Cloud Generation Firewalls

The real value beyond Security

Kappa Data

Barracuda®

Kappa Data

Value Add Distributor

Network & Security

BeNeLux & Poland

Founded in 1998

Some of our Brands

Barracuda / Juniper / Pulse Secure

Trend Micro / Vasco / Ruckus / Aerohive

Koert Martens

Director of Technology

koert.martens@kappadata.be

Barracuda®

Security Vendor (NYSE: CUDA)

Network & Application Security

Email & Web Security

Data Protection

Mission Statement

Simplifying IT

Cloud-Era oriented

+150.000 Customers

+100 Countries

+1000 Employees

+5000 Partners

Cloud Generation Firewalls

What's in the Name?

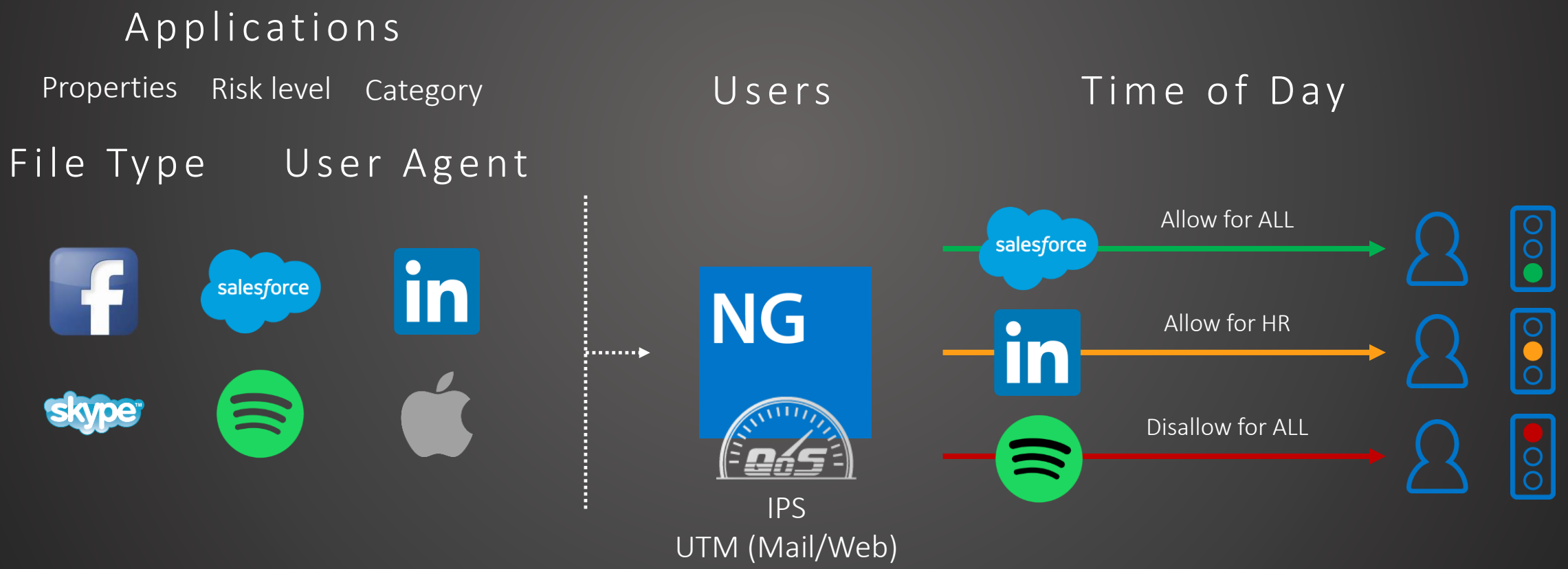
SETTING THE BASELINE

NextGen Security & Connectivity

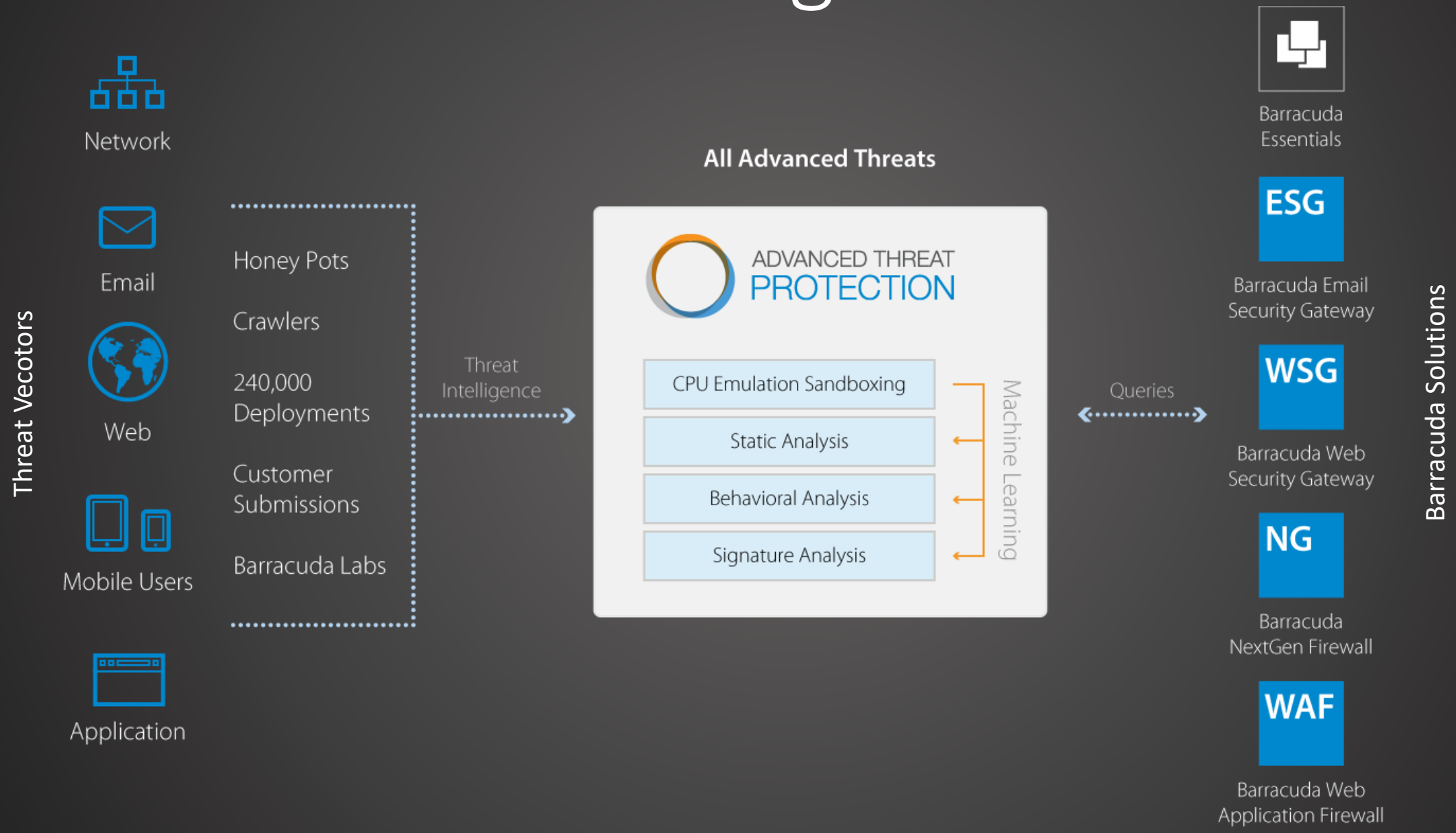
A long story Short

THE
NEXT
GENERATION
WHO
WHAT

NextGen Basic Security

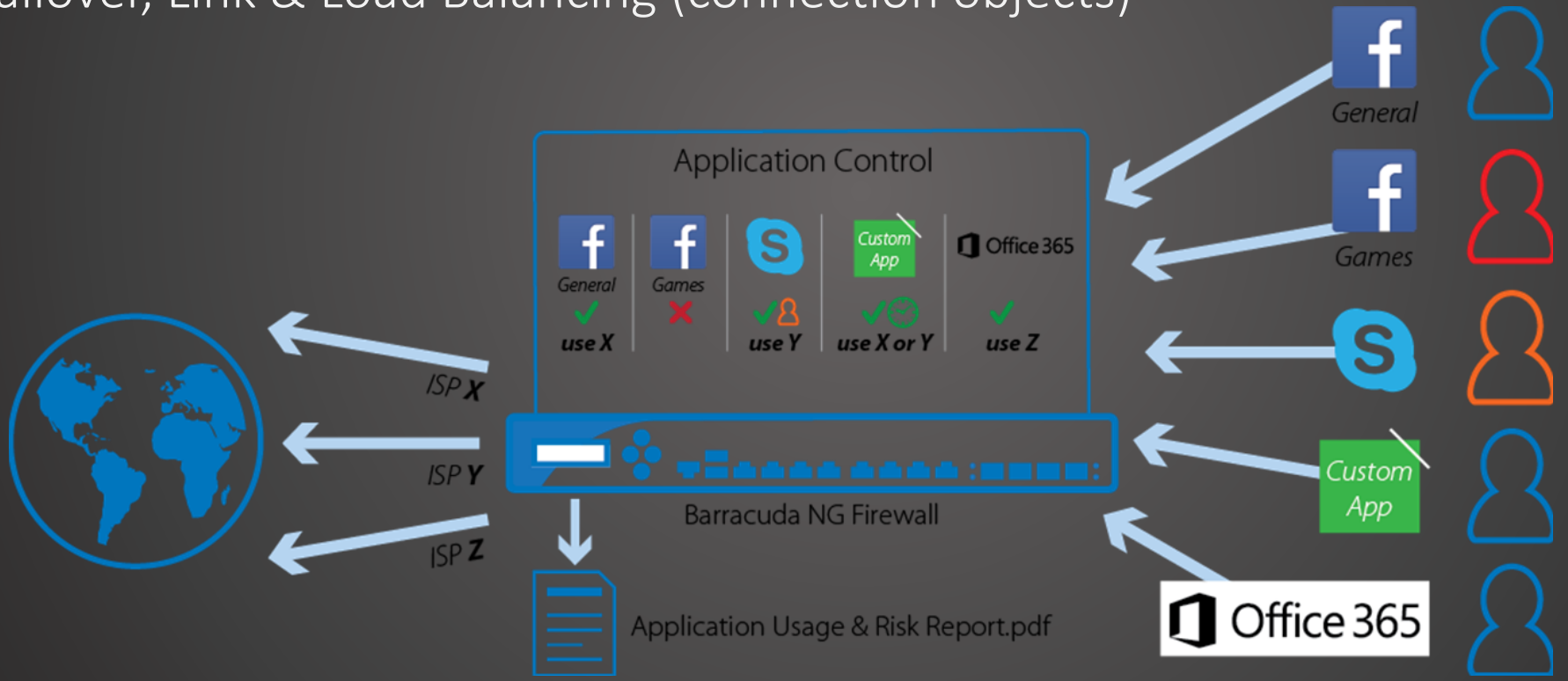


Global Threat Intelligence - ATP



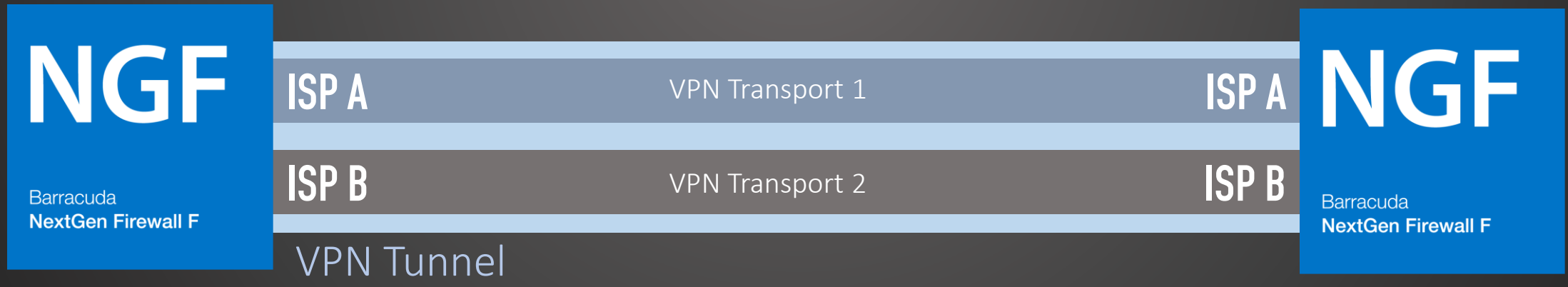
Flexible Connectivity - Internet

- Application Based Link Selection
- Failover, Link & Load Balancing (connection objects)

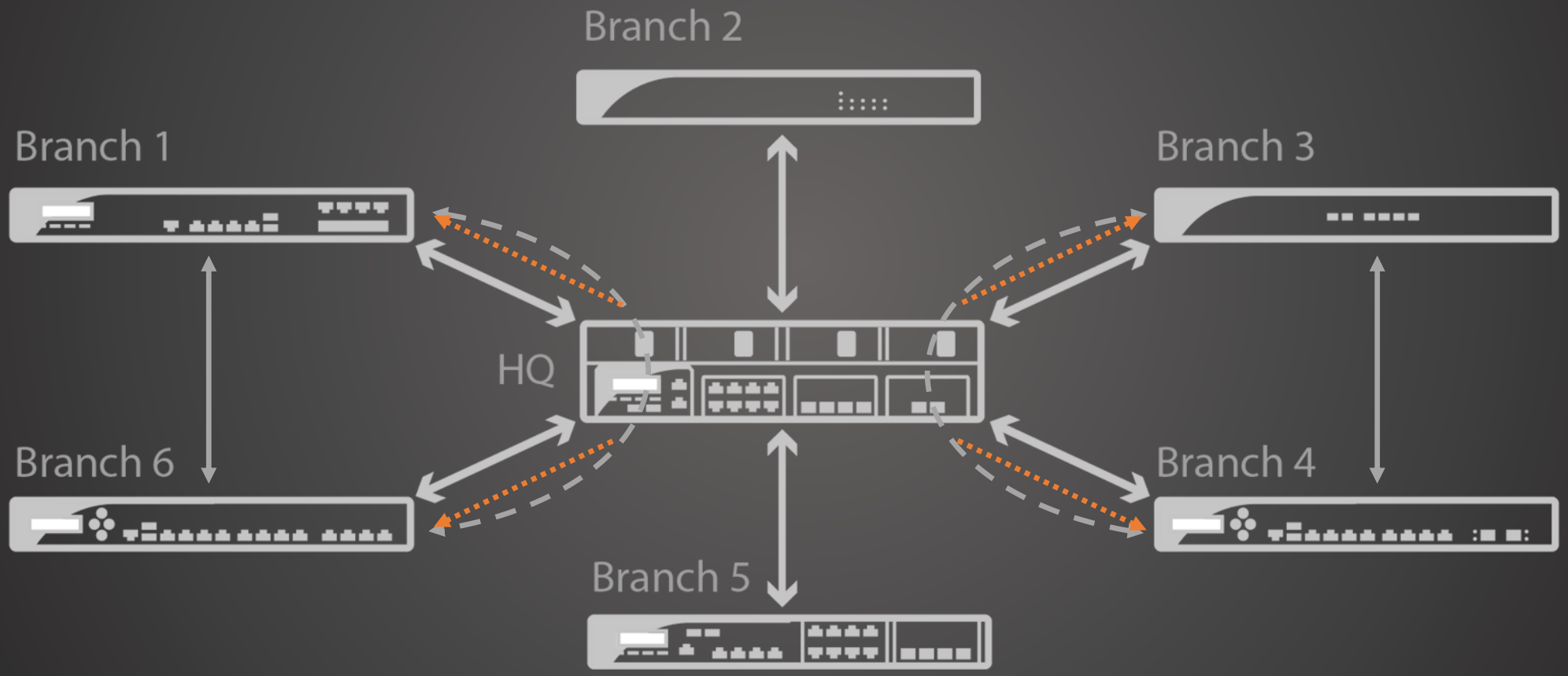


Flexible Connectivity - VPN

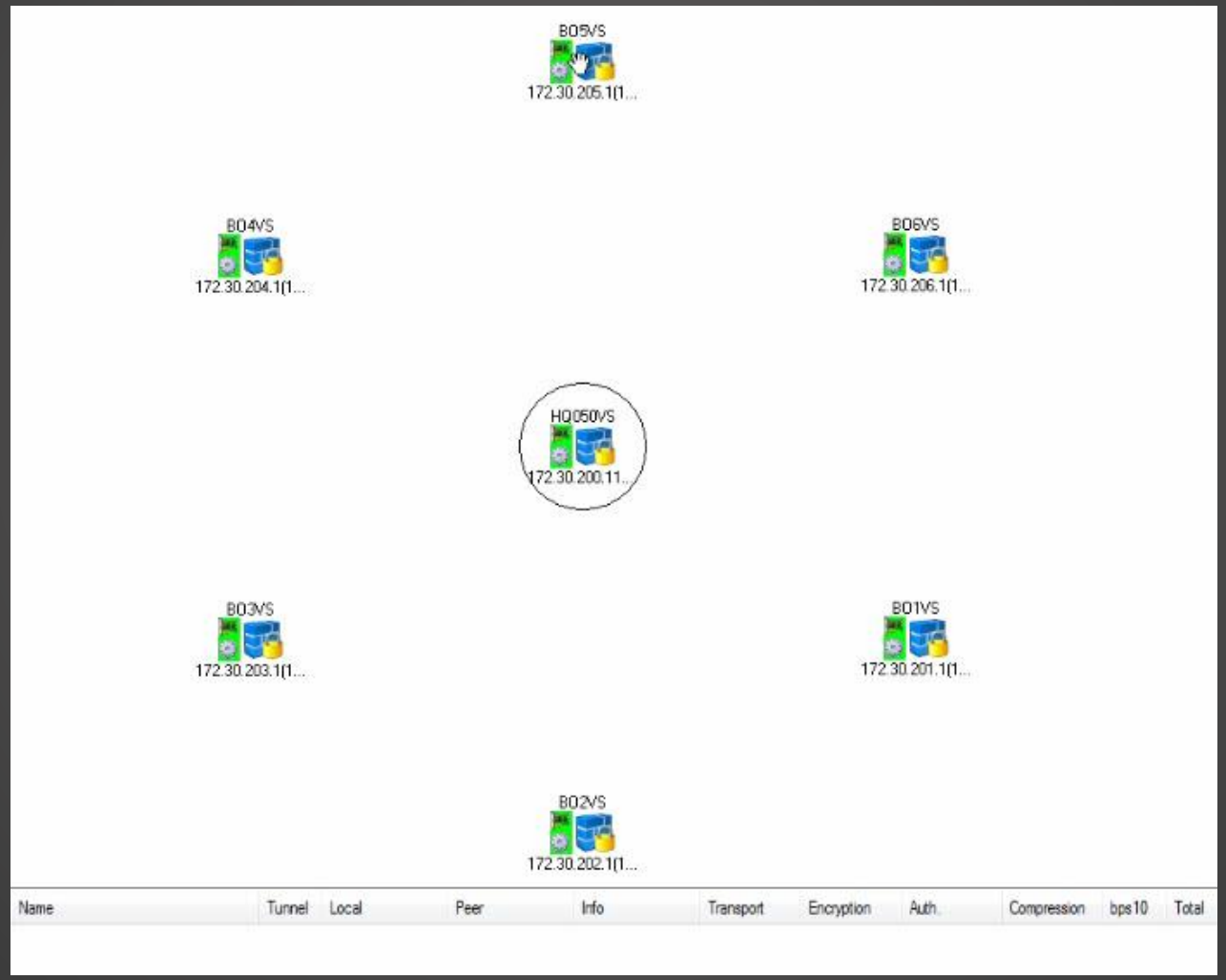
- TINA VPN = Barracuda's Proprietary VPN (enhancements on IPSEC)
- 1 VPN on Multiple transports / ISP's at the same time
- Traffic Intelligence within the VPN tunnel
- WAN Accelleration



