ZebOS-XP LACP SMI Reference

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Data Structure Documentation

3.1 smi_lacp_agg_bmp Struct Reference

Data Fields

- u_int32_t **bitmap** [SMI_LACP_BMP_WORD_MAX]
- int **count**

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

- smi_lacp_msg.h

3.2 smi_lacp_channel Struct Reference

Data Fields

- struct smi_lacp_link **lacp_link** [SMI_LACP_AGGREGATOR_LINKS]
- u_int16_t **linkCnt**
- u_char **name** [SMI_LACP_IFNAMSIZ]
- u_int32_t **aggrIdentifier**
- u_char **aggregator_mac_address** [SMI_LACP_SYS_ID_LEN]
- u_char **partner_system** [SMI_LACP_GRP_ADDR_LEN]
- u_int16_t **partner_system_priority**
- u_int16_t **partner_oper_aggregator_key**
- u_int16_t **actor_admin_aggregator_key**
- u_int16_t **actor_oper_aggregator_key**
- u_char **receive_state**
- u_char **transmit_state**
- unsigned int **individual_aggregator**:1
- unsigned int **ready**:1

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

- smi_lacp_msg.h

3.3 smi_lacp_channel_countersInfo Struct Reference

Data Fields

- u_char **name** [SMI_LACP_IFNAMSIZ]
- u_int32_t **agg_ix**
- struct smi_lacp_link_details **lacp_link** [SMI_LACP_AGGREGATOR_LINKS]

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

- smi_lacp_msg.h

3.4 smi_lacp_channel_countersInfo_list Struct Reference

Data Fields

- int **have_more**
- int **count**
- struct list ∗ **lacpChannelCountersInfoList**
- int **start_index**
- int **end_index**

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

- smi_lacp_msg.h

3.5 smi_lacp_channel_list Struct Reference

Data Fields

- int **have_more**
- int **start_index**
- int **end_index**
- int **count**
- struct list ∗ **lacpChannelList**

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

- smi_lacp_msg.h

3.6 smi_lacp_channel_summary Struct Reference

Data Fields

- struct smi_lacp_link **lacp_link** [SMI_LACP_AGGREGATOR_LINKS]
- u_int16_t **actor_admin_aggregator_key**
- u_int16_t **actor_oper_aggregator_key**

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

- smi_lacp_msg.h

3.7 smi_lacp_link Struct Reference

Data Fields

- u_char **name** [SMI_LACP_IFNAMSIZ]
- u_int16_t **actor_port_number**
- u_int16_t **sync_info**

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

- smi_lacp_msg.h

3.8 smi_lacp_link_counters Struct Reference

Data Fields

- u_char **name** [SMI_LACP_IFNAMSIZ]
- u_int32_t **lacpdu_sent_count**
- u_int32_t **lacpdu_recv_count**
- u_int32_t **mpdu_recv_count**
- u_int32_t **mpdu_sent_count**
- u_int32_t **mpdu_response_sent_count**
- u_int32_t **mpdu_response_recv_count**
- u_int32_t **pckt_sent_err_count**
- u_int32_t **pckt_recv_err_count**

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

- smi_lacp_msg.h

3.9 smi_lacp_link_details Struct Reference

Data Fields

- u_char **name** [SMI_LACP_IFNAMSIZ]
- u_int16_t **actor_port_number**
- u_int16_t **sync_info**
- struct smi_lacp_link_counters **link_counters**
- u_int16_t **system_priority**
- u_char **system_id** [SMI_LACP_SYS_ID_LEN]
- u_int16_t **actor_oper_port_key**
- u_int16_t **actor_admin_port_key**
- u_int16_t **partner_oper_port_priority**
- u_char **partner_oper_system** [SMI_LACP_GRP_ADDR_LEN]
- u_int16_t **partner_oper_key**
- u_int16_t **actor_port_priority**
- u_char **rcv_state**
- u_char **periodic_tx_state**
- u_char **mux_machine_state**
- u_char **actor_oper_port_state** [SMI_LACP_GRP_ADDR_LEN]
- u_char **partner_oper_port_state** [SMI_LACP_GRP_ADDR_LEN]
- u_int16_t **partner_admin_port_number**
- u_int16_t **partner_oper_port_number**
- u_int16_t **partner_admin_port_priority**
- u_char **actor_admin_system** [SMI_LACP_GRP_ADDR_LEN]
- u_char **partner_admin_system** [SMI_LACP_SYS_ID_LEN]
- u_char **actor_admin_port_state**
- u_char **partner_admin_port_state** [SMI_LACP_GRP_ADDR_LEN]
- u_int16_t **partner_admin_system_priority**
- u_int16_t **partner_oper_system_priority**
- u_int32_t **agg_ix**

