

# Inside the VM

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**Tim Warner**

AUTHOR/TECH EVANGELIST, PLURALSIGHT

@TechTrainerTim

azuredepot.com



# Overview

**What you need to think about to be successful**

**Administering your Azure VMs**

- RDP, PowerShell, SSH

**Deploying VM extensions**

- Antimalware
- Backup
- Configuration management



# 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.

[Resume Course](#) [Bookmark](#) [Add to Channel](#)

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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

### Share course

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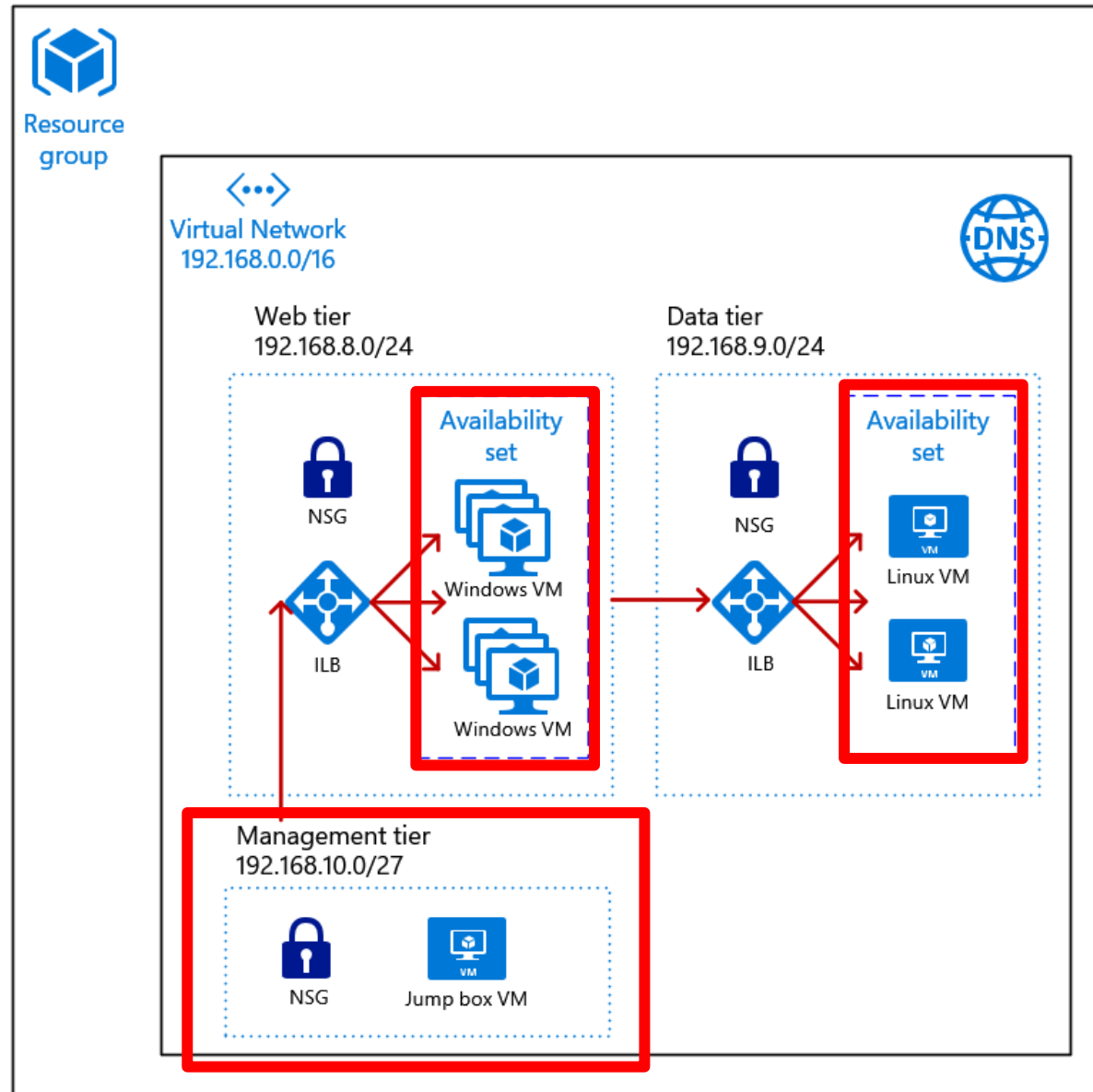
# Our Solution

