

kubernetes

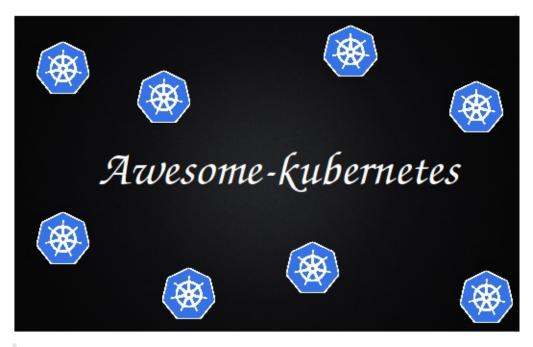
Table of Contents

Introduction 1.1

Awesome-Kubernetes



A curated list for awesome kubernetes sources Inspired by @sindresorhus' awesome



"Talent wins games, but teamwork and intelligence wins championships."

-- Michael Jordan

Without the help from these amazing contributors, building this awesome-repo would never has been possible. Thank You very much guys!!

Thanks to Gitbook. This awesome list can now be downloaded and read in the form of a book. Check it out --> https://www.gitbook.com/book/ramitsurana/awesome-kubernetes/. Keep Learning Keep Sharing!!

If you see a package or project here that is no longer maintained or is not a good fit, please submit a pull request to improve this file. Thank you!

What is Kubernetes? :ship:

Kubernetes is an open-source system for automating deployment, scaling, and management of containerized applications. It groups containers that make up an application into logical units for easy management and discovery.

Source: What is Kubernetes

History:

Kubernetes is known to be a descendant of Google's system BORG

The first unified container-management system developed at Google was the system we internally call Borg. It was built to manage both long-running services and batch jobs, which had previously been handled by two separate systems: Babysitter and the Global Work Queue. The latter's architecture strongly influenced Borg, but was focused on batch jobs; both predated Linux control groups.

Source: Kubernetes Past

Date of Birth:

Kubernetes celebrates its birthday every year on 21st July. Kubernetes 1.0 was released on July 21 2015, after being first announced to the public at Dockercon in June 2014.

Roadmap

The awesome-kubernetes will now soon be available in the form of different releases and package bundles, It means that you can download the awesome kubernetes release up to a certain period of time, The release for awesome kubernetes 2015 bundle is released. Checkout the releases column for more info.

Menu

- Starting Point
- Installers
- Main Resources
- Release Notes
- Useful Articles
- Managed Kubernetes
 - Cluster Managers
 - Developer Platform
 - Enterprise Kubernetes Products

- Public/Private Cloud
- PaaS
- Interactive Learning Environments
- MOOC Courses / Tutorials
- Case Studies
- Persistent Volume Providers
- Useful Libraries/Scripts
 - Python
 - Jenkins
- Projects
 - Related Software
- Monitoring Services
- Testing
- Continuous Delivery
- Serverless Implementations
- Operators
- Custom Schedulers
- Container Support
- Database/NoSQL
- Networking
- Service mesh
- RPC
- Secret generation and management
- Web applications
- Desktop applications
- Mobile applications
- API/CLI adaptors
- Application deployment orchestration
- Configuration
- Security
- Load balancing
- Developer platform
- Big Data
- Machine Learning
- Service Discovery
- Operating System
- YAML/JSON Config
- Tuning
- Backup and Disaster Recovery
- Raspberry Pi

- Books :books:
- Slide Presentations
- Videos :tv:
 - Main Account
 - Other Useful videos
- Interesting Twitter Accounts
- Amazing People
- Meetup Groups
- Connecting with Kubernetes
- Conferences
- Contributing
- License

Starting Point

A place that marks the beginning of a journey

- Kubernetes Community Overview and Contributions Guide by Ihor Dvoretskyi
- Are you Ready to Manage your Infrastructure like Google?
- Google is years ahead when it comes to the cloud, but it's happy the world is catching up
- An Intro to Google's Kubernetes and How to Use It by Laura Frank
- · Getting Started on Kubernetes by Rajdeep Dua
- Kubernetes: The Future of Cloud Hosting by Meteorhacks
- Kubernetes by Google by Gaston Pantana
- Key Concepts by Arun Gupta
- Application Containers: Kubernetes and Docker from Scratch by Keith Tenzer
- Learn the Kubernetes Key Concepts in 10 Minutes by Omer Dawelbeit
- Top Reasons Businesses Should Move to Kubernetes Now by Mike Johnston
- The Children's Illustrated Guide to Kubernetes by Deis
- The 'kubectl run' command by Michael Hausenblas
- Docker Kubernetes Lab Handbook by Peng Xiao
- Curated Resources for Kubernetes
- Kubernetes Comic by Google Cloud Platform
- Kubernetes 101: Pods, Nodes, Containers, and Clusters by Dan Sanche
- An Introduction to Kubernetes by Justin Ellingwood
- Kubernetes and everything else Introduction to Kubernetes and it's context by Rinor Maloku

