# 1 CheatSheet: Concourse

**VMWARE** 

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- PDF Link: cheatsheet-concourse-A4.pdf, Category: vmware
- Blog URL: https://cheatsheet.dennyzhang.com/cheatsheet-concourse-A4
- Related posts: Bosh CheatSheet, PKS CheatSheet, #denny-cheatsheets

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## 1.1 Concourse Concepts

Name	Summary
fly	Pipelines are configured entirely via fly CLI
Teams	Every pipeline and one-off build belongs to a team.
Targets	Alias of Concourse endpoints, which composes of server url, credentials, etc
Pipelines	A pipeline is the result of configuring Jobs and Resources together.
Jobs	Jobs determine the actions of your pipeline,
Resource	Allow you to define inputs and outputs to jobs in a pipeline
Tasks	The smallest configurable unit in a Concourse pipeline is a single task.
Reference	Link: Concourse Concepts, Link: concoursetutorial.com

## 1.2 Concourse Resources

Name	Summary
file-downloader-resource	enable downloading pivotal product files and stemcells
gcs-resource: google bucket	
pool-resource	Atomically manages external environments
github-release	
git-release	tracks commits in a branch of a Git repository
docker-image-resource: docker image	
Step: tags	Use tag to match workers
bbl (bosh-bootloader)	Command line utility for standing up a BOSH director on any IAAS
Reference	GitHub: pcf-pipelines

## 1.3 Concourse Examples

Name	Summary
Hello world pipeline	example: helloworld.yml
Pass output to input across different tasks	example: tasks-output-input.yml
Trigger pipeline test every 5 minutes	example: run-test-regularly.yml
git-resource	example: example-git.yml
concourse-curl-resource: http download link	example: url-download.yml

## 1.4 Concourse Containers

Name	Summary
Login to container	fly -t \$target hijack -u \$job_url
Run command without sudden exit	nohup SOMECOMMAND &; tail -f nohup.out
Hijack to containers with a successful run	By design when task has passed, the container will be deleted

# 1.5 Concourse Pipeline

Name	Summary
List all authenticated end points	fly targets
Get fly version	flyversion
fly login	fly -t \$target login -c \$concourse_url -n \$team_name
Get pipeline definition	fly -t \$target get-pipeline -p \$job_name > job.yaml
Update pipeline	fly -t \$target set-pipeline -p \$pipeline_name -c pipeline.yml -l credentia
Update pipeline	fly -t \$target set-pipeline -p \$pipeline_name -c pipeline.yml -v env1=var1
Destroy pipeline	fly -t \$target destroy-pipeline -p \$pipeline_name
Destroy pipeline without confirmation	fly -t \$target destroy-pipeline -p \$pipeline_name -n
Format pipeline	fly format-pipeline -c pipeline.yml
Validate pipeline	fly validate-pipeline -c pipeline.yml

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https://raw.githubusercontent.com/dennyzhang/cheatsheet.dennyzhang.com/master/cheatsheet-concourse-A4/concourse-sample.png

## 1.6 Concourse Resource

Name	Summary
github-release resource get the old tag	fly -t \$target check-resource -r \$pipeline-name/\$resource-name -f tag
bosh-io-stemcell resource get the old version	fly -t \$target check-resource -r \$pipeline-name/ubuntu-xenial-stemce
github release use a specific tag	github-release-specific-tag.md

# 1.7 Concourse Security

Name	Summary
Fly login to the default main team	fly -t \$target login -n main -c \$concourse_url
Fly login to a different team	fly -t \$target login -n \$team_name -c \$concourse_url
List all teams	fly -t \$target teams, fly -t \$target teams -d
Fly logout all targets	fly logoutall
Install ansible vault in mac	brew install ansible
Create a team	fly -t \$target set-team -n \$team_namegithub-org \$my_org
Create a team	fly -t \$target set-team -n \$team_nameallow-all-users
Destroy a team	fly -t \$target destroy-teamteam-name \$team_name
Login to a team	fly -t \$target set-team -n \$team_name
Fly conf file	~/.flyrc
Reference	After login to the main team, you can update other teams. Link: Concourse Team

## 1.8 Concourse Workers

Name	Summary
List all concourse workers	fly -t \$target workers
List all concourse containers	fly -t \$target containers

https://raw.githubusercontent.com/dennyzhang/cheatsheet.dennyzhang.com/master/cheatsheet-concourse-A4/concourse-design.png

