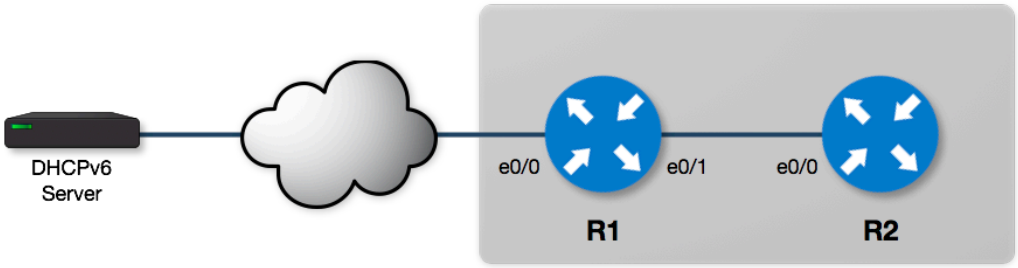
Configuring IPv6: Router Advertisements

In this exercise, you will configure a router to send Router Advertisements to a client for three different cases:

1. Provide an online prefix for SLAAC – No DHCPv6
2. Provide an online prefix for SLAAC – Use the 'O' flag to get 'Other configuration' from a DHCPv6 server
3. No online prefix – Use the 'M' flag to 'Manage the address configuration' and get an IPv6 address from the DHCPv6 server



Router roles

R1: Default gateway router / DHCPv6 Relay Agent

R2: Client device / SLAAC / DHCPv6 Client

Accessing the labs

1. Make sure you have connectivity
2. Go to http://workbench.ripe.net
3. Choose the lab 1 or lab 2 (ask the trainers)
4. Your login is your number on the participants list
5. The trainers will provide the password
6. Choose "**RA and DHCPv6**" from the menu
7. Verify that R2 has no addresses configured on the interfaces
8. See the configuration steps on the following page
9. Try out each different case: run the configuration command(s) first and then the troubleshooting commands to verify what happened.

Verify the interfaces on R2

```
UXX_R2# show ipv6 interface brief
```

Configuration Cheat Sheet

```
###
# Enable Configuration Mode
###

configure terminal
```

```
###
# Exit Configuration Mode
###

end
```

```
###
# Enable IPv6 on both routers R1 and R2
###

ipv6 unicast-routing
ipv6 cef
```

Case 1

```
# Configure R1
interface e0/1
  ipv6 address 2001:ffxx:1::a/64

xx = number on participant list
```

```
# Configure R2
interface e0/0
  ipv6 address autoconfig default

# Verify R2
show ipv6 interface e0/0
show ipv6 route
```

Case 2

```
# Configure R1
interface e0/1
  ipv6 nd other-config-flag
```

```
# Configure R2
interface e0/0
  shutdown
  no shutdown

# Verify R2
show ipv6 interface e0/0
show ip dns view
show ipv6 dhcp interface e0/0
```

Case 3

```
# Configure R1
interface e0/1
  no ipv6 nd other-config-flag
  ipv6 nd managed-config-flag
```

```
# Configure R2
interface e0/0
  shutdown
  no ipv6 address autoconfig default
  ipv6 address dhcp
  ipv6 enable
  ipv6 nd autoconfig default-route
  no shutdown

# Verify R2
show ipv6 interface e0/0
show ipv6 dhcp interface e0/0
```