illiili CISCO

Cisco Secure Access

Transforming Secure Connectivity for the Modern

Enterprise

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Security Incubation
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Agenda

- What is Secure Access?
- Use case 1 Secure Internet Access
- Use case 2 VPN as a service
- Use case 3 Zero Trust Network Access
- Use case 4 Terminal Services replacement
- Conclusion/Q&A

Cisco Secure Access

Protect your hybrid workforce with cloudagile security

This cloud-delivered security service edge (SSE) solution, grounded in zero trust, gives users an exceptional user experience and protected access from any device to anywhere.

Read e-book

Talk to an expert >



What's driving interest in security service edge (SSE)?

- Ongoing changes in the mix of cloud and on-premise applications/data
- Frequent changes in the mix of users/locations/device types
- Continually changing threats and attack tactics
- Shortage of cybersecurity talent/resources
- Zero trust

Tool sprawl and complexity are increasing risk and decreasing productivity

Cisco Secure Access

Remote

Campus

Converged cloud-native security grounded in zero trust

Branch



Airplane

Oil rig

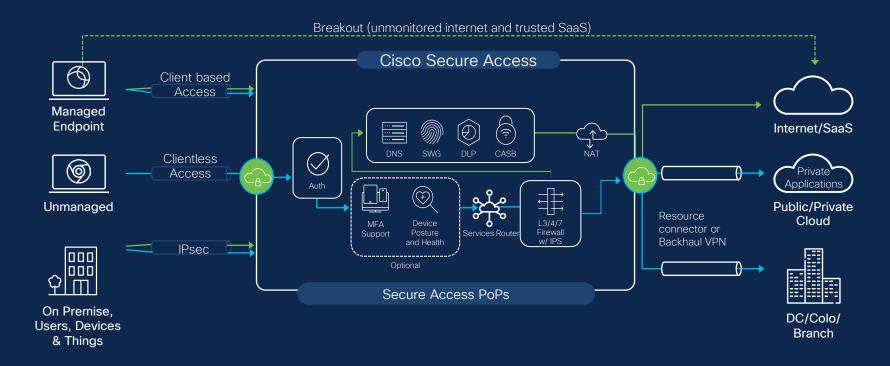
Stadium

Field

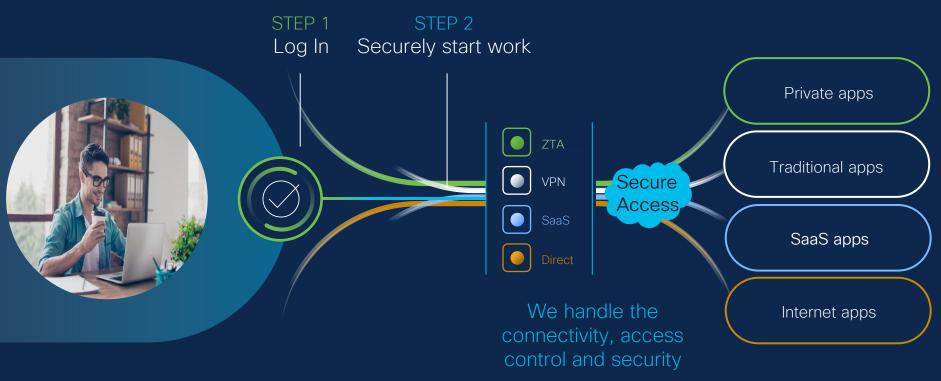
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Architecture Overview





Cisco Secure Access- User Anywhere

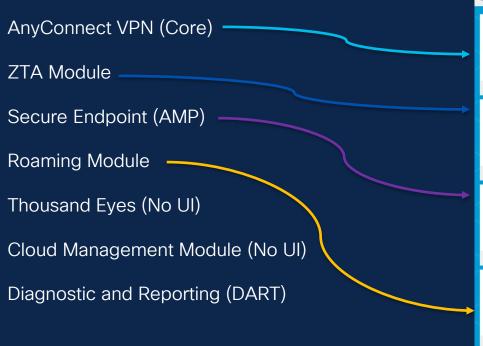


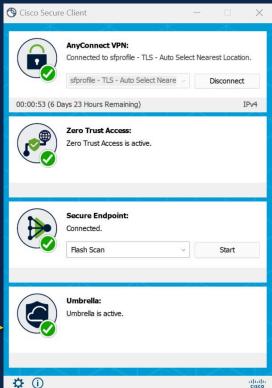
Easy, frictionless user experience

Cisco Secure Client

Suite of security service enablement modules







Cisco Secure Access

Proven cloud-native security converged into one service



Cisco Secure Access



- Single Console
- Single Client
- Unified Policies

Protecting 70,000+ customers

More than 220M endpoints

Flexible journey to ZTNA

- You set the pace
- ✓ Same client
- Common policy

Traditional VPN

Network level access – cannot control at app level VPN as-a-Service

Lift your VPN to the cloud – more control and easier to manage

ZTNA

Enable remote users to securely connect with least privilege access to private applications

Cisco Secure Access: Extended SSE protection



SSE core capabilities

Secure Web Gateway
Zero Trust Network Access
Firewall as-a-Service
Cloud Access Security Broker
Data Loss Prevention
Advanced Malware Protection
Sandbox



So much more

VPN as-a-Service
Al Access and Usage Controls
Digital Experience Monitoring
DNS Security
Remote Browser Isolation
Talos Threat Intelligence
Cloud Malware Protection

Secure Access - Features coming quickly!

- Private Resource Discovery
- Application Risk Profiles
- Resource Connectors in Docker Containers
- Virtual Appliance update
- YouTube Tenant Controls
- Realtime DLP Download Scanning
- Enhanced DLP classifications
- DLP for Private Resources
- Al-Driven Domain Generation Algorithm detection
- DLP Al Guardrails
- Enterprise Browser integration with Chrome
- Enhanced BGP controls
- Logging enhancements (Splunk)

Agenda

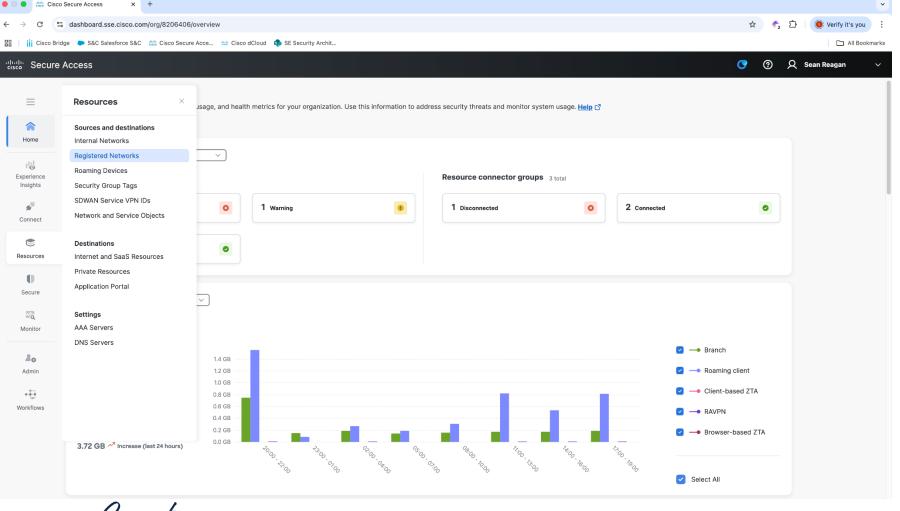
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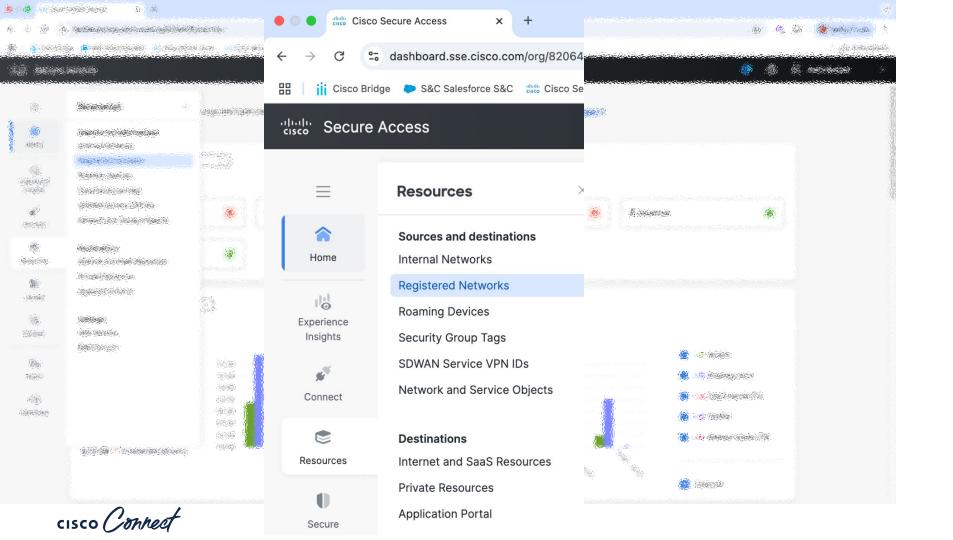
Secure Internet Access

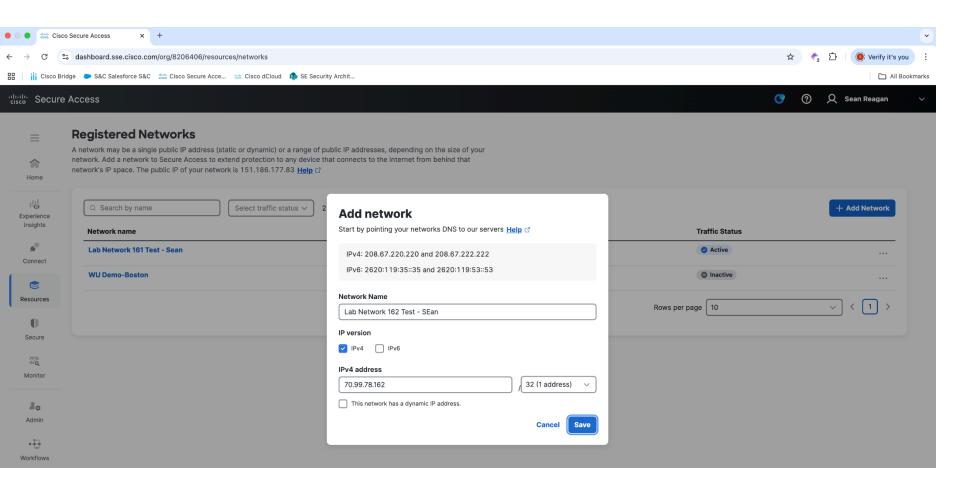
- 3 steps
- In about 6 minutes!

