

## CFM Configuration

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# Chapter 1 Overview

## 1.1 Stipulation

### 1.1.1 Format Stipulation in the Command Line

Syntax	Meaning
<b>Bold</b>	Stands for the keyword in the command line, which stays unchanged and must be entered without any modification. It is presented as a bold in the command line.
<i>{italic}</i>	Stands for the parameter in the command line, which must be replaced by the actual value. It must be presented by the italic in the brace.
< <i>italic</i> >	Stands for the parameter in the command line, which must be replaced by the actual value. It must be presented by the italic in the point bracket.
[ ]	Stands for the optional parameter, which is in the square bracket.
{ x   y   ... }	Means that you can choose one option from two or more options.
[ x   y   ... ]	Means that you can choose one option or none from two or more options.
{ x   y   ... } *	Means that you has to choose at least one option from two or more options, or even choose all options.
[ x   y   ... ] *	Means that you can choose multiple options or none from two or more options.
&<1-n>	Means that the parameter before the "&" symbol can be entered <i>n</i> times.
#	Means that the line starting with the "#" symbol is an explanation line.

## Chapter 2 CFM Configuration

### 2.1 Overview

<omit>

### 2.2 CFM Configuration Task List

- Adding the Maintenance Domain
- Maintenance Association
- Maintenance domain Intermediate Point
- Maintenance association End Point
- Starting CFM

### 2.3 CFM Maintenance Task List

- Using the Loopback Function
- Using the Linktrace Function

### 2.4 CFM Configuration

#### 2.4.1 Adding the Maintenance Domain

Configuration mode: Global

Command	Purpose
<b>ethernet cfm md mdnf</b> <i>{string}</i> <b>mdn</b> <i>&lt;char_string&gt;</i> <b>level</b> <i>&lt;0-7&gt;</i> <b>creation</b> <i>{none}</i> <b>sit</b> <i>{none}</i> <b>ip</b> <i>&lt;A.B.C.D&gt;</i>	<p>Adds a maintenance domain whose name is <b>char_string</b>.</p> <p>Note:</p> <p><b>【1】</b> The IP address has no actual use temporarily at present, so any value will do.</p> <p><b>【2】</b> The system enters the maintenance domain configuration mode after the maintenance domain is added.</p>

## 2.4.2 Adding the Maintenance Association

Configuration mode: maintenance domain

Command	Purpose
<b>ma manf</b> {string} <b>man</b> <char_string> <b>vlan</b> <1-4094> <b>ci</b> {100ms   1s   10s   1min   10min} <b>creation</b> {none} <b>sit</b> {none} <b>ip</b> <A.B.C.D> <b>meps</b> <mepids>	Adds a maintenance association whose name is <b>char_string</b> .

## 2.4.3 Adding MIP (Maintenance domain Intermediate Point)

Configuration mode: physical interface

Command	Purpose
<b>ethernet cfm mip add vlan</b> <1-4094> <b>level</b> <0-7>	Adds a designated VLAN and hierarchical MIP to the designated physical interface.

## 2.4.4 Adding MEP (Maintenance association End Point)

Configuration mode: physical interface

Command	Purpose
<b>ethernet cfm mep add mdnf</b> {string} <b>mdn</b> <char_string> <b>manf</b> {string} <b>man</b> <char_string> <b>mepid</b> <1-8191> <b>direction</b> {up   down} <b>ip</b> <A.B.C.D> <b>fat</b> <250-1000> <b>frt</b> <250-1000> <b>lap</b> {all   mac   rCCM   eCCM   xcon   none}	Adds a designated maintenance domain and an MEP to the designated physical interface.

## 2.4.5 Starting CFM

Configuration mode: Global

Command	Purpose
<b>ethernet cfm</b> {enable}	Starts CFM.

# 2.5 CFM Maintenance

## 2.5.1 Using the Loopback Function

Configuration mode: EXEC

Command	Purpose
<b>ethernet cfm loopback mdnf</b> {string} <b>mdn</b> <char_string> <b>manf</b> {string} <b>man</b> <char_string> <b>mepid</b> <1-8191> <b>mac</b> <AA:BB:CC:DD:EE:FF> <b>number</b> <1-64>	Uses a designated MEP to conduct loopback towards itself.

## 2.5.2 Using the Linktrace Function

Configuration mode: EXEC

Command	Purpose
<b>ethernet cfm linktrace mdnf</b> {string} <b>mdn</b> <char_string> <b>manf</b> {string} <b>man</b> <char_string> <b>mepid</b> <1-8191> <b>mac</b> <AA:BB:CC:DD:EE:FF> <b>tll</b> <1-255> <b>fdb-only</b> {yes   no}	Uses a designated MEP to conduct loopback towards itself.

## 2.6 Configuration Example

Users want to add a maintenance domain whose name is customer and hierarchy is 5, set a customer1 maintenance association for vlan1, configure the transmission interval of CCM of the maintenance association to 1s and at last add an MEP whose MEPID is 2009 to physical port1.

```
Switch_config#ethernet cfm md mdnf string mdn customer level 5 creation none sit none ip 200.9.12.1
```

```
Switch_config_cfm#ma manf string man customer1 vlan 1 creation none sit none ci 1s meps 1-2,2009 ip 200.9.12.1
```

```
Switch_config_cfm#interface g0/1
```

```
Switch_config_g0/1#ethernet cfm mep add mdnf string mdn customer manf string man customer1 mepid 2009 direction DOWN fat 1000 frt 1000 ip 1.1.1.1 lap ALL
```

```
Switch_config_g0/1#exit
```

```
Switch_config#ethernet cfm enable
```