# L4-L7-Routen-Peering mit Transit-Fabric -Konfigurationsanleitung

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## Einführung

In diesem Dokument wird die Konfigurationsanleitung für L4-L7-Servicediagramme mit Route Peering beschrieben, in der sowohl der Consumer als auch der Provider sich außerhalb der ACI-Fabric befinden.

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### Voraussetzungen

### Anforderungen

Cisco empfiehlt, über Kenntnisse in folgenden Bereichen zu verfügen:

- Statische VLAN-Pools für das Kapselungs-VLAN zwischen den externen Geräten und der ACI-Fabric
- Externe physische und geroutete Domänen, die den Standort (Leaf-Knoten/Pfad) der externen Geräte und den VLAN-Pool verbinden.
- Layer-3-Verbindung mit einem externen Netzwerk (L3Out)

Die vorhergehenden **Fabric Access**- und **L3Out-**Konfigurationsschritte werden in diesem Dokument nicht behandelt, und es wird davon ausgegangen, dass sie bereits abgeschlossen wurden.

#### Verwendete Komponenten

Die Informationen in diesem Dokument basieren auf den folgenden Softwareversionen:

- Cisco Application Policy Infrastructure Controller (Cisco APIC) 1.2(1 m)
- Adaptive Security Appliance (ASA)-Gerätepaket 1,2/4,8
- ASA 5585 9.5(1)
- Nexus 3064 6.0(2)U3(7)

Die Informationen in diesem Dokument wurden von den Geräten in einer bestimmten Laborumgebung erstellt. Alle in diesem Dokument verwendeten Geräte haben mit einer leeren (Standard-)Konfiguration begonnen. Wenn Ihr Netzwerk in Betrieb ist, stellen Sie sicher, dass Sie die potenziellen Auswirkungen eines Befehls verstehen.

### Hintergrundinformationen

Route Peering ist eine Funktion, mit der eine Service-Appliance wie ein Load Balancer oder eine Firewall die Erreichbarkeit über die ACI-Fabric bis hin zu einem externen Netzwerk ankündigen kann.

Der hier vorgestellte Anwendungsfall ist eine physische Firewall, die als zweiartiger Servicediagramm zwischen zwei L3Outs oder externen Endpunktgruppen (EPGs) bereitgestellt wird. Der Servicediagramm ist mit einem Vertrag zwischen der externen EPG auf Leaf 101 (N3K-1) und der externen EPG auf Leaf 102 (N3K-2) verknüpft. Die ACI-Fabric stellt einen Transit-Service für die Router (N3K-1 und N3K-2) bereit, und Routen-Peering wird mit Open Shortest Path First (OSPF) als Routing-Protokoll für den Austausch von Routen zwischen der Firewall und der ACI-Fabric verwendet.

### Konfigurieren

#### Netzwerkdiagramm

Das folgende Bild zeigt die End-to-End-Funktionsweise von Routen-Peering:



VRF1 / BD1		VRF2 / BD2					
EXTERNAL-EPG	EXTERNAL	INTERNAL	INTERNAL EXTERNAL-EPG				
	L3OUT EXTERNAL	ASA INTERNAL L3OUT	LIGOUT N3K-2				
10.10.10.0/24 192.168.1.0/30	192.168.1.4/30	.10 192.168.1.8/30	.14 .13 PROVIDER 192.168.1.12/30 20.20.20.0/24				
ping 20.20.20.1 source 10.10.10.1							

#### Konfigurieren

Schritt 1: Konfigurieren Sie Virtual Routing and Forwarding1 (VRF1), VRF2, Bridge Domain1 (BD1) und BD2. Ordnen Sie BD1 VRF1 und BD2 VRF2 zu, wie im Bild gezeigt:

ahaha cisco								Q
		arch: enter name, descr	common   infra   mg					
Tenant T1 Quick Start Tenant T1 P Application	1 Profiles	3 0	Networks	VRF	BD 27 C	C VRF BU	D	
Networkin	g		Drag and drop	o to configure:	L2 L3	common: 👝 📮		
	Domains 1 2 1 1 2 1 1 2 1 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 1 2 1 1 1 2 1 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 2 1 1 2 1 1 2 2 2 2 1 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2				ASA_IN_L3C	VTR2 VTR2 UTN3K-2_L3OUT	2 N3K-1_L3OUT A	VIE-1 UNE-1 UNE-1 UNE-1 UNE-1 BD1

Schritt 2: Laden Sie das ASA-Gerätepaket unter L4-L7-Gerät hoch, wie im Bild gezeigt:



Konfigurieren Sie das L4-L7-Gerät für die physische ASA 5585 (geroutet), wie im Bild gezeigt:

uluiu cisco	System	Tenants							ρ		w
		earch: enter name, descr	common   T1   infra								
Tenant T1		<ul> <li>O</li> </ul>	14-17 Devices	- 4945595							
💼 Quick Sta	rt		L4-L7 Devices	- 4040000							
🔺 🐣 Tenant T	1									Policy Parameter	rs Fa
🕨 🖿 Applic	ation Profiles		⊡ <b>⊥</b>								
🔺 🚞 Netwo	orking										
🕨 🖿 Bri	dge Domains		General			Device 1					
🕨 🖿 VR	Fs		Manag	ed: 🗹		Management IP Address:	172.23.97.1	Management Port: 443	٠		
🕨 🖿 Ext	ternal Bridged Networks		Nar	ne: ASA5585		Chassis	select a value	<b>~</b> @			
🕨 🛄 Ext	ternal Routed Networks		Device Packa	ge: CISCO-ASA-1.2		Interfaces					
🕨 🚞 Ro	ute Profiles		Service Ty	pe: Firewall							
🕨 🖿 Pri	otocol Policies		Device Ty	pe: PHYSICAL	_		▲ Name		Path		
🔲 L4-L7	Service Parameters		Physical Doma	sin: I1_PHY	<u></u> Ga		GigabitEthernet0/0		Node-105/eth1/2		
🔺 🖿 Secur	ity Policies		Context Awa	are: Single	_		GigabitEthernet0/1		Node-106/eth1/2		
▶ 🖿 Co	ntracts		Function Ty	pe: GoThrough GoTo							
🕨 🛄 Tal	boo Contracts		Cluster Mo	de: Single Node							
🕨 💻 Imj	ported Contracts					Cluster					
Fill	ters		Credentials			Management IP Address:	172.23.98.228	Management Port: 443	\$		
Trouble	leshoot Policies		Useman	ne: admin	_	Device Manager	172.23.97.1	<b>₽</b>			
Monito	oring Policies		Passwo	ird:	_	Cluster Interfaces					
L4-L7	Services		Confirm Passwo	ird:	_		Time	▲ Name	Concrete Interforces		
k 🗖 Da	-L7 Service Graph Templates		0	01-1-			iype	- Nume	ASA5585 Device 1/IGi	gabitEthernet0/11	
P = RO	uter contigurations		Configuration	State			provider	inside			
FUI	1.7 Devices		Contiguration Issu	es:			consumer	outside	ASA5585_Device_1/[Gi	gabitEthernet0/0]	
► ■■ L4	4045595		Devices Sta	ate. Stable							
k 🗖 Imi	norted Devices										
) 🛄 De	vices Selection Policies				1						

Schritt 3: L3Out für N3K-1 konfigurieren und BD1 und VRF1 verknüpfen.

Externes geroutetes Netzwerk wird verwendet, um die Routing-Konfiguration in der ACI-Fabric für Routen-Peering anzugeben, wie im Bild gezeigt:

ululu cisco				VM Networkin	g L4-L7 Servic	es Admin	Operations
		earch: enter name, descr	common   infra   mgmt   T1				
Tenant T1		S 10	L3 Outside - N3K-1	_L3OUT			
🔺 🐣 Tenant T1							
🕨 🖿 Applicatio	n Profiles						
🔺 💼 Networkin	g						
Bridge	Domains						
VRFs	Pridaed Networks		Properties				
A DE Externi	al Bridged Networks		Name:	N3K-1_L3OUT			
Externi Set	Action Bule Profiles		Description	optional			
🕨 🗖 Mat	ch Action Rule Profiles						
▶ 🕾 AS/	LIN_L3OUT		Tags:		•		
🕨 🕾 AS/	LOUT_L3OUT		l abel:	enter taga separa	ted by comma		
🕨 🕮 N3I	<-1_L30UT		Tarret DSCP:	uppposified			
🕨 🕾 N3	<-2_L30UT		Deute Central Enfertement				
🕨 🚞 Route	Profiles		Route Control Enforcement	Import	🗹 Export		
Protoc	ol Policies		VRF:	T1/VRF1	- ₽		
L4-L7 Ser	vice Parameters		Resolved VRF:	T1/VRF1			
Security P	olicies		External Routed Domain:	T1_L3OUT	<u> </u>		
Monitoring	uot Foncies		Route Profile for Interleak:	select a value	<u> </u>		
L4-L7 Ser	vices		Route Control For Dampening:				
				🔺 Address Fa	mily Type		
							No item
							Select Actio
			Enable BGP/ElGRP/USPF.		EIGRP		
			OSPF Area ID:	0.0.0.1			
			OSPE Area Control:	Send redicts	ibuted LSAs into NSSA area		
			Con Practice Contract.	Originate su	mmary LSA		
				Suppress fo	rwarding address in transla	ted LSA	
			OSPF Area Type:	NSSA area	Regular area Stub ar	rea	
			OSPF Area Cost:	1	\$		

als Switch Virtual Interface (SVI) mit VLAN-Encap konfiguriert werden.