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

- smi_lacp_msg.h

3.10 smi_msg_lacp Struct Reference

Data Fields

- smi_cindex_t **cindex**
- char **if_name** [INTERFACE_NAMSIZ]
- char **name** [SMI_LACP_IFNAMSIZ]
- u_char **system_id** [SMI_LACP_GRP_ADDR_LEN]
- u_int32_t **key**
- u_int32_t **ch_priority**
- u_int32_t **sys_priority**
- int **ch_timeout**
- enum smi_lacp_mode **mode**
- u_int32_t **agg_ix**
- struct smi_lacp_agg_bmp **agg_bmp**
- struct smi_lacp_channel **lacp_channel**
- struct smi_lacp_channel_summary **lacp_channel_summary**
- struct smi_lacp_link_counters **lacp_link_counters**
- enum ha_switch **switch_to_state**
- struct smi_lacp_channel_list **lacp_channel_list**
- struct smi_lacp_channel_countersInfo_list **lacp_channel_countersInfo_list**
- struct smi_lacp_link **lacp_link**
- struct smi_lacp_channel_countersInfo **lacp_channel_countersInfo**
- struct smi_lacp_link_details **lacp_link_details**
- enum smi_lacp_port_selected_state **port_selected_state**
- int **maxbundle**
- u_int32_t **debug**

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

- smi_lacp_msg.h

Chapter 4

File Documentation

4.1 smi_lacp.h File Reference

Provide APIs for managing LACP protocol. `#include "smi_client.h"`
`#include "smi_lacp_msg.h"`

Defines

- #define **SMI_LACP_TIMEOUT_LONG** 0
- #define **SMI_LACP_TIMEOUT_SHORT** 1

Functions

- int smi_get_port_channel_summary (struct smiclient_globals ∗azg, int start_index, int end_index, struct list ∗channelList, int(∗callback)(struct list ∗channelList))

    It gets all aggregator details in a list.

- int smi_get_all_lacp_counters (struct smiclient_globals ∗azg, int start_index, int end_index, struct list ∗lacpCounterList, int(∗callback)(struct list ∗lacpCounterList))

    It gets counters of all aggregator in a list.

- int smi_lacp_get_counters_by_portchannel (struct smiclient_globals ∗azg, u_int32_t lacpAdminKey, struct smi_lacp_channel_countersInfo ∗lacpChannelCountersInfo)

    It gets counters of the specific aggregator using lacp admin key as identifier.

- int smi_get_lacp_interface (struct smiclient_globals ∗azg, char ∗ifName, struct smi_lacp_link_details ∗smiLacplink)

    It gets all LACP link details.

- int smi_lacp_get_sysid (struct smiclient_globals ∗azg, u_char ∗systemId)

  This API retrieves the LACP system ID.

- int smi_lacp_get_counter (struct smiclient_globals ∗azg, char ∗ifName, struct smi_lacp_link_counters ∗linkStats)

  This API retrieves the packet traffic statistics for all member-interfaces of an LACP aggregator.

- int smi_lacp_get_port_selected_state (struct smiclient_globals ∗azg, char ∗ifName, u_int8_t ∗portSelectedState)

  Retrieves .

- int smi_lacp_get_channelactivity (struct smiclient_globals ∗azg, char ∗ifName, enum smi_lacp_mode ∗mode)

  Gets the link aggregation status on a port.

- int smi_lacp_get_channeladminkey (struct smiclient_globals ∗azg, char ∗ifName, u_int32_t ∗lacpAdminKey)

  Gets the channel admin key on a port.

- int smi_lacp_set_channelpriority (struct smiclient_globals ∗azg, char ∗ifName, u_int32_t priority)

  Sets the priority of a link.

- int smi_lacp_get_channelpriority (struct smiclient_globals ∗azg, char ∗ifName, u_int32_t ∗priority)

  Gets the priority of a link.

- int smi_lacp_unset_channelpriority (struct smiclient_globals ∗azg, char ∗ifName)

  Sets the priority of a link to default value.

- int smi_lacp_set_channeltimeout (struct smiclient_globals ∗azg, char ∗ifName, int timeout)

  Sets the timeout of a link.

- int smi_lacp_get_channeltimeout (struct smiclient_globals ∗azg, char ∗ifName, int ∗timeout)

  Gets the timeout of a link.

- int smi_lacp_set_systempriority (struct smiclient_globals ∗azg, unsigned int sysPriority)

  Sets LACP channel system priority.

