

ZebOS-XP GVRP SMI Reference
IP Infusion Inc.

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Chapter 1

Data Structure Index

1.1 Data Structures

Here are the data structures with brief descriptions:

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Chapter 2

File Index

2.1 File List

Here is a list of all documented files with brief descriptions:

smi_gvrp.h (Provides API for managing GARP VLAN Registration Protocol in ZebOS)	15
smi_gvrp_msg.h (Defines data structures used by GVRP/MVRP SMI APIs) .	27

Chapter 3

Data Structure Documentation

3.1 gvrp_bridge_configuration Struct Reference

Data Fields

- char **bridge_name** [SMI_BRIDGE_NAMSIZ+1]
- u_int16_t **dynamic_vlan_enabled**
- struct smi_port_bmp **port_list**

The documentation for this struct was generated from the following file:

- [smi_gvrp_msg.h](#)

3.2 smi_gvrp_statistics Struct Reference

Data Fields

- char **if_name** [INTERFACE_NAMSIZ]
- u_int32_t **receive_counters** [SMI_GARP_ATTR_EVENT_MAX+1]
- u_int32_t **transmit_counters** [SMI_GARP_ATTR_EVENT_MAX+1]

The documentation for this struct was generated from the following file:

- [smi_gvrp_msg.h](#)

3.3 smi_gvrp_vid_detail Struct Reference

Data Fields

- smi_vid_t **vid**
- u_int32_t **gid_index**
- u_char **applicant**:5
- u_char **registrar**:5

The documentation for this struct was generated from the following file:

- [smi_gvrp_msg.h](#)

3.4 smi_gxrp_machine_details Struct Reference

Data Fields

- char **if_name** [INTERFACE_NAMSIZ]
- u_char **applicant**:5
- u_char **registrar**:5

The documentation for this struct was generated from the following file:

- [smi_gvrp_msg.h](#)

3.5 smi_msg_gvrp Struct Reference

Data Fields

- smi_cindex_t **cindex**
- char **if_name** [INTERFACE_NAMSIZ]
- char **bridge_name** [SMI_BRIDGE_NAMSIZ]
- char **reg_type** [SMI_REGTYPESIZ]
- u_int32_t **timer_type**
- smi_time_t **timer_value**
- u_int8_t **gvrp_enabled**
- u_int32_t **reg_mode**
- u_int32_t **receive_counters**
- u_int32_t **transmit_counters**
- smi_vid_t **vid**
- bool_t **dyn_vlan_learning**
- struct [gvrp_bridge_configuration](#) **gvrp_br_config**
- struct [smi_gvrp_vid_detail](#) **gvrp_vid_detail**
- struct [smi_gxrp_machine_details](#) **gvrp_mach_details**
- struct [smi_gvrp_statistics](#) **gvrp_stats**
- u_int8_t **first_call**
- u_int32_t **gid_index**
- u_int16_t **no_of_entries**
- smi_time_t **timer_details** [SMI_GARP_MAX_TIMERS+1]
- char **protocol** [8]
- u_int32_t **vr_id**
- struct [xvrpTimers](#) **timerData**
- struct [xvrpCommonList](#) **xvrpData**
- struct [xvrpFsmState](#) **xvrpFsm**
- u_int32_t **debug**
- int **state**
- u_int8_t **mvrp_enabled**

The documentation for this struct was generated from the following file:

- [smi_gvrp_msg.h](#)

3.6 xvrpBridgeConfig Struct Reference

Data Fields

- char **portName** [32]
- char **ifState**
- char **ifp_name** [10][10]
- int **registrationType**
- int **applicantState**
- pal_time_t **timerValues** [SMI_GARP_MAX_TIMERS]

The documentation for this struct was generated from the following file:

- [smi_gvrp_msg.h](#)

3.7 xvrpCommonList Struct Reference

Data Fields

- int **have_more**
- int **more_count**
- struct list * **xvrpList**

The documentation for this struct was generated from the following file:

- [smi_gvrp_msg.h](#)

