How to create Policy Route via NetSNMP on DGS-3600 series?

 # Basic Concept

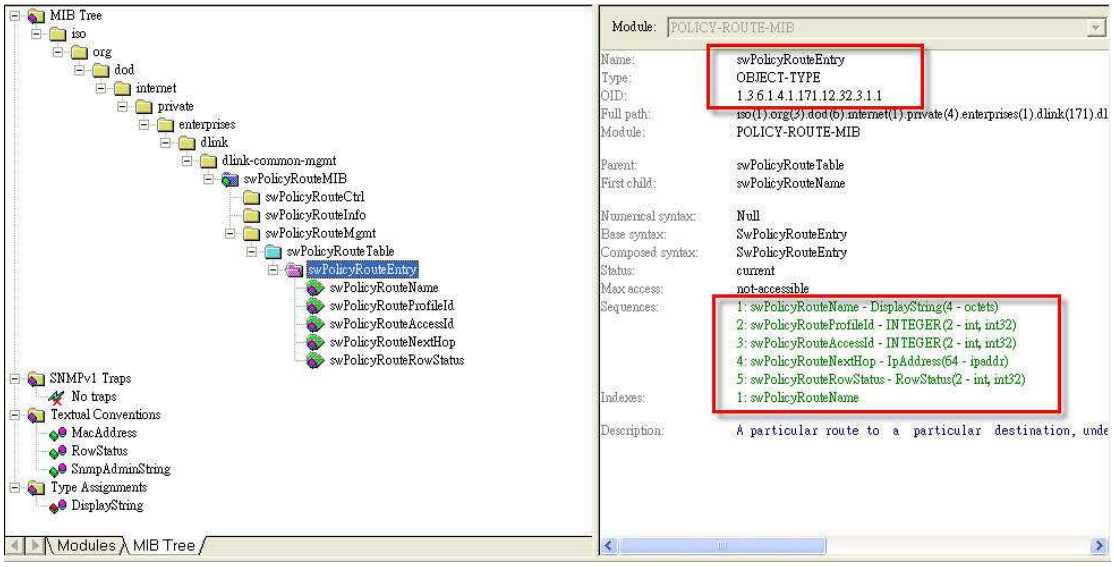
Policy Based routing is a method used by the Switch to give specified devices a cleaner path to the Internet. Used in conjunction with the Access Profile feature, the Switch will identify traffic originating from a specified IP address and forward it on to a next hop router that has a less congested connection to the Internet than the normal routing scheme of your network.

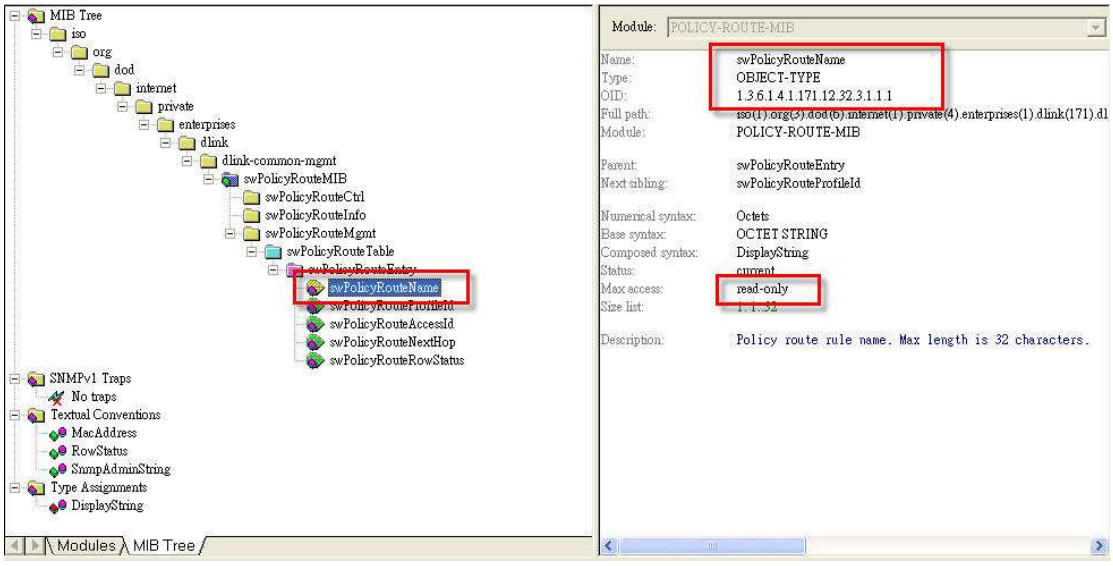
The steps needed to set up policy-based routing on the switch are as follows:

1. Create an access profile using the **create access_profile** command which specifies information that will identify the device to be given a policy route.
2. Modify the rule regarding this access profile using the **config access_profile** command. (Remember not to add the deny parameter to this rule, or packets will be dropped and the policy route will not take effect.)
3. Name the policy route to be used by configuring the **create policy_route** command.
4. Bind the access profile (profile_id) and its rule (access_id) to this policy route using the **config policy_route** command. This command must also to be used to add the next hop IP address of the device that will be connected directly to the gateway router. When the time is ready to deploy the policy route, the administrator must enable this function here as well (state [enable | disable]).

 # MIB file

The OIDs of “Policy_Route” are defined in the “POLICY-ROUTE-MIB”, please refer to the following.


MIB Tree
iso
org
dod
internet
private
enterprises
dlink
dlink-common-mgmt
swPolicyRouteMIB
swPolicyRouteCtrl
swPolicyRouteInfo
swPolicyRouteMgmt
swPolicyRouteTable
swPolicyRouteEntry
swPolicyRouteName
swPolicyRouteProfileId
swPolicyRouteAccessId
swPolicyRouteNextHop
swPolicyRouteRowStatus
SNMPv1 Traps
No traps
Textual Conventions
MacAddress
RowStatus
SnmpAdminString
Type Assignments
DisplayString
Modules
MIB Tree
Module: POLICY-ROUTE-MIB
Name: swPolicyRouteEntry
Type: OBJECT-TYPE
OID: 1.3.6.1.4.1.171.12.32.3.1.1
Full path: iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).dlink(171).dl
Module: POLICY-ROUTE-MIB
Parent: swPolicyRouteTable
First child: swPolicyRouteName
Numerical syntax: Null
Base syntax: SwPolicyRouteEntry
Composed syntax: SwPolicyRouteEntry