- int smi_lacp_get_systempriority (struct smiclient_globals ∗azg, unsigned int ∗sysPriority)

Gets LACP channel system priority.

- int smi_lacp_unset_systempriority (struct smiclient_globals ∗azg)

  Sets LACP channel system priority to default value.

- int smi_lacp_get_etherchanneldetail (struct smiclient_globals ∗azg, u_int32_t lacpAdminKey, struct smi_lacp_channel ∗chDetail)

  Get detail information about an LACP channel.

- int smi_lacp_get_etherchannelsummary (struct smiclient_globals ∗azg, u_int32_t lacpAdminKey, struct smi_lacp_channel_summary ∗chSummary)

  Get summary information about an LACP channel.

- int smi_lacp_get_aggregator_idx (struct smiclient_globals ∗azg, struct smi_lacp_agg_bmp ∗aggBmp)

  Get a bitmaps of all LACP aggregator Ids.

- int smi_lacp_clear_counters (struct smiclient_globals ∗azg)

  Clear LACP related Counters.

- int smi_lacp_get_max_bundle (struct smiclient_globals ∗azg, int ∗maxBundle)

  Gets supported maximum number of links per aggregators.

- int smi_lacp_debug_on (struct smiclient_globals ∗azg, u_int32_t debug)

  Function enables the debug for lacp.

- int smi_lacp_debug_off (struct smiclient_globals ∗azg, u_int32_t debug)

  Function disables the debug for lacp.

- int smi_lacp_show_debugging (struct smiclient_globals ∗azg, u_int32_t ∗debug)

  Function disables the debug for lacp. ∗

- int **smi_lacp_clear_channel_counters** (struct smiclient_globals ∗azg, u_int32_t lacpAdminKey)
- int **smi_lacp_set_channelpriority_validate** (struct smiclient_globals ∗azg, char ∗ifName, u_int32_t priority)
- int **smi_lacp_unset_channelpriority_validate** (struct smiclient_globals ∗azg, char ∗ifName)
- int **smi_lacp_set_channeltimeout_validate** (struct smiclient_globals ∗azg, char ∗ifName, int timeout)
- int **smi_lacp_debug_on_validate** (struct smiclient_globals ∗azg, u_int32_t debug)
- int **smi_lacp_debug_off_validate** (struct smiclient_globals ∗azg, u_int32_t debug)
- int **smi_lacp_set_systempriority_validate** (struct smiclient_globals ∗azg, u_int32_t sysPriority)

- int **smi_lacp_clear_channel_counters_validate** (struct smiclient_globals ∗azg, u_int32_t lacpAdminKey)
- int **smi_lacp_add_link** (struct smiclient_globals ∗azg, char ∗ifName, enum smi_lacp_mode mode, unsigned int lacpAdminKey)
- int **smi_lacp_add_link_validate** (struct smiclient_globals ∗azg, char ∗ifName, enum smi_lacp_mode mode, unsigned int lacpAdminKey)
- int **smi_lacp_delete_link** (struct smiclient_globals ∗azg, char ∗ifName)
- int **smi_lacp_delete_link_validate** (struct smiclient_globals ∗azg, char ∗ifName)
- int **smi_lacp_set_load_balance_method** (struct smiclient_globals ∗azg, char ∗ifName, u_int8_t lacpLoadBalanceMethod)
- int **smi_lacp_get_load_balance_method** (struct smiclient_globals ∗azg, char ∗ifName, u_int8_t ∗lacpLoadBalanceMethod)
- int smi_lacp_unset_load_balance_method (struct smiclient_globals ∗azg, char ∗ifName)

  Set load balancing method for an aggregator to the default value.

- int **smi_interface_static_channel_group_set_validate** (struct smiclient_globals ∗azg, int vrId, char ∗ifName, int lacpAdminKey)
- int **smi_interface_static_channel_group_set_wrap_validate** (struct smiclient_globals ∗azg, char ∗ifName, int lacpAdminKey)
- int **smi_interface_static_channel_group_unset_validate** (struct smiclient_globals ∗azg, int vrId, char ∗ifName)
- int **smi_lacp_set_load_balance_method_validate** (struct smiclient_globals ∗azg, char ∗ifName, u_int8_t lacpLoadBalanceMethod)
- int **smi_lacp_unset_load_balance_method_validate** (struct smiclient_globals ∗azg, char ∗ifName)
- int smi_interface_static_channel_group_set (struct smiclient_globals ∗azg, int vrId, char ∗ifName, int lacpAdminKey)

  Add interface to a static channel group.

