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The bridge to possible

Explore Simplicity of Public Cloud Network Configuration

with Cloud Network Controller (formerly cAPIC) and Nexus Dashboard Orchestrator (NDO)

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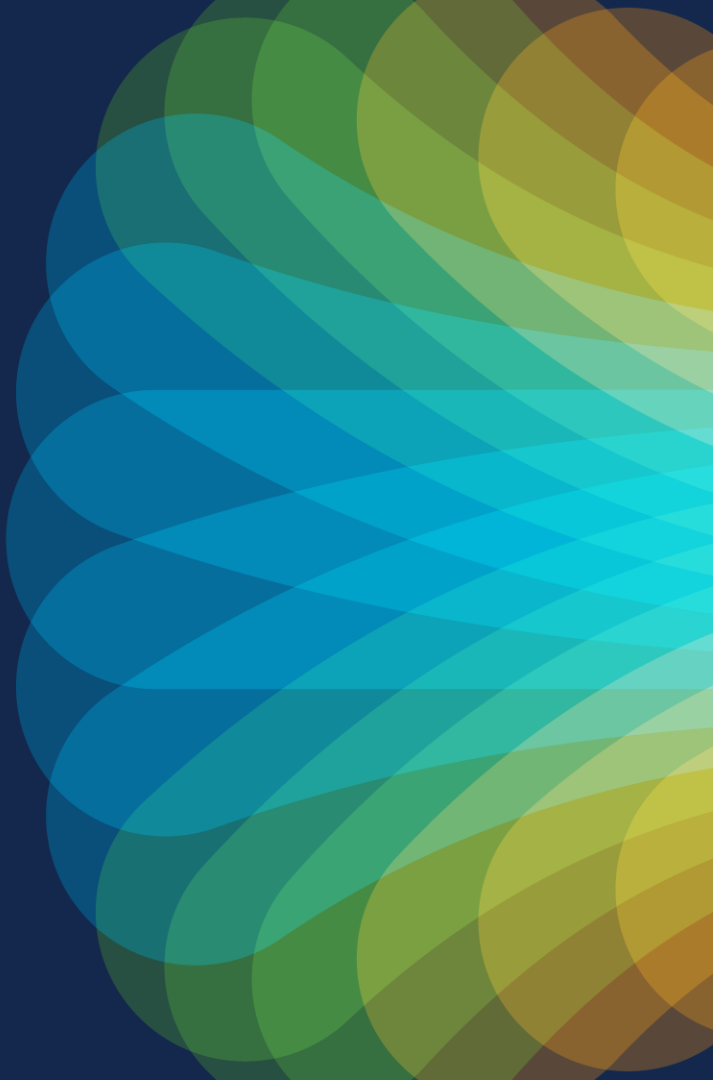
LTRCLD-2557

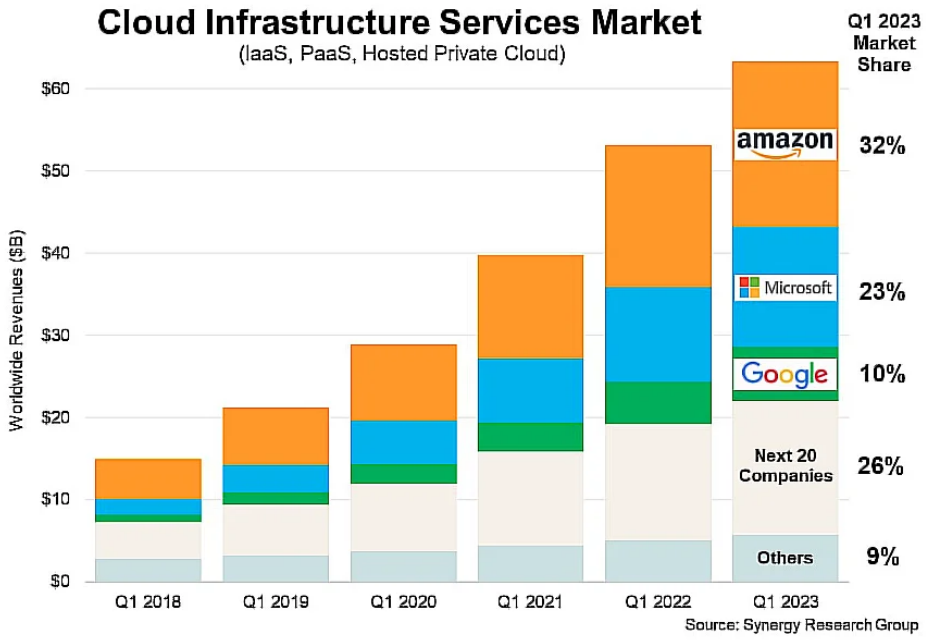
Agenda

- Cloud growth and challenges
- ACI Multicloud overview
- ACI Multicloud deployment
- Lab details