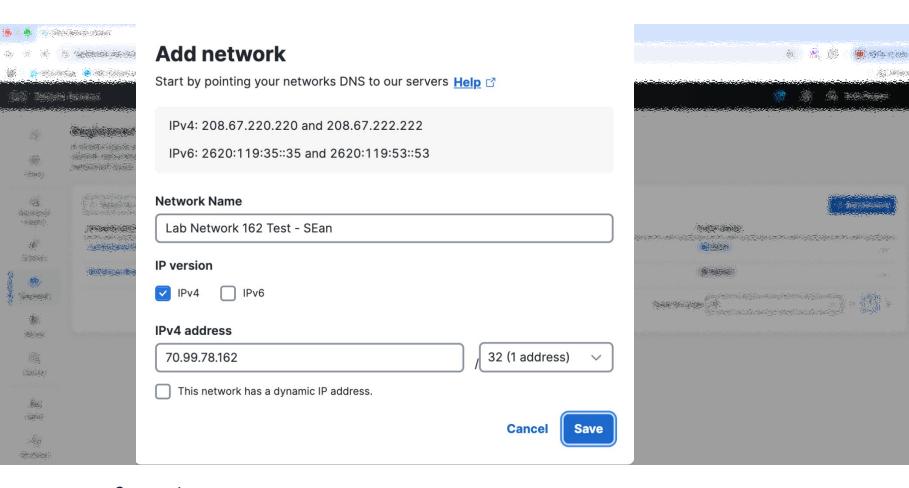


Step 1 – Define the network

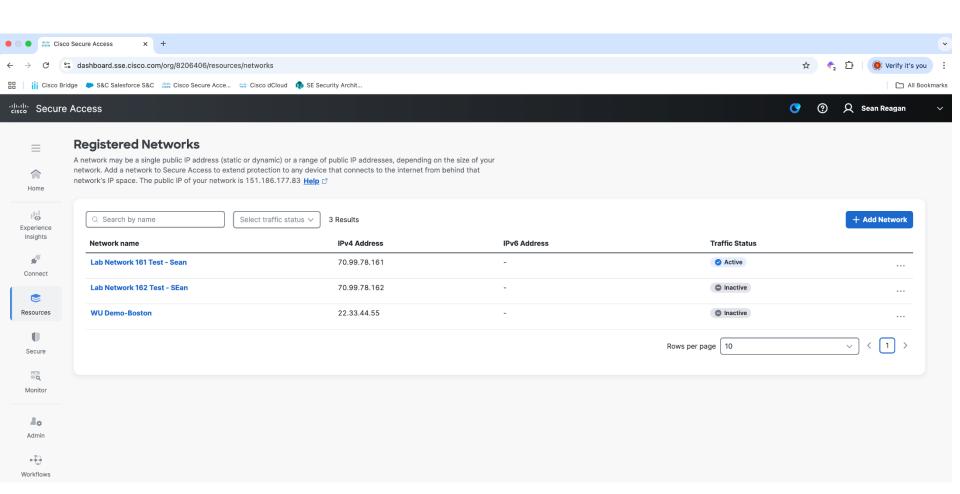






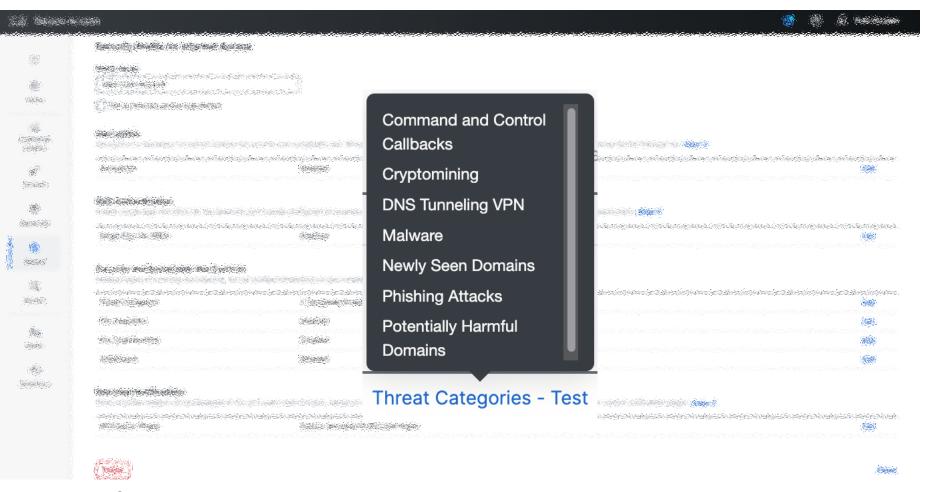






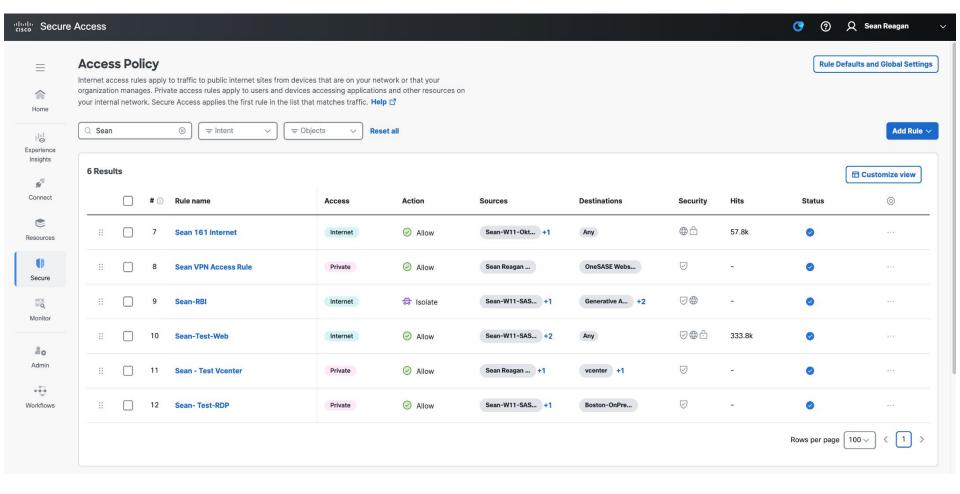
Step 2 - Create a Security Profile

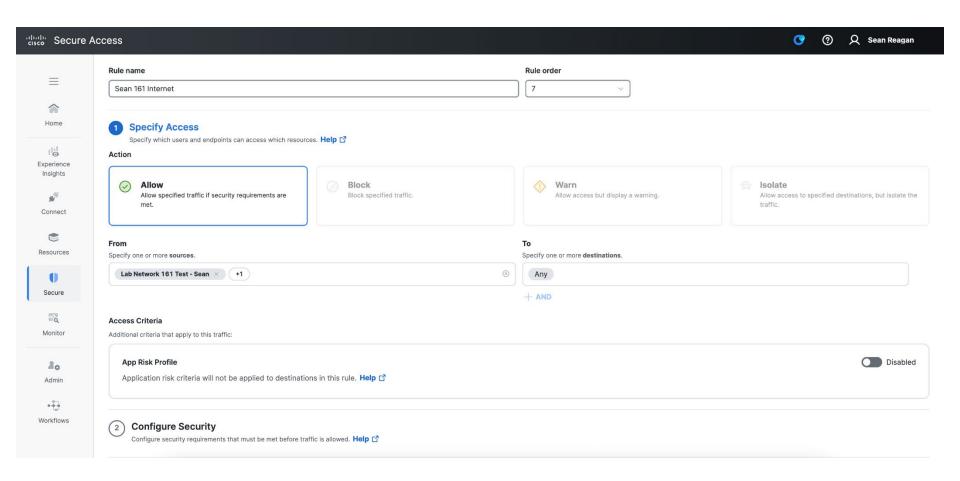


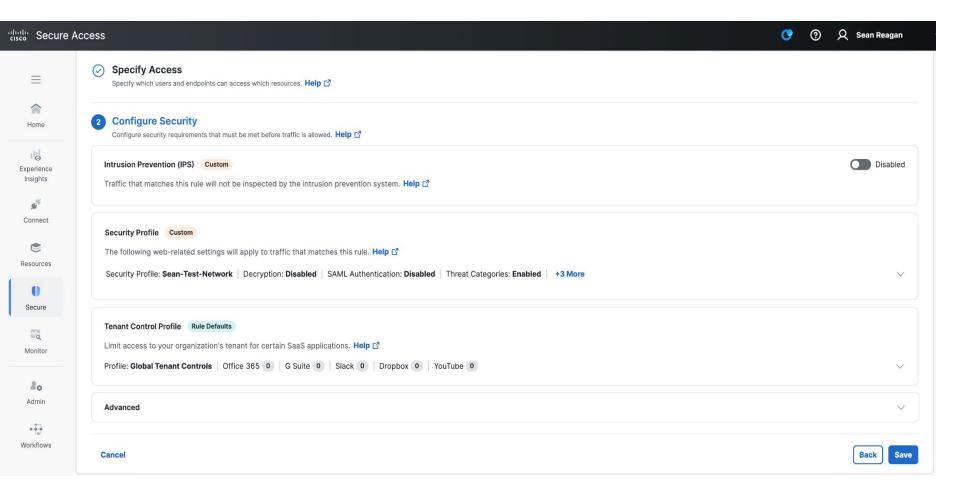


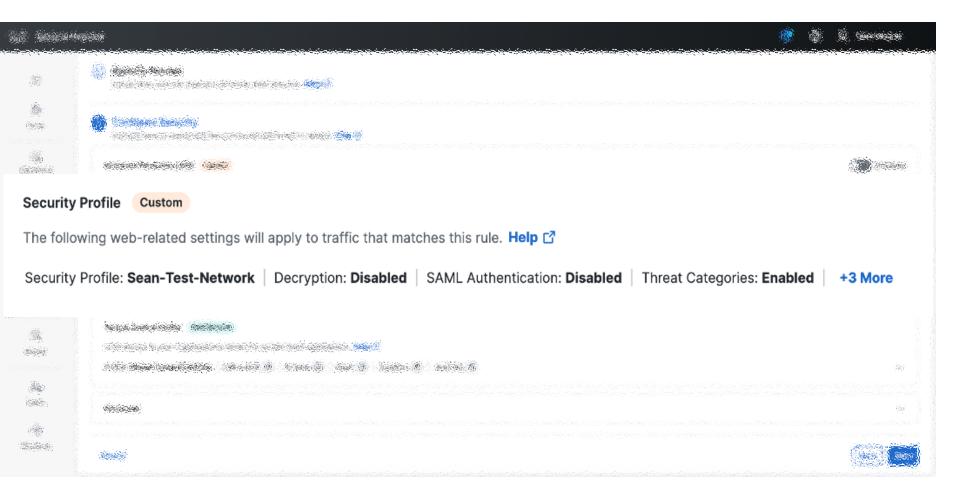


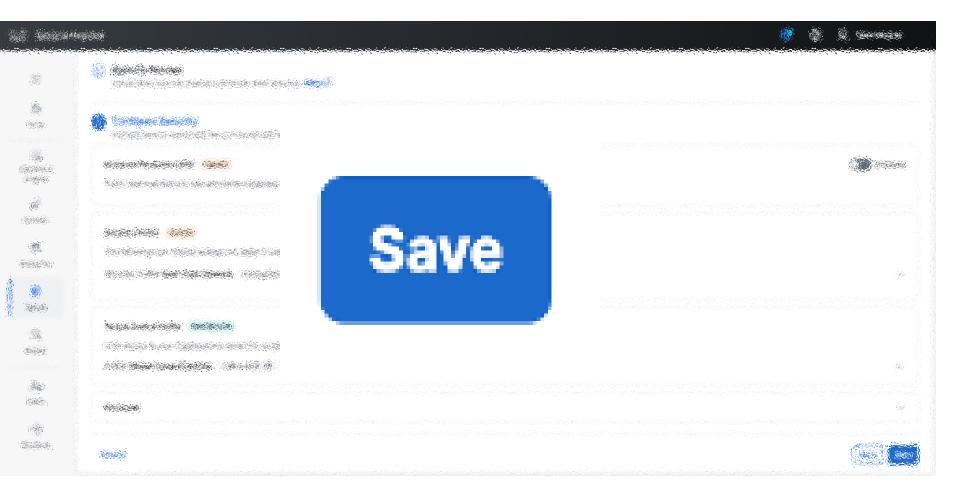
Step 3 - Create a rule

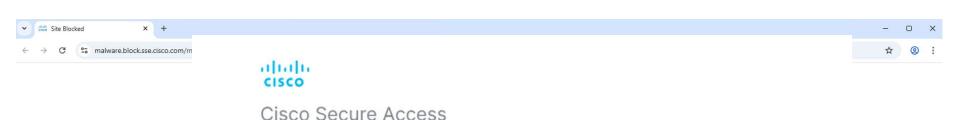












A

This site is blocked.

examplemalwaredomain.com

Sorry, examplemalwaredomain.com has been blocked by your network administrator.

This site was blocked due to the following categories: Enterprise Malware

> Diagnostic Info

Contact



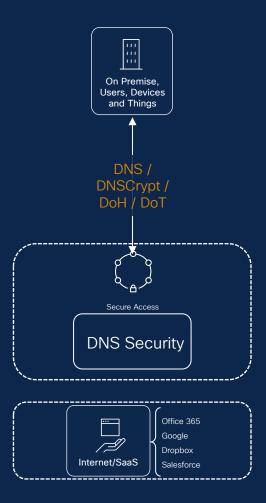
It really is that simple.

- 1. Register a network
- 2. Create a Security Profile
- 3. Create a Rule

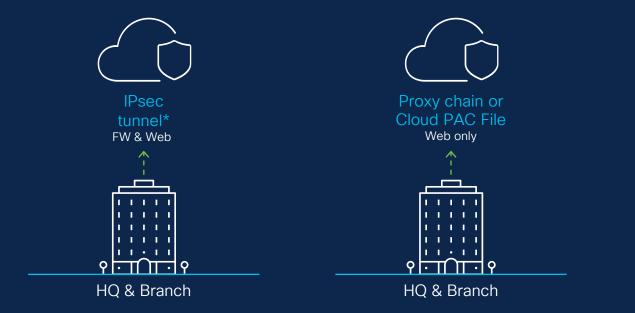


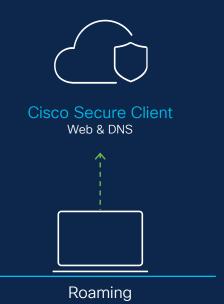
Registered Network

- Register the branch public IP with Secure Access
 - Single static IPv4 or IPv6 address
 - Single dynamic IPv4 address
