

### LANforge InterOp Setup for Android

Goal: Cable an android mobile phone to a LANforge and have the LANforge recognize the android phone as a resource.

This cookbook requires LANforge GUI version 5.4.6 and above.

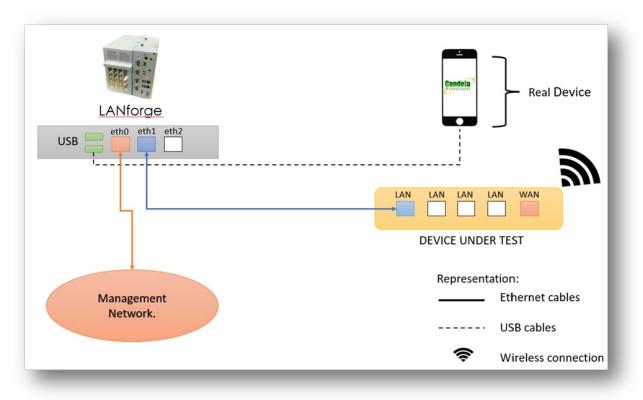
## **Background**

Our LANforge InterOp solution is used to support real clients for testing access points. InterOp gives the ease of handling real clients with complete automation and detailed, customizable test reporting.

We have support for various kinds of real clients:

- Android clients.
- iOS clients.
- Windows Machines.
- Linux Machines.
- MacOS Machines.

# Network Topology:



#### Before getting started:

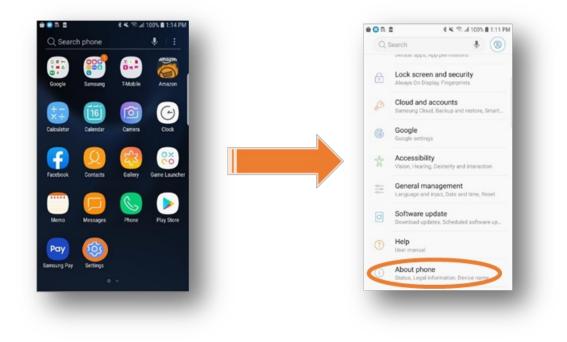
- If your mobile is in developer mode, skip to step-3.
- If you are using XIAOMI mobiles [Redmi, Poco ..etc] for LANforge Interop then please make sure that your mobile has Mi account.

Steps to create Mi account:

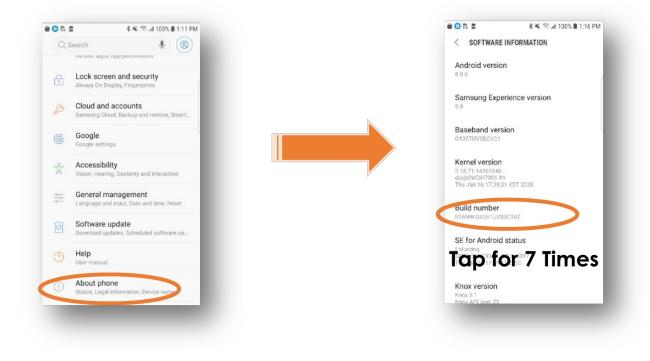
- Insert a sim card in the Mi mobile.
- Create Mi account by providing the credentials.

#### Steps to setup & connect your android phone to LANforge

1. Open the Settings on the Android phone and click on About Phone.



2. In About Phone, click on Build number 7 times to enable developer options.



- 3. Now there will be a new option available in settings tab called "Developer Options". Click on it and enable the following options:
- · Stay Awake.
- USB-Debugging.

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Always On Display, Fingerprints	ON CON	ON C
Cloud and accounts     Samsung Cloud, Backup and restore, Smart	Submit bug report	Quick settings developer tiles
		DEBUGGING
Google Settings	Desktop backup password Full desktop backups are not currently protected.	USB debugging Debugging mode launches when USB
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vision, Hearing, Dexterny and Interaction	Stay awake Screen will never sleep while charging.	Revoke USB debugging authorizations
General management Language and input, Date and time, Reset		
	Bluetooth HCI snoop log Capture all Bluetooth HCI packets in a frie.	Include bug reports in power me Include option in power menu for taking a bug report.
Software update Download updates, Scheduled software up	0EM unlock	
Help User manual	OEM unlock Allow the device to be OEM unlocked.	Mock location app No mock location app set
User manual	Running services	View attribute inspection
About phone Status, Legal information, Device none	View and control currently running services.	View attribute inspection
	Picture color mode	Select app to be debugged
Developer options     Developer options	Picture color mode Use sRG8	No application set to be debugged.

