a)

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| **Numarul subretelei** | **Adresa subretelei** | ***Range*-ul adreselor de host utilizabile** | **Adresa de broadcast in subretea** |
| 0 | 192.168.16.0 | 192.168.16.1 - 192.168.16.14 | 192.168.16.15 |
| 1 | 192.168.16.16 | 192.168.16.17 - 192.168.16.30 | 192.168.16.31 |
| 2 | 192.168.16.32 | 192.168.16.33 - 192.168.16.46 | 192.168.16.47 |
| 3 | 192.168.16.48 | 192.168.16.49 - 192.168.16.62 | 192.168.16.63 |
| 4 | 192.168.16.64 | 192.168.16.65 - 192.168.16.78 | 192.168.16.79 |
| 5 | 192.168.16.80 | 192.168.16.81 - 192.168.16.94 | 192.168.16.95 |
| 6 | 192.168.16.96 | 192.168.16.97 - 192.168.16.110 | 192.168.16.111 |
| 7 | 192.168.16.112 | 192.168.16.113 - 192.168.16.126 | 192.168.16.127 |
| 8 | 192.168.16.128 | 192.168.16.129 - 192.168.16.142 | 192.168.16.143 |
| 9 | 192.168.16.144 | 192.168.16.145 - 192.168.16.158 | 192.168.16.159 |
| 10 | 192.168.16.160 | 192.168.16.161 - 192.168.16.174 | 192.168.16.175 |
| 11 | 192.168.16.176 | 192.168.16.177 - 192.168.16.190 | 192.168.16.191 |
| 12 | 192.168.16.192 | 192.168.16.193 - 192.168.16.206 | 192.168.16.207 |
| 13 | 192.168.16.208 | 192.168.16.209 - 192.168.16.222 | 192.168.16.223 |
| 14 | 192.168.16.224 | 192.168.16.225 - 192.168.16.238 | 192.168.16.239 |
| 15 | 192.168.16.280 | 192.168.16.241 - 192.168.16.254 | 192.168.16.255 |

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| **Dispozitiv** | **Interfata** | **IP adresa** | **Masca de subretea** | **Adresa implicita a routerului** |
| R1 | Gig 0/6 | 192.168.16.65 | 255.255.255.240 | N/A |
| Gig 0/7 | 192.168.16.49 | 255.255.255.240 |
| Gig 0/8 | 192.168.16.97 | 255.255.255.240 |
| Gig 0/9 | 192.168.16.113 | 255.255.255.240 |
| R2 | Gig 0/6 | 192.168.16.129 | 255.255.255.240 | N/A |
| Gig 0/7 | 192.168.16.126 | 255.255.255.240 |
| Gig 0/8 | 192.168.16.33 | 255.255.255.240 |
| Gig 0/9 | 192.168.16.145 | 255.255.255.240 |
| R3 | Gig 0/7 | 192.168.16.81 | 255.255.255.240 | N/A |
| Gig 0/8 | 192.168.16.142 | 255.255.255.240 |
| Gig 0/9 | 192.168.16.110 | 255.255.255.240 |
| R4 | Gig 0/8 | 192.168.16.146 | 255.255.255.240 | N/A |
| Gig 0/9 | 192.168.16.1 | 255.255.255.240 |
| --- | | |
| R5 | Gig 0/8 | 192.168.16.147 | 255.255.255.240 | N/A |
| Gig 0/9 | 192.168.16.17 | 255.255.255.240 |
| --- | | |
| Server1 | Fa0 | 192.168.16.3 | 255.255.255.240 | 192.168.16.1 |
| Server2 | Fa0 | 192.168.16.18 | 255.255.255.240 | 192.168.16.17 |
| PC1 | Fa0 | 192.168.16.2 | 255.255.255.240 | 192.168.16.1 |
| PC2 | Fa0 | 192.168.16.34 | 255.255.255.240 | 192.168.16.33 |
| PC3 | Fa0 | 192.168.16.35 | 255.255.255.240 | 192.168.16.33 |
| PC4 | Fa0 | 192.168.16.36 | 255.255.255.240 | 192.168.16.33 |
| PC5 | Fa0 | 192.168.16.50 | 255.255.255.240 | 192.168.16.49 |
| PC6 | Fa0 | 192.168.16.51 | 255.255.255.240 | 192.168.16.49 |
| PC7 | Fa0 | 192.168.16.52 | 255.255.255.240 | 192.168.16.49 |
| PC8 | Fa0 | 192.168.16.66 | 255.255.255.240 | 192.168.16.65 |
| PC9 | Fa0 | 192.168.16.67 | 255.255.255.240 | 192.168.16.65 |
| PC10 | Fa0 | 192.168.16.82 | 255.255.255.240 | 192.168.16.81 |
| PC11 | Fa0 | 192.168.16.83 | 255.255.255.240 | 192.168.16.81 |

b)

