Carlos García Segura
GIIADE

EJERCICIO 1

RED1 -> IP 14 PCs + IP 1 router + IP Broadcast + IP Red = 17 IPs -> $2^5 = 32 > 17$ -> Mascara = 27

RED1 192.168.1.192/27 Desde la ip 192.168.1.192 hasta ip 192.168.1.223

RED2 -> IP 8 PCs + IP 1 router + IP Broadcast + IP Red = 11 Ips -> $2^4 = 16 > 11$ -> Mascara = 28

RED2 192.168.1.224/28 Desde la ip 192.168.1.224 hasta ip 192.168.1.239

RED3 -> IP 30 PCs + IP 1 router + IP Broadcast + IP Red = 33 Ips -> $2^6 = 64 > 33$ -> Mascara = 26

RED1 192.168.1.128/26 Desde la ip 192.168.1.128 hasta ip 192.168.1.191

RED4 -> IP 100 PCs + IP 1 router + IP Broadcast + IP Red = 103 Ips -> $2^7 = 128 > 103$ -> M = 25

RED4 192.168.1.0/25 Desde la ip 192.168.1.0 hasta ip 192.168.1.127

SUBRED R1-R2 -> IP 0 PCs + IP 2 router + IP Broadcast + IP Red = 4 Ips -> $2^2 = 4 = 4$ -> M = 30

SUBRED R1-R2 192.168.1.240 RED4 192.168.1.240 Desde la ip 192.168.1.240 hasta ip 192.168.1.243

SUBRED R1-R3 -> IP 0 PCs + IP 2 router + IP Broadcast + IP Red = 4 Ips -> $2^2 = 4 = 4$ -> M = 30

SUBRED R1-R3 192.168.1.244/30 Desde la ip 192.168.1.244 hasta ip 192.168.1.247

SUBRED R2-R4 -> IP 0 PCs + IP 2 router + IP Broadcast + IP Red = 4 Ips -> $2^2 = 4 = 4$ -> M = 30

SUBRED R2-R4 192.168.1.248/30 Desde la ip 192.168.1.248 hasta ip 192.168.1.251

SUBRED R3-R4 -> IP 0 PCs + IP 2 router + IP Broadcast + IP Red = 4 Ips -> $2^2 = 4 = 4$ -> M = 30

SUBRED R3-R4 192.168.1.252/30 Desde la ip 192.168.1.252 hasta ip 192.168.1.255

32+16+64+128+4+4+4+4 = 256 por lo que podemos asignar las Ips necesarias

R1-RED1 192.168.1.192/27

R1-SUBRED R1-R2 192.168.1.241/30

R1-SUBRED R1-R3 192.168.1.245/30

PC1-1 192.168.1.193/27

PC1-2 192.168.1.194/27

R2-RED2 192.168.1.224/28

R2-SUBRED R1-R2 192.168.1.242/30

R2-SUBRED R2-R4 192.168.1.249/30

PC2-1 192.168.1.225

PC2-2 192.168.1.226

R3-RED3 192.168.1.128/26

R3-SUBRED R1-R3 192.168.1.246/30

R3-SUBRED R3-R4 192.168.1.253/30

PC3-1 192.168.1.129/26

PC3-2 192.168.1.130/26

R4-RED4 192.168.1.0/25

R4-SUBRED R3-R4 192.168.1.254/30

R4-SUBREDR2-R4 192.168.1.250/30

PC4-1 192.168.1.1/25

PC4-2 192.168.1.2/25

R1

Red Destino	Mascara	Next-hop
192.168.1.192 (RED1)	27	*
192.168.1.224 (RED2)	28	192.168.1.242
192.168.1.128 (RED3)	26	192.168.1.246
192.168.1.0 (RED4)	25	192.168.1.242
192.168.1.240 (SUBRED_R1-R2)	30	*
192.168.1.244 (SUBRED_R1-R3)	30	*
192.168.1.248 (SUBRED_R2-R4)	30	192.168.1.242
192.168.1.252 (SUBRED_R3-R4)	30	192.168.1.246

Agrupación R1.

Red Destino	Mascara	Next-hop
192.168.1.0	24	192.168.1.242
192.168.1.128	25	192.168.1.246

Entradas por RIP que prevalecen

Red Destino	Mascara	Next-hop
192.168.1.224 (RED2)	28	192.168.1.242
192.168.1.128 (RED3)	26	192.168.1.246

R2

Red Destino	Mascara	Next-hop
192.168.1.192 (RED1)	27	192.168.1.241
192.168.1.224 (RED2)	28	*
192.168.1.128 (RED3)	26	192.168.1.241
192.168.1.0 (RED4)	25	192.168.1.250
192.168.1.240 (SUBRED_R1-R2)	30	*
192.168.1.244 (SUBRED_R1-R3)	30	192.168.1.241
192.168.1.248 (SUBRED_R2-R4)	30	*
192.168.1.252 (SUBRED_R3-R4)	30	192.168.1.250

Agrupación R1.