Status: current
Max access: not-accessible
Sequences: 1: swPolicyRouteName - DisplayString(4 - octets)
2: swPolicyRouteProfileId - INTEGER(2 - int, int32)
3: swPolicyRouteAccessId - INTEGER(2 - int, int32)
4: swPolicyRouteNextHop - IpAddress(64 - ipaddr)
5: swPolicyRouteRowStatus - RowStatus(2 - int, int32)
Indexes: 1: swPolicyRouteName
Description: A particular route to a particular destination, unde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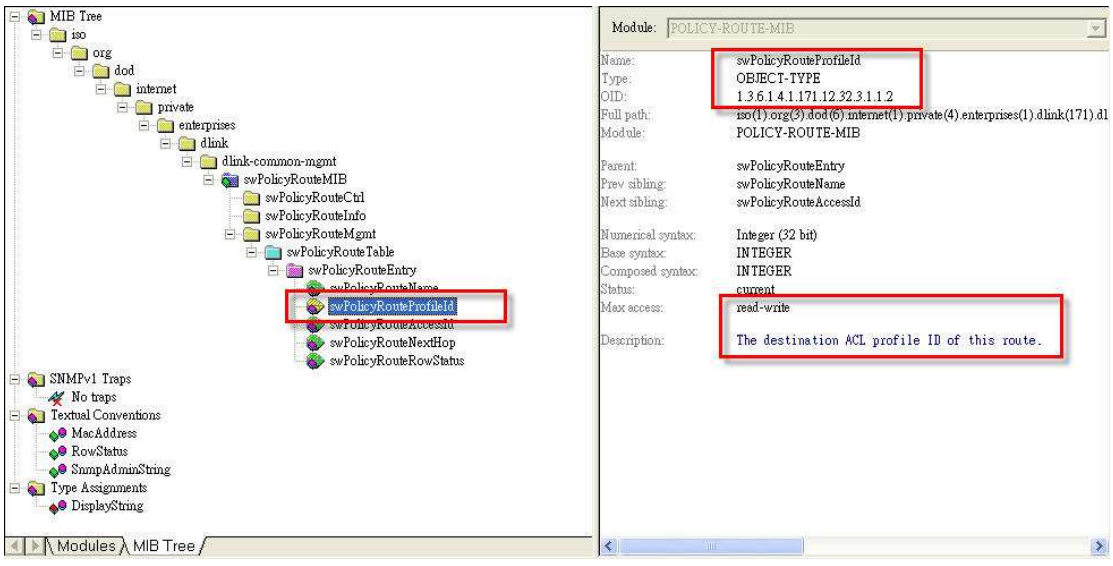
Modules
MIB Tree
Module: POLICY-ROUTE-MIB
Name: swPolicyRouteName
Type: OBJECT-TYPE
OID: 1.3.6.1.4.1.171.12.32.3.1.1.1
Full path: iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).dlink(171).dl
Module: POLICY-ROUTE-MIB
Parent: swPolicyRouteEntry
Next sibling: swPolicyRouteProfileId
Numerical syntax: Octets
Base syntax: OCTET STRING
Composed syntax: DisplayString
Status: current
Max access: read-only
Size list: 1..32
Description: Policy route rule name. Max length is 32 characters.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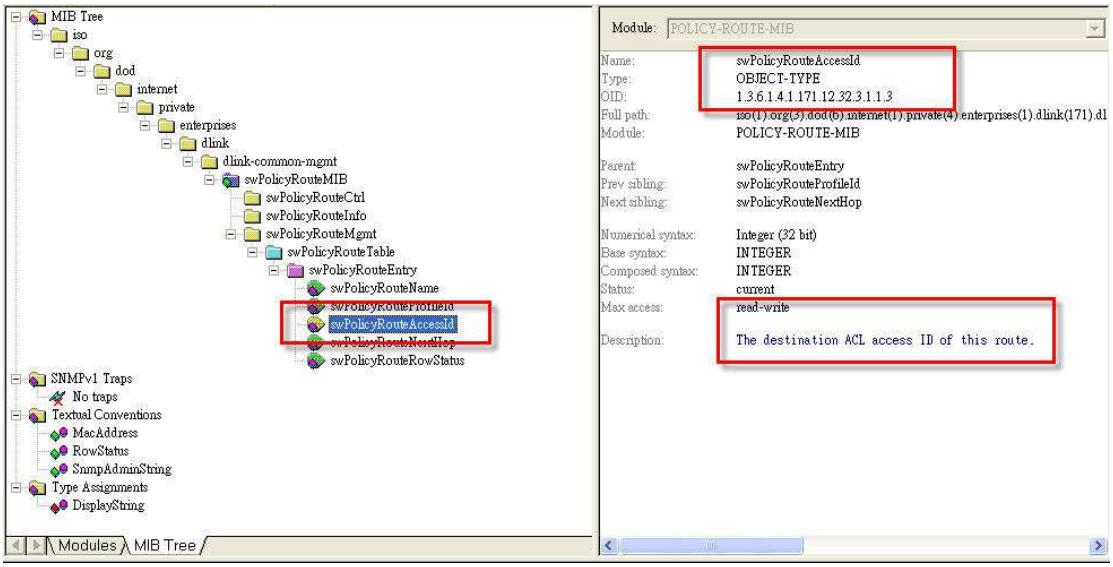
Modules
MIB Tree
Module: POLICY-ROUTE-MIB
Name: swPolicyRouteProfileId
Type: OBJECT-TYPE
OID: 1.3.6.1.4.1.171.12.32.3.1.1.2
Full path: iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).dlink(171).dl
Module: POLICY-ROUTE-MIB
Parent: swPolicyRouteEntry
Prev sibling: swPolicyRouteName
Next sibling: swPolicyRouteAccessId
Numerical syntax: Integer (32 bit)
Base syntax: INTEGER
Composed syntax: INTEGER
Status: current
Max access: read-write
Description: The destination ACL profile ID of this route.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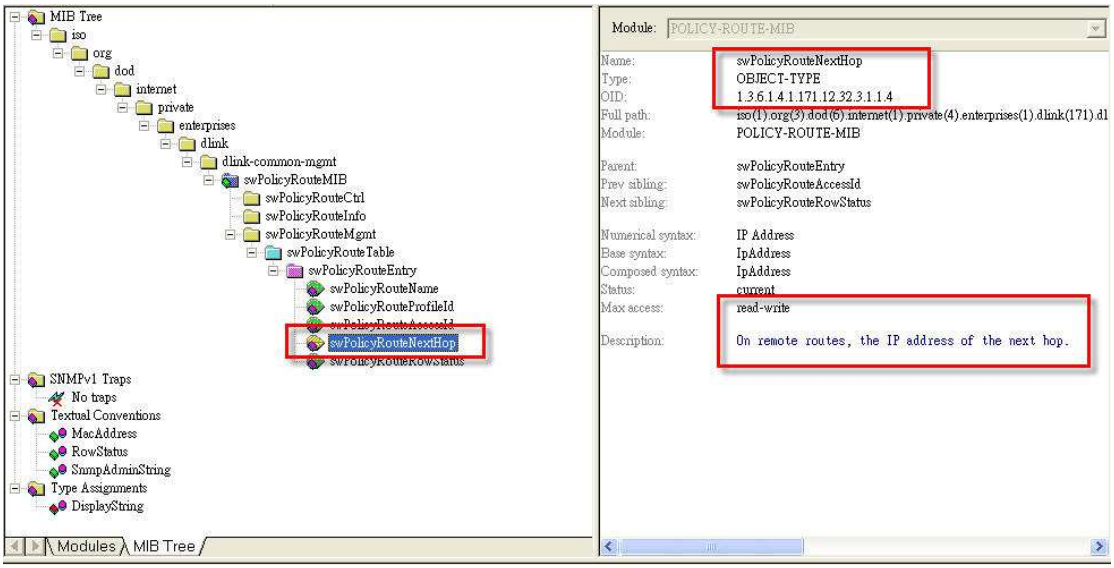
MIB Tree
Module: POLICY-ROUTE-MIB
