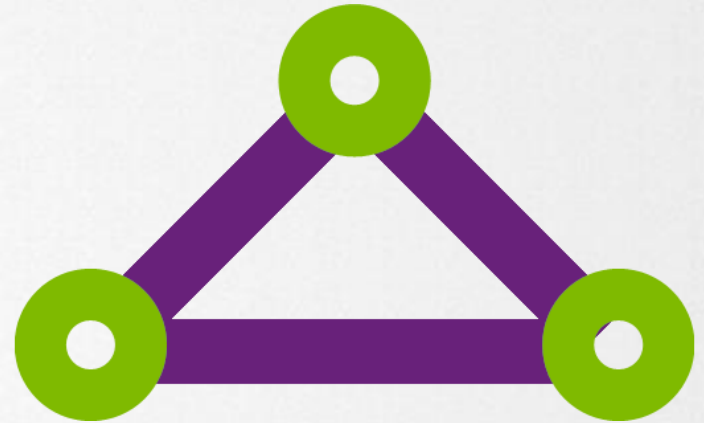


Azure Expressroute

The most direct way to
Microsoft cloud services

Christian Kreutzer
www.expertslive.at





What you can expect...

- Challenges about cloud networking
- Azure ExpressRoute overview
- Possible scenarios
- Customer Success Story „fiskaltrust.at“
- Live Demo





and what not...

- Every detail an ExpressRoute scenario can include (these are pretty much...)
- Azure Portal Experience Demo
- Deep Networking





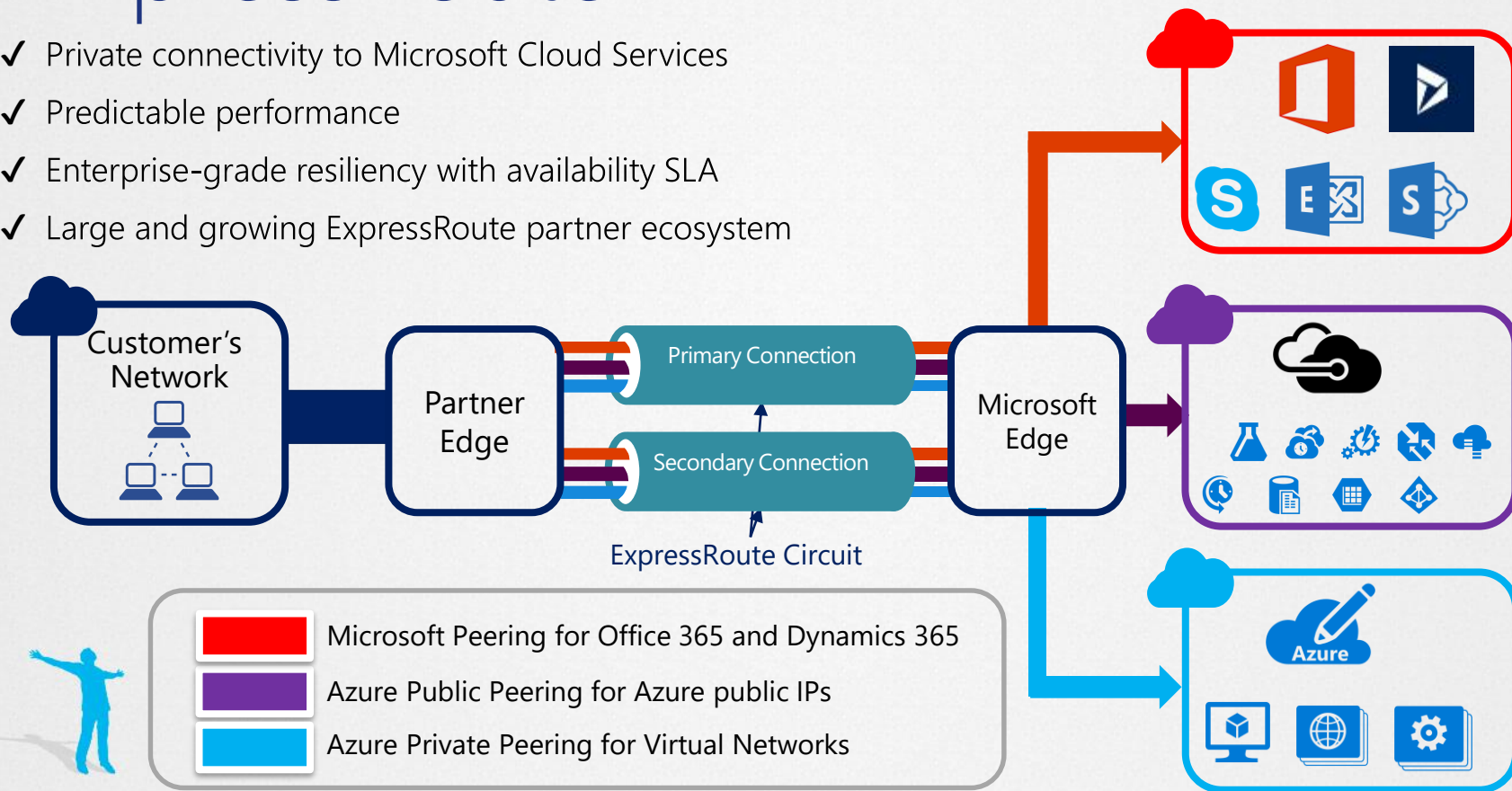
Challenges

- How to use public cloud services with dedicated connection?
- How to get reliable end to end bandwidth including SLA?
- Spread network connections across several locations
- Monitoring and Troubleshooting of foreign managed Networks
- „bring your own network“

