



**TECHSUMMIT19**

BARRACUDA TECHNICAL SUMMIT

# Large scale deployments



# Zero-touch deployment



# Large scale rollouts

Everyone can use it

Everyone can benefit

All you need is:

- Control Center (CC)
- CloudGen Firewall or
- Cloud Generation Firewall for IloT/ICS
- BCC account

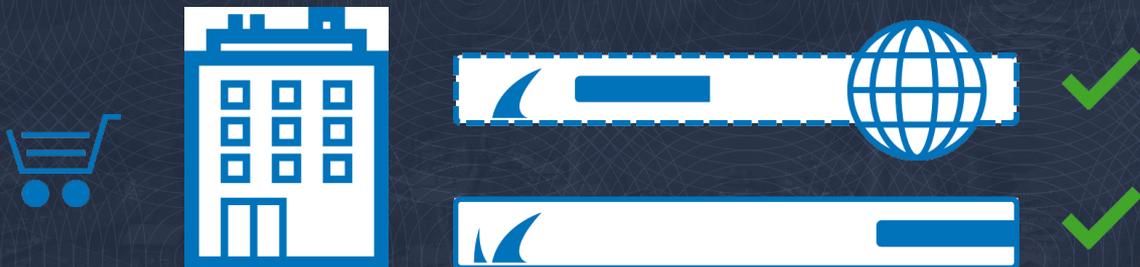
No extra costs involved



# Two sides of a coin

## Headquarters

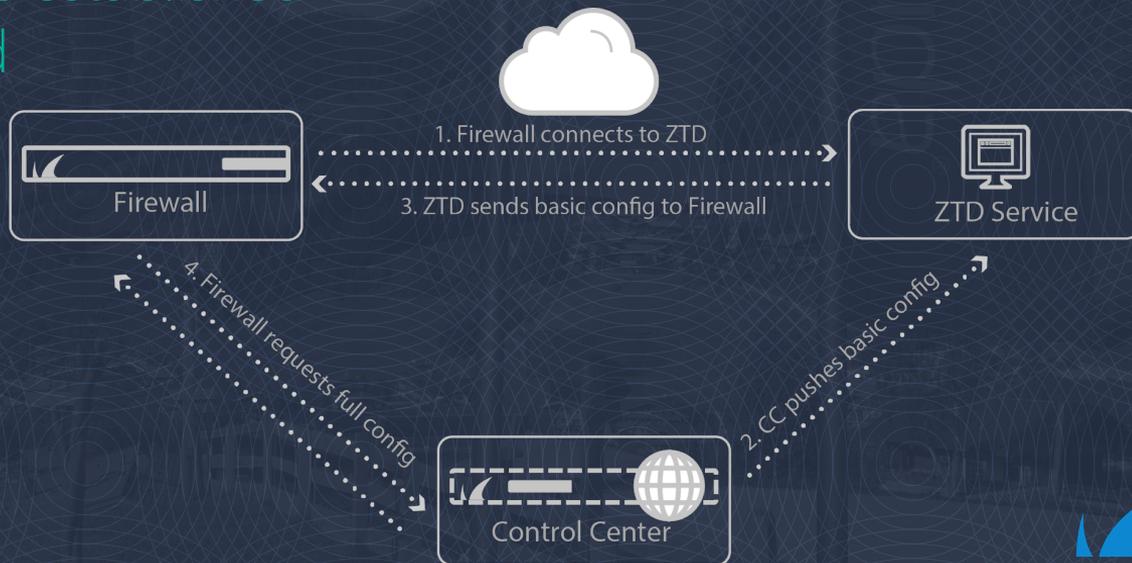
- Order the appliance
- Let Barracuda take care of shipping the box to its final destination
- Create the box' configuration on the CC
- Link / Push the configuration to Barracuda ZTD service



# Two sides of a coin

## Branch Office

- Connect the appliance to your network (or at least to the internet)
- Firewall polls the configuration and applies it
- Connection to the CC is established
- Firewall is CC-managed



# Security aspects - Data location

Firewall Control Center (CC) holds the full configuration

- Full configuration is never sent to the ZTD service
- Security-sensitive full configuration is only sent directly between CC and box
- Redirection information is one-time

What does ZTD push to the box?

- The entry point for the VPN connection
- The FWCC' public key
- The box' ephemeral private key
- The network configuration to connect to the VPN entry point



# Security aspects – Trust relationships

## ZTD service with BOS

- Internal API only (API key + whitelist), access to the box' keys

## ZTD service with Firewall Control Center

- User/admin authenticates with portal account

## ZTD service with CloudGen Firewall

- Manufactured keys verified by ZTD service
- Certificate validity of service verified by box



# Box assignment

## Automatically

- Barracuda Cloud Control (BCC) account will be automatically used if ZTD order has been “checked”

## Manually

- Use the linking code to reclaim the firewall and assign it to your account
- Linking code locations
  - On the Quick Start Guide enclosed with the delivery
  - On the invoice sent by Customer Services



# Misconfiguration

PAR file pushed to the CC is misconfigured

- The firewall cannot reach the CC
- Fallback is initiated

## Fallback

- Delete downloaded PAR file
- Contact ZTD service again to fetch "new" PAR file
- Loops until getting a working PAR file

A "new" PAR file needs to be pushed from the CC

- Any PAR file retrieved from ZTD service can only be used once



# Refurbish

Requires a firewall shipped with 7.1 or higher

Reset the firewall using Firewall Install

- Factory default, no PAR file applied

Prepare the linking code

Verify box being linked to the correct ZTD account

Start the ZTD process



# Redeployment

Automatic redeployment of an already successfully deployed unit



How does it work?