Cloud growth and challenges



Cloud Services Market

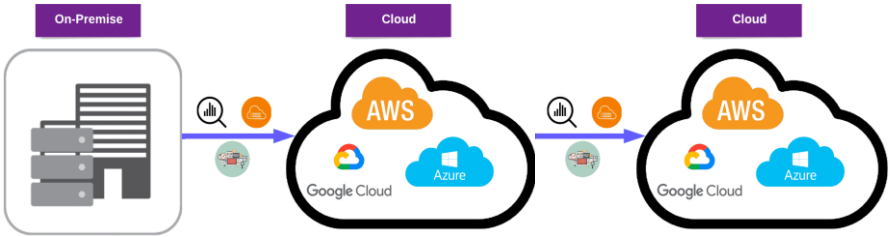


https://www.gartner.com/en/newsroom/press-releases/2023-11-29-gartner-says-cloud-will-become-a-business-necessity-by-2028
https://www.cloudzero.com/blog/cloud-computing-market-size/

- 20.4% growth 2023-2024
- 3 major players and many new coming
- End-user spending reaching $678 billion in 2024 projected to exceed $1 trillion in 2027.
- Gartner predicts that by 2027, more than 70% of enterprises will use industry cloud platforms, up from less than 15% in 2023

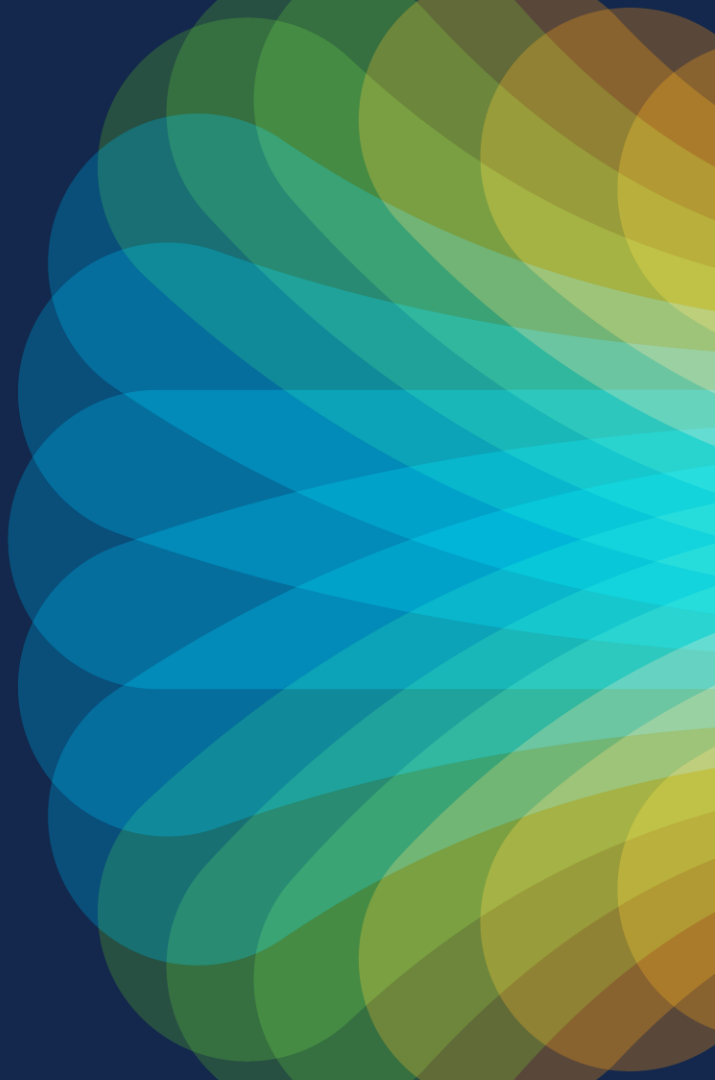
Multicloud networking challenges

- Data Privacy and Security (visibility to traffic)
- Multiple Cloud Management (consistency)
- Complexity (VNET, VPC, TGW, AZ, etc)
- Network configuration and secure access (zero trust)
- Migration

