



Top Considerations When Deploying SD-WAN



Top 4 Challenges for Business Connectivity

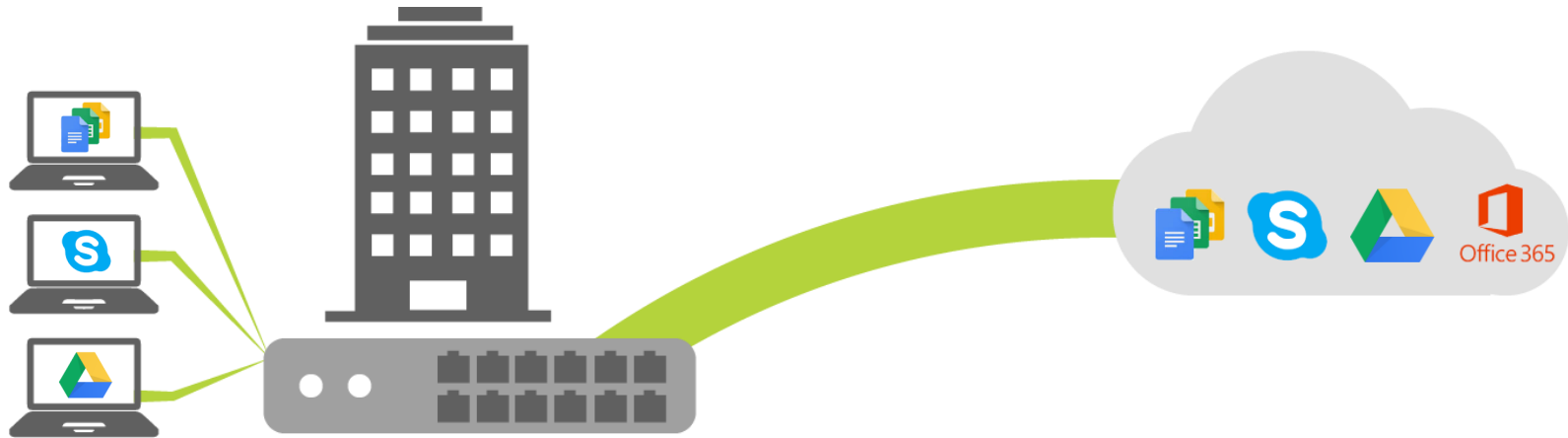
- Uptime / Outages
- Expensive Bandwidth
- Inconsistent IP Voice and Video Performance
- Remote and Mobile Connectivity



SD-WAN is the Solution

- Overview of SD-WAN Technology
- How SD-WAN helps solve business connectivity challenges

Connectivity Uptime

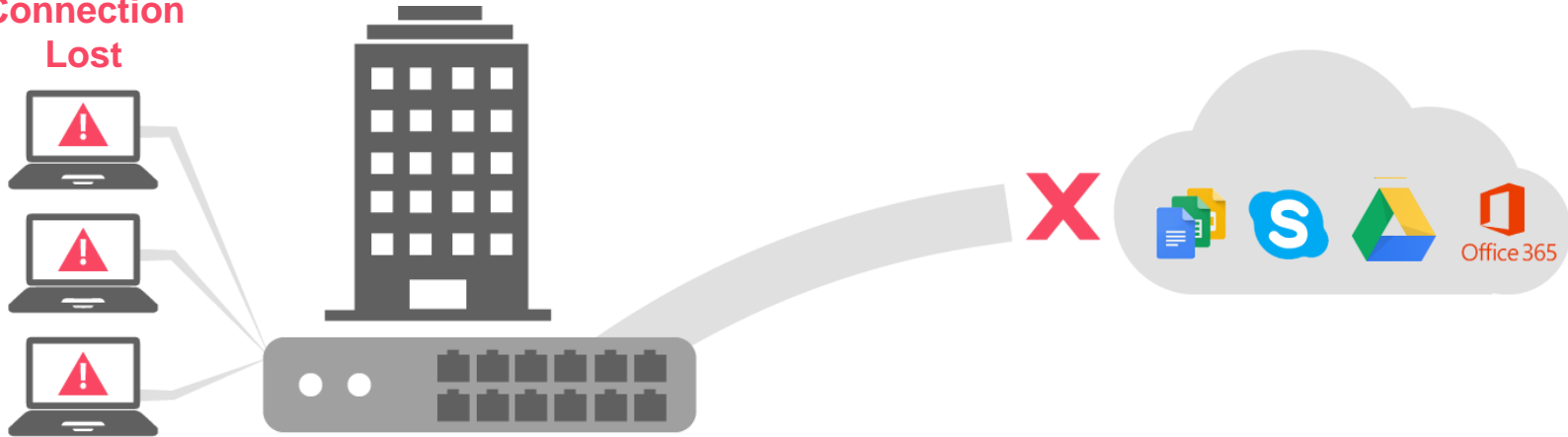


Cloud and private apps require constant connectivity.

