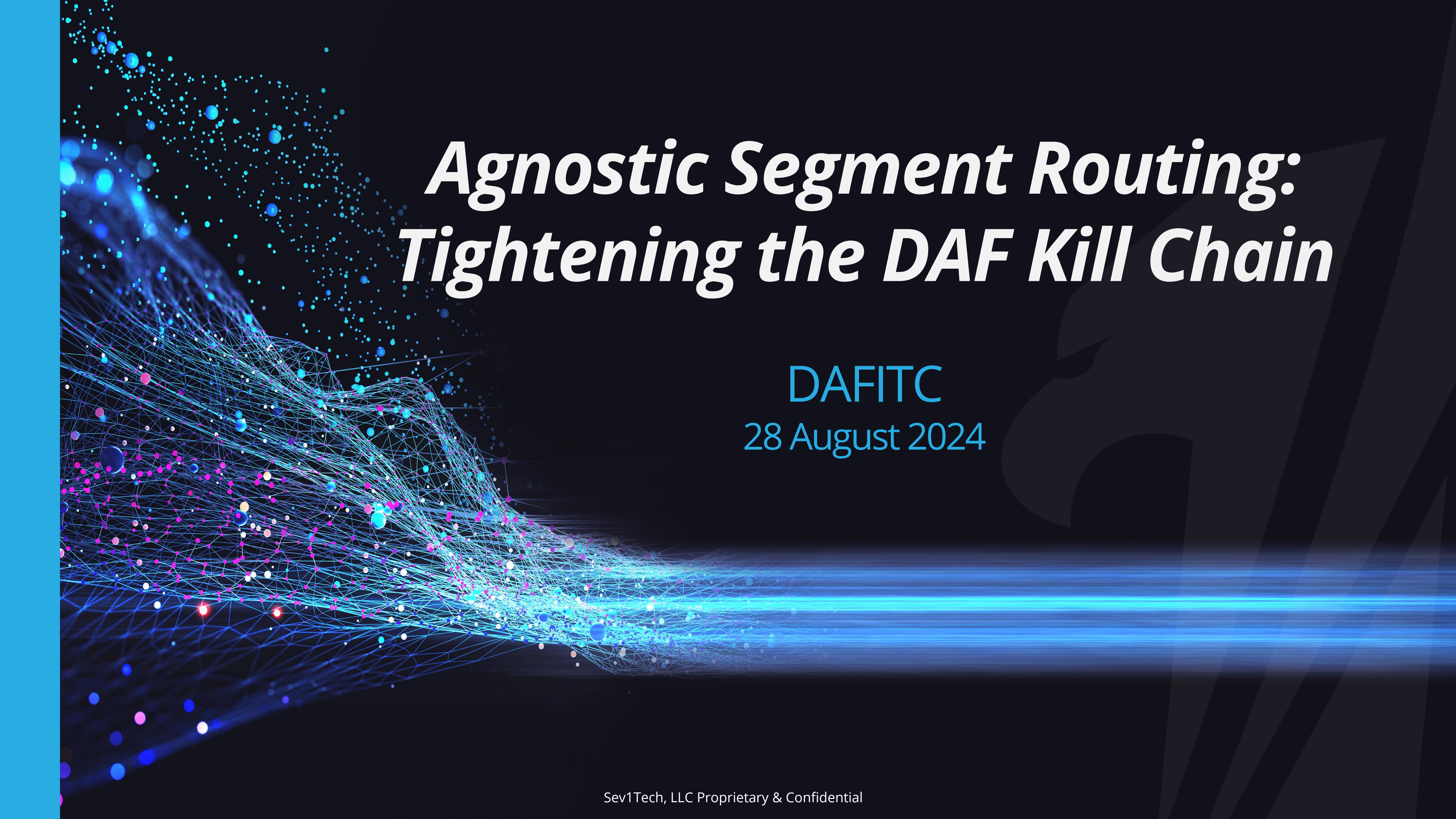




Agnostic Segment Routing: Tightening the DAF Kill Chain

DAFITC
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Presenters



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About Sev1Tech, LLC

Overview



IT modernization, networking, cybersecurity, cloud, engineering, fielding, training, and program support services



