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1. Subnetting

1.1. Asignación de direcciones IP a las redes

| Subnet | Nombre | Hosts | Direcciones | Dirección | Máscara |
|------------|--------|--------|-------------|--------------|-----------------|
| A | A | 125 | 128 | 201.158.15.0 | 255.255.255.128 |
| B | B | 17 | 32 | 20.86.15.0 | 255.255.255.224 |
| C | C | 12 | 16 | 10.31.25.128 | 255.255.255.240 |
| D | D | 223 | 256 | 20.64.73.0 | 255.255.255.0 |
| E | E | 69 | 128 | 10.31.25.0 | 255.255.255.128 |
| F | F | 19 | 32 | 20.86.15.32 | 255.255.255.224 |
| G | G | 2 | 4 | 10.31.25.152 | 255.255.255.252 |
| H | H | 2 | 4 | 10.31.25.156 | 255.255.255.252 |
| I | I | 10 PPP | | | |
| I1 | | 2 | 4 | 151.40.3.192 | 255.255.255.252 |
| I2 | | 2 | 4 | 151.40.3.196 | 255.255.255.252 |
| I3 | | 2 | 4 | 151.40.3.200 | 255.255.255.252 |
| I4 | | 2 | 4 | 151.40.3.204 | 255.255.255.252 |
| I5 | | 2 | 4 | 151.40.3.208 | 255.255.255.252 |
| I6 | | 2 | 4 | 151.40.3.212 | 255.255.255.252 |
| I7 | | 2 | 4 | 151.40.3.216 | 255.255.255.252 |
| I8 | | 2 | 4 | 151.40.3.220 | 255.255.255.252 |
| I9 | | 2 | 4 | 151.40.3.224 | 255.255.255.252 |
| I10 | | 2 | 4 | 151.40.3.228 | 255.255.255.252 |
| J | J | 43 | 64 | 20.86.15.64 | 255.255.255.192 |
| K | K | 6 | 8 | 10.31.25.144 | 255.255.255.248 |
| L | L | 240 | 256 | 20.26.29.0 | 255.255.255.0 |
| M1 | M1 | 68 | 128 | 20.86.15.128 | 255.255.255.128 |
| M2 | M2 | 18 | 32 | 10.31.25.160 | 255.255.255.224 |
| N privada | N | 2 | 4 | 10.31.25.160 | 255.255.255.252 |
| O privada | O | 2 | 4 | 10.31.25.164 | 255.255.255.252 |
| P privada | P | 2 | 4 | 10.31.25.168 | 255.255.255.252 |
| Q1 Publica | Q1 | 2 | 4 | 150.38.27.0 | 255.255.255.252 |
| Q2 Publica | Q2 | 2 | 4 | 150.38.27.4 | 255.255.255.252 |
| Q3 Publica | Q3 | 2 | 4 | 150.38.27.8 | 255.255.255.252 |

1.1.1. Asignación IP a routers, servers, hosts

| Subred | Dispositivo | Interfaz | Dirección | Máscara |
|--------|-------------|----------|--------------|-----------------|
| A | | | | |
| | WebServer | | 201.158.15.1 | 255.255.255.128 |
| | Host A | | 201.158.15.2 | 255.255.255.128 |
| | R4 | e0/0 | 201.158.15.3 | 255.255.255.128 |
| | R5 | e0/0 | 201.158.15.4 | 255.255.255.128 |
| | R2 | e0/0 | 201.158.15.5 | 255.255.255.128 |
| | R3 | e0/2 | 201.158.15.6 | 255.255.255.128 |
| | Virtual A | | 201.158.15.7 | 255.255.255.128 |
| B | | | | |
| | R1 | e0/0 | 20.86.15.1 | 255.255.255.224 |
| | R3 | e0/0 | 20.86.15.2 | 255.255.255.224 |
| C | | | | |
| | R1 | e0/1 | 10.31.25.129 | 255.255.255.240 |
| | R3 | e0/1 | 10.31.25.130 | 255.255.255.240 |
| D | | | | |
| | R5 | e0/1 | 20.64.73.1 | 255.255.255.0 |
| | R4 | e0/1 | 20.64.73.2 | 255.255.255.0 |
| | DNS-ROOT | | 20.64.73.3 | 255.255.255.0 |
| | R8 | e0/0 | 20.64.73.4 | 255.255.255.0 |
| | Virtual D | | 20.64.73.5 | 255.255.255.0 |
| E | | | | |
| | FTP-Server | | 10.31.25.1 | 255.255.255.128 |
| | R12 | e0/0 | 10.31.25.2 | 255.255.255.128 |
| | DNS1 | | 10.31.25.3 | 255.255.255.128 |
| | R15 | e0/2 | 10.31.25.4 | 255.255.255.128 |
| | R13 | e0/1 | 10.31.25.5 | 255.255.255.128 |
| F | | | | |
| | R13 | e0/0 | 20.86.15.33 | 255.255.255.224 |
| | Host C | | 20.86.15.34 | 255.255.255.224 |
| | R14 | e0/1 | 20.86.15.35 | 255.255.255.224 |
| G | | | | |
| | R10 | e1/2 | 10.31.25.153 | 255.255.255.252 |
| | R13 | e0/2 | 10.31.25.154 | 255.255.255.252 |
| H | | | | |
| | R8 | e0/1 | 10.31.25.157 | 255.255.255.252 |
| | R7 | e1/1 | 10.31.25.158 | 255.255.255.252 |
| I1 | | | | |
| | R2 | s1/0.1 | 151.40.3.193 | 255.255.255.252 |
| | R17 | s1/0.1 | 151.40.3.194 | 255.255.255.252 |
| I2 | | | | |
| | R2 | s1/0.2 | 151.40.3.197 | 255.255.255.252 |
| | R16 | s1/0.1 | 151.40.3.198 | 255.255.255.252 |
| I3 | | | | |
| | R2 | s1/0.3 | 151.40.3.201 | 255.255.255.252 |
| | R9 | s1/0.1 | 151.40.3.202 | 255.255.255.252 |

