Process Information for SNMP-centric MIBs

Overview of SNMP Framework MIBs

Table D-1 is a summary of SNMP Framework MIBs

Table D-1   *SNMP Framework MIBs*

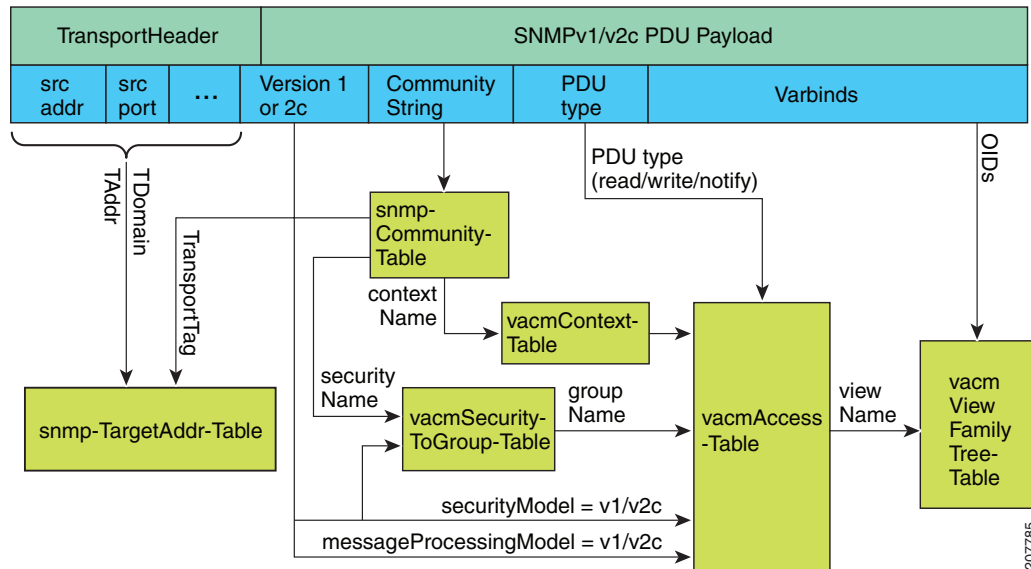| MIB Module Name	RFC Number	Description
SNMPv2- MIB	RFC-1907	MIB for SNMPv2
SNMP-FRAMEWORK-MIB	RFC-2571	Architecture for describing SNMP management frameworks
SNMP-MPD-MIB	RFC-2572	Message Processing and Dispatching for SNMP
SNMP-TARGET-MIB	RFC-2573	MIBs for specifying targets of management operations
SNMP-NOTIFICATION-MIB	RFC-2573	MIB for notification filtering
SNMP-USER-BASED-SM-MIB	RFC-2574	USM[1] for version 3
SNMP-VIEW-BASED-ACM-MIB	RFC-2575	VACM[2]
SNMP-COMMUNITY-MIB	RFC-2576	Coexistence between SNMP v1, v2, and v3
NOTIFICATION-LOG-MIB	RFC-2573	MIB for logging SNMP notifications
CISCO-BULK-FILE-MIB	—	MIB module for creating and deleting bulk files of SNMP data for file transfer
CISCO-FTP-CLIENT-MIB	—	MIB module for invoking internet FTP operations for network management processes

