

First-time User Introduction to LANforge: Scripting and GUI

Goal: This outline is a rough and generic overview of our GUI. This outline, that references other Candela Technologies documentation on our website, briefly covers basic GUI tasks and traffic generation that may be shown to a new customer whom has never used the GUI before, without overloading them with great detail.



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2. Basic GUI Port Manager layout and introduction:

• After connecting the GUI, the interface will automatically open to the *Status* page. There are 28 tabs/pages that the GUI has, not including the *Netsmith* View and the *Chamber View*.

A. Editing the GUI tabs and *Port Manager* to display relevant information

- Upon opening the GUI, several default GUI tabs open as well. Depending on what upcoming WiFi testing must occur, more (or less) GUI tabs may need to be open than the ones defaulted.
- When running python scripts aimed to automate the GUI, the tabs that the actions in the script are occuring in must be displayed in the GUI (unless the user is running the GUI in headless mode).
- A. To **display** tabs that are hidden:
 - Click on the + tab under *Refresh* in the top right hand corner. Then, select which tabs to add to the GUI display.

LANforge Manager Version(5.4.3) – 🗆	×
Control Reporting Windows Info Tests	
Chamber View Stop All Restart Manager Refresh HEL	Р
File-10 Generic Resource Mgr DUT Profiles Traffic-Profiles Alerts Messages Warnings Wift-Messages +	
Status Port Mgr / Layer-3 / L3 Endps / Layer 4-7 / Armageddon / WanLinks / VoIP/RTP Endps	
Attenuators Collision-Domains Events PPP RF-Generator	
Spans Stations Test Group Test Mgr	
Logged in to: 192.168.92.12:4002 as: Admin	_

- B. To **hide** tabs that are currently displayed:
 - Right-click the mouse on any tab that is aimed to remove and click *Hide*. This is will
 remove the tab from the GUI interface currently and will be placed under the *+* category.

B. Customization of Column Display in the Port Manager

A. In the second tab, *Port Manager*, comes downloaded with all the tab columns selected to be displayed (73 columns). To change which columns are selected and displayed, Right-click the mouse in any column space and select *Add/Remove Table Columns*. From that point, select the necessary columns wished to be displayed in the *Port Manager*.

		e Table Columns		rofiles	Alerts	er 4-7	Warnings Armage	Wifi-Messages	+ WanLinks	VolP/RTP
			<u>~</u>							VOIF/KTF
4Way Time (us)	Activity	🖌 Alias	ANQP Time (us)	Down	1	Clear Counters	Reset F	Port Dele	<u>t</u> e	
AP	Beacon	🔲 bps RX	🔲 bps RX LL	VRF	I	Display	Cr <u>e</u> at	e Mo <u>d</u>	ify <u>B</u> atch Modify	
🔲 bps TX	bps TX LL	Bytes RX LL	🔲 Bytes TX LL	Interface	es (Por	ts) for all Resou	rces. ——			
Channel	Collisions	Connections	Crypt							
CX Ago	CX Time (us)	Device	DHCP (ms)	4	ΑP	IP	Mod	de Signal	MAC	
Down I	Gateway IP	₽ IP	IPv6 Address	Not Acc	ociato	d 0.0.0.0	AUTO 20	0 dPm	00:0e:8e:56:bd:f0	
			_			d 0.0.0.0	AUTO 20		00:0e:8e:5a:6e:33	
IPv6 Gateway	Key/Phrase	Login-Fail	Login-OK			d 0.0.0.0	AUTO 20		00:0e:8e:32:12:cf	
Logout-Fail	Logout-OK	MAC MAC	Mask			d 0.0.0.0	AUTO 20		00:19:70:be:5e:0a	
Misc	🖌 Mode	MTU				d 0.0.0.0 d 0.0.0.0	AUTO 20 AUTO 20		00:0e:8e:32:e6:cf 00:0e:8e:32:e7:cf	
Noise	Parent Dev	🖌 Phantom Ø				d 0.0.0.0	AUTO 20		00:0e:8e:32:de:cf	
Port Type	Pps RX	Pps TX	QLEN			d 0.0.0.0	AUTO 20		00:19:70:be:9e:0a	
Reset	Retry Failed	RX Bytes	RX CRC	1 Not-Ass	ociate	d 0.0.0.0	AUTO 20		00:19:70:be:d0:0a	
			_	_		192.168.92.1	2		0c:c4:7a:86:69:18 0c:c4:7a:86:69:19	
RX Drop	RX Errors	RX Fifo	RX Frame			0.0.0.0	802.11a		00:0e:8e:32:12:cf	
RX Length	RX Miss	RX Over	RX Pkts			0.0.0.0	802.11a		00:0e:8e:5a:6e:33	
RX-Rate	SEC SEC	🖌 Signal	SSID			0.0.0.0	802.11a		00:19:70:be:5e:0a	
Status	Time-Stamp	TX Abort	TX Bytes			0.0.0.0	802.11a		00:0e:8e:56:bd:f0	
TX Crr	TX Errors	TX Fifo	TX HB	4		0.0.0.0	AUTO 20 AUTO 20		00:0e:8e:4c:e0:cf 00:0e:8e:3c:2e:cf	
TX Pkts	TX Wind	TX-Failed %	TX-Rate	4		0.0.0.0	AUTO 20		00:0e:8e:2a:15:cf	
		I Arralled %	iAnate	4		0.0.0.0	AUTO 20		00:0e:8e:53:46:cf	
WiFi Retries										
	<u>S</u> elect All	Apply	<u>C</u> ancel							

- B. After selecting the columns that wish to be displayed, Right-click the mouse again in the body/rows of the *Port Manager* and select *Save-table Layout*. This will make sure the changes don't revert the next time the GUI is opened and closed.
- C. After resizing, one can also Right-click the mouse in the body/rows of the *Port Manager* and select *Auto-size*, to auto-size the columns to make sure that all the words under each column are in vision at first glance.
- D. Tip: hot-keys are enabled throughout the entirety of the GUI. In some places in the GUI, there are lines underneath some letters in buttons. To use the keyboard shortcut for that button, press Alt + that letter underlined in the word to press the button. This also works for drop-down menus when the shortcut is enabled via an underlined letter in a word. **Note:** MAC users need to use key combo ctl+alt + letter to do shortcuts. Circled below are some examples of hotkeys enabled.