NSG endpoint

P2S VPN

S2S VPN

ExpressRoute



Security

Convenience

Monitoring



# What You Need to Think About to Be Successful



# Things to Keep in Mind Regarding Azure VM Management

**NSG rules**

**Premium storage  
offers 99.9% for  
single VMs**

**Combine Azure  
Load Balancer  
with Avail. Sets**

**Need availability  
sets for 99.95%  
SLA**

**Shared  
responsibility  
model**

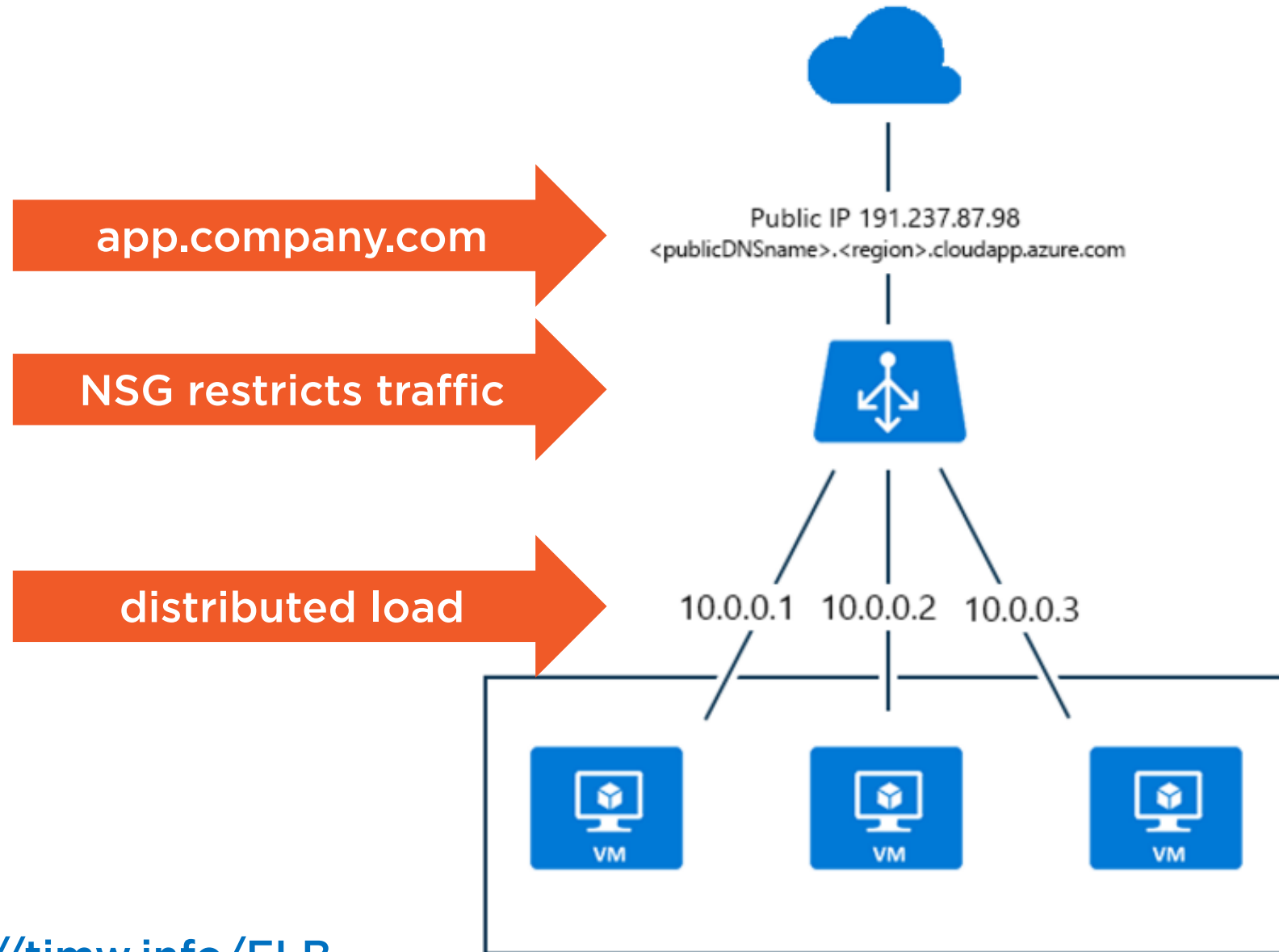
**Use separate  
storage accounts  
for each VM**



