Configuring an IP Router with CLI

This section provides information to configure an IP router.

Topics in this section include:

Router Configuration Overview

In an Alcatel-Lucent router, an interface is a logical named entity. An interface is created by specifying an interface name under the `configure>router` context. This is the global router configuration context where objects like static routes are defined. An IP interface name can be up to 32 alphanumeric characters long, must start with a letter, and is case-sensitive; for example, the interface name “1.1.1.1” is not allowed, but “int-1.1.1.1” is allowed.

To create an interface, the basic configuration tasks that must be performed are:

- Assign a name to the interface.
- Associate an IP address with the interface.
- Associate the interface with a network interface or the system interface.
- Configure appropriate routing protocols.

A system interface and network interface should be configured.

System Interface

The system interface is associated with the network entity (such as a specific Alcatel-Lucent router), not a specific interface. The system interface is also referred to as the loopback address. The system interface is associated during the configuration of the following entities:

- The termination point of service tunnels
- The hops when configuring MPLS paths and LSPs
- The addresses on a target router for BGP and LDP peering.

The system interface is used to preserve connectivity (when routing reconvergence is possible) when an interface fails or is removed. The system interface is used as the router identifier. A system interface must have an IP address with a 32-bit subnet mask.

Network Interface

A network interface can be configured on one of the following entities a physical port or LAG:

- A physical or logical port
- A SONET/SDH channel

Basic Configuration

NOTE: Refer to each specific chapter for specific routing protocol information and command syntax to configure protocols such as OSPF and BGP.

The most basic router configuration must have the following:

- System name
- System address

The following example displays a router configuration:

```
A:ALA-A> config# info
. . .
#------------------------------------------
# Router Configuration
#------------------------------------------
    router
        interface "system"
            address 10.10.10.103/32
        exit
        interface "to-104"
            address 10.0.0.103/24
            port 1/1/1
            exit
        exit
        autonomous-system 100
        confederation 1000 members 100 200 300
   router-id 10.10.10.103
...
     exit
     isis
     exit
...
#------------------------------------------
A:ALA-A> config#
```

Common Configuration Tasks

The following sections describe basic system tasks.

Configuring a System Name

Use the `system` command to configure a name for the device. The name is used in the prompt string. Only one system name can be configured. If multiple system names are configured, the last one configured will overwrite the previous entry.

If special characters are included in the system name string, such as spaces, #, or ?, the entire string must be enclosed in double quotes. Use the following CLI syntax to configure the system name:

CLI Syntax:
```
config# system
        name system-name
```

Example:
```
config# system
config>system# name ALA-A
ALA-A>config>system# exit all
ALA-A#
```

The following example displays the system name output.

```
A:ALA-A>config>system# info
#------------------------------------------
# System Configuration
#------------------------------------------
        name "ALA-A"
        location "Mt.View, CA, NE corner of FERG 1 Building"
        coordinates "37.390, -122.05500 degrees lat."
        snmp
        exit
```

Configuring Interfaces

The following command sequences create a system and a logical IP interface. The system interface assigns an IP address to the interface, and then associates the IP interface with a physical port. The logical interface can associate attributes like an IP address or port.

Note that the system interface cannot be deleted.

Configuring a System Interface

To configure a system interface:

CLI Syntax:
```
config>router
     interface interface-name
        address {[ip-address/mask]|[ip-address] [netmask]}
           [broadcast {all-ones|host-ones]
        secondary {[address/mask|ip-address][netmask]}
           [broadcast {all-ones|host-ones}] [igp-inhibit]
```

Configuring a Network Interface

To configure a network interface:

CLI Syntax:
```
config>router
     interface interface-name
        address ip-addr{/mask-length | mask} [broadcast {all-
           ones | host-ones}]
        cflowd {acl | interface}
        egress
           filter ip ip-filter-id
           filter ipv6 ipv6-filter-id
        ingress
           filter ip ip-filter-id
           filter ipv6 ipv6-filter-id
        port port-name
```

