



## SNMP Components for Satellites

This chapter describes the SNMP components for Cisco ASR 9000v Satellite and Cisco NCS 5001 Satellite on Cisco ASR 9000 Series Aggregation Services Routers.

Cisco ASR 9000v Satellite supports only the operation as a satellite. It doesn't support the standalone operation. However, NCS 5001 operates on both conditions. When ASR9000 works as a host for the satellite, there's a difference about how satellite components are models by SNMP for Cisco IOS XR software of 32-bits and 64-bits. This improvement is performed on Cisco IOS XR software of 64-bits for better management capacity of satellite by host ASR9000.



**Note** Migrating from Cisco IOS XR software 32-bits to 64-bits, with Cisco ASR 9000v Satellite in place, can lead to generate an alarm. This alarm indicates that the Satellite RP is Unknown. This is an expected behaviour.

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- [Example: Satellite NCS5001, on page 3](#)

### Example: Satellite ASR9000v2

The following is an example about SNMP components for Satellite ASR9000v2 over Host ASR9000 on Cisco IOS XR software 64-bit software version.

```
Router#show version | i ^Cisco
RP/0/RSP0/CPU0:ASR9910-F#sh version | i ^Cisco
Fri May 26 16:13:25.939 UTC
Cisco IOS XR Software, Version 7.7.2
RP/0/RSP0/CPU0:ASR9910-F#
RP/0/RSP0/CPU0:ASR9910-F#
RP/0/RSP0/CPU0:ASR9910-F#
RP/0/RSP0/CPU0:ASR9910-F#sh nv satellite status satellite 101
Fri May 26 16:13:37.656 UTC
Satellite 101
-----
Status: Connected (Stable)
Type: asr9000v2
Displayed device name: sat101
MAC address: 00a7.429c.3160
IPv4 address: 10.0.101.1 (auto, VRF: **nVSatellite)
Serial Number: CAT2131U192
Remote version: Compatible (latest version)
```

