# Configure Secure Access with Sophos XG Firewall

### **Contents**

**Introduction** 

**Prerequisites** 

Requirements

Components Used

### **Background Information**

### **Configure**

Configure the Tunnel on Secure Access

**Tunnel Data** 

Configure the Tunnel on Sophos

Configure IPsec Profile

Configure Site-to-site VPN

**Configure Tunnel Interface** 

Configure the Gateways

Configure the SD-WAN Route

Configure Private App

Configure the Access Policy

### **Verify**

RA-VPN

Client-Base ZTNA

Browser-based ZTNA

**Related Information** 

## Introduction

This document describes how to configure Secure Access with Sophos XG Firewall.

# **Prerequisites**

- Configure User Provisioning
- ZTNA SSO Authentication Configuration
- Configure Remote Access VPN Secure Access

### Requirements

Cisco recommends that you have knowledge of these topics:

- Sophos XG Firewall
- Secure Access
- Cisco Secure Client VPN
- Cisco Secure Client ZTNA
- Clientless ZTNA

### **Components Used**

The information in this document is based on:

- Sophos XG Firewall
- Secure Access
- Cisco Secure Client VPN
- Cisco Secure Client ZTNA

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

# **Background Information**



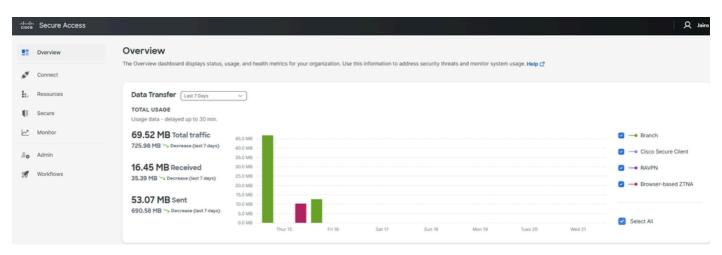
Secure Access - Sophos

Cisco has designed Secure Access to ensure the protection and provision of access to private applications, both on-premise and cloud-based. It also safeguards the connection from the network to the internet. This is achieved through the implementation of multiple security methods and layers, all aimed at preserving the information as they access it via the cloud.

# **Configure**

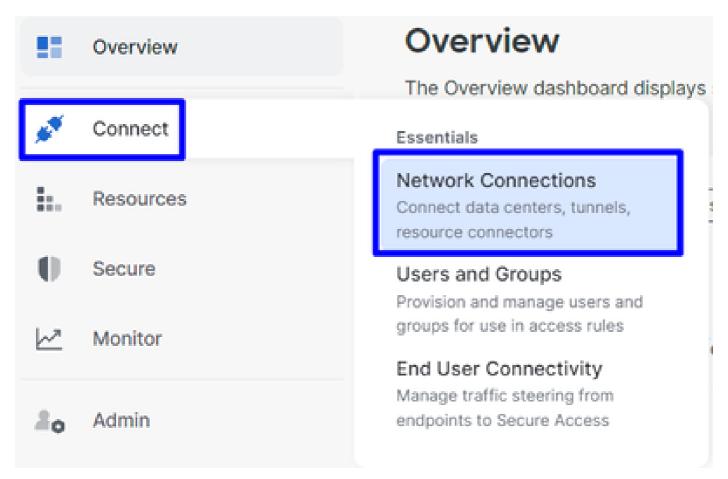
### **Configure the Tunnel on Secure Access**

Navigate to the admin panel of <u>Secure Access</u>.



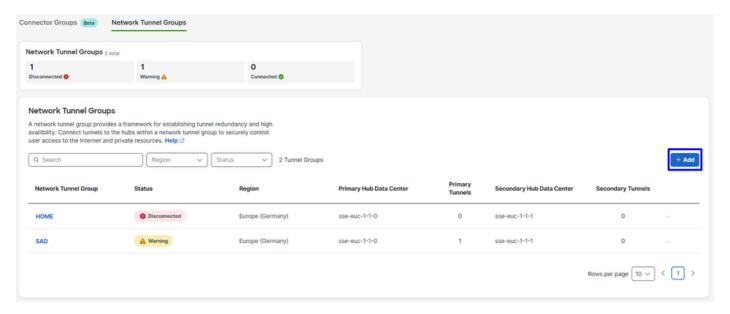
Secure Access - Main Page

• Click on Connect > Network Connections.



Secure Access - Network Connections

• Under Network Tunnel Groups click on + Add.

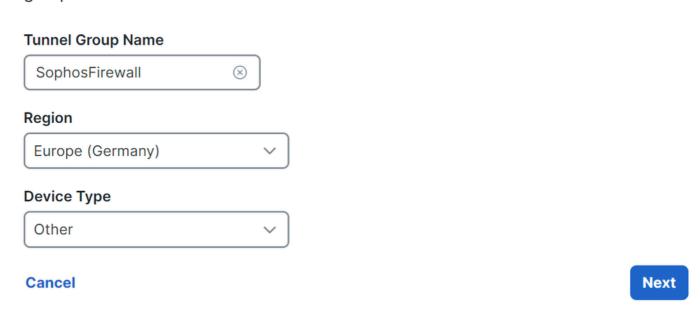


Secure Access - Network Tunnel Groups

- Configure Tunnel Group Name, Region and Device Type.
- Click Next.

### **General Settings**

Give your network tunnel group a good meaningful name, choose a region through which it will connect to Secure Access, and choose the device type this tunnel group will use.



Secure Access - Tunnel Groups - General Settings



Note: Choose the region nearest to the location of your firewall.

- Configure the Tunnel ID Format and Passphrase.
- Click Next.

### **Tunnel ID and Passphrase**

Configure the tunnel ID and passphrase that devices will use to connect to this tunnel group.

### **Tunnel ID Format** Email ) IP Address Tunnel ID @<org><hub>.sse.cisco.com $\otimes$ csasophos **Passphrase** Show $\otimes$ The passphrase must be between 16 and 64 characters long. It must include at least one upper case letter, one lower case letter, one number, and cannot include any special characters. Confirm Passphrase Show $\otimes$ Cancel **Back Next**

Secure Access - Tunnel Groups - Tunnel ID and Passphrase

- Configure the IP address ranges or hosts that you have configured on your network and want to pass the traffic through Secure Access.
- · Click Save.