 - Range of IP addresses
 - IPv4 ranges larger than /29 must be approved by support
 - IPv6 ranges larger than /56 must be approved by support
- Forward queries to the DNS AnyCast resolvers
 - 208.67.220.220
 - 208.67.222.222
 - 2620:119:35::35
 - 2620:119:53::53
- Dynamic updater is available
 - Available for Mac and Windows



Flexible connection methods



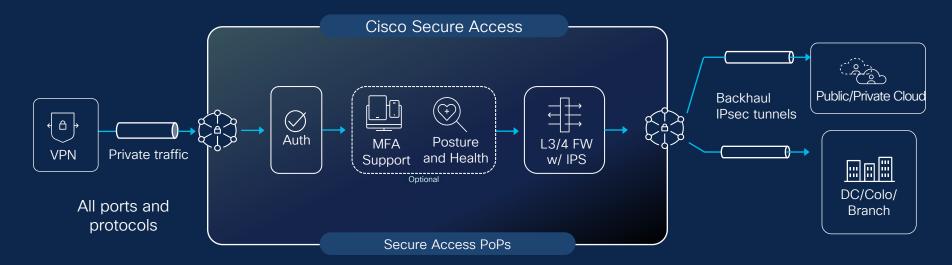


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VPN-as-a-Service



- Authentication Methods: SAML 2.0, SAML+ certificate, Certificate, RADIUS
- Identity based access
- Region specific IP pool for client addressing

- Posture Verification: (optional) Secure Firewall (formerly hostscan) or ISE with RADIUS
- IPS (optional)
- Connection profiles

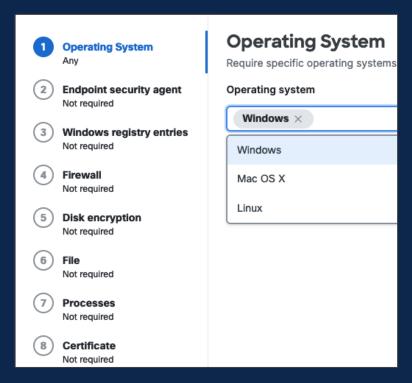
Posture

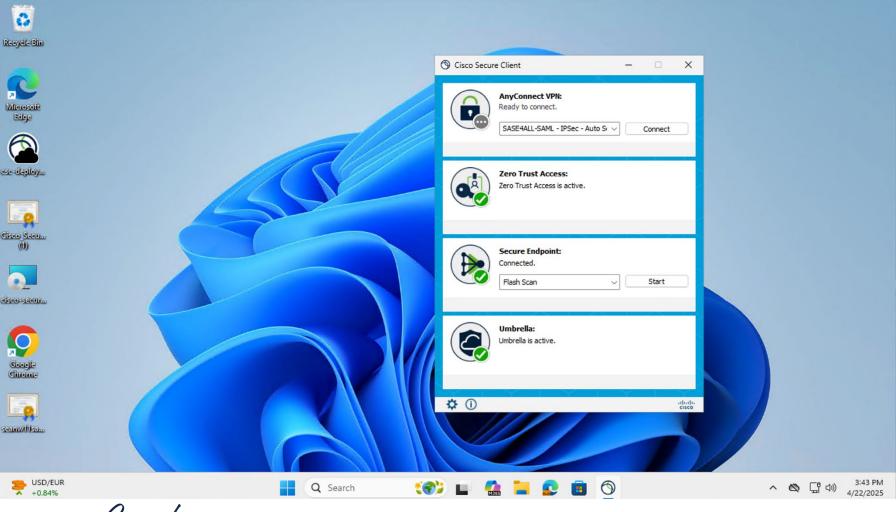
Hostscan

- Packaged with the client installer
- Supports the following attributes:
 - Operating system
 - Firewall
 - Endpoint security agent
 - System password
 - Disk encryption
 - Browser
 - Files
 - Processes
 - Certificates

