**CONFIGURACIÓN DEL PAR-4.13**

*El direccionamiento IP de cada área se obtendrá a partir de los siguientes prefijos:ç*

**• Direccionamiento para el área A: 2001:db8:XXXX:a000::/52**

**• Direccionamiento para el área B: 2001:db8:XXXX:b000::/52**

**• Direccionamiento para el área C: 2001:db8:XXXX:c000::/52**

**• Direccionamiento para el backbone: 2001:db8:XXXX:f000::/52**

*En cada una de dichas áreas, usa el siguiente plan de direccionamiento:*

**• Reserva un /56 para las redes de distribución y direcciones Loopback.**

**◦ Usa el primer /112 para Loopbacks**

**◦ Usa /126 en redes PtP**

**◦ Utiliza redes /112 para redes de distribución de otro tipo**

**• Utiliza un /56 para el PoP (RA, RB, RC y RD), distribuyendo el prefijo usando DHCPv6. Úsalos en las redes de acceso**

SUBNETTING;

**Direccionamiento Área A: 2001:db8:2121:a000::/52**

• 2001:db8:2121:a000::/56 para redes de distribución y Loopbacks

◦ 2001:db8:2121:a000::/112 para Loopbacks

▪ 2001:db8:2121:a000::a/128 para RA

▪ 2001:db8:2121:a000::a1/128 para RA1

▪2001:db8:2121:a000::a2/128 para RA2

▪ 2001:db8:2121:a000::a3/128 para RA3

▪ 2001:db8:2121:a000::a4/128 para RA4

◦ 2001:db8:2121:a000::0/112 para red distribución SwA

• 2001:db8:2121:a100::/56 para el Pool en RA

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Direccionamiento Área B: 2001:db8:2121:b000::/52**

• 2001:db8:2121:a000::/56 para redes de distribución y Loopbacks

◦ 2001:db8:2121:a000::/112 para Loopbacks

▪ 2001:db8:2121:b000::b/128 para RB

▪ 2001:db8:2121:b000::b1/128 para RB1

▪2001:db8:2121:b000::b2/128 para RB2

▪ 2001:db8:2121:b000::b3/128 para RB3

▪ 2001:db8:2121:b000::b4/128 para RB4

◦ 2001:db8:2121:b000::0/112 para red distribución SwB

• 2001:db8:2121:b100::/56 para el Pool en RB

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Direccionamiento Área C: 2001:db8:2121:c000::/52**

• 2001:db8:2121:b000::/56 para redes de distribución y Loopbacks

◦ 2001:db8:2121:c000::/112 para Loopbacks

▪ 2001:db8:2121:c000::c/128 para RC

▪ 2001:db8:2121:c000::c1/128 para RC1

▪2001:db8:2121:c000::c2/128 para RC2

▪ 2001:db8:2121:c000::c3/128 para RC3

▪ 2001:db8:2121:c000::c4/128 para RC4

◦ 2001:db8:2121:c000::0/112 para red distribución SwC

• 2001:db8:2121:c100::/56 para el Pool en RC

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**CONFIGURACIÓN DE RA. Border-Área:**

system/identity/set name=RA

interface/bridge/add name=loopback

ip/address/add address=10.255.255.1 interface=loopback

ipv6/address/add address=2001:a015::a/128 interface=loopback

routing/id/add name=id\_ospf select-dynamic-id=only-loopback

routing/ospf/instance add version=3 name=ospf3 router-id=id\_ospf

routing/ospf/area/add instance=ospf3 name=backbone

routing/ospf/area/add instance=ospf3 name=A area-id=0.0.0.1 type=stub no-summaries default-cost=1

routing/ospf/area/range add area=A prefix=2001:a015::/48

routing/ospf/interface-template/add area=A interface=loopback passive

routing/ospf/interface-template/add area=A interface=ether2 type=ptp

routing/ospf/interface-template/add area=backbone interface=ether1 type=ptp

***Ahora, configuramos las direcciones IPv6, el Pool y el servidor DHCPv3:***

ipv6/address/add eui-64=no advertise=no interface=ether1 address=2001:a015::1/126

ipv6/address/add eui-64=no advertise=no interface=ether2 address=2001:a015::6/112

ipv6/pool/add name=pool-ra prefix=2001:a115::/36 prefix-length=64

ipv6/dhcp-server/add name=dhcp-e2 interface=ether2 address-pool=pool-ra

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**CONFIGURACIÓN DE RA1. Intra-Área:**

