Juniper Routers

J-Series

M-Series
Juniper – M & J Series Routers

• Configure IPv6 on Interfaces

```plaintext
interfaces {
  fe-0/1/0 {
    unit 0 {
      family inet6 {
        address 2001:abc:xxxx:xxxx::1/64;
      }
    }
  }
}
```

• Configure IPv6 Default Static Route

```plaintext
routing-options
  rib inet6.0 {
    static {
      route 0::0/0 next-hop 2001:abc:xxxx:xxxx::1;
    }
  }
```
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- IPv6 Static Routing (if needed)

```bash
routing-options
  rib inet6.0 {
    static {
      route 2001:abc::2480/48 next-hop 2001:X:X:::1;
    }
  }
```

- IPv6 Router Advertisement (if needed)

```bash
user@Router1# show protocols
router-advertisement {
  interface fe-1/3/1.101 {
    prefix 2001:abc:2480:36aa::/64;
  }
}
```
JUNOS CLI - Set Commands

- **Set commands below are the IPv6 Router Advertisement (if needed)**

**Interfaces**

```
set interfaces fe-0/1/0 unit 0 family inet6 address 2001:abc:X:X::1/64
```

**IPv6 Default Route**

```
set routing-options rib inet6.0 static route 0::0/0 next-hop 2001:abc:X:X::1
```

**IPv6 Router Advertisement**

```
set protocols router-advertisement interface fe-1/3/1.101 prefix 2001:abc:X::/64
```

**IPv6 e-BGP**

```
set protocols bgp group v6-To-Cusomter-Site1 type external
set protocols bgp group v6-To-Cusomter-Site1 import v6_import_To_Customer_Site1
set protocols bgp group v6-To-Cusomter-Site1 family inet6 any
set protocols bgp group v6-To-Cusomter-Site1 export v6_export_To_Customer_Site1
set protocols bgp group v6-To-Cusomter-Site1 peer-as 65502
set protocols bgp group v6-To-Cusomter-Site1 local-as 65500
set protocols bgp group v6-To-Cusomter-Site1 neighbor 2001:abc:X::X local-address 2001:abc:X::X
set protocols bgp group v6-rr-clients type internal
```
Juniper – J-Series

• Flow chart for Packet Versus Flow Forwarding
  – (See reference - Branch SRX Series and J Series Selective Packet Services)

To Flow to Not to Flow...that is the question!
Juniper Routers – J-series

- With post-9.6 JUNOS code, on J-series, IPv6 traffic is set to flow-mode processing by default.

- Options are…
  - Convert all IPv6 traffic to packet forwarding mode
  - Implement policies to permit IPv6 traffic and services

- J-Web is limited on IPv6 configurations…
  - Can’t configure IPv6 address on interface
  - Documentation not great for J-Web
Juniper J-Series – Bypass Flow Mode

• To bypass Flow Mode, enter the following…

user@Router6# show security forwarding-options {
    family {
        inet6 {
            mode packet-based;
        }
    }
}

Set command -

set security forwarding-options family inet6 mode packet-based

• All IPv6 traffic will now bypass the new security hierarchical settings.
If using flow mode, you will need to configure security zones

```makefile
zones {
    security-zone TRUST {
        interfaces {
            ge-0/0/0.0 {
                host-inbound-traffic {
                    system-services {
                        all;
                    }
                }
            }
        }
    }
    security-zone UNTRUST {
        interfaces {
            ge-0/0/1.0 {
                host-inbound-traffic {
                    system-services {
                        all;
                    }
                }
            }
        }
    }
}
```
### Juniper J-Series – Security Policies

- ... and policies.

```plaintext
policies {
    from-zone UNTRUST to-zone TRUST {
        policy allow-inbound {
            match {
                source-address any;
                destination-address any;
                application any;
            }
            then {
                permit;
                log {
                    session-init;
                    session-close;
                }
            }
        }
    }
}
```

```plaintext
policies {
    from-zone TRUST to-zone UNTRUST {
        policy allow-outbound {
            match {
                source-address any;
                destination-address any;
                application any;
            }
            then {
                permit;
                log {
                    session-init;
                    session-close;
                }
            }
        }
    }
}
```