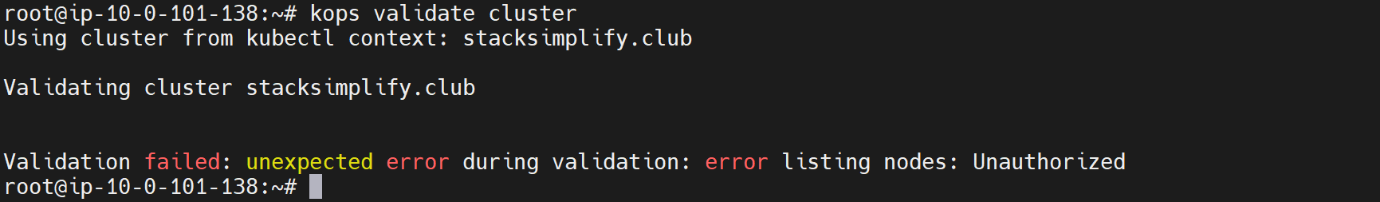
**0. important commands**

--- Reference - <https://bitnami.com/stacks>

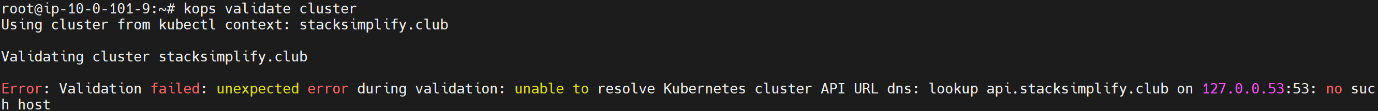
**Error1**

--- kops export kubecfg (cluster name) --admin

--- **kops validate cluster**



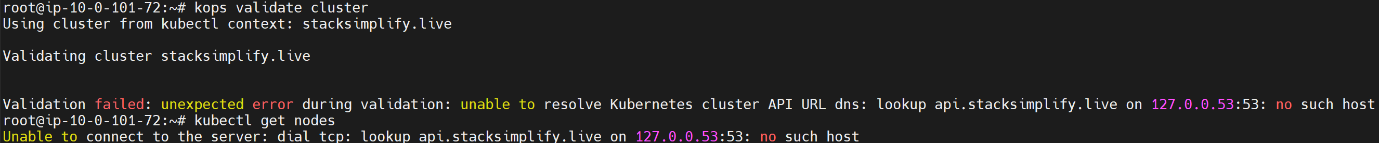
--- **kops export kubecfg stacksimplify.live --admin**



--- **note** – if you facing unexpected error during validation then execute command.

**Error2**

--- kops validate cluster



--- kubectl config use-context stacksimplify.live

**Helm workflow**

Stage1 - it will load charts

Stage2 - substitute the values through values.yml

Stage3 - render the required kubernetes templates and formats those templates into yml

Stage4 – submit the yaml files to the kubernetes.

**Install Helm**

--- Reference - <https://helm.sh/docs/intro/install/>

--- Helm is written in Google Go programming language, which is a compiled language so you can download the binaries for your operating system and start using it.

--- the recommended and easy way is to use the packaging manager for any operating system.

**Install on MacOS**

--- **Reference** - <https://helm.sh/docs/intro/install/>

**# Install helm on MacOS**

--- brew install helm

**Install on windows**

--- **Reference** - <https://helm.sh/docs/intro/install/>

**# Install helm on windows**

--- choco install kubernetes-helm

**Install on Debian/ubuntu (apt)**

--- **Reference** - <https://helm.sh/docs/intro/install/>

**# Install on Debian/ubuntu**

--- curl https://baltocdn.com/helm/signing.asc | gpg --dearmor | sudo tee /usr/share/keyrings/helm.gpg > /dev/null

--- sudo apt-get install apt-transport-https --yes

--- echo "deb [arch=$(dpkg --print-architecture) signed-by=/usr/share/keyrings/helm.gpg] https://baltocdn.com/helm/stable/debian/ all main" | sudo tee /etc/apt/sources.list.d/helm-stable-debian.list

--- sudo apt-get update

--- sudo apt-get install helm

--- You should have homebrew installed.

