Configure and Verify DIA NAT Tracker and Fallback

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Introduction

This document describes how to configure and verify DIA NAT Tracker and Fallback on CIsco IOS XE® routers using Cisco Catalyst Manager GUI.

Prerequisites

Requirements

Cisco SD-WAN NAT DIA policy must be configured on branch devices. Please check the <u>Related</u> <u>Information</u> section for instructions on how to Implement Direct Internet Access (DIA) for SD-WAN.

Components Used

This document is based on these software and hardware versions:

- Cisco Catalyst SD-WAN Manager version 20.14.1
- Cisco Catalyst SD-WAN Controller version 20.14.1
- Cisco Edge Router version 17.14.01a

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.

Restrictions for NAT DIA Tracker

Restrictions for Cisco IOS XE Catalyst SD-WAN Release 17.10.1a and Earlier Releases

- In Cisco IOS XE Release 17.6.x and earlier, the NAT DIA tracker is not supported on dialer interfaces. From Cisco IOS XE Catalyst SD-WAN Release 17.7.1a, subinterfaces and dialer interfaces support single endpoint and dual endpoint trackers.
- DNS URL endpoint is not supported on Cisco IOS XE Catalyst SD-WAN devices.
- You can only apply one tracker or tracker group to an interface.
- The NAT fallback feature is supported only from Cisco IOS XE Catalyst SD-WAN Release 17.3.2.
- The IP address of the tunnel with address 169.254.x.x is not supported to track the zScaler endpoint on manual tunnels.
- You must configure a minimum of two single endpoint trackers to configure a tracker group.
- A tracker group can incorporate only a maximum of two single endpoint trackers.
- In Cisco IOS XE Release 17.10.1 and previous releases, you cannot configure IPv4 tracker on a IPv6 interface or vice versa. The tracker wont be active.

Restrictions for Cisco IOS XE Catalyst SD-WAN Release 17.11.1a

- API URL endpoint is supported only on IPv6 DIA tracker and not supported on IPv4 DIA tracker.
- Both IPv4 and IPv6 trackers cannot be used in the same tracker group.
- You must configure the **allow service all** command under the TLOC tunnel interface for IPv6 trackers to work with a TLOC tunnel interface.
- Multiple NAT66 DIA interfaces are not supported.
- NAT fallback on centralized data policy is not supported.

Restrictions for Cisco IOS XE Catalyst SD-WAN Release 17.13.1a

• Endpoint DNS elements are not supported in a tracker group.

Note: Ensure that you use an endpoint IP address responds to HTTP/HTTPS requests. For instance, Google DNS server 8.8.8.8 cannot be used as an endpoint IP address.

Supported Interfaces for NAT DIA Tracker

You can configure the NAT DIA tracker for the these interfaces:

- Cellular Interfaces
- Ethernet Interfaces
- Ethernet (PPPoE) Interfaces
- Subinterfaces
- DSL Dialer Interfaces (PPPoE and PPPoA)

Note: IPv6 NAT DIA tracker is supported only on physical and subinterfaces of Ethernet interfaces.

Configure

Network Diagram



Configurations

The DIA tracker helps determine if the internet or external network has become unavailable. The NAT DIA Tracking feature is useful when NAT is enabled on a transport interface in VPN 0 to allow data traffic from the router to exit directly to the internet.

If the internet or external network becomes unavailable, the router continues to forward traffic based on the NAT route in the service VPN. Traffic that is forwarded to the internet gets dropped. To prevent the internet-bound traffic from being dropped, configure the DIA tracker on the edge router to track the status of the transport interface. The tracker periodically probes the interface to determine the status of the internet and return the data to the attach points that are associated with the tracker.

Step 1. Configure NAT DIA Tracker

On the Cisco SD-WAN Manager menu, navigate to **Configuration > Templates**.

