14 Management entities

14.1 Introduction

14.2 Management entities for non-SNMP-optimized eOAM profile

14.3 Management entities for SNMP-optimized eOAM profile

14.4 Management entities for DPoE eOAM profile

14.4.1 Branch 0xD6 “identification”

14.4.2 Branch 0x07 “basic attributes”

14.4.3 Branch 0xD7 “extended attributes”

14.4.4 Branch 0x09 “basic actions”

14.4.5 Branch 0xD9 “extended actions”

14.4.5.1 ONU management

14.4.5.1.1 Action *acOnuReboot* (0xD9/0x00-01)

This action is used by the OLT to request the ONU to perform a reboot (power cycle).

The *acOnuReboot* action is associated with the ONU object (see 14.4.1.1). The Variable Container~~Descriptor~~ TLV for the *acOnuReboot* action shall be as specified in Table 14-323.

Table 14-323—*ONU Reboot* TLV (0xD9/0x00-01)

Size (octets)	Field (name)	Value	Notes
1	Branch	0xD9	Branch identifier
2	Leaf	0x00-01	Leaf identifier
1	Length	0x80	The length of the TLV value field is zero.

14.4.5.2 Bridging

14.4.5.2.1 Action *acMacClearDynamicTable* (0xD9/0x01-01)

This action is used by the OLT to request the ONU to clear the content of the table storing dynamically learned MAC addresses. The MAC address table may be associated with a particular UNI port or with the ONU as a whole, i.e., all UNI ports on the given ONU.

The *acMacClearDynamicTable* action is associated with the UNI Port or the ONU object (see 14.4.1.1). The Variable ~~Descriptor~~ Container TLV for the *acMacClearDynamicTable* action shall be as specified in Table 14-324.

Table 14-324—*Clear Dynamic MAC Table* TLV (0xD9/0x01-01)

Size (octets)	Field (name)	Value	Notes
1	Branch	0xD9	Branch identifier
2	Leaf	0x01-01	Leaf identifier

Size (octets)	Field (name)	Value	Notes
1	Length	0x80	The length of the TLV value field is zero.

14.4.5.2.2 Action *acMacAddDynamicAddress* (0xD9/0x01-02)

14.4.5.2.3 Action *acMacDeleteDynamicAddress* (0xD9/0x01-03)

14.4.5.2.4 Action *acMacClearStaticTable* (0xD9/0x01-04)

This action is used by the OLT to request the ONU to clear the content of the table storing statically provisioned MAC addresses. The MAC address table may be associated with a particular UNI port or with the ONU as a whole, i.e., all UNI ports on the given ONU.

The *acMacClearStaticTable* action is associated with the UNI Port or the ONU object (see 14.4.1.1). The Variable Container~~Descriptor~~ TLV for the *acMacClearStaticTable* action shall be as specified in Table 14-327.

Table 14-327—*Clear Static MAC Table* TLV (0xD9/0x01-04)

Size (octets)	Field (name)	Value	Notes
1	Branch	0xD9	Branch identifier
2	Leaf	0x01-04	Leaf identifier
1	Length	0x80	The length of the TLV value field is zero.

14.4.5.2.5 Action *acMacAddStaticAddress* (0xD9/0x01-05)

14.4.5.2.6 Action *acMacDeleteStaticAddress* (0xD9/0x01-06)

14.4.5.2.7 Action *acConfigMulticastLlid* (0xD9/0x01-07)

14.4.5.3 Statistics and counters

14.4.5.3.1 Action *acCountersClear* (0xD9/0x02-01)

This action is used by the OLT to request the ONU to clear all the statistics counters instantiated on the ONU.

The *acCountersClear* action is associated with the ONU object (see 14.4.1.1). The Variable Container~~Descriptor~~ TLV for the *acCountersClear* action shall be as specified in Table 14-331.

Table 14-331—*Clear Counters* TLV (0xD9/0x02-01)

Size (octets)	Field (name)	Value	Notes
1	Branch	0xD9	Branch identifier
2	Leaf	0x02-01	Leaf identifier
1	Length	0x80	The length of the TLV value field is zero.

14.4.5.4 Alarms

14.4.5.4.1 Action *acAlarmGetCurrentSummary* (0xD9/0x03-01)

This action is used by the OLT to request the ONU to report all currently raised alarm conditions. To report these conditions, the ONU generates a series of at least one *Event Notification* eOAMPDUs containing *Alarm* TLVs corresponding to all current alarm conditions at the given ONU.

The *acAlarmGetCurrentSummary* action is associated with the ONU object (see 14.4.1.1). The Variable ContainerDescriptor TLV for the *acAlarmGetCurrentSummary* action shall be as specified in Table 14-332.