3.8 xvrpFsmState Struct Reference

Data Fields

- char **portName** [32]
- int **numState**
- char **ifp_name** [32][32]
- char **attrIndex** [128]
- char **applicantState** [128][4]
- char **applicant_states_strings** [128][4]
- char **registrarState** [128][4]
- char **registrar_states_strings** [128][4]

The documentation for this struct was generated from the following file:

- [smi_gvrp_msg.h](#)

3.9 xvrpIfStats Struct Reference

Data Fields

- char **brName** [32]
- u_int32_t **rxCounters** [XVRP_TOTAL_ATTR_EVENTS]
- u_int32_t **txCounters** [XVRP_TOTAL_ATTR_EVENTS]

The documentation for this struct was generated from the following file:

- [smi_gvrp_msg.h](#)

3.10 xvrpTimers Struct Reference

Data Fields

- pal_time_t **timerValues** [SMI_GARP_MAX_TIMERS]

The documentation for this struct was generated from the following file:

- [smi_gvrp_msg.h](#)

Chapter 4

File Documentation

4.1 smi_gvrp.h File Reference

Provides API for managing GARP VLAN Registration Protocol in ZebOS. #include "smi_client.h"

```
#include "smi_gvrp_msg.h"
```

Defines

- #define **SMI_GVRP_VLAN_REGISTRATION_NORMAL** 0x01
- #define **SMI_GVRP_VLAN_REGISTRATION_FORBIDDEN** 0x03

Functions

- int [smi_gvrp_set_timer](#) (struct smiclient_globals *azg, char *ifname, u_int32_t timer_type, smi_time_t timer_value)
Sets the value of a specific timer type used by GVRP on a given interface.
- int [smi_gvrp_get_timer](#) (struct smiclient_globals *azg, char *ifname, u_int32_t timer_type, smi_time_t *timer_value)
Gets the value of a specific timer type used by GVRP on a given interface.
- int [smi_gvrp_enable](#) (struct smiclient_globals *azg, char *reg_type, char *bridge_name)
Enables GVRP.
- int **smi_gvrp_enable_validate** (struct smiclient_globals *azg, char *reg_type, char *bridge_name)
- int [smi_gvrp_disable](#) (struct smiclient_globals *azg, char *bridge_name)
Disables GVRP.

- int **smi_gvrp_disable_validate** (struct smiclient_globals *azg, char *bridge_name)
- int **smi_gvrp_enable_port** (struct smiclient_globals *azg, char *ifname)
Enables GVRP on a port.
- int **smi_gvrp_enable_port_validate** (struct smiclient_globals *azg, char *ifname)
- int **smi_gvrp_disable_port** (struct smiclient_globals *azg, char *ifname)
Disables GVRP on a port.
- int **smi_gvrp_disable_port_validate** (struct smiclient_globals *azg, char *ifname)
- int **smi_gvrp_set_registration** (struct smiclient_globals *azg, char *ifname, u_int32_t reg_mode)
*Sets the GVRP port's multicast group registration type to one of the following fixed: The multicast groups currently registered on the switch will remain on the port, but subsequent new registrations or de-registrations based on timers do not affect the port
forbidden: All registered multicast groups are de-registered, and prevents further multicast registration on the port
normal: Set multicast group registration and de-registration to dynamic.*
- int **smi_gvrp_set_registration_validate** (struct smiclient_globals *azg, char *if_name, u_int32_t reg_mode)
- int **smi_gvrp_set_app_state** (struct smiclient_globals *azg, int vr_id, char *if_name, char *reg_type, int state)
Gets the GVRP port's multicast group registration type.
- int **smi_gvrp_set_app_state_validate** (struct smiclient_globals *azg, int vr_id, char *if_name, char *reg_type, int state)
- int **smi_gvrp_show_debug** (struct smiclient_globals *azg, u_int32_t *debug)
- int **smi_gvrp_unset_debug** (struct smiclient_globals *azg, int debug)
- int **smi_gvrp_unset_debug_validate** (struct smiclient_globals *azg, int debug)
- int **smi_gvrp_set_debug** (struct smiclient_globals *azg, int debug)
- int **smi_gvrp_set_debug_validate** (struct smiclient_globals *azg, int debug)
- int **smi_gvrp_clear_statistics_port** (struct smiclient_globals *azg, int vr_id, char *if_name, char *reg_type)
- int **smi_gvrp_clear_statistics_port_validate** (struct smiclient_globals *azg, int vr_id, char *if_name, char *reg_type)
- int **smi_gvrp_get_registration** (struct smiclient_globals *azg, char *ifname, u_int32_t *reg_mode)
- int **smi_gvrp_get_per_vlan_statistics_details** (struct smiclient_globals *azg, const char *bridge_name, smi_vid_t vid, u_int32_t *receive_counters, u_int32_t *transmit_counters)
Gets statistical details for GVRP per VLAN.
- int **smi_gvrp_clear_all_statistics** (struct smiclient_globals *azg, char *bridge_name)

