BOSH (/)

quick tutorial (https://bit.ly/learn-bosh) | docs (/docs) | github (https://github.com/cloudfoundry/bosh)

#bosh on slack (https://slack.cloudfoundry.org)

Table of Contents (/docs) / CLI v2

Note: Applies to CLI v2 v2.0.16+.

The BOSH Command Line Interface (CLI) is what you use to run BOSH commands. CLI v2 is a new major version of CLI.

Install

1. Download the binary for your platform and place it on your `PATH`:

- bosh-cli-2.0.28-darwin-amd64 (https://s3.amazonaws.com/bosh-cli-artifacts/bosh-cli-2.0.28-darwin-amd64) `sha1: c627e1d508b7fea20137c2e74906fd11a4139a2b`
- bosh-cli-2.0.28-linux-amd64 (https://s3.amazonaws.com/bosh-cli-artifacts/bosh-cli-2.0.28-linux-amd64) `sha1: 7b7629fcdf8839cf29bf25d97e8ea6beb3b9a7b2`
- bosh-cli-2.0.28-windows-amd64.exe (https://s3.amazonaws.com/bosh-cli-artifacts/bosh-cli-2.0.28-windows-amd64.exe) `sha1: 7ee46451e012f675fdb63074638f2538cd562dcf` (Windows CLI support is partial)

```
$ chmod +x ~/Downloads/bosh-cli-*
$ sudo mv ~/Downloads/bosh-cli-* /usr/local/bin/bosh
```

1. Check `bosh` version to make sure it is properly installed:

   ```
   $ bosh -v
   version 2.0.26-105157c-2017-06-22T18:53:53Z
   ```

   If the output does not begin with `version 2.0...` you are probably executing CLI v1 (Ruby based).

2. Install OS specified dependencies (/docs/cli-env-deps.html) for `bosh create-env` command

Alternatively, refer to cloudfoundry/homebrew-tap (https://github.com/cloudfoundry/homebrew-tap) to install CLI via Homebrew on OS X. We currently do not publish CLI via apt or yum repositories.

Global Flags

See Global flags (/docs/cli-global-flags.html) for more details on how to enable different output formats, debug logging, etc.

Commands

Environments

See Environments (/docs/cli-envs.html).

- `bosh environments` (Alias: `envs`)

  Lists aliased environments known to the CLI. Aliasing is done via `alias-env` command.

  ```
  $ bosh envs
  URL              Alias
  104.154.171.255  gcp
  192.168.56.6     vbox

  2 environments

  Succeeded
  ```

- `bosh create-env manifest.yml [--state path] [-v ...] [-o ...] [--vars-store path]`

  Creates single VM based on the manifest. Typically used to create a Director environment. Operation files and variables can be provided to adjust and fill in manifest before doing a deploy.

  `create-env` command replaces `bosh-init deploy` CLI command.

  ```
  $ bosh create-env ~/workspace/bosh-deployment/bosh.yml \
    --state state.json \
    --vars-store ./creds.yml \
    -o ~/workspace/bosh-deployment/virtualbox/cpi.yml \
    -o ~/workspace/bosh-deployment/virtualbox/outbound-network.yml \
    -o ~/workspace/bosh-deployment/bosh-lite.yml \
    -o ~/workspace/bosh-deployment/jumpbox-user.yml \
    -v director_name=vbox \
    -v internal_ip=192.168.56.6 \
    -v internal_gw=192.168.56.1 \
    -v internal_cidr=192.168.56.0/24 \
    -v network_name=vboxnet0 \
    -v outbound_network_name=NatNetwork
  ```

- `bosh alias-env name -e location [--ca-cert=path]`

  Assigns a name to the created environment for easier access in subsequent CLI commands. Instead of specifying Director location and possibly a CA certificate, subsequent commands can just take given name via `--environment` flag (`-e`).

  ```
  $ bosh alias-env gcp -e bosh.corp.com
  $ bosh alias-env gcp -e 10.0.0.6 --ca-cert <(bosh int creds.yml --path /director_ssl/ca)
  ```

- `bosh -e location environment` (Alias: `env`)

  Shows Director information in the deployment environment.

  ```
  $ bosh -e vbox env
  Using environment '192.168.56.6' as '?'

  Name      vbox
  UUID      eeb27cc6-467e-4c1d-a8f9-f1a8de759f52
  Version   260.5.0 (00000000)
  CPI       warden_cpi
  Features  compiled_package_cache: disabled
            dns: disabled
            snapshots: disabled
  User      admin

  Succeeded
  ```

- `bosh delete-env manifest.yml [--state path] [-v ...] [-o ...] [--vars-store path]`

  Deletes previously created VM based on the manifest. Same flags provided to `create-env` command should be given to the `delete-env` command.