## Example: Satellite ASR9000v2

```

ROMMON: 128.1 (Latest)
FPGA: 1.13 (Latest)
IOS: 772.100 (Latest)
Received candidate fabric ports:
nVFabric-GigE0/0/42-43 (permanent)
nVFabric-TenGigE0/0/44-47 (permanent)
Configured satellite fabric links:
Bundle-Ether101
-----
Status: Satellite Ready
Remote ports: GigabitEthernet0/0/0-43
Discovered satellite fabric links:
  TenGigE0/2/0/0/8: Satellite Ready; No conflict
  TenGigE0/2/0/0/9: Satellite Ready; No conflict
  TenGigE0/2/0/1/8: Satellite Ready; No conflict
  TenGigE0/2/0/1/9: Satellite Ready; No conflict
RP/0/RSP0/CPU0:ASR9910-F#sh snmp entity | i SAT101
Fri May 26 16:13:44.917 UTC
entPhysicalIndex: 847249308 entPhysicalName: SAT101/RP0
entPhysicalIndex: 847249314 entPhysicalName: SAT101/RP0-IDPROM
entPhysicalIndex: 847249597 entPhysicalName: SAT101/RP0-Control_Sensor
entPhysicalIndex: 847250107 entPhysicalName: SAT101/RP0-SFP bay 0
entPhysicalIndex: 847250108 entPhysicalName: SAT101/RP0-SFP bay 1
entPhysicalIndex: 847250109 entPhysicalName: SAT101/RP0-SFP bay 2
entPhysicalIndex: 847250110 entPhysicalName: SAT101/RP0-SFP bay 3
entPhysicalIndex: 847250111 entPhysicalName: SAT101/RP0-SFP bay 4
entPhysicalIndex: 847250112 entPhysicalName: SAT101/RP0-SFP bay 5
entPhysicalIndex: 847250113 entPhysicalName: SAT101/RP0-SFP bay 6
entPhysicalIndex: 847250114 entPhysicalName: SAT101/RP0-SFP bay 7
entPhysicalIndex: 847250115 entPhysicalName: SAT101/RP0-SFP bay 8
entPhysicalIndex: 847250116 entPhysicalName: SAT101/RP0-SFP bay 9
entPhysicalIndex: 847250117 entPhysicalName: SAT101/RP0-SFP bay 10
entPhysicalIndex: 847250118 entPhysicalName: SAT101/RP0-SFP bay 11
entPhysicalIndex: 847250119 entPhysicalName: SAT101/RP0-SFP bay 12
entPhysicalIndex: 847250120 entPhysicalName: SAT101/RP0-SFP bay 13
entPhysicalIndex: 847250121 entPhysicalName: SAT101/RP0-SFP bay 14
entPhysicalIndex: 847250122 entPhysicalName: SAT101/RP0-SFP bay 15
entPhysicalIndex: 847250123 entPhysicalName: SAT101/RP0-SFP bay 16
entPhysicalIndex: 847250124 entPhysicalName: SAT101/RP0-SFP bay 17
entPhysicalIndex: 847250125 entPhysicalName: SAT101/RP0-SFP bay 18
entPhysicalIndex: 847250126 entPhysicalName: SAT101/RP0-SFP bay 19
entPhysicalIndex: 847250127 entPhysicalName: SAT101/RP0-SFP bay 20
entPhysicalIndex: 847250128 entPhysicalName: SAT101/RP0-SFP bay 21
entPhysicalIndex: 847250129 entPhysicalName: SAT101/RP0-SFP bay 22
entPhysicalIndex: 847250130 entPhysicalName: SAT101/RP0-SFP bay 23
entPhysicalIndex: 847250131 entPhysicalName: SAT101/RP0-SFP bay 24
entPhysicalIndex: 847250132 entPhysicalName: SAT101/RP0-SFP bay 25
entPhysicalIndex: 847250133 entPhysicalName: SAT101/RP0-SFP bay 26
entPhysicalIndex: 847250134 entPhysicalName: SAT101/RP0-SFP bay 27
entPhysicalIndex: 847250135 entPhysicalName: SAT101/RP0-SFP bay 28
entPhysicalIndex: 847250136 entPhysicalName: SAT101/RP0-SFP bay 29
entPhysicalIndex: 847250137 entPhysicalName: SAT101/RP0-SFP bay 30
entPhysicalIndex: 847250138 entPhysicalName: SAT101/RP0-SFP bay 31
entPhysicalIndex: 847250139 entPhysicalName: SAT101/RP0-SFP bay 32
entPhysicalIndex: 847250140 entPhysicalName: SAT101/RP0-SFP bay 33
entPhysicalIndex: 847250141 entPhysicalName: SAT101/RP0-SFP bay 34
entPhysicalIndex: 847250142 entPhysicalName: SAT101/RP0-SFP bay 35
entPhysicalIndex: 847250143 entPhysicalName: SAT101/RP0-SFP bay 36
entPhysicalIndex: 847250144 entPhysicalName: SAT101/RP0-SFP bay 37
entPhysicalIndex: 847250145 entPhysicalName: SAT101/RP0-SFP bay 38
entPhysicalIndex: 847250146 entPhysicalName: SAT101/RP0-SFP bay 39
entPhysicalIndex: 847250147 entPhysicalName: SAT101/RP0-SFP bay 40
entPhysicalIndex: 847250148 entPhysicalName: SAT101/RP0-SFP bay 41
entPhysicalIndex: 847250149 entPhysicalName: SAT101/RP0-SFP bay 42