- Installation on Centos 7
- Setting Up a Kubernetes Cluster on Ubuntu 18.04
- Cloud Native Landscape

Installers

- Minikube Run Kubernetes locally
- Kops OS Agnostique AWS
- Kube-deploy
- Kubeadm OS Agnostique Cloud Agnostique
- Kubespray OS Agnostique Cloud Agnostique
- Bootkube CoreOS Cloud Agnostique
- Kube-aws CoreOS AWS
- Kismatic CentOS Cloud Agnostique
- Juju Ubuntu Cloud Agnostique
- Terraform CoreOS AWS
- Supergiant CoreOS Cloud Agnostique
- sealos Simple kubernetes HA installer
- Archon OS Agnostique Cloud Agnostique
- KubeNow Ubuntu Cloud Agnostique
- Kubicorn OS Agnostique Cloud Agnostique
- Simplekube systemd OS Cloud Agnostique
- Conjure-up Ubuntu Cloud Agnostique
- Kube-ansible OS Agnostique Cloud Agnostique
- Kubernetes-Saltstack systemd OS Cloud Agnostique
- matchbox CoreOS Network boot and provision Container Linux clusters (e.g. etcd3, Kubernetes, more).
- RKE OS Agnostique Cloud Agnostique
- Typhoon Container Linux Cloud Agnostique
- Docker for Windows Run Kubernetes and Docker locally on your Windows PC (Edge Channel)
- Docker for MAC Run Kubernetes and Docker locally on your MAC (Edge Channel)
- MetalK8s CentOS On-Prem Cloud Agnostique Apache-2.0

Main Resources

Official resources from the Kubernetes team

- Kubernetes Documentation
- Kubernetes Source
- Kubernetes Troubleshooting

Release Notes

Official release notes from the Kubernetes team on Stable Kubernetes Releases

- Kubernetes-1.13
- Kubernetes-1.12
- Kubernetes-1.11
- Kubernetes-1.10
- Kubernetes-1.9
- Kubernetes-1.8
- Kubernetes-1.7
- Kubernetes-1.6
- Kubernetes-1.5
- Kubernetes-1.4
- Kubernetes-1.3
- Kubernetes-1.2

Useful Articles

A piece of writing included with others in a newspaper, magazine, or other publication

Cloud Providers

- Kubernetes on AWS by CoreOS
- AWS Advent 2014 CoreOS and Kubernetes on AWS by Tim Dsyinger
- Kubernetes and AWS VPC Peering by Ben Straub
- Testing Kubernetes on AWS by Alan Will
- Kubernetes: First steps on Amazon AWS by Remco
- Logging in Kubernetes with Fluentd and Elasticsearch by Jon Langemak
- Manage Kubernetes Clusters on AWS Using Kops
- Corekube: Running Kubernetes on CoreOS via OpenStack by Mike Metral
- Production grade Kubernetes on AWS: Primer (Part 1) by Guy Maliar
- Production grade Kubernetes on AWS: 4 tools that made our lives easier (Part 2) by Guy Maliar
- Production grade Kubernetes on AWS: 3 tips for networking, ingress and microservices

(Part 3) by Guy Maliar

- Production grade Kubernetes on AWS: 3 lessons learned scaling a cluster (Part 4) by Guy Maliar
- Continuous Deployment with Google Container Engine and Kubernetes
- Creating a Kubernetes Cluster on DigitalOcean with Python and Fabric
- Deploy a Kubernetes development cluster with Juju! by Matt Bruzek
- Containers at Scale with Kubernetes on OpenStack by Keith Tenzer

Logging

Logging - Kafka topic by namespace by Michael Ward

Monitoring

- Kubernetes Monitoring Guide by JM Saponaro
- Installing cAdvisor and Heapster on bare metal Kubernetes by Jon Langemak
- How to Monitor Kubernetes: A 4-Part Series

