

HCL SMARTWiFi Platform

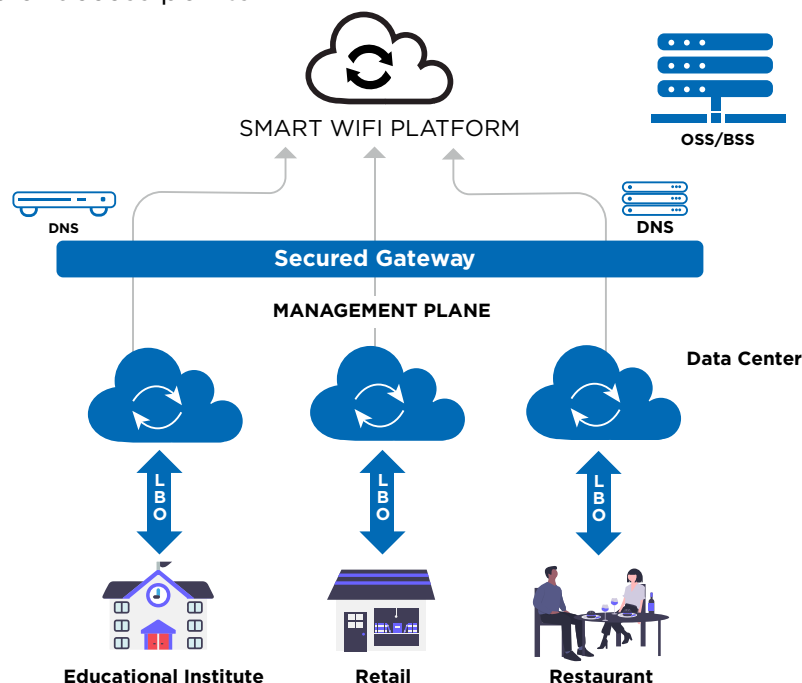
Cost effective, secure WiFi platform for centrally managed networks



HCL SMARTWiFi is a cloud-native, containerized secure WiFi network management platform for use by communication service providers (CSP) and managed service providers (MSP). HCL SMARTWiFi is ideal for large scale WiFi deployments that support various devices while remaining safe, secure, and consistent. Using open technologies, SMARTWiFi centrally manages access points (AP) for WiFi deployments across multiple sites to improve performance for WLAN networks. The result is an optimized user experience with improved connectivity and simplified management.

HCL SMARTWiFi Platform offers:

- Powerful and intuitive cloud-based AP management that eliminates the complexity of on-premises wireless controller hardware
- Advanced features such as radio resource management, band steering, and load balancing to improve network performance
- Lower total cost of ownership (TCO) than traditional offerings with a 40-60% savings based on volume and choice of access points



| **Cost effective and high performance network management without compromising security**

HCL SMARTWiFi meets high user expectations by providing exceptional security and support. Support for WPA3 with industry-leading encryption and authentication methods means worry-free access. Rogue AP detection detects any access points that may be spoofing the SSID. Seamless updates and alarms can be scheduled or delivered on demand, supporting a secure experience without interruption.

| **Flexible and scalable solution supports WiFi 6**

HCL SMARTWiFi supports management of the latest WiFi 6 (802.11ax) access points. Access points with all previous standards and protocols such as 802.11a/b/g/n/ac are also securely supported, which enables your network to address a variety of use cases.

Business Benefits

- Highly scalable with cloud agility to accommodate growth
- Flexibility to deploy WiFi 6 solutions in the cloud
- Lowers TCO by 40-60%
- Intuitive dashboard with integrated cloud management and control function
- Cloud-based policy management for secure access point configuration
- Proven product, built using open technologies
- Zero touch provisioning with plug-and-play capability

| **Key Features**

Access Point Management

- Bulk access point configuration
- Powerful dashboard monitors the real-time health of access points and traffic path controller to AP
- Role-based administration to configure multiple user accounts
- Seamless switch over to Trusted Wireless Access Gateway (TWAG) in case of connection failure