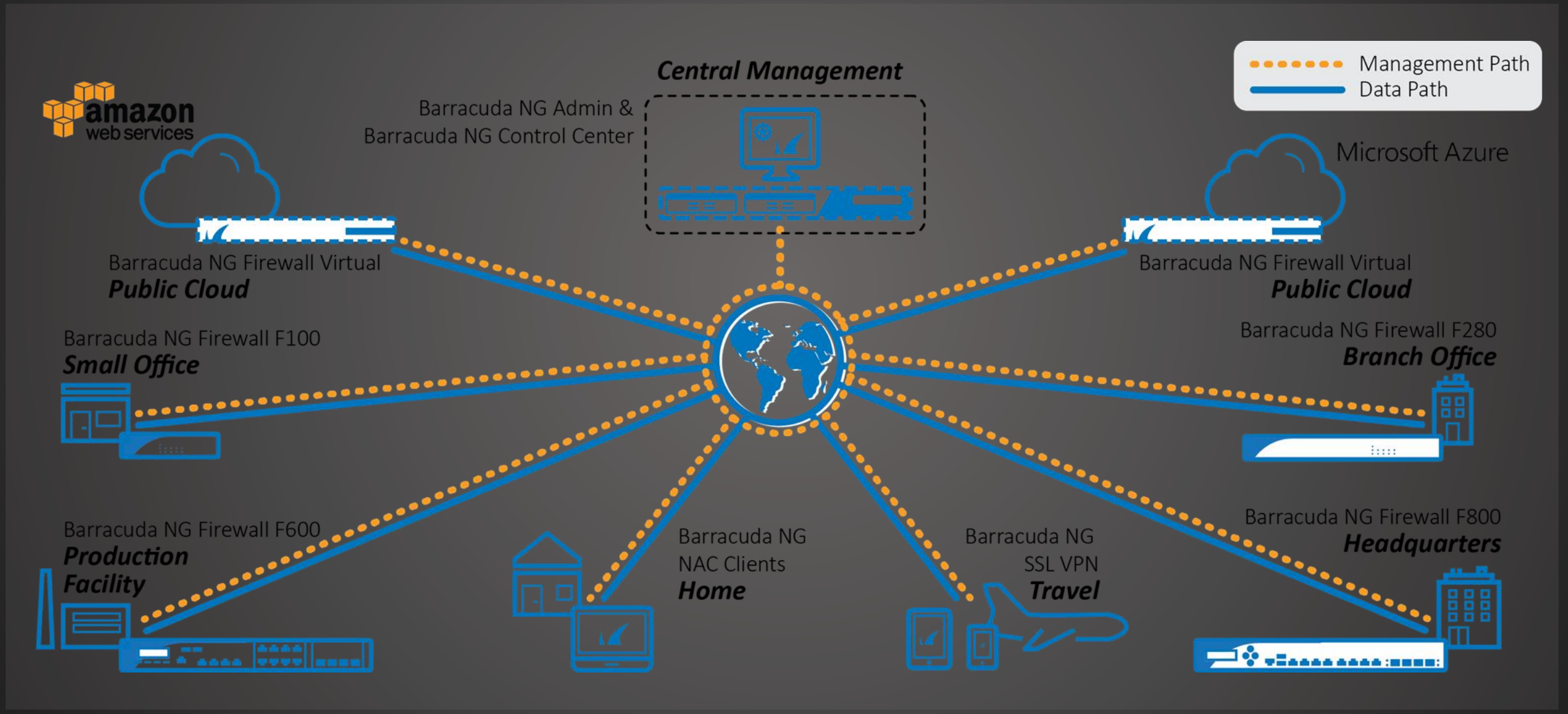
Full & Dynamic Mesh VPN



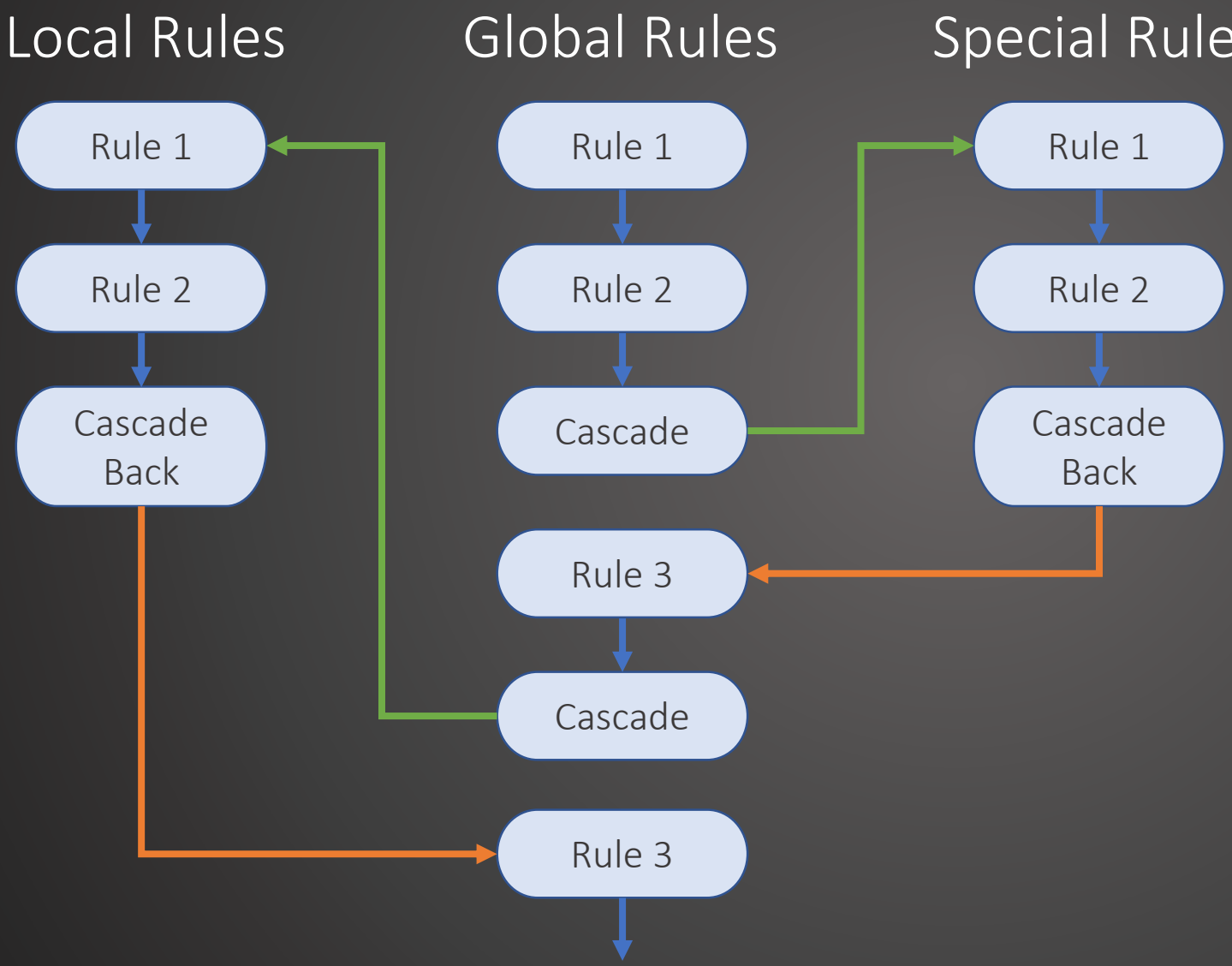
Configuring VPN



Central Management



Distribute Your Firewall



Global Rules:

- By Global Admin
- Security Policies valid “World Wide”

Special Rules:

- By Global Admin
- Location Specific exceptions

Local Rules:

- By Local Admin
- On Single Firewall

Central Manage EVERYTHING

DNS

Objects

Wite Listing

Access Rules

Server Settings

Location Specific

DHCP

Schedules

Application Rules

ATD

File Content

NTP

URL Filtering

User Agents

Anti Malware

Reservations

Classes

Options

Dynamic DNS

Routes

IPS Policy

Why Cloud Generation?

A short Story Long?

