ORACLE

Cloud Concepts

Oracle Corporation

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Agenda

Cloud Computing

Service Models

Cloud Terminology

CAPEX v/s OPEX

Cloud Computing

On-demand self-service

Provision computing capabilities as needed automatically without requiring human interaction with service provider

Broad network access

Capabilities are available over the network and accessed through standard mechanisms

Resource pooling

The provider's computing resources are pooled to serve multiple consumers using a multi-tenant model, with different resources dynamically assigned and reassigned according to demand

Rapid elasticity

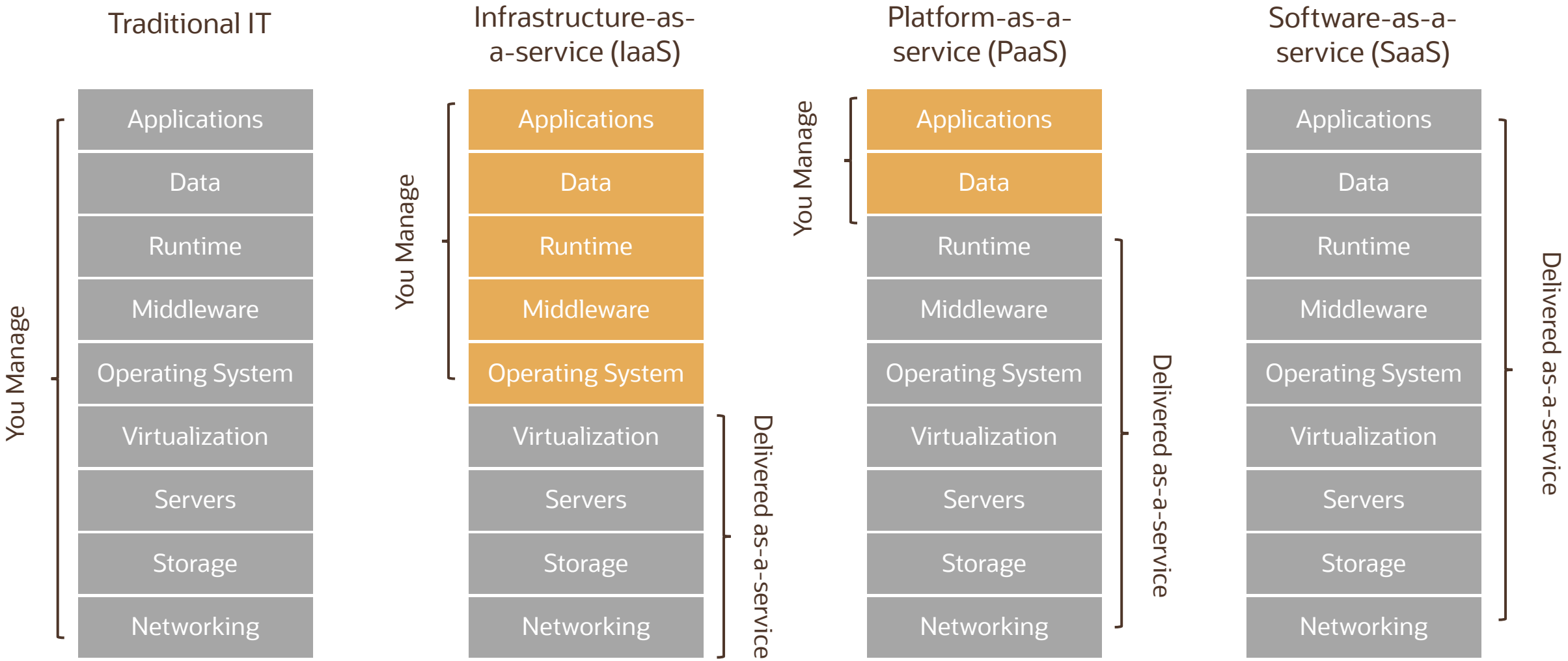
Capabilities can be elastically provisioned and released, in some cases automatically, to scale rapidly outward and inward with demand

Measured service

Resource usage can be monitored, controlled, and reported, providing transparency for both the provider and consumer of the utilized service

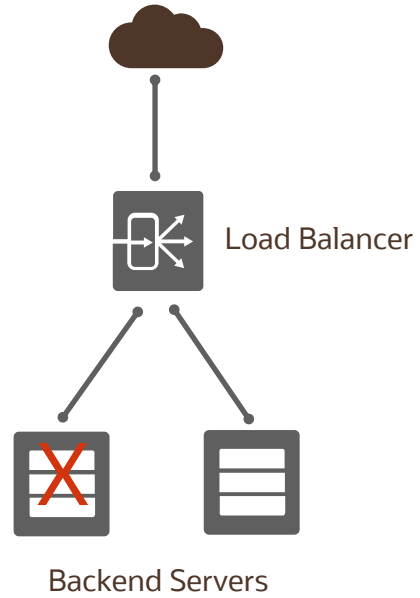
https://csrc.nist.gov/publications/detail/sp/800-145/final

