

How to use SafeGuard Engine MIB (DGS-3600)

The Location of SafeGuard Engine OID

MIB	Root ID
P-BRIDGE-MIB	1.3.6.1.2.1.17.6
PIM-MIB	1.3.6.1.3.61
PKT-STORM-CTRL-MIB	1.3.6.1.4.1.171.12.25
PoE-MIB	1.3.6.1.4.1.171.12.24
Q-BRIDGE-MIB	1.3.6.1.2.1.17.7
RADIUS-ACC-CLIENT-MIB	1.3.6.1.2.1.67.2.2
RADIUS-AUTH-CLIENT-MIB	1.3.6.1.2.1.67.1.2
RFC1155-SMI	0
RFC-1212	None
RFC1213-MIB	1.3.6.1.2.1.1
RFC-1215	None
RIP-MGMT-MIB	1.3.6.1.4.1.171.12.32
RIPv2-MIB	1.3.6.1.2.1.23
RMON-MIB	1.3.6.1.2.1.16
RSTP-MIB	1.3.6.1.2.1.17.11
SAFEGUARD-ENGINE-MIB	1.3.6.1.4.1.171.12.19
SINGLE-IP-MIB	1.3.6.1.4.1.171.12.8
SNMP-FRAMEWORK-MIB	1.3.6.1.6.3.10
SNMP-NOTIFICATION-MIB	1.3.6.1.6.3.13
SNMP-TARGET-MIB	1.3.6.1.6.3.12
SNMP-USER-BASED-SM-MIB	1.3.6.1.6.3.15
SNMPv2-CONF	None
SNMPv2-MIB	1.3.6.1.6.3.1
SNMPv2-SMI	0
SNMPv2-TC	None

```
graph TD
    iso[iso] --> swSafeGuardMIB[swSafeGuardMIB]
    swSafeGuardMIB --> swSafeGuardGblMgmt[swSafeGuardGblMgmt]
    swSafeGuardMIB --> swSafeGuardAdminState[swSafeGuardAdminState]
    swSafeGuardMIB --> swSafeGuardctrl[swSafeGuardctrl]
    swSafeGuardMIB --> swSafeGuardNotify[swSafeGuardNotify]
    swSafeGuardMIB --> swSafeGuardNotification[swSafeGuardNotification]
    swSafeGuardctrl --> swSafeGuardRisingThreshold[swSafeGuardRisingThreshold]
    swSafeGuardctrl --> swSafeGuardFallingThreshold[swSafeGuardFallingThreshold]
    swSafeGuardctrl --> swSafeGuardmode[swSafeGuardmode]
    swSafeGuardctrl --> swSafeGuardAlarmAdminState[swSafeGuardAlarmAdminState]
    swSafeGuardctrl --> swSafeGuardCurrentStatus[swSafeGuardCurrentStatus]
    swSafeGuardNotification --> swSafeGuardNotifyPrefix[swSafeGuardNotifyPrefix]
    swSafeGuardNotification --> swSafeGuardChgToExhausted[swSafeGuardChgToExhausted]
    swSafeGuardNotification --> swSafeGuardChgToNormal[swSafeGuardChgToNormal]
    iso --> SNMPv1_Traps[SNMPv1 Traps]
    iso --> Type_Assignments[Type Assignments]
    iso --> Textual_Conventions[Textual Conventions]
    iso --> TruthValue[TruthValue]
```

MIB File: SAFEGUARD-ENGINE-MIB

OID: 1.3.6.1.4.1.171.12.19

Switch Safe Guard Global Management

Object name	swSafeGuardGblMgmt
Object ID	1.3.6.1.4.1.171.12.19.1
Module	SAFEGUARD-ENGINE-MIB
Base syntax	Object Identifier
Access	Not_Accessible
Status	Mandatory
Parent node	swSafeGuardMIB
First child	swSafeGuardAdminState

Object name	swSafeGuardAdminState
Object ID	1.3.6.1.4.1.171.12.19.1.1
Module	SAFEGUARD-ENGINE-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Write
Status	Current
Value list	1 : other(1) 2 : disabled(2) 3 : enabled(3)
Parent node	swSafeGuardGblMgmt
First child	None
Description	This object indicates the Safeguard engine state of the switch.

