Cloud Computing

What is Cloud?

Using someone else's server to host, process, or store data
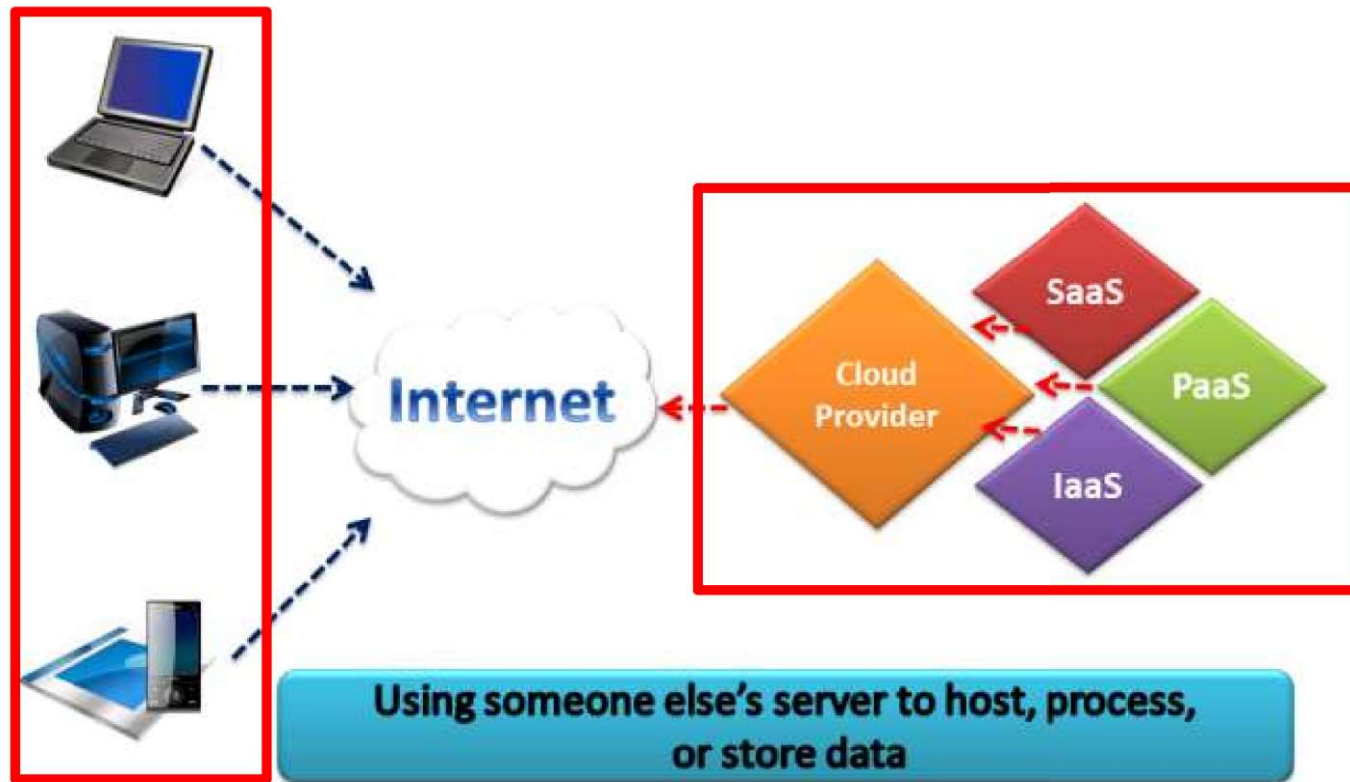