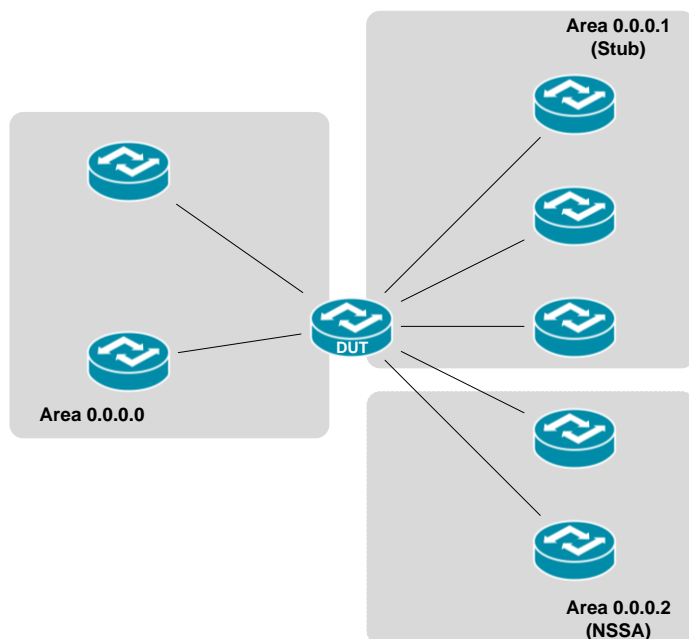# How to use SNMP to get OSPF Area support for importing AS External

Created at 2011/05/30

Introduction

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

Topology

There are three different OSPF areas in this topology, which support different importing external route capability. If AS-external-LSAs are excluded from the area, the area is called a "stub". Similarly if an area support "not-so-stubby" area (or NSSA) has the additional capability of importing AS external routes in a limited fashion.

OID

Name: ospfImportAsExtern
Type: OBJECT-TYPE
OID: 1.3.6.1.2.1.14.2.1.3
Full path: iso(1).org(3).dod(6).internet(1).mgmt(2).mib-2(1).ospf(14).ospfAreaTable(2).ospfAreaEntry(1).ospfImportAsExtern(3)
Module: OSPF-MIB

Parent: ospfAreaEntry
Prev sibling: ospfAuthType
Next sibling: ospfSpfRuns

Numerical syntax: Integer (32 bit)
Base syntax: INTEGER
Composed syntax: INTEGER
Status: current
Max access: read-create
Value list: 1: importExternal(1)
2: importNoExternal(2)
3: importNssa(3)
Default values: 1: importExternal (name)

Reference: OSPF Version 2, Appendix C.2 Area parameters

Description: The area's support for importing AS external link- state advertisements.

Step-by-Step

I.   SNMP Command

snmpwalk -v 2c -c private <DUT IP> 1.3.6.1.2.1.14.2.1.3

II.   Result

We can see the DUT attach to three areas. Area **0.0.0.0** is backbone area supporting importing AS external LSA. Area **0.0.0.1** is a stub area which not allow external route. Area **0.0.0.2** is NSSA which allow importing AS external routes in a limited fashion.

Reference

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