

Working with Helm

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Background


This document is about learning and working with Helm. This is an *draft* document as I learn more about Helm.

Walkthrough

```
# helm releases found here
# https://github.com/helm/helm/releases
```

Chapter 2 Notes

	Note
1	Helm is a single go binary. Installation is easy for all supported platforms. The current stable version is Helm 3. Use Helm 3.
2	Helm follows semantic versioning. See https://semver.org/ Version example: X.Y.Z with stability marker (alphas, betas and release candidates). <ul style="list-style-type: none">▪ Major version - breaking compatibility changes with previous versions.▪ Minor version - No <i>breaking</i> changes. There may be security fixes that can necessitate breaking changes, but will be announced.▪ Patch version - Compatible bug fixes have been made. Recommended to state on the latest patch release.
3	Run <code>helm help</code> for the help text.
4	Using the official script to install: <pre>curl -fsSL -o get_helm.sh \ https://raw.githubusercontent.com/helm/helm/master/scripts/get-helm-3 chmod 700 get_helm.sh ./get_helm.sh</pre> Recommended to use this method, if it is important to always have the latest Helm.
5	Building from source is more involved. Use this developer doc to help build from source: https://helm.sh/docs/community/developers/
6	Helm needs to interact directly with the k8s API server, to do this, it reads the same configuration files used by <code>kubectl</code> . Helm will: <ul style="list-style-type: none">▪ Try to read the env variable <code>KUBECONFIG</code>▪ Try to search default locations such as <code>\$HOME/.kube/config</code> The search path can be overridden by: <ul style="list-style-type: none">▪ <code>HELM_KUBECONTEXT</code>▪ <code>--kube-context</code> to the Helm utility. It is recommended to use <code>kubectl</code> to manage the k8s credentials and let Helm autodetect the settings.
7	In Helm 3, there is no default repository. Consider the user of Artifact Hub: https://artifacthub.io/

8	<p>Adding a Helm repo</p> <pre>helm repo add bitnami https://charts.bitnami.com/bitnami</pre>
9	<p>Searching the Helm repo</p> <pre># helm search repo drupal --versions # helm search repo drupal --versions head NAME CHART VERSION APP VERSION DESCRIPTION bitnami/drupal 12.2.10 9.3.16 Drupal is one of the most versatile open source... bitnami/drupal 12.2.9 9.3.15 Drupal is one of the most versatile open source... bitnami/drupal 12.2.8 9.3.15 Drupal is one of the most versatile open source... bitnami/drupal 12.2.7 9.3.15 Drupal is one of the most versatile open source... bitnami/drupal 12.2.5 9.3.14 Drupal is one of the most versatile open source... bitnami/drupal 12.2.4 9.3.14 Drupal is one of the most versatile open source... bitnami/drupal 12.2.3 9.3.13 Drupal is one of the most versatile open source... bitnami/drupal 12.2.2 9.3.13 Drupal is one of the most versatile open source... bitnami/drupal 12.2.1 9.3.13 Drupal is one of the most versatile open source...</pre> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <p> Chart version - The version of the Helm chart.</p> <p>App version - The version of the application packaged in the Helm chart.</p> </div>
10	<p>When installing a Helm chart, there are two important pieces of information.</p> <ul style="list-style-type: none"> ▪ The <i>installation</i> and the <i>chart</i> that you want to install. <p>The <i>installation</i> identifies the instance that you want to install, because you can have multiple instances of an application in the k8s cluster.</p> <pre># helm install <installation> <chart> helm install mysite bitnami/drupal</pre>
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Appendix

	Document	Link
1	Learning Helm book	https://learning.oreilly.com/library/view/learning-helm/9781492083641/
2	Helm releases	https://github.com/helm/helm/releases
3	Semantic Versioning	https://semver.org/