

Features:

Scalable: resource can be allocated dynamically based on demand.

Cost effective: eliminate needs of physical hardware investment.

Flexibility: supports various Os applications & development environments.

Security: cloud provides built in security measures such as encryption, firewall & access control.

Ex: AWS EC2 → Elastic Cloud Compute for scalable VMs.

Microsoft Azure VM → provides windows & Linux based instances

IBM Cloud infrastructure: flexible cloud with AI powered automation.

Oracle Cloud infrastructure: high performance computing & enterprise db management.

IaaS

→ 3 layered architecture.

① Compute layer:

- Hosts VM to run app. & workloads.

Uses hypervisors to manage VM execution, ensuring resource optimization.

Supports auto scaling & ~~resource optimization~~, load balancing to dynamically adjust computing power based on demand.

Provides GPU enabled instances for high performing computing & for AI/ML

② Storage layer:

- Provides scalable storage soln. including object storage, block st. file st.
- Ensures data redundancy through automated replication, minimizing risk of data loss.
- Offers high availability & disaster recovery features.