SECURITY IS NOT A SHARED RESPONSIBILITY

FIREWALL

your baseline security

Public Cloud Security

Azure / Amazon / Google

are responsible of the Cloud

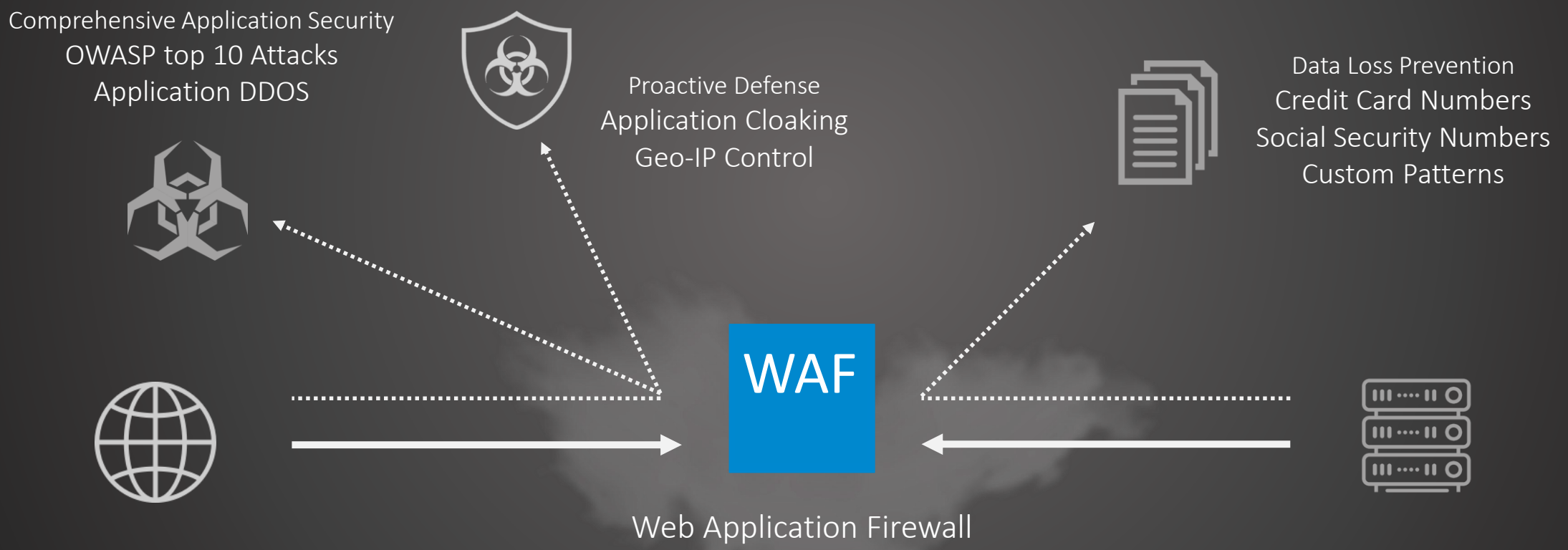
You are responsible in the Cloud

Data

Application

007
A FIREWALL IS
NOT ENOUGH

WAF - Securing Your Applications



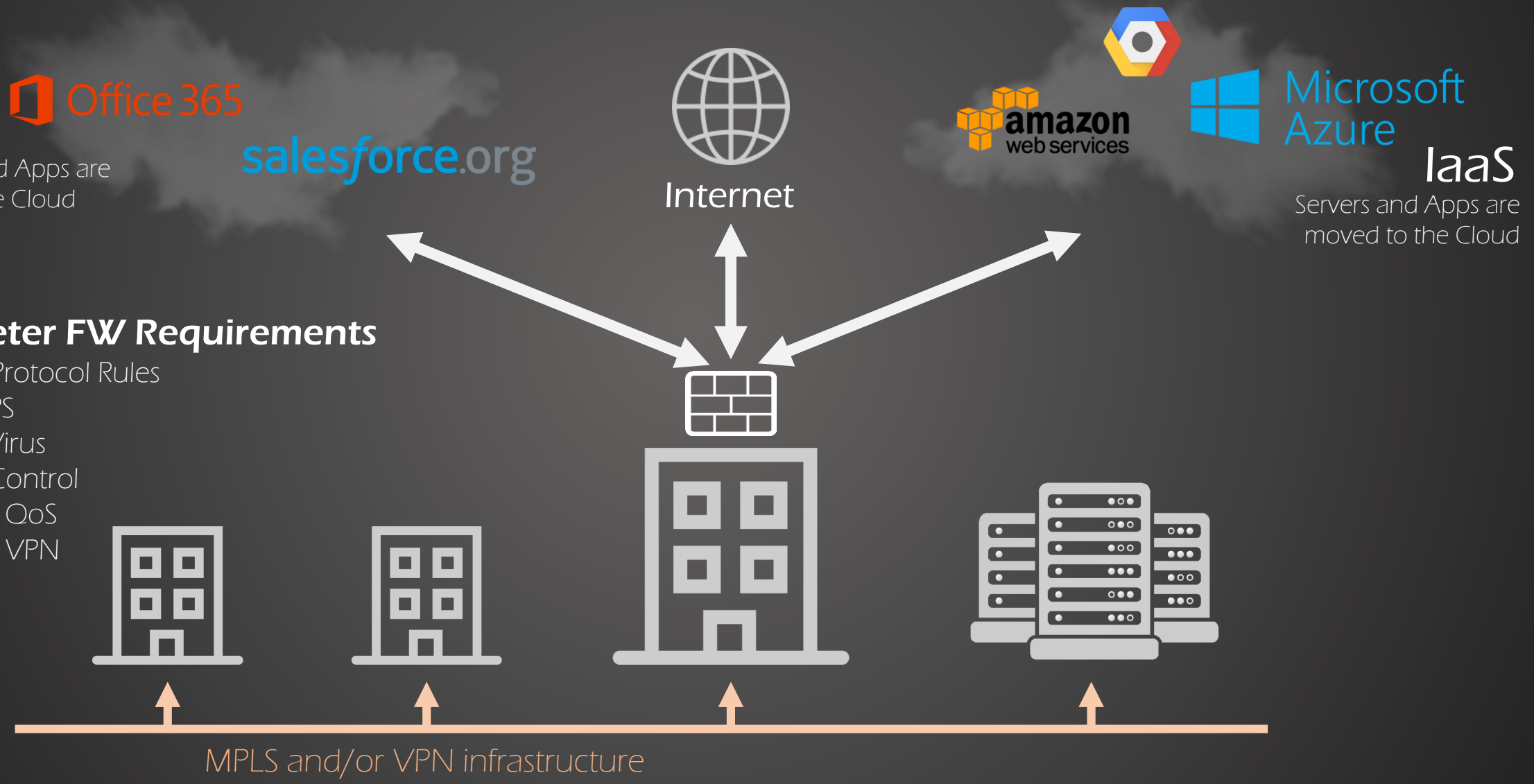
NextGen Firewall
+
Web Application Firewall

= Cloud Generation Firewalls

Cloud Drives
New Security Approach

Connecting everything together

Traditional WAN does not scale!

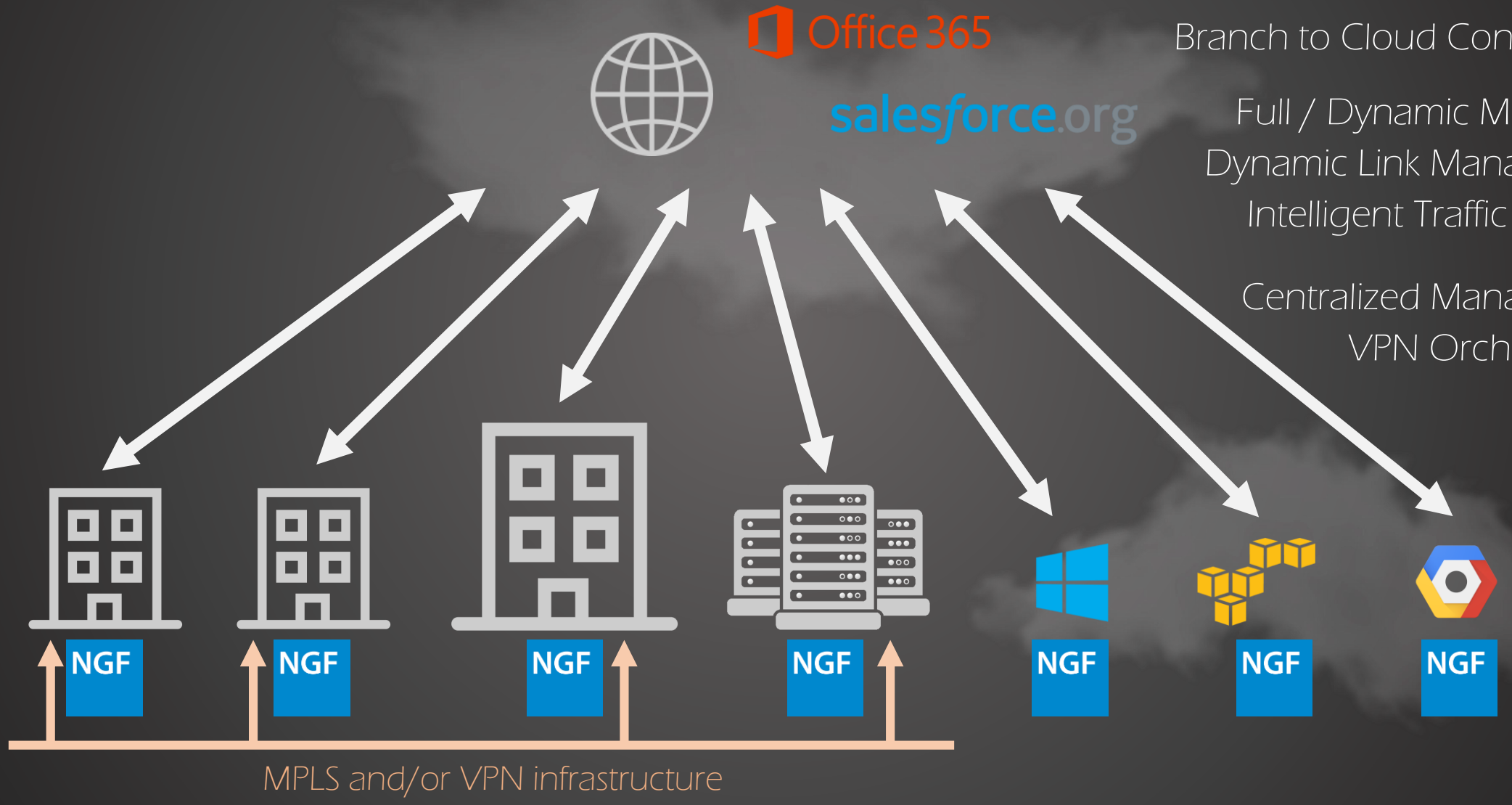


WAN architecture for the Cloud!

