#CiscoLiveAPJC

The bridge to possible

Cisco SD-WAN Multi-Cloud

Detailed Components and Connectivity

Prashant Tripathi, Principal/Chief Architect Cisco SD-WAN & Multi-Cloud
@prashant_tri

BRKENT-2080

Cisco Webex App

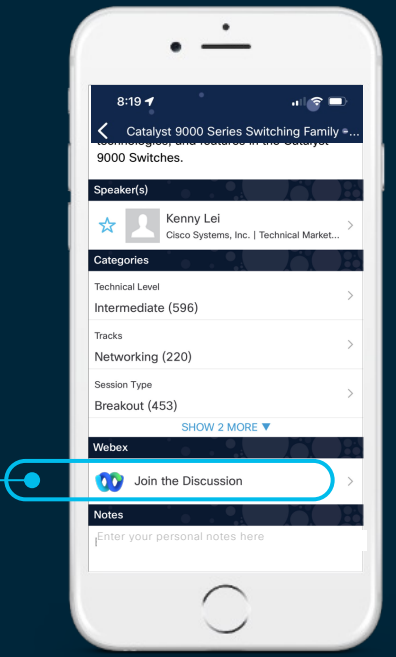
Questions?

Use Cisco Webex App to chat
with the speaker after the session

How

1. Find this session in the Cisco Live Mobile App
2. Click “Join the Discussion”
3. Install the Webex App or go directly to the Webex space
4. Enter messages/questions in the Webex space

Webex spaces will be moderated
by the speaker until Thursday 22 December, 2022.



https://ciscolive.ciscoevents.com/ciscolivebot/#BRKENT-2080

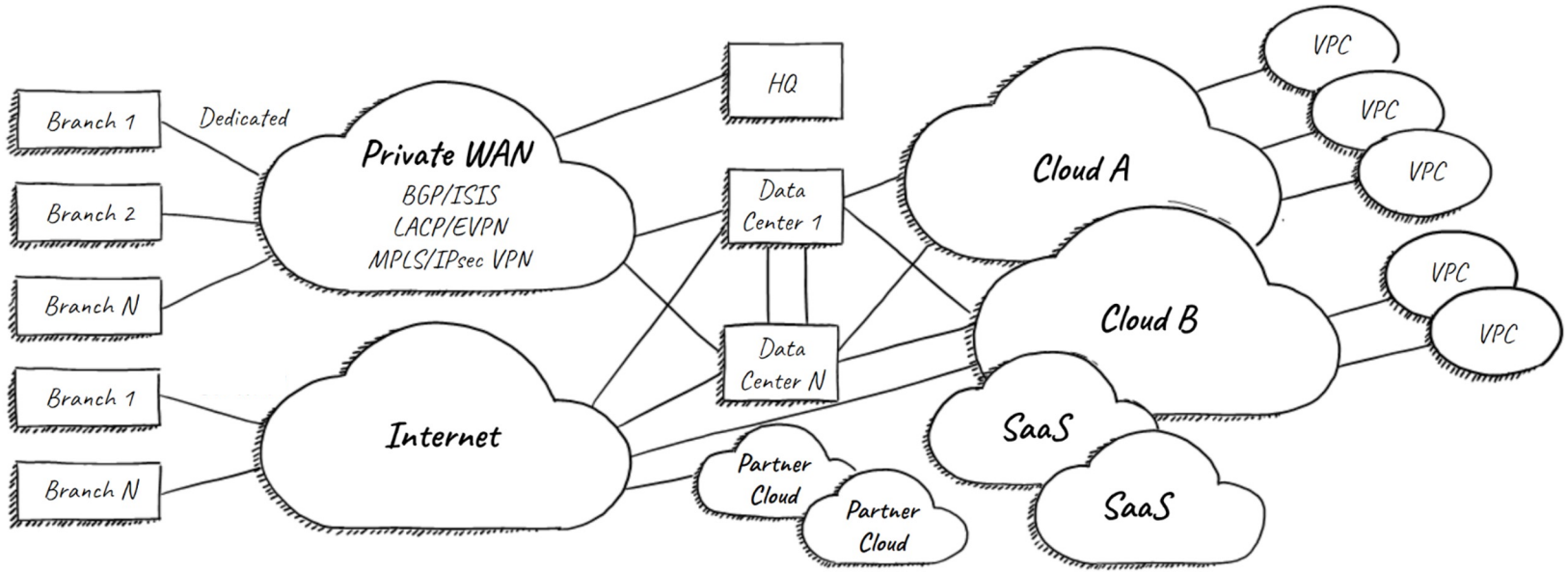
© 2022 Cisco and/or its affiliates. All rights reserved. Cisco Public

Agenda

- Infrastructure transformation
- Normalizing operations across Multi-Cloud
- SD-WAN Multi-Cloud Integration & Use Cases
  - AWS
  - Azure
  - GCP

© 2022 Cisco and/or its affiliates. All rights reserved. Cisco Public

Managing enterprise networks is increasingly complex



Months to build topology & capacity

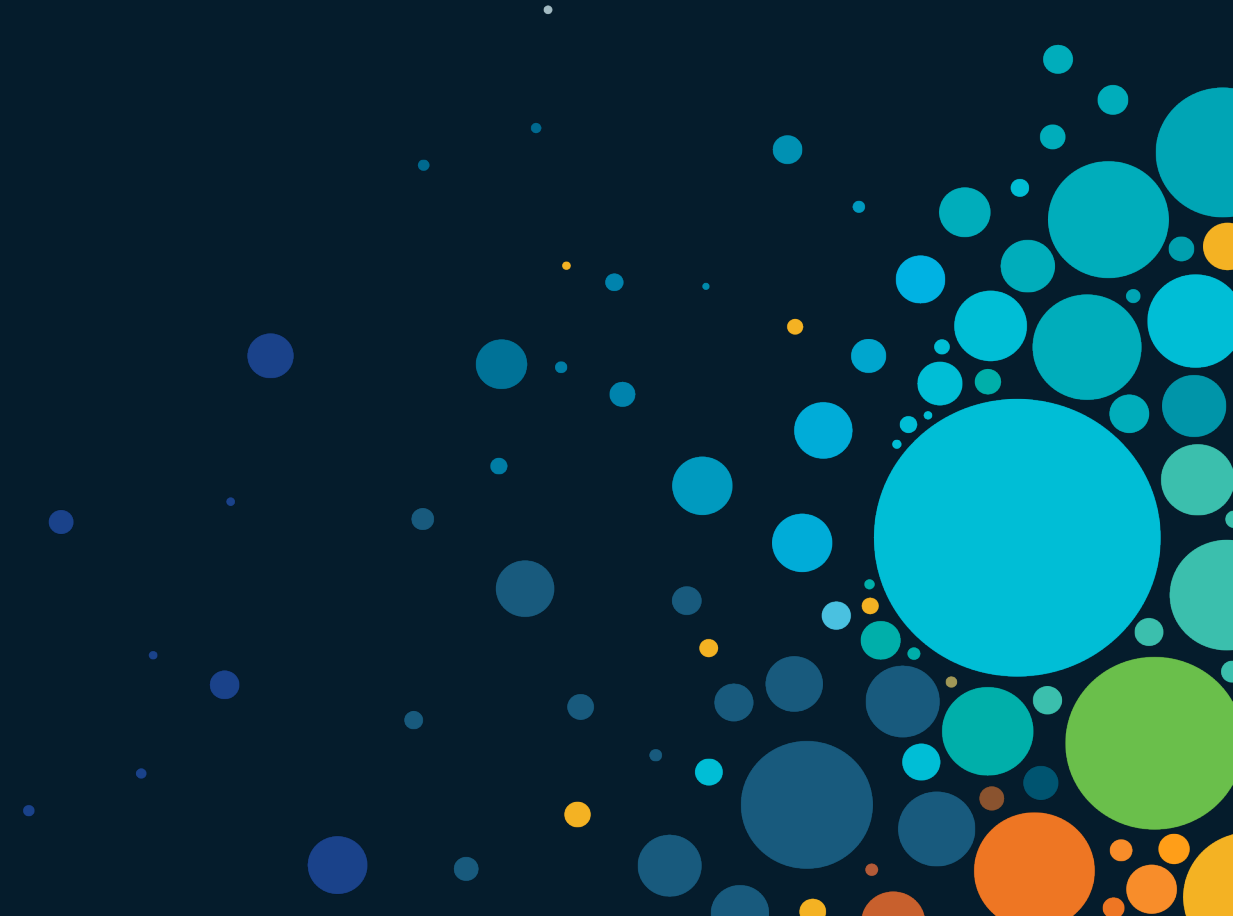
Multiple control, data & management planes

