# 205- CFM Management Commands.

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# 205.1 CFM Management Command. Tree

## **Description**

This chapter gives an overview of nodes that are handled by "CFM Management Commands.".

## **Command Tree**

#### ----admin ----cfm ----uclbm - domain - association - mep - dest-mac - [no] nbr-msgs - [no] lbm-tlv-type - [no] lbm-data-len - [no] lbm-data - [no] test-bit-pattern - [no] vlan-priority - [no] vlan-drop-enable - [no] vlan-drop-pcp ----mclbm - domain - association - mep - [no] vlan-priority - [no] lbm-tlv-type - [no] lbm-data-len - [no] lbm-data ----ltm ----domain - (domain-index) - association - mep - target-mac - [no] vlan-priority - [no] ttl - [no] fdb-only-bit ----single-ended-slm ----domain - (domain) - association - mep - target-mac - [no] send-count - [no] size - [no] timeout - [no] interval

- [no] priority

# 205.2 Unicast Loopback message Management Command

## **Command Description**

This command initiates the test of Unicast Loopback messages.

A number of Loopback messages can be requested to be send from a specified MEP towards a specified destination MAC address.

### **User Level**

The command can be accessed by operators with alarm, oam, vlan privileges, and executed by operators with alarm, oam, vlan privileges.

## **Command Syntax**

The command has the following syntax:

 $> admin \ cfm \ uclbm \ domain \ < Cfm::CfmDomainIndexType> \ association \ < Cfm::CfmMaIndexType> \ mep \ < Cfm::MepIdType> \ dest-mac \ < Vlan::MacAddr> \ [ no \ nbr-msgs \ | nbr-msgs \ < Cfm::UcLbmNbrMsgType> \ ] \ [ no \ lbm-tlv-type \ | lbm-tlv-type \ < Cfm::TlvType> \ ] \ [ no \ lbm-data-len \ | lbm-data-len \ < Cfm::LbmDataLenType> \ ] \ [ no \ lbm-data \ | lbm-data \ < Cfm::LbmDataType> \ ] \ [ no \ vlan-priority \ | vlan-priority \ < Vlan::Priority> \ ] \ [ no \ vlan-drop-enable \ | vlan-drop-enable \ < Cfm::VlanDropEnableType> \ ] \ [ no \ vlan-drop-pcp \ < Cfm::VlanDropPcpType> \ ] \ [ no \ vlan-drop-pcp \ < Cfm::VlanDropPcpType> \ ] \ [ no \ vlan-drop-pcp \ < Cfm::VlanDropPcpType> \ ] \ [ no \ vlan-drop-pcp \ < Cfm::VlanDropPcpType> \ ] \ [ no \ vlan-drop-pcp \ < Cfm::VlanDropPcpType> \ ] \ [ no \ vlan-drop-pcp \ < Cfm::VlanDropPcpType> \ ] \ [ no \ vlan-drop-pcp \ < Cfm::VlanDropPcpType> \ ] \ [ no \ vlan-drop-pcp \ < Cfm::VlanDropPcpType> \ ] \ [ no \ vlan-drop-pcp \ < Cfm::VlanDropPcpType> \ ] \ [ no \ vlan-drop-pcp \ < Cfm::VlanDropPcpType> \ ] \ [ no \ vlan-drop-pcp \ < Cfm::VlanDropPcpType> \ ] \ [ no \ vlan-drop-pcp \ < Cfm::VlanDropPcpType> \ ] \ [ no \ vlan-drop-pcp \ < Cfm::VlanDropPcpType> \ ] \ [ no \ vlan-drop-pcp \ < Cfm::VlanDropPcpType> \ ] \ [ no \ vlan-drop-pcp \ < Cfm::VlanDropPcpType> \ ] \ [ no \ vlan-drop-pcp \ < Cfm::VlanDropPcpType> \ ] \ [ no \ vlan-drop-pcp \ < Cfm::VlanDropPcpType> \ ] \ [ no \ vlan-drop-pcp \ < Cfm::VlanDropPcpType> \ ] \ [ no \ vlan-drop-pcp \ < Cfm::VlanDropPcpType> \ ] \ [ no \ vlan-drop-pcp \ < Cfm::VlanDropPcpType> \ ] \ [ no \ vlan-drop-pcp \ < Cfm::VlanDropPcpType> \ ] \ [ no \ vlan-drop-pcp \ < Cfm::VlanDropPcpType> \ ] \ [ no \ vlan-drop-pcp \ < Cfm::VlanDropPcpType> \ ] \ [ no \ vlan-drop-pcp \ < Cfm::VlanDropPcpType> \ ] \ [ no \ vlan-drop-pcp \ < Cfm::VlanDropPcpType> \ ] \ [ no \ vlan-drop-pcp \ < Cfm::VlanDropPcpType> \ ] \ [ no \ vlan-drop-pcp \ < Cfm::VlanDropPcpType> \ ] \ [ no \ vlan-drop-pcp \ < Cfm::VlanDropPcpType> \ ] \ [ no \ vla$ 

