

Configuring Linux machine as IPv6 router

To configure Linux machine as IPv6 router:

1. Ensure that package 'radvd' is installed or install it using 'yum -y install radvd'.
2. Edit '/etc/radvd.conf' and advertize prefixes for each interface of this router machine. Example configuration is:

```
interface eth0
{
  AdvSendAdvert on;
  prefix fd57:1d29:4f94:1::/64 {};
  prefix fd57:1d29:4f94:a::/64 {};
};
interface eth1
{
  AdvSendAdvert on;
  prefix fd57:1d29:4f94:2::/64 {};
  prefix fd57:1d29:4f94:b::/64 {};
};
```

3. Enable 'radvd' service on startup using
chkconfig radvd on
4. Edit '/etc/sysconfig/network' so that it has values
NETWORKING_IPV6=yes
IPV6FORWARDING=yes
IPV6_ROUTER=yes
5. Reboot the machine

Note that:

- This automatically sets 'sysctl net.ipv6.conf.all.accept_ra' to 0 so that all advertisements from other routers get ignored. This is necessary so that router does not learn prefixes advertised by other routers on same link.

Verifying node is listening on anycast addresses

All IPv6 routers should listen on anycast address for the prefixes they advertize. Hence after configuring a Linux machine as IPv6 router we can use command 'netstat -rnv -A inet6' and verify whether node is listening on anycast interfaces or not.

Anycast address would be have same prefix as node is advertising with host identifier as all zeros. On Linux node will listen on anycast address with prefix /128.