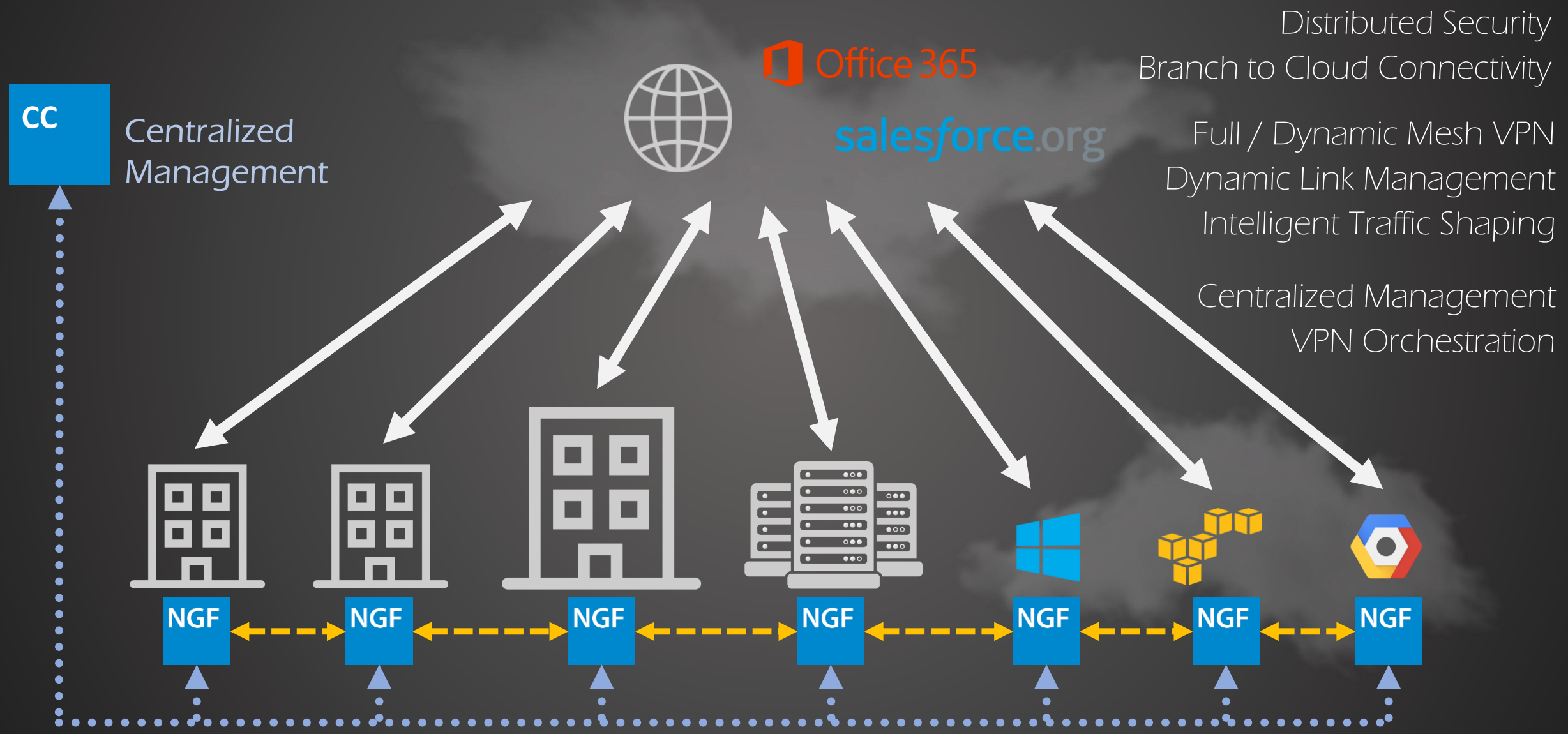
Distributed Security
Branch to Cloud Connectivity

Full / Dynamic Mesh VPN
Dynamic Link Management
Intelligent Traffic Shaping

Centralized Management
VPN Orchestration



WAN architecture for the Cloud!



Can I Really go Without MPLS?

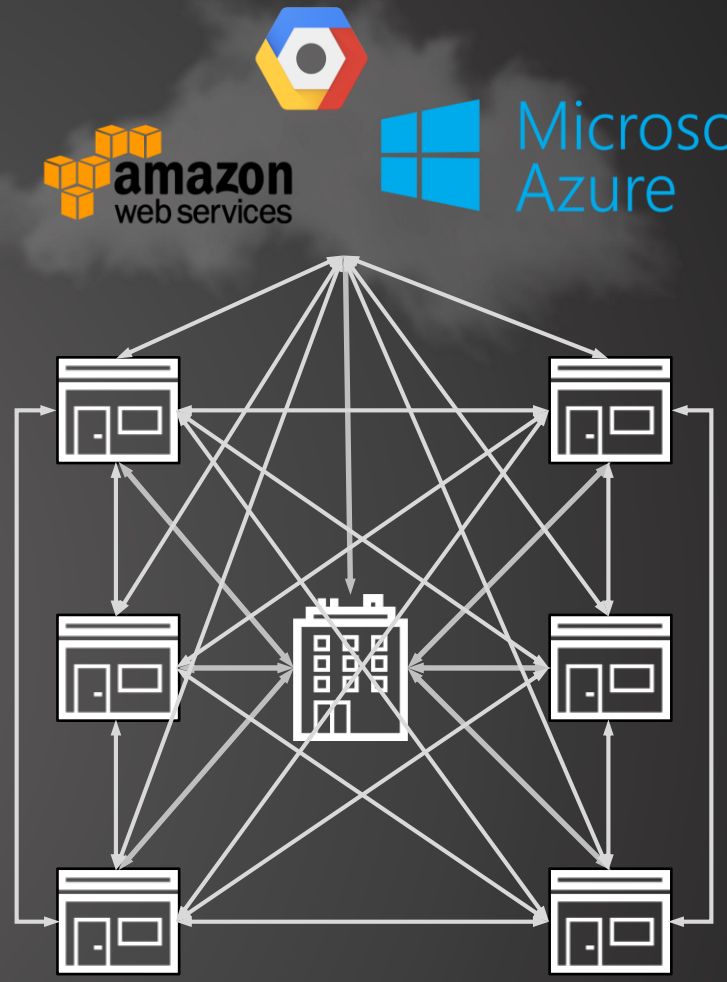
And use Internet For my Backbone?

SD-WAN

The new Trend

« The emergence of public cloud computing has redered traditional enterprise WAN architectures to be suboptimal, from a price and performance perspective »

« SD-WAN is a new approach to support branch office connectivity in a simplified and cost-effective manner ».



Hub & Spoke: 7 connections

Cloud Era: 28 connections

Gartner®

SD-WAN

The new Trend

... *SD-WAN is the optimum replacement for MPLS* ...

Gartner®

SD-WAN Key Components

1

Lightweight replacement of traditional WAN routers to terminate carriers

(MPLS / LTE / Internet / …)

http://blogs.gartner.com/andrew-lerner/2015/07/07/sdwan/

Gartner®

1 Replacement for WAN Router

PHYSICAL

Small – F18 (1.0 Gbps)

Enterprise (40 Gbps)

Office / Industrial / IoT

Optional 3G / 4G

Integrated ADSL

VIRTUAL

vmware

Xen

KVM

Hyper-V

PUBLIC CLOUD

Microsoft Azure

amazon web services

Google Cloud Platform

Barracuda

SD-WAN Key Components

2

Load sharing traffic across multiple VPN / WAN Connections, dynamically, based on policies & application requirements

http://blogs.gartner.com/andrew-lerner/2015/07/07/sdwan/

Gartner®

2 Dynamic Load Sharing on Multi VPN

TINA VPN - 1 tunnel on multiple WANs Simultaneous

Dynamic Bandwidth & Latency Detection

Adaptive QoS

Bandwidth first

Latency first

Become immune to bandwidth fluctuations (VOIP & VIDEO)

Barracuda

SD-WAN Key Components

3

Easy management, configuration and orchestrations of WANs

http://blogs.gartner.com/andrew-lerner/2015/07/07/sdwan/

Gartner®

3 Easy Management & VPN Orchestration

Control Center – Enterprise Centralized Management

Graphic VPN design – Simple Dynamic / Full Mesh VPN setup

Zero Touch Deployment – Easy and Fast Rollout in Dispersed Networks

Distributed Policies & Configurations

Barracuda

SD-WAN Key Components

4

Provides Secure VPN and integrates additional network services

(Firewall / WAN Optimization / …)

http://blogs.gartner.com/andrew-lerner/2015/07/07/sdwan/

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4 Additional Features besides VPN

NextGen Firewall – Users & Applications for Control & Visibility

Advanced Malware Protection – Barracuda ATP with Sandboxing

WAN Optimization

Email & Web Security

Barracuda

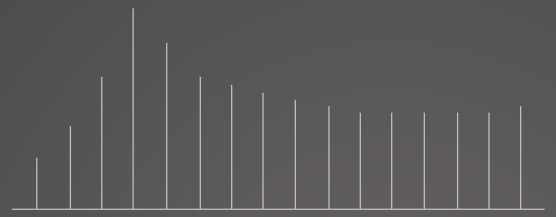
Making Traffic Intelligence Adaptive

- React to Changes in Bandwidth
- React to latency changes
- React to packet loss
- Auto mode: Avoid large configuration work !!