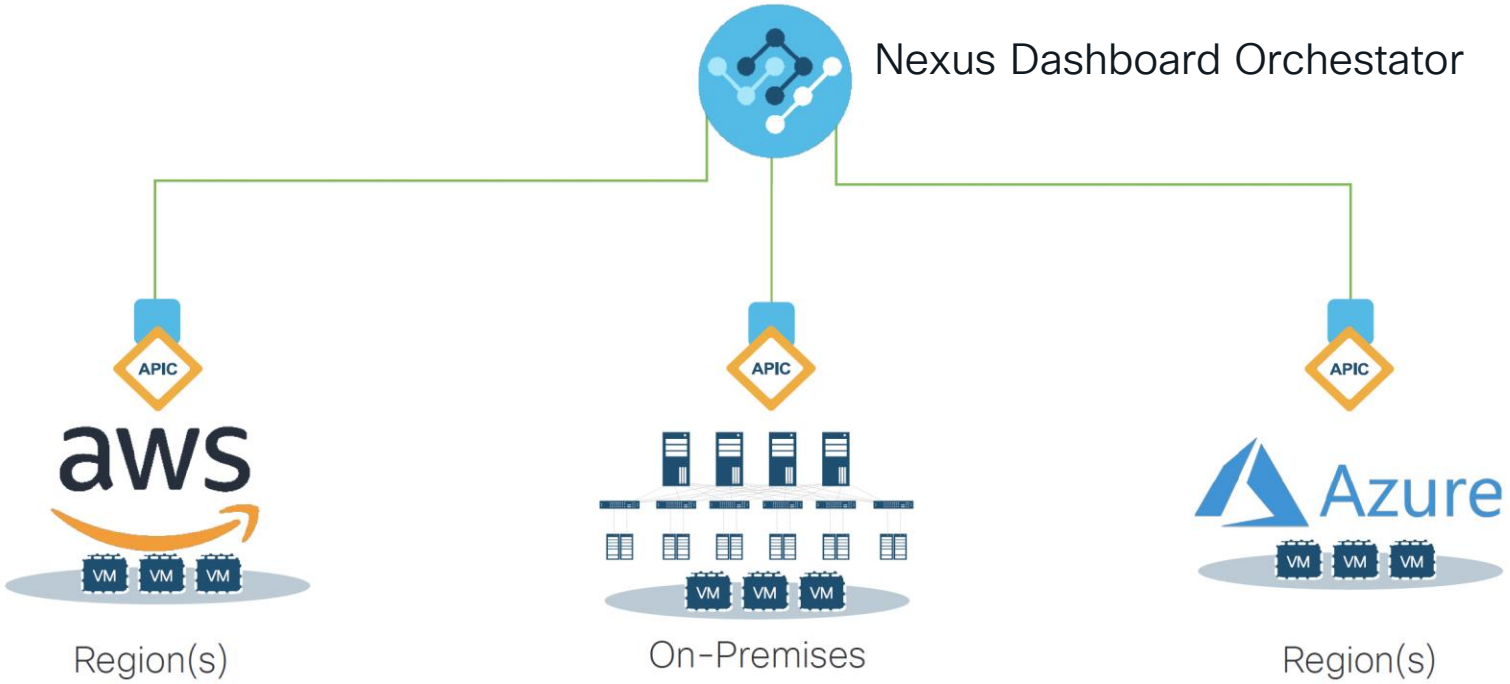


Is there a way to use known tools for network configuration in Public Clouds?

ACI Multicloud overview



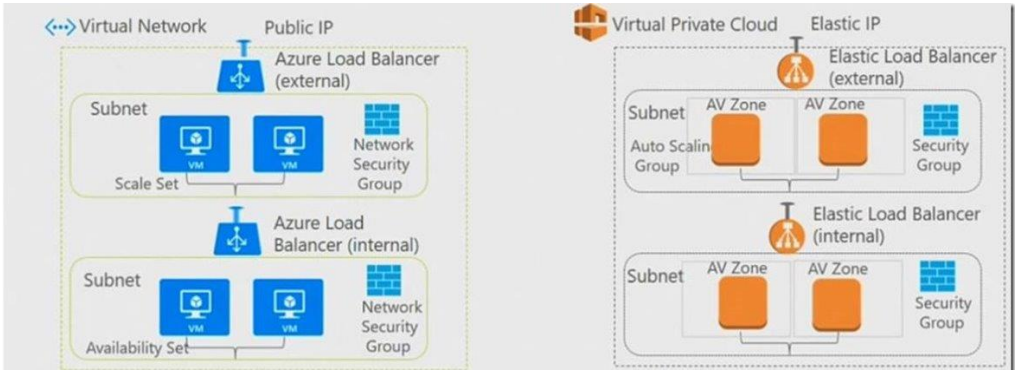
ACI multicloud solution



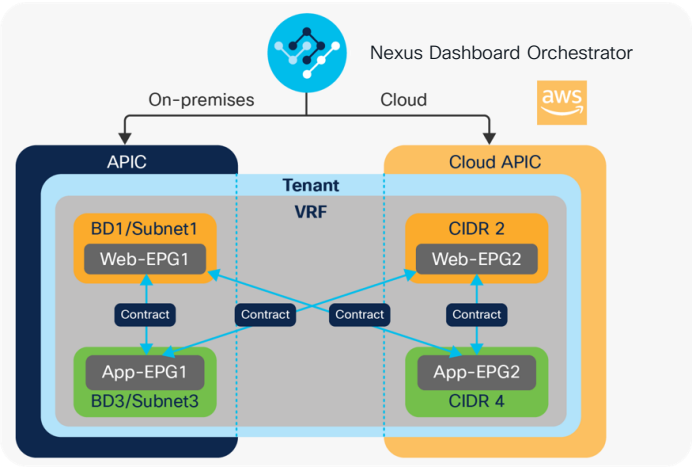
ACI multicloud solution

- Plenty of different providers, new one to come
- Each cloud has it's own logic and own naming

