

The background is a vibrant, abstract graphic. It features a central bright white light source from which numerous colorful rays emanate, creating a sunburst or starburst effect. The rays transition through a spectrum of colors including yellow, orange, red, and various shades of blue and green. Overlaid on this are several large, semi-transparent, wavy shapes in similar color tones, giving the overall image a sense of motion and energy.

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#CiscoLive



The bridge to possible

Enhancing Cloud Security

Safeguarding Your AWS Infrastructure with Cisco's
Secure Firewall

Jay Ponce, Product Management Engineer
@elnastech

BRKCLD-2018



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Agenda

- Introduction
- AWS Cloud Infrastructure
- Cisco Secure Firewall Review
- Integration
- Private Cloud
- Conclusion

Your Speaker



Jay Ponce
jayponce.com

- From Dallas, TX
- Started learning tech at 7 years old
- Programming for 11 years
- With Cisco since 2018

Off-hours

- Activities that keep my adrenaline up
- Love comics and movies
- Travel
- Building Software

Introduction: Why Cloud?



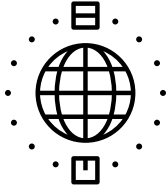
Cloud Providers



“AWS moves fast, listens to customers, and creates value on top of our already successful cloud-computing infrastructure. We're consistently thinking two to five years forward”

Andy Jassy
Amazon

Overview of AWS



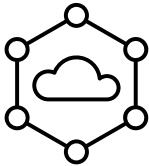
Market Dominance



Comprehensive Service
Catalog



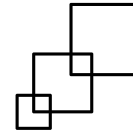
Global Presence



Pioneering the Cloud



Secure and Compliant



Scalable &
Cost Effective

AWS Cloud Infrastructure



31 Launched Regions

each with multiple Availability Zones
(AZs)

99 Availability Zones

450+ Points of Presence

400+ Edge Locations and 13
Regional Edge Caches

AWS Global Infrastructure Map

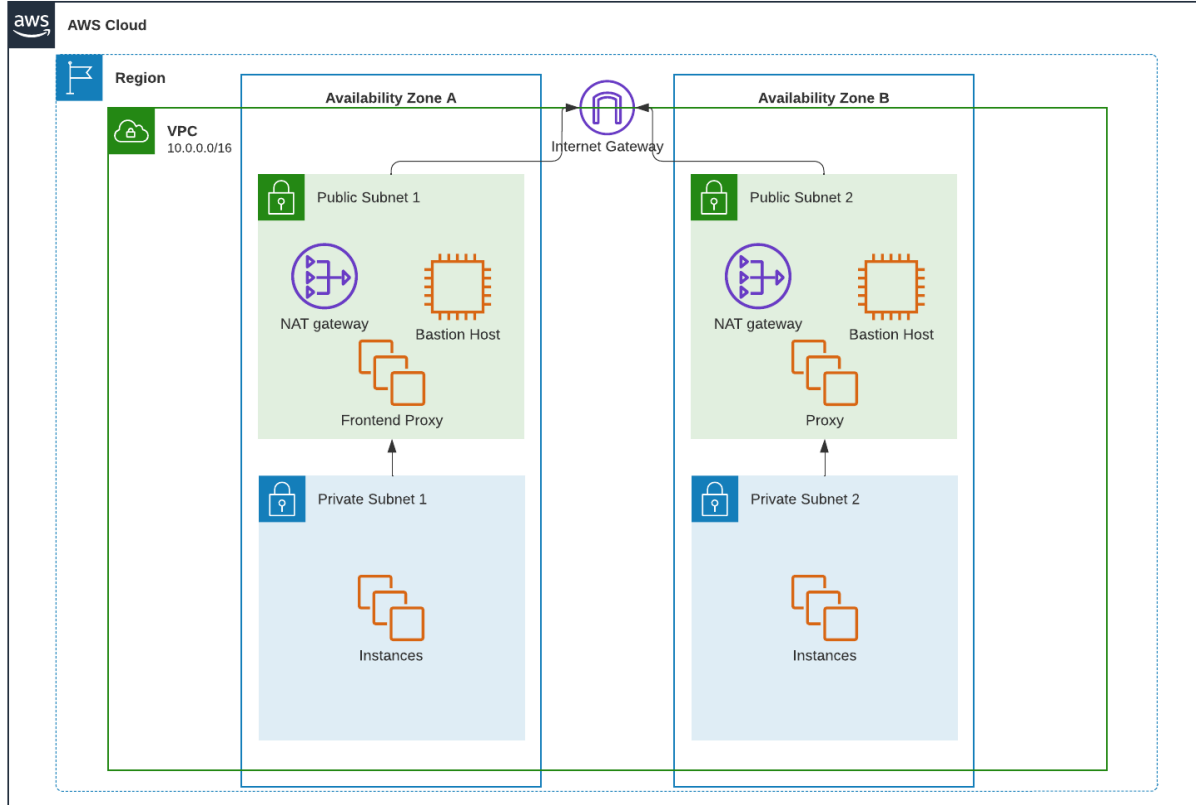
The AWS Cloud spans 99 Availability Zones within 31 geographic regions around the world, with announced plans for 15 more Availability Zones and 5 more AWS Regions in Canada, Israel, Malaysia, New Zealand, and Thailand.