Connectivity Uptime



Connection
Lost



If you connection goes down, your office stops working.

Expensive Connectivity



MPLS - N\$5000 / 1 Mbps / Month

Cable/DSL - N\$1850 / 10Mbps / Month

LTE – N\$1150 / 30Mbps / Month (125GB)



Expensive Connectivity

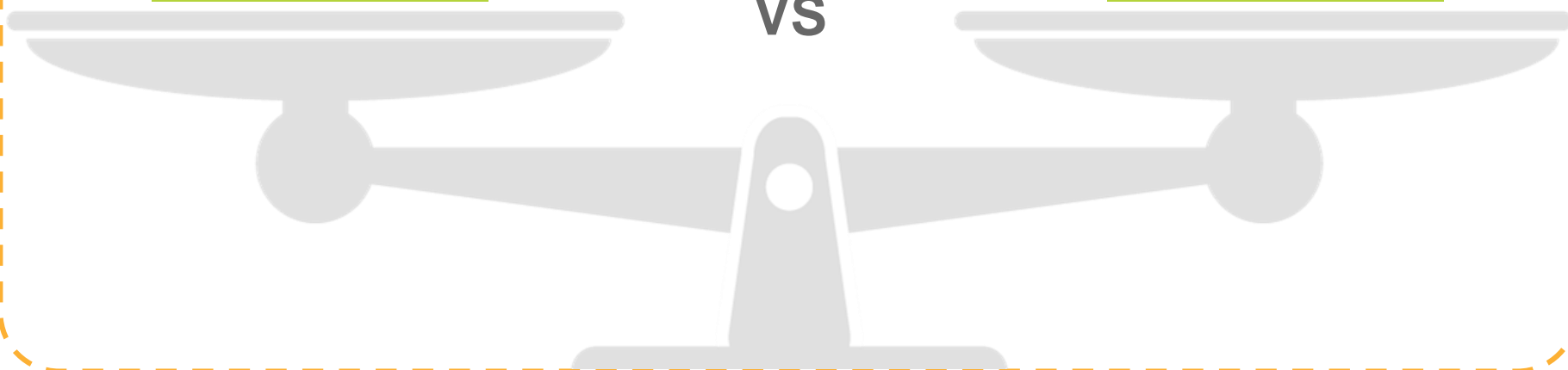


10Mbps Private Line over 100km:
N\$30 000+ / Month



VS

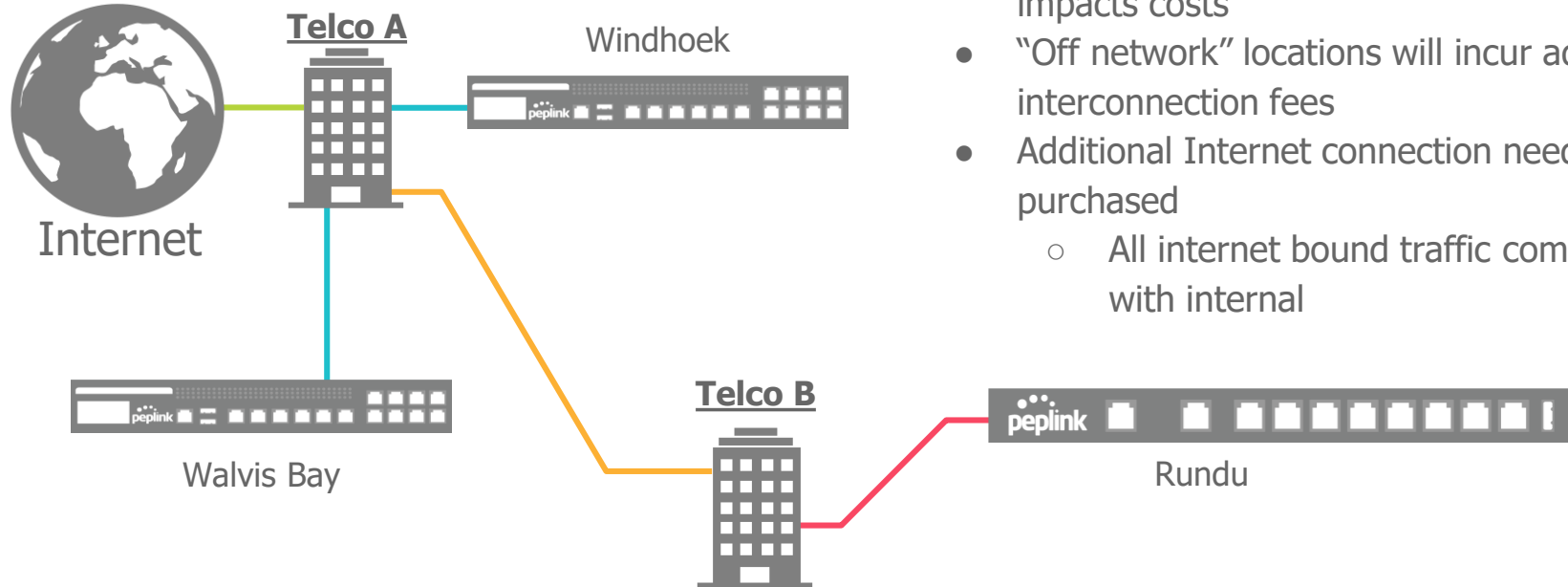
10Mbps DSL and
uncapped 30Mbps LTE:
\$3000 / Month



Expensive Connectivity



Traditional MPLS Network

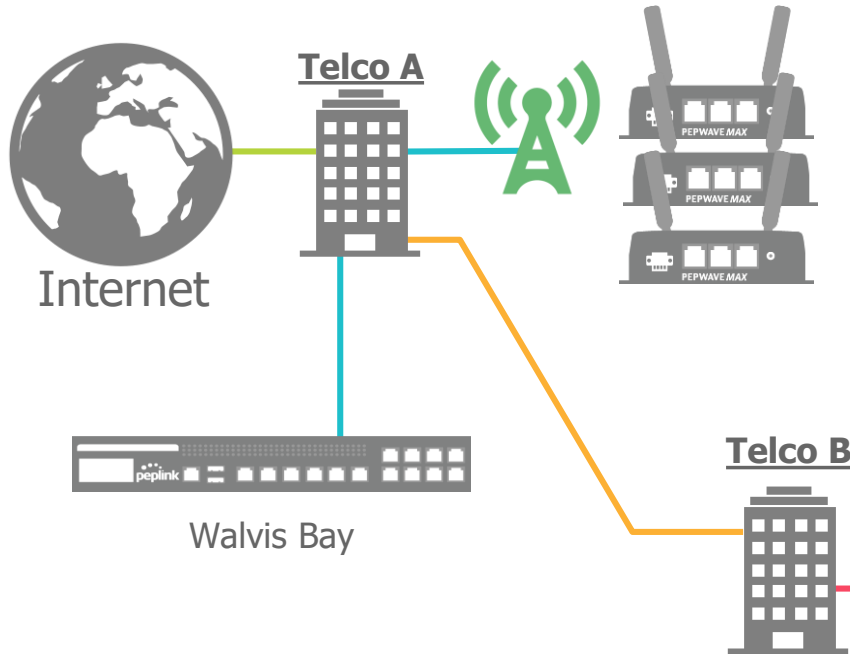


- Carrier/Incumbent network reach greatly impacts costs
- “Off network” locations will incur additional interconnection fees
- Additional Internet connection needs to be purchased
 - All internet bound traffic competes with internal

Expensive Connectivity



Traditional MPLS Network + Private LTE



Private LTE services from carriers

- Same private access as MPLS
- Can be integrated into existing MPLS or other networks
- Long setup times
- Carrier lock-in
- Coverage?

Poor Quality Connectivity



Internet

Inconsistent VoIP and Video will lead to inconsistent and missed communications.

Unreliable Cellular



Internet



Office 365



Cellular working does not require constant and missed connections.