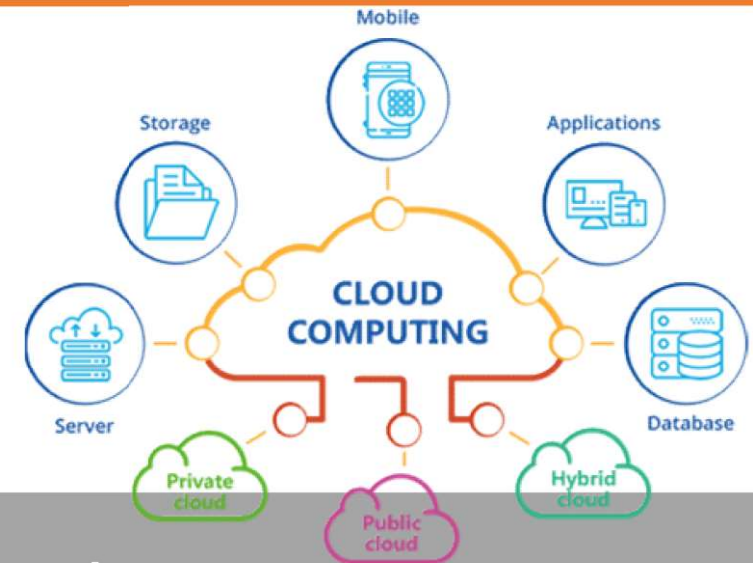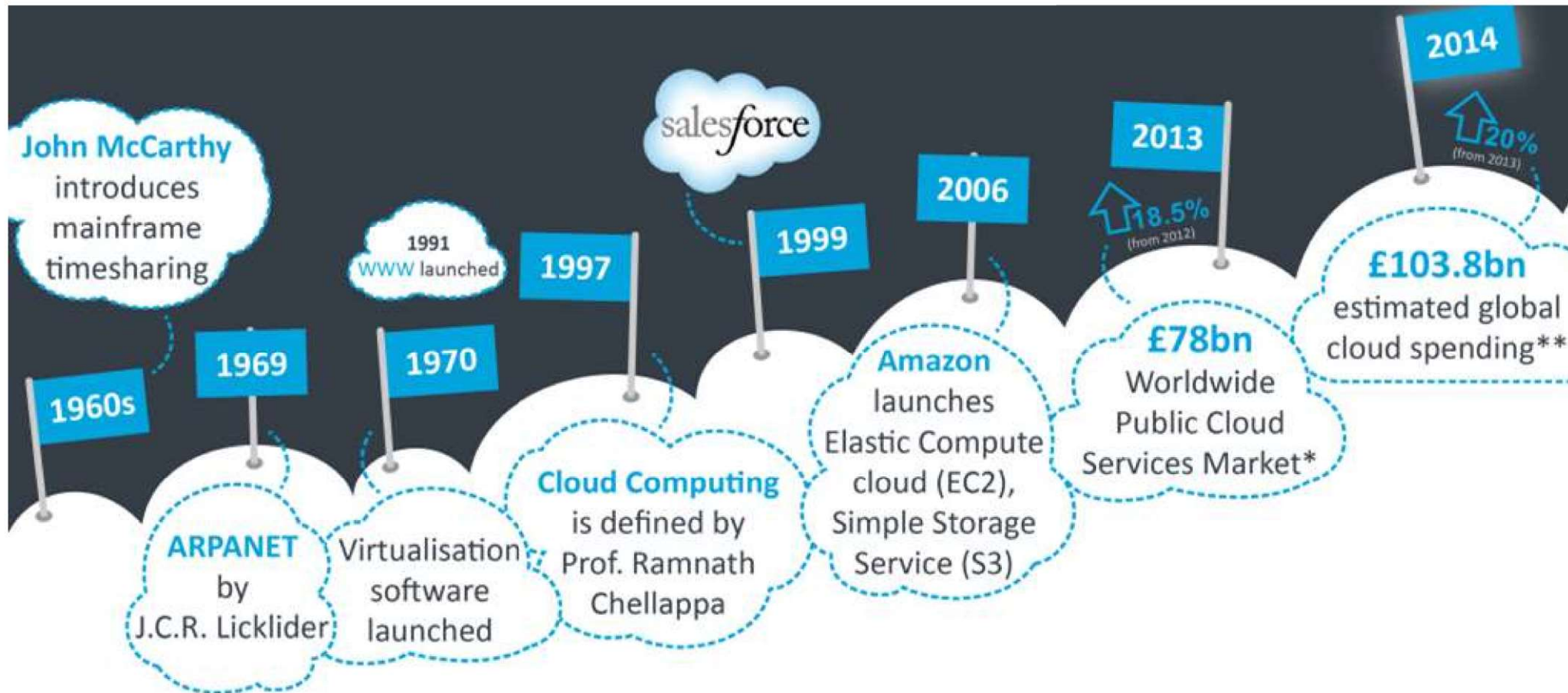
Cloud Computing

