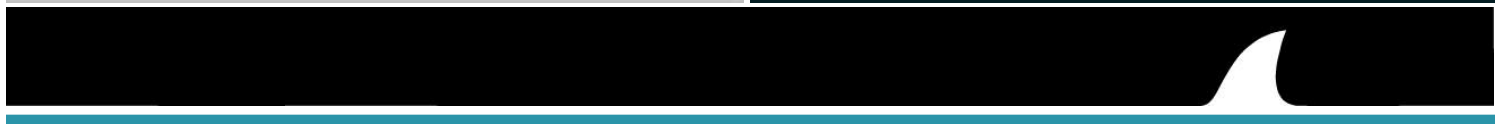




We're In Your Corner



# The World has Changed

---

- Evolution of mobility and cloud have changed how we work
- We now live in a subscription economy
- Business as usual is no longer acceptable
- Over the past 15 years, 52% of the Fortune 500 has disappeared



## Fundamentals of IT have changed

---

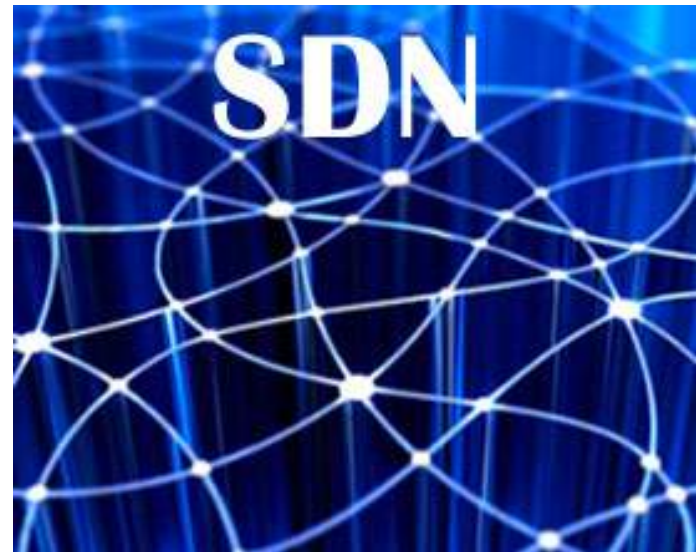
- The Fundamentals of IT have shifted....The Rapid Adoption of Cloud/SaaS has changed the requirements of the Global WAN.
- Slow application performance, latency, end user frustration, rising network costs, and declining productivity are no longer acceptable.
- **Is SDWAN the Answer?**



# Objectives

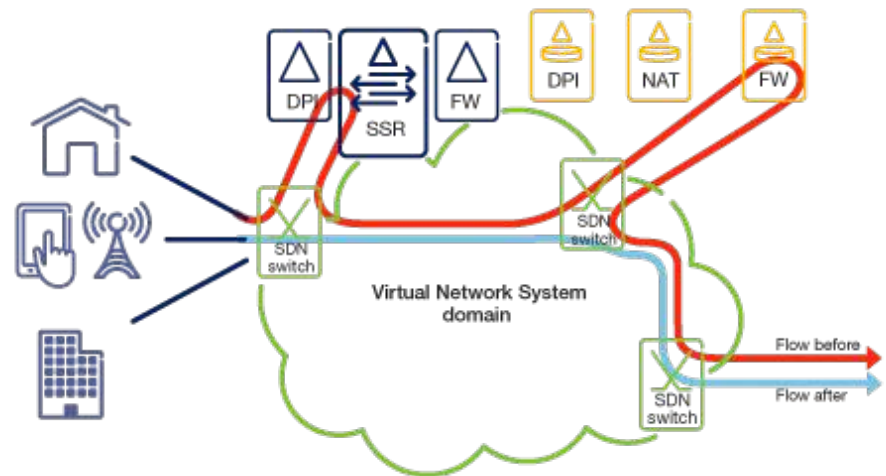
---

- Flavors of SDWAN
- Things to Consider
- Adoption Cycle
- Where can we go
- SDN Players




# SDN Defined

- Can mean a lot of things but for us -"an approach to [computer networking](#) that allows [network administrators](#) to manage network services through [abstraction](#) of higher-level functionality.

