Managing Infrastructure with Microsoft Azure – Getting Started

FOUNDATIONAL CONCEPTS

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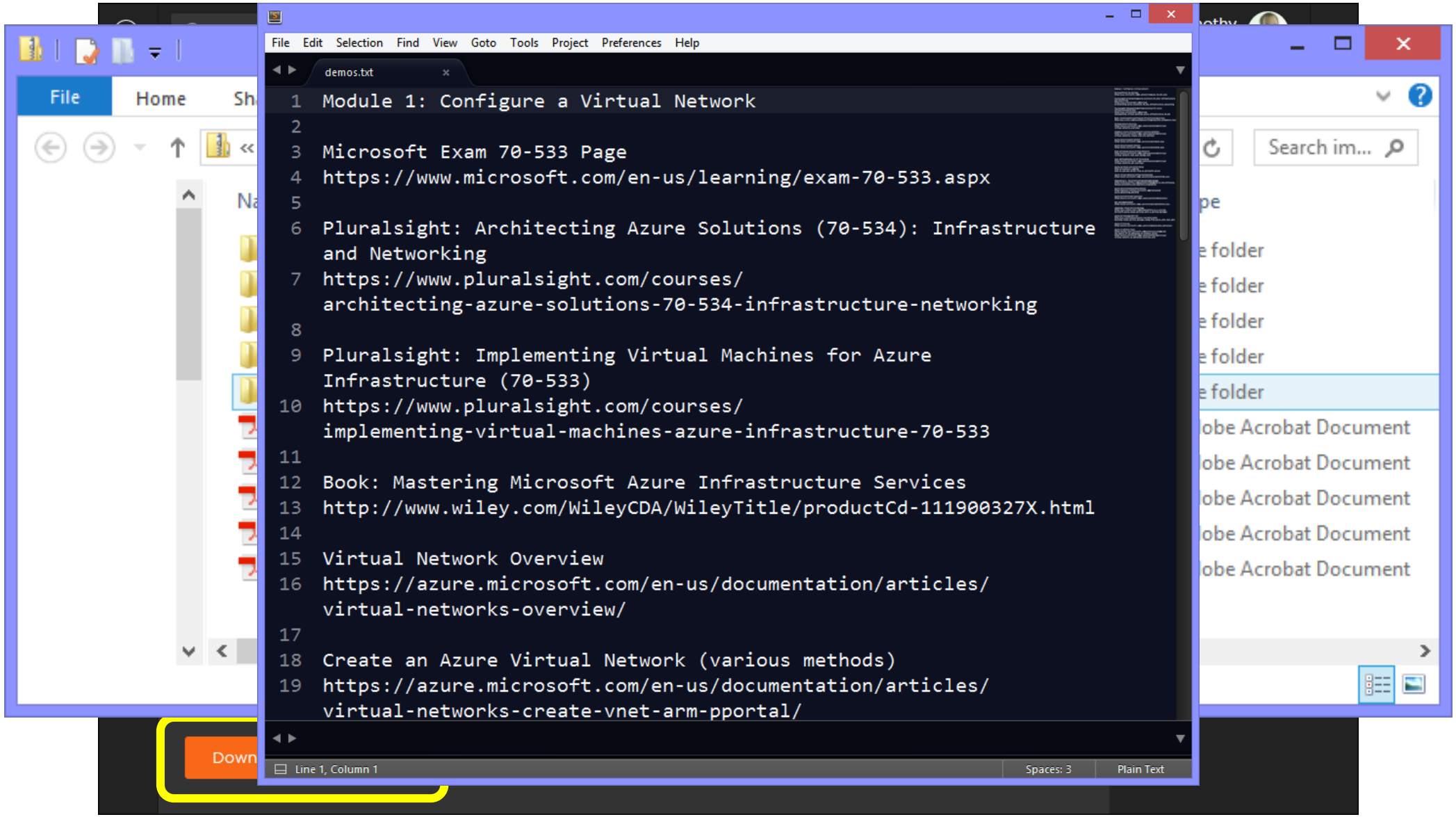
MVP
Microsoft®
Most Valuable Professional

Overview

- Why you should care about the cloud
- How to get started with Azure
- What are regions, and why they are important
- What solution we'll build in this course

Exercise Files



Why You Should Care About the Cloud

How Do You Do Business On-Premises?

