

Generating FTP Traffic Between Two Physical ports

Goal: Allow LANforge to simulate a FTP connection within the same system.

This scenario is useful if you wish to generate stateful FTP traffic between two physical ports using a single LANforge system. You will need two non-management physical ports connected to eachother with a loopback cable or switch.

- 1. Configure the physical interfaces. We will set up eth1 as a client and eth2 as a FTP server.
 - A. Go to the **Port Mgr** tab and select eth1.

4	📓 LANforge Manager Version(5.3.4) 📃 🗖 💌												
Control	Control Reporting Tear-Off Info Plugins												
	Stop All Restart Manager Refresh HELP												
Layer-4	Layer-4 Generic Test Mgr Test Group Resource Mgr Event Log Alerts Port Mgr VAP Stations Messages												
Status	Status Layer-3 L3 Endps VolP/RTP VolP/RTP Endps Armageddon WanLinks Attenuators File-10												
Disp: 192.168.100.133:0.0 Sniff Packets 1 Clear Counters Reset Port Delete													
Rpt Timer: medium (8 s) ▼ Apply I View Details Create Modify Batch Modify													
All Ethernet Interfaces (Ports) for all Resources.													
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			192.168.100.86	0	eth5	-	99,089	938	5	4,676	284,471	454	2
1.1.1			0.0.0.0	0	eth0		0	0	0	0	0	0	0
1.1.2			0.0.0.0	0	eth1		0	0	0	0	950	11	0
1.1.3			0.0.0.0	0	eth2		0	0	0	0	950	11	0
1.1.4			0.0.0.0	0	eth3	-	0	0	0	0	0	0	0
1.1.5			0.0.0.0	0	eth4		0	0	0	0	0	0	0
•													Þ
Logged i	in to: I	brent-	Sport:4002 as: A	dmin									

