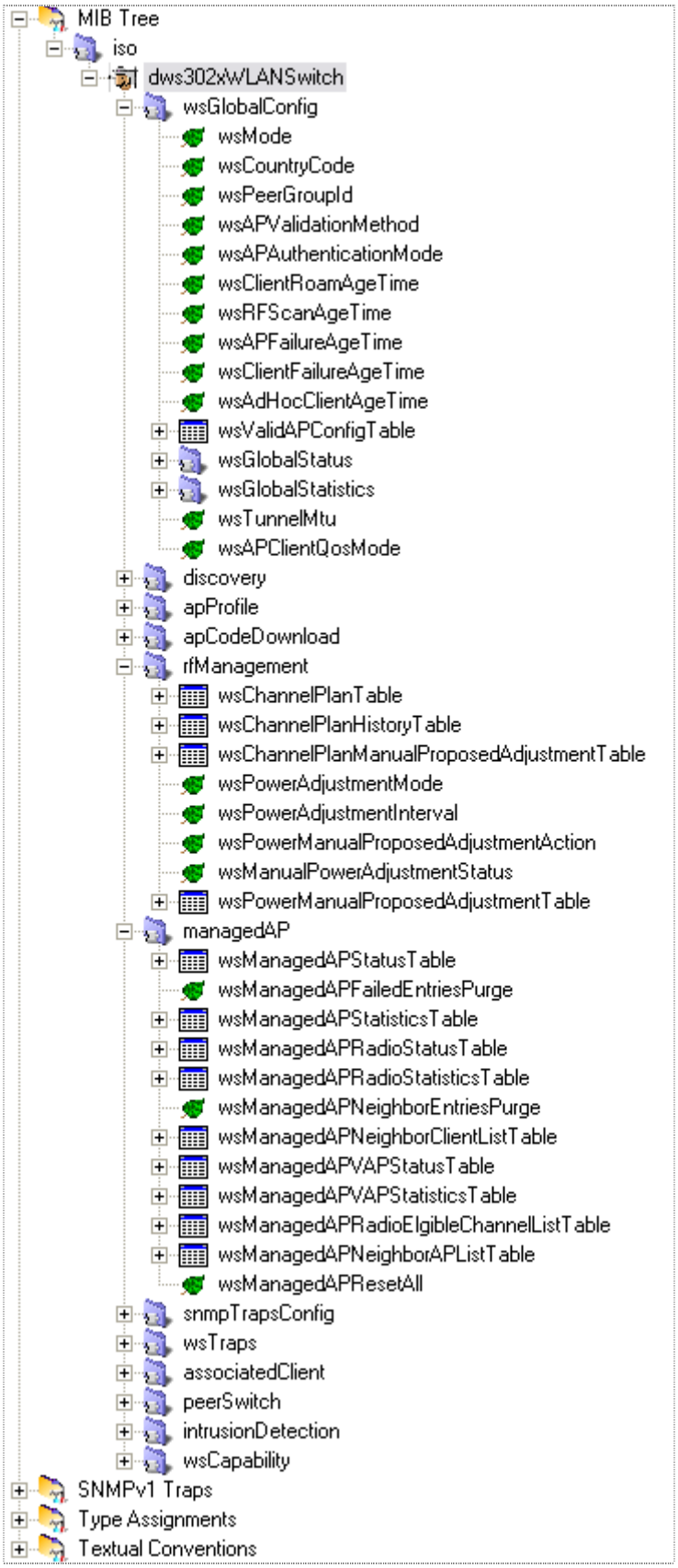
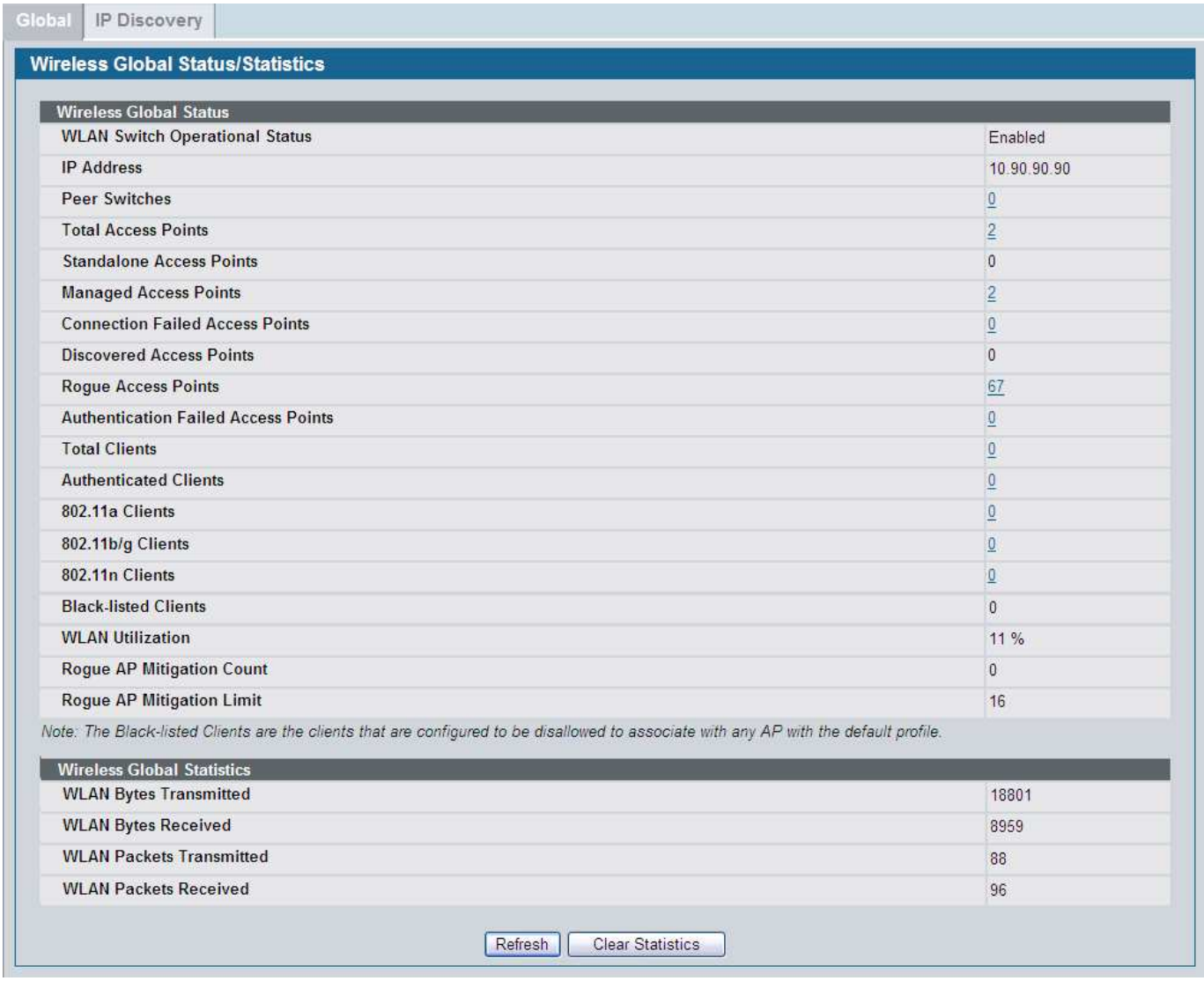
How to use SNMP to query some WLAN information on DWS-302x series

