

Running UDP Traffic with Android

Goal: Set up Android to be a LANforge resource and then run UDP traffic.

Requires LANforge 5.3.3 or later. Make sure to configure a realm other than 255 for the VAP system, this is because the Android device needs to be in the same realm to be managed. This cookbook will be using realm 195. You can find information on configuring realms using lfconfig starting from step 4 here.

This cookbook will go through installing and configuring LANforge on an Android device, then setting up a Layer-3 UDP connection between the Android device and another LANforge system. Multiple VAPs will be set up to demonstrate roaming. A bridged VAP setup is used (with the bridge as DHCP server) so the device can retain the same IP during roaming, this prevents the device from having to renew its IP saving some time between roams.





- 1. First, we will set up the LANforge system so the Android device can connect.
- 2. Create the first VAP.

A. Go to the **Port Mgr** tab.

<u></u>						L	ANforge	Manager Ver	rsion(5.3.3)					_ . ×
<u>C</u> ontrol	<u>R</u> epor	ting <u>I</u>	ear-Of	f <u>I</u> nfo <u>P</u> lu	gins									
								Stop All		Restart M	anager		Refresh	HELP
Generi Status	C TO	est Mg ayer-3	IL T	est Group Endps	Re VolP	source M /RTP	1gr E /oIP/RT	vent Log Al P Endps Ai	lerts Po rmageddo	rt Mgr 🤇 S n 🦷 Wan	Station I Links	Mgr Messa Attenuators	ges File-IO	Layer-4
Di	isp: 1	92.168	.100.1	33:0.0	Sr	niff Packe	ets	Clear C	ounters	Reset	Port	Delete		
Rį	ot Tim	er: me	dium	(8 s) 🔻		Apply		<u>V</u> iew	Details	Cr <u>e</u> a	ate	<u>M</u> odify	<u>B</u> atch Mo	dify
						-All Eth	ernet Ir	nterfaces (Po	rts) for all	Resource	s. —			
Port	Pha	. Down		IP	SEC	Alias	Parent Dev	RX Bytes	RX Pkts	Pps RX	bps RX	TX Bytes	TX Pkts	Pps TX
1.1.0			192.1	68.100.195	0	eth0		1,598,411	15,099	6	5,156	15,165,28	5 14,423	5
1.1.1			0.0.0.	0	0	ethl		0	0	0	0)	0 0	0
1.1.2			0.0.0.	0	0	wiphy0		0	0	0	()	0 0	0
1.1.3			0.0.0.	0	0	wiphy1		0	0	0	(0 0	0
1.1.4			0.0.0.	0	0	wiphy2		0	0	0	(0 0	0
1.1.5			0.0.0.	0	0	wianu wian2	wiphyu	0	0	0				0
$\frac{1.1.0}{1.1.7}$		~	0.0.0.	0	0	wlan12	wiphy2	0	0	0				0
1111/			0.0.0.	~	U	WIGHT 1	mpriyi		v	0		1		
•														Þ
Logged	d in to	: brer	nt-523	:4002 as:	Adm	in								

B. Select wiphy0 and click **Create**.

<u>_</u>	L	ANforge i	Manager Ver	sion(5.3.3)					
<u>Control Reporting Tear-Off</u> Info Pl	ugins								
Stop All Restart Manager Refresh HELP									
Generic Test Mgr Test Group Resource Mgr Event Log Alerts Port Mgr Station Mgr Messages									
Status Layer-3 L3 Endps	VoIP/RTP	/oIP/RTP	Endps Ar	mageddor	n Wanl	Links 👘	Attenuators	File-IO	Layer-4
Disp: 192.168.100.133:0.0	Sniff Packe	ets	Clear C	ounters	Reset	Port	Delete		
Rpt Timer: medium (8 s) 🔻	Apply		<u>V</u> iew I	Details	Cr <u>e</u> a	ite 📐	<u>M</u> odify	<u>B</u> atch Mo	dify
	All Eth	ernet In	terfaces (Po	rts) for all	Resource	s.			
Port Pha Down IP	SEC Alias	Parent Dev	RX Bytes	RX Pkts	Pps RX	bps RX	TX Bytes	TX Pkts	Pps TX
1.1.0 🔲 192.168.100.19	5 0 eth0		1,749,802	16,570	6	5,222	16,682,051	15,831	6
1.1.1 0.0.0.0	0 eth1		0	0	0	0	0	0	0
1.1.2 0.0.0.0	0 wiphy0		0	0	0	0	0	0	0
1.1.3 0.0.0.0	0 wiphy1		0	0	0	0	0	0	0
1.1.4 0.0.0.0	0 wiphy2		0	0	0	0	0	0	0
1.1.5	0 wlan0	wiphy0	0	0	0	0	0	0	0
1.1.6	0 wian2	wipny2	0	0	0	0	0	0	0
1.1.7	lo imiant	wiphyi	U	U	U	U	U	U	U
p									
Logged in to: brent-523:4002 as:	Admin								