Cloud Service Models

On-Premises	Infrastructure as a Service	Platform as a Service
Applications	Applications	Applications
Data	Data	Data
Runtime	Runtime	Runtime
Middleware	Middleware	Middleware
Operating System	Operating System	Operating System
Virtualization	Virtualization	Virtualization
Servers	Servers	Servers
Storage	Storage	Storage
Network	Network	Network

Common Architecture



Internet Gateway

Virtual Private Cloud

Availability Zones

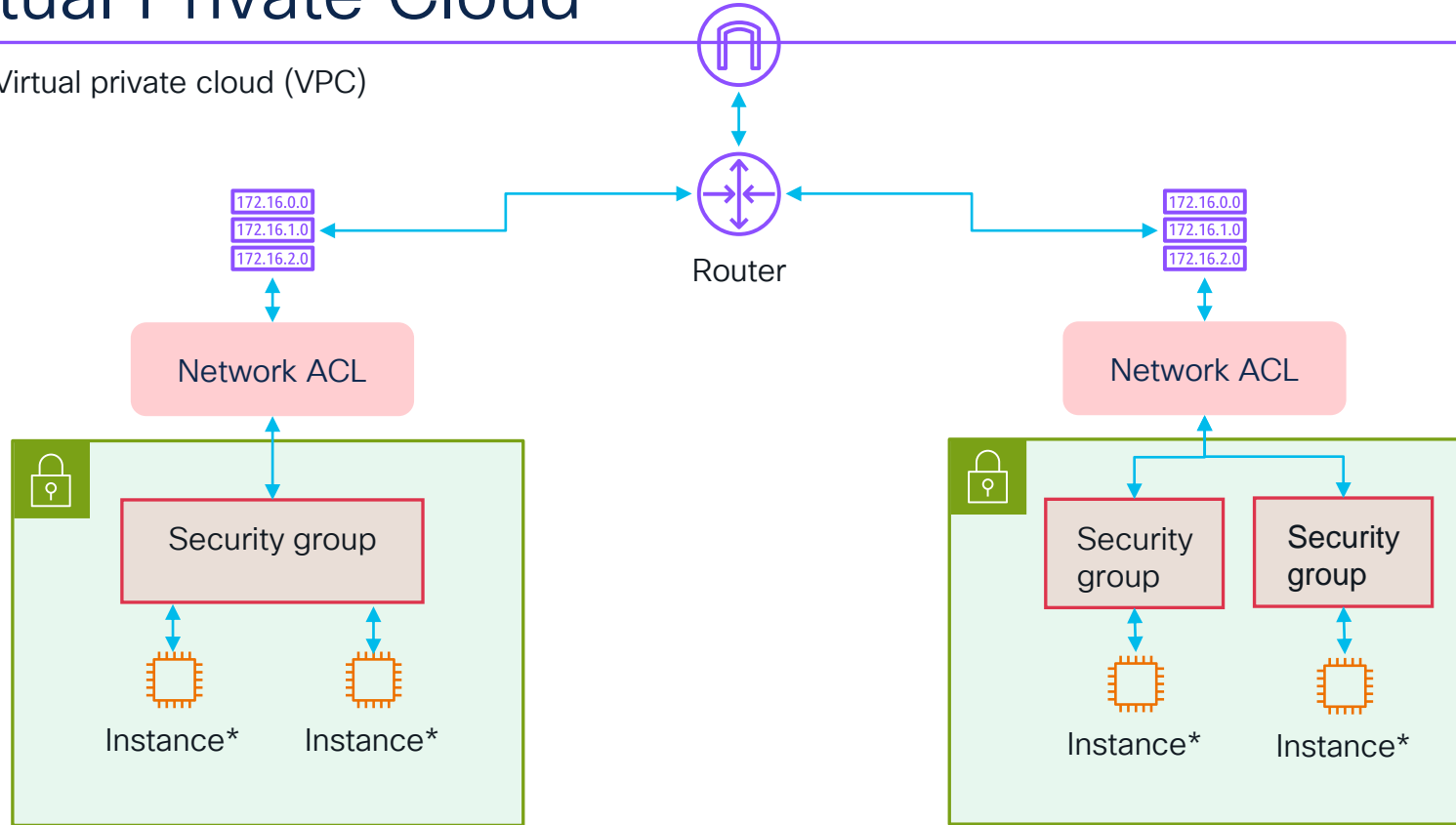
Subnets

NAT Gateway

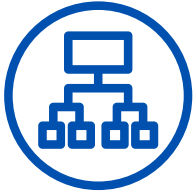
Virtual Private Cloud



Virtual private cloud (VPC)

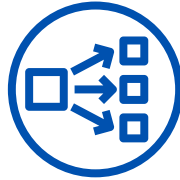


Elastic Load Balancers



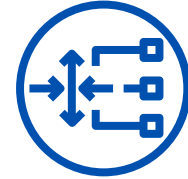
- **Application Load Balancer**

- Layer-7 Load Balancing
- User Authentication
- Rich Metrics / Logging
- Redirects
- Fixed / Response



- **Network Load Balancer**

- Layer-4 TCP/UDP
- Connection Based
- Source IP Preservation
- Low Latency



- **Gateway Load Balancer**

- Transparent Network Gateway
- Custom Firewalls
- Packet Manipulator
- Inspector

Transit Gateway



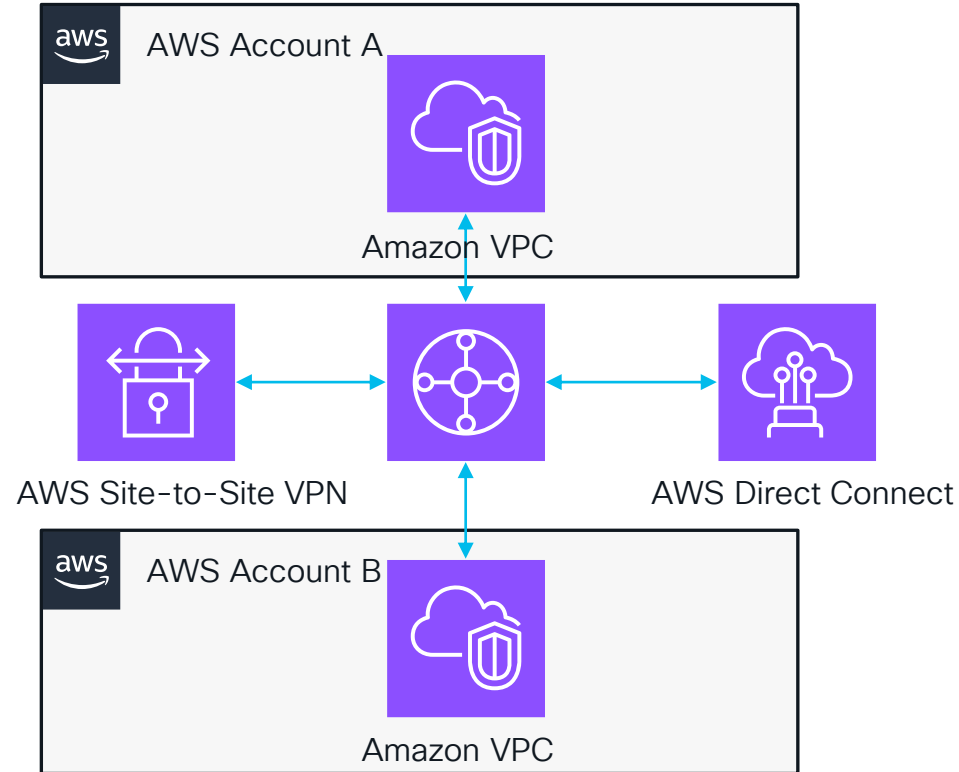
Connects multiple Amazon Virtual Private Clouds (VPCs) and on-premises networks