| Subred | Dispositivo | Interfaz | Dirección | Máscara |
|--------|-------------|----------|--------------|-----------------|
| I4 | | | | |
| | R2 | s1/0.4 | 151.40.3.205 | 255.255.255.252 |
| | R6 | s1/0.1 | 151.40.3.206 | 255.255.255.252 |
| I5 | | | | |
| | R17 | s1/0.2 | 151.40.3.209 | 255.255.255.252 |
| | R16 | s1/0.2 | 151.40.3.210 | 255.255.255.252 |
| I6 | | | | |
| | R17 | s1/0.3 | 151.40.3.213 | 255.255.255.252 |
| | R9 | s1/0.2 | 151.40.3.214 | 255.255.255.252 |
| I7 | | | | |
| | R17 | s1/0.4 | 151.40.3.217 | 255.255.255.252 |
| | R6 | s1/0.2 | 151.40.3.218 | 255.255.255.252 |
| I8 | | | | |
| | R16 | s1/0.3 | 151.40.3.221 | 255.255.255.252 |
| | R9 | s1/0.3 | 151.40.3.222 | 255.255.255.252 |
| I9 | | | | |
| | R16 | s1/0.4 | 151.40.3.225 | 255.255.255.252 |
| | R6 | s1/0.3 | 151.40.3.226 | 255.255.255.252 |
| I10 | | | | |
| | R9 | s1/0.4 | 151.40.3.229 | 255.255.255.252 |
| | R6 | s1/0.4 | 151.40.3.230 | 255.255.255.252 |
| J | | | | |
| | R17 | e0/0 | 20.86.15.65 | 255.255.255.192 |
| | R16 | e0/0 | 20.86.15.66 | 255.255.255.192 |
| | R14 | e0/0 | 20.86.15.67 | 255.255.255.192 |
| | R15 | e0/0 | 20.86.15.68 | 255.255.255.192 |
| K | | | | |
| | R15 | e0/1 | 10.31.25.145 | 255.255.255.248 |
| L | | | | |
| | R7 | e1/0 | 20.26.29.1 | 255.255.255.0 |
| | R6 | e0/0 | 20.26.29.2 | 255.255.255.0 |
| | R9 | e0/0 | 20.26.29.3 | 255.255.255.0 |
| | Tel-Server | | 20.26.29.129 | 255.255.255.0 |
| M1 | | | | |
| | Host B | | 20.86.5.129 | 255.255.255.128 |
| | Tel-Server | | 20.86.5.130 | 255.255.255.128 |
| | R11 | e0/0 | 20.86.5.132 | 255.255.255.128 |
| | R10 | e1/1 | 20.86.5.133 | 255.255.255.128 |
| M2 | | | | |
| | R10 | e1/0 | 10.31.25.193 | 255.255.255.224 |
| | DNS2 | | 10.31.25.194 | 255.255.255.224 |
| N | | | | |
| | R8 | e | 10.31.25.161 | 255.255.255.252 |
| | R11 | e | 10.31.25.162 | 255.255.255.252 |

| Subred | Dispositivo | Interfaz | Dirección | Máscara |
|--------|-------------|----------|--------------|-----------------|
| O | | | | |
| | R8 | e | 10.31.25.165 | 255.255.255.252 |
| | R12 | e | 10.31.25.166 | 255.255.255.252 |
| P | | | | |
| | R12 | e | 10.31.25.169 | 255.255.255.252 |
| | R11 | e | 10.31.25.170 | 255.255.255.252 |
| Q1 | | | | |
| | R8 | e0/2 | 150.38.27.1 | 255.255.255.252 |
| | INTERNET | e1/0 | 150.38.27.2 | 255.255.255.252 |
| Q2 | | | | |
| | R11 | e0/1 | 150.38.27.5 | 255.255.255.252 |
| | INTERNET | e1/1 | 150.38.27.6 | 255.255.255.252 |
| Q3 | | | | |
| | R12 | e0/1 | 150.38.27.9 | 255.255.255.252 |
| | INTERNET | e1/2 | 150.38.27.10 | 255.255.255.252 |