Complex hybrid & multi-cloud networks

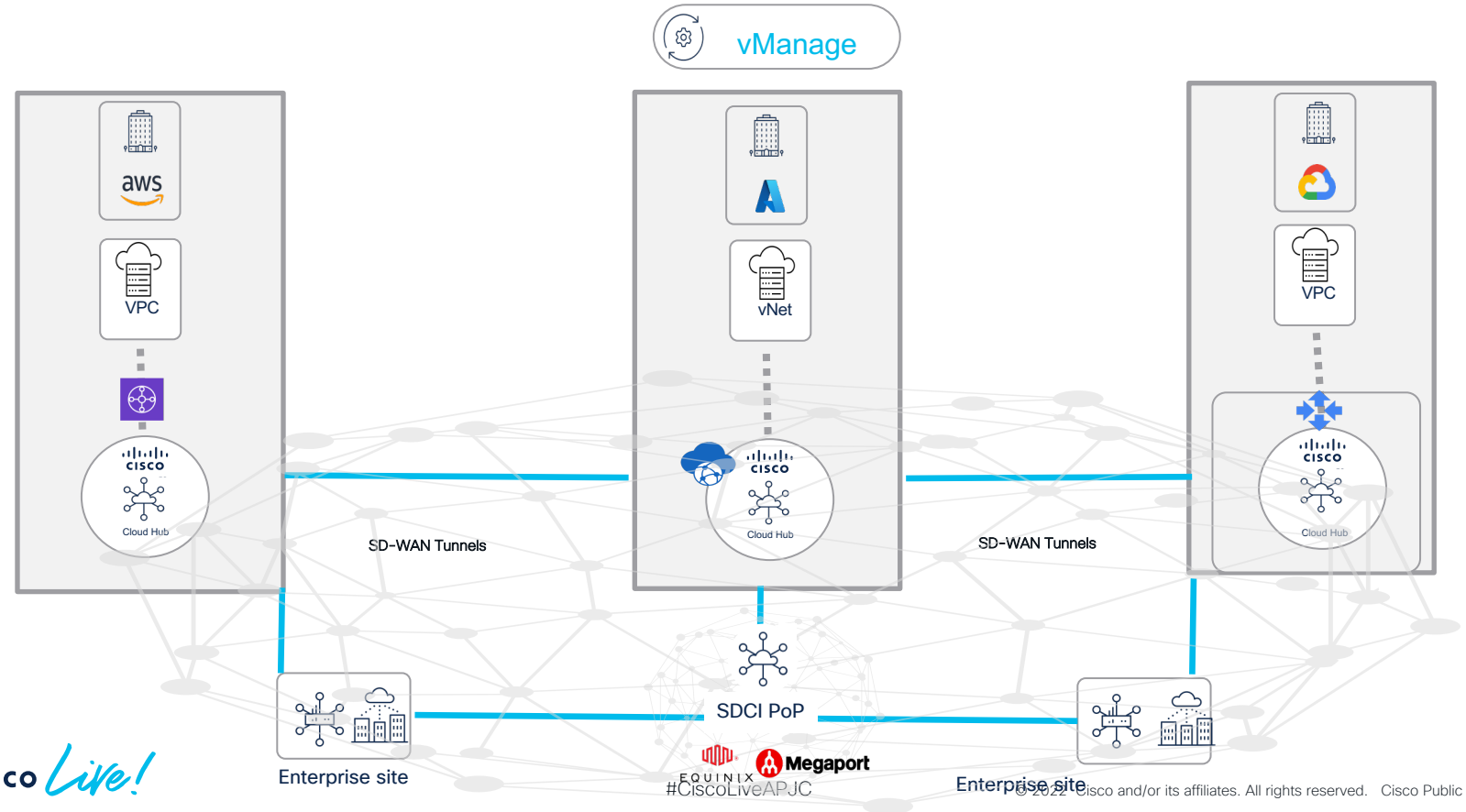
© 2022 Cisco and/or its affiliates. All rights reserved. Cisco Public

Normalizing operations

Across Multi-Cloud



Unifying Multi-Cloud Connectivity



© 2022 Cisco and/or its affiliates. All rights reserved. Cisco Public

Cisco SD-WAN Multi-Cloud

Integrations & Use Cases

cisco Live!

Cisco SD-WAN Cloud Hub- Use Cases

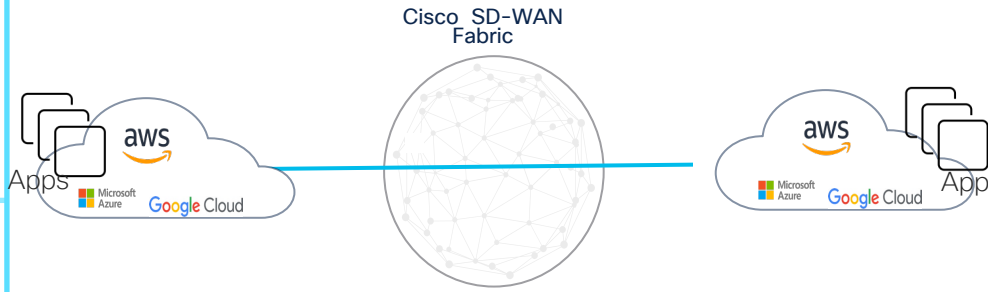
= Cisco SD-WAN virtual router hosted at Cloud Service Provider POP

= Cisco SD-WAN router on-premises

Enterprise Site to Cloud

Enterprise Site to Enterprise Site

Cloud to Cloud



Cisco SD-WAN simplifying connectivity with fabric extension to cloud providers, it is building a programable site-to-cloud workloads, Region to Region, site-to-site and cloud to cloud connectivity using cloud providers backbone

