SOLUTION BRIEF

# HCL SMARTWiFi: A Secure Platform to Manage Service Providers' WiFi 6 Networks

Simplified Operations with Lower TCO

**HCL SMARTWiFi Platform for WiFi 6 Networks provides:**

- A secure solution with zero-touch provisioning
- Integration with existing OSS/BSS systems
- Powerful and intuitive AP management via public, private, or hybrid cloud
- Advanced features, including radio resource management, band steering, and load balancing to improve network performance
- Lower cost of ownership (TCO) than traditional offerings with 40-60% savings based on volume and choice of access points

HCL SMARTWiFi provides communication service providers (CSP) and managed service providers (MSP) with reliable and consistent WiFi connectivity as well as the ability to expand deployments—all while keeping costs low. Purpose-built for CSPs and MSPs, HCL SMARTWiFi also ensures full coverage, capacity, density, and security for users.

Service providers are often challenged to provide flexible, cost-effective, and reliable WiFi services to customers. HCL SMARTWiFi eliminates these challenges with a unified hardware and software platform that includes access point (AP) management, WiFi self-organizing networks (SON), and security with an architecture designed for service providers' environments and customers.

## Changing Dynamics of the WiFi Market

A combination of behavior and technology has driven WiFi coverage growth with billions of existing devices that are only supported by WiFi—and more continuously coming online. This is because WiFi is the most affordable connectivity method that can support a high-density of connected devices. It is also ideal for offloading data in cases where APs serve a large concentration of users, such as stadiums, education institutions, malls, and restaurants. Additionally, because WiFi operates on the unlicensed spectrum, enterprises opportunistically offload non-business-critical application access to WiFi.

With the launch of WiFi 6, many countries opened an unlicensed spectrum of 6GHz to upgrade WiFi connectivity. According to a study reported by the WiFi Alliance assessing the economic value of WiFi, the 2021 global economic value associated with WiFi was nearly $3.3 trillion and is expected to reach $4.9 trillion by 2025.

WiFi 6 offers significant improvements over legacy WiFi. It brings increased capacity and efficiency along with far faster speeds than previous technologies in the 2.4 GHz and 5 GHz bands. Among the other benefits of WiFi 6 are increased range, performance in dense environments where devices compete for bandwidth, power efficiency, and AP capacity. It also provides better support for IoT and mobile devices.

## Considerations for Managed WiFi

### Deployment and Management

- Support efficient and secure on-premises and cloud WiFi deployments over large areas, with the ability to easily onboard and optimize additional devices
- Address challenges related to coverage, capacity, density, security, and capital expenditures
- Centralize management of power levels and channel frequency from a remote location
- Keep the interference to a minimum
- Scale network coverage without reducing quality or connectivity
- Install and maintain a large number of APs deployed over a wide area while avoiding degradation of WiFi quality and performance
- Eliminate the complexity of traditional on-premises wireless controller hardware

### On-premises and cloud environments

- Provide flexible WiFi management for cloud infrastructure with options for private datacenter or private cloud deployments
- Accommodate physical, hybrid, and cloud-native environments that do not bind customers to hardware and closed environments
- Maintain flexibility to adapt to changing markets, environments, and technology

### Security

- Provide unified device management and control for security by ensuring integration with existing operation support systems (OSS) /business support systems (BSS)
- Support for WPA3 and secured data through an IPSec tunnel between APs and WLC as well as 802.1x authentication, PSK, LDAP, RADIUS, and AAA
- Ability to detect rogue AP detection that may be spoofing the SSID or ones that are improperly connected to the network
- Eliminate legacy WiFi systems that use weak encryption methods
- Protect data flowing through the network
- Support the broad adoption of more secure distributed deployments