20	Monitor	Confirmation			
۶	Configuration	Configuration Groups			
*	Tools	Policy Groups	re Temp	blates	
\$	Maintenance	Service Insertion			
20	Administration	Cloud OnRamp for SaaS			
•	Workflows	Cloud OnRamp for Multicloud	~		
	Reports	Network Hierarchy		Description	٦
dd	Analytics	Certificates Certificate Authority	1237ea15	Device template of Site400-cE1 wit	F
Ø	Explore	Templates 🗸	72fa9563	Device template of Site200-cE1 wit	F
		Policies Security	b1b238	Device template of Site200-cE2 wit	F
		Unified Communications Network Design	248d5ce	Device template of Site500-cE1 wit	F
		Cloud onRamp for laaS)983cf18	Device template of Site500-cE2 wit	F
		Application Catalog	⁷ 18bba	Device template of Site100-cE1 wit	F
		58129554-ca0e-4010-a787-71a	5288785	Device template of Site100-cE2 wit	F

Click Feature Templates. Search for the Cisco System feature template in the search bar, click the three dots (...), and click Edit to modify.

Configuration									
Device Templates Featu	ire Templates								
Q 400 × system ×	Q 400 × system × Search								
Add Template Template Type Non-Defau	Add Template Template Type Non-Default -> Total Rows: 3 of 125 t 3								
Name	Description	Туре	Device Model	Device Templates	Devices Attached	Updated By	Last Updated		
ntp_system_21-10-2021_19-3	Test Drive Template: System	Cisco NTP	CSR1000v	8	8	admin	04 Apr 2024 7:19:47	PM GM	
system_Site400-cE1_400_28	Test Drive Template: System	Cisco System	C8000v	1	1	admin	04 Apr 2024 4:21:19	PM GM' ***	
system_Site500-cE2_500_14e	. Test Drive Template: System	Cisco System	C8000v	1	1	admin	04 Apr 2024 4:27:53	View Edit	
								Change Device Models	
								Delete	
								Сору	

In the System feature teample, click **Tracker**.

Configuration

Device Templates	Feature Templates
Feature Template 🗲 Ci	sco System > system_Site400-cE1_400_288e91b4-e59e-4af4-92f8-847b4237ea15_04-04-2024_16-21-17
Device Type	C8000v
Template Name*	system_Site400-cE1_400_288e91b4-e59e-4af4
Description*	Test Drive Template: System feature of Site400
Basic Configuration	GPS Tracker Advanced
BASIC CONFIGURA	TIÔN

Click New Endpoint Tracker to configure the tracker parameters.

Tracker					
TRACKERS	TRACKER GROUPS				
New End	point Tracker				
Optional	Name	Threshold	inter val	Multiplier	Tracker Type
Optional	Name	Threshold	inter val	Multiplier No data available	Tracker Type
Optional	Name	Threshold	inter val	Multiplier No data available	Tracker Type

Enter the tracker parameters and click Add.

Name: Name of the tracker. The name can be up to 128 alphanumeric characters. You can configure up to eight trackers.

Threshold: Duration to wait for the probe to return a response before declaring that the transport interface is down. Range: 100 to 1000 milliseconds. Default: 300 milliseconds.

Interval: Frequency at which a probe is sent to determine the status of the transport interface. Range: 20 to 600 seconds. Default: 60 seconds (1 minute).

Multiplier: Number of times a probe can be resent before declaring that the transport interface is down. Range: 1 to 10. Default: 3.

Tracker Type: Choose Interface to configure the DIA tracker.

End Point Type: You can select IP address or DNS Name or URL.

End Point DNS Name: DNS name of the end point. This is the destination in the internet to which the router sends probes to determine the status of the transport interface.

Click drop-down and select **Global** to change any default value.

Tracker		~
TRACKERS TRACKER GROUPS		
Name	racker1	1
Threshold		
Interval	Global Device Specific >	- 1
Multiplier	O Default	- I.
Tracker Type	⊘ → Interface	
		×
Endpoint Type	O IP Address O DNS Name O URL	
Endpoint DNS Name	(www.cisco.com	
	c	ancel Add

Click Update.

lew Endp	point Tracker					
ptional	Name	Threshold	Interval	Multiplier	Tracker Type	Action
	tracker1	⊕ 100	⊕ 30	Ø 3	 interface 	0
ew Obje	et Tracker					
lew Obje iracker Typ	et Tracker	• Interface) SIG () Route		🗌 Mark	as Optional Row
lew Obje íracker Typ Object ID	et Tracker	• Interface () SIG () Route		🗌 Mark	as Optional Row



Note: Ensure that you have configured two single endpoint trackers before configuring a tracker group.

Click Next.

