Azure Meetup
BONN

Azure Bastion – Secure access to your Azure VMs

without JumpHost or Public IP Address

by Gregor Reimling

MVP Microsoft® Most Valuable Professional

Azure Meetup BONN

Gregor Reimling

Cloud Consultant @Sepago

Cloud and Datacenter, Governance

Azure Infrastructure (Governance, IaaS, Security)

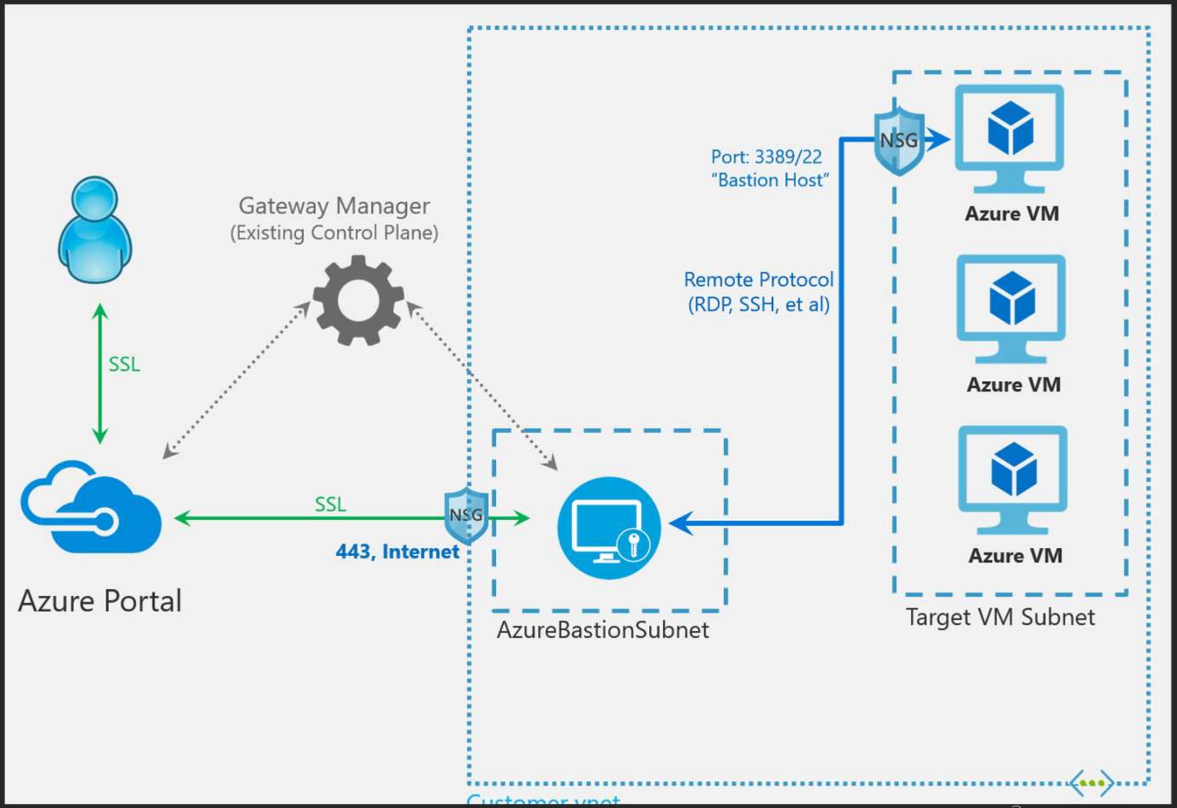
info@reimling.eu

@GregorReimling | @AzureBonn

www.reimling.eu | www.neutralien.com

Azure Bastion - Overview

- Fully-managed PaaS Service by Microsoft
- Replace Management of own Jumphosts
- Avoid bind Public IPs on VM for Management purposes
- RDP and SSH directly inside the Azure Portal
- No need for an agent inside VM
- Easy to deploy



