

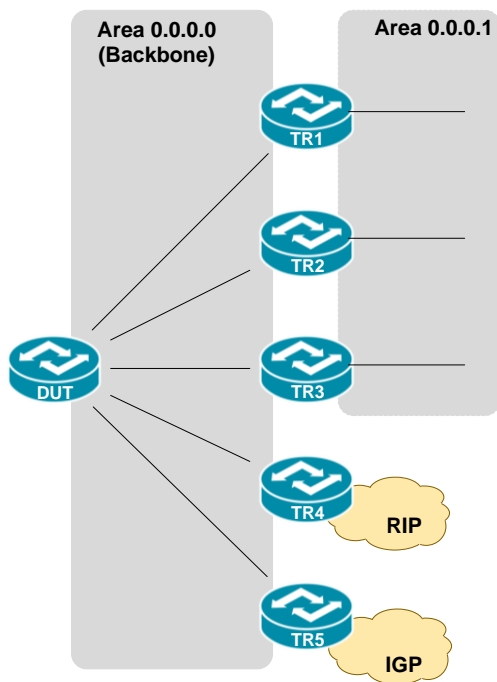
How to use SNMP to get OSPF Area Border Router Count

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

ospfAreaBdrRtrCount

Name: ospfAreaBdrRtrCount
Type: OBJECT-TYPE
OID: 1.3.6.1.2.1.14.2.1.5
Full path: iso(1).org(3).dod(6).internet(1).mgmt(2).mib-2(1).ospf(14).ospfAreaTable(2).ospfAreaEntry(1).ospfAreaBdrRtrCount(5)
Module: OSPF-MIB

Parent: ospfAreaEntry
Prev sibling: ospfSpfRuns
Next sibling: ospfAsBdrRtrCount

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

Description: The total number of area 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> 1.3.6.1.2.1.14.2.1.5.0.0.0.0
```

II. Result

```
C:\>snmpget -v 2c -c private -m ALL 10.90.90.91 1.3.6.1.2.1.14.2.1.5.0.0.0.0  
OSPF-MIB::ospfAreaBdrRtrCount.0.0.0.0 = Gauge32: 3
```

As Topology, there are three Area Border Router TR1, TR2, TR3 which attach to another area.

- 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.