Cloud Native Ninja

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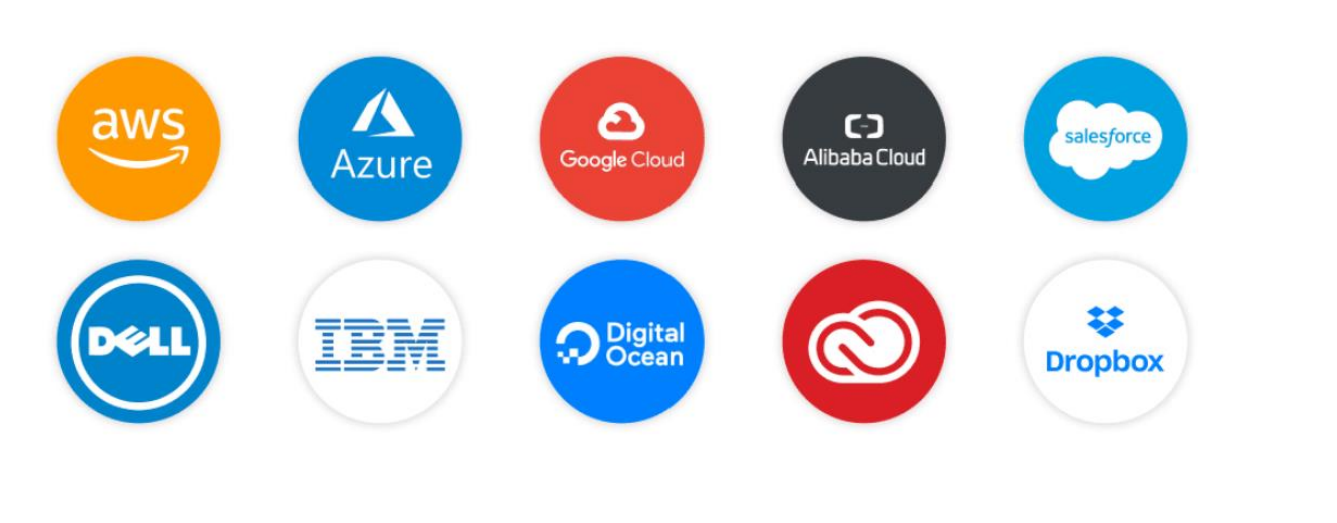
Top 10 Cloud providers



Key highlights

- ✓ **Cost**: Saves money for upfront costs for hardware and software
- ✓ **Speed**: self-serve, pay as you go
- ✓ **Scalability**: based on different parameters
- ✓ **Security**: policies, technologies and controls to protect app, data and infra
- ✓ **Reliable**: HA & DR capabilities

Cloud Native Apps

Cloud Computing

Specifically designed to take advantage of innovations in cloud computing

Scaling

Integrate easily with respective cloud architectures, taking advantage of clouds resources and scaling capabilities

Infrastructure Innovations

Take advantage of innovations in infrastructure driven by cloud computing

Cloud native platforms

Run apps in cloud providers datacenter and on cloud native platforms on-premise

Multi-cloud

Datacenter

Edge

Cloud Native Computing Foundation
CNCF

CLOUD NATIVE COMPUTING FOUNDATION

Overview

Open source, vendor neutral hub of cloud native computing hosting projects like Kubernetes and Prometheus to make cloud native universal and sustainable. Democratizes state-of-art patterns to make innovations accessible for everyone.

CNCF is part of nonprofit **Linux Foundation**.

Benefits

- Empower organizations to build and run scalable applications in modern, dynamic environments such as public, private, and hybrid clouds.
- Containers, service meshes, microservices, immutable infrastructure and declarative API's
- Enable loosely coupled systems that are resilient, manageable and observable.
- Robust automation allows engineers to make high-impact changes frequently and predictable with minimum toil

Features of Cloud Native Apps

Microservices

Purpose driven modular components

Containerized

Lightweight, self-contained

API driven

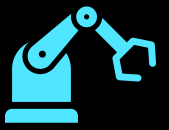
Loosely coupled, integrates using open standards

Resilient

Self healing, recovers faster from failure

Scalable

Cost optimized to run with right sized resources



Automation

Automates everything CI CD, Infrastructure as Code (IaC), GitOps

Comparison with Traditional Enterprise Apps

Predictable	Unpredictable
OS Abstraction	OS Dependent
Right seized capacity	Oversized
Collaborative	Siloed
Continuous Delivery	Waterfall
Automated Scalability	Manual Scaling
Rapid Recovery	Slow Recovery

Objectives
Cloud Native Ninja series

Key objectives of Cloud Native Ninja series

- Build and deploy app from code to cloud
- Tools used for cloud native development
- Best practices related to cloud native applications
- Build portable app to deploy on local laptop, public cloud (Azure / AWS), Private Cloud / PaaS (OpenShift), Hybrid cloud, multi cloud scenarios etc.
- Make app portable to run in serverless as well as managed cloud services
- Demonstrate practices related to CI CD, DevOps, GitOps etc.
- Implement observability features to monitor apps

Get started

Cloud Native Ninja GitHub repo: https://github.com/NileshGule/cloud-native-ninja

Slides

Slideshare: https://www.slideshare.net/nileshgule/

Speaker Deck: https://speakerdeck.com/nileshgule/

Kickstart resources

- Top cloud providers top 10 cloud providers in 2023

- CNCF landscape
- CNCF Trail

- Cloud native applications
  - Microsoft
  - AWS
  - VMWare
  - Weaveworks
  - GitLab