Highly scalable cloud router



Connection is made only once



Hybrid Architecture

- Virtual Private Gateway (VGW)
 - Let's multiple VPCs share a Direct Connect
 - Globally Available
 - Site-to-Site (S2S) Supported
- Direct Connect Gateway (DGW)
 - Connect VPCs in one region to a Direct Connect in another region
 - Does not support S2S
- Transit Gateway
 - Is not Globally Available
 - Route Segmentation and Transitive Routing

Cisco Secure Firewall Review

Overview of Cisco Secure Firewall

- Analysis
- Access Control
- Network Discovery
- Virtual Private Networks (VPNs)
- Threat Prevention
- Advanced Networking

Key Features and Services

- Cisco Secure Workload Integration
- Dynamic policies
- Snort 3 Intrusion Prevention System
- Encrypted Visibility Engine
- Transport Layer Security (TLS) Server Identity and Discovery
- Talos Threat intelligence
- Analytics and Logging

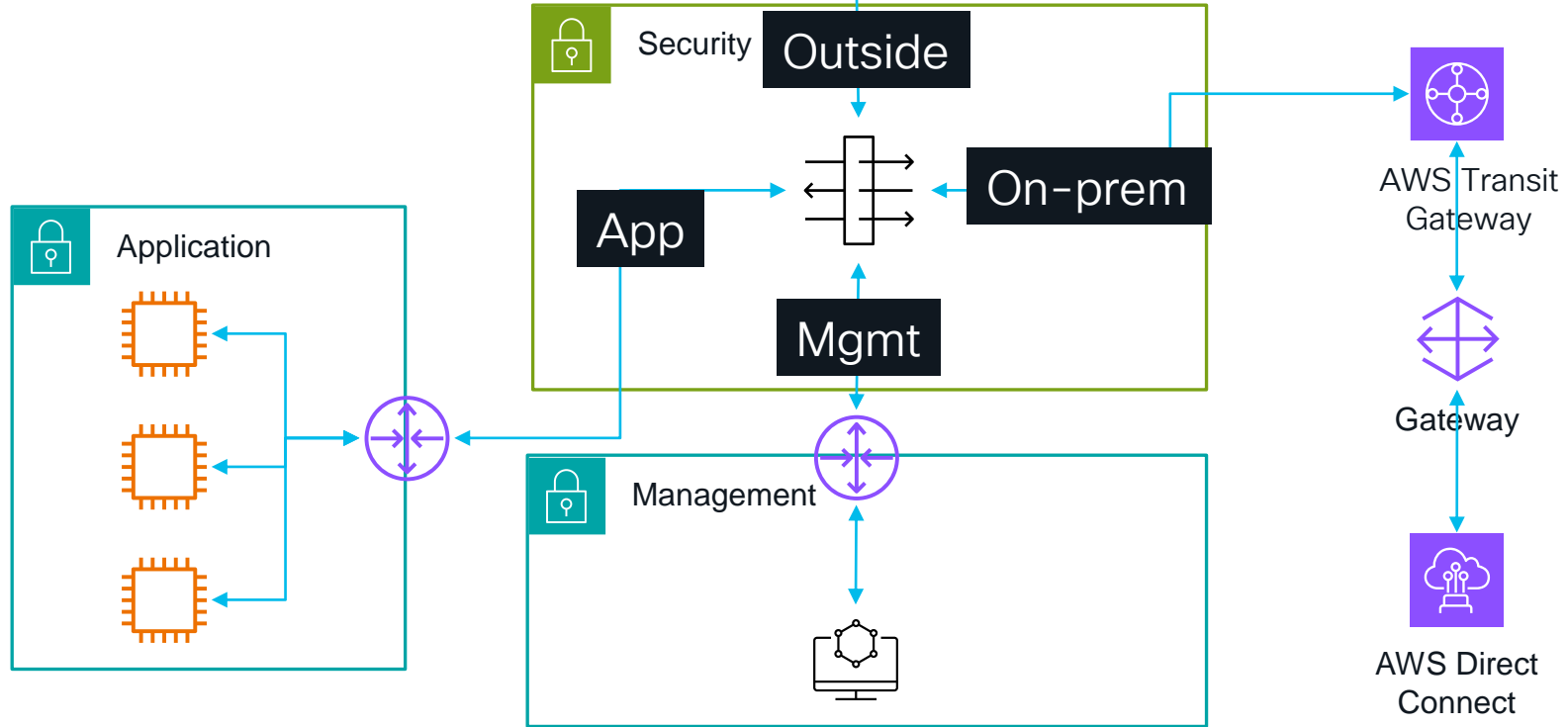
Firewall Architecture



Virtual private cloud (VPC)