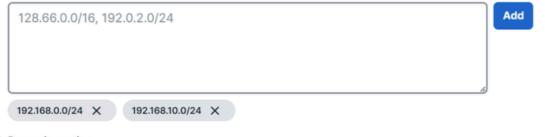
### **Routing option**

Static routing

Use this option to manually add IP address ranges for this tunnel group.

### **IP Address Ranges**

Add all public and private address ranges used internally by your organization. For example, 128.66.0.0/16, 192.0.2.0/24.



Dynamic routing

Use this option when you have a BGP peer for your on-premise router.

Secure Access - Tunnel Groups - Routing Options



After you click on Save the information about the tunnel gets displayed, please save that information for the next step, Configure the tunnel on Sophos.

### **Tunnel Data**

Cancel

### **Data for Tunnel Setup**

Review and save the following information for use when setting up your network tunnel devices. This is the only time that your passphrase is displayed.

Primary Tunnel ID:	csasophos@	-sse.cisco.com	٥
Primary Data Center IP Address:	18.156.145.74		
Secondary Tunnel ID:	csasophos@	-sse.cisco.com	a
Secondary Data Center IP Address:	3.120.45.23		
Passphrase:		ā	

Download CSV

Done

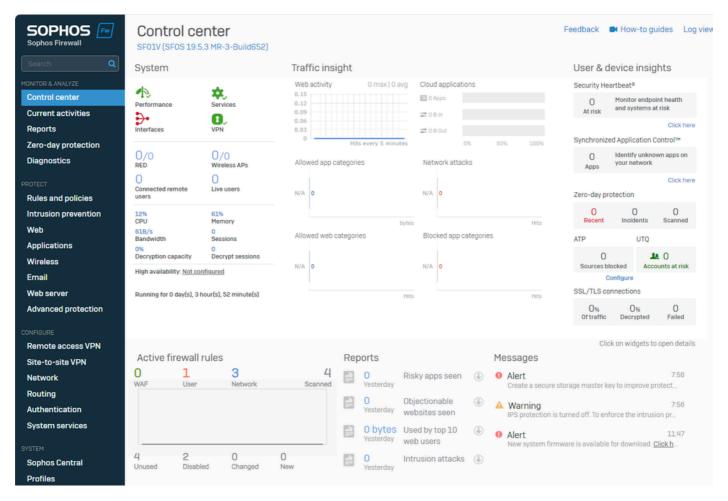
Secure Access - Tunnel Groups - Resume of configuration

### **Configure the Tunnel on Sophos**

### **Configure IPsec Profile**

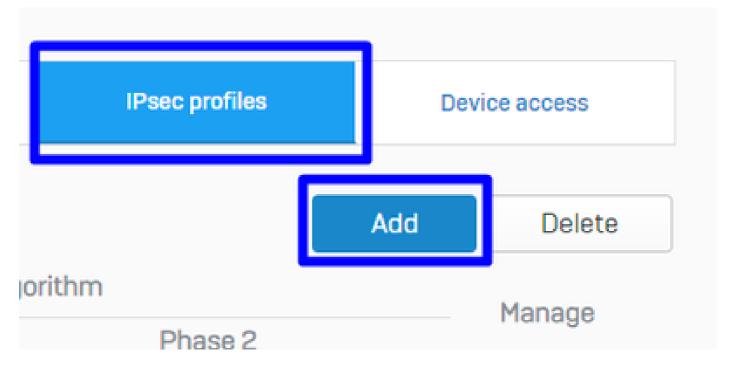
In order to configure the IPsec Profile, navigate to your Sophos XG Firewall.

You obtain something similar to this:



Sophos - Admin Panel

- Navigate to Profiles
- Click on IPsec Profiles and after that click on Add



Sophos - IPsec Profiles

### Under General Settings configure:

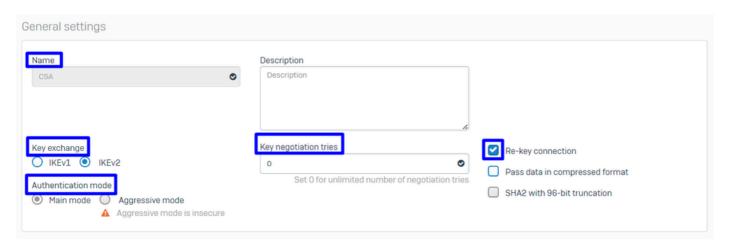
• Name: A reference name to the Cisco Secure Access Policy

• Key Exchange: IKEv2

• Authentication Mode: Main Mode

Key Negotiation Tries: 0

• Re-Key connection: Check the option



Sophos - IPsec Profiles - General Settings

### Under Phase 1 configure:

• Key Life: 28800

• DH group(key group): Select 19 and 20

Encryption: AES256
Authentication: SHA2 256
Re-key margin: 360 (Default)

Randomize re-keying margin by: 50 (Default)



 $Sophos - IPsec\ Profiles - Phase\ I$ 

### Under Phase 2 configure:

• PFS group (DH group): Same as phase-I

• Key life: 3600

Encryption: AES 256Authentication: SHA2 256

PFS group (DH group)		Key life	
Same as phase-I	<b>⊘</b> ∨	3600	•
			Second
Encryption		Authentication	
AES256	<b>&gt;</b>	SHA2 256	<b>⊘</b> ∨

 $Sophos - IPsec\ Profiles - Phase\ 2$ 

### Under Dead Peer Detection configure:

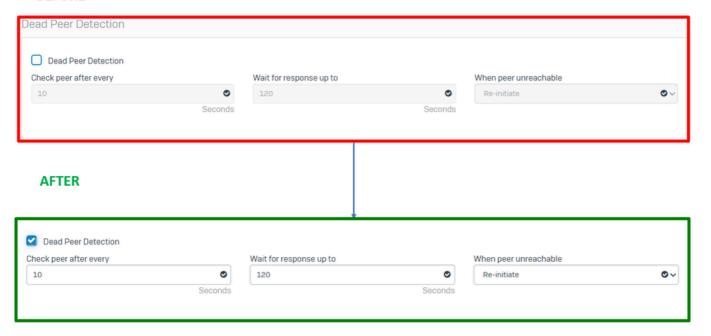
• Dead Peer Detection: Check the option

• Check peer after every: 10

• Wait for response up to: 120 (Default)

• When peer unreachable: Re-initiate (Default)

### **BEFORE**

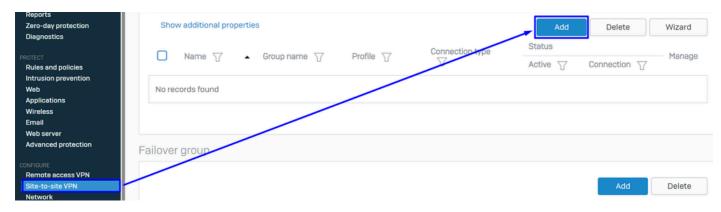


Sophos - IPsec Profiles - Dead Peer Detection

After that click on Save and proceed with the next step, Configure Site-to-site VPN.