HOW?

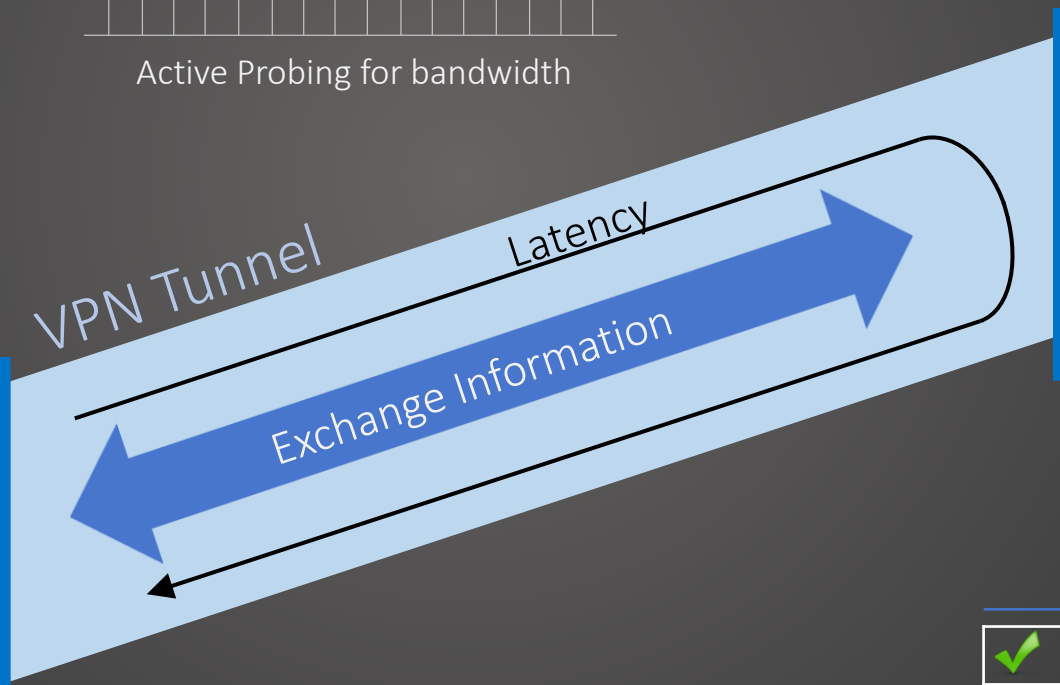
Improving SD-WAN

Acquire Information

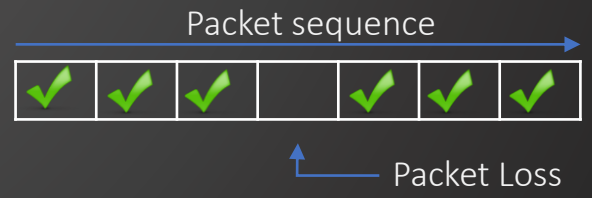


Active Probing for bandwidth

Received Bandwidth

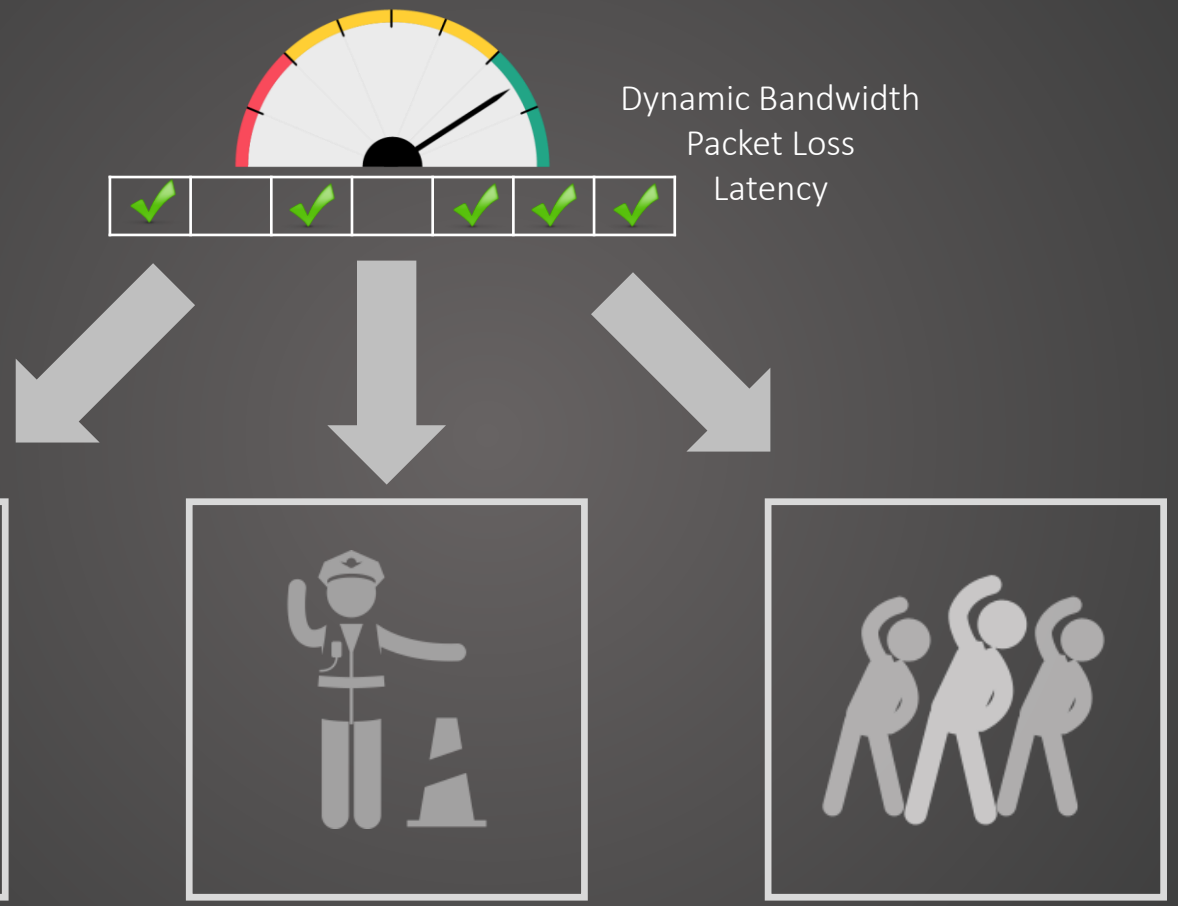


Received Bandwidth



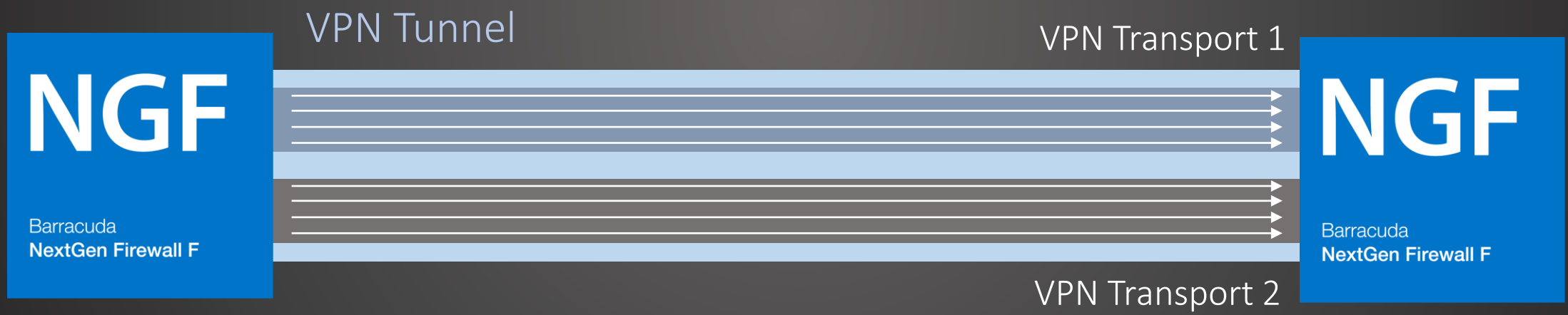
Improving SD-WAN

Use the acquired information



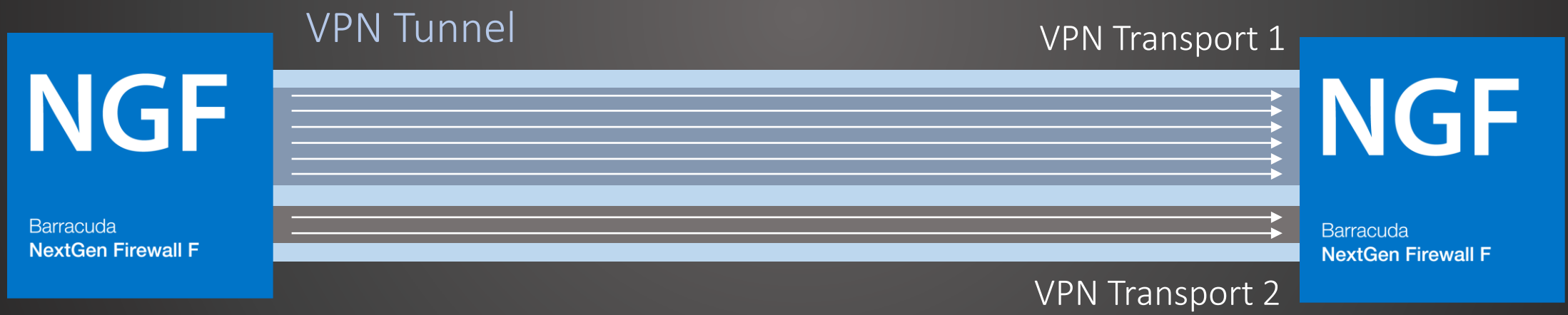
Transport Balancing

Improving SD-WAN



Transport Balancing

Improving SD-WAN



Dynamic Transport Selection

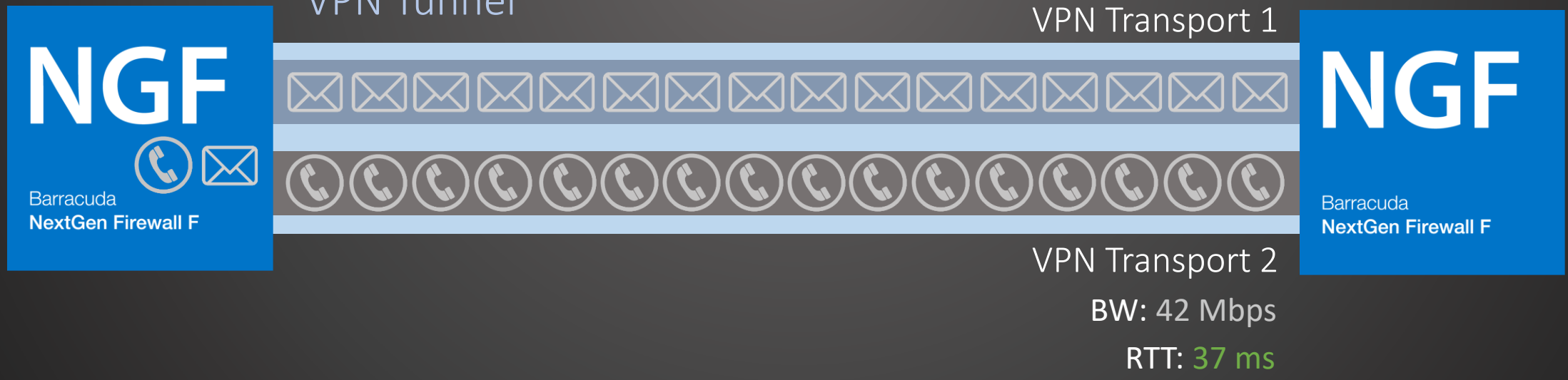