Security

- Kubernetes Security Guide RBAC, TLS, Security policy, Network policy, etc.
- Handling Sensitive Data In A Docker Application with Kubernetes Secrets by John Kariuki
- How to Create and Use Kubernetes Secrets by Mohamed Ez Ez
- Kubernetes Security Best Practices by Peter Benjamin
- Running Vault and Consul on Kubernetes by Michael Herman

Authentication

- Kubernetes Authentication plugins and kubeconfig by Jon Langemak
- Kubernetes Authentication OpenID Connect by Michael Ward

Networking

- Enable IPv6 on Kubernetes with Project Calico by Valentin Ouvrard
- Kubernetes in IPV6-only by Valentin Ouvrard
- Kubernetes 101 Networking by Jon Langemak
- Kubernetes with OpenStack Cloud Provider: Current state and upcoming changes (part 1 of 2)
- Comparison of Networking Solutions for Kubernetes

CI/CD

- GitOps: High-Velocity CI/CD for Kubernetes
- Achieving CI/CD with Kubernetes by Ramit Surana
- Jenkins declarative pipelines with Kubernetes
- Adding CI/CD to your Spring Boot app with Jenkins X and Kubernetes by Matt Raible using Jenkins X
- Continuous Delivery with Amazon EKS and Jenkins X by Henryk Konsek using Jenkins X

Deep Learning

Automate deep learning training with Kubernetes GPU-cluster

Others

- Packaging Multiple Resources together
- Scaling Docker with Kubernetes by Carlos Sanchez
- Creating a Kubernetes Cluster to Run Docker Formatted Container Images by Chris Negus
- Containerizing Docker on Kubernetes !! by Ramit Surana
- Quay: Introducing an Application Registry for Kubernetes by Antoine Legrand
- Play With Kubernetes Quickly Using Docker
- 1 command to Kubernetes with Docker compose by Sebastien Goasguen
- Nginx Server Deployment using Kubernetes by Rajdeep Dua
- What even is a kubelet? by Kamal Marhubi
- Kubernetes from the ground up: the API server by Kamal Marhubi
- Dynamic Kubernetes installation/configuration with SaltStack by Jon Langemak
- Deploying Kubernetes with SaltStack by Jon Langemak
- CoreOS + Kubernetes Step By Step by Coreos
- Deploying to Kubernetes with Panamax by Brian DeHamer
- Deploy Kubernetes with a Single Command Using Atomicapp by Jason Brooks
- Deploying a Bare Metal Kubernetes Cluster by James Kyle
- Try Kubernetes with Vagrant by Christoph Hartmann
- Keycloak on Kubernetes with OpenShift 3 by Marko Strukelj
- Kubernetes clusters with Oh-My-Vagrant by James
- Fleet Unit Files for Kubernetes on CoreOS by Michael Hamrah
- Kubernetes Container Orchestration through Java APIs by Keith Tenzer
- Docker Clustering Tools Compared: Kubernetes vs Docker Swarm
- Why Docker and Google Kubernetes Are Like PaaS Done Right
- Kubernetes with SaltStack revisited by Jon Langemak

- · Deploying Kubernetes with Ansible and Terraform
- Cluster Consul using Kubernetes API
- Kubernetes Production Patterns (and Anti-Patterns)
- Kubernetes with SaltStack revisited
- Introducing Kubic Project
- Three post learn k8s
- Kubernetes tips & tricks
- Running Flask on Kubernetes

Managed Kubernetes

- Platform9
- OpenShift Online
- Eldarion Cloud
- StackPoint Cloud
- Hasura

Cluster Managers

- Cisco Container Platform
- Gardener AWS, Azure, GCP, and OpenStack cluster manager
- Kubermatic
- Rancher
- PKS Cluster manager by Pivotal, VMWare and Google
- Telekube
- Kqueen

Developer Platform

- Fabric8 integrated development platform with CD features
- Eclipse Che cloud development workspaces with SSH and multi-user support
- OpenShift.io hosted Fabric8 with Che and Jenkins CI integration
- Spring Cloud integration
- Mantl
- goPaddle
- VAMP
- Draft a tool for developers to create cloud native applications with Kubernetes
- Knative Platform to build, deploy, and manage modern serverless workloads
- DevSpace Build, test and run code directly inside any Kubernetes cluster

Enterprise Kubernetes Products

- CoreOS Tectonic
- OpenShift Container Platform
- SUSE Container as a Service
- Kubermatic
- Canonical Distribution of Kubernetes CDK
- IBM Cloud Private