Enables network access to computing resources:

- Networks,
- Servers,
- Storage,
- Applications
- Services

Resources can be rapidly provisioned

History of Cloud Computing

1-Cloud Computing

Essential Characteristics

On-demand self-service

- Consumer can provision resourced as needed automatically
- No human interaction

Broad network access

- Are available over network

Resource pooling

- The provider's resources are pooled to serve multiple consumers

Measured Service

- Resource usage can be monitored and controlled providing transparency.
- Used for billing

Rapid elasticity

- Scale rapidly outward and inward

Common Characteristics

Massive Scale

Resilient Computing
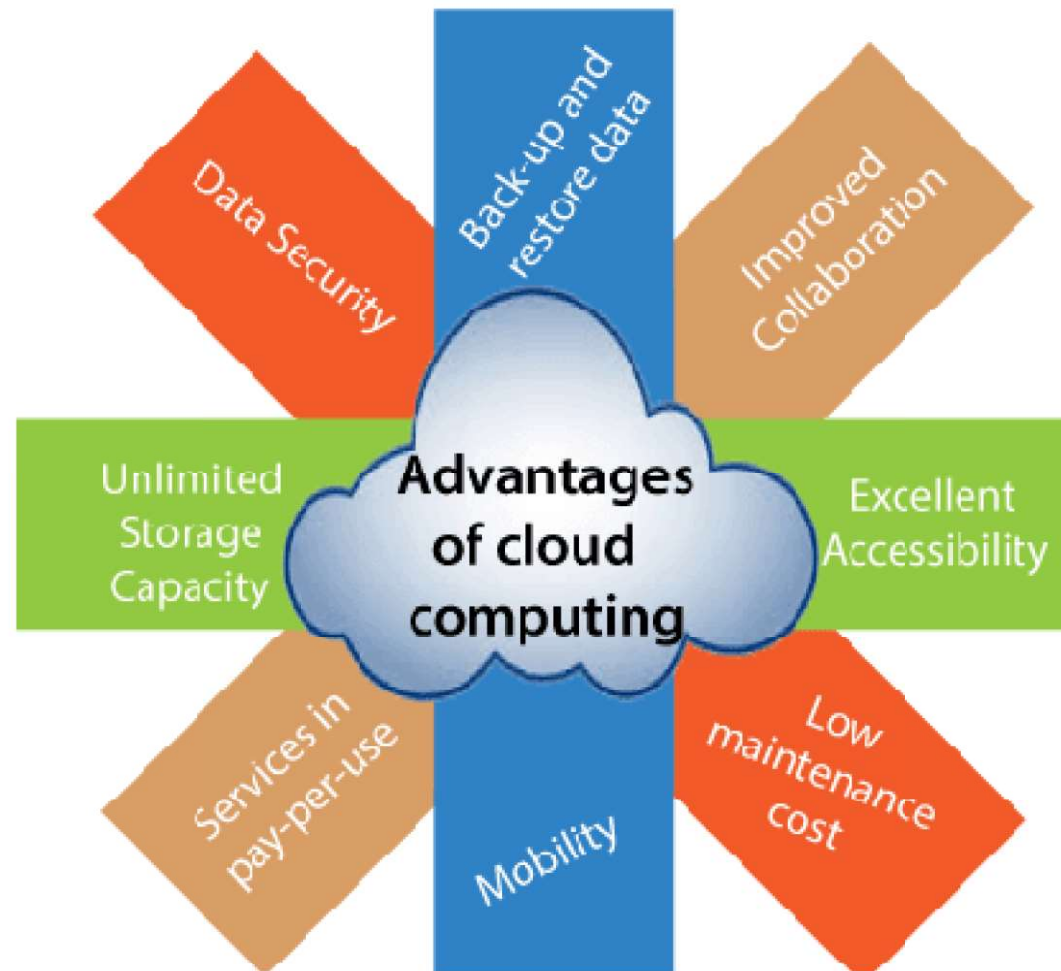
Geographic Distribution