- int **smi_interface_static_channel_group_set_wrap** (struct smiclient_globals ∗azg, char ∗ifName, int lacpAdminKey)
- int smi_interface_static_channel_group_unset (struct smiclient_globals ∗azg, int vrId, char ∗ifName)

  Remove a port from a static channel group.

- int smi_show_static_channel_group (struct smiclient_globals ∗azg, u_int32_t vrId, struct list ∗channellist, int(∗funPointer)(struct list ∗channellist))

  Use this function to get all static channel group.

- int **smi_lacp_debug_wrap** (struct smiclient_globals ∗azg, u_int32_t debug, int debugState)
- int **smi_lacp_debug_wrap_validate** (struct smiclient_globals ∗azg, u_int32_t debug, int debugState)

4.1.1 Detailed Description

Provide APIs for managing LACP protocol.

4.1.2 Function Documentation

4.1.2.1 int smi_get_all_lacp_counters (struct smiclient_globals ∗ *azg*, int *start_index*, int *end_index*, struct list ∗ *lacpCounterList*, int(∗)(struct list ∗lacpCounterList) *callback*)

It gets counters of all aggregator in a list. smi_get_all_lacp_channels_countersinfo

Parameters:

← ***azg*** Pointer to smiclient_globals structure

← ***start_index*** start index of the list to be retrieved

← ***end_index*** last index of the list to be retrieved. If start_index and left_index is set to 0 all values will be retieved

→ ***lacpChnlCountersList*** Link list of structure smi_lacp_channel_countersInfo. Each node holds counter details of single aggregator, list should be intialized by caller

→ ***callback*** Callback function which take list as input parameter, here the list will be containing the nodes of structure smi_lacp_channels_countersInfo. Pass NULL in case of no callback function required.

Returns:

0 in case of success, otherwise one of the following error codes SMI_ERROR

4.1.2.2 int smi_get_lacp_interface (struct smiclient_globals ∗ *azg*, char ∗ *ifName*, struct smi_lacp_link_details ∗ *smiLacplink*)

It gets all LACP link details. smi_get_lacp_interface

Parameters:

← ***azg*** Pointer to smiclient_globals structure

← ***ifName*** Interface name

→ ***smiLacplink*** Structure to hold specified Link details, smi_lacp_link_details.

Returns:

0 in case of success, otherwise one of the following error codes SMI_ERROR

4.1.2.3 int smi_get_port_channel_summary (struct smiclient_globals ∗ *azg*, int *start_index*, int *end_index*, struct list ∗ *channelList*, int(∗)(struct list ∗channelList) *callback*)

It gets all aggregator details in a list. smi_get_port_channel_summary

Parameters:

← ***azg*** Pointer to smiclient_globals structure

← ***start_index*** start index of the list to be retrieved

← ***end_index*** last index of the list to be retrieved. If start_index and left_index is set to 0 all values will be retieved

→ ***channelList*** Link list of structure smi_lacp_channel. Each node holds the description of single aggregator, list should be intialized by caller

→ ***callback*** Callback function which take list as input parameter, here the list will be containing the nodes of structure smi_lacp_channel. Pass NULL in case of no callback function required.

Returns:

0 in case of success, otherwise one of the following error codes SMI_ERROR

4.1.2.4 int smi_interface_static_channel_group_set (struct smiclient_globals ∗ *azg*, int *vrId*, char ∗ *ifName*, int *lacpAdminKey*)

Add interface to a static channel group. smi_interface_static_channel_group_set

Parameters:

← ***azg*** Pointer to smiclient_globals structure

← ***vrId*** VR ID

← ***ifName*** Interface name

← ***lacpAdminKey*** static channel group id

Returns:

0 in case of success, otherwise one of the following error codes
SMI_ERROR

4.1.2.5 int smi_interface_static_channel_group_unset (struct smiclient_globals ∗ *azg*, int *vrId*, char ∗ *ifName*)

Remove a port from a static channel group. smi_interface_static_channel_group_unset

Parameters:

← ***azg*** Pointer to smiclient_globals structure

← ***vrId*** VR ID

← ***ifName*** Interface name

Returns:

0 in case of success, otherwise one of the following error codes
SMI_ERROR

4.1.2.6 int smi_lacp_clear_counters (struct smiclient_globals ∗ *azg*)

Clear LACP related Counters. smi_lacp_clear_counters

Parameters:

← ***azg*** Pointer to SMI Client global structure

Returns:

0 in case of success, otherwise one of the following error codes SMI_ERROR

4.1.2.7 int smi_lacp_debug_off (struct smiclient_globals ∗ *azg*, u_int32_t *debug*)

