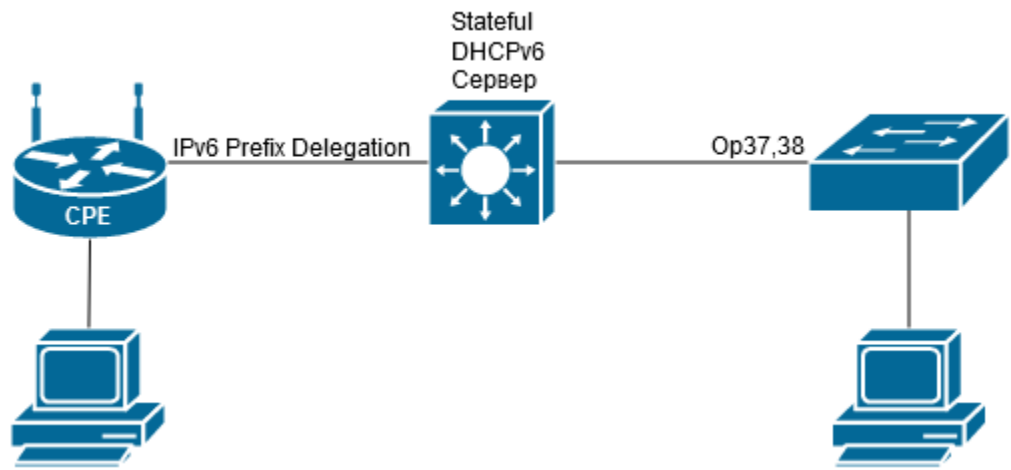


DHCPv6 SNR

SNR Stateful DHCP , IPv6 Prefix Delegation 37 38.



CPE (Wi-Fi), . Prefix Delegation, CPE , global-unicast . IPv6 , 37 38 DHCPv6 .

Stateful DHCPv6

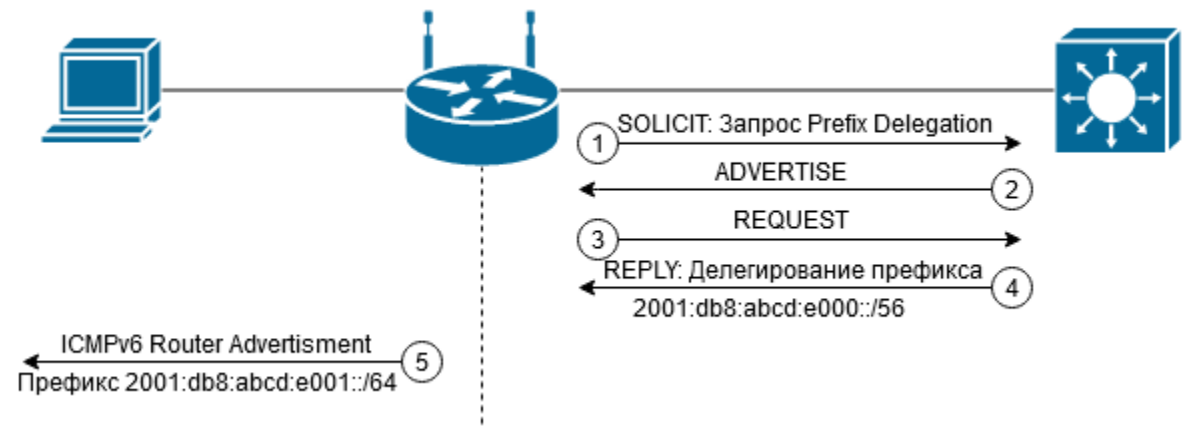
DHCPv4 IPv6 . Router Solicitation (RS) IPv6 . , , Router Advertisement (RA) , default gateway (link-local) 'M'. DHCPv6 IPv6 stateful .

DHCPv6 37 38

SNR DHCPv6 - 37 Remote-ID (rfc4649) 38 Subscriber-ID (rfc4580), Option 82 IPv4. - ascii (default) hex.

IPv6 Prefix Delegation

CPE DHCPv6-PD SOLICIT . REPLY IPv6 . CPE IPv6 . /64, CPE . /54, CPE 256 /64-.