Public/Private Cloud

- GKE Google Kubernetes Engine
- AWS EKS Amazon Elastic Container Service
- Azure AKS Azure Kubernetes Service
- Vsphere VMWare VSphere
- Rackspace Rackspace
- Alibaba Cloud Alibaba Cloud Container Service for Kubernetes
- IKS IBM Cloud Kubernetes Service
- Docker EE Docker Enterprise Edition 2.0
- DigitalOcean DigitalOcean Kubernetes
- OKE Oracle Kubernetes Engine

PaaS

Kubernetes Platform as a Service providers

- Kel
- WSO2
- Rancher
- OpenShift Origin (OKD)
- OpenShift Online/Dedicated/Container Platform
- Eldarion Cloud
- Alauda Container Platform
- Hasura
- teresa Simple PAAS that runs on top of Kubernetes.
- Containerum

Interactive Learning Environments

Learn Kubernetes using an interactive environment without requiring downloads or configuration

- Katacoda
- Play with Kubernetes
- Kubernetes Bootcamp
- Magic Sandbox

MOOC Courses / Tutorials

List of available free online courses(MOOC) and tutorials

Courses

- Scalable Microservices with Kubernetes at Udacity
- Introduction to Kubernetes at edX

Tutorials

- Kubernetes Tutorials by Kubernetes Team
- Kubernetes By Example by OpenShift Team
- Kubernetes Tutorial by Tutorialspoint

Case Studies

Study of Various different case studies

- Building a Bank with Kubernetes
- Bringing Pokemon Go to Google Cloud
- Monitoring Kubernetes at Wayblazer
- Major League Soccer Monolith to Kubernetes Transition
- Using Kubernetes on AWS
- Kubernetes at Github
- Kubernetes the hard way (installation from scratch)

Persistent Volume Providers

List of some Persistent Volume Providers for Kubernetes. Check out Persistent Volume Providers for more info

- GCE
- AWS
- Rook
- Glusterfs
- OpenStack Cinder
- CephRBD
- QuoByte
- Kube-Aliyun
- Portworx
- Rancher Longhorn
- Stork
- OpenEBS
- StorageOS
- NetApp Trident
- HPE
- Hitachi
- Pure Storage
- Microsoft

Container Storage Interface Plugins

List of some Container Storage Interface plugins for Kubernetes. Check out Kubernetes-CSI for more info

- AWS EBS
- Ceph
- Cloudscale
- DigitalOcean
- DriveScale
- Ember
- Gluster
- Google Compute Engine Persistent Disk
- Hostpath
- Inmemory
- Intel PMEM-CSI
- MooseFs
- Mesos

- NetApp Trident
- Nexenta
- NFS
- Nutanix
- OpenSDS
- OpenStack Cinder
- Portworx
- Quobyte
- ScaleIO
- Virtual Filesystem
- VMware vSphere

Developer Libraries/ Scripts

List of some libraries & scripts for executions and good referrals

Python

Pykube

Jenkins

· Jenkinsfile with Helm, Go, Docker, Kubectl, JNLP

Projects

Kubernetes-related projects that you might find helpful

Related Software

Projects built to make life with Kubernetes even better, more powerful, more scalable

- Argo The Workflow Engine for Kubernetes
- Hypernetes
- Kubernetes Cluster Federation (previously Ubernetes)
- kmachine
- kube-fledged A K8S add-on for creating and managing a cache of container images directly on cluster worker nodes

- Kubefuse
- Kubefwd Bulk port forwarding Kubernetes services for local development.
- KubeSpray
- Kubernetes Ec2 Autoscaler
- Kubeform
- kube-openvpn
- Archon
- Client Libraries
- Kubic-Project
- Telepresence Locally develop/debug services against a remote Kubernetes cluster
- Fission Workflows Workflow-based serverless function composition
- Ambassador API Gateway built on the Envoy Proxy
- Bitnami Kubernetes Production Runtime

Package Managers

Helm - For further information, please check out - Awesome Helm.