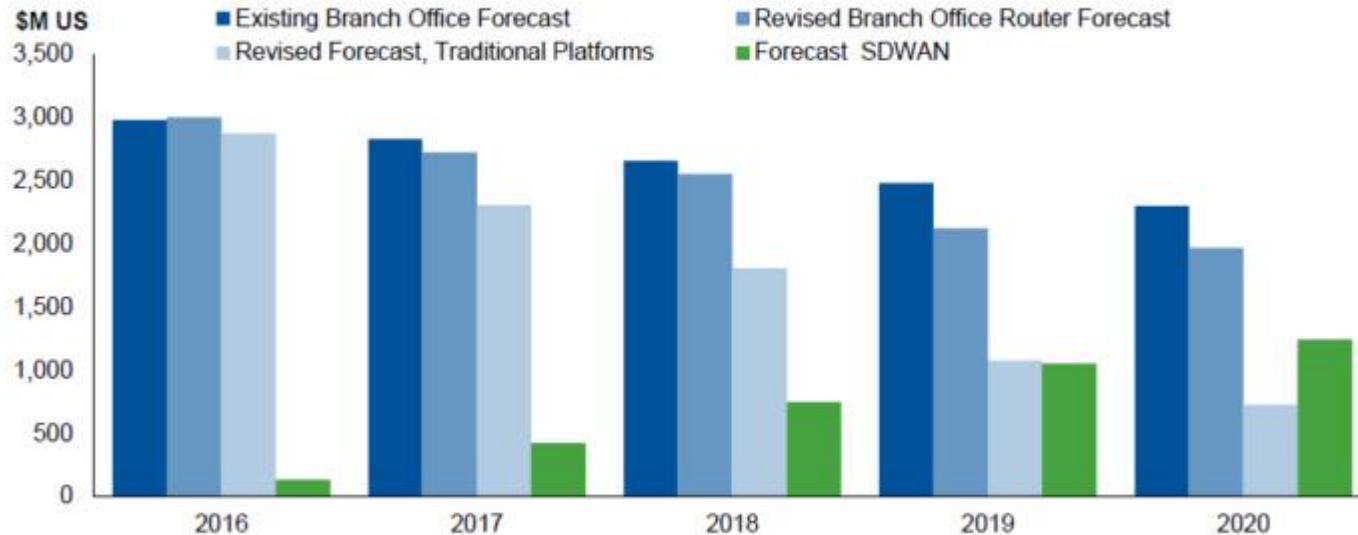
What is SD-WAN?

What is SD-WAN?

SD-WAN: Rapidly Emerging Terminology



Branch Office Routing Forecast (\$M US)



Source: Gartner, November, 2016

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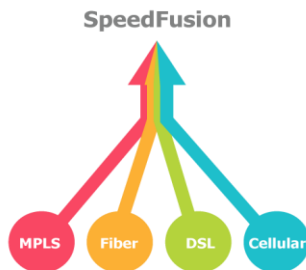
Gartner

What is **SD-WAN**?



WAN Virtualization

Peplink routers enable you to build one logical WAN connection using multiple technologies (e.g. xDSL, MPLS, cellular, fiber)



Secure VPN

Using SpeedFusion VPN technology, branch offices gain secure, local network access to cloud resources



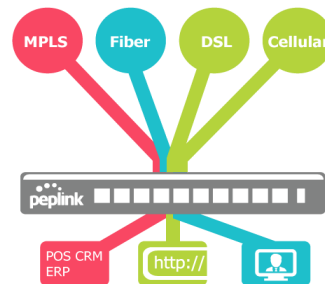
Centrally Managed

Using InControl 2, network administrators gain full control over their networks using a single interface.



Traffic Optimization

Peplink routers actively monitor WAN quality and makes intelligent decisions to direct application traffic flow.

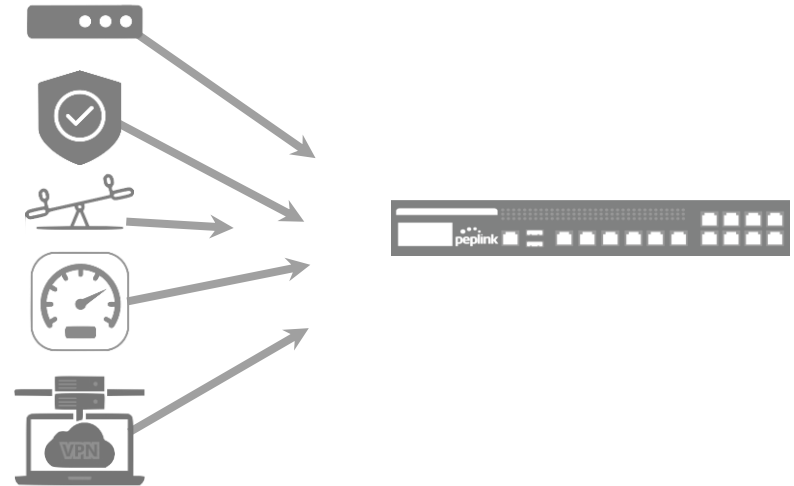


What is **SD-WAN**?

