

# **Manual - Rypto**

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# Preface

"Tietorakenteet ja algoritmit" – exercise.

Rypto is a software, which can encrypt and decrypt.

## Operation

Rypto encrypts or decrypts files with 128-bit AES in ECB mode. The encrypted data is padded according PKCS#7. Padding is removed upon decryption. Thus, encrypting and decrypting a file with the same key will produce the identical file.

## How to execute

### Encryption

To encrypt, execute the command

```
rypto e <key> <source> <destination>
```

Where

- <key> is encryption key, 32 hex digits (128 bits)
- <source> is the (plaintext) file to be encrypted
- <destination> is the encrypted file

### Decryption

To decrypt, execute the command

```
rypto d <key> <source> <destination>
```

Where

- <key> is encryption key, 32 hex digits (128 bits)
- <source> is the (ciphertext) file to be decrypted
- <destination> is the decrypted file

## Input to the software

Software takes as input the following:

- Operation mode: Encrypt or decrypt
- Key
- Source file to be read
- Destination file to be written

Source and destination files must be actual files, pipes or the like (stdin or stdout) cannot be used.

## **Location of the executable and test data**

Executable is in file build/exe/rypto/passing/rypto.

Tests are documented on separate "Testing" document.