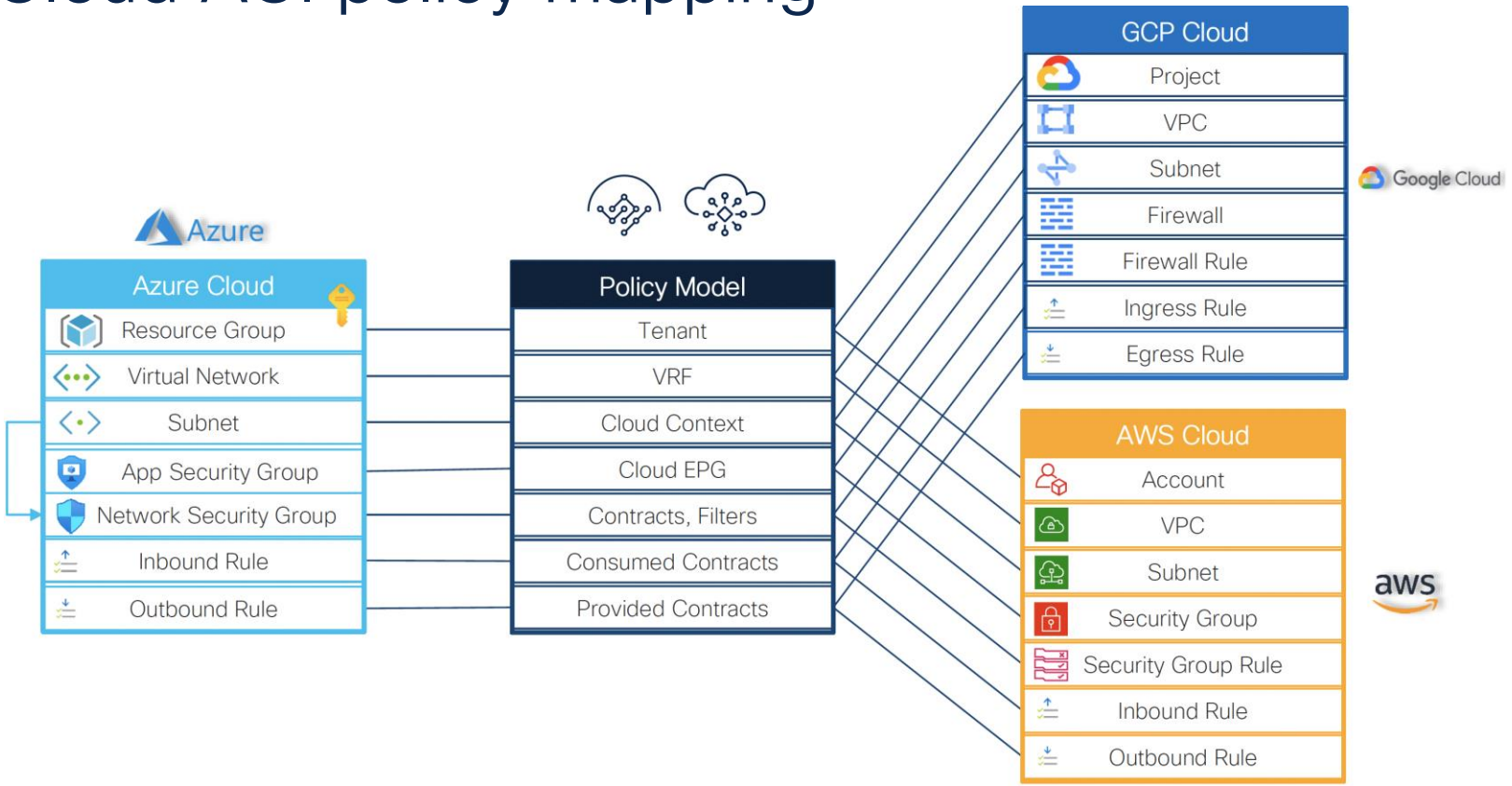
Transform this



In to unified across providers



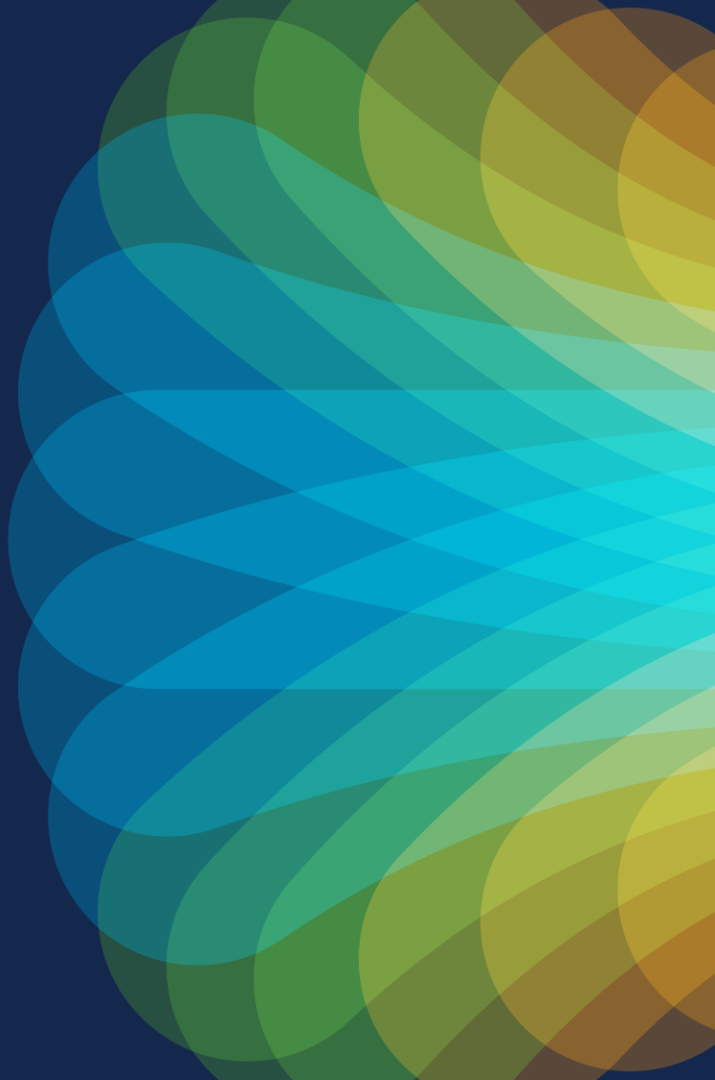
Cloud ACI policy mapping



ACI multicloud key features

- Easy and automated connectivity and routing (on-prem and cloud)
- Secure multicloud connectivity with segmentation and network policy
- Single interface for simplicity
  - Regardless of location (cloud, on-prem)
- Service integration
  - Third-party or native load balancer or firewall device
- Visibility and troubleshooting
  - Endpoint monitoring (on-prem and cloud)