Device Template 288e91b4-e59e-4af4-92f8-647b4237ea15								
Q Search								7
							Total Rows: 1	<u>+</u>
S Chassis Number	System IP	Hostname	Prefix(0.0.0.0/0)	Address(192.1	88.1.1)	Interface Name(GigabitEthernet8)	IPv4 Address/ prefix-k	_
C8K-06B43DFE-2350-F2B2-E8E2-F80		Site400-cE1	0.0.0.0/0			GigabitEthernet8		
				Next	Cancel			

Click devices, and make sure the config is correct. Click **Config Diff** and **Side by Side Diff**. Click **Configure Devices**.

rice Template 8e91b4-e59e-4af4-9	otal Config Preview Config Diff
evice list (Total: 1 devices) Filter/Search	system ztp-status in-progress device-model vedge-C8000V gps-location latitude 19.04674 gps-location longitude 72.85223
3K-08B43DFE-2350-F2B2-E8E2- IOF3EDDB887 e400-cE1 1.1.40.1	system-ip overlay-id 1 site-id 400 no transport-gateway enable port-offset 0
Configure Devi	control-session-pps 300 admin-tech-on-failure sp-organization-name Viptela-POC-Tool



vManage successfully configured the device template with the tracker configuration.

Push Feature Template Configuration	View Logs
Total Task: 1 Success : 1	Host: Site400-cE1()
Device Group (1)	Device C8000v Model:
Q Search Table	[29-Jul-2024 7:50:20 PDT] Configuring device with feature template:
Status Message Cinassis Number Success Template successfully attac I	129-JUI-2024 7:50:29 PDT] Generating or configuration from template [29-JUI-2024 7:50:29 PDT] Device is online [29-JUI-2024 7:50:29 PDT] Dudating device configuration in Manager [29-JUI-2024 7:50:29 PDT] Dudating device configuration in Manager [29-JUI-2024 7:50:29 PDT] Sending configuration to device [29-JUI-2024 7:50:36 PDT] Successfully notified device to pull configuration [29-JUI-2024 7:50:36 PDT] Device has pulled the configuration [29-JUI-2024 7:50:36 PDT] Device: Config applied successfully [29-JUI-2024 7:50:39 PDT] Device: config applied successfully [20-JUI-2024 7:50:39 PDT] Device: config applied successfully [20-JUI-2024 7:50:39 PDT] Device: config applied successfully
	[5a-Jni-2054 V-20:33 MD1] Tembrate and cessurily attraction to device

Step 2. Bind the Tracker to Transport Interface

On the Cisco SD-WAN Manager menu, navigate to **Configuration > Templates**.

20	Monitor	Confirmention			
۶	Configuration	Configuration Groups			
×	Tools	Policy Groups	re Temp	blates	
¢	Maintenance	Service Insertion			
20	Administration	Cloud OnRamp for SaaS			
-13	Workflows	Cloud OnRamp for Multicloud	~		
	Reports	Network Hierarchy		Description	٦
dil	Analytics	Certificates Certificate Authority	1237ea 1 5	Device template of Site400-cE1 wit	F
Ø	Explore	Templates 🗸	72fa9563	Device template of Site200-cE1 wit	F
		Policies Security	b1b238	Device template of Site200-cE2 wit	F
		Unified Communications Network Design	248d5ce	Device template of Site500-cE1 wit	F
		Cloud onRamp for IaaS)983cf18	Device template of Site500-cE2 wit	F
		Application Catalog	718bba	Device template of Site100-cE1 wit	F
		58129554-ca0e-4010-a787-71a	5288785	Device template of Site100-cE2 wit	F

Search for the **NAT Transport Interface feature template** in the search bar, click the **three dots** (...), and click **Edit** to modify.

Configuratio	on								
Device Template	es Feature Template								
Q 400 × Gi	gabitEthernet1 × Search								7
Add Template									
Template Type	lon-Default 🗸						Total Rows: 1 of 125	0	鐐
Name	Description	Туре	Device Model	Device Templates	Devices Attached	Updated By	Last Updated	d	
interface_GigabitEth.	Test Drive Template: Int	Cisco VPN Interface Ethernet	C8000v	1	1	admin	04 Apr 2024	4:22:1.	
								View	
								Edit	
								Change	Device Mode
								Delete	
								Copy	

Click the **Advanced** tab.