Zones

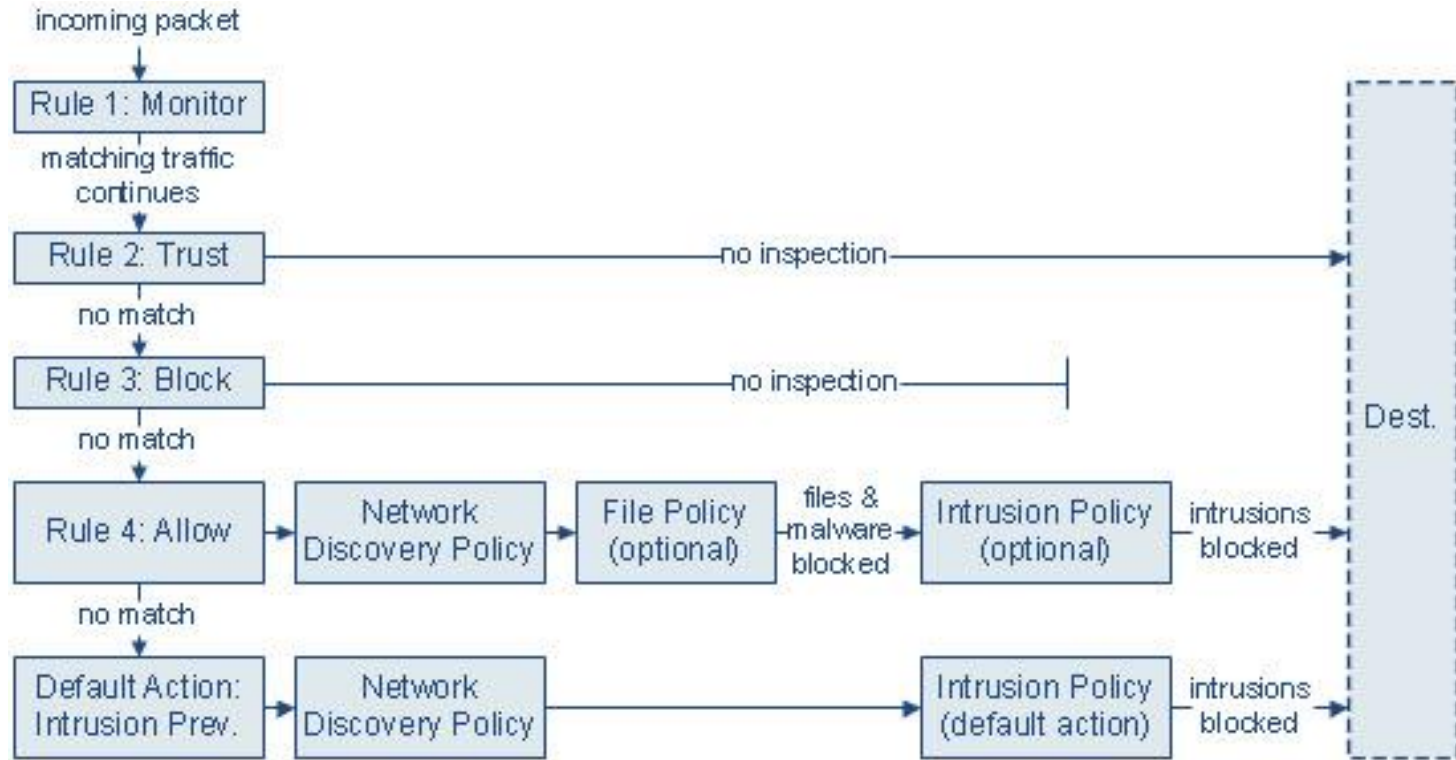


Benefits of Cisco Secure Firewall on AWS

How Cisco Secure Firewall complements AWS

- Reduce network operation by managing your firewall stack with Secure Firewall Management Center
- Management offered in a cloud-delivered, virtual, and on-premises
- Leverage Amazon Route 53 for remote access VPN (RAVPN)
- Integrate with AWS Transit Gateway for scalable inter-VPC traffic
- Centralized Management
- Reduce AWS environment complexity
- Scalable Security

More than Access Control



Proactive Threat Intelligence



Network Segmentation and Access Control

Simple Access Control Policy

Inspects all traffic with a balanced intrusion policy

[Inheritance Settings](#) | [Policy Assignments \(0\)](#)

Rules

Security Intelligence

HTTP Responses

Logging

Advanced

Prefilter Policy: [Default Prefilter Policy](#)

SSL Policy: [None](#)

Identity Policy: [None](#)

[Filter by Device](#)

Search Rules



Show Rule Conflicts ?

+ [Add Category](#)

+ [Add Rule](#)

Name	Source Zones	Dest Zones	Source Netw...	Dest Netw...	VLAN Tags	Users	Appli...	Source Ports	Dest Ports	URLs	Source SGT	Dest SGT	Act...								
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▼ Mandatory - Simple Access Control Policy (-)

There are no rules in this section. [Add Rule](#) or [Add Category](#)

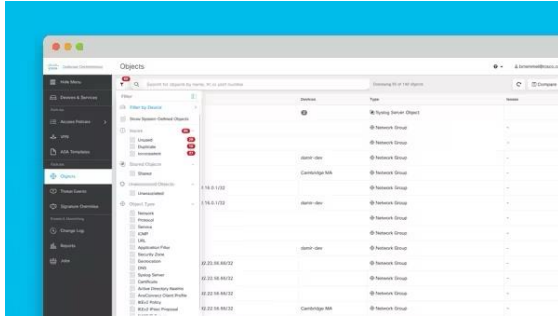
▼ Default - Simple Access Control Policy (-)

There are no rules in this section. [Add Rule](#) or [Add Category](#)

