-v2#generate-package</a>
help	Show this help message	<a href="https://bosh.io/docs/cli-v2#help">https://bosh.io/docs/cli-v2#help</a>
ignore	Ignore an instance	<a href="https://bosh.io/docs/cli-v2#ignore">https://bosh.io/docs/cli-v2#ignore</a>
init-release	Initialize release	<a href="https://bosh.io/docs/cli-v2#init-release">https://bosh.io/docs/cli-v2#init-release</a>
inspect-release	List release contents such as jobs	<a href="https://bosh.io/docs/cli-v2#inspect-release">https://bosh.io/docs/cli-v2#inspect-release</a>
instances	List all instances in a deployment	<a href="https://bosh.io/docs/cli-v2#instances">https://bosh.io/docs/cli-v2#instances</a>
interpolate	Interpolates variables into a manifest	<a href="https://bosh.io/docs/cli-v2#interpolate">https://bosh.io/docs/cli-v2#interpolate</a>
locks	List current locks	<a href="https://bosh.io/docs/cli-v2#locks">https://bosh.io/docs/cli-v2#locks</a>
log-in	Log in	<a href="https://bosh.io/docs/cli-v2#log-in">https://bosh.io/docs/cli-v2#log-in</a>
log-out	Log out	<a href="https://bosh.io/docs/cli-v2#log-out">https://bosh.io/docs/cli-v2#log-out</a>
logs	Fetch logs from instance(s)	<a href="https://bosh.io/docs/cli-v2#logs">https://bosh.io/docs/cli-v2#logs</a>
manifest	Show deployment manifest	<a href="https://bosh.io/docs/cli-v2#manifest">https://bosh.io/docs/cli-v2#manifest</a>
orphan-disk	Orphan disk	<a href="https://bosh.io/docs/cli-v2#orphan-disk">https://bosh.io/docs/cli-v2#orphan-disk</a>
recreate	Recreate instance(s)	<a href="https://bosh.io/docs/cli-v2#recreate">https://bosh.io/docs/cli-v2#recreate</a>
releases	List releases	<a href="https://bosh.io/docs/cli-v2#releases">https://bosh.io/docs/cli-v2#releases</a>
remove-blob	Remove blob	<a href="https://bosh.io/docs/cli-v2#remove-blob">https://bosh.io/docs/cli-v2#remove-blob</a>
repack-stemcell	Repack stemcell	<a href="https://bosh.io/docs/cli-v2#repack-stemcell">https://bosh.io/docs/cli-v2#repack-stemcell</a>
reset-release	Reset release	<a href="https://bosh.io/docs/cli-v2#reset-release">https://bosh.io/docs/cli-v2#reset-release</a>
restart	Restart instance(s)	<a href="https://bosh.io/docs/cli-v2#restart">https://bosh.io/docs/cli-v2#restart</a>
run-errand	Run errand	<a href="https://bosh.io/docs/cli-v2#run-errand">https://bosh.io/docs/cli-v2#run-errand</a>
runtime-config	Show current runtime config	<a href="https://bosh.io/docs/cli-v2#runtime-config">https://bosh.io/docs/cli-v2#runtime-config</a>
scp	SCP to/from instance(s)	<a href="https://bosh.io/docs/cli-v2#scp">https://bosh.io/docs/cli-v2#scp</a>
snapshots	List snapshots	<a href="https://bosh.io/docs/cli-v2#snapshots">https://bosh.io/docs/cli-v2#snapshots</a>
ssh	SSH into instance(s)	<a href="https://bosh.io/docs/cli-v2#ssh">https://bosh.io/docs/cli-v2#ssh</a>

start	Start instance(s)	<a href="https://bosh.io/docs/cli-v2#start">https://bosh.io/docs/cli-v2#start</a>
stemcells	List stemcells	<a href="https://bosh.io/docs/cli-v2#stemc">https://bosh.io/docs/cli-v2#stemc</a>
stop	Stop instance(s)	<a href="https://bosh.io/docs/cli-v2#stop">https://bosh.io/docs/cli-v2#stop</a>
sync-blobs	Sync blobs	<a href="https://bosh.io/docs/cli-v2#sync-">https://bosh.io/docs/cli-v2#sync-</a>
take-snapshot	Take snapshot	<a href="https://bosh.io/docs/cli-v2#take-">https://bosh.io/docs/cli-v2#take-</a>
task	Show task status and start tracking its output	<a href="https://bosh.io/docs/cli-v2#task">https://bosh.io/docs/cli-v2#task</a>
tasks	List running or recent tasks	<a href="https://bosh.io/docs/cli-v2#tasks">https://bosh.io/docs/cli-v2#tasks</a>
unignore	Unignore an instance	<a href="https://bosh.io/docs/cli-v2#unign">https://bosh.io/docs/cli-v2#unign</a>
update-cloud-config	Update current cloud config	<a href="https://bosh.io/docs/cli-v2#updat">https://bosh.io/docs/cli-v2#updat</a>
update-config	Update config	<a href="https://bosh.io/docs/cli-v2#updat">https://bosh.io/docs/cli-v2#updat</a>
update-cpi-config	Update current CPI config	<a href="https://bosh.io/docs/cli-v2#updat">https://bosh.io/docs/cli-v2#updat</a>
update-resurrection	Enable/disable resurrection	<a href="https://bosh.io/docs/cli-v2#updat">https://bosh.io/docs/cli-v2#updat</a>
update-runtime-config	Update current runtime config	<a href="https://bosh.io/docs/cli-v2#updat">https://bosh.io/docs/cli-v2#updat</a>
upload-blobs	Upload blobs	<a href="https://bosh.io/docs/cli-v2#uploa">https://bosh.io/docs/cli-v2#uploa</a>
upload-release	Upload release	<a href="https://bosh.io/docs/cli-v2#uploa">https://bosh.io/docs/cli-v2#uploa</a>
upload-stemcell	Upload stemcell	<a href="https://bosh.io/docs/cli-v2#uploa">https://bosh.io/docs/cli-v2#uploa</a>
variables	List variables	<a href="https://bosh.io/docs/cli-v2#varia">https://bosh.io/docs/cli-v2#varia</a>
vendor-package	Vendor package	<a href="https://bosh.io/docs/cli-v2#vendo">https://bosh.io/docs/cli-v2#vendo</a>
vms	List all VMs in all deployments	<a href="https://bosh.io/docs/cli-v2#vms">https://bosh.io/docs/cli-v2#vms</a>

Succeeded

## 1.19 More Resources

<https://github.com/bosh-tips/tips>

<http://engineering.pivotal.io/post/compiled-releases-for-pipelines/>

License: Code is licensed under MIT License.