redhat CERTIFIED ENGINEER

CISCO CERTIFIED CCNA

Microsoft CERTIFIED Systems Administrator


# AMIT GANVIR

TECHNICAL QUALIFICATION

[ A+, N+, MCSA, CCNA, RHCT (RHCSA), RHCE, RHCVA, RHCSS, SHELL SCRIPTING ]

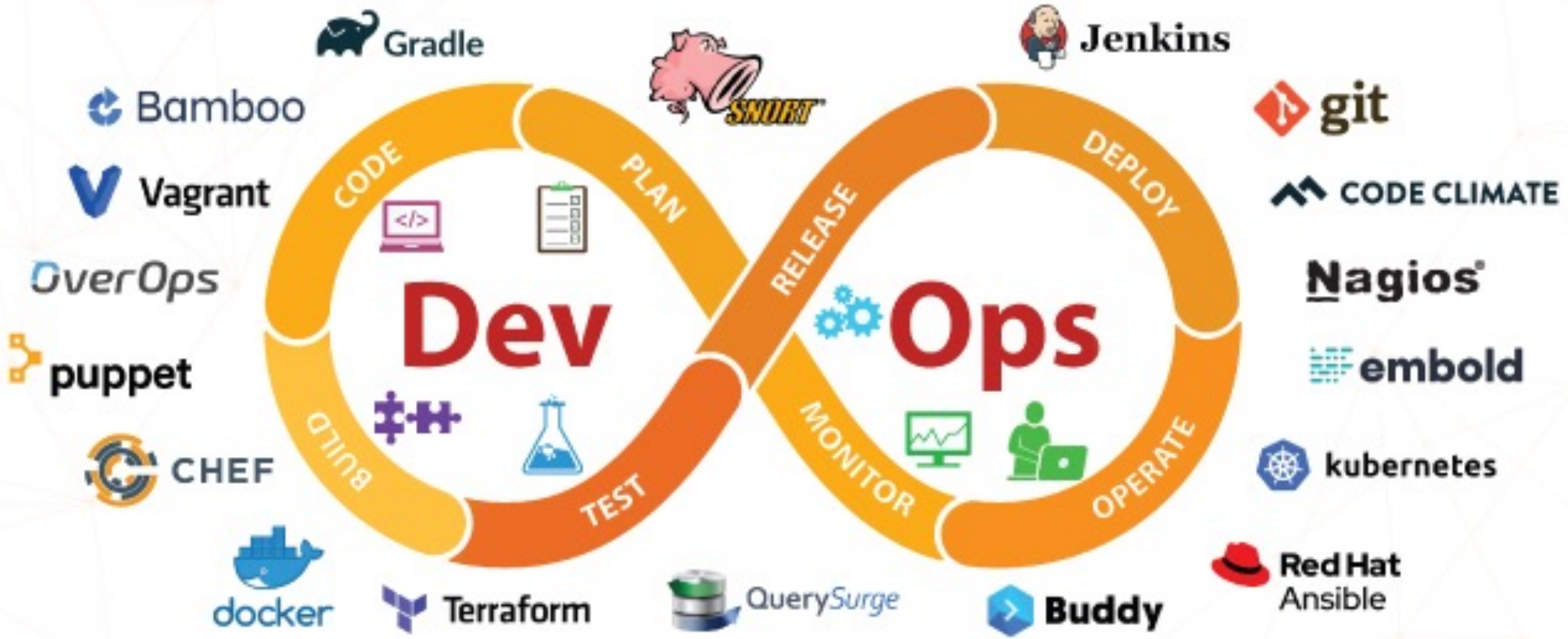

PART -1

# ADVANCED SHELL SCRIPTING

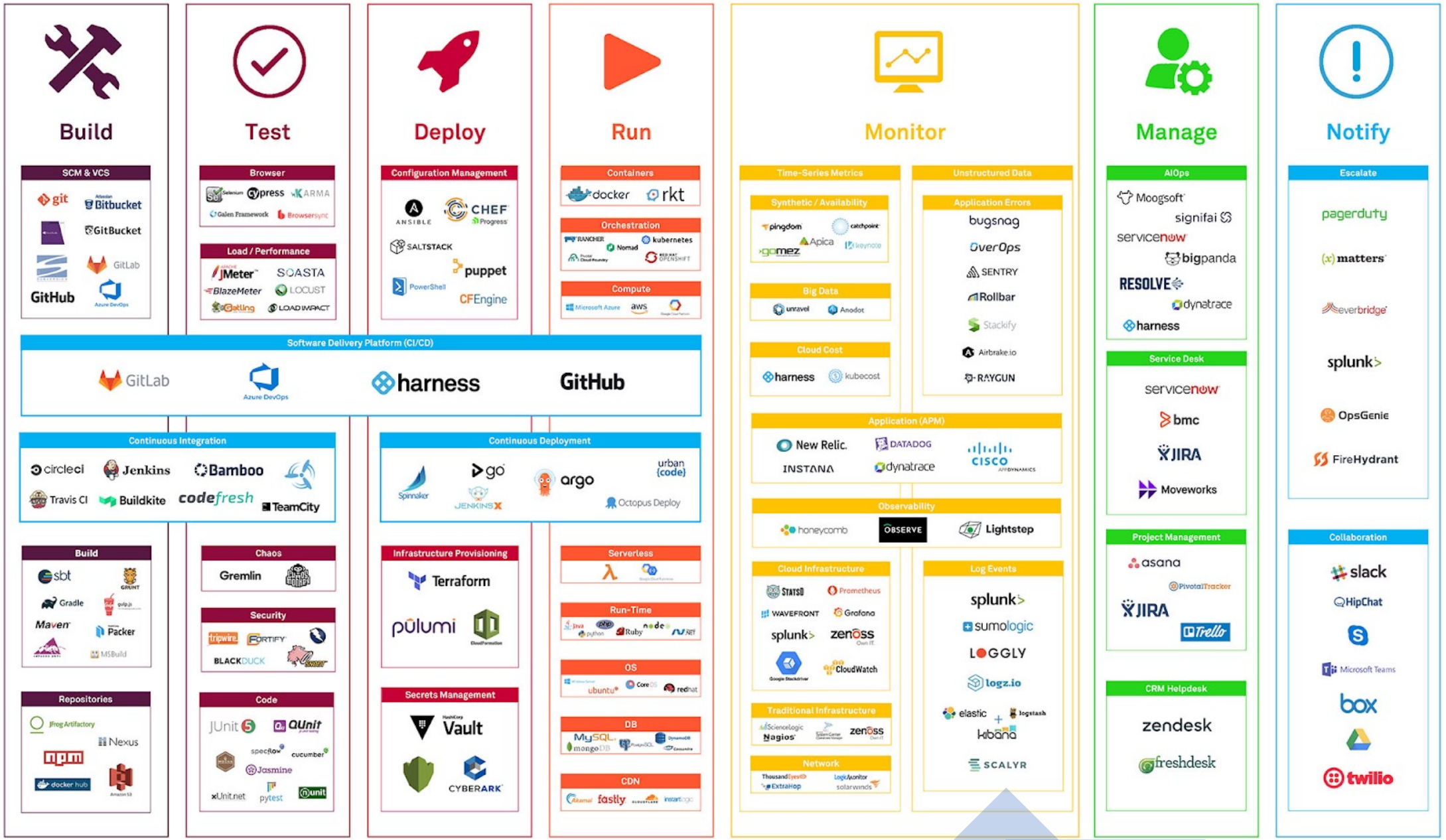
Understand the power of GNU/Linux shell and become an expert

| | Skill Set | Technologies |
|---|---|---|
| 1 | Cloud | AWS (Amazon Web Services) and GCP |
| 2 | Containerization Tools | Docker, Helm Chart, Kubernetes, Openshift & Min/(Kube/Shift). |
| 3 | Infrastructure As Code Software's | HashiCorp Terraform, Packer and Terragrunt |
| 4 | Operating System | RHEL, Ubuntu, CentOS and Windows Family |
| 5 | Configuration Management Tools | Ansible. Chef and Puppet. |
| 6 | Build Tools | NPM, Maven and Gradle |
| 7 | CI/CD Tools | Gitlab, Jenkins and pipeline groovy and DSL |
| 8 | Database | MYSQL, Mariadb, Mongodb, Couchbase and Cassandra Cluster Infra level |
| 9 | Scripting | BASH Shell Scripting and Python (Basic/Learning) |
| 10 | Version Controlling Tools | Gitlab, Bitbucket and Github |
| 11 | Application Server | Nginx, Apache and Tomcat |
| 12 | Monitoring | Zabbix, Kafka and zookeeper cluster Infra level |
| 13 | Service Discovery and Configuration | HashiCorp Consul and Git2consul |
| 14 | Virtualization Tools | Vagrant, Linux-KVM, VMware-Workstation and Virtual Box |
| 15 | Load Balancer | Nginx with Keepalived |
| 16 | Hypervisor | Qemu/KVM, VirtualBox, Vagrant |
| 17 | Software Storage | Ceph |
| 18 | Others | Nexus, Sonarqube, Jfrog, Jupeterhub, Rstudio, Keycloak and Vault<br>Kubeflow, k8s Operator, Mlflow, Jfrog, Vault, Gitlab, Helm, Kubernetes, AWS, Cloudera Hadoop, Jupeterhub, Keycloak, Airflow, Rstudio |

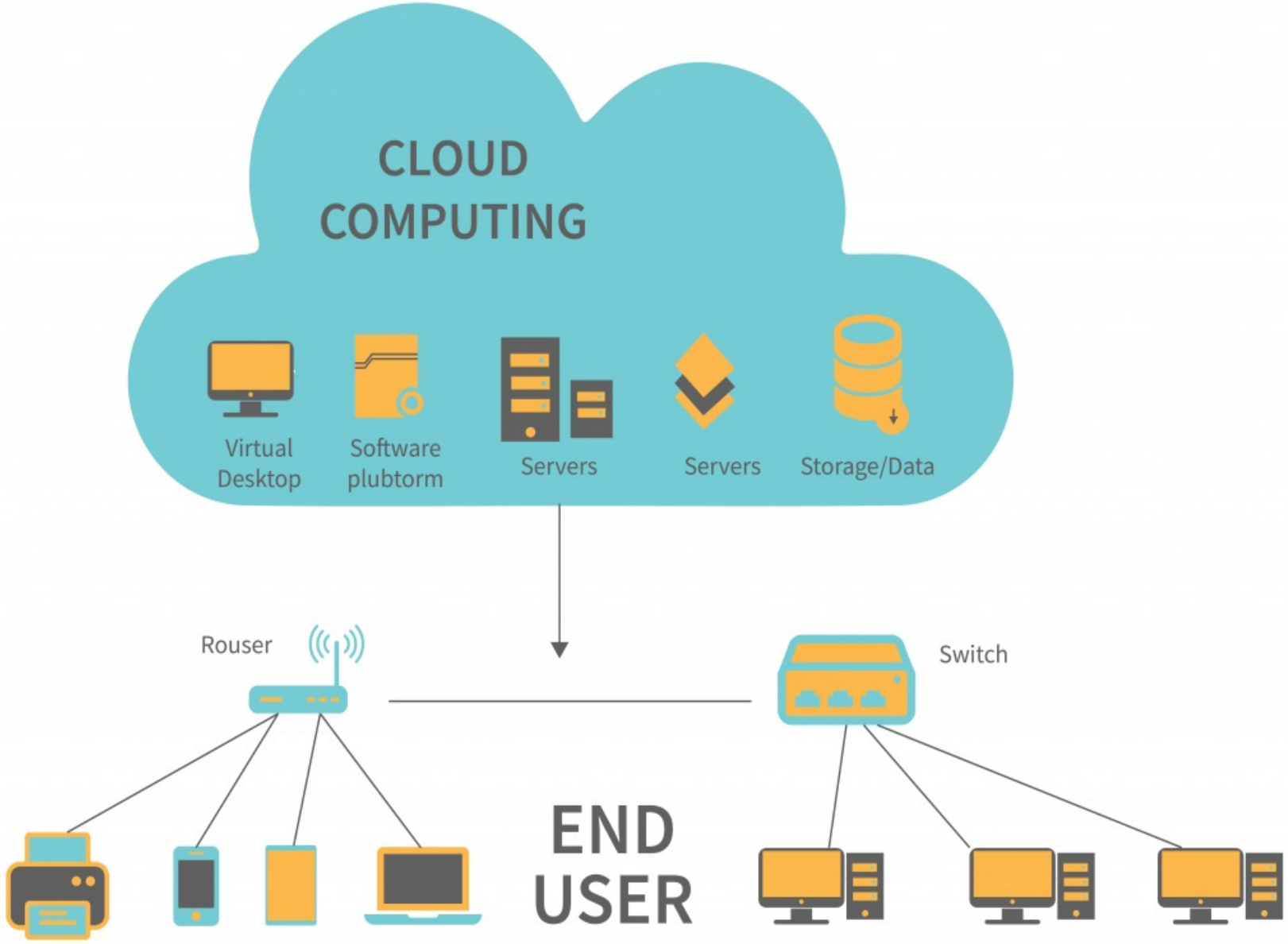
# Best **DevOps Automation** Tools and Technologies



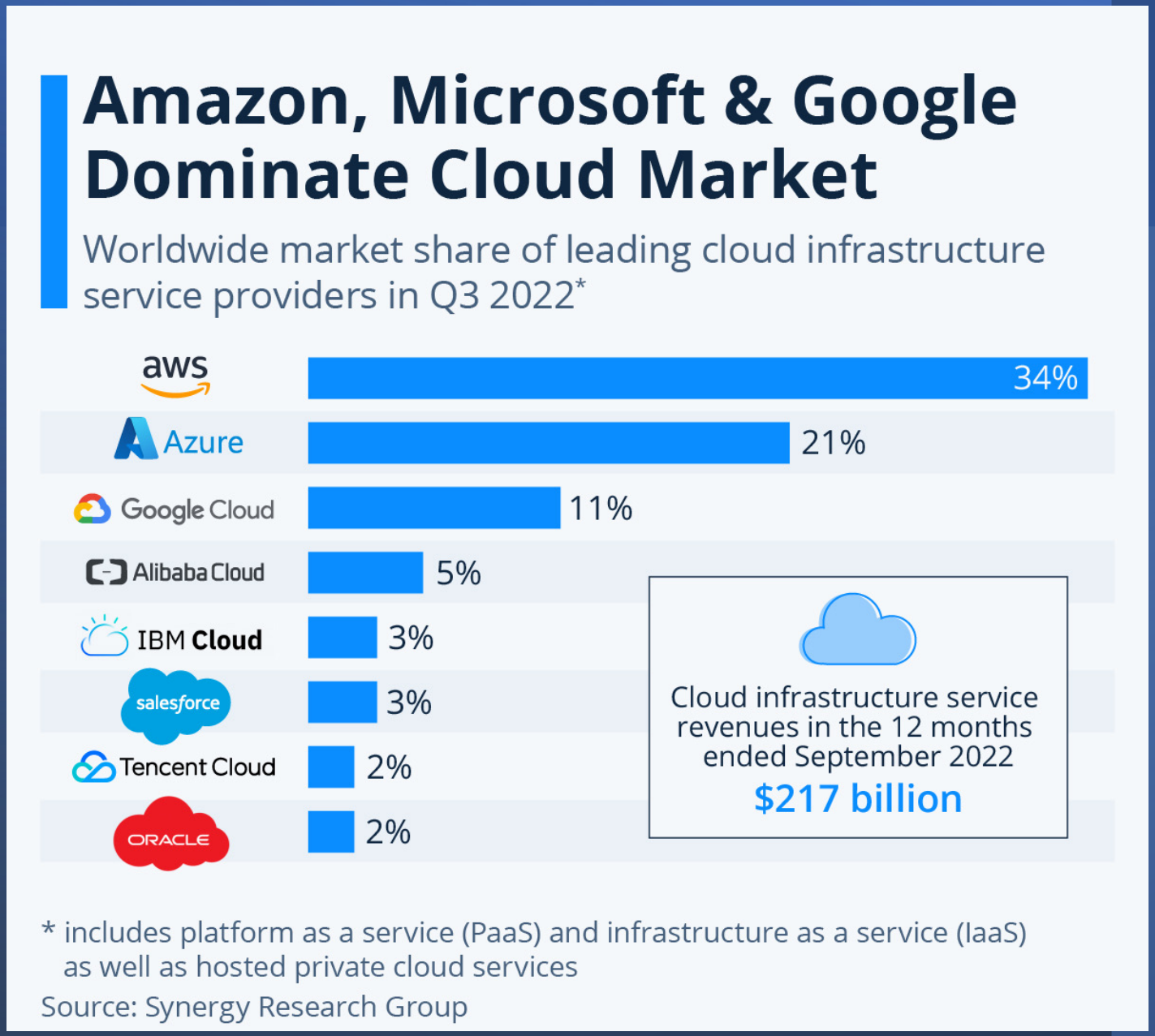
# DevOps Tools Ecosystem 2021



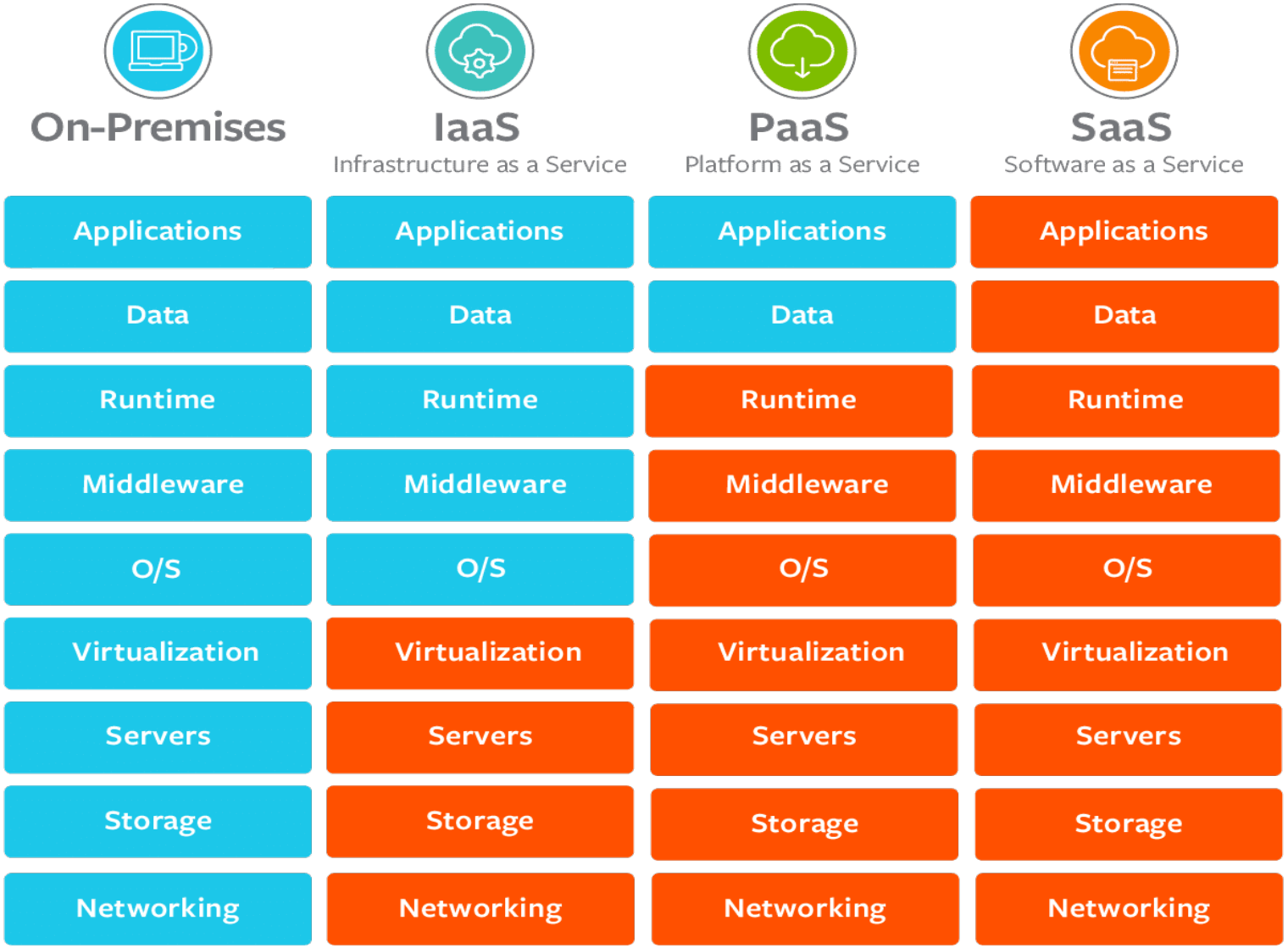
Present By Amit Ganvir

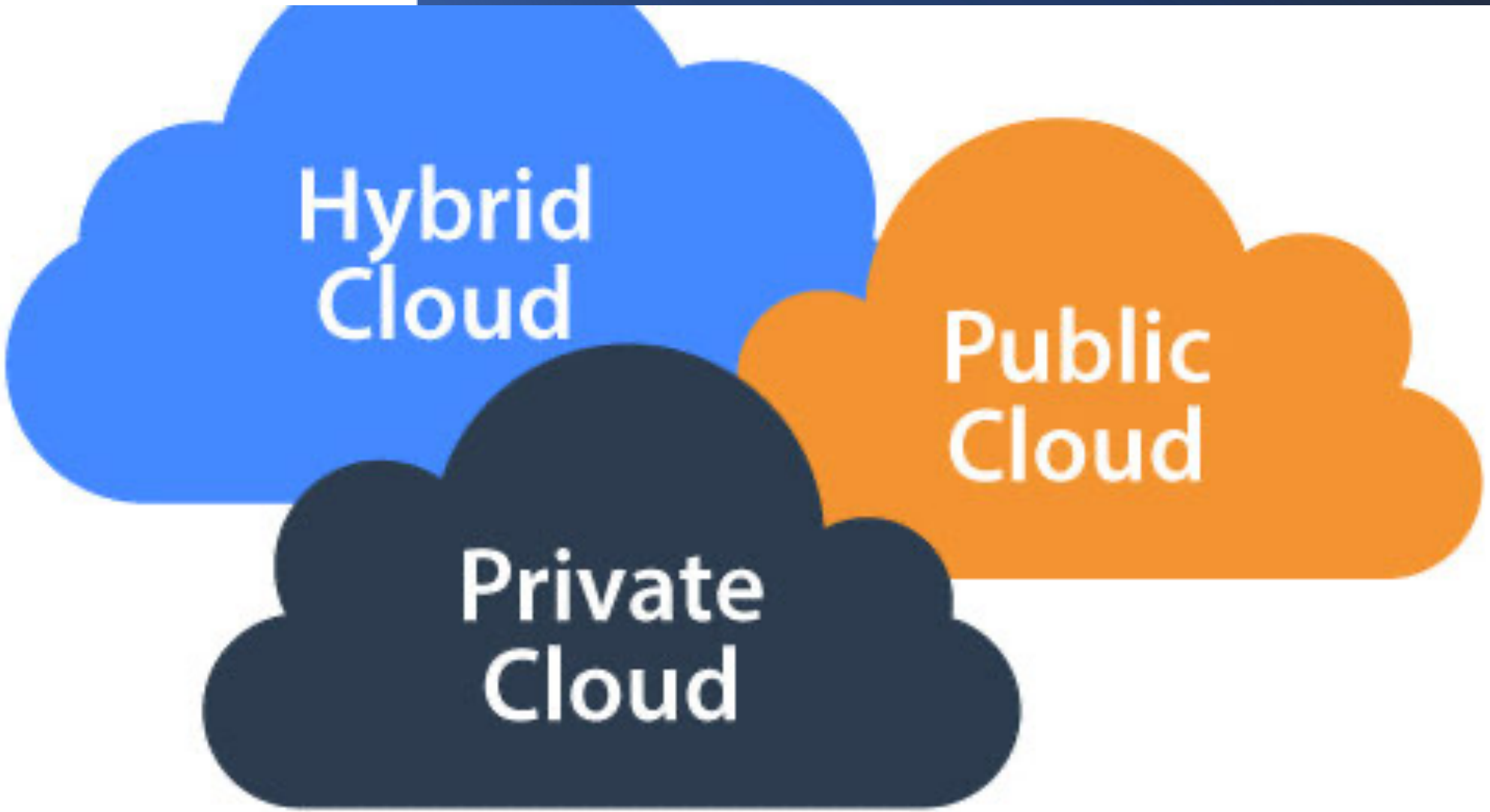

CLOUD
COMPUTING
Virtual
Desktop
Software
plubtorm
Servers
Servers
Storage/Data
Rouser
Switch
END
USER

# Cloud Service Provider



# Cloud Service types




Hybrid
Cloud
Public
Cloud
Private
Cloud

# Types of Cloud Deployment

## Public Cloud

Typically have massive amounts of available space, which translates into easy scalability. Recommended for software development and collaborative projects.

## Private Cloud

Usually reside behind a firewall and are utilized by a single organization. Recommended for businesses with very tight regulatory requirements

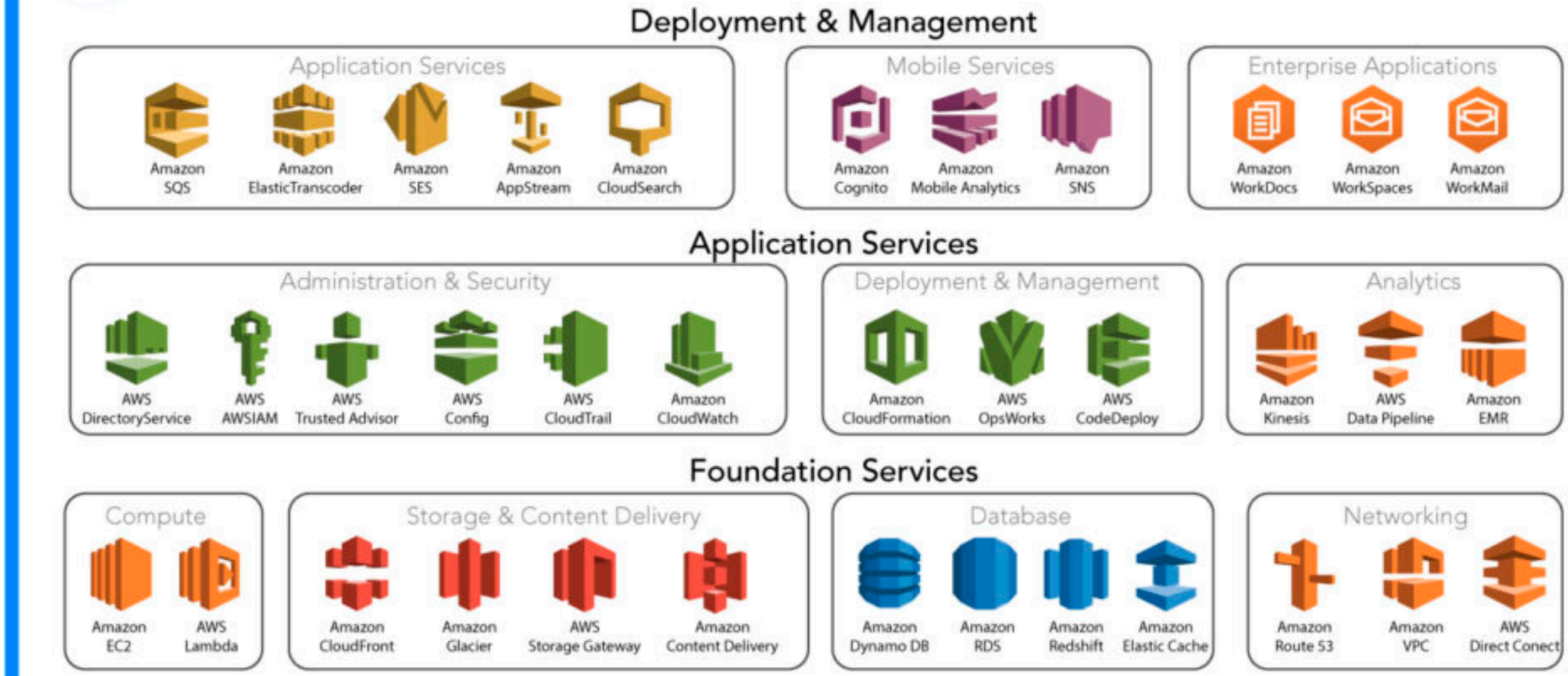
## Hybrid Cloud

Combine public clouds with private clouds to allow the two platforms to interact seamlessly. Recommended for businesses balancing big data analytics with strict data privacy regulations.

## Community Cloud

A collaborative, multi-tenant platform used by several distinct organizations to share the same applications. Users are typically operating within the same industry or field.

# AWS Services



# Create AWS Account

Open the Amazon EC2 console at https://console.aws.amazon.com

# Launch the EC2 Instance

**create a key pair -** If you already have a key pair, you don't need to create a new one. You can use your existing key pair for this exercise.

**Step 1:** Open the Amazon EC2 console at https://console.aws.amazon.com

**Step 2:** Choose **Launch Instance**.

**Step 3: Choose an Amazon Machine Image (AMI)**, find an Amazon Linux 2 AMI at the top of the list and choose **Select**.

**Step 4: Choose an Instance Type**, choose **Next: Configure Instance Details**.

Step 5: Configure Instance Details, provide the following information: - **Optional**

- Leave **Number of instances** at one.
- Leave **Purchasing option** at the default setting.
- For **Network**, choose the entry for the same VPC
- For **Subnet**, choose a default subnet in any Availability Zone.
- The **User data** automatically includes the commands

**Step 6:** Choose **Next: Add Storage - Optional**

**Step 7:** Choose **Next: Add Tags - Optional**

**Step 8:** Name your instance and choose **Next: Configure Security Group**.

**Step 9: Configure Security Group**, set **Assign a security group** to **Select an existing security group**.

**Step 10:** Choose **Review and Launch**.

**Step 11:** Choose **Launch**.

aws | Services | Search [Option+S]

# Launch an instance Info

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

## Name and tags Info

Step1

Name

t1

Add additional tags

## Application and OS Images (Amazon Machine Image) Info

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

Search our full catalog including 1000s of application and OS images

Recents | Quick Start

Step2

Amazon Linux | macOS | Ubuntu | Windows | Red Hat | S

Browse more AMIs

Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Ubuntu Server 20.04 LTS (HVM), SSD Volume Type — Free tier eligible

ami-0778521d914d23bc1 (64-bit (x86)) / ami-0620aa8714211d0af (64-bit (Arm))

Virtualization: hvm ENA enabled: true Root device type: ebs

## Summary

Number of instances Info

1

Software Image (AMI)

Canonical, Ubuntu, 20.04 LTS, ...read more

ami-0778521d914d23bc1

Virtual server type (instance type)

t2.micro

Firewall (security group)

mymac

Storage (volumes)

1 volume(s) - 8 GiB

**Free tier:** In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Cancel | Launch instance

## Instance type Info

Instance type

Step 3

t2.micro — Free tier eligible

Family: t2 1 vCPU 1 GiB Memory

On-Demand Linux pricing: 0.0116 USD per Hour

On-Demand Windows pricing: 0.0162 USD per Hour

Compare instance types

## Key pair (login) Info

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Step 4

Key pair name - *required*

mac2

Create new key pair

## Network settings Info

Edit

Network Info

vpc-07cab67d | Default

Subnet Info

No preference (Default subnet in any availability zone)

## Summary

Number of instances Info

1

Software Image (AMI)

Canonical, Ubuntu, 20.04 LTS, ...read more

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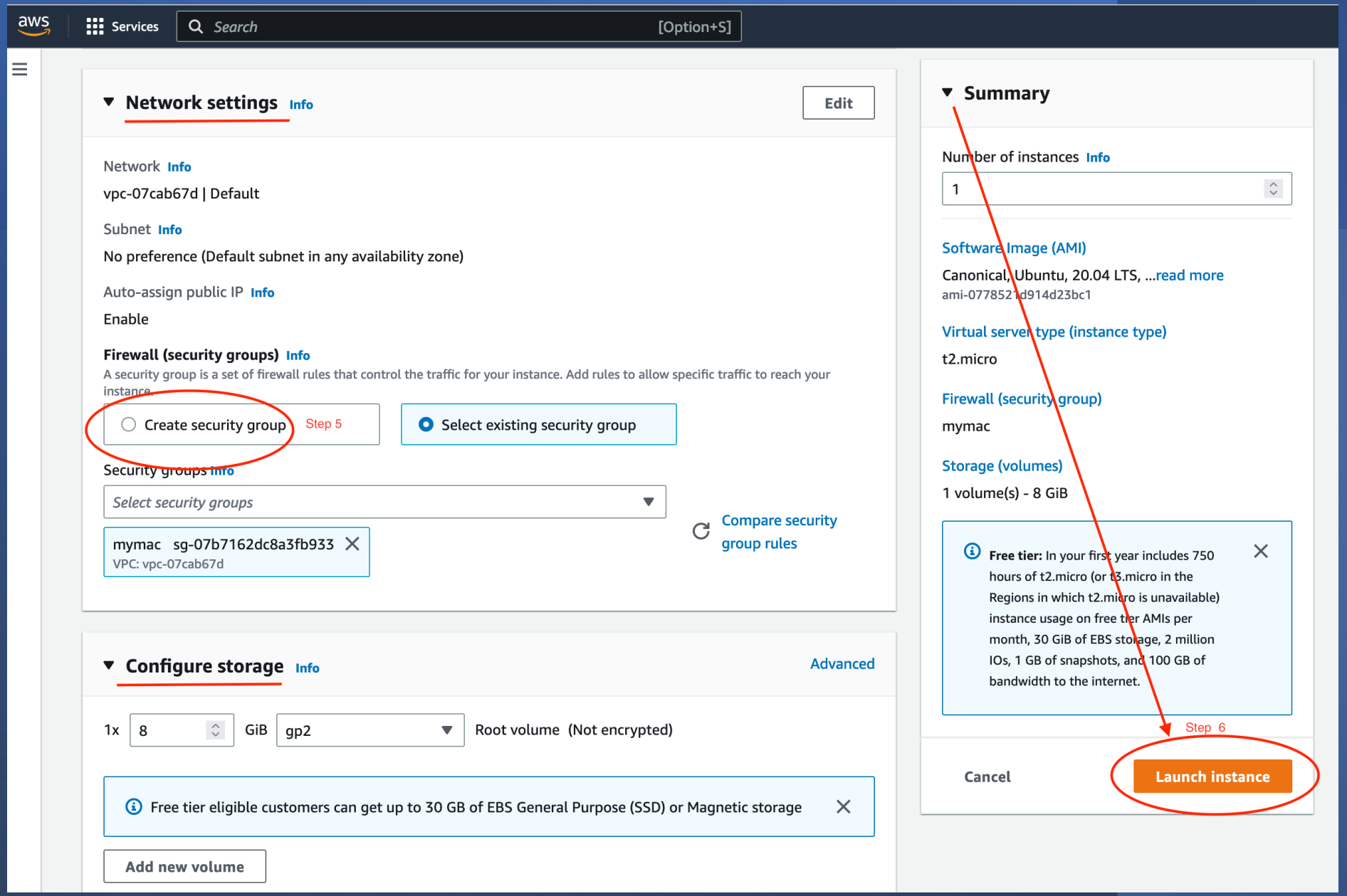
aws
Services
Search
[Option+S]
Network settings Info
Edit
Network Info
vpc-07cab67d | Default
Subnet Info
No preference (Default subnet in any availability zone)
Auto-assign public IP Info
Enable
Firewall (security groups) Info
A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.
Create security group
Step 5
Select existing security group
Security groups Info
Select security groups
mymac sg-07b7162dc8a3fb933
VPC: vpc-07cab67d
Compare security group rules
Configure storage Info
Advanced
1x 8 GiB gp2 Root volume (Not encrypted)
Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage
Add new volume
Summary
Number of instances Info
1
Software Image (AMI)
Canonical, Ubuntu, 20.04 LTS, ...read more
ami-0778521d914d23bc1
Virtual server type (instance type)
t2.micro
Firewall (security group)
mymac
Storage (volumes)
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Step 6
Cancel
Launch instance

# Data Availabe in Github Repository

https://github.com/amitganvir23/devops-session

https://www.aquasec.com/cloud-native-academy/kubernetes-101/kubernetes-dashboard/

# Thank You!

Present By **Amit Ganvir**
amitganvir6@gmail.com

https://www.serverkaka.com/2018/08/enable-password-authentication-aws-ec2-instance.html