Equipment Consolidation

An SD-WAN router can replace:

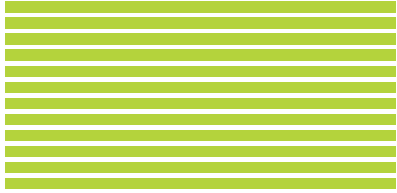
- Routers
- Firewalls
- Load Balancers
- WAN Optimizers
- VPN Appliances



Equipment Consolidation

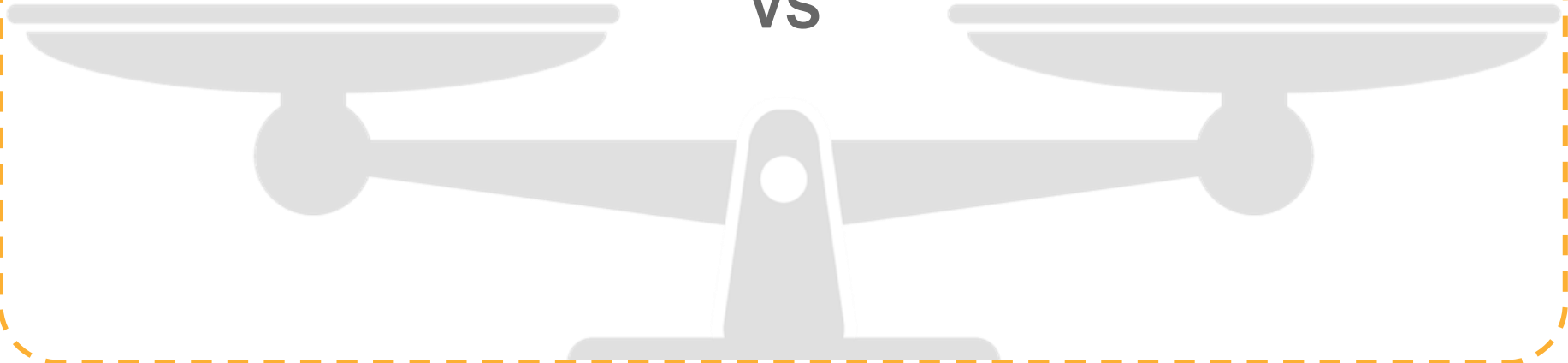


5 x Annual support and
maintenance

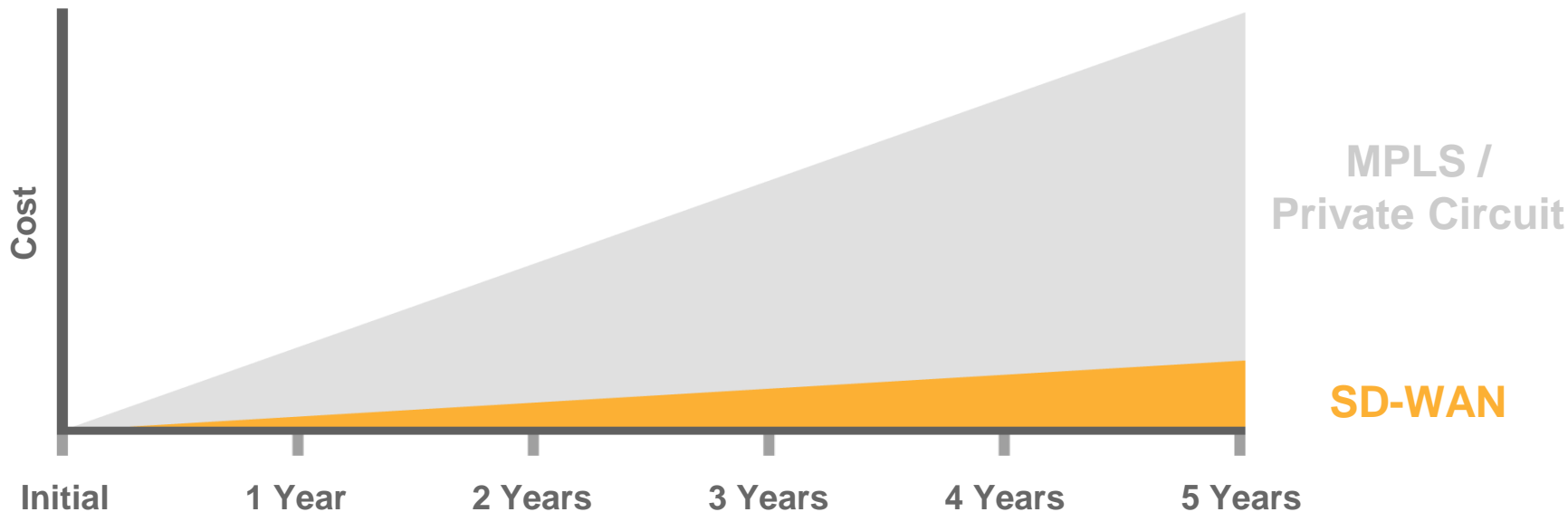


VS

1 x Annual support
and maintenance

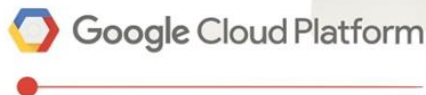


Scalable SD-WAN Connectivity

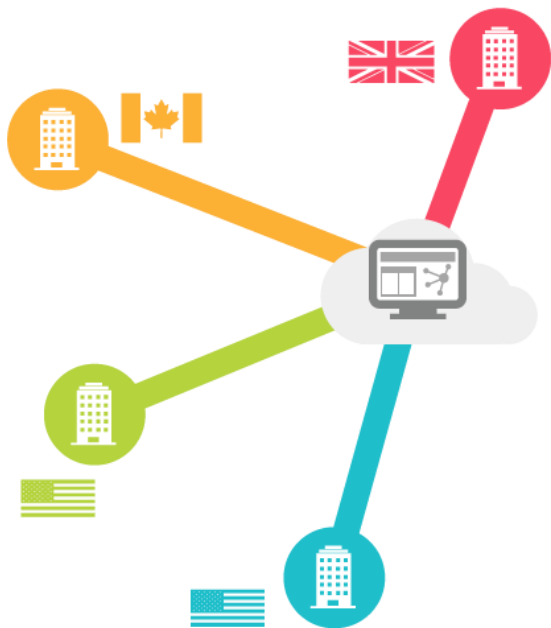


Over time, those cost savings can add up!

SD-WAN is Cloud Optimized



SD-WAN Easy Branch Networking



