

# Encrypting an AutoIt script with *CodeCrypter*

## Step 1 of 5

- Open **MCFinclude.au3** in Scite and find Func **MCFCC\_Init()**.
- Select any existing **@macro** or **Function** call that defines runtime content of array **\$CCkey**, or add your own key definitions.
- **\$CCkey array index = key ID**
- Write down which key ID(s) to use for this encryption!
- Close MCFinclude.au3

```
1 MCFinclude.au3 2 helloworld.au3
258 EndFunc
259
260
261 Func _MCFCC_Init($type=0,$query=True,$useCNG=False)
262 ; NOTE: edit/add your keytype definitions here for $CCkey array entries 3-N
263 ; this UDF will itself be fixed-key encrypted
264
265     $CCkey[3]=@UserName ; case-sensitive!
266     $CCkey[4]=_WinAPI_UniqueHardwareID($UHID_MB) ; motherboard specs
267     $CCkey[5]=_WinAPI_UniqueHardwareID($UHID_CPU) ; CPU specs
268     $CCkey[6]=DriveGetSerial("C:")
269     $CCkey[7]=@IPAddress1 ; NB ensure your IP is fixed (no DHCP)
270     ; ...
271     ; Add your own definitions here
272     ; (e.g., calls to your own functions (to be placed ABOVE _MCFCC_Init(!)))
273
274     If $type="" Or $type=Default Then $type=1
275     $type=Number($type)
276     If $type<0 Or $type>=UBound($CCkey) Then $type=1 ; pwd query
277     If $cmdline[0]>0 Then $CCkey[1]=$cmdline[1]
278     If ($CCkey[$type]==$dummypwd Or $CCkey[$type]="" Or _
279         $CCkey[$type]=Null) And $query=True Then $CCkey[$type]=
280         InputBox("Protected Application","Please Enter Password: ", "", "*M", 250)
281     $CCkeytype=$type
282
283     Switch $useCNG
284     Case True
285         For $cc=1 to UBound($CCkey)-1 ; skip entry 0 (already done)
286             if IsPtr($CCkeyhandle[$cc]) Then __CryptoNG_BcryptDestroyKey($
287             If $CCkey[$cc]<>Null Then $CCkeyhandle[$cc]=_CryptoNGgetHandle
288         Next
289     Case Else
290         _AES_Startup()
291     EndSwitch
292 EndFunc
293
294 EndFunc
295 ; this func def should be the last one within this region,
296 ; as it is used as its end marker (so do NOT rename it)
297 #endregion Encryption2 (to be fixed-key encrypted)
```

#include: MCFinclude.au3

# Encrypting an Autolt script with *CodeCrypter*

## Step 2 of 5

In your target script, add the line:

**#include "MCFinclude.au3"**

(with path, if located elsewhere)

- Below all other #includes
- Above your own code

and **save** the script.