MIB: dlinkwlan.mib



There are many Objects in dlinkwlan.mib, here just provide some examples of “Wireless Global Status/Statistic”:



1) Wireless Global Status

- WLAN Switch Operational Status

Object name	wsOperationalStatus
Object ID	1.3.6.1.4.1.171.10.73.30.1.12.2
Module	DWS302X-WLAN-SWITCH-MIB
Base syntax	Integer
Composed syntax	INTEGER
Access	Read-Only
Status	Current
Value list	1 : enabled(1) 2 : enable-pending(2) 3 : disabled(3) 4 : disable-pending(4)
Parent node	wsGlobalStatus
First child	None
Description	Indicates the current operating status of the wireless system.

SNMP Command:

snmpwalk -v2c -c public 10.90.90.90 1.3.6.1.4.1.171.10.73.30.1.12.2

```
C:\>snmpwalk -v2c -c public 10.90.90.90 1.3.6.1.4.1.171.10.73.30.1.12.2
SNMPv2-SMI::enterprises.171.10.73.30.1.12.2.0 = INTEGER: 1
```

- IP Address

Object name	wsIPAddress
Object ID	1.3.6.1.4.1.171.10.73.30.1.12.1
Module	DWS302X-WLAN-SWITCH-MIB
Base syntax	IP Address
Composed syntax	IpAddress
Access	Read-Only
Status	Current
Parent node	wsGlobalStatus
First child	None
Description	This object represents wireless switch IP address. When wireless mode is in disabled state, the value of switch IP address is zero.

SNMP Command:

snmpwalk -v2c -c public 10.90.90.90 1.3.6.1.4.1.171.10.73.30.1.12.1

```
C:\>snmpwalk -v2c -c public 10.90.90.90 1.3.6.1.4.1.171.10.73.30.1.12.1
SNMPv2-SMI::enterprises.171.10.73.30.1.12.1.0 = IpAddress: 10.90.90.90
```

- Peer Switches

Object name	wsTotalPeerSwitches
Object ID	1.3.6.1.4.1.171.10.73.30.1.12.4
Module	DWS302X-WLAN-SWITCH-MIB
Base syntax	Integer
Composed syntax	Integer32
Access	Read-Only
Status	Current
Value list	1 : 0..4
Parent node	wsGlobalStatus
First child	None
Description	Total number of peer switches detected on the network.