C. Select WiFi VAP and enter in the below values.

\$			Create VLANs o	n Port: 1.1.2		
0	○ MAC-VLAN ○ WiFi STA	 ○ 802.1Q-VLAN ○ WiFi VAP ○ WiFi 	Redirect OBrid i Monitor OWiFi	lge 🛛 GRE Tunnel Virtual Radio		
0	Shelf:	1 💌	Resource:	1 (brent-523) 🔻	Port: 2 (v	viphy0) 👻
6	VLAN ID:		DHCP-IPv4			
e	Parent MAC:	00:0e:8e:4e:59:2f	DHCP Client ID:	None		
	MAC Addr:	XX:XX:XX:*:*:XX	IP Address:		Global IPv6:	AUTO
	Quantity:	1	IP Mask or Bits:		Link IPv6:	AUTO
			Gateway IP:		IPv6 GW:	AUTO
	#1 Redir Name:		#2 Redir Name:			
	STA ID:	0	SSID:	android-test		•
	WiFi AP:		Key/Phrase:]
	WPA	WPA2	WEP			
0	Down	<u>C</u> ancel				
A	. Quantity 1					
В	STA ID: 0					

- C. SSID: android-test
- D. Click Apply.
 - A. Note: we will keep this window open for creating the second VAP.
- 3. Create the second VAP.

		Create VLANs o	n Port: 1.1.2				
○ MAC-VLAN ○ WiFi STA	○ 802.1Q-VLAN ○ F ● WiFi VAP ○ WiFi M	edirect 🔾 Brid onitor 🔾 WiFi	lge 🛛 GRE T Virtual Radio	unnel			
Shelf:	1 💌	Resource:	1 (brent-523)	•	Port: 3	(wiphy1)	•
VLAN ID:		DHCP-IPv4					
Parent MAC:	04:f0:21:11:e7:36	DHCP Client ID:	None	-			
MAC Addr:	xx:xx:xx:*:*:xx 💌	IP Address:			Global IPv6:	AUTO	
Quantity:	1	IP Mask or Bits:			Link IPv6:	AUTO	
		Gateway IP:			IPv6 GW:	AUTO	
#1 Redir Name:		#2 Redir Name:					
STA ID:	1	SSID:	android-test2			-	
WiFi AP:		Key/Phrase:					
WPA	WPA2	WEP					
Down							
Apply	<u>C</u> ancel						
	 MAC-VLAN WiFi STA Shelf: VLAN ID: Parent MAC: MAC Addr: Quantity: #1 Redir Name: STA ID: WiFi AP: WIFi AP: WPA Down Apply 	 MAC-VLAN 802.1Q-VLAN WiFi STA WiFi VAP WiFi M Shelf: 1 ▼ VLAN ID: Parent MAC: 04:f0:21:11:e7:36 MAC Addr: xx:xx:xx:*:*:xx Quantity: 1 #1 Redir Name: STA ID: 1 WiFi AP: WPA WPA2 Down <u>Apply</u> <u>Cancel</u> 	○ MAC-VLAN ○ 802.1Q-VLAN ○ Redirect ○ Brid ○ WiFi STA ⑨ WiFi VAP ○ WiFi Monitor ○ WiFi Shelf: 1 ▼ Resource: □ VLAN ID: □ □ DHCP-IPv4 □ □ DHCP-IPv4 Parent MAC: 04:f0:21:11:e7:36 □ DHCP Client ID: □ MAC Addr: ¤x:xx:xx:*:*:xx ▼ IP Address: Quantity: 1 IP Mask or Bits: Gateway IP: #1 Redir Name: #2 Redir Name: #2 Redir Name: STA ID: 1 SSID: WiFi AP: WPA2 WEP □ Down	Create VLANs on Port: 1.1.2 MAC-VLAN 802.1Q-VLAN WiFi STA WiFi VAP WiFi Monitor WiFi Virtual Radio Shelf: I I I Resource: I (brent-523) VLAN ID: DHCP-IPv4 Parent MAC: 04:f0:21:11:e7:36 DHCP Client ID: None MAC Addr: xx:xx:xx:*:*:xx IP Address: Quantity: I IP Mask or Bits: Gateway IP: #1 Redir Name: #2 Redir Name: STA ID: I STA ID: WIFI AP: WIFI AP: WIFI AP: Down Apply Cancel	MAC-VLAN 802.1Q-VLAN Redirect Bridge GRE Tunnel WiFi STA WiFi VAP WiFi Monitor WiFi Virtual Radio Shelf: 1 Resource: 1 (brent-523) VLAN ID: DHCP-IPv4 Parent MAC: 04:f0:21:11:e7:36 DHCP Client ID: MAC Addr: xx:xx:xx:*:*:xx IP Address: Quantity: 1 IP Mask or Bits: Gateway IP: Image: Constant of the state of	Create VLANs on Port: 1.1.2 MAC-VLAN 802.1Q-VLAN Redirect Bridge GRE Tunnel WiFi STA WiFi VAP WiFi Monitor WiFi Virtual Radio Shelf: 1 ▼ Resource: 1 (brent-523) ▼ Port: 3 VLAN ID: □	Create VLANs on Port: 1.1.2 MAC-VLAN B02.1Q-VLAN WiFi STA WiFi VAP WiFi Monitor WiFi Virtual Radio Shelf: I Image: Constraint of the state of t