B. Click Modify to configure port eth1.

Current: LINK-UP 1000bt-FD AUTO-NEGOTIATE Flow-Control TSO GSO GRO Driver Info: Port Type: Ethernet Driver: e1000e(3.2.6-k) Bus: 0000:03:00.0 Cur: 2.5GT/s x1 Max: 2.5GT/s x1 Port Configurables Enable General Interface Settings Port Rates Advert Re Set IF Down Dwn Aux-Mgt 10bt-HD 10bt-HD 10bt-HD Set MAC DHCP-IPV6 DHCP Release DHCP Vendor ID: None 100bt-FD 100bt-FD Set MTU DHCP-IPV4 Secondary-IPS DHCP Client ID: None 0 40G-FD 0 40G-FD 0 40G-FD Set RK-All/FCS BAker 0.0.0.0 Link IPV6: AUTO Renegotiate 0 40G-FD			eth1 (br	ent-6port) Config	ure Settings		-0					
Finable General Interface Settings Port Rates Advert R Set IF Down Aux-Mgt 10bt+HD 10bt+FD 10bt+FD Set MAC Down Aux-Mgt 100bt+FD 10bt+FD 10bt+FD Set TX Q Len DHCP-IPV4 Secondary-IPS DHCP Client ID: None 100bt+FD 100bt+FD 100bt+FD Set Offload DNS Servers: BLANK Peer IP: NA 1006-FD 1006-FD 1006-FD Set Rate Info IP Address: 10.0.0101/24 Global IPv6: AUTO Renegotiate 406-FD Set Rysall/FCS Gateway IP: 0.0.0.0 IPv6 GW: AUTO Restart Xcvr V Flow-Cd Set Bypass Alias: MTU: 1500 RX-ALL V TSO En Set CPU Mask Gost: Ignore Priority: Ignore Bypass NoW! V So En HTTP Rpt Timer: Medium (8 s) Watchdog: Ignore Bypass Power-UP Ignore	Port Status Information Current: LINK-UP 1000bt-FD AUTO-NEGOTIATE Flow-Control TSO GSO GRO Driver Info: Port Type: Ethernet Driver: e1000e(3.2.6-k) Bus: 0000:03:00.0 Cur: 2.5GT/s x1 Max: 2.5GT/s x1											
Enable General Interface Settings Port Rates Advert R Set IF Down Down Aux-Mgt 10bt.+HD 10bt.+D 10bt.+D Set TX Q Len DHCP-IPV6 DHCP Release DHCP Vendor ID: None 100bt.+D 100bt.+D 100bt.+D Set MTU DHCP-IPV4 Secondary-IPS DHCP Client ID: None 1006.FD	Port Configurables											
Set TX Q Len DHCP-IPv6 ☑ DHCP Release DHCP Vendor ID: None 0 100bt-FD 0 100bt-FD 0 100bt-FD 1 00bt-FD 1 0bt-FD 1 00bt-FD 1 00bt-FD	Enable Set IF Down Set MAC	Down	General In	terface Settings		Port Rates	Advert Rates — 10bt-HD 10bt-FD					
Set Offload DNS Servers: BLANK Peer IP: NA Image: Constraint of the service of	Set TX Q Len	DHCP-IPv6	DHCP Release	DHCP Vendor ID: DHCP Client ID:	None None	0 100bt-FD 0 1000-FD 0 10G-FD 0 40G-FD	 ✓ 100bt-HD ✓ 100bt-FD 					
IP Mask: 0.0.0.0 Link IPv6: AUTO □ Restart Xcvr ✓ Flow-Co Set Bypass Gateway IP: 0.0.0.0 IPv6 GW: AUTO □ PROMISC ○ PROMISC Set Bypass Alias: MTU: 1500 □ RX-ALL ✓ TSO En Set CPU Mask Br Cost: Ignore Priority: Ignore Bypass NOW! ☑ GSO En HTTP Rpt Timer: medium (8 s) ✓ Watchdog: 0 Ispass Power-UP Ispass Power-UP Ispass Power-UP	Set Offload Set Rate Info Set PROMISC	DNS Servers: IP Address: IP Mask: Gateway IP: Alice:	BLANK 10.0.0.101/24	Peer IP: Global IPv6:	NA AUTO	Autonegotiate Renegotiate	✓ 1000-FD ☐ 10G-FD 40G-FD					
Set Bridge Info MAC Addr: 00:90:0b:38:82:71 TX Q Len 1000 RX-ALL If TSO En Set CPU Mask Br Cost: Ignore Priority: Ignore Bypass NOW! If GSO En HTTP Rpt Timer: medium (8 s) Watchdog: 0 If Bypass Power-UP Ippass Power-UP	Set Rx-All/FCS		0.0.0.0	Link IPv6: IPv6 GW:	AUT0 AUT0	Restart Xcvr	 ✓ Flow-Control Offload ✓ TSO Enabled ✓ UFO Enabled 					
Services Bypass NOW! So Er Bypass NOW! So Er	Set Bridge Info	MAC Addr: Br Cost:	00:90:0b:38:82:71	TX Q Len Priority:	1000 Ignore	RX-ALL						
	- Services	Rpt Timer:	medium (8 s) 🔻	Watchdog:		Bypass NOW!	GSO Enabled					
RADIUS Wiri Bridge: NONE Bypass Power-DOWN Image:	RADIUS	CPU Mask:	NO-SET	wiFi Bridge:	NONE	Bypass Power-DOWN	GRO Enabled					

- A. Set the IP Address to 10.0.101/24.
- B. Click OK.

C. While still in the **Port Mgr** tab, select eth2.

*	📓 LANforge Manager Version(5.3.4) 💶 🗖 🗙												
Control	<u>≩ontrol R</u> eporting <u>T</u> ear-Off <u>I</u> nfo <u>P</u> lugins												
	Stop All Restart Manager Refresh HELP												
Layer-4 Generic Test Mgr Test Group Resource Mgr Event Log Alerts Port Mgr vAP Stations Messages Status Layer-3 L3 Endps VolP/RTP VolP/RTP Endps Armageddon WanLinks Attenuators File-IO													
Disp: 192.168.100.133:0.0 Sniff Packets 1 Clear Counters Reset Port Delete													
	Rpt Timer: medium (8 s) ▼ Apply I View Details Create Modify Batch Modify												
All Ethernet Interfaces (Ports) for all Resources.													
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			192.168.100.86	0	eth5		594,284	5,695	5	4,714	1,631,487	2,458	2
1.1.1			0.0.0.0	0	eth0	-	0	0	0	0	0	0	0
1.1.2			10.0.0.101	0	ethl	1	0	0	0	0	1,630	19	0
1.1.3			0.0.0.0	0	eth2		0	0	0	0	950	11	0
1.1.4 O 0 0 0 0 0 0 0													
1.1.5	1.1.5 Image: Image												
Logged	in to:	ll brent-	6port:4002 as: A	dmin									Þ

