

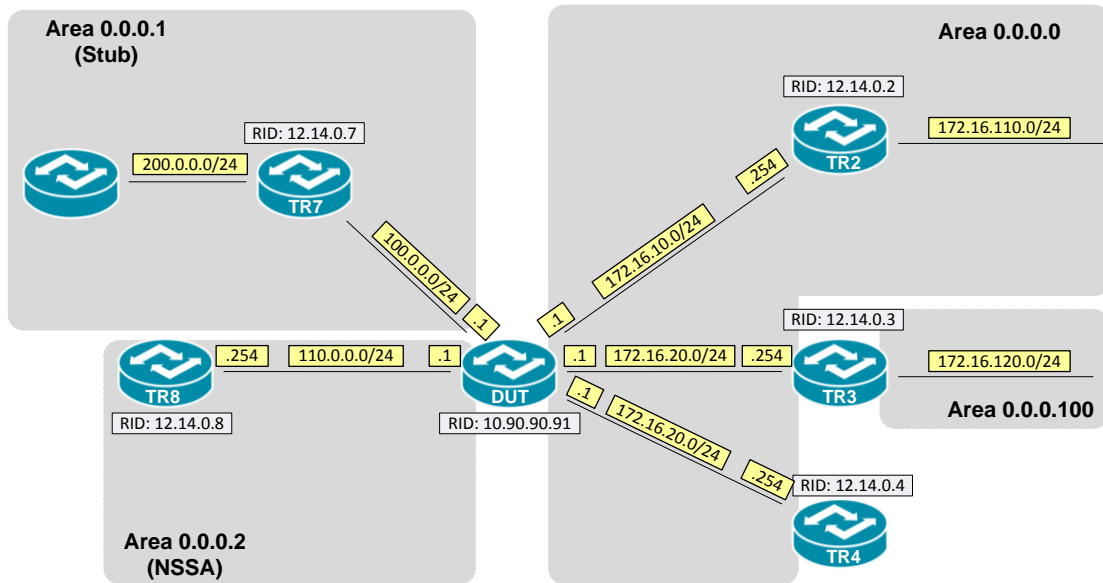
# How to use SNMP to get the entire OSPF Link State Advertisement

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



# OID

## ospfLsdbAdvertisement

Name: ospfLsdbAdvertisement  
Type: OBJECT-TYPE  
OID: 1.3.6.1.2.1.14.4.1.8  
Full path: iso(1).org(3).dod(6).internet(1).mgmt(2).mib-2(1).ospf(1.4).ospfLsdbTable(4).ospfLsdbEntry(1).ospfLsdbAdvertisement(8)  
Module: OSPF-MIB

Parent: ospfLsdbEntry  
Prev sibling: ospfLsdbChecksum

Numerical syntax: Octets  
Base syntax: OCTET STRING  
Composed syntax: OCTET STRING  
Status: current  
Max access: read-only  
Size list: 1:1..65535

Reference: [OSPF Version 2, Section 12 Link State Advertisements](#)

Description: [The entire Link State Advertisement, including its header.](#)

## Step-by-Step

### I. SNMP Command

```
snmpwalk -v 2c -c private <DUT IP> 1.3.6.1.2.1.14.4.1.8.<Area ID>
```

## II. Result

```
C:\>snmpwalk -v 2c -c private -m ALL 192.168.1.91 1.3.6.1.2.1.14.4.1.8.0.0.0
OSPF-MIB::ospfLsdbAdvertisement.0.0.0.routerLink.10.90.90.91.10.90.90.91 = Hex-STRING:
 00 00 02 01 0A 5A 5A 5B 0A 5A 5A 5B 80 00 00 33
40 A0 00 3C 01 00 00 03 AC 10 1E 01 AC 10 1E 01
02 00 00 01 AC 10 14 01 AC 10 14 01 02 00 00 01
AC 10 0A 01 AC 10 0A 01 02 00 00 01
OSPF-MIB::ospfLsdbAdvertisement.0.0.0.routerLink.12.14.0.2.12.14.0.2 = Hex-STRING: 00
01 00 01 0C 0E 00 02 0C 0E 00 02 80 00 00 2D
68 97 00 30 00 00 00 02 AC 10 0A 01 AC 10 0A FE
02 00 00 0A AC 10 6E 00 FF FF FF 00 03 00 00 1F
OSPF-MIB::ospfLsdbAdvertisement.0.0.0.routerLink.12.14.0.3.12.14.0.3 = Hex-STRING: 00
01 00 01 0C 0E 00 03 0C 0E 00 03 80 00 00 2E
FF 42 00 24 01 00 00 01 AC 10 14 01 AC 10 14 FE
02 00 00 0A
OSPF-MIB::ospfLsdbAdvertisement.0.0.0.routerLink.12.14.0.4.12.14.0.4 = Hex-STRING: 00
01 00 01 0C 0E 00 04 0C 0E 00 04 80 00 00 2F
CD 5C 00 24 02 00 00 01 AC 10 1E 01 AC 10 1E FE
02 00 00 0A
OSPF-MIB::ospfLsdbAdvertisement.0.0.0.networkLink.172.16.10.1.10.90.90.91 = Hex-STRING
: 00 00 02 02 AC 10 0A 01 0A 5A 5A 5B 80 00 00 0D
C2 73 00 20 FF FF FF 00 0A 5A 5A 5B 0C 0E 00 02
OSPF-MIB::ospfLsdbAdvertisement.0.0.0.networkLink.172.16.20.1.10.90.90.91 = Hex-STRING
: 00 00 02 02 AC 10 14 01 0A 5A 5A 5B 80 00 00 0D
62 C8 00 20 FF FF FF 00 0A 5A 5A 5B 0C 0E 00 03
OSPF-MIB::ospfLsdbAdvertisement.0.0.0.networkLink.172.16.30.1.10.90.90.91 = Hex-STRING
: 00 00 02 02 AC 10 1E 01 0A 5A 5A 5B 80 00 00 0D
02 1E 00 20 FF FF FF 00 0A 5A 5A 5B 0C 0E 00 04
```

- OSPF Link-State database of Router LSA in Backbone area

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

Area ID: 0.0.0.0                LS Type: Router Link
Link State ID: 10.90.90.91/0    Advertising Router: 10.90.90.91
Link State Age: 1412
Checksum: 0x429F                LS Sequence Number: 0x80000032

Area ID: 0.0.0.0                LS Type: Router Link
Link State ID: 12.14.0.2/0      Advertising Router: 12.14.0.2
Link State Age: 779
Checksum: 0x6897                LS Sequence Number: 0x8000002D

Area ID: 0.0.0.0                LS Type: Router Link
Link State ID: 12.14.0.3/0      Advertising Router: 12.14.0.3
Link State Age: 659
Checksum: 0xFF42                LS Sequence Number: 0x8000002E

Area ID: 0.0.0.0                LS Type: Router Link
Link State ID: 12.14.0.4/0      Advertising Router: 12.14.0.4
Link State Age: 659
Checksum: 0xCD5C                LS Sequence Number: 0x8000002F

Total Entries: 4
```

## Reference

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