Clears all statistical details for GVRP.

- int [smi_gvrp_dynamic_vlan_learning_set](#) (struct smiclient_globals *azg, char *bridge_name, bool_t vlan_learning_enable)

Sets dynamic VLAN learning capability for GVRP per bridge.

- int [smi_gvrp_dynamic_vlan_learning_set_validate](#) (struct smiclient_globals *azg, char *bridge_name, bool_t vlan_learning_enable)
- int [smi_gvrp_set_port_disable](#) (struct smiclient_globals *azg, int vr_id, char *if_name)

debug gvrp call

- int [smi_gvrp_set_port_disable_validate](#) (struct smiclient_globals *azg, int vr_id, char *if_name)
- int [smi_gvrp_set_port_enable](#) (struct smiclient_globals *azg, int vr_id, char *if_name)

debug gvrp call

- int [smi_gvrp_set_port_enable_validate](#) (struct smiclient_globals *azg, int vr_id, char *if_name)
- int [smi_gvrp_get_configuration_bridge](#) (struct smiclient_globals *azg, char *reg_type, char *bridge_name, struct [gvrp_bridge_configuration](#) *gvrp_bridge_config)

Get the [gvrp_bridge_configuration](#) for a given bridge.

- int [smi_gvrp_get_vid_details](#) (struct smiclient_globals *azg, char *ifname, u_int8_t first_call, u_int32_t gid_index, u_int16_t no_of_entries, struct [smi_gvrp_vid_detail](#) *gvrp_vid_detail)

Gets GVRP vid's state machine details.

- int [smi_gvrp_get_port_statistics](#) (struct smiclient_globals *azg, char *ifname, struct [smi_gvrp_statistics](#) *gvrp_stats)

Gets GVRP port statistics.

- int [smi_client_create_n_send_smi_msg_gvrp](#) (struct smi_client_handler *ach, struct [smi_msg_gvrp](#) *msg, int msgtype)
- int [smi_gvrp_get_timer_details](#) (struct smiclient_globals *azg, char *ifname, smi_time_t *timer_values)
- int [smi_gvrp_show_timer](#) (struct smiclient_globals *azg, int vr_id, char *reg_type, char *if_name, struct [xvrpTimers](#) *gvrp)
- s_int32_t [smi_xvrp_show_times](#) (struct smiclient_globals *azg, u_int32_t vr_id, char *protocol, char *ifname, struct [xvrpTimers](#) *timerData)

Show GVRP/MVRP configured timer values.

- s_int32_t [smi_xvrp_show_bridge_configuration](#) (struct smiclient_globals *azg, u_int32_t vr_id, char *protocol, char *bridge_name, struct list *brConfList, int(*funPointer)(struct list *brConfList))

Show GVRP/MVRP bridge configuration.

- s_int32_t [smi_xvrp_show_finite_state_machine](#) (struct smiclient_globals *azg, u_int32_t vr_id, char *protocol, char *bridge_name, struct list *fsmStateList, int(*funPointer)(struct list *fsmStateList))

Show GVRP/MVRP finite state machine details.