© 2022 Cisco and/or its affiliates. All rights reserved. Cisco Public

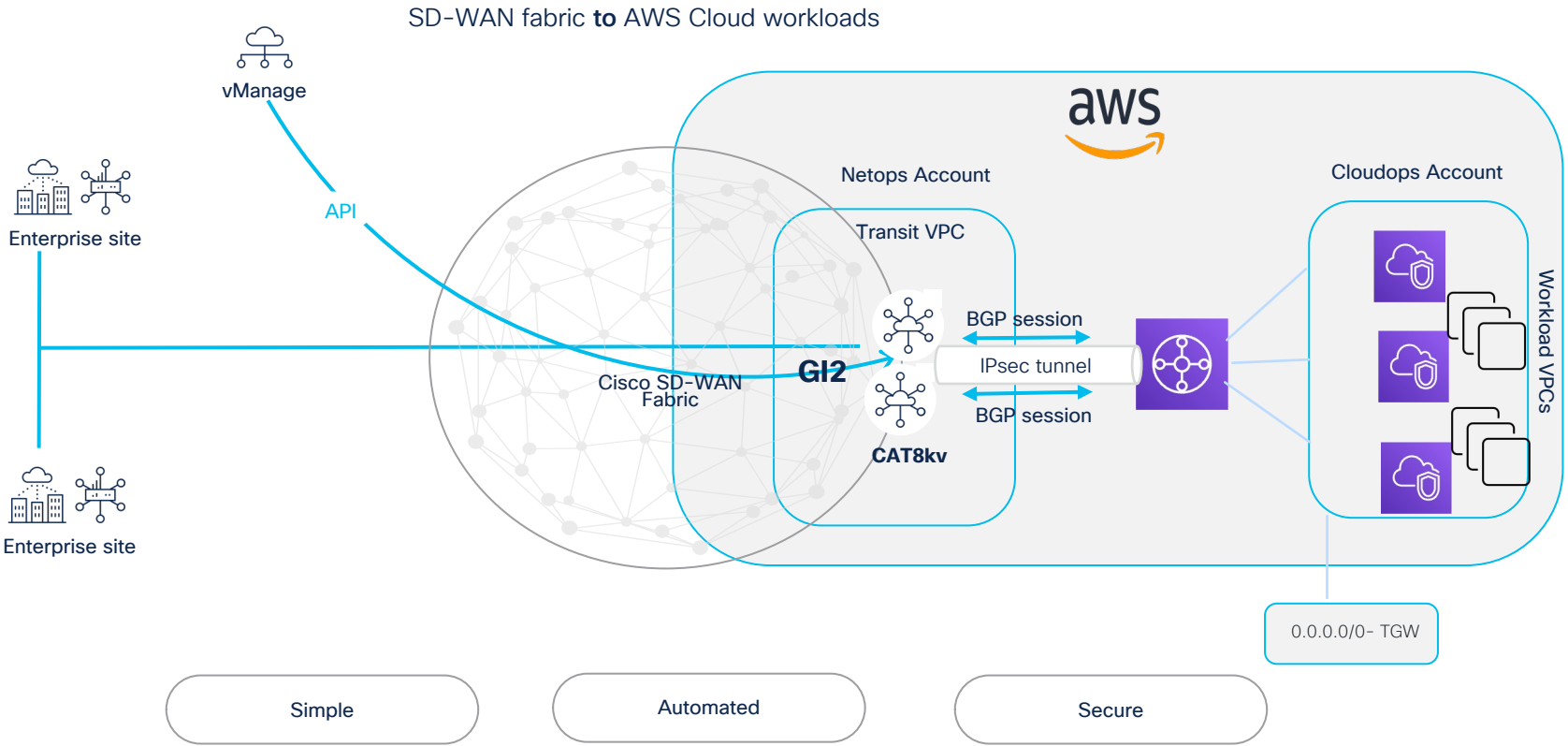
Lets get into Detailed

Use cases

Integration and connectivity to AWS

AWS - Site-to-Cloud

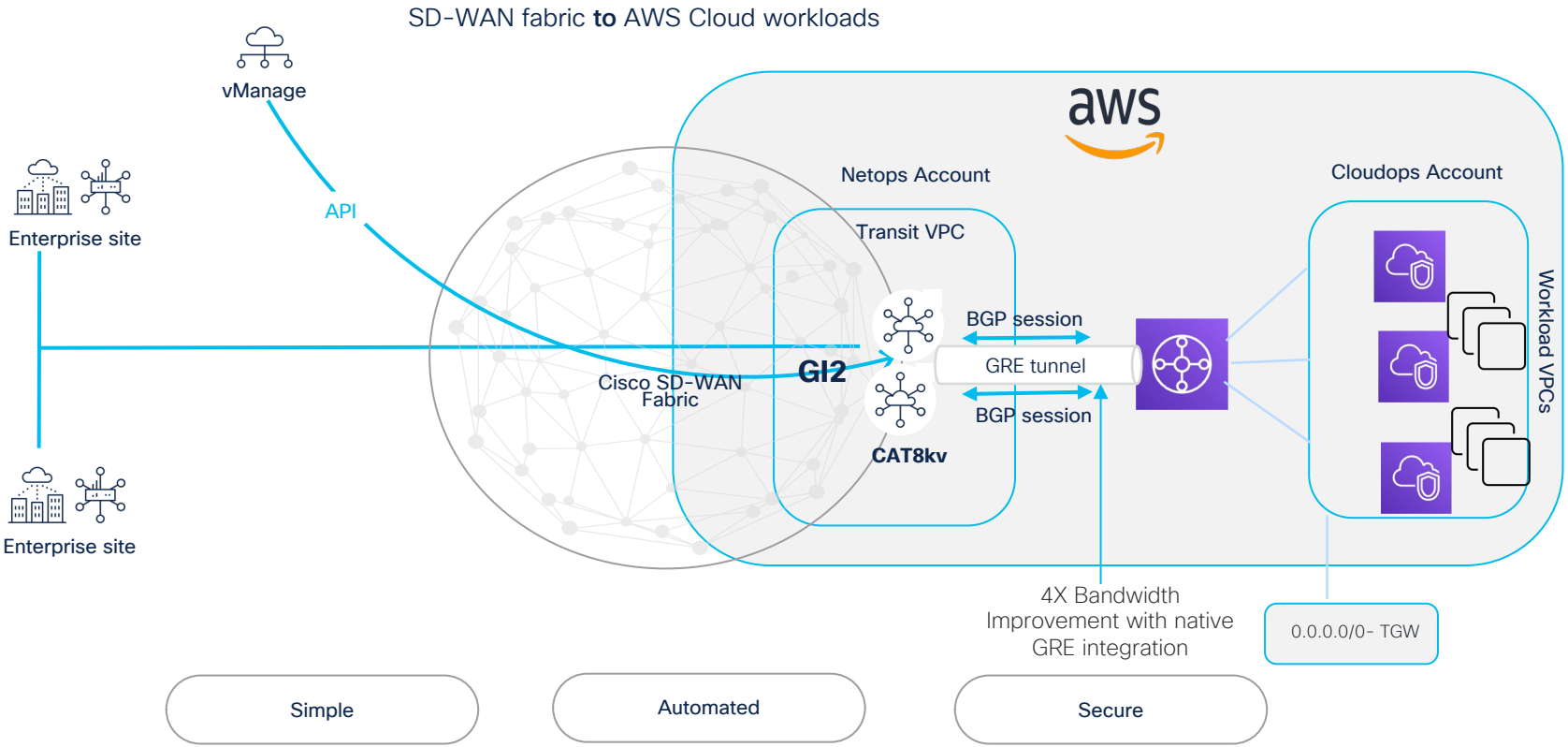
SD-WAN Native Integration using **Ike IPSEC** between Transit VPC and Transit Gateway



© 2022 Cisco and/or its affiliates. All rights reserved. Cisco Public

AWS - Site-to-Cloud

SD-WAN Native Integration using **GRE** between Transit VPC and Transit Gateway



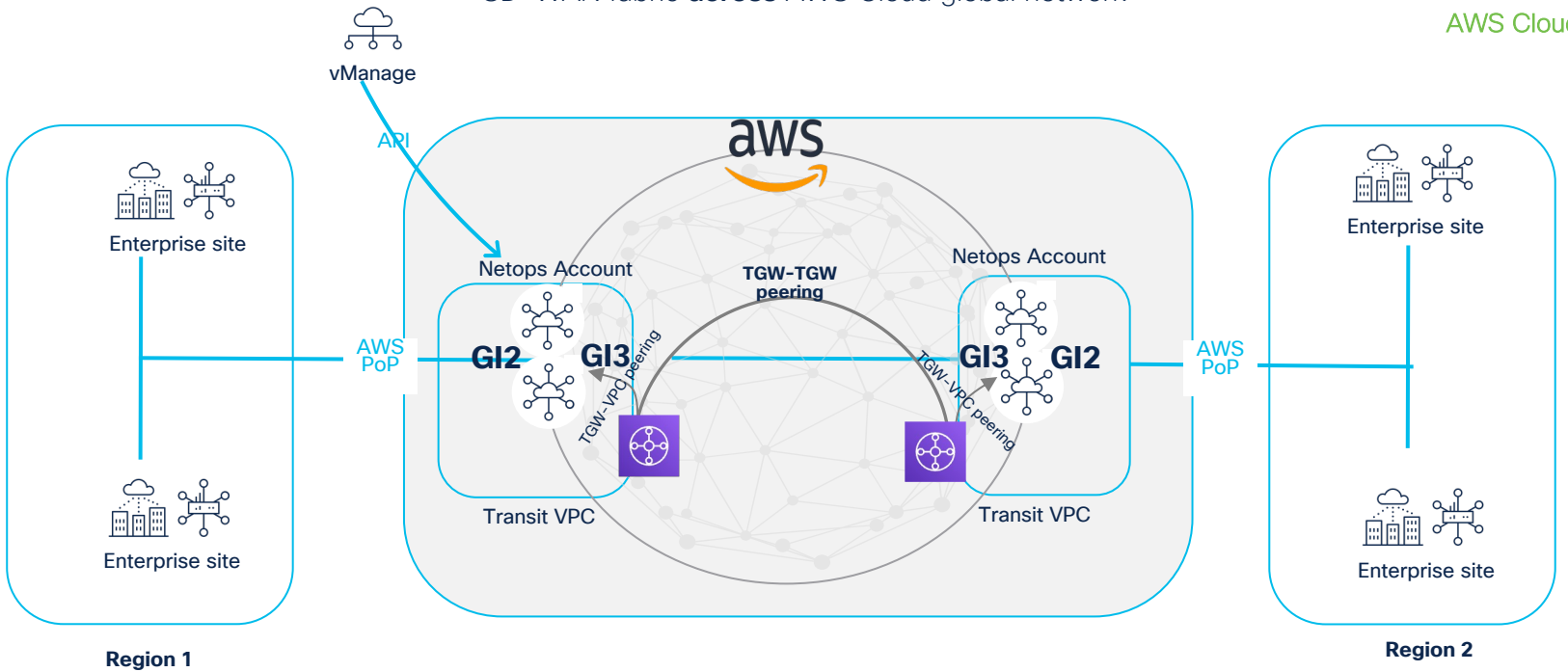
© 2022 Cisco and/or its affiliates. All rights reserved. Cisco Public

AWS - Site-to-Site

TGW-TGW peering to build Backbone. Control policy or Multi region Fabric required for traffic redirection

SD-WAN fabric **across** AWS Cloud global network

AWS Cloud WAN ?



On-demand

High performance

Global connectivity

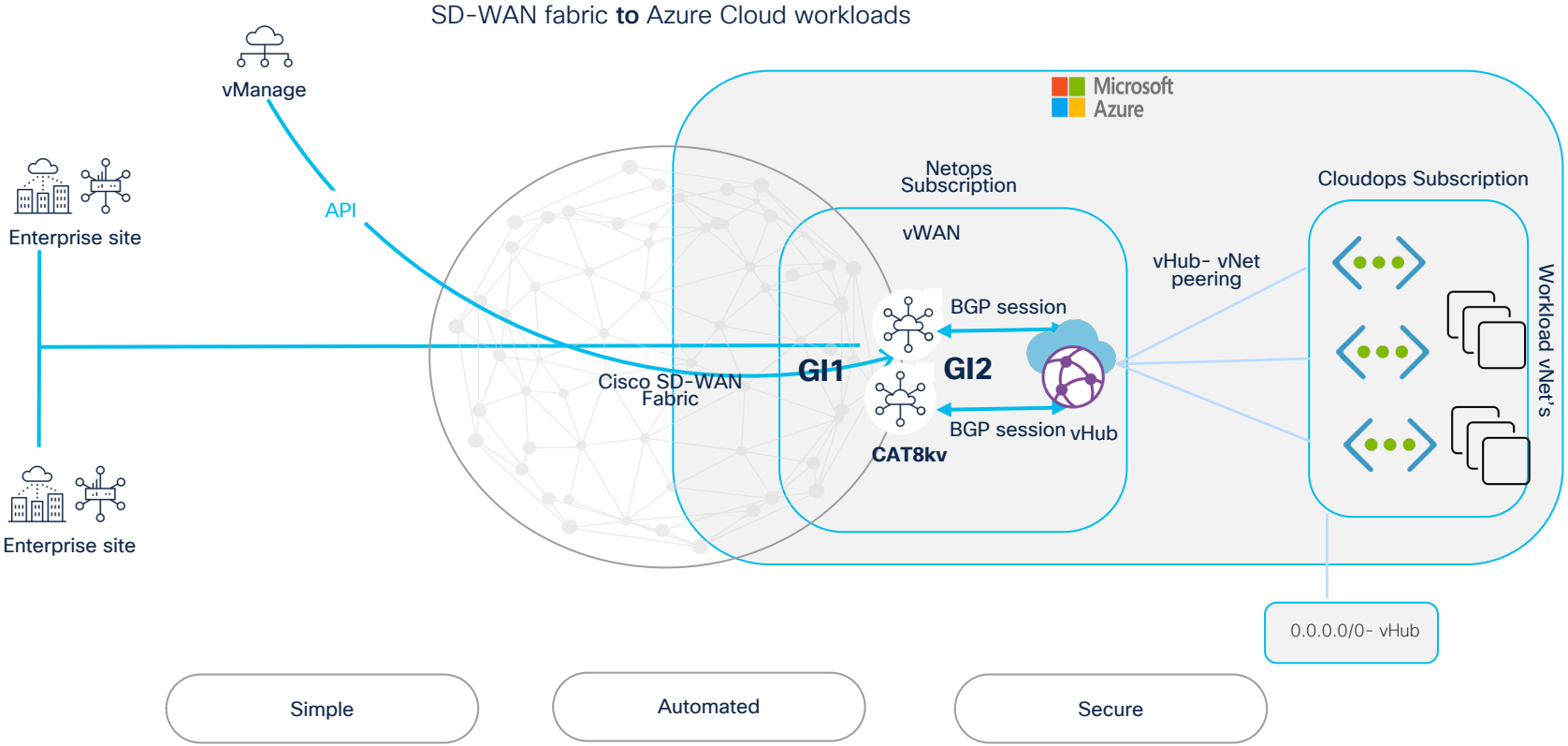
Google Cloud Router

© 2022 Cisco and/or its affiliates. All rights reserved. Cisco Public

Integration and connectivity to Azure Cloud

Azure - Site-to-Cloud

CAT8k Network virtual appliances are hosted in vhub, running BGP to vHub control plane to learn vNet mapping