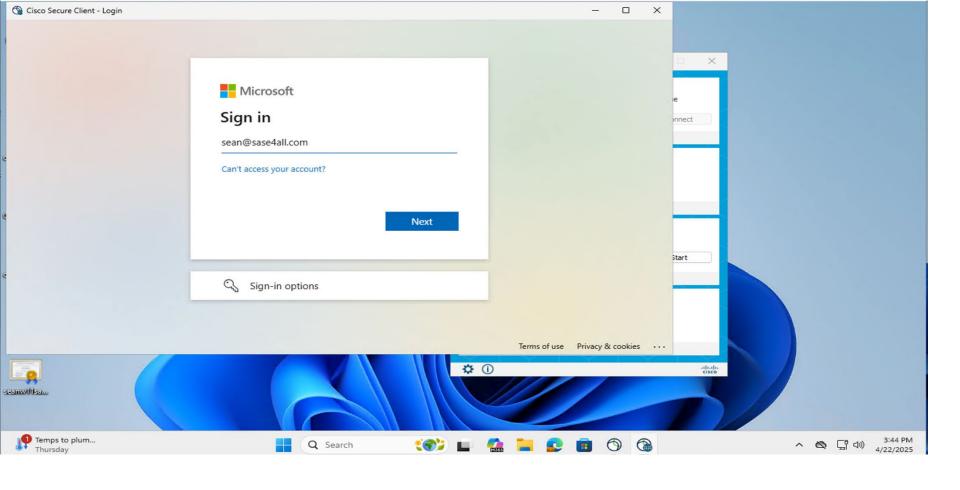
ISE

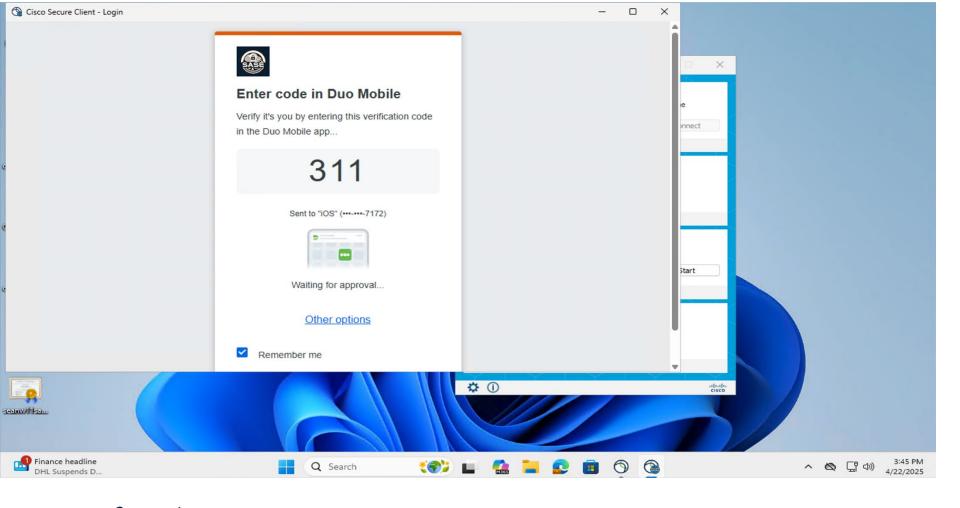
- Packaged with the client installer
- ISE Posture Prescriptive Deployment Guide



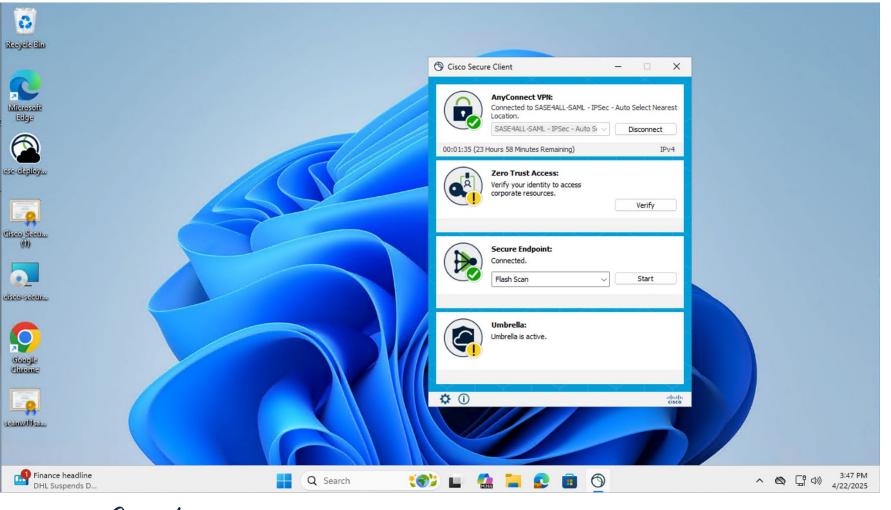


cisco Connect

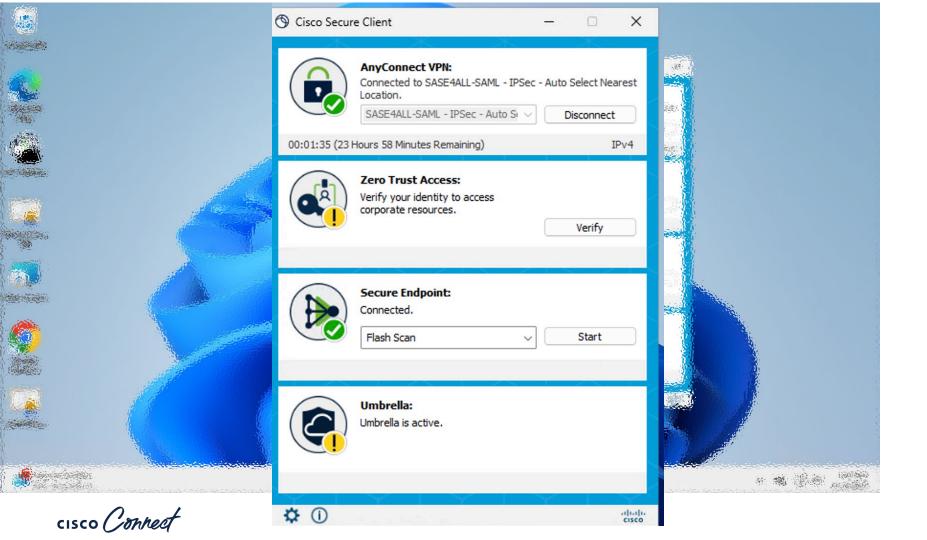




cisco Connect



cisco Connect



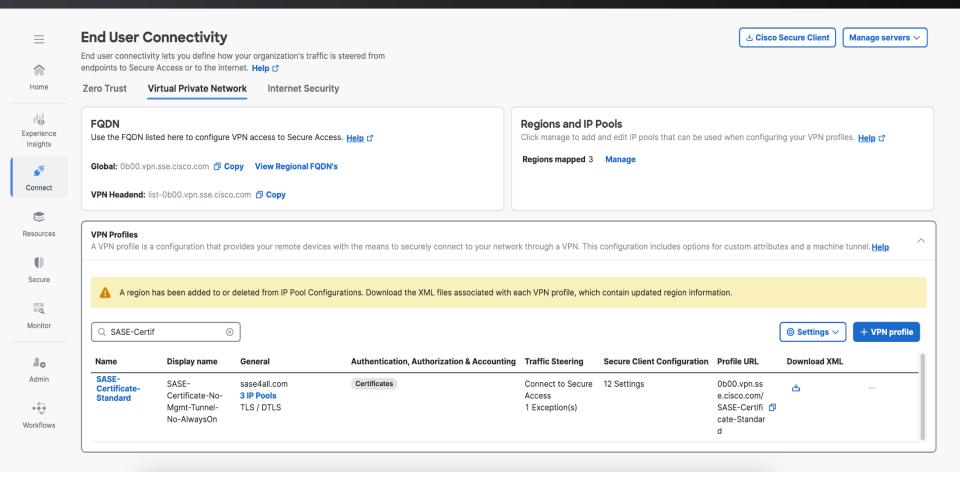
Step 1. Create VPN components



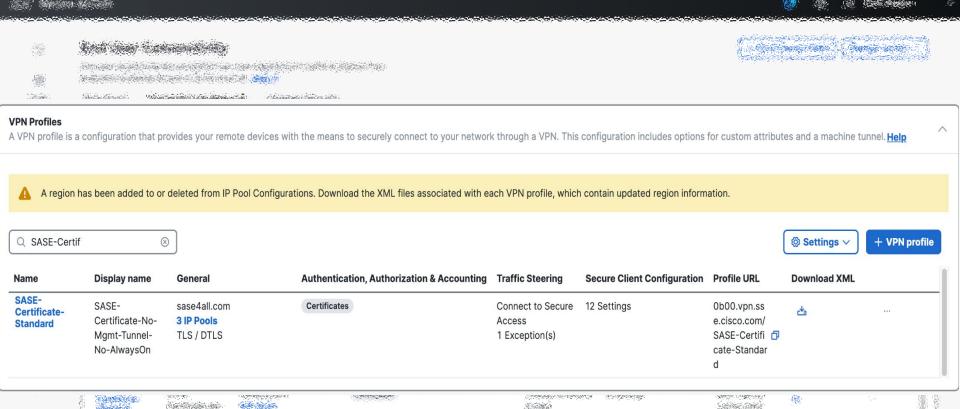












A Mar Strate Fair



(电局) (图43)



Default Domain: sase4all.com | DNS Server: 0 | Protocol: TLS / DTLS

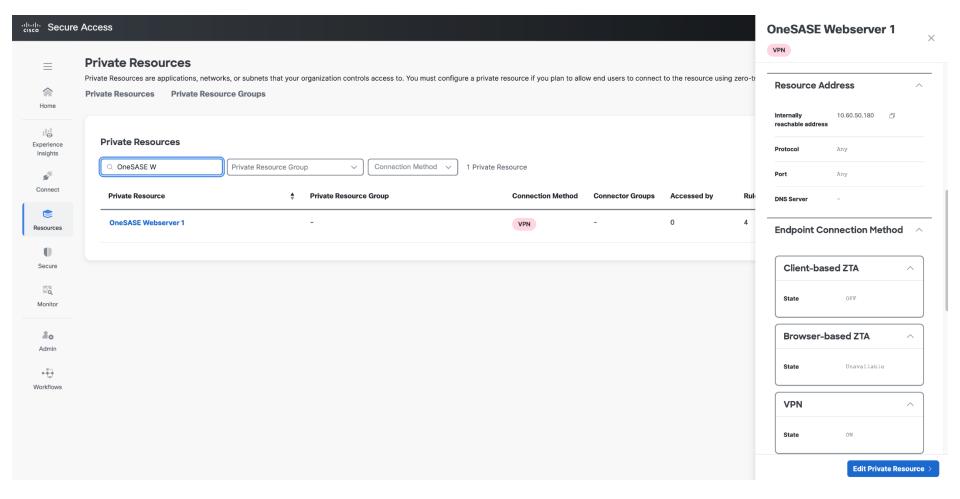
Authentication, Authorization, and Accounting
Single Certificate

