



# HAI PHONG CITY, VIETNAM

## CASE STUDY







## OVERVIEW

VNPT, a state-owned telecom company in Vietnam, wanted to setup a public WiFi network in the heart of Hai Phong city in North Vietnam. Hai Phong is one of the busiest harbours and is gateway for commerce for the north region. The city officials wanted to project 'Hai Phong a modern city' to attract investors and multi-national companies.



## REQUIREMENTS

Vietnam Post and Telecommunications Group (VNPT) wanted to deploy a scalable and seamless network for its residents in the downtown area which included the Opera house, central park, historical monuments, bus stand, convention centre and a nearby beach, that could be tweaked as per the changing trends. They also wanted to monetise the network by displaying advertisements on the free public WiFi infrastructure. Moreover, it has 36 million subscribers across 58 provinces in Vietnam which made the deployment difficult.



## HOW WE HELPED

- ▶ Deployed 100 outdoor access points that are able to accommodate 40-50 concurrent users each.
- ▶ Centrally managed controller with a single dashboard to control all access points
- ▶ Customised captive portal with Ad space
- ▶ Cost effective solution
- ▶ Access point Monitoring
- ▶ A reduction in network fault calls
- ▶ Ability to remotely control, monitor and troubleshoot
- ▶ Seamless and scalable WiFi
- ▶ Manage user logins and control the usage
- ▶ Discourage multiple logins by the same user
- ▶ Bandwidth management
- ▶ Policy management

# CASE STUDY HAI PHONG CITY AREA WIFI

Hai Phong, being the commercial capital of Vietnam, wanted to deploy Free WiFi for its residents. It had over 36 million subscribers across 58 provinces at the time of deployment which increased the difficulty of the installation.

Wifi-soft's public WiFi infrastructure along with WiFi LAN Cloud helped VNPT deploy one of the largest public WiFi networks in Vietnam. Vietnam Post and Telecommunications Group (VNPT) is one of Vietnam's largest telecom and Internet companies providing voice and data connectivity to over 36 million subscribers in all 58 provinces. VNPT also provides postal services including mail, parcel, domestic and international express mail, newspaper and magazine distribution. Its telecom division offers voice, data, internet and other value-added services deploying an advanced network infrastructure and many other IT solutions. The products and services are based on cutting-edge network infrastructure with modern telecommunications network to meet the diversified demands of its customers.



# CASE STUDY

## HAI PHONG CITY

### AREA WIFI

VNPT wanted to deploy a public WiFi network for its residents in the downtown area which included an Opera house, central park, historical monuments, bus stand, convention centre and a nearby beach. A Total of 100 outdoor access points had to be deployed, each capable of handling 40-50 concurrent users. All access points had to be centrally managed and monitored using a web-based dashboard. They also wanted to control the user policies centrally to limit speed and time used for free WiFi. Finally, the top management wanted weekly reports to analyse the usage of WiFi and Internet access to keep track of bandwidth usage and customer feedback.

In addition, VNPT was also looking to monetize this WiFi network by running advertisements on the free public WiFi. To differentiate itself from its competition, VNPT wanted to deploy in-session and interstitial (while a website is loading) advertisements so they could maximize the advertisement revenue while the users are browsing using free WiFi.

VNPT engaged Wifisoft to deploy the city-wide WiFi network with the help of local system integrator in Hanoi. Wifisoft and the SI were instrumental in deploying a robust and cost-effective WiFi network using the UniMax Smart AP technology and WiFiLAN Cloud. The outdoor access points were deployed on electric poles within the city and connected to the city-wide fibre optics backbone. Each AP was connected to a 10 Mbps backhaul which guaranteed a seamless and fast browsing experience for the end users.

All Smart APs were centrally managed using WiFiLAN Cloud dashboard which allowed VNPT engineers to centrally manage and monitor the health of the network round-the-clock.

Any network outage was immediately reported to the network team so the engineers could be dispatched to rectify the problem within an hour. WiFiLAN Cloud provided a branded and mobile-friendly splash page designed specially for VNPT. The splash page allowed users to browse the free WiFi for 1 hour after which the user had to purchase prepaid vouchers for additional access.

Wifisoft also deployed **Hotspotclicks** advertisement solution to insert banner advertisements on user's phones and laptops while the user browsed the public

WiFi network. Hotspotclicks employed content injection and adoption technology that seamlessly inserted customer friendly ads in the user's web content. The ads for Hotspotclicks were also managed through the WiFiLAN cloud dashboard and VNPT had complete control on how and when the ads would be displayed.

Any changes to the network could be done centrally and the changes were automatically pushed to the entire network within 15 minutes. This allowed VNPT engineers complete command and control on the network 24 hours a day and 7 days a week. WiFiLAN also generated real-time and historical reports for the management so the senior managers were able to review the network usage each week.

Lastly, Wifisoft engineers trained over 30 VNPT engineers, technicians on various topics like WiFi technology, network deployment, troubleshooting, portal page design and many other topics related to the management of public WiFi networks.



