

# 1 Bosh CheatSheet

## TOOLS

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

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### 1.1 Basic

- Concepts

Name	Comment
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 per VM.
Cloud ID (CID)	ID returned from the Cloud identifying particular resource such as VM or release.
Deployment	An encapsulation of software and configuration that BOSH can deploy to a cloud.
Director Blobstore	A repository where BOSH stores release artifacts, logs, stemcells, and other data.
Bosh Errand	A short-lived job that can be triggered by an operator any time after the deployment.
Bosh Event	Actions taken by the Director (via user or system control) are recorded as events.
Bosh Jumpbox	A VM that acts as a single access point for the Director and deployed VMs.
Deployment manifest	A YAML file that identifies one or more releases, stemcells and configuration.
Operations file (ops file)	A YAML file that includes multiple operations to be applied to a different deployment.
Stemcells	A generic VM image that BOSH clones and configures during deployment.

Links:

<https://bosh.cloudfoundry.org/stemcells/>

<https://bosh.io/docs/terminology>

- Commands

Name	Command
Install bosh	<code>apt install bosh-cli</code>
Bosh Command	link from pivotal
bosh interpolates variables	<code>bosh int /tmp/build/4dc76cXXX/pks-lock/metadata --path=/ops_m</code>
delete vm	<code>bosh delete-vm -d service-instance_c4b06291-XXX 35043957-XXX</code>
delete deployment	<code>bosh delete-deployment -d wf-deployment-0-7-0-dev-4</code>
ssh to vm	<code>bosh -e 192.168.30.52 -d \$deployment ssh \$vm</code>

## 1.2 Query status

Name	Command
List all bosh deployments	<code>bosh deployments</code>
Download log files	<code>bosh -d \$deployment_id logs</code> <code>bosh cloud-config</code> <code>bosh configs</code>
List environment	<code>bosh env</code> , <code>bosh env --json</code>
List vms	<code>bosh vms</code>
List all instances	<code>bosh instances</code>
Get vms per deployment	<code>bosh -e \$env -d \$deployment vms</code> <code>bosh instances</code>
Cloud consistency check	<code>bosh cloud-check -d \$deployment</code>
Show deployment manifest	<code>bosh manifest -d \$deployment</code>
List disks	<code>bosh disks -o</code>

## 1.3 Tasks

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

## 1.4 Stemcell

Name	Command
Upload stemcell	<code>bosh -n upload-stemcell /tmp/build/4dc76cXX/stemcell/stemcell.tgz</code>
List stemcells	<code>bosh -n stemcells</code>

## 1.5 Errand

Name	Command
List errands	<code>bosh errands -d my-deployment-0-8-0-dev-16</code>
Run errand in a new vm	<code>bosh -n -d my-deployment-0-8-0-dev-16 run-errand \$</code>
Run errand in a new vm with env alive	<code>bosh -n -d my-deployment-0-8-0-dev-16 run-errand \$</code>
Run errand in an existing vm	<code>bosh -n -d my-deployment-0-8-0-dev-16 run-errand \${errand}</code>

run-errand: link

## 1.6 bosh blobs

<https://bosh.io/docs/release-blobs/>

### 1.6.1 add-blob

```
kubo@jumper:/tmp/tmp.RgJNFQbFsV$ docker pull telegraf:1.7-alpine
^[[01.7-alpine: Pulling from library/telegraf
a073c86ecf9e: Pull complete
5e3fc09cd317: Pull complete
42f39ed2e134: Pull complete
28dc5f846df8: Pull complete
cbf4ff759895: Pull complete
Digest: sha256:9bc4e7316f97ebdf33d0c1edfbf3fb0de2e7db7769d393f46463ef203c8f2c33
Status: Downloaded newer image for telegraf:1.7-alpine
kubo@jumper:/tmp/tmp.RgJNFQbFsV$ docker save telegraf:1.7-alpine | gzip > telegraf:1.7-
kubo@jumper:~$ bosh add-blob /tmp/tmp.RgJNFQbFsV/telegraf:1.7-alpine.tgz container-images
Added blob 'container-images/telegraf:1.7-alpine.tgz'
```

Succeeded

```
kubo@jumper:~$ ls -lth blobs/container-images
total 237M
-rw----- 1 kubo kubo 15M Aug  6 10:21 telegraf:1.7-alpine.tgz
```

### 1.6.2 Need credentials<sub>source</sub> to run "bosh upload-blobs"

Need to provide config/private.yml. Something like below

```
---
blobstore:
  provider: s3
  options:
```

```
access_key_id: XXXXMMMAAAMMM
secret_access_key: c9EcPLbysjpafafafeweafaf23434
```

```
kubo@jumper:~$ bosh upload-blobs
Blob upload 'container-images/dummy_image:4.27.tgz' (232 MB) (sha1: ee47c68465ea8352513

Blob upload 'container-images/dummy_image:4.27.tgz' failed

Uploading blobs:
  Creating blob for path 'container-images/dummy_image:4.27.tgz':
    Creating blob in inner blobstore:
      Generating blobstore ID:
        the client operates in read only mode. Change 'credentials_source' parameter va

Exit code 1
```

