



Activate Azure with DevOps

Microsoft Services



Introductions

Juan Osorio

- Customer Engineer @ Microsoft
- Cross-platform application developer
- Civil Engineer and Information Tech
- Soccer, hiking and reading

Your introduction

- Who are you?
- Expectations about this sessions

Workshop Overview

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Day 1

Module – Azure Overview
•Duration : 30 mins

Module – Azure Resource Manager
•Duration : 45 mins

Module – Azure SQL (Optional)
•Duration : 45 mins

Lab – Azure SQL (Optional)
•Duration: 45 mins

Module – Web Apps (Optional)
•Duration: 1 hour

Day 2

Lab – Web Apps (Optional)
•Duration: 30 mins

Module – DevOps Foundations
•Duration: 30 mins

Module – End to End DevOps - Part 1: Plan
•Duration: 30 mins

Lab – End to End DevOps - Part 1: Plan
•Duration : 1 hour

Module – End to End DevOps - Part 2: Dev and Test
•Duration : 45 mins

Lab – End to End DevOps - Part 2: Dev and Test
•Duration: 2 hours

Day 3

Module – End to End DevOps - Part 3: Release
•Duration : 45 mins

Lab – End to End DevOps - Part 3: Release
•Duration: 2 hours

Module – End to End DevOps - Part 4: Monitor and Learn
•Duration: 30 mins

Lab – End to End DevOps - Part 4: Monitor and Learn
•Duration: 1 hour

Proof of Concept
•Either PartsUnlimited or customer's own application

Day 4

Proof of Concept
•Either PartsUnlimited or customer's own application

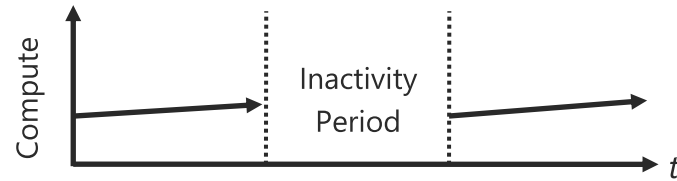
Objectives

After completing this learning unit, you will understand:

- Cloud Computing Introduction
- Microsoft Azure Overview
- Azure Compute Overview

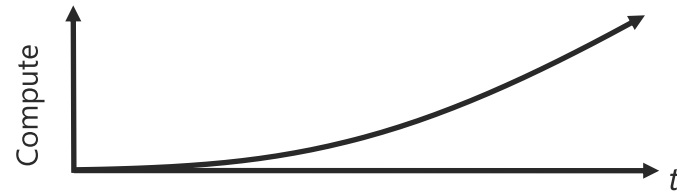
Cloud Computing Introduction

Cloud Computing Patterns



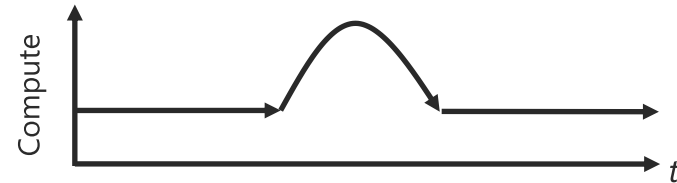
On and Off

On and off workloads (e.g. batch job)
Over provisioned capacity is wasted
Time to market can be cumbersome



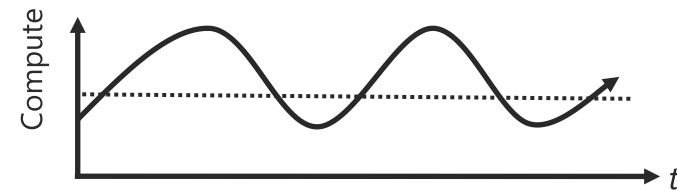
Growing Fast

Successful services needs to grow/scale
Keeping up with growth is a big IT challenge
Cannot provision hardware fast enough



Unpredictable Bursting

Unexpected/unplanned peak in demand
Sudden spike impacts performance
Cannot over provision for extreme cases



Predictable Bursting

Services with micro seasonality trends
Peaks due to periodic increased demand
IT complexity and wasted capacity