- s_int32_t [smi_xvrp_show_statistics_interface](#) (struct smiclient_globals *azg, u_int32_t vr_id, char *protocol, char *ifname, struct list *ifStatsList, int(*funPointer)(struct list *ifStatsList))

Show various GVRP/MVRP related statistics of particular interface.

- s_int32_t [smi_xvrp_show_statistics_interface_all](#) (struct smiclient_globals *azg, u_int32_t vr_id, char *protocol, char *bridge_name, struct list *ifStatsList, int(*funPointer)(struct list *ifStatsList))

Show various GVRP/MVRP related statistics of particular interface.

4.1.1 Detailed Description

Provides API for managing GARP VLAN Registration Protocol in ZebOS. GVRP Provides support for 802.1Q VLAN pruning and dynamic VLAN creation. A switch can be used to exchange VLAN configuration information with other GVRP switches, prune unnecessary broadcast and unknown unicast traffic and dynamically create and manage VLANs.

4.1.2 Function Documentation

4.1.2.1 int smi_gvrp_clear_all_statistics (struct smiclient_globals * azg, char * bridge_name)

Clears all statistical details for GVRP. smi_gvrp_clear_all_statistics

Parameters:

- ← **azg** Pointer to smiclient_globals structure
- ← **bridge_name** Name of the bridge

Returns:

- 0 on success, otherwise -1

4.1.2.2 int smi_gvrp_disable (struct smiclient_globals * azg, char * bridge_name)

Disables GVRP. smi_gvrp_disable

Parameters:

- ← *azg* Pointer to smiclient_globals structure
- ← *bridge_name* Name of the bridge on which GVRP is being enabled

Returns:

0 on success, otherwise one of the following error codes
NSM_BRIDGE_ERR_NOTFOUND

4.1.2.3 int smi_gvrp_disable_port (struct smiclient_globals * *azg*, char * *ifname*)

Disables GVRP on a port. smi_gvrp_disable_port

Parameters:

- ← *azg* Pointer to smiclient_globals structure
- ← *ifname* Name of the interface on which GVRP needs to be disabled

Returns:

0 on success, otherwise one of the following error codes
NSM_BRIDGE_ERR_NOTFOUND

4.1.2.4 int smi_gvrp_dynamic_vlan_learning_set (struct smiclient_globals * *azg*, char * *bridge_name*, bool_t *vlan_learning_enable*)

Sets dynamic VLAN learning capability for GVRP per bridge. smi_gvrp_dynamic_vlan_learning_set

Parameters:

- ← *azg* Pointer to smiclient_globals structure
- ← *bridge_name* Name of the bridge
- ← *vlan_learning_enable* boolean (0 | !0)

Returns:

0 on success, otherwise one of the following error code NSM_BRIDGE_ERR_NOTFOUND

4.1.2.5 int smi_gvrp_enable (struct smiclient_globals * *azg*, char * *reg_type*, char * *bridge_name*)

Enables GVRP. smi_gvrp_enable

Parameters:

- ← *azg* Pointer to smiclient_globals structure
- ← *reg_type* GVRP registration type
- ← *bridge_name* Name of the bridge on which GVRP is being enabled

Returns:

0 on success, otherwise one of the following error codes
 NSM_BRIDGE_ERR_NOTFOUND
 NSM_VLAN_ERR_BRIDGE_NOT_VLAN_AWARE
 NSM_BRIDGE_ERR_MEM

4.1.2.6 int smi_gvrp_enable_port (struct smiclient_globals * azg, char * ifname)

Enables GVRP on a port. smi_gvrp_enable_port

Parameters:

- ← *azg* Pointer to smiclient_globals structure
- ← *ifname* Name of the interface on which GVRP needs to be enabled

Returns:

0 on success, otherwise one of the following error codes
 NSM_BRIDGE_ERR_GENERAL
 NSM_BRIDGE_ERR_SPBD_TYPE
 NSM_PVLAN_ERR_CONFIGURED

4.1.2.7 int smi_gvrp_get_configuration_bridge (struct smiclient_globals * azg, char * reg_type, char * bridge_name, struct gvrp_bridge_configuration * gvrp_bridge_config)

