

Networking



Networking Implementation

2.4.2 - SSID

What is an SSID on a network and what are some of its settings?

Overview

Given a scenario, the student will be able to install and configure the appropriate wireless standards and technologies

Grade Level(s)

10, 11, 12

Cyber Connections

- Threats & Vulnerabilities
- Networks & Internet
- Hardware & Software

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Teacher Notes:

CompTIA N10-008 Network+ Objectives

Objective 2.4

- Given a scenario, install and configure the appropriate wireless standards and technologies
 - Service set identifier (SSID)
 - Basic service set
 - Extended service set
 - Independent basic service set (Ad-hoc)
 - Roaming

SSID

The *service set identifier (SSID)* is the WLAN “network name.” Every network uses an SSID, a 32-octet string to separate one network from another for bandwidth, authentication, and security reasons. The IEEE 802.11 standards require SSIDs to be attached to the header of packets sent over a WLAN. This helps to ensure that data is being transmitted to and from the correct network.

The *basic service set (BSS)* is a term used to describe the collection of stations which may communicate together within an 802.11 network. Two types of BSS exist, IBSS (Independent Basic Service Set) and Infrastructure Basic Service Set. An IBSS is often referred to as an *ad-hoc* network because it can be constructed quickly and without much planning. These ad-hoc networks are good for small offices and homes.

The *extended service set (ESS)* consists of interconnected WLANs integrated into LANs that appear as a single BSS to a logical link control layer. Clients/stations can disassociate from one AP and connect to another, depending on signal strength or other factors. When a station determines the current signal is poor, it will start scanning for another AP. This feature is known as *roaming* and can be done through passively listening or actively probing each channel and waiting for a response.