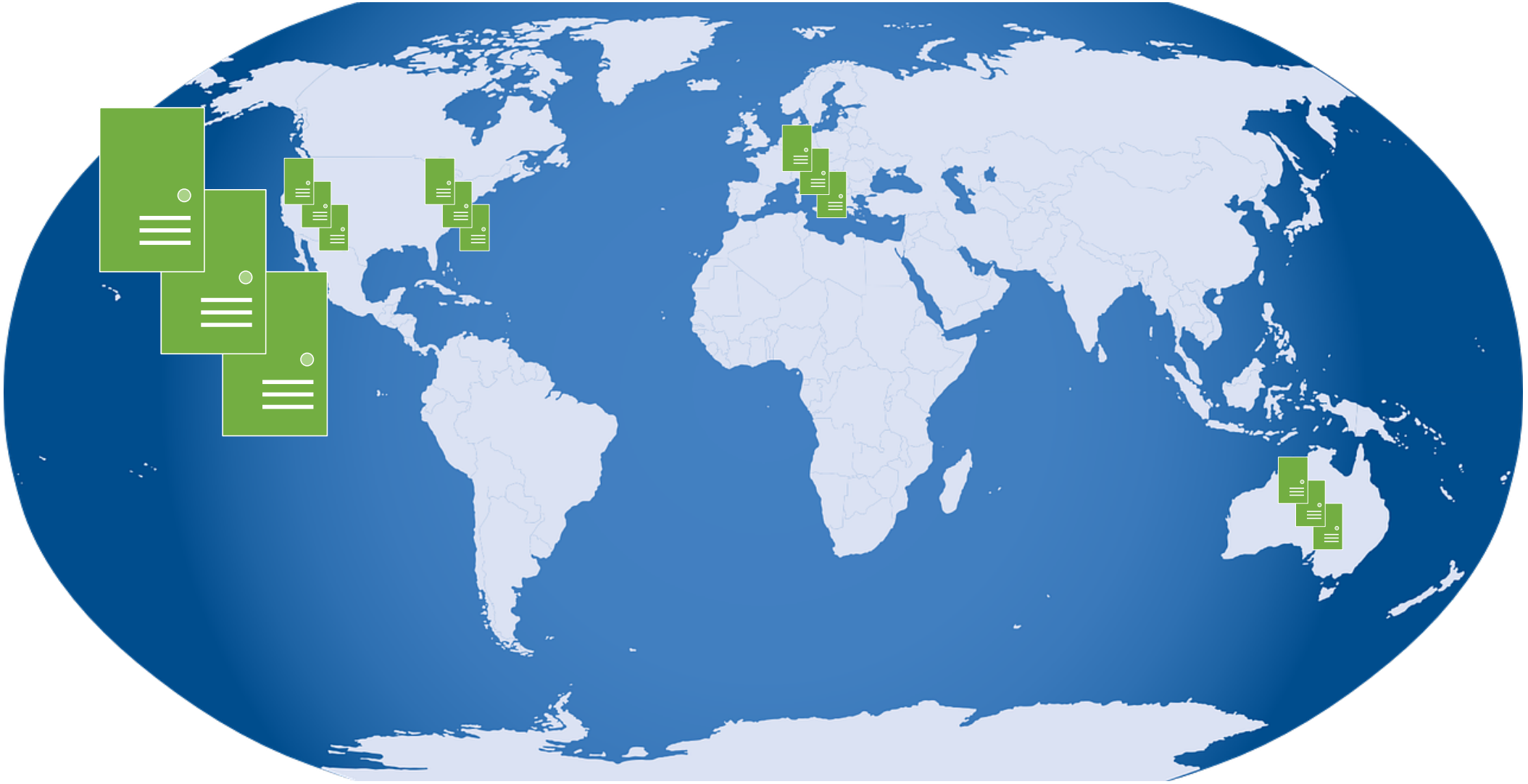
CapEx vs. OpEx

How old is your technology?