## 1.9 Concourse Opportunities

Name	Summary
fly set-pipeline run into "error: forbidden"	Need to logout from both fly client (fly logoutall) and Concourse
List team details for all targets	fly -t \$target teams -d, ~/.flyrc
Concourse UI runs into a blank page	If pipeline has recursive dependencies, Concourse UI may have issue to run
Split one pipeline yaml into small <b>reusable</b> pieces	Not supported. An uncomfortable workaround: generating yaml with other
Add a readonly member to one team	Not supported. Concourse only support authentication control, but not auti
Does Concourse have REST API?	Not supported so far. Link: GitHub, Link: Concourse REST endpoints
Reference	concourse-tutorial, concourse-pipeline-samples

## 1.10 fly Online Usage

```
bash-3.2$ fly --help
error: Usage:
  fly [OPTIONS] <command>
Application Options:
  -t, --target=
                             Concourse target name
  -v, --version
                             Print the version of Fly and exit
      --verbose
                             Print API requests and responses
      --print-table-headers Print table headers even for redirected output
Help Options:
  -h, --help
                             Show this help message
Available commands:
  abort-build
                     Abort a build (aliases: ab)
  builds
                     List builds data (aliases: bs)
                    Check a resource (aliases: cr)
  check-resource
                    Print a Checkfile of the given pipeline (aliases: cl)
  checklist
  containers
                     Print the active containers (aliases: cs)
  destroy-pipeline
                    Destroy a pipeline (aliases: dp)
                    Destroy a team and delete all of its data (aliases: dt)
  destroy-team
                     Execute a one-off build using local bits (aliases: e)
  execute
                     Make a pipeline publicly viewable (aliases: ep)
  expose-pipeline
  format-pipeline
                     Format a pipeline config (aliases: fp)
  get-pipeline
                     Get a pipeline's current configuration (aliases: gp)
                     Print this help message
  help
  hide-pipeline
                     Hide a pipeline from the public (aliases: hp)
                     Execute a command in a container (aliases: intercept, i)
  hijack
  jobs
                     List the jobs in the pipelines (aliases: js)
                     Authenticate with the target (aliases: 1)
  login
                     Release authentication with the target (aliases: o)
  logout
                     Orders pipelines (aliases: op)
  order-pipelines
                     Pause a job (aliases: pj)
  pause-job
                     Pause a pipeline (aliases: pp)
  pause-pipeline
  pause-resource
                     Pause a resource (aliases: pr)
  pipelines
                     List the configured pipelines (aliases: ps)
  prune-worker
                     Prune a stalled, landing, landed, or retiring worker (aliases: pw)
  rename-pipeline
                    Rename a pipeline (aliases: rp)
  rename-team
                     Rename a team (aliases: rt)
  set-pipeline
                     Create or update a pipeline's configuration (aliases: sp)
                     Create or modify a team to have the given credentials (aliases: st)
  set-team
  status
                     Login status
                     Download and replace the current fly from the target (aliases: s)
  sync
                    List saved targets (aliases: ts)
  targets
                     List the configured teams (aliases: t)
  teams
  trigger-job
                     Start a job in a pipeline (aliases: tj)
                     Unpause a job (aliases: uj)
  unpause-job
  unpause-pipeline
                     Un-pause a pipeline (aliases: up)
                     Unpause a resource (aliases: ur)
  unpause-resource
  validate-pipeline
                     Validate a pipeline config (aliases: vp)
  volumes
                     List the active volumes (aliases: vs)
                     Stream a build's output (aliases: w)
  watch
  workers
                     List the registered workers (aliases: ws)
```

#### 1.11 fly set-pipeline Online Usage

```
> fly set-pipeline --help
```

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error: Usage:

fly [OPTIONS] set-pipeline [set-pipeline-OPTIONS]

Application Options:

-t, --target= Concourse target name

-v, --version Print the version of Fly and exit
--verbose Print API requests and responses

--print-table-headers Print table headers even for redirected output

Help Options:

-h, --help Show this help message

[set-pipeline command options]

-n, --non-interactive Skips interactions, uses default values

--no-color Disable color output

--check-creds Validate credential variables against credential manager

-v, --var=[NAME=STRING] Specify a string value to set for a variable in the pipeline -y, --yaml-var=[NAME=YAML] Specify a YAML value to set for a variable in the pipeline

-1, --load-vars-from= Variable flag that can be used for filling in template values in configur

#### 1.12 More Resources

http://www.mikeball.info/blog/concourse-git-resource/

https://concoursetutorial.com/

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