# SNMP Migration Script User Guide

**## Table of Contents**

**1. Overview**

**2. Prerequisites**

**3. Script Execution**

**4. Output and Reports**

**5. Troubleshooting**

# Overview

This script automates the migration of SNMP configurations from SNMPv2 to SNMPv3 on Cisco network devices. It performs configuration backups, applies changes, and generates detailed reports of the migration differences.

Please note: snmp\_server\_host.txt     # List of **SNMP server Ips concerned** / helps avoid touching other customer snmp IPs

# Prerequisites

## Required Files

**Input Files** (must be in the same directory as the script):

   Snmpv2\_v3\_project/

   ├── input\_devices.txt        # List of device IP addresses/hostnames

   ├── snmp\_server\_host.txt     # List of **SNMP server IPs concerned**

   ├── snmpv2\_remove.txt        # SNMPv2 **static** removal commands

   ├── snmpv3\_add.txt          # SNMPv3 **static** addition commands

   └── templates/               # Directory containing HTML templates

       ├── index.html.j2

       └── diff.html.j2

## Python Requirements

* **Python Version**: 3.1 or higher
* **Required Packages**:
* Bash
* Ask
* Copy
* Run
* pip install netmiko
* pip install jinja2

## Network Requirements

* SSH access to all devices
* Valid credentials with configuration privileges
* Network connectivity to all target devices

**Sample File Formats and inputs**

**input\_devices.txt**

|  |
| --- |
| 192.168.1.1  192.168.1.2  10.0.0.1 |

**snmp\_server\_host.txt**

|  |
| --- |
| 10.1.1.1  10.1.1.2 |

**snmpv2\_remove.txt**

|  |
| --- |
| no snmp-server community public RO  no snmp-server community private RW |

**snmpv3\_add.txt**

|  |
| --- |
| ip access-list standard SNMP-ACL  remark SNMP tooling  permit 155.232.11.0 0.0.0.255  snmp-server view ALL-ACCESS-VIEW iso included  snmp-server group READ-GROUP v3 priv read ALL-ACCESS-VIEW access SNMP-ACL  snmp-server user tdfdfmpv3\_sha1 READ-GROUP v3 auth sha testab323 aes 128 zydfe783 |

# Running the Script

1. Prepare the input files as described above
2. python snmpv2\_v3\_dynamic.py

## Expected input and Console Output:

SNMP Migration Script

===================

   Enter username: your\_username

   Enter password: your\_password

   Enter SNMPv3 username: snmpv3\_user

Found 3 devices to process

Processing 192.168.1.1... Success

Processing 192.168.1.2... Failed (SNMPv2)

Processing 10.0.0.1... Success

Migration Complete

Total: 3, Success: 2, Failed: 1

Report available at: index.html

## Generated Files

project/

├── snmp\_migration.log

├── backups/

│   ├── 192.168.1.1/

│   │   ├── before\_20240220\_100000.txt

│   │   ├── after\_20240220\_100000.txt

│   │   └── diff\_20240220\_100000.html

│   └── 192.168.1.2/

│       ├── before\_20240220\_100000.txt

│       ├── after\_20240220\_100000.txt

│       └── diff\_20240220\_100000.html

├── logs/

│   ├── 192.168.1.1\_20240220\_100000\_session.log

│   └── 192.168.1.2\_20240220\_100000\_session.log

└── index.html

# Reports and Logs

## 1. Complete debug level logs (snmp\_migration.log)

* snmp\_migration.log for detailed execution log
* this file also contains errors required to troubleshoot

## 2. Index HTML (index.html)

* Summary of migration results
* Links to individual device configurations
* Success/failure status for each device
* Links to detailed logs and diffs

## 3. Configuration Backups (backups/host/\*.txt)

* Before and after configurations for each device
* Stored in device-specific directories
* Timestamped files for tracking

4. Difference Reports (diff\_.html)  
***Side-by-side comparison of configurations- Color-coded changes (green for additions, red for removals)- Change summary statistics###***A screenshot of a computer

Description automatically generated A screenshot of a computer

Description automatically generated

# Troubleshoot

### Log Files

- Check snmp\_migration.log for detailed errors

- Verify HTML reports for configuration changes

### Common Issues

1. \*\*Connection Failures\*\*

- Verify network connectivity

- Check device credentials

- Ensure SSH/Telnet access

2. \*\*Permission Issues or command failures\*\*

- Verify user privileges

- Check SNMP configuration commands syntax

3. \*\*Missing Files\*\*

- Ensure all required input files exist

- Check file permissions

# Support

For additional support or bug reports, please contact: