

CASE STUDY





Height 8 Technologies supports BSNL with Multi-controller Network Management to provide Wi-Fi services

- > 9 million+ Registered Subscribers
- > PM WANI roll-out, supporting WANI Token Handling Framework

Height8 Technologies

Founded in 2010 and headquartered in Ahmedabad (Gujarat), Height8 Technologies (H8) is a transformational technology solutionprovider, that delivers carrier-grade IP-based solutions in an aptly-integrated portfolio of OSS, BSS, CRM, Wi-Fi SMP & Device Management to Telcos, ISPs and CSPs. With an experience of more than a decade and a team of technology-experts, Height8 has global footprints with 300+ deployments in nearly 12 countries, with strong presence in Asia (SAARC & Middle East countries) and Africa. Today nearly 50+ million subscribers are registered on H8 product-portfolio and almost 8+ million subscribers are managed by large telecom companies through H8 platform.

H8 Wi-Fi: Solution Specialization

H8 presents a fully integrated platform that provides CSPs, smart cities, cable operators, airports, hotels and other public Wi-Fi hotspots with multiple avenues to monetize their Wi-Fi setup and engage with their customers. With our carriergrade Wi-Fi future-ready platform, comprising authentication, billing, captive portal, location-specific services, subscriber-analytics, Mobile App and Integration with Mobile Core, service-providers can deliver Wi-Fi connectivity to end-users and connected devices under various business-models, execute advertising strategies and provide Wi-Fi access blanket deals. Having Cloud-based architecture for centralized network management, we offer a customizable and highly scalable Wi-Fi experience, so that service-providers can gain new revenue-sources and leads, make strategic partnerships and quickly adapt to changing market-needs.

H8 Wi Fi SMP: **Key Features**

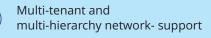


Seamless access and multiple authentication methods



Open, pluggable and vendor-agnostic for seamless integration

Cloud-based architecture



H8 AAA's proxy support in Wi-Fi Roaming

Implementation of advertising strategies

Identification of usage-patterns through subscriber-analytics



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Dynamic & flexible charging models

Pre-paid/Post-paid Billing

Customizable Wi-Fi experience

Various monetization models

H8 Wi Fi SMP: **Specialities**





Corporate Wi-Fi

√36 46_♪ 3G/4G Wi-Fi Offload

- Hotspot ®o
 - Management



- Hotel / University / Hospital Wi-Fi



As a technology-oriented integrated telecom service-providing company, BSNL is a 100% Govt. of India-owned Public Sector Undertaking. As a significant participant in the Digital India journey, BSNL is continuously engaged in building connectivity in the underserved areas of our country in a viable and innovative way. Apart from being the leading wireline-provider in India by making nationwide broadband internet proliferation, the company has been incessantly working to bring about a massive Wi-Firevolution in the country.



QuadGen

Founded in 2007 and headquartered in Pennsylvania, USA, with the Indian office in Bengaluru, QuadGen offers a comprehensive portfolio of advanced network engineering solutions. Helping world's leading wireless operators, fiber-providers, cable companies, commercial enterprises and government institutions transition from legacy to next-gen networks seamlessly, QuadGen supports its customers digitally transform the way they operate.



Trouble Connnecting? Call 1800 425 5300 (Toll free)

Powered by: Height8

Background

With the internet-services from BSNL, QuadGen had planned to provide Wi-Fi access to its customers with minimum friction. The foremost requirement was to have Captive Portal-based Log-in to its Wi-Fi services. A simple, clear and attractive user-interface, that was easy to navigate and provide full access in the shortest time possible, was needed with precise SLA Reporting Tools to ensure various reports, maximum up-time, integrated ticket management and workflow-based inventory management system along with the CRM.



Solution

H8 formed and deployed multiple teams to perform parallel tasks. While having continuous discussions with the people from BSNL and QuadGen, we chalked out our plans in following processes:

- > Setting up of a Project Room
- Formation of Sr. Management and Supporting Teams for the project
- > Daily interaction with task-centric SPOCs
- > Weekly Governance Calls with all the stakeholders
- Working on customization as per BSNL/QuadGenneeds, i.e. Use Case Mapping and Look & Feel Changes
- Preparation on setting up servers to deploy our solution
- > Preparation for Commercial Launch
- Setting up of the Support Team after Commercial Launch

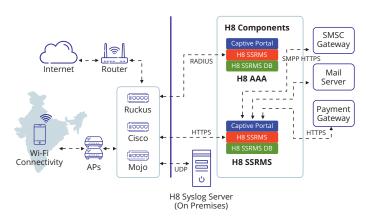
While H8 was given remote access to servers, it formed a specialized team to deploy the solution, including BSS and OSS applications. Integration with 3 Access Controller vendors, namely Ruckus, Cisco and Mojo, was completed in the First Attempt itself. The ensuing integrations were done with Payment Gateway vendors to support online payment functionality and SMSC vendors to support SMSnotifications. Everything was done, deployed and successfully tested.

Challenges

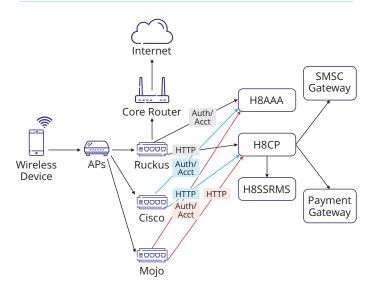
The implementation was to be done for deployment, management and support for end-to-end Wi-Fi services installed for BSNL, in integration with multi-access controllers, multipayment gateways and multi-captive portals across different states in India. Though demonstrating the product in view of their requirements in a time-span of a few days was a challenge in itself, yet H8 had an elaborate technical round with QuadGen's technical team-members.

Based on the customization outlined in the Proof-Of-Concept, installing and integrating with AP-devices in Live Environment within 60 days along with User Acceptance Testing completion for 2 sites was a stiff challenge before us.

Having location-wise captive portals and integration with multiple Access Controllers across different states presented an uphill task, but H8 was all geared up to take on the challenges and pull off startling outcomes.



High-level Deployment Architecture



Multi-controller Network Management

Impact

On-boarding functionality:

H8's Captive Portal pages provided the functionality to onboard users. The pages were developed as per BSNL's requirements. Using the "New User Registration" page, new subscribers could self-register for the service. Autonotifications were sent to the registered users.

Flexibility of plans:

H8's Administration Portal provided the Free, Paid and Sponsored plans, as required by BSNL and QuadGen.

Hotspot-wise plans:

Hotspot-based listing of plans, with support for "Free Plan", provided BSNL/QuadGen with the control required to show/hide the plans, related to Hotspot. H8 also provided additional control to support "Free Plan" for a limited number of times in a month.

Releases without downtime:

BSNL/QuadGen had made the earnest request that their subscribers mustn't be impacted during any release, as that would affect their collections and revenue and also customersatisfaction. H8 has been providing releases in production, without any downtime so far.

Positive bearing on operations:

H8 came up with proactive alerts, sent to customers on events such as "available time" or "available quota", which have increased the customer-satisfaction conspicuously, thereby ensuring accuracy in revenue-recognition.

High Availability:

H8 implemented HA (High Availability), which ensured 100% uptime.



Support for Branding:

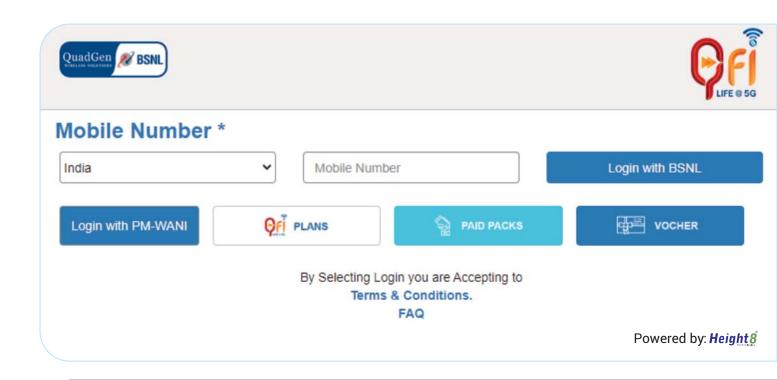
To meet the requirement of putting banners and/or images for different hotspots, H8's Advertisement Module provided BSNL to show different images/banners for different Hotspots, making possible location-specific advertisements.

Support for various services:

Based on H8's product, QuadGen along with BSNL sells attractive B-2-B Wi-Fi services to hotels, healthcare-providers, enterprises, stadiums and retailers to create businessopportunities and enhance indoor-coverage for itself.

OTT Platform:

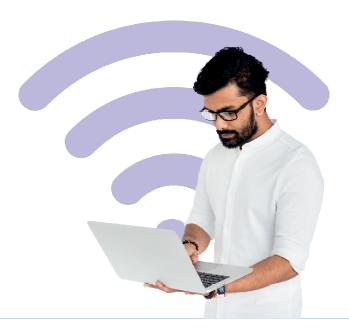
H8 made possible integration with different OTT-platforms to provide easy bundling of plans, that can be subscribed by the BSNL-customers.





We exceeded expectations of the BSNL and QuadGen's Management Teams by executing 100% E-2-E roll-out within 45 days. Currently, the system has been Live for more than 6 years and many enhanced features have also been added to it, including PM WANI roll-out, supporting WANI Token Handling Framework.







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