The following displays an IP configuration output showing interface information.

```
A:ALA-A>config>router# info
#------------------------------------------
# IP Configuration
#------------------------------------------
        interface "system"
            address 10.10.0.4/32
        exit
        interface "to-ALA-2"
            address 10.10.24.4/24
            port 1/1/1
            egress
                filter ip 10
            exit
        exit
...
#------------------------------------------
A:ALA-A>config>router#
```

To enable CPU protection:

CLI Syntax: `config>router`
`interface` *`interface-name`*
`cpu-protection` *`policy-id`*

CPU protection policies are configured in the **config>sys>security>cpu-protection** context. See the OS System Management Guide.

Configuring IPv6 Parameters

IPv6 interfaces and associated routing protocols may only be configured on the following systems:

- Chassis systems running in chassis mode c or d.
- Chassis systems running in mixed-mode, with IPv6 functionality limited to those interface on slots with IOM3-XPs/IMMs or later line cards.
- 7750 SR-c4/12.

The following displays the interface configuration showing the IPv6 default configuration when IPv6 is enabled on the interface.

```
A:ALA-49>config>router>if>ipv6# info detail
----------------------------------------------
 ' port 1/2/37
   ipv6
      packet-too-big 100 10
      param-problem 100 10
      redirects 100 10
      time-exceeded 100 10
      unreachables 100 10
   exit
----------------------------------------------
A:ALA-49>config>router>if>ipv6# exit all
```

Use the following CLI syntax to configure IPv6 parameters on a router interface.

CLI Syntax:

```
config>router# interface interface-name
               port port-name
               ipv6
                  address {ipv6-address/prefix-length} [eui-64]
                  icmp6
                     packet-too-big [number seconds]
                     param-problem [number seconds]
                     redirects [number seconds]
                     time-exceeded [number seconds]
                     unreachables [number seconds]
                  neighbor ipv6-address mac-address
```

The following displays a configuration example showing interface information.

```
A:ALA-49>config>router>if# info
----------------------------------------------
            address 10.11.10.1/24
            port 1/2/37
            ipv6
                address 10::1/24
            exit
----------------------------------------------
A:ALA-49>config>router>if#
```

Configuring IPv6 Over IPv4 Parameters

This section provides several examples of the features that must be configured in order to implement IPv6 over IPv4 relay services.

Tunnel Ingress Node

This configuration shows how the interface through which the IPv6 over IPv4 traffic leaves the node. This must be configured on a network interface.

CLI Syntax:
```
config>router
 static-route::C8C8:C802/128 indirect 200.200.200.2
 interface ip-int-name
    address {ip-address/mask|ip-address netmask} [broadcast
    all-ones|host-ones]
    port port-name
```

The following displays configuration output showing interface configuration.

```
A:ALA-49>configure>router# info
----------------------------------------------
...
        interface "ip-1.1.1.1"
            address 1.1.1.1/30
            port 1/1/1
        exit
...
----------------------------------------------
A:ALA-49>configure>router#
```

Both the IPv4 and IPv6 system addresses must to configured

CLI Syntax:
```
config>router
     interface ip-int-name
        address {ip-address/mask|ip-address netmask} [broad-
           cast all-ones|host-ones]
        ipv6
           address ipv6-address/prefix-length [eui-64]
```

The following displays configuration output showing interface information.

```
A:ALA-49>configure>router# info
----------------------------------------------
...
        interface "system"
            address 200.200.200.1/32
            ipv6
                address 3FFE::C8C8:C801/128
            exit
        exit
...
----------------------------------------------
A:ALA-49>configure>router#
```

Learning the Tunnel Endpoint IPv4 System Address

This configuration displays the OSPF configuration to learn the IPv4 system address of the tunnel endpoint.