	_			_	LANfor	ge Manager	Version(5.4.3)				
ontrol	Repo	rting Wind <u>o</u> w	/s Info	Tests							
	-		-			Chamber View		Stop All	Restart	Manager	Refresh HELP
VolP/R1	P End	lps File-IO	Generic	Resource	Mgr DUT Profiles Traffic-P	rofiles Alerts	Messages	Warnings Wifi-M	essages	+	
	atus		ort Mar		aver-3 L3 Endps	Layer		Armageddon		WanLinks	VolP/RTP
	acus						47	Annugeddon			000/1011
		Dis	sp: 10.25	3.1.30:1	Sniff Packets	Down 1	Clear Counters	Reset Port	Dele	ete	
		Rp	t Timer:	nedium (8 s	5) V Apply	VRF I	Display	Create	Mod	lify Batch Modify	
			L			Interfaces (Port			-		_
		1		E 12	All Etherhet				1		
Port	Ø	Parent Dev	Channel	Alias	SSID	AP	IP	Mode	Signal	MAC	
1.1.06		wiphy3	1	wlan3		Not-Associated	0.0.0.0	AUTO 20	0 dBm	00:0e:8e:56:bd:f0	
1.1.07	-	wiphy1	157	wlan1		Not-Associated	0.0.0.0	AUTO 20	0 dBm	00:0e:8e:5a:6e:33	
1.1.08	1	wiphy0	157	wlan0		Not-Associated	0.0.0.0	AUTO 20	0 dBm	00:0e:8e:32:12:cf	
1.1.09		wiphy2	0	wlan2		Not-Associated	0.0.0.0	AUTO 20	0 dBm	00:19:70:be:5e:0a	
1.1.10		wiphy0	157	sta0000	jedway-wpa2-x2048-4	Not-Associated	0.0.0.0	AUTO 20	0 dBm	00:0e:8e:32:e6:cf	
1.1.11	1	wiphy0	157	sta0001	jedway-wpa2-x2048-4-4	Not-Associated	0.0.0.0	AUTO 20	0 dBm	00:0e:8e:32:e7:cf	
1.1.12	1	wiphy0	157	sta0002	jedway-wpa2-x2048-4-4	Not-Associated	0.0.0.0	AUTO 20	0 dBm	00:0e:8e:32:de:cf	
1.1.16		wiphy2	0	sta2000	jedway-wpa2-x2048-4-1	Not-Associated	0.0.0.0	AUTO 20		00:19:70:be:9e:0a	
.1.18	1	wiphy2	0	sta2002	jedway-wpa2-x2048-4-1	Not-Associated		AUTO 20		00:19:70:be:d0:0a	
L.1.00				eth0			192.168.92.12	2		0c:c4:7a:86:69:18	
1.1.01				ethl			0.0.0.0			0c:c4:7a:86:69:19	
1.1.02				wiphy0			0.0.0.0	802.11abgn		00:0e:8e:32:12:cf	
.1.03				wiphy1			0.0.0.0	802.11abgn		00:0e:8e:5a:6e:33	
1.1.04				wiphy2			0.0.0.0	802.11an-AC		00:19:70:be:5e:0a	
1.1.05				wiphy3			0.0.0.0	802.11abgn		00:0e:8e:56:bd:f0	
1.1.13				stal234	jedway-wpa2-x2048-4		0.0.0.0	AUTO 20		00:0e:8e:4c:e0:cf	
1.1.14				stal235	jedway-wpa2-x2048-4		0.0.0.0	AUTO 20		00:0e:8e:3c:2e:cf	
1.1.15				stal236	jedway-wpa2-x2048-4		0.0.0.0	AUTO 20		00:0e:8e:2a:15:cf	
1.1.17		wiphy0	157	stal237	jedway-wpa2-x2048-4		0.0.0.0	AUTO 20	0 dBm	00:0e:8e:53:46:cf	

3. LANforge GUI Tab Introduction

A. Status tab:

Please read the see also below (LANforge Manager) to read about the LANforge Status tab. This is where information about the server is typically stored, configurations of the GUI are able to be saved, and where the *Netsmith* is.

	LANforge Manager	Version(5.4.3)	8
<u>C</u> ontrol <u>R</u> eporting Wind <u>o</u> ws <u>I</u> nfo <u>T</u> es	ts		
	Chamber <u>V</u> iew <u>S</u> t	op All Restart Manager	Refresh HELP
	JT Profiles Traffic-Profiles Ale		+
Status Port Mgr Layer-3		Armageddon WanLinks VolP/RTP	VoIP/RTP Endps
License Info	Current Users	Saved Test Configurati	ions
Licenses expire in: 27 days.	* Admin from:10.253.1.30 Admin from:127.0.0.1	Configuration: DFLT	▼ Load
Support expires in: 27 days.	gnuserver from:127.0.0.1	Download DB Show Progress	Delete
Status Vie <u>w</u> : Ports by Resource		Name:	Save
Realm 12	Manager/Res		
	Netsmi		

For more information see Step 2: LANforge Manager

B. Port Mgr tab:

The *Port Mgr* tab is where all the ports and representations of the radios, wifi objects, and ethernet connections are located. The *Port Mgr* (or *Port Manager*) includes the location/appearance of all further MAC-VLANs, 802.1Q-VLANs, Redirects, Bridges, Bonds, GRE Tunnels, WiFi Stations, WiFi VAPs, WiFi Monitors and WiFi Virtual Radios. Please read more about the *Port Mgr* tab next to *see-also* below