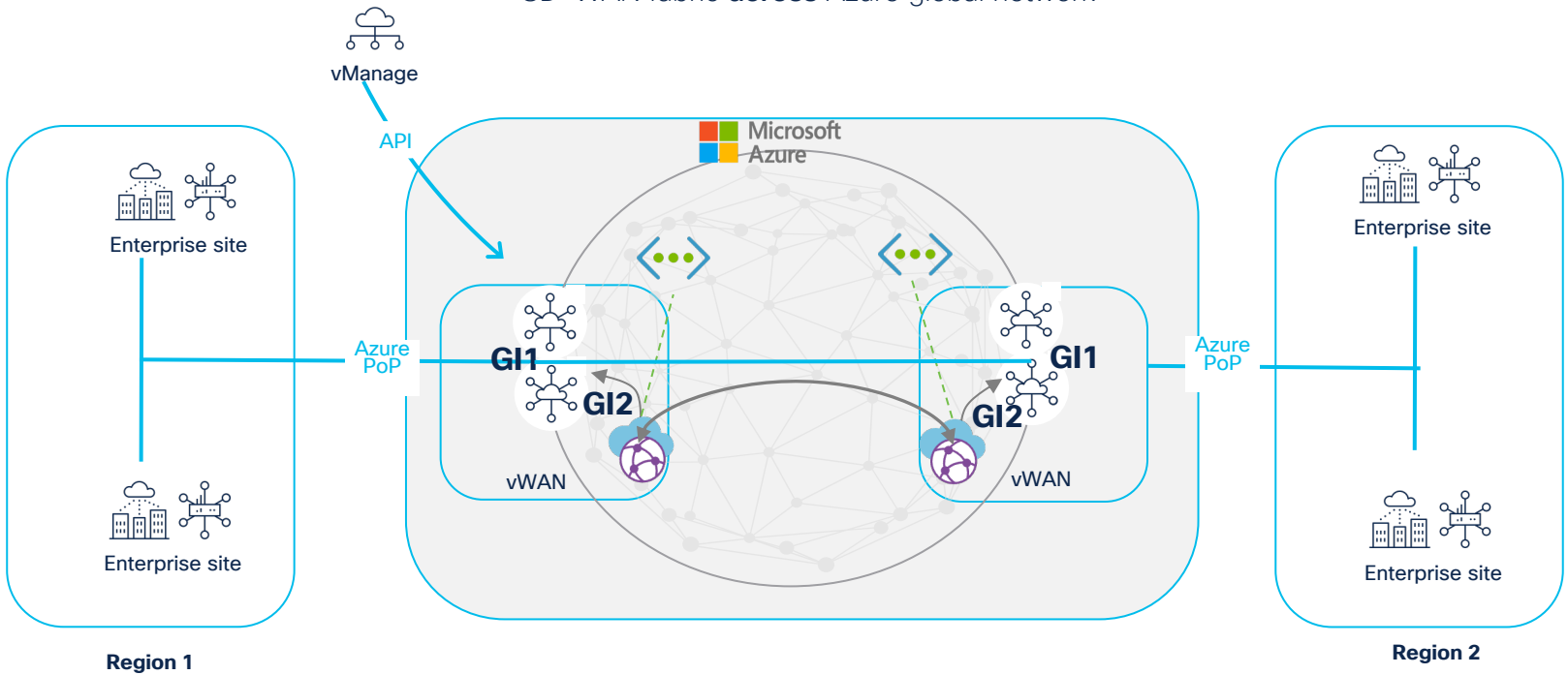


© 2022 Cisco and/or its affiliates. All rights reserved. Cisco Public

Azure - Site-to-Site

SDWAN tunnels with Azure Public IPs on NVAs go through Azure Backbone, Azure vHub to vHub used for Intra-Vnet traffic. Control policy or Multi region Fabric required for traffic redirection

SD-WAN fabric **across** Azure global network



On-demand

High performance

Global connectivity

Google Cloud Router

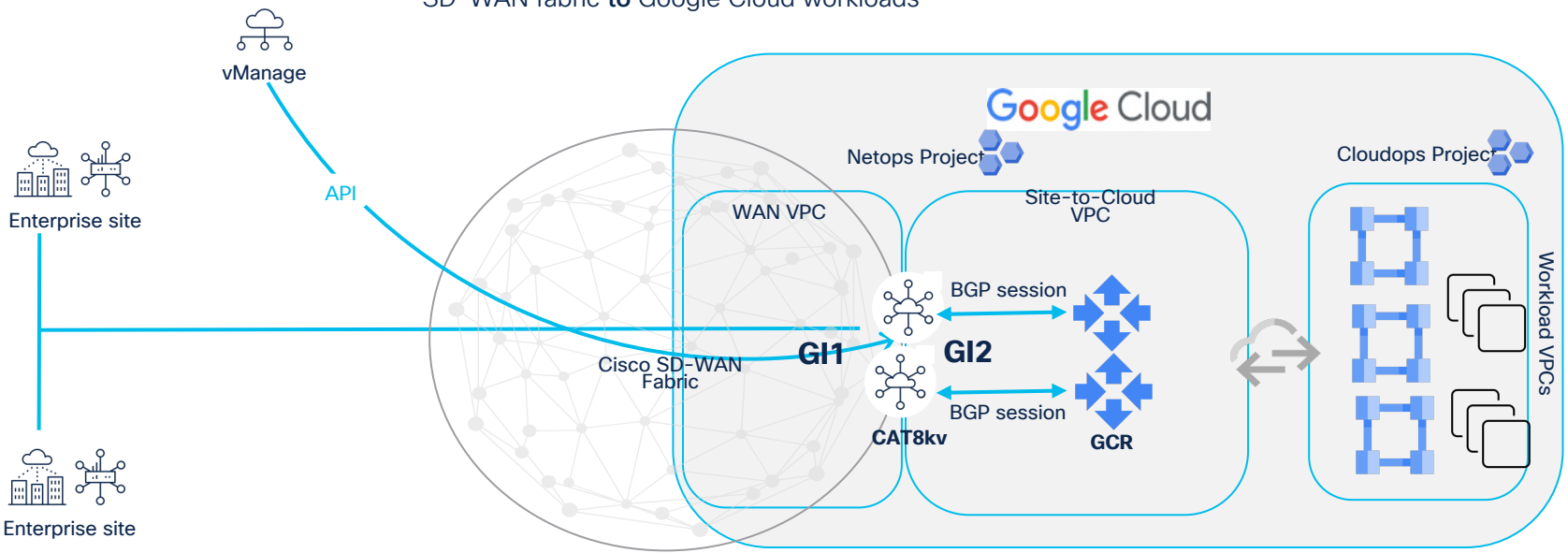
© 2022 Cisco and/or its affiliates. All rights reserved. Cisco Public

Integration and connectivity to Google

Google Cloud - Site-to-Cloud

Cisco SD-WAN Cloud Hub will be hosted on Google cloud , it runs BGP from service vpn to Google cloud routers to learn and advertise routes

SD-WAN fabric **to** Google Cloud workloads



Simple

Automated

Secure

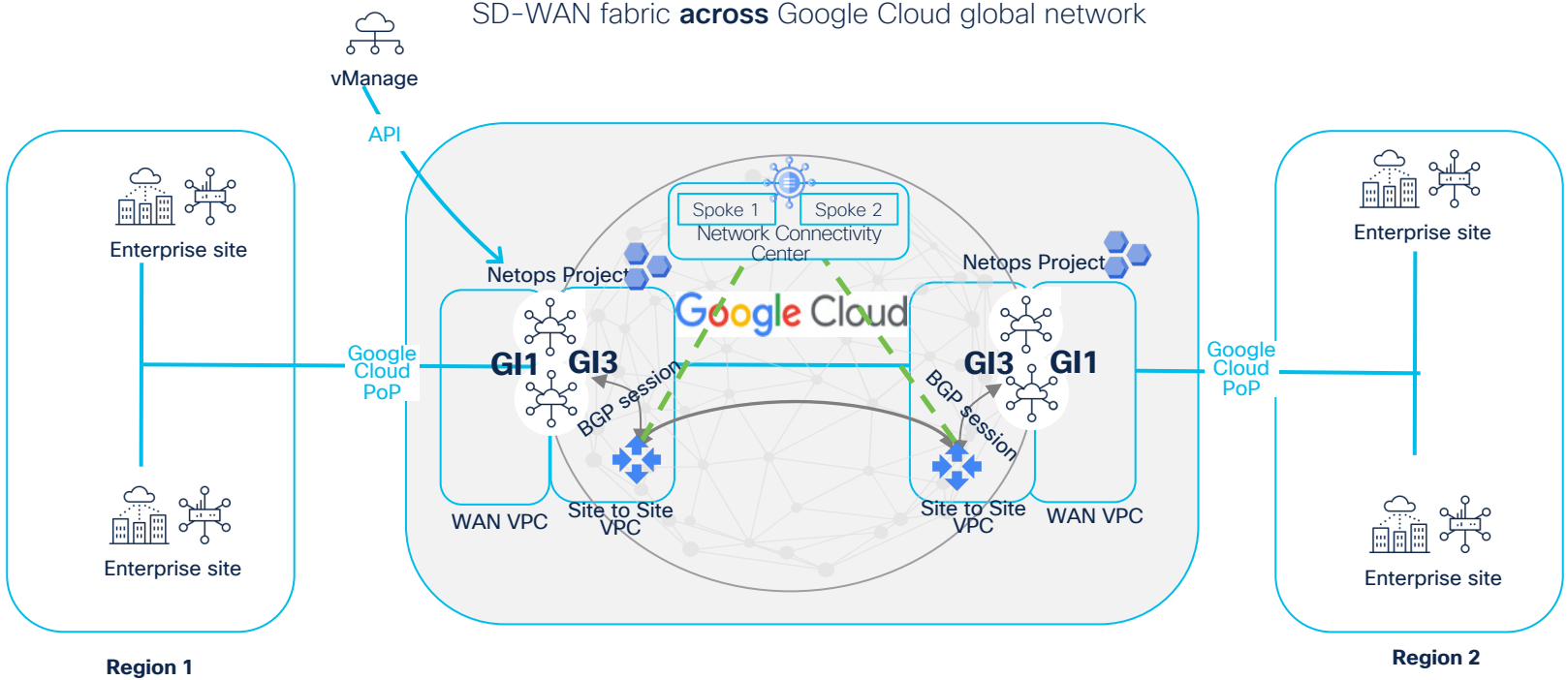
Google Cloud Router

© 2022 Cisco and/or its affiliates. All rights reserved. Cisco Public

Google Cloud - Site-to-Site

SD-WAN will leverage cloud service provider's backbone (Google NCC) to extend SD-WAN fabric from any site to Site, Control policy or Multi region Fabric required for traffic redirection

