**Network of The Roman Catholic Episcopate of Iasi**

**1st step:**

**How many subnetwork are necessary today?**

* **7**

**How many subnetwork are necessary in the nearby future?**

* **8**

**How many hosts should the biggest subnetwork have today?**

* **19**

**How many hosts should the biggest subnetwork have in the nearby future?**

* **15**

**Which address class is the IP block address belongs to?**

* **It belongs to C class**

**2nd step:**

**There are necessary a number of 7 subnetworks with a maximum number of hosts per subnetwork = 19**

**No. of subnetworks: 2S >= 7 → S=3 (23 = 8)**

**No. of hosts: 2H – 2 >= 25 → H=5 (25 – 2 = 30)**

**Subnetworks:**

**#0: 15 computers, 1 Wi-Fi router = 16 hosts**

**#1: 10 surveillance cameras, 5 printers = 15 hosts**

**#2: 1 Wi-Fi router, 6 surveillance cameras, 5 computers, 1 projector, 2 printers, 2 NAS = 17 hosts**

**#3: 9 computers, 6 surveillance cameras, 2 printers, 2 Wi-Fi routers = 19 hosts**

**#4: 10 computers, 2 Wi-fi routers = 12 hosts**

**#5: 10 surveillance cameras, 2 live-stream cameras = 12 hosts**

**#6: 14 surveillance cameras, 1 Wi-fi router = 15 hosts**

**Subnetwork adress: 200.34.79.0 – C class**

**Subnetwork mask: 255.255.255.224/27 (24+3)**

**Binary: 11111111.11111111.11111111.11100000**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Subnetwork #** | **Subnetwork ID** | **IP adress of subnetwork** | **Interval host** | **Broadcast adress** |
| **#0** | **000** | **200.34.79.0** | **200.34.79.1 - 200.34.79.30** | **200.34.79.31** |
| **#1** | **001** | **200.34.79.32** | **200.34.79.33 – 200.34.79.62** | **200.34.79.63** |
| **#2** | **010** | **200.34.79.64** | **200.34.79.65 – 200.34.79.94** | **200.34.79.95** |
| **#3** | **011** | **200.34.79.96** | **200.34.79.97 – 200.34.79.126** | **200.34.79.127** |
| **#4** | **100** | **200.34.79.128** | **200.34.79.129 – 200.34.79.158** | **200.34.79.159** |
| **#5** | **101** | **200.34.79.160** | **200.34.79.151 – 200.34.79.180** | **200.34.79.191** |
| **#6** | **110** | **200.34.79.192** | **200.34.79.193 - 200.34.79.222** | **200.34.79.223** |