1.1.2. Asignación IP a routers en Frame Relay

| Subnet | Device | Interface | Address | Mask | DLCI |
|--------|--------|-----------|--------------|-----------------|------|
| G1 | R1 | s1/0.1 | 172.19.3.65 | 255.255.255.252 | 104 |
| | R4 | s1/0.2 | 172.19.3.66 | 255.255.255.252 | 104 |
| G2 | R1 | s1/0.2 | 172.19.3.69 | 255.255.255.252 | 107 |
| | R7 | s1/0.2 | 172.19.3.70 | 255.255.255.252 | 107 |
| G3 | R1 | s1/0.3 | 172.19.3.73 | 255.255.255.252 | 108 |
| | R8 | s2/0.1 | 172.19.3.74 | 255.255.255.252 | 108 |
| G4 | R1 | s1/0.4 | 172.19.3.77 | 255.255.255.252 | 115 |
| | R15 | s1/0.1 | 172.19.3.78 | 255.255.255.252 | 151 |
| G5 | R4 | s1/0.1 | 172.19.3.81 | 255.255.255.252 | 407 |
| | R7 | s1/0.1 | 172.19.3.82 | 255.255.255.252 | 407 |
| G6 | R4 | s1/0.3 | 172.19.3.85 | 255.255.255.252 | 408 |
| | R8 | s2/0.2 | 172.19.3.86 | 255.255.255.252 | 408 |
| G7 | R4 | s1/0.4 | 172.19.3.89 | 255.255.255.252 | 415 |
| | R15 | s1/0.2 | 172.19.3.90 | 255.255.255.252 | 154 |
| G8 | R7 | s1/0.3 | 172.19.3.93 | 255.255.255.252 | 708 |
| | R8 | s2/0.3 | 172.19.3.94 | 255.255.255.252 | 807 |
| G9 | R7 | s1/0.4 | 172.19.3.97 | 255.255.255.252 | 715 |
| | R15 | s1/0.3 | 172.19.3.98 | 255.255.255.252 | 157 |
| G10 | R8 | s2/0.4 | 172.19.3.101 | 255.255.255.252 | 815 |
| | R15 | s1/0.4 | 172.19.3.102 | 255.255.255.252 | 158 |

1.2. Tablas de Ruteo de Córdoba

1.2.1. R1

| Red | Dirección de Red | Máscara | Sig. Salto | Dir. Sig. Salto | Métrica |
|-----|------------------|---------|------------|-----------------|---------|
| | 0.0.0.0 | 0.0.0.0 | R3 | 20.86.15.2 | 1 |

1.2.2. R2

| Red | Dirección de Red | Máscara | Sig. Salto | Dir. Sig. Salto | Métrica |
|-----|------------------------|-----------------|------------|-----------------|---------|
| A | Directamente conectado | | | | |
| B | 20.86.15.0 | 255.255.255.224 | R3 | 201.158.15.6 | 1 |
| C | 10.31.25.128 | 255.255.255.240 | R3 | 201.158.15.6 | 1 |
| D | 20.64.73.0 | 255.255.255.0 | R5 | 201.158.15.4 | 1 |
| E | 10.31.25.0 | 255.255.255.128 | R17 | 151.40.3.194 | 1 |
| F | 20.86.15.32 | 255.255.255.224 | R17 | 151.40.3.194 | 1 |
| G | 10.31.25.152 | 255.255.255.252 | R17 | 151.40.3.194 | 1 |
| H | 10.31.25.156 | 255.255.255.252 | R5 | 201.158.15.4 | 1 |
| I | Directamente conectado | | | | |
| I1 | | | | | |
| I2 | | | | | |
| I3 | | | | | |
| I4 | | | | | |
| I5 | 151.40.3.208 | 255.255.255.252 | R17 | 151.40.3.194 | 1 |
| I6 | 151.40.3.212 | 255.255.255.252 | R17 | 151.40.3.194 | 1 |
| I7 | 151.40.3.216 | 255.255.255.252 | R17 | 151.40.3.198 | 1 |
| I8 | 151.40.3.220 | 255.255.255.252 | R16 | 151.40.3.198 | 1 |
| I9 | 151.40.3.224 | 255.255.255.252 | R16 | 151.40.3.198 | 1 |
| I10 | 151.40.3.228 | 255.255.255.252 | R9 | 151.40.3.202 | 1 |
| J | 20.86.15.64 | 255.255.255.192 | R17 | 151.40.3.194 | 1 |
| K | 10.31.25.144 | 255.255.255.248 | R17 | 151.40.3.194 | 1 |
| L | 20.26.29.0 | 255.255.255.0 | R9 | 151.40.3.202 | 1 |
| M1 | 20.86.15.128 | 255.255.255.128 | Virtual-A | 201.158.15.7 | 1 |
| M2 | 10.31.25.192 | 255.255.255.224 | Virtual-A | 201.158.15.7 | 1 |
| N | 10.31.25.160 | 255.255.255.252 | R5 | 201.158.15.4 | 1 |
| O | 10.31.25.164 | 255.255.255.252 | R5 | 201.158.15.4 | 1 |
| P | 10.31.25.168 | 255.255.255.252 | R5 | 201.158.15.4 | 1 |