SD-WAN solutions dramatically simplify the complexity associated with management, configuration and orchestration of WANs.”

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- Seamless failover
- Use the best mix of Internet and Private circuits at each location
- Scale bandwidth without carrier or integration bottlenecks
- Optimize performance between sites

SD-WAN Secure Branch Networking **peplink**



“

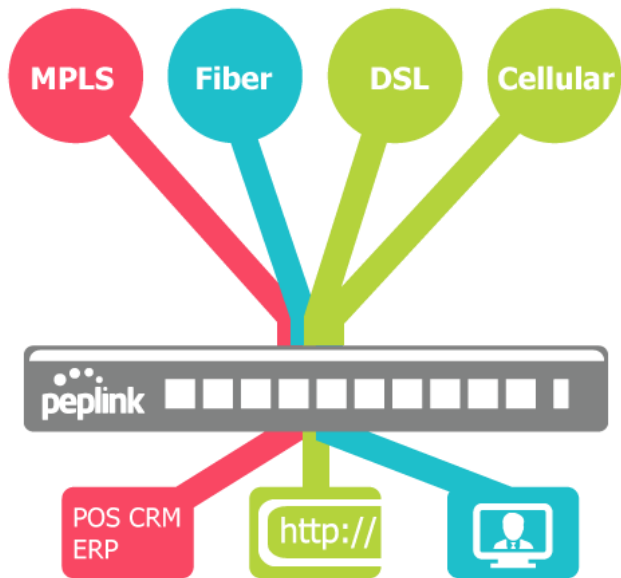
SD-WAN solutions must provide secure VPNs, and have the ability to integrate additional network services and offload Internet-destined traffic closer to the edge of the network.”