uluiju cisco		Tenants								i vel
		earch: enter name, descr	common   infra   mgmt   T1							
Tenant T1		< <del>0</del>	Logical Interface Pro	file - N3K-1	IP					
💼 Quick Start			Logical interface Fit	Jile - Nore I_	11 <del>-</del>					
🔺 🐣 Tenant T1										Policy Fault
Application	Profiles		Ð₩							
🔺 🚞 Networking	I									
🕨 🚞 Bridge E	Domains		Properties							
VRFs			1	Name: N3K-1_IP						
▶ 🛑 External	Bridged Networks		Descr	iption: optional						
🔺 🖿 External	Routed Networks									
▶ ■ Set A	Action Rule Profiles			.abel:						
Matc	h Action Rule Profiles		ND p	olicy: select a value	*					
► 🖽 ASA	IN_L3OUT		Egress Data Plane Policing P	olicy: select a value	•					
P GD ASA			Ingress Data Plane Policing P	olicy: select a value	•					
N3K	-1_L3UUT		Routed Inter	faces:						
	NOR A NO									
	B N3K-1_NP			A Path		IP Address	M	AC Address	MTU (Byte:	s)
							No items have bee	in found.		
	OSPF Interface Profile	1					Select Actions to creat	e a new kem.		
-	Configured Nodes		4							
	topology/pod-1/node-105			SVI						
🕨 🖿 N	letworks									
🖬 R	toute Profiles			A Path	IP Address	Side A IP	Side B IP	MAC Address	MTU (Bytes)	Encap
🕨 🖴 N3K	-2_L30UT			Node-105/eth1	/3 192.168.1.	2/30		00:22:BD:F8:19:FF	1500	vlan-100
🕨 🖿 Route P	rofiles									
🕨 🖿 Protoco	Policies									
🖿 L4-L7 Servi	ce Parameters									
🕨 🕨 Security Po	licies		Routed Sub-Inter	taces:						
Troublesho	ot Policies			A Path		IP Address	MAC Address	MTU (Bytea)		Encap
Monitoring	Policies						No items have bee	n found.		
▶ 🖿 L4-L7 Serv	ices						Select Actions to creat	e a new item.		

Konfigurieren Sie die Import-/Export-Route-Control für Subnetze für N3K-1 L3Out External EPG, wie im Bild gezeigt:

cisco								P
		enter name, descr	common   infra   mgmt					
Tenant T1		S 0	External Network	Instance Profile	- N3K-1 EXT NET	-		
🔲 Quick Start			LACEMAI NELWOIK	instance Frome				
🔺 🐣 Tenant T1								Policy Operation
🕨 🖿 Applicatio	n Profiles							Concert
🔺 🚞 Networkir	ig							General
🕨 🚞 Bridge	Domains		⊖±				🚹 🛕 🕕 🕕 🚺 100	
VRFs			Properties					
🕨 🚞 Extern	al Bridged Networks		Figherites	N3K 1 EVT NET				
🔺 🖿 Extern	al Routed Networks		Tags:		•			
🕨 🖿 Set	Action Rule Profiles			enter tags separated by comm	18			
▶ 💻 Ma	tch Action Rule Profiles		Description:	optional				
▶ 🖽 AS	A_IN_L3OUT							
▶ 665 AS	A_OUT_L3OUT		Configued VRF name:	VRF1				
	K-1_L30UT		Resolved VRF:	uni/tn-T1/ctx-VRF1				
4	Logical Node Profiles		QoS Class:	Unspecified				
1	NJK-1_NP		Target DSCP:	unspecified				
	<ul> <li>Logical Interface Profiles</li> <li>Logical Interface Profiles</li> </ul>		Configuration Status:	applied				
	N3K-1_IP		Configuration Issues:					
	Conligured Nodes		Subnets:					
	<ul> <li>Intervence</li> </ul>			. ID Adda	2			De une De este l Desfile
	N3K1 EXT NET			IP Address	scope		Aggregate	Koute Control Profile
	I 4-17 Service Parameters			10.10.10.0/24	External Subi	nets for the External EPG		
	Route Profiles			20.20.20.0/24	Export Route	Control Subnet		
▶ 🕮 N3	K-2 L30UT							
▶ 🖿 Route	Profiles							
Protoc	ol Policies		Route Control Profile:					
🖿 L4-L7 Ser	vice Parameters			▲ Name			Dire	ction
🕨 🖿 Security P	olicies						Nie Berne berne berne	- formed
🕨 🖿 Troublest	root Policies						Select Actions to create	a new item.
🕨 🖿 Monitoring	g Policies							

Konfigurieren Sie L3Out für die ASA-externe Schnittstelle, und ordnen Sie es BD1 und VRF1 zu, wie im Bild gezeigt:

ululu cisco							٩
		reh: enter name, descr	common   T1   infra   mgr				
Tenant T1		0 E	120444				
💼 Quick Start			L3 Outside - ASA	_001_13001			
🔺 🚢 Tenant T1							
🕨 🖿 Application	n Profiles						
🔺 🚞 Networkin	g						
🕨 🖿 Bridge	Domains		⊙ <b>±</b>				
🕨 🖿 VRFs			Durantin				
🕨 🖿 Externa	al Bridged Networks		Properties				
🔺 🚞 Extern:	al Routed Networks		Nam	ne: ASA_OUI_L3OUI			
🕨 🖿 Set	Action Rule Profiles		Descriptio	JII, opnorial			
🕨 🖿 Mat	ch Action Rule Profiles						
🕨 🕾 ASA	LIN_L3OUT		Тар	26:	· · ·		
4 🕾 AS/	A_OUT_L3OUT		Lab	enter taga separated by c el:	omma		
► <b>■</b>	Logical Node Profiles		Target DSC	P: upspecified			
• • • •	Networks		D. 1. 0. 1. 1. 5. (				
> <b>m</b>	Route Profiles		Houte Control Enforceme	nt 🗌 Import	Export		
▶ 🕾 N3F	<-1_L30UT		VE	RF: T1/VRF1	<u>▼</u> @		
▶ 🕾 N3I	K-2_L30UT		Resolved VF	RF: T1/VRF1			
Route	Profiles		External Routed Doma	in: T1_L3OUT	▼ ₽		
Protoc	ol Policies		Route Profile for Interlea	ak: select a value	- @		
L4-L7 Ser	vice Parameters		Route Control For Dampenir	ng:			
Security P	olicies						
Troublesh	ioot Policies			<ul> <li>Address Family Type</li> </ul>	pe	Route Dampenii	ng Policy
Monitoring	Policies					No items have been found.	
L4-L7 Ser	vices					Select Actions to create a new item.	
			Enable BGP/EIGRP/OSE	PF- 0 BOD			
			Enable BornElona room	OSPE			
			OSPF Area I	D: 0			
			0005 000 0000				
			USPF Area Contr	OI: Send redistributed Originate summan	LSAs into NSSA area (LSA		
				Suppress forwardin	ng address in translated LSA		
			OSPF Area Typ	e: NSSA area Reg	ular area Stub area		
			OSPF Area Co.	st: 0	÷		

uluih cisco	System	Tenants	Fabric VM N	etworking L4	-L7 Services	Admin	Operations	Q	i	Adva welcor
		arch: enter name, descr	I common   T1   infra   mgmt							
Tenant T1		S 0	Levier Heterford Duefi		0					
💼 Quick Start			Logical Interface Profile	8- ASA_001_1	r i i i i i i i i i i i i i i i i i i i					
🔺 🚢 Tenant T1										Policy Faults
🕨 💼 Applicatio	on Profiles		DE							
🔺 🚞 Networki	ng									A
🕨 🚞 Bridg	e Domains		Properties							
🕨 🖿 VRFs			Nam	: ASA_OUT_IP						
🕨 🚞 Extern	al Bridged Networks		Descriptio	n: optional						
🔺 🚞 Extern	al Routed Networks									
🕨 💼 Se	t Action Rule Profiles		Labe	l:						
🕨 💼 Ma	itch Action Rule Profiles		ND police	r eelect e velue						
🕨 🕾 As	A_IN_L3OUT		Earner Data Place Paliaire Palia		<u> </u>					
🖌 🕾 🔺	IA_OUT_L3OUT		Egless Data Plane Policing Polic	select a value	<b>•</b>					
	Logical Node Profiles		Ingress Data Plane Policing Polic	c select a value	<b>•</b>					
	ASA_OUT_NP		Routed Interface	8;						
	🔺 🚞 Logical Interface Profiles			A Path		IP Address	MA	C Address	MTU (Bytes)	
	ASA_OUT_IP									
	📃 OSPF Interface Profile						No items have been Select Actions to create	n found. e a new item.		
	🔺 🚞 Configured Nodes									
	🔺 📃 topology/pod-1/node-105		4							
	BGP for VRF-T1.VRF1		8/	1:						
	OSPF for VRF-T1:VRF1									
> <b>m</b>	Networks			A Path	IP Address	Side A IP	Side B IP	MAC Address	MTU (Bytes)	Елсар
► <b>m</b>	Route Profiles			Node-105/eth1/2	192.168.1.6/30			00:22:BD:F8:19:FF	1500	vlan-101
🕨 🕾 N.	IK-1_L30UT									
🕨 🕮 N	3K-2_L3OUT									
🕨 🖿 Route	Profiles									
🕨 🖿 Proto	col Policies		Routed Sub-Interface	5.						
🖿 L4-L7 Se	rvice Parameters			A Path	IP Address		MAC Address	MTU (Bytes)	En	icap
🕨 🖿 Security I	Policies						No heres have been	n found		
🕨 🖿 Troubles	hoot Policies						Select Actions to create	e a new item.		
🕨 🖿 Monitorin	g Policies									
14-17 Se	nices									