- Total Access Points

Object name	wsTotalAPs
Object ID	1.3.6.1.4.1.171.10.73.30.1.12.5
Module	DWS302X-WLAN-SWITCH-MIB
Base syntax	Gauge
Composed syntax	Unsigned32
Access	Read-Only
Status	Current
Parent node	wsGlobalStatus
First child	None
Description	Sum of all the WS managed APs, connection failed APs, and discovered APs in the database.

- Standalone Access Points

Object name	wsTotalStandaloneAPs
Object ID	1.3.6.1.4.1.171.10.73.30.1.12.7
Module	DWS302X-WLAN-SWITCH-MIB
Base syntax	Gauge
Composed syntax	Unsigned32
Access	Read-Only
Status	Current
Parent node	wsGlobalStatus
First child	None
Description	Total number of trusted AP's in the standalone mode.

- Managed Access Points

Object name	wsTotalManagedAPs
Object ID	1.3.6.1.4.1.171.10.73.30.1.12.6
Module	DWS302X-WLAN-SWITCH-MIB
Base syntax	Integer
Composed syntax	Integer32
Access	Read-Only
Status	Current
Value list	1 : 0..48
Parent node	wsGlobalStatus
First child	None
Description	Total number of WS managed APs currently authenticated to the switch.

- Connection Failed Access Points

Object name	wsTotalConnectionFailedAPs
Object ID	1.3.6.1.4.1.171.10.73.30.1.12.9
Module	DWS302X-WLAN-SWITCH-MIB
Base syntax	Gauge
Composed syntax	Unsigned32
Access	Read-Only
Status	Current
Parent node	wsGlobalStatus
First child	None
Description	Number of APs that were previously authenticated and managed, but currently do not have connection with the switch.

- Discovered Access Points

Object name	wsTotalDiscoveredAPs
Object ID	1.3.6.1.4.1.171.10.73.30.1.12.8
Module	DWS302X-WLAN-SWITCH-MIB
Base syntax	Gauge
Composed syntax	Unsigned32
Access	Read-Only
Status	Current
Parent node	wsGlobalStatus
First child	None
Description	Number of APs that are connected to the switch, but are not completely configured.

- Rogue Access Points

Object name	wsTotalRogueAPs
Object ID	1.3.6.1.4.1.171.10.73.30.1.12.10
Module	DWS302X-WLAN-SWITCH-MIB
Base syntax	Gauge
Composed syntax	Unsigned32
Access	Read-Only
Status	Current
Parent node	wsGlobalStatus
First child	None
Description	Total number of Rogue APs detected on the WLAN.

- Authentication Failed Access Points

Object name	wsTotalAuthenticationFailedAPs
Object ID	1.3.6.1.4.1.171.10.73.30.1.12.14
Module	DWS302X-WLAN-SWITCH-MIB
Base syntax	Gauge
Composed syntax	Unsigned32
Access	Read-Only
Status	Current
Parent node	wsGlobalStatus
First child	None
Description	Number of access points that failed to authenticate with the Unified Switch.

- Total Clients

Object name	wsTotalClients
Object ID	1.3.6.1.4.1.171.10.73.30.1.12.11
Module	DWS302X-WLAN-SWITCH-MIB
Base syntax	Gauge
Composed syntax	Unsigned32
Access	Read-Only
Status	Current
Parent node	wsGlobalStatus
First child	None
Description	Total number of clients present in the network.

- Authenticated Clients

Object name	wsTotalAuthenticatedClients
Object ID	1.3.6.1.4.1.171.10.73.30.1.12.12
Module	DWS302X-WLAN-SWITCH-MIB
Base syntax	Gauge
Composed syntax	Unsigned32
Access	Read-Only
Status	Current
Parent node	wsGlobalStatus
First child	None
Description	Total number of authenticated clients across all APs managed by the switch.

- 802.11a Clients

Object name	wsTotal11aClients
Object ID	1.3.6.1.4.1.171.10.73.30.1.12.15
Module	DWS302X-WLAN-SWITCH-MIB
Base syntax	Gauge
Composed syntax	Unsigned32
Access	Read-Only
Status	Current
Parent node	wsGlobalStatus
First child	None
Description	Total number of 802.11a clients including 'Atheros Dynamic Turbo A' clients if any.

- 802.11b/g Clients

Object name	wsTotal11bgClients
Object ID	1.3.6.1.4.1.171.10.73.30.1.12.16
Module	DWS302X-WLAN-SWITCH-MIB
Base syntax	Gauge
Composed syntax	Unsigned32
Access	Read-Only
Status	Current
Parent node	wsGlobalStatus
First child	None
Description	Total number of 802.11b/g clients including 'Atheros Dynamic Turbo G' clients if any.

