

Microsoft Azure Administrator: Configure Load Balancing

CONFIGURING AND TROUBLESHOOTING AZURE LOAD BALANCER



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Overview



Understand Azure Load Balancer

Configure:















- Public load balancer
- Internal load balancer

Create load balancing rules

Troubleshoot load balancing



Exercise Files



What do you want to learn?

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Troubleshooting with Microsoft Azure Network Watcher

by Tim Warner

Microsoft now gives you packet-level access to your Windows Server and Linux virtual machines (VMs) running in Azure. You'll learn how to use Network Watcher to troubleshoot network security groups (NSGs), perform packet captures, and much more.

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Discussion


Learning Check

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

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Course info

Level	Intermediate
Rating	★★★★★
My rating	★★★★★
Duration	2h 12m
Released	31 Oct 2017

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Exercise Files

The screenshot displays a Windows desktop environment with three overlapping windows:

- File Explorer (Left):** Shows the 'Downloads' folder. A list of files is visible, including '02', '03', '04', '05', and '06'. The status bar at the bottom indicates '0 / 5 object(s) selected'.
- Text Editor (Center):** A Notepad window titled 'microsoft-azure-ad-privileged-identity-management-configuring-m4-links.txt'. The text content is as follows:

```
1 Module 4: Organize and Perform Azure AD PIM Access Reviews
2
3 Microsoft Azure
4 https://azure.microsoft.com/en-us/
5
6 Azure Documentation
7 https://docs.microsoft.com/en-us/azure/
8
9 Azure AD Privileged Identity Management (PIM) documentation | Microsoft Docs
10 https://docs.microsoft.com/en-us/azure/active-directory/privileged-identity-management/
11
12 Identity Governance - Azure Active Directory | Microsoft Docs
13 https://docs.microsoft.com/en-us/azure/active-directory/governance/identity-governance-overview
14
15 Create an access review of Azure resource roles in PIM - Azure Active Directory | Microsoft Docs
16 https://docs.microsoft.com/en-us/azure/active-directory/privileged-identity-management/pim-resource-roles-start-access-review
17
18 Review access to Azure AD roles in PIM - Azure Active Directory | Microsoft Docs
19 https://docs.microsoft.com/en-us/azure/active-directory/privileged-identity-management/pim-how-to-perform-security-review
20
21 View audit history for Azure AD roles in PIM - Azure Active Directory | Microsoft Docs
22 https://docs.microsoft.com/en-us/azure/active-directory/privileged-identity-management/pim-how-to-use-audit-log
```

The status bar at the bottom of the text editor shows 'Spaces: 4 UTF-8 CRLF Plain Text'.
- File Download Window (Right):** A small window titled '02\demos\' showing a table with file details. The table has two columns: 'Size' and 'Pac'. The data rows are:

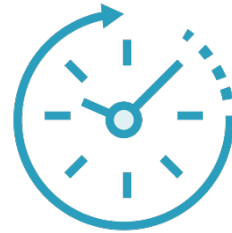
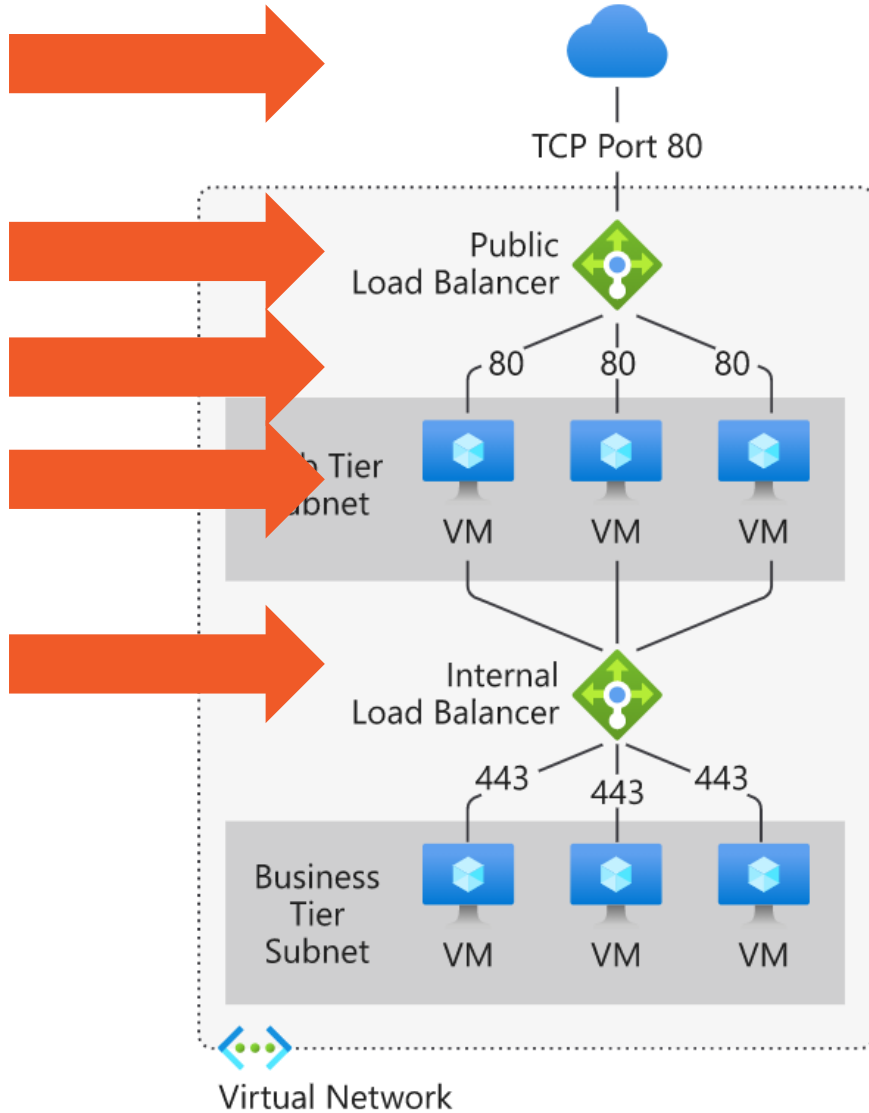
Size	Pac
1 298	
359	