SD-WAN fabric **across** Google Cloud global network



On-demand

High performance

Global connectivity

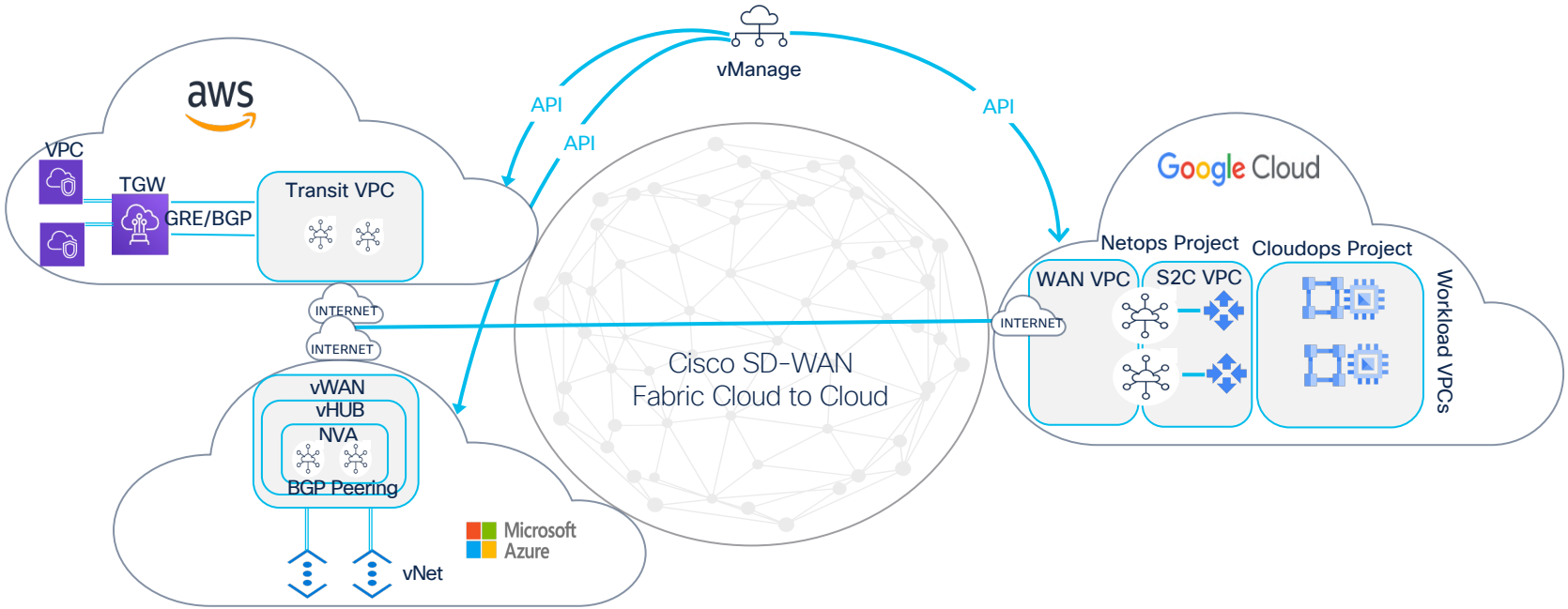
Google Cloud Router

© 2022 Cisco and/or its affiliates. All rights reserved. Cisco Public

Cloud to Cloud Connectivity

Cloud to Cloud – Over Internet

SD-WAN Fabric Between the Cloud



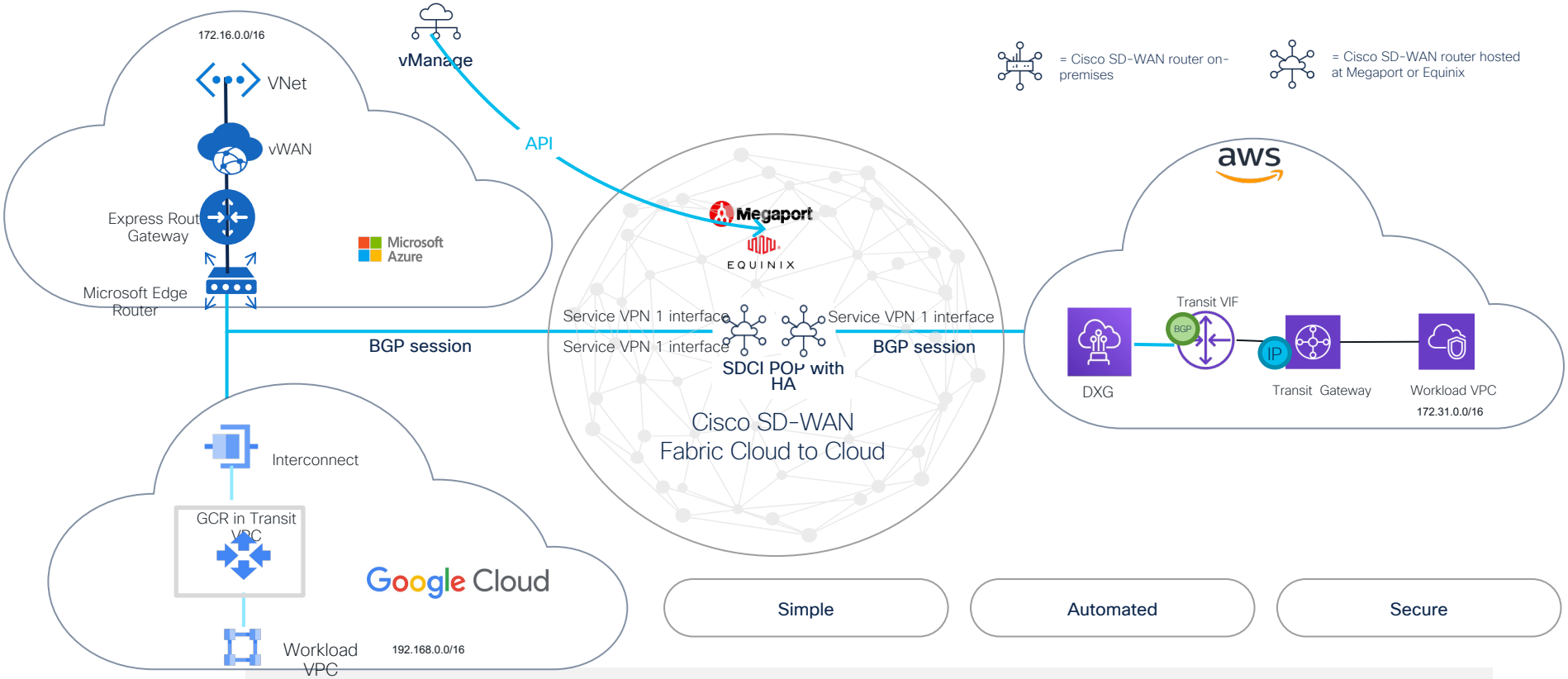
On-demand

High performance

Global connectivity

© 2022 Cisco and/or its affiliates. All rights reserved. Cisco Public

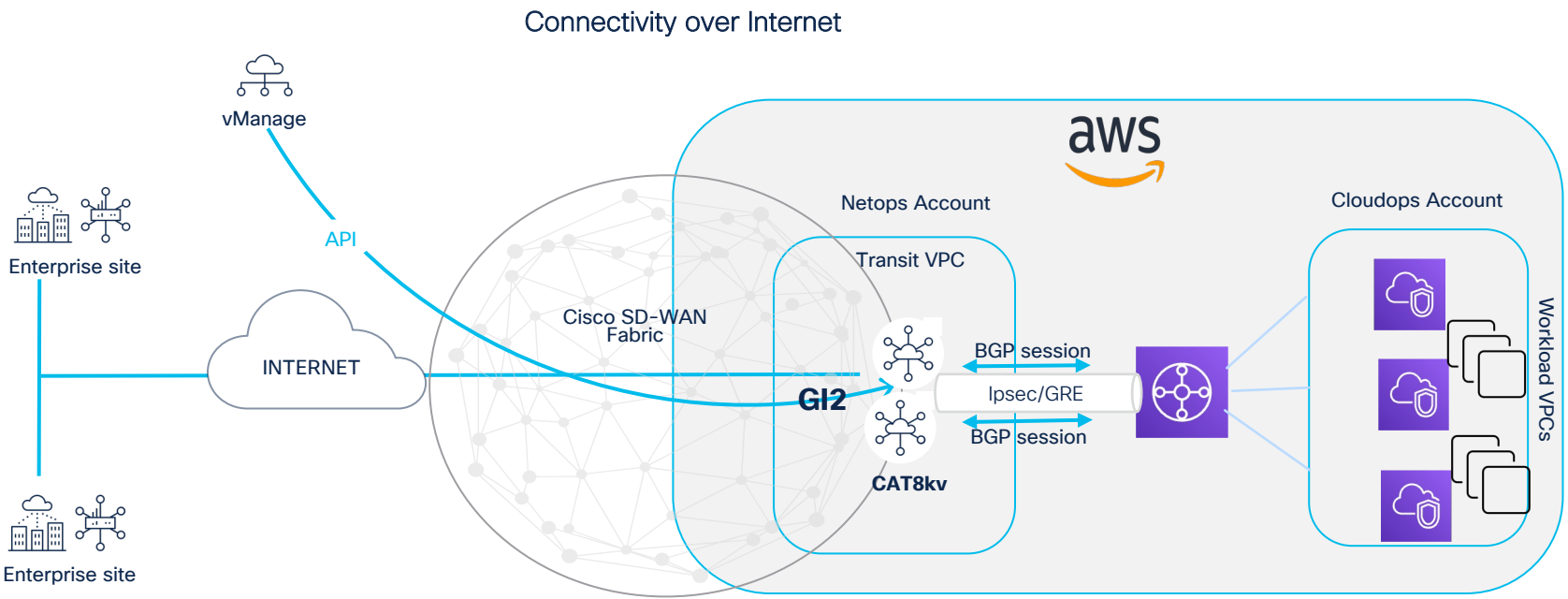
