

From MAP to DIST: The Evolution of a Large-Scale WLAN

Monitoring System

Abstract:

The edge of the Internet is increasingly becoming wireless. Therefore, monitoring the wireless edge is important to understanding the security and performance aspects of the Internet experience. We designed and implemented a large-scale WLAN monitoring system, the Dartmouth Internet security testbed (DIST), at Dartmouth College. It is equipped with distributed arrays of "sniffers" that cover 210 diverse campus locations and more than 5,000 users. In this paper, we describe our approach, designs, and solutions for addressing the technical challenges that have resulted from efficiency, scalability, security, and management perspectives. We also present extensive evaluation results on a production network, and summarize the lessons learned.