Function disables the debug for lacp. smi_lacp_debug_off

Parameters:

← ***azg*** Pointer to the SMI client global structure

← ***debug*** disables the debug <1-8> 8 for all

Returns:

SET_SUCCESS when the function succeeds, otherwise one of the following error codes
SET_ERROR

4.1.2.8 int smi_lacp_debug_on (struct smiclient_globals ∗ *azg*, u_int32_t *debug*)

Function enables the debug for lacp. smi_lacp_debug_on

Parameters:

← ***azg*** Pointer to the SMI client global structure

← ***debug*** options for debug <1-8> 8 for all

Returns:

SET_SUCCESS when the function succeeds, otherwise one of the following error codes
SET_ERROR

4.1.2.9 int smi_lacp_get_aggregator_idx (struct smiclient_globals ∗ *azg*, struct smi_lacp_agg_bmp ∗ *aggBmp*)

Get a bitmaps of all LACP aggregator Ids. smi_lacp_get_aggregator_idx

Parameters:

← ***azg*** Pointer to SMI Client global structure

→ ***aggbmp*** A bitmap of all aggregator Ids

Returns:

0 in case of success, otherwise one of the following error codes SMI_ERROR

4.1.2.10 int smi_lacp_get_channelactivity (struct smiclient_globals ∗ *azg*, char ∗ *ifName*, enum smi_lacp_mode ∗ *mode*)

Gets the link aggregation status on a port. smi_lacp_get_channelactivity

Parameters:

← ***azg*** Pointer to SMI Client global structure

← ***ifName*** Interface name for which link aggregation status needs to be retrieved

→ ***mode*** Link aggregation status on a port as defined by

Returns:

0 in case of success, otherwise one of the following error codes SMI_ERROR

4.1.2.11 int smi_lacp_get_channeladminkey (struct smiclient_globals ∗ *azg*, char ∗ *ifName*, u_int32_t ∗ *lacpAdminKey*)

Gets the channel admin key on a port. smi_lacp_get_channeladminkey

Parameters:

← ***azg*** Pointer to SMI Client global structure

← ***ifName*** Interface name for which channel admin key needs to be retrieved

→ ***key*** channel admin key

Returns:

0 in case of success, otherwise one of the following error codes SMI_ERROR

4.1.2.12 int smi_lacp_get_channelpriority (struct smiclient_globals ∗ *azg*, char ∗ *ifName*, u_int32_t ∗ *priority*)

Gets the priority of a link. smi_lacp_get_channelpriority

Parameters:

← ***azg*** Pointer to SMI Client global structure

← ***ifName*** Channel name for which channel priority needs to be retrieved

→ ***priority*** channel priority

Returns:

0 in case of success, otherwise one of the following error codes SMI_ERROR

4.1.2.13 int smi_lacp_get_channeltimeout (struct smiclient_globals ∗ *azg*, char ∗ *ifName*, int ∗ *timeout*)

Gets the timeout of a link. smi_lacp_get_channeltimeout

Parameters:

← ***azg*** Pointer to SMI Client global structure

← ***ifName*** Channel name for which channel timeout needs to be retrieved

→ ***timeout*** channel timeout

Returns:

0 in case of success, otherwise one of the following error codes SMI_ERROR

4.1.2.14 int smi_lacp_get_counter (struct smiclient_globals ∗ *azg*, char ∗ *ifName*, struct smi_lacp_link_counters ∗ *linkStats*)

This API retrieves the packet traffic statistics for all member-interfaces of an LACP aggregator. smi_lacp_get_counter

Parameters:

← ***azg*** Pointer to smiclient_globals structure

← ***ifName*** Aggregator name. Maximum size = SMI_LACP_IFNAMSIZ

→ ***linkStats*** Pointer to that structure smi_lacp_link_counters that contains link statistics for all links in an aggregator. The caller must allocate memory for this parameter before invoking this API.

→ ***callback*** Callback function which take list as input parameter, here the list will be containing the nodes of structure smi_lacp_link_counters. Pass NULL in case of no callback function required.

Returns:

0 in case of success, otherwise one of the following error codes SMI_ERROR

4.1.2.15 int smi_lacp_get_counters_by_portchannel (struct smiclient_globals ∗ *azg*, u_int32_t *lacpAdminKey*, struct smi_lacp_channel_countersInfo ∗ *lacpChannelCountersInfo*)

It gets counters of the specific aggregator using lacp admin key as identifier. smi_lacp_get_counter_by_portchannel

Parameters:

← ***azg*** Pointer to smiclient_globals structure

← ***lacpAdminKey*** LACP admin key value of an aggregator that a channel summary requested

→ ***lacpChannelCountersInfo*** Pointer to that structure smi_lacp_channel_countersInfo that contains link statistics for all links in an aggregator. The caller must allocate memory for this parameter before invoking this API.