Default Action

Access Control: Block All Traffic

Centralize Firewall Management



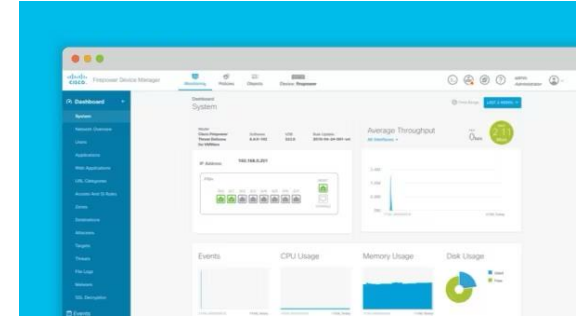
Cisco Defense Orchestrator

- Manage security policies from the cloud



Firepower Management Center

- Unified management over firewalls, application control, intrusion prevention, URL filtering, and advanced malware protection

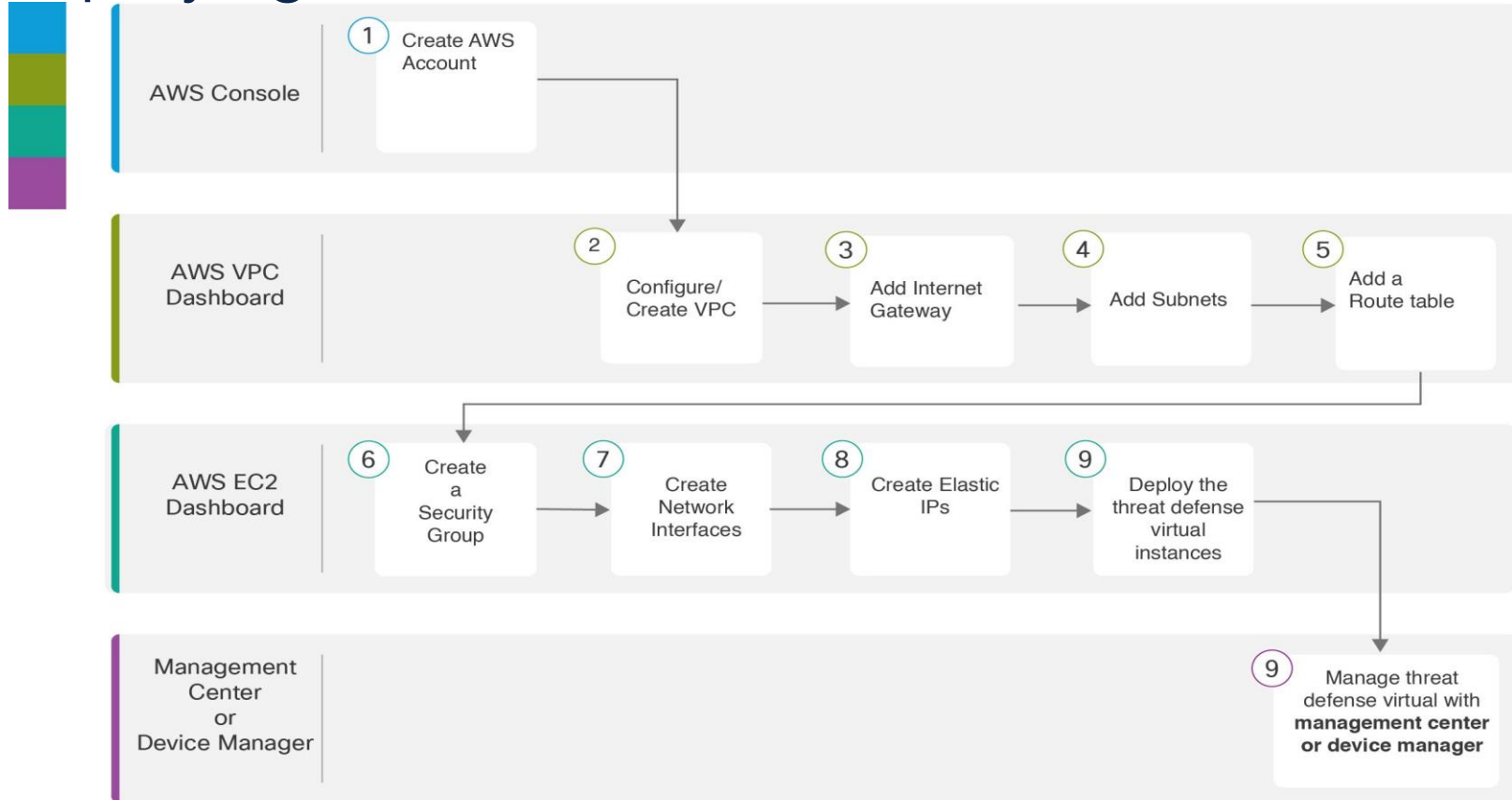


Firepower Device Manager

- Easy-to-use local firewall configuration and management for small-scale Cisco Secure Firewall deployments