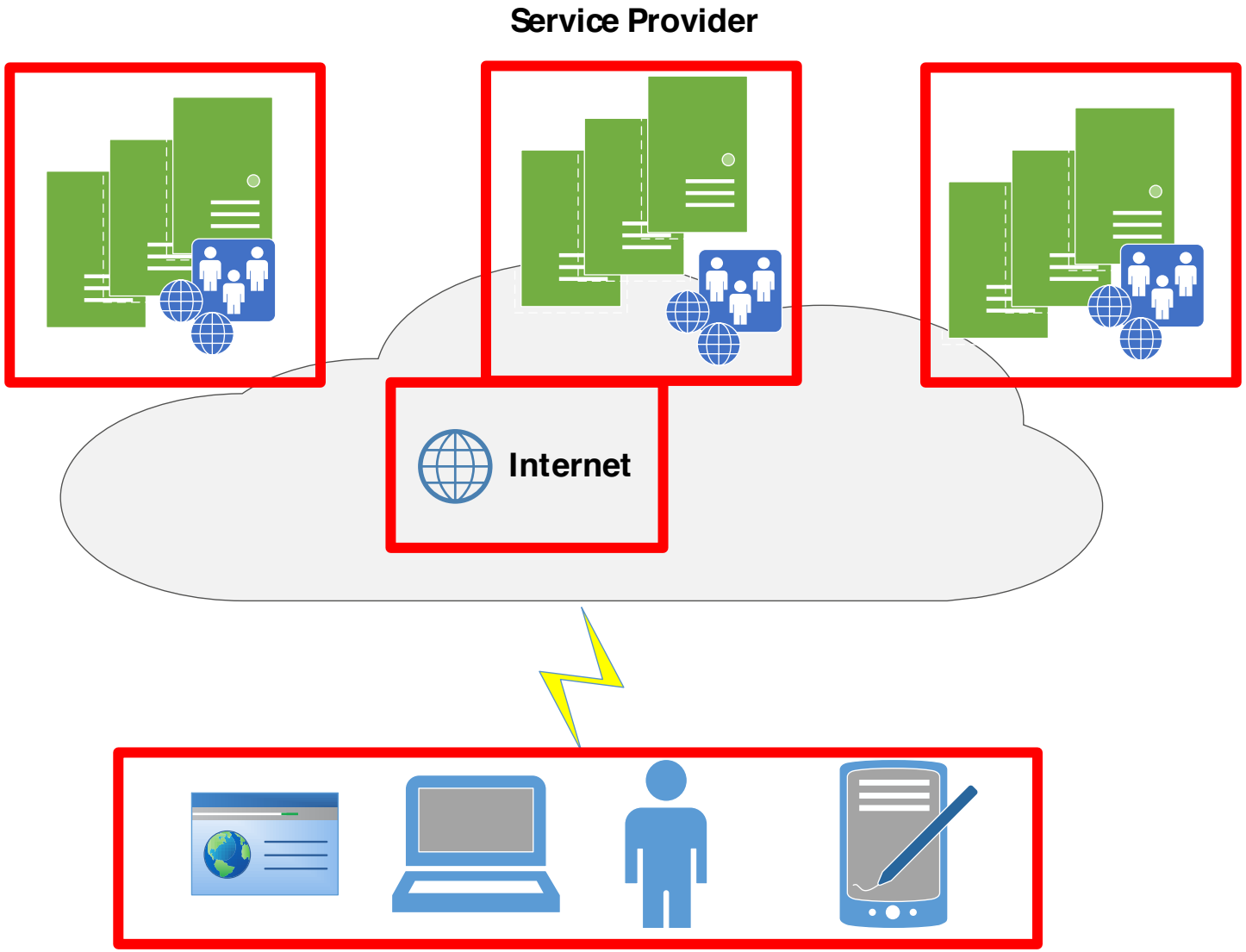
How flexible is your infrastructure?

How much redundancy do you have?

How Well Do You Scale?



The Cloud Metaphor



Elements of the Cloud Computing Model

Elasticity

- Dynamically adjust to service demand
- Short-term strategy

Scalability

- Vertical and horizontal
- Long-term strategy

Pooling

- Compute, storage, network
- Services "on tap"
- Pay only for what you use

Provisioning

- Self-service
- RBAC

Cloud Infrastructure Models

Public

All services exist in the Internet

Multi-tenancy

Azure

Private

All services exist in the private network

Complex

System Center, Azure Stack

Hybrid

Secure, private connection between public and private clouds

VPN or ExpressRoute

Cloud Delivery Models

SaaS

Software-as-a-service

Target: customer

Office 365

PaaS

Platform-as-a-service

Target: developer

Azure App Service

IaaS

Infrastructure-as-a-service

Target: sysadmin

Azure Virtual Machines

Demo

1

SAAS: Show Office 365/OneDrive

PAAS: Show Azure App Service

- Get a web app loaded up, maybe from WebMatrix

IAAS: Show a Windows Server 2016 VM

How to Get Started with Azure

Demo

2

Start at Azure public site

Go to free trial page

Briefly show portal

Go to docs.Microsoft.com

Go to SDKs and Tools page

What are Regions?