- A. Select **wiphy1** from the port drop-down menu.
- B. Update the $\ensuremath{\text{STA ID}}$ and $\ensuremath{\text{SSID}}$ with the below values.
 - A. STA ID: 1
 - B. SSID: android-test2
- C. Click **Apply** and close the Create Port window.

A. Go to the **Status** tab, and click the **Netsmith** button for the AP system (Resource 1 in this example).

<u></u>	LANforge Manager Version(5.3.3)							
<u>Control Reporting Tear-Off</u> Info F	lugins							
	Stop All Restart Manager Refresh H	IELP						
Generic Test Mgr Test Grou Status Layer-3 L3 Endps	p Resource Mgr Event Log Alerts Port Mgr Station Mgr Messages VolP/RTP VolP/RTP Endps Armageddon WanLinks Attenuators File-IO Lay	er-4						
License Info	License Info Current Users Test Configuration Database							
Licenses expire in: 118 days.	* Admin from:192.168.100.133 gnuserver from:127.0.0.1 List: BLANK ▼ Load							
	Name: Delete							
Support expires in: 118 days	Load Behavior: Choose One 💌 Save							
Support expires in. 110 days.	Download DB Show Progre	ess						
	Virtual Shelf 1							
	Resource 1							
	Resource 1							
Logged in to: brent-523:4002 as	: Admin							

B. Right-click in the Netsmith window and select **New Router**.

_		Сгез	ate/Modify \	irtual Route/	r			×
Name: <auto create="" name="" new=""></auto>			Width:	100		Height:	100	
Use OSPF 🛛 Multicast Rout	ing 📃 Use	OLSR	RIPv2	RIP Dflt Rou	ute 🗌 Xorp	SHA 📃 IPv	6 Router	IPv6 RADV
🔲 Use Existing Cfg 🛛 🗌 BGP Rou	ter 🗌 BGI	9 4B AS [BGP Refle	ector 🗌 B(GP Confedera	tion 🗌 BG	P Damping	
		Notes	about this	Virtual Rou	ter			
		BGP C	configuratio	on Informati	on			
Router ID		Local AS			Cluster ID			
Confederation ID		Damping	Half Life		Damping Max	Suppress		
Damping Reuse		Damping	Suppress					
BGP Peer Flags	Р	eer AS	Peer ID	Local Iface	e Nexthop	Nexthop6	Hold Time	Delay Open
Active Client Confed	Ucast 0							0
Active Client Confed	Ucast 0							0
Active Client Confed	Ucast 0							0
Active Client Confed	Ucast 0							0
Active Client Confed	Ucast 0							0
Active Client Confed	Ucast 0							0
Active Client Confed	Ucast 0							0
Active Client Confed	Ucast 0							0
			ок	Cancel				

A. Click $\ensuremath{\text{OK}}$ to accept the default values.

B. Click **Apply** in Netsmith.

C. Right-click in the Netsmith window and select New Bridge. Then set the below values.

4			Create VLANs on Port:	
0	○ MAC-VLAN ○ WiFi STA	○ 802.1Q-VLAN ○ ○ WiFi VAP ○ WiFi M	edirect 💿 Bridge 🔾 GRE Tunnel onitor 🔾 WiFi Virtual Radio	
0	Shelf:	1 💌	Resource: 1 (brent-523) V	ort: 1 (eth1) 🔻
a	VLAN ID:		DHCP-IPv4	
ę	Parent MAC:	00:90:0b:37:2c:bd	DHCP Client ID: None	
	MAC Addr:	XX:XX:XX:*:*:XX 💌	IP Address: 195.1.2.1/24 Global I	Pv6: AUTO
	Quantity:	1	IP Mask or Bits: Link IPv	6: AUTO
			Gateway IP: IPv6 GW	AUTO
	Bridge Name:	br0	#2 Redir Name:	
	STA ID:		SSID:	-
	WiFi AP:		Key/Phrase:	
	WPA	WPA2	WEP	
a	Down			
	Apply 📐	<u>C</u> ancel		
A	. Quantity: 1			

- B. Bridge Name: br0
- C. IP Address: 195.1.2.1/24
- D. Click **Apply** and close the Create Port window.
- E. Click **Sync** in Netsmith and the br0 interface should appear.
- F. Drag the br0 interface into the virtual router. The interface box should change from black to green.