### 1.6.3 How to get size, object<sub>id</sub>, sha for blobs.yml?

After we have successfully run "bosh upload-blobs", blobs.yml will be updated automatically.

```
container-images/telegraf:1.6-alpine.tgz:
  size: 14016537
  object_id: 9028fea7-742d-4af0-784c-7dad1be15365
  sha: bf5f32036fec554f9c5dbb7fd922a5930b625594
```

### 1.6.4 bosh upload-blobs: console output if wrong credential

```
kubo@jumper:~$ bosh upload-blobs
Blob upload 'container-images/telegraf:1.7-alpine.tgz' (16 MB) (sha1: 71ef025187f888203
2018/08/06 13:51:05 Upload failed: SignatureDoesNotMatch: The request signature we cal
status code: 403, request id: , host id:
2018/08/06 13:51:06 Upload failed: SignatureDoesNotMatch: The request signature we cal
status code: 403, request id: , host id:
2018/08/06 13:51:06 Upload failed: SignatureDoesNotMatch: The request signature we cal
status code: 403, request id: , host id:

Blob upload 'container-images/telegraf:1.7-alpine.tgz' failed

Uploading blobs:
```

```

Creating blob for path 'container-images/telegraf:1.7-alpine.tgz':
  Creating blob in inner blobstore:
    Generating blobstore ID:
      upload failure: SignatureDoesNotMatch: The request signature we calculated does
status code: 403, request id: , host id:

```

Exit code 1

## 1.7 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://bos
alias-env             Alias environment to save URL and CA certificate https://bos
attach-disk           Attaches disk to an instance                https://bos
blobs                 List blobs                                    https://bos
cancel-task           Cancel task at its next checkpoint           https://bos
clean-up              Clean up releases, stemcells, disks, etc.    https://bos

```

cloud-check	Cloud consistency check and interactive repair	<a href="https://bos">https://bos</a>
cloud-config	Show current cloud config	<a href="https://bos">https://bos</a>
config	Show current config for either ID or both type and name	<a href="https://bos">https://bos</a>
configs	List configs	<a href="https://bos">https://bos</a>
cpi-config	Show current CPI config	<a href="https://bos">https://bos</a>
create-env	Create or update BOSH environment	<a href="https://bos">https://bos</a>
create-release	Create release	<a href="https://bos">https://bos</a>
delete-config	Delete config	<a href="https://bos">https://bos</a>
delete-deployment	Delete deployment	<a href="https://bos">https://bos</a>
delete-disk	Delete disk	<a href="https://bos">https://bos</a>
delete-env	Delete BOSH environment	<a href="https://bos">https://bos</a>
delete-release	Delete release	<a href="https://bos">https://bos</a>
delete-snapshot	Delete snapshot	<a href="https://bos">https://bos</a>
delete-snapshots	Delete all snapshots in a deployment	<a href="https://bos">https://bos</a>
delete-stemcell	Delete stemcell	<a href="https://bos">https://bos</a>
delete-vm	Delete VM	<a href="https://bos">https://bos</a>
deploy	Update deployment	<a href="https://bos">https://bos</a>
deployment	Show deployment information	<a href="https://bos">https://bos</a>
deployments	List deployments	<a href="https://bos">https://bos</a>
diff-config	Diff two configs by ID	<a href="https://bos">https://bos</a>
disks	List disks	<a href="https://bos">https://bos</a>
environment	Show environment	<a href="https://bos">https://bos</a>
environments	List environments	<a href="https://bos">https://bos</a>
errands	List errands	<a href="https://bos">https://bos</a>
event	Show event details	<a href="https://bos">https://bos</a>
events	List events	<a href="https://bos">https://bos</a>
export-release	Export the compiled release to a tarball	<a href="https://bos">https://bos</a>
finalize-release	Create final release from dev release tarball	<a href="https://bos">https://bos</a>
generate-job	Generate job	<a href="https://bos">https://bos</a>
generate-package	Generate package	<a href="https://bos">https://bos</a>
help	Show this help message	<a href="https://bos">https://bos</a>
ignore	Ignore an instance	<a href="https://bos">https://bos</a>
init-release	Initialize release	<a href="https://bos">https://bos</a>
inspect-release	List release contents such as jobs	<a href="https://bos">https://bos</a>
instances	List all instances in a deployment	<a href="https://bos">https://bos</a>
interpolate	Interpolates variables into a manifest	<a href="https://bos">https://bos</a>
locks	List current locks	<a href="https://bos">https://bos</a>
log-in	Log in	<a href="https://bos">https://bos</a>
log-out	Log out	<a href="https://bos">https://bos</a>
logs	Fetch logs from instance(s)	<a href="https://bos">https://bos</a>

manifest	Show deployment manifest	<a href="https://bos">https://bos</a>
orphan-disk	Orphan disk	<a href="https://bos">https://bos</a>
recreate	Recreate instance(s)	<a href="https://bos">https://bos</a>
releases	List releases	<a href="https://bos">https://bos</a>
remove-blob	Remove blob	<a href="https://bos">https://bos</a>
repack-stemcell	Repack stemcell	<a href="https://bos">https://bos</a>
reset-release	Reset release	<a href="https://bos">https://bos</a>
restart	Restart instance(s)	<a href="https://bos">https://bos</a>
run-errand	Run errand	<a href="https://bos">https://bos</a>
runtime-config	Show current runtime config	<a href="https://bos">https://bos</a>
scp	SCP to/from instance(s)	<a href="https://bos">https://bos</a>
snapshots	List snapshots	<a href="https://bos">https://bos</a>
ssh	SSH into instance(s)	<a href="https://bos">https://bos</a>
start	Start instance(s)	<a href="https://bos">https://bos</a>
stemcells	List stemcells	<a href="https://bos">https://bos</a>
stop	Stop instance(s)	<a href="https://bos">https://bos</a>
sync-blobs	Sync blobs	<a href="https://bos">https://bos</a>
take-snapshot	Take snapshot	<a href="https://bos">https://bos</a>
task	Show task status and start tracking its output	<a href="https://bos">https://bos</a>
tasks	List running or recent tasks	<a href="https://bos">https://bos</a>
unignore	Unignore an instance	<a href="https://bos">https://bos</a>
update-cloud-config	Update current cloud config	<a href="https://bos">https://bos</a>
update-config	Update config	<a href="https://bos">https://bos</a>
update-cpi-config	Update current CPI config	<a href="https://bos">https://bos</a>
update-resurrection	Enable/disable resurrection	<a href="https://bos">https://bos</a>
update-runtime-config	Update current runtime config	<a href="https://bos">https://bos</a>
upload-blobs	Upload blobs	<a href="https://bos">https://bos</a>
upload-release	Upload release	<a href="https://bos">https://bos</a>
upload-stemcell	Upload stemcell	<a href="https://bos">https://bos</a>
variables	List variables	<a href="https://bos">https://bos</a>
vendor-package	Vendor package	<a href="https://bos">https://bos</a>
vms	List all VMs in all deployments	<a href="https://bos">https://bos</a>

Succeeded

- bosh delete vm

kubo@jumper:~\$ bosh vms

Using environment '30.0.X.11' as client 'ops\_manager'

Task 291  
Task 294  
Task 292  
Task 293  
Task 291 done

Task 292 done

Task 294 done

Task 293 done

Deployment 'XXX-container-service-37f4102408dc7e3b4fcf'

Instance	Process State	AZ	IPs	VM CID
XXX-container-service/6245d88f-7d52-4371-a3c2-5dc023c32fe9	running	az-1	30.0.0.11	

1 vms

Deployment 'service-instance\_1ee08f0f-2e8a-45f9-a1f8-5e0d608225b4'

Instance	Process State	AZ	IPs	VM CID
master/05e56b86-b650-4ec6-a953-3de9a736517d	running	az-1	40.0.2.2	vm-4bd0dd74
worker/7881dd78-0006-4466-a4bd-eb5e59477998	running	az-1	40.0.2.4	vm-d24b71a0
worker/adf1ecda-700e-4d52-a675-34c8853fd063	running	az-1	40.0.2.3	vm-73dd78c5

3 vms

Deployment 'service-instance\_c4b06291-ed29-4b5e-89c2-ff35547db2d2'

Instance	Process State	AZ	IPs	VM CID
master/85496f06-26aa-4dfd-b181-1c6b7e29f655	running	az-1	40.0.1.2	vm-d6938cf8
worker/1f4cc6b9-533a-4edf-bec1-03f2fd402b8d	stopped	az-1	40.0.1.3	vm-00cf6f51
worker/35043957-97b4-4aa5-bfda-9d495831a7e8	running	az-1	40.0.1.4	vm-b0adf34d

Succeeded

kubo@jumper:~\$ bosh delete-vm -d service-instance\_c4b06291-ed29-4b5e-89c2-ff35547db2d2  
Using environment '30.0.0.11' as client 'ops\_manager'



Using deployment 'service-instance\_c4b06291-ed29-4b5e-89c2-ff35547db2d2'

Continue? [yN]: y

Task 295

. Done

## 1.8 More Resources

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

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