1.2.3. R3

| Red | Dirección de Red | Máscara | Sig. Salto | Dir. Sig. Salto | Métrica |
|-----|------------------------|-----------------|------------|-----------------|---------|
| A | Directamente conectado | | | | |
| B | Directamente conectado | | | | |
| C | Directamente conectado | | | | |
| D | 20.64.73.0 | 255.255.255.0 | Virtual-A | 201.158.15.7 | 1 |
| E | 10.31.25.0 | 255.255.255.128 | R2 | 201.158.15.5 | 1 |
| F | 20.86.15.32 | 255.255.255.224 | R2 | 201.158.15.5 | 1 |
| G | 10.31.25.152 | 255.255.255.252 | R2 | 201.158.15.5 | 1 |
| H | 10.31.25.156 | 255.255.255.252 | Virtual-A | 201.158.15.7 | 1 |
| I | | | | | |
| I1 | 151.40.3.192 | 255.255.255.252 | R2 | 201.158.15.5 | 1 |
| I2 | 151.40.3.196 | 255.255.255.252 | R2 | 201.158.15.5 | 1 |
| I3 | 151.40.3.200 | 255.255.255.252 | R2 | 201.158.15.5 | 1 |
| I4 | 151.40.3.204 | 255.255.255.252 | R2 | 201.158.15.5 | 1 |
| I5 | 151.40.3.208 | 255.255.255.252 | R2 | 201.158.15.5 | 1 |
| I6 | 151.40.3.212 | 255.255.255.252 | R2 | 201.158.15.5 | 1 |
| I7 | 151.40.3.216 | 255.255.255.252 | R2 | 201.158.15.5 | 1 |
| I8 | 151.40.3.220 | 255.255.255.252 | R2 | 201.158.15.5 | 1 |
| I9 | 151.40.3.224 | 255.255.255.252 | R2 | 201.158.15.5 | 1 |
| I10 | 151.40.3.228 | 255.255.255.252 | R2 | 201.158.15.5 | 1 |
| J | 20.86.15.64 | 255.255.255.192 | R2 | 201.158.15.5 | 1 |
| K | 10.31.25.144 | 255.255.255.248 | R2 | 201.158.15.5 | 1 |
| L | 20.26.29.0 | 255.255.255.0 | R2 | 201.158.15.5 | 1 |
| M1 | 20.86.15.128 | 255.255.255.128 | Virtual-A | 201.158.15.7 | 1 |
| M2 | 10.31.25.192 | 255.255.255.224 | Virtual-A | 201.158.15.7 | 1 |
| N | 10.31.25.160 | 255.255.255.252 | Virtual-A | 201.158.15.7 | 1 |
| O | 10.31.25.164 | 255.255.255.252 | Virtual-A | 201.158.15.7 | 1 |
| P | 10.31.25.168 | 255.255.255.252 | R2 | 201.158.15.5 | 1 |

1.2.4. R4 y R5 (routers VRRP)

| Red | Dirección de Red | Máscara | Sig. Salto | Dir. Sig. Salto | Métrica |
|-----|------------------------|-----------------|------------|-----------------|---------|
| A | Directamente conectado | | | | |
| B | 20.86.15.0 | 255.255.255.224 | R3 | 201.158.15.6 | 1 |
| C | 10.31.25.128 | 255.255.255.240 | R3 | 201.158.15.6 | 1 |
| D | Directamente conectado | | | | |
| E | 10.31.25.0 | 255.255.255.128 | R2 | 201.158.15.5 | 1 |
| F | 20.86.15.32 | 255.255.255.224 | R2 | 201.158.15.5 | 1 |
| G | 10.31.25.152 | 255.255.255.252 | R2 | 201.158.15.5 | 1 |
| H | 10.31.25.156 | 255.255.255.252 | R8 | 20.64.73.4 | 1 |
| I | | | | | |
| I1 | 151.40.3.192 | 255.255.255.252 | R2 | 201.158.15.5 | 1 |
| I2 | 151.40.3.196 | 255.255.255.252 | R2 | 201.158.15.5 | 1 |
| I3 | 151.40.3.200 | 255.255.255.252 | R2 | 201.158.15.5 | 1 |
| I4 | 151.40.3.204 | 255.255.255.252 | R2 | 201.158.15.5 | 1 |
| I5 | 151.40.3.208 | 255.255.255.252 | R2 | 201.158.15.5 | 1 |
| I6 | 151.40.3.212 | 255.255.255.252 | R2 | 201.158.15.5 | 1 |
| I7 | 151.40.3.216 | 255.255.255.252 | R2 | 201.158.15.5 | 1 |
| I8 | 151.40.3.220 | 255.255.255.252 | R2 | 201.158.15.5 | 1 |
| I9 | 151.40.3.224 | 255.255.255.252 | R2 | 201.158.15.5 | 1 |
| I10 | 151.40.3.228 | 255.255.255.252 | R2 | 201.158.15.5 | 1 |
| J | 20.86.15.64 | 255.255.255.192 | R2 | 201.158.15.5 | 1 |
| K | 10.31.25.144 | 255.255.255.248 | R2 | 201.158.15.5 | 1 |
| L | 20.26.29.0 | 255.255.255.0 | R8 | 20.64.73.4 | 1 |
| M1 | 20.86.15.128 | 255.255.255.128 | R8 | 20.64.73.4 | 1 |
| M2 | 10.31.25.192 | 255.255.255.224 | R8 | 20.64.73.4 | 1 |
| N | 10.31.25.160 | 255.255.255.252 | R8 | 20.64.73.4 | 1 |
| O | 10.31.25.164 | 255.255.255.252 | R8 | 20.64.73.4 | 1 |
| P | 10.31.25.168 | 255.255.255.252 | R8 | 20.64.73.4 | 1 |