G. Right click br0 and select modify.

<u></u>	Create/Mo	dify Connection	×
		Interface-Cost:	1
Port 1-A:	10 (br0)	RIP-Metric:	1
		OSPF Area:	0.0.0.0
Port 1-B: 🗹 Skip	<auto create="" new="" port=""></auto>	VRRP IP:	0.0.0/24
WanLink: 🗹 Skip	<auto create="" new="" wanlink=""></auto>	VRRP ID:	1
Port 2.B: Z Skin	<auto create="" new="" ports<="" th=""><th>VRRP Priority:</th><th>100</th></auto>	VRRP Priority:	100
FUIL 2-0. SKIP		VRRP Interval:	1
Port 2-A: V Skip	<auto create="" new="" port=""></auto>	Next-Hop:	0.0.0.0
DHCP Lease Time:	300	Subnets (a.b.c.d/xx):	
DHCP DNS:	195.1.2.1		
DHCP Range Min:	195.1.2.10		
DHCP Range Max:	195.1.2.20		
DHCP Domain:			
DHCPv6 DNS:		Next-Hop-IPv6:	
DHCPv6 Range Min:		IPv6 Subnets (aaa::0/xx):	
DHCDv6 Range Max		-	
Difervo hange Max.			
DHCPd Config File:			
NAT DHCP	DHCPv6 Custom DHCI	VRRP Cand-RP	
	ок	Cancel	

- H. Select **DHCP** and use the below values.
 - A. DHCP Lease Time: 300
 - B. DHCP DNS: 195.1.2.1
 - C. DHCP Range Min: 195.1.2.10
 - D. DHCP Range Max: 195.1.2.20

I. Click OK.

J. Right click br0 and select Modify Port.

<u>ه</u>		br0 (brei	nt-523) Configure So	ettings					
		P Current: LINK-D Driver Info: Port Ty	ort Status Informa OWN PROBE-ERRO ype: Bridge Drive	ation IR TSO UFO GSO GRO r: bridge(2.3) Bus: N//	A.				
	Port Configurables								
Enable ——		General Int	erface Settings	1	Spanning-Tree				
Set IF Down	Down	Aux-Mgt			Aging Time:	300	-		
Set MAC	DHCP-IPv6	✓ DHCP Release	DHCP Vendor ID:	None 💌	Bridge Priority:	32768	-		
Set TX Q Len	DHCP-IPv4	Secondary-IPs	DHCP Client ID:	None 💌	Max Age:	20	-		
Set MIU	DNS Servers:	BLANK	Peer IP:	NA	Hello Time:	2	-		
Set Bridge Info	IP Address:	195.1.2.1	Global IPv6:	AUTO	Forwarding Delay:	15	-		
	IP Mask:	255.255.255.0	Link IPv6:	AUTO					
	Gateway IP:	0.0.0.0	IPv6 GW:	AUTO					
	Alias:		MTU:	1500					
	MAC Addr:	00:00:00:00:00:00	TX Q Len	0					
	Rpt Timer:	medium (8 s) 🔻	WiFi Bridge:	NONE					
	Bridg	je Information	Remov	e Ports					
Services —	Conligured Po	rts Current Ports	Add Po	rts					
			vap 1						
	Print View	Details P	robe Sync	Apply OK	Cancel				

- A. Enter vap0 and vap1 into the text box as shown above.
- B. Click Add Ports.
- C. Click Apply then Sync. The Current Ports column should now show vap0 and vap1.

Configured Ports	Current Ports
vap0	vap0
vapl	vapl

- D. Click \mathbf{OK} to close the window.
- K. Click **Apply** in Netsmith.
- 5. Create a redirect-device inside the virtual router. The Android will connect to this port for management purposes.