Megaport/Equinix



© 2022 Cisco and/or its affiliates. All rights reserved. Cisco Public

Connectivity options

Cisco SD-WAN Cloud Hub connectivity option: T-AWS



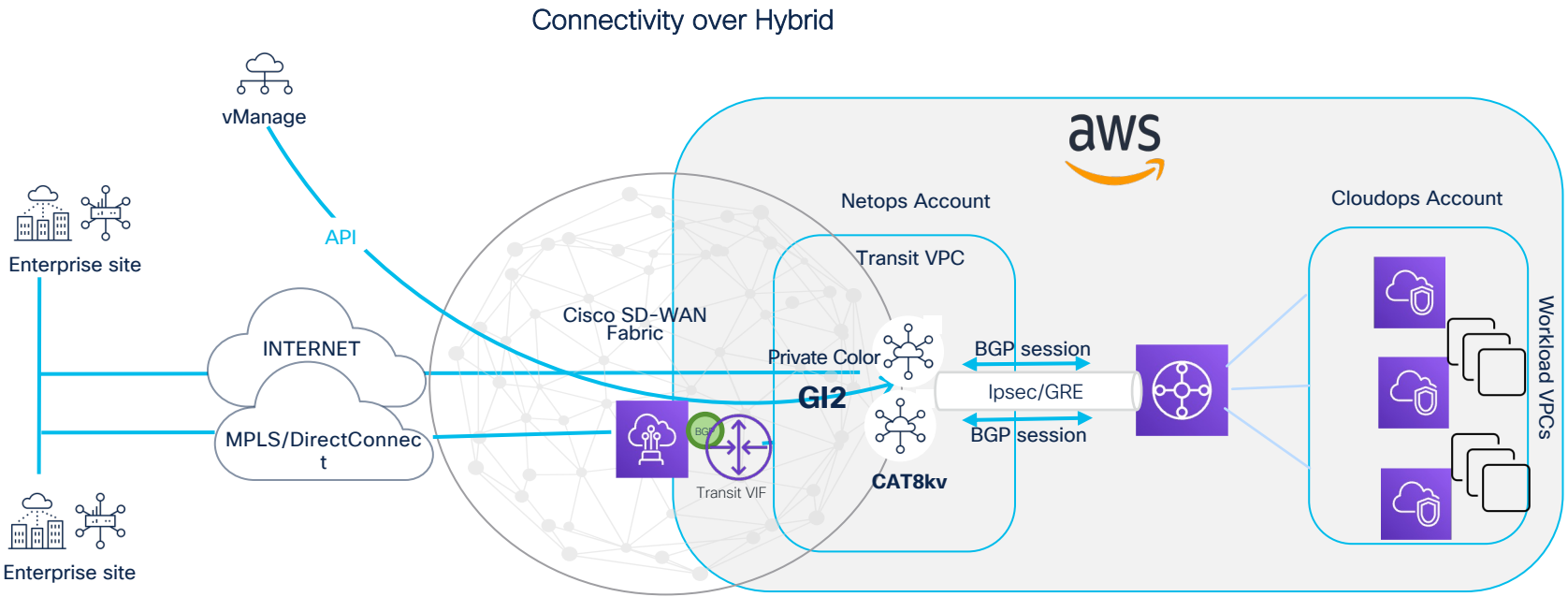
Simple

Automated

Secure

© 2022 Cisco and/or its affiliates. All rights reserved. Cisco Public

Cisco SD-WAN Cloud Hub connectivity option: 2 – AWS



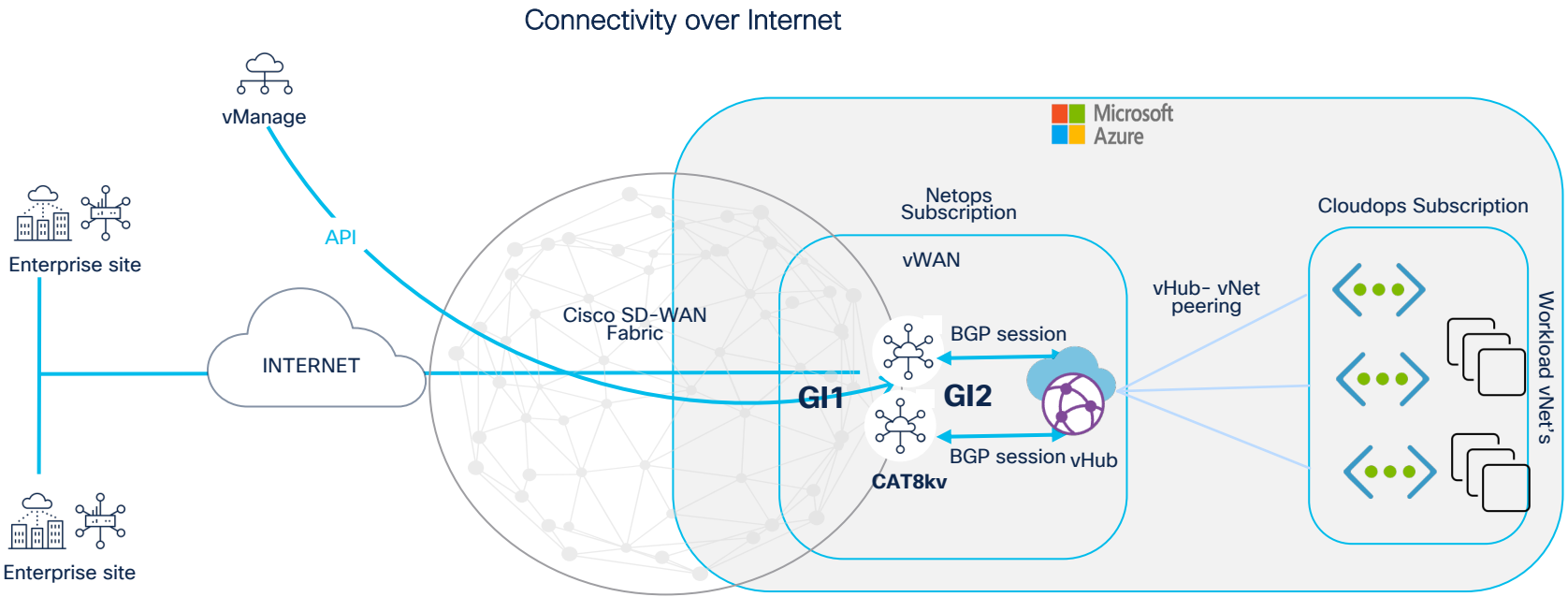
Simple

Automated

Secure

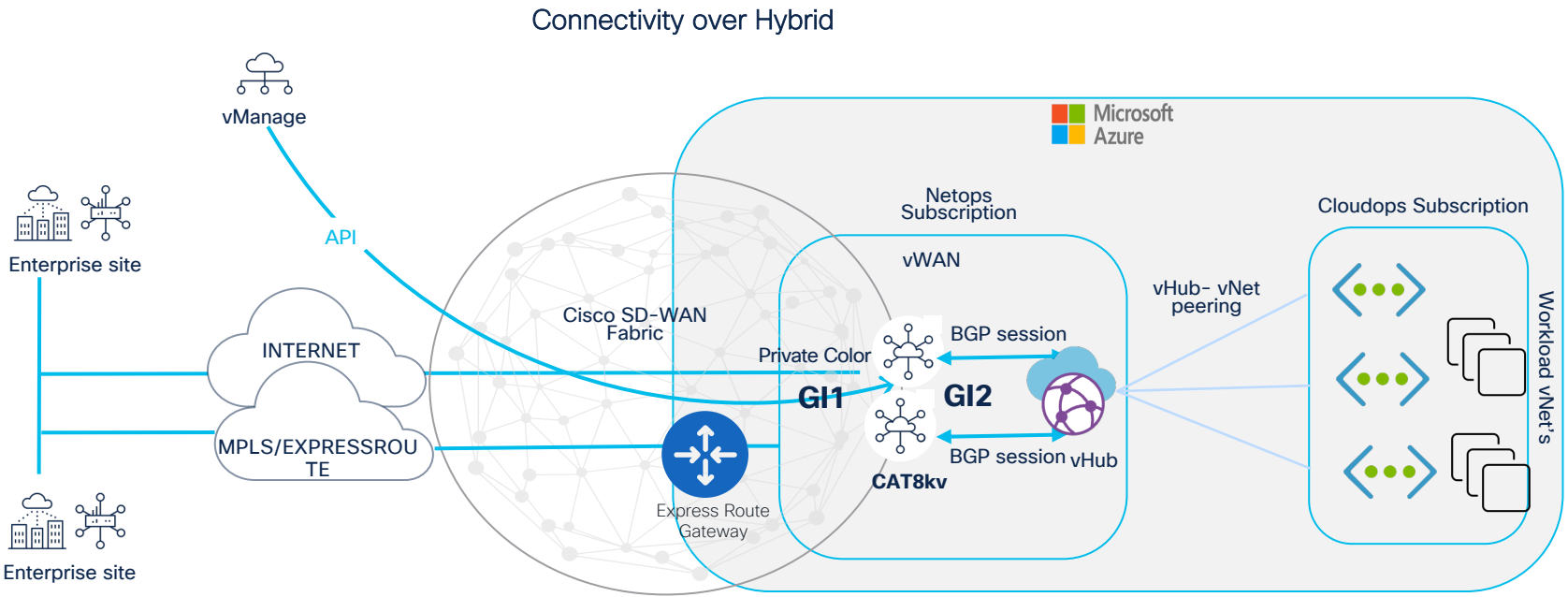
© 2022 Cisco and/or its affiliates. All rights reserved. Cisco Public

