



# Cisco SD-Access

Scaling the fabric to multiple sites

Devi Bellamkonda Technical marketing Engineer

DGTL-BRKCRS-2825

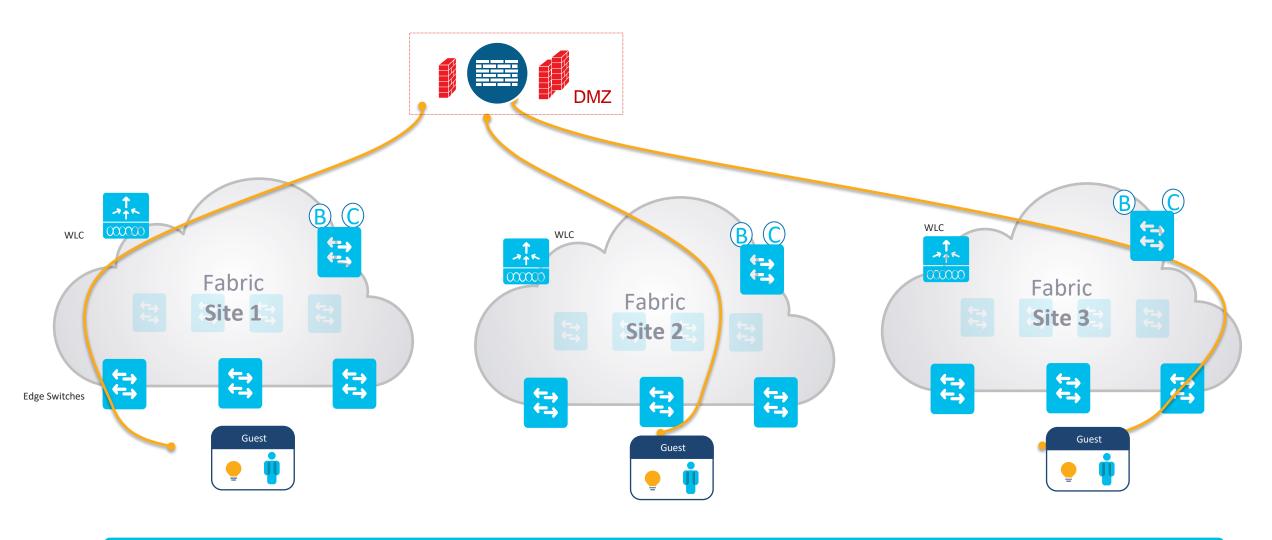






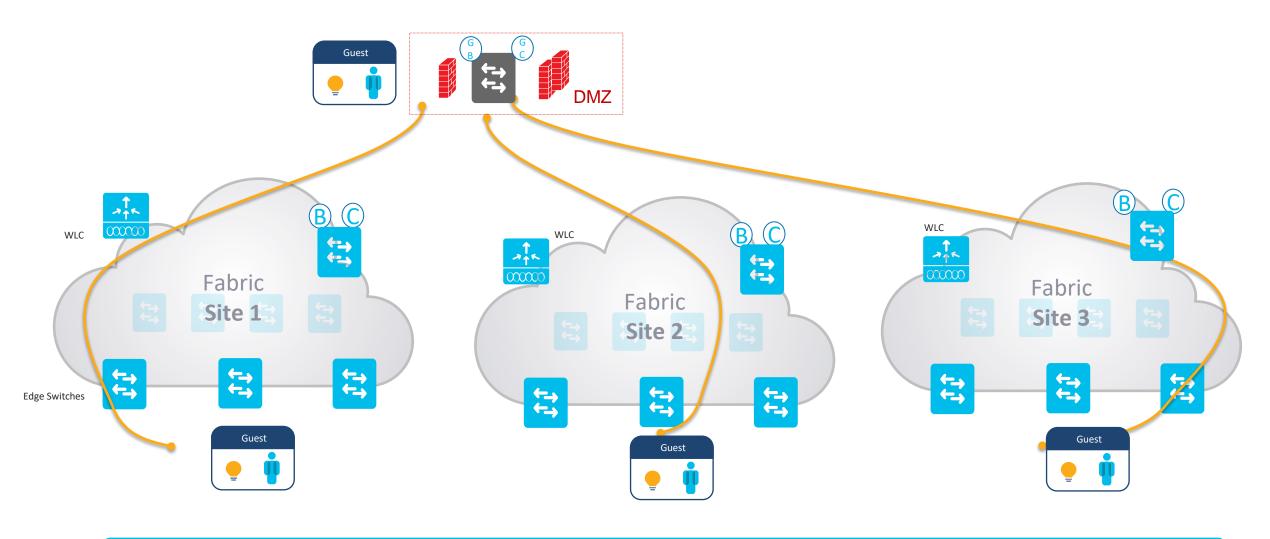


# Cisco SD-Access – Current deployment



cisco Like!