### **Configure Site-to-site VPN**

To initiate the configuration of the VPN, click on Site-to-site VPN and click on Add.



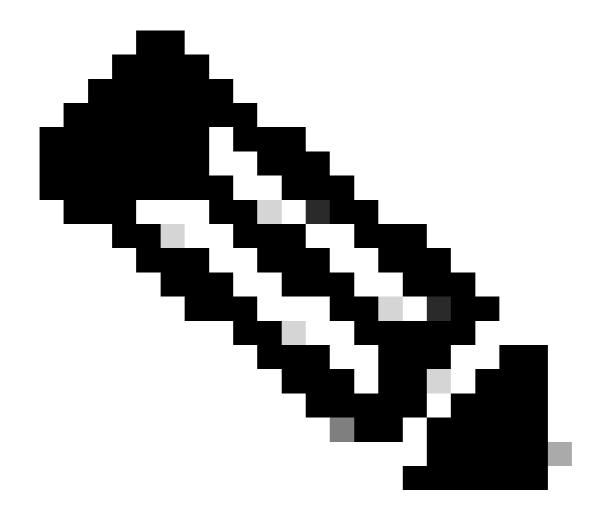
Sophos - Site-to-site VPN

### Under General Settings configure:

• Name: A reference name to the Cisco Secure Access IPsec Policy

• IP version: IPv4

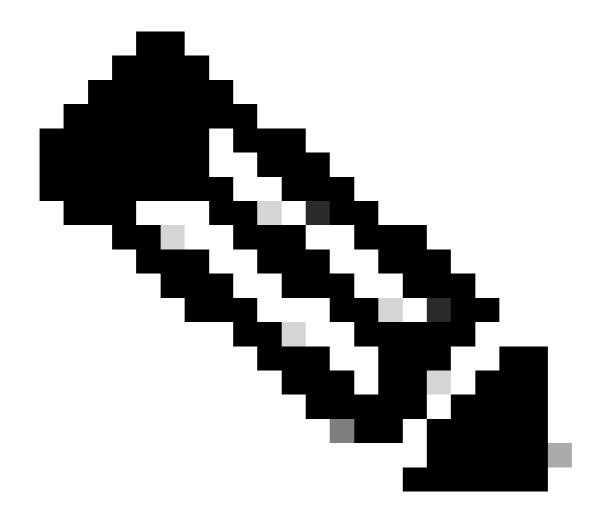
Connection type: Tunnel interface
Gateway type: Initiate the connection
Active on save: Check the option



**Note**: The option Active on save enables the VPN automatically after you end up configuring the site-to-site VPN.



Sophos - Site-to-site VPN - General Settings

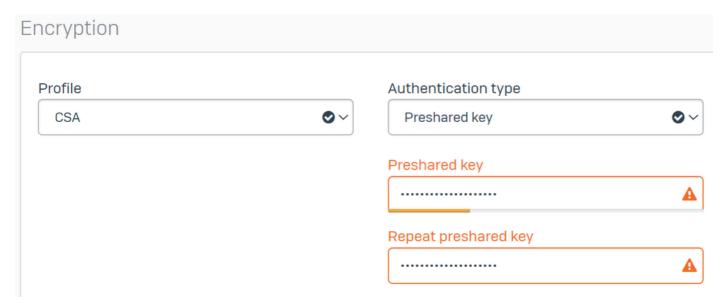


Note: The option Tunnel interface creates a virtual tunnel interface for the Sophos XG Firewall

### with the name XFRM.

### Under Encryption configure:

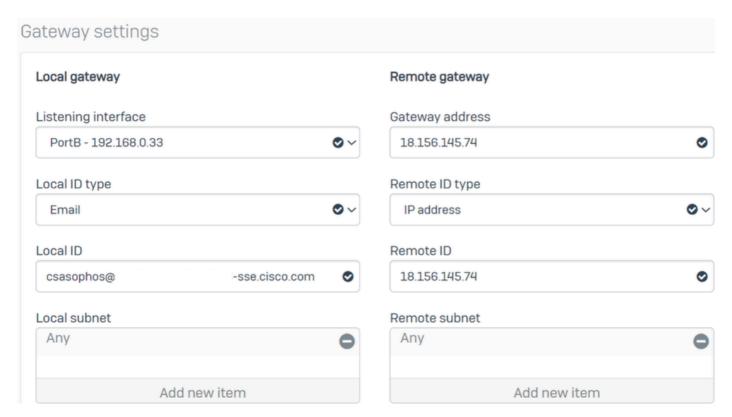
- Profile: The profile that you create on the step, Configure IPsec Profile
- Authentication type: Preshared key
- Preshared key: The key that you configure on the step, Configure the Tunnel on Secure Access
- Repeat preshared key: Preshared key



 $Sophos - Site-to-site \ VPN - Encryption$ 

Under Gateway Settings configure Local Gateway and Remote Gateway options, use this table as a reference.

Local Gateway	Remote Gateway
Listening interface  Your Wan-Internet Interface	Gateway address  The public IP generated under the step, Tunnel Data
<b>Local ID type</b> Email	Remote ID type  IP address
Local ID  The Email generated under the step, Tunnel Data	Remote ID  The public IP generated under the step, Tunnel Data
<b>Local subnet</b> Any	Remote Subnet Any



Sophos - Site-to-site VPN - Gateway Settings

### After that click on Save, and you can see that the tunnel was created.



Sophos - Site-to-site VPN - IPsec Connections

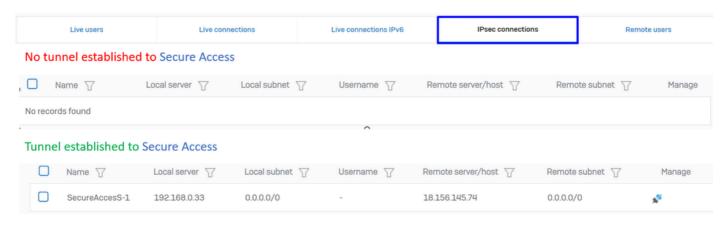


**Note**: To check if the tunnel is correctly enabled on the last image you can check Connection status, if it is green, the tunnel is connected if it is not green the tunnel is not connected.

