Filmina #85 de la presentación "Network" [05-85]
Christopher Zúñiga C28730

To complete this subnetting task, we'll start by ordering the subnet requests from largest to smallest. Then, using subnetting, we'll allocate addresses for each range while moving from lower to higher addresses within the network `192.168.24.0/24`. Here's a step-by-step breakdown:

Step 1: Order Requests by Size

Let's arrange the address requests from largest to smallest:

1. **Range B** - 127 addresses
2. **Range E** - 63 addresses
3. **Range C** - 30 addresses
4. **Range A** - 16 addresses
5. **Range D** - 15 addresses
6. **Range F** - 7 addresses

Step 2: Determine the Required Subnets

We'll assign subnets from the lower end of the `192.168.24.0` network to satisfy each address request.

1. **Range B - 127 Addresses**
    - We need at least 127 addresses, so we use a `/25` subnet, which provides 128 addresses.
    - Subnet: `192.168.24.0/25`
    - **Address Range for Range B: `192.168.24.0 - 192.168.24.127`**
2. **Range E - 63 Addresses**
    - We need 63 addresses, so we use a `/26` subnet, which provides 64 addresses.
    - Subnet: `192.168.24.128/26`
    - Address Range for Range E: `192.168.24.128 - 192.168.24.191`
3. **Range C - 30 Addresses**
    - We need 30 addresses, so we use a `/27` subnet, which provides 32 addresses.
    - Subnet: `192.168.24.192/27`
    - Address Range for Range C: `192.168.24.192 - 192.168.24.223`
4. **Range A - 16 Addresses**
    - We need 16 addresses, so we use a `/28` subnet, which provides 16 addresses.
    - Subnet: `192.168.24.224/28`
    - Address Range for Range A: `192.168.24.224 - 192.168.24.239`

5. **Range D - 15 Addresses**
    - We need 15 addresses, so we also use a `/28` subnet, as it provides the required 16 addresses.
    - Subnet: `192.168.24.240/28`
    - Address Range for Range D: `192.168.24.240 - 192.168.24.255`
6. **Range F - 7 Addresses**
    - We need 7 addresses, so we use a `/29` subnet, which provides 8 addresses.
    - Subnet: `192.168.24.248/29`
    - Address Range for Range F: `192.168.24.248 - 192.168.24.255`

Summary of Subnets and Address Assignments

Range	Required Addresses	Subnet	Address Range
B	127	192.168.24.0/25	192.168.24.0 - 192.168.24.127
E	63	192.168.24.128/26	192.168.24.128 - 192.168.24.191
C	30	192.168.24.192/27	192.168.24.192 - 192.168.24.223
A	16	192.168.24.224/28	192.168.24.224 - 192.168.24.239
D	15	192.168.24.240/28	192.168.24.240 - 192.168.24.255
F	7	192.168.24.248/29	192.168.24.248 - 192.168.24.255

Each range is assigned an appropriate subnet with addresses ordered from the lowest to highest, ensuring each requirement is met efficiently.