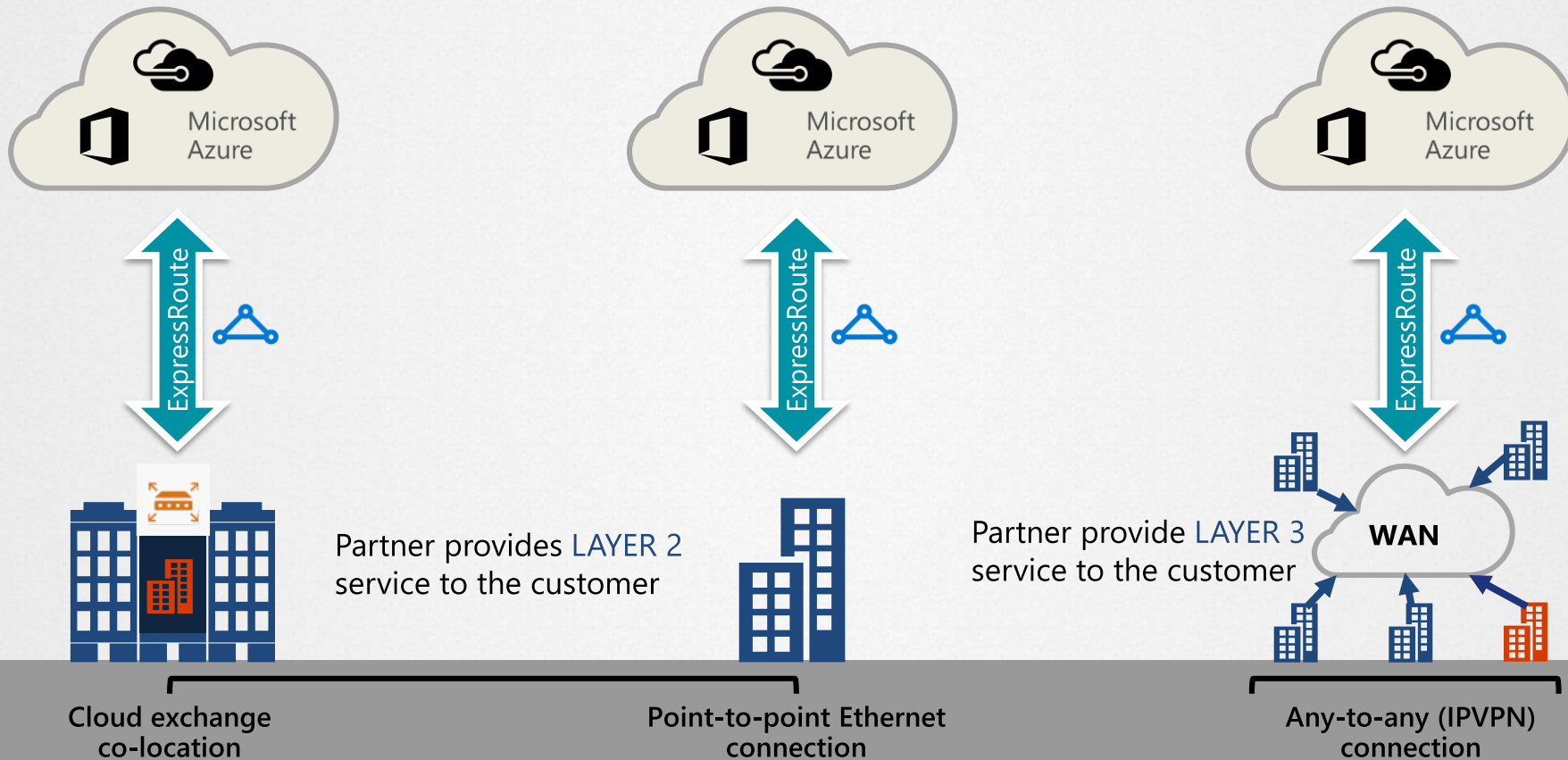


ExpressRoute

- ✓ Private connectivity to Microsoft Cloud Services
- ✓ Predictable performance
- ✓ Enterprise-grade resiliency with availability SLA
- ✓ Large and growing ExpressRoute partner ecosystem