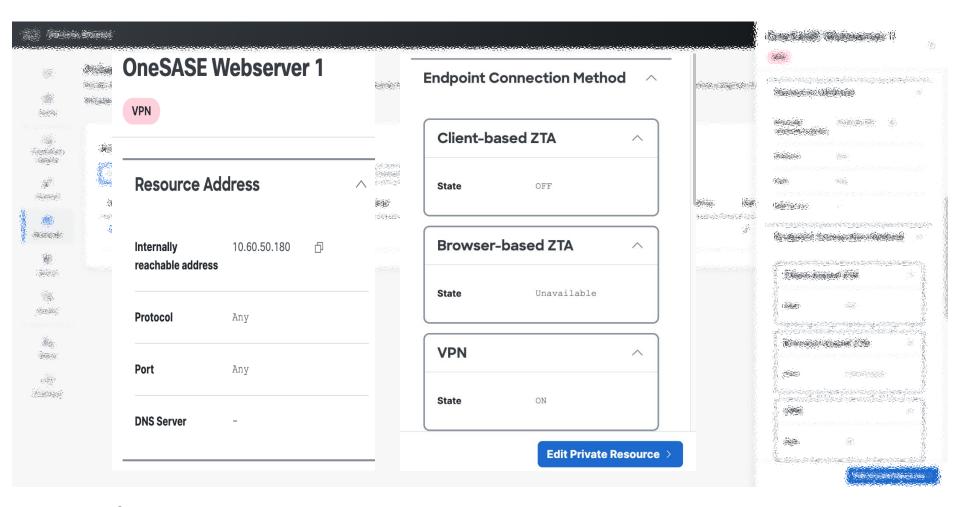
Connect to Secure Access | 1
Exceptions

Cisco Secure Client
Configuration



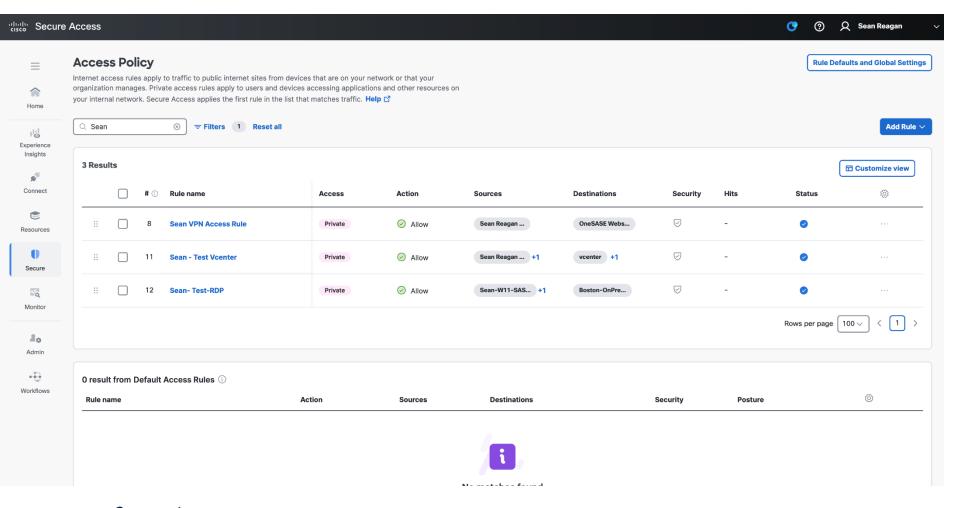
Step 2. Configure Private Resources



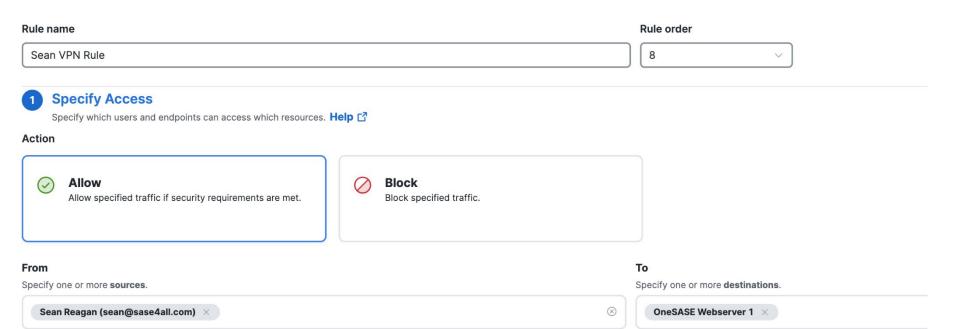




Step 3. Create a rule for VPN traffic







Endpoint Requirements

For VPN connections:

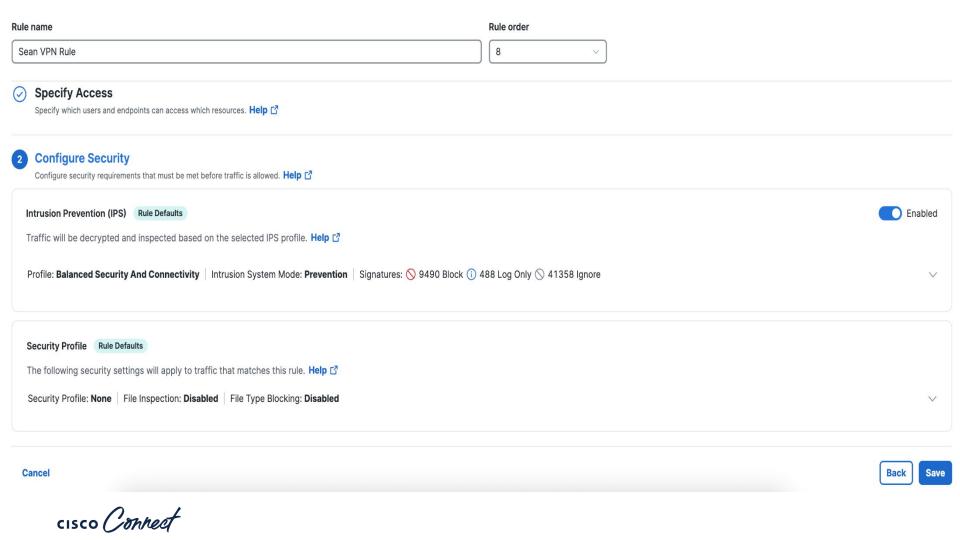
End-user endpoint devices that are connected to the network using VPN may be able to access destinations specified in this rule. ①

Endpoint requirements are configured in the VPN posture profile. Requirements are evaluated at the time the endpoint device connects to the network. VPN Posture Profiles []

For Branch connections:

Endpoint device posture is not evaluated for endpoints connecting to these resources from a branch network.





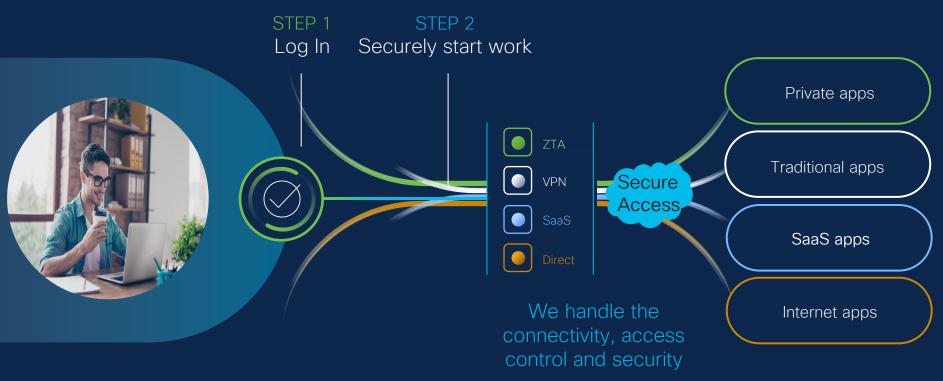
Sources
Sean Reagan (sean@sase4all.com)

Sean Reagan (sean@sase4all.com)

Destinations
Private Resources
OneSASE Webserver 1

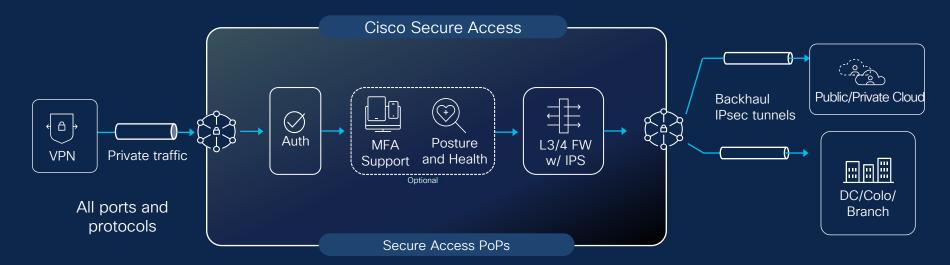
OneSASE Webserver 1

Cisco Secure Access- User Anywhere



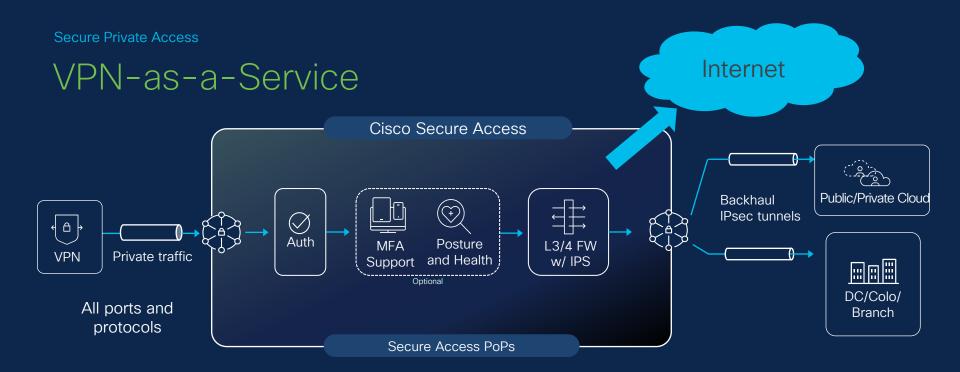
Easy, frictionless user experience

VPN-as-a-Service



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- IPS (optional)
- Connection profiles



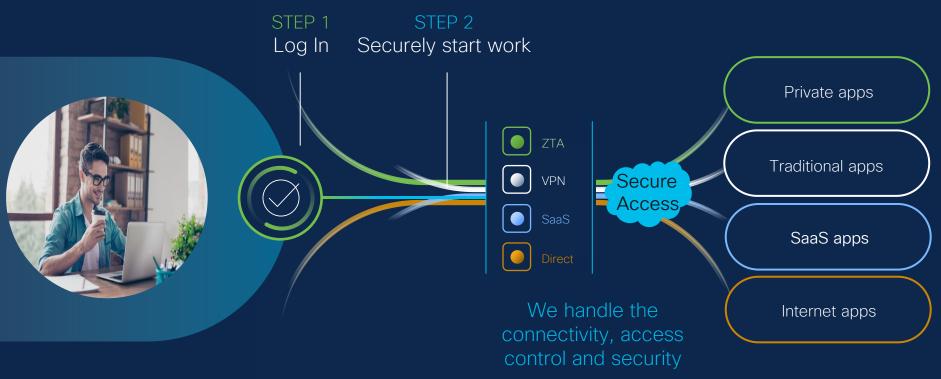
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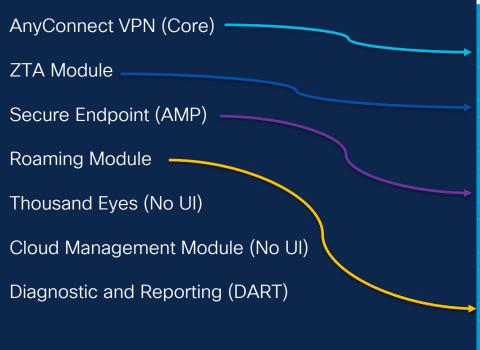