1.2.5. R8

REVISAR POR REDES: E, F, G, J, K, M1, M2, P

| Red | Dirección de Red | Máscara | Sig. Salto | Dir. Sig. Salto | Métrica |
|-----|------------------------|-----------------|------------|-----------------|---------|
| A | 201.158.15.0 | 255.255.255.128 | Virtual-D | 20.64.73.5 | 1 |
| B | 20.86.15.0 | 255.255.255.224 | Virtual-D | 20.64.73.5 | 1 |
| C | 10.31.25.128 | 255.255.255.240 | Virtual-D | 20.64.73.5 | 1 |
| D | Directamente conectado | | | | |
| E | 10.31.25.0 | 255.255.255.128 | R12 | 10.31.25.166 | 1 |
| F | 20.86.15.32 | 255.255.255.224 | R12 | 10.31.25.166 | 1 |
| G | 10.31.25.152 | 255.255.255.252 | R12 | 10.31.25.166 | 1 |
| H | Directamente conectado | | | | |
| I | | | | | |
| I1 | 151.40.3.192 | 255.255.255.252 | Virtual-D | 20.64.73.5 | 1 |
| I2 | 151.40.3.196 | 255.255.255.252 | Virtual-D | 20.64.73.5 | 1 |
| I3 | 151.40.3.200 | 255.255.255.252 | Virtual-D | 20.64.73.5 | 1 |
| I4 | 151.40.3.204 | 255.255.255.252 | Virtual-D | 20.64.73.5 | 1 |
| I5 | 151.40.3.208 | 255.255.255.252 | Virtual-D | 20.64.73.5 | 1 |
| I6 | 151.40.3.212 | 255.255.255.252 | Virtual-D | 20.64.73.5 | 1 |
| I7 | 151.40.3.216 | 255.255.255.252 | Virtual-D | 20.64.73.5 | 1 |
| I8 | 151.40.3.220 | 255.255.255.252 | Virtual-D | 20.64.73.5 | 1 |
| I9 | 151.40.3.224 | 255.255.255.252 | Virtual-D | 20.64.73.5 | 1 |
| I10 | 151.40.3.228 | 255.255.255.252 | Virtual-D | 20.64.73.5 | 1 |
| J | 20.86.15.64 | 255.255.255.192 | R12 | 10.31.25.166 | 1 |
| K | 10.31.25.144 | 255.255.255.248 | R12 | 10.31.25.166 | 1 |
| L | 20.26.29.0 | 255.255.255.0 | R7 | 10.31.25.158 | 1 |
| M1 | 20.86.15.128 | 255.255.255.128 | R11 | 10.31.25.162 | 1 |
| M2 | 10.31.25.192 | 255.255.255.224 | R11 | 10.31.25.162 | 1 |
| N | Directamente conectada | | | | |
| O | Directamente conectada | | | | |
| P | 10.31.25.168 | 255.255.255.252 | R12 | 10.31.25.166 | 1 |

1.3. Tablas de Ruteo de Calamuchita

1.3.1. R6

| Red | Dirección de Red | Máscara | Sig. Salto | Dir. Sig. Salto | Métrica |
|-----|------------------------|-----------------|------------|-----------------|---------|
| A | 201.158.15.0 | 255.255.255.128 | R2 | 151.40.3.205 | 1 |
| B | 20.86.15.0 | 255.255.255.224 | R2 | 151.40.3.205 | 1 |
| C | 10.31.25.128 | 255.255.255.240 | R2 | 151.40.3.205 | 1 |
| D | 20.64.73.0 | 255.255.255.0 | R7 | 20.26.29.1 | 1 |
| E | 10.31.25.0 | 255.255.255.128 | R17 | 151.40.3.217 | 1 |
| F | 20.86.15.32 | 255.255.255.224 | R17 | 151.40.3.217 | 1 |
| G | 10.31.25.152 | 255.255.255.252 | R17 | 151.40.3.217 | 1 |
| H | 10.31.25.156 | 255.255.255.252 | R7 | 20.26.29.1 | 1 |
| I | | | | | |
| I1 | 151.40.3.192 | 255.255.255.252 | R2 | 151.40.3.205 | 1 |
| I2 | 151.40.3.196 | 255.255.255.252 | R2 | 151.40.3.205 | 1 |
| I3 | 151.40.3.200 | 255.255.255.252 | R2 | 151.40.3.205 | 1 |
| I4 | Directamente conectado | | | | |
| I5 | 151.40.3.208 | 255.255.255.252 | R17 | 151.40.3.217 | 1 |
| I6 | 151.40.3.212 | 255.255.255.252 | R17 | 151.40.3.217 | 1 |
| I7 | Directamente conectado | | | | |
| I8 | 151.40.3.220 | 255.255.255.252 | R8 | 151.40.3.229 | 1 |
| I9 | Directamente conectado | | | | |
| I10 | Directamente conectado | | | | |
| J | 20.86.15.64 | 255.255.255.192 | R17 | 151.40.3.217 | 1 |
| K | 10.31.25.144 | 255.255.255.248 | R17 | 151.40.3.217 | 1 |
| L | Directamente conectado | | | | |
| M1 | 20.86.15.128 | 255.255.255.128 | R7 | 20.26.29.1 | 1 |
| M2 | 10.31.25.192 | 255.255.255.224 | R7 | 20.26.29.1 | 1 |
| N | 10.31.25.160 | 255.255.255.252 | R7 | 20.26.29.1 | 1 |
| O | 10.31.25.164 | 255.255.255.252 | R7 | 20.26.29.1 | 1 |
| P | 10.31.25.168 | 255.255.255.252 | R7 | 20.26.29.1 | 1 |