  `delete-env` command replaces `bosh-init delete` CLI command.

  ```
  $ bosh delete-env ~/workspace/bosh-deployment/bosh.yml \
    --state state.json \
    --vars-store ./creds.yml \
    -o ~/workspace/bosh-deployment/virtualbox/cpi.yml \
    -o ~/workspace/bosh-deployment/virtualbox/outbound-network.yml \
    -o ~/workspace/bosh-deployment/bosh-lite.yml \
    -o ~/workspace/bosh-deployment/jumpbox-user.yml \
    -v director_name=vbox \
    -v internal_ip=192.168.56.6 \
    -v internal_gw=192.168.56.1 \
    -v internal_cidr=192.168.56.0/24 \
    -v network_name=vboxnet0 \
    -v outbound_network_name=NatNetwork
  ```

Session

- `bosh log-in` (Alias: `l`, `login`)

  Logs in given user into the Director.

  This command can only be used interactively. If non-interactive use is necessary (for example in scripts) please set `BOSH_CLIENT` and `BOSH_CLIENT_SECRET` environment variables instead of using this command. Note that if the Director is configured with UAA authentication you cannot use UAA users with BOSH_* environment variables but rather have to use UAA clients.

```
$ bosh -e my-env l
User (): admin
Password ():
```

- `bosh log-out` (Alias: `logout`)

  Logs out currently logged in user.

Stemcells

See [Uploading Stemcells (/docs/uploading-stemcells.html)](/docs/uploading-stemcells.html).

- `bosh -e my-env stemcells` (Alias: `ss`)

  Lists stemcells previously uploaded into the Director. Shows their names, versions and CIDs.

  ```
  $ bosh -e my-env ss
  Using environment '192.168.56.6' as '?'

  Name                                         Version  OS             CPI  CID
  bosh-warden-boshlite-ubuntu-trusty-go_agent  3363*    ubuntu-trusty  -    6cbb176a-6a43-42...
  ~                                            3312     ubuntu-trusty  -    43r3496a-4rt3-52...
  bosh-warden-boshlite-centos-7-go_agent       3363*    centos-7       -    38yr83gg-349r-94...

  (*) Currently deployed

  3 stemcells

  Succeeded
  ```

- `bosh -e my-env upload-stemcell location [--sha1=digest] [--fix]` (Alias: `us`)

  Uploads stemcell to the Director. Succeedes even if stemcell is already imported.

  Stemcell location may be local file system path or an HTTP/HTTPS URL.

  `--fix` flag allows to replace previously uploaded stemcell with the same name and version to repair stemcells that might have been corrupted in the cloud.

  ```
  $ bosh -e my-env us ~/Downloads/bosh-stemcell-3363-warden-boshlite-ubuntu-trusty-go_agent.tgz
  $ bosh -e my-env us https://bosh.io/d/stemcells/bosh-stemcell-warden-boshlite-ubuntu-trusty-go_agent?v=3363
  ```

- `bosh -e my-env delete-stemcell name/version`

  Deletes uploaded stemcell from the Director. Succeedes even if stemcell is not found.

  ```
  $ bosh -e my-env delete-stemcell bosh-warden-boshlite-ubuntu-trusty-go_agent/3363
  ```

- `bosh repack-stemcell src.tgz dst.tgz [--name=name] [--version=ver] [--cloud-properties=json-string]`

  Produces new stemcell tarball with updated properties such as name, version, and cloud properties.

  See [Repacking stemcells (/docs/repack-stemcell.html)](/docs/repack-stemcell.html) for details.

Release creation

- `bosh init-release [--git] [--dir=dir]`

  Creates an empty release skeleton for a release in `dir`. By default `dir` is the current directory.

`--git` flag initializes release skeleton as a Git repository, adding appropriate `.gitignore` file.

```
$ bosh init-release --git --dir release-dir
$ cd release-dir
```

- `bosh generate-job name [--dir=dir]`

  Creates an empty job skeleton for a release in `dir`. Includes bare `spec` and an empty `monit` file.

- `bosh generate-package name [--dir=dir]`

  Creates an empty package skeleton for a release in `dir`. Includes bare `spec` and an empty `packaging` file.

- `bosh create-release [--force] [--version=ver] [--timestamp-version] [--final] [--tarball=path] [--dir=dir]` (Alias: `cr`)

  Creates new version of a release stored in `dir`

  - `--force` flag specifies to ignore uncommitted changes in the release directory; it should only be used when building dev releases
  - `--version` flag allows to provide custom release version
  - `--timestamp-version` flag will produce timestamp based dev release version
  - `--tarball` flag specifies destination of a release tarball; if not specified, release tarball will not be produced
  - `--sha2` flag to use SHA256 checksum

  While iterating on a release it's common to run `bosh create-release --force && bosh -e my-env upload-release && bosh -e my-env -d my-dep deploy manifest.yml` command sequence.

