

## Clustering multiple LANforge systems together

**Goal**: Cluster multiple LANforge systems together to use while Wifi network testing. Clustering enables multiple LANforges to act as one large LANforge.

Multiple LANforge machines can be used as a group with one **manager** LANforge.

	LANforge Manager	version(5.4.6)	$\odot$ $\odot$ $\odot$
Control <u>R</u> eporting Windows Info ⊥est	5		
	Chamber ⊻iew Stop	All Restart Manager	Refresh HELP
RF-Generator File-IO Resource Mgr	Interop DUT Profiles Traffic	Profiles Alerts Warnings + Wifi-	Messages
Status Port Mgr Layer-3	L3 Endps Layer 4-7 Ar	mageddon 🛛 WanLinks 🕺 VoIP/RT	P VoIP/RTP Endps
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Status Vie <u>w</u> : Ports by Resource 💌			0000
		Verwrite _ DUI _ Chamber _ Pr	onie
	Netsmith	Resource 10 Resource 11	
ogged in to: localhost:4002 as: Admin			10 stations: 0↑ 2I A

- An unclustered LANforge is both 'Manager' and 'Resource'. In a cluster (with multiple LANforges), there is one LANforge that is a 'Manager' and 'Resource' and there are other LANforges that are only 'Resources'. The LANforges that are only a 'Resource' use the first LANforge as their 'Manager'. There are two ways to cluster. One way is via the command line, second is via the User Interface. This cookbook demonstrates how to cluster via the User Interface. First, configure the first LANforge (which is typically both a 'Resource' and 'Manager')
  - A. Open a VNC/RDP window to the LANforge wished to be used as the 'Manager' and 'Resource' of the final cluster. Click on the *Configure LANforge* icon located on the VNC session desktop.



B. Once the 'LANforge Installation and Configuration (as superuser)' window opens, click on the *Basic* tab. Set the *Setup Mode* to *Both, Resource ID* to *1*, and pick a realm 1-254 (example below is realm *2*). Realm 255 means the LANforge is un-clustered.

0	LANforge Installation and Configuration (as superuser)	$\odot$ $\otimes$ $\otimes$
Basic Network Logging	Clustering Advanced	Let's configure LANforge Server!
<ul> <li>Resource ID</li> <li>Realm</li> <li>Management Interface</li> </ul>	1 2 2 ■ ■ ■ ■ ■ ■ ■ ■ ■	Your LANforge system should be configured for a specific Realm, with a Management Port, and as a Manager, a Resource or Both. A typical stand-alone LANforge system will have the following values: • Realm 255 (the stand-alone realm) • Resource 1 (the only LANforge in the realm) • Mode Both (Both a Manager and a Resource)
		For clustered LANforge systems, pick a single realm number between 1-254 for all LANforge systems to be clustered together.
	Reset to Defaults Restart on Apply Apply Exit LANforge Con	fig

- C. Click on Apply and Exit LANforge Config to save settings.
- 2. Next, configure the following LANforges to cluster to the first LANforge. These LANforges will be only Resources.
  - A. Open a VNC/RDP window to the LANforge wished to be used as the 'Manager' and 'Resource' of the final cluster. Click on the *Configure LANforge* icon located on the VNC session desktop.



B. Once the 'LANforge Installation and Configuration (as superuser)' window opens, click on the *Basic* tab. Set the *Setup Mode* to *Resource, Resource ID* to 2 or what the next unused Resource number is, and pick the same realm as the manager LANforge (in our example, realm 2).

0	Wireshark Network traffic analyz	ge Installation and Configuration (as superuser) er	$\odot \odot \otimes$
Ba	sic Ne <mark>twork Logging Claste</mark> Setup Mode	Advanced Advanced	Let's configure
0	Resource ID	2	Your LANforge system
	Realm Management Interface	2	specific Realm, with a Management Port, and as a Management a Besource or Both.
	-	Dev: eth0 IP: 192.168.100.33 MAC: 00:0d:b9:53:2d:98	A typical stand-alone LANforge system will have the following values:
			<ul> <li>Realm 255 (the stand-alone realm)</li> <li>Resource 1 (the only LANforge in the realm)</li> <li>Mode Both (Both a Manager and a Resource)</li> </ul>
		-	For clustered LANforge systems, pick a single realm number between 1-254 for all LANforge systems to be
	Rese	t to Defaults Restart on Apply Apply Exit LANforge	Config