  - Single pane of glass for monitoring and management of route tables, subnets, peering, attachments, endpoints, etc.

ACI Multicloud deployment



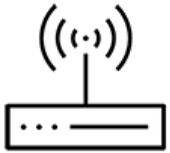
ACI multicloud architecture components

Cisco Cloud Network Controller

- Deployed in each Cloud
- Local Cloud configuration and policy translation
- Cloud Router configurations
- Northbound REST interface
- Endpoint discovery in the cloud

Cisco Nexus Dashboard orchestrator

- Multi-site policy definition
- Visibility
- End to end security
- Consistency



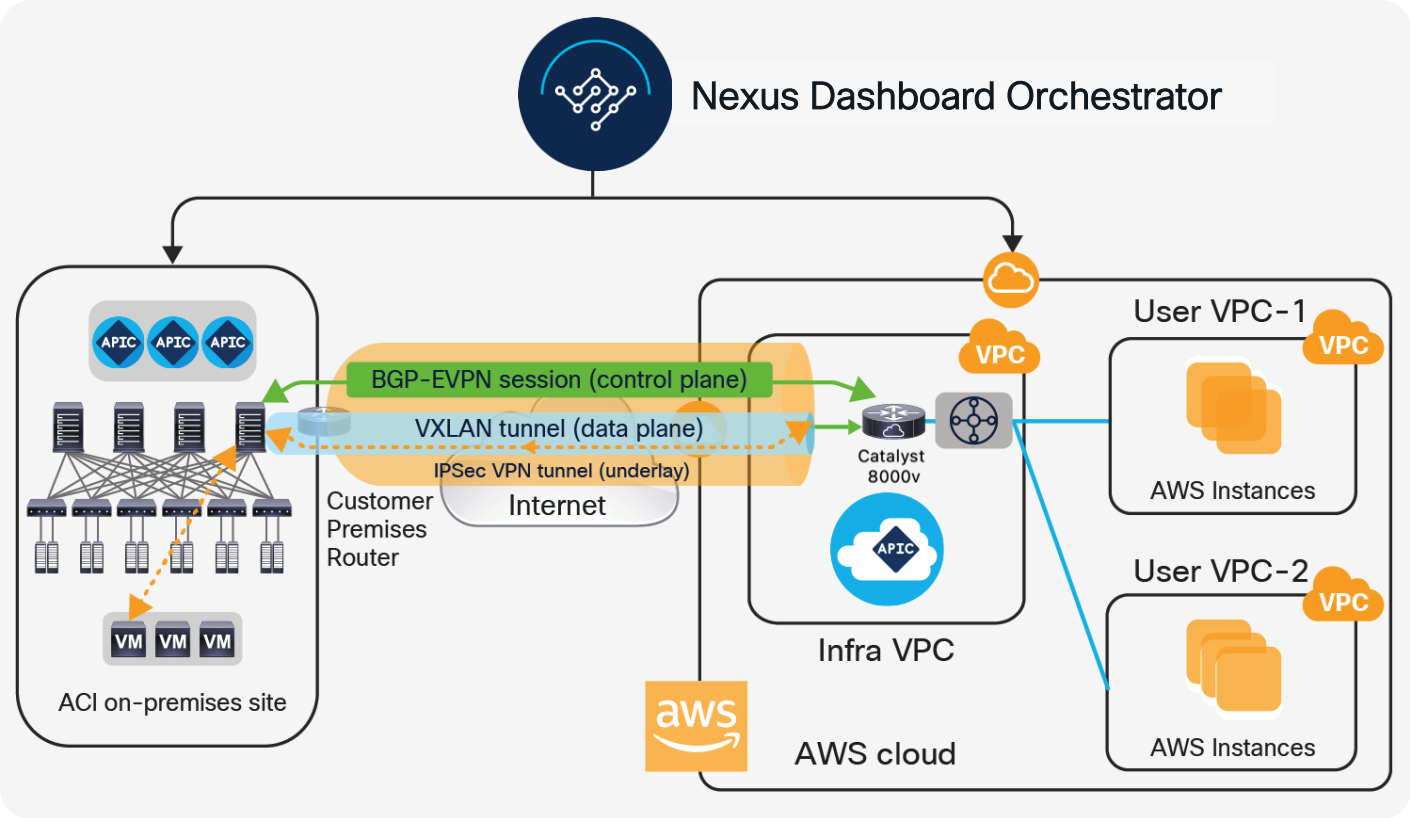
Cisco Catalyst® 8000V or cloud-native router

