

Virtual Machines



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Overview

What you need to think about to be successful

How to deploy Windows and Linux VMs

- Azure Portal
- Programmatically (PowerShell and Azure CLI v2.0)

How to connect to your VMs

- RDP
- PowerShell
- SSH



Exercise Files

Timothy

...

Getting Started with Azure Machine Learning

by Jerry Kurata

Machine learning helps predict the weather, route you around traffic jams, and display personalized ads on your web pages. In this course, you will learn how to use Azure machine learning in order to create, deploy, and maintain predictive solutions.

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Description

Exercise files

Discussion

Recommended

These exercise files are intended to provide you with the assets you need to create a video-based hands-on experience. With the exercise files, you can follow along with the author and re-create the same solution on your computer. We find this to be even more effective than written lab exercises.

[Download exercise files](#)

Course author

Jerry Kurata

Jerry Kurata is a Solutions Architect at InStep Technologies.

Course info

Level	Beginner
Rating	★★★★★
My rating	★★★★★
Duration	2h 14m
Released	2 Nov 2016

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What You Need to Think About to Be Successful



Which Model is Best For Your Workload?

PaaS (App Service)

Higher agility

Higher ease of management

Lower degree of control

Lower support for legacy apps

IaaS (Virtual Machines)

Higher degree of control

Higher support for legacy apps

Lower ease of management

Lower agility



Things to Keep in Mind Regarding Azure VMs

Unless the VM is deallocated, it still incurs charge

Related assets are charged separately

You can't connect to VMs in other virtual networks

Deleting the VM doesn't delete the VHD

You can't connect without an NSG rule

DNS names require creativity and should be standardized



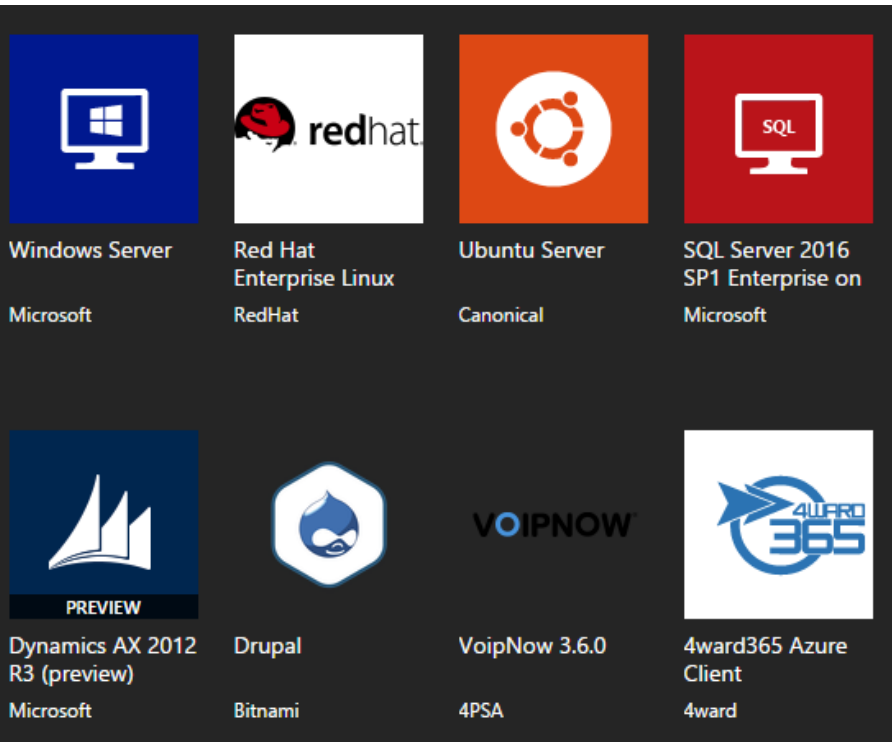
VM Instance Types and Sizes

VM marketplace






- License may be included or BYOL

You can capture and upload your own custom VM images as well

You can scale your VM instance size up or down to suit your workloads



VM Instance Types and Sizes

DS2_V2 Standard ★	
2	Cores
7	GB
 4	Data disks
 6400	Max IOPS
 14 GB	Local SSD
	Load balancing
	Premium disk support
108.62	
USD/MONTH (ESTIMATED)	

VM marketplace

- License may be included or BYOL

You can capture and upload your own custom VM images as well

You can scale your VM instance size up or down to suit your workloads



Demo



1

Show VM sizes page on public site

Show VM pricing page (mention costs for other related resources)

Go to an existing VM in the portal and show how to scale up or down instance size