- Globally or per Range/Cluster
- Using same matching criteria (like external IP)
- Feature enable on CC and on Account (by Support)

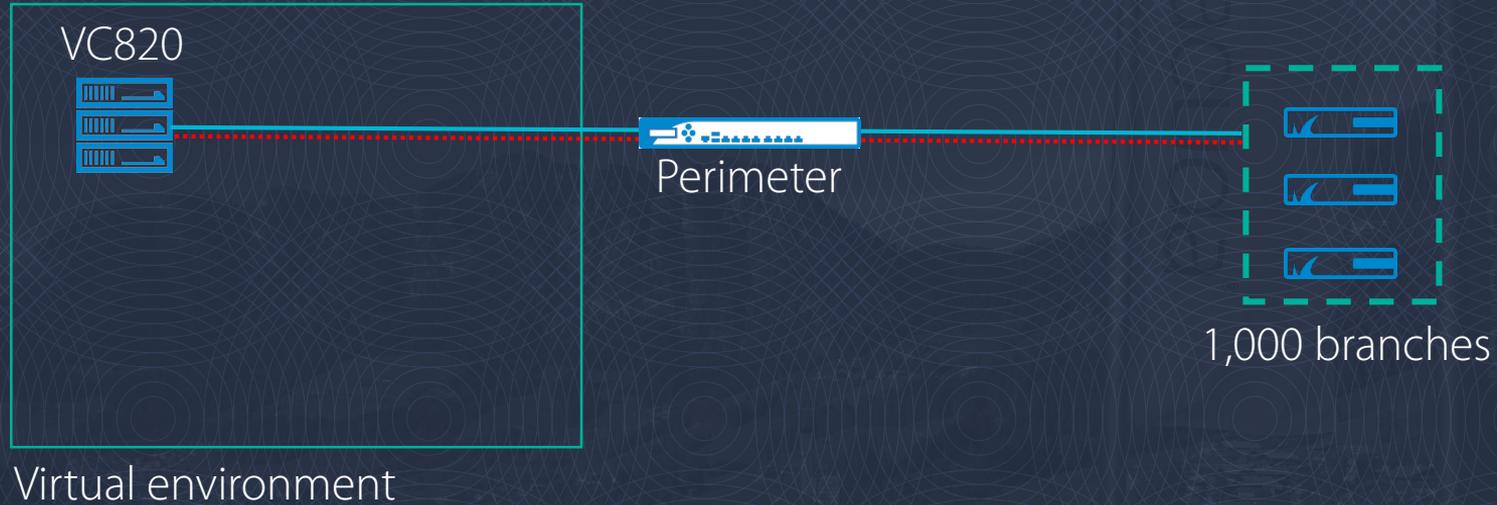
ZTD Redeployment	<input checked="" type="checkbox"/>	on	▼	📄
Enable ZTD Redeployment globally	<input checked="" type="checkbox"/>	off	▼	📄