Improving SD-WAN

Use best bandwidth

Use best latency

Use best quality

Fallback is still in place



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Improving SD-WAN

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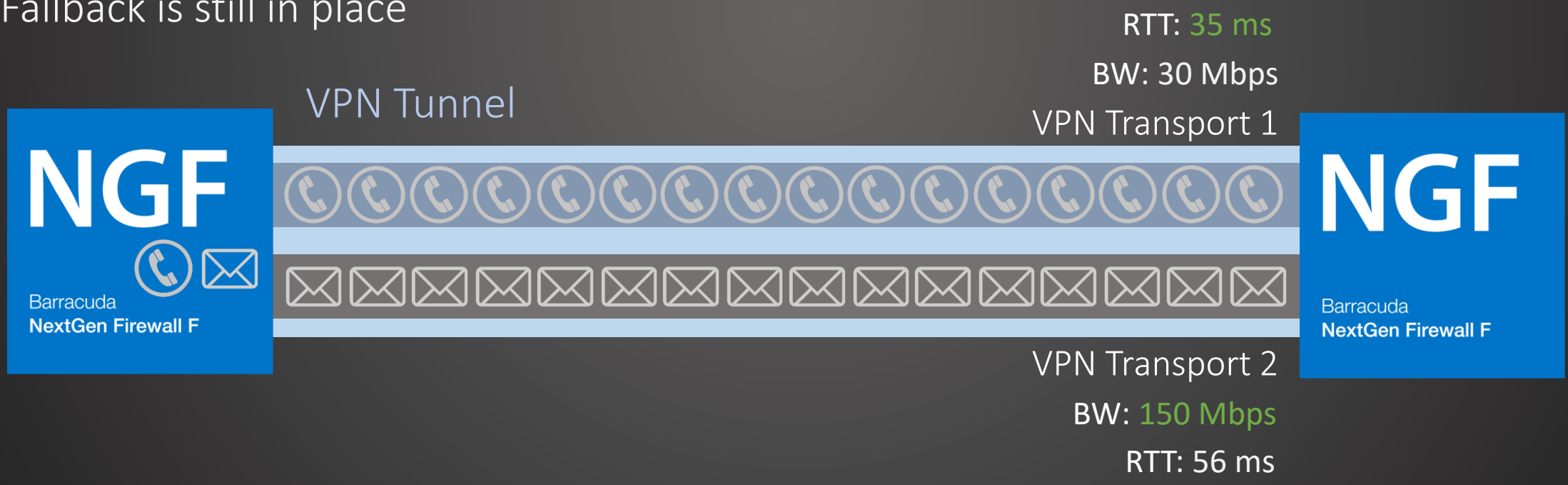


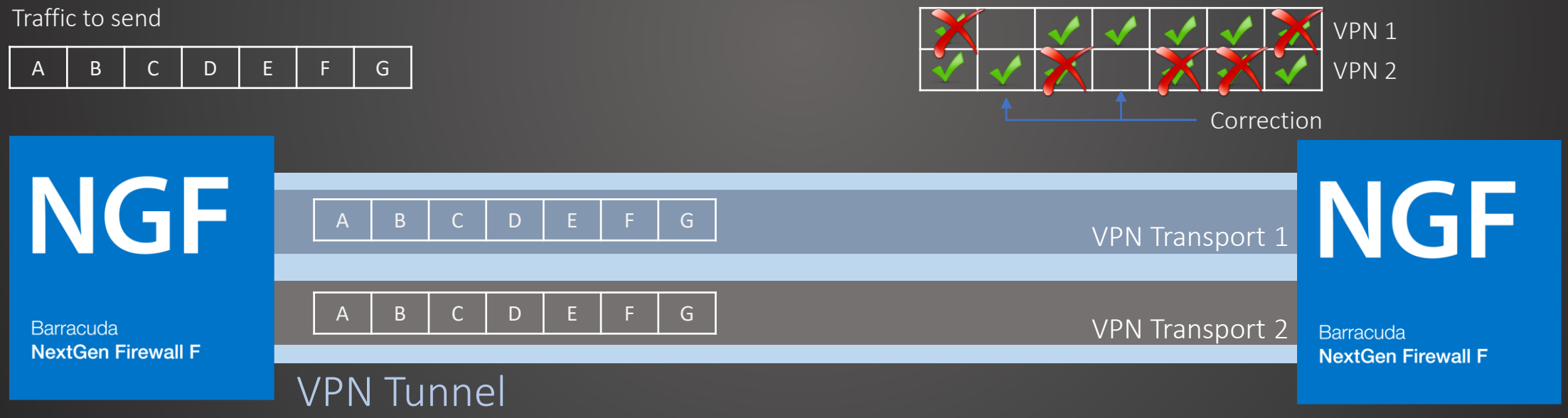
Forward Error Correction (Traffic Replication)

Improving SD-WAN

Traffic is duplicated on two transports

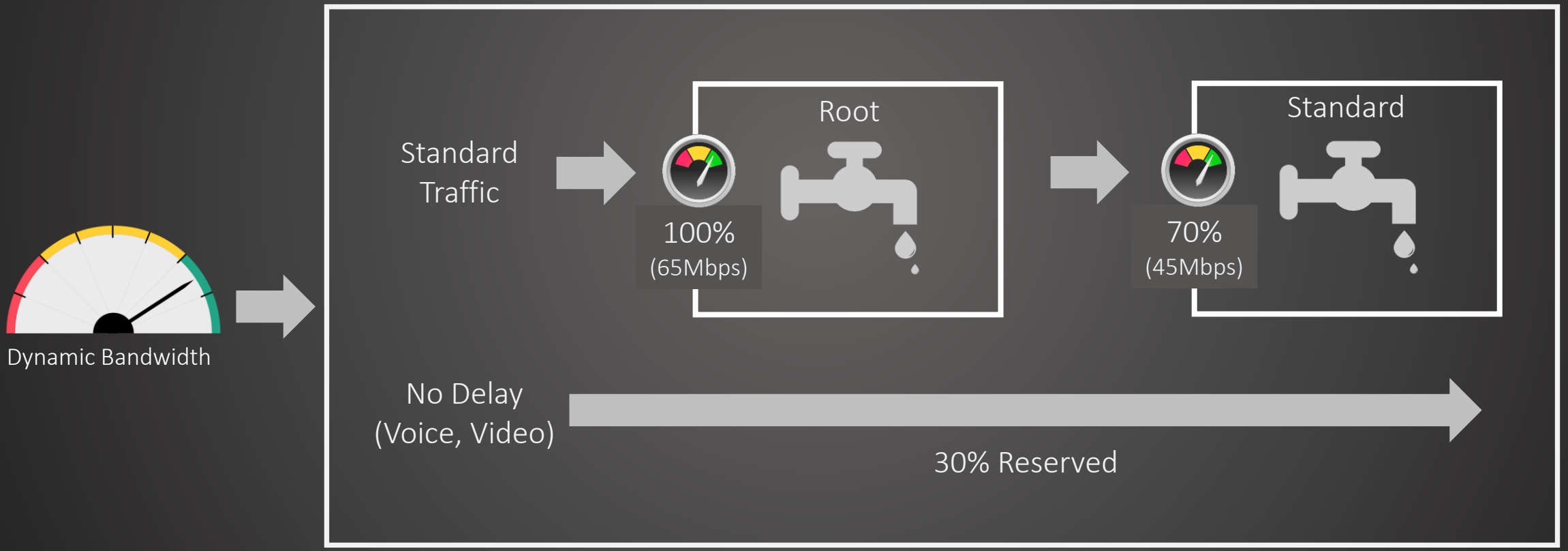
Transports should have similar latency values