1. USM = User-based security model

2. VACM = View-based access control model

SNMP Message Processing

SNMPv1 and v2c Coexistence Message Processing

Figure D-1 describes SNMPv1 and v2c Coexistence Message Processing.
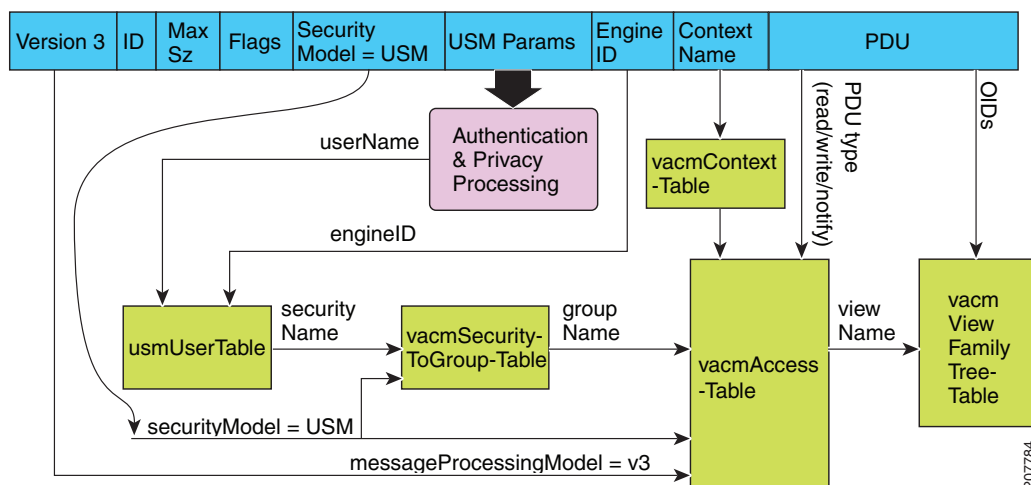
Figure D-1 SNMPv1 and v2c Coexistence Message Processing

SNMPv3 Message Processing

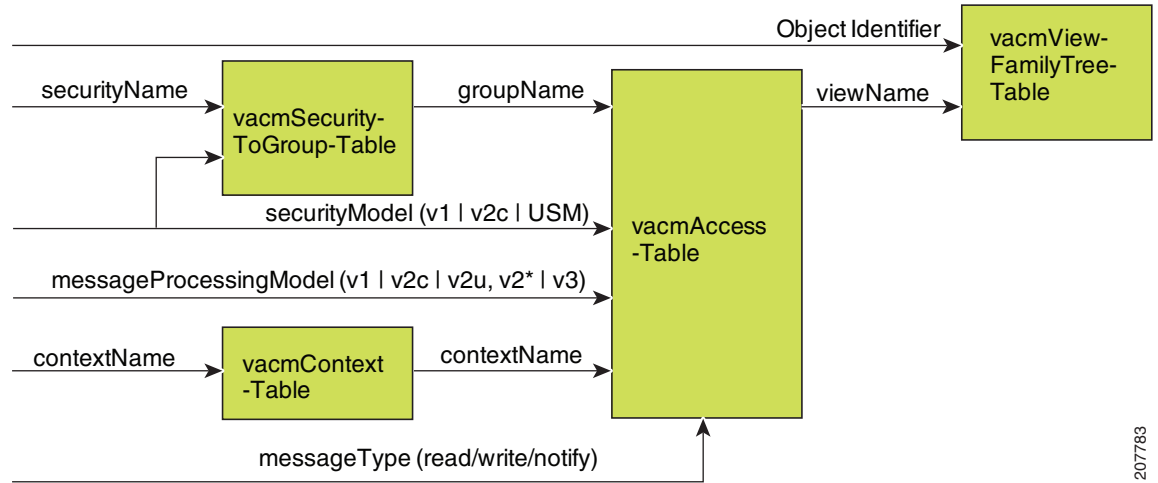Figure D-2 shows SNMPv3 PDU (Protocol Data Unit) with USM (user-based security model).

Figure D-2 SNMPv3 Message Processing

SNMPv3 View-Based Access Control Model

Figure D-3 shows the SNMPv3 View-Based Access Control Model.

Figure D-3   *SNMPv3 View-Based Access Control Model*

SNMPv1/v2 Community Configuration to Tables Mappings

SNMPv1/v2 community config

Example configuration command used for the following tables: **snmp-server view** *tim2* **RW**

Note   The first row of Table D-2 is a table index.