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- Local breakout for internet bound traffic
- Automatic secure routing to branch and cloud locations
- Customized application priority and optimization

SD-WAN Traffic Steering

Intelligent Traffic Management



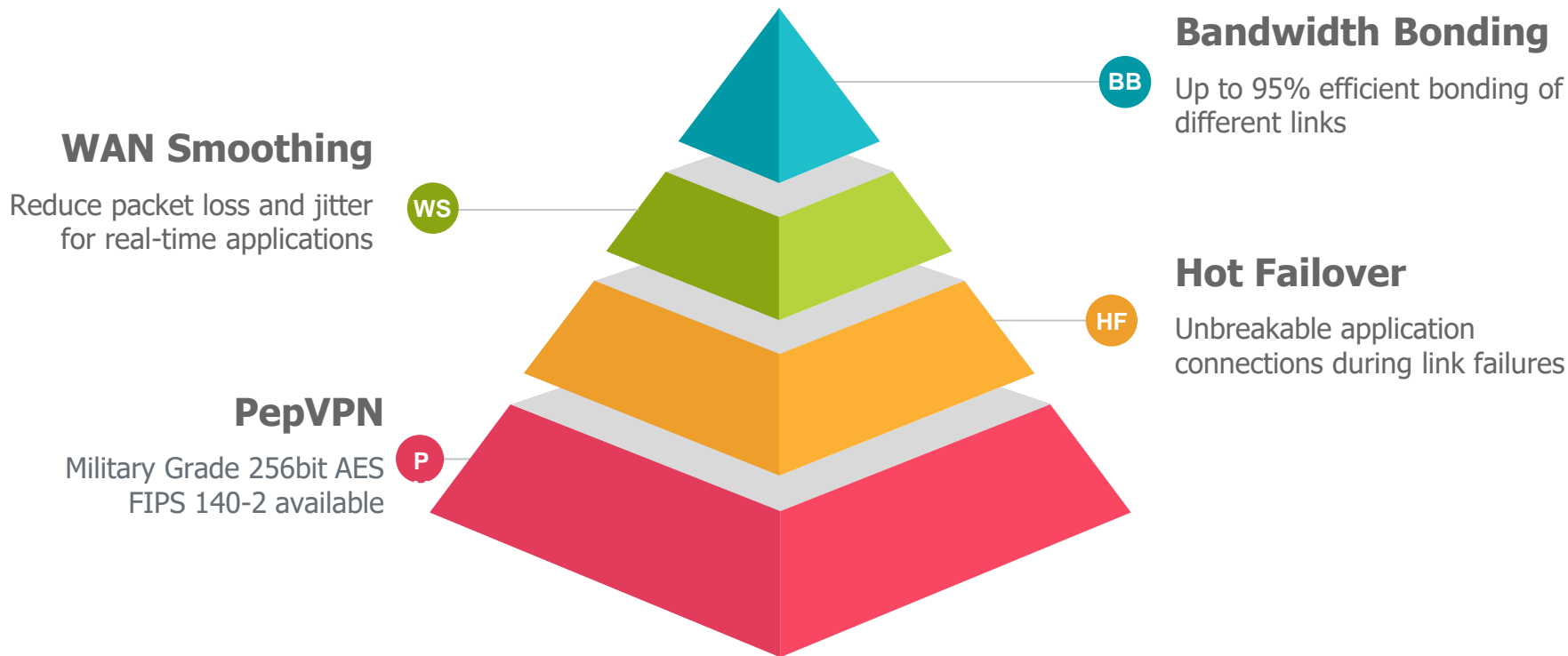
Based on business and/or application policies, SD-WAN solutions allow for load sharing of traffic across multiple WAN connections in an efficient and dynamic fashion.”

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- Actively monitors WAN quality and makes intelligent decisions to direct application traffic flow
- Policies can be customized based on application for security and performance preferences
- Once configured, traffic steering requires no human interaction