Monitoring Services

To maintain regular surveillance over kubernetes

- Console
- Datadog
- eventrouter simple introspective kubernetes service that forwards events to a specified sink.
- Grafana Kubernetes App
- Heapster
- Instana
- Kubebox Terminal console for Kubernetes
- Kubedash
- Kubernetes Operational View read-only system dashboard for multiple K8s clusters
- Kubetail
- Kubewatch
- Netsil
- New Relic Kubernetes monitoring and visualization service.
- Outcold Solutions monitoring Kubernetes, OpenShift and Docker in Splunk Enterprise and Splunk Cloud (metrics and log forwarding)
- Prometheus

- Sysdig Monitoring
- Sysdig Open Source
- Weave Scope
- Searchlight
- Ingress Monitor Controller A Kubernetes Controller to watch your ingresses and create liveness alerts for your endpoints
- Kubespy Tools for observing Kubernetes resources in real time, powered by Pulumi.
- · Goldpinger display, monitor and alert on inter-cluster connectivity

Testing

Test your applications running on Kubernetes

- kube-monkey Chaos Monkey for Kubernetes clusters
- k8s-testsuite Helm chart for network and loadtesting of a Kubernetes cluster
- Test-Infra
- Sonobuoy Diagnostic tool that runs Kubernetes conformance tests
- PowerfulSeal kills targeted pods and machines to test your software reliability
- Litmus Chaos engineering for stateful workloads on Kubernetes
- Kubeadm-dind-cluster multi-node test cluster based on kubeadm
- kind A single node cluster to run your CI tests against thats ready in 30 seconds

Continuous Delivery

Build-test-deploy automated workflow software designed to make production environments more stable and life better for engineers

- Jenkins
 - Jenkins-Kubernetes Plugin by Carlos Sanchez
 - Automated Image Builds with Jenkins, Packer, and Kubernetes
 - On-demand Jenkins slaves with Kubernetes and the Google Container Engine
 - Jenkins setups for Kubernetes and Docker Workflow
 - Lab: Build a Continuous Deployment Pipeline with Jenkins and Kubernetes
 - Jenkins Operator Kubernetes native Jenkins operator
- Jenkins X automated CI/CD for Kubernetes with GitOps Promotion and Preview Environments on Pull Requests using best of breed OSS tools like: Jenkins, Helm, Skaffold, Kaniko, Knative Build, Knative Pipeline and Prow
- kb8or
- Wercker
- Shippable

- GitLab
- Kontinuous
- Kit
- Spinnaker
- CircleCI
- KubeCl
- Vili
- Keel
- Apollo Open Source application providing teams with self service UI for creating and deploying their services to Kubernetes.
- Weave Flux GitOps reconcoliation operator
- Codefresh Kubernetes CI/CD platform (with private Docker and Helm Chart repositories)
- k8s-deploy-helper Framework to easily deploy Kubernetes applications via GitLab.
- Argo CD Declarative continuous deployment for Kubernetes.

Serverless Implementations

- Funktion
- Fission
- Kubeless
- OpenWhisk
- Iron.io
- OpenFaaS
- FaaS-netes
- Nuclio
- Virtual Kubelet Allows nodes to be backed by other services and providers.

Operators

- Prometheus
- Kong API
- Kubernetes Operators
- K8s Operator Workshop
- Cert Operator
- Cert manager
- cert-manager
- Operator Kit
- Container Linux Update Operator

- DB Operator
- etcd
- Elasticsearch
- Memcached
- MySQL
- MongoDB
- PostgreSQL
- PostgreSQL manage PostgreSQL clusters using StatefulSets and Patroni.
- Couchbase
- Kafka
- KubeVirt
- Operator SDK
- kooper Simple Go library to create Kubernetes operators and controllers

Custom Schedulers

- Scheduler Cost based scheduler
- Sticky Node Scheduler
- ksched Experimental flow based scheduler
- escheduler Written in elixir
- bashScheduler Written in bash

Container Support

A list of linux containers supported by kubernetes.

- Docker:
- Rkt
 - Rktnetes
 - rktlet Rkt implementation of a Kubernetes
- containerd
- cri-containerd Containerd-based implementation of Kubernetes Container Runtime Interface
- CRI-O (OCI)
- Hyper.sh/frakti Hypervisor-based container runtime
- virtlet Kubernetes CRI implementation for running VM workloads
- infranetes

Database

- Apache Ignite Memory-centric distributed database, caching, processing platform
- CockroachDB
- Cassandra / DataStax
- MongoDB
- Hazelcast
- Crate
- Minio
- Vitess Horizontal scaling of MySql by Youtube
- RDS Provision RDS databases via CRD from Kubernetes