  In a CI pipeline it's common to use this command to create a release tarball and pass it into acceptance or end-to-end tests. Once release tarball goes through appropriate tests it can be finalized with a `finalize-release` command and shared with release consumers.

  ```
  $ cd release-dir
  $ bosh create-release --force
  $ bosh create-release --timestamp-version
  $ bosh create-release --version 9+dev.10
  $ bosh create-release --tarball /tmp/my-release.tgz
  $ bosh create-release --final
  $ bosh create-release --version 20 --final
  $ bosh create-release releases/zookeeper/zookeeper-3.yml --tarball /tmp/my-release.tgz
  ```

- `bosh finalize-release release.tgz [--force] [--version=ver] [--dir=dir]`

  Records contents of a release tarball as a final release with an optionally given version. Once `.final_builds` and `releases` directories are updates it's strongly recommend to commit your changes to version control.

  Typically this command is used as a final step in the CI pipeline to save the final artifact once it passed appropriate tests.

  ```
  $ cd release-dir
  $ bosh finalize-release /tmp/my-release.tgz
  $ bosh finalize-release /tmp/my-release.tgz --version 20
  $ git commit -am 'Final release 20'
  $ git push origin master
  ```

- `bosh reset-release [--dir=dir]`

  Removes temporary artifacts such as dev releases, blobs, etc. kept in the release directory `dir`.

Release blobs

See Release Blobs (/docs/release-blobs.html) for a detailed workflow.

- `bosh blobs`

  Lists tracked blobs from `config/blobs.yml`. Shows uploaded and not-yet-uploaded blobs.

  ```
  $ cd release-dir
  $ bosh blobs
  Path                                Size     Blobstore ID         Digest
  golang/go1.6.2.linux-amd64.tar.gz  81 MiB   f1833f76-ad8b-4b...  b8318b0...
  stress/stress-1.0.4.tar.gz         187 KiB  (local)              e1533bc...

  2 blobs

  Succeeded
  ```

- `bosh add-blob src-path dst-path`

  Sarts tracking blob in `config/blobs.yml` for inclusion in packages.

  ```
  $ cd release-dir
  $ bosh add-blob ~/Downloads/stress-1.0.4.tar.gz stress/stress-1.0.4.tar.gz
  ```

- `bosh remove-blob blob-path`

  Stops tracking blob in `config/blobs.yml`. Does not remove previously uploaded copies from the blobstore as older release versions may still want to reference it.

  ```
  $ cd release-dir
  $ bosh remove-blob stress/stress-1.0.4.tar.gz
  ```

- `bosh upload-blobs`

  Uploads previously added blobs that were not yet uploaded to the blobstore. Updates `config/blobs.yml` with returned blobstore IDs. Before creating a final release it's strongly recommended to upload blobs so that other release contributors can rebuild a release from scratch.

  ```
  $ cd release-dir
  $ bosh upload-blobs
  ```

- `bosh sync-blobs`

  Downloads blobs into `blobs/` based on `config/blobs.yml`.

  ```
  $ cd release-dir
  $ bosh sync-blobs
  ```

Releases

See Uploading Releases (/docs/uploading-releases.html).

- `bosh -e my-env releases` (Alias: `rs`)

  Lists releases previously uploaded into the Director. Shows their names and versions.

```
$ bosh -e my-env rs
Using environment '192.168.56.6' as client 'admin'

Name               Version   Commit Hash
capi               1.21.0*   716aa812
cf-mysql           34*       e0508b5
cf-smoke-tests     11*       a6dad6e
cflinuxfs2-rootfs  1.52.0*   4827ef51+
consul             155*      22515a98+
diego              1.8.1*    0cca668e
dns                3*        57e27da
etcd               94*       57c81e16
garden-runc        1.2.0*    2b3dedc5
loggregator        78*       773a3ba
nats               15*       d4dfc4c1+
routing            0.145.0*  dfb44c41+
statsd-injector    1.0.20*   552926d
syslog             9         ac2172f
uaa                25*       86ec7568

(*) Currently deployed
(+) Uncommitted changes

15 releases

Succeeded
```

- `bosh -e my-env upload-release [location] [--version=ver] [--sha1=digest] [--fix]` (Alias: `ur`)

  Uploads release to the Director. Succeedes even if release is already imported.

  Release location may be local file system path, HTTP/HTTPS URL or a git URL.