# Control Center split



# Split CC (Standard setup: 1,000 boxes)



RMGMT-Tunnel

Config-Data



# Split CC (Large Scale: 2,000 boxes)

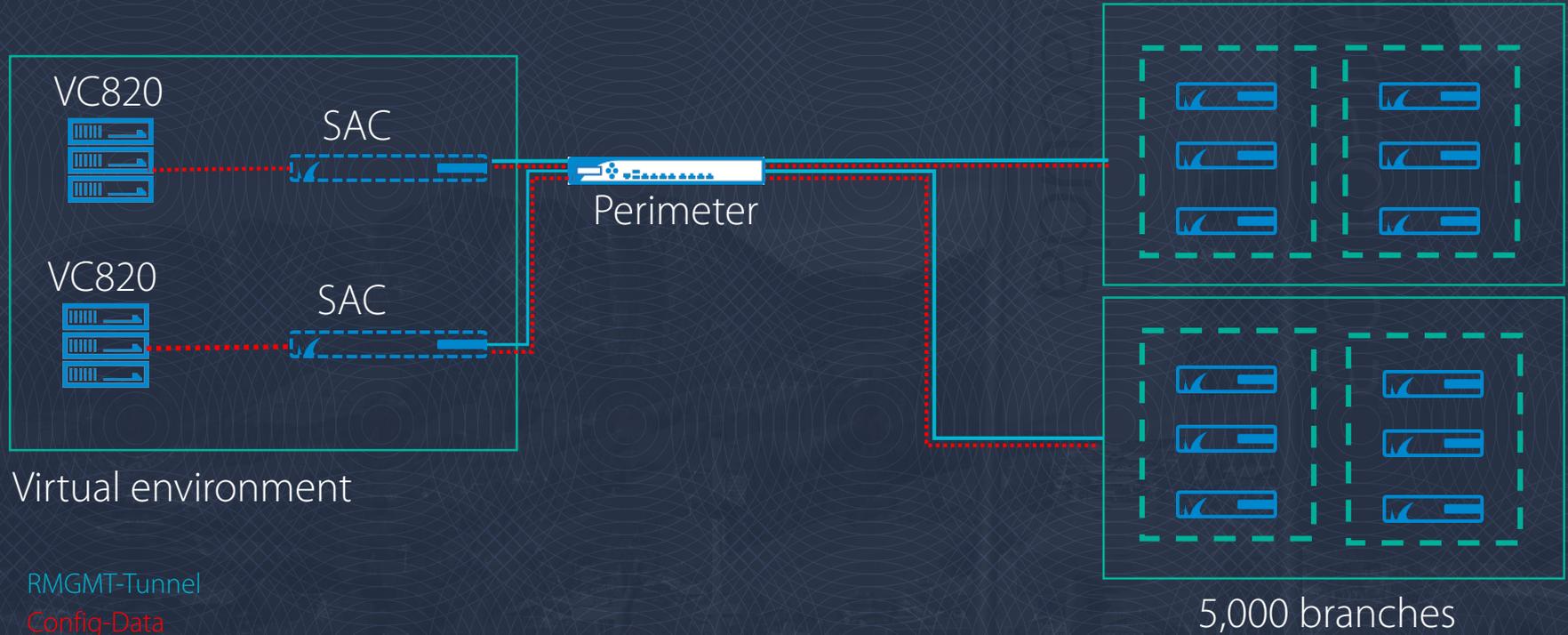


RMGMT-Tunnel

Config-Data



# Split CC (Large Scale: 5,000 boxes)



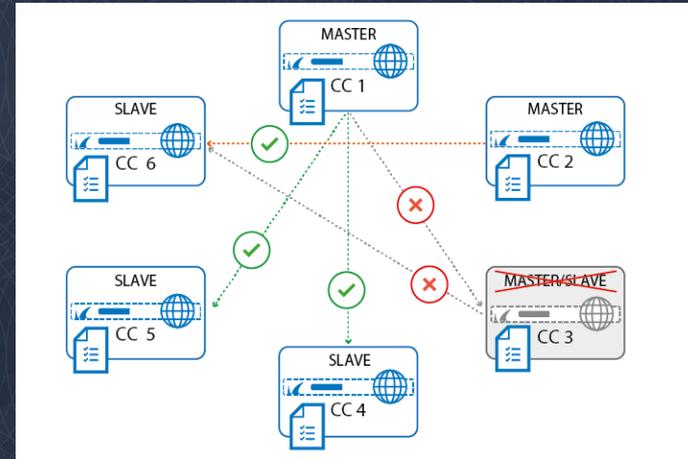
# Relationship

The **master** is the **master** is the **master**

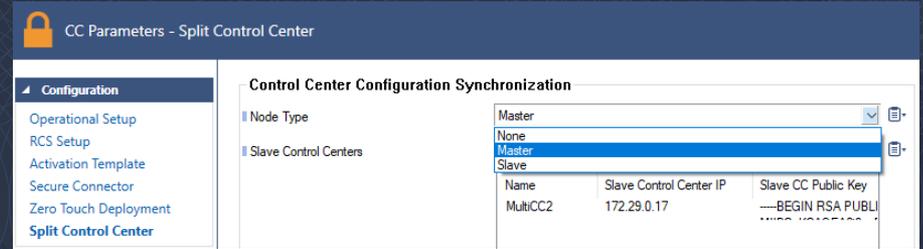
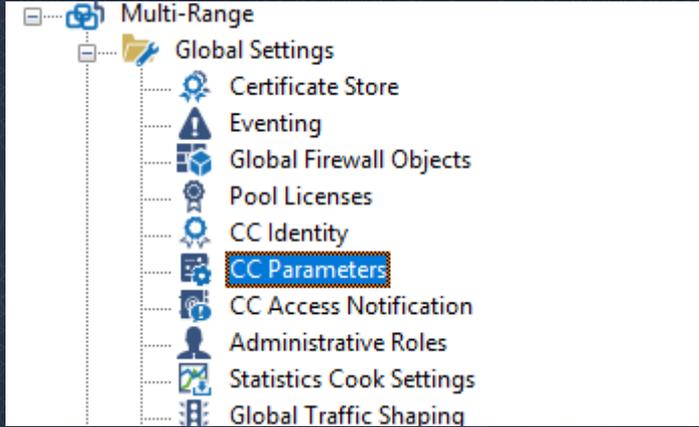
A **master** will never be a **slave**

A **slave** will have only one **master**

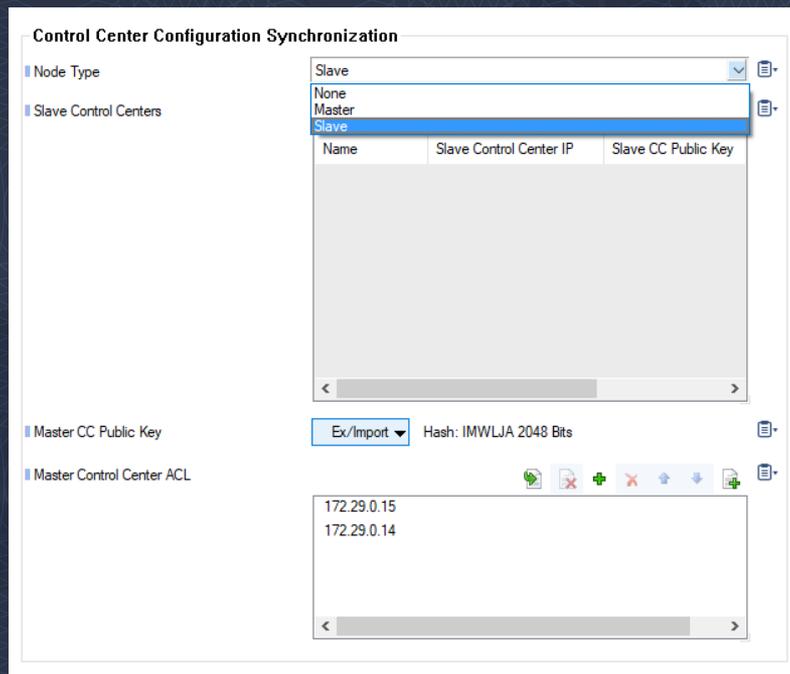
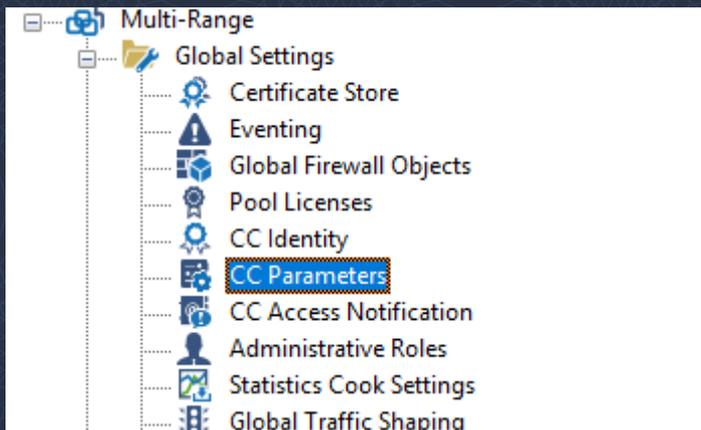
The **master** will override every synced configuration of a **slave** CC



