

How To Template

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Introduction

This is a sample configuration for trunking on a Catalyst 5000 family switch Fiber Distributed Data Interface (FDDI)/ Copper Distributed Data Interface (CDDI) module.

Cisco implements VLANs over FDDI medium with 802.10 encapsulation. This encapsulation adds a tag (SAID) to the frames. SAID is used in order to determine the VLAN to which they belong. On Catalyst switches, a VLAN cannot be both Ethernet and FDDI type. If you want to extend an Ethernet VLAN over FDDI, you must create a specific FDDI VLAN and merge the two.

Through the use of an FDDI trunk between two switches, the hosts on same the VLAN but on different switches can communicate with each other. If you want hosts on different VLANs to communicate with each other, InterVLAN routing is required. In order to achieve this, configure an FDDI trunk between a switch and a router. Refer to Trunking Between a Catalyst 5000 and a Router over FDDI for more information about how to configure a trunk between the switch and router.

The purpose of this document is to achieve connectivity between two hosts in VLAN 10 that are attached to two different Catalysts, connected with FDDI. In order to do this, it is necessary to create a specific FDDI VLAN 910 that carries VLAN 10 over the FDDI trunk.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

The information in this document is based on these software and hardware versions:

- a Catalyst 5000 series with a FDDI or CDDI blade
- Supervisor release 3.2(7). Release 3.2(7) is recommended, but the minimum version you can use is 1.3.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Network Diagram

This document uses this network setup:



Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

Configuration for Catalyst 5000 A

In this section, you are presented with the information to configure the features described in this document.

Complete these steps:

1. Configure a system name (optional):

```
Console> (enable) set system name cat5kA
```

2. Set the VTP domain to **cisco**. The switch must already be in server mode. The domain name must be set to something in order to create VLANS:

```
cat5kA> (enable) set vtp domain cisco
```

3. Create Ethernet VLAN 10 and FDDI VLAN 910:

```
cat5kA> (enable) set vlan 10
cat5kA> (enable) set vlan 910 type fddi
```

4. Merge Ethernet VLAN 10 and FDDI VLAN 910. With this configuration, Ethernet VLAN 10 is spanning from A to B over the FDDI link:

```
cat5kA> (enable) set vlan 10 translation 910
```

5. Configure trunking on the FDDI interface that links A and B:

```
cat5kA> (enable) set trunk 5/1 on
```

6. In order to test connectivity, assign interface sc0 to VLAN 10 and successfully ping remote B:

```
cat5kA> (enable) set int sc0 10 17.0.0.1 255.255.255.0
cat5kA> (enable) ping 17.0.0.2
17.0.0.2 is alive
```

Configuration for Catalyst 5000 B

Complete these steps:

1. Configure a system name (optional):

```
Console> (enable) set system name cat5kB
```

2. Set the VTP domain to **cisco**:

```
cat5kA> (enable) set vtp domain cisco
```

3. Create Ethernet VLAN 10 and FDDI VLAN 910:

```
cat5kA> (enable) set vlan 10
cat5kA> (enable) set vlan 910 type fddi
```

4. Map Ethernet VLAN 10 and Ethernet VLAN 910:

```
cat5kA> (enable) set vlan 10 translation 910
```

5. Configure trunking on the FDDI interface that links B and A:

```
cat5kA> (enable) set trunk 2/1 on
```

6. Set an IP address for a connectivity test:

```
cat5kA> (enable) set int sc0 10 17.0.0.2 255.255.255.0
```

Verify

Use this section in order to confirm that your configuration works properly.

The Output Interpreter Tool (registered customers only) (OIT) supports certain **show** commands. Use the OIT to view an analysis of **show** command output.

Check the status of the trunk and the VLAN carried by the trunk with these commands:

- **show trunk**
- **show trunk vlan**

Verify the status of the VLANs with this command:

- **show vlan**

This command confirms that the translation between the Ethernet and FDDI VLAN is configured. Also, check that the FDDI VLAN has the same SAID value configured on both sides of the FDDI trunk. The SAID value does not matter for the Ethernet VLAN.

Troubleshoot

There is currently no specific troubleshooting information available for this configuration.

Related Information

- **LAN Product Support**
- **LAN Switching Technology Support**
- **Technical Support & Documentation – Cisco Systems**

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