C. Click on the *Clustering* tab and in the *Connect to Manager* input box, put in the Manager's IP address followed by a ':4002'

LANforge Installation and Configuration (as superuser)         Society			
Basic Network Logging	Clustering Advanced	Let's configure LANforge Server!	
Add Cluster Resource		Your LANforge system should be configured for a specific Realm, with a Management Port, and as a Manager, a Resource or Both. A typical stand-alone LANforge system will have the following values: • Realm 255 (the stand-alone realm) • Resource 1 (the only LANforge in the realm) • Mode Both (Both a Manager and a Resource) For clustered LANforge systems, pick a single realm number between 1-254 for all LANforge systems to be	
	Reset to Defaults Restart on Apply Apply Exit LANforge C	Config	

- D. Click on Apply and Exit LANforge Config to save settings.
- 3. Restart LANforge Manager on all LANforges of cluster. The 'Status' tab of 'the Manager' of the clustered systems should show multiple resources now, as shown in the example below. If systems are not clustering and LANforge version build dates are too far apart between systems in cluster, LANforges may need to be upgraded so build version dates are closer to each other. Please contact *support@candelatech.com* for

assistance.

Control Beporting Windows info Tests  Chamber View Stop All Restart Manager Refresh HELP  RF-Generator File-10 Resource Mgr Interop DUT Profiles Traffic-Profiles Alerts Warnings + Wifi-Messages Status Port Mgr Layer-3 L3 Endps Layer 4-7 Armagedon WanLinks VolP/RTP VolP/RTP Endps  License thin Current Users Saved Test Configurations  License expire in: 75 days. TR-398 Support expires in: 75 days. Status Vieg: Ports by Resource   Manager/Resource  Manager/Reso	0	LANforge Manager	Version(5.4.6)	$\sim$ $\sim$ $\times$		
Chamber Yiew Stop All Restart Manager Refresh HELP   RF-Generator File-10 Resource Mgr Interop DUT Profiles Traffic-Profiles Alerts Warnings + WifhMessages   Status Port Mgr Layer-3 L3 Endps Layer 4-7 Armageddon Warluss VolP/RTP VolP/RTP   License Info Licenses info Current Users Saved Test Configurations Imageddon Download DB Show Progress Delete   Status Volvery: Port by Resource Imager/Resource Save DB Name: Save Save   Status Viey: Ports by Resource Imager/Resource Imager/Resource Imager/Resource Imager/Resource   Realm 2 Imager/Resource Imager/Resource Resource Imager/Resource Imager/Resource	<u>Control Reporting Windows Info Test</u>	s				
RF-Generator       File-10       Resource Mgr       Interop       DUT       Profiles       Traffic-Profiles       Alerts       Warnings       +       Wif-Messages         Status       Port Mgr       Layer 3-       L3 Endps       Layer 4-7       Armageddon       Warnings       +       Wif-Messages         License Info       License info       Current Users       Saved Test Configurations       Configurations       Delete         Support expires in: 75 days.       *       Admin formaliz7.00.1       Download DB       Show Progress       Delete         Save DB Name:       Save       Save       Save       Save       Save         Realm 2		Chamber <u>V</u> iew <u>S</u> top	All Restart Manager Ref	fresh HELP		
License Info License Info Licenses expire in: 75 days. TR-398 Support expires in: 75 days. Status View: Ports by Resource  Realm 2  Manager/Resource  Manager/Resource  Manager/Resource  Manager/Resource  Manager/Resource  Netsmith Netsm	RF-Generator File-IO Resource Mgr Status Port Mgr Layer-3	Interop DUT Profiles Traffic L3 Endps Layer 4-7 Ar	-Profiles Alerts Warnings + Wifi-Messages mageddon WanLinks VoIP/RTP V	s VoIP/RTP Endps		
Licenses expire in: 75 days. TR-398 Support expires in: 75 days. Status View: Ports by Resource Realm 2 Manager/Resource 10 Resource 10 Resource 11 Netsmith Netsmith	License Info	Current Users Saved Test Configurations				
TR-398       Support expires in: 75 days.       Download DB       Show Progress       Delete         Status View:       Ports by Resource       Image: Resource	Licenses expire in: 75 days.	* Admin from:127.0.0.1	Configuration: DFLT	Load		
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	Realm 2					
ogged in to: localitos: 4002 as: Adniifi 10 stations: 01 24 80	Logged in to: localhost:4002 as: Admin		10	stations: 01 2↓ 8Ø		

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