1 CheatSheet: Kubernetes Backup   Cloud

- PDF Link: cheatsheet-k8s-backup-A4.pdf, Category: Cloud

- Blog URL: `https://cheatsheet.dennyzhang.com/cheatsheet-k8s-backup-A4`

- Related posts: Kubectl CheatSheet, Kubernetes Yaml Templates, #denny-cheatsheets

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1.1 heptio ark

Name	Summary
ark	Kubernetes backup and recovery. Initiated by heptio
heptio backup volume	Backup is done at PV layer(e.g, snapshot EBS block), instead of PVC(Posix filesystem).
Reference	YouTube: 15 minutes with Heptio Ark, Link: How Ark Works
Reference	Link: ark supported storage providers

https://raw.githubusercontent.com/dennyzhang/cheatsheet.dennyzhang.com/master/cheatsheet-k8s-backup-A4/ark-backup.png

1.2 heptio ark cli

Name	Command
Create backup by labels	`ark backup create $BACKUP_NAME --selector app=nginx`
Check backupset info	`ark backup describe $BACKUP_NAME`
Restore from backupset	`ark restore create --from-backup $BACKUP_NAME`
Check restore status	`ark restore get`
Delete backupset	`ark backup delete $BACKUP_NAME`

1.3 heptio ark CRD

Name	Summary
backups.ark.heptio.com	
backupstoragelocations.ark.heptio.com	
deletebackuprequests.ark.heptio.com	
downloadrequests.ark.heptio.com	
podvolumebackups.ark.heptio.com	
podvolumerestores.ark.heptio.com	
resticrepositories.ark.heptio.com	
restores.ark.heptio.com	
schedules.ark.heptio.com	
volumesnapshotlocations.ark.heptio.com	

1.4 Sample output of ark backup

```
> ark backup describe nginx-backup
Name:        nginx-backup
Namespace:   heptio-ark
Labels:         <none>
Annotations:  <none>

Phase:  New

Namespaces:
  Included:  *
  Excluded:  <none>

Resources:
  Included:         *
  Excluded:         <none>
  Cluster-scoped:  auto
```

```
Label selector:  app=nginx

Storage Location:

Snapshot PVs:  auto

TTL:  720h0m0s

Hooks:  <none>

Backup Format Version:  0

Started:     <n/a>
Completed:  <n/a>

Expiration:  0001-01-01 00:00:00 +0000 UTC

Validation errors:  <none>

Persistent Volumes: <none included>
```

1.5   ark CLI Online Help

```
> ./ark --help
Heptio Ark is a tool for managing disaster recovery, specifically for Kubernetes
cluster resources. It provides a simple, configurable, and operationally robust
way to back up your application state and associated data.

If you're familiar with kubectl, Ark supports a similar model, allowing you to
execute commands such as 'ark get backup' and 'ark create schedule'. The same
operations can also be performed as 'ark backup get' and 'ark schedule create'.

Usage:
  ark [command]

Available Commands:
  backup            Work with backups
  backup-location   Work with backup storage locations
  bug               Report an Ark bug
  client            Ark client related commands
  completion        Output shell completion code for the specified shell (bash or zsh)
  create            Create ark resources
  delete            Delete ark resources
  describe          Describe ark resources
  get               Get ark resources
  help              Help about any command
  plugin            Work with plugins
  restic            Work with restic
  restore           Work with restores
  schedule          Work with schedules
  server            Run the ark server
  snapshot-location Work with snapshot locations
  version           Print the ark version and associated image

Flags:
      --alsologtostderr                 log to standard error as well as files
  -h, --help                            help for ark
      --kubeconfig string               Path to the kubeconfig file to use to talk to the Kubernetes apiserv
```

```
    --kubecontext string                The context to use to talk to the Kubernetes apiserver. If unset def
    --log_backtrace_at traceLocation    when logging hits line file:N, emit a stack trace (default :0)
    --log_dir string                    If non-empty, write log files in this directory
    --logtostderr                       log to standard error instead of files
-n, --namespace string                  The namespace in which Ark should operate (default "heptio-ark")
    --stderrthreshold severity          logs at or above this threshold go to stderr (default 2)
-v, --v Level                           log level for V logs
    --vmodule moduleSpec                comma-separated list of pattern=N settings for file-filtered logging
```

Use "ark [command] --help" for more information about a command.

1.6   More Resources

https://kubedex.com/resource/ark/
    https://blog.heptio.com/announcing-ark-v0-10-with-greater-support-for-hybrid-and-multi-cloud-deployments-
    License: Code is licensed under MIT License.