  `--fix` flag allows to replace previously uploaded release with the same name and version to repair releases that might have been corrupted.

  ```
  $ bosh -e my-env ur
  $ bosh -e my-env ur https://bosh.io/d/github.com/concourse/concourse?v=2.7.3
  $ bosh -e my-env ur git+https://github.com/concourse/concourse --version 2.7.3
  ```

- `bosh -e my-env delete-release name/version`

  Deletes uploaded release from the Director. Succeedes even if release is not found.

  ```
  $ bosh -e my-env delete-release cf-smoke-tests/94
  ```

- `bosh -e my-env -d my-dep export-release name/version os/version [--dir=dir]`

  Compiles and exports a release against a particular stemcell version.

  Requires to operate with a deployment so that compilation resources (VMs) are properly tracked.

  Destination directory default to the current directory.

  ```
  $ bosh -e my-env -d my-dep export-release cf-smoke-tests/94 ubuntu-trusty/3369
  ```

- `bosh -e my-env inspect-release name/version`

  Lists all jobs, job metadata (such as links), packages, and compiled packages associated with a release version.

```
$ bosh -e gcp-test inspect-release consul/155
Using environment '192.168.56.6' as client 'admin'

Job                                                                   Blobstore ID       Digest       Links Consumed    Links Provided
acceptance-tests/943c6083581e623dc66c7d9126d8e5989c4c2b31             0f3cd013-1d3d-...  17e5e4fc...  -                 -
consul-test-consumer-windows/6748c0675da2292c680da03e89b738a9d5818370 7461c74c-745d-...  9809861c...  -                 -
consul-test-consumer/7263db87ba85eaf0dd41bd198359c8597e961839         8bde4572-8e8b-...  7b08b059...  -                 -
consul_agent/b4872109282347700eaa884dcfe93f3a03dc22dd                 e41f705e-2cb7-...  a8db2c76...  - name: consul    - name: consul
                                                                                                        type: consul      type: consul
                                                                                                        optional: true
consul_agent_windows/a0b91cb0aa1029734d77fcf064dafdb67f14ada6         3a8755d0-7a39-...  17f07ec0...  - name: consul    - name: consul
                                                                                                        type: consul      type: consul
                                                                                                        optional: true
fake-dns-server/a1ea5f64de0860512470ace7ce2376aa9470f9b1              5bb53f17-eba9-...  0565f9af...  -                 -

6 jobs

Package                                                           Compiled for          Blobstore ID            Digest
acceptance-tests-windows/e36cef763e5cfd4e28738ad314807e6d1e13b960 (source)              03589024-2596-49fc-...  96eaaf4ba...
acceptance-tests/9d56ac03d7410dcdfd96a8c96bbc79eb4b53c864         (source)              79fb9ba7-cd23-4b93-...  e08ee88f5...
confab-windows/52b117effcd95138eca94c789530bcd6499cff9d           (source)              53d4b206-b064-462d-...  43f92c8d0...
confab/b2ff0bbd68b7d600ecb1ffaf41f59af073e894fd                   (source)              b93214eb-a816-4029-...  4b627d264...
~                                                                 ubuntu-trusty/3363.9  f66fe541-8c21-4fe3-...  8e662c2e2...
consul-windows/2a8e0b7ce1424d1d5efe5c7184791481a0c26424           (source)              9516870b-801e-42ea-...  19db18127...
consul/6049d3016cd34ac64ccbf7837b06b6db81942102                   (source)              04aa38af-e883-4842-...  c42cacfc7...
~                                                                 ubuntu-trusty/3363.9  ab4afda6-881e-46b1-...  27c1390fa...
golang1.7-windows/1a80382e081cd429cf518f0c783f4e4172cac79e        (source)              d7670210-7038-4749-...  b91caa06a...
golang1.7/181f7537c2ec17ac2406d9f2eb3322fd80fa2a1c                (source)              ac8aa36a-8965-46e9-...  ca440d716...
~                                                                 ubuntu-trusty/3363.9  9d40794f-0c50-4d0c-...  9d6e29221...

11 packages

Succeeded
```

Cloud config

See Cloud config (/docs/cloud-config.html).

- `bosh -e my-env cloud-config` (Alias: `cc`)

  Show current cloud config on the Director.

- `bosh -e my-env update-cloud-config config.yml [-v ...] [-o ...]` (Alias: `ucc`)

  Update current cloud config on the Director.

  ```
  $ bosh -e my-env ucc cc.yml
  ```

Runtime config

See Runtime config (/docs/runtime-config.html).

- `bosh -e my-env runtime-config` (Alias: `rc`)

  Show current runtime config on the Director.

- `bosh -e my-env update-runtime-config config.yml [-v ...] [-o ...]` (Alias: `urc`)

  Update current runtime config on the Director.

  ```
  $ bosh -e my-env urc runtime.yml
  ```

CPI config

See CPI config (/docs/cpi-config.html).

- `bosh -e my-env cpi-config`

  Show current CPI config on the Director.