Trusted adviser for DoD, Federal and private sectors



Support to critical mission areas of national defense, intelligence, military and commercial space, homeland security, health



HQ Location

12700 Black Forest Lane
Ste 100
Woodbridge, VA 22192



Quick Facts

Founded: 2010
Business Size: Large
Business Type: Traditional
Status: U.S. Owned

BLUF - Key Takeaways

DAF GPC Mission Execution: Fast, Flexible Implementation

Open Standard: Vendor & Architecture Agnostic

Sev1Tech current solution for Space Force and ABMS: Segment Routing in Action

DAF Needs and Impacts

- Tighten the Kill Chain for GPC Operations
- Warfighting Mission Assurance
- User Experience and Interface
- Data Agility and Resiliency
- Scalability
- Increased Tech Integration
- Affordable = Reduce the Tech Debt



Credit: U.S. Space Force photo by Staff Sgt. Luke Kitterman

Advantages and Benefits



FLEXIBILITY

- Scalable capability across non-conforming organizations & disparate networks



DEPENDABILITY & EFFICIENCY

- Survivability, Increased Failover performance: more efficient data sharing
- Secure, Simplified end-to-end transport; Reduces multiple transport protocols reliance

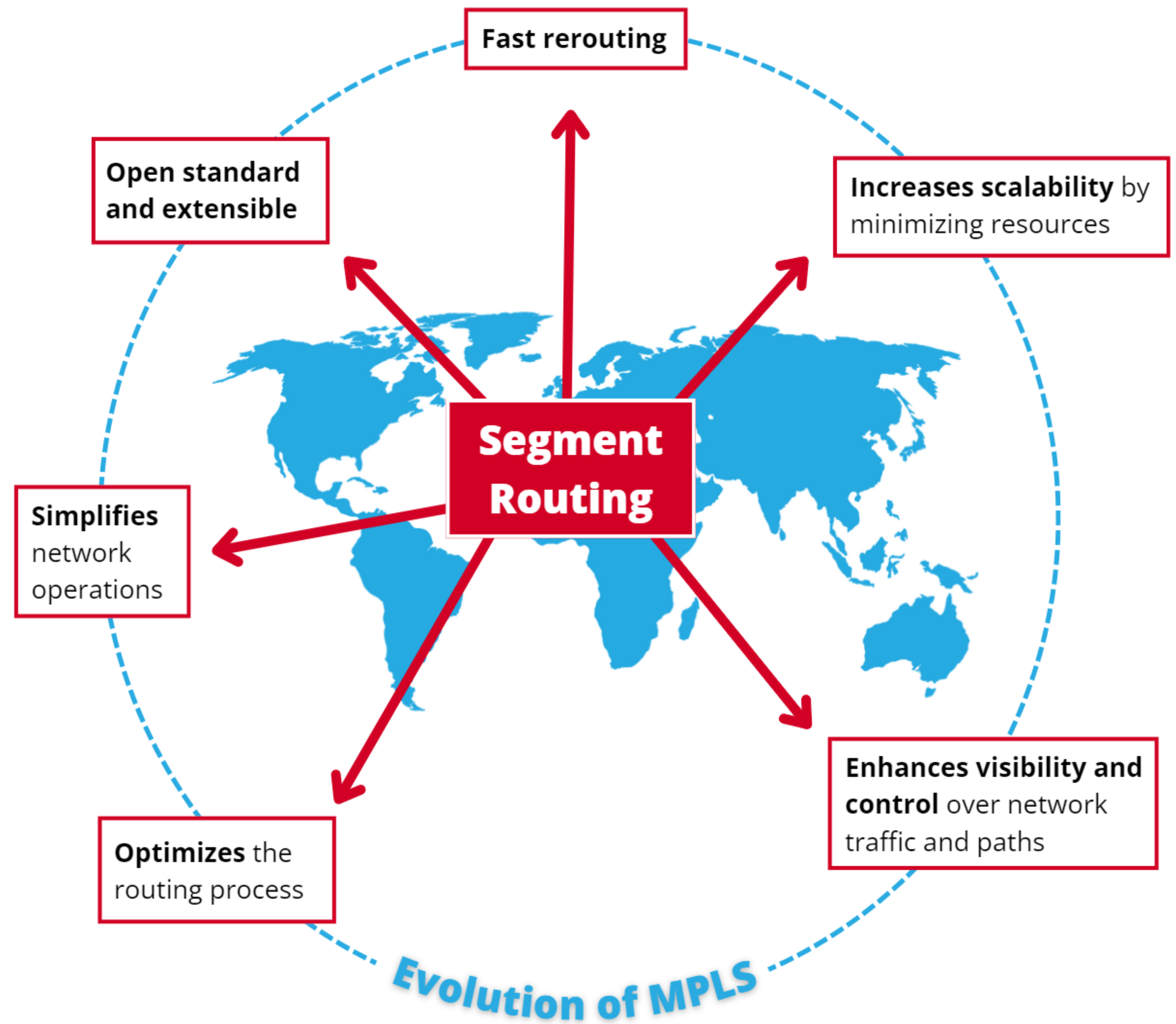


SPEED & ROBUSTNESS

- Quicker, more effective data access, visibility, control, & action
Significantly improved SD-WAN performance
- Innovation with Legacy system Accommodation

Applicable for ALL Command Levels: Unit, Program, MAJCOM/FIELDCOM, DAF Enterprise, DAF Battle Network

Segment Routing



Segment Routing in Action

Our current DTaaS solution delivers the most agnostic, survivable, secure, and exceedingly available global connectivity across multiple vendors' networking architectures, providing best-of-breed advantages.

What is our innovative Agnostic approach?