Integration

Deploying Cisco Secure Firewall

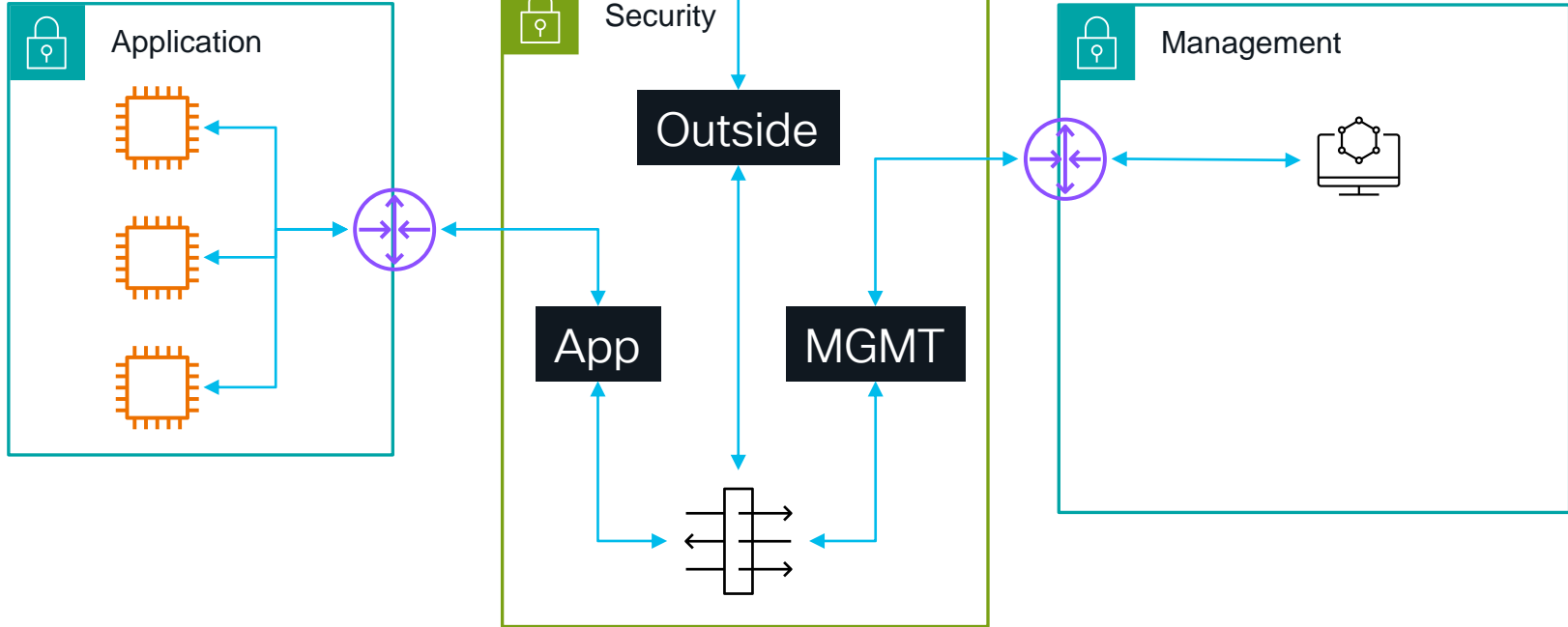


Firewall Architecture



Virtual private cloud (VPC)