Feature l'emplate / Cisco	o VPN Interface Ethemet / Interface_GigabitEthemet1_04-04-2024_16-21-18
Device Type	C8000v
Template Name*	interface_GigabitEthernet1_04-04-2024_16-21-18
Description*	Test Drive Template: Interface GigabitEthernet1 fe

To add the tracker name on the Tracker, select **Global** from the drop-down menu.

Tracker	
ICMP/ICMPv6 Redirect Disable	Global Off
	Device Specific >
GRE tunnel source IP	⊘ Default

Enter the **tracker name** that you created in the system template and click **Update**.

Tracker	Uracker1	
ICMP/ICMPv6 Redirect Disable	⊘ - On Off	
GRE tunnel source IP		
Xconnect		
		Cancel Update

Click Next.

Q. Search							7
						Total Rows: 1 🔒	<u>+</u>
_ Chassis Number	System IP	Hostname	Prefix(0.0.0.0/0)	Address (192.188.1.1)	Interface Name(GigabitEthernet8)	IPv4 Address/ prefix-k	
C8K-06B43DFE-2350-F2B2-E8E2-F80		Site400-cE1	0.0.0.0/0		GigabitEthernet8		

Click devices, and make sure the config is correct. Click **Config Diff** and **Side by Side Diff**. Click **Configure Devices**.

Device Template 288e91b4-e59e-4af4-9	Total 1	Config Preview Config Diff
Device list (Total: 1 devices) Filter/Search		system ztp-status in-progress device-model vedge-C8000V gps-location latitude 19.04674 gps-location longitude 72.85223 system-in
C8K-06B43DFE-2350-F2B2-E8E2- F80F3EDDB687 Site400-cE1 1.1.40.1		overlay-id 1 site-id 400 no transport-gateway enable port-offset 0
Configure Devi		<pre>control-session-pps 300 admin-tech-on-failure sp-organization-name Viptela-POC-Tool organization-name Viptela-POC-Tool port-hop track-transport track-default-gateway console-baud-rate 115200 no on-demand enable on-demand idle-timeout 10</pre>

interface GigabitEthernet1	²¹² interface GigabitEthernet1
no shutdown	213 no shutdown
arp timeout 1200	214 arp timeout 1200
ip address 10.2.7.2 255.255.255.0	²¹⁵ ip address 10.2.7.2 255.255.255.0
no ip redirects	216 no ip redirects
ip mtu 1500	²¹⁷ ip mtu 1500
ip nat outside	²¹⁸ ip nat outside
load-interval 30	219 load-interval 30
mtu 1500	220 mtu 1500
	221 endpoint-tracker tracker1
negotiation auto	222 negotiation auto
exit	223 exit
interface GigabitEthernet2	224 interface GigabitEthernet2
no shutdown	225 no shutdown
arp timeout 1200	arp timeout 1200
Back Configure Devices	Cancel

vManage has successfully configured the device template.

Push Feature Template Configuration O Validation success	View Logs
Total Task: 1 Success : 1	Host: Site400-cE1()
Device Group (1)	Device C8000v Model:
Q Search Table	[29-Jul-2024 8:02:13 PDT] Configuring device with feature template: [29-Jul-2024 8:02:13 PDT] Checking and creating device in Manager
Status Message Cinassis Number Success Template successfully attac	129-Jul-2024 80:2:04 PDT] Generating configuration from template 129-Jul-2024 80:2:04 PDT] Device is online 129-Jul-2024 80:2:04 PDT] Sending configuration in Manager 129-Jul-2024 80:2:02 PDT] Sending configuration to device 129-Jul-2024 80:2:04 PDT] Sending configuration to device 129-Jul-2024 80:2:04 PDT] Successfully notified device to pull configuration 129-Jul-2024 80:2:04 PDT] Device has pulled the configuration 129-Jul-2024 80:2:04 PDT] Device: Config applied successfully 129-Jul-2024 80:2:04 PDT] Device: Config applied successfully 129-Jul-2024 80:2:04 PDT] Template successfully attached to device

Step 3. Enable NAT Fallback on Existing DIA Policy

Cisco IOS XE Catalyst SD-WAN devices support the NAT fallback feature for Direct Internet Access (DIA). NAT fallback feature allows traffic to use an alternative path if the primary NAT path fails. This ensures continuous connectivity even if there are issues with the primary NAT configuration.

