SHIVAJI UNIVERSITY KOLHAPUR

CASE **STUDY**

Wifi-soft
Helping unwire the World

OVERVIEW

Shivaji University, Kolhapur is an 'A' Grade State level university, Established in 1962, with a CGPA-of 3.16. The campus of the University is spread over 345.20 hectares, of which the university is housed on 43 hectares. The University is equipped with facilities like large classrooms, laboratories, libraries, staff rooms, rest rooms, recreation halls, indoor and outdoor auditorium, conference halls, study halls, playgrounds and tracks, indoor sports centre, hostels, administrative building, guest house, post office, bank and printing press. The infrastructure is continuously increased to meet requirements.

REQUIREMENTS

- Scalable and reliable carrier grade Wi-Fi connectivity for students, teachers and guests
- All in one wireless network controller with a single dashboard to control and manage a variety of locations within the campus
- Network with a capacity to support large consumer traffic and simultaneously manage allied services like HD video conferencing and multimedia streaming at events.
- Provision of internet at different speeds to the upper management, teachers, students and guests.
- Easy to use solution using the existing fibre framework

HOW WE HELPED

- Cost effective solution
- Single dashboard control
- No subscription, license, recurring fee of any kind
- Access point Monitoring
- A reduction in network fault calls
- Ability to remotely control, monitor and troubleshoot
- Seamless WiFi
- The ability to support high density environments with more concurrent users per access point
- Manage student logins and control the usage
- Discourage multiple logins by the same user
- Bandwidth management
- Policy management

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Cancun Internationa Airport deployed Wifi-soft's seamless WiFi connectivity to increase revenue, start WiFi Monetization and patron satisfaction.

Shivaji University is renowned to be one of the premier institutes in India, but they faced issues managing their wireless network. The jurisdiction of the University is spread over three districts viz. Kolhapur, Sangli and Satara with strength of about 3,00,000 students studying in 271 affiliated colleges and recognised institutes. They experienced multiple logins by students and faculty, slow speeds, disconnections, unrestricted downloads, lack of content filtration and lack of policy management. There were frequent complaints from the faculty owing to these shortcomings and the misuse of the network was common place. They also had no means of monitoring individual usage and compliance to the rules established by the management, which only became worse considering the volume of students and teachers at the university. The university also requested access point monitoring to record the IP addresses of each access point.

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Previously, Shivaji University had only deployed Wi-Fi within select administrative buildings. By early 2012 with the dramatic increase in the number of Wi-Fi enabled mobile devices, and a growing student community now armed with multiple smart mobile devices, the deployment of ubiquitous Wi-Fi across the campus became a necessity. Wifi-soft's tailor made solution was designed and installed to eradicate these challenges.

Our state of the art controller made use of the existing wireless infrastructure to help the University and provided a low cost solution. Wifi-soft's Unibox U500, which supports 500 users and needs no yearly recurring subscription, was installed. The faculty and students were segregated into two separate groups and the deployment methodology was as follows,

▶ One time online registration (MAC binding) of all first time users, the database for which was provided by Shivaji University.

▶ Centralized configuration and monitoring of all pre-installed access points. Wifi-soft also provided Centralized Authentication and Authorization of users' device and user identification based on the data provided to the Wireless controller.

▶ Centralized management for:

   o DHCP
   o User and device registration
   o Accounting of individual usage hours
   o AP-wise and user-wise Bandwidth Monitoring
   o Traffic Logs for generating various reports
   o Scheduling the access time
   o Limiting the download size

Though there are many competitors in the market who provide WiFi connectivity, there was no one who could tailor make the end to end desired network, especially the user management. Shivaji University had deployed an open source user management solution but still faced many glitches and could not manage the network properly. They then reached out to Wifisoft for a demo and were impressed by the ease of operation and cost effectiveness of the solution. A PoC (proof of concept) was initiated, owing to the volume of the perceived users.

A solution with 500 concurrent users was then deployed successfully. Results achieved after said installation are as below,

   o Separate bandwidth allocation for students and faculty
   o Only 2 devices (1 laptop & 1 mobile) can be connected by an individual
   o Downloads are limited by restrictions through policy management
   o Social media sites and mature content is banned
   o Secured Connectivity (Security of university resources and user data)
   o Time based access management
   o Dynamic speed allocation based on load and contention ratio
   o Concise and accurate reports on usage
   o Access point monitoring
   o Seamless wireless connectivity
   o Scalable and reliable network
   o Low cost solution with no recurring charges
   o Used the existing network as uniBox is compatible to any ancillary product of any brand
   o Wifi-soft also provided the university with a yearly AMC on request.

Since the installation has been completed, the satisfaction among the users of the wifi has increased by 600%. The university also registered a steady increase in student exam results as the internet usage has now been targeted to achieve better scores.

Unibox U500 Network Controller

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CHALLENGES

▶ Large number of Non-Student users viz. morning /evening workers, tourists, contractual labour, parents, guests, therefore, identifying the proper user and authorizing them was a challeng.

▶ 'Password protected ID' did not prove useful as the people usually shared their passwords.

▶ MAC capture of registered students was a good option.

▶ While MAC IDs of faculty and officers were collected manually

▶ Limiting the usage quota, sessions and download speeds as per user profiles

> " The Unibox appliance from WiFisoft has gratified the entire requirements, specific to our WiFi infrastructure.
> Now we can aptly support our users.
> Reporting tools are excellent.
>
> *- Dr. Milind Joshi,*
> *Co ordinator, Internet Unit,*
> *Shivaji University, Kolhapur*

HOW WE HELPED

▶ Single and simple Web based user management/ monitoring console

▶ Profiles of users: Faculty, Officers, students and research students

▶ User usage reports are excellent
   o Login time
   o Bandwidth usage
   o User wise website access log

▶ Granular user controls

   o Bandwidth control
   o URL filters
   o Session control
   o Daily download quota etc firewall features

▶ Admin user categories to delegate monitoring tasks

▶ Simple admin console, even comprehendable by inexperienced technical assistants

▶ Great Support telephonicly or through a remote session