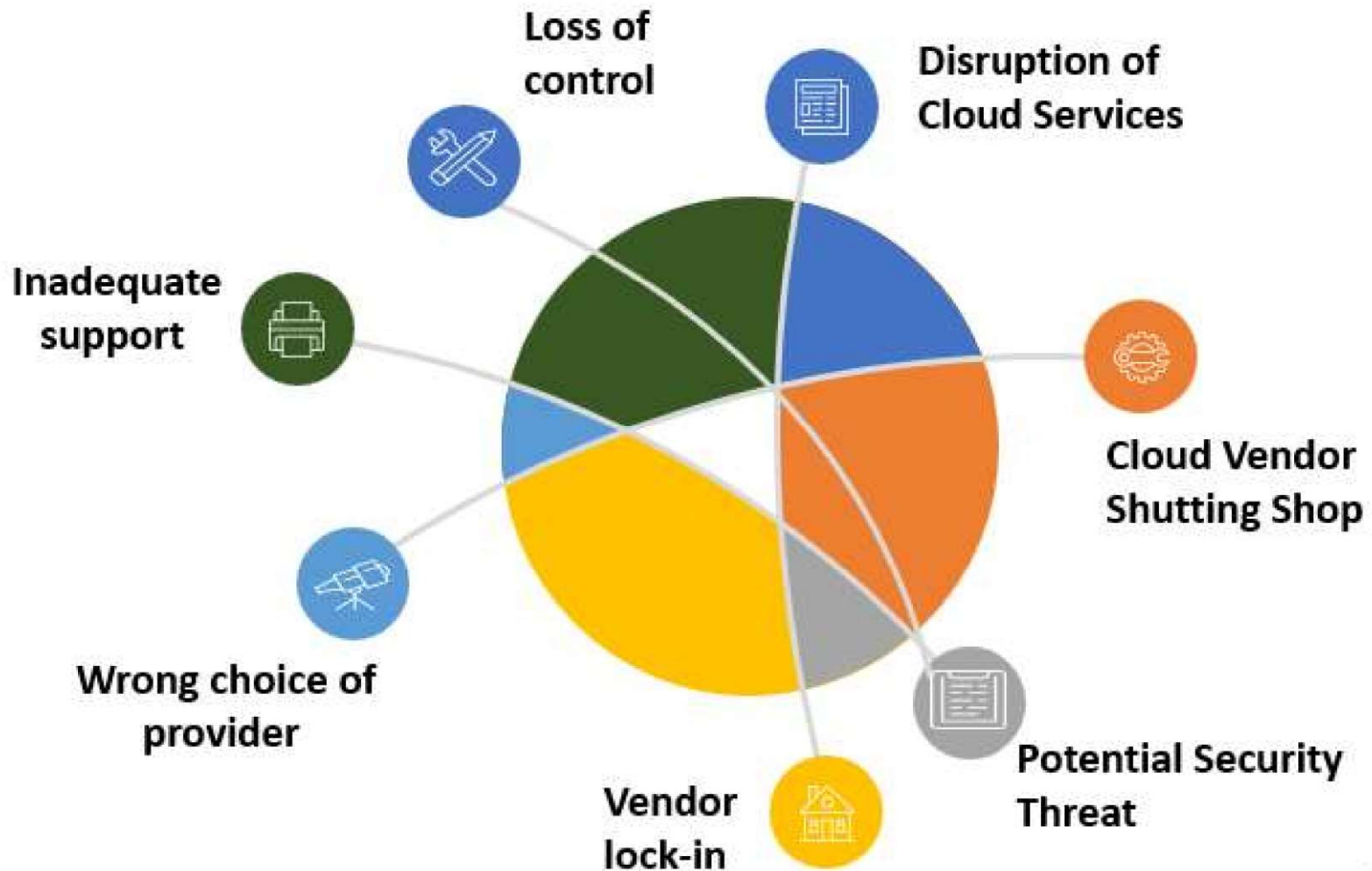Virtualization

Service Orientation

Low Cost Software

Advanced Security

Cloud Computing Advantages

Cloud Computing Disadvantages