To check if a tunnel is established navigate to Current Activities > IPsec Connections.

# Control center Current activities Reports Zero-day protection Diagnostics

Sophos - Monitor and Analyze - IPsec



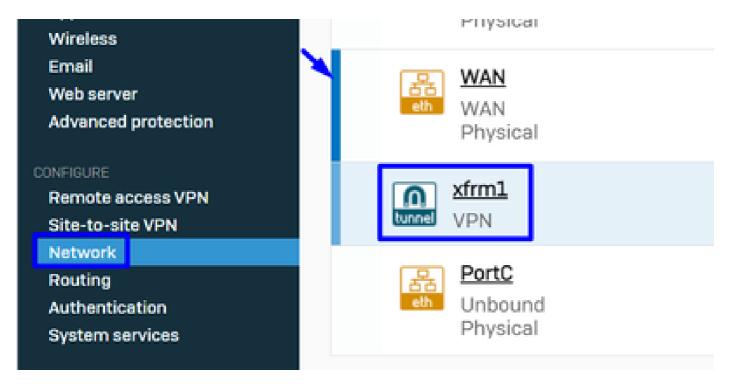
Sophos - Monitor and Analyze - IPsec before and after

After that, we can continue with the step, Configure Tunnel Interface Gateway.

### **Configure Tunnel Interface**

Navigate to Network and check your WAN interface configured on the VPN to edit the virtual tunnel interface with the name xfrm.

• Click on thexfrm interface.



Sophos - Network - Tunnel Interface

• Configure the interface with an IP non-routable in your network, for example, you can use 169.254.x.x/30 which is an IP in a non-routable space usually, in our example we use 169.254.0.1/30

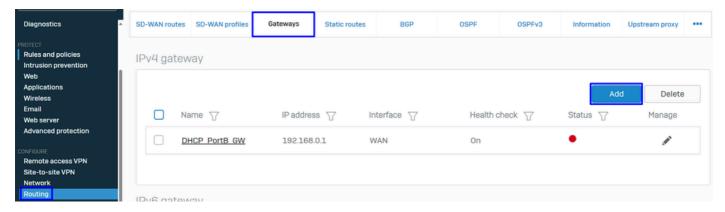


Sophos - Network - Tunnel Interface - Configuration

### **Configure the Gateways**

In order to configure the gateway for the virtual interface (xfrm)

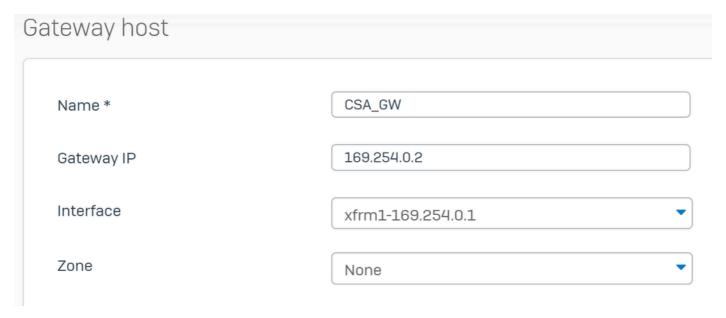
- Navigate to Routing > Gateways
- · Click Add



Sophos - Routing - Gateways

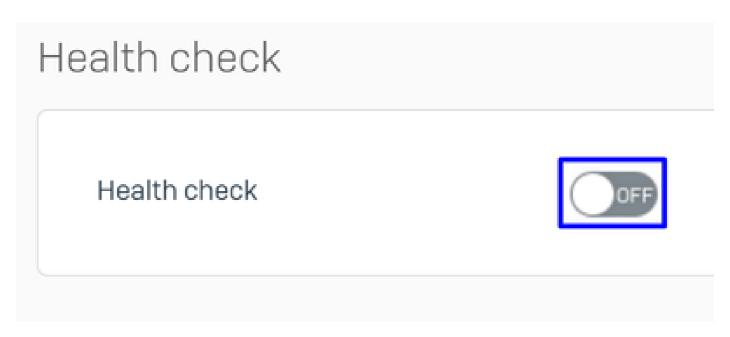
### Under Gateway host configure:

- Name: A name that makes reference to the virtual interface created for the VPN
- Gateway IP: In our case 169.254.0.2, that is the IP under the network 169.254.0.1/30 that already we assigned under the step, Configure Tunnel Interface
- Interface: VPN Virtual Interface
- Zone: None (Default)



Sophos - Routing - Gateways - Gateway Host

- Under Health check disable the check
- Click Save



Sophos - Routing - Gateways - Health-check

You can observe the status of the gateway after you save the configuration:



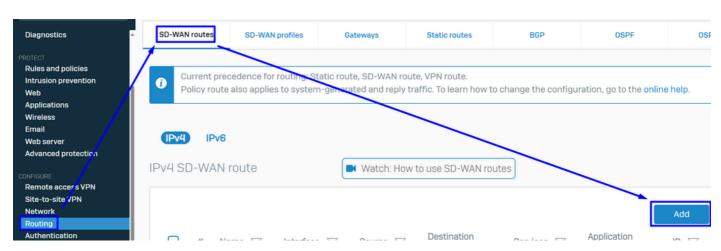
Sophos - Routing - Gateways - Status

### **Configure the SD-WAN Route**

To finalize the process of configuration, you need to create the route that permits you to forward the traffic to Secure Access.

Navigate to Routing > SD-WAN routes.