A. Right-click in the Netsmith window and select New Connection.

\$	Create/Mo	dify	/ Connection	×		
			Interface-Cost:	1		
Port 1-A:	<auto create="" new="" port=""></auto>	•	RIP-Metric:	1		
Dort 1 D: V Skin	Auto Create New Ports		OSPF Area:	000.000.000.000		
РОПТЕВ. И ЗКІР		_	VRRP IP:	0.0.0/24		
WanLink: 🗹 Skip	<auto create="" new="" wanlink=""></auto>	•	VRRP ID:	1		
Port 2-B: 🗹 Skip	<auto create="" new="" port=""></auto>	•	VRRP Priority:	100		
	Auto Crosto New Ports		VRRP Interval:	1		
Рогт 2-А: 🔄 SKIp	<auto create="" new="" port=""></auto>	•	Next-Hop:			
DHCP Lease Time:	43200		Subnets (a.b.c.d/xx):			
DHCP DNS:						
DHCP Range Min:						
DHCP Range Max:						
DHCP Domain:	example.com					
DHCPv6 DNS:			Next-Hop-IPv6:			
DHCPv6 Range Min:	0::0		IPv6 Subnets (aaa::0/xx):	1		
DHCPv6 Range Max:				<u> </u>		
DHCPd Config File:]		
]		
]		
NAT DHCP	DHCPv6 Custom DHC	P	VRRP Cand-RP			
	OK		Cancel			

- A. Select the Skip checkbox for Port 1-B, WanLink, and Port 2-B.
- B. Click OK
- B. Click Apply in Netsmith.
- C. Drag one of the rdd interfaces into the virtual router (rddVR0 is used in this example). The interface box should change to green.



A. Note: The other rdd (rddVR1 in this case) will not be used and can be ignored.

- D. Click **Apply** in Netsmith.
- E. Right click rddVR0 and select Modify Port.

<u>\$</u>		rddVR0	(brent-523) Config	ure Setting	s		D	
		Currenti	Port Status Info	rmation		0		
		Current: I	LINK-UP PROBE-ERI					
		Driver mito. i	Port Type. Redirec	L-Device i	Peer. ruuv			
Port Configurables								
Enable General Interface Settings								
Set IF Down						0 10bt-HD	🗌 10bt-HD	
Set MAC	Down	Aux-Mat				0 100L-PD	10bt-FD	
🔲 Set TX Q Len				Nana		0 100bt-FD	100bt-HD	
Set MTU	DHCP-IPV6	DHCP Release	DHCP vendor ID:	None	·	0 10G-FD	100bt-FD	
Set Offload	DHCP-IPv4	Secondary-IPs	DHCP Client ID:	None	•	O Autonegotiate	1000-FD	
Set PROMISC	DNS Servers:	BLANK	Peer IP:	NA			10G-FD	
Set Rx-All/FCS	IP Address:	195.1.1.1/24	Global IPv6:	AUTO		Renegotiate	40G-FD	
🔲 Set Bridge Info	IP Mask:	0.0.0.0	Link IPv6:	AUTO		Restart Xcvr	Flow-Control	
1	Gateway IP:	0.0.0.0	IPv6 GW:	AUTO				
Services	Alias:		MTU:	1500		RX-ALL	Offload	
	MAC Addr:	a6:b5:cc:73:01:e3	TX Q Len	1000		RX-FCS	ISO Enabled	
	Br Cost:	Ignore 🗸	Priority:	Ignore	-	Bypass NOW!	UFO Enabled	
BADIUS	Rot Timer:	medium (8 s) 🔻	WiFi Bridge:	NONE	-	Bypass Power-UP	GSO Enabled	
	npe inneri					Bypass Power-DOWN		
						Bypass Disconnect	GRO Enabled	
	Print V	iew Details	Probe Sync		Apply	OK Cancel		

- A. Set the IP Address to 195.1.1.1/24
- B. Click OK.
- F. Close Netsmith.
- 6. Set up the Android device.
 - A. Install LANforge Resource from the Google Play Store.



B. Once installed, connect your device to **android-test** using Android's WiFi setup.



C. Launch the LANforge Resource app and set the values below.

Saving screenshot									
🛫 LANforge 5.3.3									
Configure LANfo Realm	orge Resource								
195									
Manager IP:por	t								
195.1.1.1									
Resource ID									
2									
Apply	Start Stop Remove								
1	2	3	• .						
4	5	6	,						
7	8	9	×						
	0		Done						

- A. Realm 195
- B. Manager IP:port: 195.1.1.1
- C. Resource ID: 2

D. Push the **Apply** button to apply changes and start LANforge. After 20-30 seconds the LANforge system should see the Android device connect.



- 7. Create and run a Layer-3 UDP connection.
 - A. Go to the Status tab, and click the Netsmith button for the AP system (Resource 1 in this example).