1-Cloud Computing

Cloud Services Models

Software as a Service (SaaS)
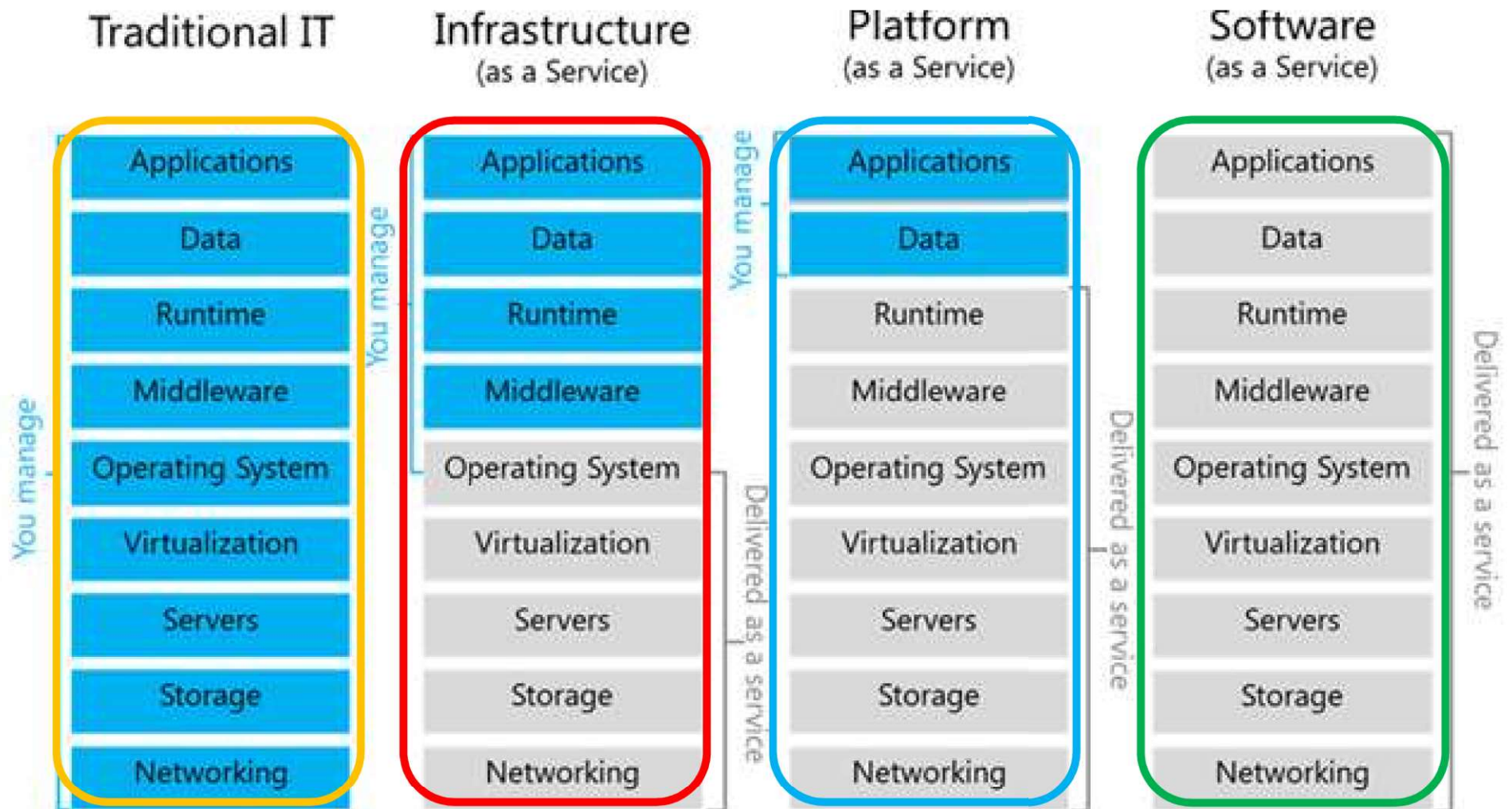
- Google Drive and Google Docs