To enable NAT fallback using Cisco SD-WAN Manager:

From the Cisco SD-WAN Manager menu, navigate to **Configuration > Policy**.

🗞 Monitor

\$	Configuration	Configuration Groups	
×	Tools	Policy Groups	
à	Maintonona	Service Insertion	
÷	Maintenance	Topology	zed Pol
20	Administration	Cloud OnRamp for SaaS	
.n	Workflows	Cloud OnRamp for Multicloud	
- D	WORNDWS	Devices	
-	Reports	Network Hierarchy	afault A
. Lel	Applytics	Certificates	
	Analytics	Certificate Authority	
Ø	Explore	Templates	
		Policies 🗸	
		Security	
		Unified Communications	nes
		Network Design	Jagias
		Cloud onRamp for laaS	nogies
		Application Catalog	∋ss_v
		VIP10_DC_Preference	
		VIP16_QoS_Classify_SIP	

interface GigabitEthernet1
ip address 10.2.7.2 255.255.255.0
no ip redirects
ip nat outside
load-interval 30
negotiation auto

endpoint-tracker tracker1

arp timeout 1200 end

Site400-cE1#show sdwan running-config | sec endpoint endpoint-tracker tracker1 tracker-type interface endpoint-dns-name www.cisco.com threshold 100 interval 30

The output shows how to verify the tracker status using the commands **show endpoint-tracker** and **show endpoint-tracker** GigabitEthernet1.

Site400-cE1#show	endpoint-tracker						
Interface	Record Name S	tatus A	ddress Famil	ly RTT ir	n msecs	Probe ID	Next Hop
GigabitEthernet1	tracker1	Up I	Pv4	8		6	10.2.7.1
Site400-cE1#show	endpoint-tracker	interfac	e GigabitEth	nernet1			
Interface	Record Name	Status	Address Fa	amily RT1	in msecs	Probe	ID Next Hop
GigabitEthernet1	tracker1	Up	IPv4		8	6	10.2.7.1

The output shows timer-related information about the tracker to help debug tracker-related issues, if any:

Site400-cE1#show endpoint-tracker records							
Record Name	Endpoint	EndPoint Type	Threshold(ms)	Multiplier	Interval(s)	Tracker-Type	
tracker1	<u>www.cisco.com</u>	DNS_NAME	100	3	30	interface	

The output of show ip sla summary command.

Site400-cE1#show ip sla summary IPSLAs Latest Operation Summary Codes: * active, ^ inactive, ~ pending All Stats are in milliseconds. Stats with u are in microseconds

ID Type Destination Stats Return Last Code Run

*5	dns	8.8.8.8	RTT=16	ОК	16 seconds ago
*6	http	x.x.x.x	RTT=15	ОК	3 seconds ago

Verify the fallback configuration applied on the device using the command **show sdwan policy from-vsmart**.

<#root>

```
Site400-cE1#show sdwan policy from-vsmart
from-vsmart data-policy _VPN12_VPN12_DIA
direction from-service
vpn-list VPN12
sequence 1
match
source-data-prefix-list Site400_AllVPN_Prefixes
action accept
nat use-vpn 0
nat fallback
```

no nat bypass default-action drop

Troubleshooting Tracker

Enable these debugs on the edge device to check how the router sends probes to determine the status of the transport interface.

- To monitor how the router sends probes and determines the status of the transport interfaces use the **debug platform software sdwan tracker** command which is supported untill the 17.12.x release.
- From 17.13.x onwards, to monitor the probes logs, enable these debugs.
 - set platform software trace ios R0 sdwanrp-tracker debug
 - set platform software trace ios R0 sdwanrp-cfg debug
- To check the logs related to IP SLA operations error and trace, enable these debugs. These logs show if IP SLA operations are failing.
 - debug ip sla trace
 - debug ip sla error

Run these show and monitor commands to check the debug logs:

- show logging profile sdwan internal
- · monitor logging profile sdwan internal

Site400-cE1#show logging profile sdwan internal Logging display requested on 2024/08/13 08:10:45 (PDT) for Hostname: [Site400-cE1], Model: [C8000V], Ve

Displaying logs from the last 0 days, 0 hours, 10 minutes, 0 seconds executing cmd on chassis local ... Unified Decoder Library Init .. DONE

