

# Exploring Helm Releases

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# Overview



**Deploying a chart to Kubernetes**

**Retrieving information about a Release**

**Upgrading a Release**

**Rolling back a Release**

**Exploring a Chart**



# Deploying a Chart to Kubernetes

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# Searching the Stable Repository

```
helm repo add stable https://kubernetes-charts.storage.googleapis.com/
```

```
helm search repo stable/mysql
```

```
PS C:\> helm search repo stable/mysql
```

NAME	CHART VERSION	APP VERSION	DESCRIPTION
stable/mysql	1.6.4	5.7.30	Fast, reliable, scalable, and easy to use open-...
stable/mysqldump	2.6.0	2.4.1	A Helm chart to help backup MySQL databases usi...

```
PS C:\>
```



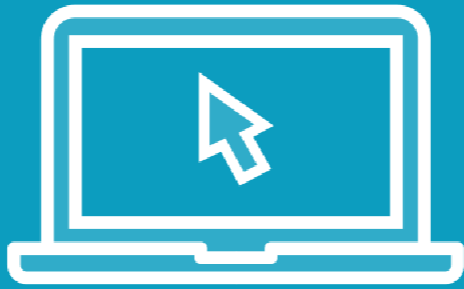
# Deploying a Chart

```
helm install mysql stable/mysql
```

```
PS C:\> helm install mysql stable/mysql
NAME: mysql
LAST DEPLOYED: Thu Jun 25 13:07:07 2020
NAMESPACE: default
STATUS: deployed
REVISION: 1
NOTES:
MySQL can be accessed via port 3306 on the following DNS name from within your cluster:
mysql.default.svc.cluster.local
```



# Demo



## Deploying a chart to Kubernetes



# Retrieving Information About a Release

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# Viewing Release Status

```
helm list
```

```
PS C:\> helm list
```

NAME	NAMESPACE	REVISION	UPDATED	STATUS	CHART	APP VERSION
mysql	default	1	2020-06-25 13:07:07.702461 +0100 BST	deployed	mysql-1.6.4	5.7.30

```
PS C:\>
```





# Viewing Kubernetes Objects

```
kubectl get all
```

```
PS C:\> kubectl get all
```

NAME	READY	STATUS	RESTARTS	AGE
pod/mysql-69b7b6c74c-mwrbh	1/1	Running	0	2m18s

NAME	TYPE	CLUSTER-IP	EXTERNAL-IP	PORT(S)	AGE
service/kubernetes	ClusterIP	10.96.0.1	<none>	443/TCP	20d
service/mysql	ClusterIP	10.104.112.111	<none>	3306/TCP	2m18s

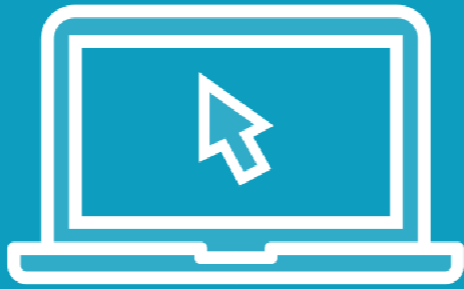
NAME	READY	UP-TO-DATE	AVAILABLE	AGE
deployment.apps/mysql	1/1	1	1	2m18s

NAME	DESIRED	CURRENT	READY	AGE
replicaset.apps/mysql-69b7b6c74c	1	1	1	2m18s

```
PS C:\> |
```



# Demo



## Retrieving information about a release



# Upgrading a Release

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# Viewing Chart Versions

```
helm search repo stable/mysql --versions
```

```
PS C:\> helm search repo stable/mysql --versions
```

NAME	CHART VERSION	APP VERSION	DESCRIPTION
stable/mysql	1.6.4	5.7.30	Fast, reliable, scalable, and easy to use open-
stable/mysql	1.6.3	5.7.28	Fast, reliable, scalable, and easy to use open-
stable/mysql	1.6.2	5.7.28	Fast, reliable, scalable, and easy to use open-
stable/mysql	1.6.1	5.7.27	Fast, reliable, scalable, and easy to use open-
stable/mysql	1.6.0	5.7.27	Fast, reliable, scalable, and easy to use open-
stable/mysql	1.5.0	5.7.27	Fast, reliable, scalable, and easy to use open-
stable/mysql	1.4.0	5.7.27	Fast, reliable, scalable, and easy to use open-
stable/mysql	1.3.3	5.7.14	Fast, reliable, scalable, and easy to use open-
stable/mysql	1.3.2	5.7.14	Fast, reliable, scalable, and easy to use open-
stable/mysql	1.3.1	5.7.14	Fast, reliable, scalable, and easy to use open-
stable/mysql	1.3.0	5.7.14	Fast, reliable, scalable, and easy to use open-
stable/mysql	1.2.2	5.7.14	Fast, reliable, scalable, and easy to use open-



# Deploying a Specific Chart Version

```
helm install mysql stable/mysql --version 1.6.3
```

```
PS C:\> helm install mysql stable/mysql --version 1.6.3
NAME: mysql
LAST DEPLOYED: Thu Jun 25 13:16:14 2020
NAMESPACE: default
STATUS: deployed
REVISION: 1
NOTES:
MySQL can be accessed via port 3306 on the following DNS name from within your cluster:
mysql.default.svc.cluster.local
```



# Upgrading a Release

```
helm upgrade mysql stable/mysql --version 1.6.4
```

```
PS C:\> helm upgrade mysql stable/mysql --version 1.6.4
Release "mysql" has been upgraded. Happy Helming!
NAME: mysql
LAST DEPLOYED: Thu Jun 25 13:17:30 2020
NAMESPACE: default
STATUS: deployed
REVISION: 2
NOTES:
MySQL can be accessed via port 3306 on the following DNS name from within your cluster:
mysql.default.svc.cluster.local
```



# Viewing Release History

```
helm list
```

```
PS C:\> helm list
```

NAME	NAMESPACE	REVISION	UPDATED	STATUS	CHART	APP VERSION
mysql	default	2	2020-06-25 13:17:30.2951258 +0100 BST	deployed	mysql-1.6.4	5.7.30

```
PS C:\> |
```

```
helm history mysql
```

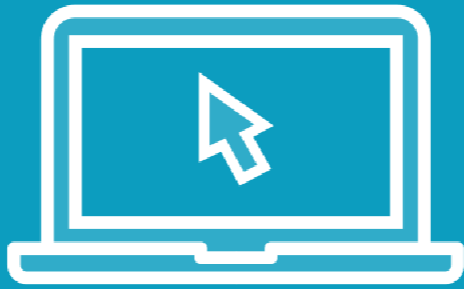
```
PS C:\> helm history mysql
```

REVISION	UPDATED	STATUS	CHART	APP VERSION	DESCRIPTION
1	Thu Jun 25 13:16:14 2020	superseded	mysql-1.6.3	5.7.28	Install complete
2	Thu Jun 25 13:17:30 2020	deployed	mysql-1.6.4	5.7.30	Upgrade complete

```
PS C:\> |
```



# Demo



## Upgrading a Release





# Rolling Back a Release

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# Release History

```
helm history mysql
```

```
PS C:\> helm history mysql
```

REVISION	UPDATED	STATUS	CHART	APP VERSION	DESCRIPTION
1	Thu Jun 25 13:16:14 2020	superseded	mysql-1.6.3	5.7.28	Install complete
2	Thu Jun 25 13:17:30 2020	deployed	mysql-1.6.4	5.7.30	Upgrade complete

```
PS C:\> |
```



# Rolling Back a Release

```
helm rollback mysql 1
```

```
PS C:\> helm rollback mysql 1
Rollback was a success! Happy Helming!
PS C:\> helm list
```

NAME	NAMESPACE	REVISION	UPDATED	STATUS	CHART	APP VERSION
mysql	default	3	2020-06-25 13:21:48.7197311 +0100 BST	deployed	mysql-1.6.3	5.7.28

```
PS C:\> |
```



# Release History

```
helm history mysql
```

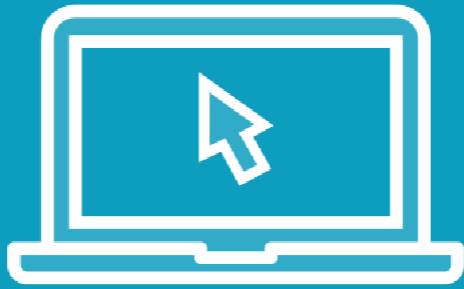
```
PS C:\> helm history mysql
```

REVISION	UPDATED	STATUS	CHART	APP VERSION	DESCRIPTION
1	Thu Jun 25 13:16:14 2020	superseded	mysql-1.6.3	5.7.28	Install complete
2	Thu Jun 25 13:17:30 2020	superseded	mysql-1.6.4	5.7.30	Upgrade complete
3	Thu Jun 25 13:21:48 2020	deployed	mysql-1.6.3	5.7.28	Rollback to 1

```
PS C:\>
```



# Demo



## Rolling back a Release



# Exploring a Chart

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# Pulling Down a Chart

```
helm pull stable/mysql --untar
```

```
PS C:\Helm> helm pull stable/mysql --untar
PS C:\Helm> ls
```