→ ***callback*** Callback function which take list as input parameter, here the list will be containing the nodes of structure lacp_channel_countersInfo. Pass NULL in case of no callback function required.

Returns:

0 in case of success, otherwise one of the following error codes SMI_ERROR

4.1.2.16 int smi_lacp_get_etherchanneldetail (struct smiclient_globals ∗ *azg*, u_int32_t *lacpAdminKey*, struct smi_lacp_channel ∗ *chDetail*)

Get detail information about an LACP channel. smi_lacp_get_etherchanneldetail

Parameters:

← ***azg*** Pointer to SMI Client global structure

← ***lacpAdminKey*** LACP channel admin key

→ ***ch_details*** LACP channel details as defined by

Returns:

0 in case of success, otherwise one of the following error codes SMI_ERROR

4.1.2.17 int smi_lacp_get_etherchannelsummary (struct smiclient_globals ∗ *azg*, u_int32_t *lacpAdminKey*, struct smi_lacp_channel_summary ∗ *chSummary*)

Get summary information about an LACP channel. smi_lacp_get_etherchannelsummary

Parameters:

← ***azg*** Pointer to SMI Client global structure

← ***lacpAdminKey*** LACP channel admin key

→ ***chSummary*** LACP channel summary defined by

Returns:

0 in case of success, otherwise one of the following error codes SMI_ERROR

4.1.2.18 int smi_lacp_get_max_bundle (struct smiclient_globals ∗ *azg*, int ∗ *maxBundle*)

Gets supported maximum number of links per aggregators. smi_lacp_get_max_bundle

Parameters:

← ***azg*** Pointer to SMI Client global structure

→ ***maxBundle*** Max links per aggregator supported

Returns:

0 in case of success, otherwise one of the following error codes SMI_ERROR

4.1.2.19 int smi_lacp_get_port_selected_state (struct smiclient_globals ∗ *azg*, char ∗ *ifName*, u_int8_t ∗ *portSelectedState*)

Retrieves . smi_lacp_get_port_selected_state

Parameters:

← ***azg*** Pointer to SMI Client global structure

← ***ifName*** Interface name for which selected status needs to be retrieved

→ ***portSelectedState***

Returns:

0 in case of success, otherwise one of the following error codes SMI_ERROR

4.1.2.20 int smi_lacp_get_sysid (struct smiclient_globals ∗ *azg*, u_char ∗ *systemId*)

This API retrieves the LACP system ID. smi_lacp_get_sysid

Parameters:

← ***azg*** Pointer to smiclient_globals structure

→ ***systemId*** String of length SMI_LACP_GRP_ADDR_LEN bytes containing the LACP system ID. The string must be allocated by the caller before invoking the API

Returns:

0 in case of success, otherwise one of the following error codes SMI_ERROR

4.1.2.21 int smi_lacp_get_systempriority (struct smiclient_globals ∗ *azg*, unsigned int ∗ *sysPriority*)

Gets LACP channel system priority. smi_lacp_get_systempriority

Parameters:

← ***azg*** Pointer to SMI Client global structure

← ***sysPriority*** LACP system priority

Returns:

0 in case of success, otherwise one of the following error codes SMI_ERROR

4.1.2.22 int smi_lacp_set_channelpriority (struct smiclient_globals ∗ *azg*, char ∗ *ifName*, u_int32_t *priority*)

Sets the priority of a link. smi_lacp_set_channelpriority

Parameters:

← ***azg*** Pointer to SMI Client global structure

← ***ifName*** Channel name for which channel priority needs to be set

← ***priority*** channel priority to be set <1-65535>

Returns:

0 in case of success, otherwise one of the following error codes SMI_ERROR

4.1.2.23 int smi_lacp_set_channeltimeout (struct smiclient_globals ∗ *azg*, char ∗ *ifName*, int *timeout*)

Sets the timeout of a link. smi_lacp_set_channeltimeout

Parameters:

← ***azg*** Pointer to SMI Client global structure

← ***ifName*** Channel name for which channel timeout needs to be set

← ***timeout*** channel timeout to be set {0|1} (0-long, 1-short)

Returns:

0 in case of success, otherwise one of the following error codes SMI_ERROR

4.1.2.24 int smi_lacp_set_systempriority (struct smiclient_globals ∗ *azg*, unsigned int *sysPriority*)