Stop All Restart Manager Refresh HELP Generic Test Mgr Test Group Resource Mgr Event Log Alerts Port Mgr Station Mgr Messages Status Layer-3 L3 Endps VolP/RTP VolP/RTP Event Log Alerts Port Mgr Station Mgr Messages License Info Current Users	<u>\$</u>	LANforge Manager Versio	n (5.3.3)						
Stop All Restart Manager Refresh HELP Generic Test Mgr Test Group Resource Mgr Event Log Alerts Port Mgr Station Mgr Messages Status Layer-3 L3 Endps VolP/RTP VolP/RTP Alerts Port Mgr Station Mgr Messages License Info Current Users Test Configuration Database List: day_351 Load Licenses expire in: 118 days. auserver from:127.0.0.1 List: day_351 Load Support expires in: 118 days. virtual Shelf 1 Download DB Show Progress	Control Reporting Tear-Off Info P	ugins							
Generic Test Mgr Test Group Resource Mgr Event Log Alerts Port Mgr Station Mgr Messages Status Layer-3 L3 Endps VoIP/RTP VoIP/RTP Endps Armagedon WanLinks Attenuators File-10 Layer-4 License Info License Info License expire in: 118 days. Support expires in: 118 days. Virtual Shelf 1 Resource 2 Resource 1 Netsmith Netsmith		Stop All	Restart M	anager R	efresh HELP				
General Layer-3 L3 Endps VolP/RTP Even Logy Arents Polt High Patch High Pessages File-IO Layer-4 License Info Current Users Test Configuration Database Ist: Iday_351 Load Licenses expire in: 118 days. * Admin from:192.168.100.133 Ist: Iday_351 Load Support expires in: 118 days. Ist: Ist: Iday_351 Load Virtual Shelf 1 Essource 1 Ist: Download DB Show Progress Virtual Shelf 1 Resource 1 Ist: <	Gaparic Tast Mar Tast Grou	Posource Mar Event Log Alert	C Port Mar	Station Mar Mossages					
License Info Licenses expire in: 118 days. Support expires in: 118 days. Virtual Shelf 1 Resource 2 Resource 1 Netsmith Netsmith	Status Layer-3 L3 Endps	VoIP/RTP VoIP/RTP Endps Arma	igeddon Wan	Links Attenuators	File-IO Layer-4				
License expire in: 118 days. Support expires in: 118 days. Virtual Shelf 1 Resource 1 Netsmith									
Licenses expire in: 118 days. Support expires in: 118 days. Virtual Shelf 1 Resource 1 Netsmith Netsmith	License Info	* Admin from: 192 168 100 133	10	est Configuration Datab	ase				
Support expires in: 118 days.	Licenses expire in: 118 days	gnuserver from:127.0.0.1	List:	day_351 💌	Load				
Support expires in: 118 days.	Licenses expire in. 110 days.		Name:		Delete				
Support expires in: 118 days.			Load Behavior:	Choose One	Save				
Virtual Shelf 1 Resource 1 Netsmith Netsmith	Support expires in: 118 days.								
Virtual Shelf 1 Resource 2 Netsmith Netsmith				Download DB	Show Progress				
Virtual Shelf 1 Resource 2 Netsmith Netsmith									
Resource 2		Virtual Shelf	1		1				
Resource 1 Netsmith Netsmith Netsmith		Re	source 2						
Resource 1 Netsmith Netsmith Netsmith		••							
Netsmith Netsmith		Resource 1							
Netsmith Netsmith Netsmith		•• •• •• ••							
Netsmith									
Netsmith		Netsmith							
Netsmith									
	Netsmith								
Longed in to: brent-523:4002 as: Admin	Logged in to: brent-523:4002 as	· Admin							

B. Create a redirect-device inside the virtual router.

A. Right-click in the Netsmith window and select New Connection.

		Interface-Cost:	1
Port 1-A:	<auto create="" new="" port=""></auto>	RIP-Metric:	1
Port 1-B: 🗹 Skip	<auto create="" new="" port=""></auto>	OSPF Area: VRRP IP:	000.000.000.000
WanLink: 🗹 Skip	<auto create="" new="" wanlink=""> 🔻</auto>	VRRP ID:	1
Port 2-B: 🗹 Skip	<auto create="" new="" port=""></auto>	VRRP Priority: VRRP Interval:	100
Port 2-A: 🔲 Skip	<auto create="" new="" port=""></auto>	Next-Hop:	
DHCP Lease Time:	43200	Subnets (a.b.c.d/xx):	
DHCP DNS:			
DHCP Range Min:			
DHCP Range Max:]	
DHCP Domain:	example.com		
DHCPv6 DNS:		Next-Hop-IPv6:	
DHCPv6 Range Min:		IPv6 Subnets (aaa::0/xx)	
DHCPv6 Range Max:			
DHCPd Config File:			
	DHCPv6 Custom DHCP	VRRP Cand-RP	
		Cancel	

- B. Select the **Skip** checkbox for Port 1-B, WanLink, and Port 2-B.
- C. Click OK.
- D. Click Apply in Netsmith.
- E. Drag rddVR2 into the virtual router. The interface box should change to green.