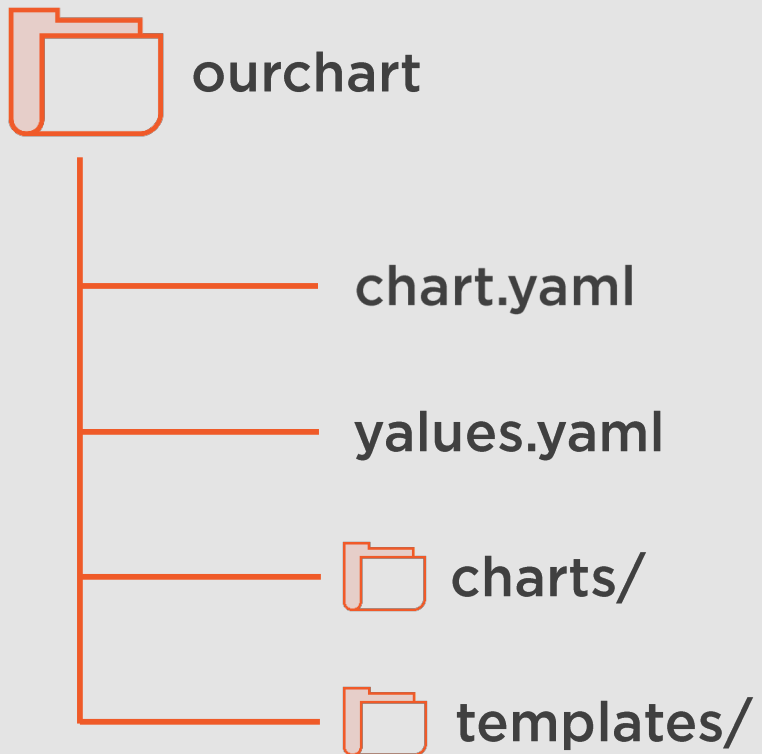
Directory: C:\Helm

Mode	LastWriteTime	Length	Name
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d----	01/08/2020 14:44		mysql

```
PS C:\Helm>
```



## Helm Chart Structure

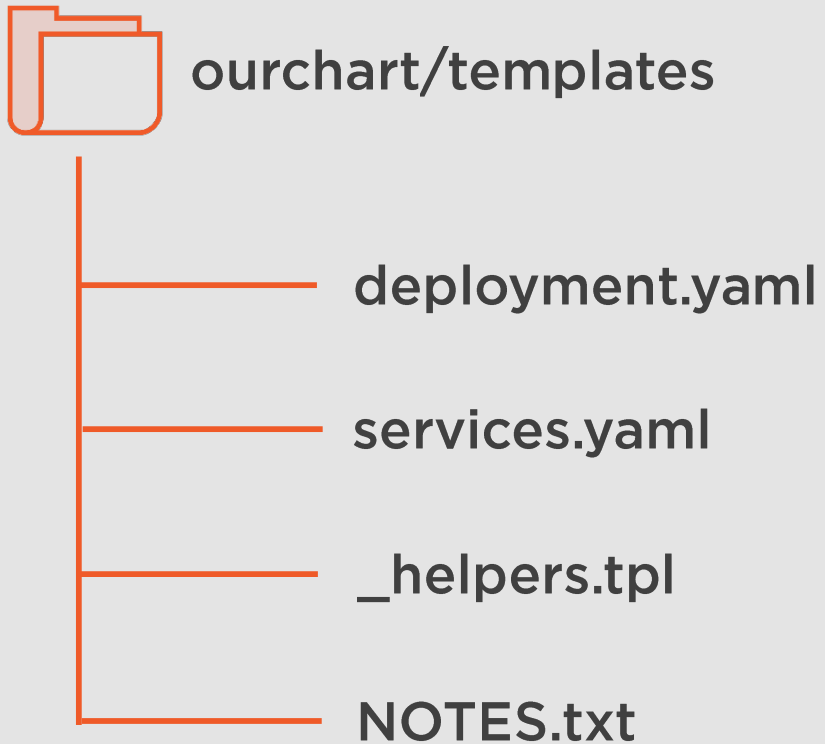


- **Chart Name**
- **Contains description of the Chart**
- **Contains default values for the chart**
- **Contains other Charts**
- **Contains yaml files for the Chart**





## Templates Directory Structure



- Templates directory
- Deployment template yaml file
- Service template yaml file
- Template helpers
- Help text for the Chart



```
apiVersion: apps/v1
kind: Deployment
metadata:
  name: {{ .Release.Name }}-deployment
spec:
  replicas: 1
selector:
  matchLabels:
    name: {{ .Release.Name }}-pods
  template:
    metadata:
      labels:
        name: {{ .Release.Name }}-pods
    spec:
      containers:
      - name: {{ .Values.containerName }}
        image: {{ .Values.containerImage }}
        ports:
        - containerPort: {{ .Values.containerPort }}
```



Up Next:

# Configuring Helm Repositories

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