Cloud Infrastructure as a Service (IaaS)

- DigitalOcean
- Azure
- AWS

## Platform as a Service (PaaS)

- The consumer does not manage or control the underlying cloud infrastructure:
  - network, servers,
  - operating systems, or storage
- Has control over the deployed applications and
- Configuration settings
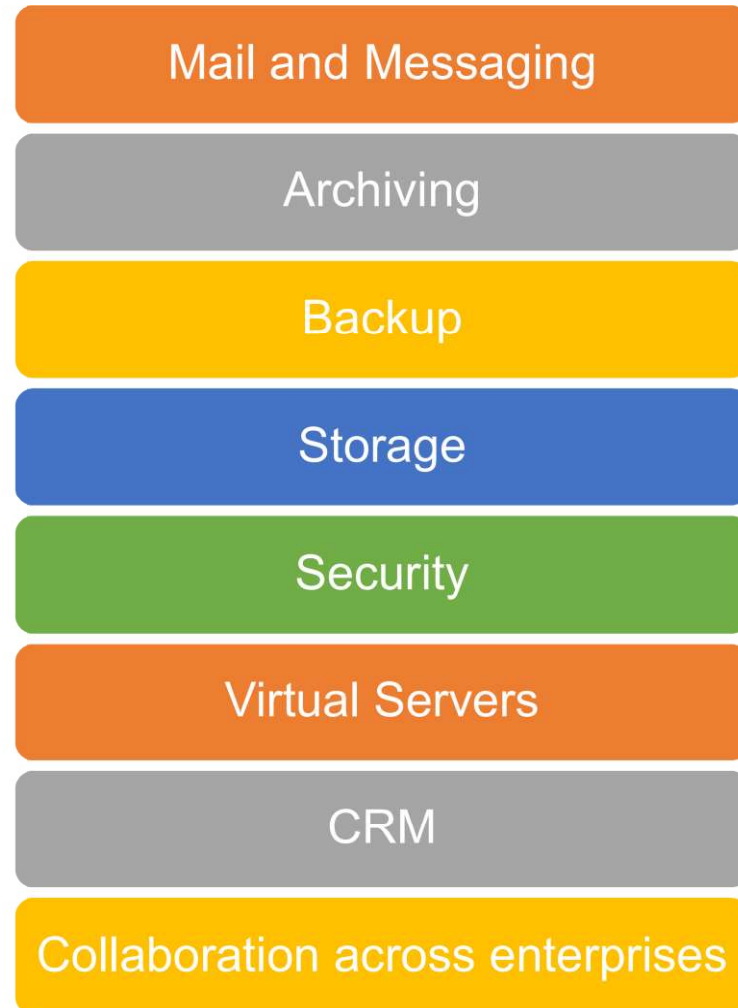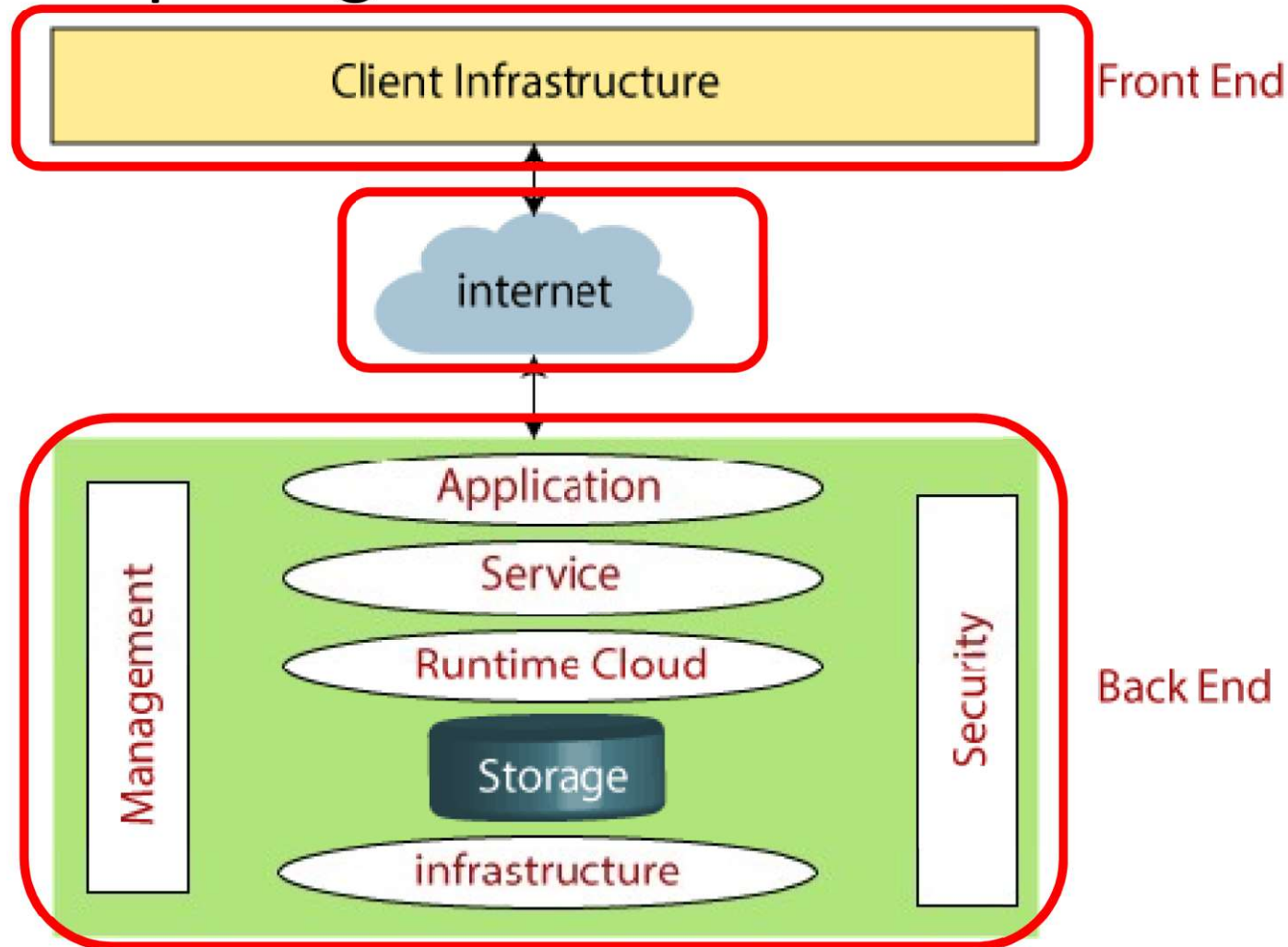
Cloud Services Models

