NAME

snmp_target - Target addresses and notifications module for bsnmpd(1)

LIBRARY

(begemotSnmpdModulePath."target" = /usr/lib/snmp_target.so)

DESCRIPTION

The **snmp_target** module implements SNMPv3 Management Target MIB and basic functionality from Notification MIB as defined in RFC 3413. The module is used to manage the internal list of SNMPv3 notification target addresses in **bsnmpd** and their associated transport and encapsulation parameters. The module must be loaded for **bsnmpd** to send SNMPv3 Trap-PDUs to the configured notification target addresses.

IMPLEMENTATION NOTES

A short description of the objects implemented in the module follows.

snmpTargetSpinLock

An advisory lock used to coordinate several Command Generator Applications when altering the SNMP Target addresses and their associated parameters.

snmpTargetAddrTable

The table contains the transport addresses to be used in generation of SNMP messages. The table contains the following objects

snmpTargetAddrName A unique local identifier used as entry key. Not accessible for GET or SET operations.

snmpTargetAddrTDomain

The transport domain of the target address. Currently only UDP over IPv4 is supported and any attempt to SET the value of this object will return an "inconsistentValue" error. Additional transport domains will be supported in future via the object definitions in TRANSPORT-ADDRESS-MIB (RFC 3419).

snmpTargetAddrTAddress

The transport address of this entry interpreted within the context of the value of *snmpTargetAddrTDomain*. For UDP over IPv4, this is a 6-byte long octetstring, with the first 4 bytes representing the IPv4 address and the last 2

bytes the UDP port number in network-byte order.

snmpTargetAddrTimeout The value of this object is only relevant when the receiver of the SNMP message is to send an acknowledgment that the message was received, i.e for SNMP notifications it is relevant if the notification is SNMP Inform rather than SNMP Trap. Currently **bsnmpd** supports only SNMP Trap notifications, so the value of this object is meaningless.

snmpTargetAddrRetryCount

As with *snmpTargetAddrTimeout* the value of this object currently is meaningless.

snmpTargetAddrTagList A list of human-readable tag values used to select target addresses for a particular operation. Recognized ASCII delimiting characters between tags are space (0x20), tab (0x20), carriage return (0xOD) and line feed (0x0A).

snmpTargetAddrParams The value of this object contains the value of a key in snmpTargetParamsTable containing SNMP parameters used when generating messages to this transport address.

snmpTargetAddrStorageType

This column always has either of two values. Entries created via **bsnmpd's** configuration file always have this column set to readOnly (5) and it is not possible to modify those entries. Entries created by Command Generator Applications always have this column set to volatile(2) and such entries are lost when the module is restarted. A SET operation on this column is not allowed.

snmpTargetAddrRowStatus

This column is used to create new target address entries or delete existing ones from the table.

snmpTargetParamsTable

The table contains the target information to be used in generation of SNMP messages. The table contains the following objects

snmpTargetParamsName A unique local identifier used as entry key. Not

accessible for GET or SET operations.

snmpTargetParamsMPModel

The Message Processing Model to be used when generating SNMP PDUs using this entry. Supported values are 0 for SNMPv1, 1 for SNMPv2c and 3 for SNMPv3.

snmpTargetParamsSecurityModel

The Security Model to be used when generating SNMP PDUs using this entry. Supported values are 1 for SNMPv1, 2 for SNMPv2c and 3 for SNMPv3 User-Based Security Model.

snmpTargetParamsSecurityName

The securityName which identifies the Principal on whose behalf SNMP PDUs will be generated using this entry. For SNMPv1 and SNMPv2c this is the name of a community configured in **bsnmpd**, and for SNMPv3 USM, this is the name of an existing user configured via the **snmp_usm** module.

snmpTargetParamsSecurityLevel

The Security Level to be used when generating SNMP PDUs using this entry. Supported values are noAuthNoPriv(1) for plain-text PDUs with no authentication, authNoPriv(2) for authenticated plain-text PDUs and authPriv(3) for encrypted PDUs.

snmpTargetParamsStorageType

As with *snmpTargetAddrStorageType* this column always has either of two values. Entries created via **bsnmpd's** configuration file always have this column set to readOnly (5), while entries created by Command Generator Applications always have this column set to volatile(2). A SET operation on this column is not allowed.

snmpTargetParamsRowStatus

This column is used to create new target address

parameters entries or delete existing ones from the table.

snmpNotifyTable

The table is used to select the management targets which should receive SNMP notifications. The table contains the following objects

snmpNotifyName A unique local identifier used as entry key. Not accessible for GET or SET operations.

snmpNotifyTag This object contains a single tag value used to select target addresses from the *snmpTargetAddrTable* to which the notifications will be send.

snmpNotifyType The type of SNMP notifications that will be send to the target addresses matching the corresponding *snmpNotifyTag*. Possible values are Trap (1) or Inform (2). Currently only SNMP Traps are supported and any attempt to SET the value of this object will return an "inconsistentValue" error.

snmpNotifyStorageType

Again this column always has either of two values. Entries created via **bsnmpd's** configuration file always have this column set to readOnly (5), while entries created by Command Generator Applications always have this column set to volatile(2). A SET operation on this column is not allowed.

snmpNotifyRowStatus

This column is used to create new notification target entries or delete existing ones from the table.

The *snmpNotifyFilterProfileTable* and *snmpNotifyFilterTable* tables from the SNMP-NOTIFICATION-MIB are not supported by the module. Notification filtering is supported via the snmp_vacm(3) module instead.

FILES

/usr/share/snmp/defs/target_tree.def

The description of the MIB tree implemented by **snmp_target**.

SEE ALSO

bsnmpd(1), gensnmptree(1), snmpmod(3), snmp_usm(3), snmp_vacm(3)

STANDARDS

IETF RFC 3413

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