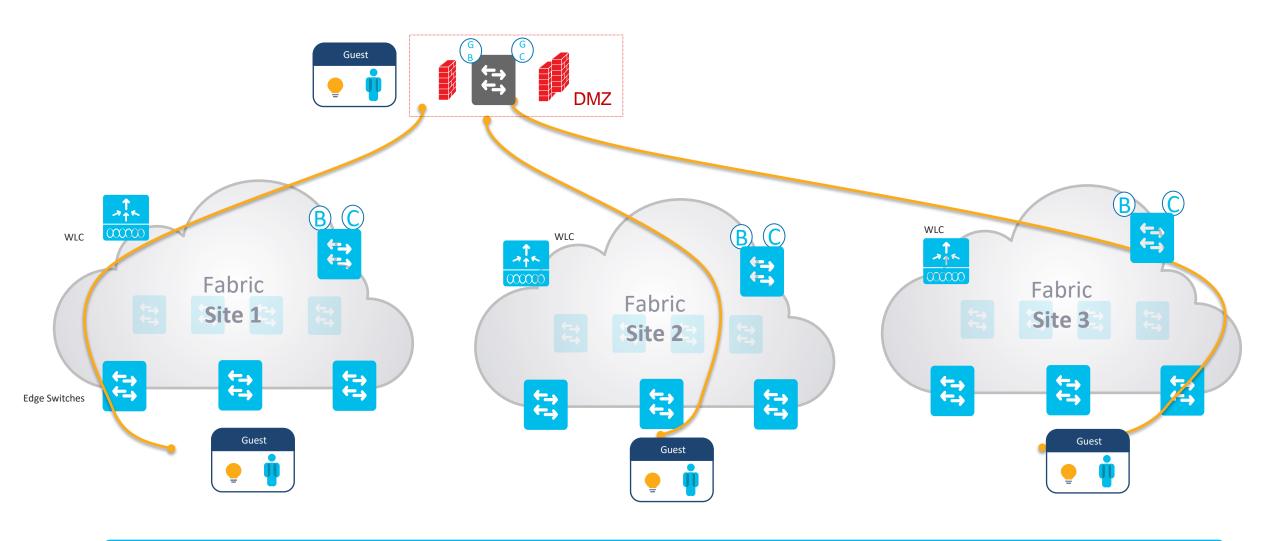
# Cisco SD-Access – Current deployment



10.1.1.0/24 10.1.2.0/24 10.1.3.0/24



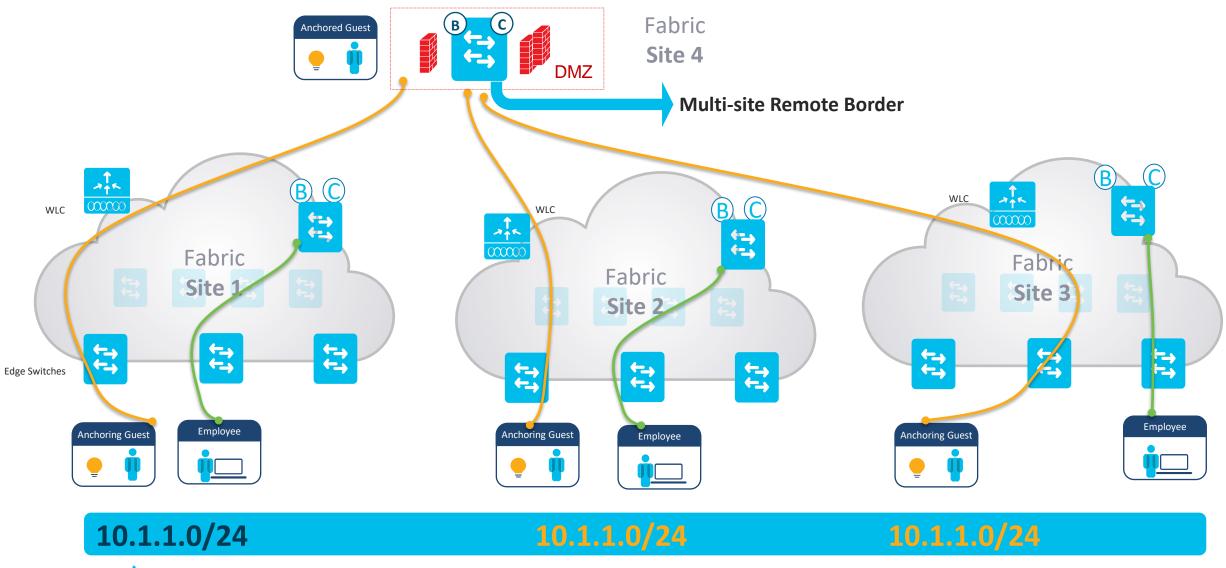
# Cisco SD-Access – Current deployment





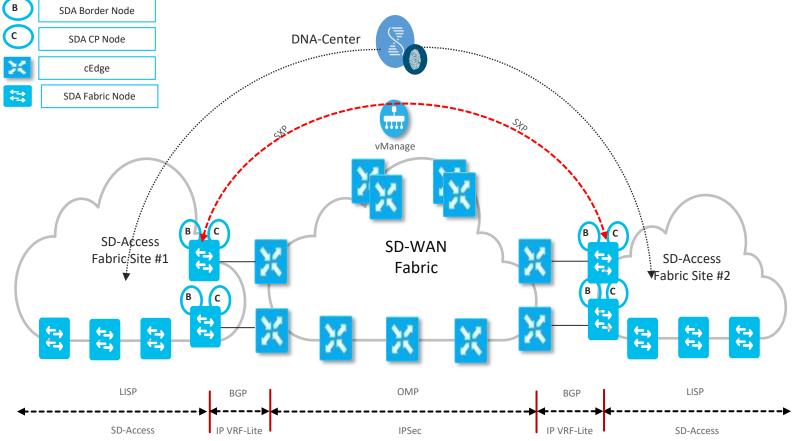


### Cisco SD-Access



# High Level Design for a Cisco SD-Access across Geographies



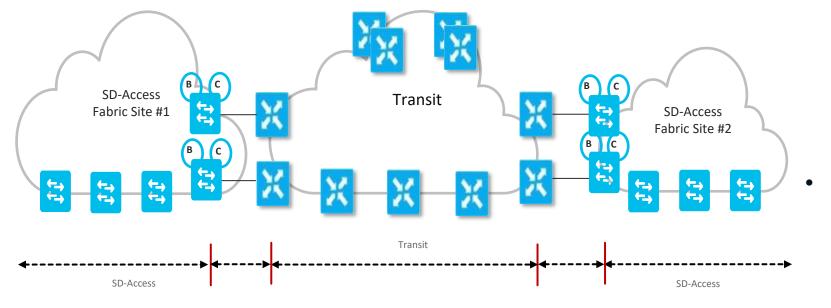


### **Current deployments**

- Cisco DNA Center automates Cisco SD-Access Sites
- Cisco SD-Access Border hands off to cEdge using IP Transit
- Manual handoff between Cisco SD-Access Border and cEdge
- Challenge with SGT propagation using SXP.