#### **Command Parameters**

Table 205.2-2 "Unicast Loopback message Management Command" Command Parameters

Parameter	Туре	Description
domain	Parameter type: <cfm::cfmdomainindextype></cfm::cfmdomainindextype>	mandatory parameter
	Format:	Maintenance Domain Index.
	- Maintenance Domain (MD) index	
	- range: [14294967295]	
association	Parameter type: <cfm::cfmmaindextype></cfm::cfmmaindextype>	mandatory parameter
	Format:	Maintenance Association Index.
	- Maintenance Association (MA) index. Unique within an	
	MD	
	- range: [14294967295]	
mep	Parameter type: <cfm::mepidtype></cfm::mepidtype>	mandatory parameter
	Format:	Maintenance Association End
	- MA End Point (MEP) ID. Unique within an MA	Point (MEP) ID. Unique within
	- range: [18191]	an MA.
dest-mac	Parameter type: <vlan::macaddr></vlan::macaddr>	mandatory parameter
	Format:	The MAC address for the OAM
	- mac address (aa:bb:cc:a1:02:03)	target: a unicast destination MAC
	- unit: Byte	address in the Unicast Loopback

Parameter	Type	Description
	- length: 6	message.
[no] nbr-msgs	Parameter type: <cfm::uclbmnbrmsgtype> Format: - The number of Unicast Loopback messages to be transmitted.For GPON LT, the range is [12] - range: [15]</cfm::uclbmnbrmsgtype>	optional parameter with default value: 1L The number of Unicast Loopback messages to be transmitted.
[no] lbm-tlv-type	Parameter type: <cfm::tlvtype> Format: (tlv-none   data-tlv   test-tlv) Possible values: - tlv-none : no TLV - data-tlv : data TLV - test-tlv : test TLV</cfm::tlvtype>	optional parameter with default value: "tlv-none" Specifies which TLV type is to be used for LBM.
[no] lbm-data-len	Parameter type: <cfm::lbmdatalentype> Format: - the length of the Data TLV - range: [11488]</cfm::lbmdatalentype>	optional parameter with default value: 64L  The value specifies the length of the TLV. Specifying length zero implies no TLV will be included in LBM. Default length = 64 octets.
[no] lbm-data	Parameter type: <cfm::lbmdatatype> Format: - a binary string - length: 8</cfm::lbmdatatype>	optional parameter with default value: "00:00:00:00:00:00:00:00:00:00:00:00:00:
[no] test-bit-pattern	Parameter type: <cfm::testbitpatterntype> Format: ( all-zeros-no-crc   all-zeros-crc   prbs-no-crc   prbs-crc   all-ones-no-crc   all-ones-crc   <signedinteger>) Possible values: - all-zeros-no-crc : A bit pattern with all zero's without CRC all-zeros-crc : A bit pattern with all zero's with CRC prbs-no-crc : A Pseudo Random Bit Sequence of type (2^31)-1, according ITU-T O.150, without CRC prbs-crc : A Pseudo Random Bit Sequence of type (2^31)-1, according ITU-T O.150, with CRC all-ones-no-crc : A bit pattern with all one's without CRC all-ones-crc : A bit pattern with all one's with CRC all-ones-crc : A bit pattern with all one's with CRC field type <signedinteger> - a signed integer</signedinteger></signedinteger></cfm::testbitpatterntype>	optional parameter with default value: "all-zeros-no-crc"  To specify which bit pattern type to use in the Test TLV within a unicast LBM. Default = allZerosNoCrc
[no] vlan-priority	Parameter type: <vlan::priority> Format: - priority of ethernet frames - range: [07]</vlan::priority>	optional parameter with default value: 7L Priority. A 3 bit value to be used in the VLAN tag, if present in the transmitted frame. Default = 7 decimal.
[no] vlan-drop-enable	Parameter type: <cfm::vlandropenabletype></cfm::vlandropenabletype>	optional parameter with default

Parameter	Туре	Description
	Format:	value: "no-drop"
	( no-drop	Parameter indicating whether the
	pcp	packet must be marked as drop
	dei	eligible.
	<signedinteger> )</signedinteger>	_
	Possible values:	
	- no-drop: Packet must not be marked as drop eligible.	
	- pcp : Priority Code Point encoding to be used.	
	- dei : Drop eligible indicator to be used. Can only be used	
	in context of an S-VLAN.	
	Field type <signedinteger></signedinteger>	
	- a signed integer	
[no] vlan-drop-pcp	Parameter type: <cfm::vlandroppcptype></cfm::vlandroppcptype>	optional parameter with default
	Format:	value: "pcp8p0d"
	( pcp8p0d	Defines the Priority Code Point
	pcp7p1d	encoding rule used.
	pcp6p2d	
	pcp5p3d	
	<signedinteger> )</signedinteger>	
	Possible values:	
	- pcp8p0d : Priority encoding rule to be applied.	
	- pcp7p1d : Priority encoding rule to be applied.	
	- pcp6p2d : Priority encoding rule to be applied.	
	- pcp5p3d : Priority encoding rule to be applied.	
	Field type <signedinteger></signedinteger>	
	- a signed integer	

# **Command Output**

Table 205.2-3 "Unicast Loopback message Management Command" Display parameters

<b>Specific Informat</b>	ion	
name	Туре	Description
result	Parameter type: <cfm::cfmoamresult></cfm::cfmoamresult>	Result of the command.
	( test-done	This element is only shown in
	test-in-progress	detail mode.
	internal-failure )	
	Possible values:	
	- test-done :	
	- test-in-progress :	
	- internal-failure :	
lbr-in	Parameter type: <counter></counter>	Total number of valid, in-order
	- 32 bit counter	Loopback Replies received.
		This element is only shown in
		detail mode.
lbr-in-ooo	Parameter type: <counter></counter>	The total number of valid,
	- 32 bit counter	out-of-order Loopback Replies
		received.
		This element is only shown in
	D G	detail mode.
lbr-bad-msdu	Parameter type: <counter></counter>	The total number of LBRs
	- 32 bit counter	received whose
		mac_service_data_unit did not
		match (except for the OpCode)
		that of the corresponding LBM
		This element is only shown in
		detail mode.

# 205.3 CFM Multicast Loopback Management Command

## **Command Description**

This CFM Managemet command is executed to initiate a Multicast Loopback message.

### **User Level**

The command can be accessed by operators with alarm, oam, vlan privileges, and executed by operators with alarm, oam, vlan privileges.

## **Command Syntax**

The command has the following syntax:

 $> admin \ cfm \ mclbm \ domain \ < Cfm::CfmDomainIndexType> \ association \ < Cfm::CfmMaIndexType> \ mep \ < Cfm::MepIdType> [ no vlan-priority | vlan-priority < Vlan::Priority> ] [ no lbm-tlv-type | lbm-tlv-type < Cfm::McLbmTlvType> ] [ no lbm-data-len | lbm-data-len < Cfm::LbmDataLenType> ] [ no lbm-data | lbm-data < Cfm::LbmDataType> ]$ 

## **Command Parameters**

Table 205.3-1 "CFM Multicast Loopback Management Command" Resource Parameters

Resource Identifier	Type	Description
domain	Parameter type: <cfm::cfmdomainindextype></cfm::cfmdomainindextype>	Maintenance Domain Index.
	Format:	
	- Maintenance Domain (MD) index	
	- range: [14294967295]	

Table 205.3-2 "CFM Multicast Loopback Management Command" Command Parameters

Parameter	Type	Description
association	Parameter type: <cfm::cfmmaindextype></cfm::cfmmaindextype>	mandatory parameter
	Format:	Maintenance Association Index
	- Maintenance Association (MA) index. Unique within an	
	MD	
	- range: [14294967295]	
mep	Parameter type: <cfm::mepidtype></cfm::mepidtype>	mandatory parameter
	Format:	Maintenance Association End
	- MA End Point (MEP) ID. Unique within an MA	Point (MEP) ID. Unique within
	- range: [18191]	an MA
[no] vlan-priority	Parameter type: <vlan::priority></vlan::priority>	optional parameter with default
	Format:	value: 7L
	- priority of ethernet frames	Priority. A 3 bit value to be used
	- range: [07]	in the VLAN tag, if present in the
		transmitted frame. Default = 7
		decimal.

Parameter	Type	Description
[no] lbm-tlv-type	Parameter type: <cfm::mclbmtlvtype></cfm::mclbmtlvtype>	optional parameter with default
	Format:	value: "tlv-none"
	(tlv-none	Specifies which TLV type is to
	data-tlv )	be used for LBM.
	Possible values:	
	- tlv-none : no TLV	
	- data-tlv : data TLV	
[no] lbm-data-len	Parameter type: <cfm::lbmdatalentype></cfm::lbmdatalentype>	optional parameter with default
	Format:	value: 64L
	- the length of the Data TLV	The value specifies the length of
	- range: [11488]	the Data TLV. Specifying length
		zero implies no Data TLV will be
		included in LBM.
[no] lbm-data	Parameter type: <cfm::lbmdatatype></cfm::lbmdatatype>	optional parameter with default
	Format:	value: "00 : 00 : 00 : 00 : 00 : 00
	- a binary string	: 00 : 00"
	- length: 8	This 64 bit pattern is used
		repetitively to fillup Data TLV,if
		the Data TLV is selected to be
		sent. Most significant bits are
		used first.

# **Command Output**

Table 205.3-3 "CFM Multicast Loopback Management Command" Display parameters

Specific Information		
name	Type	Description
reply-nr	Parameter type: <counter></counter>	ResultNbr. of the received LBR.
	- 32 bit counter	This element is always shown.
result	Parameter type: <cfm::cfmoamresult></cfm::cfmoamresult>	Result of the command.
	( test-done	This element is only shown in
	test-in-progress	detail mode.
	internal-failure )	
	Possible values:	
	- test-done :	
	- test-in-progress :	
	- internal-failure :	
mac	Parameter type: <vlan::macaddr></vlan::macaddr>	MAC address of the peer MEP
	- mac address (aa:bb:cc:a1:02:03)	that sent the LBR message.
	- unit: Byte	This element is always shown.
	- length: 6	

# 205.4 CFM Linktrace management command

# **Command Description**

This CFM Management command is executed to initiate a Linktrace message

### **User Level**

The command can be accessed by operators with alarm, oam, vlan privileges, and executed by operators with alarm, oam, vlan privileges.

## **Command Syntax**

The command has the following syntax:

> admin cfm ltm

# 205.5 Linktrace message Management Command

## **Command Description**

This command initiates the sending of a Linktrace message.

## **User Level**

The command can be accessed by operators with alarm, oam, vlan privileges, and executed by operators with alarm, oam, vlan privileges.

## **Command Syntax**

The command has the following syntax:

> admin cfm ltm domain (domain-index) association <Cfm::CfmMaIndexType> mep <Cfm::MepIdType> target-mac <Vlan::MacAddr> [ no vlan-priority | vlan-priority <Vlan::Priority> ] [ no ttl | ttl <Cfm::TtlLtmType> ] [ no fdb-only-bit <Cfm::FdbOnlyType> ]

### **Command Parameters**

Table 205.5-1 "Linktrace message Management Command" Resource Parameters

Resource Identifier	Type	Description
(domain-index)	Format:	Maintenance Domain Index.
	- Maintenance Domain (MD) index	Note: This is in fact not realy a
	- range: [14294967295]	resourceId, but one of the
		mandatory parameters.