Red Destino	Mascara	Next-hop
192.168.1.128	25	192.168.1.241
192.168.1.0	24	192.168.1.250

Entradas por RIP que prevalecen

Red Destino	Mascara	Next-hop
192.168.1.128 (RED3)	26	192.168.1.241
192.168.1.0 (RED4)	25	192.168.1.250

R3

Red Destino	Mascara	Next-hop
192.168.1.192 (RED1)	27	192.168.1.245
192.168.1.224 (RED2)	28	192.168.1.245
192.168.1.128 (RED3)	26	*
192.168.1.0 (RED4)	25	192.168.1.254
192.168.1.240 (SUBRED_R1-R2)	30	192.168.1.245
192.168.1.244 (SUBRED_R1-R3)	30	*
192.168.1.248 (SUBRED_R2-R4)	30	192.168.1.254
192.168.1.252 (SUBRED_R3-R4)	30	*

Agrupación R1.

Red Destino	Mascara	Next-hop
192.168.1.192	26	192.168.1.245
192.168.1.0	24	192.168.1.254

Entradas por RIP que prevalecen

Red Destino	Mascara	Next-hop
192.168.1.0 (RED4)	25	192.168.1.254
192.168.1.240 (SUBRED_R1-R2)	30	192.168.1.245

R4

Red Destino	Mascara	Next-hop
192.168.1.192 (RED1)	27	192.168.1.249
192.168.1.224 (RED2)	28	192.168.1.249
192.168.1.128 (RED3)	26	192.168.1.253
192.168.1.0 (RED4)	25	*
192.168.1.240 (SUBRED_R1-R2)	30	192.168.1.249
192.168.1.244 (SUBRED_R1-R3)	30	192.168.1.253
192.168.1.248 (SUBRED_R2-R4)	30	*
192.168.1.252 (SUBRED_R3-R4)	30	*

Agrupación R1.

Red Destino	Mascara	Next-hop
192.168.1.192	26	192.168.1.249
192.168.1.128	25	192.168.1.253

Entradas por RIP que prevalecen

Red Destino	Mascara	Next-hop
192.168.1.192 (RED1)	27	192.168.1.249
192.168.1.224 (RED2)	28	192.168.1.249

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EJERCICIO 2

RA-privada 192.168.1.1

RA-publica 11.0.0.1

PCA-1 192.168.101

PCA-2 192.168.102

RB-privada 192.168.2.1

RB-publica 11.0.0.2

PCB-1 192.168.2.101

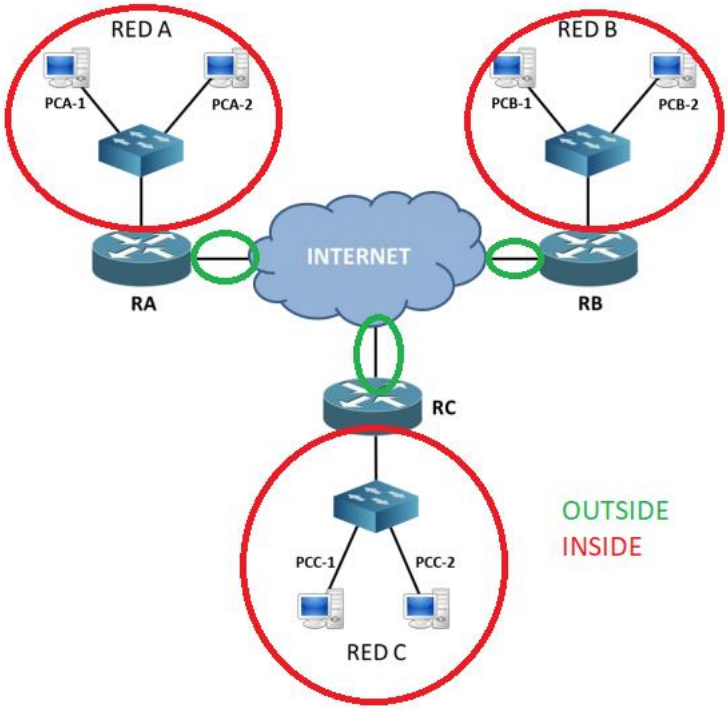
PCB-2 192.168.2.102

RC-privada 192.168.3.1

RC-publica 11.0.0.3

PCC-1 192.168.3.101

PCC-2 192.168.3.102



Inside Local	Inside Global	Outside Global	Outside Local
192.168.3.101:80	11.0.0.1:80	11.0.0.2:80	192.168.2.102:80
192.168.3.101:5555	11.0.0.1:5555	11.0.0.1:5555	192.168.1.101:5555
192.168.3.102:22	11.0.0.1:22		
192.168.3.102:23	11.0.0.1:23		