NAME
  genetlink - Generic Netlink

SYNOPSIS
  #include <netlink/netlink.h>
  #include <netlink/netlink_generic.h>

  int
  socket(*AF_NETLINK*, *SOCK_DGRAM*, *NETLINK_GENERIC*);

DESCRIPTION
  The NETLINK_GENERIC is a "container" family, used for dynamic registration of other families
  belonging to the various subsystems. These subsystems provide a string family name during registration
  and receive a dynamically-allocated family id. Allocated family identifiers are then used by applications
  to get access to functions provided by that subsystem via netlink. There are standard methods for
  resolving string family names to family identifiers. A similar mechanism works for the notification
  groups provided by those families.

  All generic netlink families share a common header:

```
struct genlmsghdr {
        uint8_t         cmd;            /* command within the family */
        uint8_t         version;   /* ABI version for the cmd */
        uint16_t  reserved; /* reserved: set to 0 */
};
```
  The family id is encoded in the nlmsg_type of the base netlink header. The *cmd* field is the command
  identifier within the family. The *version* field is the command version.

METHODS
  The generic Netlink framework provides the base family, GENL_ID_CTRL ("nlctrl") with a fixed
  family id. This family is used to list the details of all registered families.

  The following messages are supported by the framework:

 CTRL_CMD_GETFAMILY
  Fetches a single family or all registered families, depending on the NLM_F_DUMP flag. Each family is
  reported as CTRL_CMD_NEWFAMILY message. The following filters are recognised by the kernel:

    CTRL_ATTR_FAMILY_ID (uint16_t) current family id assigned by kernel
    CTRL_ATTR_FAMILY_NAME   (string) family name

TLVs

CTRL_ATTR_FAMILY_ID
>   (uint16_t) Dynamically-assigned family identifier.

CTRL_ATTR_FAMILY_NAME
>   (string) Family name.

CTRL_ATTR_HDRSIZE
>   (uint32_t) Family mandatory header size (typically 0).

CTRL_ATTR_MAXATTR
>   (uint32_t) Maximum attribute number valid for the family.

CTRL_ATTR_OPS
>   (nested) List of the operations supported by the family. The attribute consists of a list of nested
>   TLVs, with attribute values monotonically incremented, starting from 0. The following
>   attributes are present in each TLV:
>
>   CTRL_ATTR_OP_ID
>   >   Operation (message) number.
>
>   CTRL_ATTR_OP_FLAGS
>   >   Operation flags. The following flags are supported:
>   >   GENL_ADMIN_PERM   requires elevated permissions
>   >   GENL_CMD_CAP_DO   operation is a modification request
>   >   GENL_CMD_CAP_DUMP   operation is a get/dump request

CTRL_ATTR_MCAST_GROUPS
>   (nested) List of the notification groups supported by the family. The attribute consists of a list of
>   nested TLVs, with attribute values monotonically incremented, starting from 0. The following
>   attributes are present in each TLV:
>
>   CTRL_ATTR_MCAST_GRP_ID
>   >   Group id that can be used in NETLINK_ADD_MEMBERSHIP setsockopt(2).
>
>   CTRL_ATTR_MCAST_GRP_NAME
>   >   (string) Human-readable name of the group.

Groups

The following groups are defined:

"notify"   Notifies on family registrations/removal.

SEE ALSO

netlink(4)

HISTORY

The NETLINK_GENERIC protocol family appeared in FreeBSD 13.2.

AUTHORS

The netlink was implementated by Alexander Chernikov <*melifaro@FreeBSD.org*>. It was derived from the Google Summer of Code 2021 project by Ng Peng Nam Sean.