Contents

- 1 Introduction
- 2 Background information
- 3 Configuration
- 4 Related Information

Introduction

This configuration example covers an initial configuration for the EtherSwitch Service module or NME.

This example uses an L3 link between the router and the switch module. You should use an L3 link so that the 3750 will route between the vlans in hardware.

Background information

There are a few things to keep in mind when configuring the EtherSwitch service module:

1) The EtherSwitch service module is basically an embedded 3750 switch, which runs it's own code and you need to session into it to configure.

Here are the commands necessary to session into the EtherSwitch service module:

An IP must be set on the internal link, for session to be enabled:

```
Router(config)# int GigabitEthernet2/0
 Router(config-if)# ip address 10.0.0.1 255.255.255.0
 Router(config-if)# no shut
```

To session in, use this command:

```
Router# service-module GigabitEthernet2/0 session
```

2) There is an internal GigabitEthernet link between the switch and the router, usually Gig1/0 or Gig2/0 on the router side and Gig1/0/2 on the switch

3) Since the EtherSwitch service module can route between Vlans in hardware (at line speed), it is not recommended to make the internal link between the router and the switch module a trunk link. There is no need to trunk the vlans up to the router, since the 3750 can already route between these vlans. It is recommended to set the link as layer 3 and assign IP addresses to it.

Additionally, you will either need to run a routing protocol between the router and the switch module or set static routers on the router back to each vlan on the switch module (and a default static route on the switch back to the router).

Configuration

Here is a sample configuration for the internal link between the router and the switch module:

Router:

Set the IP address on the internal interface to the EtherSwitch service module:

```
Router(config)# interface GigabitEthernet2/0
 Router(config-if)# ip address 10.0.0.1 255.255.255.0
```

Add static routes (or use a routing protocol) for each vlan:

```
Router(config)# ip route 10.0.50.0 255.255.255.0 10.0.0.2
Router(config)# ip route 10.0.100.0 255.255.255.0 10.0.0.2
```

EtherSwitch service module:

Set the internal interface to be a layer 3 interface and assign it an IP:

```
Switch(config)# interface GigabitEthernet1/0/2
 Switch(config-if)# no switchport
 Switch(config-if)# ip address 10.0.0.2 255.255.255.0
```

Setup an SVI for each Vlan:

```
Switch(config)# interface Vlan50
 Switch(config-if)# ip address 10.0.50.1 255.255.255.0
Switch(config)# interface Vlan100
 Switch(config-if)# ip address 10.0.100.1 255.255.255.0
```

Enable IP routing and add a default static route back to the router internal interface:

```
Switch(config)# ip routing
Switch(config)# ip route 0.0.0.0 0.0.0.0 10.0.0.1
```

Related Information

Technical Support & Documentation - Cisco Systems
EtherSwitch Service Module (ES) Configuration Example