system/identity/set name=RA2

interface/bridge/add name=loopback

ip/address/add address=10.255.255.2 interface=loopback

ipv6/address/add address=2001:a015::a2/128 interface=loopback

routing/id/add name=id\_ospf select-dynamic-id=only-loopback

routing/ospf/instance add version=3 name=ospf3 router-id=id\_ospf

routing/ospf/area/add instance=ospf3 name=A area-id=0.0.0.1 type=stub

routing/ospf/interface-template/add area=A interface=loopback passive

routing/ospf/interface-template/add area=A interface=ether1

routing/ospf/interface-template/add area=A interface=ether3 type=ptp

***Ahora, configuramos las direcciones IPv6, cliente y servidor DHCPv3:***

ipv6/address/add eui-64=no advertise=no interface=ether1 address=2001:a015::2/112

ipv6/dhcp-client/add interface=ether1 pool-name=pool-ra1 pool-prefix-length=64 request=prefix add-default-route=yes

ipv6/address/add eui-64=yes advertise=yes interface=ether2 from-pool=pool-ra1

ipv6/nd/set 0 ra-interval=10-30

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**CONFIGURACIÓN DE RA2. Intra-Área:**

system/identity/set name=RA2

interface/bridge/add name=loopback

ip/address/add address=10.255.255.12 interface=loopback

ipv6/address/add address=2001:a015::a2/128 interface=loopback

routing/id/add name=id\_ospf select-dynamic-id=only-loopback

routing/ospf/instance add version=3 name=ospf3 router-id=id\_ospf

routing/ospf/area/add instance=ospf3 name=A area-id=0.0.0.1 type=stub

routing/ospf/interface-template/add area=A interface=loopback passive

routing/ospf/interface-template/add area=A interface=ether1

routing/ospf/interface-template/add area=A interface=ether2 passive

***Ahora, configuramos las direcciones IPv6, cliente y servidor DHCPv3:***

ipv6/address/add eui-64=no advertise=no interface=ether1 address=2001:a015::2/112

ipv6/dhcp-client/add interface=ether1 pool-name=pool-ra2 pool-prefix-length=64 request=prefix add-default-route=yes

ipv6/address/add eui-64=yes advertise=yes interface=ether2 from-pool=pool-ra2

ipv6/nd/set 0 ra-interval=10-30

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**CONFIGURACIÓN DE RA3. Intra-Área:**

system/identity/set name=RA3

interface/bridge/add name=loopback

ip/address/add address=10.255.255.13 interface=loopback

ipv6/address/add address=2001:a015::a3/128 interface=loopback

routing/id/add name=id\_ospf select-dynamic-id=only-loopback

routing/ospf/instance add version=3 name=ospf3 router-id=id\_ospf

routing/ospf/area/add instance=ospf3 name=A area-id=0.0.0.1 type=stub

routing/ospf/interface-template/add area=A interface=loopback passive

routing/ospf/interface-template/add area=A interface=ether1 type=ptp

routing/ospf/interface-template/add area=A interface=ether2 passive

***Ahora, configuramos las direcciones IPv6, cliente y servidor DHCPv3:***

ipv6/address/add eui-64=no advertise=no interface=ether1 address=2001:a000::5/112

ipv6/dhcp-client/add interface=ether1 pool-name=pool-ra3 pool-prefix-length=64 request=prefix add-default-route=yes

ipv6/address/add eui-64=yes advertise=yes interface=ether2 from-pool=pool-ra3

ipv6/nd/set 0 ra-interval=10-30

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**CONFIGURACIÓN DE RA4. Intra-Área:**

system/identity/set name=RA4

interface/bridge/add name=loopback

ip/address/add address=10.255.255.14 interface=loopback

ipv6/address/add address=2001:db8:2121:a000::a4/128 interface=loopback

routing/id/add name=id\_ospf select-dynamic-id=only-loopback

routing/ospf/instance add version=3 name=ospf3 router-id=id\_ospf

routing/ospf/area/add instance=ospf3 name=A area-id=0.0.0.1 type=stub

routing/ospf/interface-template/add area=A interface=loopback passive

routing/ospf/interface-template/add area=A interface=ether1

routing/ospf/interface-template/add area=A interface=ether2 passive

***Ahora, configuramos las direcciones IPv6, cliente y servidor DHCPv3:***

ipv6/address/add eui-64=no advertise=no interface=ether1 address=2001:db8:2121:a000::4/112

ipv6/dhcp-client/add interface=ether1 pool-name=pool-ra4 pool-prefix-length=64 request=prefix add-default-route=yes

