



Solution Comparison

Pronto Cloud Controller

v/s

Traditional WLAN Controllers

Evolution of Wi-Fi

Wireless access points started off as standalone access points, also known as fat access points. In the beginning, these independent Fat APs provided everything needed to manage wireless clients. But as networks developed and became more complex, certain limitations came to light. These devices needed to be configured individually through a serial cable connected to the AP's port, making setup a pain for larger networks. Technical expertise was necessary to configure these APs through command line interface (CLI). As Wi-Fi hardware evolved, these APs started supporting web based GUI for configuration but bulk provisioning of APs still remained as an operational hurdle faced by network administrators. Furthermore, maintenance, monitoring and upgrades of APs became a nightmare.

These issues obliged vendors to invent a centralized solution to configure, control and manage access points. This introduced WLAN controllers and thin APs. Thin APs were by default always dependent on the controllers. The hardware controller became the centralized management unit for configuration. All wireless client traffic went through this controller. Group configuration and centralized management, updates of firmware became easier with controller based access points. However once again, as customer need evolved, the disadvantages of hardware controllers became evident. Controllers are very expensive hardware and networking becomes even more costly since all access points have to terminate at the controller's interface. More importantly, the entire network will stop working if the controller goes down. To solve these concerns, IT administrators required a redundant hardware, which in turn added to mounting infrastructure costs.

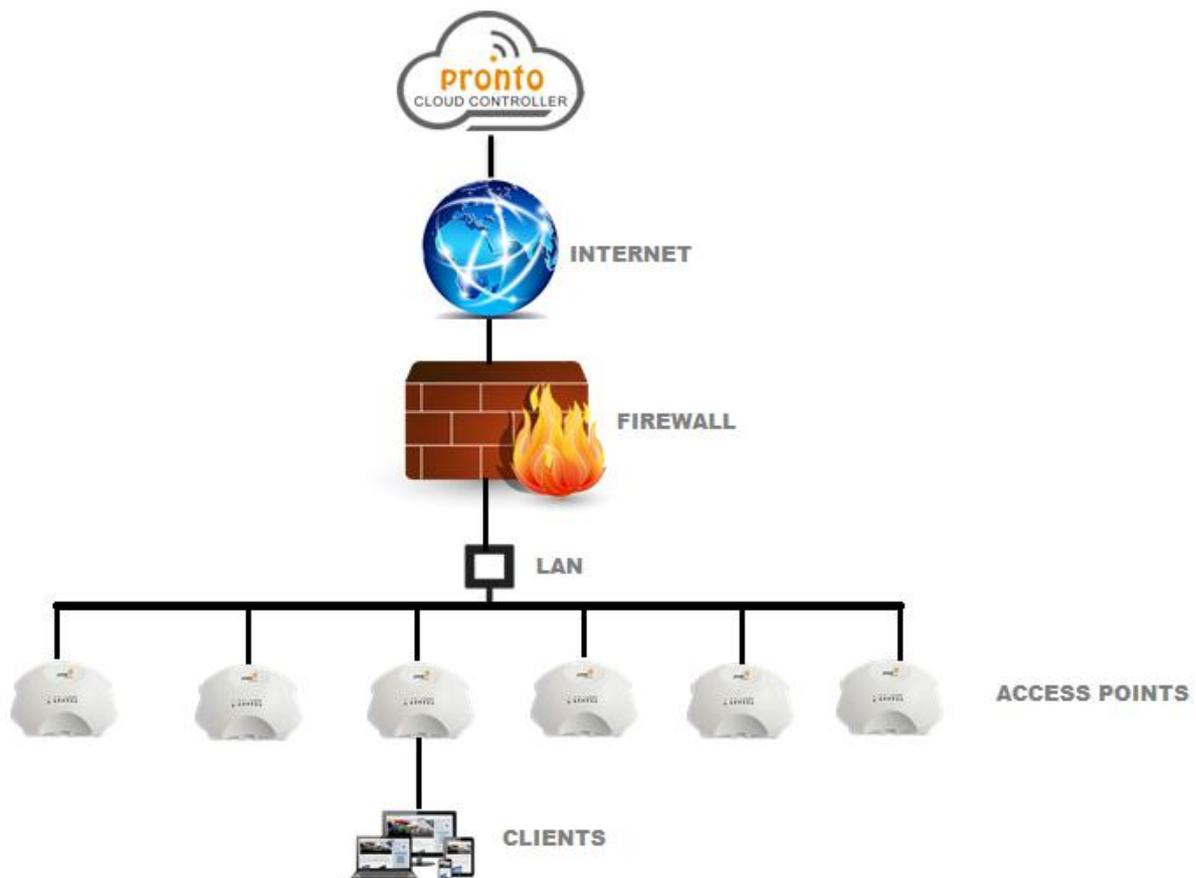
To address the issues of controller based networks, vendors introduced deployments with tunneling. This resolved a number of issues except for the increased expenses and concerns regarding network scalability for multiple-site environment that are geographically far away. In this scenario, it is necessary to install one controller for each site or augment the network with complex MPLS architecture.