- `bosh -e my-env update-cpi-config config.yml [-v ...] [-o ...]`

  Update current CPI config on the Director.

  ```
  $ bosh -e my-env update-cpi-config cpis.yml
  ```

Deployments

- `bosh -e my-env deployments` (Alias: `ds`)

  Lists deployments tracked by the Director. Shows their names, used releases and stemcells.

  ```
  $ bosh -e my-env ds
  Using environment '192.168.56.6' as client 'admin'

  Name                                Release(s)                Stemcell(s)                                         Team(s)  Cloud Config
  cf                                  binary-buildpack/1.0.9    bosh-warden-boshlite-ubuntu-trusty-go_agent/3363.9  -        latest
                                      capi/1.21.0
                                      cf-mysql/34
                                      cf-smoke-tests/11
                                      cflinuxfs2-rootfs/1.52.0
                                      consul/155
                                      diego/1.8.1
                                      etcd/94
                                      garden-runc/1.2.0
                                      loggregator/78
                                      nats/15
                                      routing/0.145.0
                                      statsd-injector/1.0.20
                                      uaa/25
  service-instance_0d4140a0-42b7-...  mysql/0.6.0               bosh-warden-boshlite-ubuntu-trusty-go_agent/3363.9  -        latest

  2 deployments

  Succeeded
  ```

- `bosh -e my-env -d my-dep deployment` (Alias: `dep`)

  Shows general deployment information for a given deployment.

  Can be used to determine if Director has a deployment with a given name.

  ```
  $ bosh -e vbox -d cf dep
  Using environment '192.168.56.6' as client 'admin'

  Name  Release(s)              Stemcell(s)                                         Team(s)  Cloud Config
  cf    binary-buildpack/1.0.9  bosh-warden-boshlite-ubuntu-trusty-go_agent/3363.9  -        latest
        capi/1.21.0
        cf-mysql/34
        cf-smoke-tests/11
        uaa/25
        dns/3
        ...

  1 deployments

  Succeeded
  ```

- `bosh -e my-env -d my-dep deploy manifest.yml [-v ...] [-o ...]`

  Create or update specified deployment according to the provided manifest. Operation files and variables can be provided to adjust and fill in manifest before deploy begins.

  Currently name provided via `--deployment` (`-d`) flag must match name specified in the manifest.

```
$ bosh -e vbox -d cf deploy cf.yml -v system_domain=sys.example.com -o large-footprint.yml
```

- `bosh -e my-env -d my-dep delete-deployment [--force]` (Alias: `deld`)

  Deletes specified deployment. If `--force` is provided, ignores variety of errors (from IaaS, blobstore, database) when deleting.

  Note that if you've deleted your deployment, not all resources may have been freed. For example "deleted" persistent disks will be deleted after a few days to avoid accidental data loss. See Persistent and Orphaned Disks (/docs/persistent-disks.html) for more details.

  Succeedes even if deployment is not found.

  ```
  $ bosh -e vbox -d cf deld
  $ bosh -e vbox -d cf deld --force
  ```

- `bosh -e my-env [-d my-dep] instances [--ps] [--details] [--vitals] [--failing]` (Alias: `is`)

  Lists all instances managed by the Director or in a single deployment. Show instance names, IPs, and VM and process health.

  - `--details` (`-i`) flag includes VM CID, persistent disk CIDs, and other instance level details
  - `--ps` flag includes per process health information
  - `--vitals` flag shows basic VM and process usage such RAM, CPU and disk.
  - `--failing` flag hides all healthy instances and processes leaving only non-healthy ones; useful for scripting

  ```
  $ bosh -e vbox is -i
  $ bosh -e vbox is --ps --vitals
  $ bosh -e vbox -d cf is
  $ bosh -e vbox -d cf is --ps
  $ bosh -e vbox -d cf is --ps --vitals
  ```

- `bosh -e my-env -d my-dep manifest` (Alias: `man`)

  Prints deployment manifest to `stdout`.

  ```
  $ bosh -e vbox -d cf man > /tmp/manifest.yml
  ```

- `bosh -e my-env -d my-dep recreate [group[/instance-id]] [--skip-drain] [--fix] [--canaries=] [--max-in-flight=] [--dry-run]`

  Recreates VMs for specified instances. Follows typical instance lifecycle.

  - `--skip-drain` flag skips runnig drain scripts
  - `--fix` flag replaces unresponsive VMs
  - `--canaries=` flag overrides manifest values for `canaries`
  - `--max-in-flight=` flag overrides manifest values for `max_in_flight`
  - `--dry-run` flag runs through as many operations without altering deployment

  ```
  $ bosh -e vbox -d cf recreate
  $ bosh -e vbox -d cf recreate --fix
  $ bosh -e vbox -d cf recreate diego-cell
  $ bosh -e vbox -d cf recreate diego-cell/209c42e5-3c1a-432a-8445-ab8d7c9f69b0
  $ bosh -e vbox -d cf recreate diego-cell/209c42e5-3c1a-432a-8445-ab8d7c9f69b0 --skip-drain
  $ bosh -e vbox -d cf recreate diego-cell --canaries=0 --max-in-flight=100%
  ```

- `bosh -e my-env -d my-dep restart [group[/instance-id]] [--skip-drain] [--canaries=] [--max-in-flight=]`

  Restarts jobs (processes) on specified instances. Does not affect VM state.

