STUDENT HOUSING

in collabration with BELL CANADA

CASE **STUDY**

www.indionetworks.com

OVERVIEW

University and college enrolment is booming across Canada, and post-secondary institutions are scrambling to keep up by expanding existing buildings and opening new satellite campuses. The federal government having committed in Budget 2016, to provide up to $2 billion over three years, for modernising infrastructure at post-secondary institutions and affiliated research and commercialization organizations. As these improvements take place in the Canadian market and as there are more and more housing facilities available, it becomes important to consider the preferences of students.

REQUIREMENT

- Seamless wireless internet connectivity
- User registration with ID
- Bandwidth bifurcation and management
- Ability to support Gaming Stations and Smart TVs
- Custom Landing page
- Students can be accumulated in groups and once they leave the entire group can be deleted to avoid unwanted access
- User friendly interface
- Access point management
- User and Policy management
- Reports for diagnostics and analytics
- Ability to access the internet 24x7
- RL filtering and Fair Usage Policy

HOW WE HELPED

- Lower cost of deployment as compared to alternatives
- Easy tracking of number of users, bandwidth control, policy management and reporting
- Implemented Fair Usage Policy
- Integrated BYOD support
- Simplified and centralized network management with the ability to
- remotely control, monitor and troubleshoot
- Access Point Management
- A reduction in network fault calls
- Seamless connectivity with Zero downtime
- Support high density environments by connecting more concurrent users per access point

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In 2013, Indio Networks deployed an all-in-one end to end solution to cater to students specifically. The hostels are now equipped with High Speed internet access that can support a variety of devices like Gaming stations and Smart TVs.

As of 2013, there were 950,000 full-time students enrolled in 82 of the largest educational institutions across Canada, a number that grew closer to one million in 2016. Of these students, approximately 55 per cent attend school outside of their own community, creating a strong demand for student housing. The international student market comprised approximately $8 billion in Canada as of 2014, factoring in both tuition and living expenses. Obviously housing is an important factor in the decision-making process of students and one that is not taken lightly considering the cost. This holds particularly true for international

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students. In fact, the international student market comprised approximately $8 billion in Canada as of 2014, factoring in both tuition and living expenses. This group accounts for approximately 10 per cent of full-time university students across the country. The international student community is expected to bring close to $20 billion into the Canadian market by 2022.

With the enrolment of an ever increasing list of students in Canadian universities, the housing market for lodging these students has also seen a record boom. As the competition in the market increases, providing a cheaper option for student accommodation is no longer enough. Trends indicate that students prefer living spaces where there is a steadier and faster WiFi network. Thus, Indio Networks along with Bell Canada (that was co-founded by Alexander Graham Bell, and who own the patent for Telephones)[1] deployed a seamless and scalable wireless network to entice students and help the hostel owners manage them with ease.

Students Enrolled in Canadian Universities

As we all know, students consume a lot of bandwidth and are constantly bandwidth hungry. Moreover, these days students use a lot of gaming devices and smart electronics like smart TVs. These devices guzzle even more bandwidth. It was estimated that an average student uses 30GB of data per day. [2] Which makes it difficult for service providers to ensure fair usage, bandwidth optimisation and URL monitoring.

Our clients were no different as they housed 500-600 students in their hostels and it was difficult for them to keep track of their daily browsing activities. They wanted the following protocols to be implemented,

- Control the sites visited by each student and block mature content
- A pre decided speed of bandwidth was to be made available to each student
- A daily quota was to be set to ensure fair usage among the residents
- The network needed to function 24x7, as a majority of the students used the internet at night to prepare for their classes
- As the hostel owners had accommodations at multiple locations, a student who was registered at one location was to be granted access to the network at all the locations irrespective of the distance between them.
- Each year the students staying at a particular hostel changed. A group was to be created for students of a particular year so that once they pass out and leave the premises there can be no unwanted access and their regis tration would get cancelled automatically.
- A BYOD model was to be implemented that allowed the students to connect their gaming devices and smart TVs.
- A MultiWAN had to be implemented, which allows bandwidth from two or more ISPs to be combined and distributed among the students. This helps in load balancing and providing a steady internet connection
- Remote management of the network was to be delivered

The challenges of operating any large network

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are immense, to eradicate them Indio Networks designed a custom made solution that could be installed at multiple locations and deliver a stable connection. The solutions was as follows,

- URL filtration and blocking of certain websites was programmed
- A set speed was provided to the residents along with MultiWAN which aggregated and load balanced the bandwidth from two ISPs and distributed it to ensure that each user got sufficient speed.
- A daily quota was established on the down loads and overall usage
- The network was installed to function stably as there was a 24x7 usage
- The programing was tweaked to ensure that once a user was registered at a particular loca tion, he/she would automatically gain access to other network locations without registering for the same again.
- All the students from one year were grouped together so once the academic year was over the group was simply deleted to help the network operators eradicate unwanted users
- The network could connect multiple devices from each users and manage their activity separately
- It could even be scaled to achieve higher speeds
- The whole network (irrespective of the number of locations or the geographic distance) could be managed from a single location
- A single dashboard to check the usage of all users and implement policies.

After the installation of Indio Networks solution the satisfaction among the students improved by 70%. The network operators also registered an increase in the satisfaction level by 200%. The overall productivity of each student also saw a favourable increase. The results on an average were improved by 20%. It was also noticed that accommodations with free WiFi facility had a 30% higher occupancy rate as compared to hostels that did not provide WiFi.

Citations

[1] https://en.wikipedia.org/wiki/Bell_Canada
[2]https://www.whistleout.com.au/Broadband/Guides/Broadband-Usage-Guide

Excerpts

http://www.remonline.com/examining-the-student-housing-market/
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