The following sections explain how to configure basic network services for the application's virtual instance.

- Binding an Application
- Testing IP Connectivity

Binding an Application

By default, a newly created application virtual instance is bound to interface eth0. Binding ensures that the application has IP connectivity to the Cisco 280x ISR and the rest of the network.

Note: If your application is already bound to the eth0 interface, you may skip this section and go to Testing IP Connectivity

Example In this example application "tcptrace" binds to interface eth0 in Cisco AXP configuration mode.

```
# se-Module(exec-tcptrace)> end
# se-Module> configure terminal
# To enter the virtual instance where your application resides, type the following command:

se-Module(config)> app-service tcptrace
# To bind your application to an IP interface allowing IP traffic to your application, enter the f

se-Module(config-tcptrace)> bind eth0

WARNING!!! Reset the hosting environment

WARNING!!! for binding to take effect
```

Note: The above warning reminds you to re-enter Cisco AXP EXEC mode after executing the **bind** command.

```
# se-Module(config-tcptrace)> end
# se-Module> app-service tcptrace
# se-Module(exec-tcptrace)> reset
```

The system resets. No message is displayed on the screen to show that the system is resetting.

Verify that your virtual instance and application are online by entering the command:
```
se-Module(exec-tcptrace)> show state
```

Testing IP Connectivity

Use the `ping` command to test the connectivity between your application's virtual instance to the rest of the network. Each virtual instance has its own Linux shell context and is isolated from other instances and the effects of other applications.

The following example shows how to test IP connectivity to your application.

Example

In this example, you first enter Cisco AXP application service EXEC mode, then go into the Linux shell context for your application, and then execute the `ping` command.

```
se-Module> app-service tcptrace
```

```
se-Module(exec-tcptrace)>

# Enter the Linux shell for your application (virtual instance shell).

se-Module(exec-tcptrace)> connect console

bash-2.05b#

# The interface to be pinged in this step is the eth0 interface to which you bound your applicatio

# Ping the eth0 interface

bash-2.05b# ping 192.168.2.2

PING 192.168.2.2 (192.168.2.2) 56(84) bytes of data.

64 bytes from 192.168.2.2: icmp_seq=1 ttl=64 time=0.063 ms

64 bytes from 192.168.2.2: icmp_seq=2 ttl=64 time=0.037 ms

64 bytes from 192.168.2.2: icmp_seq=3 ttl=64 time=0.061 ms

[1]+  Stopped  ping 192.168.2.2

bash-2.05b#

'''Note: '''    Press Ctrl-C to stop the '''ping'''.
# Ping the Cisco 280x ISR side of the ISE1/0 interface (router side):

bash-2.05b# ping 192.168.2.1

PING 192.168.2.1 (192.168.2.1) 56(84) bytes of data.

64 bytes from 192.168.2.1: icmp_seq=1 ttl=255 time=2.31 ms

64 bytes from 192.168.2.1: icmp_seq=2 ttl=255 time=0.822 ms

64 bytes from 192.168.2.1: icmp_seq=3 ttl=255 time=0.799 ms

[2]+  Stopped  ping 192.168.2.1

bash-2.05b#
# Ping your FTP server, where your Cisco AXP package files are located:

bash-2.05b# ping 192.168.1.1

PING 192.168.1.1 (192.168.1.1) 56(84) bytes of data.

64 bytes from 192.168.1.1: icmp_seq=1 ttl=254 time=3.59 ms

64 bytes from 192.168.1.1: icmp_seq=2 ttl=254 time=1.68 ms

[1]+  Stopped   ping 192.168.1.1

# The results of the above ping proves that the application environment has IP network connectivit

bash-2.05b#
```

Your prompt is a standard Linux shell prompt, so it appears that you are logged into a Linux machine with your own root (/) directory.

At this stage, you can start developing your application in your linux environment, view your working virtual instance environment, and check your network connectivity.

To exit the virtual instance, enter the following commands.

```
bash-2.05b# exit
# exits the Linux shell environment in your virtual instance

se-Module(exec-tcptrace)> exit

se-Module> exit

2800_w_axp#

#You are now back to a Cisco 280x ISR prompt.
```

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