

HOW TO SET INI FILES

CardTool

CardTool is an application that Reads and Writes several types of cards via PC/SC. In order to read the entire card, CardTool needs, for each type of card, the size of blocks and the number of blocks. These data are stored in .ini files, in order to define these parameters without having to modify the source code.

1. PIX_VALUES.INI

The pix_values.ini file contains the description of PIX.SS and PIX.NN as defined by the PC/SC Workgroup (for more details see <http://www.pcscworkgroup.com/>). These values are in bytes 12 (PIX.SS), 13 & 14 (PIX.NN) of the card's ATR. We try to update this file as often as we can according to the changes made on the PC/SC Workgroup's specifications.

2. SUB_TYPES.INI

In some cases, the type defined by PIX.SS and PIX.NN is not precise enough for the card (eg.: ICODE and TAG-IT cards). If the subtype can be defined by the three first bytes of the UID of the card, subtypes can be defined in file sub_types.ini . Here is how to do so :

```
[PIXNN value of type]
First 3 bytes of UID = Name of card subtype
```

Which gives, for ICODE SLI cards :

```
[0014]
E00402=ICODE SLI-S
E00403=ICODE SLI-L
E00401=ICODE SLI
```

3. TYPE_CARD.INI

All the information you need to define the parameters of this file are in your card's documentation. In this file we define, for every card type (PIX.NN) and subtype (3 first bytes of UID) :

- the name of the card's type/subtype
- the number of blocks (NB)
- the size of a block (SZ)
- the maximum length that can be read at once (if there is no limit, put 254 or the number of bytes of your card)
- the number of the blocks where writing is possible but not advised (ORANGE)
- the number of the blocks where writing is forbidden (RED)

The information on blocks allows CardTool to read fully the card with the least APDU commands as possible, trying to read all data at once. Set this data in decimal format.

The ORANGE and RED information are used for writing the card : if you are trying to write an ORANGE block, you will be prompted for confirmation before writing; you will not be able to write a RED block. If all the blocks are free for writing, put NO. You can enumerate blocks by separating them with commas (",") or set an interval using -.

Here is an example, with NXP Mifare Ultralite card :

```
[0003] // card type/subtype
Name=Mifare Ultra Light //Name
NB=16 // there are 16 blocks
SZ=4 // each block contains 4 bytes
LE=254 // there is no size limit
ORANGE=3 // block 3 is written with care
RED=0-2 // block 0 to 2 can't be written
```

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