1.3.2. R7

| Red | Dirección de Red | Máscara | Sig. Salto | Dir. Sig. Salto | Métrica |
|-----|------------------------|-----------------|------------|-----------------|---------|
| A | 201.158.15.0 | 255.255.255.128 | R6 | 20.26.29.2 | 1 |
| B | 20.86.15.0 | 255.255.255.224 | R6 | 20.26.29.2 | 1 |
| C | 10.31.25.128 | 255.255.255.240 | R6 | 20.26.29.2 | 1 |
| D | 20.64.73.0 | 255.255.255.0 | R8 | 10.31.25.157 | 1 |
| E | 10.31.25.0 | 255.255.255.128 | R6 | 20.26.29.2 | 1 |
| F | 20.86.15.32 | 255.255.255.224 | R6 | 20.26.29.2 | 1 |
| G | 10.31.25.152 | 255.255.255.252 | R6 | 20.26.29.2 | 1 |
| H | Directamente conectado | | | | |
| I | | | | | |
| I1 | 151.40.3.192 | 255.255.255.252 | R6 | 20.26.29.2 | 1 |
| I2 | 151.40.3.196 | 255.255.255.252 | R6 | 20.26.29.2 | 1 |
| I3 | 151.40.3.200 | 255.255.255.252 | R6 | 20.26.29.2 | 1 |
| I4 | 151.40.3.204 | 255.255.255.252 | R6 | 20.26.29.2 | 1 |
| I5 | 151.40.3.208 | 255.255.255.252 | R6 | 20.26.29.2 | 1 |
| I6 | 151.40.3.212 | 255.255.255.252 | R6 | 20.26.29.2 | 1 |
| I7 | 151.40.3.216 | 255.255.255.252 | R6 | 20.26.29.2 | 1 |
| I8 | 151.40.3.220 | 255.255.255.252 | R6 | 20.26.29.2 | 1 |
| I9 | 151.40.3.224 | 255.255.255.252 | R6 | 20.26.29.2 | 1 |
| I10 | 151.40.3.228 | 255.255.255.252 | R6 | 20.26.29.2 | 1 |
| J | 20.86.15.64 | 255.255.255.192 | R6 | 20.26.29.2 | 1 |
| K | 10.31.25.144 | 255.255.255.248 | R6 | 20.26.29.2 | 1 |
| L | Directamente conectada | | | | |
| M1 | 20.86.15.128 | 255.255.255.128 | R8 | 10.31.25.157 | 1 |
| M2 | 10.31.25.192 | 255.255.255.224 | R8 | 10.31.25.157 | 1 |
| N | 10.31.25.160 | 255.255.255.252 | R8 | 10.31.25.157 | 1 |
| O | 10.31.25.164 | 255.255.255.252 | R8 | 10.31.25.157 | 1 |
| P | 10.31.25.168 | 255.255.255.252 | R8 | 10.31.25.157 | 1 |

1.3.3. R9

| Red | Dirección de Red | Máscara | Sig. Salto | Dir. Sig. Salto | Métrica |
|-----|------------------------|-----------------|------------|-----------------|---------|
| A | 201.158.15.0 | 255.255.255.128 | R2 | 151.40.3.201 | 1 |
| B | 20.86.15.0 | 255.255.255.224 | R2 | 151.40.3.201 | 1 |
| C | 10.31.25.128 | 255.255.255.240 | R2 | 151.40.3.201 | 1 |
| D | 20.64.73.0 | 255.255.255.0 | R2 | 151.40.3.201 | 1 |
| E | 10.31.25.0 | 255.255.255.128 | R17 | 151.40.3.213 | 1 |
| F | 20.86.15.32 | 255.255.255.224 | R17 | 151.40.3.213 | 1 |
| G | 10.31.25.152 | 255.255.255.252 | R17 | 151.40.3.213 | 1 |
| H | 10.31.25.156 | 255.255.255.252 | R7 | 20.26.29.1 | 1 |
| I | | | | | |
| I1 | 151.40.3.192 | 255.255.255.252 | R2 | 151.40.3.201 | 1 |
| I2 | 151.40.3.196 | 255.255.255.252 | R2 | 151.40.3.201 | 1 |
| I3 | Directamente conectada | | | | |
| I4 | 151.40.3.204 | 255.255.255.252 | R2 | 151.40.3.201 | 1 |
| I5 | 151.40.3.208 | 255.255.255.252 | R17 | 151.40.3.213 | 1 |
| I6 | Directamente conectada | | | | |
| I7 | 151.40.3.216 | 255.255.255.252 | R17 | 151.40.3.213 | 1 |
| I8 | Directamente conectada | | | | |
| I9 | 151.40.3.224 | 255.255.255.252 | R6 | 20.86.15.2 | 1 |
| I10 | Directamente conectada | | | | |
| J | 20.86.15.64 | 255.255.255.192 | R17 | 151.40.3.213 | 1 |
| K | 10.31.25.144 | 255.255.255.248 | R17 | 151.40.3.213 | 1 |
| L | Directamente conectada | | | | |
| M1 | 20.86.15.128 | 255.255.255.128 | R7 | 20.26.29.1 | 1 |
| M2 | 10.31.25.192 | 255.255.255.224 | R7 | 20.26.29.1 | 1 |
| N | 10.31.25.160 | 255.255.255.252 | R7 | 20.26.29.1 | 1 |
| O | 10.31.25.164 | 255.255.255.252 | R7 | 20.26.29.1 | 1 |
| P | 10.31.25.168 | 255.255.255.252 | R7 | 20.26.29.1 | 1 |

