

CAMPUS WI-FI DEPLOYMENT, CHALLENGES AND SOLUTIONS

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IITK Campus Wi-Fi

IITK Campus Wi-Fi Setup

- Started Wi-Fi deployment in 2002.
- About 2300 APs (Mix of standalone and controller based APs)
- Deployed in Academic Area, Residential Area and Student Hostels

Challenges

- **Mix of old and new APs.**
- **Avery high user density in some areas like Lecture Halls, Conference venues and Student Activity centre during events.**
- **Most of the hosts still use 2.4 GHz. 80% clients connect on 2.4GHz.**

3

Challenges

- **Students have their own wireless routers in hostels which interfere with infrastructure APs.**
- **Wireless Security specially in campus boundaries.**
- **Guest Wi-Fi Access.**

4

Solutions

- In Lecture Halls, use APs which can support high number of user connections and sessions.
- In hostels, use more number of APs but with lower user connection/sessions capacity.
- Disable lower data rates and optionally use Band Steering.
- In residences, use wireless router inside every house.
- Unlike Wired network, continuous redeployment and restructuring is required in wireless network.

5

Solutions

- Use WPA2-Enterprise for security.
- Use OTP based Guest Access.

6