Name: swPolicyRouteAccessId
Type: OBJECT-TYPE
OID: 1.3.6.1.4.1.171.12.32.3.1.1.3
Full path: iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).dlink(171).dl
Module: POLICY-ROUTE-MIB
Parent: swPolicyRouteEntry
Prev sibling: swPolicyRouteProfileId
Next sibling: swPolicyRouteNextHop
Numerical syntax: Integer (32 bit)
Base syntax: INTEGER
Composed syntax: INTEGER
Status: current
Max access: read-write
Description: The destination ACL access ID of this route.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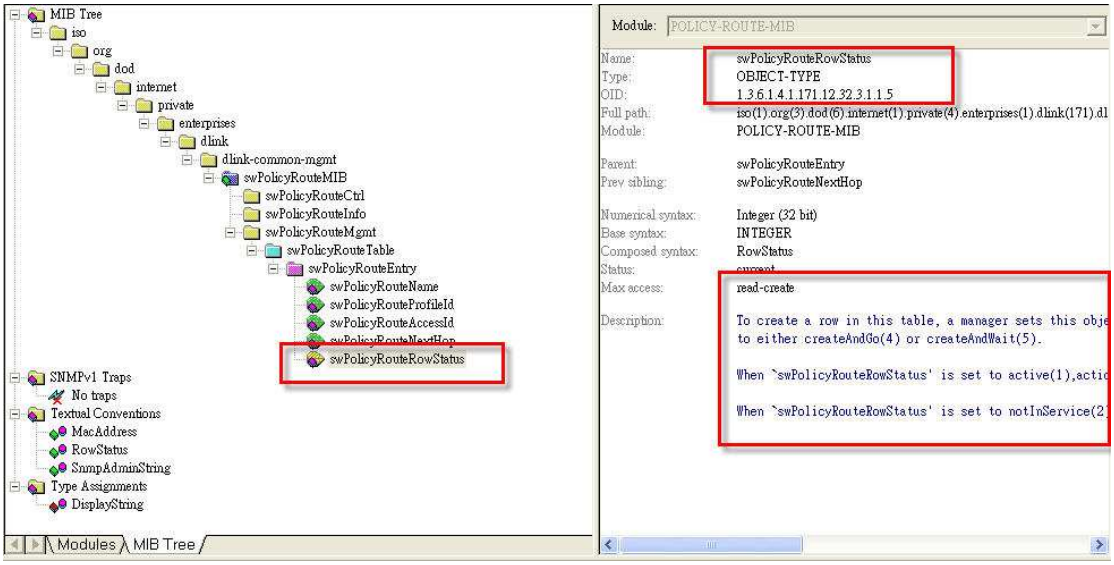
Modules
MIB Tree
Module: POLICY-ROUTE-MIB
Name: swPolicyRouteNextHop
Type: OBJECT-TYPE
OID: 1.3.6.1.4.1.171.12.32.3.1.1.4
Full path: iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).dlink(171).dl
Module: POLICY-ROUTE-MIB
Parent: swPolicyRouteEntry
Prev sibling: swPolicyRouteAccessId
Next sibling: swPolicyRouteRowStatus
Numerical syntax: IP Address
Base syntax: IpAddress
Composed syntax: IpAddress
Status: current
Max access: read-write
Description: On remote routes, the IP address of the next hop.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MIB Tree
Module: POLICY-ROUTE-MIB
Name: swPolicyRouteRowStatus
Type: OBJECT-TYPE
OID: 1.3.6.1.4.1.171.12.32.3.1.1.5
Full path: iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).dlink(171).dl
Module: POLICY-ROUTE-MIB
Parent: swPolicyRouteEntry
Prev sibling: swPolicyRouteNextHop
Numerical syntax: Integer (32 bit)
Base syntax: INTEGER
Composed syntax: RowStatus
Status: current
Max access: read-create
Description: To create a row in this table, a manager sets this obje
to either createAndGo(4) or createAndWait(5).
When `swPolicyRouteRowStatus' is set to active(1),actic
When `swPolicyRouteRowStatus' is set to notInService(2