2024/08/13	08:02:28.408998337	{iosrp_R0-0}{255}:	[buginf]	[17432]:	(debug):	IPSLA-INFRA_TRACE:OPER:10 s
2024/08/13	08:02:28.409061529	<pre>{iosrp R0-0}{255};</pre>	[buginf]	Γ ₁₇₄₃₂]:	(debug):	IPSLA-INFRA TRACE: OPER: 10 S
2024/08/13	08:02:28.409086404	{iosrp R0-0}{255}:	[buginf]	[17432]:	(debug):	TPSLA-TNERA TRACE: Sla sync
2024/08/13	08:02:28 409160541	$\{i_{0}, r_{0}, R_{0}, 0\}$	[buginf]	[17432] •	(debug):	TPSLA-TNERA TRACE: Sla sync
2024/08/13	08.02.28 409182208	$f_{10} = P_{0} = 0 $	[buginf]	[17/32].	(debug):	TDSLA_ODED_TDACE.ODED.10_S+
2024/00/13	08.02.28.409102208	$\{1031p_{0}, 0, 0\}$	[bugini]	[17432].	(debug).	TPSLA OPER TRACE.OPER.10 OU
2024/08/13	08:02:28:409197024	$\{10STP_R0-0\}\{255\}$		[17452]:	(debug):	IPSLA-OPER_TRACE:OPER:IU QU
2024/08/13	08:02:28.409215496	{10srp_R0-0}{255}:	[bugint]	[1/432]:	(debug):	IPSLA-OPER_IRACE:OPER:10 DN
2024/08/13	08:02:28.409242243	{iosrp_R0-0}{255}:	[buginf]	[17432]:	(debug):	IPSLA-OPER_TRACE:OPER:10 So
2024/08/13	08:02:28.409274690	{iosrp_R0-0}{255}:	[buginf]	[17432]:	(debug):	IPSLA-OPER_TRACE:OPER:10 De
2024/08/13	08:02:28.409298157	{iosrp_R0-0}{255}:	[buginf]	[17432]:	(debug):	IPSLA-OPER_TRACE:OPER:10 So
2024/08/13	08:02:28.409377223	{iosrp_R0-0}{255}:	[buginf]	[17432]:	(debug):	IPSLA-OPER_TRACE:OPER:10 Net
2024/08/13	08:02:28.409391034	{iosrp_R0-0}{255}:	[buginf]	[17432]:	(debug):	IPSLA-OPER_TRACE:OPER:10 Re
2024/08/13	08:02:28.409434969	{iosrp R0-0}{255}:	[buginf]	[17432]:	(debug):	TPSLA-OPER TRACE: OPER: 10 ac
2024/08/13	08:02:28.409525831	$\{i_0, r_0, R_0, 0\}$	[buginf]	[17432]:	(debug):	TPSLA-OPER TRACE: OPER: 10 Pr
2024/08/13	08:02:28 426966448	$\{105, p_{10}, 0\}$	[buginf]	[17432].	(debug):	TPSLA-OPER TRACE: OPER: 10 Out
2024/00/13	08:02:28:420900448	$\{1031p_{0}, 0, 0\}$	[bugini]	[17432].	(debug).	TDSLA OPER TRACE: OPER: 10 Qu
2024/08/13	08:02:28.427004143	$\{10SPP_R0-0\}\{255\}$:	[bugini]	[17432]:	(debug):	IPSLA-OPER_TRACE:OPER:10 RE
2024/08/13	08:02:28.427029754	{10srp_kU-U}{255}:	[bugint]		(debug):	IPSLA-OPER_IRACE:OPER:IU RI
2024/08/13	08:02:28.42/161550	{10srp_R0-0}{255}:	[bugint]	[1/432]:	(debug):	IPSLA-INFRA_IRACE:OPER:10 S
2024/08/13	08:02:28.427177727	{iosrp_R0-0}{255}:	[buginf]	[17432]:	(debug):	IPSLA-INFRA_TRACE:OPER:10 S
2024/08/13	08:02:28.427188035	{iosrp_R0-0}{255}:	[buginf]	[17432]:	(debug):	IPSLA-INFRA_TRACE:OPER:10 S
2024/08/13	08:02:28.427199147	{iosrp_R0-0}{255}:	[buginf]	[17432]:	(debug):	IPSLA-INFRA_TRACE:OPER:10 S