Table D-2 is a summary of SNMPv1/v2 community config for SNMP-COMMUNITY-MIB

Table D-2   *SNMP-COMMUNITY-MIB: snmpCommunityTable*

SNMP-COMMUNITY-MIB:: snmpCommunityTable (causes row creation)	
Configuration	**Sample Output**
snmpCommunityName	"tim2"
snmpCommunitySecurityName	"tim2"
snmpCommunityContextEngineID	<localEngineID>
snmpCommunityContextName	""
snmpCommunityTransportTag	""

Note   The first four rows of Table D-3 are table indexes.

Table D-3 is a summary of SNMPv1/v2 community config for SNMP-VACM-MIB

Table D-3   SNMP-VACM-MIB: vacmAccessEntry

SNMP-VACM-MIB:: vacmAccessEntry (causes row creation)

Configuration	Sample Output
vacmGroupName	"test-group"
vacmContextPrefix	""
vacmSecurityModel	1 and 2 (v1 and v2)
vacmSecurityLevel	1 (noAuthNoPriv)
vacmAccessReadViewName	"v1default"
vacmAccessWriteViewName	"v1default"
vacmAccessNotifyViewName	"v1default"

Table D-4 is a summary of SNMPv1/v2 community config for SNMP-VACM-MIB

Note   The first two rows of Table D-4 are table indexes.

Table D-4   SNMP-VACM-MIB: vacmSecurityToGroupEntry

SNMP-VACM-MIB:: vacmSecuritytoGroupEntry (causes row creation)

Configuration	Sample Output
vacmSecurityModel	1 and 2 (v1 and v2)
vacmSecurityName	"tim2"
vacmGroupName	"tim2"

SNMPv3 Configuration to Tables Mappings

SNMPv3 user config

Example configuration command used for the following tables: **snmp-server user** *tim test-group v3*

Note   The first two rows of Table D-5 and Table D-6 are table indexes.

Table D-5 is a summary of SNMPv3 user config for SNMP-USM-MIB

Table D-5   SNMP-USM-MIB: usmUserEntry

SNMP-USM-MIB:: usmUserEntry (causes row creation)

Configuration	Sample Output
usmUserEngineID	<localEngineID>
usmUserName	"tim"
usmUserSecurityName	"tim"
usmUserPrivProtocol	usmNoPrivProtocol
usmUserAuthProtocol	usmNoAuthProtocol

Table D-6 is a summary of SNMPv3 user config for SNMP-VACM-MIB

Table D-6   SNMP-VACM-MIB: vacmSecurityToGrouptEntry

SNMP-VACM-MIB:: vacmSecurityToGroupEntry (causes row creation)

Configuration	Sample Output
vacmSecurityModel	3
vacmSecurityName	"tim"
vacmGroupName	"test-group"

SNMPv3 group config

Example configuration command used for Table D-7: **snmp-server group** *test_group v3 noauth* **notify** *test-view* **read** *test-view* **write** *test-view*

Note   The first four rows of Table D-7 are table indexes.

Table D-7 is a summary of SNMPv3 group config for SNMP-VACM-MIB

Table D-7   SNMP-VACM-MIB: vacmAccessEntry

SNMP-VACM-MIB:: vacmAccessEntry (causes row creation)

Configuration	Sample Output
vacmGroupName	"test-group"
vacmConextPrefix	""
vacmSecurityModel	3 (v3)
vacmSecurityLevel	1 (noAuthNoPriv)
vacmAccessReadViewName	"test-view"
vacmAccessWriteViewName	"test-view"
vacmAccessNotifyViewName	""

SNMPv3 view config

Example configuration command used for Table D-8: **snmp-server view** *test-view internet* **included**

Note   The first two rows of Table D-8 are table indexes.

Table D-8 is a summary of SNMPv3 group config for SNMP-USM-MIB

Table D-8   SNMP-USM-MIB: vacmViewTreeFamilyEntry

SNMP-VACM-MIB:: vacmViewTreeFamilyEntry (causes row creation)	
Configuration	**Sample Output**
vacmViewTreeFamilyViewName	"test-view"
vacmViewTreeFamilySubtree	.1.3.6.1 (OID = internet)
vacmViewTreeFamilyMask	""
vacmViewTreeFamilyType	included