1.3.4. R10

| Red | Dirección de Red | Máscara | Sig. Salto | Dir. Sig. Salto | Métrica |
|-----|------------------------|-----------------|------------|-----------------|---------|
| A | 201.158.15.0 | 255.255.255.128 | R11 | 20.86.5.132 | 1 |
| B | 20.86.15.0 | 255.255.255.224 | R11 | 20.86.5.132 | 1 |
| C | 10.31.25.128 | 255.255.255.240 | R11 | 20.86.5.132 | 1 |
| D | 20.64.73.0 | 255.255.255.0 | R11 | 20.86.5.132 | 1 |
| E | 10.31.25.0 | 255.255.255.128 | R13 | 10.31.25.154 | 1 |
| F | 20.86.15.32 | 255.255.255.224 | R13 | 10.31.25.154 | 1 |
| G | Directamente conectada | | | | |
| H | 10.31.25.156 | 255.255.255.252 | R11 | 20.86.5.132 | 1 |
| I | | | | | |
| I1 | 151.40.3.192 | 255.255.255.252 | R13 | 10.31.25.154 | 1 |
| I2 | 151.40.3.196 | 255.255.255.252 | R13 | 10.31.25.154 | 1 |
| I3 | 151.40.3.200 | 255.255.255.252 | R13 | 10.31.25.154 | 1 |
| I4 | 151.40.3.204 | 255.255.255.252 | R13 | 10.31.25.154 | 1 |
| I5 | 151.40.3.208 | 255.255.255.252 | R13 | 10.31.25.154 | 1 |
| I6 | 151.40.3.212 | 255.255.255.252 | R13 | 10.31.25.154 | 1 |
| I7 | 151.40.3.216 | 255.255.255.252 | R13 | 10.31.25.154 | 1 |
| I8 | 151.40.3.220 | 255.255.255.252 | R13 | 10.31.25.154 | 1 |
| I9 | 151.40.3.224 | 255.255.255.252 | R13 | 10.31.25.154 | 1 |
| I10 | 151.40.3.228 | 255.255.255.252 | R13 | 10.31.25.154 | 1 |
| J | 20.86.15.64 | 255.255.255.192 | R13 | 10.31.25.154 | 1 |
| K | 10.31.25.144 | 255.255.255.248 | R13 | 10.31.25.154 | 1 |
| L | 20.26.29.0 | 255.255.255.0 | R11 | 20.86.5.132 | 1 |
| M1 | Directamente conectada | | | | |
| M2 | Directamente conectada | | | | |
| N | 10.31.25.160 | 255.255.255.252 | R11 | 20.86.5.132 | 1 |
| O | 10.31.25.164 | 255.255.255.252 | R11 | 20.86.5.132 | 1 |
| P | 10.31.25.168 | 255.255.255.252 | R11 | 20.86.5.132 | 1 |

1.3.5. R11

REVISAR POR REDES: A, B, C, D, E, H, J, K, L, O

| Red | Dirección de Red | Máscara | Sig. Salto | Dir. Sig. Salto | Métrica |
|-----|------------------------|-----------------|------------|-----------------|---------|
| A | 201.158.15.0 | 255.255.255.128 | R8 | 10.31.25.161 | 1 |
| B | 20.86.15.0 | 255.255.255.224 | R8 | 10.31.25.161 | 1 |
| C | 10.31.25.128 | 255.255.255.240 | R8 | 10.31.25.161 | 1 |
| D | 20.64.73.0 | 255.255.255.0 | R8 | 10.31.25.161 | 1 |
| E | 10.31.25.0 | 255.255.255.128 | R12 | 10.31.25.169 | 1 |
| F | 20.86.15.32 | 255.255.255.224 | R10 | 20.86.5.133 | 1 |
| G | 10.31.25.152 | 255.255.255.252 | R10 | 20.86.5.133 | 1 |
| H | 10.31.25.156 | 255.255.255.252 | R8 | 10.31.25.161 | 1 |
| I | | | | | |
| I1 | 151.40.3.192 | 255.255.255.252 | R10 | 20.86.5.133 | 1 |
| I2 | 151.40.3.196 | 255.255.255.252 | R10 | 20.86.5.133 | 1 |
| I3 | 151.40.3.200 | 255.255.255.252 | R10 | 20.86.5.133 | 1 |
| I4 | 151.40.3.204 | 255.255.255.252 | R10 | 20.86.5.133 | 1 |
| I5 | 151.40.3.208 | 255.255.255.252 | R10 | 20.86.5.133 | 1 |
| I6 | 151.40.3.212 | 255.255.255.252 | R10 | 20.86.5.133 | 1 |
| I7 | 151.40.3.216 | 255.255.255.252 | R10 | 20.86.5.133 | 1 |
| I8 | 151.40.3.220 | 255.255.255.252 | R10 | 20.86.5.133 | 1 |
| I9 | 151.40.3.224 | 255.255.255.252 | R10 | 20.86.5.133 | 1 |
| I10 | 151.40.3.228 | 255.255.255.252 | R10 | 20.86.5.133 | 1 |
| J | 20.86.15.64 | 255.255.255.192 | R12 | 10.31.25.169 | 1 |
| K | 10.31.25.144 | 255.255.255.248 | R12 | 10.31.25.169 | 1 |
| L | 20.26.29.0 | 255.255.255.0 | R8 | 10.31.25.161 | 1 |
| M1 | Directamente conectada | | | | |
| M2 | 10.31.25.192 | 255.255.255.224 | R10 | 20.86.5.133 | 1 |
| N | Directamente conectada | | | | |
| O | 10.31.25.164 | 255.255.255.252 | R8 | 10.31.25.161 | 1 |
| P | Directamente conectada | | | | |

1.4. Tablas de Ruteo de La Falda

Para los siguientes routers será necesario tener en cuenta que se implementará OSPF de manera interna, por lo tanto el ruteo estático necesario será para conectar con las otras zonas, siendo únicamente configurado en los routers frontera. Por lo tanto, las redes que no aparezcan en las siguientes tablas serán aquellas para las cuales se aprenderán las rutas por medio del protocolo de enrutamiento dinámico.