Konfigurieren Sie die Import-/Export-Routenkontrolle für Subnetze für ASA-External L3Out External EPG, wie im Bild gezeigt:

ululu cisco								Q	i
		arch: enter name, descr	common   T1   infra   mg						
Tenant T1		<ul> <li>O</li> </ul>	Extornal Network	Instance Profile		NET			
🔲 Quick Start			External Network	instance Frome	- ASA_001_LA1_				
🔺 🐣 Tenant T1								Policy	Operational Stats
🕨 🖿 Application	Profiles								Contractor
🔺 🖿 Networking	1								Contracts
🕨 🖿 Bridge I	Domains		⊖±				🗥 🛕 🕕 🚺 100		
🕨 🖿 VRFs			Dranatica						
🕨 🖿 Externa	Bridged Networks		Properties	AGA OUT FUT NET					
🔺 🚞 Externa	I Routed Networks		Name. Terre:	ASA_OUT_EXT_NET					
🕨 🖿 Set/	Action Rule Profiles		1080.	enter tags separated by comm					
🕨 🖿 Mato	h Action Rule Profiles		Description:	optional					
🕨 🕾 ASA	IN_L3OUT								
🔺 🕾 ASA	_OUT_L3OUT		Configued VRF name:	VRF1					
) 🕨 🖿 L	ogical Node Profiles		Resolved VRF:	unith.T1/ctx.WRF1					
🔺 💼 N	letworks		QoS Class:	Unspecified					
<b>⊿</b> 1	ASA_OUT_EXT_NET		Target DSCP:	unspecified	-				
	L4-L7 Service Parameters		Configuration Otation	annlind					
▶ 💼 F	Route Profiles		Configuration status.	appileu					
🕨 🕾 N3K	-1_L3OUT		Subnete:						
🕨 🕾 N3K	-2_L3OUT		4						
🕨 🖿 Route F	rofiles			<ul> <li>IP Address</li> </ul>	Scope		Aggregate	Route Control Profile	Route Summa
🕨 🚞 Protoco	I Policies			10.10.10.0/24	Export Rout Shared Rou	e Control Subnet te Control Subnet			
L4-L7 Serv	ice Parameters			20.20.20.0/24	External Su	onets for the External EPG			
🕨 🛑 Security Po	licies			20.20.20.0024	Shared Rou	ite Control Subnet			
🕨 🔲 Troublesho	oot Policies								
🕨 🔲 Monitoring	Policies		Route Control Profile:						
🕨 🖿 L4-L7 Serv	ices								
				<ul> <li>Name</li> </ul>			Dire	ction	
							No items have been Select Actions to create	i found. a new item.	

Konfigurieren Sie L3out für ASA-Internal, und ordnen Sie es BD2 und VRF2 zu, wie im Bild gezeigt:

ululu cisco							Q
		rch: enter name, descr	common   T1   infra				
Tenant T1		S 20	1.2 Outside AC				
🔲 Quick Start			L3 Outside - As	SA_IN_LSOUT			
🔺 🐣 Tenant T1							
🕨 🖿 Applicatio	on Profiles						
🔺 🖿 Networki	ng						
🕨 🖿 Bridgi	e Domains		⊖±			Δ \Lambda 🕕 🕕	
🕨 🖿 VRFs			Bronartian				
🕨 🖿 Extern	nal Bridged Networks		Floperties	Name: ASA IN LOUIT			
🔺 🚞 Extern	nal Routed Networks		Desc	rintion: ontional			
▶ 💼 Se	t Action Rule Profiles			npaon.			
🕨 🛄 Ma	atch Action Rule Profiles			Terry			
🔺 🕾 AS	SA_IN_L3OUT			enter taga separated by	comma		
4	Logical Node Profiles			Label:			
×	ASA_IN_NP		Target	DSCP: unspecified			
	Networks		Route Control Enforc	ement:			
Þ 🔿 40	A OUT LOOLT						
► 🕾 N3	8K-1 1 30UT			VRF: T1/VRF2	<u></u> ta		
▶ 🕾 N	3K-2 L3OUT		Resolve External Douted Dr	d VRF: T1/VRF2	. D		
Route	Profiles			International In	e		
🕨 🖿 Proto	col Policies		Route Profile for Inti	erieak: select a value	<u></u> ₽		
🖿 L4-L7 Se	rvice Parameters		Route Control For Damp	pening:			
🕨 🖿 Security F	Policies			<ul> <li>Address Family Ty</li> </ul>	/pe	Ro	ute Dampening Policy
🕨 🖿 Troubles	hoot Policies					No items have bee	en found.
🕨 🖿 Monitorin	g Policies					Select Actions to creat	e a new item.
🕨 🕨 🖿 L4-L7 Se	rvices						
			Enable BGP/EIGRP.	OSPF: BGP	EIGRP		
			0.005	OSPF			
			USPF A	rea ID: 0			
			OSPF Area C	control: I Send redistributed	I LSAs into NSSA area		
				Suppress forward	ing address in translated LSA		
			OSPE Are:	a Type: NSSA area	gular area Stub area		
			OSPE Area	Cost: 0	olub ulda		
			CO.T AIG		· ·		

ululu cisco	System	Tenants						٩	i		Advanced Mor welcome, admin
		rch: enter name, descr	common   T1   infra   mgmt								
Tenant T1		<ul> <li>O</li> </ul>	Logical Interface Profile	ASA IN ID							
🔲 Quick Start			Logical Interface Frome	- AOA_IN_IP							
🔺 🚢 Tenant T1										Policy Fa	aults Histor
🕨 🚞 Applicatio	in Profiles		€¥								ACTIONS -
🔺 🛄 Networki	ng										
🕨 🛄 Bridge	Domains		Properties								
VRFs			Name	: ASA_IN_IP							
🕨 🔲 Extern	al Bridged Networks		Description	c optional							
A B Extern	al Routed Networks										
P Se	t Action Rule Profiles		Label	l:							
Ma	ton Action Rule Profiles		ND policy	select a value	<u>•</u>						
- CD AS	A_IN_L3001		Egress Data Plane Policing Policy	select a value	•						
	aga in ND		Ingress Data Plane Policing Policy	select a value	-						
_	A Dr. I onical Interface Profiles		Routed Interfaces	E.	-						× 1
	A ASA IN IP					Sec. 2					
	OSPF Interface Profile		1	A Path		IP Address	MAC Addi	re88	MTU (Bytes)		
	🔺 🚞 Configured Nodes						No items have been found Select Actions to create a new	Rem			
	topology/pod-1/node-106						Delect Actions to create a new	icenii.			
Þ 💼	Networks										
)	Route Profiles		sv								
🕨 🕾 AS	A_OUT_L3OUT										× +
🕨 🖨 N3	K-1_L30UT			<ul> <li>Path</li> </ul>	IP Address	Side A IP	Side B IP	MAC Address	MTU (Bytes)	Encap	
🕨 🙆 N3	IK-2_L30UT			Node-106/eth1/2	192.168.1.10/30			00:22:BD:F8:19:FF	1500	vlan-102	
🕨 🖿 Route	Profiles										
🕨 🖿 Protoc	ol Policies										
🖿 L4-L7 Se	wice Parameters										
🕨 🖿 Security F	Policies		Routed Sub-Interfaces								× +
🕨 🚞 Troublesi	haat Policies			- Path	IP Addres	8	MAC Address	MTU (Bytes)	Encap		
Monitorin	g Policies						No items have been found				
🕨 🖿 L4-L7 Se	rvices						Select Actions to create a new	item.			

Konfigurieren Sie die Import-/Export-Routenkontrolle für Subnetze für ASA-Internal L3Out External EPG, wie im Bild gezeigt:

uluiu cisco								Q
		arch: enter name, descr	common   T1   infra   mg					
Tenant T1		<ul> <li>O</li> </ul>	External Network	Instance Profile	- ASA IN EXT N	FΤ		
💼 Quick Start			LALEITIAI NELWOIK	Instance Frome				
🔺 🐣 Tenant T1								Policy Ope
🕨 🖿 Applicati	ion Profiles							Conor
🔺 🚞 Network	ang							Genera
🕨 🖿 Bridg	e Domains		€±			L	£ 🛕 🕕 🕕 100	
VRFs	3		Proportion					
🕨 🖿 Exter	nal Bridged Networks		Figherites	ASA IN EVT NET				
🔺 🖿 Exter	mal Routed Networks		Tags:	A3A_IN_EAT_NET				
> 🖿 S	et Action Rule Profiles			enter taga separated by comm	8			
► 💼 M	atch Action Rule Profiles		Description:	optional				
⊿ @ A	SA_IN_L3OUT							
> <b>I</b>	Logical Node Profiles		Configued VRF name:	VRF2				
4	Networks		Resolved VRF:	uni/tn-T1/ctx-VRF2				
	ASA_IN_EXT_NET		QoS Class:	Unspecified 🗸				
	Route Profiles		Target DSCP:	unspecified				
► CED AS	SA_OUT_L3OUT		Configuration Status:	applied				
▶ 🖽 N	3K-1_L3OUT		Configuration Issues:					
► CD N	I3K-2_L3OUT		Subnets:					
P Route	e Profiles		4					
Proto	ocol Policies			<ul> <li>IP Address</li> </ul>	Scope		Aggregate	Route Control Profile
L4-L7 St	ervice Parameters			10.10.10.0/24	External Sur Shared Rou	ite Control Subnet		
Security	rolicles			20.20.20.0/24	Export Route Shared Route	e Control Subnet te Control Subnet		
Monitoria	ng Policies				onarounda			
▶ ■ 14-17 St	envices							
	01/1000		Route Control Profile:					
				<ul> <li>Name</li> </ul>				Direction
							No items have I Select Actions to cn	been found. eate a new item.