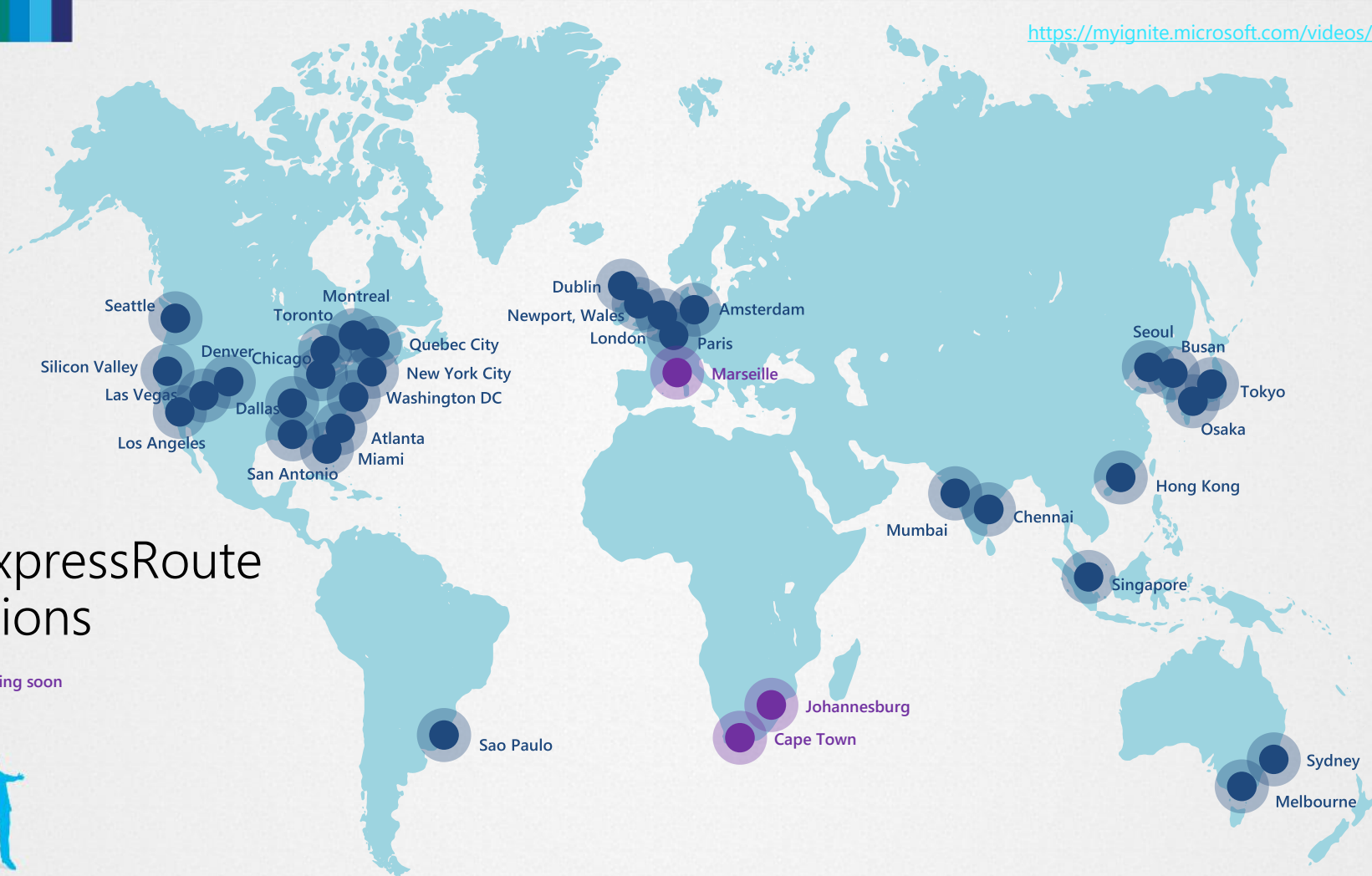


ExpressRoute connectivity models

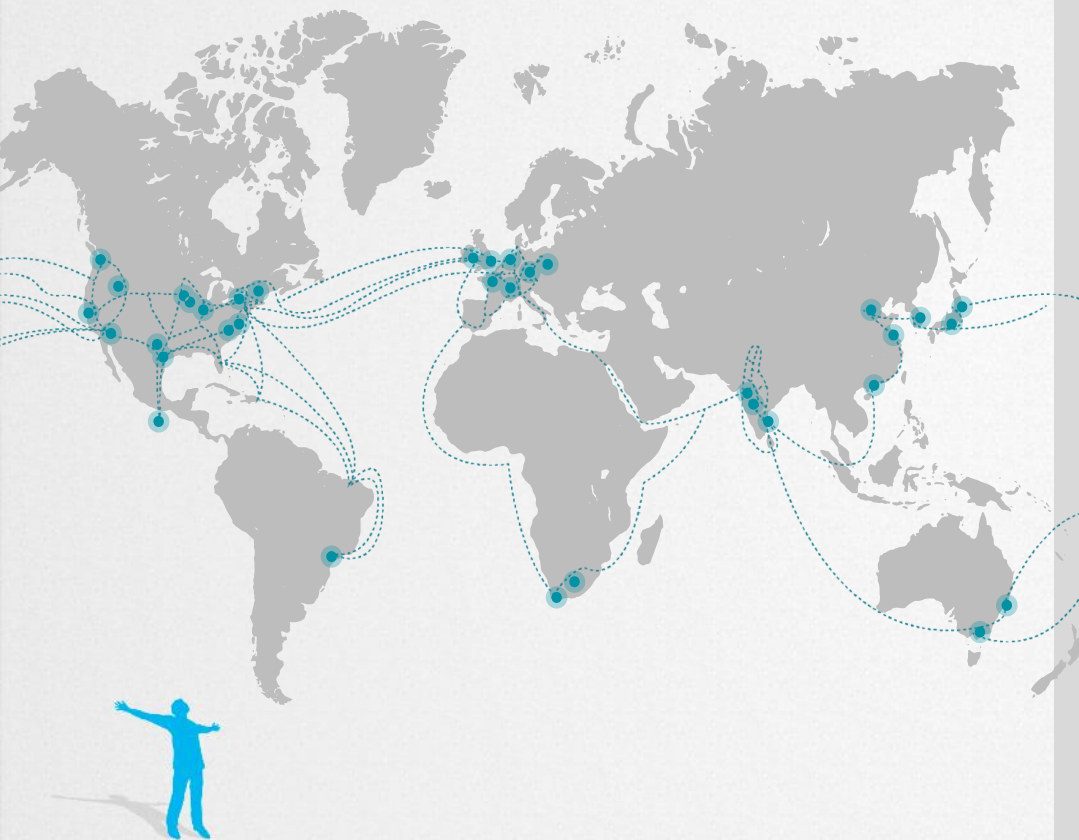




34 ExpressRoute locations



Premium SKU



Global connectivity

Link a Virtual Network from any Azure Region to your ExpressRoute circuit (up from all in geopolitical region)

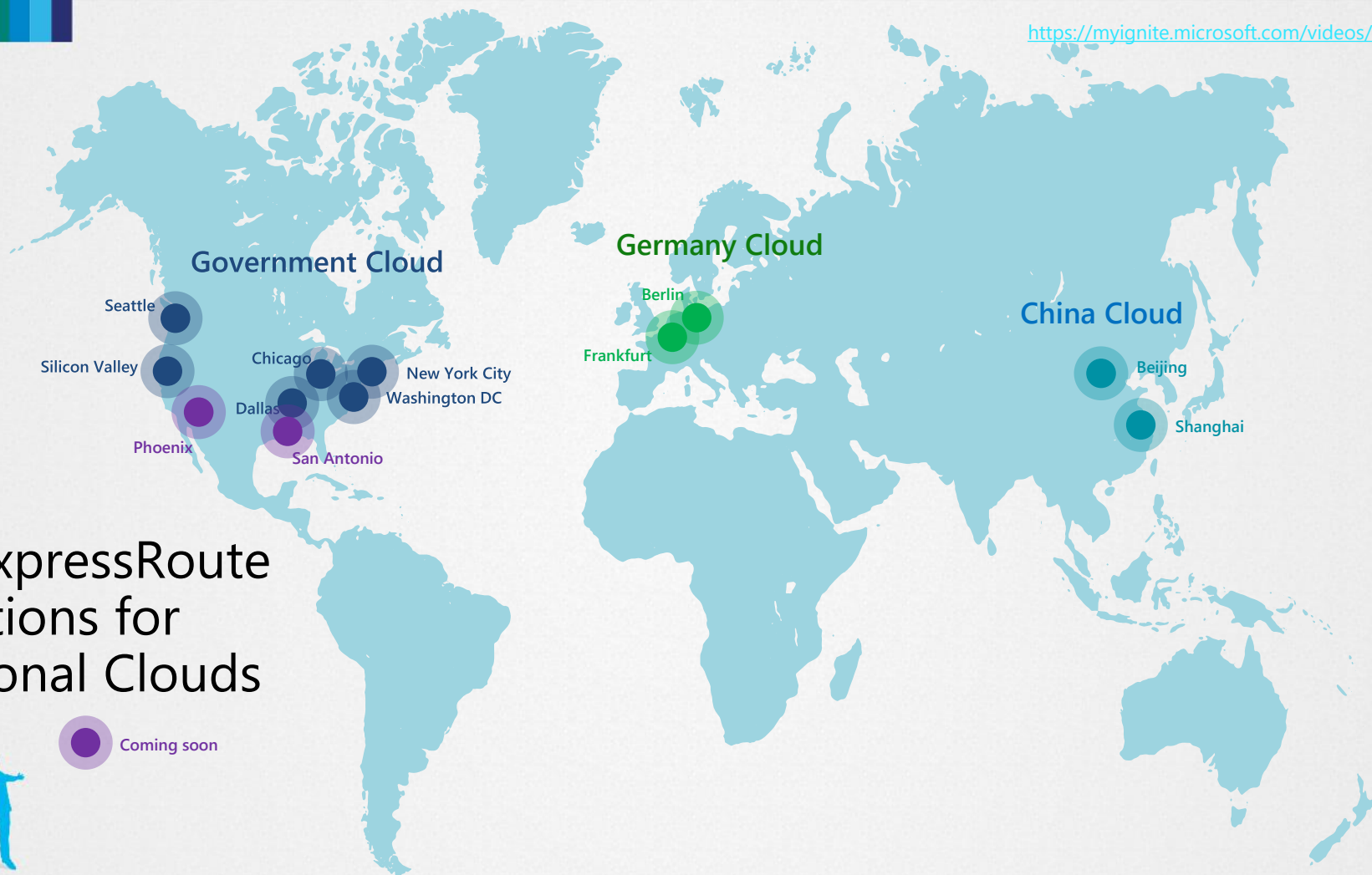
More routes (IP prefixes)

