KOPS

Kubernetes Operations Tool

KOPS Intro

KOPS or Kubernetes Operations is an official kubernetes project for managing production grade Kube clusters

- KOPS is a kubernetes cluster provisioning and tool.
- It is mainly used to deploy and maintain kubernetes clusters on various cloud service providers like AWS, GCP etc.

KOPS Intro (Continued)

Key Features:

- Deploy clusters to existing virtual private clouds (VPC) or create a new VPC from scratch.
- Provision single or multiple master clusters.
- Provides configurable bastion machines for SSH access to individual cluster nodes.
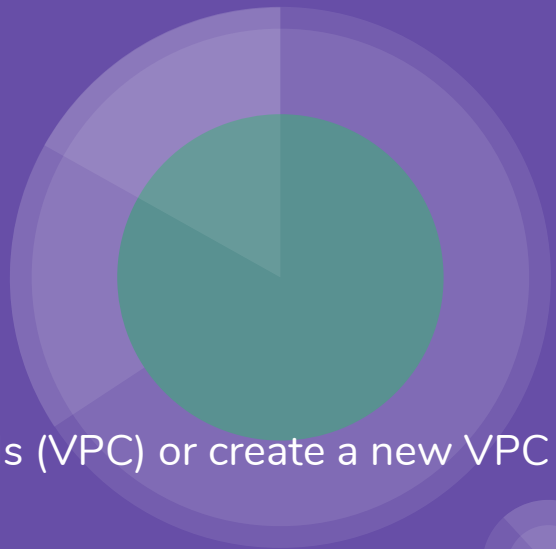
KOPS Intro (Continued)

Other Features:

- Works with both Cloudformation or Terraform.
- Provides ability to perform rolling cluster updates.
- Supports heterogeneous clusters by creating multiple cluster groups.

KOPS Requirements

Some of the basic requirements to create a kubernetes cluster on AWS using kops are as follows:

- IAM Permissions and an S3 bucket for the KOPS_STATE_STORE*
- A configured DNS service with DNS names from Route 53.
- kubectl (kubernetes command line tool)

List of resources created by Kops

Total: 59 Resources

2 Autoscaling Groups

2 EBS Volumes

2 Launch Configurations

12 Key pairs

2 IAM Instance Profiles
IAM Instance Profile Roles
IAM Roles
IAM Role Policies

10 Managed Files

1 Internet Gateway

1 DHCP Options

1 VPC

1 Route
Route Table
Route Table Association

1 VPCDHCPOptionsAssociation

1 Subnet

12 Security Group Rules

1 SSH Key

2 Security Groups

Fin.