Table 205.5-2 "Linktrace message Management Command" Command Parameters

Parameter	Type	Description
association	Parameter type: <cfm::cfmmaindextype></cfm::cfmmaindextype>	mandatory parameter
	Format:	Maintenance Association Index.
	- Maintenance Association (MA) index. Unique within an	
	MD	
	- range: [14294967295]	
mep	Parameter type: <cfm::mepidtype></cfm::mepidtype>	mandatory parameter
	Format:	Maintenance Association End
	- MA End Point (MEP) ID. Unique within an MA	Point (MEP) ID. Unique within
	- range: [18191]	an MA.
target-mac	Parameter type: <vlan::macaddr></vlan::macaddr>	mandatory parameter
	Format:	MAC address within the payload
	- mac address (aa:bb:cc:a1:02:03)	of the LTM. The destination
	- unit: Byte	MAC address is calculated by the
	- length: 6	system.
[no] vlan-priority	Parameter type: <vlan::priority></vlan::priority>	optional parameter with default
	Format:	value: 7L
	- priority of ethernet frames	Priority. A 3 bit value to be used
	- range: [07]	in the VLAN tag, if present in the
		transmitted frame. Default = 7

Parameter	Type	Description
		decimal.
[no] ttl	Parameter type: <cfm::ttlltmtype></cfm::ttlltmtype>	optional parameter with default
	Format:	value: 64L
	- Range of allowed ttl values.	The maximum number of hops
	- range: [0255]	the LTM may pass. Default value
		is 64.
[no] fdb-only-bit	Parameter type: <cfm::fdbonlytype></cfm::fdbonlytype>	optional parameter with default
	Format:	value: "true"
	( true	Indication to use Filtering
	false )	Database.
	Possible values:	
	- true : sets use-fdb-only bit within an LTM to true.	
	- false : sets use-fdb-only bit within an LTM to false.	

# **Command Output**

Table 205.5-3 "Linktrace message Management Command" Display parameters

<b>Specific Informatio</b>	n	
name	Туре	Description
receive-order-nbr	Parameter type: <counter> - 32 bit counter</counter>	Order number of the received LTR.  This element is only shown in detail mode.
result	Parameter type: <cfm::cfmoamresult> ( test-done   test-in-progress   internal-failure ) Possible values: - test-done : - test-in-progress : - internal-failure :</cfm::cfmoamresult>	Result of the command.  This element is only shown in detail mode.
orig-egress-id	Parameter type: <cfm::egressidtype> - a binary string - length: 8</cfm::egressidtype>	The MEP that is originating the LTM. The low-order(highest numbered) octets contain a 48-bit IEEE MAC address unique to the system in which the MEP resides. The high-order (lowest numbered) two octets are set to zero.  This element is only shown in detail mode.
ltm-seq-nbr	Parameter type: <counter> - 32 bit counter</counter>	The LTM Transaction Identifier of the LTM sent.  This element is only shown in detail mode.
nbr-unexp-ltr	Parameter type: <counter> - 32 bit counter</counter>	The total number of unexpected LTRs received during the duration of the LTM test.  This element is only shown in detail mode.
ttl-in-ltr	Parameter type: <cfm::ttlltrtype> - Range of allowed ttl values range: [0255]</cfm::ttlltrtype>	TTL value indicated in the received LTR.  This element is only shown in detail mode.
ltr-forwarded	Parameter type: <cfm::ltrfwdtype> ( true</cfm::ltrfwdtype>	Indicates if a LTM was forwarded by the responding