Supports up to 10,000 routes for Azure private peering (up from 4,000)

Connect more virtual networks

Up to 100 virtual networks depending on bandwidth option (up from 10)

Connect to Office365 and CRM Online



12 ExpressRoute locations for National Clouds



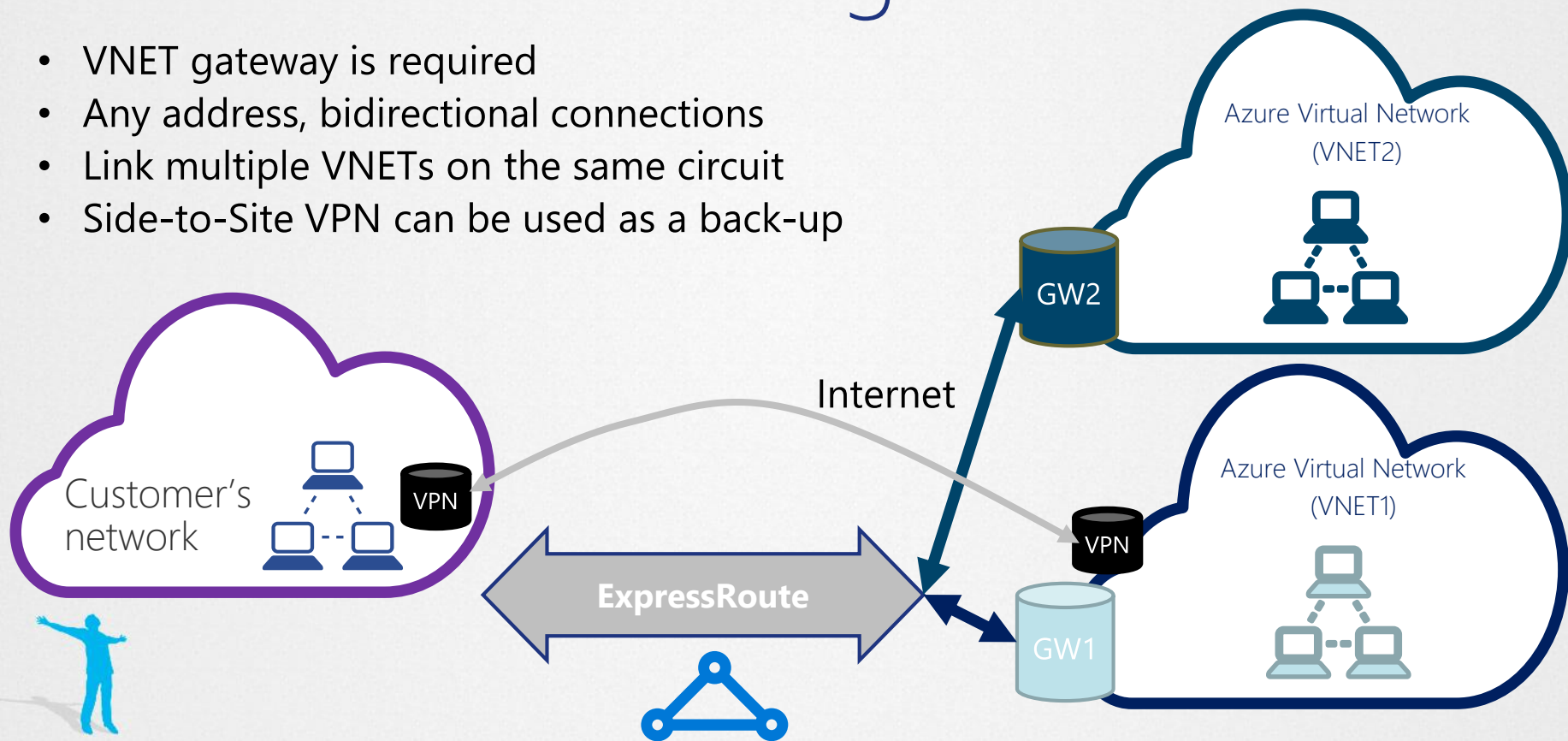
Coming soon

100+ ExpressRoute partners



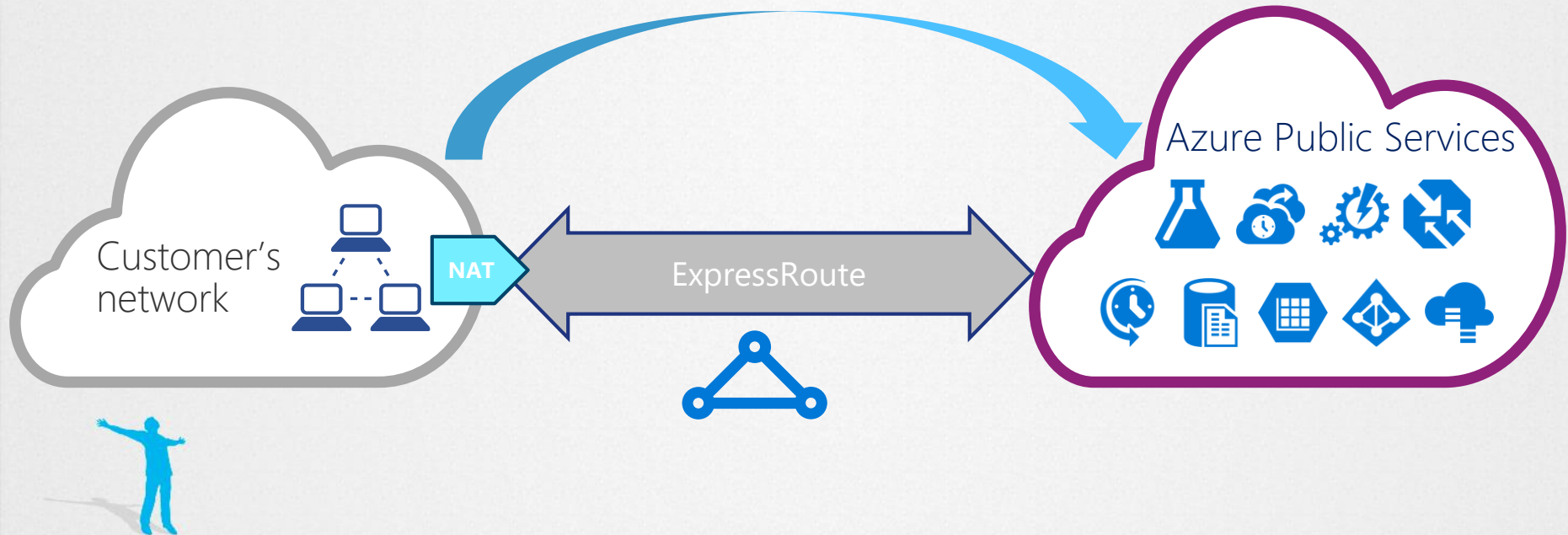
Azure Private Peering

- VNET gateway is required
- Any address, bidirectional connections