# Administering Your Azure VMs

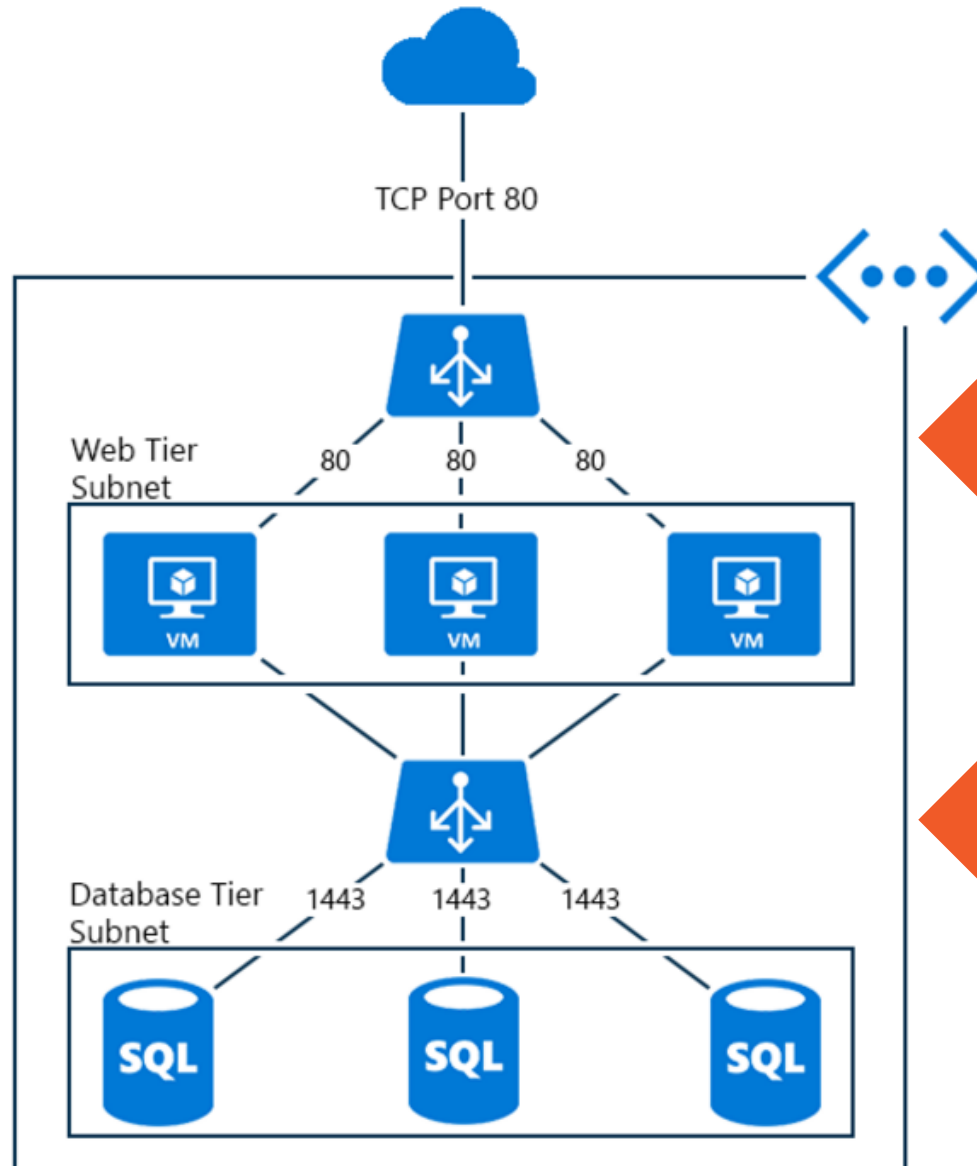


# Azure External Load Balancer



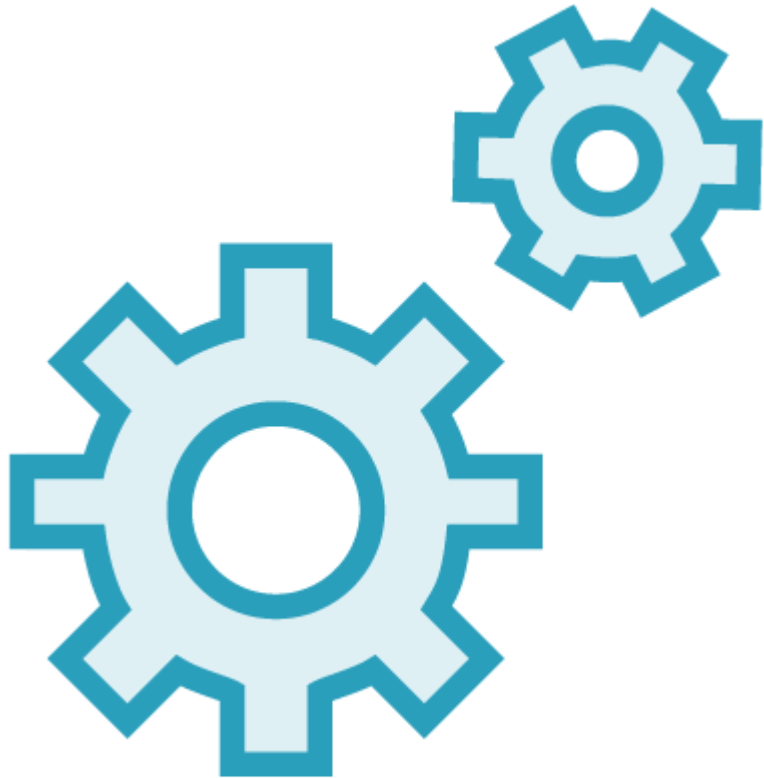


# Azure Internal Load Balancer



We'll learn how to use  
deploy ELBs and ILBs  
in Module 5, Scaling  
and High Availability

# Azure VM Configuration Options



## Touching each machine individually

- Pets vs. cattle metaphor

## Azure Automation DSC

- Part of Operations Management Suite (OMS)

## System Center Configuration Manager

## Third-party CM platforms

- Chef
- Puppet

## Azure VM extensions



# Demo



# 1

Work from Azure jumpbox (mention Don's article)

Try Test-Connection

Work with DNS server addresses

PowerShell remoting / DSC push

Linux: SSH

- install mysql



# Deploying VM Extensions



# What are **VM Extensions**?

Windows and Linux Azure agents are automatically installed

You need to be a whitelisted extension publisher to appear in the portal

You're always free to install agents directly in the VM

The Linux agent and Microsoft Linux extensions are at [GitHub](#)



# VM Extensions

```
Windows PowerShell v5.0.10586.117
PS C:\> Get-AzureRmVMImagePublisher -Location 'southcentralus' | Get-AzureRmVMExtensionImageType | Get-AzureRmVMExtensionImage | Select-Object -Property Type -Unique | Format-Wide -Column 2
```

AcronisBackup	Backup	AcronisBackupLinux
AlertLogicLM		AgentWinExt
CentosChefClient		ChefClient
LinuxChefClient	CM	CloudLinkSecureVMLinuxAgent
CloudLinkSecureVM		ConferForAzure
BmcCtmAgentLinux		DatadogLinuxAgent
DatadogWindowsAgent		dtmanaged