name	Туре	Description
	false )	maintenance point.
	Possible values:	This element is only shown in
	- true : FwdYes-flag within received LTR is true.	detail mode.
	- false: FwdYes-flag within received LTR is false.	
terminal-mep	Parameter type: <cfm::termmeptype></cfm::termmeptype>	Indicates if a LTM reached a
	( true	MEP enclosing its MA.
	false )	This element is only shown in
	Possible values:	detail mode.
	- true : TerminalMEP-flag within received LTR is true.	
	- false: TerminalMEP-flag within received LTR is false.	
last-egress-id	Parameter type: <cfm::egressidtype></cfm::egressidtype>	An octet field holding the Last
	- a binary string	Egress Identifier returned in the
	- length: 8	LTR Egress Identifier TLV of the
		LTR. This identifier identifies the
		MEP Linktrace Initiator that
		originated, or the Linktrace
		Responder that forwarded, the
		LTM to which this LTR is the
		response.
		This element is only shown in
		detail mode.
next-egress-id	Parameter type: <cfm::egressidtype></cfm::egressidtype>	An octet field holding the Next
	- a binary string	Egress Identifier returned in the
	- length: 8	LTR Egress Identifier TLV of the
		LTR. This identifier identifies the
		Linktrace Responder that
		transmitted this LTR.
		This element is only shown in
		detail mode.
ltr-relay	Parameter type: <cfm::relayactionfieldvaluetype></cfm::relayactionfieldvaluetype>	Value returned in the Relay
	( rly-hit	Action field.
	rly-fdb	This element is only shown in
	rly-mpdb	detail mode.
	<signedinteger> )</signedinteger>	
	Possible values:	
	- rly-hit: The LTM reached an MP whose MAC address	
	matches the target MAC address.	
	- rly-fdb : The Egress port was determined by consulting the	
	Filtering DB.	
	- rly-mpdb: The Egress port was determined by consulting	
	the MIP CCM DB.	
	Field type <signedinteger></signedinteger>	
1	- a signed integer	
chassis-id-format	Parameter type: <cfm::lldpchassisidsubtype></cfm::lldpchassisidsubtype>	Specifies the format of the
	( not-applic	Chassis ID returned in the Sender
	chassis-component	ID TLV of the LTR, if present.
	interface-alias	This element is only shown in
	port-component	detail mode.
	mac-address	
	network-address	
	interface-name	
	local	
	<signedinteger> )</signedinteger>	
	Possible values:	
	- not-applic : not applicable	
	- chassis-component : Reference IETF RFC 2737	
	- interface-alias : Reference IETF RFC 2863	

name	Туре	Description
	- port-component : Reference IETF RFC 2737	Description
	- mac-address :	
	- network-address :	
	- interface-name : Reference IETF RFC 2863	
	- local : An alph-numeric string.	
	Field type <signedinteger></signedinteger>	
	- a signed integer	
chassis-id	Parameter type: <cfm::lldpchassisidtype></cfm::lldpchassisidtype>	The Chassis ID returned in the
	- a variable length octet string 016	Sender ID TLV of the LTR, if
	- length: x<=16	present.
		This element is only shown in
		detail mode.
mgmt-addr-domain	Parameter type: <object></object>	The TDomain that identifies the
	- an object identifier	type and format of the address of
		the SNMP agent of the system
		transmitting the LTR.
		This element is only shown in
		detail mode.
mgmt-addr	Parameter type: <cfm::mgmtaddrtype></cfm::mgmtaddrtype>	This element is only shown in
	- a variable length octet string 050	detail mode.
	- length: x<=50	
ltr-ingress	Parameter type: <cfm::ingressactionfieldvaluetype></cfm::ingressactionfieldvaluetype>	The value returned in the Ingress
	( ingress-no-tlv	Action Field of the Reply Ingress
	ingress-ok	TLV of the LTR.
	ingress-down	This element is only shown in
	ingress-blocked	detail mode.
	ingress-vid	
	<signedinteger> )</signedinteger>	
	Possible values:	
	- ingress-no-tly: There is no Reply Ingress TLV.	
	- ingress-ok: The target data frame would be passed through	
	to the MAC Relay Entity.	
	- ingress-down: The bridge Port's MAC_Operational	
	parameter is false	
	- ingress-blocked: The target data frame would not be	
	forwarded if received on this port ingress-vid: The ingress port is not in the member set of	
	the LTM's VID.	
	Field type <signedinteger></signedinteger>	
	- a signed integer	
ingr-mac	Parameter type: <vlan::macaddr></vlan::macaddr>	MAC address returned in the
mgi-mac	- mac address (aa:bb:cc:a1:02:03)	ingress MAC address field of the
	- unit: Byte	Reply ingress TLV of the LTR.
	- length: 6	This element is only shown in
	length. 0	detail mode.
ingr-portid-stype	Parameter type: <cfm::lldpportidsubtype></cfm::lldpportidsubtype>	Format of the Ingress port ID.
mgi portia stype	( none	This element is only shown in
	interface-alias	detail mode.
	port-component	
	mac-address	
	network-address	
	interface-name	
	agent-circuit-id	
	local	
	<signedinteger>)</signedinteger>	
	Possible values:	