Service Models



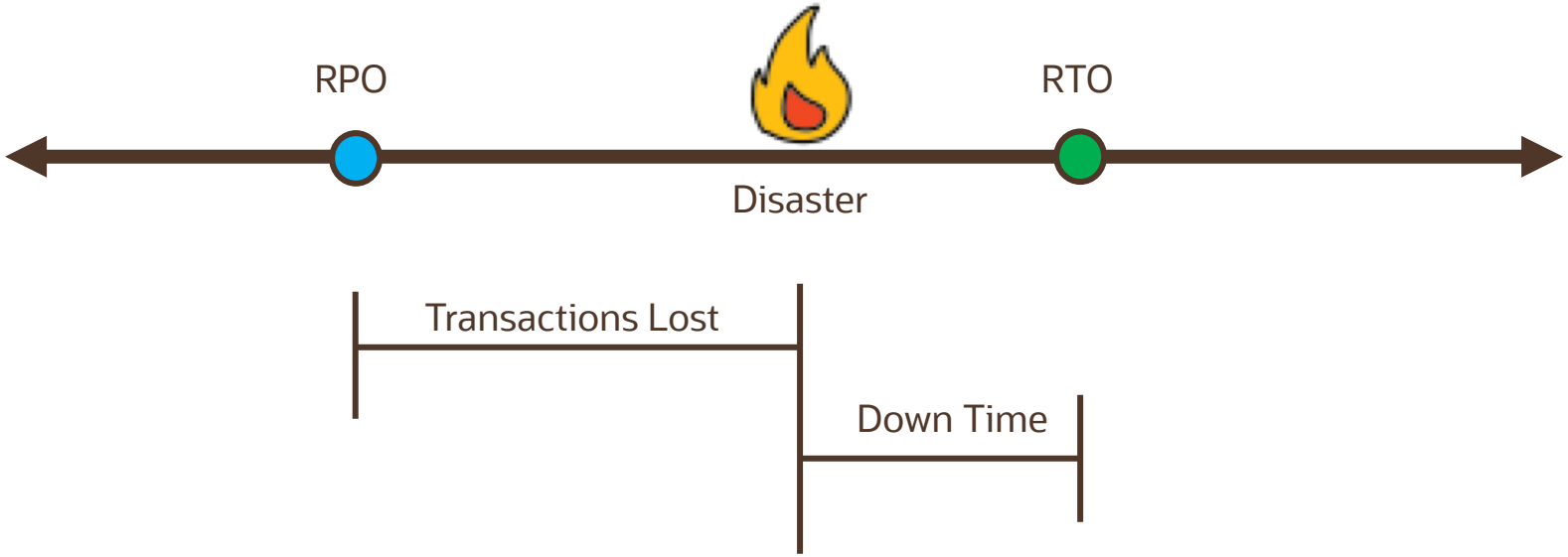
High Availability

- Computing environments configured to provide nearly full-time availability are known as high availability systems
- Such systems typically have redundant hardware and software that makes the system available despite failures
- Well-designed high availability systems avoid having single points-of-failure
- When failures occur, the failover process moves processing performed by the failed component to the backup component. The more transparent that failover is to users, the higher the availability of the system



Disaster Recovery

- Disaster recovery (DR) involves a set of policies, tools and procedures to enable the recovery or continuation of vital technology infrastructure and systems
- Disaster recovery should indicate the key metrics of recovery point objective (RPO) and recovery time objective (RTO)

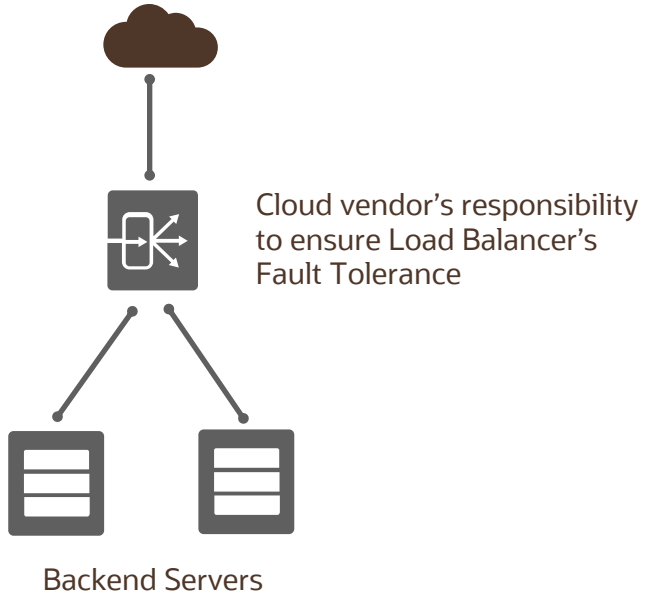


Cloud Terminology

- **Fault Tolerance** describes how a cloud vendor will ensure minimal downtime for services provided

- **Scalability** refers to scaling out (or in) or scaling up (or down).
  - Scaling out (or in) is called horizontal scaling
  - Scaling up (or down) is called vertical scaling

- **Elasticity** is the ability to quickly increase or decrease resources



CAPEX v/s OPEX

CAPEX

Capital expenditure or capital expense (CAPEX) is the money an organization or corporate entity spends to buy, maintain, or improve its fixed assets, such as buildings, vehicles, equipment, or land

OPEX

Operational expenditure or OPEX is an ongoing cost for running a product, business, or system

Cloud lets you trade CAPEX for OPEX

Instead of having to invest heavily in data centers and infrastructure, in the cloud, **you can pay only when you consume resources**, and **pay only for how much you consume**

Summary

Cloud Computing – on-demand self-service, network access, resource pooling, rapid elasticity, measure service

Service Models – IaaS, PaaS, SaaS

Cloud Terminology – HA, DR, Fault Tolerance, Scalability, Elasticity

CAPEX v/s OPEX

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Oracle Cloud always free tier:
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OCI training and certification:
cloud.oracle.com/en_US/iaas/training
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Thank you