

Helm

- Helm is the package manager for Kubernetes.
- As an operating system package manager like apt, dnf, homebrew etc. makes it easy to install tools on an OS, Helm makes it easy to install applications and resources into Kubernetes clusters.





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Three Big Concepts

A **Chart** is a Helm package. It contains all of the resource definitions necessary to run an application, tool, or service inside of a Kubernetes cluster.

A **Repository** is the place where charts can be collected and shared.

A **Release** is an instance of a chart running in a Kubernetes cluster. One chart can often be installed many times into the same cluster. And each time it is installed, a new release is created.



Three Big Concepts

HELM

DOCKER

Chart

----▶ Image

Repository

→ ECR- Docker hub

Release

---- Container

Helm Commands - Install and Uninstall Apps

```
Install an app:
```

```
helm install [app-name] [chart]
```

Install an app in a specific namespace:

```
helm install [app-name] [chart] --namespace [namespace]
```

Override the default values with those specified in a file of your choice:

```
helm install [app-name] [chart] --values [yaml-file/url]
```

Run a test installation to validate and verify the chart:

```
helm install [app-name] --dry-run --debug
```

Uninstall a release:

helm uninstall [release]

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Helm Commands - Perform App Upgrade and Rollback

Upgrade an app:

```
helm upgrade [release] [chart]
```

Upgrade a release. If it does not exist on the system, install it:

```
helm upgrade [release] [chart] --install
```

Upgrade to a specified version:

```
helm upgrade [release] [chart] --version [version-number]
```

Roll back a release:

```
helm rollback [release] [revision]
```



Helm Commands - Add, Remove, and Update Repositories



Add a repository from the internet:

helm repo add [repository-name] [url]

Remove a repository from your system:

helm repo remove [repository-name]

Update repositories:

helm repo update



Helm Commands - List and Search Repositories



List chart repositories:

helm repo list

Generate an index file containing charts found in the current directory:

helm repo index

Search charts for a keyword:

helm search [keyword]

Search repositories for a keyword:

helm search repo [keyword]

Search Helm Hub:

helm search hub [keyword]

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