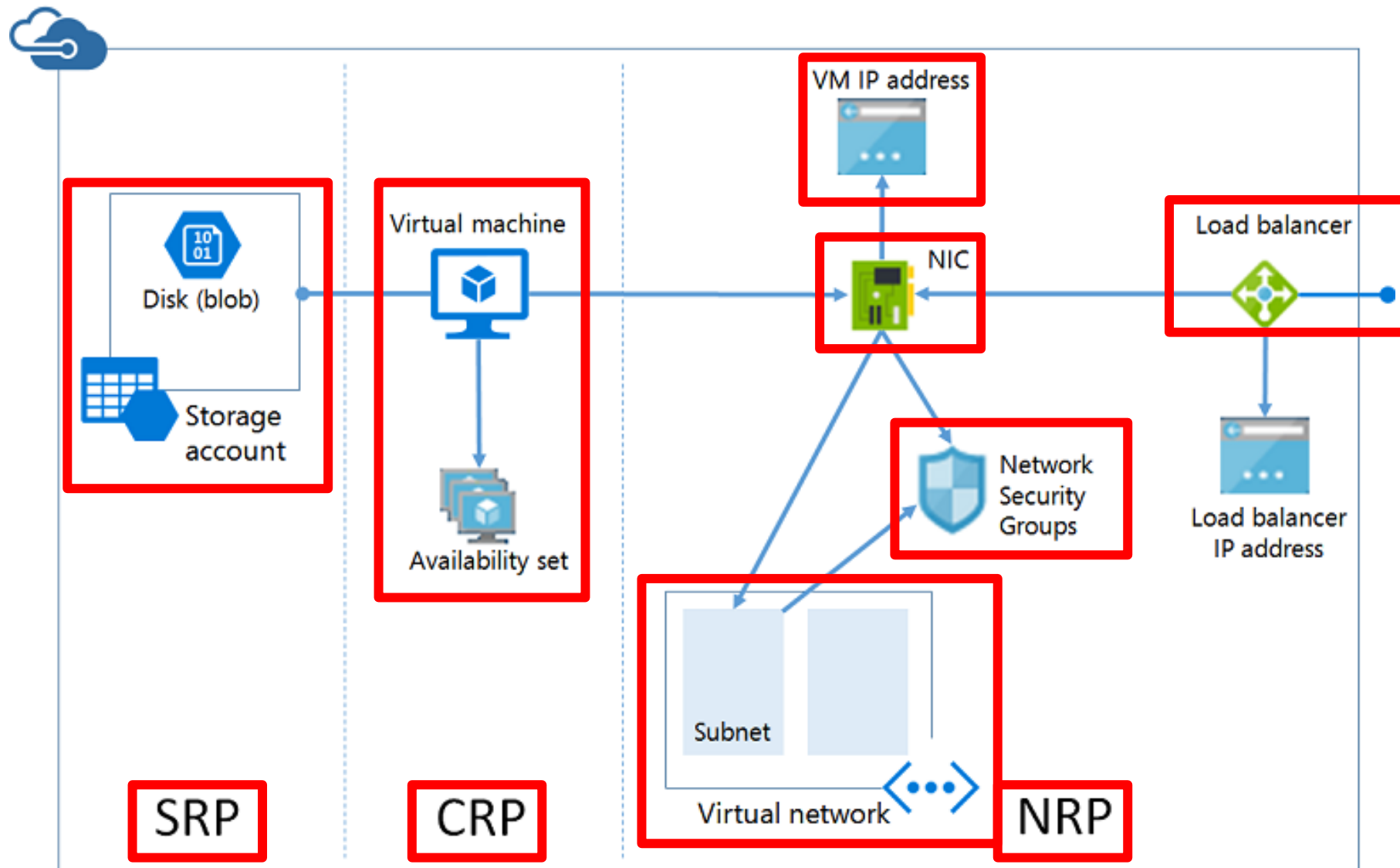
- Mention that you may not be able to scale down



How to Deploy Azure Virtual Machines



Virtual Machine Resources



Demo



2

Have the storage account, Vnet, and NSG already created

- Mention we'll circle back to that

Create Windows VM through portal

- Save the template

Create Linux VM with PowerShell

Create second Windows VM with Azure CLI v2.0



How to Connect to Your Azure VMs



Connect to Your **Windows Server VMs**

RDP

TCP 3389

Relies upon the NSG

PowerShell

TCP 5985/5986

Remember TrustedHosts



Connect to Your **Linux VMs**

Secure Shell (SSH)

Industry standard,
secure remote access
protocol

Authentication

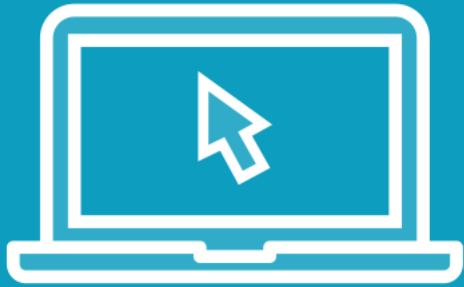
Password or keys

RDP

Install a desktop
environment, RDP
server, and create an
NSG rule



Demo



3

Verify NSG allows RDP

Add entry in Trusted Hosts on admin workstation

Use Git SSH environment for SSH

Remind that you can use key-based auth as well



For Further Learning

Deploying and Managing Azure IaaS Virtual Machines
(John Savill)

Nice extension to what we've learned in this module

Automating Deployment and Scale of Azure IaaS
Solutions (John Savill)

Excellent opportunity to gain comfortability with ARM templates





Fundamentals of Azure

Microsoft Azure Essentials

Michael Collier
Robin Shahan

Book Reference

Free ebook

Chapter 3, “Azure Virtual Machines”



[\[Docs\]](#) [\[txt|pdf\]](#) [\[draft-ietf-secsh-...\]](#) [\[Diff1\]](#) [\[Diff2\]](#) [\[IPR\]](#) [\[Errata\]](#)

Updated by: [6668](#)

PROPOSED STANDARD

Errata Exist

Network Working Group

T. Ylonen

Request for Comments: 4253

SSH Communications Security Corp

Category: Standards Track

C. Lonvick, Ed.

Cisco Systems, Inc.

January 2006

The Secure Shell (SSH) Transport Layer Protocol

Status of This Memo

This document specifies an Internet standards track protocol for the Internet community, and requests discussion and suggestions for improvements. Please refer to the current edition of the "Internet Official Protocol Standards" (STD 1) for the standardization state and status of this protocol. Distribution of this memo is unlimited.

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Abstract

The Secure Shell (SSH) is a protocol for secure remote login and other secure network services over an insecure network.

White Paper Reference

Industry standard remote
access protocol

RFC 4253

The PowerShell engine will
eventually include SSH client
and server



Summary



Ask yourself if IaaS is the best deployment vehicle for your workload

Be mindful of where the cost centers lie

The Windows vs. Linux distinction isn't as important as you might have thought

Next module: **Disks and Storage**