- Link multiple VNETs on the same circuit
- Side-to-Site VPN can be used as a back-up



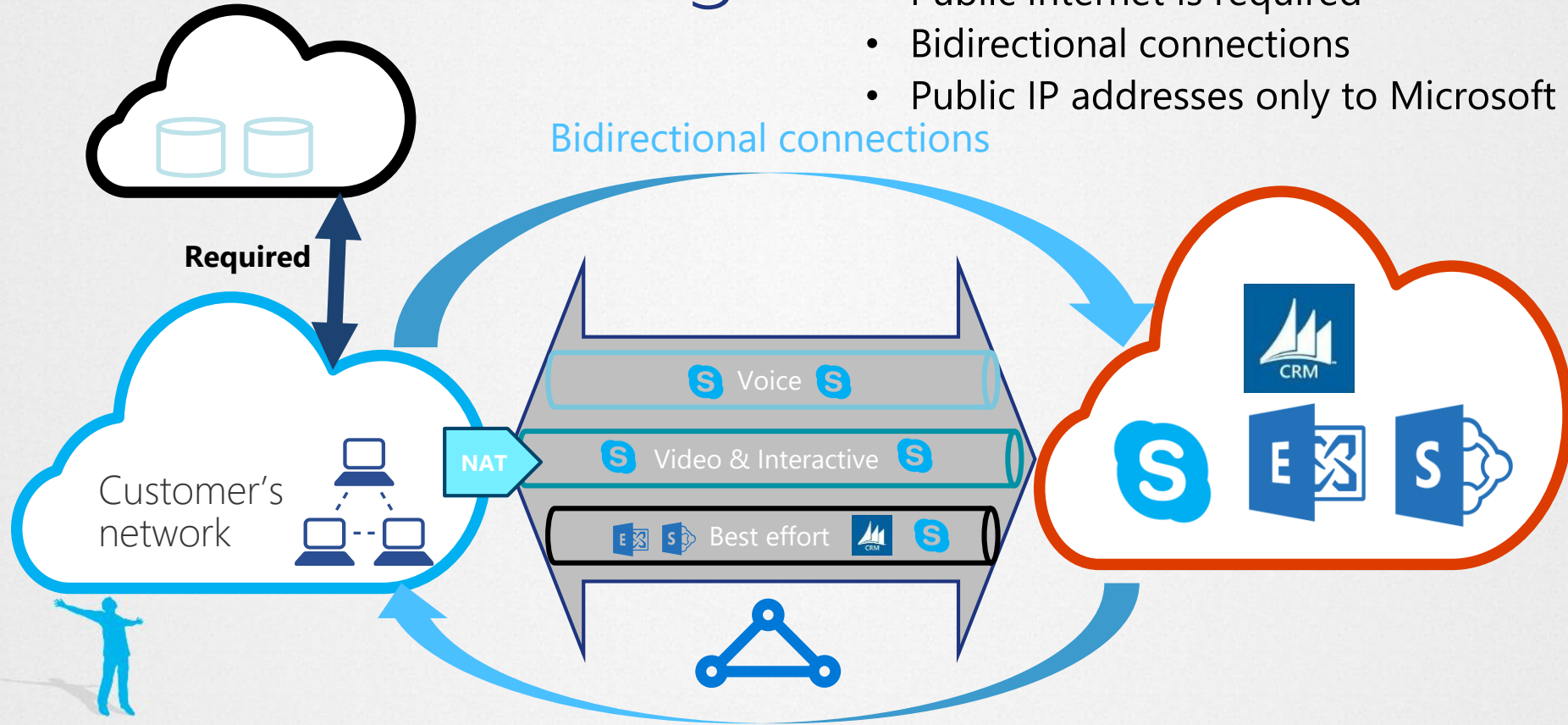
Azure Public Peering

- Unidirectional connections
- Public IP addresses only to Microsoft

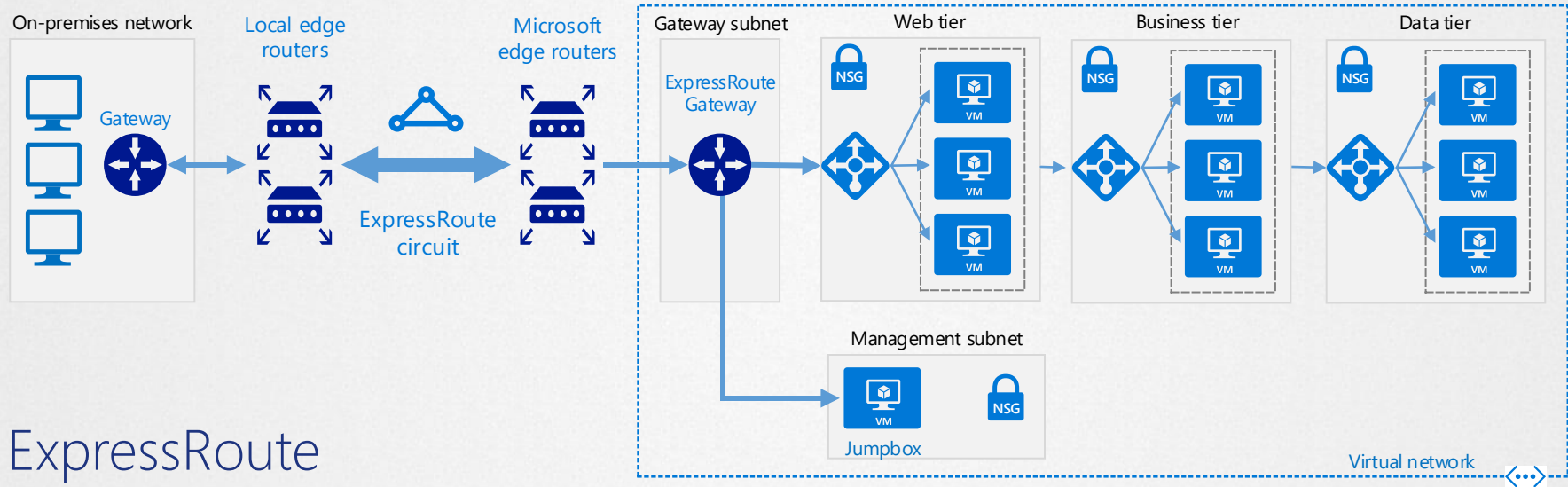


Microsoft Peering

- Premium Add-on is required
- QoS support for Skype for Business
- Public Internet is required
- Bidirectional connections
- Public IP addresses only to Microsoft