Konfigurieren Sie L3Out für N3K-2, und ordnen Sie es BD2 und VRF2 zu, wie im Bild gezeigt:

ululu cisco								P
		arch: enter name, descr	common   T1   infra   mgmt					
Tenant T1								
Quick Start			L3 Outside - N3K-2	2_L3OUT				
Tenant T1								
🕨 🖿 Applicatio	on Profiles							
🔺 🚞 Networki	ng							
🕨 🖿 Bridgi	e Domains		⊖±			Δ \Lambda 🕕 🕕		
🕨 🖿 VRFs			Description of					
🕨 🚞 Extern	nal Bridged Networks		Properties					
🔺 🚞 Extern	nal Routed Networks		Name	NJK-2_L3UUI				
🕨 🖿 Se	t Action Rule Profiles		Description	, optional				
🕨 🖿 Ma	atch Action Rule Profiles		_					
🕨 🕾 AS	IA_IN_L3OUT		Tags		<b>~</b>			
🕨 🕾 AS	A_OUT_L3OUT		Label	enter aga separated by co				
▶ 🕾 N3	3K-1_L3OUT		Target DSCP	unspecified				
A GO N     A  A     A	3K-2_L3OUT		Route Control Enforcement	Imnort	- Export			
	Logical Node Prolles		VDE	TIMPED				
	Route Profiles		VIG		<u> </u>			
► 🗖 Route	Profiles		Resolved VRF External Bouted Domain	T1/VRF2	0			
🕨 🖿 Proto	col Policies		Deute Desfile fee leterile els					
🖿 L4-L7 Se	rvice Parameters		Route Prome for Interleak	select a value	<u> </u>			
🕨 🖿 Security F	Policies		Route Control For Dampening					
🕨 🖿 Troubles	hoot Policies			Address Family Type	e	Route	Dampening Policy	
🕨 🖿 Monitorin	g Policies					No items have been fr	und.	
🕨 🖿 L4-L7 Se	rvices					Select Actions to create a	new item.	
				_				
			Enable BGP/EIGRP/OSPF	BGP				
				✓ OSPF				
			USPF Area ID	0.0.0.1				
			OSPF Area Control	Send redistributed L	SAs into NSSA area			
				Suppress forwarding	g address in translated LSA			
			OGRE Area Type	NPCL area	llov ovec			
			OSDE Area Cost	Regu	otup area			
			USPF Alea Cost		<del>•</del>			
1								
cisco							₽ i	

CISCO								
ALL TENANTS   Add Tenant   Search: enter name, dea	cr   common   T1   infra   mgmt							
Tenant T1	O Logical Interface Profile	- NSK-2 ID						
Quick Start	Logical Interface Frome	- NSIX-2_IF						
🔺 🐣 Tenant T1								Policy Fa
Application Profiles								
🔺 🖿 Networking								
🕨 🖿 Bridge Domains	Properties							
The VRFs	Name:	N3K-2_IP						
🕨 🖿 External Bridged Networks	Description:	optional						
🔺 💼 External Routed Networks								
Set Action Rule Profiles	Label:							
🕨 💼 Match Action Rule Profiles	ND policy:	select a value	_					
ASA_IN_L3OUT	Entress Data Plane Policing Policy	enlect a value						
ASA_OUT_LIGOUT	learner Date Place Palicing Policy.							
M3K-1_L3OUT	ingless bata Halle Folicing Folicy.	select a value						
M3K-2_L3OUT	Routed Interfaces:							
🔺 🛄 Logical Node Profiles		A Path		IP Address	MAC	Address	MTU (Bytes)	
и 💷 N3K-2_NP								
Logical Interface Profiles					No items have been I Select Actions to create a	round. a new item.		
4 📜 N3K-2_IP								
OSPF Interface Profile	4							
Configured Nodes	SVI:							
Networks								
Route Profiles		A Path	IP Address	Side A IP	Side B IP	MAC Address	MTU (Bytes)	Encap
Route Profiles		Node-106/eth1/4	192.168.1.14/30			00:22:BD:F8:19:FF	1500	vian-103
Protocol Policies								
L4-L7 Service Parameters								
🕨 💼 Security Policies	Destad out Interference							
Troubleshoot Policies	Routed Sub-Interaces.							
Monitoring Policies		A Path	IP Addre	88	MAC Address	MTU (Bytes)	Đ	ncap
▶ 🖿 L4-L7 Services					No items have been I Select Actions to create a	found. a new item.		

Konfigurieren Sie die Import-/Export-Routenkontrolle für Subnetze für N3K-2 L3Out für externe EPG, wie im Bild gezeigt:

ululu cisco								٩
		arch: enter name, descr	common   T1   infra   mg					
Tenant T1		<ul> <li>O</li> </ul>	External Network	Instance Profile	- NSK-2 EXT NET	г		
💼 Quick Start			LALEITIAI NELWOIK	instance Frome	- NOR-2_EXT_NE	1		
🔺 🐣 Tenant T1								Policy Operational
🕨 🖿 Application	Profiles							Concerd
🔺 🖿 Networkin	g							General Ct
🕨 🖿 Bridge	Domains		⊖±				Δ 🛕 🕕 🕛 100	
🕨 🖿 VRFs			Dranartino					
🕨 🖿 Externa	I Bridged Networks		Floperties					
🔺 🚞 Externa	al Routed Networks		Tags:	NJR-Z_EAT_NET				
🕨 🖿 Set	Action Rule Profiles			enter taga separated by comm				
🕨 🖿 Mat	ch Action Rule Profiles		Description:	optional				
🕨 🕾 ASA	_IN_L3OUT							
🕨 🖾 ASA	_OUT_L3OUT		Configued VRF name:	VRF2				
► 🕾 N3k	-1_L30UT		Resolved VRF:	uni/tn-T1/ctx-VRF2				
M3F	(-2_L30UT		QoS Class:	Unspecified 🗸 🗸				
> <b>=</b> 1	_ogical Node Profiles		Target DSCP:	unspecified				
4	Vetworks		Configuration Status:	applied				
<b>∠</b> (	N3K-2_EXT_NET		Configuration Issues:					
	L4-L7 Service Parameters		Subnets:					
h 🗖 Durit (	Route Profiles		1					
Route r	Tomes			<ul> <li>IP Address</li> </ul>	Scope		Aggregate	Route Control Profile F
1.4-1.7 Sen	ire Parametere			10.10.10.0/24	Export Route	e Control Subnet		
E4 EF 6610	licies			20.20.20.0/24	External Sub	onets for the External Ef	PG	
Troublesh	not Policies							
Monitoring	Policies							
▶ 🚞 L4-L7 Sen	rices		Route Control Profile:					
				<ul> <li>Name</li> </ul>			Di	rection
							No item - have been	en found
							Select Actions to crea	te a new item.

Schritt 4: Erstellen Sie die Funktionsprofilgruppe, und konfigurieren Sie das Funktionsprofil aus der vorhandenen Vorlage, wie im Bild gezeigt:

ululu cisco											Adv welco
		earch: enter name, descr	common   T1   infra								
Tenant T1		0	1417 Services	Eurotion Profile	ACASSOS ED						
💼 Quick Start			L4-L7 Services	Function Frome	- ASA5565_FF						
🔺 🚢 Tenant T1											General Faults
🕨 🖿 Applicatio	n Profiles										
🕨 🖿 Networkir	g										
L4-L7 Ser	vice Parameters		Properties								
Security P	olicies		Nan	ne: ASA5585_FP							
Troublest	oot Policies		Descriptio	on:							
Monitoring	Policies		Associated Function	on: CISCO-ASA-1.2/Firewall							
4 🖿 L4-L7 Ser	vices										
▶ ■ L4-L7	Service Graph Templates										
P Router	configurations										
Functi	on Profiles										
a ta As	ADDOD_FFG		FEATURES AN								
E 1417	Davises		FEATURES AN	ID PARAMETERS							
Import	ed Devices		Features:	Basic Par	rameters All Parameters						
🕨 🖿 Device	s Selection Policies			Meta Folde	r/Param Key		Name	Value	Mandatory	Locked	Shared
🕨 🖿 Deplo	ed Graph Instances		Interfaces	🔺 😅 Der	vice Config		Device				
🕨 🖿 Deploy	red Devices		<u>AccessLists</u>	• • • • •	Access List		access-list-inbound			false	false
📃 Inband	Management Configuration for L4-L	.7 devices	NAT		Interface Related Configuration	n	externallf			false	false
🕨 🖿 Device	Managers		TrafficSelectionOl	piects 🔹 🕨	Interface Related Configuration	n	internallf			false	false
🕨 🖿 Chass	is		All	🔺 🗇 Fur	nction Config		Function				
					External Interface Configuration	on	ExtConfig			false	false
				• <u>●</u>	Internal Interface Configuratio	n	IntConfig			faise	false

		General	Faults Hi	istor
	A A O O		ACTION	s •
Properties Name: ASA5585_FP Description:				
Associated Function: CISCO-ASA-1.2/Firewall				

#### FEATURES AND PARAMETERS

:

Features:	Basic Parameters All Parameters					
	Meta Folder/Param Key	Name	Value	Mandatory	Locked	Shared
	🔺 😅 Device Config	Device				
	Access List	access-list-inbound		false	false	
	Interface Related Configuration	externallf			false	false
TrafficSelectionObjects	tionObjects Croup				false	
All	🔤 Inbound Access List	name	access-list-inbound	false	false	
	🔺 😅 Interface Specific Configuration	externallfCfg			false	
	IPv4 Address Configuration	IPv4Address			false	
	IPv4 Address	ipv4_address	192.168.1.5/30	true	false	
	El Security Level	external_security_level	50	false	false	
	Interface Related Configuration	internallf			false	false
	🔺 😅 Interface Specific Configuration	internallfCfg			false	
	IPv4 Address Configuration	IPv4Address			false	
	IPv4 Address	ipv4_address	192.168.1.9/30	true	false	
	El Security Level	internal_security_level	100	false	false	
	🔺 🚔 Function Config	Function				
	External Interface Configuration	ExtConfig			false	false
	Interface Configuration	ExtConfigrel	externallf	false	false	
	Internal Interface Configuration	IntConfig			false	false
	- 🖃 Interface Configuration	InConfigrel	internallf	false	false	

Schritt 5: Erstellen Sie einen Vertrag, und ändern Sie das Feld "Scope" (Umfang) in "Tenant" (Tenant), wie im Bild gezeigt:

ululu cisco				VM Networking	L4-L7 Services		Operations
		<mark>h:</mark> enter name, descr	common   T1   infra   m				
Tenant T1		<ul> <li>O</li> </ul>	Contract - PERM	IIT ALL			
Quick Star							
Premant III	tion Profiles						
🔺 🖿 Networ	king						
🕨 🖿 Brid	ge Domains		Properties				
🕨 🕨 VRF	s		Name:	PERMIT_ALL			
🕨 🖿 Exte	rnal Bridged Networks		Label:				
🕨 🖿 Exte	rnal Routed Networks		Scope:	Tenant 🗸 🗸			
🕨 🖿 Rou	te Profiles		QoS Class:	Unspecified 🚽	•		
🕨 🖿 Pro	tocol Policies		Target DSCP:	unspecified			
🔲 L4-L7 8	Service Parameters			For "unapecified", put "64"			
🔺 🖿 Securit	y Policies		Description	optional			
or 🗖 🔺	itracts						
	PERMIT_ALL		Subjects				
	PERMIT_ALL			. Nesse	Filte		
🕨 🖿 Tab	oo Contracts				Flite		
🕨 📕 Imp	orted Contracts			PERMIT_ALL	11/F	PERMIT_ALL	
Filte	ers						
Trouble	eshoot Policies						
Monitor	ing Policies						
▶ <b>■</b> L4-L7 :	Services						

Schritt 6: Erstellen Sie, wie im Bild gezeigt, eine L4-L7-Servicediagrammvorlage, bei der die Zuordnung von Servicediagrammen zu einer externen gerouteten Netzwerkrichtlinie und einer Routerkonfiguration mit einer Richtlinie für die Geräteauswahl beinhaltet.

ALL TENANTS   Add Tenant   Search: enter name, descr	I common I T1   inffa   mgmt	
Tenant T1		
Quick Start	L4-L7 Service Graph Template - ASA5585_SGT	
A Prenant T1		Topology Policy
Application Profiles	0	
Networking	Consumer Brouider	
L4-L7 Service Parameters		
Security Policies		
Troubleshoot Policies	A\$45585	
Monitoring Policies		
L4-L7 Services	N1	
L4-L7 Service Graph Templates		
Kongogo_oui	ASA5568 Information	
Router configurations	Frewait Routed	
Eurotion Profiles	TOME ASAGO	
L4-L7 Devices		
Imported Devices		
Devices Selection Policies		
Deployed Graph Instances		
Deployed Devices		
Inband Management Configuration for L4-L7 devices		
Device Managers		
🕨 💼 Chassis		
Create L4-L7 Service Graph Template		i X
Drag device eluctore te erecte greek sedee		
Drag device clusters to create graph hodes.		
Device Clusters	Graph Name: ASA5585_SGT	
• +	Graph Type. Create A New One Crone An Existing One	
🗮 T1 /ASA5585 (Managed Firewall)		
	Consumer Pr	rovider
		EDG
		S.
	FOLVEN	
	NI	
	141	
	Please drag a device from devices table and drop it here to create a service node.	
	ASA5585 Information	
	Firewall:   Routed  Transparent	
	Profile: T1/ASA5585_FPG/ASA5585_FP	
		CANCEL
	SUBMIT	CANCEL

Router-Konfiguration zur Angabe der Router-ID, die auf der Service Appliance (ASA 5585) verwendet wird, wie in der Abbildung gezeigt:

cisco		Tenants	Fabric	VM Networking	L4-L7 Services	Admin
	ALL TENANTS   Add Tenant   S	earch: enter name, descr	common   T1   infra			
Tenant T1		S 0	Router config	uration - ASA5585		
🔲 Quick Start 4 🐣 Tenant T1			<b>y</b>			
🕨 🖿 Applicatio	n Profiles					
🕨 🖿 Networkii	ng					
🔲 L4-L7 Se	rvice Parameters		Properties			
🕨 🖿 Security F	Policies		N	ame: ASA5585		
🕨 🖿 Troubles	noot Policies		Route	er ID: 3.3.3.3		
🕨 🖿 Monitorin	g Policies		Descrip	otion: optional		
🔺 🖿 L4-L7 Se	rvices					
L4-L7	Service Graph Templates					
🖉 🗖 Route	r configurations					
1 AS	A5585					
🕨 🖿 Functi	on Profiles					
▶ 💼 L4-L7	Devices					
🕨 🖿 Impor	ted Devices					
🕨 🖿 Device	es Selection Policies					
🕨 🖿 Deplo	yed Graph Instances					
🕨 💻 Deplo	yed Devices					
📃 Inban	d Management Configuration for L4-I	L7 devices	4			
Device	e Managers					
🕨 🖿 Chas	sis					

Ändern Sie den Adjacency-Typ von L2 in L3, wie in der Abbildung gezeigt:

cisco									ρ	
		arch: enter name, descr	common   T1   infra   mg							
Tenant T1		S 0	14-17 Service G	anh Template -	ASA5585 SCT					
🔲 Quick Start			LT-LT GEIVICE GI	apri rempiate -	HOH0000_001					
🔺 🐣 Tenant T1										Topology
🕨 🖿 Application	n Profiles		Ð₩							
🕨 🖿 Networkin	g									
🖿 L4-L7 Ser	vice Parameters		Properties							
🕨 🖿 Security P	olicies		Name:	ASA5585_SGT						
🕨 🖿 Troublesh	oot Policies		Template Name:	UNSPECIFIED						
🕨 🖿 Monitoring	Policies		Configuration Issues:							
4 🖿 L4-L7 Ser	vices		Description:	optional						
🔺 🛄 L4-L7 :	Service Graph Templates									
AS/	\$5585_SGT		Label:							
<b>4 ╚</b>	Function Node - N1		Function Nodes:	<ul> <li>Name</li> </ul>		Function Name	F	unction Type		Description
	consumer			N1		CISCO-ASA-1.2/Firewa	all G	90To		
	J provider									
Router	configurations									
P Functio	in Profiles									
▶ ■ L4+L/ 1	Jevices									
Import Device	o Coloriton Polision		1							
Device	s Selection Policies									
Deploy	ed Orapin Instances		Terminal Nodes:	<ul> <li>Name</li> </ul>		Pro	wider/Consumer		Description	
Inhand	Management Configuration for L4-L7	devices		T4		00			bees in priori	
Device	Managers	4011000				00	Insumer			
▶ 🖿 Chass	is			T2		Pro	wider			
			Connections						-	
			comections.	<ul> <li>Name</li> </ul>	Connected Nodes		Unicast Route	Adjacency Type	Descr	iption
				C1	N1, T1		True	L3		
				C2	N1, T2		True	L3		

Vorlage für Servicediagramme anwenden, wie im Bild gezeigt:



#### Hinzufügen des Servicediagramms zum Vertrag, wie im Bild gezeigt:

uluilu cisco										
		earch: enter name, descr	common   T1   infra   r							
Tenant T1		<ul> <li>Ø</li> </ul>	Apply L4-L7 Service	ce Graph Tem <u>plate</u>	To EPGs					<b>i X</b>
🔲 Quick Start										
🔺 🐣 Tenant T1			STED 1 > Control	t					1 Contr	act 2 Graph
Application	n Profiles		STEP 12 Contra							and an orașin
🕨 🖿 Networkin	g									
🖿 L4-L7 Sen	vice Parameters		Config A Contract	Between EPGs						
🕨 🕨 Security Pr	plicies		- EPGs Information							
🕨 🖿 Troublesh	oot Policies		Consumer	EPG / External Network: T	1/N3K-1_L3OUT/N3K-1_EXT_I	NI 🖵 😰 🛛 P	rovider EPG / External Network: T1/N	3K-2_L3OUT/N3K-2_EXT_NI 🚽 📳	G	
Monitoring	Policies									
🕴 💻 L4-L7 Ser	vices		- Contract Information -							
🔺 🛄 L4-L7 :	Bervice Graph Templates			Contract: 🧿 Create A New (	Contract	Choose An Existing Co	ontract Subject			
ASF	15585_SGT		Contro	of Name: DEDMIT ALL						
Router	configurations		Contra	Ct Name: PERMIT_ALL						
🕨 🛄 Functio	in Profiles		No Filter (Allow A	All Traffic): 🗹						
▶ 🛄 L4-L7 (	Devices									
🕨 🛄 Importe	ed Devices									
🕨 🚞 Device	s Selection Policies									
🕨 🛄 Deploy	ed Graph Instances									
Deploy	ed Devices									
📃 Inband	Management Configuration for L4-L	_7 devices	4							
Device	Managers									
🕨 🖿 Chass	is									
									PREVIOUS	NEXT CANCEL