Understand Azure Load Balancer



Load Balancer Use Cases



High availability



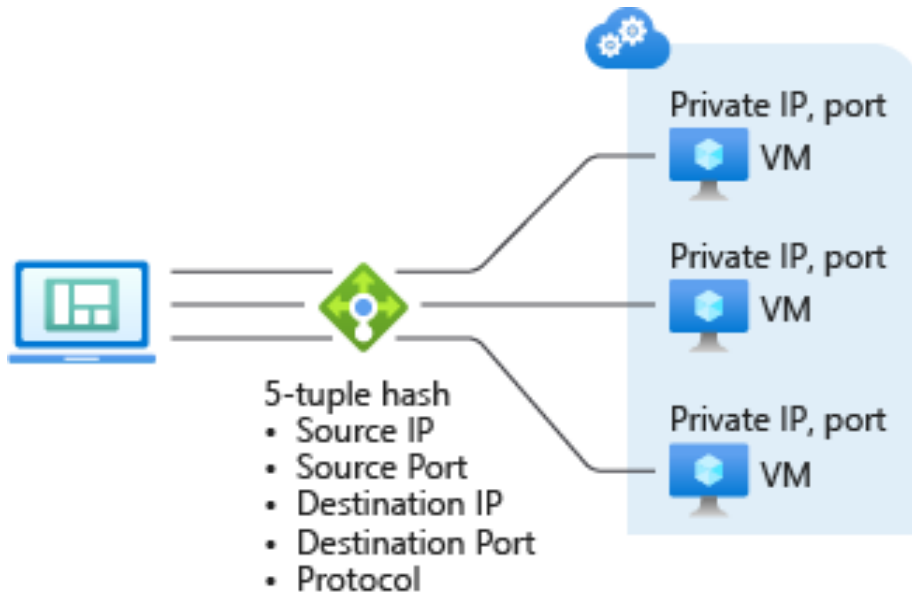
Scalable performance



Best consumer experience



Azure Load Balancer



Front-end configuration

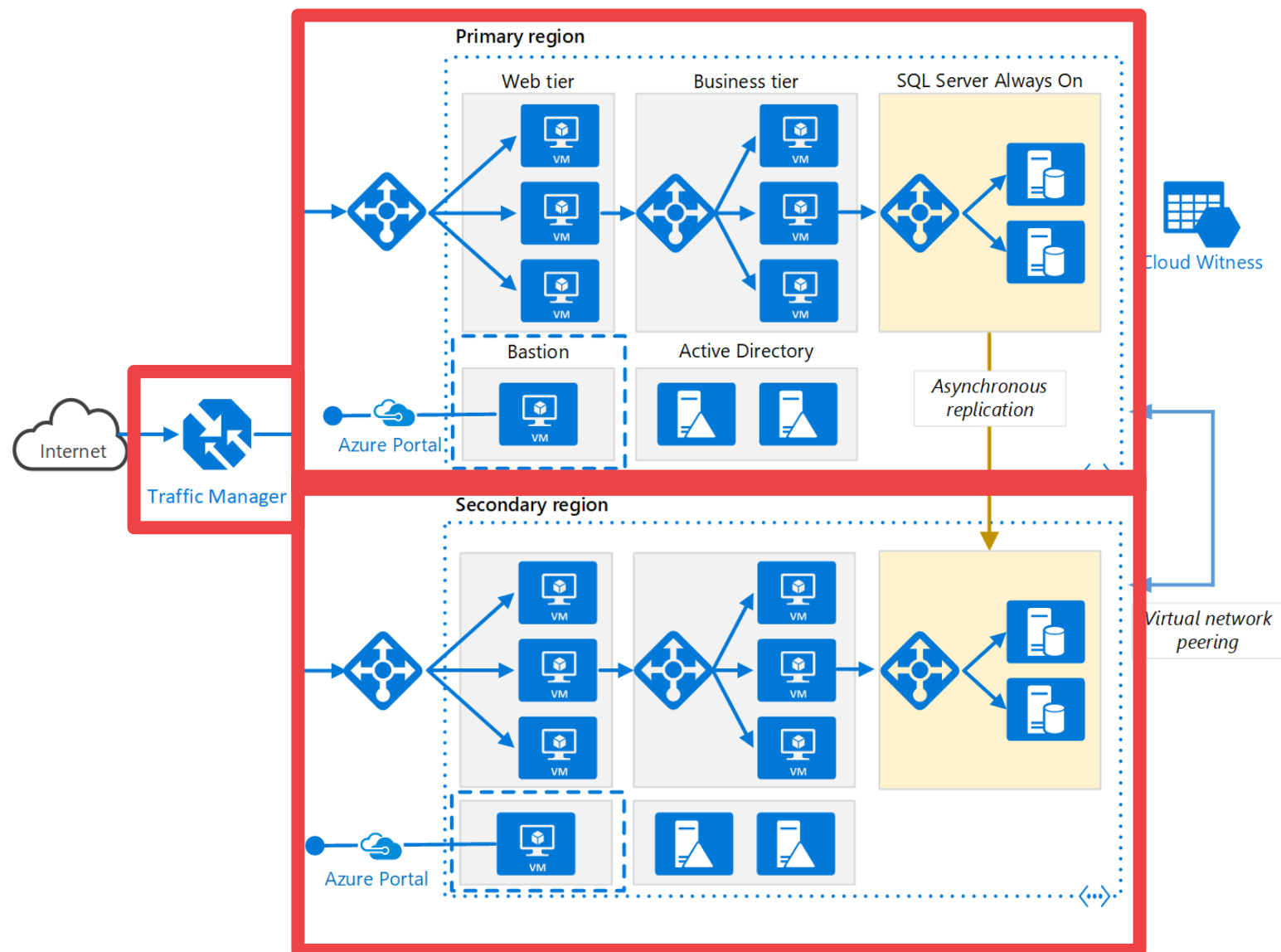
Hash-based distribution

Backend pool

Health probe



Reference Topology



Azure Load Balancer SKUs

Basic

Backend pool: 300 instances

Backend pool: Availability set, VMSS

No availability zones

Standard

Backend pool: 1000 instances

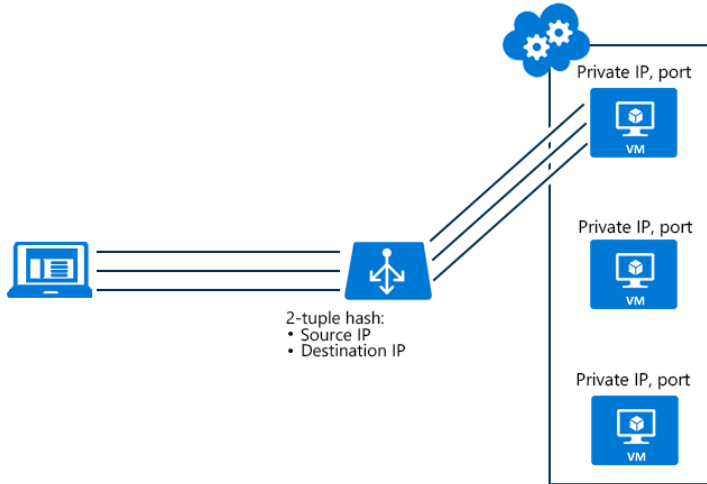
Backend pool: Any VM in a single VNet

Availability zone-aware

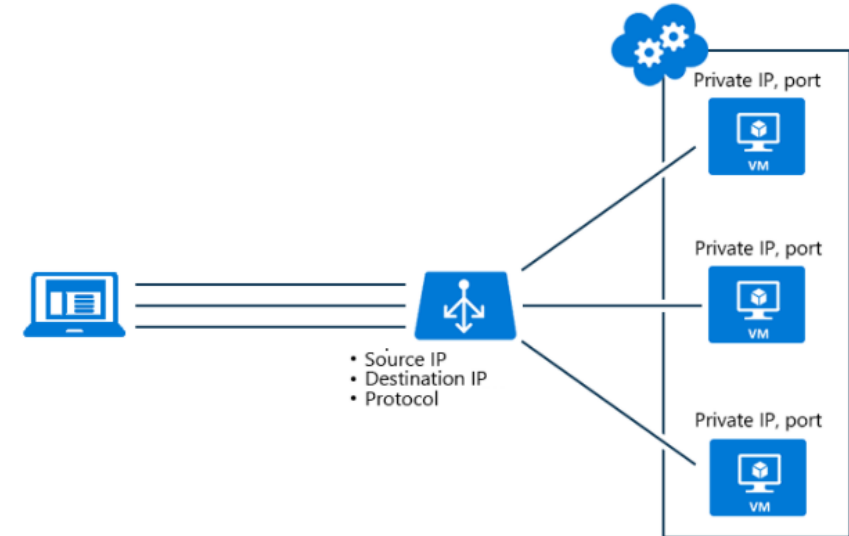
Azure LB SKU is not mutable