Networking

- Weave Net
- Canal by Tigera
- OpenContrail
- Nuage
- Kuryr
- Contiv
- Calico
- OpenVSwitch
- Kube-router
- Cilium
- Linen
- CNI-Genie
- Romana
- Infoblox
- External DNS To control DNS records dynamically via Kube resources
- cni-ipvlan-vpc-k8s
- kubernetes-network-policy-recipes
- Multus-cni Multi-homed pod cni
- Network-Controller Open vSwitch, Multiple network interfaces that associate with Kubernetes pods
- AWS VPC CNI Networking plugin using Elastic Network Interfaces
- NSX-T CNI plugin supporting load balancing and distributed firewalls.
- Goldpinger display, monitor and alert on inter-cluster connectivity

Service mesh

- Envoy
- Amalgam8 Acquired by Istio
- Linkerd
- Weave Mesh
- Conduit

RPC

- gRPC
- Micro

Secret generation and management

- CyberArk Conjur Kubernetes Authenticator Secure your Kubernetes-deployed applications with CyberArk Conjur
- Vault auth plugin backend: Kubernetes
- Vault controller
- kube-lego
- k8sec
- kubernetes-vault
- kubesec Secure Secret management
- Sealed Secrets
- Secure GitOps Using Weave Cloud Deploy And Bitnami's Sealed Secrets
- Kamus A GitOps, zero-trust solution for secrets encryption/decryption solution.

Web applications

- Kubernator
- Kubeapps A web-based UI for deploying and managing applications in Kubernetes clusters

Desktop applications

Kubernetic

Mobile applications

- Cabin
- Cockpit

API/CLI adaptors

- click A CLI focused REPL for quickly interacting with Kubernetes objects.
- kube-prompt Interactive kubernetes client built using go-prompt.
- Kube-shell Integrated shell for working with the Kubernetes CLI
- Kubebot
- kubectx switch between clusters on kubectl
- · kubens switch between namespaces on kubectl
- StackStorm
- Kubefuse
- Ksql
- kubectld
- Kubesh Work around kubectl
- Kubectl Aliases Aliases for Kubectl
- Vikube Kubernetes operations from Vim, in Vim
- kube-ps1 Kubernetes prompt helper for bash and zsh.
- kube-tmux Kubernetes tmux plugin to display the current context and namespace
- kubensx Simpler Cluster/User/Namespace switching for Kubernetes (featuring interactive mode and wildcard/fuzzy matching).
- stern Multi pod and container log tailing
- kubeplay
- kubectl-plugins A collection of kubectl plugins handling everything from easy context switches to connecting to a container as any user (root included) via exec. Slightly tailored towards GKE users.
- kubectl-trace Schedule bpftrace programs on your kubernetes cluster using this kubectl plugin

Application deployment orchestration

- ElasticKube
- AppController
- Kb8or
- IBM UrbanCode

- Nulecule
- Deployment manager
- Psykube
- Brigade Event Based Scripting using JavaScript
- Skaffold Command line tool that facilitates continuous development for Kubernetes applications.
- Gitkube Build and deploy docker images on Kubernetes using git push.

Configuration

- Kompose
- Jsonnet
- K8comp
- Ktmpl
- Konfd
- kenv
- kubediff
- thesus A command-line utility and importable package for comparing sets of Kubernetes objects
- Habitat
- Puppet
- Ansible
- Saltstack
- Chef
- kubegen
- kustomize Customization using partial specs
- kapitan Manage complex deployments using jsonnet and jinja2
- kubecfg Combines jsonnet and kubectl to let you declare systems in an easy to override way

Security

- Aquasec
- Authenticator A tool for using AWS IAM credentials to authenticate to a Kubernetes cluster
- Calico Network Policy (from Tigera) Widely adopted open source implementation unifying Kubernetes Network Policy and Istio Application Policy.
- Dex OpenID and OAuth for Kubernetes
- Guard Authenticaton webhook server with support for Github, Gitlab, Google, Azure

and LDAP (AD) as identity providers.

- kiam Allows cluster users to associate AWS IAM roles to Pods.
- kube-bench The Kubernetes Bench for Security is a Go application that checks whether Kubernetes is deployed according to security best practices.
- kube-hunter Hunt for security weaknesses in Kubernetes clusters.
- kube2iam Provides different AWS IAM roles for pods running on Kubernetes
- Kubesec.io
- Sysdig Falco
- Sysdig Secure
- Tigera Secure Cloud Edition
- Tigera Secure Enterprise Edition
- Trireme
- Twistlock

