efficient iP®

Worcester Polytechnic Institute

Making the Grade – Teachers and researchers demand "extreme flexibility"

WPI

Project Type:

- **Streamlining DNS, DHCP and IPAM infrastructure management**

Key Benefits:

- **Product flexibility and customizability**

- **Cost-effectiveness**

- **Superior level of technical expertise and support during transition**

Worcester Polytechnic Institute (WPI) is an internationally acclaimed private research university in Massachusetts. WPI has about 2,000 graduate and 4,000 undergraduate students along with 500 faculty and 400 staff members with an insatiable demand for knowledge to increase their subject matter expertise.

For over ten years, WPI had been using a powerful IT network system called NetReg developed by Carnegie Mellon University. However, due to a lack of resources to pick up the development and overall stagnation of the project, it was abandoned by CMU in 2008. As the bar had already been set quite high with their previous solutions, WPI needed another package where they would not have to give up functionality.

Frank Sweetser, Director of Network Operations, is responsible for all aspects of networking including routing, switching and wireless, as well as core services such as DNS and DHCP at WPI. He helped lead the charge in finding a new solution, to ensure all network communications continued to function across campus.

"EfficientIP met all our business and technical needs at a better price point than its competitors."

Frank Sweetser, Director of Network Operations
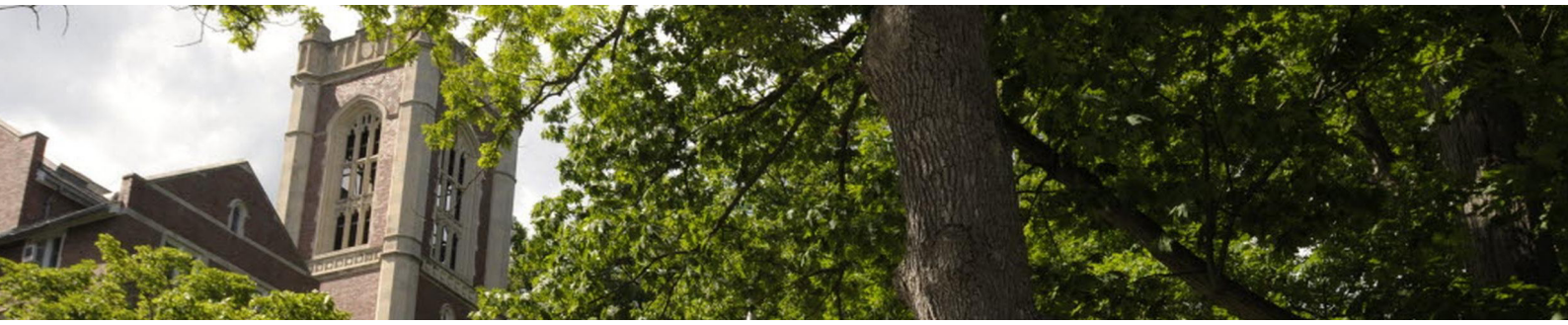
Project Overview

With a clear set of requirements, WPI started researching IPAM solutions from multiple vendors. However, after a thorough evaluation, they all proved insufficiently flexible to meet their business needs. They began searching for alternative IPAM, DNS, and DHCP solutions and came across EfficientIP.

"With the entire student and faculty user base having very little tolerance for 'second best', we needed best-of-breed solutions with good integration- everything must work," Sweetser explained. "We were extremely pleased with the EfficientIP sales engineers – both in how quickly they were able to understand our networking issues, and how they could be solved with their SOLIDserver™."

Frank was impressed the engineers could easily tweak the behavior of the product, and explain step by step how they could fill the gaps in WPI's systems. "EfficientIP organized an extensive whiteboard session to explain and talk everything through with us," said Sweetser. "They didn't try to guide the discussion with prepared talking points."

Transition Process and Key Benefits

Sweetser indicated WPI chose EfficientIP for its flexibility, customization, price, and technical expertise. In addition to meeting the functional requirements, including full IPv6 support, Sweetser stated the price of EfficientIP services, even with the large amount of customizations, was also a key element in the team's choice.

"EfficientIP met all our business and technical needs at a better price point than its competitors." EfficientIP also offered solid support for integrating with other systems, and a robust Graphical User Interface software. However, EfficientIP engineers' approachability and understanding of WPI's situation was the biggest win, according to Sweetser. "Their transparency around the details of the product has really helped us fully understand how the system works and make effective long-term plans, as well as resolve technical issues as they came up," Sweetser summarized.

"The superior support level has made it easier for us to feel more comfortable when swapping a system this large - it was as good as you can reasonably expect. Their 'under the hood' insight on products helped guide us through the system, and build off the BIND and ISC - we got the support we needed, and having engineers on-site was very helpful," he added.

Plans For The Future

The full implementation of the project took place the second week of June 2016. The whole process took six months in total, which according to Sweetser, is shorter than other projects of this scope.

In terms of the future usage of EfficientIP solutions, WPI is planning to focus on one-to-one transition over the new platform for the next six to twelve months. The three main goals of the Institute will be related to enabling the DNS infrastructure, using the system as a stepping stone for IPv6 and increasing amount of automation roll-outs in their data center operations.»

There was only one feature from another vendor that WPI had to deploy: "The only functionality that's missing to pair with our solution is RADIUS (authentication protocol)," Sweetser pointed out. "We are going to have the data with EfficientIP driving our RADIUS configuration, which is being integrated along with it as an implemented control."

WPI Lessons Learnt

"Although fundamental, getting the right IPAM solution is not straightforward. To avoid potential issues, it's vital to know exactly how each function operates and how to optimize them for your infrastructure. With large and complex projects like this, the set-up phase is critical. Expect to do few trials to avoid potential project hurdles. There are always going to be little pitfalls you didn't anticipate, but thanks to the flexibility of EfficientIP, we were able to meet the needs of our demanding user base."

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