			Chan	nber <u>V</u> iew	<u>S</u> top All	Resta	art Manager	<u>R</u> efre	sh	HELP
Gen	eric Resou	rce Mar		ofiles Traffic-Profiles	Alerts	lessages Wa	arnings Wifi-Mes	sages +		
7	Port Mar	Laver-3		ndps Laver 4-7	Armag				P/RTP En	dps
	5 1 00 1		0.100						-	· ·
10.	253.1.30:1		Shiff Paci	kets 🕑 Down	Clear	Counters	Reset Port	Dele <u>t</u> e		
mer	medium (8	s) 🔻	Apply		1 D	isplay	Create	Modify Bat	ch Modif	v
					res (Ports) for	all Resources				
				, a concrete internat		all neovarces.				
Į	Parent Dev	Channel	Alias	SSID		AP	IP	Mode	Signal	
	u interno		ula a D					41170.00	0.40	00.0
										00:0e
										00:0e
-										00:19
-		-		iedway.wpa2.v2ada	edaed049-4-4					00:0e
										00:0e
-										00:0e
_										00:19
_										
	wipriyz	0		Jeaway-wp	142-12040-4-1	Not Associate		A010 20	U UDIII	0c:c4
			otino				TOTIODIOTICE			0c:c4
		0						802 11 ahan		00:0e
										00:0e
-										00:19
-										00:0e
		157	stal234	iedwav-	wpa2-x2048-4		0.0.0.0	AUTO 20	0 dBm	00:0e
		157	stal235		wpa2-x2048-4		0.0.0.0	AUTO 20		00:0e
	to the state of the	157	stal236		wpa2-x2048-4		0.0.0.0	AUTO 20		00:0e
	wiphy0						0.0.0.0	AUTO 20		
	mer:	10.253.1.30:1 mer: medium (8	10.253.1.30:1 mer: medium (8 s) ▼ I Parent Dev Channel ✓ wiphy3 1 ✓ wiphy1 157 ✓ wiphy2 0 ✓ wiphy2 0 ✓ wiphy0 157 ✓ wiphy0 157 ✓ wiphy0 157 ✓ wiphy0 157 ✓ wiphy0 157 ✓ wiphy2 0	10.253.1.30:1 Sniff Pacl mer: medium (8 s) ▲ Image: medium (8 s) ▲ Image: wiphy3 Image: Man3 ✓ wiphy1 157 wlan3 ✓ wiphy0 157 wlan0 ✓ wiphy0 157 sta0000 ✓ wiphy0 157 sta0001 ✓ wiphy0 157 sta2000 ✓ wiphy0 157 sta20002 ✓ wiphy2 0 sta2002 ✓ wiphy2 0 sta2002 ✓ wiphy0 157 sta001 ✓ wiphy0 157 sta0001 ✓ wiphy0 157 sta2002 ✓ wiphy0 0 wiphy0 ✓ 0 wiphy0 157	10.253.1.30:1 Sniff Packets ✓ Down mer: medium (8 s) ▲ Apply ∨RF All Ethernet Interface All Ethernet Interface I Parent Dev Channel Alias SSID ✓ wiphy3 1 wlan3 ✓ ✓ wiphy0 157 wlan0 ✓ ✓ wiphy0 157 sta0000 jedway-wpa2-x2ada ✓ wiphy0 157 sta0000 jedway-wp ✓ wiphy0 157 sta0000 jedway-wp ✓ wiphy0 157 sta0002 jedway-wp ✓ wiphy0 157 sta0002 jedway-wp ✓ wiphy0 157 sta0002 jedway-wp ✓ wiphy2 0 sta2002 jedway-wp ✓ wiphy2 0 sta2002 jedway-wp ✓ wiphy0 0 wiphy0 intace ✓ 0 wiphy0 intace wiphy0 ✓ 0 wiphy0 intace wiphy0	10.253.1.30:1 Sniff Packets ✓ Down 1 Clear mer: medium (8 s) ▲ Apply ∨RF ↓ D All Ethernet Interfaces (Ports) for ✓ All Ethernet Interfaces (Ports) for ✓ wiphy3 1 wlan3 ✓ wiphy0 157 wlan0 ✓ wiphy0 157 sta0000 ✓ wiphy0 157 sta0001 ✓ wiphy0 157 sta0002 ✓ wiphy0 157 sta00048-4-4 ✓ wiphy0 157 sta0002 ✓ wiphy0 157 sta00048-4-4 ✓ wiphy0 157 sta0002 ✓ yedway-wpa2-x2048-4-1 ✓ wiphy2 0 sta2002 ✓ yedway-wpa2-x2048-4-1 ✓ wiphy0 0 wiphy0 0 wiphy0 0 wiphy0 0 wiphy0 0	10.253.1.30:1 Sniff Packets ✓ Down 1 Clear Counters mer: medium (8 s) ▲ Apply ∨RF I Display All Ethernet Interfaces (Ports) for all Resources. I Parent Dev Channel Alias SSID AP ✓ wiphy3 1 wlan3 Not-Associate ✓ wiphy0 157 wlan0 Not-Associate ✓ wiphy0 157 sta0000 jedway-wpa2-x2048-44 Not-Associate ✓ wiphy0 157 sta0000 jedway-wpa2-x2048-44 Not-Associate ✓ wiphy0 157 sta0000 jedway-wpa2-x2048-44 Not-Associate ✓ wiphy0 157 sta0002 jedway-wpa2-x2048-44 Not-Associate ✓ wiphy0 157 sta0002 jedway-wpa2-x2048-44 Not-Associate ✓ wiphy2 0 sta2002 jedway-wpa2-x2048-44 Not-Associate ✓ wiphy2 0 wiphy0 0 wiphy0 0 wiphy0<	10.253.1.30:1 Sniff Packets ✓ Down 1 Clear Counters Reset Port mer: medium (8 s) Apply VRF I Display Create All Ethernet Interfaces (Ports) for all Resources. All Ethernet Interfaces (Ports) for all Resources. IP I Parent Dev Channel Alias SSID AP IP ✓ wiphy3 1 wlan3 Not-Associated 0.0.00 ✓ wiphy0 157 wlan0 Not-Associated 0.0.00 ✓ wiphy0 157 sta0000 jedway-wpa2-x2048-44-Not-Associated 0.0.00 ✓ wiphy0 157 sta0001 jedway-wpa2-x2048-44-Not-Associated 0.0.00 ✓ wiphy0 157 sta0002 jedway-wpa2-x2048-44-Not-Associated 0.0.00 ✓ wiphy0 157 sta0002 jedway-wpa2-x2048-44-Not-Associated 0.0.00 ✓ wiphy2 0 sta2002 jedway-wpa2-x2048-44-Not-Associated 0.0.00 ✓ wiphy2 0 sta2002 jedway-wpa2-x2048-41-Not-Associated 0.0.00 ✓ wiphy2 0 sta2002 jedway-wpa2-x2048-41-Not-Associated	10.253.1.30:1 Sniff Packets ✓ Down 1 Clear Counters Reset Port Delete mer: medium (8 s) ▲ Apply VRF I Display Create Modify Bat All Ethernet Interfaces (Ports) for all Resources. All Ethernet Interfaces (Ports) for all Resources. APP IP Mode ✓ wiphy3 1 wlan3 Not-Associated 0.0.0.0 AUTO 20 ✓ wiphy0 157 wlan0 Not-Associated 0.0.0.0 AUTO 20 ✓ wiphy0 157 sta0000 jedway-wpa2-x2adasdasd048-44 Not-Associated 0.0.0.0 AUTO 20 ✓ wiphy0 157 sta0001 jedway-wpa2-x2048-44 Not-Associated 0.0.0.0 AUTO 20 ✓ wiphy0 157 sta0001 jedway-wpa2-x2048-44 Not-Associated 0.0.0.0 AUTO 20 ✓ wiphy0 157 sta0001 jedway-wpa2-x2048-44 Not-Associated 0.0.0.0 AUTO 20 ✓ wiphy2 0 sta2002 jedway-wpa2-x2048-44 Not-Associated 0.0.0.0 AUTO 20 ✓ wiphy2 0 sta2002 jedway-wpa2-x2	10.253.1.30:1 Sniff Packets ✓ Down 1 Clear Counters Reset Port Delete mer: medium (8 s) Apply VRF T Display Create Modify Batch Modify All Ethernet Interfaces (Ports) for all Resources. All Ethernet Interfaces (Ports) for all Resources. IP Mode Signal ✓ wiphy3 1 wlan3 Not-Associated 0.0.0.0 AUTO 20 0 dBm ✓ wiphy0 157 wlan0 Not-Associated 0.0.0.0 AUTO 20 0 dBm ✓ wiphy0 157 sta0001 jedway-wpa2-x2048-44 Not-Associated 0.0.0.0 AUTO 20 0 dBm ✓ wiphy0 157 sta0001 jedway-wpa2-x2048-44 Not-Associated 0.0.0.0 AUTO 20 0 dBm ✓ wiphy0 157 sta0001 jedway-wpa2-x2048-44 Not-Associated 0.0.0.0 AUTO 20 0 dBm ✓ wiphy0 157 sta0002 jedway-wpa2-x2048-44 Not-Associated 0.0.0.0 AUTO 20 0 dBm ✓ wiphy0 157 <

For more information see Ports (Interfaces)

C. Layer-3 tab, L3 Endps tab:

The *Layer-3* tab are where Layer-3 WiFIRE traffic connections are made, started, stopped, modified, and displayed. Each cross-connects have 2 endpoints each. These endpoints and the traffic/data associated with them are found and elaborated under the *L3 Endps* tab in the GUI. Please visit the introduction to Layer-3 Cross-Connects, linked below, for a general overview.

2				LA	Nforge Managei	Version(5.2.1	3)				↑ □
ontrol <u>R</u> epo	rting <u>T</u> ea	ar-Off <u>I</u> nfo	<u>P</u> lugins								
						Stop All	I R	estart Manage	er	Refres	n HELF
Attenuators	File-IO Status	Layer-4	Test Mgr	Test Group Layer-3	Resource Mgr E	vent Log Alerts L3 End	Port Mgr	Messages		WanLinks	
	Status			Layer-5		L5 ENG	ips			WariLinks	
	Rpt Timer	fact	(1 s) 🔻	Go Test Mar	ager all	 Select 	All Sta	t Stop	Ouiesce	Clear	
	npt ninei		(15)	GO TEST Mai	lager all			c Scop	Quicace	cicui	
	View	0 - 200			Go		Display	Create M	odify	Delete	
	1000	0 - 200			00		Jopidy		Joury	Delete	
Cross Connects for Selected Test Manager											
							-				
Name	Туре	State	Pkt Rx A → B	Pkt Rx A ← B	Rate A → B	Rate A ← B	Rx Drop % A	Rx Drop % B	Drop Pkts A	Drop Pkts B	Avg RTT
kcdx-1	LF/UDP	Run	17,294	17,549	9,998,239	9,997,437	0	0	0	0	1
cdx-10	LF/UDP	Run	17,377	17,716	9,997,632	9,996,340	0	0	0	0	0
cdx-2	LF/UDP	Run	17,548	17,802	9,997,351	9,996,964	0	0	0	0	0
cdx-3	LF/UDP	Run	17,633	17,802	9,997,891	9,996,964	0	0	0	0	0
cdx-4	LF/UDP	Run	17.633	17,802	9,997,891	9,996,964	0	0	0	0	1
cdx-5	LF/UDP	Run	17,718	17,036	9,997,947	9,992,326	0	0	0	0	1
cdx-6	LF/UDP	Run	17,718	17,044	9,997,947	9,997,018	0	0	0	0	1
cdx-7	LF/UDP		17,718	17.044	9,997,947	9,997,018	0	0	0	0	1
cdx-8	LF/UDP		17,718	17,044	9,997,947	9,997,516	0		0	0	1
	15000		17 710	17044	0.007.047	0.007.010			-	0	
(¹											

For more information see Layer-3 Cross-Connects (FIRE)

D. Layer 4-7 tab:

The 'Layer 4-7' tab is currently where *Layer-4* HTTP, HTTPS, FTP, FTPS, TFTP, SCP and SFTP endpoints are made. These are stateful protocols that will communicate properly with third-party servers. FTP, FTPS, TFTP, SCP and SFTP can upload and download, and the other protocols are only for downloading. The Layer 4-7 tab is used to manage Layer 4-7 endpoints.

	oorting <u>T</u> ea										
						Stop All	Re	estart Manager	r	Refresh	1 HEL
Layer-4 (Generic T	est Mgr 🛛 I	Resource M	Agr Serial	Snans PPP	-Links Ev	ent Log 🛛 Al	erts Port Me	ar Messaa	05	
Status	Layer-3	L3 Endps			olP/RTP End		ageddon	WanLinks		n-Domains	File-IO
Status	Luyer 5	Lo Enaps	von	,	on / Kir End	///////////////////////////////////////	ugcuuon	maneniks	comstor	Domains	The to
Rpt Timer:	fast (1	s) 🔻	Go Test M	Manager all	-		Select All	Start	Stop Q	uiesce	Clear
		-/									
View	0 - 200			🔻 Go		Dis	splay Cr	eate Moo	lify Bat	ch Modify	Delete
				——Layer-	-4 Endpoints	for Selected	Test Manage	r			
Name	EID	Type	Status	Total-URLs	URLs/s	Bytes-RD	Bytes-WR	Tx Rate	Tx Rate(1)	Rx Rate	Rx Rate(1)
tp-lb-1	1.1.18 L ²	l/Gen Sto	pped	0	0	0	0	0	0	0	0
th-in-t					0.143	307,084	0	0	0	50,211	50,338
	1.1.0.62 L4	i/Gen Ru	n		0.145	507,004	0	0	0	20,222	
, joogle-0		i/Gen Ru i/Gen Ru		/ 8	0.143	333,384	0	0	0	54,177	54,280
joogle-0 joogle-0	1.1.0.63 L4		n	8			-	-	-		54,280 52,476
google-O google-O google-O	1.1.0.63 L4	I/Gen Ru I/Gen Ru	n	7 8 7 0	0.163	333,384	0	0	0	54,177	
joogle-0 joogle-0 joogle-0 joogle-0	1.1.0.63 L4 1.1.0.64 L4	I/Gen Ru I/Gen Ru I/Gen Un	n n	7 8 7 0 0	0.163 0.142	333,384 322,814	0	0	0	54,177	
oogle-0 oogle-0 oogle-0 oogle-0 oogle-0	1.1.0.63 L4 1.1.0.64 L4 1.1.47.65 L4 1.1.48.66 L4	I/Gen Ru I/Gen Ru I/Gen Un I/Gen Un	n n initializ	7	0.163 0.142 0	333,384 322,814 0	0	0	0	54,177 52,466 0	52,476 0
100001e-0 100001e-0 100001e-0 100001e-0 100001e-0	1.1.0.63 L4 1.1.0.64 L4 1.1.47.65 L4	4/Gen Ru 4/Gen Ru 4/Gen Un 4/Gen Un 4/Gen Un	n n initializ	7 0 0	0.163 0.142 0 0	333,384 322,814 0 0	0 0 0	0 0 0 0	0 0 0 0	54,177 52,466 0	52,476 0 0

For more information see Layer 4-7

E. Resource Mgr tab:

The *Resource Mgr* tab displays information on all Resources discovered by the LANforge server and provides the ability to perform system functions on selected machines (one or more). The definition of a resource is a LANforge machine that belongs to a numbered realm. The realm 255 is always a stand-alone realm while the realm resource 1 is the manager. The Resource Mgr tab displays LANforge servers in the same realm. LANforge systems have to be manually numbered, two LANforge systems with the same resource ID will confuse the manager resource. Please visit the link below for more information on the *Resource Mgr*

	porting <u>r</u>	ear-Off	neip								
						Stop Al	R	estart Manag	er	Refres	h HELF
Layer-4	Generic	Test Mgr	Resource	Mgr Serial	Spans PPP	-Links Ev	ent Log A	lerts Port M	Mgr Messa	aes	
Status	Layer-3	L3 En			olP/RTP End		nageddon	WanLinks	Collisio	n-Domains	File-IO
Rpt Timer:	fast ((1 s)	▼ Go Test	Manager all	-		Select All	Start	Stop	Quiesce	Clear
View	0 - 200			▼ Go		Di	splay C	reate Mo	odify Ba	tch Modify	Delete
				Layer	-4 Endpoints	for Selected	Test Manag	er			
Name	EID	Type	Status	Total-URLs	URLs/s	Bytes-RD	Bytes-WR	Tx Rate	Tx Rate(1)	Rx Rate	Rx Rate(1)
tp-lb-1	1.1.18	L4/Gen	Stopped	0	0	0	0	0	0	0	0
		14/5	Run	7	0.143	307,084	0	0	0	50,211	50,338
joogle-0	1.1.0.62	L4/Gen	Run	/							
		L4/Gen	Run	8	0.163	333,384	0	0	0	54,177	54,280
google-0	1.1.0.63 1.1.0.64	L4/Gen L4/Gen	Run Run	8	0.163 0.142	333,384 322,814	0	0	0	54,177 52,466	54,280 52,476
google-0 google-0 google-0	1.1.0.63	L4/Gen L4/Gen	Run	7 0			0 0 0	-	-		· · · · ·
google-0 google-0	1.1.0.63 1.1.0.64	L4/Gen L4/Gen L4/Gen	Run Run	7	0.142	322,814	0 0 0	0	0	52,466	52,476
google-0 google-0 google-0 google-0 google-0	1.1.0.63 1.1.0.64 1.1.47.65	L4/Gen L4/Gen L4/Gen L4/Gen L4/Gen	Run Run Uninitializ	7 0	0.142 0	322,814 0	0	0	0	52,466 0	52,476_ 0

For more information see Resources (Data Generator Machines)

F. Messages, Warnings, Wifi-Messages Mgr tab:

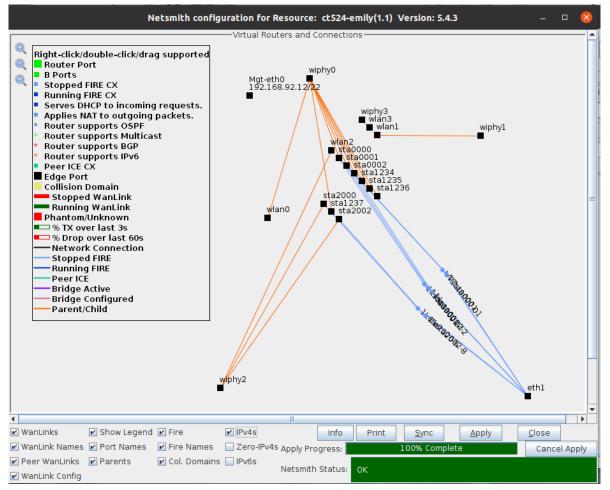
The *Messages, Warnings* and *Wifi-Messages* tab are all tabs that should be open at all times. All these tabs contain important information about the LANforge GUI Interface. The *Messages* tab displays detailed CLI command feedback from the LANforge Server. When scripting, command failures can be shown here. If <u>any</u> one of these 3 tabs are highlighted/have a yellow background in the tab bar, there is a new update in that yellowed tab.For information on any other tabs, besides the ones mentioned above, please visit the link below *LANforge-GUI User Guide: Tab Display Preferences* for further tab descriptions.

