

# Bosh CheatSheet

# VMWARE

```
#+BEGIN_EXPORT HTML <a href="https://github.com/dennyzhang/cheatsheet-bosh-A4"></a> <div
id="the whole thing" style="overflow: hidden;"> <div style="float: left; padding: 5px"> <a href="https://www.
linkedin.com/in/dennyzhang001"></a></div> <div style="float: left; padding: 5px"><a href="https://github.com/dennyzhang"></a></div> <div style="float:
left; padding: 5px"><a href="https://www.dennyzhang.com/slack" target="_blank" rel="nofollow"></a></div> </div>
<br/><br/> <a href="http://makeapullrequest.com" target="_blank" rel="nofollow"></a> #+END_HTML
```

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

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## 1.1 Bosh Frequent-Used

Name	Command
List all tasks	<code>bosh -d &lt;deployment&gt; tasks -ar</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

## 1.2 Bosh Wishlist

Name	Comment
More lightweight	Use <b>containers</b> , instead of <b>VMs</b> to run errands
More declarative	End users define requirement via <b>yaml</b> files
Support rolling upgrade	Just like <code>kubect1 rollout</code> .
Support <code>tail -f</code> for running task	Personally I don't like the way of <code>bosh logs</code>

## 1.3 Bosh Concepts

Name	Comment
Reference	link: terminology, GitHub: <a href="#">cloudfoundry/bosh</a> , CheatSheet: <a href="#">Cloudfoundry Tile &amp; OpsManager</a>
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 *.pivot 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.

## 1.4 Bosh Basic

Name	Command
bosh	<code>apt install bosh-cli</code> , link: pivotal bosh command
bosh log	<code>/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</code> , <code>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</code> , <code>bosh configs</code>
List environment	<code>bosh env</code> , <code>bosh env --json</code> , <code>bosh envs</code>
List all instances	<code>bosh instances</code>
Get vms per deployment	<code>bosh -e \$env -d &lt;deployment&gt; vms</code> , <code>bosh instances</code>
Cloud consistency check	<code>bosh cloud-check -d &lt;deployment&gt;</code>
List disks	<code>bosh disks -o</code>

## 1.5 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>

## 1.6 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>

## 1.7 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>
SSH to vm	<code>bosh -d &lt;deployment&gt; ssh \$instance_name</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>

## 1.8 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

## 1.9 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; link: run-errand</code>
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>

## 1.10 Bosh Blob

Name	Command
Reference	link: Working with Blobs
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

## 1.11 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>

## 1.12 Bosh Release - Creation

Name	Command
Reference	link: Release creation
Create a release	<code>bosh create-release --tarball /tmp/my-release.tgz</code>

## 1.13 Bosh Manifest

Name	Command
Show bosh manifest	<code>bosh manifest -d &lt;deployment&gt; link: manifest</code>

## 1.14 Bosh Stemcell

Name	Command
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>
Floating stemcell	Floating stemcells allow upgrade to the minor versions of stemcells but not the major versions.

## 1.15 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>

## 1.16 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 or systemd
kiln	Kiln helps you maintain tile metadata

## 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	<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

## 1.18 More Resources

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

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

License: Code is licensed under MIT License. `#+BEGIN_EXPORT HTML` `<a href="https://www.dennyzhang.com"></a>` `<a href="https://www.dennyzhang.com"></a>`  
`<a href="https://www.linkedin.com/in/dennyzhang001"></a>` `<a href="https://github.com/dennyzhang"></a>` `<a`

```
href="https://www.dennyzhang.com/slack" target="_blank" rel="nofollow"></a> #+ENDHTML
```