Monitor and Troubleshoot

Following are some troubleshooting tips for installing and using the Cisco Smart PHY.

Monitor Host Resources

Use the Grafana dashboard for monitoring host resources.

Step 1 Access the Grafana dashboard using the following URL: `https://grafana.<smartphy-ip>.nip.io/`

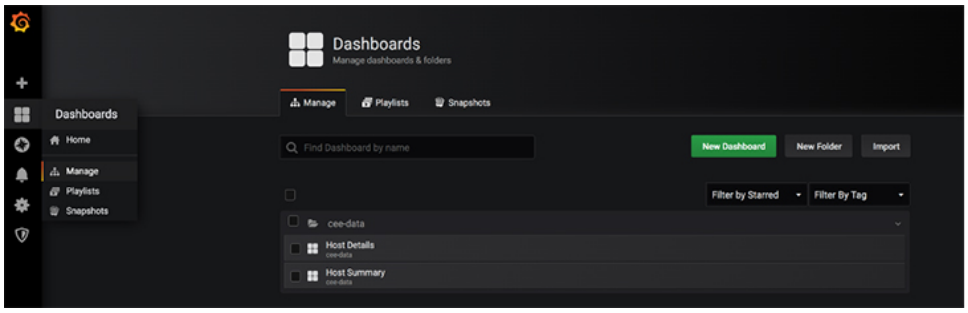
Example:

```
https://grafana.172.xx.xx.xxx.nip.io/
```

Step 2 Log in using the credentials used during the installation.

Step 3 Select **Dashboards** > **Manage**.

Step 4 Click the **cee-data** and then select **Host Details**.



Step 5 To view details of CPU, Memory, or Disk usage, select the **Host** on the top left corner of the screen.

Debug RPD SSD on Cisco Smart PHY

The SSD related logs in Cisco Smart PHY application are available at: `/var/log/rpd-service-manager/rpd-service-manager.log`.

Check SSD on NSO

The Cisco Network Services Orchestrator (NSO) supports the SSD profile from the iosNed 6.28.

1. Access the `robot-cfgsvc` container and check the SSD configuration on the NSO side.
2. Wait until the device moves into in-sync.

```
router# devices device _DEVICE_20.5.30.13 check-sync
result out-of-sync
info got: 4a0ba9b4ecdaa8710a9202e8656bfe82 expected: c22a63a573c84e40c1ad5e735888461c
router# devices device _DEVICE_20.5.30.13 check-sync
result in-sync
show running-config devices device _DEVICE_20.5.30.13 | begin ssd
  ios:cable profile ssd 1
   ssd 2.2.2.2 tftp xxx
  !
```

```
ios:cable profile ssd 2
 description ssd 2
 ssd 1.1.1.1 tftp abc
```

The SSD configuration on NSO must be the same as with the Cisco cBR router.

Check SSD using RestAPI

1. Get the SSD profiles, which are read by NSO from the Cisco cBR router, use the **query-core-details** command.

   ```
   https://{{controller}}:{{new-port}}/rpd-service-manager/rpdorch/v2/core-topology/query-core-details
   ```

   Output:

   SSD profile info must be the same as that with the Cisco cBR router.

   ```
   Input:
   {
     "ipAddress": "10.0.0.1"
   }


   Result:
   {
       "status": "Success",
       "coreList": [
           {
               "ipAddressList": [
                   "10.0.0.1"
               ],
               "uuid": "_DEVICE_10.0.0.1",
               "gpsLocation": {},
               "hostName": "NG03.cisco.com",
               "interfacesList": [...],
               "virtualSGs": [],
               "ndfProfiles": {},
               "ndrProfiles": {},
               "ssdProfiles": [
                   {
                       "id": 1,
                       "name": "xxx"
                   },
                   {
                       "id": 2,
                       "name": "abc"
                   },
                   {
                       "id": 3,
                       "name": "aaa"
                   },
                   {
                       "id": 4,
                       "name": "abcdef"
                   },
                   {
                       "id": 5,
                       "name": "abbbc"
                   },
                   {
                       "id": 6,
                       "name": "acde"
                   },
   ```

```
                {
                    "id": 7,
                    "name": "xxx"
                },
                {
                    "id": 9,
                    "name": null
                },
                {
                    "id": 10,
                    "name": "abcc"
                }
            ],
            "state": "ONLINE",
            "productType": "CBR-8-CCAP-CHASS",
            "swVersion": "16.10.1f",
            "vendorName": "Cisco",
            "protectedLC": -1
        }
    ]
}
```

2. Check the RPD paring details, use the **query-rpd-pairing** command.

   ```
   https://{{controller}}:{{new-port}}/rpd-service-manager/rpdorch/v2/rpd-pairing/query-rpd-pairing
   ```