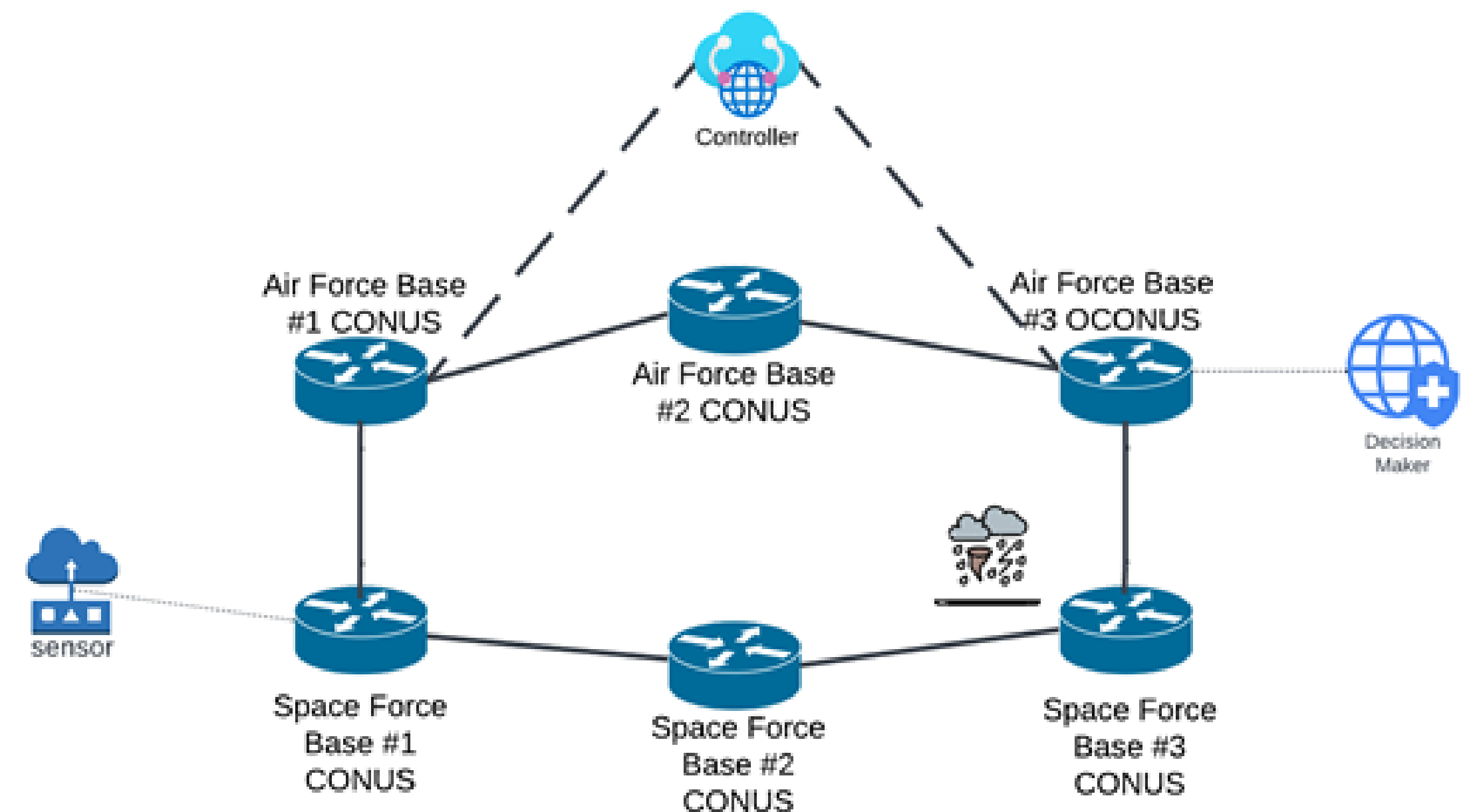
Scale



Controller



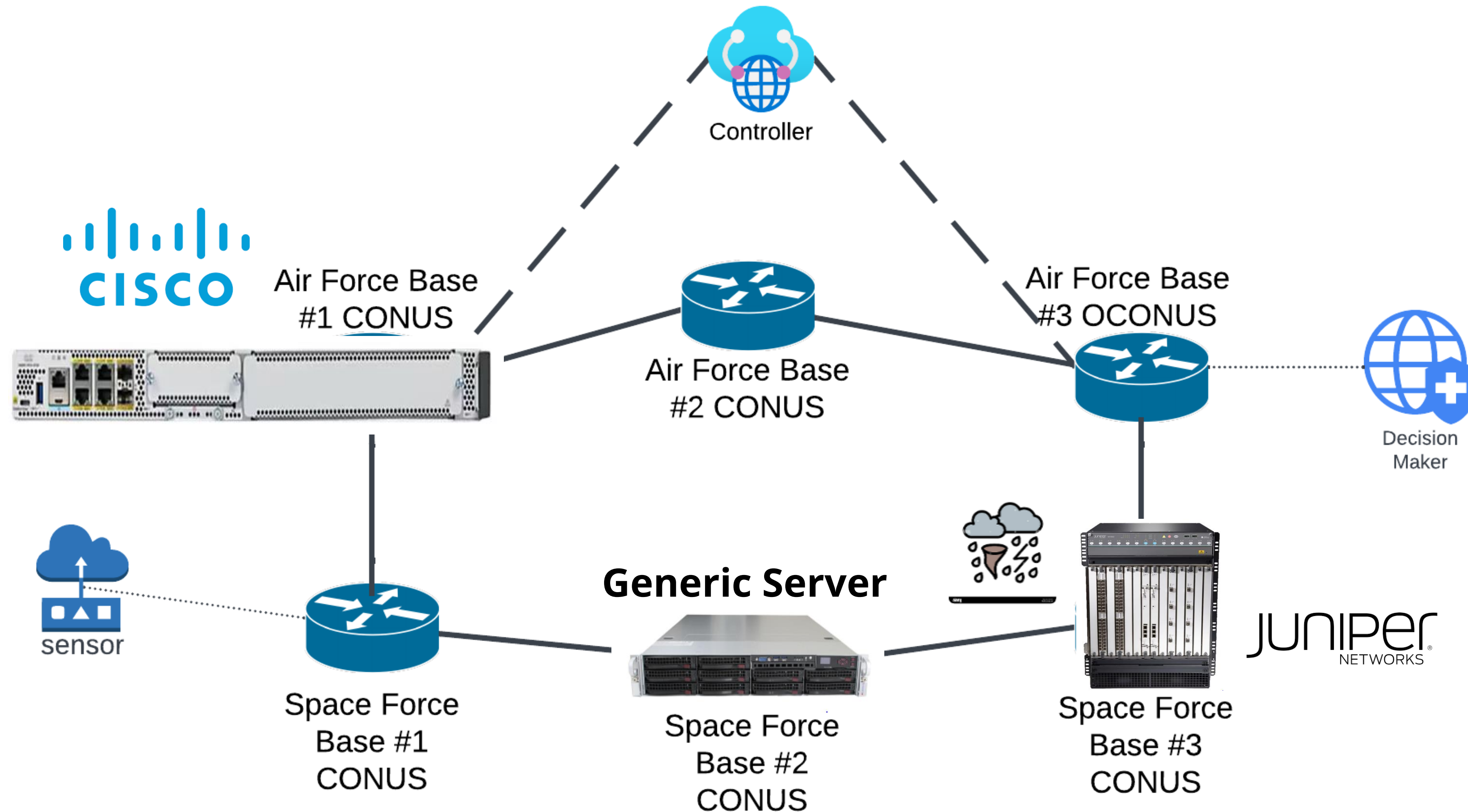
Knowledge



Technical Features & Benefits

Feature	Benefit / Value
Open Extensible	Not proprietary; Not vendor locked
Traffic Engineering (TE)	Simplified configuration of entire enterprise; Eliminates requirement for complex RSVP-TE configurations Maps network services to end missions (Quality of Service)
TI-LFA / Fast Re-route	Increased network resilience; Fast convergence time without micro loops; Better than any IP protection today
One-way Latency precision measurement	Precision Timing Protocol (PTP) can provide per segment latency measurements that automatically update path forwarding for delay sensitive applications
Source based routing technique	Simplifies the network and reduces resources to make it easier to operate and scale up; Ability to converge multiple protocols into one IPv6 Layer
IS-IS & SRv6 continuous RFC features	Industry ratified TLVs (Type-Length-Value) bring new features and enhancements
Segment Routing Controllers	Provides service provisioning for SR policies; Controllers can be used in a centralized, distributed or in a hybrid environment; Controllers are utilized to scale programmability and visibility of differing mission applications (Policies); Enhances SD-WAN mechanisms at the edge by monitoring latency, loss and bandwidth utilization
Capable over any Transport	Can operate SR over Optical (RON), Ethernet, Cellular, Satcom and IP/IPv6

Open Extensible and Ubiquitous



Traffic Engineering (TE) / Segment Routing Controllers

- **TE:**

- Do you have WAN links which are underutilized or overutilized ?
- Do you have a subset of traffic which requires different routing than the traditional shortest path?
- Do you want to avoid certain backbone links for your different Missions? Primary Mission A and Secondary Mission B can never route across the same links (disjointed paths).

