Candela
TECHNOLOGIES
Network Testing and Emulation Solutions

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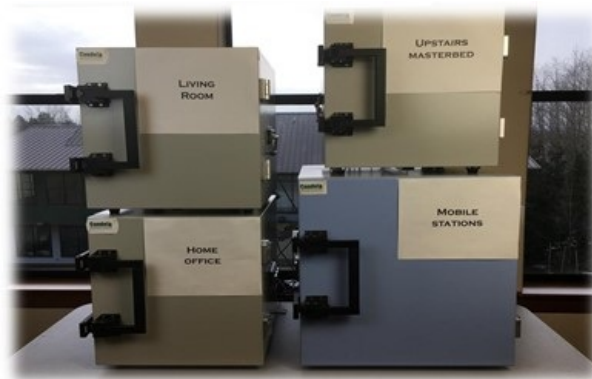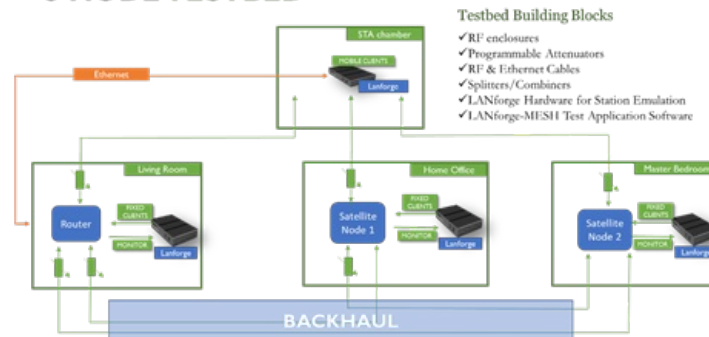+1 (360) 380-1618 [PST, GMT -8]

WiFi Mesh Testing with LANforge

Testing a multi-node WiFi mesh network can be very complex. Fortunately, the Candela LANforge WiFi mesh test solution packages a number of integrated building blocks and offers a comprehensive, highly repeatable, controllable and automatable mesh testbed in a compact and highly affordable form factor.

Using the LANforge mesh test system, customers can create an entire home network in the lab. The chambers emulate rooms and mobile station location and LANforge systems in each chamber emulate fixed devices (TVs, laptops, phones). The LANforge software allows quick and powerful graphical control of the chambers to emulate physical distance and mobility. Many tests can be automated, substantially decreasing test time and increasing test coverage.

See these LANforge Mesh presentation slides for other topologies and more information.

Pictures of installed testbeds: Two Rack-Mounted Mesh Testbeds

The RF cabling is done in such a way that the test can have full control over each individual connection of both the access and backhaul links in a full mesh topology. The test setup can scale to up to 6 node mesh and also up to 4x4 MIMO testing on both the access and backhaul links.

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

Includes these Building Blocks

- Station Emulation
- AP Emulation
- RF Enclosures
- Programmable Attenuators

- Traffic Generation feature set (TCP, UDP, HTTP, ...)
- RF Cables, splitters/combiners.

Key Tests

- Data Plane Performance per Hop
- Performance in Different Mesh Configurations
- Station Load Balancing
- Fast Roaming – 802.11k/v/r
- Auto Channel Selection
- Link Failover / Self-Healing
- Video Performance
- Mobile Client Performance / Handover Scenarios
- See Example Mesh Report.

Key Measurements

- Throughput/Latency/Loss per Hop
- Roaming Delays and Network downtime
- Performance over Distance

WiFi Mesh Test Demonstration

Pricing: Depending upon the configuration of the LANforge unit, pricing of a 3-node mesh testbed varies between $50K - $150K USD. This includes 4 LANforge systems each with 2+ 11ac Wave1 or Wave2 radios capable of emulating 64 stations per radio, traffic generation, software, RF cables, splitters, RF chambers, 1 yr. SW and HW warranty

Received your test-bed and need to put it together? Here are some Mesh Wiring Diagrams and Installation notes. Please contact support@candelatech.com if you need any assistance.

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.

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