

Implementing a Secure Wireless Network in an Educational Setting

Introduction

Wireless connectivity has become a necessity in educational institutions of all levels. Students require Internet connectivity to conduct research, download assignments and communicate with their instructors. Likewise, educators utilize web portals to post assignments, update class materials and communicate with parents and students. Unlike a business setting, schools have little or no control over the type of wireless technology utilized to access the wireless network, so they must employ a wireless solution that can support a broad range of standards and devices. Additionally, schools allow a wide range of unmanaged machines to access the wireless network, which carries significant security and privacy concerns.

Best practices for securing a wireless network include controlling which access devices and wireless standards are allowed, as well as to control the traffic, itself. However, this type of control is extremely resource intensive and, given the wide range of wireless devices possessed by students, is simply not possible in an educational environment. Without the proper tools, these challenges can easily overwhelm the minimal IT resources that exist in most schools. As a result, many schools are still reluctant to employ wireless networks, in fear of:

- reduced levels of security and privacy
- significant burden on scarce IT resources associated with multiple wireless access points
- complicated network infrastructure
- decreased network performance

Achieving Flexibility, While Managing Security and Performance

Secure Wireless Access



Wireless connectivity provides faculty, staff and students with the ability to quickly connect to the network from anywhere on campus. In this mixed environment, it is important that faculty and staff traffic be effectively separated from that of students. The network can be configured quickly and easily, so students will be unable to access or view internal traffic – effectively eliminating the risk of a student accessing or infecting the private network.

NETGEAR® ProSafe® Wireless Access Points and Wireless Management Systems enable faculty, staff and student wireless traffic to be easily separated and masked. ProSafe Wireless Management Systems enable rapid centralized deployment and management of all ProSafe Wireless Access Points on the network, to ensure consistent and secure configuration. Furthermore, NETGEAR ProSafe Smart and Managed Switches support additional capabilities to ensure that segmented traffic remains separated. Finally, NETGEAR ProSecure® Unified Threat Management (UTM) appliances include an array of network security technologies to protect the network from a wide range of threats.

Easy to Deploy and Manage



Expanding wireless network connectivity can be done quickly and easily by adding wireless access points throughout the campus, wherever wireless access is desired. Using a wireless management system, all wireless access points throughout the network can be centrally configured and managed, thereby simplifying the effort required to implement, configure and manage the wireless network.

NETGEAR ProSafe Wireless Access Points deliver secure, reliable, high-performance wireless. NETGEAR ProSafe Wireless Management

Systems automatically discover all supported access points on the network and mimic the setup process of a single access point – for easy, rapid, centralized management.

Maintaining Network Performance

Network performance can be managed and maintained by adding Gigabit Speed network switches to effectively manage traffic and maintain overall network performance. Switches range in size and capabilities. The specific switch that is right for each environment depends on the size and type of the network configuration, as well as the type and number of devices that are attached to the network. Many network switches support both wired and wireless connections in a single unit, and some are stackable, to support future network growth.



NETGEAR ProSafe switches ensure secure wired and wireless network connectivity, while delivering reliability, performance and ease-of-use. Up to six ProSafe Stackable Smart Switches can be stacked, yet easily managed via a single IP address – for the ideal blend of performance, PoE convenience and ease-of-use.

NETGEAR Solution

NETGEAR offers reliable, high-performance, business-class security, as well as wired and wireless networking solutions that have been specifically designed to meet the needs of high schools and secondary schools, colleges and universities, and other educational institutions. With a simple interface, NETGEAR Business Solutions deliver flexibility and robust functionality, without the complexity and cost seen in competitive offerings.

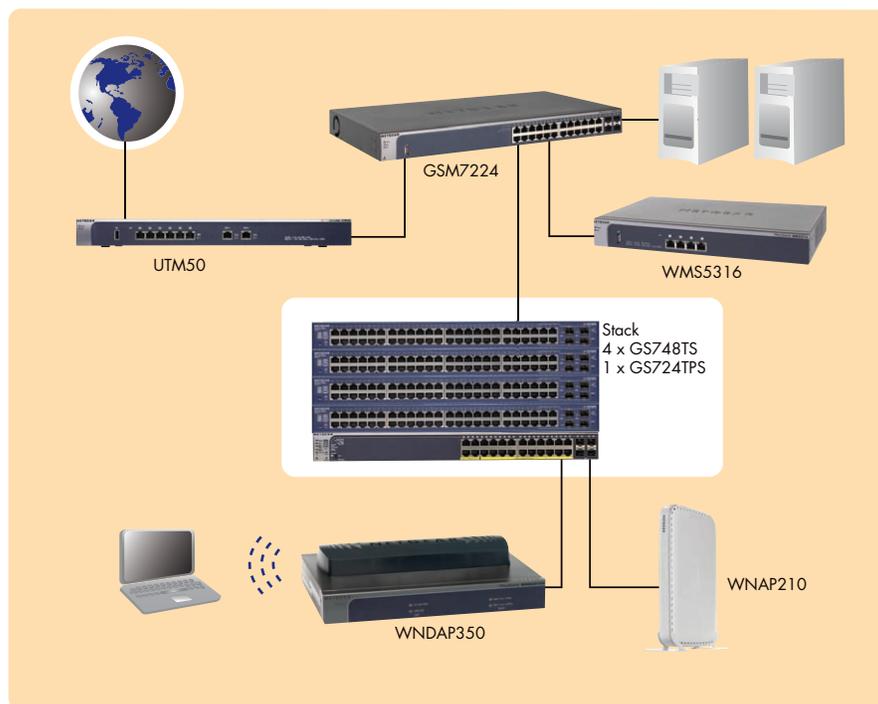


Diagram: NETGEAR Solution for Education

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