LANforge Manager Version(5.4.3)	
Control Reporting Windows Info Tests	
Chamber View Stop All Restart Manager Refresh	HELP
Generic Resource Mgr DUT Profiles Traffic-Profiles Alerts Messages Warnings + Wifi-Messages	
Status Port Mgr Layer-3 L3 Endps Layer 4-7 Armageddon WanLinks VolP/RTP VolP/RTP Endps	File-I0
Save Clear Text	
Welcome to the LANforge GUI Manager. This page will contain miscellaneous information from the server.	^
Tue Dec 29 15:33:02 PST 2020: Welcome to LANforge. Enter 'help' for more information. Tue Dec 29 15:33:02 PST 2020:	
Tue Dec 29 15:33:02 PST 2020: ### LICENSE INFORMATION	
Version: 5.4.3 Compiled on: Wed Dec 2 11:01:16 PST 2020	
By: greearb On machine: Linux v-f24-64 4.10.17-100.fc24.x86_64 x86_64 Platform: Linux 64-bit	
Licenses: Shelves: 2 Cards: 10 Ports: 10000 Active Ports: 64000 Fire-CX: 64000 Wanlinks: 66000 WI-2m: 66000 WI-45m: 6600 WI-0EM100: 0 WI-155m: 6600 WI-1g: 60 WI-10g: 16 WanPaths: 6400 Armageddon: 6600 VOIP: 6400 Secondary-18: 64000	
80211AC-Radios: 64000 TR-398: 0 RFGEN: 0 LLANforge Licenses expire in: 32 days.	
Current use: Ports: 1 IPs: 0 Fire-CX: 0 Armageddon: 0 V0IP: 0	
WL-2m: 0 WL-45m: 0 WL-165m: 0 WL-165m: 0 WL-106: 0	
WanPaths: 0 80211AC-Radios: 0 L'ANforse Support and Software Uporades expire in: 32 days.	
Tue Dec 29 15:33:02 PST 2020:	
Tue Dec 29 15:33:02 PST 2020·>>R5LT: 252 Cmd: 'show_clients' Tue Dec 29 15:33:02 PST 2020·>>R5LT: 192 Cmd: 'who'	
Tue Dec 29 15:33:02 PST 2020: >>RSLT: 3542 Cmd: Who Tue Dec 29 15:33:02 PST 2020: >>RSLT: 3542 Cmd: 'show dbs'	
Tue Dec 29 15:33:02 PST 2020: >>RSLT: 0 Cmd: 'license' "NA' yes'	
Tue Dec 29 15:33:02 PST 2020: >>RSLT: 0 Cmd: 'show_vr' 'ALL' 'ALL'	
Tue Dec 29 15:33:02 PST 2020·>>R5LT:0 C md: 'show_vrcx' 'ALL' 'ALL' Tue Dec 29 15:33:02 PST 2020·>>R5LT:25C Cmd: 'show_vlents'	
Tue Dec 29 15:3:02 PST 2020: >>RSLT: 192 Cmd: Who'	
Tue Dec 29 15:33:02 PST 2020: >>RSLT: 0 Cmd: 'show_alerts'	
Tue Dec 29 15:33:02 PST 2020: New Setting: IsBrief: 1	
Tue Dec 29 15:33:02 P5T 2020: Push_Endp_Rptsflag set to:0 Tue Dec 29 15:33:02 P5T 2020: Push_All Rotsflag set to:0	
Tue Dec 29 15:35:02 Foi Z020: rusn_wii xpts nag set to: 0 Tue Dec 29 15:37:57 Foi Z020: Adding new endopint.	
Tue Dec 29 15:37:57 PST 2020: Setting Rate: VTsta0000-0-A min: 256000 max: 0	
Tue Dec 29 15:37:57 PST 2020: Setting Payload Size: Shelf: 1 Card: 1 Port: 65535 Endpoint: 142 Type: LANFORGE_UDP min: -1 max: 0 Checksum: NA	
Tue Dec 29 15:37:57 PST 2020: Endpoint values have been set.	
Tue Dec 29 15:37:57 PST 2020: Adding new endpoint.	-
Input:	
Logged in to: localhost:4002 as: Admin	

For more information see Tab Display Preferences

G. Using Netsmith tab:

In the LANforge GUI, on the *Status* page there is a small button named *Netsmith*. It is a tool used to help visualize the relationships of ports and cross connects defined in the resource you are viewing. There is a separate *Netsmith* view for each LANforge resource in your realm. There are several ways to edit the GUI objects in *Netsmith*, display the different up-to-date connections in the GUI, and what is shown in *Netsmith*. Please visit the link below to understand how to use *Netsmith* in greater detail.



For more information see Netsmith: Virtual Network Configurator

4. Station Creation:

Please visit Step 1 of the following cookbook below to learn how to Create a Station in the LANforge-GUI. Please visit the link at the bottom of this section on how to script a station in the GUI.

A. Searching for Active SSIDS & Connecting to a Particular SSID:

Often times, there may be an active network around, but the LANforge GUI does not have the network registered as "able to be connected to". To allow this network to be recognized, one must **scan** in the GUI object's settings to make sure that the object sees this network.

See below for an example:

I. Double-click or select *Modify* on a station in the Port Mgr to pop up *Configure Settings* window.

	LANforg	je Manager	Version(5.	4.3) +cl	i-sock		\odot	\odot
Control Reporting Windows Info	Tests							
	Chamber <u>V</u> iew	N	<u>S</u> top All	Res	start Manager		<u>R</u> efresh	HELP
		Stations DU			Warnings +	Wifi-Messages	-	
Status Port Mgr Layer-	3 L3 Endps	Layer 4-7	Armagedo	don	WanLinks	Attenuators	RF-Gene	rator
Disp: 192.168.92.14:1	Sniff Packets	🗹 Down	1 Clear C	ounters	Reset Port	Dele <u>t</u> e		
Rpt Timer: medium (8 s) 🔻	Apply	VRF	I Dis	p <u>l</u> ay	Cr <u>e</u> ate	Modify	<u>B</u> atch Modi	fy
	All Eth	nernet Interface	s (Ports) for a	Il Resource				

II. However, the GUI isn't registering that as a proper network because selecting *Display Scan*, *Scan*, and *Sync* in the *Configure Settings* shows no networks are found and discovered in the GUI.

	sti	a0 (ct524-geni	a) Configu	re Settinas		(\mathbf{v})			
0			wi	phy0 Scan Res	ults				\sim \times
SSID	Channel	Info	Auth	BSS	Signal	Frequency	Beacon	Age	
									-
						\frown			
				🗌 Pa	us <u>e</u>	Sc <u>a</u> n		Sync	Close
L									

III. Type in the desired SSID, Key/Phrase, and select the appropriate Security to be used (WPA/WPA2/WPA3... etc) located within the *WiFi Settings* panel (shown below). Select *Apply. Apply* will trigger the LANforge GUI to start searching for currentlyactive SSIDs.

0	sta0 (c	t524-genia) Conf	igure Settings	\odot \otimes \otimes
		Port Status Informa DWN LINK-DOWN GRO NONE ort Type: WIFI-STA Parent:		
		Port Configurab	les	
Standard Configurati	on Advanced	Configuration Misc	Configuration	Corruptions Custom WiFi
Enable		General In	terface Settings	
Set MAC	Down	Aux-Mgt	DHCP Hostname:	None
Set TX Q Len	DHCP-IPv <u>6</u>	DHCP Release	DHCP Vendor ID:	None
Set Offload	DHCP-IPv4	Secondary-IPs	DHCP Client ID:	None
Set PROMISC	DNS Servers:	BLANK	Peer IP:	NA
	I <u>P</u> Address:	0.0.0.0	Global IPv6:	AUTO
Services	IP Mask:	0.0.0.0	Link IPv6:	AUTO
HTTP	Gateway IP:	0.0.0.0	IPv6 GW:	AUTO
FTP	Alias:		MTU:	1500
DNS	MAC Addr:	00:0e:8e:4e:3b:47	TX Q Len	1000
RADIUS	Rpt Timer:	medium (8 s) 👻	WiFi Bridge:	NONE
IPsec-Upstream	IPSec GW:	0.0.0.0	IPSec Password:	
	IPSec Local ID.:		IPSec Remote ID.:	
Low Level	il occ cocarion	14/15	i Settings	
	SSID: je	dway-wpa2-x2048-5-:		
TS0 Enabled		2 1		
UFO Enabled		dway-wpa2-x2048-5-1		
GS0 Enabled	Freq/Channel: 5		Rate: OS Def	ault
LRO Enabled	The second se	12 🗌 WPA <u>3</u> 🗌 OSEN		
🖌 GRO Enabled	Disable <u>H</u> T4	0 📃 <u>E</u> nable VHT160	Disable SGI	
			-	
Print Display	Probe	Display Scan	Sync Ap	ply <u>O</u> K <u>C</u> ancel

IV. Then, select Display Scan in the bottom bar, as highlighted in the picture above. Something similar to the Window in the picture below will pop up. Then click on Scan (circled below) and Sync. Now, the most recent active networks should be scanned and displayed in a similar window to below by the GUI. The example below indicates that the radio (wiphy0) has now found current, active networks. Also, the far right corner of the table displays the age of the networks, so if the Age is too old after the recent scanning, it might be time to restart the network or pick a new network.

