

**TPENCRYPT(3)**

| REVISION HISTORY |      |             |      |
|------------------|------|-------------|------|
| NUMBER           | DATE | DESCRIPTION | NAME |
|                  |      |             |      |

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## Chapter 1

# SYNOPSIS

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

```
int tpencrypt(char *input, long ilen, char *output, long *olen, 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

Data encrypt function. Function provides access to Enduro/X built-in encryption engine. AES-128 in CBC mode algorithm is used. By default encryption key is from current hostname and username, but key could be retrieved from other resources by plugin interface, if configured.

Function may work in binary mode (the input data and output data is binary). The other mode is string mode with flag **TPEX\_STRING**, where *input* is expected to be 0x00 terminated string and *output* will be Base64 encoded.

*input* buffer contains clear data with corresponding data length in *ilen* (number of bytes). *output* buffer is used for encrypted data with corresponding data length in *olen* (number of bytes in/out).

In string mode *ilen* is ignored, in binary mode *ilen* is required and must be *>0\**. *olen* is used for checking output buffer sizes. In case if there is no space, the error **TPELIMIT** is returned, and *olen* variable is set to estimated space required.

In the result of function *olen* is set to bytes written to *output* buffer.

For string encryption, function internally uses temporary buffer which size is set by **NDRX\_MSGSIZEMAX** env variable, thus encrypted output data ( non Base64) shall not be larger than **NDRX\_MSGSIZEMAX** value.

### Valid flags

**TPEX\_STRING** In this mode expected input is EOS terminated string. On success output will contain Base64 encoded binary data.

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## Chapter 3

# RETURN VALUE

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

## Chapter 4

# ERRORS

Note that **tpsterror()** returns generic error message plus custom message with debug info from last function call.

**TPEINVAL** Invalid arguments to function. *input*, *ilen*, *output* or *olen* is **NULL**. For non string mode *ilen* is  $\Leftarrow$  **0**.

**TPELIMIT** There is not enough space in *output* buffer. Estimate is returned in *olen*.

## Chapter 5

# EXAMPLE

See `atmitest/test043_encrypt/atmict43_tp.c` for sample code.



## Chapter 6

# BUGS

Report bugs to [support@mavimax.com](mailto:support@mavimax.com)

## Chapter 7

## SEE ALSO

**tpdecrypt(3)** **ex\_env(5)** **exencrypt(8)** **exdecrypt(8)** **ex\_devguide(guides)**

## Chapter 8

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