# Master setup



# Slave setup



# Node synchronization

**Slave Control Center Settings**

Slave Control Center IP: 172.29.0.17

Slave CC Public Key: Ex/Import Hash: CDEKVV 2048 Bits

Synced Configuration Nodes

Source Node Path	Source Node Name	Destination
zrepo/*	*	
0settings	fwobj	
1/zrepo/*	*	

*Note: The CC public key for the slave must be configured on the 'CC Parameters/Split Control Center' page.*

*Note: Create an access rule on the Host CC Firewall of the slave Control Center to allow UDP 810 traffic from the master.*

**Configuration node definitions for synchronization**

Source Node Path: zrepo/\*

Source Node Name: \*

**Configuration node definitions for synchronization**

Source Node Path: 0settings

Source Node Name: fwobj

**Configuration node definitions for synchronization**

Source Node Path: 1/zrepo/\*

Source Node Name: \*

**Configuration node definitions for synchronization**

Source Node Path: 1/Cluster1/0settings

Source Node Name: fwobj



# Filetypes to sync

What can be synced?

- .conf files
- .fwobj files
- folders/repositories

What cannot be synced?\*

- .db files
- .dbconf files

\* Not yet



# NEVER DO!!!

## Configuration node definitions for synchronization

Source Node Path	<input type="text" value="Osettings"/>	
Source Node Name	<input type="text" value="."/>	

## Configuration node definitions for synchronization

Source Node Path	<input type="text" value="Osettings"/>	
Source Node Name	<input type="text" value="masterparam"/>	

## Configuration node definitions for synchronization

Source Node Path	<input type="text" value="Osettings"/>	
Source Node Name	<input type="text" value="master"/>	



# Synchronizing Firewall Control Center units

Recommended	Node Type	Comment
Yes	Global Firewall Objects	Global Firewall Objects already carry information that is shared commonly on managed firewalls.
Yes	Firewall Objects in Ranges/Clusters	Firewall Objects in Ranges or Clusters also hold information for grouping purposes.
Yes	Repositories	Repositories already concentrate functions of configurations in Control Centers and therefore are well suited for synchronizing.
No	VPN tunnels	VPN tunnels configurations must be treated special via a VPN hub because they are treated differently on all slave CCs.
No	Services	Services are not suited for sharing because a box is always bound to its own Control Center.





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# Azure vWAN



# Microsoft Azure and Barracuda Partnership

1st

Microsoft Azure Certified  
security solution provider

4M

Hours of Barracuda VM  
consumption per month

2,000+

Customers deployed in  
production in Azure

Microsoft Partner of the Year  
2016 Winner

Microsoft Azure Certified ISV  
Solution Award

## Buy and Deploy Using Azure Marketplace

- Top performing ISV in Azure Marketplace
- First security appliance in Azure Marketplace
- Flexible pricing models:
  - Bring-Your-Own-License (BYOL) and Pay-As-You-Go (PAYG)
- Customer self-service tool for configuration and deployment