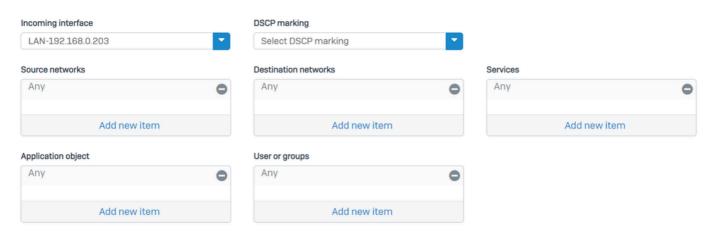
· Click on Add



### Under Traffic Selector configure:

- Incoming interface: Select the interface from where you want to send the traffic or the users that access from RA-VPN, ZTNA, or Clientless-ZTNA
- DSCP marking: Nothing for this example
- Source networks: Select the address that you want to route through the tunnel
- Destination networks: Any or you can specify a destination
- Services: Any or you can specify the services
- Application object: An application if you have the object configured
- User or groups: If you want to add a specific group of users to route the traffic to Secure Access

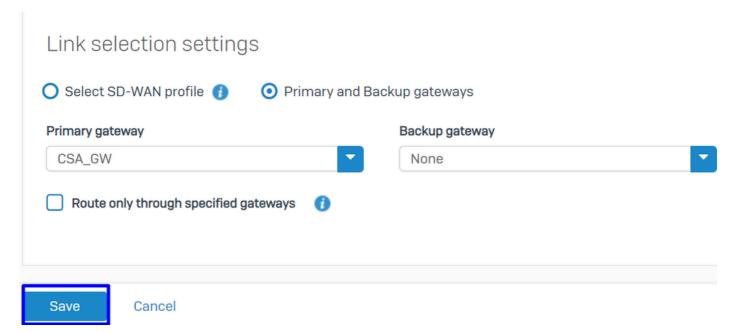
### Traffic selector



Sophos - SD-Wan Routes - Traffic Selector

### Under Link selection settings configure the gateway:

- Primary and Backup gateways: Check the option
- Primary gateway: Select the gateway configured under the step, Configure the Gateways
- · Click on Save



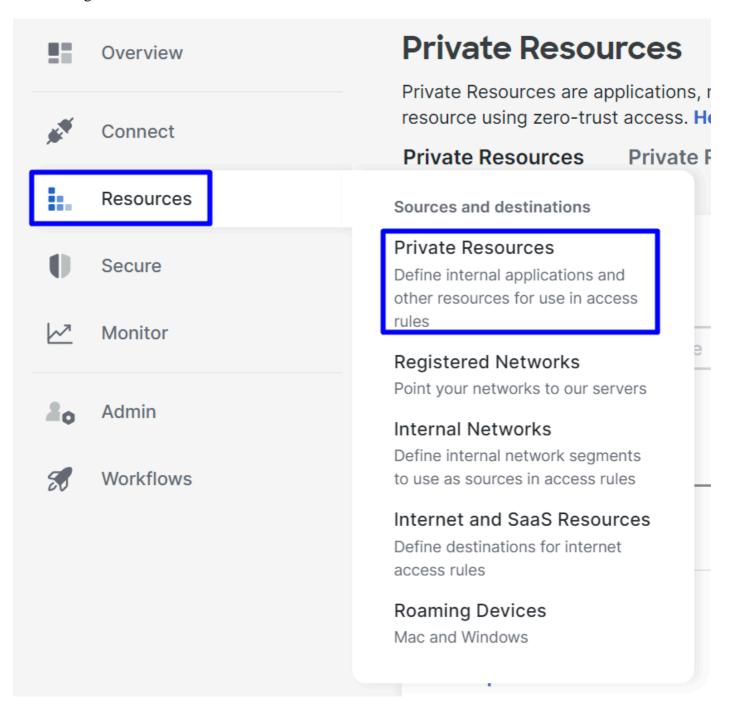
Sophos - SD-Wan Routes - Traffic Selector - Primary and Backup gateways

After you finalize the configuration on the Sophos XG Firewall you can proceed with the step, Configure Private App.

### **Configure Private App**

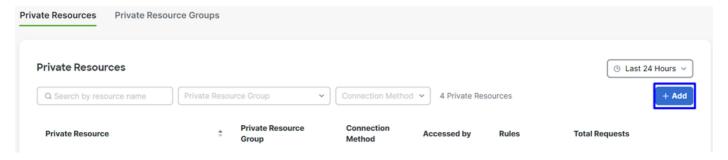
In order to configure the Private App access, log in to the Admin Portal.

• Navigate to Resources > Private Resources



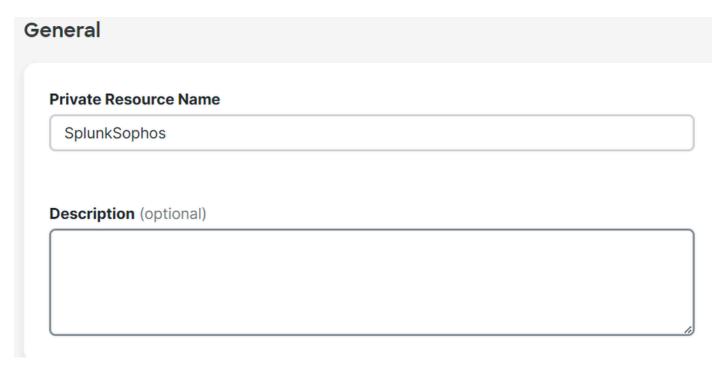
Secure Access - Private Resources

• Click on + Add



Secure Access - Private Resources 2

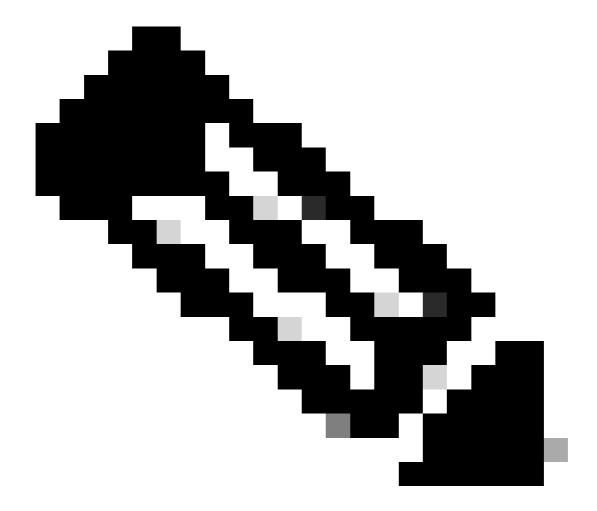
• Under General Configure the Private Resource Name



Secure Access - Private Resources - General

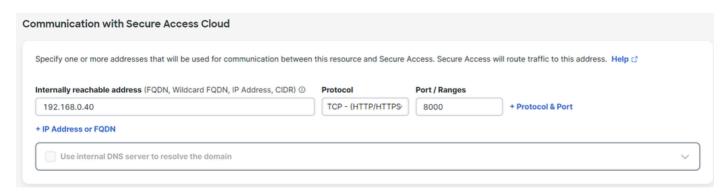
Under Communication with Secure Access Cloud configure:

• Internally reachable address (FQDN, Wildcard FQDN, IP Address, CIDR): Select the resource that you want to access



**Note**: Remember the internally reachable address was assigned on the step, <u>Configure the Tunnel on Secure Access</u>.