 # Example

To create one policy route named **“test”** which is set in conjunction with Access_profile id 1, Access_id 1, next hop 1.1.1.1 and state to be “enable”.

(parameter i 1 for enable, i 2 for disable).

[Configuration]

reset config

enable snmp

create access_profile profile_id 1 ip source_ip_mask 255.255.255.0

config access_profile profile_id 1 add access_id 1 ip source_ip 192.168.1.0 port 1-12 permit

create policy_route name test

 # NetSNMP Command (“test” = 116.101.115.116 in ASCII code)

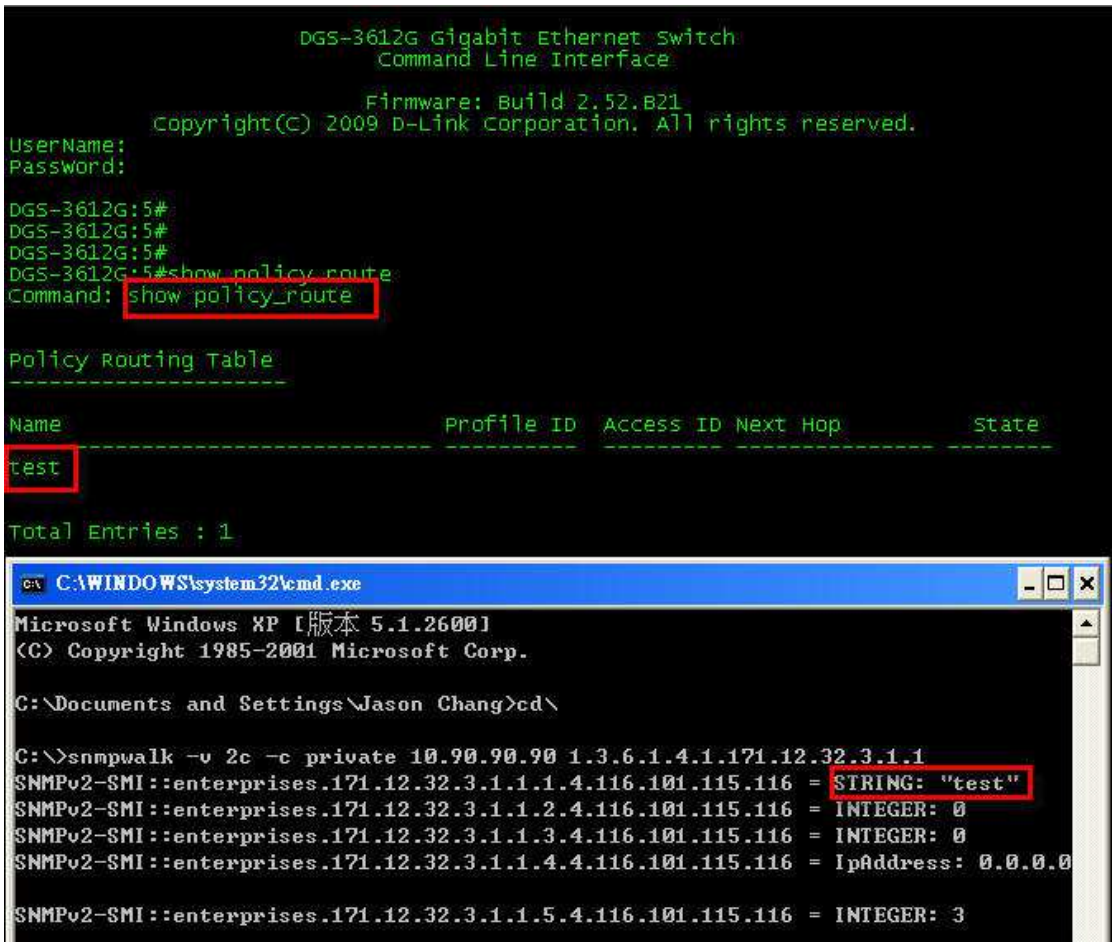
C:\ >snmpset -v 2c -c private 10.90.90.90