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| **Numarul subretelei** | **Adresa subretelei** | ***Range*-ul adreselor de host utilizabile** | **Adresa de broadcast in subretea** |
| 0 | 172.16.0.0 | 172.16.0.1 - 172.16.0.14 | 172.16.0.15 |
| 1 | 172.16.0.16 | 172.16.0.17 - 172.16.0.30 | 172.16.0.31 |
| 2 | 172.16.0.32 | 172.16.0.33 - 172.16.0.46 | 172.16.0.47 |
| 3 | 172.16.0.48 | 172.16.0.49 - 172.16.0.62 | 172.16.0.63 |
| 4 | 172.16.0.64 | 172.16.0.65 - 172.16.0.78 | 172.16.0.79 |
| 5 | 172.16.0.80 | 172.16.0.81 - 172.16.0.94 | 172.16.0.95 |
| 6 | 172.16.0.96 | 172.16.0.97 - 172.16.0.110 | 172.16.0.111 |
| 7 | 172.16.0.112 | 172.16.0.113 - 172.16.0.126 | 172.16.0.127 |
| 8 | 172.16.0.128 | 172.16.0.129 - 172.16.0.142 | 172.16.0.143 |
| 9 | 172.16.0.144 | 172.16.0.145 - 172.16.0.158 | 172.16.0.159 |
| 10 | 172.16.0.160 | 172.16.0.161 - 172.16.0.174 | 172.16.0.175 |
| 11 | 172.16.0.176 | 172.16.0.177 - 172.16.0.190 | 172.16.0.191 |
| 12 | 172.16.0.192 | 172.16.0.193 - 172.16.0.206 | 172.16.0.207 |
| 13 | 172.16.0.208 | 172.16.0.209 - 172.16.0.222 | 172.16.0.223 |
| 14 | 172.16.0.224 | 172.16.0.225 - 172.16.0.238 | 172.16.0.239 |
| 15 | 172.16.0.240 | 172.16.0.241 - 172.16.0.254 | 172.16.0.255 |

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| **Dispozitiv** | **Interfata** | **IP adresa** | **Masca de subretea** | **Adresa implicita a routerului** |
| R1 | Gig 0/6 | 172.16.0.65 | 255.255.255.240 | N/A |
| Gig 0/7 | 172.16.0.49 | 255.255.255.240 |
| Gig 0/8 | 172.16.0.97 | 255.255.255.240 |
| Gig 0/9 | 172.16.0.113 | 255.255.255.240 |
| R2 | Gig 0/6 | 172.16.0.129 | 255.255.255.240 | N/A |
| Gig 0/7 | 172.16.0.126 | 255.255.255.240 |
| Gig 0/8 | 172.16.0.33 | 255.255.255.240 |
| Gig 0/9 | 172.16.0.145 | 255.255.255.240 |
| R3 | Gig 0/7 | 172.16.0.81 | 255.255.255.240 | N/A |
| Gig 0/8 | 172.16.0.142 | 255.255.255.240 |
| Gig 0/9 | 172.16.0.110 | 255.255.255.240 |
| R4 | Gig 0/8 | 172.16.0.146 | 255.255.255.240 | N/A |
| Gig 0/9 | 172.16.0.1 | 255.255.255.240 |
| --- | | |
| R5 | Gig 0/8 | 172.16.0.147 | 255.255.255.240 | N/A |
| Gig 0/9 | 172.16.0.17 | 255.255.255.240 |
| --- | | |
| Server1 | Fa0 | 172.16.0.2 | 255.255.255.240 | 172.16.0.1 |
| Server2 | Fa0 | 172.16.0.18 | 255.255.255.240 | 172.16.0.17 |
| PC1 | Fa0 | 172.16.0.3 | 255.255.255.240 | 172.16.0.1 |
| PC2 | Fa0 | 172.16.0.34 | 255.255.255.240 | 172.16.0.33 |
| PC3 | Fa0 | 172.16.0.35 | 255.255.255.240 | 172.16.0.33 |
| PC4 | Fa0 | 172.16.0.36 | 255.255.255.240 | 172.16.0.33 |
| PC5 | Fa0 | 172.16.0.50 | 255.255.255.240 | 172.16.0.49 |
| PC6 | Fa0 | 172.16.0.51 | 255.255.255.240 | 172.16.0.49 |
| PC7 | Fa0 | 172.16.0.52 | 255.255.255.240 | 172.16.0.49 |
| PC8 | Fa0 | 172.16.0.66 | 255.255.255.240 | 172.16.0.65 |
| PC9 | Fa0 | 172.16.0.67 | 255.255.255.240 | 172.16.0.65 |
| PC10 | Fa0 | 172.16.0.82 | 255.255.255.240 | 172.16.0.81 |
| PC11 | Fa0 | 172.16.0.83 | 255.255.255.240 | 172.16.0.81 |

C)