Show Switch SafeGuard Administrative State

```
snmpwalk -v2C -c public 10.90.90.90 1.3.6.1.4.1.171.12.19.1.1
```

Enable SafeGuard Administrative State

```
snmpset -v2C -c private 10.90.90.90 1.3.6.1.4.1.171.12.19.1.1.0 i 3
```

Disable SafeGuard Administrative State

```
snmpset -v2C -c private 10.90.90.90 1.3.6.1.4.1.171.12.19.1.1.0 i 2
```

Switch Safe Guard Control

Object name	swSafeGuardctrl
Object ID	1.3.6.1.4.1.171.12.19.2
Module	SAFEGUARD-ENGINE-MIB
Base syntax	Object Identifier
Access	Not_Accessible
Status	Mandatory
Parent node	swSafeGuardMIB
First child	swSafeGuardRisingThreshold

Object name	swSafeGuardRisingThreshold
Object ID	1.3.6.1.4.1.171.12.19.2.1
Module	SAFEGUARD-ENGINE-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Write
Status	Current
Value list	1 : 20..100
Parent node	swSafeGuardctrl
First child	None
Description	The object indicates Safeguard engine rising threshold in percentage. the range is between 20%-100%, if the CPU utilization is over the rising threshold, the switch enters exhausted mode.

Show Switch SafeGuard Rising Threshold

```
snmpwalk -v2C -c public 10.90.90.90 1.3.6.1.4.1.171.12.19.2.1
```

Set Switch SafeGuard Rising Threshold (Example Set to 30)

```
snmpset -v2C -c private 10.90.90.90 1.3.6.1.4.1.171.12.19.2.1.0 i 30
```

Object name	swSafeGuardFallingThreshold
Object ID	1.3.6.1.4.1.171.12.19.2.2
Module	SAFEGUARD-ENGINE-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Write
Status	Current
Value list	1 : 20..100
Parent node	swSafeGuardctrl
First child	None
Description	The object indicates Safeguard engine falling threshold in percentage. the range is between 20%-100%, if the CPU utilization is lower than the falling threshold, the switch enters normal mode.

Show Switch SafeGuard Falling Threshold

```
snmpwalk -v2C -c public 10.90.90.90 1.3.6.1.4.1.171.12.19.2.2
```

Set Switch SafeGuard Falling Threshold (Example Set to 30)

```
snmpset -v2C -c private 10.90.90.90 1.3.6.1.4.1.171.12.19.2.2.0 i 30
```

Object name	swSafeGuardmode
Object ID	1.3.6.1.4.1.171.12.19.2.3
Module	SAFEGUARD-ENGINE-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Write
Status	Current
Value list	1 : strict(1) 2 : fuzzy(2)
Parent node	swSafeGuardctrl
First child	None
Description	determine the controlling method of broadcast traffic. Here are two modes (strict and fuzzy). In strict, the Switch will stop receiving all 'ARP not to me' packets (the protocol address of target in ARP packet is the Switch itself). That means no matter what reasons cause the high CPU utilization (may not caused by ARP storm), the Switch reluctantly processes any 'ARP not to me' packets in exhausted mode. In fuzzy mode, the Switch will adjust the bandwidth dynamically depend on some reasonable algorithm.

Show Switch SafeGuard mode

```
snmpwalk -v2C -c public 10.90.90.90 1.3.6.1.4.1.171.12.19.2.3
```

Set Switch SafeGuard mode (Example Set to Strict)

```
snmpset -v2C -c private 10.90.90.90 1.3.6.1.4.1.171.12.19.2.3.0 i 1
```

Object name	swSafeGuardAlarmAdminState
Object ID	1.3.6.1.4.1.171.12.19.2.4
Module	SAFEGUARD-ENGINE-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Write
Status	Current
Value list	1 : other(1) 2 : disabled(2) 3 : enabled(3)
Parent node	swSafeGuardctrl
First child	None
Description	This object indicates the state of Safeguard engine related trap/log mechanism (enable or disable). If set to enable, trap and log will be active while Safeguard engine current mode changed. If set to disable, current mode change will not trigger trap and log events.

Show Switch SafeGuard Alarm Administrative State

```
snmpwalk -v2C -c public 10.90.90.90 1.3.6.1.4.1.171.12.19.2.4
```

Enable SafeGuard Alarm Administrative State

```
snmpset -v2C -c private 10.90.90.90 1.3.6.1.4.1.171.12.19.2.4.0 i 3
```

Disable SafeGuard Alarm Administrative State

```
snmpset -v2C -c private 10.90.90.90 1.3.6.1.4.1.171.12.19.2.4.0 i 2
```

Object name	swSafeGuardCurrentStatus
Object ID	1.3.6.1.4.1.171.12.19.2.5
Module	SAFEGUARD-ENGINE-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Only
Status	Current
Value list	1 : normal(1) 2 : exhausted(2)
Parent node	swSafeGuardctrl
First child	None
Description	This object indicates current operation mode of Safeguard engine

Show Switch SafeGuard Current State

```
snmpwalk -v2C -c public 10.90.90.90 1.3.6.1.4.1.171.12.19.2.5
```