D. Click **Modify** to configure port eth2.

Cu Dr	rrent: LINK-UP iver Info: Port Ty	1000bt-FD AUTO-NE pe: Ethernet Driver:	Port Status Info GOTIATE Flow-Cont e1000e(3.2.6-k)	ormation rol TSO GSO GRO Bus: 0000:04:00).0 Cur: 2.	.5GT/s xl Max: 2.5GT/s xl	
			Port Configur	ables			
Enable Set IF Down		General In	terface Settings		[Port Rates	Advert Rates
Set MAC	Down	DHCP Release	DHCP Vendor ID:	None	-	O 100bt-HD O 100bt-FD O 1000-FD	 ✓ 10bt-FD ✓ 100bt-HD
Set Offload	DHCP-IPv4	DHCP-IPv4 Secondary-IPs DHCP Client DNS Servers: BLANK Peer IP: P Address: 10.0.0.102/24 Global IPv6: P Mask: 0.0.0 Link IPv6:	DHCP Client ID: Peer IP:	None NA	-	○ 10G-FD ○ 40G-FD ● Autonegotiate	✓ 100bt-FD ✓ 1000-FD
Set Rate Info	IP Address: IP Mask: Gateway IP: Alias: MAC Addr: Br Cost:		Global IPv6: Link IPv6:	AUTO AUTO	Renegoti	Renegotiate	10G-FD
Set Bypass		0.0.0.0] IPv6 GW:] MTU:	AUT0 1500			Offload -
Set CPU Mask		00:90:0b:38:82:72	TX Q Len Priority:	1000 Ignore	-	RX-FCS	✓ TSO Enable
	Rpt Timer:	medium (8 s) 🔻	Watchdog:	0		Bypass NOW!	GSO Enable
	CPU Mask:	NO-SEI	WiFi Bridge:	NONE		Bypass Power-DOWN	GRO Enable

- A. Set the IP Address to 10.0.102/24.
- B. Enable FTP under Services.
- C. Click **OK**.
- 2. Create a file for the FTP client to download/upload. This is optional if you already have a file in mind to test with, just make sure the file is in */home/lanforge* (the default directory for FTP). Step 3 explains how to upload a file from a Windows machine.

A. First, you'll need to open a console on the LANforge system.

- A. Log into the machine directly or remotely through rdesktop. The user/password should be lanforge/lanforge for both.
- B. To log in via rdesktop type the following command into a console (replace LANforge-IP with the IP of your LANforge system): Р



- C. Log in with user/password lanforge/lanforge.
- D. Once you are on the system, a console should already be open. If you don't see a console, go ahead and open one by clicking the console icon in the top menu bar (shown in the below screenshot).

	Ð	Applications	Places	System	1	i 📶 🖻 🕎 🕑 👘 📃
1000					Μ	IATE Terminal
					U	se the command line

B. Once you have a console ready, use the below commands to create a small or large file. These files will just contain random text.

Note: These files will be created in the **/home/lanforge** directory. This is the default directory used for FTP on LANforge.

- A. Small file (45 KB):
 - dd if=/dev/urandom of=/home/lanforge/small-file.bin bs=1k count=44



- B. Large file (10 MB):
 - dd if=/dev/urandom of=/home/lanforge/large-file.bin bs=1k count=10240



- 3. **Optional:** Upload a file to the LANforge system for the FTP client to download/upload. There are multiple ways to do this, this step will demonstrate the upload using a Windows machine with FileZilla.
 - A. On your Windows machine, download and install FileZilla. You can download the FileZilla client here: https://filezilla-project.org/download.php
 - B. Open FileZilla.