2024/08/13	08:02:28.427208941	{iosrp_R0-0}{255}:	[buginf]	[17432]:	(debug):	IPSLA-OPER_TRACE:OPER:10 IP
2024/08/13	08:02:28.427219960	<pre>{iosrp R0-0}{255}:</pre>	[buginf]	[17432]:	(debug):	IPSLA-OPER TRACE: Common St
2024/08/13	08:02:28 427238042	$\{i_{0}, r_{0}, R_{0}, 0\}$	[buginf]	[17432]:	(debug):	TPSLA-OPER TRACE: Common St.
2024/08/13	08.02.28 427301952	$\{i_{0}, r_{0}, R_{0},$	[buginf]	[17432]	(debug):	TPSLA-OPER TRACE: Common St
2024/00/13	08.02.28 427316275	$f_{10} = P_{0} = 0 $	[buginf]	[17/22].	(dobug):	TPSLA-OPER_TRACE: Common St
2024/08/13	08.02.28.427310275	$\{1051p_{0}, 0, 0\}$	[buyini]	$\begin{bmatrix} 17432 \end{bmatrix}$	$\left(\begin{array}{c} uebuy \\ 17422 \end{array} \right)$	(debug), Paceived TPSLA star
2024/08/13	08:02:28.427320233	$\{10STP_R0-0\}\{255\}$	[suwanrp-		[17432]:	(debug): Received IPSLA Sta
2024/08/13	08:02:28.427328425	{10srp_kU-U}{255}:	[sdwanrp-	tracker	[1/432]:	(debug): DNS status calibac
2024/08/13	08:02:28.42/341452	{10srp_R0-0}{255}:	Lsdwanrp-	tracker	[1/432]:	(debug): DNS query valid IR
2024/08/13	08:02:28.427343152	{iosrp_R0-0}{255}:	[sdwanrp-	tracker]	[17432]:	(debug): DNS resolved addre
2024/08/13	08:02:28.427344332	{iosrp_R0-0}{255}:	[sdwanrp-	tracker]	[17432]:	(debug): DNS probe handler
2024/08/13	08:02:28.427349194	{iosrp_R0-0}{255}:	[buginf]	[17432]:	(debug):	IPSLA-INFRA_TRACE:OPER:10 S
2024/08/13	08:02:28.427359268	{iosrp_R0-0}{255}:	[buginf]	[17432]:	(debug):	IPSLA-OPER_TRACE: Common St
2024/08/13	08:02:28.427370416	{iosrp_R0-0}{255}:	[buginf]	[17432]:	(debug):	IPSLA-OPER_TRACE: Common St
2024/08/13	08:02:28.427555382	{iosrp_R0-0}{255}:	[buginf]	[17432]:	(debug):	IPSLA-OPER_TRACE: Common St
2024/08/13	08:02:28.427565670	{iosrp R0-0}{255}:	[buginf]	Γ ₁₇₄₃₂]:	(debug):	IPSLA-INFRA TRACE:OPER:10 S
2024/08/13	08:02:28.427577691	$\{i_0, r_0, R_0, 0\}$	[buginf]	[17432]:	(debug):	TPSLA-OPER TRACE: Common St.
2024/08/13	08.02.28 427588947	$\{i_{0}, r_{0}, R_{0},$	[buginf]	[17432] •	(debug):	TPSLA-OPER TRACE: Common St
2024/08/13	08.02.28 427600567	$f_{10} = P_{0} = 0 $	[buginf]	[17/32].	(debug):	TPSLA-OPER TRACE: Common St
2024/00/13	08.02.28.427000507	$\{1031p_{0}, 0, 0\}$	[bugini]	[17432].	(debug).	TPSLA OPER TRACE: Common St
2024/08/13	08:02:28.427611465	$\{10STP_R0-0\}\{255\}$		[17452]:	(debug):	IPSLA-UPER_TRACE: COMMON SC
2024/08/13	08:02:28.427620724	{10srp_kU-U}{255}:	[bugint]		(debug):	IPSLA-INFRA_TRACE:UPER:10 S
2024/08/13	08:02:28.427645035	{10srp_R0-0}{255}:	[bugint]	[1/432]:	(debug):	IPSLA-INFRA_IRACE:OPER:10 S