  - `--skip-drain` flag skips runnig drain scripts
  - `--canaries=` flag overrides manifest values for `canaries`
  - `--max-in-flight=` flag overrides manifest values for `max_in_flight`

- `bosh -e my-env -d my-dep start [group[/instance-id]] [--canaries=] [--max-in-flight=]`

  Starts jobs (processes) on specified instances. Does not affect VM state.

  - `--canaries=` flag overrides manifest values for `canaries`
  - `--max-in-flight=` flag overrides manifest values for `max_in_flight`

- `bosh -e my-env -d my-dep stop [group[/instance-id]] [--skip-drain] [--canaries=] [--max-in-flight=]`

  Stops jobs (processes) on specified instances. Does not affect VM state unless `--hard` flag is specified.

  - `--hard` flag forces VM deletion (keeping persistent disk)
  - `--skip-drain` flag skips runnig drain scripts
  - `--canaries=` flag overrides manifest values for `canaries`
  - `--max-in-flight=` flag overrides manifest values for `max_in_flight`

- `bosh -e my-env -d my-dep ignore group/instance-id`

  Ignores instance from being affected by other commands such as `bosh deploy`.

- `bosh -e my-env -d my-dep unignore group/instance-id`

  Unignores instance from being affected by other commands such as `bosh deploy`.

- `bosh -e my-env -d my-dep logs [group[/instance-id]] [--follow] ...`

  Downloads logs from one or more instances.

  - `--dir=` flag specifies destination directory
  - `--job=` flag includes only specific jobs logs
  - `--only=` flag filters logs (comma-separated)
  - `--agent` flag includes only BOSH Agent logs

  Additional flags for following logs via SSH: - `--follow` (`-f`) flag to turn on log following - `--num` flag shows last number of lines immediately - `--quiet` (`-q`) flag suppresses printing of headers when multiple files are examined - `--gw-*` flags allow to configure SSH gateway configuration

  See Location and use of logs (/docs/job-logs.html) for details.

  ```
  $ bosh -e vbox -d cf logs diego-cell/209c42e5-3c1a-432a-8445-ab8d7c9f69b0
  $ bosh -e vbox -d cf logs diego-cell/209c42e5-3c1a-432a-8445-ab8d7c9f69b0 --job=rep --job=silkd
  $ bosh -e vbox -d cf logs -f
  $ bosh -e vbox -d cf logs -f --num=1000
  ```

- `bosh -e my-env [-d my-dep] events [--* ...]`

  Lists events.

  See Events (/docs/events.html) for details.

  - `--before-id=` flag shows events with ID less than the given ID
  - `--before=` flag shows events before the given timestamp (ex: 2016-05-08 17:26:32)
  - `--after=` flag shows events after the given timestamp (ex: 2016-05-08 17:26:32)
  - `--task=` flag shows events with the given task ID

  - `--instance=` flag shows events with given instance
  - `--event-user=` flag shows events with given user
  - `--action=` flag shows events with given action
  - `--object-type=` flag shows events with given object type
  - `--object-id=` flag shows events with given object ID

  ```
  $ bosh -e vbox events --instance diego-cell/209c42e5-3c1a-432a-8445-ab8d7c9f69b0
  $ bosh -e vbox events --instance diego-cell/209c42e5-3c1a-432a-8445-ab8d7c9f69b0 --task 281
  $ bosh -e vbox events -d my-dep
  $ bosh -e vbox events --before-id=1298284
  $ bosh -e vbox events --before="2016-05-08 17:26:32 UTC" --after="2016-05-07 UTC"
  ```

- `bosh -e my-env event id`

  Shows single event details.

- `bosh -e my-env -d my-dep variables` (Alias: `vars`)

  List variables referenced by the deployment.

VMs

- `bosh -e my-env [-d my-dep] vms [--vitals]`

  Lists all VMs managed by the Director or VMs in a single deployment. Show instance names, IPs and VM CIDs.

  `--vitals` flag shows basic VM usage such RAM, CPU and disk.

  ```
  $ bosh -e vbox vms
  $ bosh -e vbox -d cf vms
  $ bosh -e vbox -d cf vms --vitals
  ```

- `bosh -e my-env -d my-dep delete-vm cid`

  Deletes VM without going through typical instance lifecycle. Clears out VM reference from a Director database if referenced by any instance.

  ```
  $ bosh -e vbox -d cf delete-vm i-fs384238fjwjf8
  ```

Disks

- `bosh -e my-env -d my-dep disks [--orphaned]`

  Lists disks. Currently only supports `--orphaned` flag.