Azure Regions

30 regions, with 8 on the way

Demo

3

Show the service status web site and the region status page in the portal

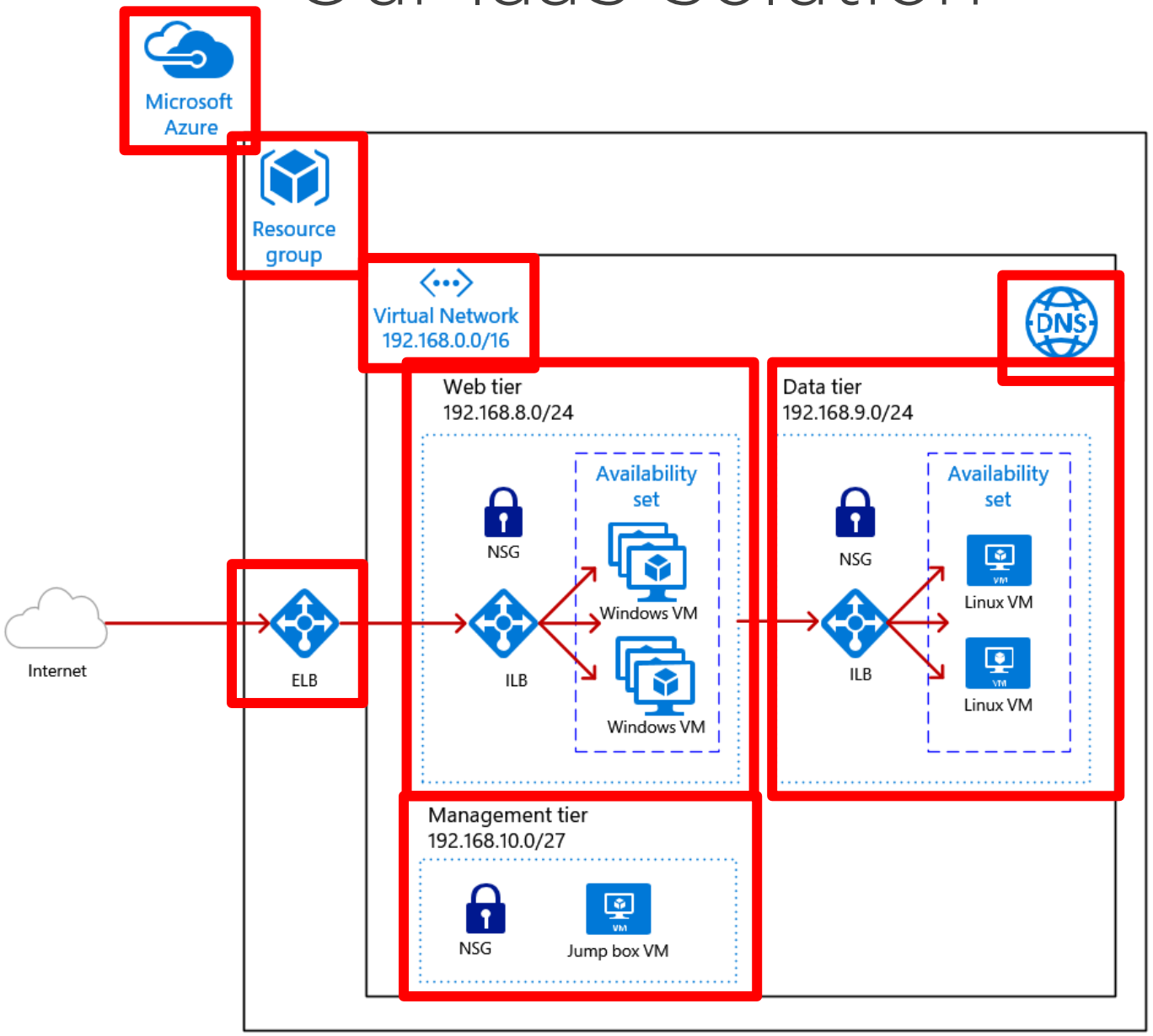
Show region web page

Show regions in resource group and storage account

explain that resources can be in a different region from the resource group