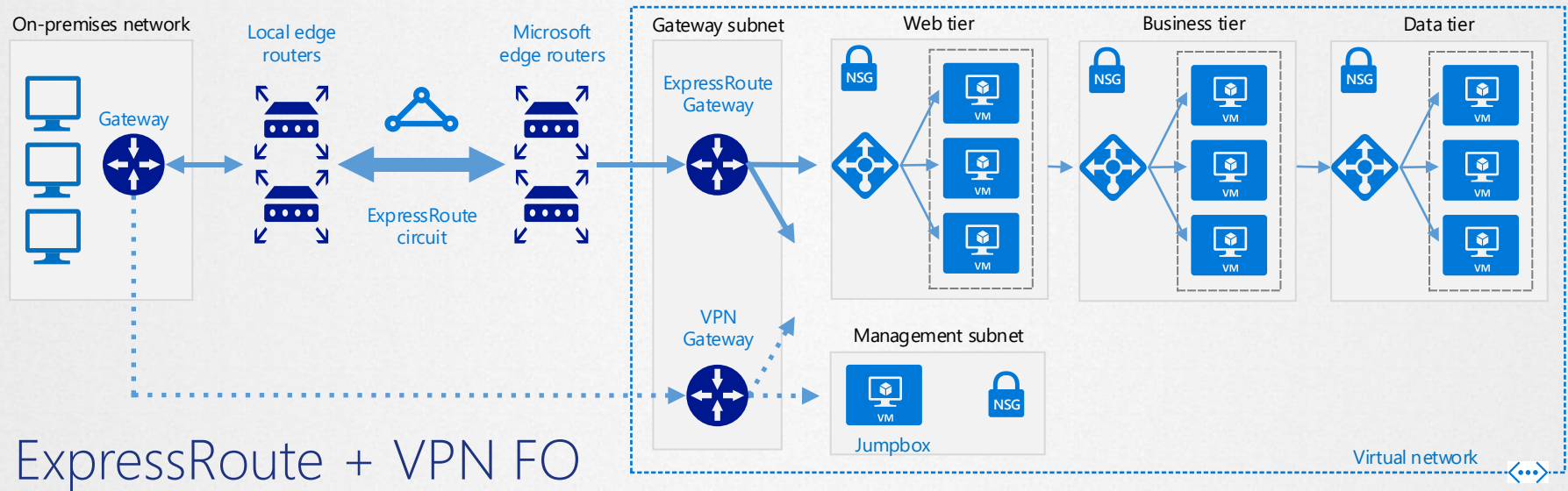
How to set up?