- `bosh -e my-env -d my-dep attach-disk group/instance-id disk-cid`

  Attaches disk to an instance, replacing currently attached disk (if any).

  ```
  $ bosh -e vbox -d cf attach-disk postgres/209c42e5-3c1a-432a-8445-ab8d7c9f69b0 vol-shw8f293f2f2
  ```

- `bosh -e my-env -d my-dep delete-disk cid`

  Deletes orphaned disk.

  ```
  $ bosh -e vbox -d cf delete-disk vol-shw8f293f2f2
  ```

SSH

- `bosh -e my-env -d my-dep ssh [destination] [-r] [-c=cmd] [--opts=opts] [--gw-* ...]`

  SSH into one or more instances.

  - `--opts` flag allows to pass through options to `ssh`; useful for port forwarding
  - `--gw-*` flags allow to configure SSH gateway configuration

```
# execute command on all instances in a deployment
$ bosh -e vbox -d cf ssh -c 'uptime'

# execute command on one instance group
$ bosh -e vbox -d cf ssh diego-cell -c 'uptime'

# execute command on a single instance
$ bosh -e vbox -d cf ssh diego-cell/209c42e5-3c1a-432a-8445-ab8d7c9f69b0 -c 'uptime'

# execute command with passwordless sudo
$ bosh -e vbox -d cf ssh diego-cell -c 'sudo lsof -i|grep LISTEN'

# present output in a table by instance
$ bosh -e vbox -d cf ssh -c 'uptime' -r

# port forward UAA port locally
$ bosh -e vbox -d cf ssh uaa/0 --opts ' -L 8080:localhost:8080'
```

- `bosh -e my-env -d my-dep scp src/dst:[file] src/dst:[file] [-r] [--gw-* ...]`

  SCP to/from one or more instances.

  - `--recursive` (`-r`) flag allow to copy directory recursively
  - `--gw-*` flags allow to configure gateway configuration

```
# copy file from this machine to machines a deployment
$ bosh -e vbox -d cf scp ~/Downloads/script.sh :/tmp/script.sh
$ bosh -e vbox -d cf scp ~/Downloads/script.sh diego-cell:/tmp/script.sh
$ bosh -e vbox -d cf scp ~/Downloads/script.sh diego-cell/209c42e5-3c1a-432a-8445-ab8d7c9f69b0:/tmp/script.sh

# copy file from remote machines in a deployment to this machine
$ bosh -e vbox -d cf scp :/tmp/script.sh ~/Downloads/script.sh
$ bosh -e vbox -d cf scp diego-cell:/tmp/script.sh ~/Downloads/script.sh
$ bosh -e vbox -d cf scp diego-cell/209c42e5-3c1a-432a-8445-ab8d7c9f69b0:/tmp/script.sh ~/Downloads/script.sh
```

Errands

- `bosh -e my-env -d my-dep errands` (Alias: `es`)

  Lists all errands defined by the deployment.

```
$ bosh -e vbox -d cf es
Using environment '192.168.56.6' as '?'

Using deployment 'cf'

Name
smoke-tests

1 errands

Succeeded
```

- `bosh -e my-env -d my-dep run-errand name [--keep-alive] [--when-changed] [--download-logs] [--logs-dir=dir]`

  Runs errand with the name.

  - `--keep-alive` flag keeps VM around where errand was executing
  - `--when-changed` flag indicates whether to skip running an errand if it previously ran (successfully finished) and errand job configuration did not change
  - `--download-logs` flag indicates whether to download full errand logs to a directory specified by `--logs-dir` (defaults to the current directory)

  ```
  $ bosh -e vbox -d cf run-errand smoke-tests
  $ bosh -e vbox -d cf run-errand smoke-tests --keep-alive
  $ bosh -e vbox -d cf run-errand smoke-tests --when-changed
  ```

Tasks

- `bosh -e my-env tasks [--recent[=num]] [--all]` (Alias: `ts`)

  Lists active and previously ran tasks.