Outdoor Access Point  
UM 510 N



Rugged Outdoor Access Point  
UM 530 N



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### AREA WIFI

#### Deployment Diagram

The figure below shows the VNPT network diagram. VNPT wanted to tunnel the traffic from the central NOC in the Hai Phong data center. Each Smart AP was programmed to tunnel the traffic back to the central NOC where it was connected to the Internet.

The Hotspotclicks server resided centrally in the data center and was designed to inspect http traffic and perform content injection in the html streams.

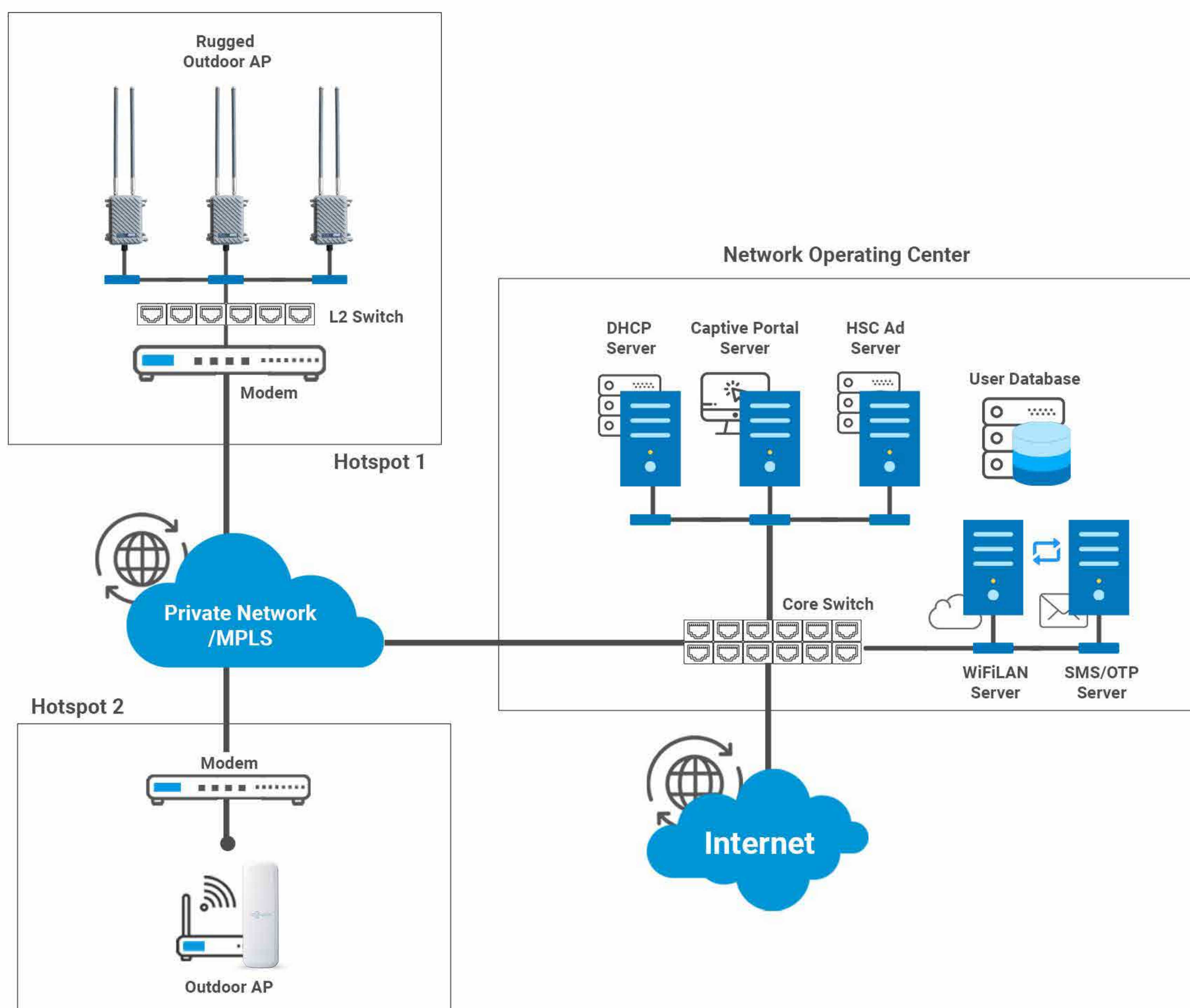
Wifi-soft and the Vietnamese SI were able to deploy the city-wide network within 3 months. The entire network catered to a population of around 300,000 residents who

used the network regularly. The system recorded over 50,000 unique logins each day and the users downloaded over 1 TB of data on a busy day.

VNPT received a lot of media coverage for the first of its kind public WiFi project in Vietnam. The city officials took special interest in the project since the project was showcasing the progress of the city and its readiness for the 21st century.

#### Excerpt

<https://en.wikipedia.org/wiki/Haiphong>



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