Use Case Scenario Examples

Scenario 1 - Find the number of online hosts

Requirements:

Count the number of devices connected to the subnet.

Pre-conditions:

The database contains a list of devices connected to the switch.

Post-conditions:

The system will count the number of connected devices and output this number to the user.

Invariants:

The switch keeps track of all connected devices.

Scenario:

User selects count online devices option.
Get list of all connected devices, and subsequently count the number of them.

Scenario 2 – Find MAC and IP address of a device

Requirements:

The device must be online.
The user has a way of identifying the device to pick it out from all the others.

Pre-conditions:

The user does not know the MAC or IP address of the device in question.
The IP address is static and reserved.

Post-conditions:

The user is provided with the MAC and IP address of a specific device.

Invariants:

The MAC and IP address.

Scenario:

User selects option to search for a device's MAC and IP address.

Compare search criteria, such as device name, with list of connected devices, then when a match is found output the relevant MAC and IP address.

Scenario 3 – Find the number of free IP addresses

Requirements:

List of IP addresses available on subnet.
Number of IP addresses used.

Pre-conditions:

Some devices are connected, using a number of IP addresses that can be found.

Post-conditions:

The user knows the number of IP addresses that are not being used on the subnet.

Scenario:

First find the number of IP addresses that are allocated, then subtract that from the total number on the subnet.

Scenario 4 – List name to IP address relationships

Requirements:

Each device connected to the subnet will have a name as well as an IP address.

Pre-conditions:

There will be a list of devices connected, and each entry will have its attributes listed.

Post-conditions:

The relevant attributes are listed side by side, for each connected device.

Scenario:

User selects option to list devices by name with their respective IP address.

This information is then read from the database and output for the user.