

En la parte 1 se nos pide configurar un servidor DHCPv6 sin estado y hacer que funcione correctamente la topología dada, para ello hemos hecho lo siguiente:

Le hemos asignado una dirección ipv6 y su gateway.

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address: 2001:1111:2222:3333:4444::1 / 64

Link Local Address: FE80::290:21FF:FE49:4E0C

Default Gateway: 2001:1111:2222:3333:4444::2

DNS Server: 2001:1111:2222:3333:4444::1

Además hemos activado el servicio DHCPv6, creado una pull y configurado de esta forma.  
DNS-Server : 2001:1111:2222:3333:4444::1

Server0

Physical Config **Services** Desktop Programming Attributes

**SERVICES**

- HTTP
- DHCP
- DHCPv6**
- TFTP
- DNS
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

DHCPv6

Interface: FastEthernet0 Service: ☒ On ☐ Off

DHCPv6 Pool: STATELESS\_POOL

DHCPv6 Pool

Pool List: STATELESS\_POC Create Pool Remove Pool

DNS Server: 01:1111:2222:3333:4444::1 Domain Name: example.com

IPv6 Address Prefix

Prefix	Prefix Length	Valid Lifetime	Preferred Lifetime
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Create Edit Remove

IPv6 Prefix-Delegation

Prefix	DUID	Local Pool	Valid Lifetime	Preferred Lifetime
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Create Edit Remove

IPv6 Local Pool

Pool Name	Prefix	Prefix Length
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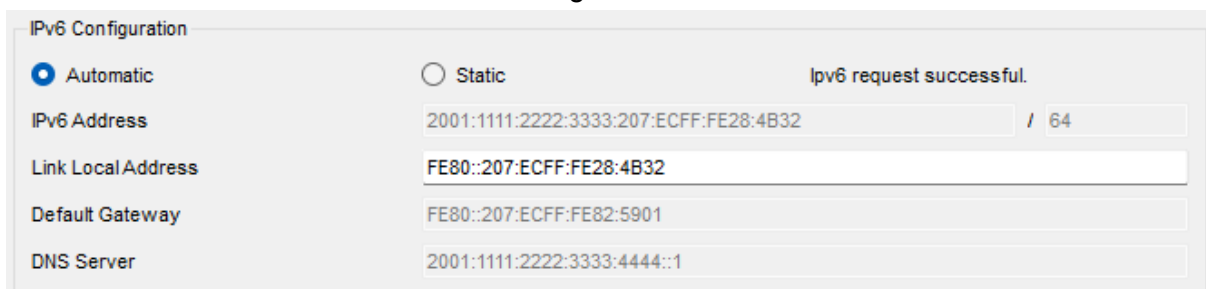
Create Edit Remove

☐ Top

En el router hemos hecho lo siguiente:

```
Router#conf t
Router(config)#ipv6 unicast-routing
Router(config)#interface g0/0
Router(config-if)#ipv6 address 2001:1111:2222:3333:4444::2/64
Router(config-if)#ipv6 nd other-config-flag
Router(config-if)#ipv6 dhcp pool STATELESS_POOL
Router(config-dhcpv6)#dns-server 2001:1111:2222:3333:4444::1
Router(config-dhcpv6)#domain-name example.com
Router(config-dhcpv6)#exit
Router(config)#interface g0/0
Router(config-if)#no shut
```

Por último en el PC hemos activado la configuración de IP automática.



The screenshot shows the 'IPv6 Configuration' window. The 'Automatic' radio button is selected, and the 'Static' radio button is unselected. The status 'IPv6 request successful.' is displayed. The configuration fields are as follows:

Field	Value
IPv6 Address	2001:1111:2222:3333:207:ECFF:FE28:4B32 / 64
Link Local Address	FE80::207:ECFF:FE28:4B32
Default Gateway	FE80::207:ECFF:FE82:5901
DNS Server	2001:1111:2222:3333:4444::1