The Solution We'll Build

Our IaaS Solution



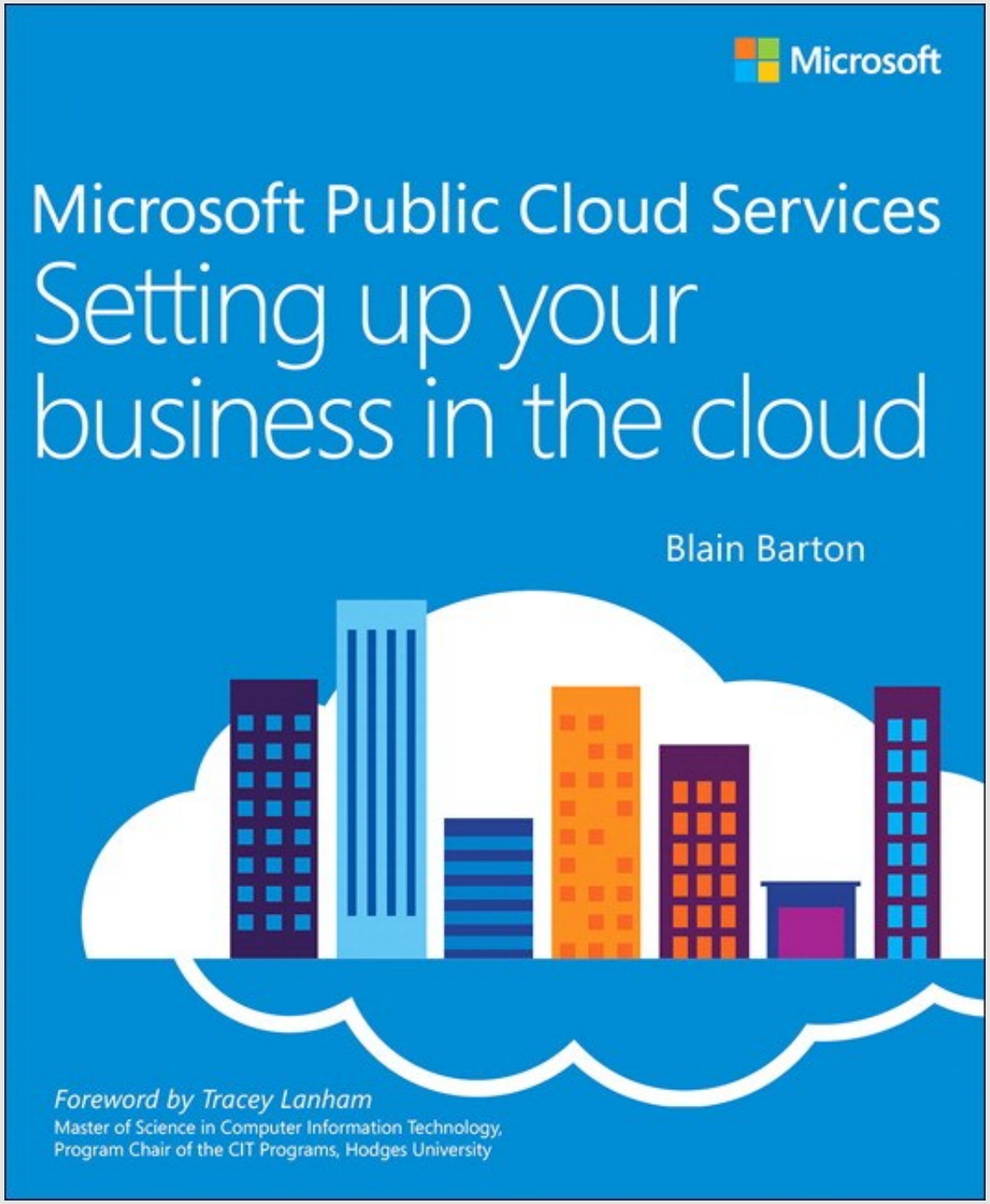
For Further Learning

Cloud Computing: The Big Picture (David Chappell)

Nice general overview

Understanding the Difference Between Microsoft Azure and Amazon AWS
(Tim Warner)

