Decode Label and OID Values for SWA and SMA

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Introduction

This document describes the steps on Object Identifiers (OIDs) within the Secure Web Appliance (SWA).

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- SWA Administration
- A fundamental understanding of networking principles
- Fundamentals of Simple Network Management Protocol (SNMP)

Cisco recommends that you have:

- A Physical or Virtual SWA Installed
- Administrative Access to the SWA Command-Line Interface (CLI)

Components Used

This document is not restricted to specific software and hardware versions.

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, ensure that you understand the potential impact of any command.

Problem

For network administrators and IT professionals working with Cisco Secure Web Appliance (SWA) and Security Management Appliance (SMA), the **snmpwalk** command is a crucial tool. This command assists in retrieving OID values, which are necessary for effective monitoring and management.

While **snmpwalk** is readily available on macOS, additional setup is required on Windows and Linux systems, which can be a barrier for some users.

To overcome this challenge, Cisco Engineers tested **snmpwalk** commands in lab environments and have provided the outputs for reference. This resource is intended to support users who face setup restrictions by offering these reference outputs, aiding in the management of their SWA and SMA environments.

OIDs play a vital role in network management, allowing for the identification and interaction with various network elements. By leveraging **snmpwalk**, users can efficiently obtain and interpret values associated with important OIDs, enhancing the monitoring and management of SWA and SMA systems. This guide explains how to use **snmpwalk** to access key OID values, which in turn boost your network management capabilities.

Solution

You can find a sequence of OID names, **snmpwalk** command syntax, and sample outputs.

SWA Sample Output

Percent CPU Utilization

```
snmpwalk -O a -v 2c -c <Community Name> -M <path to MIB files> -m "ALL" <SWA IP Address> .1.3.6.1.4.1.1
ASYNCOS-MAIL-MIB::perCentCPUUtilization.0 = INTEGER: 16
```

Percent Memory Utilization

```
snmpwalk -O a -v 2c -c <Community Name> -M <path to MIB files> -m "ALL" <SWA IP Address> .1.3.6.1.4.1.1
ASYNCOS-MAIL-MIB::perCentMemoryUtilization.0 = INTEGER: 11
```

Disk Utilization

```
snmpwalk -O a -v 2c -c <Community Name> -M <path to MIB files> -m "ALL" <SWA IP Address> .1.3.6.1.4.1.1
ASYNCOS-MAIL-MIB::diskUtilization.0 = STRING: Total_disk_space: 198.391 GB, Available_disk_space: 107.8
```

CPU Temperature

```
snmpwalk -O a -v 2c -c <Community Name> -M <path to MIB files> -m "ALL" <SWA IP Address> .1.3.6.1.4.1.1
```

Fan Table

```
snmpwalk -O a -v 2c -c <Community Name> -M <path to MIB files> -m "ALL" <SWA IP Address> .1.3.6.1.4.1.1
```

Power Supply Unit (PSU) Status

```
snmpwalk -O a -v 2c -c <Community Name> -M <path to MIB files> -m "ALL" <SWA IP Address> .1.3.6.1.4.1.9
```

Note: The output of the **1** command means PSU is not installed. **2** means PSU is healthy, **3** means no AC power, and **4** means PSU is faulty.

Interface Link Status

```
snmpwalk -O a -v 2c -c <Community Name> -M <path to MIB files> -m "ALL" <SWA IP Address> .1.3.6.1.4.1.1
```

Note: In the output of this command, **1** means the interface is up and **2** means the interface is down.

SMA Sample Output

Power Supply Unit (PSU) Status:

```
snmpwalk -O a -v 2c -c <Community Name> -M <path to MIB files> <SWA IP Address> .1.3.6.1.4.1.15497.1.1.

iso.3.6.1.4.1.15497.1.1.1.8.1.1.1 = INTEGER: 1
iso.3.6.1.4.1.15497.1.1.1.8.1.2.1 = INTEGER: 2
iso.3.6.1.4.1.15497.1.1.1.8.1.3.1 = INTEGER: 1
iso.3.6.1.4.1.15497.1.1.1.8.1.4.1 = STRING: "PS 1"
```

Note: The output of the **1** command means PSU is not installed. **2** means PSU is healthy, **3** means no AC power, and **4** means PSU is faulty.