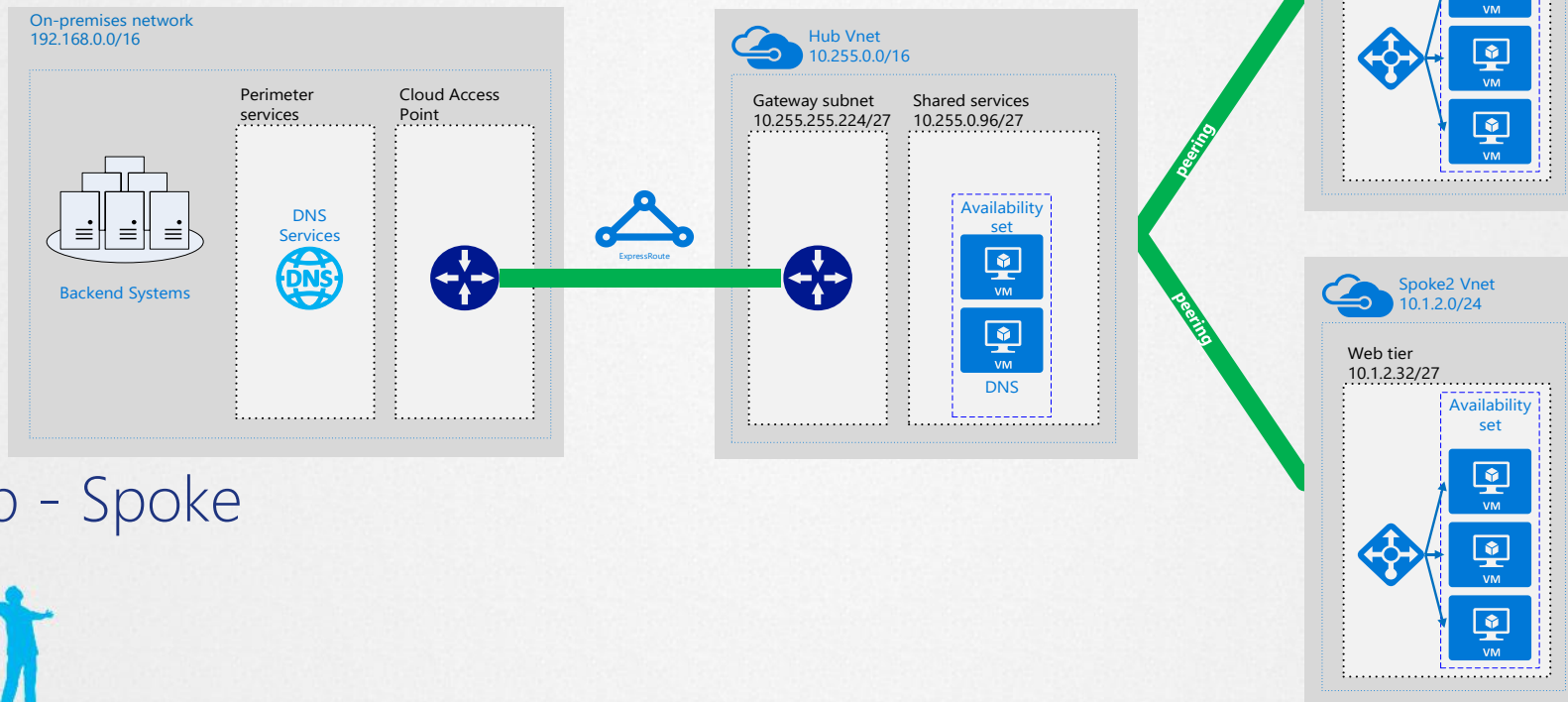
ExpressRoute



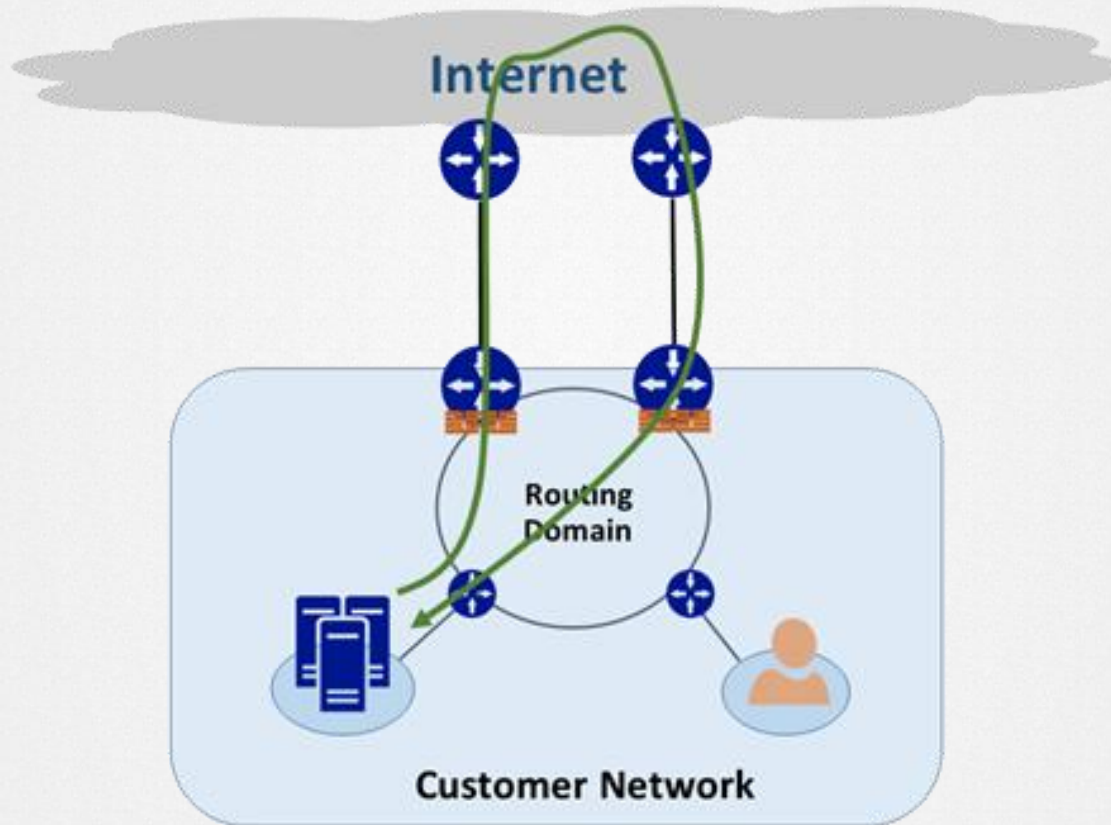
How to set up?



How to set up?



Asymmetric Routing





Quick Summary

- ExpressRoute provides 99.9% SLA (month)
- Available Bandwidths from 50MBit to 10GBit
- Don't underestimate networking complexity





Customer Success Story

- Services hosted in Azure and On Premises
- High Availability for receipt chains
- Audit proof backups On Premises
- Extensible for upcoming markets