**Install on fedora (dnf/yum)**

--- **Reference** - <https://helm.sh/docs/intro/install/>

**# Install on fedora (dnf/yum)**

--- sudo dnf install helm

**Helm commands**

**# Add bitnami repository to your repositories.**

--- helm repo add bitnami <https://charts.bitnami.com/bitnami>

**# List repos**

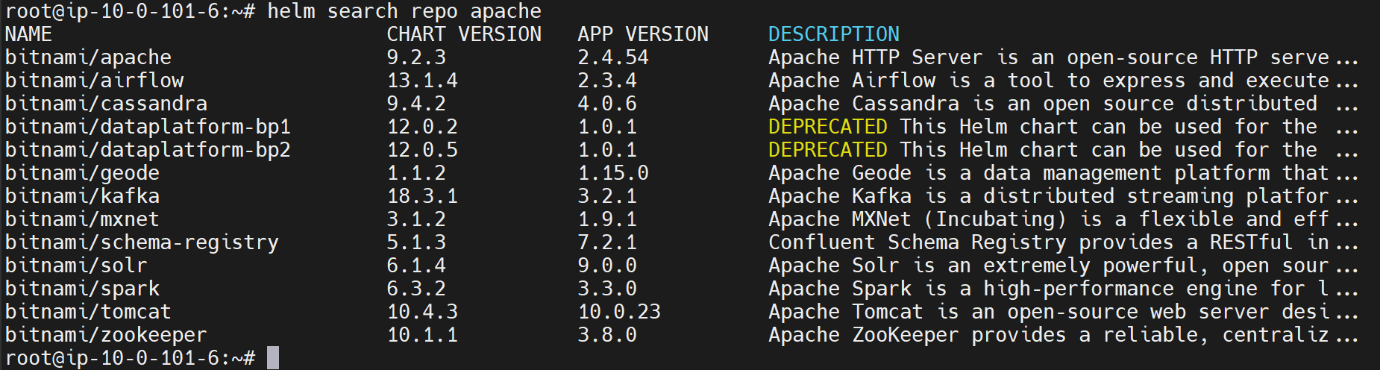
--- helm repo list

**# Lis the installed packaged.**

--- helm list or helm ls

**# Search apache chart in bitnami repo**

--- helm search repo apache



--- **note** – you have chart version and app version.

--- **note** – by default, you will only see the latest version of apache. If you want to see the all the versions of apache then execute the below command.

**# To see the all the version of apache.**

--- helm search repo apache –versions

**Remove repo**

**# Remove the repository**

--- helm repo remove bitnami

**install packages**

**# Install mysql with helm**

--- helm install <dbname> bitnami/mysql

--- helm install mydb bitnami/mysql

**# To see the default configuration information.**

--- helm status mydb

**Uninstall packages**

**# Remove package from namespace.**

--- helm uninstall jenkins

--- helm uninstall mydb

**# Uninstall packages form namespace.**

--- helm uninstall mydb -n <namespace-name>

**Providing mysql with custom values.yml**

**# Create values.yml**

auth:

  rootPassword: "admin123"

**# Install mysql with custom password**

--- helm install mysql bitnami/mysql --values /root/mysql/values.yml

**Upgrade package chart**

**# Upgrade mysql**

--- helm upgrade mysql bitnami/mysql --values /root/mysql/values.yml

**# Reuse the values.yml without giving the file. (Need to use values.yml one time)**

--- helm upgrade mysql bitnami/mysql --reuse-values

**helm --dry-run**

**# Dry run mysql installation using helm**

--- helm install mysql bitnami/mysql --values /root/mysql/values.yml --dry-run

**Helm template**

--- **note** – to overcome the problems we face in the --dry-run command, helm team introduced helm template.

--- **note** – the helm command never communicates with kubernetes api server.

**# Generate template for mysql.**

--- helm template mysql bitnami/mysql --values /root/mysql/values.yml

**Helm get**

**# Get the release notes information of mysql**

--- helm get notes mydb

**# List the custom values you have passed through values.yml**

--- helm get values mysql

root@ip-10-0-101-6:/home/ubuntu# helm get values mysql

USER-SUPPLIED VALUES:

auth:

  rootPassword: admin123

**# List the customized values passed using values.yml in revision**

--- helm get values mysql --revision 1

root@ip-10-0-101-6:/home/ubuntu# helm get values mysql --revision 1

USER-SUPPLIED VALUES:

auth:

  rootPassword: admin123

**# List the manifest for particular revision.**

--- helm get manifest mysql --revision 1

**# List all the values for the chart**

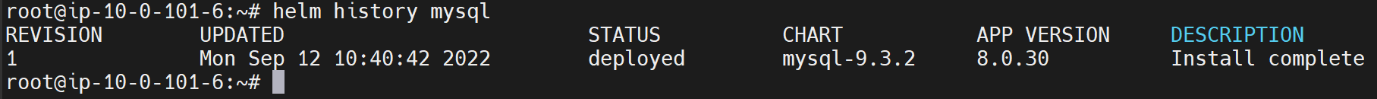
--- helm get values mysql –all

**helm history**

--- **note** - helm history will show us the history of the installations and upgrades.

**# List history of installation**

--- helm history mysql



**Keep history**

**# keep the history of package when you uninstall the package.**

--- helm uninstall mysql --keep-history

--- **important** - if you do not include the --keep-history when you uninstalling the package then the entire history will be gone. You will not be able to roll back or get the installations back.

**create namespace**

--- **note** - To install a package within a namespace, we must create the namespace first and then use the namespace in the installation command.

**# Create name space and install the package in namespace**

--- helm install mywebserver bitnami/apache --namespace mynamespace --create-namespace

**# List the packages in namespace**

--- helm ls -n mynamespace

**install or upgrade**

--- **important** - you will learn how to use the helm upgrade or install command. it will first check if the installation is already there. If it is there it will do the upgrade, otherwise it will do a Install

--- this is very helpful in our CI CD pipeline as the code gets committed to git or any other repository and the CI CD pipeline gets kicked off for the very first time.

**# Install if the package is present otherwise do a upgrade**

--- helm upgrade --install mysql bitnami/mysql