



IoX Application

- [IoX Application, on page 1](#)

IoX Application

How do I verify the IoX Application is running on the switch?

Run the **show app-hosting list** command.

App State should be RUNNING to indicate that it is running.

```
Switch# show app-hosting list
App id                               State
-----
cisco_dnas_wired_iox_app             RUNNING
```

How do I start an interactive shell session for the IoX Application?

Run the **app-hosting connect appid cisco_dnas_wired_iox_app session /bin/bash** command.

This command starts a shell that runs inside the IoX Application container.

```
Switch# app-hosting connect appid cisco_dnas_wired_iox_app session /bin/bash
root@5c423778c2d6:/var/dnas_wired#
```

How can I see the logs for the IoX application?

Run the **tail -F /tmp/dnas_ble.log** command.

You can see the logs for the IoX Application.

```
root# tail -F /data/logs/dnas_wired.log
Tue Jun 15 04:26:36 2021 [INFO]: Starting DNA Spaces Wired IOx Application
Tue Jun 15 04:26:36 2021 [INFO]: gRPC Server IP Address: 10.22.243.59
Tue Jun 15 04:26:36 2021 [INFO]: gRPC Server Port: 8003
Tue Jun 15 04:26:36 2021 [INFO]: gRPC Server Token: eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJ0aWQiOiJlc2MzOjE2Mzc0LCJjaWQiOiJyMyJqZ5NzMDYzOTkwNzEwMDAsImVwIjoiMTAuMjIuMjQzLjU5Ojg1MDAiLCJpYXQiOiJlMjMjIiwiaWF0IjoiOTQ5OTV9.KOK6EYM6_8r7nTs2U-13CotT8S-qOUphKf7s57L-KxxU
Tue Jun 15 04:26:36 2021 [INFO]: Application Host ID: 44:b6:be:37:a0:00
Tue Jun 15 04:26:36 2021 [INFO]: Application Host IP: 10.22.243.63
```


Metrics Name	Metrics Description
Source MAC Dest MAC UUID Name Count Interval Last-heard	<p>Periodically the scanned are dumped in the log with the attributes</p> <p>Source MAC: Source MAC address of the device scanned</p> <p>Dest MAC: Destination MAC address of the device scanned</p> <p>UUID: Universal Unique Identifier</p> <p>NAME: Device name</p> <p>Count: Number of times the device was heard since last scan values dumped</p> <p>Interval: Number of seconds between each device scan</p> <p>Last-heard: Last heard since the last scan values dumped</p>

```

root# tail -F /data/logs/dnas_wired_metrics.log
Tue Jun 15 07:08:12 2021 [INFO]: Application Version: 1.0.16
Tue Jun 15 07:08:12 2021 [INFO]: Start Time: Tue Jun 15 06:03:12 2021 Up Time:
0000D:01H:05M:00S
Tue Jun 15 07:08:12 2021 [INFO]: Total Physical Memory: 6443 MB
Tue Jun 15 07:08:12 2021 [INFO]: Physical Memory Free: 868 MB
Tue Jun 15 07:08:12 2021 [INFO]: Physical Memory Used: 5574 MB
Tue Jun 15 07:08:12 2021 [INFO]: Total Physical Shared Memory: 277 MB
Tue Jun 15 07:08:12 2021 [INFO]: Total Physical Buffer Memory: 390 MB
Tue Jun 15 07:08:12 2021 [INFO]: Total AP Percent CPU Used: 1.723203
Tue Jun 15 07:08:12 2021 [INFO]: Process Virtual Memory: 655436 kB
Tue Jun 15 07:08:12 2021 [INFO]: Process Physical Memory: 25820 kB
Tue Jun 15 07:08:12 2021 [INFO]: Process CPU Used: 0.100417
Tue Jun 15 07:08:12 2021 [INFO]: gRPC Reconnect Count: 0
Tue Jun 15 07:08:12 2021 [INFO]: Log Rotation Count: 20
Tue Jun 15 07:08:12 2021 [INFO]: Event Data Message Count: 8284
Tue Jun 15 07:08:12 2021 [INFO]: Event Data Message Rate Per Second: 20
Tue Jun 15 07:08:12 2021 [INFO]: Source MAC      Dest MAC      UUID
      Name      Count  Interval  Last-heard
Tue Jun 15 07:08:12 2021 [INFO]: 68:27:19:3b:cd:4a 00:50:56:87:db:ed 0001-17-6827193bcd4a
      i0.1_POWER      44      3.87      0000D:00H:00M:01S
Tue Jun 15 07:08:12 2021 [INFO]: 68:27:19:3b:cd:4a 00:50:56:87:db:ed 0002-17-6827193bcd4a
      i0.2_ENERGY      44      3.87      0000D:00H:00M:01S
Tue Jun 15 07:08:12 2021 [INFO]: 68:27:19:3b:cd:4a 00:50:56:87:db:ed 2002-17-6827193bcd4a
      d0.2_RGB          44      3.87      0000D:00H:00M:01S
Tue Jun 15 07:08:12 2021 [INFO]: 68:27:19:3b:cd:4a 00:50:56:87:db:ed 2004-17-6827193bcd4a
      d0.4_ALS          43      7.74      0000D:00H:00M:01S
Tue Jun 15 07:08:12 2021 [INFO]: 68:27:19:3b:cd:4a 00:50:56:87:db:ed 2005-17-6827193bcd4a
      d0.5_PIR          44      3.87      0000D:00H:00M:01S
Tue Jun 15 07:08:12 2021 [INFO]: 68:27:19:3b:cd:4a 00:50:56:87:db:ed 2103-17-6827193bcd4a
      d1.3_R            232     0.02      0000D:00H:00M:00S
Tue Jun 15 07:08:12 2021 [INFO]: 68:27:19:3b:cd:4a 00:50:56:87:db:ed 2104-17-6827193bcd4a
      d1.4_ALS          231     0.04      0000D:00H:00M:00S
Tue Jun 15 07:08:12 2021 [INFO]: 68:27:19:3b:cd:4a 00:50:56:87:db:ed 2106-17-6827193bcd4a
      d1.6_TEMP          226     0.04      0000D:00H:00M:01S
Tue Jun 15 07:08:12 2021 [INFO]: 68:27:19:3b:cd:4a 00:50:56:87:db:ed 2107-17-6827193bcd4a
      d1.7_HUM          225     0.02      0000D:00H:00M:01S
Tue Jun 15 07:08:12 2021 [INFO]: 68:27:19:3b:cd:4a 00:50:56:87:db:ed 2108-17-6827193bcd4a
      d1.8_AQ            130     0.03      0000D:00H:00M:01S
Tue Jun 15 07:08:12 2021 [INFO]: 68:27:19:3b:cd:4a 00:50:56:87:db:ed 2109-17-6827193bcd4a
      d1.9_CO2           41      0.03      0000D:00H:00M:01S
Tue Jun 15 07:08:12 2021 [INFO]: 68:27:19:3b:cd:4a 00:50:56:87:db:ed e4c5-17-6827193bcd4a
      68              1.47      0000D:00H:00M:01S
    
```

