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Configuring the SRE Interface on the Router

Cisco ISM-SRE and SM-SRE are service modules that run Cisco-authorized applications. The following steps describe the configuration of the service module interface on the router. Applications can also use the MGF interface. For more information on configuring the optional MGF interface refer to: http://www.cisco.com/en/US/docs/routers/access/interfaces/software/feature/guide/ism-sm-sre.html#wp1134657

To configure the Cisco ISM-SRE or SM-SRE interface to the host router, complete the following steps.

From the Host-Router CLI

Enter Privileged EXEC Mode

`enable` Enters privileged EXEC mode on the host router. Enter your password if prompted.

Enter Global Config Mode

```
configure terminal
```

Enters global configuration mode on the host router.

Enter Interface Configuration Mode

`interface ism 0/0` or `interface sm slot/0`

Enters interface configuration mode for the slot and port where the ISM resides.

or

Enters interface configuration mode for the slot and port where the SM resides.

Specify IP Address for Router Side of the Interface

`ip address` *`router-side-ip-address subnet-mask`*

or

`ip unnumbered` *`type number`*

Example:

```
Router(config-if)# ip address 10.0.0.1 255.255.255.0
```

or

```
Router(config-if)# ip unnumbered gigabitethernet 1/0
```

Enables IP processing on an interface without assigning an explicit IP address to the interface.

`type`?Type of interface on which the router has an assigned IP address.

`number`?Number of the interface on which the router has an assigned IP address. **Note:** The unnumbered interface cannot be another unnumbered interface.

Specify the IP Address for the Module Side of the Interface

`service-module ip address` *`module-side-ip-address subnet-mask`*

`service-module ip default-gateway` *`gateway-ip-address`*

Example:

```
Router(config-if)# service-module ip default-gateway 10.0.0.1
```

Note: The *`subnet-mask`* must be in the same subnet as the host router.

Enable Interface

`no shutdown`

Return to Global Configuration Mode

`end`

Establish Static Routes

`ip route` *`destination-network-prefix network-prefix-mask gateway-ip-address`*

Note: When the `ip unnumbered` command is configured on the SM interface, you must use the `ip route` command to add a static route to the SM.

Verify Addresses

```
show running-config
```

Displays the router's running configuration, so that you can verify address configurations.

The following example shows the configuration of the internal interface between the Cisco ISM-SRE and the router:

```
interface ISM0/0

 ip address 10.0.0.1 255.255.255.0

 service-module ip address 10.0.0.2 255.255.255.0

 service-module default-gateway 10.0.0.1

 hold-queue 60 out
```

The following example shows the configuration of the internal interface between the Cisco SM-SRE and the router:

```
interface SM1/0
 ip address 10.0.0.1 255.255.255.0
 service-module ip address 10.0.0.2 255.255.255.0
 service-module ip default-gateway 10.0.0.1
 hold-queue 60 out
```

Opening and Closing a Session

To first check the running status and then open or close a session with the Cisco SRE module, perform the following steps:

From the Host-Router CLI

Enter Privileged EXEC Mode

```
enable
```

Enter your password if prompted.

Display Status of SM

`service-module ism 0/0 status` or `service-module sm slot/0 status`

Check for steady state.

Note: If the module is not running, start it with one of the startup commands listed in the "Shutting Down and Starting Up the Cisco SRE Module" section.

Start Session on SM

`service-module ism 0/0 session` or `service-module sm slot/0 session`

Perform one of the following:

- To interrupt the auto-boot sequence and access the bootloader, quickly type ***
- To start a configuration session, press Enter.

From the Service-Module Interface Enter the bootloader and enter configuration commands on the module as needed.

Example (Bootloader):

```
ServicesEngine boot-loader> config

Example (Configuration):

SE-Module> configure terminal

SE-Module(config)>

SE-Module(config)>exit

SE-Module> write
```

Notice that you do not use the enable command and the prompt does not change from ">".

Enter Configuration Commands

Enters bootloader or configuration commands on the module as needed. Use bootloader commands for debugging and troubleshooting purposes only.

Bootloader command choices include boot, config, exit, help, ping, reboot, show, and verify.

Enter configuration commands. Exit global configuration mode with the exit command. Save your new configuration with the write command. Notice that you do not use the enable command and the prompt does not change from >.

`Control-Shift-6 x` Closes the service-module session and returns to the host router CLI.

Note: The service-module session stays up until you clear it in the next step. While it remains up, you can return to it from the router CLI by pressing Enter.

From the Host-Router CLI

Clear the Session

`service-module ism 0/0 session clear` or `service-module sm slot/0 session clear`

Example:

```
Router# service-module ism 0/0 session clear
```

or

```
Router# service-module sm 1/0 session clear
```

Return to Installing_AXP_on_SRE_Modules

Return to start of Getting Started Guide: Cisco AXP Getting Started Guide