Note: If there are no scan results, the radio is probably set to a specific channel. The radio channel configuration may need to be changed or the object must be created on a different radio.

	0				phv0 Scan Resu	lte				 • 	
									\frown	Ŭ	1
	SSID	Channel	Info	Auth	BSS	Signal	Frequency		Age		
	CBCI-31BF-2.4	1	3x3 MIMO	WPA2	74:85:2a:4f:0c:38	-78.0		100	46.15 s		
	CBCI-CE22-2.4	6	3x3 MIMO	WPA WPA2	20:25:64:61:af:70	-75.0		100	5.32 s		
	CBCI-CE22-5	161-	3x3 MIMO	WPA WPA2	20:25:64:61:10:e0	-77.0		100	2.79 s		
	OSEN-AP	157+	3x3 MCS 0-9 AC	OSEN	04:f0:21:df:42:df	-84.0		240	43.27 s		
	Silv-Wifi	11	2x2 MIM0	WPA WPA2	24:f5:a2:6a:72:47	-83.0		100	13.19 s		
	Silv-Wifi-guest	11	2x2 MIMO	Open	24:f5:a2:6a:72:49	-78.0		100	5.09 s		
	Success11	11	3x3 MIMO	WPA WPA2	c0:7c:d1:0c:bd:f8	-79.0		100	26.95 s		
	XFINITY	161-	3x3 MIMO	WPA2	20:25:64:61:10:e3	-78.0		100	2.81 s		
	[BLANK]	1	3x3 MIMO	WPA2	f2:9f:c2:71:fa:8a	-55.0		100	5.74 s		
	[BLANK]	60	4x4 MCS 0-9 AC	WPA2	f2:9f:c2:69:55:12	-62.0		100	4.49 s		
	[BLANK]	6	4x4 MCS 0-9 AC	WPA2	f0:9f:c2:69:55:13	-58.0		100	13.48 s		
	bridged-APft	36+	3x3 MCS 0-9 AC	WPA2	04:f0:21:2d:29:44	-61.0		240	5.05 s		
	dlink-dir878-perf	9	4x4 MCS 0-9 AC	Open	74:da:da:6d:73:78	-71.0		100	5.22 s		
	dlink-dir878-perf-5g	48	802.11a		74:da:da:6d:73:79	-81.0		100	4.86 s		
	jedway-abcd	36+	3x3 MIMO	WPA2	00:0e:8e:e7:7b:07	-71.0	5180	240	5.05 s		
	jedway-open-1	1+	3x3 MIM0	Open	00:0e:8e:78:e1:76	-71.0		240	5.59 s		
	jedway-open-149	149+	3x3 MIMO	Open	00:0e:8e:de:d4:e6	-75.0		240	3.01 s		
	jedway-r8000-11	11	3x3 MIMO	WPA2	10:0c:6b:63:1c:9e	-41.0		200	5.11 s		
	jedway-r8000-153	153-	3x3 MCS 0-9 AC	WPA2	10:0c:6b:63:1c:9f	-46.0	5765	200	2.95 s		
	jedway-r8000-36	36+	3x3 MCS 0-9 AC	Open	10:0c:6b:63:1c:9d	-60.0	5180	200	5.05 s		
	jedway-wep-48	48	802.11a	WEP	04:f0:21:4d:9a:21	-48.0	5240	240	4.86 s		
	jedway-wpa-1	1+	3x3 MIM0	WPA	00:0e:8e:b9:b9:76	-71.0		240	5.67 s		
	jedway-wpa2-x128	44+	3x3 MCS 0-9 AC	WPA2	04:f0:21:3d:66:41	-55.0		240	4.93 s		
	jedway-wpa2-x204	1	3x3 MIMO	WPA2	00:0e:8e:06:70:76	-72.0		240	5.75 s		
	jedway-wpa2-x204	149	3x3 MIM0	WPA2	00:0e:8e:ff:86:e6	-74.0		240	3.01 s		
	jedway-wpa2-x204	161-	3x3 MIMO	WPA2	00:0e:8e:b3:68:e7	-75.0		240	2.81 s		
	jedway-wpa2-x204	157	3x3 MIMO	WPA2	00:0e:8e:7b:df:9b	-73.0		240	2.88 s		
	jedway-wpa2-x204	36+	3x3 MIM0	WPA2	00:0e:8e:e4:fa:07	-71.0		240	5.05 s		
	jedway-wpa2-x64-3-1	48	3x3 MCS 0-9 AC	WPA2	04:f0:21:d3:8d:21	-47.0		240	4.86 s		
	jedway-wpa3-1	1+		WPA2 WPA3	00:0e:8e:22:e8:76	-71.0		240	5.75 s		
	jedway-wpa3-44	44+	3x3 MCS 0-9 AC	WPA2 WPA3	04:f0:21:0a:8b:41	-54.0	5220	240	4.93 s		
	muffin	48-	3x3 MCS 0-9 AC	Open	04:f0:21:f8:92:21	-47.0	5240	240	4.86 s		
	ubnt-hd-ent	60	4x4 MCS 0-9 AC	WPA2	f0:9f:c2:69:55:12	-62.0	530	100	54 s		
					Paus	s <u>e</u>	Sc <u>a</u> n		Sync	<u>C</u> lose	
						_					

V. Now, close the two windows opened previously by selecting *Close*. Go back to the *Port Mgr* tab and the desired object to be connected should be connected to that SSID. In *Wifi-Messages*, there should have also been a message saying that sta0 and wiphy0 are scanning for network SSIDs. This is another indication of the LANforge scanning software retrieving local SSIDs. LANforge now concludes that it can connect to the SSID by acquiring an *AP* and *IP* in the *Port Mgr* (see circled below).