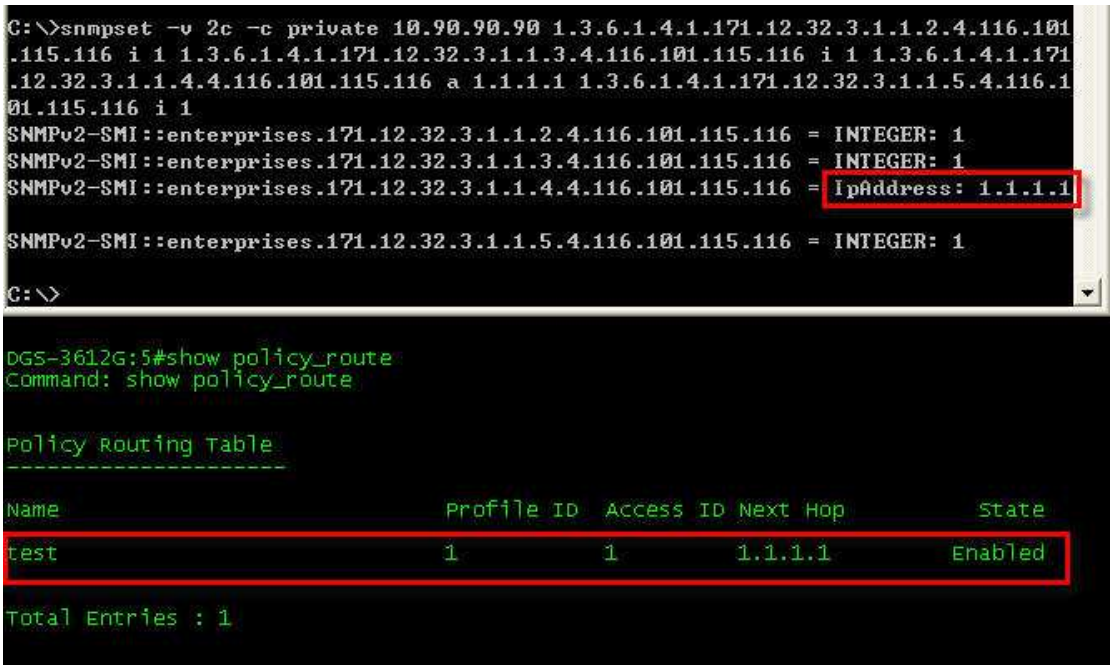
1.3.6.1.4.1.171.12.32.3.1.1.**2.4.116.101.115.116 i 1**

1.3.6.1.4.1.171.12.32.3.1.1.**3.4.116.101.115.116 i 1**

1.3.6.1.4.1.171.12.32.3.1.1.**4.4.116.101.115.116 a 1.1.1.1**

1.3.6.1.4.1.171.12.32.3.1.1.**5.4.116.101.115.116 i 1**




C:\>snmpset -v 2c -c private 10.90.90.90 1.3.6.1.4.1.171.12.32.3.1.1.2.4.116.101
.115.116 i 1 1.3.6.1.4.1.171.12.32.3.1.1.3.4.116.101.115.116 i 1 1.3.6.1.4.1.171
.12.32.3.1.1.4.4.116.101.115.116 a 1.1.1.1 1.3.6.1.4.1.171.12.32.3.1.1.5.4.116.1
01.115.116 i 1
SNMPv2-SMI::enterprises.171.12.32.3.1.1.2.4.116.101.115.116 = INTEGER: 1
SNMPv2-SMI::enterprises.171.12.32.3.1.1.3.4.116.101.115.116 = INTEGER: 1
SNMPv2-SMI::enterprises.171.12.32.3.1.1.4.4.116.101.115.116 = IpAddress: 1.1.1.1
SNMPv2-SMI::enterprises.171.12.32.3.1.1.5.4.116.101.115.116 = INTEGER: 1
C:\>

DGS-3612G:5#show policy_route
Command: show policy_route
Policy Routing Table
Name Profile ID Access ID Next Hop State
test 1 1 1.1.1.1 Enabled
Total Entries : 1