Candela TECHNOLOGIES Network Testing and Emulation Solutions

sales@candelatech.com
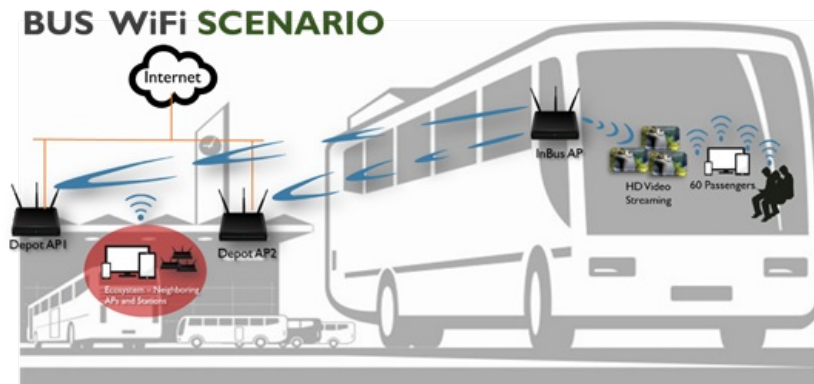support@candelatech.com
+1 (360) 380-1618 [PST, GMT -8]

# Testing WiFi Mesh in Mass Transit using LANforge

Buses, planes, trains, ferries and other forms of mass transportation now have WiFi. Its extremely important for these transportation companies to provide consistently excellent WiFi coverage for hundreds of users in small spaces for long duration.


If we take buses as an example, the AP in the bus needs to provide good quality of experience to all the passengers in the bus and should also be able to connect in repeater mode to the APs in the Depot when the bus parks at the depot. The AP in the bus should be able to simultaneous act both in STA and AP mode. This same use case applies to many different forms of mass transportation and emergency-services and police vehicles.

The example setup includes 4 RF chambers. Chamber 1 has a LANforge system that can emulate 100s of passengers in the bus, chamber 2 has the Device Under Test (the AP in the Bus) and chamber 3 and 4 have LANforge systems that emulate two APs in the depot. Third-party APs can also be used for the depot APs.
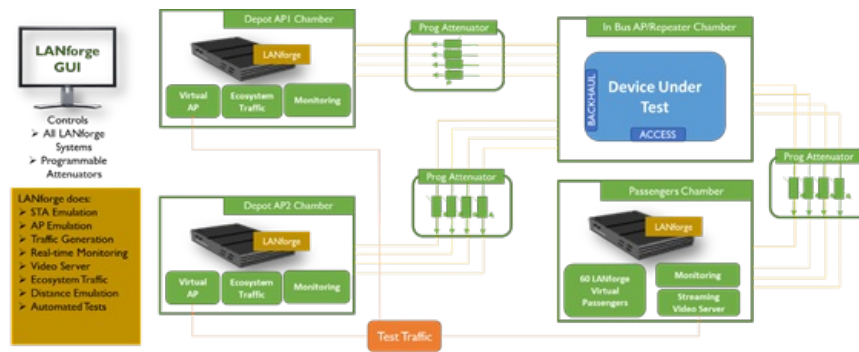
All chambers are connected using programmable attenuators. The setup allows 100s of emulated passengers connecting to the AP under test while roaming the AP under test in the bus between the 2 Depot APs. LANforge can generate emulated HD video streaming and other traffic flows and report details of the end-user experience.
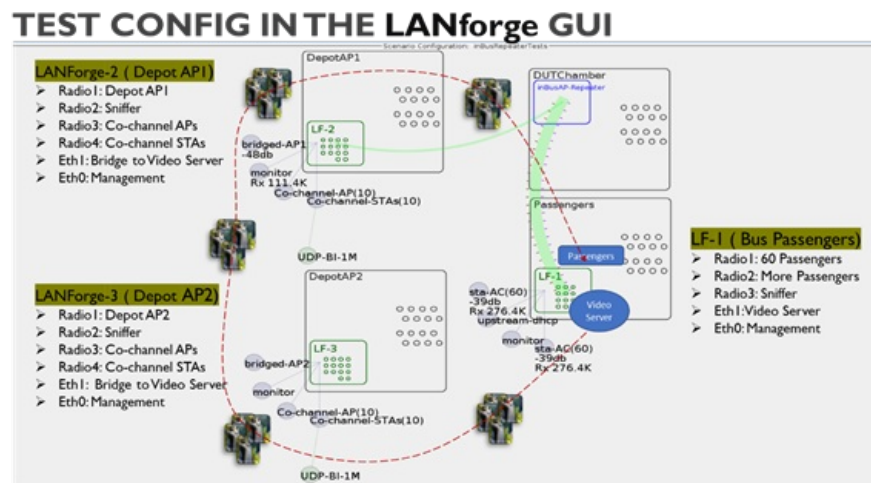
Includes these Building Blocks

- Station Emulation to load DUT AP
- AP Emulation to act as Depot APs
- AP/STA Emulation and monitor radios for adjacent WiFi interference and packet capture
- 4 RF Enclosures
- Programmable Attenuators
- Traffic Generation feature set (TCP, UDP, HTTP, emulated HD Video streaming...)
- RF Cables, splitters/combiners.

Key Tests

- DUT capacity test with many users
- DUT roaming between Depot uplink APs
- AP validation: LANforge-APs and third-party APs may be used for Depot APs
- Stability test as many users come and go
- DHCP lease management
- Web Portal login available, requires additional scripting work

Transportation Demonstration

Pricing: Pricing ranges from $50k to $150k and includes the building blocks listed above.

Lead Times: Most LANforge systems can generally be shipped within a couple of days of customer PO. The accessories may need 2-4 weeks of lead time.

TaaS/Onsite Support: For a customer with only occasional testing needs, we provide an option of Test as a Service. Candela engineers can do the testing for you in our fully equipped test lab and provide a detailed test report with recommendations. We can provide onsite setup and automation services for customers interesting in purchasing the system.

For more information, please contact sales@candelatech.com or give us a call at: 1-360-380-1618