Fügen Sie ggf. den L4-L7-Parameter hinzu bzw. ändern Sie ihn, wie im Bild gezeigt:

ululu cisco	System	Tenants	Fabric	VM Networking	L4-L7 Services	Admin	Operations		P	i
		earch: enter name, descr	common   T1   infra   r							
Tenant T1		S 0	Apply L4-L7 Servic	e Graph Template	To EPGs					í) X
Image: Start         ■ Ouck Start         ■ Tenant T         ■ Tenant T         ■ Tenant T         ■ Tenant T         ■ Security PC         ■ Security PC         ■ Troublesh         ■ L4-L7 Sen         ■ L4-L7 Sen         ■ Troublesh         ■ L4-L7 Sen         ■ L4-L7 Sen         ■ L4-L7 Sen         ■ Delvices         ■ Deploy         ■ Deploy         ■ Ibe/ces         ■ Deploy         ■ Deploy	L Profiles 2 3 3 1 1 1 2 1 2 1 2 1 2 1 2 1 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1	7 devices	Apply L4-L7 Service STEP 3 > ASA550 config parameters Profile Name: ASA Features: Interfacea Accessition NAT Traffic SelectionO All	ee Graph Template	To EPGs	evc::applyProfile_edition	Con' style= 'display, inline-Mock; widt Device Device access-list-inbound externalif internalif Function ExtContig IntContig	1. Contract	2. Graph	ASA5585 Parameters
									Р	REVIOUS FINISH CANCEL

Schritt 7: Route-Tag-Richtlinie, Konfigurieren der Route-Tag-Richtlinie für VRF1 (Tag:100), wie im Bild gezeigt:

uluih cisco	System	Tenants	Fabric	VM Networking	L4-L7 Services	Admin	Operations		ρ		i		/ wel
		ron: enter name, descr	common   infra   mgr	mt   T1									
Tenant T1 Quick Start		0 12	VRF - VRF1						Policy				
<ul> <li>Application</li> <li>Metworkin</li> </ul>	n Profiles g		€				A O O 100						
Bridge	Domains		Properties										
VRF			Route Tag Policy	- VRF1_RTP				1 ×					
0	Deployed VRFs (Simple Mode) EPG Collection for Context							Policy History					
<ul> <li>RF</li> <li>Externa</li> </ul>			⊙±					ACTIONS *					
Externa	I Routed Networks		Properties	me: VRF1_RTP									
Participation Protocol	of Policies		Descript	tion: optional									
L4-L7 Sen	rice Parameters blicles			Tag: 100	•								
Troublesh	oot Policies Policies												
L4-L7 Ser	vices												
								-					
				* EIGRP	Address Family Type		SHOW USAGE	SUBMIT CLOSE					
							No items have Select Actions to c	been found. reate a new item.					
				DNS labels:	P v E								
										s	HOWUSAG	ie SU	JBMIT

Konfigurieren Sie die Route-Tag-Richtlinie für VRF2 (Tag:200), wie im Bild gezeigt:

ululu cisco												
		earch: enter name, descr	common   infra   mg									
Tenant T1		S 🛛	VRE - VRE2									
🔲 Quick Start			VIXI - VIXI Z					_				
Tenant T1								Policy	Operational			Fault
Application			⊖₹			Δ \Lambda 🕕 🕕 100						
🕨 🖿 Bridge	a Domains		Route Tag Police									
🔺 🖿 VRFs				y - vixi 2_ixii-								
► 🖻 VR	2F1						Policy History					
> VF	RF2		⊙₹				ACTIONS +					
Extern	al Routed Networks		Properties									
🕨 💼 Route	Profiles		N	ame: VRF2_RTP								
🕨 🖿 Proto	col Policies		Descrip	ption: optional								
L4-L7 Se	rvice Parameters			_								
Security F			. L	Tag: 200	<u>•</u>							
Monitorin	g Policies											
🕨 🖿 L4-L7 Se	rvices											
			1									
						SHOW USAGE	SUBMIT CLOSE					
			EIGRP COMEX	Per Address Family.								
				- EIGRP	Address Family Type		EIGRP Address Family Context					
						No items have Select Actions to c	been found. reate a new item.					
				DhC labela:								
				Divo labels.								
				Route Tag Policy: VRF2_RT	<u>₽</u> ₽							
									S	HOW USAGE	SUB	MIT

Schritt 8: Überprüfen Sie den Status, und überprüfen Sie die Richtlinie für die Geräteauswahl, wie im Bild gezeigt:

uluilu cisco							Operations					
		arch: enter name, descr	common   T1   infra   mg									
Tenant T1		S 0	Logical Interface	Context - consu	mer							
💼 Quick Start			Logical Internace	Context - Consu								
🔺 🐣 Tenant T1												
🕨 🕨 🖿 Applicati	on Profiles		⊖.¥									
🕨 🖿 Networki	ng											
🖿 L4-L7 Se	rvice Parameters		Properties									
🕨 🖿 Security I	Policies		Connector Name:	consumer								
Troubles	hoot Policies		Cluster Interface:	outside	<u>r</u> 🕑							
Monitorin	g Policies		Associated Network:	Associated Network Bridge Domain L3 External Network ASSociated Network T1/ASA_OUT_LSOUT// - C3								
4 🖿 L4-L7 Se	rvices		L3 External Network:									
▶ ■ L4-L7	Service Graph Templates		Redistribute:	ban 🔊 ospf 🛞 👻								
Route	r configurations											
Funct	ion Profiles											
▶ ■ L4-L7	Devices		Subnets:					×	+			
P Impoi	ted Devices			ID (Mark	Scope	Proferred	Subret Control					
	ES SEIECTION POLICIES			IP JINDAK	30096	Fielened	Subilist Control		-			
	concumer					No items have been found. Select Actions to create a new item.						
	provider											
Denic	wed Granh Instances		4									
Depic	ved Devices		Virtual IP Addresses:					×	1			
📃 Inban	d Management Configuration for L4-L7	7 devices										
🕨 🖿 Devic	e Managers			<ul> <li>IP Address</li> </ul>								
🕨 🖿 Chas	sis					No items have been found. Select Actions to create a new item						
						server receive to a back a new room						
1												

ululu cisco	System	Tenants	Fabric	VM Networking	L4-L7 Services	Admin	Operations				
		earch: enter name, descr	common   T1   infra   mg								
Tenant T1		S 🔊	Logical Interface	Context provid	lor						
💼 Quick Start			Logical Interface	Context - provid	lei						
🔺 🐣 Tenant T1											
Application Profiles											
🕨 🖿 Networking											
🖿 L4-L7 Servi	ce Parameters		Properties								
🕨 🖿 Security Po	icies		Connector Name:	provider							
🕨 🖿 Troublesho	ot Policies		Cluster Interface:	inside	<u>·</u> @						
🕨 🖿 Monitoring I	Policies		Associated Network	Bridge Domain	External Network						
🔺 💼 L4-L7 Servi	ces		3 External Network:	13 External Network: Th/ASA_IN_L3OUT/AST = 19							
🕨 🚞 L4-L7 S	ervice Graph Templates		Dedistribute:								
🕨 🖿 Router d	onfigurations		Redistribute.	vgp x ospt x							
🕨 🖿 Functior	Profiles										
🕨 🖿 L4-L7 D	evices		Subnets:								
🕨 🚞 Importe	1 Devices						^	Ŧ			
🔺 💼 Devices	Selection Policies			IP/Mask	Scope	Preferred	Subnet Control				
4 🖸 PER	MIT_ALL-ASA5585_SGT-N1					No items have been found.					
1 <b>1</b> c	onsumer					Select Actions to create a new item.					
e p	rovider										
Deploye	d Graph Instances		<ul> <li>Virtual ID #ddreases;</li> </ul>								
Deploye	d Devices		VIILUALIF AUURESSES.				×	+			
📃 Inband I	Aanagement Configuration for L4-L	7 devices		<ul> <li>IP Address</li> </ul>							
Device N	lanagers					No items have been found					
🕨 💻 Chassis	3					Select Actions to create a new item.					