Load balancing

- Avi Networks Software Load Balancer | Intelligent WAF | Elastic Service Mesh
- AWS ALB Ingress Controller
- Cloudflare Warp Ingress
- Contour Kubernetes ingress controller for Lyft's Envoy proxy
- F5 Big IP Controller
- Gimbal Platform capable of routing traffic to multiple Kubernetes and OpenStack clusters
- Gloo Envoy-based API gateway and ingress controller
- HAProxy Ingress
- MetalLB load-balancer implementation for bare metal Kubernetes clusters, using standard routing protocols.
- NGINX Ingress Controller
- Nginx Plus
- Skipper HTTP router and reverse proxy for service composition, including use cases like Kubernetes Ingress
- Traefik
- Voyager Secure HAProxy based Ingress Controller

Big Data

- Kube-Yarn
- Spark

Machine Learning

- TensorFlow k8s
- mxnet-operator Tools for ML/MXNet on Kubernetes.
- kubeflow Machine Learning Toolkit for Kubernetes.
- seldon-core Open source framework for deploying machine learning models on Kubernetes
- FfDL Deep Learning Platform offering TensorFlow, Caffe, PyTorch etc. as a Service on Kubernetes
- Polyaxon An open source platform for reproducible machine learning and deep learning on kubernetes
- MLT Machine Learning Container Templates: easy to use container and kubernetes object templates.

Service Discovery

- Consul
 - Kelsey Hightower Consul
 - Bridge between Kubernetes and Consul

Operating System

- CoreOS
- Kurma
- GCI
- LinuxKit

YAML/JSON Config

- ksonnet-lib
- kube-libsonnet Generic library of Kubernetes objects for Jsonnet/Kubecfg with object to array mapping for painless overrides.
- kompose
- kubeval
- kubegen

Tuning

Ktune

Backup and Disaster Recovery

- Ark Utility for managing backup and restore of Kubernetes clusters.
- · burry.sh Cloud Native backup and recovery for etcd, zookeeper and consul
- kube-backup Sync kubernetes state to git.

Raspberry Pi

Some of the awesome findings and experiments on using Kubernetes with Raspberry Pi.

- Check out Kubecloud
- Setting up a Kubernetes on ARM cluster
- Setup Kubernetes on a Raspberry Pi Cluster easily the official way! by Mathias Renner and Lucas Käldström
- How to Build a Kubernetes Cluster with ARM Raspberry Pi then run .NET Core on OpenFaas by Scott Hanselman

Books

A written or printed work consisting of pages glued or sewn together along one side and bound in covers that provide us with information

- Kubernetes: Up and Running by Kelsey Hightower
- Cloud Native DevOps with Kubernetes by John Arundel, Justin Domingus (blog)
- Docker and Kubernetes Under the Hood (Chinese) by Harry Zhang, Jianbo Sun and ZJU SEL lab
- Kubernetes: Scheduling the Future at Cloud Scale by Dave K. Rensin
- Kubernetes in Action by Marko Lukša
- Kubernetes Cookbook Second Edition by Hideto Saito, Hui-Chuan Chloe Lee, Ke-Jou Carol Hsu
- Getting Started with Kubernetes by Jonathan Baier
- Kubernetes Handbook (OpenSource Book in Chinese) by Pengfei Ni
- Mastering Kubernetes by Gigi Sayfan
- OpenShift in Action by Jamie Duncan & John Osborne
- The DevOps 2.3 Toolkit: Kubernetes by Viktor Farcic
- Kubernetes Handbook (OpenSource Book in Chinese) by Jimmy Song

- DevOps with Kubernetes by Hideto Saito, Hui-Chuan Chloe Lee, Cheng-Yang Wu
- Golden Guide to Kubernetes Application Development by Matthew Palmer
- Docker in Action, Second Edition by Jeff Nickoloff and Stephen Kuenzli
- Kubernetes Design Patterns and Extensions by Onur Yilmaz
- Playing with Java Microservices on Kubernetes and OpenShift by Nebrass Lamouchi

Slide Presentations

A slide is a single page of a presentation created with software such as PowerPoint or OpenOffice Impress.

- Architecture Overview by enakai00
- Package your Java EE Application using Docker and Kubernetes by Arun Gupta
- Scaling Jenkins with Docker and Kubernetes by Carlos Sanchez
- An Introduction to Kubernetes by Imesh Gunaratne
- Musings on Mesos: Docker, Kubernetes, and Beyond. by Timothy St. Clair
- Cluster management with Kubernetes by Satnam Singh
- A brief study on Kubernetes and its components by Ramit Surana
- Moving to Kubernetes Tales from SoundCloud by Tobias Schmidt
- Kubernetes Scaling SIG (K8Scale) by Bob Wise
- Zero downtime-java-deployments-with-docker-and-kubernetes by Arjan Schaaf
- Kubernetes and CoreOS @ Athens Docker meetup by Mist.io
- Achieving CI/CD with Kubernetes by Ramit Surana
- The Top 5 Metrics to Monitor in Kubernetes

Videos

A recording of moving visual images made digitally or on videotape.

