Troubleshoot IOx on Cisco IR800 Integrated Services Router

Contents

Introduction

This document describes the troubleshooting steps for initial setup of IOx on Cisco IR800 router.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

The information in this document is based on IR800 with IOS.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Troubleshooting Steps

There can be couple of issues that come up with you being up new IR800 router for IOX and connect it with Fog director.

You can follow step by step process to check the issue on IR800, Cisco Application Hosting Framework (CAF) or Network Address Translation (NAT). Use **guest-os 1 restart/start/stop** to restart/start/stop the GOS in IOS.

1. Check type of Guest OS version and its state (running or not).

```
iox-ir809-02#sh platform guest-os

Guest OS status:

Installation: Cisco-GOS,version-1.0.0.58

State: RUNNING
```

Use **guest-os 1 restart/start/stop** to restart/start/stop the GOS in IOS.

2. If GOS runs then check if iox host gets ip address from IOS.

```
iox-ir809-02#sh iox host list

Host Name                 IPV4 Address      IPV6 Address          IOX Client Version

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iox-ir809-02-GOS-1  192.0.2.1              2001:DB8::1                  0.4

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```

3. If IOx host gets ip address then try to reverse telnet into GOS (Linux VM) to get access of linux prompt.

```
IR829-IOT#telnet 192.0.2.1 2070

Trying 192.0.2.1, 2070 ... Open


Poky 9.0 (Yocto Project 1.4 Reference Distro) 1.4.1 IR829-IOT-GOS-1 ttyS0
```

4. Once you get inside, check if CAF is istalled properly or not.

a. Check if monit summary is there or not.

```
root@iox-ir809-02-GOS-1:~# monit summary

Cannot translate 'iox-ir809-02-GOS-1' to FQDN name -- Name or service not known

The Monit daemon 5.14 uptime: 76d 0h 27m


Process 'dmo'                  Running

File 'product_id'             Accessible

File 'hwid'                   Accessible

File 'svcbr0'                 Accessible

Process 'caf'                 Running

File 'cgroup'                 Not monitored

System 'qemux86-64'           Running
```

b. Check if CAF software is there or not.

```
root@iox-ir809-02-GOS-1:~# ls /software

apps  backup  caf  downloads  lost+found  tmp
```

On new router with older image , you can find issue where GOS (Linux VM) is present but this linux VM dont have IOx infrastructure (CAF).

If there is no CAF then either you can upgrade to new bundle image which contians all images or upgrade latest GOS separately.

5. Common issue when you connect Fog Director (FD) to IOx host is due to routing, ACL or NAT misconfiguration.

a. Ensure you are able to ping Fog Director ip from IR8XX IOS and there is no ACL for inbound or outbound connection which can block FD communication.

Check if NAT is configured for incoming and outgoing traffic.

```
IR829-IOT#sh ip nat translations
Pro Inside global          Inside local                    Outside local
Outside global
tcp 198.51.100.1:8443    192.0.2.1:8443                  198.51.100.3:54285
 198.51.100.3:54285
```
You should see FD ip (198.51.100.3) in outside local and global for successful connection.

As NAT is done from inside to outside, ensure to have valid route to outside address otherwise NAT operation will fail.