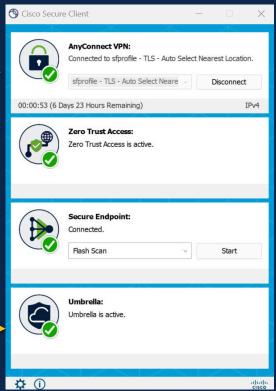
Easy, frictionless user experience

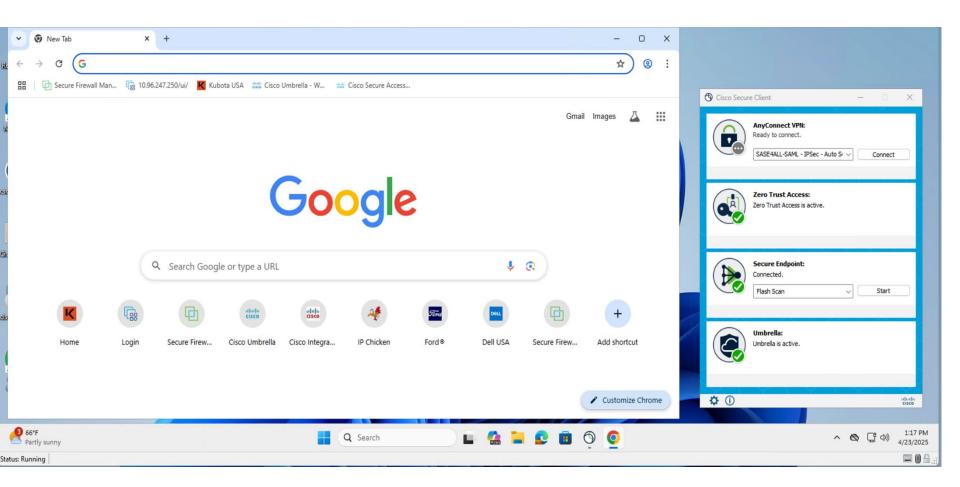
Cisco Secure Client

Suite of security service enablement modules

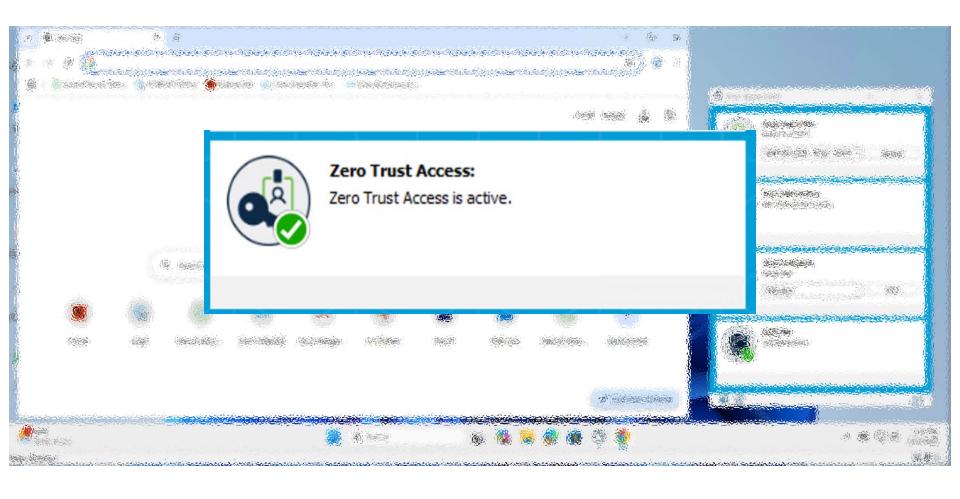


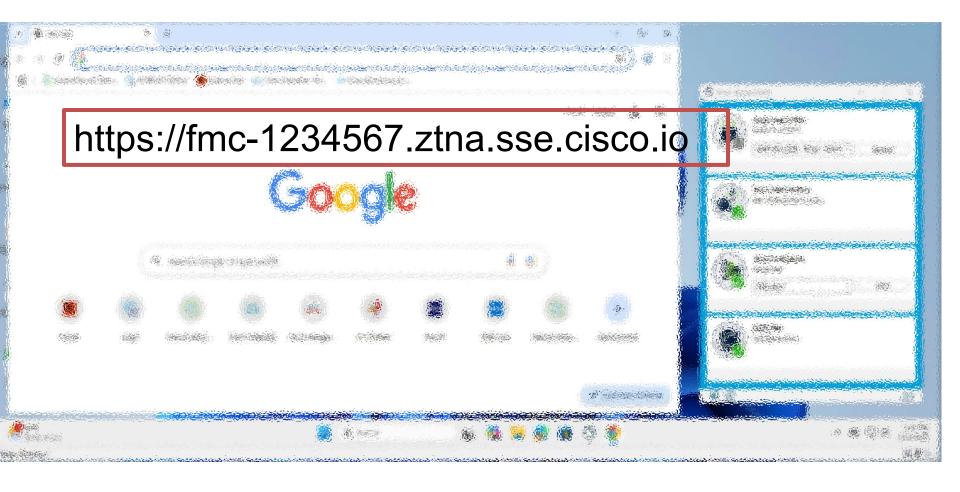


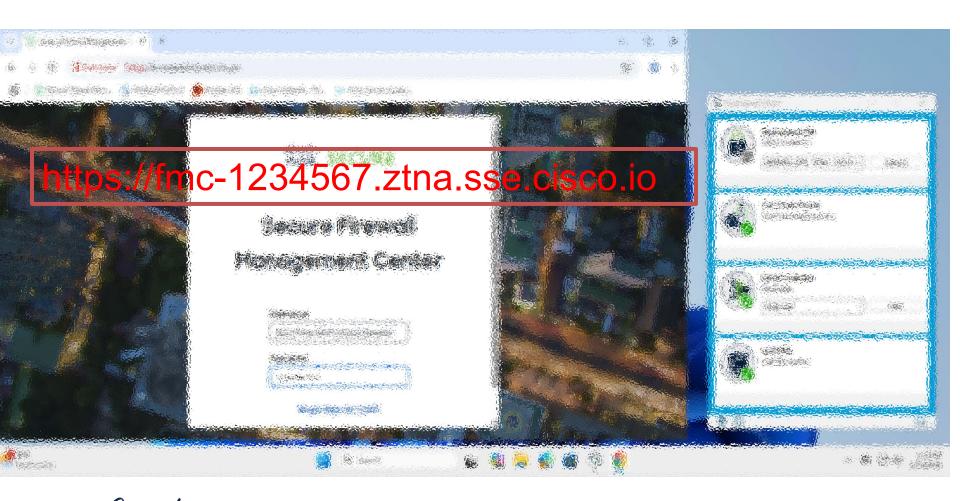


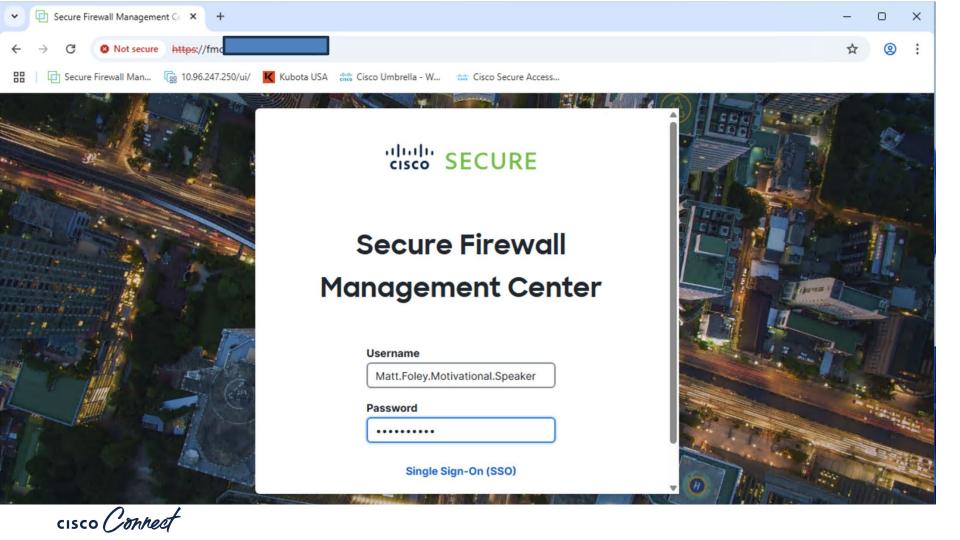


cisco Connect









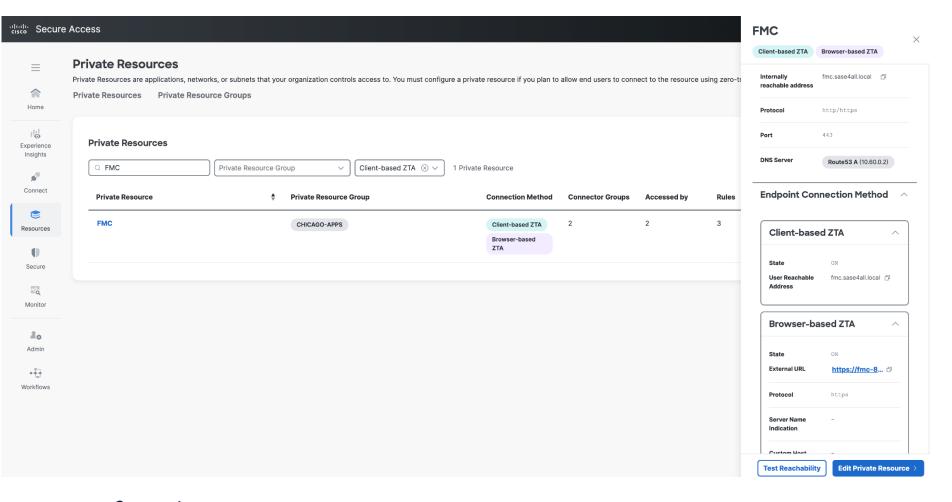
Client-based Zero Trust Access

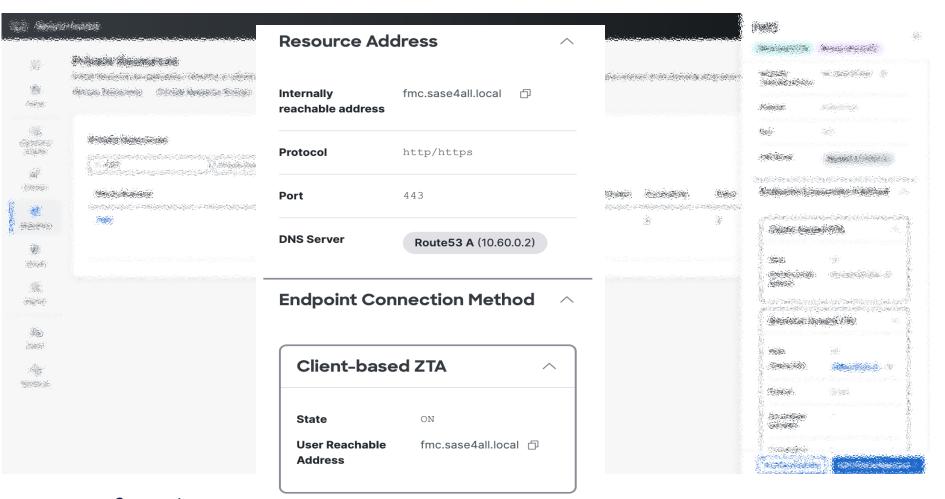


- Transparent user experience
- Forward proxied resource access with coarse or fine-grained access control
- Service managed client certificates with TPM-protected key storage

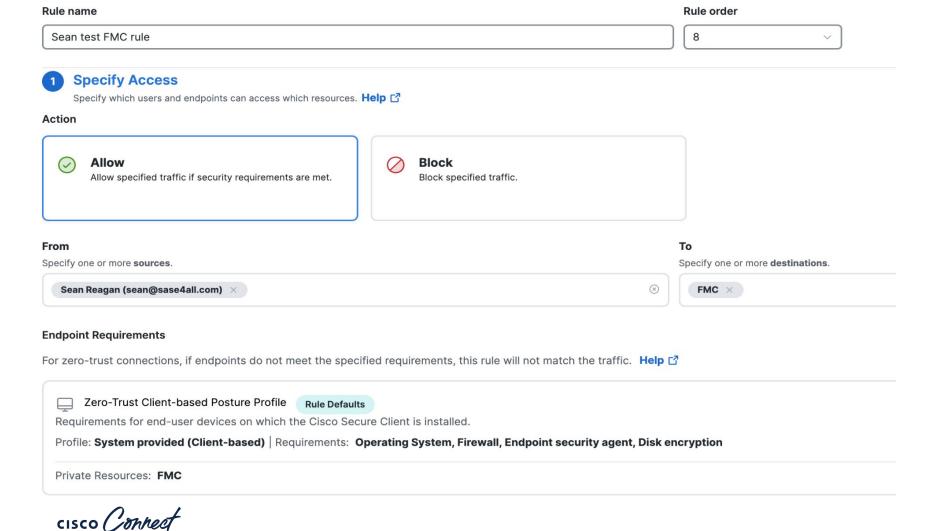
- Inside to out L4-7 tunnels from RCs
- No routing complexities
- Apps are hidden, supports overlapping subnets
- Easy to scale with high availability

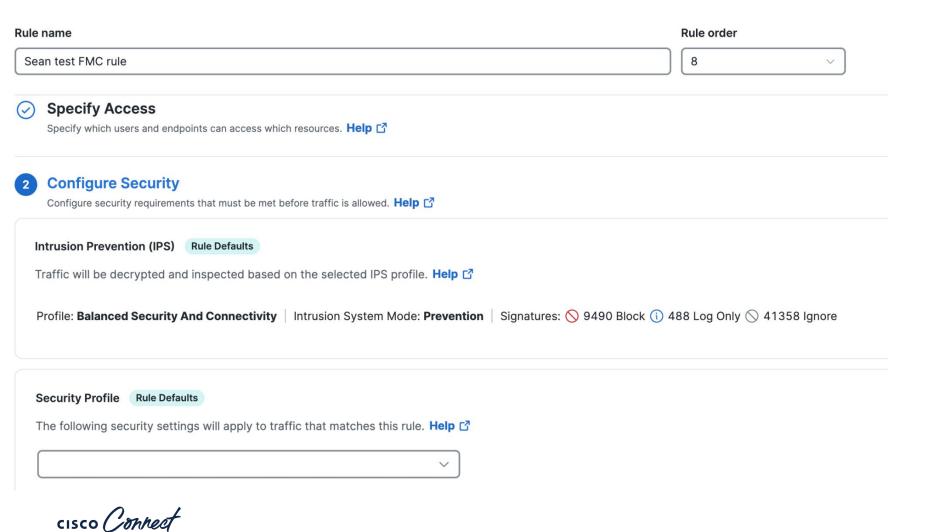