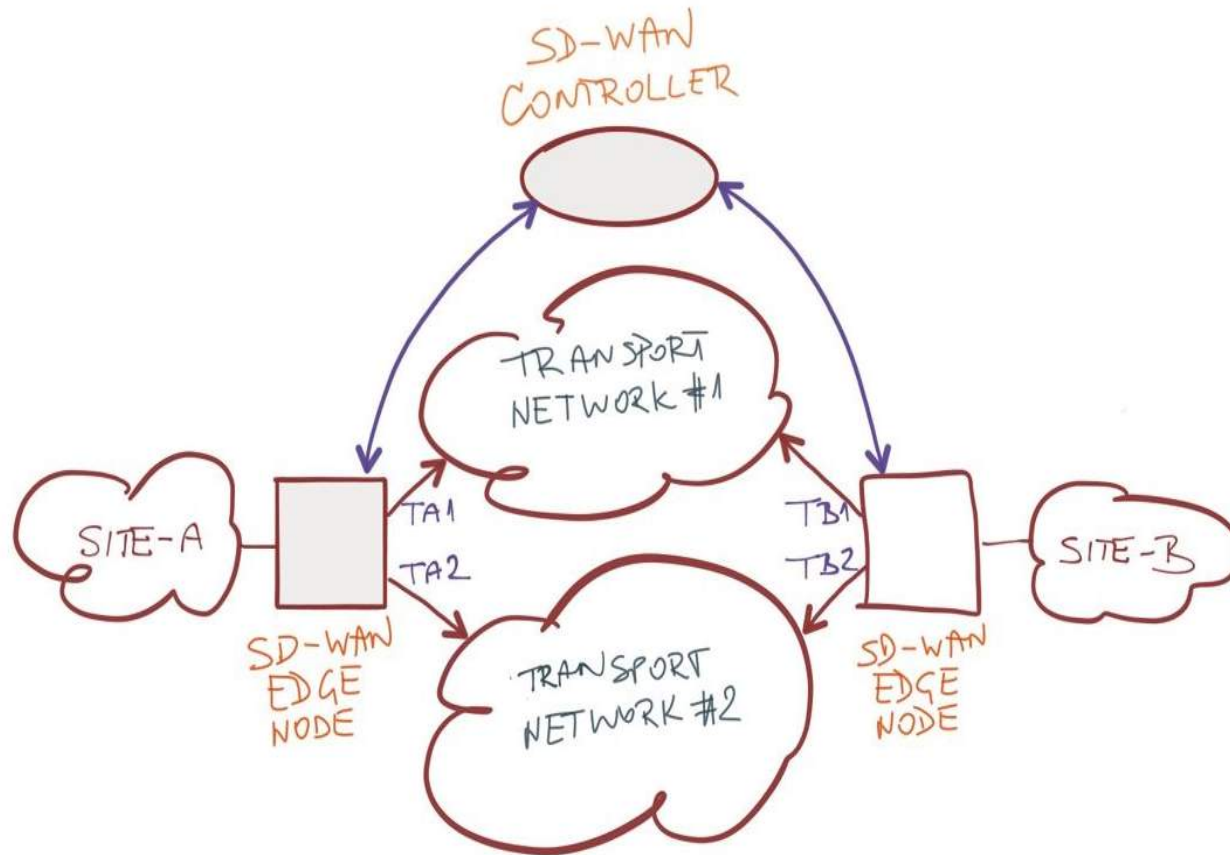


# Flavors of SD-WAN

---

- Broadband/Internet Aggregation
    - How do I factor it in with MPLS
    - How to I deploy with my existing network?
    - Where and what type of traffic do I handle?
  - Application Acceleration
    - What types of data am I working with and will it help?
    - Do I use something today?
  - Dynamic Bandwidth
    - Public Cloud providers
    - Data centers
  - NFV
    - What do I need in the cloud?
  - General things to consider
    - Regional/Domestic/International
    - What am I trying to solve (redundancy, replacement, simplification, speed, cost...)?
- 

