Pronto Cisco Joint Solution for WiFi Network Deployment
Pronto Networks provides an integrated solutions platform that enables service providers to deploy & manage large wireless broadband networks, including Wi-Fi mesh networks for community hot-zones, public safety and other next generation wireless networks. The Pronto UniFi OSS is the back-office server software that handles all aspects of the WLAN service provisioning, authentication, and authorization & accounting (AAA), billing, credit card processing and customer registration functions for a public access Wi-Fi network. The UniFi OSS remotely manages all controllers in the network from the Network Operations Center (NOC).

Pronto UniFi OSS is a modular, multi-tier platform that includes feature-rich components for:

- Service creation, activation and maintenance of hotspot and Hotzone locations
- Implementation of network policies (QoS) and session monitoring capabilities
- Authentication, Authorization and Accounting (AAA), multiple authentication realms and roaming options
- Customer care, billing, and payment processing capabilities

In this solution, Cisco offers WLAN indoor and outdoor mesh equipment. It offers intelligent wireless mesh solution for mixed-use network deployments where both public safety agencies and residents utilize services on a common wireless infrastructure. The solution is engineered for ease of deployment & management using identical indoor/outdoor management based on LWAPP.

The Cisco mesh solution is self-configuring and self-healing. The solution uses zero-touch configuration and uses Cisco’s new adaptive wireless path (AWP) protocol. The solution provides robust embedded security and seamless L3 mobility.

The Pronto Cisco joint solution provides the following capabilities:

- Location based services
- Enhanced customer service options
- “Mixed – Use” Networks
- Different SLAs for different services
- Support for varied business models - wholesale access, drinking fountain model, free/fee based business model
- Varied go to market choices – Build for municipality, ISPs and Build own operate model

Pronto Networks performed the interoperability testing for the Cisco 4404 series WLAN controllers on various provisioning, service creation, AAA, service plans and billing related features. The test setup consisted of:

- R4.0 of Pronto UniFi OSS
- Cisco WLCN 4404
- Cisco 1500 series Mesh APs

In a Pronto Cisco joint solution deployment, when a user attempts to connect to the wireless network, he would associate with the SSID corresponding to the one configured on the Cisco WLAN controller and the Cisco mesh APs, as defined by the Wireless ISP (WISP).

The table nearby shows a description of the features tested successfully in the interoperability testing. Once connected, when the subscriber attempts to access the Internet before authentication, the WLANC will redirect the request to the UniFi OSS’ web servers, from where it picks up the appropriate login/captive portal pages that are presented on the subscriber’s device.

These sites called “Walled Garden” sites further serve as an opportunity for the operator to co brand their services and enhance revenue with sponsor channels and information specific to the location / type of users /time of the year etc. Multiple splash pages are supported so that different set of users on different VLANs, can be configured to receive different pages and hence different service offerings, based on which SSID/VLAN they are associated in the WLAN network.
The captive portal page provides multiple authentication methods that can co-exist in a service provider environment, thus empowering the operator to reach out across geographies and demographics leading to higher customer penetration and thus higher returns. Pronto’s UniFi OSS solution supports multiple service plans/offers on the same VLAN (i.e. Captive Portal Page) for WLAN controllers that allow for multiple VLANs and separate captive portal redirections per VLAN. Even within a single login page, i.e. the same VLAN, the system can simultaneously support different types of users.

Additionally, the Cisco solution supports Virtual Network Operators through the use of multiple SSIDs and multiple VLANs in the WLANC. The network and service management of this feature is outside the scope of this joint solution.

In the UniFi OSS, multi-tiered rating and service plans enable both retail and wholesale offerings with support for a variety of authentication and payment mechanisms. Credit cards, prepaid cards, monthly subscription plans and bandwidth usage plans are also supported, as well as roaming settlements with aggregators such as Boingo and iPass. The authentication options can vary from prepaid authentication to USB key based authentication. Pronto’s UniFi OSS offers Radius AAA and 802.1x support as well as multiple authentication options through external sources, including roamers such as Boingo and iPass.

Custom branding options supported by Pronto UniFi OSS enables the service providers to acquire customers and have them associated with a known level of performance and assurance. The captive portal would further have various links to sites that can be accessed without authentication.

Apart from providing the software license, Pronto Networks also hosts the OSS software for its MSP customers under its Managed Services offering. Under the Managed Services option, Pronto provides all the back-office operations for customers, including 24x7 network management and 24x7 call center support, leveraging its leading OSS software platform.

Network infrastructure, installation and commissioning of the network at the locations, etc. are outside the purview of Pronto Networks in this scenario. The highlights of the offering includes shared hosting of the OSS software on the server at our NOC, the controllers/gateways if customer opts for it, login page customization, provisioning and activation of service, round the clock remote network management, guaranteed uptime for services, upgrades of the software and training.

About Pronto Networks
Pronto Networks, based in Pleasanton, California, provides a carrier-class Operations Support Systems (OSS) that enable network operators to deploy and manage large public hot spot and hot zone networks. The software handles provisioning, configuration, authentication, access control, security, pre-paid and post-paid billing, and roaming settlement for large public WLAN networks, in addition to remotely managing and updating multi-vendor hardware and Wi-Fi switches.