# Cisco SD-Access Deployments





### **Current deployments-Alternatives**

#### **DMVPN**

- Manual Mapping & Routing of VNs.
- Macro/Micro segmentation works.
- TCP Adjust MSS

#### Cisco SD-Access Transit

- DNAC provides automation.
- SGTs and VNs are preserved.
- MTU consideration.
- TCP Adjust MSS.

# Integrated Domain approach

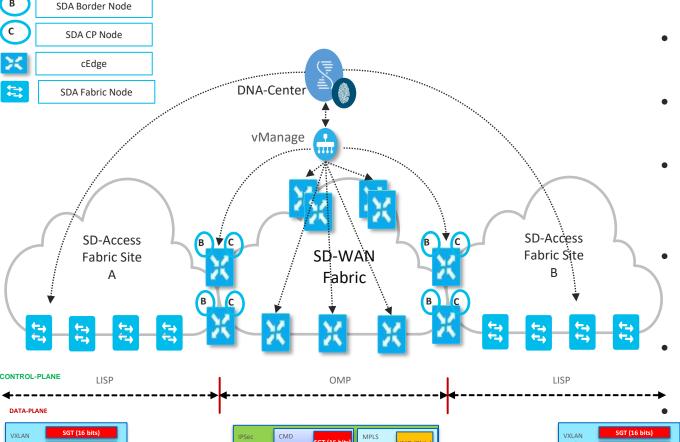
**Domain Controller Integration** 

# Independent Domain approach



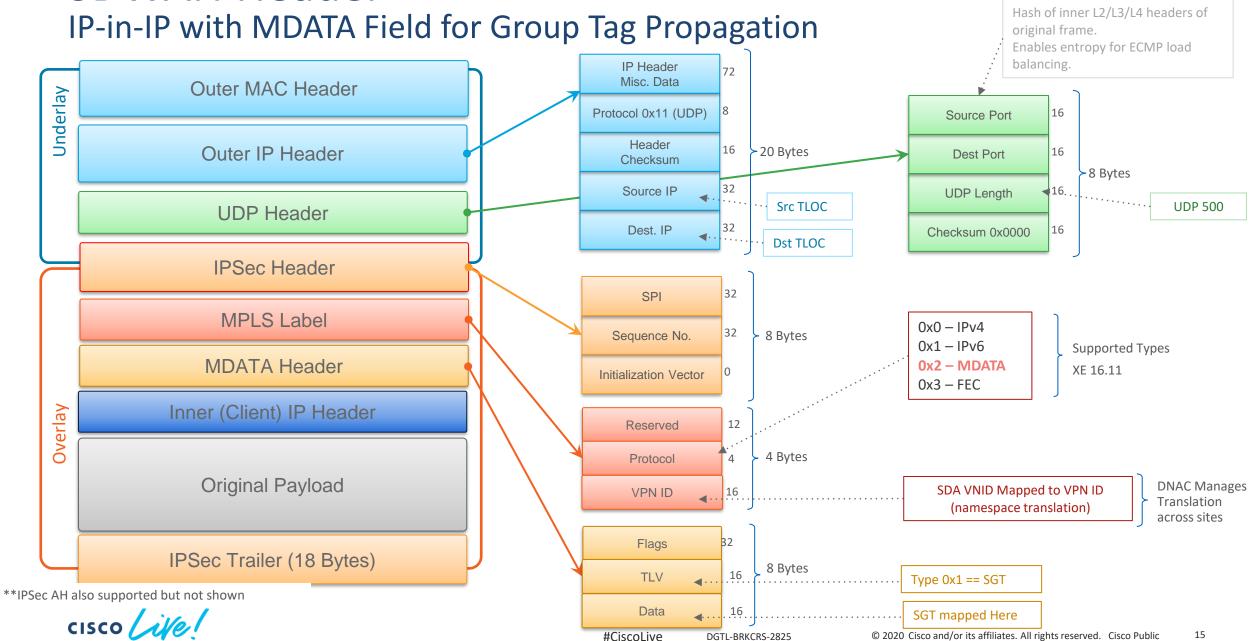
### **Integrated Domain**

What is integrated?



- Cisco DNAC and vManage controller Integrate
- Deployment flexibility for lean branch.
- Co-located Cisco SD-Access Border, CP and SD-WAN Edge on Single ISR/ASR (cEdge) device.
  - DNAC configures Cisco SD-Access border node via vManage.
  - LISP-OMP route redistribution on control path.
  - VN/SGT carried over SDWAN transit

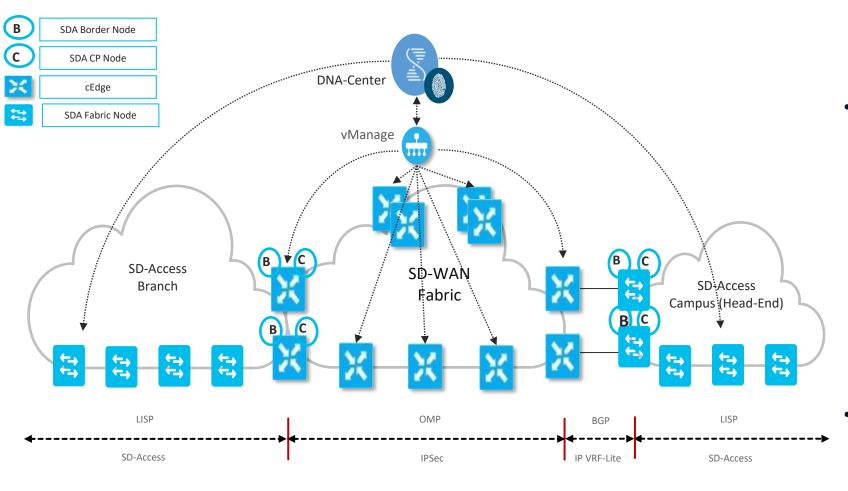
### **SDWAN** Header



**Independent Domain DNA-Center VXLAN-to-Ethernet CMD** Ethernet CMD-to-VXLAN SDWAN-to-Ethernet CMD **Ethernet CMD-to-SDWAN** vManage C В B ) (C **SD-WAN** SD-Access SD-Access **Fabric** Fabric Site #1 Fabric Site #2 SGT in CMD SGT in CMD BGP/vrf-lite BGP/vrf-lite Ingress SGT Tagging in VXLAN frame SGT Propagation in SDWAN format **Egress Enforcement** 

- SGT micro-segmentation in Cisco SD-Access fabric can be extended to SDWAN.
- This is to propagate SGT in Cisco SD-WAN Metadata





#### **SDA/SDWAN**

- Separation at Head-End between Cisco SD-Access and SD-WAN
  - Deployment and operational simplicity
  - Flexibility and independence between Cisco SD-Access and SD-WAN from a code upgrade or system maintenance perspective
  - Can have two-box at the branch depending on the criticality of the branch site
- Single-Boxes at Branches
  - Cost of operations and maintenance

© 2020 Cisco and/or its affiliates. All rights reserved. Cisco Public

Low scale depending on the type of branch



### What next?

> Prepare your designs for Cisco SD-Access Fabrics.

> Reach out to us for any questions.

>Run through the Cisco Live Session Videos.

➤ Have Fun doing all the above.



© 2020 Cisco and/or its affiliates. All rights reserved. Cisco Public

# Thank you

cisco

cisco live!