  - `--deployment` (`-d`) flag filters tasks by a deployment

  ```
  # currently active tasks
  $ bosh -e vbox ts

  # currently active tasks for my-dep deployment
  $ bosh -e vbox -d my-dep ts
  Using environment '192.168.56.6' as '?'

  #   State  Started At                    Last Activity At              User   Deployment   Description                   Result

  27  done   Thu Feb 16 19:16:15 UTC 2017  Thu Feb 16 19:20:33 UTC 2017  admin  cockroachdb  create deployment             /deploy
  ments/cockroachdb
  26  done   Thu Feb 16 18:54:32 UTC 2017  Thu Feb 16 18:55:27 UTC 2017  admin  cockroachdb  delete deployment cockroachd  /deploy
  ments/cockroachdb
  ...

  110 tasks

  Succeeded

  # show last 30 tasks
  $ bosh -e vbox ts -r --all

  # show last 1000 tasks
  $ bosh -e vbox ts -r=1000
  ```

- `bosh -e my-env task id [--debug] [--result] [--event] [--cpi]` (Alias: `t`)

  Shows single task details. Continues to follow task if it did not finish. `Ctrl^C` does not cancel task.

  ```
  $ bosh -e vbox t 281
  $ bosh -e vbox t 281 --debug
  ```

- `bosh -e my-env cancel-task id` (Alias: `ct`)

  Cancel task at its next checkpoint. Does not wait until task is cancelled.

  ```
  $ bosh -e vbox ct 281
  ```

Snapshots

- `bosh -e my-env -d my-dep snapshots`

  Lists disk snapshots for given deployment.

- `bosh -e my-env -d my-dep take-snapshot [group/instance-id]`

  Takes snapshot for an instance or an entire deployment.

- `bosh -e my-env -d my-dep delete-snapshot cid`

  Deletes snapshot.

  ```
  $ bosh -e vbox -d cf delete-snapshot snap-shw38ty83f2f2
  ```

- `bosh -e my-env -d my-dep delete-snapshots`

  Deletes snapshots for an entire deployment.

Deployment recovery

- `bosh -e my-env update-resurrection on/off`

  Enables or disables resurrection globally. This state is not reflected in the `bosh instances` command's `Resurrection` column.

  See Automatic repair with Resurrector (/docs/resurrector.html) for details.

- `bosh -e my-env -d my-dep cloud-check [--report] [--auto]` (Alias: `cck`)

  Checks for resource consistency and allows interactive repair.

  See Manual repair with Cloud Check (/docs/cck.html) for details.

- `bosh -e my-env locks`

  Lists current locks.

Misc

- `bosh -e my-env clean-up [--all]`

  Cleans up releases, stemcells, orphaned disks, and other unused resources.

  - `--all` flag forces cleanup for orphaned disks

- `bosh help`

  Shows list of available commands and global options. Consider using `-h` flag for individual commands.

- `bosh interpolate manifest.yml [-v ...] [-o ...] [--vars-store path] [--path op-path]` (Alias: `int`)

  Interpolates variables into a manifest sending result to stdout. Operation files (/docs/cli-ops-files.html) and variables (/docs/cli-int.html) can be provided to adjust and fill in manifest before doing a deploy.

  `--path` flag can be used to extract portion of a YAML document.

```
$ bosh int bosh-deployment/bosh.yml \
  --vars-store ./creds.yml \
  -o bosh-deployment/virtualbox/cpi.yml \
  -o bosh-deployment/virtualbox/outbound-network.yml \
  -o bosh-deployment/bosh-lite.yml \
  -o bosh-deployment/jumpbox-user.yml \
  -v director_name=vbox \
  -v internal_ip=192.168.56.6 \
  -v internal_gw=192.168.56.1 \
  -v internal_cidr=192.168.56.0/24 \
  -v network_name=vboxnet0 \
  -v outbound_network_name=NatNetwork

$ bosh int creds.yml --path /admin_password
skh32i7rdfji4387hg

$ bosh int creds.yml --path /director_ssl/ca
-----BEGIN CERTIFICATE-----
...
```

Command can be used in a generic way to generate CA and leaf certificates.

```
variables:
- name: default_ca
  type: certificate
  options:
    common_name: ca
- name: service_ssl
  type: certificate
  options:
    ca: default_ca
    common_name: ((internal_ip))
    alternative_names: [((internal_ip))]


$ bosh interpolate certs-tpl.yml -v internal_ip=1.2.3.4 --vars-store certs.yml --var-errs
$ bosh interpolate certs.yml --path /service_ssl/ca
$ bosh interpolate certs.yml --path /service_ssl/certificate
$ bosh interpolate certs.yml --path /service_ssl/private_key
```

Next: Differences between CLI v2 vs v1 (/docs/cli-v2-diff.html)

Contribute changes to this page (https://github.com/cloudfoundry/docs-bosh/blob/master/cli-v2.html.md.erb)

COMMUNITY

- Documentation (/docs)
- github.com/cloudfoundry/bosh (https://github.com/cloudfoundry/bosh)
- #bosh on Slack (https://slack.cloudfoundry.org)
- cf-bosh mailing list (https://lists.cloudfoundry.org/pipermail/cf-bosh)
- Pivotal Tracker project (https://www.pivotaltracker.com/n/projects/956238)
- Report a security issue (https://pivotal.io/security)