

# 1 Bosh CheatSheet

# VMWARE

- PDF Link: [cheatsheet-bosh-A4.pdf](#), Category: tools
- Blog URL: <https://cheatsheet.dennyzhang.com/cheatsheet-bosh-A4>
- Related posts: [PKS CheatSheet](#), [Tile CheatSheet](#)

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## 1.1 Bosh Frequent-Used

Name	Command
List tasks	<code>bosh -d &lt;deployment&gt; tasks -ar, bosh tasks -r=10</code>
List deployments and vms	<code>bosh deployments, bosh -d &lt;deployment&gt; vms</code>
Get task detail log, especially errand stdout/stderr	<code>bosh -d &lt;deployment&gt; task \$id --debug</code>
Run errand, and avoid deleting the vms	<code>bosh -n -d &lt;deployment&gt; run-errand &lt;errand_name&gt; --keep-alive</code>
Common Bosh Releases	kubo-release, cfc-etc-release, docker-boshrelease, pxc-release
Reference	Bosh CheatSheet, Tile CheatSheet, UAA CheatSheet, PKS CheatSheet

## 1.2 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

## 1.3 Bosh Challenges

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

## 1.4 Bosh Concepts List

Name	Comment
Reference	Link: terminology, GitHub: cloudfoundry/bosh, CheatSheet: Cloudfoundry Tile & OpsManager
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.

## 1.5 Bosh Basic

Name	Command
bosh	<code>apt install bosh-cli, /var/vcap/bosh/log</code>
Interpolates variables	<code>bosh int /tmp/build/4dcXX/pks-lock/metadata --path=/ops_manager/username</code>
Delete a deployment	<code>bosh delete-deployment -d \$deployment</code>
List all bosh deployments	<code>bosh -n deployments, bosh -n deployments --json</code>
Download log files	<code>bosh -d &lt;deployment&gt;_id logs</code>
Show deployment manifest	<code>bosh manifest -d &lt;deployment&gt;</code>
bosh config	<code>bosh cloud-config, bosh configs</code>
List environment	<code>bosh env, bosh env --json, bosh envs</code>
List all instances	<code>bosh instances</code>
Get vms per deployment	<code>bosh -e \$env -d &lt;deployment&gt; vms, bosh instances</code>
Cloud consistency check	<code>bosh cloud-check -d &lt;deployment&gt;</code>
List disks	<code>bosh disks -o</code>

## 1.6 Bosh VM

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

## 1.7 Bosh Deployment

Name	Command
List bosh deployments	<code>bosh deployments</code>
Delete bosh deployment	<code>bosh -n -d &lt;deployment&gt; delete-deployment --force</code>
Get deployment manifest yaml	<code>bosh manifest -d &lt;deployment&gt; &gt; my.yaml</code>
Run bosh deployment from yaml	<code>bosh deploy -d &lt;deployment&gt; my.yaml</code>

## 1.8 Bosh Task

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

## 1.9 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

## 1.10 Bosh Errand

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

## 1.11 Bosh Blob

Name	Command
Reference	Link: <a href="#">Working with Blobs</a>
Configure credential	If you need to upload/download with S3/GCP buckets, make sure <code>config/private.yml</code> has been configured
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> , make sure <code>config/private.yml</code> is correct. <code>blobs.yml</code> will be automatically updated

## 1.12 Bosh Release - Basic

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>
Inspect a release	<code>bosh inspect-release &lt;my-release&gt;/&lt;release-version&gt;</code>
Export a release	<code>bosh -d &lt;deployment&gt; export-release &lt;my-release&gt;/&lt;release-version&gt; ubuntu-trusty/3586.36</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 /tmp/my-release-0.22.0.tgz</code>
Reset release	<code>bosh reset-release GitHub ticket</code>

## 1.13 Bosh Release - Creation

Name	Command
Reference	Link: <a href="#">Release creation</a>
Create a release	<code>bosh create-release --tarball /tmp/my-release.tgz</code>

## 1.14 Bosh Manifest

Name	Command
Show bosh manifest	<code>bosh manifest -d &lt;deployment&gt;</code> Link: <a href="#">manifest</a>

## 1.15 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>

## 1.16 Bosh Monit

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

## 1.17 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

## 1.18 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 colorized output
-n, --non-interactive	Don't ask for user input [\$BOSH_NON_INTERACTIVE]

Help Options:

-h, --help	Show this help message
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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#stemcells">https://bosh.io/docs/cli-v2#stemcells</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-blobs">https://bosh.io/docs/cli-v2#sync-blobs</a>
take-snapshot	Take snapshot	<a href="https://bosh.io/docs/cli-v2#take-snapshot">https://bosh.io/docs/cli-v2#take-snapshot</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#unignore">https://bosh.io/docs/cli-v2#unignore</a>
update-cloud-config	Update current cloud config	<a href="https://bosh.io/docs/cli-v2#update-cloud-config">https://bosh.io/docs/cli-v2#update-cloud-config</a>
update-config	Update config	<a href="https://bosh.io/docs/cli-v2#update-config">https://bosh.io/docs/cli-v2#update-config</a>
update-cpi-config	Update current CPI config	<a href="https://bosh.io/docs/cli-v2#update-cpi-config">https://bosh.io/docs/cli-v2#update-cpi-config</a>
update-resurrection	Enable/disable resurrection	<a href="https://bosh.io/docs/cli-v2#update-resurrection">https://bosh.io/docs/cli-v2#update-resurrection</a>

update-runtime-config	Update current runtime config	<a href="https://bosh.io/docs/cli-v2#update-runtime-config">https://bosh.io/docs/cli-v2#update-runtime-config</a>
upload-blobs	Upload blobs	<a href="https://bosh.io/docs/cli-v2#upload-blobs">https://bosh.io/docs/cli-v2#upload-blobs</a>
upload-release	Upload release	<a href="https://bosh.io/docs/cli-v2#upload-release">https://bosh.io/docs/cli-v2#upload-release</a>
upload-stemcell	Upload stemcell	<a href="https://bosh.io/docs/cli-v2#upload-stemcell">https://bosh.io/docs/cli-v2#upload-stemcell</a>
variables	List variables	<a href="https://bosh.io/docs/cli-v2#variables">https://bosh.io/docs/cli-v2#variables</a>
vendor-package	Vendor package	<a href="https://bosh.io/docs/cli-v2#vendor-package">https://bosh.io/docs/cli-v2#vendor-package</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/>

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