NAME

mac_group_info, **mac_group_info_t** - MAC group information structure

SYNOPSIS

#include <sys/mac_provider.h>

INTERFACE LEVEL

Evolving - This interface is still evolving. API and ABI stability is not guaranteed.

DESCRIPTION

The *mac_group_info_t* structure is used by the MAC framework as part of the MAC_CAPAB_RINGS capability. For background on the MAC framework, please see mac(9E).

When a device driver declares that it supports the MAC_CAPAB_RINGS capability and fills out the capability structure as described in mac_capab_rings(9E), it indicates that it supports a number of transmit and receive groups. For each group that it indicates, its mr_gget(9E) entry point will be called, during which it will have to fill out the *mac_group_info_t* structure described here.

TYPES

The following types define the function pointers in use in the *mac_group_info_t* structure.

```
typedef int (*mac_group_start_t)(mac_group_driver_t);
typedef void (*mac_group_stop_t)(mac_group_driver_t);
typedef int (*mac_add_mac_addr_t)(mac_group_driver_t,
    const uint8_t *mac, uint_t flags)
typedef int (*mac_rem_mac_addr_t)(mac_group_driver_t,
    const uint8_t *mac, uint_t flags)
typedef int (*mac_add_vlan_t)(mac_group_driver_t, uint16_t vlan,
     uint_t flags)
typedef int (*mac_rem_vlan_t)(mac_group_driver_t, uint16_t vlan,
     uint_t flags)
typedef int (*mac_add_mv_filter_t)(mac_group_driver_t,
    const uint8_t *mac, uint16_t vlan, uint_t flags);
typedef int (*mac_rem_mv_filter_t)(mac_group_driver_t,
    const uint8_t *mac, uint16_t vlan, uint_t flags);
```

STRUCTURE MEMBERS

```
uint_t              mgi_extensions;
uint_t              mgi_flags;
mac_group_driver_t  mgi_driver;
```

```
mac_group_start_t       mgi_start;
mac_group_start_t       mgi_stop;
uint_t                  mgi_count;
mac_add_mac_addr_t      mgi_addmac;
mac_rem_mac_addr_t      mgi_remmac;
mac_add_vlan_t          mgi_addvlan;
mac_rem_vlan_t          mgi_remvlan;
mac_add_mv_filter_t     mgi_addmvf;
mac_rem_mv_filter_t     mgi_remmvf;
```

The *mgi_extensions* member is used to negotiate extensions between the MAC framework and the device driver. The MAC framework will set the value of *mgi_extensions* to include all of the currently known extensions. The driver should intersect this list with the set that the driver supports. At this time, no such features are defined and the driver should set this member to **0**.

The *mgi_flags* member is used to indicate various additional capabilities supported by the group. None are currently defined and the driver should set this to **0**.

The *mgi_driver* member should be set by the driver to a driver-specific value that represents the data structure that corresponds to this group. The driver will receive this value in all of the callback functions that are defined in this structure.

The *mgi_start* member is an optional entry point. If the driver needs to take a specific action before it the group is used, then it should set this to a function. For more information, see mgi_start(9E).

The *mgi_stop* member is an optional entry point. If the driver needs to take a specific action when the group is being stopped, then it should set this to a function. For more information, see mgi_stop(9E).

The *mgi_count* member should be set to a count of the number of rings that are present in this group. When the group type is MAC_GROUP_TYPE_STATIC, then the value in *mgi_count* represents the fixed number of rings available to the group.

The *mgi_addmac* member is an optional entry point and should be set to a function that can add a MAC address filter to the group in hardware. For more information, see mgi_addmac(9E). This member only has meaning for a receive group, transmit groups should set this to NULL.

The *mgi_remmac* member is an optional entry point and should be set to a function that can remove a MAC address filter from a group in hardware. If the *mgi_addmac* member is a valid pointer, then this entry point must be as well. For more information, see mgi_remmac(9E). This member only has meaning for a receive group, transmit groups should set this to NULL.

The *mgi_addvlan* member is an optional entry point and should be set to a function that can add a VLAN filter to the group in hardware. For more information, see mgi_addvlan(9E). This member only has meaning for a receive group, transmit groups should set this to NULL.

The *mgi_remvlan* member is an optional entry point and should be set to a function that can remove a VLAN filter from a group in hardware. If the *mgi_addvlan* member is a valid pointer, then this entry point must be as well. For more information, see mgi_remvlan(9E). This member only has meaning for a receive group, transmit groups should set this to NULL.

The *mgi_addmvf* member is an optional entry point and should be set to a function that can add a MAC Address and VLAN tuple filter to the group in hardware. For more information, see mgi_addmvf(9E). This member only has meaning for a receive group, transmit groups should set this to NULL.

The *mgi_remmvf* member is an optional entry point and should be set to a function that can remove a MAC address and VLAN tuple filter from the group in hardware. If the *mgi_addmvf* member is a valid pointer, then this entry point must be as well. For more information, see mgi_remmvf(9E). This member only has meaning for a receive group, transmit groups should set this to NULL.

Required Members

All of the non-function pointers described in this manual are required members for both transmit and receive groups. The *mgi_start* and *mgi_stop* members are optional for both transmit and receive groups.

For transmit groups, all of the filter entry points must be set to NULL.

Receive groups must have some way to set a MAC address filter. This means that one of the MAC address related functions must be set. The driver must implement either *mgi_addmac* and *mgi_remmac* or *mgi_addmvf* and *mgi_remmvf*.

SEE ALSO

mac(9E), mac_capab_rings(9E), mgi_addmac(9E), mgi_addmvf(9E), mgi_addvlan(9E), mgi_remmac(9E), mgi_remmvf(9E), mgi_remvlan(9E), mgi_start(9E), mgi_stop(9E), mr_gget(9E)