Get the [gvrp_bridge_configuration](#) for a given bridge. smi_gvrp_get_configuration_bridge

Parameters:

- ← *azg* Pointer to smiclient_globals structure
- ← *reg_type* GVRP registration type as specified by smi_gvrp_vlan_registration_type
- ← *bridge_name* Name of the bridge
- *gvrp_bridge_config* Pointer to [gvrp_bridge_configuration](#)

Returns:

0 on success, otherwise one of the following error code NSM_BRIDGE_ERR_NOTFOUND

4.1.2.8 `int smi_gvrp_get_per_vlan_statistics_details (struct smiclient_globals * azg, const char * bridge_name, smi_vid_t vid, u_int32_t * receive_counters, u_int32_t * transmit_counters)`

Gets statistical details for GVRP per VLAN. `smi_gvrp_get_per_vlan_statistics_details`

Parameters:

- ← *azg* Pointer to `smiclient_globals` structure
- ← *bridge_name* Name of the bridge
- ← *vid* VLAN ID for which GVRP statistical details needs to be
- *receive_counters* Pointer to the number of GVRP packets received
- *transmit_counters* Pointer to the number of GVRP packets transmitted

Returns:

- 0 on success, otherwise one of the following error codes
- NSM_BRIDGE_ERR_GENERAL

4.1.2.9 `int smi_gvrp_get_port_statistics (struct smiclient_globals * azg, char * ifname, struct smi_gvrp_statistics * gvrp_stats)`

Gets GVRP port statistics. `smi_gvrp_get_port_statistics`

Parameters:

- ← *azg* Pointer to `smiclient_globals` structure
- ← *ifname* Interface name for which GVRP port statistics needs to be retrieved
- *gvrp_stats* Pointer to [smi_gvrp_statistics](#)

Returns:

- 0 on success, otherwise one of the following error code
- NSM_ERR_IF_BIND_VLAN_ERR
- NSM_BRIDGE_ERR_GENERAL

4.1.2.10 `int smi_gvrp_get_timer (struct smiclient_globals * azg, char * ifname, u_int32_t timer_type, smi_time_t * timer_value)`

Gets the value of a specific timer type used by GVRP on a given interface. `smi_gvrp_get_timer`

Parameters:

- ← *azg* Pointer to `smiclient_globals` structure
- ← *ifname* Interface name on which GVRP timer needs to be retrieved
- ← *timer_type* Type of timer as defined by `smi_garp_timer`

→ *timer_value* Timer value in hundredth of a second

Returns:

0 on success, otherwise one of the following error codes
NSM_BRIDGE_ERR_GENERAL

4.1.2.11 `int smi_gvrp_get_vid_details (struct smiclient_globals * azg, char * ifname, u_int8_t first_call, u_int32_t gid_index, u_int16_t no_of_entries, struct smi_gvrp_vid_detail * gvrp_vid_detail)`

Gets GVRP vid's state machine details. `smi_gvrp_get_vid_details`

Parameters:

← *azg* Pointer to `smiclient_globals` structure
 ← *ifname* Interface name
 ← *first_call* If this is the first or subsequent call by the application
 ← *gid_index* A local index used by GVRP to store learnt VIDs
 ← *no_of_entries* Number of entries Unused
 → *gvrp_vid_details* Pointer to [smi_gvrp_vid_detail](#)

Returns:

0 on success, otherwise one of the following error code
NSM_ERR_IF_BIND_VLAN_ERR
NSM_BRIDGE_ERR_GENERAL

4.1.2.12 `int smi_gvrp_set_app_state (struct smiclient_globals * azg, int vr_id, char * if_name, char * reg_type, int state)`

Gets the GVRP port's multicast group registration type. `smi_gvrp_get_registration`

Parameters:

← *azg* Pointer to `smiclient_globals` structure
 ← *ifname* Name of the interface for which GVRP registration type will be retrieved
 → *reg_mode* Pointer to the value Registration type

Returns:

0 on success, otherwise one of the following error codes
NSM_BRIDGE_ERR_GENERAL

4.1.2.13 int smi_gvrp_set_port_disable (struct smiclient_globals * azg, int vr_id, char * if_name)

debug gvrp call smi_gvrp_set_port_disable

Parameters:

← *azg* Pointer to the SMI client global structure

← *vr_id* virtual router Id

← *if_name* interface name

Returns:

0 on success, otherwise one of the following error codes

NSM_API_SET_ERR_MASTER_NOT_EXIST

NSM_API_ERR_NO_NSM_BRIDGE_MASTER

NSM_API_SET_ERR_IF_NOT_FOUND

4.1.2.14 int smi_gvrp_set_port_enable (struct smiclient_globals * azg, int vr_id, char * if_name)

debug gvrp call smi_gvrp_set_port_enable

Parameters:

← *azg* Pointer to the SMI client global structure

← *vr_id* virtual router Id

← *if_name* interface name

Returns:

0 on success, otherwise one of the following error codes

NSM_API_SET_ERR_MASTER_NOT_EXIST

NSM_API_ERR_NO_NSM_BRIDGE_MASTER

NSM_API_SET_ERR_IF_NOT_FOUND

4.1.2.15 int smi_gvrp_set_registration (struct smiclient_globals * azg, char * ifname, u_int32_t reg_mode)

Sets the GVRP port's multicast group registration type to one of the following

fixed: The multicast groups currently registered on the switch will remain on the port, but subsequent new registrations or de-registrations based on timers do not affect the port

forbidden: All registered multicast groups are de-registered, and prevents further multicast registration on the port

normal: Set multicast group registration and de-registration to dynamic. smi_gvrp_set_registration

Parameters:

- ← *azg* Pointer to smiclient_globals structure
- ← *ifname* Name of the interface on which GVRP registration type will be set
- ← *reg_mode* Registration type as specified by smi_gvrp_vlan_registration_type

Returns:

0 on success, otherwise one of the following error codes
 NSM_ERR_GVRP_NOCONFIG_ONPORT
 NSM_BRIDGE_ERR_GENERAL

4.1.2.16 **int smi_gvrp_set_timer (struct smiclient_globals * azg, char * ifname, u_int32_t timer_type, smi_time_t timer_value)**

Sets the value of a specific timer type used by GVRP on a given interface. smi_gvrp_set_timer

Parameters:

- ← *azg* Pointer to smiclient_globals structure
- ← *ifname* Interface name on which GVRP timer needs to be set
- ← *timer_type* Type of timer as defined by smi_garp_timer
- ← *timer_value* Timer value to be set in hundredth of a second

Returns:

0 on success, otherwise one of the following error codes
 NSM_BRIDGE_ERR_GENERAL

4.1.2.17 **s_int32_t smi_xvrp_show_bridge_configuration (struct smiclient_globals * azg, u_int32_t vr_id, char * protocol, char * bridge_name, struct list * brConfList, int(*) (struct list * brConfList) funPointer)**

Show GVRP/MVRP bridge configuration. xvrp_show_bridge_configuration

Parameters:

- ← *azg* Pointer to smiclient_globals structure
- ← *vr_id* Virtual Router ID <0-255>
- ← *protocol* Protocol type string {gvrp|mvrp}
- ← *bridge_name* Bridge name
- *brConfList* Pointer to linked list of structure [xvrpBridgeConfig](#)
- ← *funPointer* Callback function pointer

Returns:

0 on success, otherwise one of the following error codes
 NSM_BRIDGE_ERR_NOTFOUND
 NSM_BRIDGE_ERR_GMRP_NOCONFIG
 CLI_ERROR

4.1.2.18 `s_int32_t smi_xvrp_show_finite_state_machine (struct smiclient_globals *azg, u_int32_t vr_id, char *protocol, char *bridge_name, struct list *fsmStateList, int(*) (struct list *fsmStateList) funPointer)`

Show GVRP/MVRP finite state machine details. `xvrp_show_finite_state_machine_details`

Parameters:

← *azg* Pointer to `smiclient_globals` structure
 ← *vr_id* Virtual Router ID <0-255>
 ← *protocol* Protocol type string {gvrp|mvrp}
 ← *bridge_name* Bridge name
 → *fsmStateList* Pointer to linked list of structure [xvrpFsmState](#)
 ← *funPointer* Callback function pointer

Returns:

0 on success, otherwise one of the following error codes
 NSM_BRIDGE_ERR_NOTFOUND
 NSM_BRIDGE_ERR_GMRP_NOCONFIG
 CLI_ERROR

4.1.2.19 `s_int32_t smi_xvrp_show_statistics_interface (struct smiclient_globals *azg, u_int32_t vr_id, char *protocol, char *ifname, struct list *ifStatsList, int(*) (struct list *ifStatsList) funPointer)`

Show various GVRP/MVRP related statistics of particular interface. `xvrp_show_statistics_interface`

Parameters:

← *azg* Pointer to `smiclient_globals` structure
 ← *vr_id* Virtual Router ID <0-255>
 ← *protocol* Protocol type string {gvrp|mvrp}
 ← *ifname* Interface name
 → *ifStatsList* Pointer to linked list of structure [xvrpIfStats](#)
 ← *funPointer* Callback function pointer

Returns:

0 on success, otherwise one of the following error codes
 NSM_BRIDGE_ERR_GENERAL
 RESULT_ERROR

4.1.2.20 s_int32_t smi_xvrp_show_statistics_interface_all (struct smiclient_globals * *azg*, u_int32_t *vr_id*, char * *protocol*, char * *bridge_name*, struct list * *ifStatsList*, int(*) (struct list * *ifStatsList*) *funPointer*)

Show various GVRP/MVRP related statistics of particular interface. xvrp_show_statistics_interface_all

Parameters:

← *azg* Pointer to smiclient_globals structure
 ← *vr_id* Virtual Router ID <0-255>
 ← *protocol* Protocol type string {gvrp|mvrp}
 ← *ifname* Interface name
 → *ifStatsList* Pointer to linked list of structure [xvrpIfStats](#)
 ← *funPointer* Callback function pointer

Returns:

0 on success, otherwise one of the following error codes
 NSM_BRIDGE_ERR_GENERAL
 RESULT_ERROR

4.1.2.21 s_int32_t smi_xvrp_show_times (struct smiclient_globals * *azg*, u_int32_t *vr_id*, char * *protocol*, char * *ifname*, struct xvrpTimers * *timerData*)

Show GVRP/MVRP configured timer values. xvrp_show_timers

Parameters:

← *azg* Pointer to smiclient_globals structure
 ← *vr_id* Virtual Router ID <0-255>
 ← *protocol* Protocol type string {gvrp|mvrp}
 ← *ifname* Interface name
 → *timerData* Pointer to structure [xvrpTimers](#)

Returns:

0 on success, otherwise one of the following error codes
 NSM_BRIDGE_ERR_NOTFOUND
 NSM_BRIDGE_ERR_GMRP_NOCONFIG
 CLI_ERROR

4.2 smi_gvrp_msg.h File Reference

Defines data structures used by GVRP/MVRP SMI APIs. `#include "smi_message.h"`

Data Structures

- struct [gvrp_bridge_configuration](#)
- struct [smi_gvrp_vid_detail](#)
- struct [smi_gxrp_machine_details](#)
- struct [smi_gvrp_statistics](#)
- struct [xvrpTimers](#)
- struct [xvrpBridgeConfig](#)
- struct [xvrpFsmState](#)
- struct [xvrpIfStats](#)
- struct [xvrpCommonList](#)
- struct [smi_msg_gvrp](#)