🛃 FileZilla	
File Edit View Transfer Server Bookmarks Help	
M - D - C - C - C - C - C - C - C - C - C	
Host: tp://192.168.100.86 Username: lanforge Password:	••••••• Port: Quickconnect -
	v
Local site: C:\Users\brent\Downloads\	▼ Remote site:
	A
- Favorites	
Links	
Filename Filesize Filetype Last modified	Filename Filesize Filetype Last modified Permissions
🥌 n 🕾 decision ini	
file.txt 47 278 084 Text Document 6/15/2015 9:49:23	Not connected to any server
FileZilla_3.11.0.2 6,477,032 Application 6/12/2015 9:31:10	······································
٠	F 4
3 files. Total size: 53,755,398 bytes	Not connected.
Server/Local file Direction Remote file	Size Priority Status
Ourse of Class Field American Survey of American	
Queued files Falled transfers Successful transfers	
	📟 Queue: empty 🔍 🔍 🏄

- A. Near the top left in the Host field, enter in the following: sftp://LANforge-IP (sftp://192.168.100.86 is used in this example).
- B. Username: lanforge Password: lanforge.
- C. Click Quickconnect.
- C. In the left column navigate to your file's directory. Make sure the right column is set to /home/lanforge

5ftp://lanforg	ge@192.168.100.80	5 - FileZilla							
File Edit Viev	w Transfer Se	rver Bookmarks H	elp						
1 - 1		🗉 🕈 🍁 🍕 🕼	R 😚 🕅						
Host: tp://192.1	168.100.86 <u>U</u> ser	name: lanforge	Pass <u>w</u> ord:	••••	•••••	Port:	Quickc	onnect 💌	
Status: C Status: C	Connecting to 192 Connected to 192	.168.100.86 168.100.86							*
Status: R	letrieving director	y listing							
Status: L	isting directory /ł	nome/lanforge	<i>.</i> .						
Status: D	Arectory listing of	"/home/lanforge" suc	cessful						-
Local site: C:\L	Jsers\brent\Down	loads\		-	Remote site:	/home/lanf	orge		•
	🚺 Downlo	ads 🗟		-	⊡?./				
	🖶 🚹 Favorite	s			🖨 🤰 hoi	me			
	🗽 Links				÷	lanforge			
	Local Se	ttings		-					
Filename	Files	ize Filetype	Last modified		Filename	Filesiz	e Filetype	Last modified	Permissio 🔺
					I				
desktop.ini	Z	82 Configuration	5/12/2015 11:50:4	13	📕 .cache		File folder	6/15/2015 9:24:	drwx
file.txt	47,278,0	184 Text Document	6/15/2015 9:49:23		.config		File folder	6/3/2015 11:47:	drwxr-xr-x
FileZilla_3.11	.0.2 6,477,0	132 Application	6/12/2015 9:31:10		dbus .		File folder	4/24/2015 11:2	drwx
					.gnome2		File folder	6/2/2015 11:58:	drwx
•		III	10	•	•			41141012 11.1	4
3 files. Total size:	: 53,755,398 bytes				177 files and 4	3 directories.	Total size: 78,11	.1,666 bytes	
Server/Local file		Direction Remote fi	le		Size	Priority	Status		
	F 11 F 1								
Queued files	Failed transfers	Successful transfer	S						
							🔒 E00	Queue: empty	••

D. To start transferring your file, double click it in the left column. Once the transfer is complete make sure you can find it within the right column under /home/lanforge. Your file is now on the LANforge machine!

5 sttp://lapforge@197.168.100.86 - File7illa									
File Edit View Transfer Server Bookmarks Heln									
Host: tp://192.168.100.86 Username: lanforge Password:	••	•••••	Port:	Quickco	onnect 💌				
Status: Retrieving directory listing of "/home/lanforge"						*			
Status: Directory listing of "/home/lanforge" successful	Status: Listing directory /norme/lamorge Status: Directory listing of "Home/lamorge" successful								
Status: Deleting "/home/lanforge/file.txt"									
Status: Starting upload of C:\Users\brent\Downloads\file.txt Status: local:C:\Users\brent\Downloads\file.txt => remote:/home	lanfo	orge/file.txt				-			
Least 21 Collection (Star Starting Source and Starting St									
	- *	Remote site:	/nome/lanro	rge					
Eavorites	Î	ho	me						
Links			lanforge						
Local Settings	-								
Filename Filesize Filetype Last modified	_	Filename	Filesize	Filetype	Last modified	Permissio 🔦			
1		do_run	66	File	6/15/2015 9:24:	-rw-rr			
🗿 desktop.ini 282 Configuration 5/12/2015 11:50	43	etc_cron	183	D_CLEAN	6/12/2015 10:0	-maxr-xr-x			
file.bxt 😓 47,278,084 Text Document 6/15/2015 9:49:2	3	FileZilla	6,477,032	Application	6/12/2015 4:53:	-w-w-r			
7:12 FileZilla_3.11.0.2 6,477,032 Application 6/12/2015 9:31:1	.0	🕙 find_dflt	1,370	PL File	6/12/2015 10:0	-rwxr-xr-x			
		find_gw	635	PL File	6/12/2015 10:0	-rwxr-xr-x			
<	P.	<	1 00 /	пі г.і. Ш	£ (10 (001E 10.0	+			
Selected 1 file. Total size: 47,278,084 bytes		176 files and 4	3 directories. ⁻	Fotal size: 78,108	8,194 bytes				
Server/Local file Direction Remote file Size Priority Status									
💂 sftp://lanforge@192.168.10									
C:\Users\brent\Downloads>> /home/lanforge/file.txt 47,278,084 Normal Transferring									
00:00:02 elapsed 00:00:03 left <u>60.3</u> % 28,524,544 bytes (10.9 MiB/s)									
Queued files (1) Failed transfers Successful transfers (2)									
				800	Queue: 45.1 MiB	e e 🔒			

- 4. Create the FTP endpoint.
 - A. On the Layer 4-7 tab, click Create.

0				LANF	orge Manag	er Version(5.3.2)				\odot \times
<u>C</u> ontrol	<u>R</u> eporting <u>T</u>	ear-Off <u>I</u> nf	o <u>P</u> lugins								
					5	Stop All	Resta	rt Manage	r	Refres	n HELP
File-IO	Layer-4	Generic	Test Mg	r Test Gro	up Reso	urce Mgr	Event Log	Alerts	Port Mgr I	Messages	
Status	Layer-3	L3 End	ps Voll	P/RTP VolF	P/RTP Endps	s Armag	eddon W	anLinks	Attenuator	s Collis	ion-Domains
t Timer:	default (5	s) 🔻 🕻	o Test M	lanager all	-	[Select All	Start	Stop	Quiesce	Clear
w	0 - 200			▼ Go		Di	splay C	r <u>e</u> ate	<u>M</u> odify	<u>B</u> atch Mod	ify Delete
				— Layer-4	Endpoints	for Selecte	d Test Mana	ager —			
Name	EID	Туре	Status	Total-URLs	URLs/s	Bytes-RD	Bytes-WR	Tx Rate	Tx Rate (1 min)	Rx Rate	Rx Rate (1 min)
Logged	l in to: 192.	168.100.86	:4002 as:	Admin							

B. Configure the FTP endpoint.

*		Create/Modi	fy L4Endpoint				
Name:	ftp-download	Rpt Timer:	fast (1 s)	-	Test Manager:	default_tm	-
Shelf: 1 🔽 F	Resource: 1 (brent-6port)	▼ Port: 2 (ethl)	-	IP Addr:	AUTO	-
Endp Name:	0	URLs per 10m:	600		Max Speed:	Infinite	-
Quiesce:	3 (3 sec) 💌	URL Timeout:	10000	-	DNS Cache Timeout:	60	•
TFTP Block Size:	Default (512 B) 🔻						
Proxy Port:		Proxy Server:					
Proxy Auth:							
Proxy Auth Types:	🗌 Basic 🔲 Digest 🔲 NTLM	м					
HTTP Compression:	🗌 Gzip 🔲 Deflate						
HTTP Auth Types:	🗌 Basic 🔲 Digest 🔲 GSS	-Negotiate 🔲 N	TLM				
SSL Cert:	ca-bundle.crt						
SMTP-From:							
Agent/RCPT-TO:							
UL/DL:	Download 💌	₽ IPv4	IPv6				
URL:	ftp://lanforge:lanforge@10	.0.0.102/large-fil	e.bin				
Source/Dest File:	/dev/null						
Get-URLs-From-F	ile 🗌 Authenticate Server	Use-Proxy	Allow-Reuse		Allow-Cache 📃 Ena	ble 4XX	Show Headers
Bind DNS	TP PASV I FTP EPSV						
	Apply	ок	Batch-Create		Cancel		

- A. Name your endpoint **ftp-download**.
- B. Set Rpt Timer to fast (1 s)
- C. Set Port to eth1.
- D. Set URLs per 10m to 600 (1/sec).
 - I. Here is a list of common values used for **URLS per 10m**.

URLsper 10min	Converted
60	1/min
600	1/sec
6000	10/sec
60000	100/sec

- E. To download the small file (44KB) created earlier, set URL to: ftp://lanforge:lanforge@10.0.0.102/small-file.bin
 To download the large file (10MB) created earlier, set URL to:
 ftp://lanforge:lanforge@10.0.0.102/large-file.bin
 Note: The default directory for FTP is /home/lanforge
 and the default username/password is lanforge/lanforge. All
 files downloaded/uploaded via FTP need to be in /home/lanforge.
- F. **Optional:** If you want to use another file in **/home/lanforge** you can just change the filename at the end of the URL.

For example ftp://lanforge:lanforge@10.0.0.102/large-file.bin would be changed to ftp://lanforge@10.0.0.102/your-file-name

- G. Set Source/Dest File to /dev/null.
- H. Click **OK**.
- 5. Start the endpoint and display the graph.
 - A. In the Layer 4-7 tab, select the connection called ftp-download.
 - B. Click Start.

LANforge Manager Version(5.3.4)
Control Reporting Tear-Off Info Plugins
Stop All Restart Manager Refresh HELP
Layer-4 Generic Test Mgr Test Group Resource Mgr Event Log Alerts Port Mgr VAP Stations Messages Status Layer-3 L3 Endps VolP/RTP VolP/RTP Endps Armageddon WanLinks Attenuators File-10
Rpt Timer: default (5 s) 🗸 Go Test Manager all 🗸 Select All Start Stop Quiesce Clear
View 0 - 500 Image: Go description Display Create Modify Batch Modify Delete
Layer-4 Endpoints for Selected Test Manager
Name EID Type Status Total-URLs URLs/s Bytes-RD Bytes-WR Tx Rate Tx Rate Rx Rate (1 min) Rx Rate (1 min)
ftp-download 1.1.2.1 L4/Gen Stopped 0
Logged in to: brent-6port:4002 as: Admin

C. Select **ftp-download** and click **Display** to see a graph similar to below.

4	📓 📃 Layer-4 Endpoint ftp-download Manager: brent-6port 📃 🗖 🗶										
			E	oad ——							
	Resource: Port: IP: bps TX: Pps Tx:	Port brent-6port eth1 10.0.0.101 276.724 Kbps 492 pps	EID: Cfg URLs/10m: RX Rate: TX Rate: URLs/s:	ooint 1.1.2.1 600 84.449 Mbps 0 bps 1	75: 10 76: 3 78: 12 92: 27 90: 24 106: 1 138: 0 202: 0 330: 0 586: 0 1098: 0 2122: 0	First RX Avg:82 7491	165: 10 166: 3 168: 5 172: 30 180: 29 196: 1 228: 0 222: 0 420: 1 676: 0 1188: 0 2212: 0	URL Completec Avg:172 164182			
3 13 13	bps RX: Pps RX: Errors: 256 ps - 0 ps 17.18 Gbps - 256 bps - 17.18 Gbps - 256 bps - 17.18 Gbps - 256 bps - 17.18 Gbps - 256 bps - 0 bps 17.18 Gbps - 17.18	88.636 Mbps 7.317 Kpps 0 ssed Tx Throughp	URLs Processed: Total-ERR: Type:	79 0 L4/Gen	1: 77 2: 0 4: 0 22: 0 22: 0 24: 0 128: 0 256: 0 512: 0 512: 0 1024: 0 2048: 0	2^20 -2^15 -1024 -32 0 DNS Complete Avg:0 00 2^20 -2^15 -1024 -32 0	ull	2^20 -2^15 -1024 -32 0			
	Pause Di	Clear	Close								

6. **Uploading** a file from the FTP client to the FTP server.

