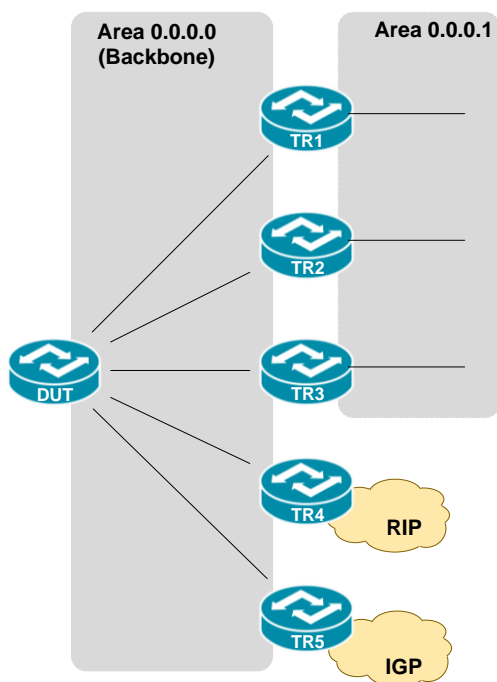# How to use SNMP to get OSPF Autonomous Border Router Count

Created at 2011/05/31

Introduction

Simple Network Management Protocol (SNMP) is a widely used protocol for monitoring the health and welfare of network equipment.

Topology

There are two OSPF area (0.0.0.0 and 0.0.0.1) in this topology.

OID

ospfAsBdrRtrCount

Name: ospfAsBdrRtrCount
Type: OBJECT-TYPE
OID: 1.3.6.1.2.1.14.2.1.6
Full path: iso(1).org(3).dod(6).internet(1).mgmt(2).mib-2(1).ospf(14).ospfAreaTable(2).ospfAreaEntry(1).ospfAsBdrRtrCount(6)
Module: OSPF-MIB

Parent: ospfAreaEntry
Prev sibling: ospfAreaBdrRtrCount
Next sibling: ospfAreaLsaCount

Numerical syntax: Gauge (32 bit)
Base syntax: Gauge32
Composed syntax: Gauge32
Status: current
Max access: read-only

Description: The total number of Autonomous System border
                  routers reachable within this area. This is
                  initially zero, and is calculated in each SPF
                  Pass.

Step-by-Step

I.   SNMP Command

● Blue color is OSPF area ID

snmpget -v 2c -c private <DUT IP> 1.3.6.1.2.1.14.2.1.6.0.0.0.0

II.   Result

```
C:\>snmpget -v 2c -c private -m ALL 10.90.90.91 1.3.6.1.2.1.14.2.1.6.0.0.0.0
OSPF-MIB::ospfAsBdrRtrCount.0.0.0.0 = Gauge32: 2
```

As Topology, there are two AS Border Router TR4, TR5 which attach to different IGP domain.

● OSPF area status on device

```
DGS-3627:admin#show ospf area 0.0.0.0
Command: show ospf area 0.0.0.0

Area ID: 0.0.0.0                         Area Type: Normal

SPF algorithm runs for area 0.0.0.0: 19 times
Number of LSA in this area: 20           Checksum Sum: 0xA46F5
Number of ABR in this area: 3            Number of ASBR in this area: 2

Total Entries : 1
```

Reference

- This example is made by DGS-3600 series in firmware R 2.80.B61.
- SNMP Tools is Net-SNMP.