CLI Syntax:
```
config>router
 ospf
    area area-id
       interface ip-int-name
```

The following displays a configuration showing OSPF output.

```
A:ALA-49>configure>router# info
----------------------------------------------
...
        ospf
            area 0.0.0.0
                interface "system"
                exit
                interface "ip-1.1.1.1"
                exit
            exit
        exit
----------------------------------------------
A:ALA-49>configure>router#
```

Configuring an IPv4 BGP Peer

This configuration display the commands to configure an IPv4 BGP peer with (IPv4 and) IPv6 protocol families.

CLI Syntax:

```
config>router
    bgp
       export policy-name [policy-name...(upto 5 max)]
       router-id ip-address
       group name
          family [ipv4][vpn-ipv4] [ipv6] [mcast-ipv4]
          type {internal|external}
          neighbor ip-address
             local-as as-number [private]
             peer-as as-number
```

The following displays a configuration showing BGP output.

```
A:ALA-49>configure>router# info
----------------------------------------------
...
        bgp
            export "ospf3"
            router-id 200.200.200.1
            group "main"
                family ipv4 ipv6
                type internal
                neighbor 200.200.200.2
                    local-as 1
                    peer-as 1
                exit
            exit
        exit
...
----------------------------------------------
A:ALA-49>configure>router#
```

An Example of a IPv6 Over IPv4 Tunnel Configuration

The IPv6 address is the next-hop as it is received through BGP. The IPv4 address is the system address of the tunnel's endpoint static-route ::C8C8:C802/128 indirect 200.200.200.2.

This configuration displays an example to configure a policy to export IPv6 routes into BGP.

CLI Syntax:

```
config>router
        bgp
           export policy-name [policy-name...(upto 5 max)]
           router-id ip-address
           group name
              family [ipv4] [vpn-ipv4] [ipv6] [mcast-ipv4]
              type {internal|external}
              neighbor ip-address
                 local-as as-number [private]
                 peer-as as-number
```

The following displays the configuration output.

```
A:ALA-49>configure>router# info
----------------------------------------------
...
         policy-options
            policy-statement "ospf3"
                description "Plcy Stmnt For 'From ospf3 To bgp'"
                entry 10
                    description "Entry From Protocol ospf3 To bgp"
                    from
                        protocol ospf3
                    exit
                    to
                        protocol bgp
                    exit
                    action accept
                    exit
                exit
            exit
        exit
...
----------------------------------------------
A:ALA-49>configure>router#
```

Tunnel Egress Node

This configuration shows how the interface through which the IPv6 over IPv4 traffic leaves the node. It must be configured on a network interface. Both the IPv4 and IPv6 system addresses must be configured.

CLI Syntax:

```
config>router
 configure router static-route ::C8C8:C801/128 indirect
 200.200.200.1
    interface ip-int-name
       address {ip-address/mask>|ip-address netmask} [broad-
          cast all-ones|host-ones]
       ipv6
          address ipv6-address/prefix-length [eui-64]
       port port-name
```

The following displays interface configuration.

```
A:ALA-49>configure>router# info
----------------------------------------------
...
        interface "ip-1.1.1.2"
            address 1.1.1.2/30
            port 1/1/1
        exit
        interface "system"
            address 200.200.200.2/32
            ipv6
                address 3FFE::C8C8:C802/128
            exit
        exit
----------------------------------------------
```

Learning the Tunnel Endpoint IPv4 System Address

This configuration displays the OSPF configuration to learn the IPv4 system address of the tunnel endpoint.

CLI Syntax:
```
config>router
 ospf
    area area-id
       interface ip-int-name
```

The following displays OSPF configuration information.

```
A:ALA-49>configure>router# info
----------------------------------------------
...
        ospf
            area 0.0.0.0
                interface "system"
                exit
                interface "ip-1.1.1.2"
                exit
            exit
        exit
----------------------------------------------
A:ALA-49>configure>router#
```

Configuring an IPv4 BGP Peer

This configuration display the commands to configure an IPv4 BGP peer with (IPv4 and) IPv6 protocol families.

CLI Syntax:

```
config>router
 bgp
    export policy-name [policy-name...(upto 5 max)]
    router-id ip-address
    group name
       family [ipv4] [vpn-ipv4] [ipv6] [mcast-ipv4]
       type {internal|external}
       neighbor ip-address
          local-as as-number [private]
          peer-as as-number
```

The following displays the IPv4 BGP peer configuration example.

```
A:ALA-49>configure>router# info
----------------------------------------------
...
        bgp
            export "ospf3"
            router-id 200.200.200.2
            group "main"
                family ipv4 ipv6
                type internal
                neighbor 200.200.200.1
                    local-as 1
                    peer-as 1
                exit
            exit
        exit
...
----------------------------------------------
A:ALA-49>configure>router#
```

An Example of a IPv6 Over IPv4 Tunnel Configuration

The IPv6 address is the next-hop as it is received through BGP. The IPv4 address is the system address of the tunnel's endpoint static-route ::C8C8:C802/128 indirect 200.200.200.2

This configuration displays an example to configure a policy to export IPv6 routes into BGP.

CLI Syntax:

```
config>router
 bgp
    export policy-name [policy-name...(upto 5 max)]
    router-id ip-address
    group name
       family [ipv4] [vpn-ipv4] [ipv6] [mcast-ipv4]
       type {internal|external}
       neighbor ip-address
          local-as as-number [private]
          peer-as as-number
```

The following displays an IPv6 over IPv4 tunnel configuration

```
A:ALA-49>configure>router# info
----------------------------------------------
...
        policy-options
            policy-statement "ospf3"
                description "Plcy Stmnt For 'From ospf3 To bgp'"
                entry 10
                    description "Entry From Protocol ospf3 To bgp"
                    from
                        protocol ospf3
                    exit
                    to
                        protocol bgp
                    exit
                    action accept
                    exit
                exit
            exit
        exit
----------------------------------------------
A:ALA-49>configure>router#
```

Router Advertisement

To configure the router to originate router advertisement messages on an interface, the interface must be configured under the router-advertisement context and be enabled (no shutdown). All other router advertisement configuration parameters are optional.

Router advertisement can be configured under the `config>router>router-advertisement` context or under the `config>service>vprn>router-advertisement` context. Use the following example CLI syntax to enable router advertisement and configure router advertisement parameters:

CLI Syntax:

```
config>router# router-advertisement
               dns-options
                  dns-servers ipv6-address
                  rdnss-lifetime seconds
               interface ip-int-name
                  current-hop-limit number
                  dns-options
                     dns-servers ipv6-address
                     rdnss-lifetime {seconds | infinite}
                  include-dns
                  managed-configuration
                  max-advertisement-interval seconds
                  min-advertisement-interval seconds
                  mtu mtu-bytes
                  other-stateful-configuration
                  prefix ipv6-prefix/prefix-length
                     autonomous
                     on-link
                     preferred-lifetime {seconds | infinite}
                     valid-lifetime {seconds | infinite}
                  reachable-time milli-seconds
                  retransmit-time milli-seconds
                  router-lifetime seconds
                  no shutdown
                  use-virtual-mac
```

The following displays a router advertisement configuration example.

```
*A:sim131>config>router>router-advert# info
----------------------------------------------
            interface "n1"
                prefix 2001:db8:3::/64
                exit
                use-virtual-mac
                no shutdown
            exit
----------------------------------------------
*A:sim131>config>router>router-advert# interface n1
```

```
*A:sim131>config>router>router-advert>if# prefix 2001:db8:3::/64
-----------------------------------------------
                    autonomous
                    on-link
                    preferred-lifetime 604800
                    valid-lifetime 2592000
-----------------------------------------------
*A:tahi>config>router>router-advert>if>prefix#
```