Table 14-332—*Retrieve Current Alarm Summary* TLV (0xD9/0x03-01)

Size (octets)	Field (name)	Value	Notes
1	Branch	0xD9	Branch identifier
2	Leaf	0x03-01	Leaf identifier
1	Length	0x80	The length of the TLV value field is zero.

14.4.5.5 Frame processing

14.4.5.5.1 Action *acRulesClearAll* (0xD9/0x05-01)

This action is used by the OLT to request the ONU to delete all frame processing rules associated with the given UNI port or the PON port, as indicated by the *Object Context* TLV.

The *acRulesClearAll* action is associated with the UNI Port or the PON Port object (see 14.4.1.1). The Variable ContainerDescriptor TLV for the *acRulesClearAll* action shall be as specified in Table 14-333.

Table 14-333—*Clear Port Ingress Rules* TLV (0xD9/0x05-01)

Size (octets)	Field (name)	Value	Notes
1	Branch	0xD9	Branch identifier
2	Leaf	0x05-01	Leaf identifier
1	Length	0x80	The length of the TLV value field is zero.

14.4.5.5.2 Action *acRulesAddOne* (0xD9/0x05-02)

This action is used by the OLT to request the ONU to add the ingress frame processing rule, described by the *aRuleSetConfig* attribute carried in the *Port Ingress Rule* TLV that preceded this action.

The *acRulesAddOne* action is associated with the UNI Port or the PON Port object (see 14.4.1.1). The Variable ContainerDescriptor TLV for the *acRulesAddOne* action shall be as specified in Table 14-334.

Table 14-334—*Add Port Ingress Rule* TLV (0xD9/0x05-02)

Size (octets)	Field (name)	Value	Notes
1	Branch	0xD9	Branch identifier
2	Leaf	0x05-02	Leaf identifier
1	Length	0x80	The length of the TLV value field is zero.

14.4.5.5.3 Action *acRulesDeleteOne* (0xD9/0x05-03)

This action is used by the OLT to request the ONU to delete the ingress frame processing rule, described by the *aRuleSetConfig* attribute carried in the *Port Ingress Rule* TLV that preceded this action.

The *acRulesDeleteOne* action is associated with the UNI Port or the PON Port object (see 14.4.1.1). The Variable ContainerDescriptor TLV for the *acRulesDeleteOne* action shall be as specified in Table 14-335.

Table 14-335—*Delete Port Ingress Rule* TLV (0xD9/0x05-03)

Size (octets)	Field (name)	Value	Notes
1	Branch	0xD9	Branch identifier

Size (octets)	Field (name)	Value	Notes
2	Leaf	0x05-03	Leaf identifier
1	Length	0x80	The length of the TLV value field is zero.

14.4.5.6 Transmission control

14.4.5.6.1 Action *acEnableUserTraffic* (0xD9/0x06-01)

This action is used by the OLT to request the ONU to enable user data traffic on the given L-ONU, as indicated by the *Object Context* TLV.

The *acEnableUserTraffic* action is associated with the LLID object (see 14.4.1.1). The Variable Container~~Descriptor~~ TLV for the *acEnableUserTraffic* action shall be as specified in Table 14-336.

Table 14-336—*Enable User Traffic* TLV (0xD9/0x06-01)

Size (octets)	Field (name)	Value	Notes
1	Branch	0xD9	Branch identifier
2	Leaf	0x06-01	Leaf identifier
1	Length	0x80	The length of the TLV value field is zero.

14.4.5.6.2 Action *acDisableUserTraffic* (0xD9/0x06-02)

This action is used by the OLT to request the ONU to disable user data traffic on the given L-ONU, as indicated by the *Object Context* TLV. OAM and MPCP traffic remains unaffected by the use of this action. An ONU boots with the user data traffic disabled.

The *acDisableUserTraffic* action is associated with the LLID object (see 14.4.1.1). The Variable Container~~Descriptor~~ TLV for the *acDisableUserTraffic* action shall be as specified in Table 14-337.

Table 14-337—*Disable User Traffic* TLV (0xD9/0x06-02)

Size (octets)	Field (name)	Value	Notes
1	Branch	0xD9	Branch identifier
2	Leaf	0x06-02	Leaf identifier
1	Length	0x80	The length of the TLV value field is zero.

14.4.5.6.3 Action *acLoopbackEnable* (0xD9/0x06-03)

14.4.5.6.4 Action *acLoopbackDisable* (0xD9/0x06-04)

14.4.5.6.5 Action *acLaserTxPowerOff* (0xD9/0x06-05)