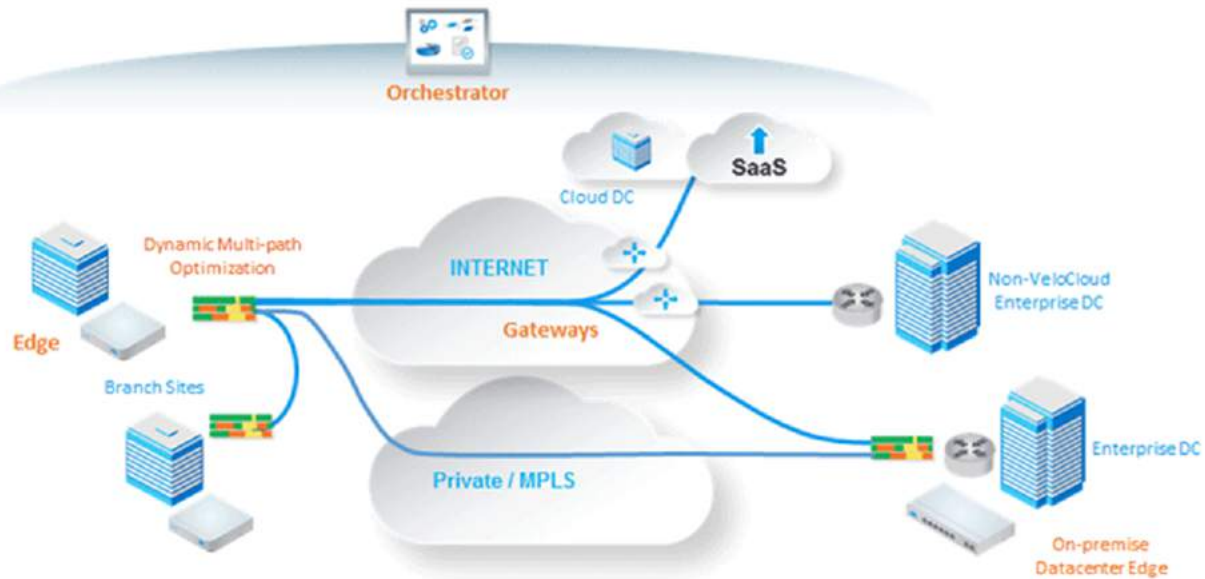
# Internet Aggregation



# Internet Aggregation

## *VeloCloud Cloud-Delivered SD-WAN*

Internet and private circuits • SaaS and enterprise applications • Onsite and cloud deployments





## Things to Consider

---

- Where do I need to deploy
  - Regional – 1-2 states
  - Domestic – Across the US
  - International – Highly distributed
- What am I trying to solve
  - Redundancy – Aggregate circuits
  - Replacement – Alternative to MPLS
  - Simplification – Easier admin/deployment
  - Speed/Cost – Faster and Cheaper
- Are you using any of the public cloud providers or SaaS providers?
- Are you using Microsoft 365?
- What colocation providers are you using?
- Where do you plan to host your real time communications?
- Do you want to deploy with your existing MPLS network?
- What type of data are you working with?



## How suppliers are deploying

---

- Leverage a particular Technology
  - Velocloud
  - Cisco iWan
  - Versa Networks
  - SilverPeak
  - Proprietary
- Leverage Technology Partners Cloud Controllers or deploy their own
- Will only deploy in conjunction with their own network
- Customer can self manage
- Act as Aggregator(Domestic/International)



## What problems is SDN trying to solve

---

- Utilizing Internet circuits where typically MPLS or other technologies used in the past
- Purchase hardware to solve a problem
  - WAN acceleration, CDN, etc
- Long lead times to add sites
- Defined bandwidth requirements
- Quality of Service used to reduce latency and jitter for critical apps



# Characteristics of a SD-WAN

- Very dynamic in nature
- Software defined
  - Changes can be made quickly
  - Typically single pane of glass for administration
  - Better visibility into what's happening with bandwidth
  - API exposure
- Zero to little capex
- Faster updates and changes and companies add sites
- Redundancy easily added without extensive routing knowledge



## Where do we stand with Adoption

---

Very early in the cycle, but growing rapidly

Picture the future - Application Defined

Scale-Up/Down controlled by ERP

Items that will effect SDN

IoT

Wireless

PaaS

Controllers

Security



# SDN Players

---

Aryaka

WAN Acceleration

MPLS replacement

Velocloud

Bandwidth aggregation

Bigleaf

Bandwidth aggregation

Megaport

Portal for data center connectivity

Level3(TWtelcom)

Dynamic Bandwidth

NTT- Bought Virtela-Firewall/WAN Acc

Hybrid connectivity

Dynamic Bandwidth

EvolveIP

Bandwidth aggregation



Table of Players

[https://docs.google.com/spreadsheets/d/1AM\\_24eSgxYQATTk7WqoSbplgkdS8ZbgEgrmdUj00SNM/edit?usp=sharing](https://docs.google.com/spreadsheets/d/1AM_24eSgxYQATTk7WqoSbplgkdS8ZbgEgrmdUj00SNM/edit?usp=sharing)



# Questions

---