Session Affinity



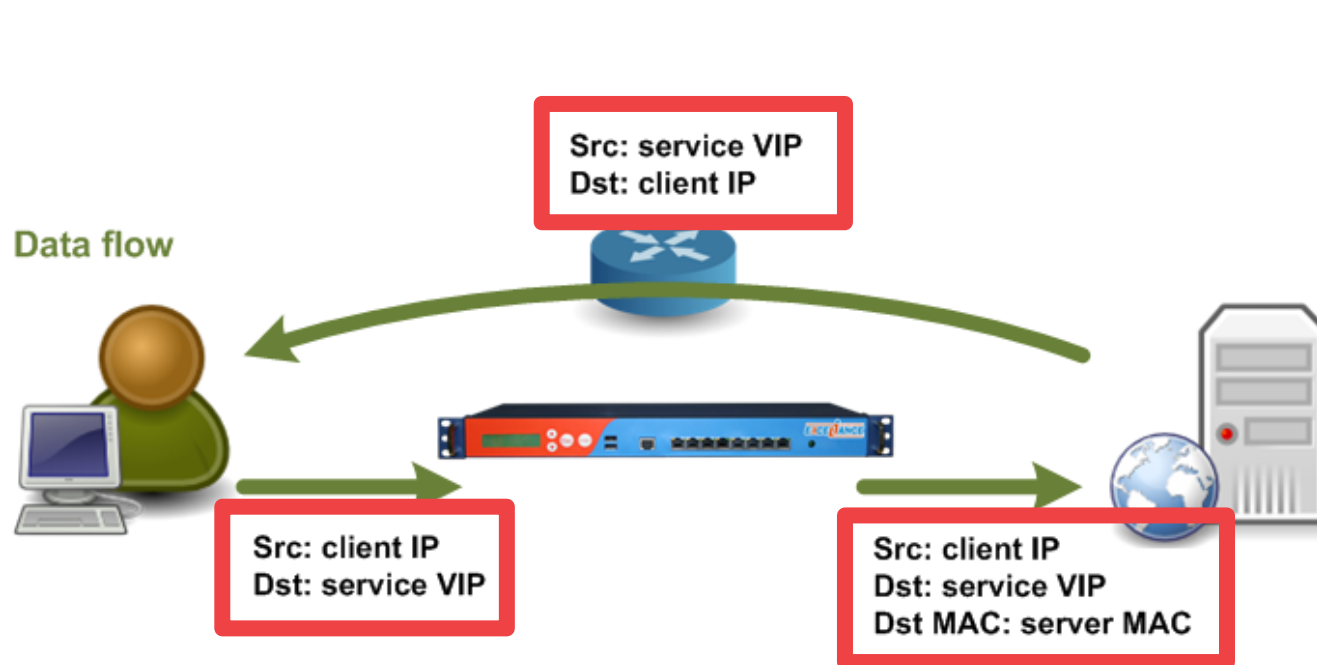
Client IP affinity
Use with RD Gateway



Client IP + protocol
Stateless workloads



Floating IP / Direct Server Return



Required for Always On Availability Groups

Prevents ILB from becoming a bottleneck

Allows for faster failover

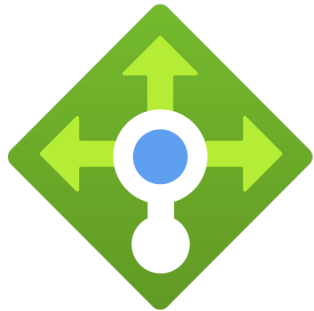
SQL Server responds directly to client



Configure Azure Load Balancer



Load Balancer Deployment Questions



What type(s) of network traffic?

Azure Load Balancer or Application Gateway?

Public or internal?

Session affinity?



Deployment Methods



Portal



PowerShell



CLI



REST

JSON ARM deployment template

Azure Blueprint definition



Demo



1

Describe scenario

- Two IIS web servers

Deploy public load balancer

Test connectivity



Troubleshoot Azure Load Balancer



Troubleshooting Tools

Service Health

Resource Health

Azure Monitor

PSPing

TCPing

Network Watcher
Packet Capture



Demo



2

Service Health / Resource Health
Network Watcher



Summary



Azure Load Balancer is excellent for general network traffic load balancing applications

You may need to consider a network virtual appliance (NVA)

If you're load balancing HTTP/S only, then consider Application Gateway

Next module: Configuring and Troubleshooting Azure Application Gateway

