RESTRUCTURING ‘THE CHURCH AT SUGAR CREEK’ NETWORK

PRESENTED BY: MATTHEW MATHIS

WHY DID I CHOSE THIS PROJECT?

GOALS

1. Change public Wi-Fi to a mesh Wi-Fi system
2. Create “zones” to separate systems in different parts of the church
3. Provide ample instruction on how to complete tasks if they can’t be completed in allotted time

MESH NETWORKING

- Consists of one main router with multiple nodes
- Allows for continuous connectivity throughout the location
- All nodes must have the same SSID (Wi-Fi name) and password

GOAL 1: CREATING THE MESH NETWORK

- Current Wi-Fi system has public Wi-Fi throughout some of the church
  - All Access Points and Routers had a different SSID but same password
    - Ie. OurChurch1, OurChurch2, OurChurch3 etc.
  - All Aps/Routers changed to have the same SSID and password
  - Creates the mesh network

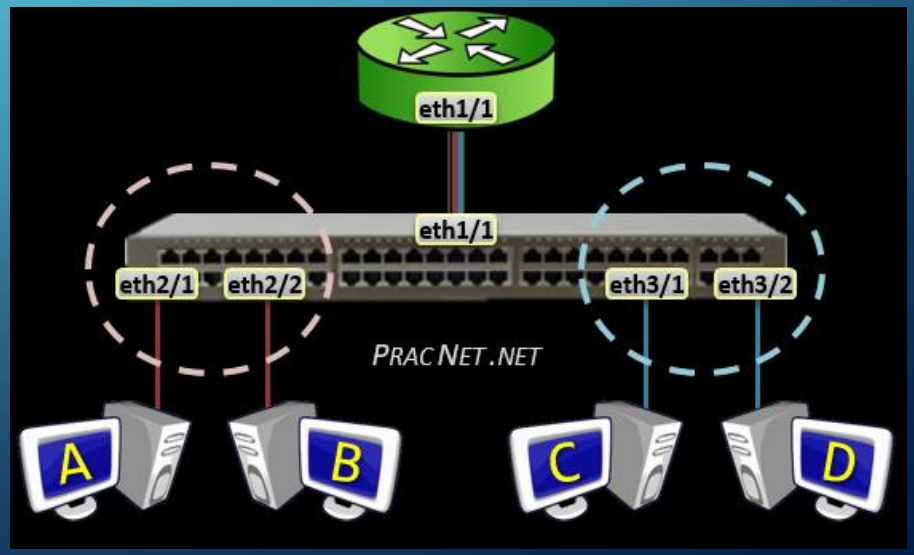
GOAL 2: CREATING THE ZONES

- Main goal is to separate the network into different zones
  - For the church
    - Public Wi-Fi
    - Office/Preschool
    - CLC

GOAL 2: CREATING THE ZONES (CONT.)

- Multiple Subnets
  - Didn't really separate the IPs as those on a 192.168.1.x could still access a computer on 192.168.2.x
  - Could set-up multiple scopes for the dynamic IP range to get around static IP addresses

- VLANs
  - Separates one LAN from another
    - Computer on 192.168.1.x couldn't communicate with computer on 192.168.2.x
  - Requires rerouting the cabling



GOAL 3: PROVIDING HELP FOR FUTURE

- Guidance given on new network equipment
- Help Installing new equipment and setting up VLANs
- Providing written instructions

CHALLENGES

- Time
- Being Alone

SPECIAL THANKS TO STEVE BABCOCK

QUESTIONS?