Step 1 - Define the Private Resource





Step 2 - Create a rule





	Rule name	Access	Action	Sources	Destinations	Security	Hits	Status	©
 	Sean test block	Internet	Ø Block	Sean Reagan +1	2 IP Address/CIDR AND 1 Services ①		334	0	***
:	Sean test FMC rule	Private		Sean Reagan	FMC	eq	7.Er	0	
ii 🗆	Sean VPN Rule	Private		Sean Reagan	OneSASE Webs	eq	-	Ø	
ii 🗆	Sean 161 Internet	Internet		Sean-W11-Okt +1	Any	⊕ ☆	932.4k	Ø	
:	Sean-RBI	Internet	⇔ Isolate	Sean-W11-SAS +1	Generative A +2	$\bigcirc \oplus$	-	0	
:	Sean-Test-Web	Internet		Sean-W11-SAS +2	Any	⊘⊕ ∆	302	Ø	
=	Sean - Test ZTA Apps	Private		Sean Reagan +1	vcenter +1	eq	Ē	Ø	
	Sean-Test-RDP	Private		Sean-W11-SAS +1	Boston-OnPre	\bigcirc	-	0	***

The user connects to their application. They have no idea how, it just works!

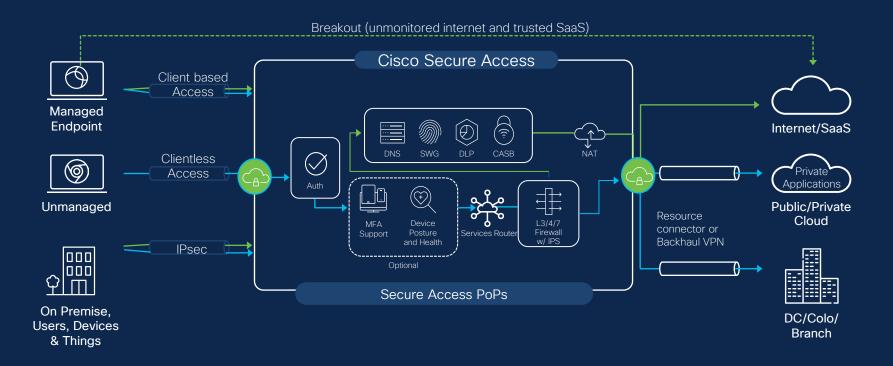
Do I always need that Zero-Trust Client module to do these kind of things?

NO!