	Traditional IT	Infrastructure (as a Service)	Platform (as a Service)	Software (as a Service)
Applications	■	■	■	□
Data	■	■	■	□
Runtime	■	■	□	□
Middleware	■	■	□	□
Operating System	■	□	□	□
Virtualization	■	□	□	□
Servers	■	□	□	□
Storage	■	□	□	□
Networking	■	□	□	□

You manage — Delivered as a service

Virtual Machines

- VM technology allows multiple virtual machines to run on a single physical machine

Top cloud applications

Mail and Messaging

Archiving

Backup

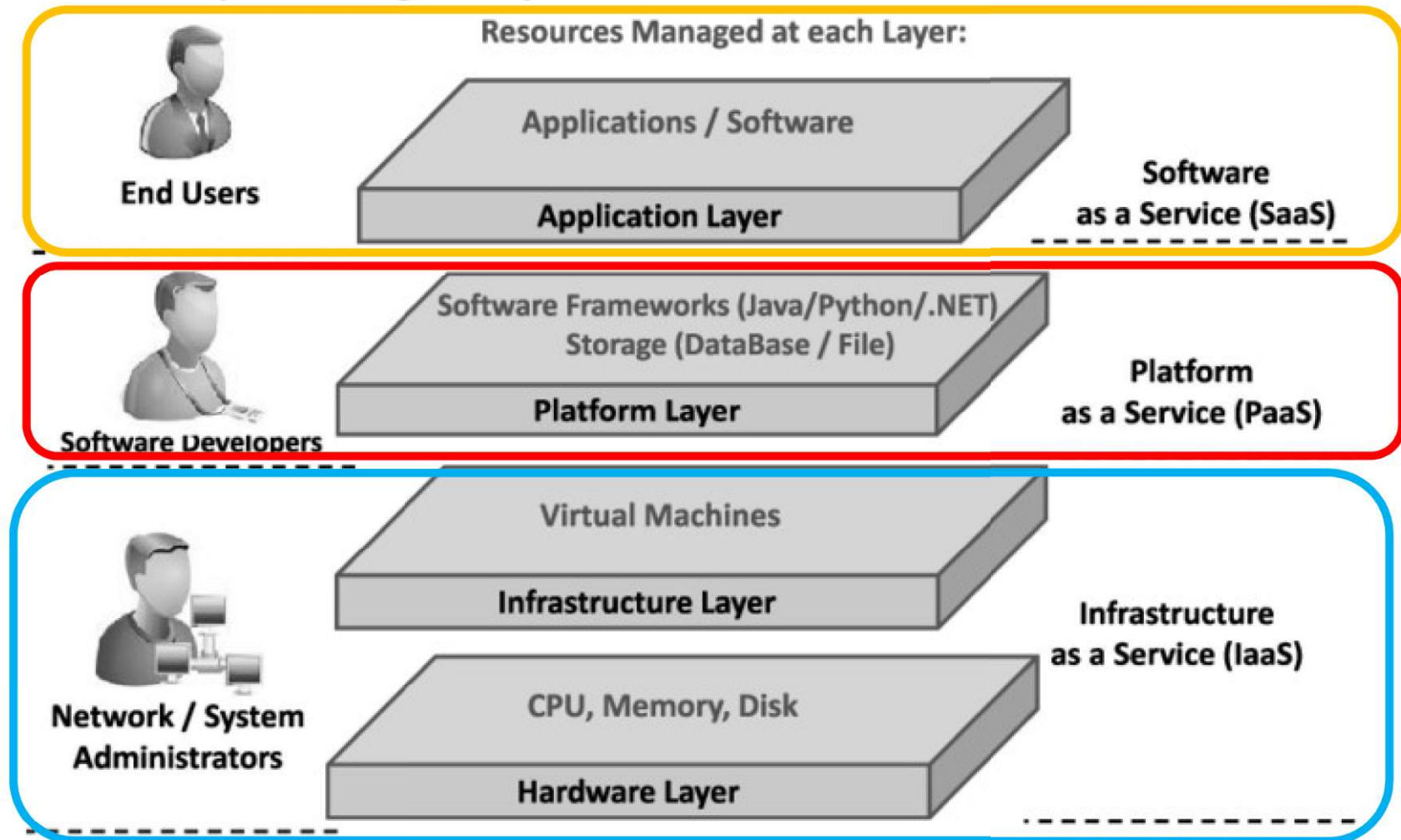Storage

Security

Virtual Servers

CRM
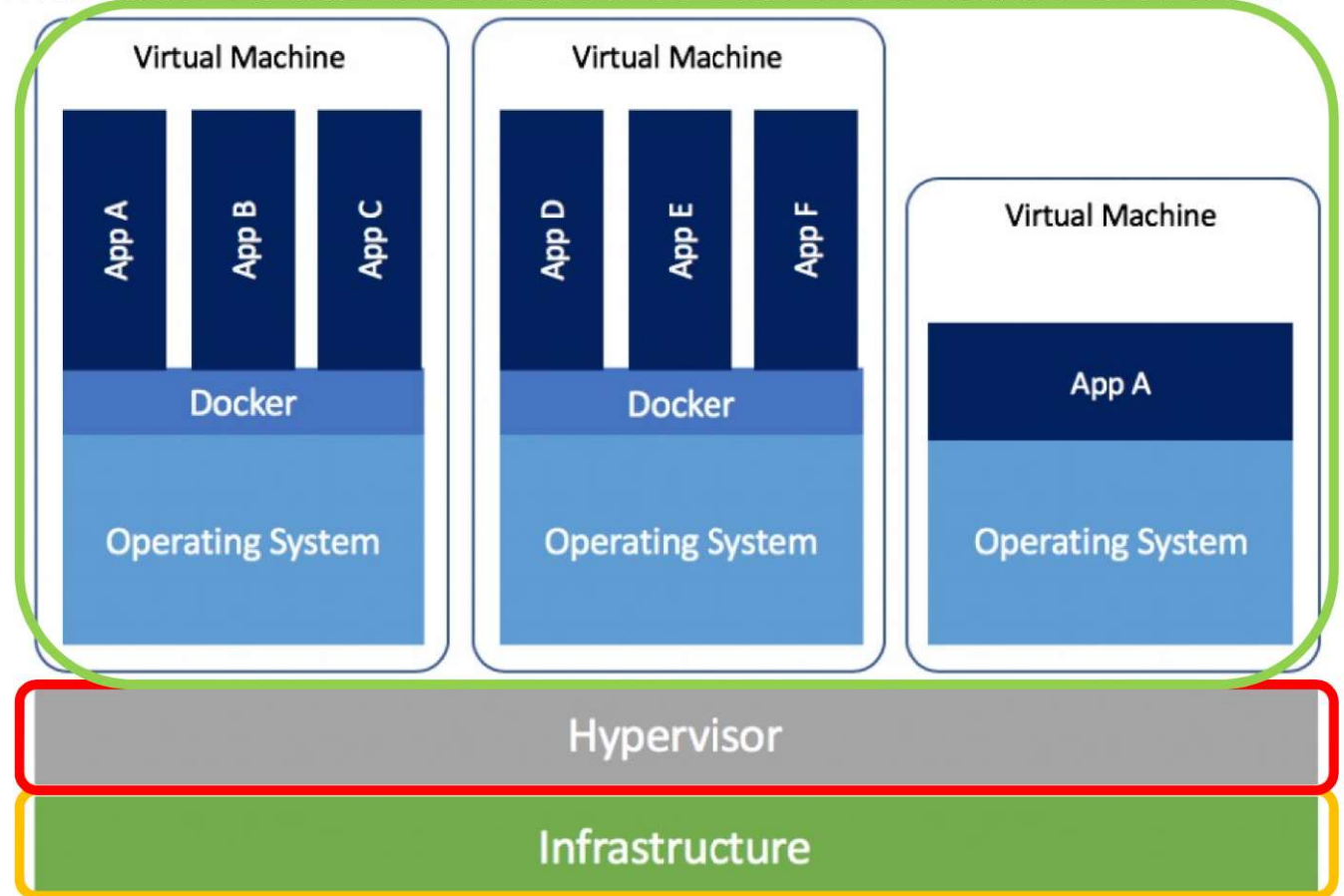
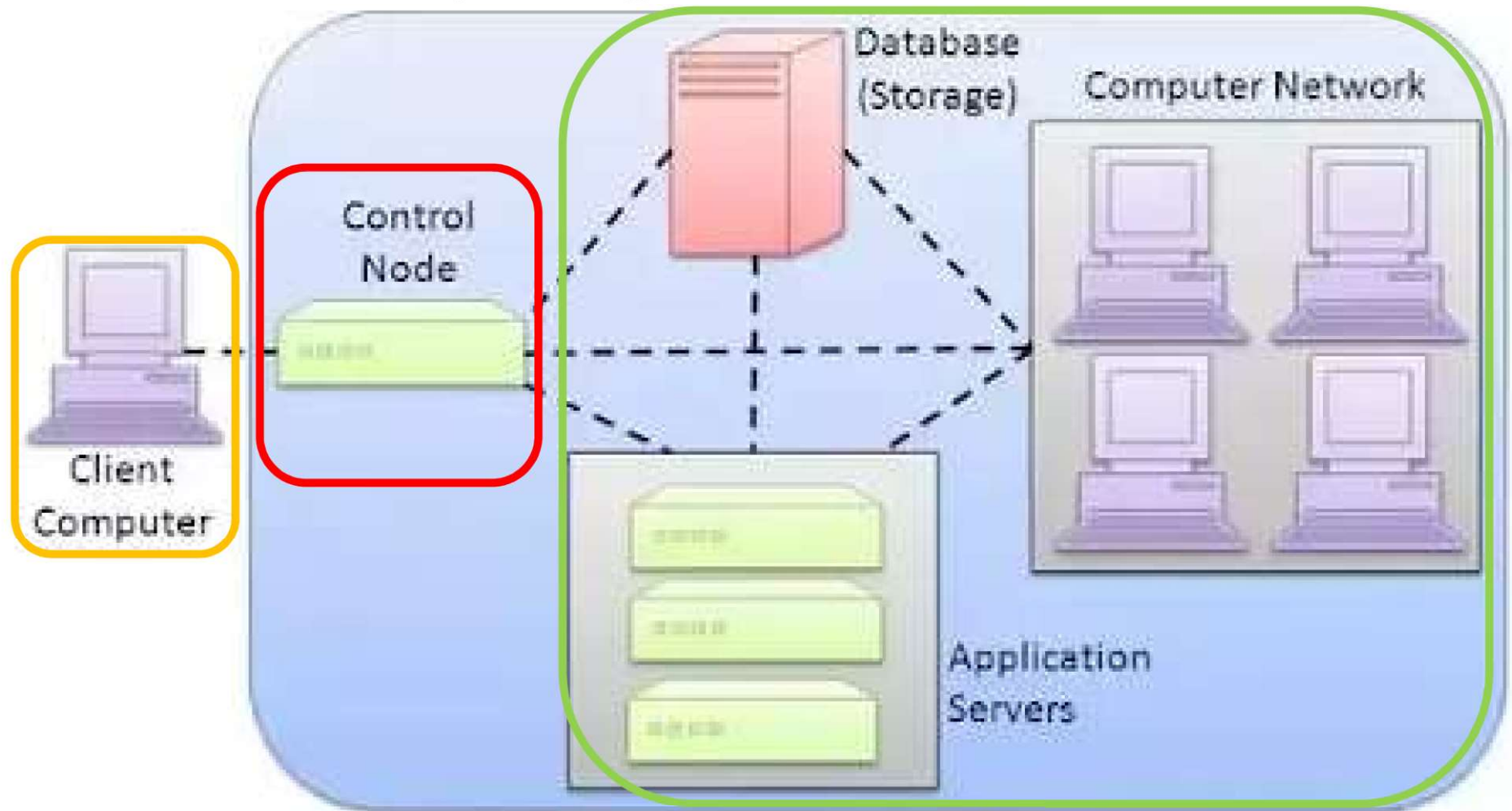Collaboration across enterprises

Cloud Computing Architecture

Cloud Computing Layers

How Cloud Computing Works?

Thanks