A. Go to the Layer 4-7 tab and modify the **ftp-download** endpoint. The below changes will need to be made:

4		Create/Modi	fy L4Endpoint				
Name:	ftp-upload	Rpt Timer:	fast (1 s	-	Test Manager:	default_tm	-
Shelf: 1 🔻 F	Resource: 1 (brent-6port)	▼ Port: 2 (ethl)	-	IP Addr:	AUTO	-
Endp Name:	1	URLs per 10m:	600		Max Speed:	Infinite	-
Quiesce:	3 (3 sec) 💌	URL Timeout:	10000	-	DNS Cache Timeout:	60	-
TFTP Block Size:	Default (512 B) 💌						
Proxy Port:		Proxy Server:					
Proxy Auth:							
Proxy Auth Types:	🗌 Basic 🔲 Digest 🗌 NTLN	4					
HTTP Compression:	Gzip Deflate						
HTTP Auth Types:	🔲 Basic 🔲 Digest 🔛 GSS-	-Negotiate 🔲 N	TLM				
SSL Cert:	ca-bundle.crt						
SMTP-From:							
Agent/RCPT-TO:							
UL/DL:	Upload 🗸	₽ IPv4	IPv6				
URL:	ftp://lanforge:lanforge@10.	0.0.102/upload	file				
Source/Dest File:	large-file.bin						
Get-URLs-From-F	ile 🗌 Authenticate Server	Use-Proxy	Allow-Reus	e 🗌	Allow-Cache 🗌 Ena	able 4XX Show	Headers
Bind DNS	TP PASV FTP EPSV						
	Apply	ОК	Batch-Crea	te	Cancel		

- A. Name to ftp-upload.
- B. UL/DL to Upload.
- C. URL to ftp://lanforge@10.0.0.102/upload-file. The 'upload-file' filename in this link can be changed if needed.
- D. Source/Dest File to large-file.bin. This can be changed to a preferred file as long as it is in /home/lanforge (the default FTP directory).
- E. Click OK.
- B. Select ftp-upload and click Start.
- C. This endpoint will now essentially upload the large-file.bin file in /home/lanforge to the same directory with a new file name (upload-file in this case). If you select **ftp-upload** in the **Layer 4-7** tab and click **Display**, the graph should look similar to the one below.



A. Go to the Layer 4-7 tab and modify the **ftp-download** endpoint. The below changes will need to be made:

4				LANforg	e Manager	Version(5.	.3.4)			
<u>Control</u> <u>R</u> epo	rting <u>T</u> ea	ar-Off Info	<u>P</u> lugins							
						Stop All	Resta	rt Manager	Refresh	HELP
Layer-4 Ge Status	neric T	est Mgr	Test Group	Resource Mo	gr Event VoIP/RTP En	Log Alerts	Port Mgr Armageddon	VAP Stations M WanLinks	Messages Attenuators	File-I0
Rpt Tim	ner: defau	ılt (5 s)	Go T	est Manager	all	•	Select All	Start Stop	Quiesce Clear	•
View	0 - 50	00		🔻 Go			Display Cr	eate <u>M</u> odify <u>E</u>	Batch Modify De	elete
-				Layer-4 E	ndpoints for	Selected T	est Manager-			
Name	EID	Туре	Status	Total-URLs	URLs/s	Bytes-RD	Bytes-WR	Tx Rate (1 mir	te Rx Rate	Rx Rate (1 min)
ftp-download	1.1.2.1	L4/Gen	Stopped	138	0	1,447,034	. 0	0	0 82,824,960) (
ftp-upload	1.1.2.2	L4/Gen	Stopped	162	0	(1,698,693	83,322,368	0 () (
•										
Logged in to:	brent-6p	ort:4002 a	s: Admin							

- A. Name to ftp-scp for scp or ftp-sftp for sftp.
- B. For SCP, set the URL to scp://lanforge@10.0.0.102/~/small-file.bin. The filename at the end of the link can be changed to another file in /home/lanforge.

<u>گ</u>		Create/Modi	fy L4Endpoint				
Name:	ftp-scp	Rpt Timer:	fast (1 s)	-	Test Manager:	default_tm	-
Shelf: 1 🔻 F	Resource: 1 (brent-6port)	▼ Port: 2 (ethl)	-	IP Addr:	AUTO	-
Endp Name:	1	URLs per 10m:	600		Max Speed:	Infinite	-
Quiesce:	3 (3 sec) 💌	URL Timeout:	10000	-	DNS Cache Timeout:	60	-
TFTP Block Size:	Default (512 B) 💌						
Proxy Port:		Proxy Server:					
Proxy Auth:							
Proxy Auth Types:	🗌 Basic 🔲 Digest 🗌 NTLM	1					
HTTP Compression:	Gzip Deflate						
HTTP Auth Types:	🗌 Basic 🔲 Digest 🔲 GSS-	Negotiate 🔲 N	TLM				
SSL Cert:	ca-bundle.crt						
SMTP-From:							
Agent/RCPT-TO:							
UL/DL:	Download 💌	✓ IPv4	IPv6				
URL:	scp://lanforge:lanforge@10	.0.0.102/~/sma	ll-file.bin				
Source/Dest File:	/dev/null						
Get-URLs-From-F	ile 🗌 Authenticate Server	Use-Proxy	Allow-Reuse		Allow-Cache 🗌 Ena	ble 4XX 🔲 Show	Headers
Bind DNS	TP PASV 🕑 FTP EPSV						
	Apply	ок	Batch-Create		Cancel		

- C. Click OK.
- D. For SFTP, set the URL to sftp://lanforge:lanforge@10.0.0.102/~/small-file.bin. The filename at the end of the link can be changed to another file in /home/lanforge.