Sets LACP channel system priority. smi_lacp_set_systempriority

Parameters:

← ***azg*** Pointer to SMI Client global structure

← ***sysPriority*** LACP system priority to be set <1-65535>

Returns:

0 in case of success, otherwise one of the following error codes SMI_ERROR

4.1.2.25 int smi_lacp_show_debugging (struct smiclient_globals ∗ *azg*, u_int32_t ∗ *debug*)

Function disables the debug for lacp. ∗∗ ∗ smi_lacp_debug_off ∗ ∗

Parameters:

← ***azg*** Pointer to the SMI client global structure ∗

→ ***debug*** value of debug ∗

Returns:

SET_SUCCESS when the function succeeds, otherwise one of the following error codes
∗ SET_ERROR

4.1.2.26 int smi_lacp_unset_channelpriority (struct smiclient_globals ∗ *azg*, char ∗ *ifName*)

Sets the priority of a link to default value. smi_lacp_unset_channelpriority

Parameters:

← ***azg*** Pointer to SMI Client global structure

← ***ifName*** Channel name for which channel priority needs to be set to default

Returns:

0 in case of success, otherwise one of the following error codes SMI_ERROR

4.1.2.27 int smi_lacp_unset_load_balance_method (struct smiclient_globals ∗ *azg*, char ∗ *ifName*)

Set load balancing method for an aggregator to the default value. smi_lacp_unset_-load_balance_method

Parameters:

← ***azg***

← ***ifName*** Aggregator Name.

Returns:

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

4.1.2.28 int smi_lacp_unset_systempriority (struct smiclient_globals ∗ *azg*)

Sets LACP channel system priority to default value. smi_lacp_unset_systempriority

Parameters:

← ***azg*** Pointer to SMI Client global structure

Returns:

0 in case of success, otherwise one of the following error codes SMI_ERROR

4.1.2.29 int smi_show_static_channel_group (struct smiclient_globals ∗ *azg*, u_int32_t *vrId*, struct list ∗ *channellist*, int(∗)(struct list ∗channellist) *funPointer*)

Use this function to get all static channel group. smi_show_static_channel_group

Parameters:

← ***azg*** Pointer to the SMI client global structure

→ ***channellist*** Link list of structure smi_static_channel_group. To get channel group details. List should be intialized by caller.

→ ***callback*** Callback function which take list as input parameter, here the list will be containing the nodes of type structure smi_static_channel_group. Pass NULL in case of no callback function required.

Returns:

0 on success

4.2 smi_lacp_msg.h File Reference

Defines data structures used by LACP SMI APIs. `#include "smi_message.h"` `#include "sys_limits.h"`

Data Structures

- struct smi_lacp_agg_bmp
- struct smi_lacp_link
- struct smi_lacp_channel
- struct smi_lacp_channel_summary
- struct smi_lacp_link_counters
- struct smi_lacp_link_details
- struct smi_lacp_channel_countersInfo
- struct smi_lacp_channel_list
- struct smi_lacp_channel_countersInfo_list
- struct smi_msg_lacp

Defines

- #define **SMI_STATUS_SUCCESS** 0
- #define **SMI_STATUS_FAILURE** 1
- #define **SMI_LACP_IFNAMSIZ** 32
- #define **SMI_LACP_CHANNEL_PRIO_MIN** 1
- #define **SMI_LACP_CHANNEL_PRIO_MAX** 65535
- #define **SMI_LACP_GRP_ADDR_LEN** 80
- #define **SMI_LACP_SYS_ID_LEN** 6
- #define **SMI_LACP_EVENT** 1
- #define **SMI_LACP_PACKET** 2
- #define **SMI_LACP_SYNC** 3
- #define **SMI_LACP_TIMER** 4
- #define **SMI_LACP_HA** 5
- #define **SMI_LACP_CLI** 6
- #define **SMI_LACP_RX** 7
- #define **SMI_LACP_TX** 8
- #define **SMI_LACP_ALL** 9
- #define **SMI_LACP_AGG_IX_MAX** 1000000000
- #define **SMI_LACP_AGG_IX_MIN** 1000000
- #define **SMI_LACP_AGG_COUNT_MAX** ((SMI_LACP_AGG_IX_MAX)/(SMI_LACP_AGG_IX_MAX))
- #define **SMI_LACP_BMP_WORD_MAX** ((SMI_LACP_AGG_COUNT_MAX + SMI_BMP_WORD_WIDTH)/ SMI_BMP_WORD_WIDTH)
- #define **SMI_LACP_DEBUG_EVENT** 0x01
- #define **SMI_LACP_DEBUG_CLI** 0x02
- #define **SMI_LACP_DEBUG_TIMER** 0x04