Cisco SD-WAN Cloud Hub connectivity option: 1- Azure



© 2022 Cisco and/or its affiliates. All rights reserved. Cisco Public

Cisco SD-WAN Cloud Hub connectivity option: 2 – Azure



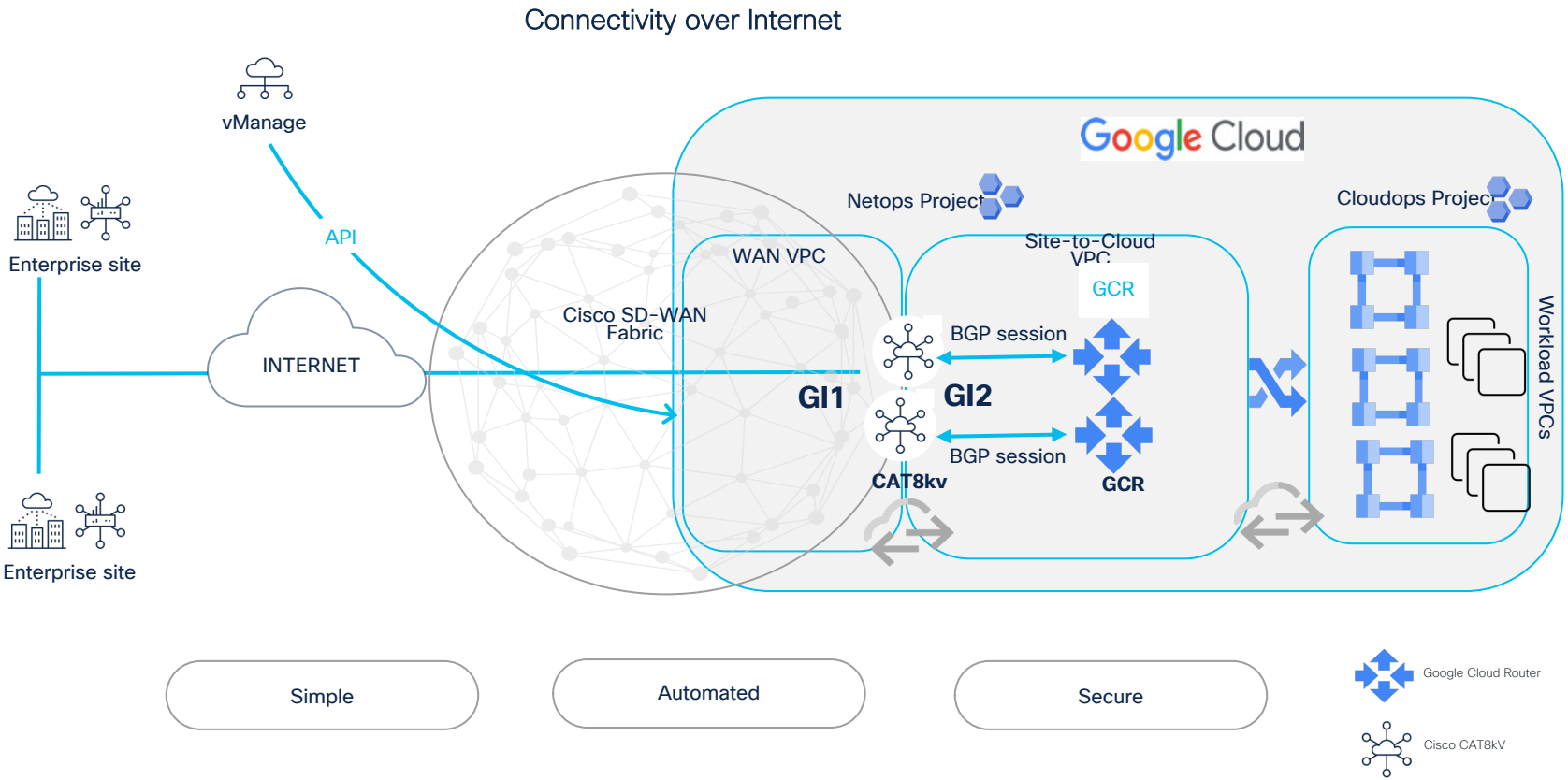
Simple

Automated

Secure

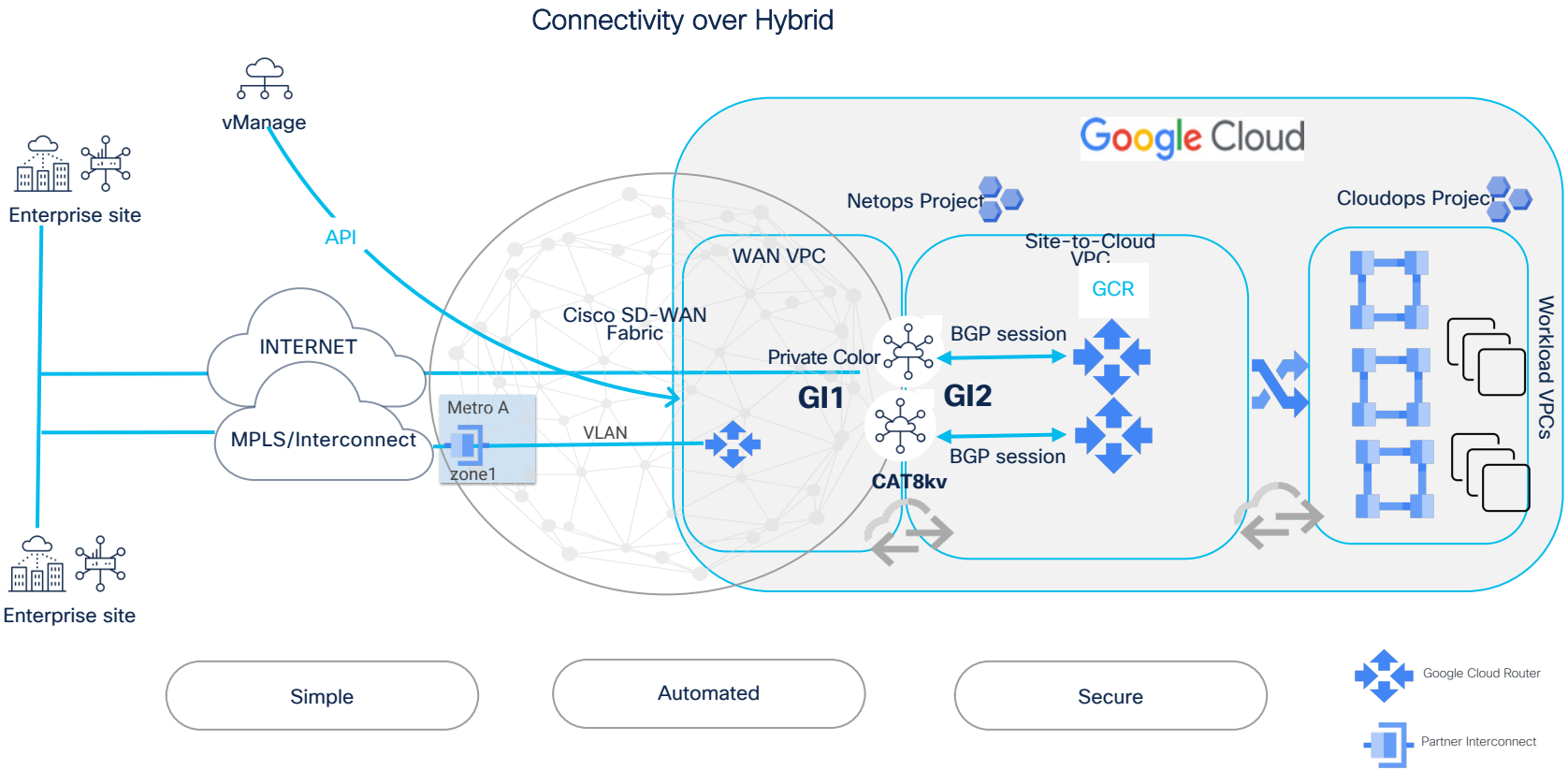
© 2022 Cisco and/or its affiliates. All rights reserved. Cisco Public