Fan Table:

```
snmpwalk -O a -v 2c -c <Community Name> -M <path to MIB files> <SWA IP Address> .1.3.6.1.4.1.15497.1.1.

iso.3.6.1.4.1.15497.1.1.1.10.1.1.1 = INTEGER: 1
iso.3.6.1.4.1.15497.1.1.1.10.1.1.2 = INTEGER: 2
iso.3.6.1.4.1.15497.1.1.1.10.1.1.3 = INTEGER: 3
iso.3.6.1.4.1.15497.1.1.1.10.1.1.4 = INTEGER: 4
iso.3.6.1.4.1.15497.1.1.1.10.1.1.5 = INTEGER: 5
iso.3.6.1.4.1.15497.1.1.1.10.1.1.6 = INTEGER: 6
iso.3.6.1.4.1.15497.1.1.1.10.1.1.7 = INTEGER: 7
iso.3.6.1.4.1.15497.1.1.1.10.1.1.8 = INTEGER: 8
iso.3.6.1.4.1.15497.1.1.1.10.1.1.9 = INTEGER: 9
iso.3.6.1.4.1.15497.1.1.1.10.1.1.10 = INTEGER: 10
iso.3.6.1.4.1.15497.1.1.1.10.1.1.11 = INTEGER: 11
iso.3.6.1.4.1.15497.1.1.1.10.1.1.12 = INTEGER: 12
iso.3.6.1.4.1.15497.1.1.1.10.1.1.13 = INTEGER: 13
iso.3.6.1.4.1.15497.1.1.1.10.1.1.14 = INTEGER: 14
iso.3.6.1.4.1.15497.1.1.1.10.1.2.1 = Gauge32: 10500
```

```
iso.3.6.1.4.1.15497.1.1.1.10.1.2.2 = Gauge32: 10712
iso.3.6.1.4.1.15497.1.1.1.10.1.2.3 = Gauge32: 10500
iso.3.6.1.4.1.15497.1.1.1.10.1.2.4 = Gauge32: 11227
iso.3.6.1.4.1.15497.1.1.1.10.1.2.5 = Gauge32: 10500
iso.3.6.1.4.1.15497.1.1.1.10.1.2.6 = Gauge32: 11227
iso.3.6.1.4.1.15497.1.1.1.10.1.2.7 = Gauge32: 10500
iso.3.6.1.4.1.15497.1.1.1.10.1.2.8 = Gauge32: 11227
iso.3.6.1.4.1.15497.1.1.1.10.1.2.9 = Gauge32: 10080
iso.3.6.1.4.1.15497.1.1.1.10.1.2.10 = Gauge32: 10712
iso.3.6.1.4.1.15497.1.1.1.10.1.2.11 = Gauge32: 10500
iso.3.6.1.4.1.15497.1.1.1.10.1.2.12 = Gauge32: 11227
iso.3.6.1.4.1.15497.1.1.1.10.1.2.13 = Gauge32: 10500
iso.3.6.1.4.1.15497.1.1.1.10.1.2.14 = Gauge32: 10712
iso.3.6.1.4.1.15497.1.1.1.10.1.3.1 = STRING: "FAN 1"
iso.3.6.1.4.1.15497.1.1.1.10.1.3.2 = STRING: "FAN 2"
iso.3.6.1.4.1.15497.1.1.1.10.1.3.3 = STRING: "FAN 3"
iso.3.6.1.4.1.15497.1.1.1.10.1.3.4 = STRING: "FAN 4"
iso.3.6.1.4.1.15497.1.1.1.10.1.3.5 = STRING: "FAN 5"
iso.3.6.1.4.1.15497.1.1.1.10.1.3.6 = STRING: "FAN 6"
iso.3.6.1.4.1.15497.1.1.1.10.1.3.7 = STRING: "FAN 7"
iso.3.6.1.4.1.15497.1.1.1.10.1.3.8 = STRING: "FAN 8"
iso.3.6.1.4.1.15497.1.1.1.10.1.3.9 = STRING: "FAN 9"
iso.3.6.1.4.1.15497.1.1.1.10.1.3.10 = STRING: "FAN 10"
iso.3.6.1.4.1.15497.1.1.1.10.1.3.11 = STRING: "FAN 11"
iso.3.6.1.4.1.15497.1.1.1.10.1.3.12 = STRING: "FAN 12"
iso.3.6.1.4.1.15497.1.1.1.10.1.3.13 = STRING: "FAN 13"
iso.3.6.1.4.1.15497.1.1.1.10.1.3.14 = STRING: "FAN 14"
```