ipv6/address/add eui-64=yes advertise=yes interface=ether2 from-pool=pool-ra4

ipv6/nd/set 0 ra-interval=10-30

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**CONFIGURACIÓN DE RA5. Intre-Área:**

system/identity/set name=RA5

interface/bridge/add name=loopback

ip/address/add address=10.255.255.15 interface=loopback

ipv6/address/add address=2001:db8:2121:a000::a5/128 interface=loopback

routing/id/add name=id\_ospf select-dynamic-id=only-loopback

routing/ospf/instance add version=3 name=ospf3 router-id=id\_ospf

routing/ospf/area/add instance=ospf3 name=A area-id=0.0.0.1 type=stub

routing/ospf/interface-template/add area=A interface=loopback passive

routing/ospf/interface-template/add area=A interface=ether1

routing/ospf/interface-template/add area=A interface=ether2 passive

***Ahora, configuramos las direcciones IPv6, cliente y servidor DHCPv3:***

ipv6/address/add eui-64=no advertise=no interface=ether1 address=2001:db8:2121:a000::5/112

ipv6/dhcp-client/add interface=ether1 pool-name=pool-ra5 pool-prefix-length=64 request=prefix add-default-route=yes

ipv6/address/add eui-64=yes advertise=yes interface=ether2 from-pool=pool-ra5

ipv6/nd/set 0 ra-interval=10-30

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**CONFIGURACIÓN DE RB. Border-Área:**

system/identity/set name=RA0

interface/bridge/add name=loopback

ip/address/add address=10.255.255.3 interface=loopback

ipv6/address/add address=2001:a015::a3/128 interface=loopback

routing/id/add name=id\_ospf select-dynamic-id=only-loopback

routing/ospf/instance add version=3 name=ospf3 router-id=id\_ospf

routing/ospf/area/add instance=ospf3 name=backbone

routing/ospf/area/add instance=ospf3 name=A area-id=0.0.0.1 type=stub no-summaries default-cost=1

routing/ospf/area/range add area=B prefix=2001:b015::/48

routing/ospf/interface-template/add area=A interface=loopback passive

routing/ospf/interface-template/add area=A interface=ether2 type=ptp

routing/ospf/interface-template/add area=B interface=ether3 type=ptp

routing/ospf/interface-template/add area=B interface=ether4 type=ptp

routing/ospf/interface-template/add area=backbone interface=ether1 type=ptp

***Ahora, configuramos las direcciones IPv6, cliente y servidor DHCPv3:***

ipv6/address/add eui-64=no advertise=no interface=ether1 address=2001:a015::1/126

ipv6/address/add eui-64=no advertise=no interface=ether2 address=2001:a015::6/112

ipv6/pool/add name=pool-rb prefix=2001:a115::/36 prefix-length=64

ipv6/dhcp-server/add name=dhcp-e2 interface=ether2 address-pool=pool-rb

ipv6/dhcp-server/add name=dhcp-e3 interface=ether3 address-pool=pool-rb

ipv6/dhcp-server/add name=dhcp-e4 interface=ether4 address-pool=pool-rb

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**CONFIGURACIÓN DE RB1. Intra-Área:**

system/identity/set name=RB1

interface/bridge/add name=loopback

ip/address/add address=10.255.255.21 interface=loopback

ipv6/address/add address=2001:b015::b1/128 interface=loopback

routing/id/add name=id\_ospf select-dynamic-id=only-loopback

routing/ospf/instance add version=3 name=ospf3 router-id=id\_ospf

routing/ospf/area/add instance=ospf3 name=B area-id=0.0.0.2 type=stub

routing/ospf/interface-template/add area=B interface=loopback passive

routing/ospf/interface-template/add area=B interface=ether1 type=ptp

routing/ospf/interface-template/add area=B interface=ether2

***Ahora, configuramos las direcciones IPv6, cliente y servidor DHCPv3:***

ipv6/address/add eui-64=no advertise=no interface=ether1 address=2001:b015::b11:2/112

ipv6/dhcp-client/add interface=ether1 pool-name=pool-rb1 pool-prefix-length=64 request=prefix add-default-route=yes

ipv6/address/add eui-64=no advertise=no interface=ether2 from-pool=pool-rb1

ipv6/nd/set 0 ra-interval=10-30

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**CONFIGURACIÓN DE RB2. Intra-Área:**