L3-. DHCPv6 37, 38.

```
(config)#service dhcpv6
(config)#ipv6 dhcp server remote-id option
(config)#ipv6 dhcp server subscriber-id option
```

dhcp- NAG, 37, 38

```
(config)#ipv6 dhcp class NAG
(dhcpv6-class-nag-config)#remote-id f8-f0-82-75-cd-41 subscriber-id vlan200+Ethernet1/0/2
(dhcpv6-class-nag-config)#exit
```

IPv6 CPE

```
(config)#ipv6 local pool DHCPV6-PD-POOL 2001:db8:abcd:e000::/52 56
(config)#ipv6 dhcp pool DHCP-P00L
(dhcpv6-dhcp-pool-config)#prefix-delegation pool DHCPV6-PD-POOL lifetime 600 200
(dhcpv6-dhcp-pool-config)#dns-server 2001:db8:cafe:9::99
(dhcpv6-dhcp-pool-config)#domain-name ipv6.org
(dhcpv6-dhcp-pool-config)#exit
```

IPv6 stateful NAG., L2-, 2001:db8:cafe:9::120 - 150

```
(config)#ipv6 dhcp pool DHCP-P00L2
(dhcpv6-dhcp-pool2-config)#network-address 2001:db8:cafe:9::100 2001:db8:cafe:9::200
(dhcpv6-dhcp-pool2-config)#excluded-address 2001:db8:cafe:9::1
(dhcpv6-dhcp-pool2-config)#dns-server 2001:db8:cafe:9::99
(dhcpv6-dhcp-pool2-config)#domain-name ipv6.org
(dhcpv6-dhcp-pool2-config)#class NAG
(dhcpv6-pool-dhcp-pool2-class-nag-config)#address range 2001:db8:cafe:9::120 2001:db8:cafe:9::150
(dhcpv6-pool-dhcp-pool2-class-nag-config)#exit
(dhcpv6-dhcp-pool2-config)#exit
```

37, 38 DHCPV6

```
(config)#savi enable
(config)#ipv6 dhcp snooping remote-id option
(config)#ipv6 dhcp snooping subscriber-id option
```



SAVI snooping.

```
(config)#int e1/0/1
(config-if-ethernet1/0/1)#switchport access vlan 100
(config-if-ethernet1/0/1)#int e1/0/2
(config-if-ethernet1/0/2)#switchport mode trunk
(config-if-ethernet1/0/2)#switchport trunk allowed vlan 200
(config-if-ethernet1/0/2)#exit
```

SVI IPv6, RA

```
(config)#int vlan100
(config-if-vlan100)#ipv6 address 2001:db8:abcd:e000::1/64
(config-if-vlan100)#ipv6 dhcp server DHCP-P00L
(config-if-vlan100)#int vlan200
(config-if-vlan200)#ipv6 address 2001:db8:cafe:9::1/64
(config-if-vlan200)#no ipv6 nd suppress-ra
(config-if-vlan200)#ipv6 nd managed-config-flag
(config-if-vlan200)#ipv6 dhcp server DHCP-P00L2
```

```
#sh ipv6 dhcp binding
```

```
Creating DHCPv6 binding table...
```

```
The number of DHCPv6 bindings is 2
```

```
Client: fe80::faf0:82ff:fe7a:2afb (Vlan100)
```

```
DUID: 00030001f8f0827a2afb
```

```
IA PD: IA ID 11100, T1 100, T2 160
```

```
Prefix: 2001:db8:abcd:e000::/56
```

```
preferred lifetime 200, valid lifetime 600
```

```
expires at Mon Apr 13 10:50:51 2020 (549 seconds)
```

```
Client: iatype IANA, iauid 0xbb71d300
```

```
DUID: 00:01:00:01:26:26:fa:ec:38:63:bb:71:d3:00
```

```
IANA leased address: 2001:db8:cafe:9::120
```

```
Preferred lifetime 604800 seconds, valid lifetime 2592000 seconds
```

```
Lease obtained at %Apr 13 10:41:13 2020
```

```
Lease expires at %May 13 10:41:13 2020 (2591971 seconds left)
```