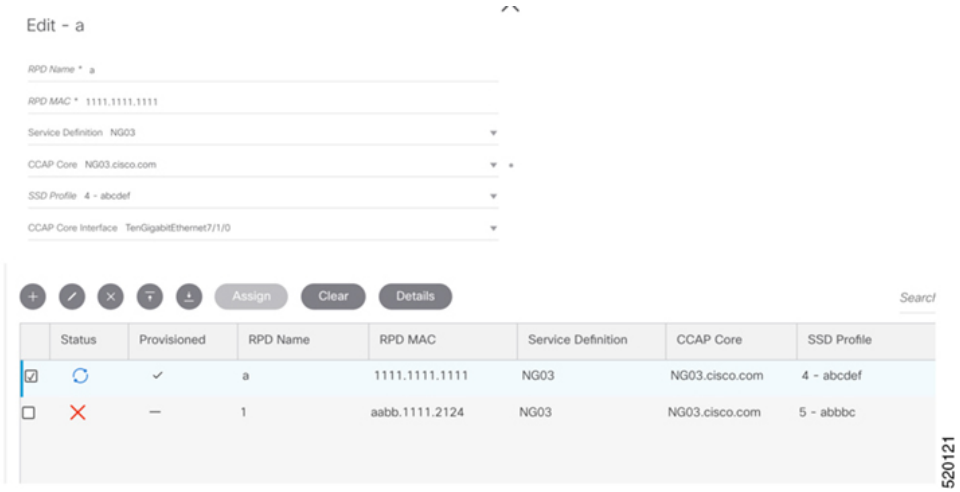
   Output:

   The value of ssdProfileId must be correct.

   ```
   Input:
   {
   }

   Result:
   {
       "status": "Success",
       "rpdPairingRspList": [
           {
               "macAddress": "aabb11112124",
               "name": "1",
               "serviceTemplate": "C02",
               "approvalState": "Approved",
               "assignedCores": [
                   {
                       "serviceType": "Data",
                       "mgmtCore": "C02.cisco.com",
                       "rpdConnectionInterface": "TenGigabitEthernet7/1/0",
                       "primaryUsPort": 1
                   }
               ],
               "pairingChangeTimestamp": 1563823890549,
               "description": "",
               "state": "ResourceAllocationError",
               "gpsLocation": {
                   "latitude": 77,
                   "longitude": 99,
                   "genericLocation": "Shanghai"
               },
               "ssdProfileId": 1
           }
       ],
       "nextFrom": null
   }
   ```

3. Verify the SSD profile ID and the image name in the **Edit** window of the RPD paring table.



4. Verify whether the RPD Details contain the SSD command.

RPD CLI

```
cable rpd a
 identifier 1111.1111.1111
 core-interface Te7/1/0
  principal
  rpd-ds 0 downstream-cable 7/0/15 profile 1
  rpd-us 0 upstream-cable 7/0/9 profile 1
 r-dti 1
 rpd-event profile 0
 ssd 4
cable fiber-node 8
 downstream Downstream-Cable 7/0/15
 downstream sg-channel 0 downstream-Cable 7/0/15 rf-channel 0
 upstream Upstream-Cable 7/0/9
 upstream sg-channel 0 upstream-Cable 7/0/9 us-channel 0
 service-group profile yuanliu2_SG
```

520118

Check SSD on Cisco cBR

Run the following command to check the SSD on the Cisco cBR router.

```
cable rpd PRPD
 identifier a0f8.496f.6506
 type shelf
 rpd-ds 0 base-power 25
 rpd-ds 1 base-power 25
 core-interface Te9/1/6
  principal
  rpd-ds 0 downstream-cable 9/0/16 profile 100
  rpd-us 0 upstream-cable 9/0/1 profile 4
 r-dti 2
 rpd-event profile 0
 ssd 1
 rpd-55d1-us-event profile 0
```

Debug SSD on Cisco cBR

Use the following command to check the upgrading state on the Cisco cBR router.

```
cable rpd xxxx.xxxx.xxxx ssd status
```

DEPI Latency Measurement in Service Template

If a Service Template is already in use, you can update only the DLM fields (Static delay, DLM sampling value, Measure Only) and the existing behavior is maintained for all other fields.

Following operations are allowed when Service Template is already in use:

- If there is no existing DLM configuration in the service template, you can add network-delay static <delay-val>, network-delay dlm <interval>, and network-delay dlm <interval><measure-only>.

If the network-delay static <delay-val> is configured in the service template, the user can modify the <delay-val> for static.

If the network-delay dlm <interval> is configured in the service template, the user can modify the dlm <interval> and <measure-only> parameters.

If the network-delay dlm <interval><measure-only> is configured in the service template, the user can modify only the dlm <interval>.

The RPD detailed information contains the DLM command.

Before you update a Service Definition, you should check whether any Cisco cBR-8 line cards are in a high availability state an active secondary line card.

The DLM configuration gets automatically applied to all RPDs assigned to the Service Definition. However, the RPD configuration is rejected if the Cisco cBR-8 line card for DOCSIS controllers is in high availability mode. In addition, because this operation might take more time, you may see a network connectivity issue.

After updating a Service Definition, you should check the RPD service manager logs for errors. To recover an RPD with a configuration rejection or error, do the following:

- If the secondary line card is active:
  1. Revert to the primary line card.
  2. Wait until the primary line card is active
- For each RPD with a configuration rejection or error:
  1. From the **RPD Assignment** page, click **Edit** for that RPD.
  2. On the **Edit** page, click **Save**.

Check New DLM Configuration on Cisco cBR

```
cable rpd <RPD Name>
 identifier a0f8.496f.6506
 type shelf
 rpd-ds 0 base-power 25
 rpd-ds 1 base-power 25
 core-interface Te9/1/6
  principal
  rpd-ds 0 downstream-cable 9/0/16 profile 100
  rpd-us 0 upstream-cable 9/0/1 profile 4
  network-delay dlm 100
 r-dti 2
 rpd-event profile 0
 ssd 1
 rpd-55d1-us-event profile 0
!
```