```

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entPhysicalIndex: 847250150 entPhysicalName: SAT101/RP0-SFP bay 43
entPhysicalIndex: 847250151 entPhysicalName: SAT101/RP0-SFP bay 44
entPhysicalIndex: 847250152 entPhysicalName: SAT101/RP0-SFP bay 45
entPhysicalIndex: 847250153 entPhysicalName: SAT101/RP0-SFP bay 46
entPhysicalIndex: 847250154 entPhysicalName: SAT101/RP0-SFP bay 47
entPhysicalIndex: 847261596 entPhysicalName: SAT101/FT0
entPhysicalIndex: 847261602 entPhysicalName: SAT101/FT0-IDPROM
entPhysicalIndex: 847262445 entPhysicalName: SAT101/FT0-fan0
entPhysicalIndex: 847262446 entPhysicalName: SAT101/FT0-fan1
entPhysicalIndex: 847262447 entPhysicalName: SAT101/FT0-fan2
entPhysicalIndex: 847262448 entPhysicalName: SAT101/FT0-fan3
entPhysicalIndex: 847262545 entPhysicalName: SAT101/FT0-fan speed sensor 0
entPhysicalIndex: 847262546 entPhysicalName: SAT101/FT0-fan speed sensor 1
entPhysicalIndex: 847262547 entPhysicalName: SAT101/FT0-fan speed sensor 2
entPhysicalIndex: 847262548 entPhysicalName: SAT101/FT0-fan speed sensor 3
entPhysicalIndex: 847273884 entPhysicalName: SAT101/PT0
entPhysicalIndex: 847273889 entPhysicalName: SAT101/PT0-IDPROM
entPhysicalIndex: 847273993 entPhysicalName: SAT101/PT0-PEM Bay 0
entPhysicalIndex: 855633820 entPhysicalName: SAT101
entPhysicalIndex: 855633825 entPhysicalName: SAT101-IDPROM
entPhysicalIndex: 855633834 entPhysicalName: SAT101-LineCard Chassis backplane
entPhysicalIndex: 855633889 entPhysicalName: SAT101-Power Module Slot 0
entPhysicalIndex: 855633904 entPhysicalName: SAT101-Fan Tray Slot 0
entPhysicalIndex: 855633909 entPhysicalName: SAT101-RouteProcessor Slot 0

```

## Example: Satellite NCS5001

The following is an example about SNMP components for Satellite NCS5001 over Host ASR9000 on Cisco IOS XR software 64-bits version.

```

Router#show version
Thu Nov 18 13:08:16.446 UTC
Cisco IOS XR Software, Version 7.1.3
Copyright (c) 2013-2020 by Cisco Systems, Inc.

Build Information:
  Built By      : gopalk2
  Built On     : Thu Nov 26 10:51:48 PST 2020
  Built Host   : iox-ucs-027
  Workspace    : /auto/srcarchive17/prod/7.1.3/asr9k-x64/ws
  Version      : 7.1.3
  Location     : /opt/cisco/XR/packages/
  Label       : 7.1.3

cisco ASR9K () processor
System uptime is 1 week 17 hours 32 minutes

RP/0/RP0/CPU0:ASR-9922-A#
RP/0/RP0/CPU0:ASR-9922-A#sh nv satellite status satellite 102
Thu Nov 18 13:08:35.012 UTC
Satellite 102
-----
  Status: Connected (Stable)
  Type: ncs5001
  Displayed device name: Sat102
  MAC address: 00bc.60eb.7ec5
  IPv4 address: 102.102.102.12 (VRF: default)
  Serial Number: FOC2234R1FA
  Remote version: Compatible (latest version)
  IOFPGA: 0.18

```

## Example: Satellite NCS5001

```

MB_MIFPGA: 0.17
BIOS: 1.13
XR: 7.1.3 (Recommended: 7.1.3)
Received candidate fabric ports:
nVFabric-TenGigE0/0/38-39 (permanent)
nVFabric-HundredGigE0/1/0-3 (permanent)
Configured satellite fabric links:
Bundle-Ether102
-----
Status: Satellite Ready
Remote ports: TenGigE0/0/0-39
Discovered satellite fabric links:
HundredGigE0/0/0/2: Satellite Ready; No conflict
HundredGigE0/0/0/0: Satellite Ready; No conflict
HundredGigE0/0/0/3: Satellite Ready; No conflict
HundredGigE0/0/0/1: Satellite Ready; No conflict

