



NARSIMHA REDDY ENGINEERING COLLEGE

**An Autonomous Institution | Affiliated to JNTUH | Approved by AICTE
Accredited by NBA & NAAC with 'A' Grade**

Department of Computer Science and Engineering

Program Name : B.Tech CSE

Subject: CLOUD COMPUTING

Course Code : 23CS706

Semester & Year: I/IV

Faculty Name : G. MAHESH

UNIT - 3

Agenda

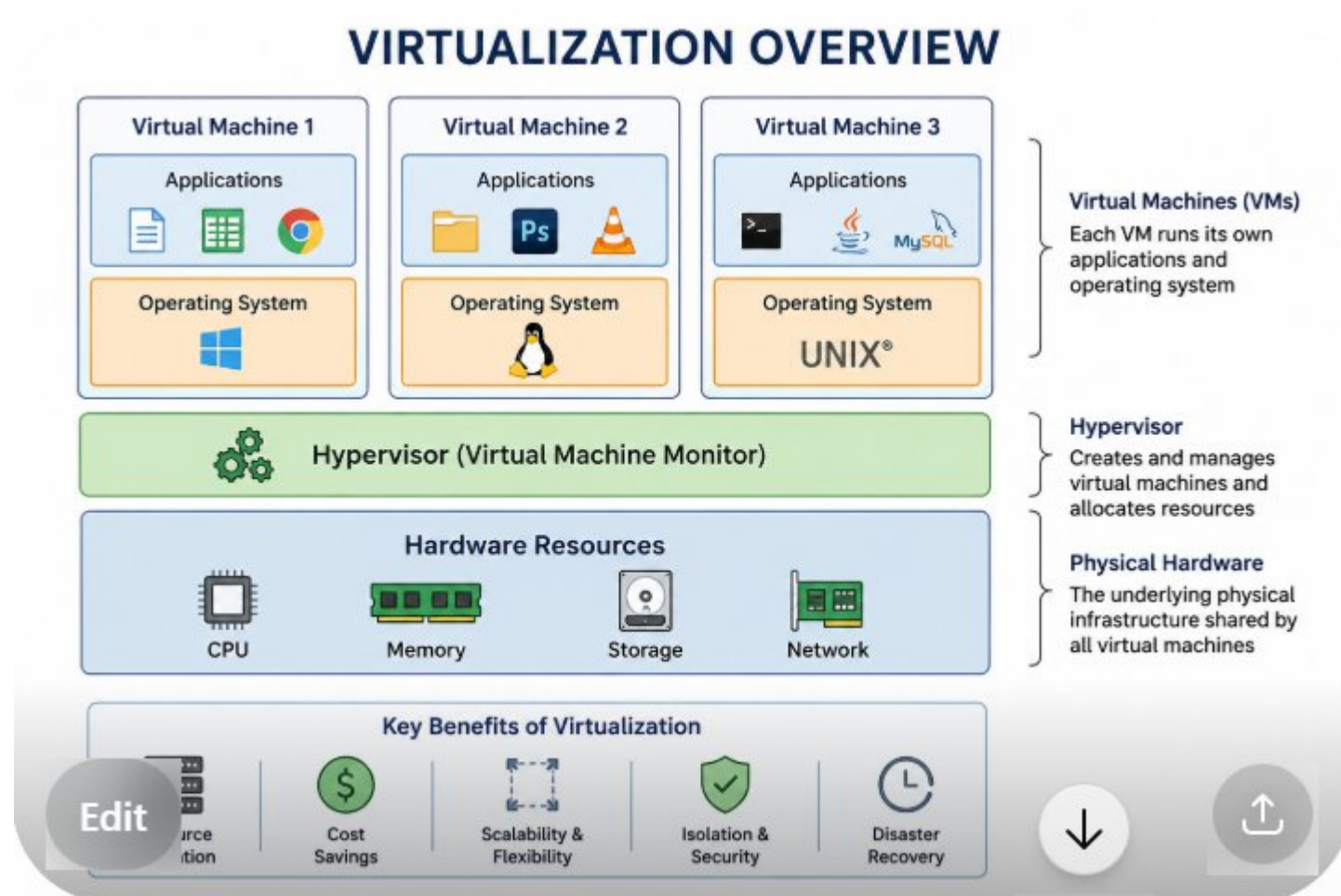
- Virtualization
- Programming Models
- MapReduce
- Cloud Haskell
- Software Development in Cloud

Cloud Computing Foundations

- On-demand resources
- Scalability
- Elasticity
- Pay-as-you-go.

Virtualization Overview

- Abstraction layer between hardware and operating systems

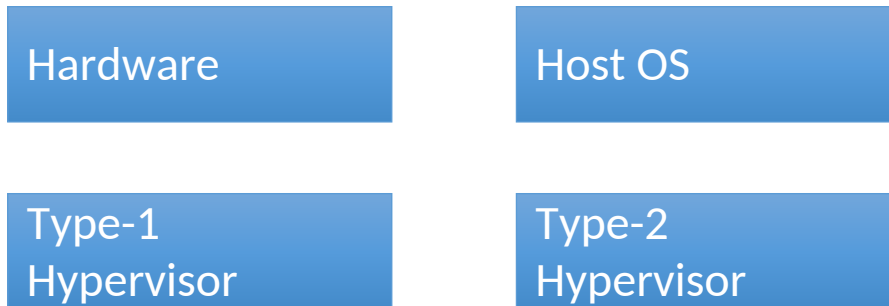


Types of Virtualization

- Server, Storage
- Network, Desktop
- Application.

Hypervisor Architecture

- Type-1 and Type-2 Hypervisors.



Benefits & Challenges

- Efficiency
- Consolidation
- security, management overhead.

Programming Models for Cloud

- Distributed
- parallel computing paradigms.

MapReduce Workflow

- Input → Map → Shuffle → Reduce → Output



Software Development in Cloud

- Cloud-native applications,
- Microservices,
- Containers.

DevOps, CI/CD & Tools

- Git, Jenkins
- Docker
- Kubernetes
- Cloud Platforms.