oneAgentLinux		oneAgentWindows
ruxitAgentLinux		ruxitAgentWindows
FileSecurity		ProtectVClientLinuxExtension
ProtectVClientWindowsExtension		DotnetAgent
McAfeeEndpointSecurity		IaaS47C6E03DTest
MyBackupTest		MyBackupTestInt
MyBackupTestLinux		MyBackupTestLinuxInt
IaaS.Diagnostics		CustomScript
DockerExtension		DockerExtension.Edp
LinuxAsm		VMSnapshot
VMSnapshotLinux		SiteRecovery
SiteRecoveryLinux		ADETest
ADETestWire	Security	AzureDiskEncryption
AzureDiskEncryption		AzureDiskEncryptionForLinuxTest
IaaSAntimalware		VMBackupForLinuxExtension



Demo



2

Show Linux extensions in portal

Install Custom Script extension on Windows VM

- Log in to make sure it worked

Find, manage, install, uninstall

- PowerShell
- CLI



# For Further Learning

Windows PowerShell Desired State Configuration  
Fundamentals (Jeff Hicks)

Excellent DSC primer

Play by Play: Elastic Scale and Consistency with Azure  
Automation DSC (Jason Helmick and Michael Greene)

Interesting discussion that lays out the business case





THE EXPERT'S VOICE® IN AUTOMATION

# Using Chef with Microsoft Azure

—  
Stuart Preston

EXTRAS ONLINE

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## Book Reference

Published May 18, 2016

Chef and Microsoft have a close relationship

See Chapter 3, "Chef Azure VM Extensions"



# Summary



If you need to wrangle on-premises and cloud herds, consider a VPN or ExpressRoute

You can deploy an entire CM infrastructure in the Azure IaaS cloud

- OMS
- Chef, Puppet virtual servers

**Next module: Scaling and High Availability**