## Recent Customer Wins



# Microsoft Global Network

Microsoft  
Global  
Network

54 AZURE  
REGIONS

100K+ MILES OF FIBER  
AND SUBSEA CABLES

140+ EDGE  
SITES

200+ EXPRESSROUTE  
PARTNERS

# Three elements of a CloudGen Firewall



Protect



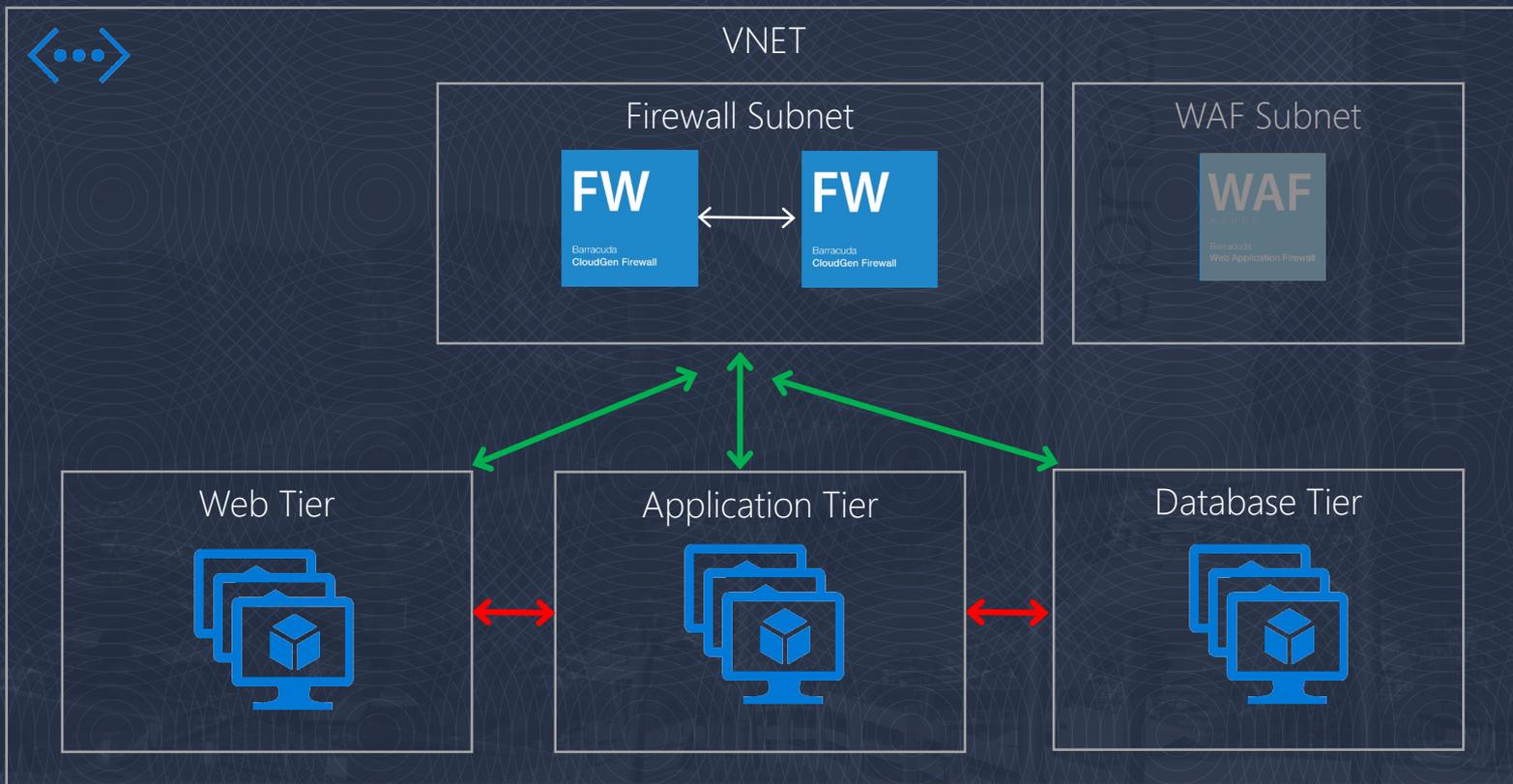
Connect



Automate



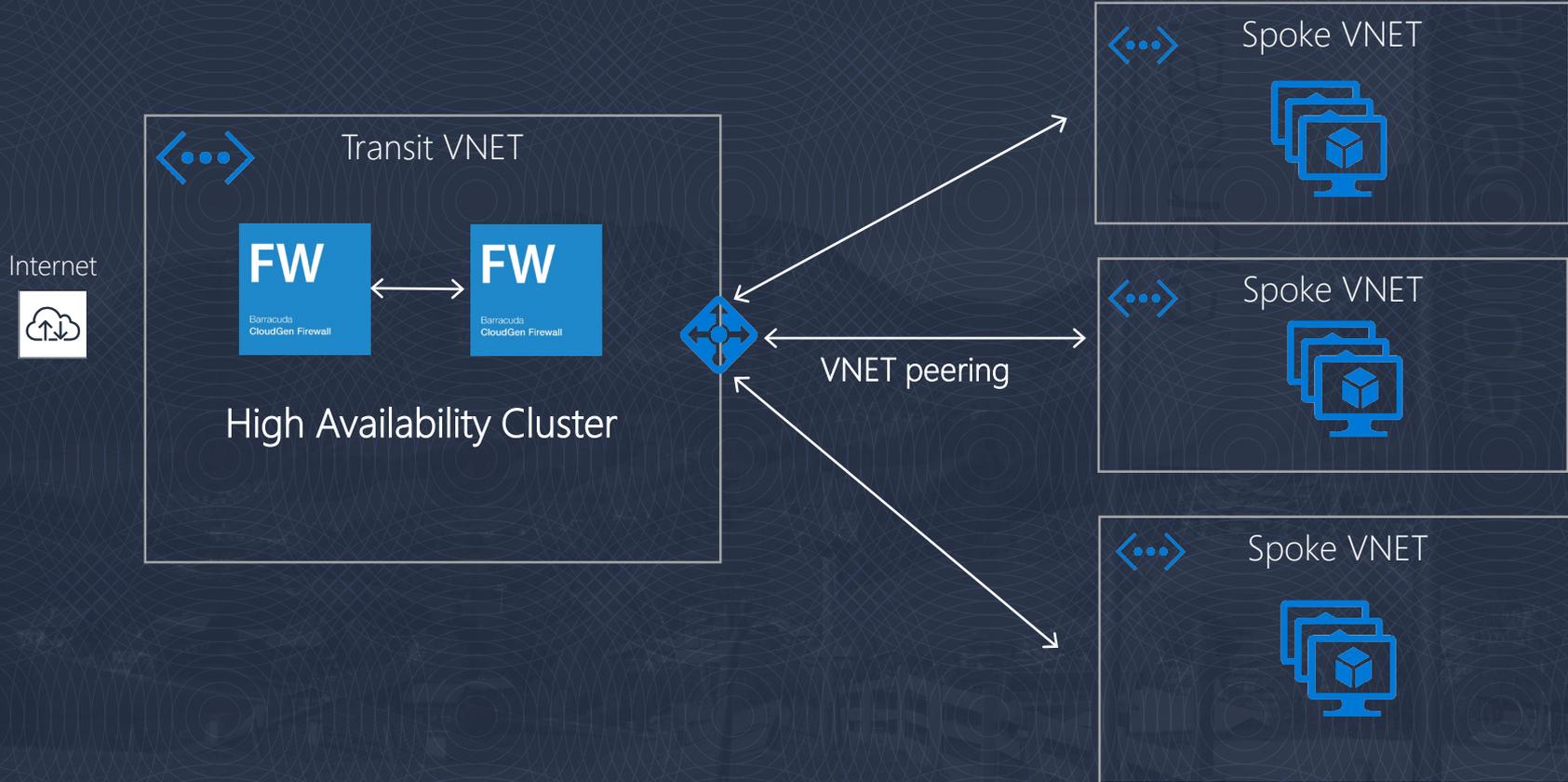
# Reference architecture - Single VNET



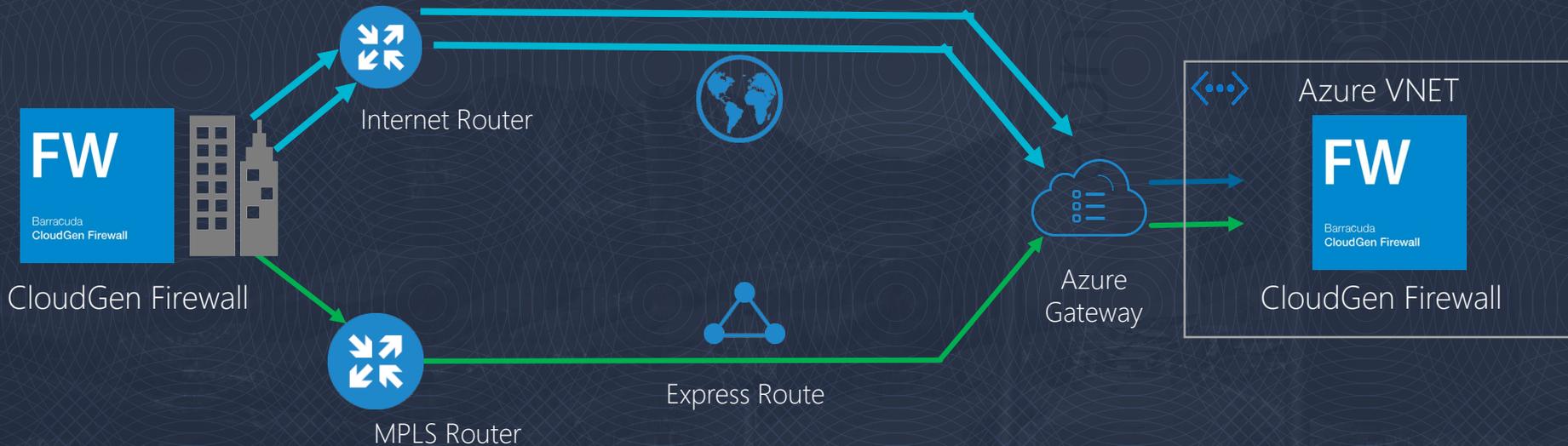
# Reference architecture - Edge Firewall