Cisco SD-WAN Cloud Hub connectivity option: T-GCP



© 2022 Cisco and/or its affiliates. All rights reserved. Cisco Public

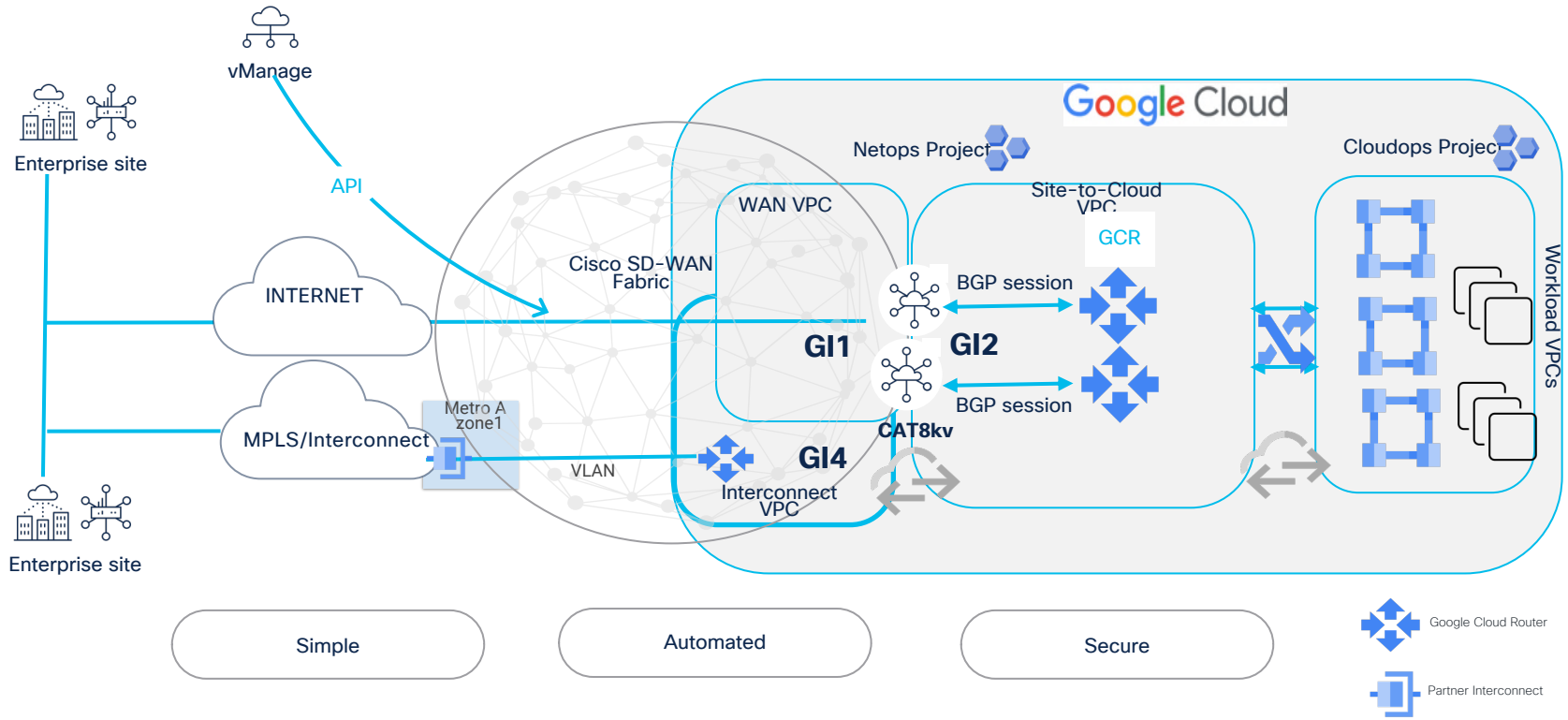
Cisco SD-WAN Cloud Hub connectivity option: 2- GCP



© 2022 Cisco and/or its affiliates. All rights reserved. Cisco Public

Cisco SD-WAN Cloud Hub connectivity option: 2

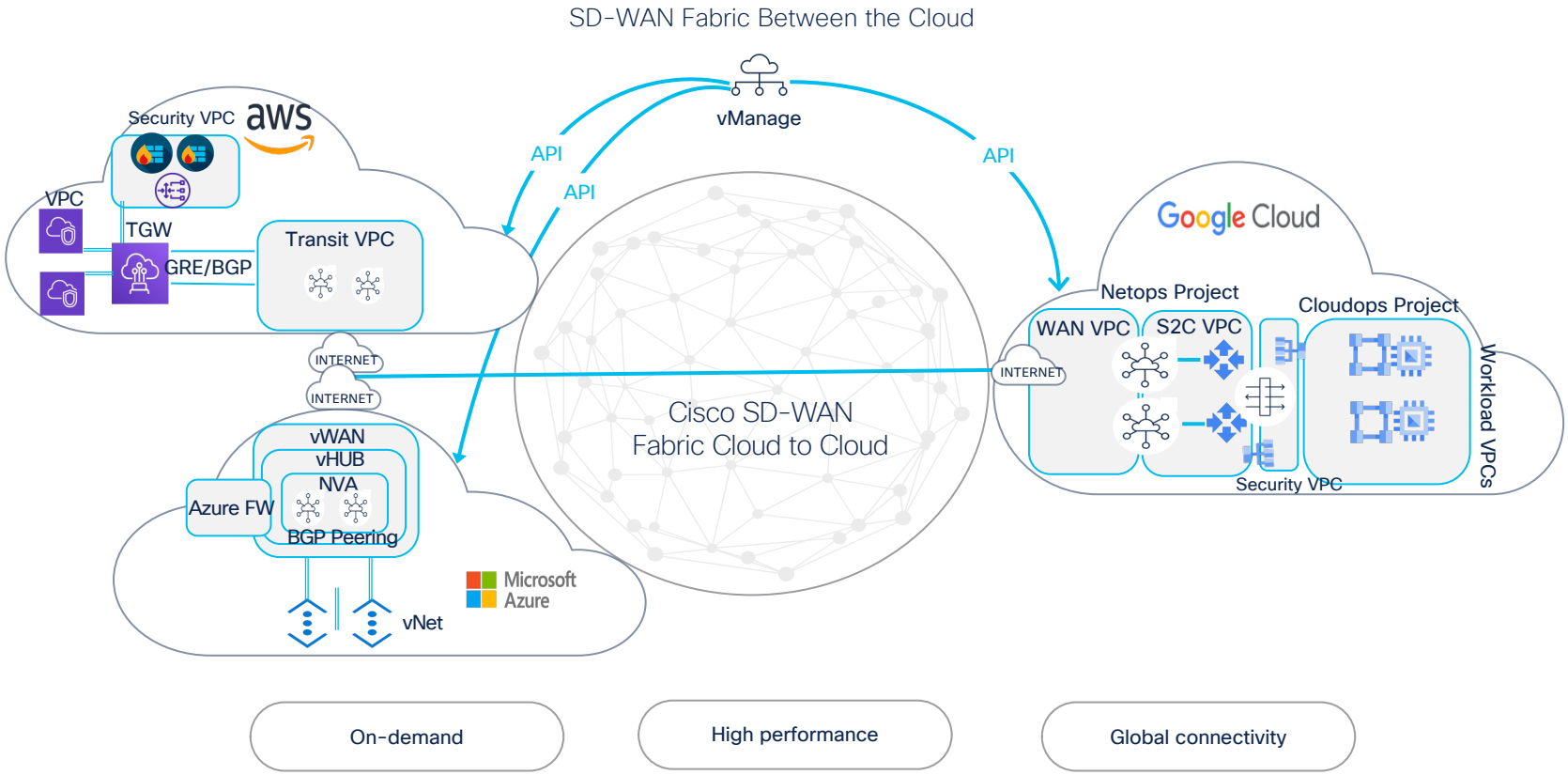
Connectivity over Hybrid



© 2022 Cisco and/or its affiliates. All rights reserved. Cisco Public

Simple Security Insertion

Security Stack Insertion in the Cloud



© 2022 Cisco and/or its affiliates. All rights reserved. Cisco Public

Unified Connectivity Orchestrator – Cisco SD-WAN

Single pane of glass automation

Time to value (with fast deployment) full network stack automation
(automate overlay underlay via vManage)

Centralized control from a single unified view with real-time monitoring via vManage

Simplified connectivity to Cloud to provides decentralise access

Service-health based

Automate SD-WAN policy for custom applications in multi-cloud based on application profile

Improved application performance

SD-WAN path selection based on network and service telemetry data exchange

Secure multicloud networking

Consistent Security Policies – Secure segmentation and common policy framework across on-prem and cloud

Reduced network risks
(with private backbone connectivity)

Strong security posture
(end-to-end encryption and segmentation)

© 2022 Cisco and/or its affiliates. All rights reserved. Cisco Public

Session Surveys

We would love to know your feedback on this session!

- Complete the session surveys in the Cisco Events mobile app. You'll earn some points in the Cisco Live Game and potentially win a prize.
- Complete a minimum of four session and the overall event surveys to claim a Cisco Live cable bag.

© 2022 Cisco and/or its affiliates. All rights reserved. Cisco Public

Continue your education

Visit the Cisco Showcase for related demos

Book your one-on-one Meet the Expert meeting

Attend the interactive education with DevNet, Capture the Flag, and Walk-in Labs

Visit the On-Demand Library for more sessions at www.CiscoLive.com/on-demand

© 2022 Cisco and/or its affiliates. All rights reserved. Cisco Public

Cisco Learning and Certifications

From technology training and team development to Cisco certifications and learning plans, let us help you empower your business and career. www.cisco.com/go/certs

Pay for Learning with Cisco Learning Credits

(CLCs) are prepaid training vouchers redeemed directly with Cisco.

Learn

Cisco U.
IT learning hub that guides teams and learners toward their goals

Cisco Digital Learning
Subscription-based product, technology, and certification training

Cisco Modeling Labs
Network simulation platform for design, testing, and troubleshooting

Cisco Learning Network
Resource community portal for certifications and learning

Train

Cisco Training Bootcamps
Intensive team & individual automation and technology training programs

Cisco Learning Partner Program
Authorized training partners supporting Cisco technology and career certifications

Cisco Instructor-led and Virtual Instructor-led training
Accelerated curriculum of product, technology, and certification courses

Certify

Cisco Certifications and Specialist Certifications
Award-winning certification program empowers students and IT Professionals to advance their technical careers

Cisco Guided Study Groups
180-day certification prep program with learning and support

Cisco Continuing Education Program
Recertification training options for Cisco certified individuals

© 2022 Cisco and/or its affiliates. All rights reserved. Cisco Public

The bridge to possible

Thank you

cisco Live!

#CiscoLiveAPJC