### Überprüfen Sie die Instanz des bereitgestellten Diagramms, wie im Bild gezeigt:

		welcome, adm					
	_	_					
	Poli	y Faults Hist					
	•						
Name: N1							
		Escan					
		Encap					
		unknown					
		unknown					
Class ID							
32773							
49156							
•	Override Name/Val	ue To					
	Ciess ID 22773 49166	Ciens ID 32773 49156					

ululu cisco				VM Networking				Operation	s
		enter name, descr	common   T1   infra						
Tenant T1		<ul> <li>O</li> </ul>	Deployed Devi						
💼 Quick Start				ces					
🔺 🐣 Tenant T1									
Applicatio	n Profiles		⊖±						
L4-L7 Ser	vice Parameters		<ul> <li>Device Name</li> </ul>			VRF			
Security Policies			ASA5585			none			
🕨 🔲 Troublesh	noot Policies								
Monitoring	g Policies								
L4-L7 Ser L4-L7	wices Service Graph Templates								
🕨 🖿 Router	r configurations								
🕨 🖿 Functio	on Profiles								
▶ 🖿 L4-L7	Devices								
Import	ed Devices as Selection Policies								
- 💶 Device	RMIT_ALL-ASA5585_SGT-N1								
1	consumer								
1	provider								
🔺 🖿 Deploy	yed Graph Instances		•						
	RMIT_ALL-ASA5585_SG1-11 Function Node - N1								
🔺 🛄 Deploy	yed Devices								
🔺 💙 AS/	A5585-none								
	BGP Device Configuration								
	OSPF Device Configuration								
	BGP Graph Instance Configuration								
	OSPF Graph Instance Configuration								
<b>A</b> 1	₩ N1								
	Connector N1/consumer								
📃 Inbanc	d Management Configuration for L4-L7 device	es							
🖿 Device	Managers								
🖿 Chass	iis								
ahaha	System Tenants	Eabric	VM Networking	14-17 Services	Admin	Onerations		Q	i
CISCO	TENANTS I And Tanant I. Search: enter name, desc	L common L T1 L infr							•
Tenant T1									
Quick Start		Device USPF	- Configurations						
<ul> <li>Tenant T1</li> <li>Application Profi</li> </ul>	les	<b>€</b>							
Networking	aramatara	Name	Enable	Context Name Address	Family Area	Area Control	4	krea Type Networks	
<ul> <li>E4-L7 Service F</li> <li>Security Policies</li> </ul>	aranneters	ASA_IN_L3OUT_are	a_0 True	VRF2 IPv4	Backbone area	Send redistributed LSAs into Originate summary I SA	NSSA area P	Regulararea ASA_IN_EX	[_NET (10.10.10.0/24)
Troubleshoot Pc Manifording Polici	olicies	ASA_OUT_L3OUT_s	area_0 True	VRF1 IPv4	Backbone area	Originate summary LSA	F F F	Regulararea ASA_OUT_E	EXT_NET (20.20.20.0/24)
4 🖿 L4-L7 Services									
L4-L7 Service Router config	e Graph Templates gurations								
Function Prot	files								
<ul> <li>L4-L7 Device</li> <li>Imported Device</li> </ul>	es vices								
🔺 🖿 Devices Sele	ection Policies								
E consu	mer								
📃 providu 🔺 🖿 Deploved Gr:	er aph Instances								
	ALL-ASA5585_SGT-T1								
📃 Functio	on Node - N1 wices								
▲ 💜 A8A5585	none								
BGP D	Jevice Configuration								
PERM	IT_ALL-ASA5585_SGT-T1								
BG	PF Graph Instance Configuration								
4 💎 N1	Connector N1 (consumer								
1	Connector N1/provider								
📃 Inband Mana	igement Configuration for L4-L7 devices ders								
Chassis	<i>•</i>								

## Überprüfung und Fehlerbehebung

#### APIC-Konfiguration für Tenant:

```
apic1# sh running-config tenant T1
# Command: show running-config tenant T1
# Time: Thu Feb 25 16:05:14 2016
   tenant T1
```

```
access-list PERMIT_ALL
 match ip
  exit
contract PERMIT_ALL
 scope tenant
  subject PERMIT_ALL
   access-group PERMIT_ALL both
    1417 graph ASA5585_SGT
    exit
  exit
vrf context VRF1
  exit
vrf context VRF2
  exit
13out ASA_IN_L3OUT
 vrf member VRF2
  exit
13out ASA_OUT_L3OUT
 vrf member VRF1
  exit
13out N3K-1_L3OUT
 vrf member VRF1
  exit
13out N3K-2_L3OUT
 vrf member VRF2
  exit
bridge-domain BD1
 vrf member VRF1
  exit
bridge-domain BD2
 vrf member VRF2
  exit
application AP1
  epg EPG1
   bridge-domain member BD1
   exit
  epg EPG2
   bridge-domain member BD2
    exit
  exit
external-13 epg ASA_IN_EXT_NET 13out ASA_IN_L3OUT
  vrf member VRF2
  match ip 10.10.10.0/24
  exit
external-13 epg ASA_OUT_EXT_NET 13out ASA_OUT_L3OUT
 vrf member VRF1
 match ip 20.20.20.0/24
  exit
external-13 epg N3K-1_EXT_NET 13out N3K-1_L3OUT
  vrf member VRF1
  match ip 10.10.10.0/24
  contract consumer PERMIT_ALL
  exit
external-13 epg N3K-2_EXT_NET 13out N3K-2_L3OUT
  vrf member VRF2
  match ip 20.20.20.0/24
 contract provider PERMIT_ALL
  exit
interface bridge-domain BD1
  exit
interface bridge-domain BD2
  exit
1417 cluster name ASA5585 type physical vlan-domain T1_PHY service FW function go-to
  cluster-device ASA5585_Device_1
```

```
cluster-interface inside
        member device ASA5585_Device_1 device-interface GigabitEthernet0/1
          interface ethernet 1/2 leaf 106
          exit
        exit
      cluster-interface outside
        member device ASA5585_Device_1 device-interface GigabitEthernet0/0
          interface ethernet 1/2 leaf 105
          exit
        exit
      exit
    1417 graph ASA5585_SGT contract PERMIT_ALL
      service N1 device-cluster-tenant T1 device-cluster ASA5585 mode FW_ROUTED
        connector consumer cluster-interface outside
          1417-peer tenant T1 out ASA_OUT_L3OUT epg ASA_OUT_EXT_NET redistribute bgp,ospf
          exit
        connector provider cluster-interface inside
         1417-peer tenant T1 out ASA_IN_L3OUT epg ASA_IN_EXT_NET redistribute bgp,ospf
          exit
       rtr-cfg ASA5585
        exit
      connection C1 terminal consumer service N1 connector consumer
      connection C2 terminal provider service N1 connector provider
      exit
   rtr-cfg ASA5585
     router-id 3.3.3.3
      exit
    exit
apic1#
```

Überprüfen Sie die OSPF-Nachbarbeziehung und die Routing-Tabelle auf Blatt 101:

```
leaf101# show ip ospf neighbors vrf T1:VRF1
OSPF Process ID default VRF T1:VRF1
Total number of neighbors: 2
Neighbor ID Pri State
                                    Up Time Address
                                                            Interface
                                    02:07:19 192.168.1.1
1.1.1.1
                 1 FULL/BDR
                                                             Vlan8
3.3.3.3
                  1 FULL/BDR
                                    00:38:35 192.168.1.5
                                                             Vlan9
leaf101# show ip route vrf T1:VRF1
IP Route Table for VRF "T1:VRF1"
'*' denotes best ucast next-hop
'**' denotes best mcast next-hop
'[x/y]' denotes [preference/metric]
'%<string>' in via output denotes VRF <string>
10.10.10.0/24, ubest/mbest: 1/0
   *via 192.168.1.1, vlan8, [110/8], 01:59:50, ospf-default, intra
20.20.20.0/24, ubest/mbest: 1/0
   *via 192.168.1.5, vlan9, [110/22], 00:30:20, ospf-default, inter
100.100.100.100/32, ubest/mbest: 2/0, attached, direct
   *via 100.100.100.100, lo1, [1/0], 02:21:22, local, local
   *via 100.100.100.100, lo1, [1/0], 02:21:22, direct
192.168.1.0/30, ubest/mbest: 1/0, attached, direct
   *via 192.168.1.2, vlan8, [1/0], 02:35:53, direct
192.168.1.2/32, ubest/mbest: 1/0, attached
   *via 192.168.1.2, vlan8, [1/0], 02:35:53, local, local
192.168.1.4/30, ubest/mbest: 1/0, attached, direct
   *via 192.168.1.6, vlan9, [1/0], 02:20:53, direct
192.168.1.6/32, ubest/mbest: 1/0, attached
   *via 192.168.1.6, vlan9, [1/0], 02:20:53, local, local
```

192.168.1.8/30, ubest/mbest: 1/0
 \*via 192.168.1.5, vlan9, [110/14], 00:30:20, ospf-default, intra
200.200.200.200/32, ubest/mbest: 1/0
 \*via 192.168.1.5, vlan9, [110/15], 00:30:20, ospf-default, intra
Überprüfen Sie die OSPF-Nachbarbeziehung und die Routing-Tabelle auf Blatt 102:

```
leaf102# show ip ospf neighbors vrf T1:VRF2
OSPF Process ID default VRF T1:VRF2
Total number of neighbors: 2

        Openation
        Address
        Interface

        00:37:07
        192.168.1.9
        Vlan14

        02:00:50
        1

Neighbor ID Pri State
                 1 FULL/BDR
3.3.3.3
2.2.2.2
                   1 FULL/BDR
                                       02:09:59 192.168.1.13 Vlan15
leaf102# show ip route vrf T1:VRF2
IP Route Table for VRF "T1:VRF2"
'*' denotes best ucast next-hop
'**' denotes best mcast next-hop
'[x/y]' denotes [preference/metric]
'%<string>' in via output denotes VRF <string>
10.10.10.0/24, ubest/mbest: 1/0
    *via 192.168.1.9, vlan14, [110/22], 00:35:22, ospf-default, inter
20.20.20.0/24, ubest/mbest: 1/0
    *via 192.168.1.13, vlan15, [110/8], 02:08:13, ospf-default, intra
192.168.1.4/30, ubest/mbest: 1/0
    *via 192.168.1.9, vlan14, [110/14], 00:35:22, ospf-default, intra
192.168.1.8/30, ubest/mbest: 1/0, attached, direct
    *via 192.168.1.10, vlan14, [1/0], 02:14:29, direct
192.168.1.10/32, ubest/mbest: 1/0, attached
    *via 192.168.1.10, vlan14, [1/0], 02:14:29, local, local
192.168.1.12/30, ubest/mbest: 1/0, attached, direct
    *via 192.168.1.14, vlan15, [1/0], 02:09:04, direct
192.168.1.14/32, ubest/mbest: 1/0, attached
    *via 192.168.1.14, vlan15, [1/0], 02:09:04, local, local
200.200.200.200/32, ubest/mbest: 2/0, attached, direct
    *via 200.200.200.200, lo4, [1/0], 02:10:02, local, local
    *via 200.200.200.200, lo4, [1/0], 02:10:02, direct
```