\$		Create/Modi	fy L4Endpoint				
Name:	ftp-sftp	Rpt Timer:	fast (1 s)	•	Test Manager:	default_tm	-
Shelf: 1 🔻 F	Resource: 1 (brent-6port)	▼ Port: 2 (ethl)	-	IP Addr:	AUTO	-
Endp Name:	1	URLs per 10m:	600		Max Speed:	Infinite	-
Quiesce:	3 (3 sec) 💌	URL Timeout:	10000	-	DNS Cache Timeout:	60	-
TFTP Block Size:	Default (512 B) 💌						
Proxy Port:	0	Proxy Server:					
Proxy Auth:							
Proxy Auth Types:	🗌 Basic 🔲 Digest 🗌 NTLN	1					
HTTP Compression:	🗌 Gzip 🔲 Deflate						
HTTP Auth Types:	🔲 Basic 🔲 Digest 🔛 GSS-	Negotiate 🔲 N	TLM				
SSL Cert:	ca-bundle.crt						
SMTP-From:							
Agent/RCPT-TO:							
UL/DL:	Download 💌	✓ IPv4	IPv6				
URL:	sftp://lanforge:lanforge@10).0.0.102/~/sma	ll-file.bin				
Source/Dest File:	/dev/null						
Get-URLs-From-F	ile 🗌 Authenticate Server	Use-Proxy	Allow-Reuse		Allow-Cache 📃 Ena	ble 4XX 🔲 Show Head	ders
Bind DNS	TP PASV P FTP EPSV						
	Apply	ОК	Batch-Create		Cancel		

- E. Click OK.
- B. Select the ftp-scp or ftp-sftp endpoint and click Start.
- C. To use **TFTP**, you will first need to have a TFTP server set up and configured to serve the Layer 4-7 endpoint a file.
 - A. Once the server is set up, use the below configuration to set up a TFTP endpoint. **Note:** You will need to provide your own server's IP and file name.

		Create/Modi	fy L4Endpoint						
Name:	l4-tftp	Rpt Timer:	fast (1 s) 🔻	Test Manager:	default_tm	-			
Shelf: 1 🔽 F	Resource: 1 (brent-6port)	▼ Port: 0 (eth5)(MGT)	IP Addr:	AUTO	-			
Endp Name:	21	URLs per 10m:	100	Max Speed:	Infinite	-			
Quiesce:	3 (3 sec) 💌	URL Timeout:	10000 🗖	DNS Cache Timeout:	60	-			
TFTP Block Size:	Default (512 B) 🔻								
Proxy Port:		Proxy Server:							
Proxy Auth:									
Proxy Auth Types:	🗌 Basic 🔲 Digest 🗌 NTLI	ч							
HTTP Compression:	🔲 Gzip 🔛 Deflate								
HTTP Auth Types:	🗌 Basic 🔲 Digest 🔲 GSS	-Negotiate 🔲 N	TLM						
SSL Cert:	ca-bundle.crt								
SMTP-From:									
Agent/RCPT-TO:									
UL/DL:	Download 🗸	₽ IPv4	IPv6						
URL:	tftp://192.168.100.93/large	e-file.bin							
Source/Dest File:	/dev/null								
Get-URLs-From-F	Get-URLs-From-File Authenticate Server Use-Proxy Allow-Reuse Allow-Cache Enable 4XX Show Headers								
Bind DNS	TP PASV 🔽 FTP EPSV								
	Apply	<u>0</u> K	Batch-Create	<u>C</u> ancel					

- I. Set the **Port** to a port that can talk to the TFTP server. In this case the server was on the management network so eth0 was used.
- II. URLs per 10m was left at the default 100, this can be set higher or lower depending on how often the file should be downloaded.
- III. Set URL to tftp://server-IP/filename.
- IV. Source/Dest File can be /dev/null.