	sta0	LANfor (ct524-genia)		r Version(5.4.)	3)	(\mathbf{v})		(•	
0	5140	(ccoz+-yeilld)		phy0 Scan Resu	lts	00			(
SSID	Channel	Info	Auth	BSS	Signal	Frequency	Beacon	Age	
CBCI-31BF-2.4	1	3x3 MIMO	WPA2	74:85:2a:4f:0c:38	-78.0	2412	100	AG 1.5 S	
CBCI-CE22-2.4	6	3x3 MIMO	WPA WPA2	20:25:64:61:af:70	-75.0	2437	100	5.32 s	
CBCI-CE22-5	161-	3x3 MIMO	WPA WPA2	20:25:64:61:10:e0	-77.0	5805	100	2.79 s	
OSEN-AP	157+	3x3 MCS 0-9 AC	OSEN	04:f0:21:df:42:df	-84.0	5785	240	43.27 s	
Silv-Wifi	11	2x2 MIM0	WPA WPA2	24:f5:a2:6a:72:47	-83.0	2462	100	13.19 s	
Silv-Wifi-quest	11	2x2 MIM0	Open	24:f5:a2:6a:72:49	-78.0	2462	100	5.09 s	
Success11	11	3x3 MIMO	WPA WPA2	c0:7c:d1:0c:bd:f8	-79.0	2462	100	26.95 s	
XFINITY	161-	3x3 MIMO	WPA2	20:25:64:61:10:e3	-78.0	5805	100	2.81 s	
[BLANK]	1	3x3 MIMO	WPA2	f2:9f:c2:71:fa:8a	-55.0	2412	100	5.74 s	
[BLANK]	60	4x4 MCS 0-9 AC	WPA2	f2:9f:c2:69:55:12	-62.0	5300	100	4.49 s	
IBLANKI	6	4x4 MCS 0-9 AC	WPA2	f0:9f:c2:69:55:13	-58.0	2437	100	13.48 s	
bridged-APft	36+	3x3 MCS 0-9 AC	WPA2	04:f0:21:2d:29:44	-61.0	5180	240	5.05 s	
dlink-dir878-perf	9	4x4 MCS 0-9 AC	Open	74:da:da:6d:73:78	-71.0	2452	100	5.22 s	
dlink-dir878-perf-5a	48	802.11a	WPA WPA2	74:da:da:6d:73:79	-81.0	5240	100	4.86 s	
jedway-abcd	36+	3x3 MIMO	WPA2	00:0e:8e:e7:7b:07	-71.0	5180	240	5.05 s	
jedway-open-1	1+	3x3 MIM0	Open	00:0e:8e:78:e1:76	-71.0	2412	240	5.59 s	
jedway-open-149	149+	3x3 MIMO	Open	00:0e:8e:de:d4:e6	-75.0	5745	240	3.01 s	
edway-r8000-11	11	3x3 MIMO	WPA2	10:0c:6b:63:1c:9e	-41.0	2462	200	5.11 s	
jedway-r8000-153	153-	3x3 MCS 0-9 AC	WPA2	10:0c:6b:63:1c:9f	-46.0	5765	200	2.95 s	
jedway-r8000-36	36+	3x3 MCS 0-9 AC	Open	10:0c:6b:63:1c:9d	-60.0	5180	200	5.05 s	
jedway-wep-48	48	802.11a	WEP	04:f0:21:4d:9a:21	-48.0	5240	240	4.86 s	
jedway-wpa-1	1+	3x3 MIMO	WPA	00:0e:8e:b9:b9:76	-71.0	2412	240	5.67 s	
jedway-wpa2-x128	44+	3x3 MCS 0-9 AC	WPA2	04:f0:21:3d:66:41	-55.0	5220	240	4.93 s	
edway-wpa2-x204	1	3x3 MIMO	WPA2	00:0e:8e:06:70:76	-72.0	2412	240	5.75 s	
edway-wpa2-x204	149	3x3 MIM0	WPA2	00:0e:8e:ff:86:e6	-74.0	5745	240	3.01 s	
edway-wpa2-x204	161-	3x3 MIMO	WPA2	00:0e:8e:b3:68:e7	-75.0	5805	240	2.81 s	
edway-wpa2-x204	157	3x3 MIMO	WPA2	00:0e:8e:7b:df:9b	-73.0	5785	240	2.88 s	
edway-wpa2-x204	36+	3x3 MIM0	WPA2	00:0e:8e:e4:fa:07	-71.0	5180	240	5.05 s	
edway-wpa2-x64-3-1	48	3x3 MCS 0-9 AC	WPA2	04:f0:21:d3:8d:21	-47.0	5240	240	4.86 s	
jedway-wpa3-1	1+		WPA2 WPA3	00:0e:8e:22:e8:76	-71.0	2412	240	5.75 s	
jedway-wpa3-44	44+	3x3 MCS 0-9 AC	WPA2 WPA3	04:f0:21:0a:8b:41	-54.0	5220	240	4.93 s	
muffin	48-	3x3 MCS 0-9 AC	Open	04:f0:21:f8:92:21	-47.0	5240	240	4.86 s	
ubnt-hd-ent	60	4x4 MCS 0-9 AC	WPA2	f0:9f:c2:69:55:12	-62.0	530	1.00	54 s	
				Paus	e e	Sc <u>a</u> n	<u> </u>	ync	<u>C</u> los
						\smile			
t Display	Probe	Display Scan					_		

For more information see Station Creation : Step 1

For more information see Scripting a Station in the GUI

5. MAC-VLAN Creation:

Creating a MAC-VLAN on the LANforge-GUI is done in the Port Mgr.

Please visit **Step 3** of the following cookbook on how to create a MAC-VLAN from the GUI. The following link will inform how to program the GUI to create a MAC-VLAN

For more information see Creating a MAC-VLAN in the GUI(Step 3)

For more information see Scripting a MAC-VLAN in the GUI

6. Bridge Creation:

Creating a Bridge on the LANforge-GUI is done in the Port Mgr.

Please visit Step 2 of the following cookbook on how to create a Bridge in Netsmith.

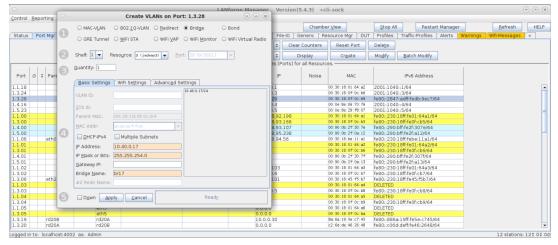
For more information see Creating a Bridge in Netsmith (Step 2)

A. Create a bridge in *Port Mgr*.

	A	۹.	Click on the	Port Mar tab	and Create in	the top right	corner.
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.1.00		-			eth0								192.16	8.92.198		00:30:
.1.01					eth1								0.0.0.0			00:30:
.1.02					eth2								10.0.0.	103		00:30:
.1.03					eth3								0.0.0.0			00:30:
.1.04					eth4								0.0.0.0			00:30
.1.05					eth5								0.0.0.0			00:30
L.1.06				0	wiphy0							802.11ab	0.0.0.0			04:f0
L.1.07				36	wiphyl							802.11an	0.0.0.0			04:f0
L.1.08			wiphy0	0	wlan0				Not-Associ	iated		AUTO 20	0.0.0.0		-1 dBm	04:f0
1.09			wiphyl	0	wlan1				Not-Associ	iated			0.0.0.0		-1 dBm	04:f0
1.1.12					br1000								10.40.0			00:30
.1.15			wiphy0	48	sta0000		m	uffin	04:F0:21:F	F8:92:	21	802.11an	10.40.0	0.12	-102 dBm	04:f0
L.1.16			wiphy0	0	sta0001	j	edway-wpa2-	160				AUTO 20	0.0.0.0		-1 dBm	04:f0
1.17			wiphy1	0	vap201		jedway-roan	1-36				AUTO 20	0.0.0.0		-1 dBm	04:f0
.1.18			eth0		eth0#0									8.94.56		00:30
L.3.00					eth0								192.16	8.93.166		00:30:
1.3.01					eth1								0.0.0.0			00:30:
1.3.02					eth2								10.40.0			00:30:
L.3.03					eth3								10.40.0).5		00:30:
3.04					eth4								0.0.0.0			00:30:
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.3.06				48	wiphy0							802.11ab	0.0.0.0			04:f0:
1.3.07				44	wiphy1							802.11ab	0.0.0.0			04:f0:
4																•

B. After a new window pops up, Select Bridge in Step 1 of the new window. In Step 2, select the Shelf and Resource the bridge should use (from the drop down menus in each slot). Step 3, select the Quantity of the bridges to be created. In Step 4, under the Basic Settings tab, check the box if the bridge should be enabling DHCP-IPv4. If DHCP-IPv4 isn't enabled, give the bridge an IP Address and IP Mask. Lastly, give the bridge a name, Click Apply and Cancel. The bridge is now in the Port Mgr.