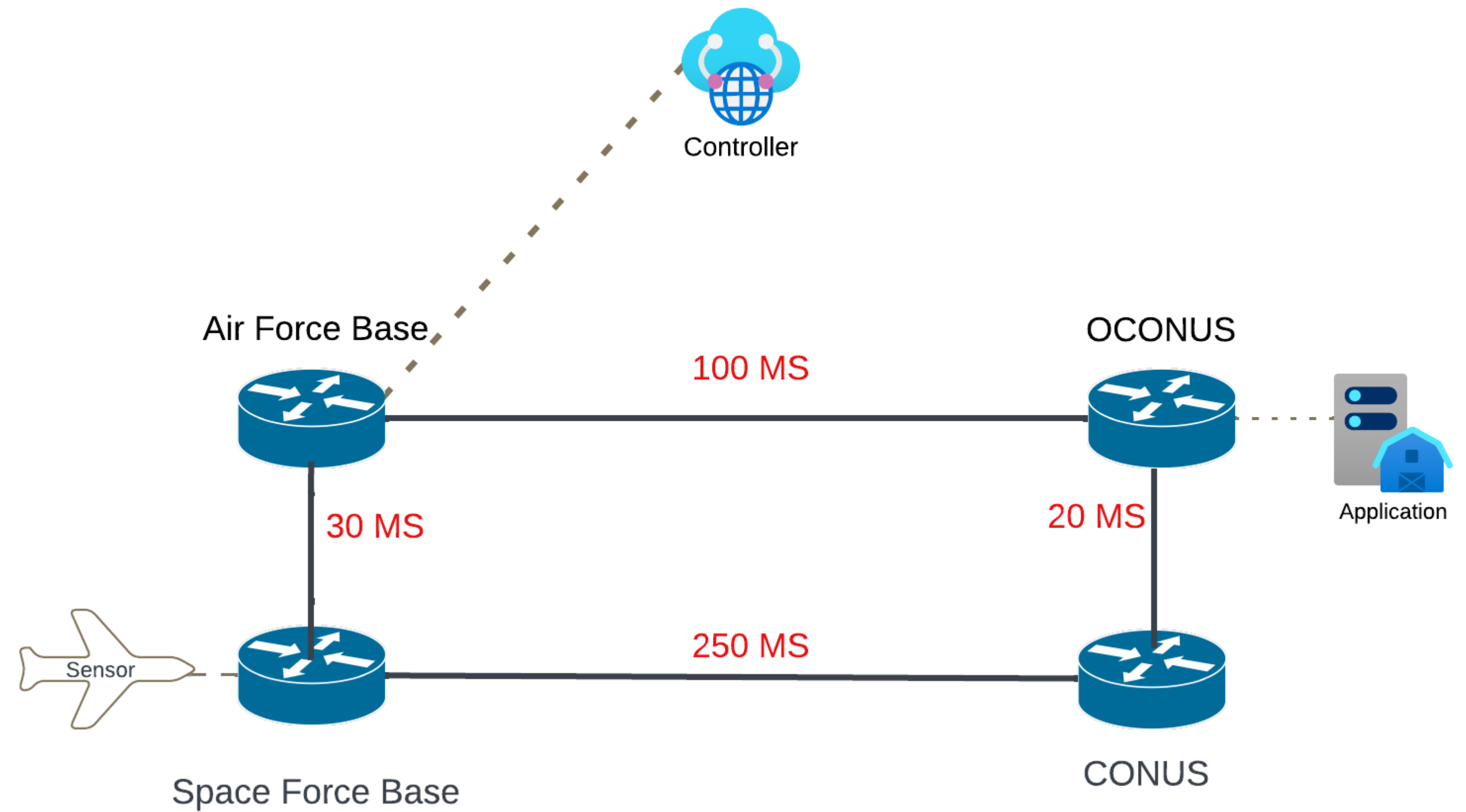
Enter Traffic Engineering!

- Simplified TE configuration of entire enterprise
- Eliminates complex RSVP-TE configurations
- Maps network services to end missions

- **SR Controllers:**

- Provides service provisioning for SR policies
- Controllers can be used in a centralized, distributed or in a hybrid environment
- Controllers are utilized to scale programmability and visibility of differing mission applications (Policies)
- Enhances SD-WAN mechanisms at the edge by monitoring latency, loss and bandwidth utilization

Precision Measurement



Precision Timing Protocol

TI-LFA / Fast Re-Route

BETTER SOLUTIONS. FASTER.