system/identity/set name=RB3

interface/bridge/add name=loopback

ip/address/add address=10.255.255.23 interface=loopback

ipv6/address/add address=2001:b015::b3/128 interface=loopback

routing/id/add name=id\_ospf select-dynamic-id=only-loopback

routing/ospf/instance add version=3 name=ospf3 router-id=id\_ospf

routing/ospf/area/add instance=ospf3 name=B area-id=0.0.0.2 type=stub

routing/ospf/interface-template/add area=B interface=loopback passive

routing/ospf/interface-template/add area=B interface=ether1 type=ptp

routing/ospf/interface-template/add area=B interface=ether2 passive

***Ahora, configuramos las direcciones IPv6, cliente y servidor DHCPv3:***

ipv6/address/add eui-64=no advertise=no interface=ether1 address=2001:b015::b13:2/112

ipv6/dhcp-client/add interface=ether1 pool-name=pool-rb2 pool-prefix-length=64 request=prefix add-default-route=yes

ipv6/address/add eui-64=yes advertise=yes interface=ether2 from-pool=pool-rb

ipv6/nd/set 0 ra-interval=10-30

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**CONFIGURACIÓN DE RB3. Intra-Área:**

system/identity/set name=RB5

interface/bridge/add name=loopback

ip/address/add address=10.255.255.25 interface=loopback

ipv6/address/add address=2001:b015::b5/128 interface=loopback

routing/id/add name=id\_ospf select-dynamic-id=only-loopback

routing/ospf/instance add version=3 name=ospf3 router-id=id\_ospf

routing/ospf/area/add instance=ospf3 name=B area-id=0.0.0.2 type=stub

routing/ospf/interface-template/add area=B interface=loopback passive

routing/ospf/interface-template/add area=B interface=ether1

routing/ospf/interface-template/add area=B interface=ether2 passive

***Ahora, configuramos las direcciones IPv6, cliente y servidor DHCPv3:***

ipv6/address/add eui-64=no advertise=no interface=ether1 address=2001:b015::b15:2/112

ipv6/dhcp-client/add interface=ether1 pool-name=pool-rb5 pool-prefix-length=64 request=prefix add-default-route=yes

ipv6/address/add eui-64=yes advertise=yes interface=ether2 from-pool=pool-rb5

ipv6/nd/set 0 ra-interval=10-30

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**CONFIGURACIÓN DE RC. Border-Área:**

system/identity/set name=RC

interface/bridge/add name=loopback

ip/address/add address=10.255.255.3 interface=loopback

ipv6/address/add address=2001:db8:2121:c000::c/128 interface=loopback

routing/id/add name=id\_ospf select-dynamic-id=only-loopback

routing/ospf/instance/add name=ospf3 router-id=id\_ospf version=3

routing/ospf/area/add instance=ospf3 name=backbone

routing/ospf/area/add instance=ospf3 name=C area-id=0.0.0.3 type=stub default-cost=1 no-summaries

routing/ospf/interface-template/add area=backbone interfaces=ether1 type=ptp

routing/ospf/interface-template/add area=C interfaces=ether2 passive

routing/ospf/interface-template/add area=C interfaces=ether3 passive

routing/ospf/interface-template/add area=C interfaces=loopback passive

routing/ospf/area/range/add area=C prefix=2001:db8:2121:c000::/52

***Ahora, configuramos las direcciones IPv6, el Pool y el servidor DHCPv3:***

ipv6/pool/add name=mi-pool prefix=2001:db8:2121:c100::/56 prefix-length=64

ipv6/address/add interface=ether2 advertise=yes eui-64=yes from-pool=mi-pool

ipv6/address/add interface=ether3 advertise=yes eui-64=yes from-pool=mi-pool

ipv6/nd/set 0 ra-interval=10-30

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**CONFIGURACIÓN DE RZ:**

system/identity/set name=RF

interface/bridge/add name=loopback

ip/address/add address=10.255.255.255 interface=loopback

ipv6/address/add address=2001:f015::f/128 interface=loopback

routing/id/add name=id\_ospf select-dynamic-id=only-loopback

routing/ospf/instance/add name=ospf3 version=3 router-id=id\_ospf

routing/ospf/area/add instance=ospf3 name=backbone

routing/ospf/interface-template/add area=backbone interfaces=ether1 type=ptp

routing/ospf/interface-template/add area=backbone interfaces=ether2 type=ptp

routing/ospf/interface-template/add area=backbone interfaces=ether3 type=ptp

routing/ospf/interface-template/add area=backbone interfaces=loopback passive