Pronto Cloud Controller:

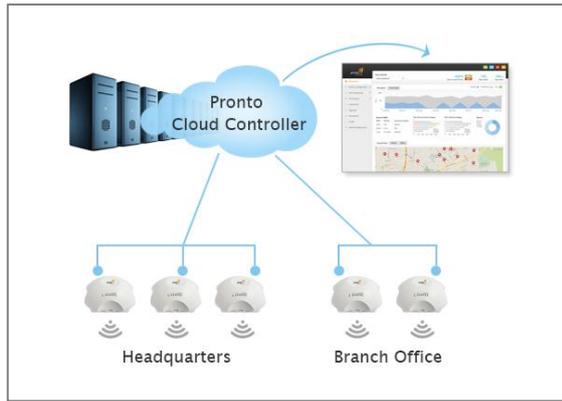
Pronto Cloud controller took an innovative approach to provide a simple answer to all these issues. With Pronto, the only hardware component in this solution is the APs. The controller is now in the Cloud and is a single centralized web based solution. Administrators can easily login through a desktop web browser or from their mobile. IT staff can manage, monitor and control APs in a single touch from anywhere in the world. Administrators have the privilege to make configuration changes based on a specific network or tagged groups or in aggregate. Real time monitoring and SMS alerts makes life easy for the network administrator and allow them to keep a pulse on their network.

With no need for expensive bulky controllers, the total cost of ownership is 50% of that of traditional WLAN controller networks. This advancement in traditional networking provides enterprises, operators a cost effective and industry leading solution.

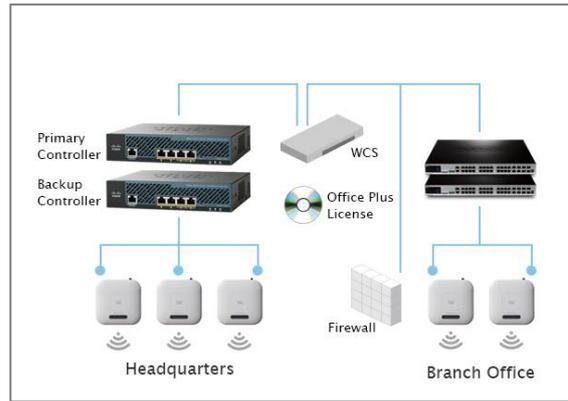
Pronto Cloud Controller Architecture:



Enterprise WLAN: Pronto Cloud Controller v/s Traditional WLAN Controller



Pronto Cloud Controller (PCC)



Traditional WLAN Controller

Scalability:

Cloud controller resources automatically scale to network needs. No user traffic flows through the cloud, removing the bottleneck of a traditional controller.

Redundancy:

PCC supports automatic failover as it is hosted in the cloud. Network functions are not affected even if the PCC is temporarily unreachable.

Speed of Deployment:

Zero touch provisioning feature of cloud controller reduces deployment time. Plug and play APs self-provision as soon as they are connected to the network. No training costs are involved as the PCC dashboard is intuitive and easy to use.

Management:

The PCC is equipped with a powerful and intelligent dashboard. Management is easy with PCC's bulk provisioning, SSID level management, device tagging, network level policy definition, etc.

Multi-site Networks:

PCC manages multiple sites from a single interface. It has visibility of all network sites and the same is displayed through Google map support. Troubleshooting is simple and does not require field engineer dispatches.

Visibility & Reporting:

The PCC provides easy visibility of the network through real time monitoring and auto-generated graphs. Alerts are sent through SMS. Client level historic data is available with search filters.

Maintenance & Upgrades:

The PCC supports automatic firmware upgrade at no additional cost. Upgrades can be scheduled per AP or in bulk.

Scalability:

Traditional WLAN controllers support only a fixed number of APs. AP Scalability requires upgrading the hardware.

Redundancy:

Additional hardware needs to be purchased and configured. If a WLAN controller is needed for multiple sites that are geographically dispersed, additional hardware is required to support redundancy.

Speed of Deployment:

WLAN Controller configuration requires specially trained and certified engineers.

Management:

WLAN controllers require special expertise to configure through CLI or GUI. Understanding the procedures and commands consumes time and resources.

Multi-site Networks:

Additional hardware and software support is required for managing multiple site networks.

Visibility & Reporting:

Client search is very limited. IT teams need to merge data in case of multiple site networks with additional hardware.

Maintenance & Upgrades:

Upgrades have to be performed individually. This can lead to unplanned downtime. In addition, some vendors charge for upgrade or require additional license.

Enterprise WLAN Feature: Pronto Cloud Controller v/s Traditional WLAN Controller

Enterprise Feature	PCC	CISCO	ARUBA	RUCKUS
WPA2-Enterprise with 802.1x Authentication	✓	✓	✓	✓
VLAN tagging, guest access	✓	✓	✓	✓
QoS for Voice, Video	✓	✓	✓	✓
Spectrum analysis	✓	✓	✓	
Rogue AP Detection and location	✓	✓	✓	✓
Stateful policy firewall	✓		✓	
Built in Network Access Control (NAC)	✓			
Zero-configuration virtual branch networks	✓			
Built-in multi-site management	✓			
Google maps integration	✓			
Layer-7 traffic shaping and application firewall	✓			
Integrated client location tracking	✓			