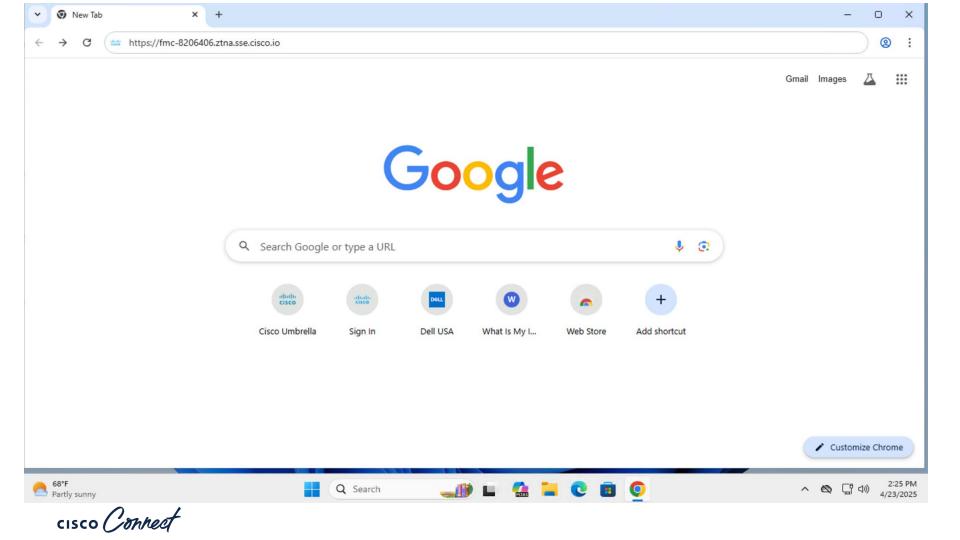


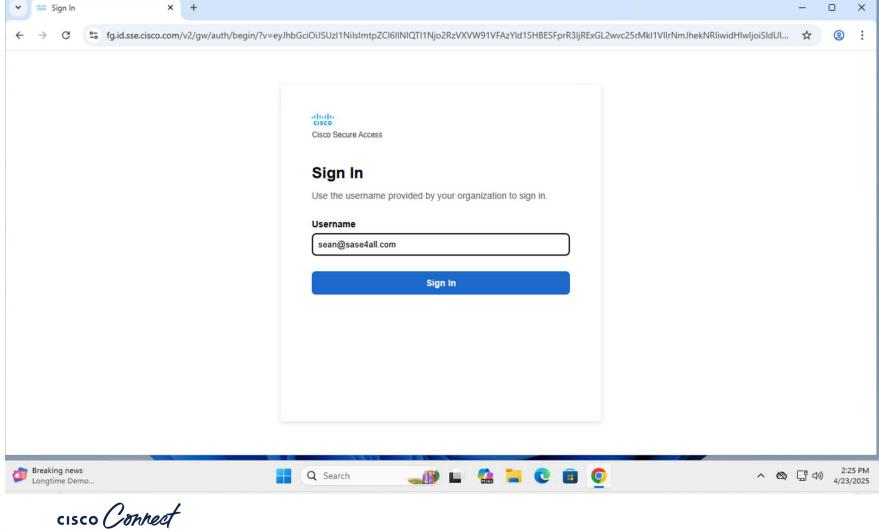
Architecture Overview

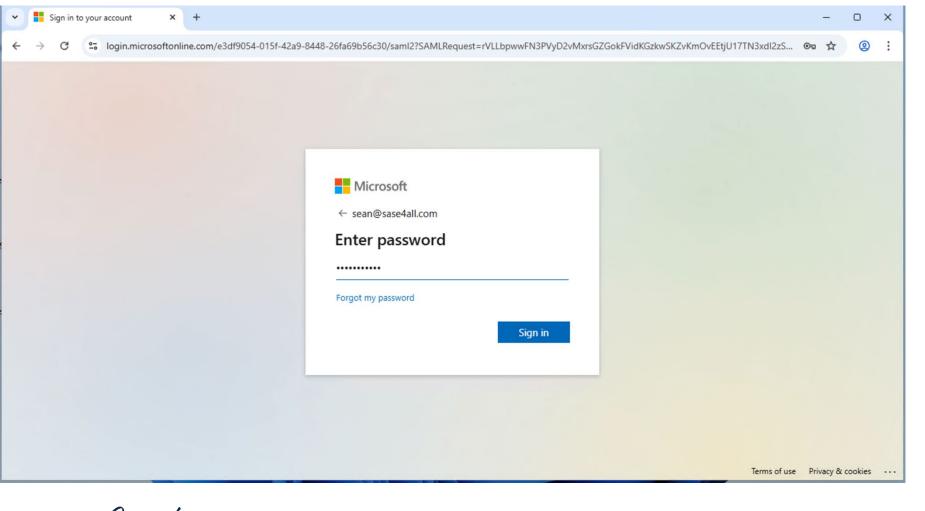


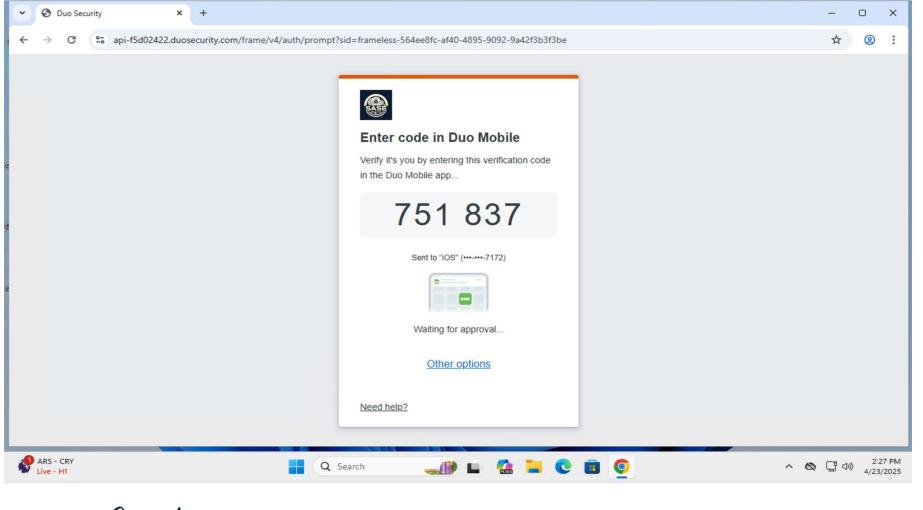


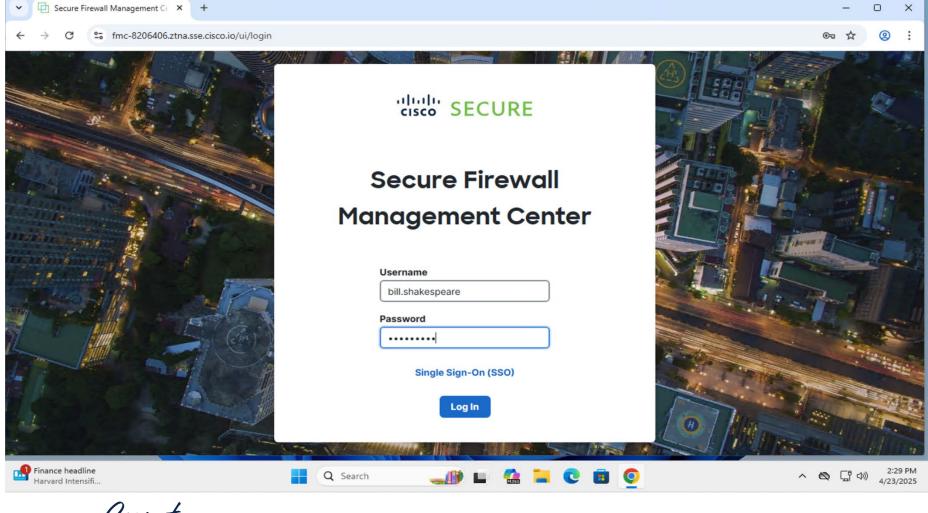
Client-based connection
Allow connections from endpoints that have the Secure Client installed. Enable this option for maximum control over endpoint security requirements (posture).
Remotely Reachable Address (FQDN, Wildcard FQDN, IP Address) ①
fmc.sase4all.local
+ FQDN or IP Address
Browser-based connection
Allow browser-based connections from endpoints that do not have the Secure Client installed. Enable this option when devices that your organization does not manage must connect to this resource. Fewer endpoint security checks are possible.
Public URL for this resource ①
You will give the selected address to browser-based users.
Use a URL in a Cisco domain
https:// fmc -8206406.ztna.sse.cisco.io
Provide a URL prefix that uniquely identifies this resource.
Use a URL in your domain
Protocol Custom host header (optional) ① Server Name Indication (SNI) (optional) ①
HTTPS V
☐ Validate Application Certificate ①
cisco Connect



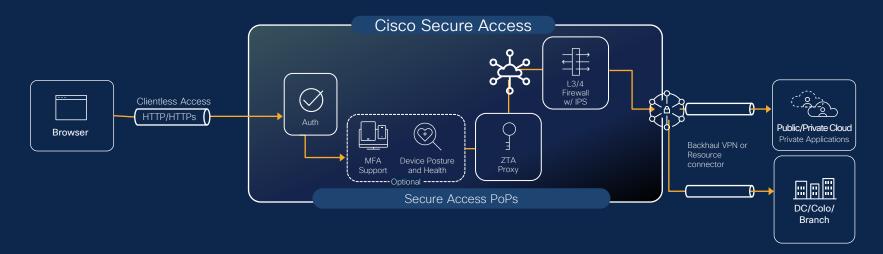






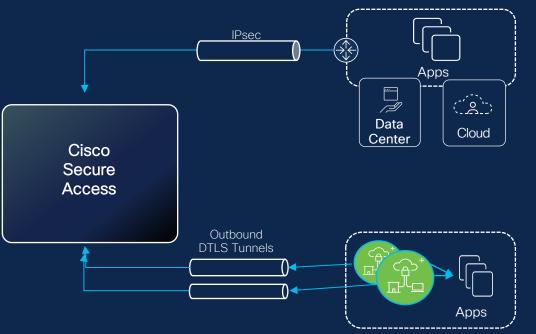


Clientless Zero Trust Access



- Ideal for unmanaged devices and BYOD use-cases
- Automatically generated publicly resolvable FQDN for per app access
- Posture (optional) verification based on HTTP headers
- SAML authentication

Apps: Private Applications



Network Tunnel

- → IPsec Backhaul
- → Static or BGP based routing
- → Auto Failover/ Redundancy

Resource Connector (RC)

- → Software deployment (VM or Cloud Instance)
- → Deploy closest to application
- → Outbound connectivity (no holes in firewall)
- → Auto failover / load balancing
- Supported in AWS, Azure, Docker and VMWare

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Why do we use VDI / Terminal Services?

Industry's most comprehensive SSE solution

SSF Core Capabilities

So much more

Enterprise Browser Integration

Al-powered Platform

Enterprise Browser Use cases

- Unmanaged device with managed profile based on identity
- VDI replacement using Enterprise Browser and Secure Access
- 3rd party/consultant/contractor/partner access to private apps
- Corporate approved browser controls

Secure Access with Enterprise Browser

Internet Traffic

Zero Trust Access to Private Apps and Internet Apps

Enterprise Browser







- Device Trust
- Posture management
- Data Loss Prevention
- Copy-paste controls, Block Screenshots
- Block file upload/download
- Isolation of Web processes, Site isolation
- Management via Secure Access Console

Cisco Secure Access



- Seamless access to private apps
- Secure access to SaaS apps
- Content Inspection
- Access Control
- File type control
- Malware protection

Internet (SaaS)
Applications





Private Applications

Cisco and Google Enhance Zero Trust Access

Chrome







Extension Security



Sandboxing & Auto Updates



Password Manager



Local policy controls

Chrome Enterprise Core



Extension Management



Compliance & Data Regions



Fleet risk management



Managed profiles and BYOD



Reporting and Insights



Centralized policy controls



Enterprise integrations

Chrome Enterprise Premium



Data Loss Prevention



File Uploads & Downloads



Controls



Threat Protection



URL Filtering Evidence Locker



¥

Malware

Security Insights and reporting















Access Control



Signals

Zero Trust



Partner

Context Aware Access for SaaS & Private Web Apps

-

Joint Solution Use Cases

Copy/Paste Controls Local File Download/Upload Controls **Print Control Screenshot Control** Watermark Control Sanctioned/Unsanctioned Application control Site/Tab Browser Isolation And more

Enterprise Browser – User experience





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Converged cloud-native security grounded in zero trust



Remote Campus Branch Airplane Oil rig Stadium Field ...



Thank you!

Sean Reagan
Solutions Engineer
Security Incubation
sereagan@cisco.com

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