# NDRX_FORK(3)

**REVISION HISTORY**

| NUMBER | DATE | DESCRIPTION | NAME |
|---|---|---|---|
| | | | |

# Contents

# Chapter 1

# SYNOPSIS

#include <atmi.h>

pid_t ndrx_fork(void);

For XATMI client link with *-latmiclt -latmi -lubf -lnstd -lpthread -lrt -lm*

For XATMI server link with *-latmisrv|-latmisrvnomain|-latmisrvinteg -latmi -lubf -lnstd -lpthread -lrt -lm*

# Chapter 2

# DESCRIPTION

When doing forking with the XATMI binaries (either clients or servers), the special care shall be taken when process is about to copy it self. In case if XATMI server process want's to copy it self, the child copy shall close any queues and other resources used by parent's XATMI server. Thus one of the tasks of **ndrx_fork()** is to close server resources after the forking the XATMI servers.

In standard situation when client process is about to fork, it should perform **tpterm(3)** then perform **ndrx_fork(3)** and do **tpinit(3)** back on either in parent or child or both. In this scenario standard **fork(3)** can be used too, if System V queues are not used.

In case if for IPC transport System V queues are used, **ndrx_fork()** is mandatory to be used by both XATMI clients and servers, because System V uses auxiliary threads to support real time operations, thus before forking threads must be terminated, and the restored properly back for the parent process (child performs fresh init back on if XATMI IPC operations are used).

If developer cannot replace designed **fork()** with **ndrx_fork()** (i.e. it is used in library), then developer may use:

1. **ndrx_atfork_prepare(3)** - parent calls before forking
2. **ndrx_atfork_parent(3)** - called by parent after forking
3. **ndrx_atfork_child(3)** - called by child after forking

functions and either call them manually after the fork or register them with **pthread_atfork()** function which automatically invokes them in proper order when fork() call is performed.

# Chapter 3

# RETURN VALUE

On success, **ndrx_fork()** returns 0 for child process, and pid (>0) for the parent process. In case of failure -1 is returned.

# Chapter 4

# ERRORS

See **fork()** system calls errors.

# Chapter 5

# EXAMPLE

See **cpmsrv/cltexec.c** for sample code.

# Chapter 6

# BUGS

Report bugs to support@mavimax.com

# Chapter 7

# SEE ALSO

**ndrx_atfork_prepare(3) ndrx_atfork_parent(3) ndrx_atfork_child(3)**

# Chapter 8

# COPYING