- 802.11n Clients

Object name	wsTotal11nClients
Object ID	1.3.6.1.4.1.171.10.73.30.1.12.17
Module	DWS302X-WLAN-SWITCH-MIB
Base syntax	Gauge
Composed syntax	Unsigned32
Access	Read-Only
Status	Current
Parent node	wsGlobalStatus
First child	None
Description	Total number of 802.11n clients that include 802.11an, 802.11bgn, 2.4GHz 802.11n and 5GHz 802.11n clients.

- WLAN Utilization

Object name	wsWLANUtilization
Object ID	1.3.6.1.4.1.171.10.73.30.1.12.13
Module	DWS302X-WLAN-SWITCH-MIB
Base syntax	Integer
Composed syntax	Integer32
Access	Read-Only
Status	Current
Value list	1 : 0..100
Parent node	wsGlobalStatus
First child	None
Description	Total network utilization across all APs managed by this switch. This is based on global statistics.

SNMP Command:

snmpwalk -v2c -c public 10.90.90.90 1.3.6.1.4.1.171.10.73.30.1.12.13

```
C:\>snmpwalk -v2c -c public 10.90.90.90 1.3.6.1.4.1.171.10.73.30.1.12.13
SNMPv2-SMI::enterprises.171.10.73.30.1.12.13.0 = INTEGER: 11
```

2) Wireless Global Statistics

- WLAN Bytes Transmitted

Object name	wsTotalWLANBytesTransmitted
Object ID	1.3.6.1.4.1.171.10.73.30.1.13.1
Module	DWS302X-WLAN-SWITCH-MIB
Base syntax	Counter64
Composed syntax	Counter64
Access	Read-Only
Status	Current
Parent node	wsGlobalStatistics
First child	None
Description	Total bytes transmitted across all APs managed by this switch.

SNMP Command: # snmpwalk -v2c -c public 10.90.90.90 1.3.6.1.4.1.171.10.73.30.1.13.1

```
C:\>snmpwalk -v2c -c public 10.90.90.90 1.3.6.1.4.1.171.10.73.30.1.13.1
SNMPv2-SMI::enterprises.171.10.73.30.1.13.1.0 = Counter64: 18801
```

- WLAN Bytes Received

Object name	wsTotalWLANBytesRecvd
Object ID	1.3.6.1.4.1.171.10.73.30.1.13.2
Module	DWS302X-WLAN-SWITCH-MIB
Base syntax	Counter64
Composed syntax	Counter64
Access	Read-Only
Status	Current
Parent node	wsGlobalStatistics
First child	None
Description	Total bytes received across all APs managed by by this switch.

SNMP Command: # snmpwalk -v2c -c public 10.90.90.90 1.3.6.1.4.1.171.10.73.30.1.13.2

```
C:\>snmpwalk -v2c -c public 10.90.90.90 1.3.6.1.4.1.171.10.73.30.1.13.2
SNMPv2-SMI::enterprises.171.10.73.30.1.13.2.0 = Counter64: 8959
```

- WLAN Packets Transmitted

Object name	wsTotalWLANPktsTransmitted
Object ID	1.3.6.1.4.1.171.10.73.30.1.13.3
Module	DWS302X-WLAN-SWITCH-MIB
Base syntax	Counter64
Composed syntax	Counter64
Access	Read-Only
Status	Current
Parent node	wsGlobalStatistics
First child	None
Description	Total packets transmitted across all APs managed by this switch.

SNMP Command: # snmpwalk -v2c -c public 10.90.90.90 1.3.6.1.4.1.171.10.73.30.1.13.3

```
C:\>snmpwalk -v2c -c public 10.90.90.90 1.3.6.1.4.1.171.10.73.30.1.13.3
SNMPv2-SMI::enterprises.171.10.73.30.1.13.3.0 = Counter64: 88
```

- WLAN Packets Received

Object name	wsTotalWLANPktsRecvd
Object ID	1.3.6.1.4.1.171.10.73.30.1.13.4
Module	DWS302X-WLAN-SWITCH-MIB
Base syntax	Counter64
Composed syntax	Counter64
Access	Read-Only
Status	Current
Parent node	wsGlobalStatistics
First child	None
Description	Total packets received across all APs managed by this switch.

SNMP Command: # snmpwalk -v2c -c public 10.90.90.90 1.3.6.1.4.1.171.10.73.30.1.13.4

```
C:\>snmpwalk -v2c -c public 10.90.90.90 1.3.6.1.4.1.171.10.73.30.1.13.4
SNMPv2-SMI::enterprises.171.10.73.30.1.13.4.0 = Counter64: 96
```