Configuring IPv6 Parameters

The following displays the interface configuration showing the IPv6 default configuration when IPv6 is enabled on the interface.

```
A:ALA-49>config>router>if>ipv6# info detail
-----------------------------------------------
  port 1/3/37
   ipv6
      packet-too-big 100 10
      param-problem 100 10
      redirects 100 10
      time-exceeded 100 10
      unreachables 100 10
   exit
-----------------------------------------------
A:ALA-49>config>router>if>ipv6# exit all
```

The following displays an IPv6 configuration example.

```
A:ALA-49>config>router>if# info
-----------------------------------------------
            address 10.11.10.1/24
            port 1/3/37
            ipv6
                address 10::1/24
            exit
-----------------------------------------------
A:ALA-49>config>router>if#
```

An Example of a IPv6 Over IPv4 Tunnel Configuration

The IPv6 address is the next-hop as it is received through BGP. The IPv4 address is the system address of the tunnel's endpoint static-route ::C8C8:C802/128 indirect 200.200.200.2

This configuration displays an example to configure a policy to export IPv6 routes into BGP.

CLI Syntax:

```
config>router
    bgp
        export policy-name [policy-name...(upto 5 max)]
        router-id ip-address
        group name
```

```
                    family [ipv4] [vpn-ipv4] [ipv6] [mcast-ipv4]
                    type {internal|external}
                    neighbor ip-address
                       local-as as-number [private]
                       peer-as as-number
```

The following displays the configuration showing the policy output.

```
A:ALA-49>configure>router# info
----------------------------------------------
...
        policy-options
            policy-statement "ospf3"
                description "Plcy Stmnt For 'From ospf3 To bgp'"
                entry 10
                    description "Entry From Protocol ospf3 To bgp"
                    from
                        protocol ospf3
                    exit
                    to
                        protocol bgp
                    exit
                    action accept
                    exit
                exit
            exit
        exit
----------------------------------------------
A:ALA-49>configure>router#
```

Configuring Proxy ARP

To configure proxy ARP, you can configure:

- A prefix list in the **config>router>policy-options>prefix-list** context.
- A route policy statement in the **config>router>policy-options>policy-statement** context and apply the specified prefix list.
  - → In the policy statement **entry>to** context, specify the host source address(es) for which ARP requests can or cannot be forwarded to non-local networks, depending on the specified action.
  - → In the policy statement **entry>from** context, specify network prefixes that ARP requests will or will not be forwarded to depending on the action if a match is found. For more information about route policies, refer to the OS Routing Protocols Guide.
- Apply the policy statement to the **proxy-arp** configuration in the **config>router>interface** context.

CLI Syntax:
```
config>router# policy-options
 begin
 commit
 prefix-list name
    prefix ip-prefix/mask [exact|longer|through
    length|prefix-length-range length1-length2]
```

Use the following CLI syntax to configure the policy statement specified in the **proxy-arp-policy** *policy-statement* command.

CLI Syntax:
```
config>router# policy-options
 begin
 commit
 policy-statement name
    default-action {accept | next-entry | next-policy | re-
    ject}
    entry entry-id
       action {accept | next-entry | next-policy | reject}
       to
          prefix-list name [name...(upto 5 max)]
       from
          prefix-list name [name...(upto 5 max)]
```

The following displays prefix list and policy statement configuration examples:

```
A:ALA-49>config>router>policy-options# info
----------------------------------------------
            prefix-list "prefixlist1"
                   prefix 10.20.30.0/24 through 32
            exit
```

```
            prefix-list "prefixlist2"
                    prefix 10.10.10.0/24 through 32
            exit
...
            policy-statement "ProxyARPpolicy"
                entry 10
                    from
                        prefix-list "prefixlist1"
                    exit
                    to
                        prefix-list "prefixlist2"
                    exit
                    action reject
                exit
                default-action accept
                exit
            exit
...
-------------------------------------------
A:ALA-49>config>router>policy-options#
```

Use the following CLI to configure proxy ARP:

CLI Syntax:
```
config>router>interface interface-name
  local-proxy-arp
  proxy-arp-policy policy-name [policy-name...(upto 5 max)]
  remote-proxy-arp
```

The following displays a proxy ARP configuration example:

```
A:ALA-49>config>router>if# info
-------------------------------------------
            address 128.251.10.59/24
            local-proxy-arp
            proxy-arp
                policy-statement "ProxyARPpolicy"
            exit
-------------------------------------------
A:ALA-49>config>router>if#
```

Creating an IP Address Range

An IP address range can be reserved for exclusive use for services by defining the `config>router>service-prefix` command. When the service is configured, the IP address must be in the range specified as a service prefix. If no service prefix command is configured, then no limitation exists.

The `no service-prefix ip-prefix/mask` command removes all address reservations. A service prefix cannot be removed while one or more services use address(es) in the range to be removed.

CLI Syntax: `config>router`
`service-prefix` *`ip-prefix/mask`* `[exclusive]`

Deriving the Router ID

The router ID defaults to the address specified in the system interface command. If the system interface is not configured with an IP address, then the router ID inherits the last four bytes of the MAC address. The router ID can also be manually configured in the `config>router router-id` context. On the BGP protocol level, a BGP router ID can be defined in the `config>router>bgp router-id` context and is only used within BGP.

Note that if a new router ID is configured, protocols are not automatically restarted with the new router ID. The next time a protocol is initialized the new router ID is used. An interim period of time can occur when different protocols use different router IDs. To force the new router ID, issue the `shutdown` and `no shutdown` commands for each protocol that uses the router ID, or restart the entire router.

It is possible to configure an SR OS node to operate with an IPv6 only BOF and no IPv4 system interface address. When configured in this manner, the operator must explicitly define IPv4 router IDs for protocols such as OSPF and BGP as there is no mechanism to derive the router ID from an IPv6 system interface address.

Use the following CLI syntax to configure the router ID:

CLI Syntax:
```
config>router
    router-id router-id
    interface ip-int-name
        address {ip-address/mask | ip-address netmask} [broad-
            cast all-ones | host-ones]
```

The following example displays a router ID configuration:

```
A:ALA-4>config>router# info
#------------------------------------------
# IP Configuration
#------------------------------------------
        interface "system"
            address 10.10.0.4/32
        exit
    . . .
        router-id 10.10.0.4
#------------------------------------------
A:ALA-4>config>router#
```

Configuring a Confederation

Configuring a confederation is optional. The AS and confederation topology design should be carefully planned. Autonomous system (AS), confederation, and BGP connection and peering parameters must be explicitly created on each participating router. Identify AS numbers, confederation numbers, and members participating in the confederation.

Refer to the BGP section for CLI syntax and command descriptions.

Use the following CLI syntax to configure a confederation:

CLI Syntax: `config>router`
`confederation` *`confed-as-num`* `members` *`member-as-num`*

The following example displays the commands to configure the confederation topology diagram displayed in Figure 2 on page 41.

NOTES:

- Confederations can be preconfigured prior to configuring BGP connections and peering.
- Each confederation can have up to 15 members.

The following displays a confederation example.

```
A:ALA-B>config>router# info
#------------------------------------------
# IP Configuration
#------------------------------------------
        interface "system"
            address 10.10.10.103/32
        exit
        interface "to-104"
            shutdown
            address 10.0.0.103/24
            port 1/1/1
        exit
        autonomous-system 100
        confederation 2002 members 200 300 400
        router-id 10.10.10.103

#------------------------------------------
A:ALA-B>config>router#
```

Configuring an Autonomous System

Configuring an autonomous system is optional. Use the following CLI syntax to configure an autonomous system:

CLI Syntax: `config>router`
`autonomous-system` *`as-number`*

The following displays an autonomous system configuration example:

```
A;ALA-A>config>router# info
#------------------------------------------
# IP Configuration
#------------------------------------------
        interface "system"
            address 10.10.10.103/32
        exit
   interface "to-104"
            address 10.0.0.103/24
            port 1/1/1
            exit
        exit
        autonomous-system 100
        router-id 10.10.10.103
#------------------------------------------
A:ALA-A>config>router#
```

Configuring Overload State on a Single SFM

A 7x50 system with a single SFM installed has a system multicast throughput that is only a half of a 7x50 system with dual SFMs installed. For example, in a mixed environment in which IOM1s, IOM2s, and IOM3s are installed in the same system (chassis mode B or C), system multicast throughput doubles when redundant SFMs are used instead of a single SFM. If the required system multicast throughput is between 16G and 32G (which means both SFMs are being actively used), when there is an SFM failure, multicast traffic needs to be rerouted around the node.

Some scenarios include:

- There is only one SFM installed in the system
- One SFM (active or standby) failed in a dual SFM configuration
- The system is in the ISSU process

You can use an overload state in IGP to trigger the traffic reroute by setting the overload bit in IS-IS or setting the metric to maximum in OSPF. Since PIM uses IGP to find out the upstream router, a next-hop change in IGP will cause PIM to join the new path and prune the old path, which effectively reroutes the multicast traffic downstream. When the problem is resolved, the overload condition is cleared, which will cause the traffic to be routed back to the router.

Service Management Tasks

This section discusses the following service management tasks:

Changing the System Name

The system command sets the name of the device and is used in the prompt string. Only one system name can be configured. If multiple system names are configured, the last one configured will overwrite the previous entry.

Use the following CLI syntax to change the system name:

CLI Syntax:
```
config# system
        name system-name
```

The following example displays the command usage to change the system name:

Example:
```
A:ALA-A>config>system# name tgif
A:TGIF>config>system#
```

The following example displays the system name change:

```
A:ALA-A>config>system# name TGIF
A:TGIF>config>system# info
#------------------------------------------
# System Configuration
#------------------------------------------
        name "TGIF"
    location "Mt.View, CA, NE corner of FERG 1 Building"
    coordinates "37.390, -122.05500 degrees lat."
    synchronize
    snmp
       exit
       security
           snmp
                community "private" rwa version both
           exit
       exit
       . . .
--------------------------------------------
A:TGIF>config>system#
```

Modifying Interface Parameters

Starting at the `config>router` level, navigate down to the router interface context.

To modify an IP address, perform the following steps:

Example:
```
A:ALA-A>config>router# interface "to-sr1"
      A:ALA-A>config>router>if# shutdown
      A:ALA-A>config>router>if# no address
      A:ALA-A>config>router>if# address 10.0.0.25/24
      A:ALA-A>config>router>if# no shutdown
```

To modify a port, perform the following steps:

Example:
```
A:ALA-A>config>router# interface "to-sr1"
      A:ALA-A>config>router>if# shutdown
      A:ALA-A>config>router>if# no port
      A:ALA-A>config>router>if# port 1/1/2
      A:ALA-A>config>router>if# no shutdown
```

The following example displays the interface configuration:

```
A:ALA-A>config>router# info
#------------------------------------------
# IP Configuration
#------------------------------------------
        interface "system"
            address 10.0.0.103/32
        exit
        interface "to-sr1"
            address 10.0.0.25/24
            port 1/1/2
        exit
        router-id 10.10.0.3
#------------------------------------------
A:ALA-A>config>router#
```

Deleting a Logical IP Interface

The no form of the `interface` command typically removes the entry, but all entity associations must be shut down and/or deleted before an interface can be deleted.

1. Before an IP interface can be deleted, it must first be administratively disabled with the `shutdown` command.
2. After the interface has been shut down, it can then be deleted with the **no interface** command.

CLI Syntax:
```
config>router
    no interface ip-int-name
```

Example:
```
config>router# interface test-interface
config>router>if# shutdown
config>router>if# exit
config>router# no interface test-interface
config>router#
```