- IPSec tunnels termination
- Inter-site traffic flow

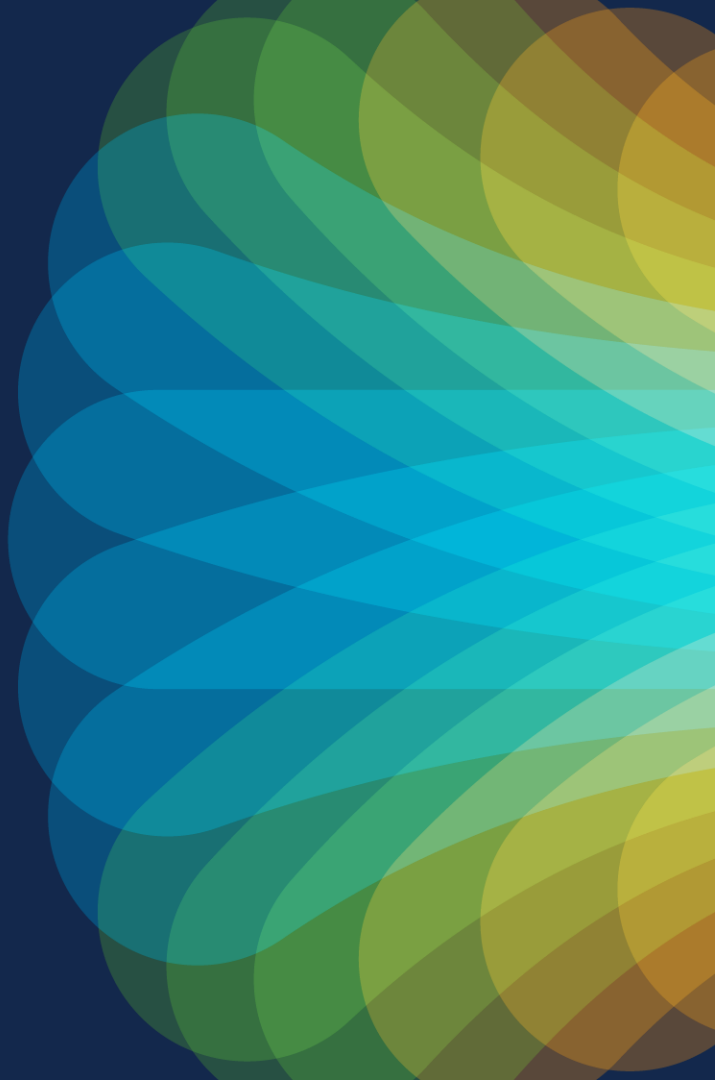
Cloud ACI deployment

1. Deploy Nexus Dashboard cluster (on-prem or in Cloud)
2. Deploy Cloud Network Controller(CNC) in each managed cloud
    - Template based deployment for both Azure and AWS
3. Perform region management in CNC
4. Register sites to Nexus Dashboard and Orchestrator
5. Configure sites for multisite (almost fully automated)
6. Create logical configuration of Tenants, EPGs, contracts, etc

Cloud ACI deep dive (AWS example)

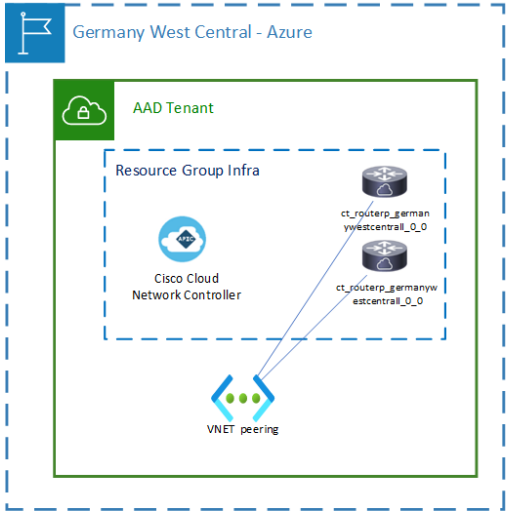


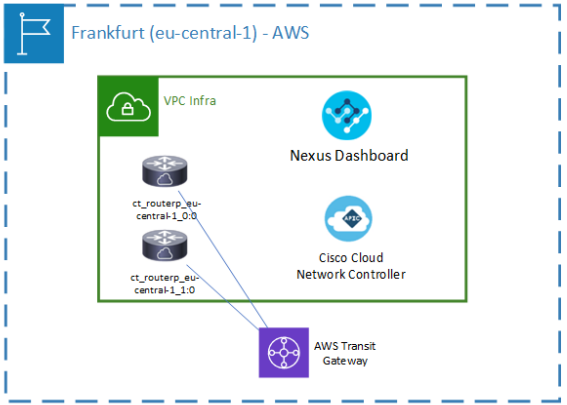
Lab details



Lab details

- ACI Multicloud lab with AWS and Azure sites
- All components hosted in Public Clouds
- Initial Lab topology





