NAME

sysvipc − System V interprocess communication mechanisms

DESCRIPTION

System V IPC is the name given to three interprocess communication mechanisms that are widely available on UNIX systems: message queues, semaphore, and shared memory.

Message queues

System V message queues allow data to be exchanged in units called messages. Each message can have an associated priority. POSIX message queues provide an alternative API for achieving the same result; see **mq_overview**(7).

The System V message queue API consists of the following system calls:

msgget(2)
: Create a new message queue or obtain the ID of an existing message queue. This call returns an identifier that is used in the remaining APIs.

msgsnd(2)
: Add a message to a queue.

msgrcv(2)
: Remove a message from a queue.

msgctl(2)
: Perform various control operations on a queue, including deletion.

Semaphore sets

System V semaphores allow processes to synchronize their actions. System V semaphores are allocated in groups called sets; each semaphore in a set is a counting semaphore. POSIX semaphores provide an alternative API for achieving the same result; see **sem_overview**(7).

The System V semaphore API consists of the following system calls:

semget(2)
: Create a new set or obtain the ID of an existing set. This call returns an identifier that is used in the remaining APIs.

semop(2)
: Perform operations on the semaphores in a set.

semctl(2)
: Perform various control operations on a set, including deletion.

Shared memory segments

System V shared memory allows processes to share a region a memory (a "segment"). POSIX shared memory is an alternative API for achieving the same result; see **shm_overview**(7).

The System V shared memory API consists of the following system calls:

shmget(2)
: Create a new segment or obtain the ID of an existing segment. This call returns an identifier that is used in the remaining APIs.

shmat(2)
: Attach an existing shared memory object into the calling process’s address space.

shmdt(2)
: Detach a segment from the calling process’s address space.

shmctl(2)
: Perform various control operations on a segment, including deletion.

IPC namespaces

For a discussion of the interaction of System V IPC objects and IPC namespaces, see **ipc_namespaces**(7).

SEE ALSO

ipcmk(1), **ipcrm**(1), **ipcs**(1), **lsipc**(1), **ipc**(2), **msgctl**(2), **msgget**(2), **msgrcv**(2), **msgsnd**(2), **semctl**(2), **semget**(2), **semop**(2), **shmat**(2), **shmctl**(2), **shmdt**(2), **shmget**(2), **ftok**(3), **ipc_namespaces**(7)