Main Account

- Google Developers
- Kubernetes

Other Useful Videos

- Google I/O 2014 Containerizing the Cloud with Docker on Google Cloud Platform by Google Developers
- Container Orchestration using CoreOS and Kubernetes by Kelsey Hightower

- A Technical Overview of Kubernetes by Bredan Burns
- Docker Containers and Kubernetes with Brian Dorsey by Brian Dorsey
- Alpaca Kubernetes on AWS by Adrien Lemaire
- Arun Gupta: Package your Java applications using Docker and Kubernetes by Arun Gupta
- "Managing Containers at Scale with CoreOS and Kubernetes" by Kelsey Hightower by Kelsey Hightower
- Kubernetes: The Journey So Far Greg DeMichillie by Greg DeMichillie
- DevNation 2015 Paul Bakker Kubernetes: Beyond the basics by Paul Bakker
- Kubernetes-Defined Monitoring
- Testing Distributed Software on Kubernetes with PowerfulSeal at Kubecon 2017 Austin by Mikolaj Pawlikowski
- Shanghai '18: KubeCon + CloudNativeCon

CI/CD Videos

Automating CI/CD on Kubernetes with Jenkins X by James Strachan using Jenkins X with these slides

Interesting Twitter Accounts

Twitter is quick, it's easy to communicate on, and is a very valuable social channel for a brand or business if you use it to its full potential, By following these news aggregators, rolling news channels, and companies, you can get the inside scoop of a story long before it hits the mainstream news outlets.

- Kubernetes
- Google Cloud Platform
- Kube Con
- Kismatic
- Engine Yard
- Apcera
- CoreOS
- DevOps Summit
- KubeWeekly
- KubeFacts
- Skippbox Acquired by Bitnami
- Sysdig

Amazing People

- Ahmet Alp Balkan, Software Engineer at Google & Google Kubernetes Engine
- · Aparna Sinha, Group Product Manager Kubernetes at Google
- Arun Gupta, Principal Open Source Technologist at Amazon Web Services
- Brandon Philips, CTO at CoreOS
- Brendan Burns, Partner Architect at Microsoft
- Brian Grant, Principal Engineer at Google, Lead Architect of Kubernetes
- Carlos Sanchez, Senior Software Engineer, CloudBees
- Chris Aniszczyk, Chief Operating Officer at Cloud Native Computing Foundation
- Eric Tune, Senior Staff Engineer at Google
- Ihor Dvoretskyi, Developer Advocate at Cloud Native Computing Foundation
- Jessie Frazzelle, Cloud Developer Advocate at Microsoft
- Joe Beda, Founder and CTO at Heptio
- Joseph Jacks, Entrepreneur In Residence at Quantum Corporation
- Kelsey Hightower, Staff Developer Advocate at Google
- Kris Nova, Engineer at Heptio, Creator of Kubicorn
- Michelle Noorali, Software Engineer at Microsoft
- Paris Pittman, Developer Relations Manager Kubernetes at Google
- Patrick Reilly, Office of the CTO at Cisco, Cisco board of member for CNCF
- Tim Hockin, Senior Staff SW Engineer / Engineering Manager at Google

Meetup Groups

An awesome way to connect with kubernauts around the globe

- Amsterdam
- Amsterdam #2
- Atlanta
- Bangalore
- Berlin
- Boston
- Hamburg
- Hong Kong
- London
- Munich
- New York
- Paris
- Pittsburgh

- Pune
- San Francisco
- Seattle
- Worldwide

Connecting with Kubernetes

- Blog
- Freenode
- Twitter
- Google +
- Stackoverflow
- Slack
- Mailing List (user discussion and Q&A)
- Mailing List (developer/contributor discussion)
- Reddit
- Community
- Community Q&A The Office Hours

Conferences

Some must to go and attend conferences on kubernetes

- Kubecon
- Container Camp
- GCP Next
- Docker Con
- Devoxx
- ContainerDays

Contributing

Contributions are most welcome!

This list is just getting started, please contribute to make it super awesome.

Check out the Contributing Guidelines.

License



awesome-kubernetes by Ramit Surana is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.