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| **Numarul subretelei** | **Adresa subretelei** | ***Range*-ul adreselor de host utilizabile** | | **Adresa de broadcast in subretea** |
| **FIRST** | **LAST** |
| 0 | 10.10.0.0 | 10.10.0.1 | 10.10.0.14 | 10.10.0.15 |
| 1 | 10.10.0.16 | 10.10.0.17 | 10.10.0.30 | 10.10.0.31 |
| 2 | 10.10.0.32 | 10.10.0.33 | 10.10.0.46 | 10.10.0.47 |
| 3 | 10.10.0.48 | 10.10.0.49 | 10.10.0.62 | 10.10.0.63 |
| 4 | 10.10.0.64 | 10.10.0.65 | 10.10.0.78 | 10.10.0.79 |
| 5 | 10.10.0.80 | 10.10.0.81 | 10.10.0.94 | 10.10.0.95 |
| 6 | 10.10.0.96 | 10.10.0.97 | 10.10.0.110 | 10.10.0.111 |
| 7 | 10.10.0.112 | 10.10.0.113 | 10.10.0.126 | 10.10.0.127 |
| 8 | 10.10.0.128 | 10.10.0.129 | 10.10.0.142 | 10.10.0.143 |
| 9 | 10.10.0.144 | 10.10.0.145 | 10.10.0.158 | 10.10.0.159 |
| 10 | 10.10.0.160 | 10.10.0.161 | 10.10.0.174 | 10.10.0.175 |
| 11 | 10.10.0.176 | 10.10.0.177 | 10.10.0.190 | 10.10.0.191 |
| 12 | 10.10.0.192 | 10.10.0.193 | 10.10.0.206 | 10.10.0.207 |
| 13 | 10.10.0.208 | 10.10.0.209 | 10.10.0.222 | 10.10.0.223 |
| 14 | 10.10.0.224 | 10.10.0.225 | 10.10.0.238 | 10.10.0.239 |
| 15 | 10.10.0.240 | 10.10.0.241 | 10.10.0.254 | 10.10.0.255 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Dispozitiv** | **Interfata** | **IP adresa** | **Masca de subretea** | **Adresa implicita a routerului** |
| R1 | Gig 0/6 | 10.10.0.65 | 255.255.255.240 | N/A |
| Gig 0/7 | 10.10.0.49 | 255.255.255.240 |
| Gig 0/8 | 10.10.0.97 | 255.255.255.240 |
| Gig 0/9 | 10.10.0.113 | 255.255.255.240 |
| R2 | Gig 0/6 | 10.10.0.129 | 255.255.255.240 | N/A |
| Gig 0/7 | 10.10.0.126 | 255.255.255.240 |
| Gig 0/8 | 10.10.0.33 | 255.255.255.240 |
| Gig 0/9 | 10.10.0.145 | 255.255.255.240 |
| R3 | Gig 0/7 | 10.10.0.81 | 255.255.255.240 | N/A |
| Gig 0/8 | 10.10.0.142 | 255.255.255.240 |
| Gig 0/9 | 10.10.0.110 | 255.255.255.240 |
| R4 | Gig 0/8 | 10.10.0.146 | 255.255.255.240 | N/A |
| Gig 0/9 | 10.10.0.1 | 255.255.255.240 |
| --- | | |
| R5 | Gig 0/8 | 10.10.0.147 | 255.255.255.240 | N/A |
| Gig 0/9 | 10.10.0.17 | 255.255.255.240 |
| --- | | |
| Server1 | Fa0 | 10.10.0.2 | 255.255.255.240 | 10.10.0.1 |
| Server2 | Fa0 | 10.10.0.18 | 255.255.255.240 | 10.10.0.17 |
| PC1 | Fa0 | 10.10.0.3 | 255.255.255.240 | 10.10.0.1 |
| PC2 | Fa0 | 10.10.0.34 | 255.255.255.240 | 10.10.0.33 |
| PC3 | Fa0 | 10.10.0.35 | 255.255.255.240 | 10.10.0.33 |
| PC4 | Fa0 | 10.10.0.36 | 255.255.255.240 | 10.10.0.33 |
| PC5 | Fa0 | 10.10.0.50 | 255.255.255.240 | 10.10.0.49 |
| PC6 | Fa0 | 10.10.0.51 | 255.255.255.240 | 10.10.0.49 |
| PC7 | Fa0 | 10.10.0.52 | 255.255.255.240 | 10.10.0.49 |
| PC8 | Fa0 | 10.10.0.66 | 255.255.255.240 | 10.10.0.65 |
| PC9 | Fa0 | 10.10.0.67 | 255.255.255.240 | 10.10.0.65 |
| PC10 | Fa0 | 10.10.0.82 | 255.255.255.240 | 10.10.0.81 |
| PC11 | Fa0 | 10.10.0.83 | 255.255.255.240 | 10.10.0.81 |