

This is an example cheat sheet, feel free to customize for your own needs by opening <https://github.com/zalando-incubator/kubernetes-on-aws/blob/dev/docs/user-guide/kubernetes-cheat-sheet.svg> with Inkscape.

## Installation & Configuration

```
pip3 install -U stups ← installs zkubectl & zdeploy,
stups configure foo.example.org
```

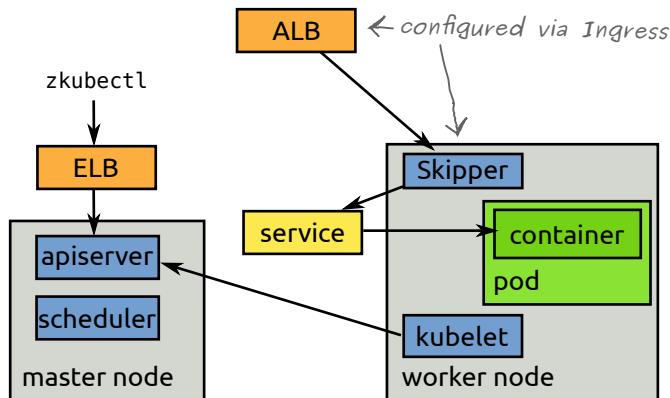
*might need "sudo"*

```
put in ~/.bashrc
source <(zkubectl completion bash)
source <(zkubectl completion zsh) ← put in ~/.zshrc
```

## Cluster Login

```
zkubectl list
zkubectl list-clusters ← shows all available clusters
zkubectl login CLUSTER_ALIAS ← writes ~/.kube/config
zkubectl cluster-info
```

## Architecture



## Bootstrapping Deployment Configurations

```
zdeploy init [MYDIR] ← create pipeline.yaml,
deployment.yaml and apply/*
in current folder or MYDIR
```

```
echo -n "pw" | base64 | tr -d '\n' | zdeploy encrypt
← encrypt "pw" for usage in Kubernetes secret
← data in Kubernetes secret must be base64 encoded
```

## Running in Production

- Always run at least two replicas to survive cluster updates. *← better three*
- Always set CPU/memory requests.
- Always set memory limit.
- Use Downwards API and MEM\_TOTAL\_KB to set JVM max heap.
- Use readinessProbe. *← to only get traffic when healthy*

## Creating/Updating Resources

```
zkubectl apply -f myresource.yaml
zkubectl scale deploy DEPLOY_NAME --replicas=10
zkubectl edit deploy DEPLOY_NAME
← opens editor to change YAML
```

*only in test clusters*

## Troubleshooting

```
zkubectl get deploy ← get all my application pods
zkubectl get pods -l application=APP_NAME
zkubectl describe pod POD_NAME ← see status and reason
(e.g. OOM killed)
zkubectl get pod POD_NAME -o yaml
zkubectl top pod POD_NAME --containers
zkubectl logs -f [-c CONTAINER_NAME] POD_NAME ← tail my app logs
(or check scalyr.com)
zkubectl exec -it POD_NAME CONTAINER_NAME sh
zkubectl port-forward POD_NAME [LOCAL_PORT:]PORT
← open Kubernetes Dashboard in browser
zkubectl dashboard ← does my svc have endpoints?
zkubectl describe svc SVC_NAME ← ALB configured?
zkubectl describe ingress INGRESS_NAME
https://kube-ops-view.foo.example.org ← makes my fan spin
```

*only works in test clusters..*

## Resource Types

configmaps	cm
deployments	deploy
endpoints	ep
events	ev
horizontalpodautoscalers	hpa
ingresses	ing
jobs	
limitranges	limits
namespaces	ns
nodes	no
statefulsets	← for databases etc
pods	po
replicasets	rs
cronjob	
secrets	← to store DB passwords and other credentials
serviceaccount	sa
services	svc
thirdpartyresources	
platformcredentialsets	← Zalando specific: declare needed OAuth tokens/clients

## Documentation & Help

<https://kubernetes-on-aws.readthedocs.io/>  
[kubernetes-users@example.com](mailto:kubernetes-users@example.com) ← ask here - after checking the docs!  
[#Kubernetes Users HipChat room](#)  
*← or here*