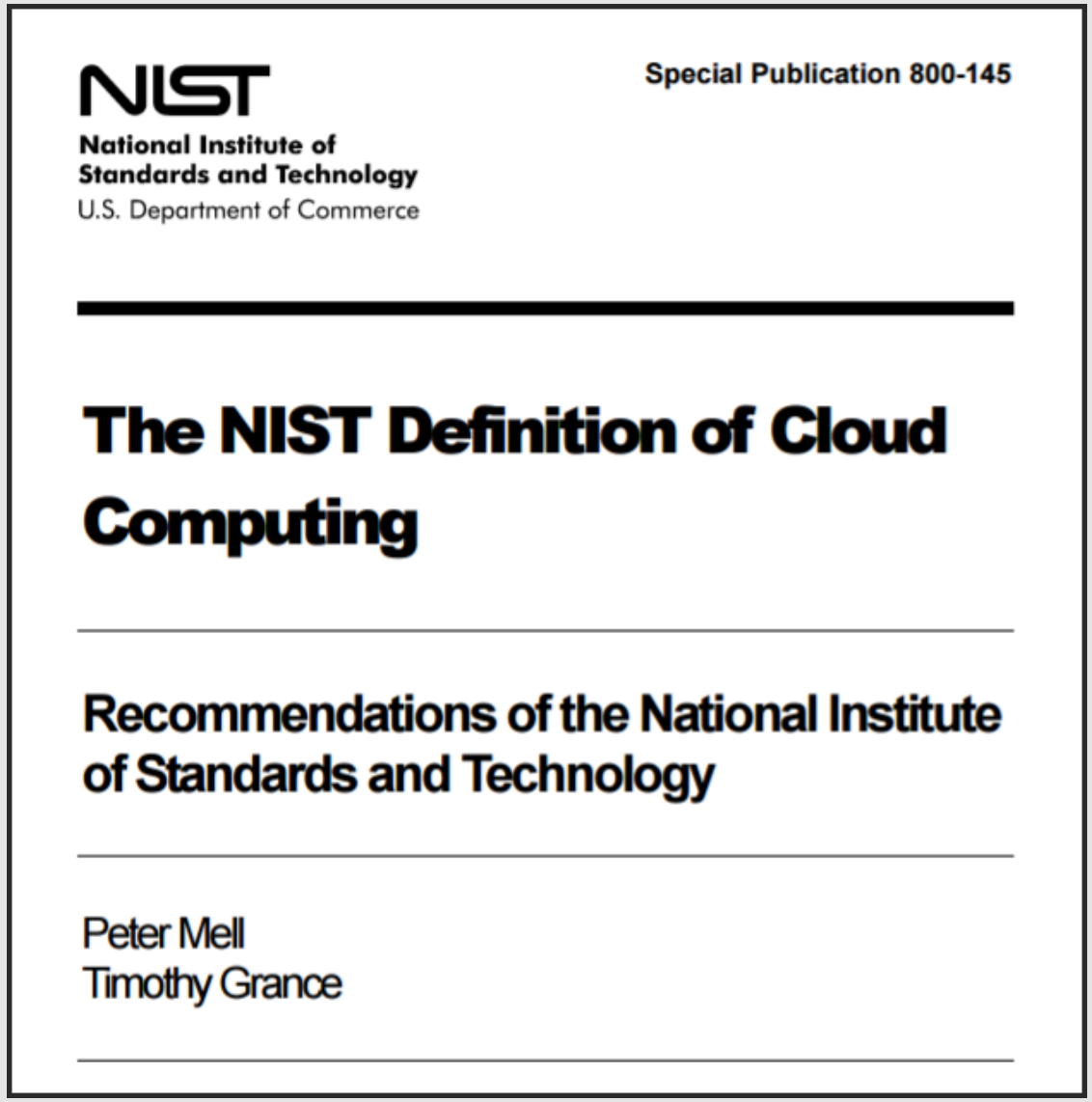
Especially useful if you have prior experience with AWS



Book Reference

Gentle introduction to Azure-related services:

- Dynamics CRM
- Intune
- Office 365
- OneDrive for Business



White Paper Reference

The reference cloud computing definition

A bit old (2011) and in need of updating

Summary

Designing infrastructure and services for on-prem vs. the cloud are very different

Azure has a low barrier to entry and rich documentation/community support

Next module: Virtual Machines