1.4.1. R12

| Red | Dirección de Red | Máscara | Sig. Salto | Dir. Sig. Salto | Métrica |
|-----|------------------------|-----------------|------------|-----------------|---------|
| A | 201.158.15.0 | 255.255.255.128 | R8 | 10.31.25.165 | 1 |
| B | 20.86.15.0 | 255.255.255.224 | R8 | 10.31.25.165 | 1 |
| C | 10.31.25.128 | 255.255.255.240 | R8 | 10.31.25.165 | 1 |
| D | 20.64.73.0 | 255.255.255.0 | R8 | 10.31.25.165 | 1 |
| E | Directamente conectada | | | | |
| H | 10.31.25.156 | 255.255.255.252 | R8 | 10.31.25.165 | 1 |
| L | 20.26.29.0 | 255.255.255.0 | R8 | 10.31.25.165 | 1 |
| M1 | 20.86.15.128 | 255.255.255.128 | R11 | 10.31.25.170 | 1 |
| N | 10.31.25.160 | 255.255.255.252 | R11 | 10.31.25.170 | 1 |
| O | Directamente conectada | | | | |
| P | Directamente conectada | | | | |

1.4.2. R13

| Red | Dirección de Red | Máscara | Sig. Salto | Dir. Sig. Salto | Métrica |
|-----|------------------|-----------------|------------|-----------------|---------|
| L | 20.26.29.0 | 255.255.255.0 | R10 | 10.31.25.153 | 1 |
| M1 | 20.86.15.128 | 255.255.255.128 | R10 | 10.31.25.153 | 1 |
| M2 | 10.31.25.192 | 255.255.255.224 | R10 | 10.31.25.153 | 1 |

1.4.3. R14 y R15

Al ser R14 y R15 routers internos (i.e. sin conexiones a subredes externas a la zona de La Falda), aprenderán de todas las rutas por el protocolo OSPF, sin publicar rutas estáticas.

1.4.4. R16

| Red | Dirección de Red | Máscara | Sig. Salto | Dir. Sig. Salto | Métrica |
|-----|------------------------|-----------------|------------|-----------------|---------|
| A | 201.158.15.0 | 255.255.255.128 | R2 | 151.40.3.197 | 1 |
| B | 20.86.15.0 | 255.255.255.224 | R2 | 151.40.3.197 | 1 |
| C | 10.31.25.128 | 255.255.255.240 | R2 | 151.40.3.197 | 1 |
| D | 20.64.73.0 | 255.255.255.0 | R2 | 151.40.3.197 | 1 |
| I | Directamente conectada | 255.255.255.252 | R2 | 151.40.3.197 | 1 |
| I2 | | | | | |
| I3 | | | | | |
| I4 | | | | | |
| I5 | | | | | |
| I8 | Directamente conectada | 255.255.255.252 | R9 | 151.40.3.222 | 1 |
| I9 | Directamente conectada | | | | |
| I10 | 151.40.3.228 | | | | |
| L | 20.26.29.0 | 255.255.255.0 | R6 | 151.40.3.226 | 1 |

1.4.5. R17

| Red | Dirección de Red | Máscara | Sig. Salto | Dir. Sig. Salto | Métrica |
|-----|------------------------|-----------------|------------|-----------------|---------|
| A | 201.158.15.0 | 255.255.255.128 | R2 | 151.40.3.193 | 1 |
| B | 20.86.15.0 | 255.255.255.224 | R2 | 151.40.3.193 | 1 |
| C | 10.31.25.128 | 255.255.255.240 | R2 | 151.40.3.193 | 1 |
| D | 20.64.73.0 | 255.255.255.0 | R2 | 151.40.3.193 | 1 |
| I | | | | | |
| I1 | Directamente conectada | | | | |
| I2 | 151.40.3.196 | 255.255.255.252 | R2 | 151.40.3.193 | 1 |
| I3 | 151.40.3.200 | 255.255.255.252 | R2 | 151.40.3.193 | 1 |
| I4 | 151.40.3.204 | 255.255.255.252 | R2 | 151.40.3.193 | 1 |
| I5 | Directamente conectada | | | | |
| I6 | Directamente conectada | | | | |
| I7 | Directamente conectada | | | | |
| I10 | 151.40.3.228 | 255.255.255.252 | R9 | 151.40.3.214 | 1 |
| L | 20.26.29.0 | 255.255.255.0 | R6 | 151.40.3.218 | 1 |

2. Frame Relay

Para el armado de la red Frame Relay se usaron 6 *Routers 3600* con las siguientes configuraciones de DLCI en cada uno.

2.1. FR

| Interface In | DLCI In | Interface Out | DLCI Out |
|--------------|---------|---------------|----------|
| s0/0 | 217 | Serial0/1 | 172 |
| s0/0 | 216 | Serial0/2 | 162 |
| s0/0 | 209 | Serial0/3 | 902 |
| s0/0 | 206 | Serial0/4 | 602 |
| s0/1 | 172 | Serial0/0 | 217 |
| s0/1 | 1716 | Serial0/2 | 1617 |
| s0/1 | 179 | Serial0/3 | 917 |
| s0/1 | 176 | Serial0/4 | 617 |
| s0/2 | 162 | Serial0/0 | 216 |
| s0/2 | 1617 | Serial0/1 | 1716 |
| s0/2 | 169 | Serial0/3 | 916 |
| s0/2 | 166 | Serial0/4 | 616 |
| s0/3 | 902 | Serial0/0 | 209 |
| s0/3 | 917 | Serial0/1 | 179 |
| s0/3 | 916 | Serial0/2 | 169 |
| s0/3 | 906 | Serial0/4 | 609 |
| s0/4 | 602 | Serial0/0 | 206 |
| s0/4 | 617 | Serial0/1 | 176 |
| s0/4 | 616 | Serial0/2 | 166 |
| s0/4 | 609 | Serial0/3 | 906 |