name	Type	Description
	- interface-alias :	•
	- port-component :	
	- mac-address :	
	- network-address :	
	- interface-name :	
	- agent-circuit-id:	
	- local :	
	Field type <signedinteger></signedinteger>	
	- a signed integer	
ingr-portid	Parameter type: <cfm::lldpportidtype></cfm::lldpportidtype>	The Ingress port ID.
mgi portid	- a variable length octet string 016	This element is only shown in
	- a variable length octet string 010 - length: x<=16	detail mode.
1tr ograss	Parameter type: <cfm::egressactionfieldvaluetype></cfm::egressactionfieldvaluetype>	The value returned in the Egress
ltr-egress		
	( egress-no-tlv	Action Field of the Reply Egress
	egress-ok	TLV of the LTR.
	egress-down	This element is only shown in
	egress-blocked	detail mode.
	egress-vid	
	< SignedInteger > )	
	Possible values:	
	- egress-no-tly: There is no Reply Egress TLV.	
	- egress-ok : The target data frame would be forwarded.	
	- egress-down: The egress port can be identified, but that	
	bridge Port's MAC_Operational parameter is false	
	- egress-blocked : The target data frame would not pass	
	through the egress port.	
	- egress-vid : The egress port can be identified, but the	
	bridge port is not in the LTM's VID member set.	
	Field type <signedinteger></signedinteger>	
	- a signed integer	
egr-mac	Parameter type: <vlan::macaddr></vlan::macaddr>	MAC address returned in the
	- mac address (aa:bb:cc:a1:02:03)	egress MAC address field of the
	- unit: Byte	Reply egress TLV of the LTR.
	- length: 6	This element is only shown in
		detail mode.
egr-portid-stype	Parameter type: <cfm::lldpportidsubtype></cfm::lldpportidsubtype>	Format of the Egress port ID.
8 1 1 1 1 7 1	( none	This element is only shown in
	interface-alias	detail mode.
	port-component	
	mac-address	
	network-address	
	interface-name	
	agent-circuit-id	
	local	
	<signedinteger>)</signedinteger>	
	Possible values:	
	- none :	
	- interface-alias :	
	- port-component :	
	- mac-address :	
	- network-address :	
	- interface-name :	
	- agent-circuit-id:	
	- local :	
	Field type <signedinteger></signedinteger>	
egr-portid	- a signed integer  Parameter type: <cfm::lldpportidtype></cfm::lldpportidtype>	The Egress port ID.

### 205 CFM Management Commands.

name	Type	Description
	- a variable length octet string 016	This element is only shown in
	- length: x<=16	detail mode.
org-spec-tlv	Parameter type: <cfm::orgspectlvtype> - a variable length octet string 07</cfm::orgspectlvtype>	All Orginzation specific TLVs returned in the LTR, if any.
	- length: x<=7	This element is only shown in detail mode.

# 205.6 CFM Single Ended Synthetic Loss Measurement message Management Command

## **Command Description**

This command is executed to initiate a test of Single Ended Synthetic Loss Measurement messages.

### **User Level**

The command can be accessed by operators with alarm, oam, vlan privileges, and executed by operators with alarm, oam, vlan privileges.

## **Command Syntax**

The command has the following syntax:

> admin cfm single-ended-slm

# 205.7 Single Ended Synthetic Loss Measurement message Management Command

## **Command Description**

This command initiates the test of Single Ended Synthetic Loss Measurement messages.

A number of Single Ended Synthetic Loss Measurement messages can be requested to be send from a specified MEP towards a specified destination MAC address.

### **User Level**

The command can be accessed by operators with alarm, oam, vlan privileges, and executed by operators with alarm, oam, vlan privileges.

## **Command Syntax**

The command has the following syntax:

> admin cfm single-ended-slm domain (domain) association <Cfm::CfmMaIndexType> mep <Cfm::MepIdType> target-mac <Vlan::MacAddr> [ no send-count | send-count <Cfm::SlmSendCountType> ] [ no size | size <Cfm::SlmPacketSizeType> ] [ no timeout | timeout <Cfm::SlmTimeoutType> ] [ no interval | interval <Cfm::SlmIntervalType> ] [ no priority | priority <Vlan::Priority> ]

### **Command Parameters**

Table 205.7-1 "Single Ended Synthetic Loss Measurement message Management Command" Resource Parameters