# Reference architecture - Transit VNET



# Reference architecture – SD-WAN



# Azure Virtual WAN

Barracuda official connectivity partner for Virtual WAN

Azure-managed connectivity using  
the Microsoft global network



**Microsoft  
Ignite**

Orlando, FL  
September 24-28, 2018



# Azure Virtual WAN

Managed virtual networks and VPN gateways

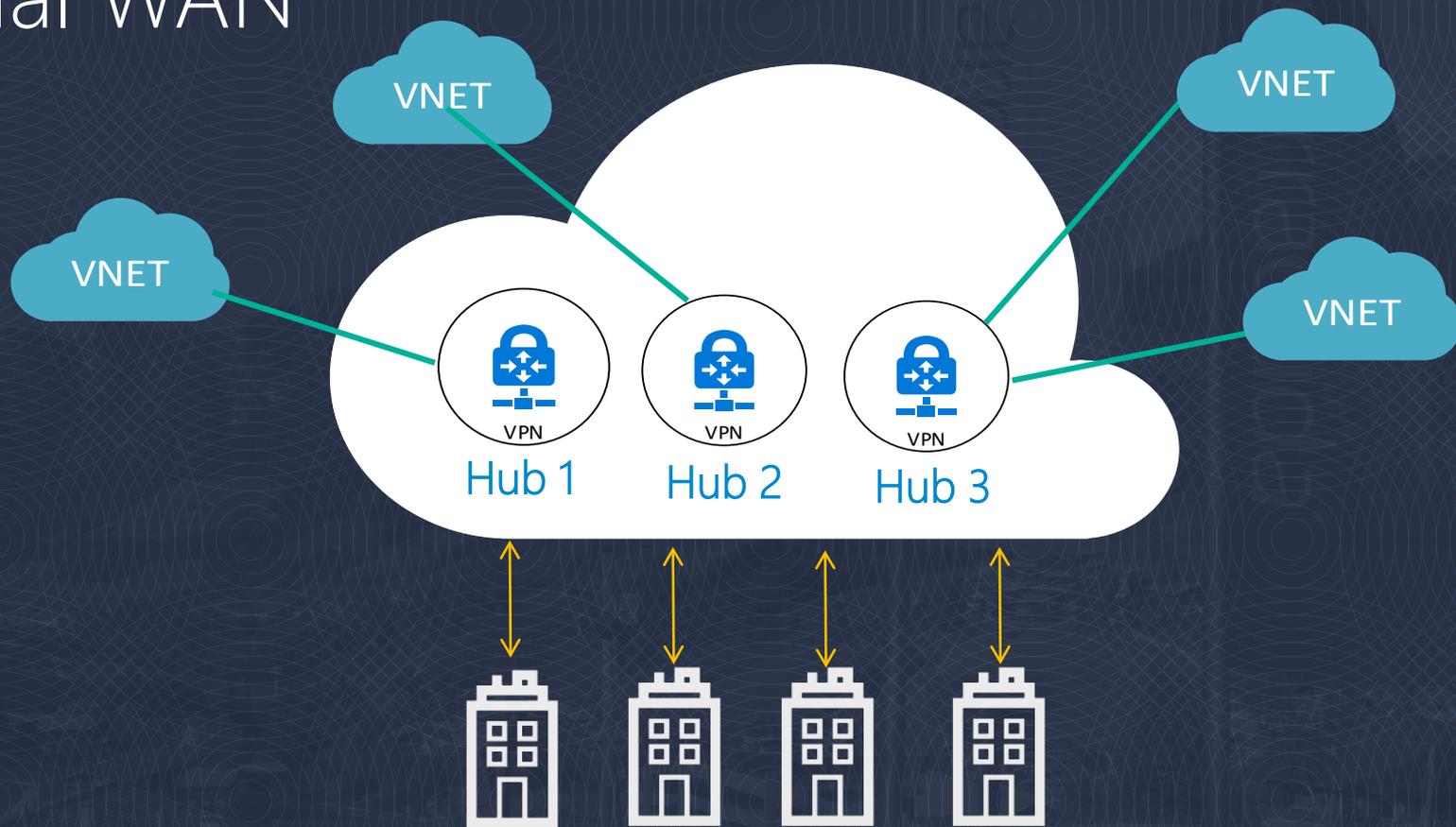
Automated connectivity from CloudGen Firewall

Branch-to-branch and branch-to-cloud

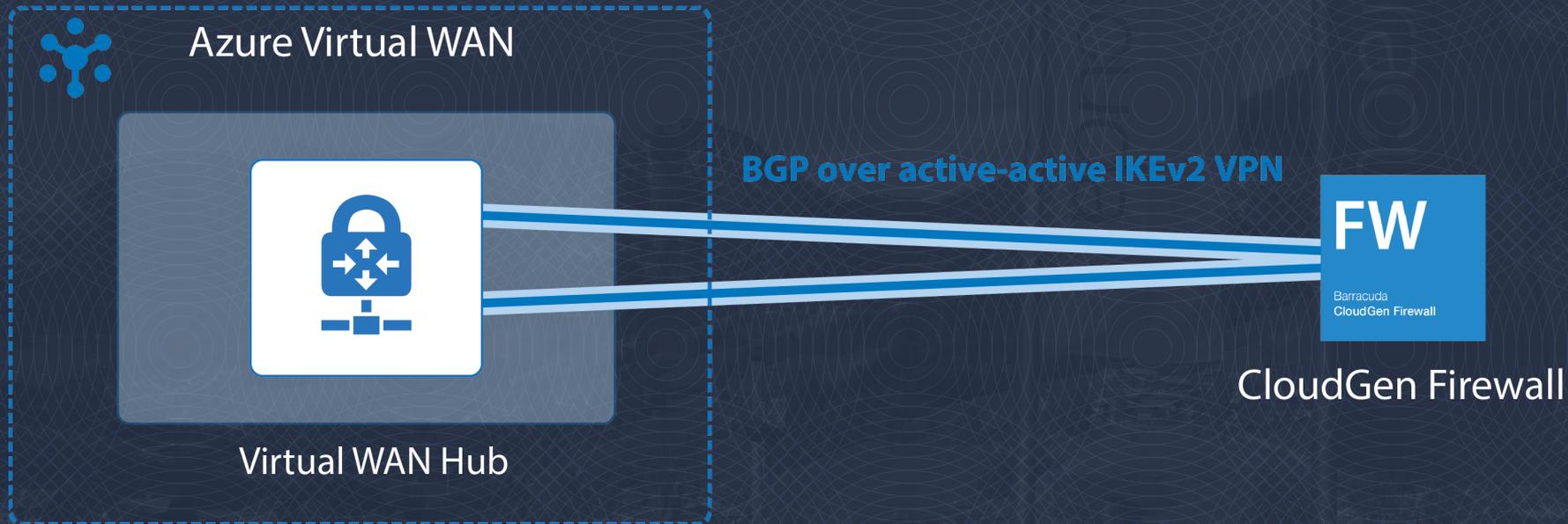
Optimal routing and performance from Microsoft Global network



# Virtual WAN



# Virtual WAN Setup



# Virtual WAN Demo (7.2.3 + Patch)



- Create a resource
- Home
- Dashboard
- All services
- FAVORITES
- Resource groups
- All resources
- Virtual WANs
- Route tables
- Azure Active Directory
- Virtual networks
- Public IP addresses
- Virtual machines
- Recent
- Virtual machines (classic)
- Monitor
- Security Center
- Advisor
- Firewalls
- Subscriptions