- #define **SMI_LACP_DEBUG_PACKET** 0x08
- #define **SMI_LACP_DEBUG_RX** 0x10
- #define **SMI_LACP_DEBUG_TX** 0x20
- #define **SMI_LACP_DEBUG_SYNC** 0x40
- #define **SMI_LACP_DEBUG_HA** 0x80
- #define **SMI_LACP_TIMEOUT_LONG** 0
- #define **SMI_LACP_TIMEOUT_SHORT** 1
- #define **SMI_LACP_DEFAULT_PORT_PRIORITY** 32768
- #define **SMI_LACP_DEFAULT_SYSTEM_PRIORITY** 32768
- #define **SMI_LACP_CTYPE_NAME** 0
- #define **SMI_LACP_CTYPE_MODE** 1
- #define **SMI_LACP_CTYPE_KEY** 2
- #define **SMI_LACP_CTYPE_IFNAME** 3
- #define **SMI_LACP_CTYPE_CHPRIORITY** 4
- #define **SMI_LACP_CTYPE_CHTIMEOUT** 5
- #define **SMI_LACP_CTYPE_SYSPRIORITY** 6
- #define **SMI_LACP_CTYPE_ETHERDETAIL** 7
- #define **SMI_LACP_CTYPE_SYSTEMID** 8
- #define **SMI_LACP_CTYPE_AGG_BMP** 9
- #define **SMI_LACP_CTYPE_AGG_IDX** 10
- #define **SMI_LACP_CTYPE_ETHERSUMMARY** 11
- #define **SMI_LACP_CTYPE_COUNTERS** 12
- #define **SMI_LACP_SWITCH** 13
- #define **SMI_LACP_CHANNEL_LIST** 14
- #define **SMI_LACP_LINK** 15
- #define **SMI_LACP_CHANNEL_COUNTERINFO** 16
- #define **SMI_LACP_LINK_DETAILS** 17
- #define **SMI_LACP_CHANNEL_COUTERINFO_LIST** 18
- #define **SMI_LACP_PORT_SELECTED_STATE** 19
- #define **SMI_LACP_CTYPE_BUNDLE** 20
- #define **SMI_LACP_CTYPE_DEBUG** 21
- #define **SMI_MSG_LACP_SIZE** 4

Enumerations

- enum **smi_lacp_rcv_state** {

  SMI_RCV_INVALID, **SMI_RCV_INITIALIZE**, **SMI_RCV_PORT_DISABLED**, **SMI_RCV_LACP_DISABLED**,

  SMI_RCV_EXPIRED, **SMI_RCV_DEFAULTED**, **SMI_RCV_CURRENT** }
- enum **smi_lacp_mux_state** {

  SMI_MUX_DETACHED, **SMI_MUX_WAITING**, **SMI_MUX_ATTACHED**, **SMI_MUX_COLLECTING**,

  SMI_MUX_DISTRIBUTING, **SMI_MUX_COLLECTING_DISTRIBUTING** }

- enum **smi_lacp_periodic_tx_state** {

  SMI_PERIODIC_TX_INVALID, **SMI_PERIODIC_TX_NO_PERIODIC**, **SMI_PERIODIC_TX_FAST_PERIODIC**, **SMI_PERIODIC_TX_SLOW_PERIODIC**,

  SMI_PERIODIC_TX }
- enum **smi_lacp_port_selected_state** { **SMI_LACP_PORT_UNSELECTED**, **SMI_LACP_PORT_SELECTED**, **SMI_LACP_PORT_STANDBY** }

Functions

- void **smi_lacp_dump** (struct lib_globals ∗zg, struct smi_msg_lacp ∗msg)
- int **smi_encode_lacpmsg** (u_char ∗∗pnt, u_int16_t ∗size, struct smi_msg_lacp ∗msg)
- int **smi_decode_lacpmsg** (u_char ∗∗pnt, u_int16_t ∗size, struct smi_msg_lacp ∗msg)
- int **smi_parse_lacp** (u_char ∗∗pnt, u_int16_t ∗size, struct smi_msg_header ∗header, void ∗arg, SMI_CALLBACK callback)
- char ∗ **lacp_rcv_state_str** (enum smi_lacp_rcv_state)
- char ∗ **lacp_periodic_state_str** (enum smi_lacp_periodic_tx_state)
- char ∗ **lacp_mux_state_str** (enum smi_lacp_mux_state)

4.2.1 Detailed Description

Defines data structures used by LACP SMI APIs.

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