- Protocol: Select the protocol that you use to access that resource
- Port / Ranges: Select the ports that you need to enable to access the app

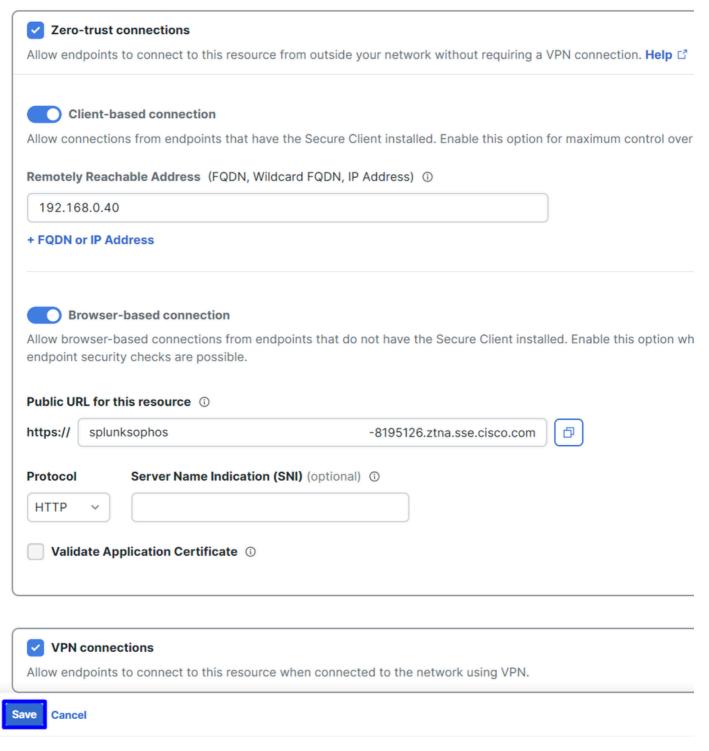


Secure Access - Private Resources - Communications with Secure Access Cloud

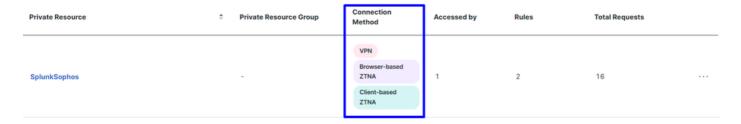
Within Endpoint Connection Methods, you configure all the ways possible to access private resources via Secure

Access, and choose the methods that you want to use for your environment:

- Zero-trust connections: Check the box to enable ZTNA access.
  - Client-based connection: Enable the button to permit client base ZTNA
    - Remotely Reachable Address: Configure the IP of your private App
  - Browser-based connection: Enable the button to permit browser-based ZTNA
    - Public URL for this resource: Add a name to use in conjunction with the domain ztna.sse.cisco.com
    - Protocol: Choose HTTP or HTTPS as a protocol to access through the browser
  - VPN connections: Check the box to enable RA-VPN Access.
- Click Save



After the configuration is complete, this is the result:

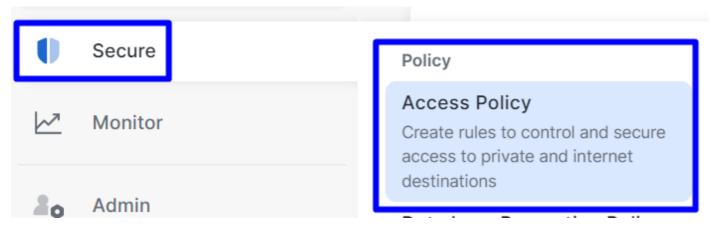


Secure Access - Private Resources Configured

Now you can proceed with the step, Configure the Access Policy.

### **Configure the Access Policy**

In order to configure the access policy navigate to Secure > Access Policy.



Secure Access - Access Policy

• Click Add Rule > Private Access

# Private Access

Control and secure access to resources and applications that cannot be accessed by the general public.

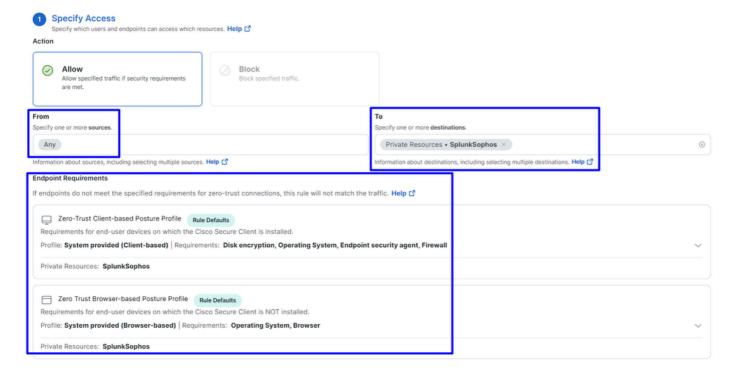
# Internet Access

Control and secure access to public destinations from within your network and from managed devices

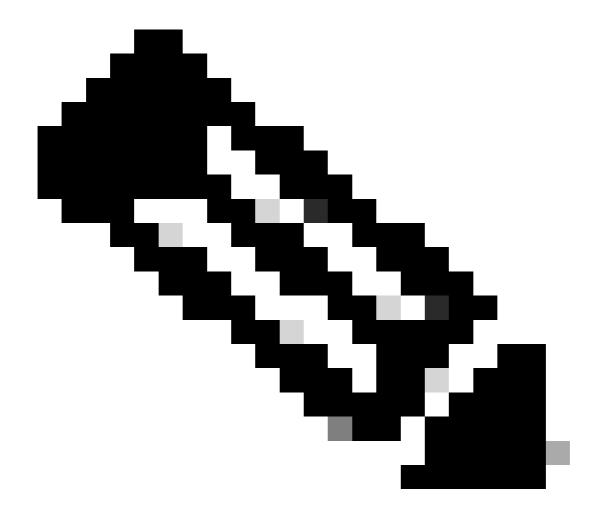
Secure Access - Access Policy - Private Access

Configure the next options to provide access through multiple methods of authentication:

- 1. Specify Access
  - Action: Allow
  - Rule name: Specify a name for your access rule
  - From: The users that you grant access to
  - To: The application that you wanted to permit access
  - Endpoint Requirements: (Default)
- Click Next



Secure Access - Access Policy - Specify Access



**Note**: For step 2. Configure Security as needed, but in this case, you did not enable the Intrusion Prevention (IPS), or Tenant Control Profile.



