

TPBROADCAST(3)

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Chapter 1

SYNOPSIS

```
#include <atmi.h>
```

```
int tpbroadcast(char *lmid, char *username, char *cltname, char *data, long len, long flags);
```

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

For XATMI server link with *-latmisrvl -latmisrvnomainl -latmisrvinteg -latmi -lubf -lnstd -lpthread -lrt -lm*

Chapter 2

DESCRIPTION

Function is used for sending unsolicited message to multiple clients at once. The target clients can be matched by following options:

- *lmid* Cluster node id to send the message to. If field is set to empty string (first byte 0x00) then any cluster node id is matched. If string value is given then numeric value is expected and is matched against the connected cluster nodes. Either local or remote. This field can be set to regular expression, in that case *flags* should contain the *TPREGEXMATCH*. Maximum statement length is **MAXTIDENT***2-1.
- *usrname* is reserved for future use. Currently not supported.
- *cltname* is process name (executable name) that should be matched. If *cltname* is NULL or empty string, then it is matched. If string value is given then exact executable is matched for delivery. If binary runs in multiple copies, all of them will receive notification. The field can be set to regular expression, in that case *flags* must contain *TPREGEXMATCH*. The max length of *cltname* string can be **MAXTIDENT***2-1.

Any combination is possible between *lmid* and *cltname*. Any matched process that will fulfill the matching requirements will receive the message.

The data sent in broadcast is set in variable *data* which is XATMI buffer allocated by **tpalloc(3)** (or auto buffer). The complementary *len* is used only for buffer types which do not contain length descriptor internally (i.e. **CARRAY** buffer type).

The *data* field can be NULL. In this situation matched client callbacks will be called, but no data will be sent to client.

In case when *lmid* is matched on another node, then full broadcast request with all parameters are sent to remote machines @*TPBROADNNN* service (advertised by **tpbrdcstsv(8)**). When dispatched, the remote @*TPBROADNNN* will process the local matchings of the clients processes and will do the broadcast locally.

Valid flags

TPNOBLOCK Do not block on full client queue, instead return error.

TPNOTIME Do not timeout when waiting on full queue (**TPNOBLOCK** is not set).

TPSIGRSTRT Restart the system call in progress if interrupted by signal handler. This affects only underlaying mq_* function calls.

TPREGEXMATCH Match *lmid* (cluster node id) and *cltname* by assuming that these are regular expressions.

Chapter 3

RETURN VALUE

On success, **tpbroadcast()** return zero; on error, -1 is returned, with **tperrno** set to indicate the error.

Chapter 4

ERRORS

Note that **tpstrerror()** returns generic error message plus custom message with debug info from last function call. Note that Enduro/X does not analyze the errors returned by each individual delivery to the client process, thus the function will try to delivery to all of the clients the notification. If some of them were exited or for example client reply (delivery) queue was full and **TPNOBLOCK** was set or **TPNOTIME** was not set, then error is logged to Enduro/X *ndrx* logger and ULOG, but **tpbroadcast(3)** will return success.

TPEINVAL Environment variables not configured, see **ex_env(5)** page, or invalid parameters have been passed to the function, for example *clientid*, *lmtid* or *username* are set and they are invalid regular expressions (i.e. with **TPREGEXMATCH** set).

TPESYSTEM System failure occurred during serving. See logs i.e. user log, or debugs for more info.

TPEOS System failure occurred during serving. See logs i.e. user log, or debugs for more info.

Chapter 5

EXAMPLE

See `atmitest/test039_tpbroadcast/atmict39.c` for sample code.

Chapter 6

BUGS

Report bugs to support@mavimax.com

Chapter 7

SEE ALSO

tpsetunsol(3) tpnotify(3) tpchkunsol(3) tpinit(3) tpbrdcstsv(8)

Chapter 8

COPYING

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