Überprüfen Sie die Konfiguration, die OSPF-Nachbarbeziehung und die Routing-Tabelle auf der ASA 5585:

```
ASA5585# sh run interface
!
interface GigabitEthernet0/0
no nameif
security-level 0
no ip address
1
interface GigabitEthernet0/0.101
nameif externalIf
security-level 50
ip address 192.168.1.5 255.255.255.252
1
interface GigabitEthernet0/1
no nameif
security-level 100
no ip address
!
interface GigabitEthernet0/1.102
```

```
nameif internalIf
security-level 100
ip address 192.168.1.9 255.255.255.252
!
interface Management0/0
management-only
nameif management
security-level 0
ip address 172.23.97.1 255.255.254.0
ASA5585# sh run router
router ospf 1
router-id 3.3.3.3
network 192.168.1.4 255.255.255.252 area 0
network 192.168.1.8 255.255.255.252 area 0
area O
log-adj-changes
1
ASA5585# sh ospf neighbor
Neighbor ID
              Pri State
                                   Dead Time Address
                                                               Interface
100.100.100.100 1 FULL/DR
                                    0:00:38
                                               192.168.1.6
                                                              externalIf
200.200.200.200 1 FULL/DR
                                               192.168.1.10
                                    0:00:33
                                                               internalIf
ASA5585# sh route ospf
Routing Table: T1
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
      D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
      N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
      E1 - OSPF external type 1, E2 - OSPF external type 2
      i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
      ia - IS-IS inter area, * - candidate default, U - per-user static route
      o - ODR, P - periodic downloaded static route, + - replicated route
Gateway of last resort is not set
O IA
        10.10.10.0 255.255.255.0
          [110/18] via 192.168.1.6, 00:22:57, externalIf
        20.20.20.0 255.255.255.0
O IA
          [110/18] via 192.168.1.10, 00:22:47, internalIf
        200.200.200.200 255.255.255.255
0
          [110/11] via 192.168.1.10, 00:22:47, internalIf
ASA5585# sh access-list
access-list cached ACL log flows: total 0, denied 0 (deny-flow-max 4096)
           alert-interval 300
access-list access-list-inbound; 3 elements; name hash: 0xcb5bd6c7
access-list access-list-inbound line 1 extended permit tcp any any eq www (hitcnt=0) 0xc873a747
access-list access-list-inbound line 2 extended permit tcp any any eq https (hitcnt=0)
0x48bedbdd
```

access-list access-list-inbound line 3 extended permit icmp any any (hitcnt=6) 0xe4b5a75d Überprüfung der Konfiguration, der OSPF-Nachbarbeziehung und der Routing-Tabelle auf N3K-1:

```
N3K-1# sh run ospf
!Command: show running-config ospf
!Time: Thu Feb 25 15:40:55 2016
version 6.0(2)U3(7)
feature ospf
router ospf 1
 router-id 1.1.1.1
interface Ethernet1/21
  ip router ospf 1 area 0.0.0.1
interface Ethernet1/47
  ip router ospf 1 area 0.0.0.1
N3K-1# sh ip ospf neighbors
OSPF Process ID 1 VRF default
Total number of neighbors: 1
                                    Up Time Address
Neighbor ID
               Pri State
                                                             Interface
                                    01:36:24 192.168.1.2
100.100.100.100 1 FULL/DR
                                                             Eth1/47
N3K-1# sh ip ospf route
OSPF Process ID 1 VRF default, Routing Table
  (D) denotes route is directly attached
                                            (R) denotes route is in RIB
10.10.10.0/24 (intra)(D) area 0.0.0.1
    via 10.10.10.0/Eth1/21* , cost 4
20.20.20.0/24 (inter)(R) area 0.0.0.1
     via 192.168.1.2/Eth1/47 , cost 62
100.100.100.100/32 (intra)(R) area 0.0.0.1
    via 192.168.1.2/Eth1/47 , cost 41
192.168.1.0/30 (intra)(D) area 0.0.0.1
    via 192.168.1.1/Eth1/47* , cost 40
```

Überprüfung der Konfiguration, der OSPF-Nachbarbeziehung und der Routing-Tabelle auf N3K-2:

N3K-2# sh run ospf !Command: show running-config ospf !Time: Thu Feb 25 15:44:47 2016 version 6.0(2)U3(7) feature ospf router ospf 1 router-id 2.2.2.2 interface loopback0 ip ospf network point-to-point ip router ospf 1 area 0.0.0.0 interface Ethernet1/21 ip router ospf 1 area 0.0.0.1

```
N3K-2# sh ip ospf neighbors
 OSPF Process ID 1 VRF default
 Total number of neighbors: 1
 Neighbor ID
                                    Up Time Address
             Pri State
                                                            Interface
 200.200.200.200 1 FULL/DR
                                                           Eth1/47
                                    01:43:50 192.168.1.14
N3K-2# sh ip ospf route
 OSPF Process ID 1 VRF default, Routing Table
  (D) denotes route is directly attached
                                         (R) denotes route is in RIB
2.2.2.0/30 (intra)(D) area 0.0.0.0
     via 2.2.2.0/Lo0* , cost 1
10.10.10.0/24 (inter)(R) area 0.0.0.1
     via 192.168.1.14/Eth1/47 , cost 62
20.20.20.0/24 (intra)(D) area 0.0.0.1
     via 20.20.20.0/Eth1/21* , cost 4
192.168.1.12/30 (intra)(D) area 0.0.0.1
     via 192.168.1.13/Eth1/47* , cost 40
```

#### Überprüfen Sie die Vertragsfilterregeln für das Leaf und die Anzahl der Paketergebnisse:.

leaf101# show system internal policy-mgr stats Requested Rule Statistics [CUT] Rule (4107) DN (sys/actrl/scope-3112964/rule-3112964-s-32773-d-49158-f-33) Ingress: 1316, Egress: 0, Pkts: 0 RevPkts: 0 Rule (4108) DN (sys/actrl/scope-3112964/rule-3112964-s-49158-d-32773-f-33) Ingress: 1317, Egress: 0, Pkts: 0 RevPkts: 0 leaf101# show system internal policy-mgr stats Requested Rule Statistics [CUT] Rule (4107) DN (sys/actrl/scope-3112964/rule-3112964-s-32773-d-49158-f-33) Ingress: 2317, Egress: 0, Pkts: 0 RevPkts: 0 Rule (4108) DN (sys/actrl/scope-3112964/rule-3112964-s-49158-d-32773-f-33) Ingress: 2317, Egress: 0, Pkts: 0 RevPkts: 0

leaf102# show system internal policy-mgr stats Requested Rule Statistics [CUT] Rule (4103) DN (sys/actrl/scope-2752520/rule-2752520-s-49156-d-6019-f-default) Ingress: 3394, Egress: 0, Pkts: 0 RevPkts: 0 Rule (4104) DN (sys/actrl/scope-2752520/rule-2752520-s-6019-d-49156-f-default) Ingress: 3394, Egress: 0, Pkts: 0 RevPkts: 0 [CUT] leaf102# show system internal policy-mgr stats Requested Rule Statistics [CUT] Rule (4103) DN (sys/actrl/scope-2752520/rule-2752520-s-49156-d-6019-f-default) Ingress: 4392, Egress: 0, Pkts: 0 RevPkts: 0 Rule (4104) DN (sys/actrl/scope-2752520/rule-2752520-s-6019-d-49156-f-default) Ingress: 4392, Egress: 0, Pkts: 0 RevPkts: 0 [CUT]

Erreichbarkeitstest zwischen N3K-1 und N3K-2:

N3K-1# ping 20.20.20.1 source 10.10.10.1 PING 20.20.20.1 (20.20.20.1) from 10.10.10.1: 56 data bytes 64 bytes from 20.20.20.1: icmp\_seq=0 ttl=250 time=2.098 ms 64 bytes from 20.20.20.1: icmp\_seq=1 ttl=250 time=0.922 ms 64 bytes from 20.20.20.1: icmp\_seq=2 ttl=250 time=0.926 ms 64 bytes from 20.20.20.1: icmp\_seq=3 ttl=250 time=0.893 ms 64 bytes from 20.20.20.1: icmp\_seq=4 ttl=250 time=0.941 ms --- 20.20.20.1 ping statistics ---5 packets transmitted, 5 packets received, 0.00% packet loss round-trip min/avg/max = 0.893/1.156/2.098 ms

N3K-2# ping 10.10.10.1 source 20.20.20.1 PING 10.10.10.1 (10.10.10.1) from 20.20.20.1: 56 data bytes 64 bytes from 10.10.10.1: icmp\_seq=0 ttl=250 time=2.075 ms 64 bytes from 10.10.10.1: icmp\_seq=1 ttl=250 time=0.915 ms 64 bytes from 10.10.10.1: icmp\_seq=2 ttl=250 time=0.888 ms 64 bytes from 10.10.10.1: icmp\_seq=3 ttl=250 time=1.747 ms 64 bytes from 10.10.10.1: icmp\_seq=4 ttl=250 time=0.828 ms --- 10.10.10.1 ping statistics ---5 packets transmitted, 5 packets received, 0.00% packet loss round-trip min/avg/max = 0.828/1.29/2.075 ms

Angehängt ist die XML-Konfigurationsdatei für den Tenant und das ASA-Funktionsprofil, die für diese Demonstration verwendet wird.