Secure Access - Access Policy Configured

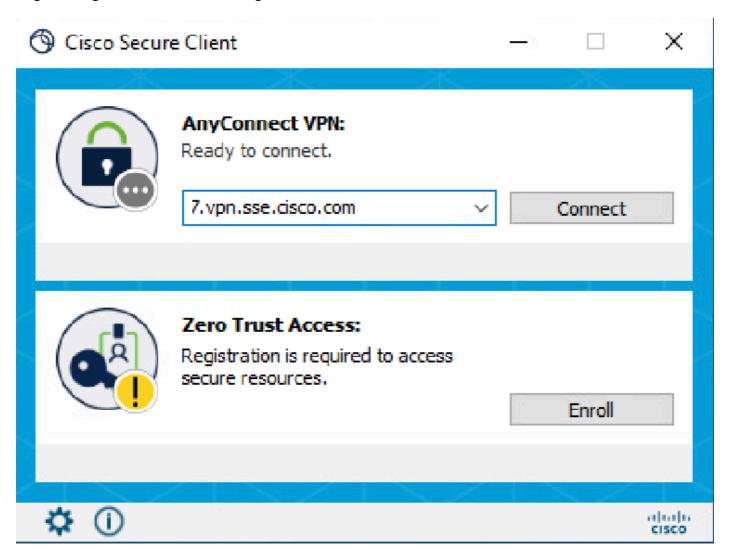
After that, you can proceed with the step Verify.

# Verify

In order to verify the access you must have installed the agent of Cisco Secure Client that you can download from Software Download - Cisco Secure Client.

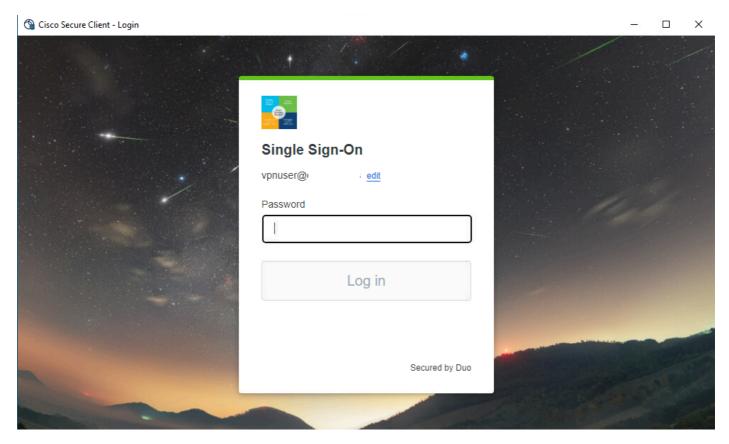
### **RA-VPN**

Login through Cisco Secure Client Agent-VPN.



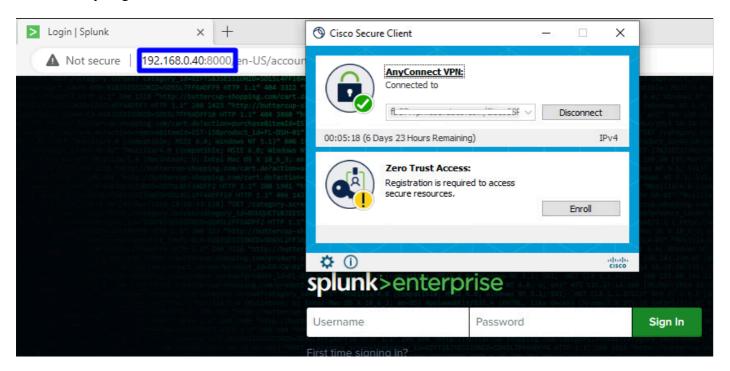
Secure Client - VPN

• Authenticate through your SSO provider



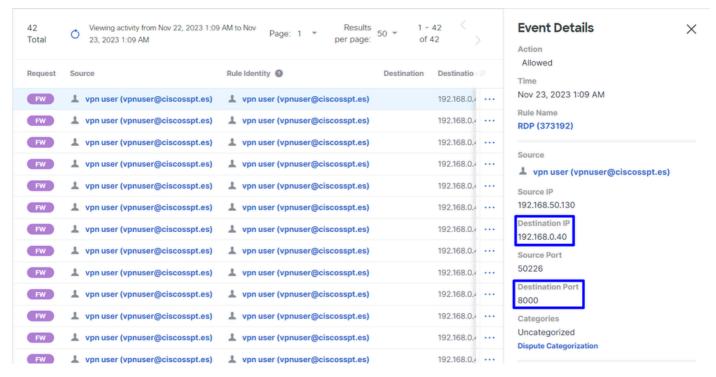
Secure Access - VPN - SSO

• After you get authenticated, access to the resource:



Secure Access - VPN - Authenticated

Navigate to Monitor > Activity Search:

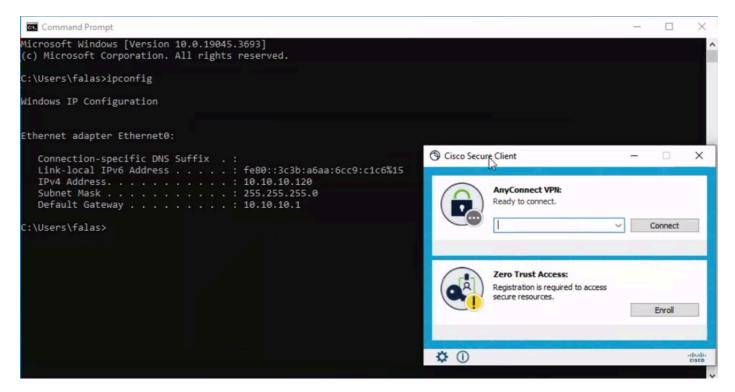


Secure Access - Activity Search - RA-VPN

You are able to see the user was allowed to authenticate through RA-VPN.