2024/08/13	08:02:55.599896668	{iosrp_R0-0}{255}:	[bugint]	[17432]:	(debug):	IPSLA-INFRA_TRACE:OPER:3 sl
2024/08/13	08:02:55.599966240	{iosrp_R0-0}{255}:	[buginf]	[17432]:	(debug):	IPSLA-INFRA_TRACE:OPER:3 St
2024/08/13	08:02:55.599981173	{iosrp_R0-0}{255}:	[buginf]	[17432]:	(debug):	IPSLA-OPER_TRACE:OPER:3 Sta
2024/08/13	08:02:55.600045761	{iosrp_R0-0}{255}:	[buginf]	[17432]:	(debug):	IPSLA-OPER_TRACE:OPER:3 Nex
2024/08/13	08:02:55.600111585	{iosrp_R0-0}{255}:	[buginf]	[17432]:	(debug):	IPSLA-OPER_TRACE:OPER:3 DNS
2024/08/13	08:02:55.600330868	{iosrp R0-0}{255}:	[buginf]	Γ 17432]:	(debug):	IPSLA-OPER TRACE:OPER:3 sla
2024/08/13	08:02:55 610693565	$\{i_0, s_1, r_0, R_0, r_0, r_0, r_0, r_0, r_0, r_0, r_0, r$	[buginf]	[17432]	(debug)	TPSLA-OPER TRACE: OPER: 3 Soc
2024/08/13	08:02:55 610717011	$\{105, p_{10}, 0\}$	[buginf]	[17432].	(debug):	TPSLA-OPER TRACE: OPER: 3 Wai
2024/00/13	08:02:55.610777327	$\{1031p_{R0} 0\}\{255\}$	[buginf]	[17422].	(debug):	TDSLA_OPED_TDACE:OPED:3_Son
2024/08/13	08.02.33.010777327	$\{1051p_{0}, 0, 0\}$	[bugini]	[17432].	(debug).	TPSLA OPER TRACE.OPER.2 Wai
2024/08/13	08:02:33.010788233	$\{10STP_R0-0\}\{255\}$		[17452]:	(debug):	IPSLA-UPER_TRACE:UPER:5 Wat
2024/08/13	U8:U2:55.018534651	{10srp_KU-U}{255}:	Lougint	[1/432]:	(aebug):	IPSLA-UPEK_IKALE:UPEK:3 SOC
2024/08/13	08:02:55.618685838	{10srp_R0-0}{255}:	[buginf]	[1/432]:	(debug):	IPSLA-UPER_TRACE: OPER: 3 HTT
2024/08/13	08:02:55.618697389	{iosrp_R0-0}{255}:	[buginf]	[17432]:	(debug):	IPSLA-INFRA_TRACE:OPER:3 Sc
2024/08/13	08:02:55.618706090	{iosrp_R0-0}{255}:	[buginf]	[17432]:	(debug):	IPSLA-INFRA_TRACE:OPER:3 Sc
2024/08/13	08:02:55.618714316	{iosrp_R0-0}{255}:	[buginf]	[17432]:	(debug):	IPSLA-INFRA_TRACE:OPER:3 Sc
2024/08/13	08:02:55.618723915	{iosrp_R0-0}{255}:	[buginf]	[17432]:	(debug):	IPSLA-INFRA_TRACE:OPER:3 Sc
2024/08/13	08:02:55.618732815	{iosrp_R0-0}{255}:	[buginf]	[17432]:	(debug):	IPSLA-OPER_TRACE:OPER:3 IPS
2024/08/13	08:02:55.618821650	{iosrp_R0-0}{255}:	[buginf]	[17432]:	(debug):	IPSLA-OPER_TRACE: Common St
, , -				-		

2024/08/13 08:02:55.618833396 {iosrp_R0-0}{255}: [buginf] [17432]: (debug): IPSLA-OPER_TRACE: Common St 2024/08/13 08:02:55.618857012 {iosrp_R0-0}{255}: [buginf] [17432]: (debug): IPSLA-OPER_TRACE: Common St

Related Information

Implement Direct Internet Access (DIA) for SD-WAN

Cisco Catalyst SD-WAN NAT Configuration Guide

NAT Fallback on Cisco IOS XE Catalyst SD-WAN Devices

Technical Support & Documentation - Cisco Systems