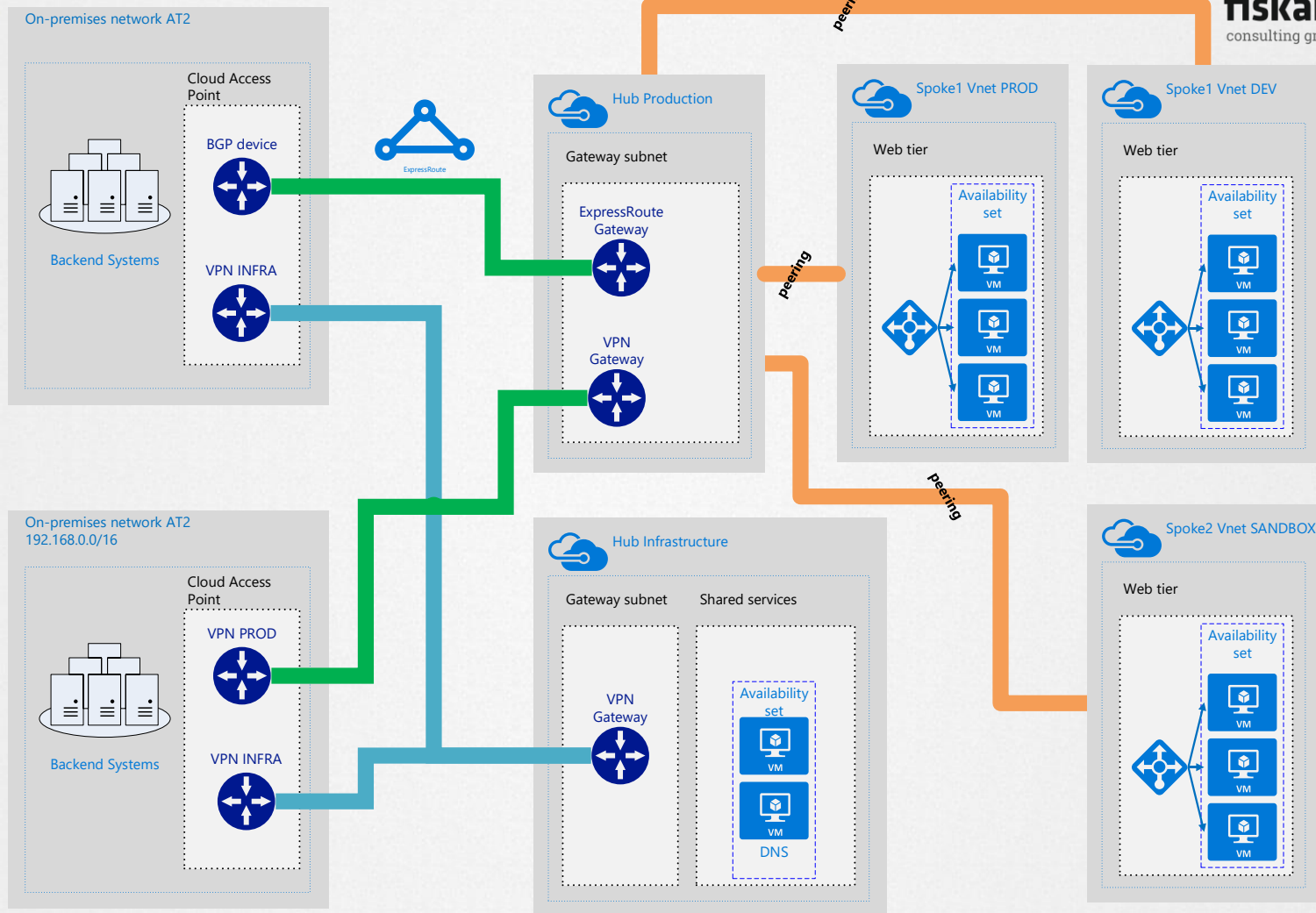


Die gesetzes-
konforme
Registrierkassen-
Sicherheits-
einrichtung



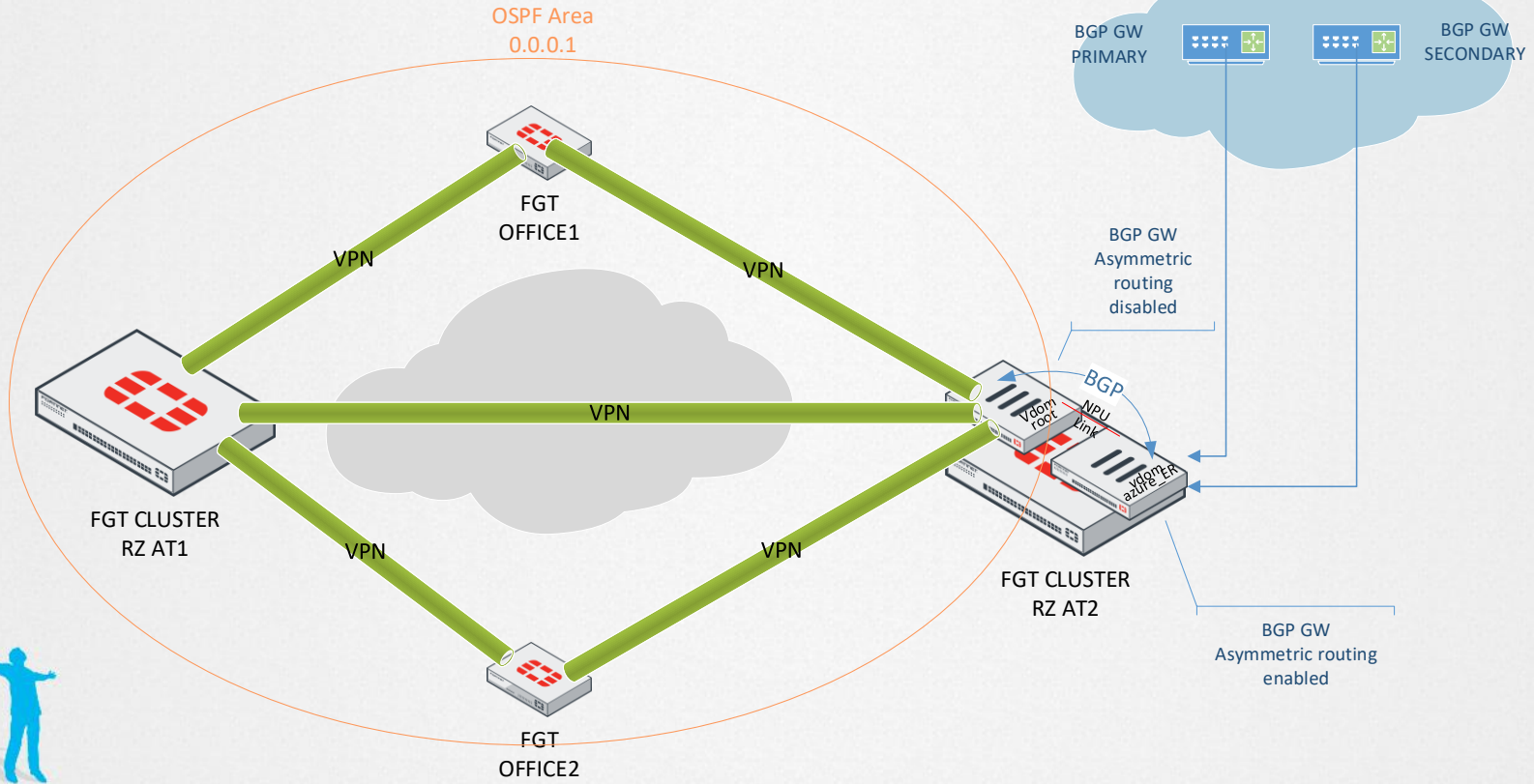
Customer Success Story

Networking excerpt





Firewall Config





DEMO



Features released since last Ignite

Zero down time gateway upgrade

ExpressRoute virtual network gateway is protected against planned maintenance, e.g. VM OS upgrade, host OS upgrade

Planned maintenance notifications

IP updates for Azure, Office 365, Dynamics 365 on Azure portal
Router maintenance notifications to ExpressRoute partners

Connection weight

Optimize routing for traffic from virtual network

Route filter for Microsoft Peering

Select the services you want to enable
Reduce the number of prefixes you and your service provider will receive



New features

Monitoring *Preview*

Resource Health Check (RHC)

Circuit metrics in Azure Monitor

Customer monitoring through Network Performance Monitor (NPM)

IPv6 support

Office 365 & Azure public services

Merging of Microsoft Peering and Azure Public Peering *Preview*

Azure public services on Microsoft Peering

Azure regions selectable through route filters

Bi-directional connections for services hosted on Azure

Azure Public Peering supported in near future





Links

- Microsoft Documentation
<https://docs.microsoft.com/en-us/azure/expressroute/>
- Azure Friday, videoblog for Azure news and features
<https://azure.microsoft.com/en-gb/resources/videos/azure-friday/>
- Locations and partners
<https://azure.microsoft.com/en-us/documentation/articles/expressroute-locations/>
- Gateways
<https://azure.microsoft.com/en-us/documentation/articles/vpn-gateway-about-vpngateways/#gwsku>
- Pricing
<https://azure.microsoft.com/en-us/pricing/details/expressroute/>
- SLA
https://azure.microsoft.com/en-us/support/legal/sla/expressroute/v1_0/



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