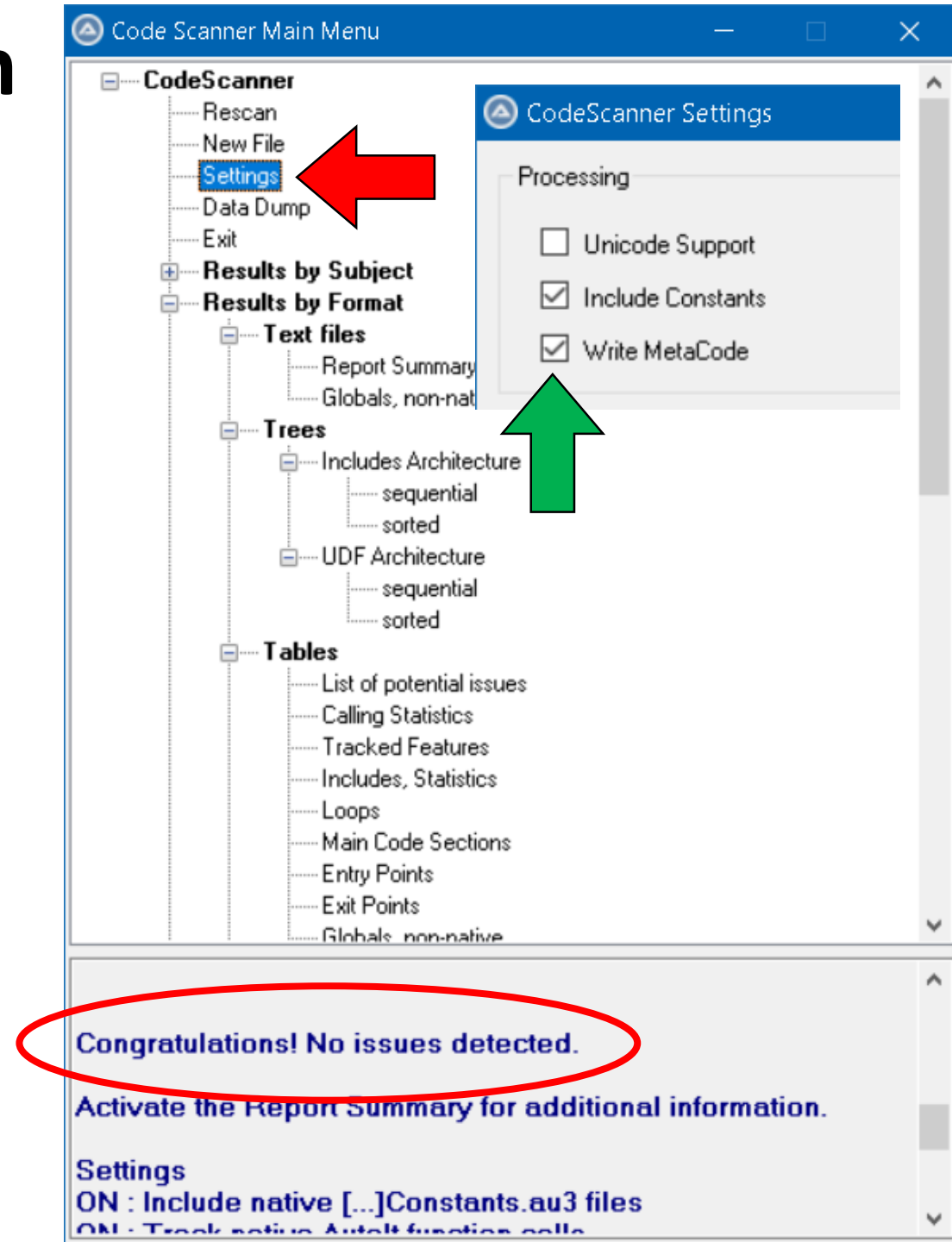
```
1 MCFinclude.au3 2 helloworld.au3
1 #NoTrayIcon
2 #include <GUIConstantsEx.au3>
3 #include <MsgBoxConstants.au3>
4
5 #include ".\MCFinclude.au3" ; <<< ADD THIS #INCLUDE, BELOW ALL OTHER INCLUDES
6
7 ; Show a simple message box.
8 MsgBox ( $MB_TOPMOST+$MB_ICONINFORMATION, "Test", "Hello, World!" )
9
10
11 ; call function to create a GUI
12 ExampleGUI()
13
14
15 Func ExampleGUI() ; adapted from Help file, first example for GuiCreate
16
17 ; Create a GUI with a button
18 Local $hGUI = GUICreate( "This is an Example GUI" )
19 Local $myButton = GUICtrlCreateButton( "Press to Quit", 80, 200, 120, 30 )
20
21 GUISetState( @SW_SHOW, $hGUI ) ; Display the GUI.
22
23 While 1 ; Loop until the user exits.
24     Switch GUIGetMsg()
25     Case $GUI_EVENT_CLOSE, $myButton
26         ExitLoop
27     EndSwitch
28 WEnd
29
30 GUIDelete( $hGUI ) ; Delete the GUI and all controls.
31
32 EndFunc ;==>Example
```