RP/0/RP0/CPU0:ASR-9922-A#
RP/0/RP0/CPU0:ASR-9922-A#
RP/0/RP0/CPU0:ASR-9922-A#sh snmp entity | i SAT102
Thu Nov 18 13:10:02.694 UTC
entPhysicalIndex: 838860701 entPhysicalName: SAT102/RP0
entPhysicalIndex: 838860707 entPhysicalName: SAT102/RP0-IDPROM
entPhysicalIndex: 838860990 entPhysicalName: SAT102/RP0-Control_Sensor
entPhysicalIndex: 838861500 entPhysicalName: SAT102/RP0-SFP bay 0
entPhysicalIndex: 838861501 entPhysicalName: SAT102/RP0-SFP bay 1
entPhysicalIndex: 838861502 entPhysicalName: SAT102/RP0-SFP bay 2
entPhysicalIndex: 838861503 entPhysicalName: SAT102/RP0-SFP bay 3
entPhysicalIndex: 838861504 entPhysicalName: SAT102/RP0-SFP bay 4
entPhysicalIndex: 838861505 entPhysicalName: SAT102/RP0-SFP bay 5
entPhysicalIndex: 838861506 entPhysicalName: SAT102/RP0-SFP bay 6
entPhysicalIndex: 838861507 entPhysicalName: SAT102/RP0-SFP bay 7
entPhysicalIndex: 838861508 entPhysicalName: SAT102/RP0-SFP bay 8
entPhysicalIndex: 838861509 entPhysicalName: SAT102/RP0-SFP bay 9
entPhysicalIndex: 838861510 entPhysicalName: SAT102/RP0-SFP bay 10
entPhysicalIndex: 838861511 entPhysicalName: SAT102/RP0-SFP bay 11
entPhysicalIndex: 838861512 entPhysicalName: SAT102/RP0-SFP bay 12
entPhysicalIndex: 838861513 entPhysicalName: SAT102/RP0-SFP bay 13
entPhysicalIndex: 838861514 entPhysicalName: SAT102/RP0-SFP bay 14
entPhysicalIndex: 838861515 entPhysicalName: SAT102/RP0-SFP bay 15
entPhysicalIndex: 838861516 entPhysicalName: SAT102/RP0-SFP bay 16
entPhysicalIndex: 838861517 entPhysicalName: SAT102/RP0-SFP bay 17
entPhysicalIndex: 838861518 entPhysicalName: SAT102/RP0-SFP bay 18
entPhysicalIndex: 838861519 entPhysicalName: SAT102/RP0-SFP bay 19
entPhysicalIndex: 838861520 entPhysicalName: SAT102/RP0-SFP bay 20
entPhysicalIndex: 838861521 entPhysicalName: SAT102/RP0-SFP bay 21
entPhysicalIndex: 838861522 entPhysicalName: SAT102/RP0-SFP bay 22
entPhysicalIndex: 838861523 entPhysicalName: SAT102/RP0-SFP bay 23
entPhysicalIndex: 838861524 entPhysicalName: SAT102/RP0-SFP bay 24
entPhysicalIndex: 838861525 entPhysicalName: SAT102/RP0-SFP bay 25
entPhysicalIndex: 838861526 entPhysicalName: SAT102/RP0-SFP bay 26
entPhysicalIndex: 838861527 entPhysicalName: SAT102/RP0-SFP bay 27
entPhysicalIndex: 838861528 entPhysicalName: SAT102/RP0-SFP bay 28
entPhysicalIndex: 838861529 entPhysicalName: SAT102/RP0-SFP bay 29
entPhysicalIndex: 838861530 entPhysicalName: SAT102/RP0-SFP bay 30
entPhysicalIndex: 838861531 entPhysicalName: SAT102/RP0-SFP bay 31
entPhysicalIndex: 838861532 entPhysicalName: SAT102/RP0-SFP bay 32
entPhysicalIndex: 838861533 entPhysicalName: SAT102/RP0-SFP bay 33
entPhysicalIndex: 838861534 entPhysicalName: SAT102/RP0-SFP bay 34
entPhysicalIndex: 838861535 entPhysicalName: SAT102/RP0-SFP bay 35
entPhysicalIndex: 838861536 entPhysicalName: SAT102/RP0-SFP bay 36
entPhysicalIndex: 838861537 entPhysicalName: SAT102/RP0-SFP bay 37
entPhysicalIndex: 838861538 entPhysicalName: SAT102/RP0-SFP bay 38
entPhysicalIndex: 838861539 entPhysicalName: SAT102/RP0-SFP bay 39

```

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entPhysicalIndex: 838861540 entPhysicalName: SAT102/RP0-SFP bay 40