Lab tasks

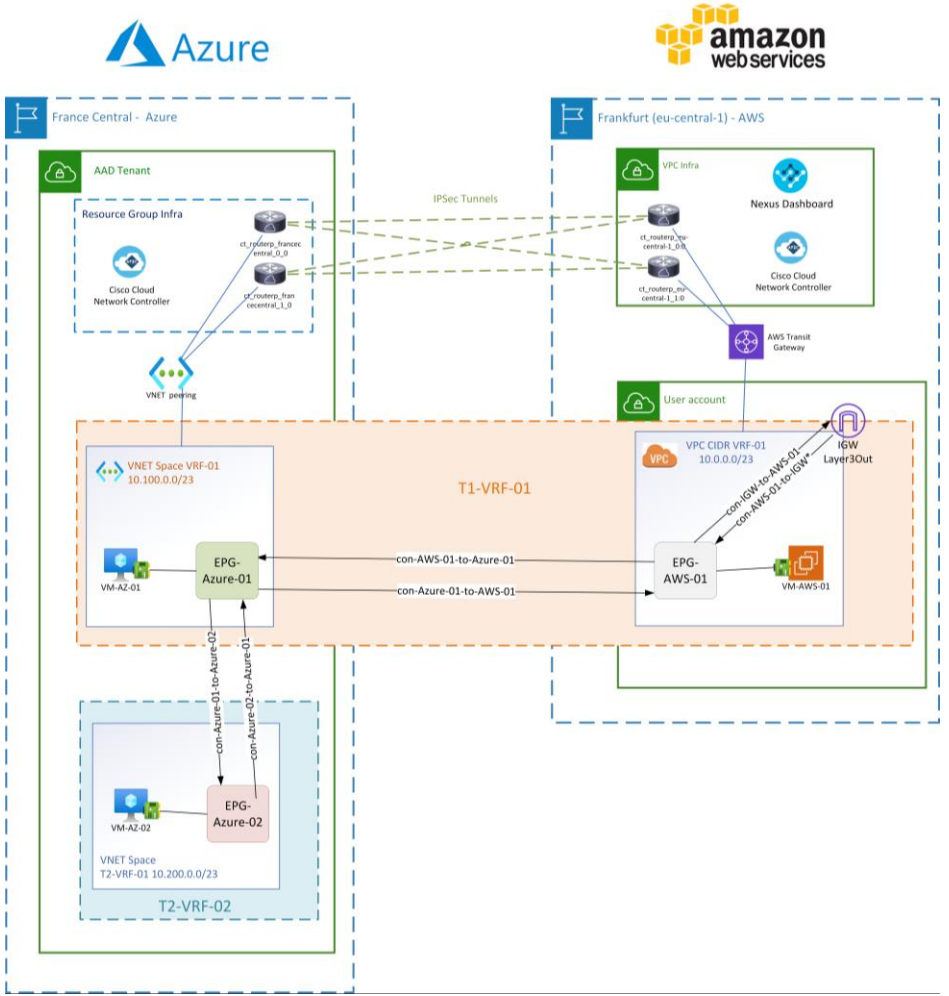
1. Nexus Dashboard Site oboarding
2. Multisite configuration between Azure and AWS
3. Tenant creation and trust configuration
4. Use-cases configuration
    1. Stretched VRF
    2. Internet Gateway
    3. Inter-Tenant Routing (bonus)

Configuration and traffic flow verification.

Lab topology final

To be configured:

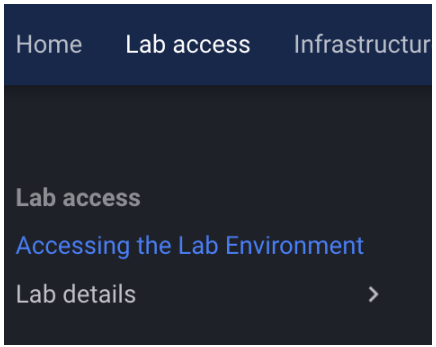
- 2 Tenants
- 2 VRFs
  - Stretched
  - Azure only
- 3 EPGs
- Contracts
- EC2/VMs