Zones



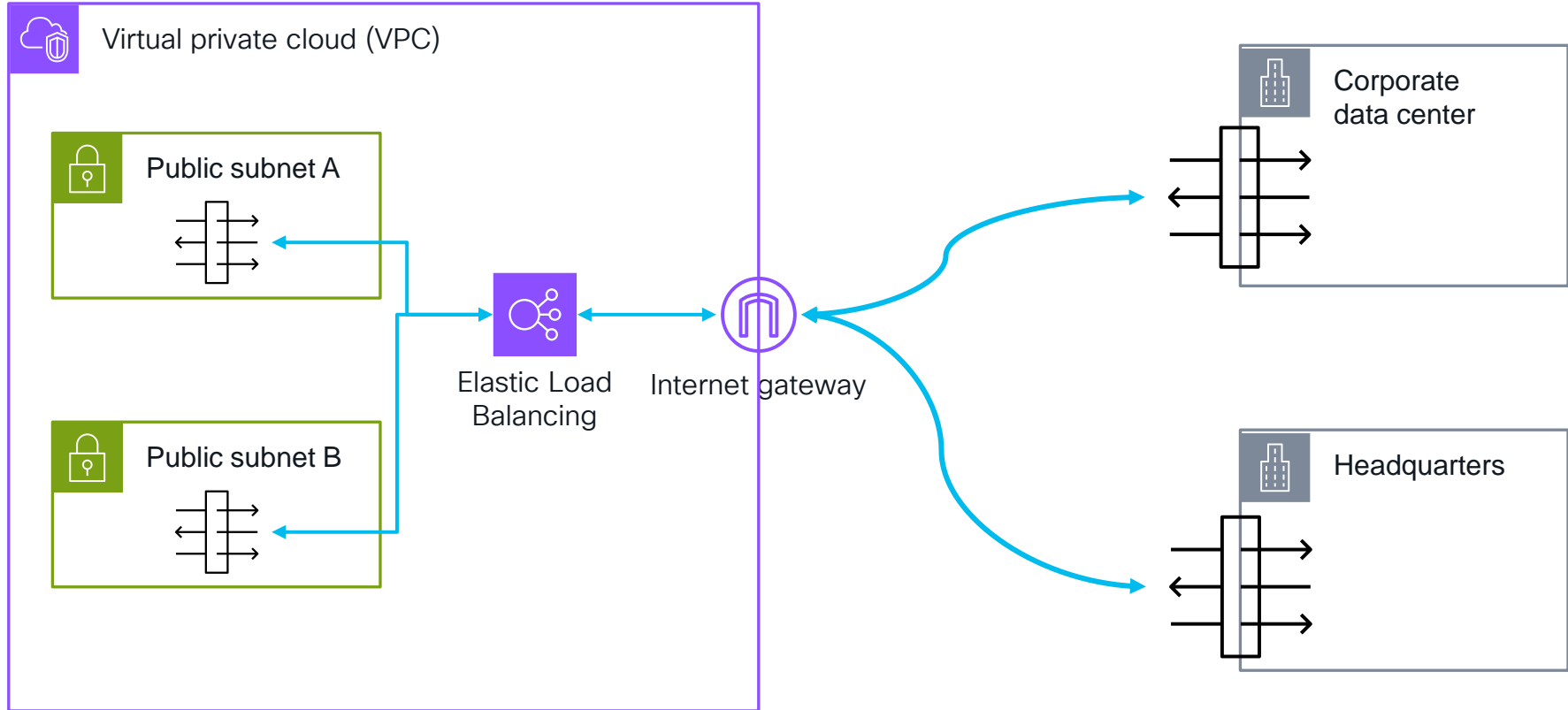


Demo

Private Cloud

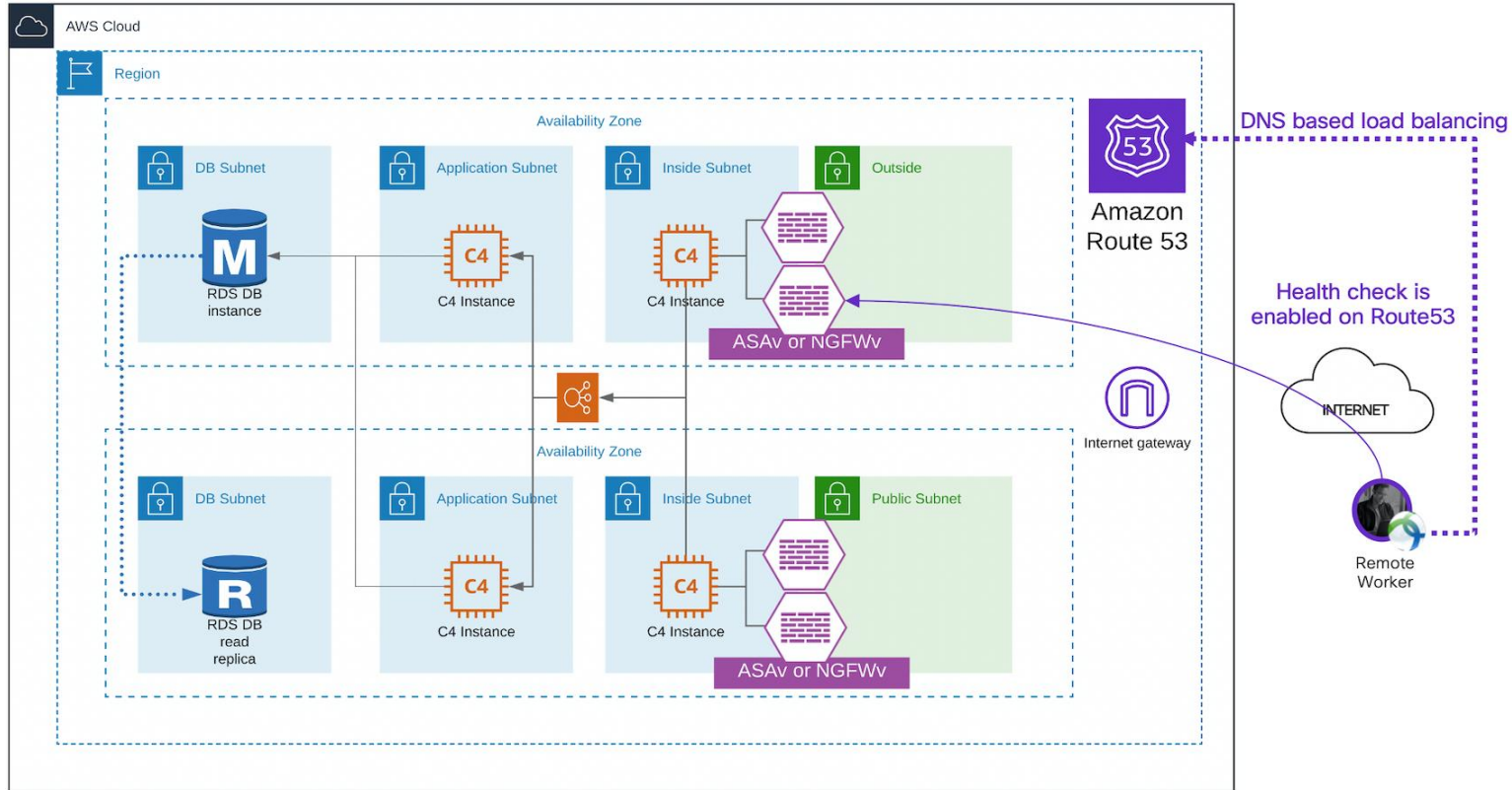


Site-to-Site VPN



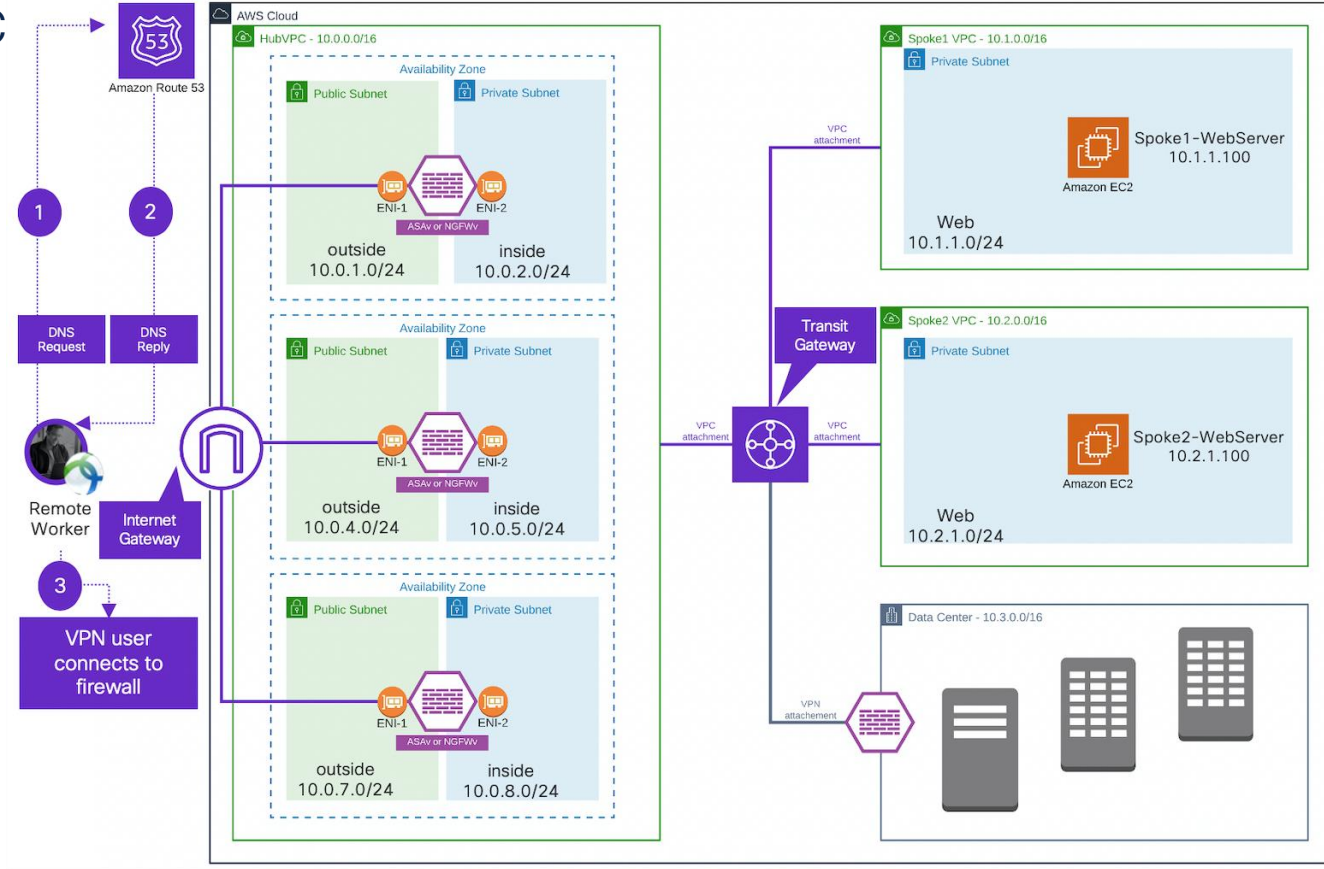
Remote Access VPN

Single-VPC



Remote Access VPN

Multi-VPC



Conclusion

Recap

- AWS Infrastructure
- Cisco Secure Firewall Product Review
- Benefits of implementing Cisco Secure Firewall on AWS
- Integration steps for Cisco Firewall
- Building a private cloud with Cisco Firewall

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These points help you get on the leaderboard and increase your chances of winning daily and grand prizes