Home > Virtual WANs

## Virtual WANs

cudazure

+ Add | Edit columns | Refresh | Assign tags

Subscriptions: NGEEngineeringTeam

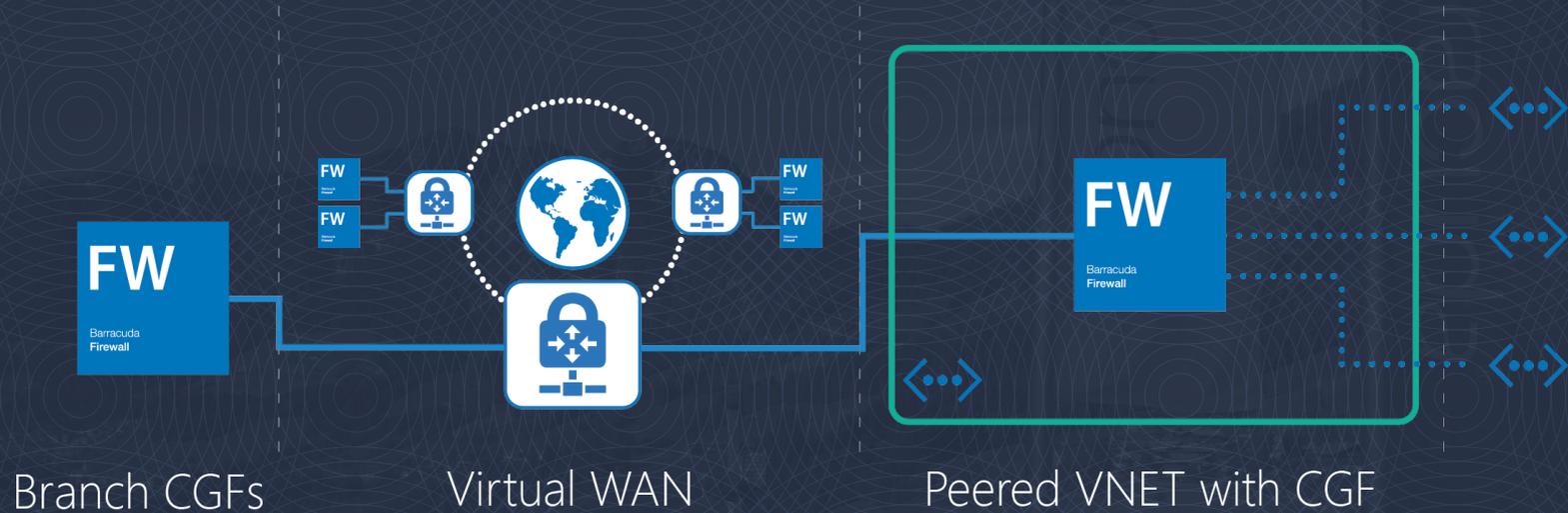
fbu-vwan | All resource groups | All locations | All tags | No grouping

1 items

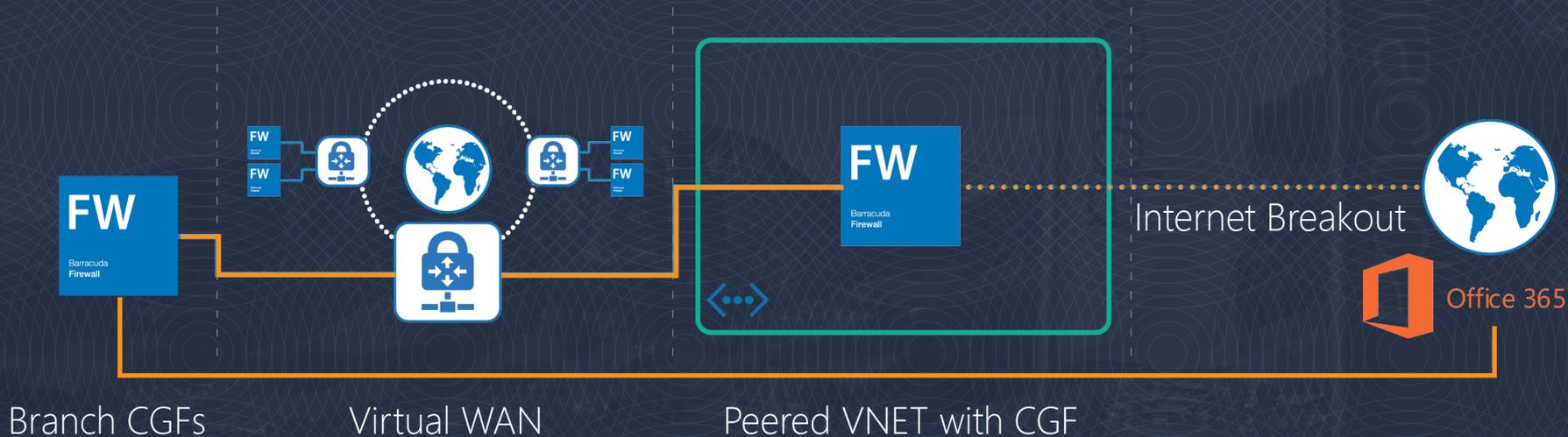
NAME	TYPE	RESOURCE GROUP	LOCATION	SUBSCRIPTION
fbu-vwan-ne	Virtual WAN	fbu-vwan-ne-rg	North Europe	NGEEngineeringTeam



# CloudGen Firewall combined with Virtual WAN



# Office365 Policy for Virtual WAN



# Summary of native connectivity options

## Connecting to Azure Network

- Internet direct
- Internet VPN
- Azure ExpressRoute

## Transit routing between Azure ExpressRoute and VPN

- Azure Virtual WAN

## Multi Cloud Connectivity

- Internet: Virtual WAN
- Dedicated: Azure ExpressRoute





# Thank you

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