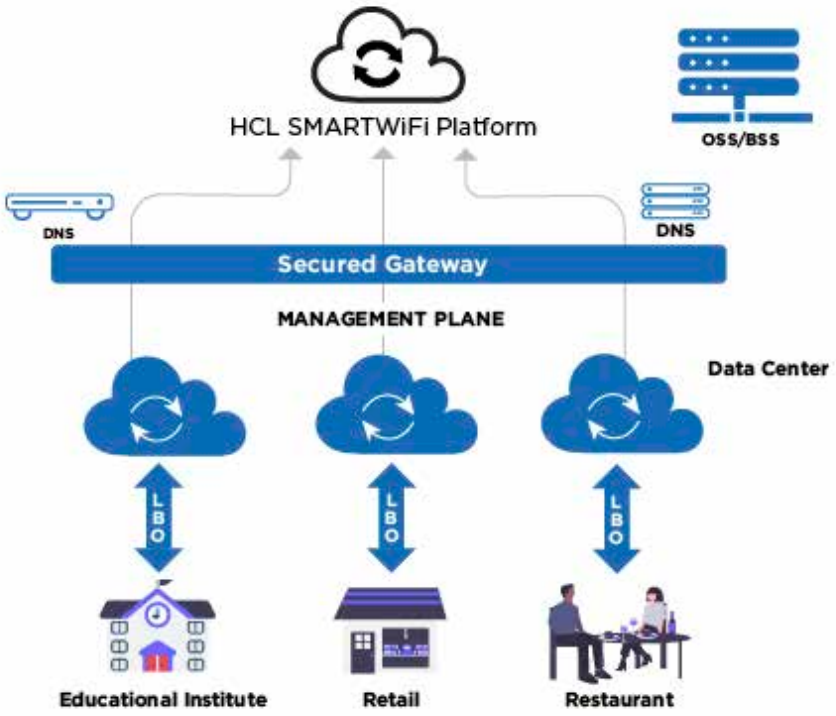


**Figure 1: HCL SMARTWiFi Platform.**

## HCL SMARTWiFi for Managed WiFi

The HCL SMARTWiFi Platform is a purpose-built, cloud-based WiFi 6 solution for service providers that offer managed WiFi (Figure 1). It enables service providers to deliver advanced, secure connectivity with a frictionless management experience.

HCL SMARTWiFi addresses the challenges of deploying and managing a WiFi system with an intelligent manager. Using the intelligent manager, service providers can remotely manage all APs with nuanced levels of control, including adjusting AP power levels and channel frequencies to reduce interference to a large extent.

HCL SMARTWiFi is ideal for advanced and secure network management and large-scale WiFi deployments. It provides support for various devices while remaining safe, secure, and delivering consistent service levels. Using open technologies, HCL SMARTWiFi centrally manages and secures access points for WiFi deployments across multiple sites to improve performance for WLAN networks.

### Access Point Management

HCL SMARTWiFi enables bulk configuration of hundreds of APs simultaneously using templates and zero-touch provisioning to minimize time on provisioning and installation. In addition, automated central intelligence and control adjust the power levels of each access point and their channel frequencies to reduce interference substantially.

To achieve appropriate capacity and coverage in a high-functioning, widespread network, APs should be strategically placed and managed. HCL SMARTWiFi supports this by centralizing the majority of the intelligence. The centralized SON engine handles the management and intelligent decision-making, thereby allowing for cost-effective, large scale WiFi deployments.

Connecting all APs in the deployment location with a centralized controller also improves network optimization by comparing and analyzing the coverage patterns and behavior. In a retail environment, the data collected and analyzed over a period, can narrate the retailer which areas of the store are most popular and at what time. They can then change the store layout suitably, place their staff at visible locations, and ensure that they are in place during the busiest hours of the day.

### Signal Consistency and Reliability

Centralized management of power levels and channel frequency from a remote location minimizes interference. This is particularly helpful in an area where users are frequently latching on/off the WiFi network.

For mobile wireless users, HCL SMARTWiFi helps in the smooth transition from one access point to another, providing a consistent and reliable WiFi signal. In addition, HCL SMARTWiFi APs have no restrictions that could interfere with connectivity. HCL SMARTWifi APs continue to operate functionally with or without cloud controller connectivity.

## A Must-Have Upgrade for Service Providers

Wi-FI 6 changes the game for local access. The reach of each AP can be as wide as 30 feet with support for more than 200 simultaneously connected devices. Wi-Fi 6 also delivers a dramatic boost in speed up to 40%, a 50% improvement in battery life, a 4x increase in network capacity, and a 2x increase in bandwidth over previous generations of Wi-Fi.

HCL SMARTWiF allows service providers to take full advantage of the benefits of WiFi 6 and deliver better-managed WiFi service for a lower cost. Developed using open technology, HCL SMARTWiF supports the latest WiFi 6 and all previous standards. It is ideal for all types of distributed deployments and simplifies operations with OSS/BSS integration, bulk configuration using templates, and simplified monitoring and troubleshooting. With HCL SMARTWiFi, users can set system rules in a centralized place by integrating alarms and SLA monitoring. HCL SMARTWiFi helps service providers reduce the total cost of managed WiFi operations by up to 60%.

HCL

HCL Technologies (HCL) empowers global enterprises with technology for the next decade today. HCL's Mode 1-2-3 strategy, through its deep-domain industry expertise, customer-centricity and entrepreneurial culture of ideapreneurship™ enables businesses to transform into next-gen enterprises.

HCL offers its services and products through three lines of business - IT and Business Services (ITBS), Engineering and R&D Services (ERS), and Products & Platforms (P&P). ITBS enables global enterprises to transform their businesses through offerings in areas of Applications, Infrastructure, Digital Process Operations, and next generation digital transformation solutions. ERS offers engineering services and solutions in all aspects of product development and platform engineering while under P&P. HCL provides modernized software products to global clients for their technology and industry specific requirements. Through its cutting-edge co-innovation labs, global delivery capabilities, and broad global network, HCL delivers holistic services in various industry verticals, categorized under Financial Services, Manufacturing, Technology & Services, Telecom & Media, Retail & CPG, Life Sciences, and Healthcare and Public Services.

As a leading global technology company, HCL takes pride in its diversity, social responsibility, sustainability, and education initiatives. For the 12 months ending June 30, 2021, HCL had consolidated revenue of $10.54 billion. Its more than 175,000 Ideapreneurs operate out of 50 countries. For more information, visit www.hcltech.com

www.hcltech.com