- 4. Connect the device to the LANforge as per the testbed topology. Plug the phone via the port (usb-c or microusb) at the bottom of the phone to one of the usb-A slots on the LANforge.
- 5. Open the LANforge GUI window. The *Interop* tab should appear now. Click on the tab to see your phone detected as a port.

	Chamber View Traffic-Profile Modify
Start +     Stop -     Uninstall     Discover     Modify	
	lodify De
Android Devices	
Name phantom adb_username sdk_release sdk_version product model device app_id	d
1.581ad8a4	0

6. in the *InterOp* tab, double-click on the port to open the *Modify ADB Device* window. Enter your device user name.

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7. Close the *Modify ADB Device* window. Back in the *InterOp* tab there is a button called *Batch-Modify*. Click on *Batch-Modify* to see options to configure the Wi-Fi profiles of the client.

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8. In the *Batch-Modify* window, check the *use SCRCPY* option and click on Launch GUI. This will open a screen mirror of the mobile in the LANforge GUI and can be used to remotely control the phone if needed.

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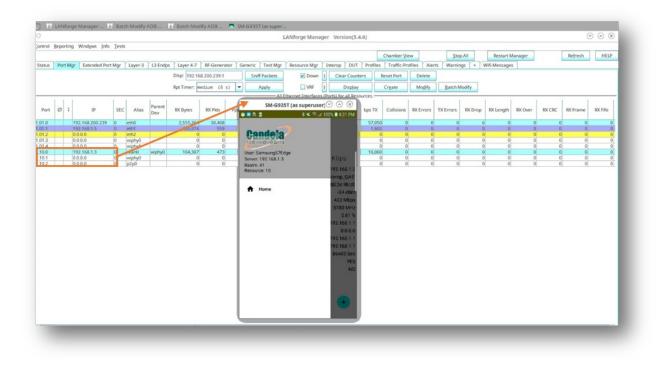
- 9. Now click on *Install* in the *Batch-Modify* window to install the InterOp app (apk).
- 10. Close the *Batch-Modify* window. Click on the *Port Magr* tab, double click on *eth1*, and check the DHCP-IPv4 checkbox or assign a static IP address from the DHCP pool of the AP, which is our Manager IP address.

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Disp: 192.16	200.239:1 Sniff Packets	Down 1 Clear Counters	Reset Port Delete		
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0 etb2 0		Driver Info: Port Type: Ethernet	Driver:lgb(5.19.17+) Bus: 0000:07:00.0		
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	Set Rate Info	Pv4 Secondary-IPs DHCP C	lient ID: None	0 2.5G-FD 0 5G-FD	1000-FD
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	Set RX-AUFCS IP Address:	0.0.0.0 Global I	Pv6: AUTO	40G-FD     Autonegotiate	5G-FD
	Set Bypass IP Mask:	0.0.0.0 Link IPv	6: AUTO		10G-FD
	Set Bridge Info Gateway IP	: 0.0.0.0 IPv6 GV	AUTO	Renegotiate	40G-FD
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11. Click on the *InterOp* tab again, double-click on your phone, and fill out the fields of IP address, SSID, encryption modes of the DUT. Click *Apply* when fields are entered.

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12. After clicking *Apply*, the InterOp app will open in the mobile and the Network stats will be visible. The phone can also be detected in the *Resource Mgr* and *Port Mgr* tabs in the GUI now.



13. Below is an example of ports like wiphy0, wlan0, p2p0, which are the ports of the mobile. At this point, if you click on wlan0 port[station] and click on *Display Scan*, a pop-up in which all the nearby SSID's Broadcasted near the phone are detected.

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