Resource Identifier	Type	Description
(domain)	Format:	Maintenance Domain Index.
	- Maintenance Domain (MD) index	
	- range: [14294967295]	
association	Parameter type: <cfm::cfmmaindextype></cfm::cfmmaindextype>	Maintenance Association Index.
	Format:	
	- Maintenance Association (MA) index. Unique within an	
	MD	
	- range: [14294967295]	
mep	Parameter type: <cfm::mepidtype></cfm::mepidtype>	Maintenance Association End
	Format:	Point (MEP) ID. Unique within
	- MA End Point (MEP) ID. Unique within an MA	an MA.
	- range: [18191]	
target-mac	Parameter type: <vlan::macaddr></vlan::macaddr>	The MAC address for the OAM
	Format:	target: a unicast destination MAC
	- mac address (aa:bb:cc:a1:02:03)	address used in the SLM.
	- unit: Byte	
	- length: 6	

Table 205.7-2 "Single Ended Synthetic Loss Measurement message Management Command"

### **Command Parameters**

Parameter	Type	Description
[no] send-count	Parameter type: <cfm::slmsendcounttype></cfm::slmsendcounttype>	optional parameter with default
	Format:	value: 1L
	- The number of Synthetic Loss Measurement messages to	The number of SLM packets to
	be transmitted.	be sent. Allowed range: 1 to 100.
	- range: [1100]	
[no] size	Parameter type: <cfm::slmpacketsizetype></cfm::slmpacketsizetype>	optional parameter with default
	Format:	value: 0L
	- The Data TLV size of Synthetic Loss Measurement	Size of data TLV. Allowed range
	messages to be transmitted.	: 0 to 1500.
	- range: [01500]	
[no] timeout	Parameter type: <cfm::slmtimeouttype></cfm::slmtimeouttype>	optional parameter with default
	Format:	value: 5L
	- The timeout for Synthetic Loss Measurement messages to	The timeout in seconds to wait
	be transmitted.	for each SLR. Allowed range: 5
	- range: [510]	to 10.
[no] interval	Parameter type: <cfm::slmintervaltype></cfm::slmintervaltype>	optional parameter with default
	Format:	value: 5L
	- The interval for Synthetic Loss Measurement messages to	The interval in seconds between
	be transmitted.	each SLM packet to be sent.
	- range: [110]	Allowed range: 1 to 10.
[no] priority	Parameter type: <vlan::priority></vlan::priority>	optional parameter with default
	Format:	value: 7L
	- priority of ethernet frames	Priority. A 3 bit value to be used
	- range: [07]	in the VLAN tag. Allowed range
		: 0 to 7.

# **Command Output**

Table 205.7-3 "Single Ended Synthetic Loss Measurement message Management Command" Display parameters

Specific Information		
name	Туре	Description
remote-mep	Parameter type: <cfm::mepidtype></cfm::mepidtype>	Remote Maintenance Association
	- MA End Point (MEP) ID. Unique within an MA	End Point Id.
	- range: [0,18191,65535]	This element is always shown.
slm-transmitted	Parameter type: <counter></counter>	The total number of SLM
	- 32 bit counter	messages transmitted.
		This element is always shown.
slr-received	Parameter type: <counter></counter>	The total number of SLR
	- 32 bit counter	messages received.
		This element is always shown.
in-loss	Parameter type: <cfm::signedinttype></cfm::signedinttype>	The total number of Synthetic
	- Signed Integer.	Loss Reply messages transmitted
	- range: [-21474836472147483647L]	from the Remote MEP, but not
		received at the Local MEP.
		This element is always shown.
out-loss	Parameter type: <cfm::signedinttype></cfm::signedinttype>	The total number of Synthetic
	- Signed Integer.	Loss Measurement messages
	- range: [-21474836472147483647L]	transmitted from the Local MEP,
		but not received at the Remote
		MEP.
		This element is always shown.
un-ack	Parameter type: <cfm::signedinttype></cfm::signedinttype>	The total number of
	- Signed Integer.	unacknowledged Synthetic Loss

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name	Type	Description
	- range: [-21474836472147483647L]	Measurement messages.
		This element is always shown.
test-id	Parameter type: <cfm::slmondemandtestidtype></cfm::slmondemandtestidtype>	The Test Id for On Demand
	- The Test Id for On Demand Synthetic Loss Measurement	Synthetic Loss Measurement
	messages.	messages.
	- range: [04294967295]	This element is always shown.