Peplink's SD-WAN: SpeedFusion

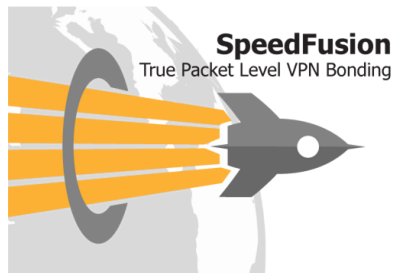
Core Technologies



The Peplink **SD-WAN** Advantage



A Leader in WAN Virtualization



InControl 2 SD-WAN Controller



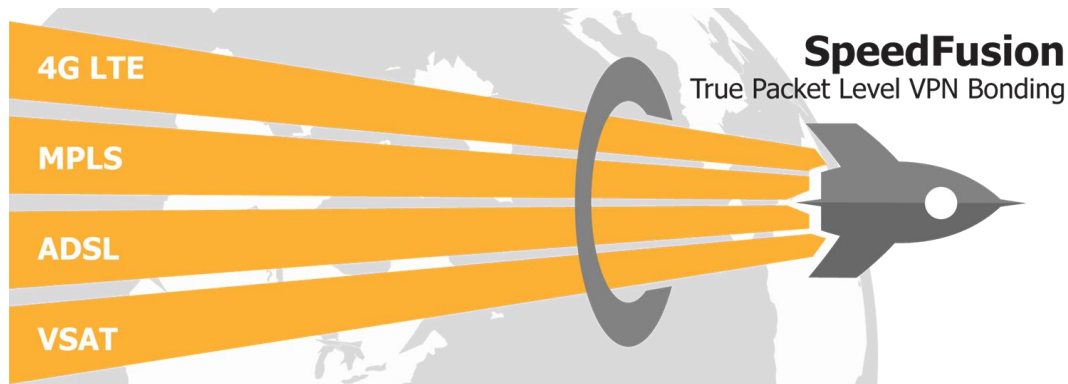
Vast Array of Mobile Products



SD-WAN Virtual Appliance



The Peplink SD-WAN Advantage



Bandwidth Bonding technology combines multiple links into a single fast, reliable private connection.

- Connection speed: is the combination of each link's individual speed.
(10Mbps + 10Mbps = 18Mbps)
- Reliability is the combination of each link's uptime.
(97.26% + 97.26% + 97.26% = 99.998% reliability)
(10 days of downtime a year reduced to 0.0075 days)



Case Studies



Case Study - Mobile Mammography. LSU Health, USA.



Life-Saving Mammograms in Rural Louisiana

- 4x bonded cellular from multiple carriers, MAX HD2, HD4, BR1 and Balance 580
- Enables high bandwidth X-ray transfers, Unbreakable VoIP inside vehicle
- **Winning Factors**
 - Unbreakable cellular connection in rural area, transfer speed doubled
 - Large three dimensional X-ray images take just minutes to upload over an established bandwidth of 22Mbps

"This solution allows us to send images from remote locations that typically have poor cellular coverage" - Dr. Jerry McLarty, LSU Health.



Case Study - Harris County Sheriff's Office. USA.

Award Winning Mobile Command Unit Connectivity

- Deployed Balance 580 to 6 mobile assets and Balance 1350 to HQ
- Connectivity: Public Safety private LTE, commercial LTE, VSAT, microwave broadband
- **Winning Factors**
 - SpeedFusion aggregated bandwidth allows for high definition media streaming and other vital real-time information delivery
 - Always online - connection redundancy is now possible



"The Mobile Command Units have now found a more efficient way to get the job done!" -Sergeant Bryan Rudel, Harris County Sheriff's Office.



Case Study - Town of Tonawanda, NY, USA.



MPLS Alternative

- Load balance between 50 Mbps MPLS FiOS and wireless PTP link
- 9 sites connected to central HQ
- Replaced with Peplink SpeedFusion bonded VPN
- **Winning Factors**
 - 92% savings
 - 15x more bandwidth

"To date, my devices have been up and running continuously with no intervention for 114 days with zero issues." - Andrew W. Pudlak, IT Manager



Case Study - Hickory Farms. US.



500+ Branch Provisioning via InControl 2 Cloud Management

- 560+ MAX BR1s rolled out
- InControl 2 pivotal to branch cloning, proactive monitoring
- **Winning Factors:**
 - Easy branch setup, no technical personnel required
 - VLAN segmentation provided the required security

"Peplink's InControl suite allowed us to be more proactive in managing kiosk connectivity as well as anticipate issues." Darrell Woolaver. Manager of Retail Applications, Hickory Farms.



Case Study - Costco Wholesale. Mexico.

MPLS Supplement

- 80 retail branches
- combined 2 MPLS circuits into 1, extra bandwidth via additional links and 3G
- **Winning Factors**
 - Significantly drove costs down - ability to add low-cost bandwidth to existing MPLS contracts
 - Used for anything from VoIP, video surveillance, disaster recovery, credit card authorizations





Thanks!



Q&A

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