Lab guide and lab details

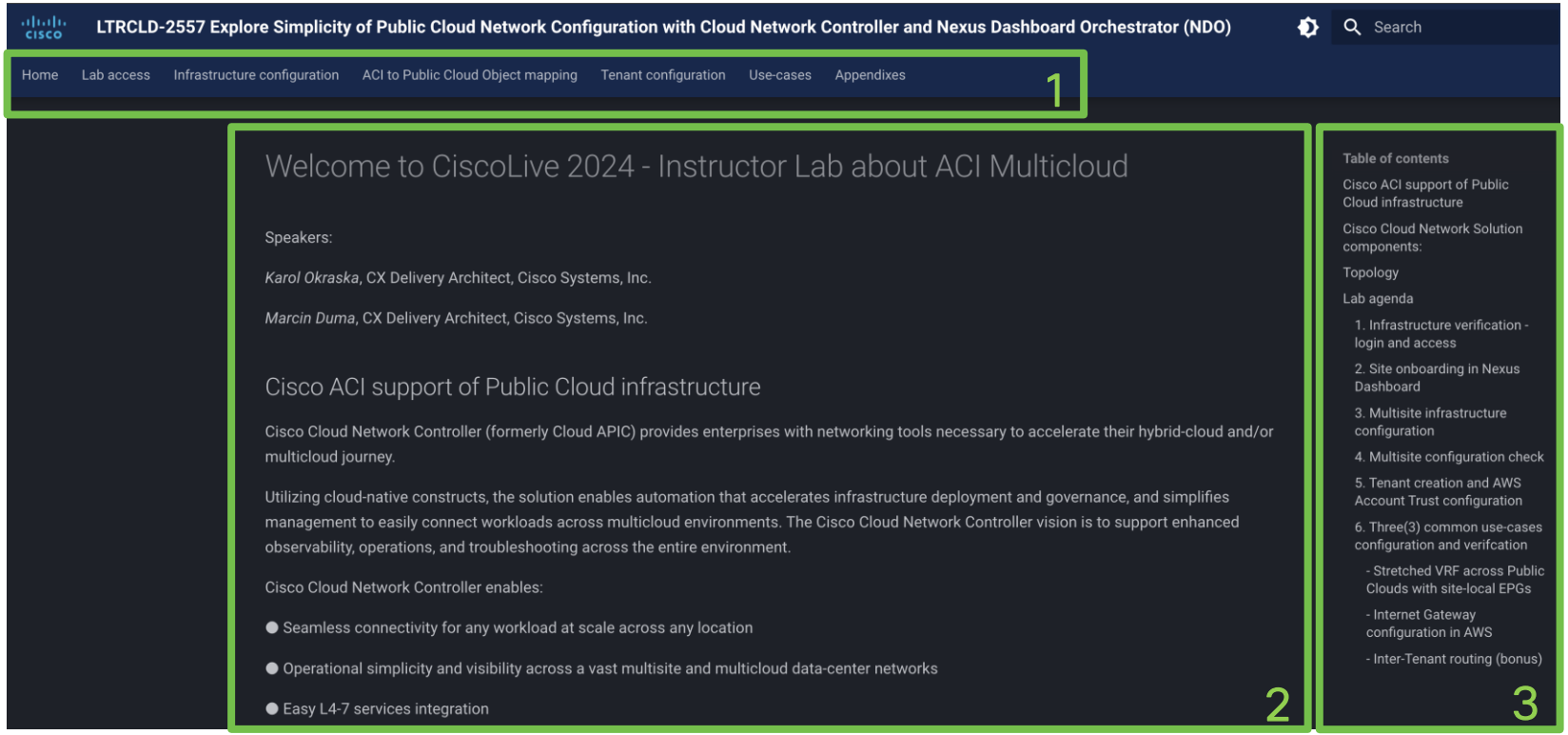
Lab guide – online:
http://labguides-wil.s3-website.eu-central-1.amazonaws.com/ltrcld-2557/

Lab access details – one user – one POD



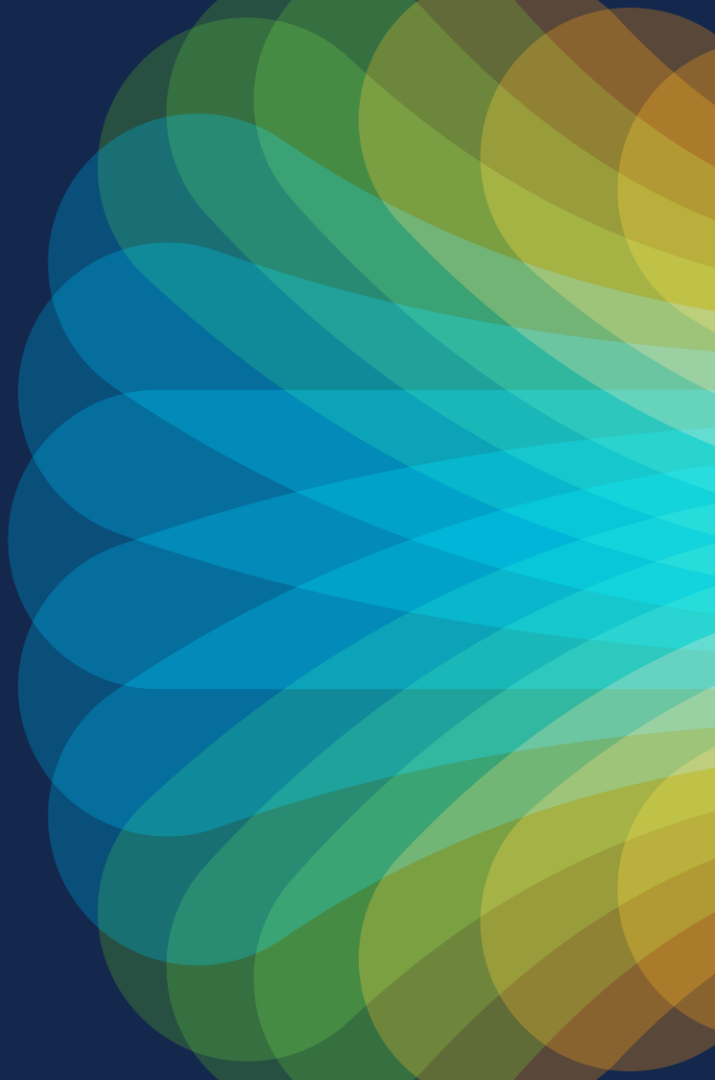
Attendee Name	POD ID	POD access details
Student 1	POD1	Lab Details POD1
Student 2	POD2	Lab Details POD2
Student 3	POD3	Lab Details POD3

Lab guide and lab details



The bridge to possible

Thank you



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