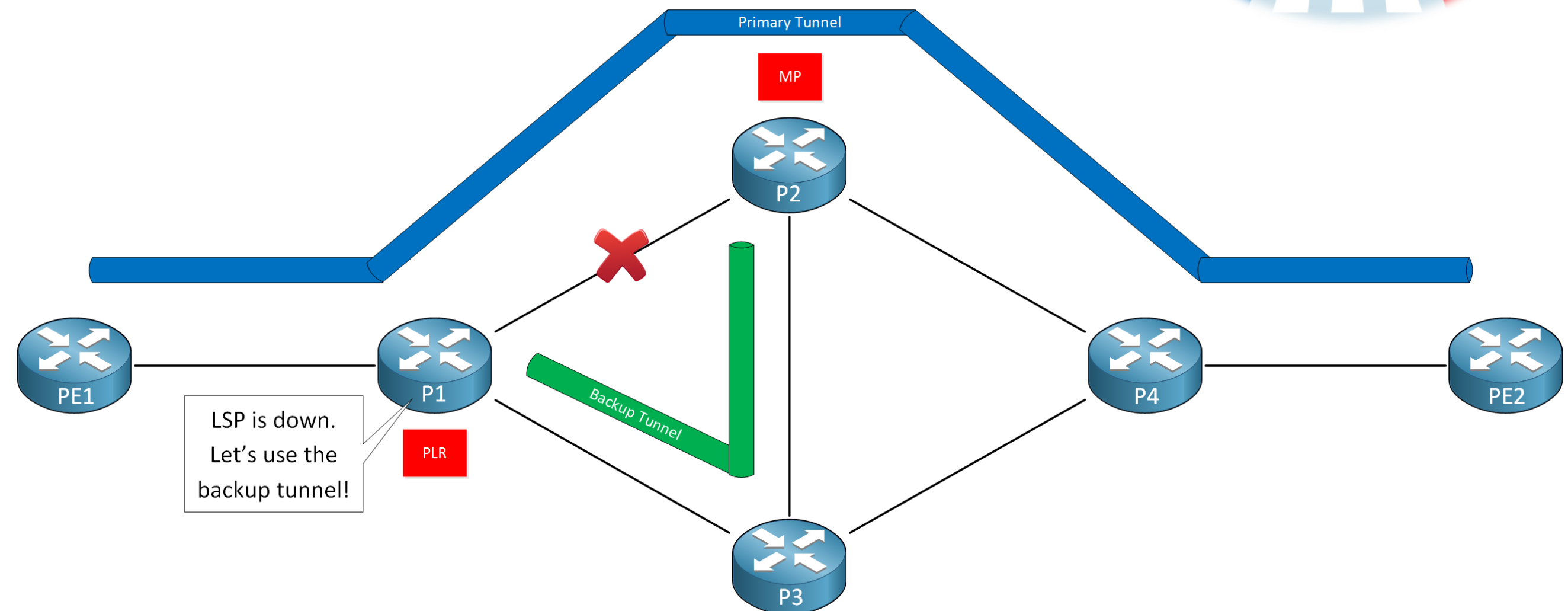
Increased Network Resilience



Fast convergence times without micro loops

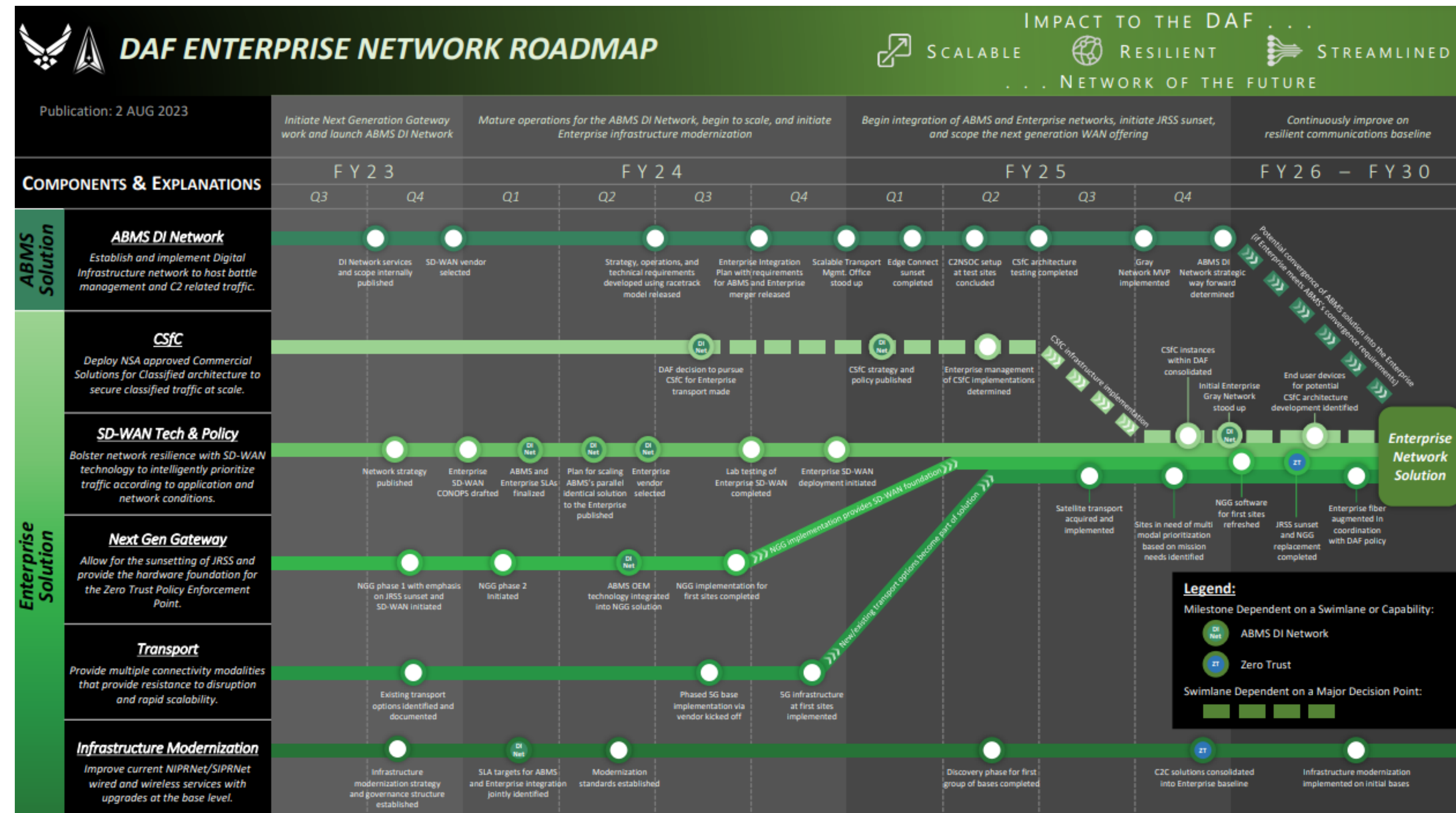


Better than any existing IP protection



Segment Routing and Beyond

- **Where are we now? – New and Legacy architectures disconnected**
- **Where are we going? – Connect systems enabling the DAF vision while meeting individual mission needs**
- **SRv6 – MPLS, SD & AI Net Network World Congress recognizes as the future of WAN architectures**
- **What's Next?**
 - **DAF expands SR at multiple levels**
 - **DAF program engagement**
 - **Architecture understanding**
 - **Knowledge sharing**



Contact Us



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