What files exist in the IoX Application?

The following log files are created while the IoX Application is running. These files are located in the `/data/logs` directory.

Log File Name	Description
<code>dnas_wired.log</code>	Active log file for debug message for the application.
<code>dnas_wired_1.log</code>	Rotated log file for the debug messages for the application
<code>dnas_wired_metrics.log</code>	Active log file for metric messages
<code>dnas_wired_metrics_1.log</code>	Rotated log file for metric messages
<code>dnas_wired_stdout.log</code>	Standard output and standard error messages are written to the file
<code>dnas_wired_last_restart.log</code>	If the IoX Application is restarted, then the <code>dnas_wired_last_restart.log</code> file is copied to this file. You can use this file to troubleshoot the reason for the restart
<code>dnas_wired_metrics_last_restart.log</code>	If the IoX Application is restarted, then the <code>dnas_wired_metrics_last_restart.log</code> file is copied to this file. You can use it to troubleshoot the reason for the restart.

The following are binary files installed specifically for the IoX Application. All the files are located in the `/var/dnas_wired` directory.

File Name	Description
<code>dnas_wired_iox_app</code>	IoX Application binary which scan for wired devices
<code>dnas_wired_iox_app_start.sh</code>	Script to start and in the case of a failure restart the application again

How do I verify that the IoX Application is receiving span session data?

pen the interactive shell of the IoX Application. Refer to [How do I start an interactive shell session for the IoX Application?](#)

Run the `tcpdump -i eth1` command.

`eth1` is the interface that receives the span traffic. This command begins a TCP dump on the `eth1` interface.

The dump should show that the interface is receiving GRE. If the GRE traffic is not seen, then you can conclude that the span session is not working as expected.

```
root# tcpdump -i eth1
```

```
07:38:03.153932 IP 124.124.124.5 > 124.124.124.10: GREv0, seq 0, length 130: gre-proto-0x88be
07:38:03.154147 IP 124.124.124.5 > 124.124.124.10: GREv0, seq 0, length 186: gre-proto-0x88be
07:38:03.154214 IP 124.124.124.5 > 124.124.124.10: GREv0, seq 0, length 314: gre-proto-0x88be
07:38:03.166872 IP 124.124.124.5 > 124.124.124.10: GREv0, seq 0, length 74: gre-proto-0x88be
07:38:03.173112 IP 124.124.124.5 > 124.124.124.10: GREv0, seq 0, length 74: gre-proto-0x88be
07:38:03.173119 IP 124.124.124.5 > 124.124.124.10: GREv0, seq 0, length 74: gre-proto-0x88be
07:38:03.173128 IP 124.124.124.5 > 124.124.124.10: GREv0, seq 0, length 138: gre-proto-0x88be
07:38:03.173764 IP 124.124.124.5 > 124.124.124.10: GREv0, seq 0, length 610: gre-proto-0x88be
07:38:03.173772 IP 124.124.124.5 > 124.124.124.10: GREv0, seq 0, length 130: gre-proto-0x88be
```

Why am I not seeing span session data in the IoX Application?

First, ensure that you have enabled ip routing on the switch using the **show running-config | inc ip routing** command.

This command displays the running configuration and show if you have enabled ip routing.

```
switch# show running-config | inc ip routings
```

```
ip routing
```

If you have not enabled ip routing on the switch, then run the **ip routing** command in the configuration mode.

```
switch# configure terminal  
switch(config)# ip routing  
switch(config)# exit
```

Why am I not seeing span session data in the IoX Application?