Defines

- `#define SMI_MSG_GVRP_SIZE 4`
- `#define SMI_REGTYPESIZ 16`
- `#define SMI_GVRP_JOIN_TIMER_MAX 20`
- `#define SMI_GVRP_JOIN_TIMER_MIN 1`
- `#define SMI_GVRP_ENABLED 1`
- `#define SMI_GVRP_DISABLED 0`
- `#define GVRP_DEBUG_EVENT 0x01`
- `#define GVRP_DEBUG_CLI 0x02`
- `#define GVRP_DEBUG_TIMER 0x04`
- `#define GVRP_DEBUG_PACKET 0x08`
- `#define XVRP_TOTAL_ATTR_EVENTS 7`
- `#define SMI_GVRP_CTYPE_IFNAME 0`
- `#define SMI_GVRP_CTYPE_TIMER_TYPE 1`
- `#define SMI_GVRP_CTYPE_TIMER_VALUE 2`
- `#define SMI_GVRP_CTYPE_BRIDGE_NAME 3`
- `#define SMI_GVRP_CTYPE_REG_TYPE 4`
- `#define SMI_GVRP_CTYPE_PORT_CONFIG 5`
- `#define SMI_GVRP_CTYPE_REG_MODE 6`
- `#define SMI_GVRP_CTYPE_VLAN_ID 7`
- `#define SMI_GVRP_CTYPE_RECV_COUNTERS 8`
- `#define SMI_GVRP_CTYPE_XMIT_COUNTERS 9`
- `#define SMI_GVRP_CTYPE_DYNVLAN_LEARNING 10`
- `#define SMI_GVRP_CTYPE_BRIDGE_CONFIG 11`
- `#define SMI_GVRP_CTYPE_FIRST_CALL 12`
- `#define SMI_GVRP_CTYPE_GID_INDEX 13`

- #define **SMI_GVRP_CTYPE_NUM_ENTRIES** 14
- #define **SMI_GVRP_CTYPE_VID_DETAILS** 15
- #define **SMI_GVRP_CTYPE_MACHINE_BRIDGE** 16
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- #define **SMI_GVRP_CTYPE_PROTOCOL** 19
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- #define **SMI_GVRP_CTYPE_DEBUG** 27
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- #define **SMI_MVRP_CTYPE_MVRP_ENABLED** 29
- #define **SMI_GVRP_CTYPE_GVRP_ENABLED** 30
- #define **SMI_GVRP_CTYPE_TIMER_VALUES** 31

Enumerations

- enum **smi_garp_attribute_event** {
SMI_GARP_ATTR_EVENT_LEAVE_ALL, **SMI_GARP_ATTR_EVENT_JOIN_EMPTY**, **SMI_GARP_ATTR_EVENT_JOIN_IN**, **SMI_GARP_ATTR_EVENT_LEAVE_EMPTY**,
SMI_GARP_ATTR_EVENT_LEAVE_IN, **SMI_GARP_ATTR_EVENT_EMPTY**, **SMI_GARP_ATTR_EVENT_MAX** }
- enum **smi_gid_registrar_mgmt** {
SMI_GID_REG_MGMT_NORMAL, **SMI_GID_REG_MGMT_FIXED**, **SMI_GID_REG_MGMT_FORBIDDEN**, **SMI_GID_REG_MGMT_RESTRICTED_GROUP**,
SMI_GID_REG_MGMT_MAX }
- enum **smi_garp_timers** {
SMI_GARP_JOIN_TIMER, **SMI_GARP_LEAVE_TIMER**, **SMI_GARP_LEAVE_ALL_TIMER**, **SMI_GARP_LEAVE_CONF_TIMER**,
SMI_GARP_LEAVEALL_CONF_TIMER, **SMI_GARP_PERIODIC_TIMER**, **SMI_GARP_MAX_TIMERS** }

Functions

- void **smi_gvrp_dump** (struct lib_globals *zg, struct [smi_msg_gvrp](#) *msg)
- int **smi_encode_gvrpmsg** (u_char **pnt, u_int16_t *size, struct [smi_msg_gvrp](#) *msg)
- int **smi_decode_gvrpmsg** (u_char **pnt, u_int16_t *size, struct [smi_msg_gvrp](#) *msg)
- int **smi_parse_gvrp** (u_char **pnt, u_int16_t *size, struct smi_msg_header *header, void *arg, SMI_CALLBACK callback)

4.2.1 Detailed Description

Defines data structures used by GVRP/MVRP SMI APIs.

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