



# Extreme Networks Helps Achieve Unparalleled Network Speed and Consistency

## CASE STUDY

### SCHOOL STATS

- Networking IT Staff: 4
- Users: 600
- Locations: 2 buildings (rectory and library)

### INDUSTRY

- Higher Education

### CHALLENGES

- Provide seamless network service to faculty and students
- Strengthen connectivity services with optimal perimeter air security and centralized user management

### PRODUCTS UTILIZED

- B5G124-24P2 Switch
- 2 WS-V2110-8 NAM virtual wireless network controllers
- 6 WS-AP3705i Access Points

### RESULTS

- Faster, and more available network
- Excellent wired and wireless connectivity for 2 buildings

Pachuca Polytechnic University arises under the need to establish a new model of higher education characterized by its high relevance, flexibility and academic articulation. The aim is to forge professionals and specialists on the field of engineering that have both knowledge and technical skills acquired through experimentation and research. This feature Pachuca Polytechnic University as a hotbed of talented trained and certified engineers, highly demanded talented on the public and private sector throughout the State of Hidalgo, particularly in the industrial region of Pachuca.

A hallmark of Pachuca Polytechnic University feature is its offering on cutting-edge educational programs, consistent with the current necessities and continuous innovation.

Designed to continue this path of innovation and high educational quality, the university made several situational analyses of the network infrastructure for present and future conditions. This was required because of a comprehensive and consistent design of several degrees plans such as: Physical Therapy, Software Engineering, Financial Engineering, Bioengineering (making it by resolution of the National Curriculum Design of Biomedical Engineering Counsel on September 2010) and Automotive Engineering (currently Automotive & Mechanical Engineering). As well as specialties on Environmental Biotechnology, Computer Security, Mechatronics; in addition to the Masters in Biotechnology, Mechatronics, Information Technology and Communications and PhD in Biotechnology.

In 2013, the university experienced a significant growth not only in demand but in the amount of internal processes that rely on a strong network infrastructure, so they decided to implement: "A service that would link to many wireless devices in tight spaces, while giving a high-demand the availability, due to a slow network caused by the unavailability of a quick link to external and internal information sources for students. Therefore, and in addition to the needs diagnosed from a deep analysis done for the several departments, a technological analysis was conducted to seek the best present and future systems," said David Luna, Head of Systems and Computer Services and Telematics Department of the university.

After doing a very extensive comparative analysis of different network technologies, Extreme Networks was selected for its robust features and flexibility to be configured with different characteristics for different network

*"With Extreme Networks, our university improved services for our students who rely on the campus network connection to complete academic assignments"*

**DAVID LUNA**  
**HEAD OF SYSTEMS AND COMPUTER SERVICES AND TELEMATICS DEPARTMENT, PACHUCA POLYTECHNIC UNIVERSITY**

designs and situations. The decision also took into consideration the methods, technical support, and extended warranty offered by the manufacturer," added David Luna.

Also by having permanent contact with Joaquín Herrera and Erik Ortiz, of Extreme Networks business partner Fandis, the process was extremely agile and fast which allowed an immediate solution for this challenge.

Data Center implementation was completed in a week and a half; network optimizing was performed in only two days.

"During the implementation several tests with Wireless equipment were made to learn more in depth knowledge of the full network requirements, the support of a strong wireless connection was mandatory. Final design included a couple of virtual controllers, distribution equipment (IDF), and 6 access points to ensure wireless access to the library and rectory. The main concern was to give quality service to students, teachers, and administrative staff, with exceptional security and a centralized user management system", said Erik Ortiz Almeida, Brand Manager at Fandis.

The University's equipment, implemented by Extreme Networks, included a B5G124-24P2 Switches, twoWS-V2110-8 virtual wireless network controllers, and six WS-AP3705i Access Points.

Fandis' commercial department supported the implementation with Joaquín Herrera Rojas, Special Accounts Executive, and an active Erik Ortiz partner, Data Network Engineering (1 Engineer). From Pachuca Polytechnic University, David Luna Cruz, Master in IT and Head of Systems and Computer Services and Telematics Department, played a large role in the successful integration of the network infrastructure.

Today, Pachuca Polytechnic University's rectory and library are able to provide excellent connection to 600 users, "In the midterm we're looking to grow our wireless network architecture to provide strong wireless connection for up-to 6,000 users and in the short-term, the wired network will be restructured to support Backbone infrastructure with a management system, IDFs, and access Switches to cover all areas throughout different buildings at the University.



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