Percent CPU Utilization

```
snmpwalk -O a -v 2c -c <Community Name> -M <path to MIB files> <SWA IP Address> .1.3.6.1.4.1.15497.1.1.

iso.3.6.1.4.1.15497.1.1.1.2.0 = INTEGER: 0
```

Percent Memory Utilization

```
snmpwalk -O a -v 2c -c <Community Name> -M <path to MIB files> <SWA IP Address> .1.3.6.1.4.1.15497.1.1.

iso.3.6.1.4.1.15497.1.1.1.1.0 = INTEGER: 0
```

Disk Utilization

```
snmpwalk -O a -v 2c -c <Community Name> -M <path to MIB files> <SWA IP Address> .1.3.6.1.4.1.15497.1.1.

iso.3.6.1.4.1.15497.1.1.1.27.0 = STRING: "Total_disk_space: 556.391 GB, Available_disk_space: 526.995 G
```

CPU Temperature

```
snmpwalk -O a -v 2c -c <Community Name> -M <path to MIB files> <SWA IP Address> .1.3.6.1.4.1.15497.1.1.

iso.3.6.1.4.1.15497.1.1.1.9.1.2.1 = INTEGER: 35
```

Interface Link Status

```
snmpwalk -O a -v 2c -c <Community Name> -M <path to MIB files> <SWA IP Address> .1.3.6.1.2.1.2.2.1.8

iso.3.6.1.2.1.2.2.1.8.1 = INTEGER: 1
iso.3.6.1.2.1.2.2.1.8.2 = INTEGER: 2
```

Note: In the output of this command, **1** means the interface is up and **2** means the interface is down.

View OIDs

Cisco does not provide an OID list for content security appliances. You can convert the MIB file to view OID using a third-party MIB Browser Application such as **Paessler MIB Imported**. You can download a third-party application from Paessler

These are the steps to view OIDs:

1. Download the MIB browser software.
2. Import the MIB file into your application (the latest MIB files can be download from Cisco Secure Web Appliance Product Page).

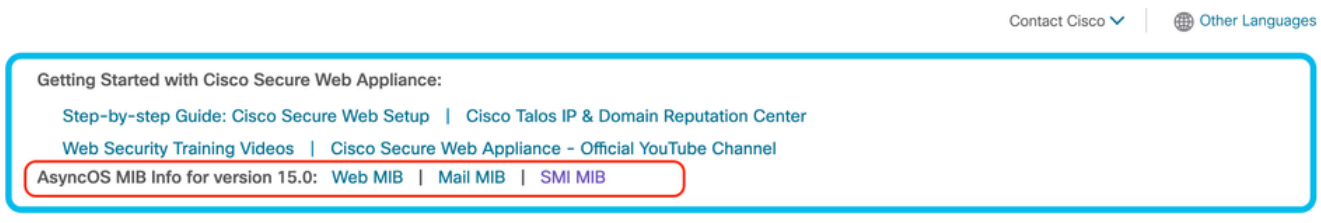


Image: Download MIB Files

3. Import The MIB File to your application.

Note: You must download and import the SMI MIB and the Web MIB.

4. You can view all OIDs defined in the MIB files.

Note: Be aware that certain OIDs, such as those related to the Fan Table and Power Supply do not return outputs in a virtual environment when the hardware component is absent. This is because these hardware components are not present in virtual appliances.

Related Information

- User Guide for AsyncOS 15.2 for Cisco Secure Web Appliance
- Configure and Troubleshoot SNMP in SWA