Cloud Computing



IaaS

Infrastructure as a Service

Host



PaaS

Platform as a Service

Build

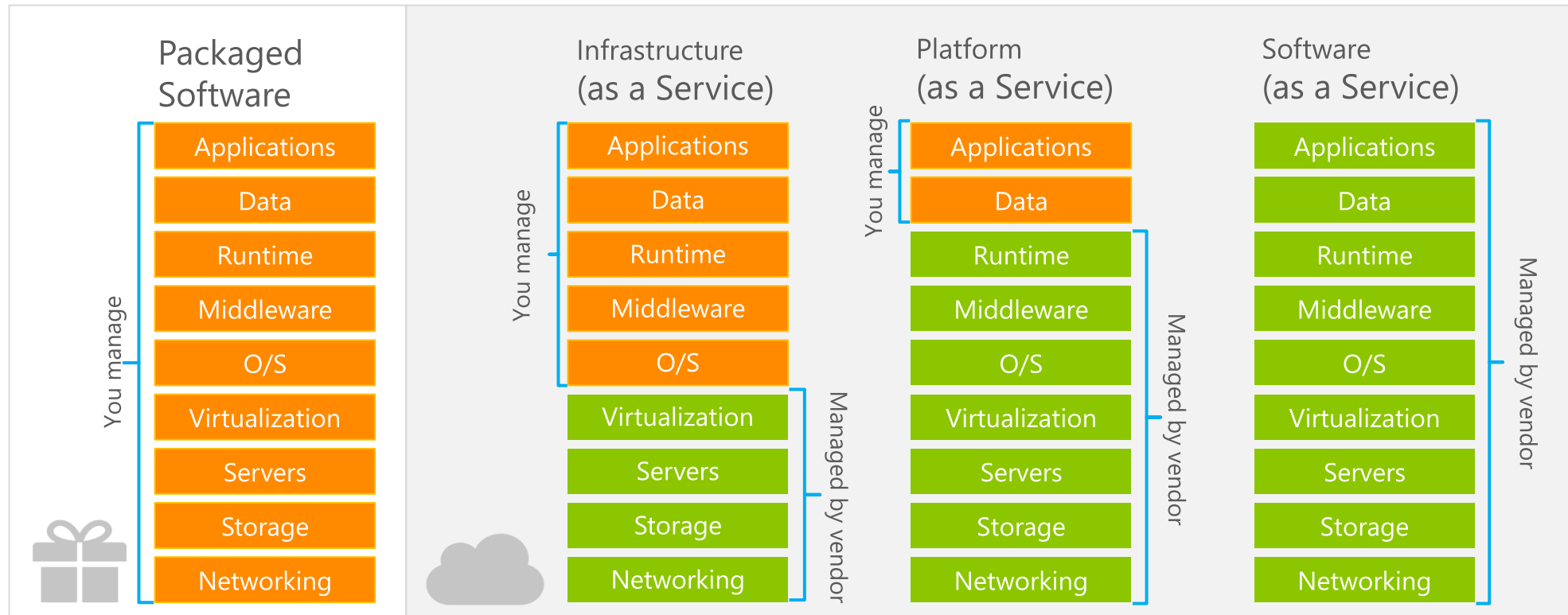


SaaS

Software as a Service

Consume

Cloud Computing (continued)



Microsoft Azure

54 regions worldwide

140 countries



- Available region
- Announced region
- ◆ Availability Zones

* Two Azure Government Secret region locations undisclosed

How are Microsoft Azure Charges Incurred?

- Free (\$200 credit with registration and 30-day usage)
- Pay only for what you use*
- VMs (IaaS and web/worker role) usage is by the minute
 - Previous usage rounded up to one hour
- VMs (IaaS only) that are stopped in Microsoft Azure do not incur charges

