LAYER 3 SWITCHING

Using Routed Ports

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Topology (To be drawn by the student)

Addressing Table (Filled by the student)

Device	Model	Interfaces Used	IP Address	Gateway	Data Link Address

Scenario

The current project is a network for a local Bank. This bank has 2 branches in two different cities. The main branch is at Ramallah city, the second branch located at Nablus. Ramallah branch has about 140 hosts, and Nablus branch has about 30 hosts. This time you are doing the design from scratch. The network design to be implemented has to abide to the following:

1. Ramallah branch is to be divided into 7 different VLANs as follows:
    a. DMZ: 15 hosts.
    b. Tellers: 12 employees.
    c. Sales: 20 employees.
    d. HR: 10 employees.
    e. Finance:30 employees.
    f. Operations:40 employees.
    g. Management: 10 employees.
2. Nablus branch is to be divided into multiple VLANs as follows:
    a. Tellers: 6 employees.
    b. sales: 5 employees.
    c. Operations: 10 employees.
    b. Management: 5 hosts.
3. Main internet connection is at Ramallah (Lab network is to be used as an ISP network).

Conceptual Requirements

Required Concepts that must be included in your design:

a. Layer 3 switching is to be implemented at Ramallah branch (use 3560 switch).
b. Routed ports.
c. Router on a stick at Nablus.
d. Static routing.
e. Network address translation.

Tasks

1. Design the logical topology as per the requirements.
2. Design an appropriate addressing scheme.
3. Connect the topology proposed.
4. Configure all devices with the required configurations.
5. Configure all conceptual requirements.
6. All your hosts should have internet connectivity. (DNS 8.8.8.8)
7. Test connectivity and all required services.

GOOD LUCK