



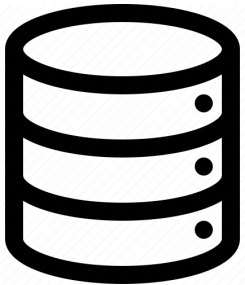
VELERO

洪胤勛

Intro

- 備份, 復原 K8s cluster
- 遷移 cluster 到另一個 cluster

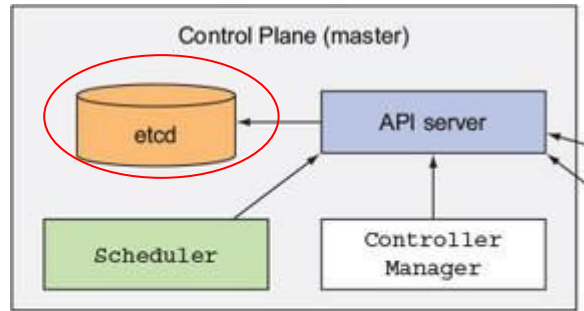
K8s stateful data



persistent volumes

- persistent volumes
 - ex. SQL

K8s stateful data



- etcd database
 - K8s object
 - etcdctl

Velero operation

- On-demand backups

- `velero backup create nginx-backup --selector app=nginx`

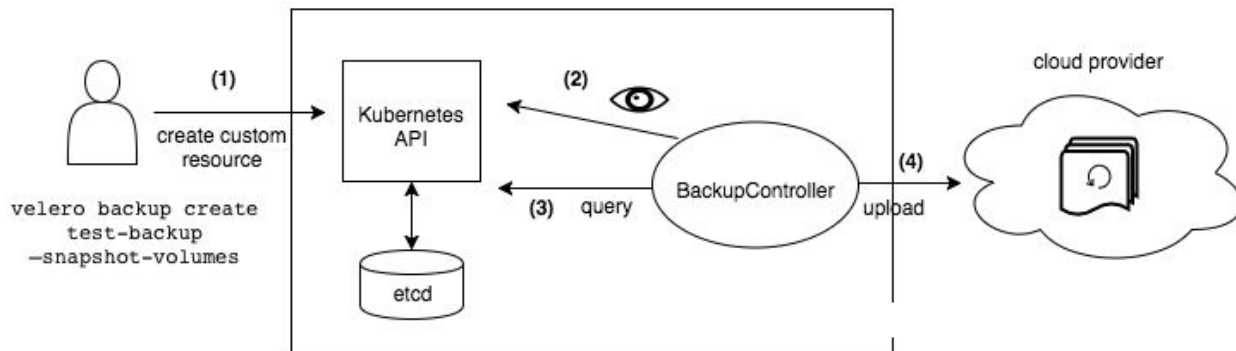
- Scheduled backups

- `velero schedule create nginx-daily --schedule="0 1 * * *" --selector app=nginx`

- Restores

- `velero restore create --from-backup nginx-backup`

Workflow



1. 選擇要備份的 object
2. BackupController 會去認證
3. BackupController 收集需要備份的 data
4. BackupController 上傳備份好的 data

Workflow

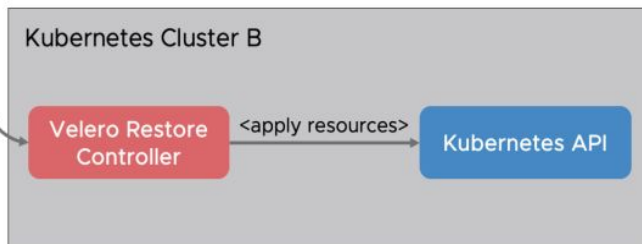
Backup

```
velero backup create my-backup \  
  --include-namespaces example \  
  --snapshot-volumes
```



Restore

```
velero restore create my-restore \  
  --from-backup my-backup
```



★ API version 會跟備份端的一樣

Workflow

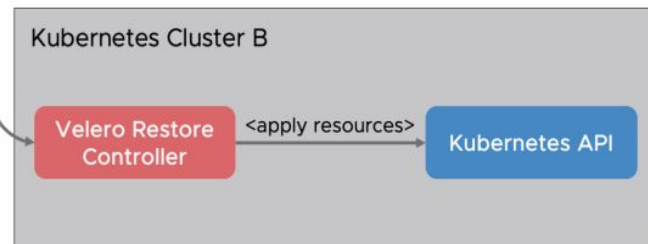
Backup

```
velero backup create my-backup \  
--include-namespaces example \  
--snapshot-volumes
```



Restore

```
velero restore create my-restore \  
--from-backup my-backup
```



- ★ 使用 object storage 來備份 persistent volumes
- ★ 如果是不同的 cloud provider, 則須用 [restic](#) (filesystem level)

Provider	Object Store	Volume Snapshotter	Plugin Provider Repo	Setup Instructions
Amazon Web Services (AWS)	AWS S3	AWS EBS	Velero plugin for AWS	AWS Plugin Setup
Google Cloud Platform (GCP)	Google Cloud Storage	Google Compute Engine Disks	Velero plugin for GCP	GCP Plugin Setup
Microsoft Azure	Azure Blob Storage	Azure Managed Disks	Velero plugin for Microsoft Azure	Azure Plugin Setup
VMware vSphere	⊘	vSphere Volumes	VMware vSphere	vSphere Plugin Setup
Container Storage Interface (CSI)	⊘	CSI Volumes	Velero plugin for CSI	CSI Plugin Setup

Provider	Object Store	Volume Snapshotter	Plugin Documentation	Contact
AlibabaCloud	Alibaba Cloud OSS	Alibaba Cloud	AlibabaCloud	GitHub Issue
DigitalOcean	DigitalOcean Object Storage	DigitalOcean Volumes Block Storage	StackPointCloud	
Hewlett Packard	⊘	HPE Storage	Hewlett Packard	Slack , GitHub Issue
OpenEBS	⊘	OpenEBS CStor Volume	OpenEBS	Slack , GitHub Issue
OpenStack	Swift	Cinder	OpenStack	GitHub Issue
Portworx	⊘	Portworx Volume	Portworx	Slack , GitHub Issue
Storj	Storj Object Storage	⊘	Storj	GitHub Issue

Thank you for your listening