B. Adding a port to an existing bridge in Port Mgr.

Control Beporting Windows Info Tests Chamber ⊻iew Stop All Restart Manager Befresh HEL RF-Generator File-IO Generic Test Group Resource Mgr vAP Stations DUT Profiles Alerts Warnings + Status Port Mgr Layer-3 L3 Endps Layer 4-7 Armageddon WanLinks Attenuators Disp: 192.168.92.14:1 Sniff Packets ✓ Down I Clear Counters Reset Port Delete Rpt Timer: medium (8 s) Apply ✓ VRF I Display Crgate Modify Batch Modify - All Ethernet Interfaces (Ports) for all Resources. - - All Ethernet Interfaces - 0c::c4:7a: 0c::c4:7a: 1.1.0 192.168 eth0 0 802.11an 00:0e: 8e: 1.1.2 10.40.9.1 eth1 0c::c4:7a: 0c::c4:7a: 0c::c4:7a: 00:0e: 8e: 1.1.2 10.40.9.1 thipygi 0 802.11an 00:0e: 8e: 1.1.3 0c::0e: 9e: 1.1.4 10.40.0.17 0 802.11ab 00	0				LANfo	rge Mana	ger	Vers	sion(5.4	4.3)						Q	$) \otimes \otimes$
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1.1.10 0.0.0.0 wiphy3 0 802.11an 00:19:70: 1.1.2 10.40.9.1 sta0 wiphy0 00:0E:8E: 157 802.11an jedway-w 00:0e:8e: 1.1.3 0.0.0.0 wiphy0 0 802.11ab 00:0e:8e: 1.1.4 10.40.0.17 br17 a5:50:b2: a5:50:b2: a5:50:b2: 1.1.6 0.0.0.0 wiphy1 0 802.11ab 00:0e:8e:	1.1.0			192.168	eth0									0c:c4:7	'a:		
1.1.2 10.40.91 sta0 wiphy0 00:0E:8E: 157 802.11an jedway-w 00:0e:8e: 1.1.3 0.0.0.0 wiphy0 0 802.11ab 00:0e:8e: 00:0e:8e: 1.1.4 10.40.0.17 br17 a6:50:b2: a6:50:b2: 00:0e:8e: 1.1.6 0.0.0.0 wiphy1 0 802.11ab 00:0e:8e:																	
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Logged in to: localhost:4002 as: Admin 1 stations: 1 t 0 1		Incolhects	002 201 4	Imin											let	ations	1+ 01 02

A. To add a port, double click on the bridge you created or click once on the bridge in *Port Mgr* and select *Modify*. A window *Configure Settings* should pop up. At the bottom of the window, there is a small section that allows addition of ports.

0		br17 (ct	t524-genia) Con	igure Settings		\odot \otimes \otimes						
			Port Status Informa LINK-DOWN PROBE-ERROR Port Type: Bridge Driver	TSO GSO GRO								
	Port Configurables											
Enable		General In	iterface Settings	100								
Set MAC	Down	Aux-Mgt	DHCP Hostname:	None 💌	Spanning-Tree							
Set TX Q Len	DHCP-IPv6	DHCP Release	DHCP Vendor ID:	None 👻	Aging Time:	300 • 32768 •						
Set MTU			1		Bridge Priority:							
Set Officiad	DHCP-IPv4	Secondary-IPs	DHCP Client ID:	None	Max Age: Hello Time:	20 •						
	DNS Servers:	BLANK	Peer IP:	NA AUTO	Forwarding Delay:							
	I <u>P</u> Address: IP Mask:	10.40.0.17	- !	AUTO	Forwarding Delay.							
	Gateway IP:	0.0.0.0	IPv6 GW:	AUTO								
-	Alias:	0.0.0.0	1 MTU:	1500								
	MAC Addr:	00:00:00:00:00:00	TX Q Len	1000								
	Rpt Timer:	medium (8 s) 🔻	WiFi Bridge:	NONE								
Services	IPSec GW:	0.0.0.0	IPSec Password:									
НТТР	IPSec Local ID.:		IPSec Remote ID.:									
FTP		ge Information	,	un Danta								
DNS	Configured Po			ve Ports								
RADIUS			Add F	or <u>t</u> s								
IPSEC-Client					Ì							
- rsec-opscream												
3	Print D	isplay <u>P</u> ro	obe <u>Sync</u>	<u>A</u> pply <u>O</u> K	<u>C</u> ancel							

B. In the text box under the Add Ports button (circled below), type in the port name (ex: vap123, eth1, sta000) intended to be added to the bridge. In this example, *eth1* to be added to *br17*.

0		br17 (ct	t524-genia) Cont	figure Settings		$\odot \odot \otimes$			
			Port Status Informa LINK-UP PROBE-ERROR TS Port Type: Bridge Driver	0 GS0 GR0					
Enable		General In	Port Configurab Iterface Settings	nes					
Set MAC	Down	Aux-Mgt	Spanning-Tree						
Set TX Q Len	DHCP-IPv6	DHCP Release	DHCP Hostname: DHCP Vendor ID:	None	Aging Time:	300 -			
Set MTU			1		Bridge Priority:	32768 •			
Set Officiad	DHCP-IPv4	Secondary-IPs	DHCP Client ID:	None	Max Age: Hello Time:	20 •			
	DNS Servers:	BLANK	Peer IP: Global IPv6:	NA	Forwarding Delay:				
	I <u>P</u> Address: IP Mask:	10.40.0.17	Link IPv6:		Forwarding Delay:	13			
	Gateway IP:	0.0.0.0	IPv6 GW:	AUTO					
	Alias:		MTU:	1500					
	MAC Addr:	de:0d:83:75:d0:3c	TX Q Len	1000					
	Rpt Timer:	medium (8 s) 🔻	WiFi Bridge:	NONE					
Services	IPSec GW:	0.0.0.0	IPSec Password:						
HTTP	IPSec Local ID.:		IPSec Remote ID.:						
FTP	Bridge Information Remove Ports								
DNS RADIUS	Configured Ports Current Ports								
IPSEC-Client			Add F	°or <u>t</u> s					
IPsec-Upstream			eth l						
	<u>P</u> rint D)isplay <u>P</u> ro	obe <u>S</u> ync	<u>Apply</u> <u>O</u> K	<u>C</u> ancel				

C. Select Add Ports (circled). This button will now categorize *eth1* as a *Configured Port*. Then, select *Apply* and *Sync* to now see *eth1* also be listed under *Current Ports*. Lastly, click *OK* to close the window. If the port inputted into the text box does not move to the *Current Ports* category after selecting *Sync*, this may mean that the port is already in a configuration that prevents it from being in a bridge (i.e. it may already be in a bridge...etc). To learn how to script a bridge in the GUI, please visit the link below.

For more information see Scripting the GUI to create a Bridge

7. Virtual Creation (VAP):

Please visit **Step 1** of the following cookbook to learn how to create a Virtual AP in the GUI. For more information see **Scripting the GUI to create a bridge**

8. Monitor Creation:

Please visit **Step 1** of the following cookbook to learn how to create a Monitor in the GUI. For more information see **Scripting the GUI to create a Monitor**

9. Layer 3 Creation:

Layer-3 Cross-Connects represent a stream of data flowing through the system under test. A Cross-Connect (CX) is composed of two Endpoints, each of which is associated with a particular Port (physical or virtual interface). The *Layer-3* tab displays connections 0-200 by default.

Separated below are important sections to getting to know the Layer 3 tab:

For more information see How to Create and Modify Cross-Connects & Cross-Connect Information

For more information see Interpreting the Layer-3 Endps tab: Layer-3 Cross Connect Endpoints & Batch-Creating Cross-Connects

10. Layer 4-7 Traffic Generation:

The Layer 4-7 traffic is supposed to emulate curl commands. Endpoints can be created with the following protocols: HTTP, HTTPS, FTP, FTPS, TFTP, SCP and SFTP. These are stateful protocols that will communicate properly with third-party servers. FTP, FTPS, TFTP, SCP and SFTP can upload and download, and the other protocols are only for downloading. The Layer 4-7 tab is used to manage Layer 4-7 endpoints.

Separated below are important sections to getting to know the Layer 4-7 tab:

For more information see Creating and Modifying Layer 4-7 Endpoints, L4 Endpoint Information, Batch-Create Layer 4-7 Endpoints

For more information see Layer 4-7 Endpoint Display

For more information see Setting up a Simple HTTP Get/Download in the GUI

For more information see Scripting the GUI to create Layer 4-7 traffic

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