Zero failover time



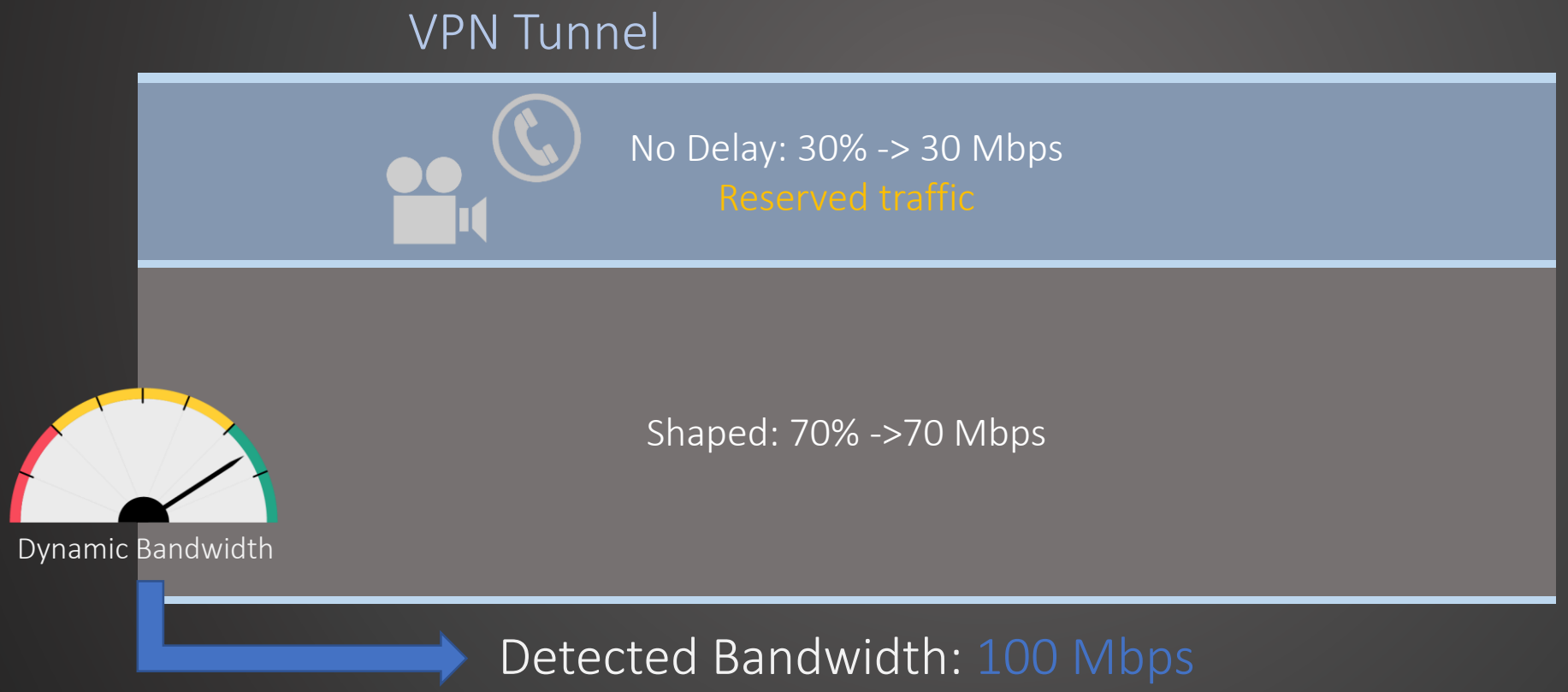
Traffic Shaping

Improving SD-WAN



Adaptive Bandwidth Detection & Reservation

Improving SD-WAN



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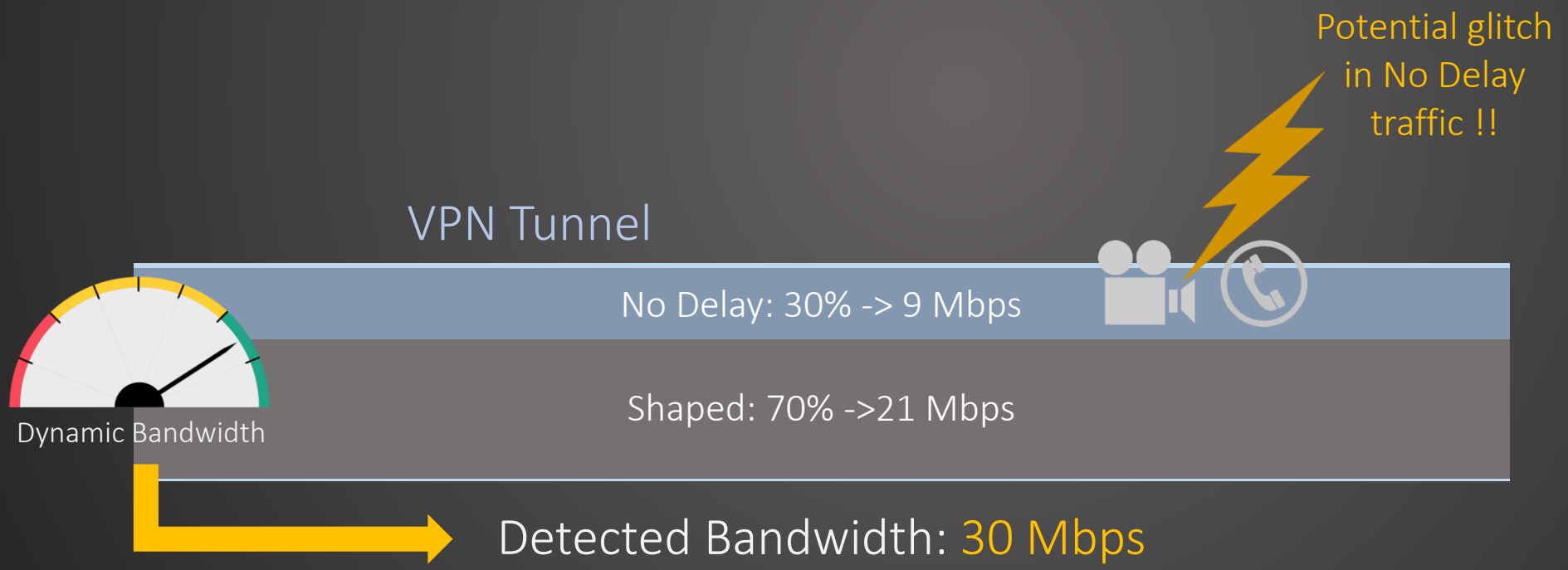
Improving SD-WAN



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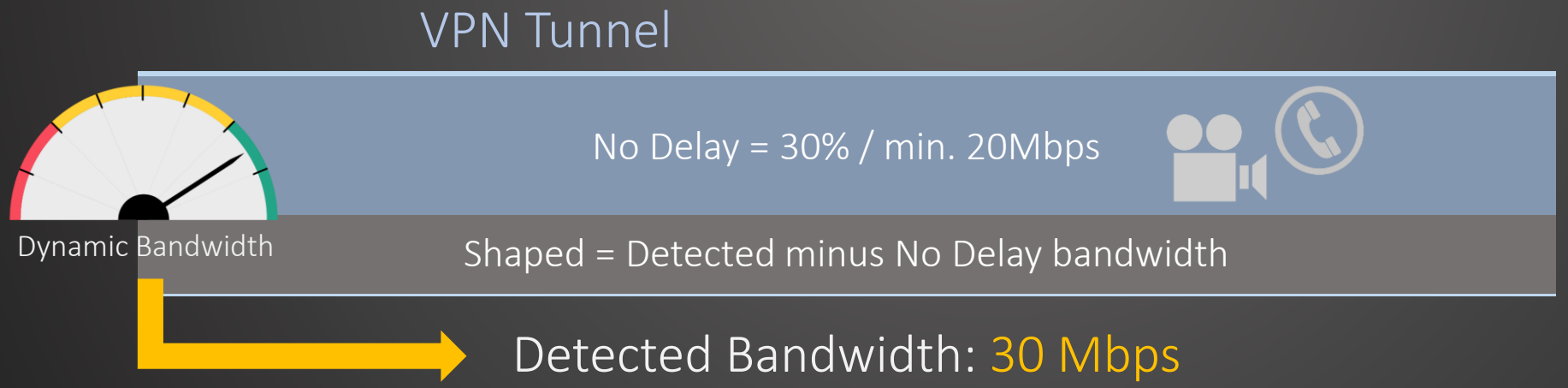

Demo

Does it realy work?

https://www.youtube.com/watch?v=RVM5rEwnUvs

Thank You