*Microsoft Azure Enterprise Agreement (EA) billing process differs

Microsoft Azure Compute

- Virtual Machines

Provision Windows and Linux virtual machines in seconds

- Virtual Machine Scale Sets

Manage and scale up to thousands of Linux and Windows virtual machines

- App Service

Quickly create powerful cloud apps for web and mobile

- Functions

Process events with serverless code

Microsoft Azure Compute - Continued

- Azure Container Service

(AKS) Simplify the deployment, management, and operations of Kubernetes

- Container Instances

Easily run containers with a single command

- Batch Cloud

Scale job scheduling and compute management

Microsoft Azure Compute - Continued

- Service Fabric

Develop microservices and orchestrate containers on Windows or Linux

- Cloud Services

Create highly-available, infinitely-scalable cloud applications and APIs

Microsoft Azure App Service

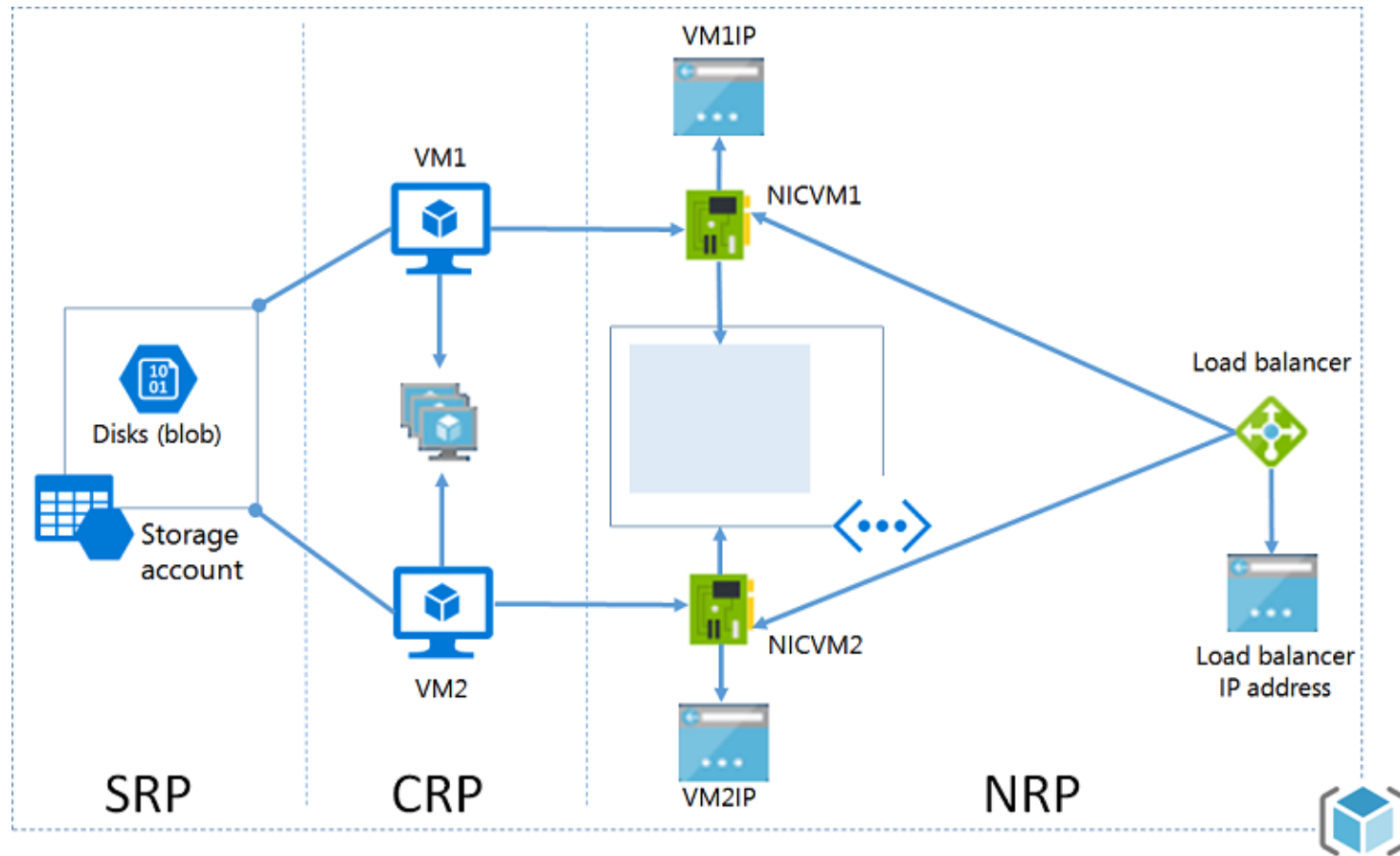
- App Service – fully managed platform in Azure for web, mobile and integration scenarios. This includes:
 - Web Apps – Enterprise grade web applications
 - Mobile Apps - Build native and cross platform apps for iOS, Android, and Windows apps or cross-platform Xamarin or Cordova (Phonegap) apps
 - API Apps – API apps in Azure App Service are used to develop, publish, manage, and monetize APIs.
 - Logic Apps - Allows developers to design workflows that articulate intent via a trigger and series of steps, each invoking an App Service API app
 - Functions – Serverless computing platform. Create methods and only pay for the time the method takes to execute

High Level view of Virtual Machine Services

- Compute resources
 - Virtual Machines
 - VM Extensions
- Networking Resources
 - Virtual networks
 - Network interface cards (NICs)
 - Load balancers
 - IP addresses
- Network Security Groups
- Storage Resources if not using Managed Disks
 - Blobs, tables, queues and Files functionality
 - Storage accounts (blobs) – Standard & Premium Storage

Management model for PaaS/IaaS

ARM with Resource Providers



Demonstration: Management Portal

Build, manage, and monitor everything from simple web apps to complex cloud applications in a single, unified console



Activity: Setup Azure Subscription

Activate your Azure trial subscription for the remaining labs