F. Click Apply in Netsmith.

G. Right click rddVR2 and select Modify Port.

		rddVR2	(brent-523) Config	ure Settings			
		Current: L Driver Info: F	Port Status Info INK-UP PROBE-ERI Port Type: Redirec	rmation ROR TSO UFO GS t-Device Peer: 1	O GRO rddVR	0	
			Port Configur	ables			
——Enable ——		General Int	erface Settings			Port Rates	Advert Rates
Set IF Down Set MAC	Down	Aux-Mgt				0 10bt-HD 0 10bt-FD 0 100bt-HD	10bt-HD
Set TX Q Len Set MTU	DHCP-IPv6 DHCP Relea		DHCP Vendor ID:	None	-	0 1000-FD 0 1000-FD 0 10G-FD	100bt-HD
Set Offload	DNS Servers:	Secondary-IPs	DHCP Client ID:	None	-	O Autonegotiate	1000-FD
Set PROMISC	IP Address:	195.1.3.1/24	Global IPv6:	AUTO		Renegotiate	0G-FD
Set Bridge Info	IP Mask:	0.0.0.0	Link IPv6:	AUTO		Restart Xcvr	Flow-Contro
- Services	Gateway IP: Alias:	0.0.0.0	MTU:	AUTO 1500		RX-ALL	Offload
HTTP	MAC Addr:	2e:e8:dd:7a:00:a9	TX Q Len	1000		Bypass NOW!	UFO Enable
RADIUS	Rpt Timer:	medium (8 s) 🔻	WiFi Bridge:	NONE	- -	Bypass Power-UP	GSO Enable
						Bypass Disconnect	GRO Enable
	Print Vi	ew Details	Probe Sync	Apply		OK Cancel	

- I. Set the IP Address to 195.1.3.1/24
- II. Click OK.
- H. Right click rddVR3 and select Modify Port

<u>\$</u>	📓 rddVR3 (brent-523) Configure Settings 📃 🔍 🔍										
Port Status Information											
	Current: LINK-UP PROBE-ERROR TSO UFO GSO GRO										
Driver Info: Port Type: Redirect-Device Peer: rddVR2											
Port Configurables											
Enable ——		General Int	erface Settings		1	Port Rates	-Advert Rates-				
Set IF Down			-			O 10bt-HD	10bt-HD				
Set MAC	Down	Aux Mat				O 100t-FD	10bt-FD				
Set TX Q Len	Down	Aux-Higt				0 100bt-FD	100bt-HD				
Set MTU	DHCP-IPv6	✓ DHCP Release	DHCP Vendor ID:	None		● 1000-FD ● 10G-FD	100bt-FD				
Set Offload	DHCP-IPv4	Secondary-IPs	DHCP Client ID:	None	-	O 40G-FD	1000-FD				
Set PROMISC DNS	S Servers:	BLANK	Peer IP:	NA		1 • · · · · · · · · ·	10G-FD				
Set Rx-All/FCS	Address:	195.1.3.2/24	Global IPv6:	AUTO		Renegotiate	40G-FD				
Set Bridge Info	Mask:	0.0.0.0	Link IPv6:	AUTO		Restart Xcvr	Flow-Control				
Gat	teway IP:	195.1.3.1	IPv6 GW:	AUTO		PROMISC	,				
Alia	as:		MTU:	1500		RX-ALL	Offload —				
Services MAG	C Addr:	02:85:d7:b0:4f:50	TX Q Len	1000		RX-FCS	✓ TSO Enabled				
	Cost:	Ignore 💌	Priority:	Ignore		Bypass NOW!	UFO Enabled				
	Timor	modium (9 c) -	WIEL Dridges	NONE		Bypass Power-UP	✓ GSO Enabled				
RADIUS RPL	t rimer:		wiFi Bridge:	NONE		Bypass Power-DOWN	LRO Enabled				
						Bypass Disconnect	GRO Enabled				
D	Print Vi	ew Details	Probe Sync	An		OK Cancel					
	VI	en becans	Sync	Ар		Cancer					

- I. Set the IP Address to 195.1.3.2/24
- II. Set the Gateway IP to 195.1.3.1
- III. Click OK.
- I. Close Netsmith.