Y hemos realizado un ping al router

```
C:\>ping 2001:1111:2222:3333:4444::2

Pinging 2001:1111:2222:3333:4444::2 with 32 bytes of data:

Reply from 2001:1111:2222:3333:4444::2: bytes=32 time<1ms TTL=255
Reply from 2001:1111:2222:3333:4444::2: bytes=32 time<1ms TTL=255
Reply from 2001:1111:2222:3333:4444::2: bytes=32 time<1ms TTL=255
Reply from 2001:1111:2222:3333:4444::2: bytes=32 time<1ms TTL=255

Ping statistics for 2001:1111:2222:3333:4444::2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

En la parte 2 nos piden un servidor DHCPv6 con estado.

Configuración del servidor:

Le hemos asignado una dirección ipv6 y su gateway.

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address: 2001:1111:2222:3333:4444::1 / 64

Link Local Address: FE80::260:2FFF:FE1B:6174

Default Gateway: 2001:1111:2222:3333:4444::2

DNS Server: 2001:1111:2222:3333:4444::1

Además hemos activado el servicio DHCPv6, creado una pull y configurado, por último hemos añadido un prefijo.

Server0

Physical Config **Services** Desktop Programming Attributes

**SERVICES**

- HTTP
- DHCP
- DHCPv6**
- TFTP
- DNS
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

DHCPv6

Interface: FastEthernet0 Service: ☒ On ☐ Off

DHCPv6 Pool: STATEFULL\_POOL

DHCPv6 Pool

Pool List: STATEFULL\_POOL Create Pool Remove Pool

DNS Server: 01:1111:2222:3333:4444::1 Domain Name: example.com

IPv6 Address Prefix

Prefix	Prefix Length	Valid Lifetime	Preferred Lifetime
2001:1111:2222:...	64	2592000	604800

Create Edit Remove

IPv6 Prefix-Delegation

Prefix	DUID	Local Pool	Valid Lifetime	Preferred Lifetime
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Create Edit Remove

IPv6 Local Pool

Pool Name	Prefix	Prefix Length
-----------	--------	---------------

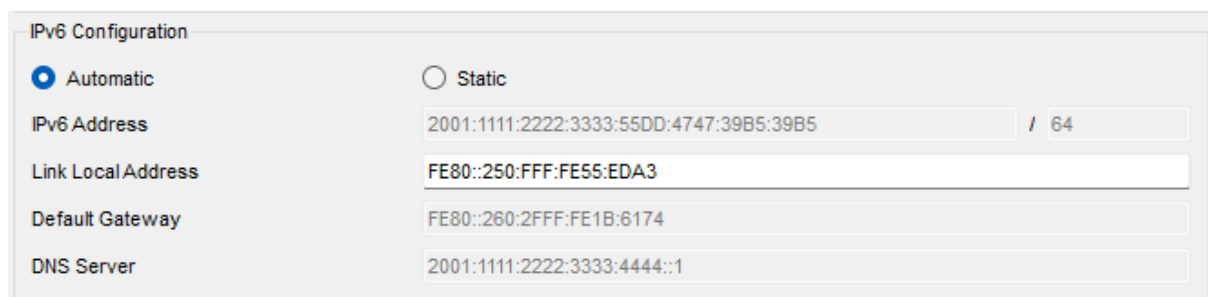
Create Edit Remove

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En el router:

```
Router#conf t
Router(config)#ipv6 unicast-routing
Router(config)#interface g0/0
Router(config-if)#ipv6 address 2001:1111:2222:3333:4444::2/64
Router(config-if)#ipv6 dhcp pool STATEFULL_POOL
Router(config-dhcpv6)#address prefix 2001:1111:2222:3333:4444::1/64
Router(config-dhcpv6)#dns-server 2001:1111:2222:3333:4444::1
Router(config-dhcpv6)#domain-name example.com
Router(config-dhcpv6)#exit
Router(config)#interface g0/0
Router(config-if)#ipv6 dhcp server STATEFULL_POOL
Router(config-if)#no shut
```

En el PC:



IPv6 Configuration

☒ Automatic ☐ Static

IPv6 Address: 2001:1111:2222:3333:55DD:4747:39B5:39B5 / 64

Link Local Address: FE80::250:FFF:FE55:EDA3

Default Gateway: FE80::260:2FFF:FE1B:6174

DNS Server: 2001:1111:2222:3333:4444::1

Por último hacemos ping.

```
C:\>ping 2001:1111:2222:3333:4444::2

Pinging 2001:1111:2222:3333:4444::2 with 32 bytes of data:

Reply from 2001:1111:2222:3333:4444::2: bytes=32 time=4ms TTL=255
Reply from 2001:1111:2222:3333:4444::2: bytes=32 time<1ms TTL=255
Reply from 2001:1111:2222:3333:4444::2: bytes=32 time<1ms TTL=255
Reply from 2001:1111:2222:3333:4444::2: bytes=32 time<1ms TTL=255

Ping statistics for 2001:1111:2222:3333:4444::2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 4ms, Average = 1ms

C:\>
```