entPhysicalIndex: 838861541 entPhysicalName: SAT102/RP0-SFP bay 41
entPhysicalIndex: 838863301 entPhysicalName: SAT102/RP0-CPUVCC
entPhysicalIndex: 838863302 entPhysicalName: SAT102/RP0-V3P3_BRCM
entPhysicalIndex: 838863303 entPhysicalName: SAT102/RP0-V0P8_CPU
entPhysicalIndex: 838863304 entPhysicalName: SAT102/RP0-V1P0
entPhysicalIndex: 838863305 entPhysicalName: SAT102/RP0-V1P0_PCH
entPhysicalIndex: 838863306 entPhysicalName: SAT102/RP0-V2P5VB
entPhysicalIndex: 838863307 entPhysicalName: SAT102/RP0-V1P05
entPhysicalIndex: 838863308 entPhysicalName: SAT102/RP0-V1P5_PCH
entPhysicalIndex: 838863309 entPhysicalName: SAT102/RP0-V1P5
entPhysicalIndex: 838863310 entPhysicalName: SAT102/RP0-V1P8_ZR
entPhysicalIndex: 838863311 entPhysicalName: SAT102/RP0-V1P8
entPhysicalIndex: 838863312 entPhysicalName: SAT102/RP0-V2P5
entPhysicalIndex: 838863313 entPhysicalName: SAT102/RP0-V1P2
entPhysicalIndex: 838863314 entPhysicalName: SAT102/RP0-V5P0
entPhysicalIndex: 838863315 entPhysicalName: SAT102/RP0-V1P2VA
entPhysicalIndex: 838863316 entPhysicalName: SAT102/RP0-V2P5VA
entPhysicalIndex: 838863317 entPhysicalName: SAT102/RP0-V3P3
entPhysicalIndex: 838863318 entPhysicalName: SAT102/RP0-V3P3VA
entPhysicalIndex: 838863319 entPhysicalName: SAT102/RP0-TDNT_VDD_V1P0
entPhysicalIndex: 838863320 entPhysicalName: SAT102/RP0-TDNT_AVDD_V1P0
entPhysicalIndex: 838872989 entPhysicalName: SAT102/FT0
entPhysicalIndex: 838872995 entPhysicalName: SAT102/FT0-IDPROM
entPhysicalIndex: 838873838 entPhysicalName: SAT102/FT0-fan0
entPhysicalIndex: 838873839 entPhysicalName: SAT102/FT0-fan1
entPhysicalIndex: 838873938 entPhysicalName: SAT102/FT0-fan speed sensor 0
entPhysicalIndex: 838873939 entPhysicalName: SAT102/FT0-fan speed sensor 1
entPhysicalIndex: 838877085 entPhysicalName: SAT102/FT1
entPhysicalIndex: 838877091 entPhysicalName: SAT102/FT1-IDPROM
entPhysicalIndex: 838877934 entPhysicalName: SAT102/FT1-fan0
entPhysicalIndex: 838877935 entPhysicalName: SAT102/FT1-fan1
entPhysicalIndex: 838878034 entPhysicalName: SAT102/FT1-fan speed sensor 0
entPhysicalIndex: 838878035 entPhysicalName: SAT102/FT1-fan speed sensor 1
entPhysicalIndex: 838885277 entPhysicalName: SAT102/PT0
entPhysicalIndex: 838885282 entPhysicalName: SAT102/PT0-IDPROM
entPhysicalIndex: 838885386 entPhysicalName: SAT102/PT0-PEM Bay 0
entPhysicalIndex: 838889373 entPhysicalName: SAT102/PT1
entPhysicalIndex: 838889378 entPhysicalName: SAT102/PT1-IDPROM
entPhysicalIndex: 838889482 entPhysicalName: SAT102/PT1-PEM Bay 0
entPhysicalIndex: 847245213 entPhysicalName: SAT102
entPhysicalIndex: 847245218 entPhysicalName: SAT102-IDPROM
entPhysicalIndex: 847245227 entPhysicalName: SAT102-LineCard Chassis backplane
entPhysicalIndex: 847245282 entPhysicalName: SAT102-Power Module Slot 0
entPhysicalIndex: 847245283 entPhysicalName: SAT102-Power Module Slot 1
entPhysicalIndex: 847245297 entPhysicalName: SAT102-Fan Tray Slot 0
entPhysicalIndex: 847245298 entPhysicalName: SAT102-Fan Tray Slot 1
entPhysicalIndex: 847245302 entPhysicalName: SAT102-RouteProcessor Slot 0

```