C. Go to the Layer-3 tab, click Create.

🛃 LANforge Manager Version(5.3.3)									
<u>Control</u> <u>R</u> eporti	Control Reporting Tear-Off Info Plugins								
					Stop All	Restart M	lanager	Refresh HELP	
Generic Test Mar Test Group Resource Mar Event Log Alerts Port Mar Station Mar Messages									
Status Layer-3 L3 Endps VolP/RTP Event Edg Armageddon WanLinks Attenuators File-IO Layer-4									
Rpt Timer: default (5 s) 🔻 Go Test Manager all 💌 Select All Start Stop Quiesce Clear									
View	0 - 20	00		🔻 Go	•	Displ	ay Cr <u>e</u> ate <u>M</u> o	odify Delete	
				-Cross Cor	nects for Selecte	d Test Manager	.		
Name	Name Type State Pkt Rx A				Pkt Rx B Bps Rx A Bps		Bps Rx B Rx Drop % A Rx Drop % B Drop Pkt		
Logged in to:	brent-	523:4002	as: Admin						

D. Set the below values. Note that Endpoint B Resource will differ depending on the Android device type.

android-udp - Create/Modify Cross Connect										
+ - All Display Sync Batch-Create Apply OK Cancel										Cancel
Cross-Connect 2 Cross-Co										1
CX Name:	android-udp			_		Report Timer:	fast (1 s)			-
CX Type:	LANforge / UDP			•			Endpoint A Endpoint B			
	Endpoint A		Endpoint B			Pld Pattern	increasing	-	increasing	-
Resource:	1 (brent-523)	•	2 (Nexus)	•		Min IP Port:	Αυτο	-	Αυτο	-
Port:	10 (br0)	•	26 (wlan0)	•		Max IP Port:	Same	-	Same	
Min Tx Rate:	Tl (1.544 Mbps)	•	Zero (0 bps)	•		Min Duration:	Forever	-	Forever	-
Max Tx Rate:	Same	•	Same	•		Max Duration:	Same	-	Same	
Min PDU Size:	AUTO	-	AUTO	-		Min Beconni	0 (0 ms)	-	0 (0 ms)	
Max PDU Size:	Same	-	Same	-		Mill Reconn.	Como	-	Como	
IP ToS:	Best Effort (0)	-	Best Effort (0)	-		Max Reconn:		•	Salle	
Pkts To Send	Infinite	-	Infinite	-		Multi-Conn:	Normal (0)	•	Normal (0)	
r kts ro sena.							Script		Script	
							Thresholds		Thresholds	

- A. CX Name: android-udp
- B. Endpoint A Resource: brent-523
- C. Endpoint B Resource: Nexus
- D. Endpoint A Port: br0
- E. Endpoint B Port: wlan0
- F. Endpoint A Min Tx Rate: T1 (1.544 Mbps)
- G. Endpoint B Min Tx Rate: Zero (0 bps)
- H. Report Timer: fast (1 s)
- I. Click OK.

E. Start running traffic.

🛃 LANforge Manager Version(5.3.3) 🗕 🗆 🗙									
Control Reporting Tear-Off Info Plugins									
Stop All Restart Manager Refresh HELP									
Generic Test Mar T	est Group Resou	Irce Mar Ev	vent Log Alert	s Port Mar S	Station Mor	Messages			
Status Layer-3 L3	3 Endps VolP/RTF	P VoIP/RTP	PEndps Arma	geddon Wan	Links Atte	enuators File-IO	Layer-4		
Rpt Timer: default	Rpt Timer: default (5 s) 🔻 Go Test Manager all 💌 Select All Start Stop Quiesce Clear								
View 0 - 200		▼ Go		Displa	ay Cr <u>e</u> ate	Modify Delet	e		
		-Cross Conn	ects for Selecte	d Test Manager-					
Name Type	State Pkt Rx A	Pkt Rx B	Bps Rx A	Bps Rx B	Rx Drop % A F	Rx Drop % B Drop Pkt	s A Drop Pkts		
android-udp LF/UDP Rui	n 0	7,595	0	1,469,798	0	3.629	0 28		
android-udp LF/UDP Run 0 7,595 0 1,469,798 0 3.629 0 28									
Logged in to: brent-523	3:4002 as: Admin	II							
Logged in to: brent-523	3:4002 as: Admin								

- A. Select the android-udp connection.
- B. Click Start.
- F. Connect your Android device to **android-test2**. Traffic should start flowing again after about 20-30 seconds.

1	l 🗘		?	10:33
(‡) w	'i-Fi			ON
andr Conne	oid-test2			\$
e3k-2 Saved	2 g-1 , secured with W	PA2		F
andr Saved	oid-test			¢
CBCI Secure	-CE22-2.4 ed with WPA/WF	A2 (WPS availab	ole)	7
xfinit	ywifi			\$
Have	e n-Wifi ed with WPA2			7
CBCI Secure	-4EC0-2.4 ed with WPA/WP	PA2 (WPS availat	ole)	-
\$		+		:
	()	\square		

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