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- Book your one-on-one Meet the Engineer meeting
- Attend the interactive education with DevNet, Capture the Flag, and Walk-in Labs
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Sign up today: cs.co/SecurePanel



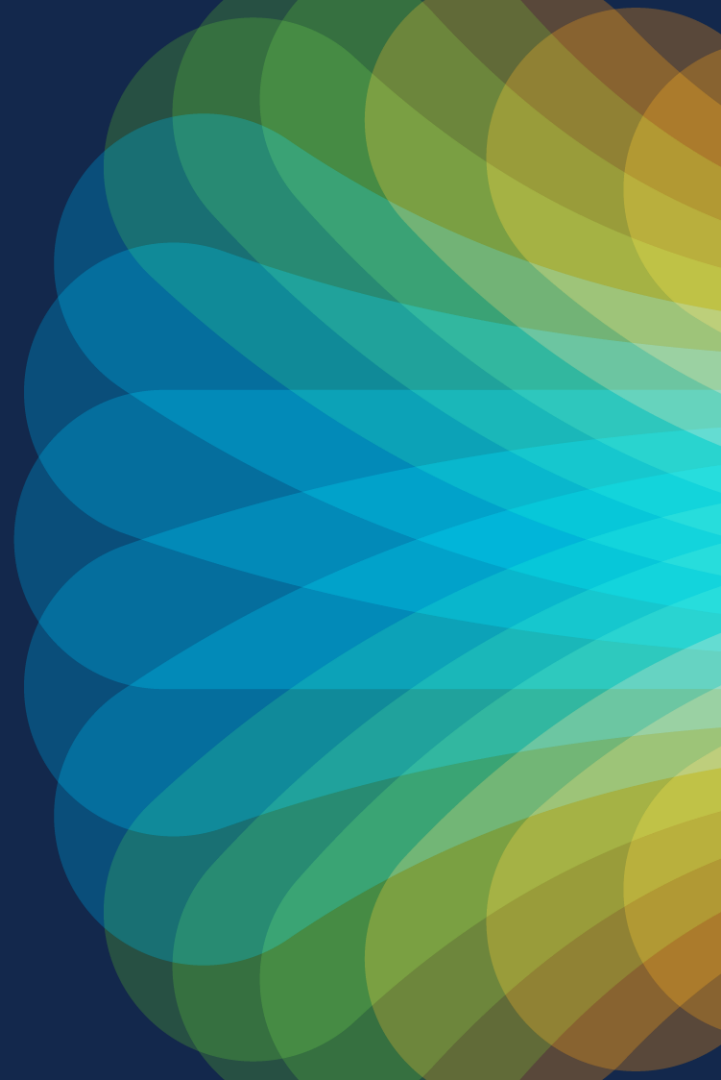


The bridge to possible

Thank you



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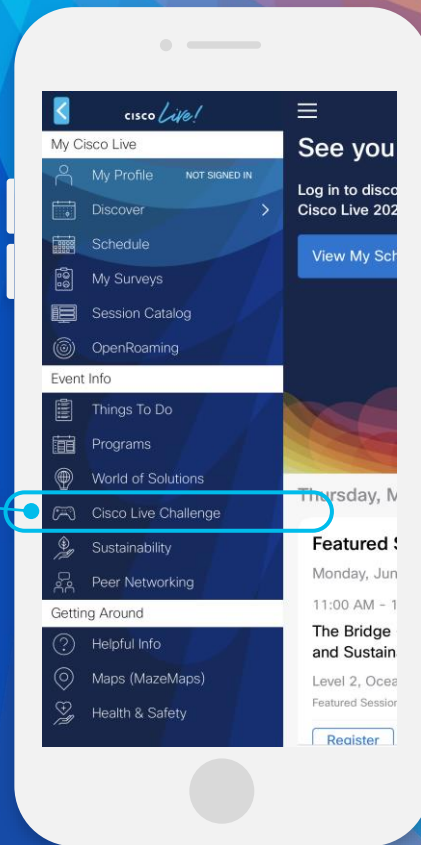


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