Azure Bastion – General Notes

Region availability

West US, East US, South Central US

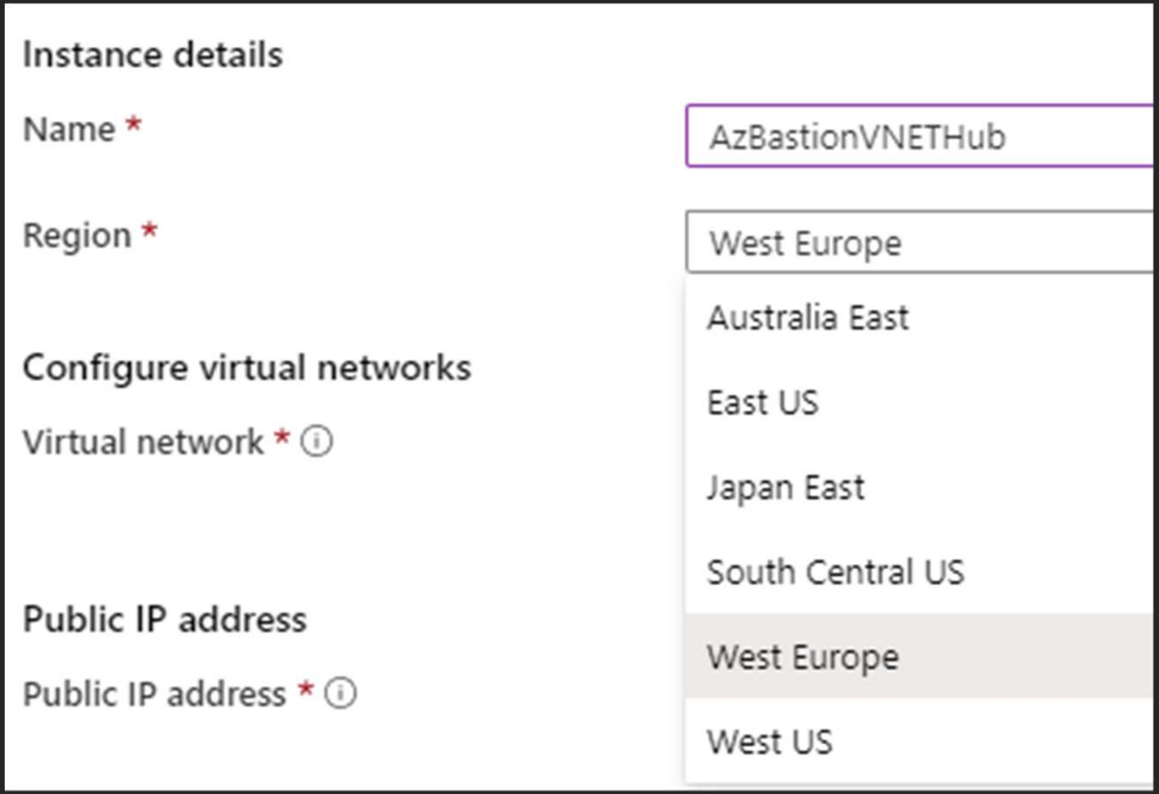
West Europe

Australia East & Japan East

Browser compatibility

Chromium based (Edge Dev and Chrome)