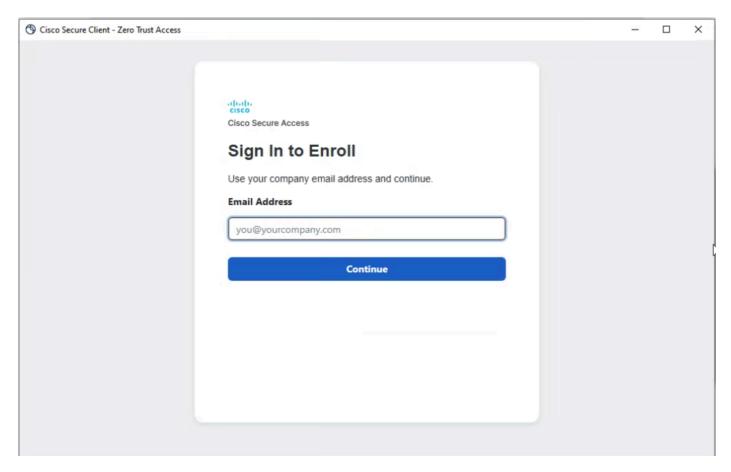
### **Client-Base ZTNA**

Login through Cisco Secure Client Agent - ZTNA.



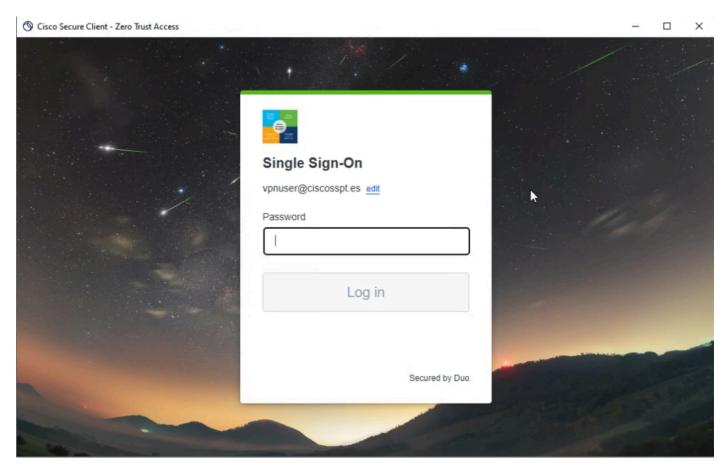
Secure Client - ZTNA

• Enroll with your username.



Secure Client - ZTNA - Enroll

• Authenticate in your SSO Provider



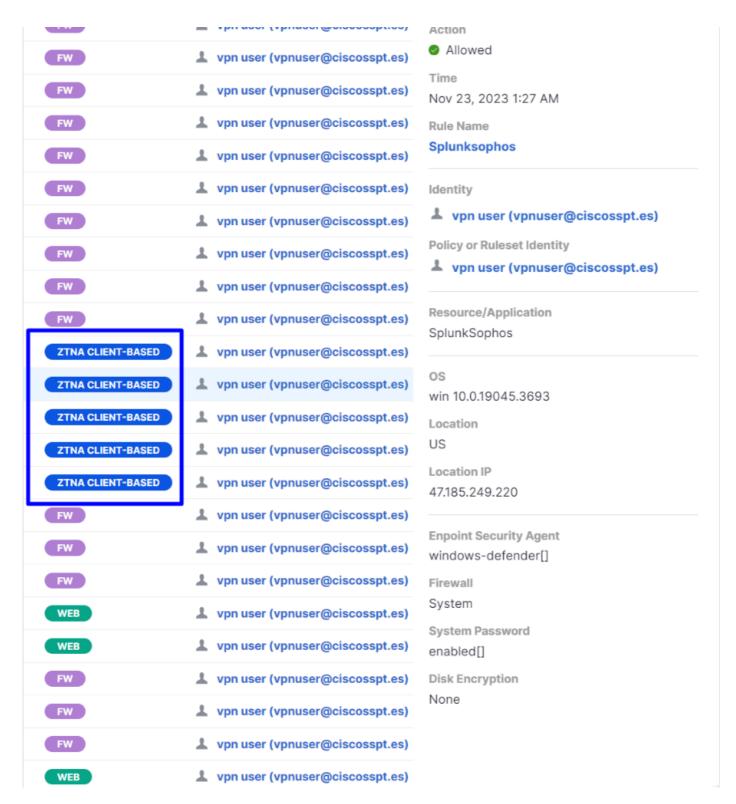
Secure Client - ZTNA - SSO Login

• After you get authenticated, access to the resource:



Secure Access - ZTNA - Logged

Navigate to Monitor > Activity Search:

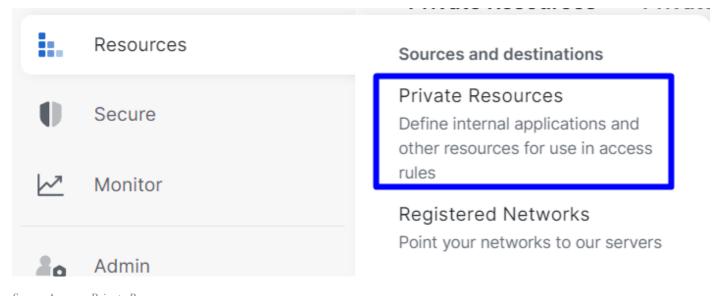


Secure Access - Activity Search - ZTNA Client-Based

You are able to see the user was allowed to authenticate through client-based ZTNA.

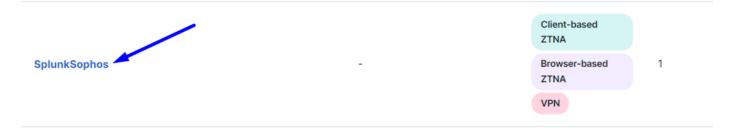
### **Browser-based ZTNA**

In order to get the URL, you need to go to Resources > Private Resources.



Secure Access - Private Resource

• Click on your Policy



Secure Access - Private Resource - SplunkSophos

· Scroll down

# **SplunkSophos**

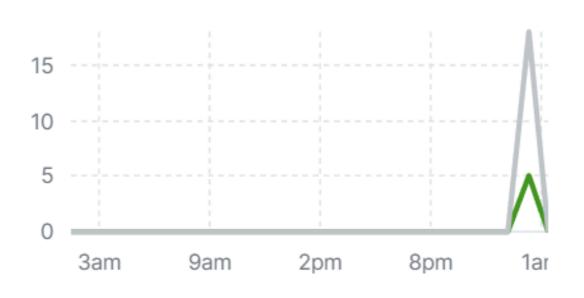
Client-based ZTNA

**Browser-based ZTNA** 

**VPN** 

# **Total Requests**

**23** ~ 44% from previous 24 hours



# TOTAL REQUESTS BY STATUS

# **Status**

0	Success	5
0	Blocked	18