Reporting and Analytics

- Near real-time data reporting
- Actionable insights using network traffic data segmented by client and AP
- Location analytics measure visitor's bandwidth, visit length, and repeat visit rate over time
- Extensive data storage capabilities to store streaming data

Simple and Secure

- Supports WPA3
- Industry-leading encryption and authentication methods
- Rogue AP detection protects network
- Scheduled or demand based seamless upgrades
- Generate and manage pro-active alarms for scheduled and unscheduled alerts

Integration and Support

- Communicate with OSS/BSS and other third-party components (REST API, RPC, and https)
- Dual-stack support for IPv4 and IPv6 connectivity capabilities
- Hotspot 2.0 enables seamless roaming
- Automated PPPoE, enabling one-time login via single authorizing DSL service

| Specifications

Radio Features and Wi-Fi Standards	802.11ax, 802.11a/b/g/n and 802.11ac Wave II
	802.11d, 11k, 11m, 11r, 11u, 11v, 11i, 11j, 11e, 11h, 11w
	Compliance with all WiFi standards
	HOTSPOT 2.0
	Beamforming with Multiuser Multiple Input Multiple Output (MU-MIMO)
	Fast transition

Security	WPA3 based client authentication
	Access Control Lists (ACL) at both L2 and L3
	Pre-Shared Key or PSK and 802.1X
	Client exclusion
	LDAP captive portal
	Client monitoring
	MAC address filtering for client and AP
	Rogue AP detection

Enhanced Network Capabilities	DHCPv6
	Multiple interface vlan for WLAN
	Local Breakout (LBO) /Offload, PnP
	Zero touch provisioning with support for at least 32 SSIDs
	Point-to-Point Protocol over Ethernet (PPPoE)
	WLAN-VLAN mapping
	Ethernet over GRE (EoGRE) support
	Per SSID bandwidth control/per user

Management and Troubleshooting	Packet capture
	Auto update scheduling
	Performance management and fault monitoring
	Alarm customization
	Bulk AP provisioning
	Syslog export support
	Client emulation
	Firmware upgrade management

Plug-in Support	REST API, RPC, https support
	Parental control
	OSS/BSS integration
	Speed test app integration
	Auto commissioning
	Mobile application plug-in for home use cases
Customization	TWAG, AAA, staging server, captive portal
	Orchestration with Robin.io, bare metal, Kubernetes (k8s)
	SIM, non-SIM, “open Authentication” based UE connectivity
	LTE/5G co-existence
	Support for all ISP topologies
	Dual stack

| Sizing Guidelines

The HCL SMARTWiFi Platform supports access point hardware with following specifications:

- Indoor AP (Wi-Fi 6): 4x4 MIMO (2.4 GHz) and 4x4 MIMO (5 GHz) concurrent
- Indoor AP (Wi-Fi 6): 2x2 MIMO (2.4 GHz) and 2x2 MIMO (5 GHz) concurrent

Scaling

vCPUs WLC	vCPUs analytics	RAM WLC	RAM analytics	Storage WLC	Storage analytics	APs	Concurrent users
80	264	80 GB	1088 GB	250 GB	166 TB	10,000	500 K
800	264	800 GB	1088 GB	2500 GB	166 TB	100,000	5 M

Staging Server Infrastructure requirements

	No. of nodes	vCPUs	RAM	Disk space
Master Node	3	2	8 GB	50 GB
Minion Node	2	4	8 GB	50 GB
DB nodes	3	4	8 GB	50 GB
NFS Server	2	2	8 GB	100 GB
Load Balancer	3	2	8 GB	50 GB

| Analytics Infrastructure Requirements

	Per node resource requirement				Total resource requirement		
Storage	Memory	vCPU	Role	Number Required	Storage (TB)	Mem (GB)	vCPU
1TB	96	24	Edge	1	1	96	24
1TB	96	12	Hadoop master	2	2	192	24
5TB	48	18	Hadoop data node + Kafka	10	50	480	180
1TB	96	12	Opentsdb	2	2	192	24
1TB	128	12	Redis	1	1	128	12
Total					56 TB	1088 GB	264 vCPU



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