Firefox also works



Instance details

Name * AzBastionVNETHub

Region * West Europe

Configure virtual networks

Virtual network * ⓘ

Public IP address

Public IP address * ⓘ

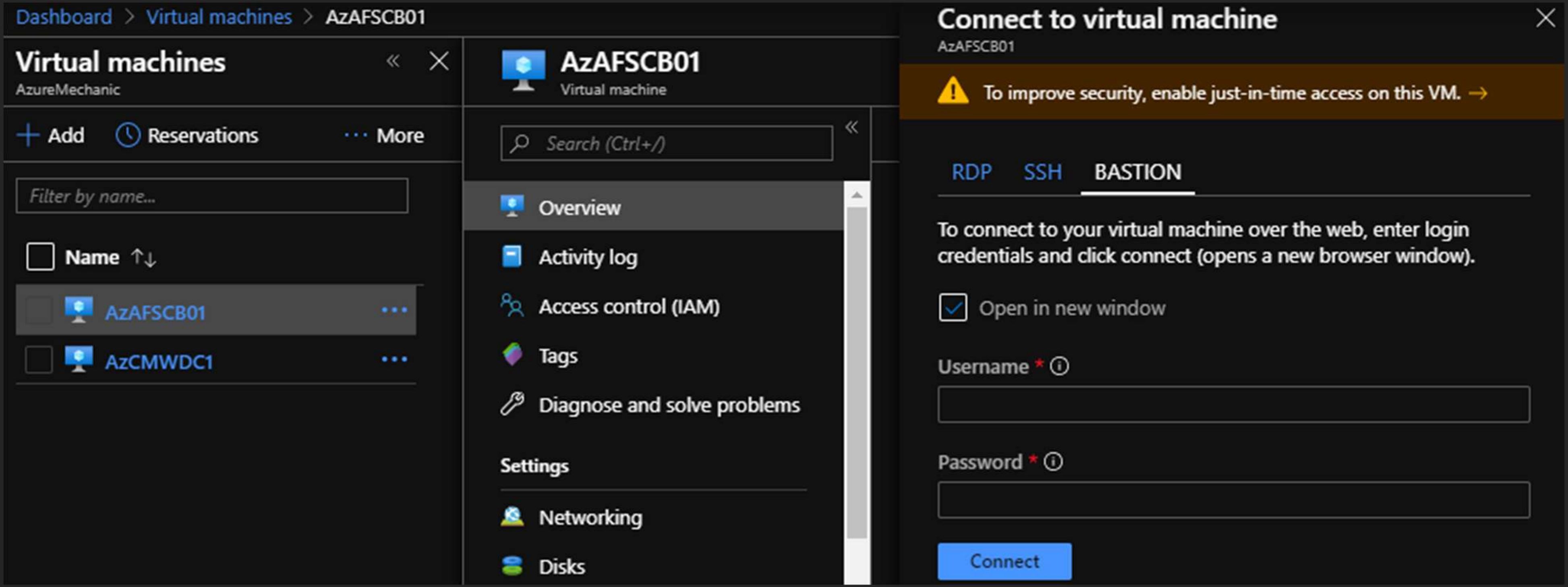
Azure Bastion – Requirements

- Minimum priviliges
  - Reader role on the VM
  - Reader role on the assigned NIC
  - Reader Role on the Azure Bastion resource
- Need an own Subnet inside the Virtual Network
  - subnet need at least /27 or larger subnet
  - Must named with "AzureBastionSubnet"
  - Doesn´t support VNET Peering right now

Azure Bastion – How it works

- Deploy a HTML 5 based Webclient
- RDP and SSH direct over the Portal
- Forward SSH/RDP over SSL
- Only accessible via the Portal
- Can`t access the Public IP directly

Azure Bastion - Demo



Connect to virtual machine

AzAFSCB01

To improve security, enable just-in-time access on this VM. →

To connect to your virtual machine over the web, enter login credentials and click connect (opens a new browser window).

