

Find YANG Models in Cisco IOS XR Software (cXR and eXR)

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Introduction

This document describes how to find Yet Another Next Generation (YANG) models on a router. In order to know which YANG models are supported on a particular Cisco IOS® XR release can be tedious, and from time to time new models are added or current models are changed. For reference, you can also find YANG models on github, but they might not be up to date.

Here is a link to the github repository. [github repository](#)

Find YANG Models In XR

Here is an example where you have two models that are not resolved:

```
RP/0/RSP0/CPU0:ASR9904-B#show telemetry model-driven subscription 1
```

```
Mon Apr 30 04:33:42.421 EST
```

```
Subscription: 1
```

```
-----
```

```
State:          NOT ACTIVE
```

```
Sensor groups:
```

```
Id: Memory
```

```
Sample Interval: 10000 ms
```

```
Sensor Path:      Cisco-IOS®-XR-nto-misc-oper:memory-summary/nodes/node/summary
```

```
Sensor Path State: Not Resolved
```

```
Sensor Path:      Cisco-IOS®-XR-procmem-oper:processes-memory/nodes/node/process-ids/process-id
```

```
Sensor Path State: Not Resolved
```

```
Collection Groups:
```

```
-----
```

No active collection groups

The first thing to do after going into the shell is to change directories to /pkg/yang. This is where t

The models we specified in the configuration are not resolved because the models do not exist on the ro
for instance we see that it has changed from Cisco-IOS®-XR-procmem-oper to Cisco-IOS®-XR-nto-misc-shpro
However, we should examine this file further to see if anything else has changed in the model structure
As we can see with this model the container/list process-ids/process-id has changed to job-ids/job-id.

```
RP/0/RSP0/CPU0:ASR9904-B#
```

```
RP/0/RSP0/CPU0:ASR9904-B#
```

```
RP/0/RSP0/CPU0:ASR9904-B#run
```

```
Mon Apr 30 04:34:04.911 EST
```

```
# cd /pkg/yang
```

```
# ls -l Cisco-IOS®-XR-nto-misc-oper*
```

```
ls: No such file or directory (Cisco-IOS-XR-nto-misc-oper*)
```

```
# ls -l Cisco-IOS®-XR-procmem-oper*
```

```
ls: No such file or directory (Cisco-IOS-XR-procmem-oper*)
```

```
# ls -l Cisco-IOS®-XR-nto-misc*
```

```
-rw-r--r--  2 13707      25           4320 Jun 29  2017 Cisco-IOS®-XR-nto-misc-shmem-oper-sub1.yang
```

```
-rw-r--r--  2 13707      25           1732 Jun 29  2017 Cisco-IOS®-XR-nto-misc-shmem-oper.yang
```

```
-rw-r--r--  2 13707      25           1388 Jun 29  2017 Cisco-IOS®-XR-nto-misc-shprocmem-oper-sub1.yan
```

```
-rw-r--r--  2 13707      25           1719 Jun 29  2017 Cisco-IOS®-XR-nto-misc-shprocmem-oper.yang
```

```
# ls -l Cisco-IOS®-XR*procmem*
```

```
-rw-r--r--  2 13707      25           1388 Jun 29  2017 Cisco-IOS®-XR-nto-misc-shprocmem-oper-sub1.yan
```

```
-rw-r--r--  2 13707      25           1719 Jun 29  2017 Cisco-IOS®-XR-nto-misc-shprocmem-oper.yang
```

```
#
```

```
# more Cisco-IOS®-XR-nto-misc-shprocmem-oper.yang
```

```
module Cisco-IOS®-XR-nto-misc-shprocmem-oper {
```

```
  /*** NAMESPACE / PREFIX DEFINITION ***/
```

```
  namespace "http://cisco.com/ns/yang"+
```

```
"/Cisco-IOS®-XR-nto-misc-shprocmem-oper";
```

```
prefix "nto-misc-shprocmem-oper";
```

```
/** LINKAGE (IMPORTS / INCLUDES) **/
```

```
import Cisco-IOS®-XR-types { prefix "xr"; }
```

```
include Cisco-IOS®-XR-nto-misc-shprocmem-oper-sub1 {  
    revision-date 2015-11-09;  
}
```

```
/** META INFORMATION **/
```

```
organization "Cisco Systems, Inc.";
```

```
contact
```

```
"Cisco Systems, Inc.
```

```
Customer Service
```

```
Postal: 170 West Tasman Drive
```

```
San Jose, CA 95134
```

```
Tel: +1 800 553-NETS
```

```
E-mail: cs-yang@cisco.com";
```

```
description
```

```
"This module contains a collection of YANG definitions  
for Cisco IOS®-XR nto-misc-shprocmem package operational data.
```

This module contains definitions
for the following management objects:
 processes-memory: Process statistics

Copyright (c) 2013-2016 by Cisco Systems, Inc.
All rights reserved.";

```
revision "2015-11-09" {  
    description  
        "IOS® XR 6.0 revision."  
}
```

```
container processes-memory {  
    config false;  
    description "Process statistics";
```

```
    container nodes {  
        description "List of nodes";
```

```
        list node {  
            key "node-name";  
            description "Node ID";
```

```
        container job-ids {  
            description "List of jobs";
```

```
            list job-id {  
                key "job-id";  
                description "Job Id";
```

```

        leaf job-id {
            type int32;
            description "Job Id";
        }
        uses PROCESSESMEMORY-ENTRY;
    }
}

leaf node-name {
    type xr:Node-id;
    description "Node name";
}
}
}
}
}
}
# exit

```

After you commit these changes, you can see that the two models are now resolved.

Here are also some examples which shows that a part of the sensor path can be specified and the job-ids container must be specified for Cisco-IOS®-XR-nto-misc-shprocmem-oper and not process-ids.

```
RP/0/RSP0/CPU0:ASR9904-B#show telemetry model-driven subscription 1
```

```
Tue May 1 06:33:15.986 EST
```

```
Subscription: 1
```

```
-----
```

```
State:          NOT ACTIVE
```

```
Sensor groups:
```

```
Id: Memory
```

```
Sample Interval: 10000 ms
```

```
Sensor Path:     Cisco-IOS®-XR-nto-misc-oper:memory-summary/nodes/node/summary
```

```
Sensor Path State: Not Resolved
```

```
Sensor Path:     Cisco-IOS®-XR-nto-misc-shmem-oper:memory-summary
```

```
Sensor Path State: Resolved
```

```
Sensor Path:     Cisco-IOS®-XR-nto-shmem-misc-oper:memory-summary
```

```
Sensor Path State: Not Resolved
```

```
Sensor Path:     Cisco-IOS®-XR-nto-misc-shmem-oper:memory-summary/nodes/node/summary
```

```
Sensor Path State: Resolved
```

```
Sensor Path:     Cisco-IOS®-XR-nto-misc-shprocmem-oper:processes-memory/nodes/node/process-ids
```

```
Sensor Path State: Not Resolved
```

```
Sensor Path:     Cisco-IOS®-XR-nto-misc-shprocmem-oper:processes-memory/nodes/node/job-ids/job
```

```
Sensor Path State: Resolved
```

```
Sensor Path:     Cisco-IOS®-XR-procmem-oper:processes-memory/nodes/node/process-ids/process-id
```

Sensor Path State: Not Resolved

Collection Groups:

No active collection groups

Find YANG Models in Admin Mode (eXR)

The same principals can be applied in order to find a YANG model in XR to admin mode, the only difference is the path.

The path where YANG models are located is here: **`/opt/cisco/calvados/1.00/etc/confd/yang`**