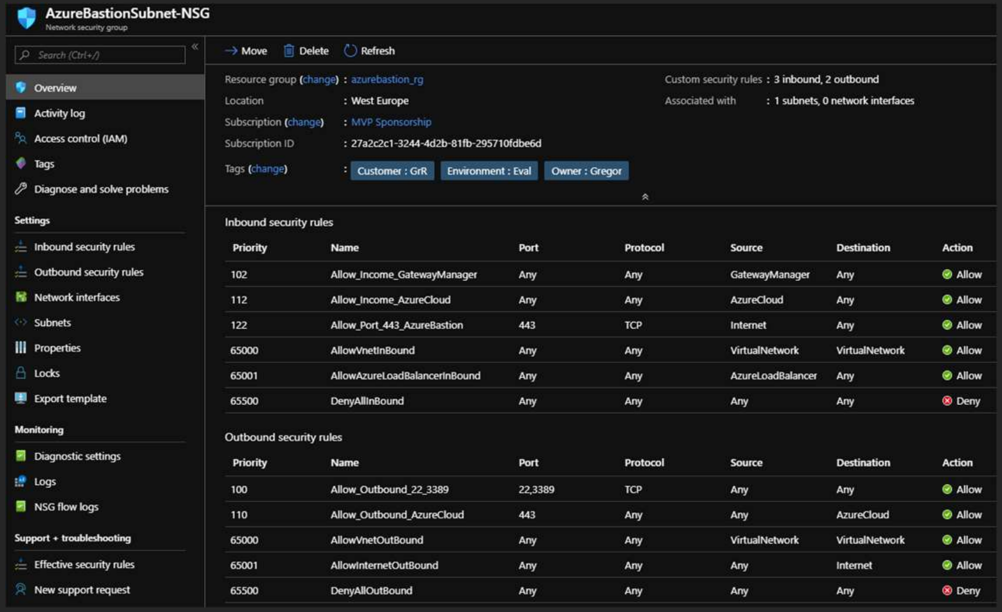
☑ Open in new window

Username *

Password *

Azure Bastion – Hardening

- Harden Bastion Subnet with NSG
- Must define Inbound and Outbound Rules
- Inbound Traffic
  - Allow 443 enabled for Public IP
  - Allow Any from Gateway Manager
  - Allow Any from AzureCloud
- Outbound Traffic
  - Allow 22/3389 to target VM subnets
  - Allow 443 to AzureCloud



Resource group (change) : azurebastion_rg
Location : West Europe
Subscription (change) : MVP Sponsorship
Subscription ID : 27a2c2c1-3244-4d2b-81fb-295710fdbe6d
Tags (change) : Customer : GrR Environment : Eval Owner : Gregor

Custom security rules : 3 inbound, 2 outbound
Associated with : 1 subnets, 0 network interfaces

Inbound security rules

Priority	Name	Port	Protocol	Source	Destination	Action
102	Allow_Income_GatewayManager	Any	Any	GatewayManager	Any	✓ Allow
112	Allow_Income_AzureCloud	Any	Any	AzureCloud	Any	✓ Allow
122	Allow_Port_443_AzureBastion	443	TCP	Internet	Any	✓ Allow
65000	AllowVnetInBound	Any	Any	VirtualNetwork	VirtualNetwork	✓ Allow
65001	AllowAzureLoadBalancerInBound	Any	Any	AzureLoadBalancer	Any	✓ Allow
65500	DenyAllInBound	Any	Any	Any	Any	☒ Deny

Outbound security rules

Priority	Name	Port	Protocol	Source	Destination	Action
100	Allow_Outbound_22_3389	22,3389	TCP	Any	Any	✓ Allow
110	Allow_Outbound_AzureCloud	443	Any	Any	AzureCloud	✓ Allow
65000	AllowVnetOutBound	Any	Any	VirtualNetwork	VirtualNetwork	✓ Allow
65001	AllowInternetOutBound	Any	Any	Any	Internet	✓ Allow
65500	DenyAllOutBound	Any	Any	Any	Any	☒ Deny

https://docs.microsoft.com/en-us/azure/bastion/bastion-nsg

Azure Bastion – Pricing & SLA

- In all regions same pricinig
- €uro: 0,081€ per hour x 730 hours = 59,13€
- $ 0,095$ per hour x 730 hours = 69,35$
- SLA: Azure Bastion will be available at least 99.95%

Azure Bastion - Summary

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Pro

- Easy do deploy
- Secure your VNET
- Forget Jumphosts
- Can see and manage connections

Contra

- VNET Peering not supported
- Need an own subnet
- Doesn´t support multi keystrocks
- Region availability

Azure Bastion – Links

- Azure Bastion Documentation Microsoft Docs
  - https://azure.microsoft.com/en-us/services/azure-bastion/
- What is Azure Bastion
  - https://docs.microsoft.com/en-us/azure/bastion/bastion-overview
- Azure Bastion Feedback
  - https://feedback.azure.com/forums/217313-networking?query=bastion
- Secure Azure Bastion Subnet
  - https://docs.microsoft.com/en-us/azure/bastion/bastion-nsg
- Blog Article about Azure Bastion (German)
  - https://www.reimling.eu/2019/06/azure-bastion-sicherer-azure-vm-zugriff-via-ssh-rdp-ohne-public-ip/

Thank you!

@GregorReimling | @AzureBonn
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