Target script: HelloWorld.au3

# Encrypting an Autolt script with *CodeCrypter*

## Step 3 of 5

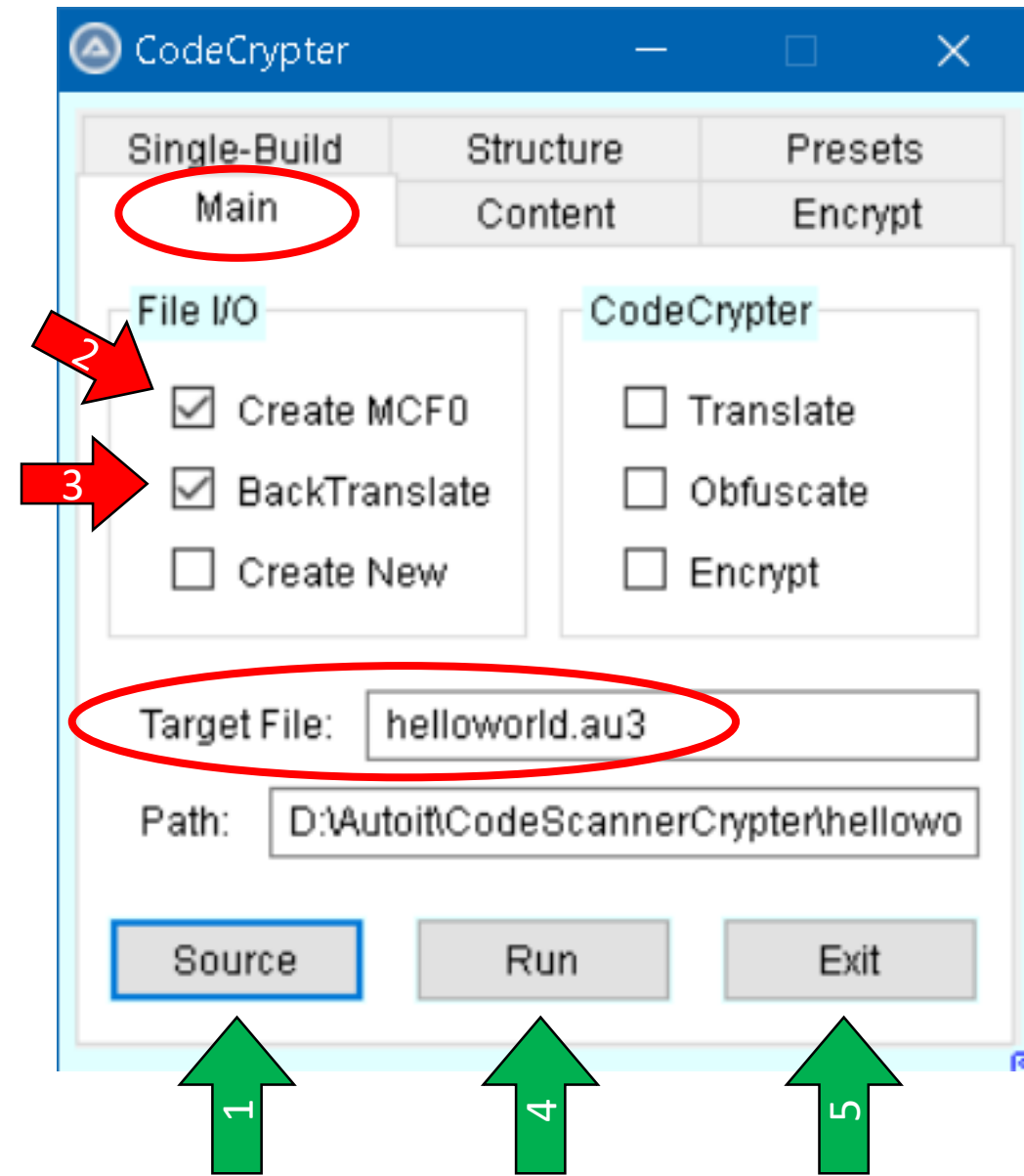
- Run **CodeScanner** on your script (this takes a long time).
- Check that no issues were detected (or fix these and re-run).
- **Subdirectory** :<name>.au3.CS\_DATA is created (if not, ensure that in CodeScanner's **Settings**, option [**Write MetaCode**] is enabled, and re-run).
- Close CodeScanner.



# Encrypting an Autolt script with *CodeCrypter*

## Step 4 of 5

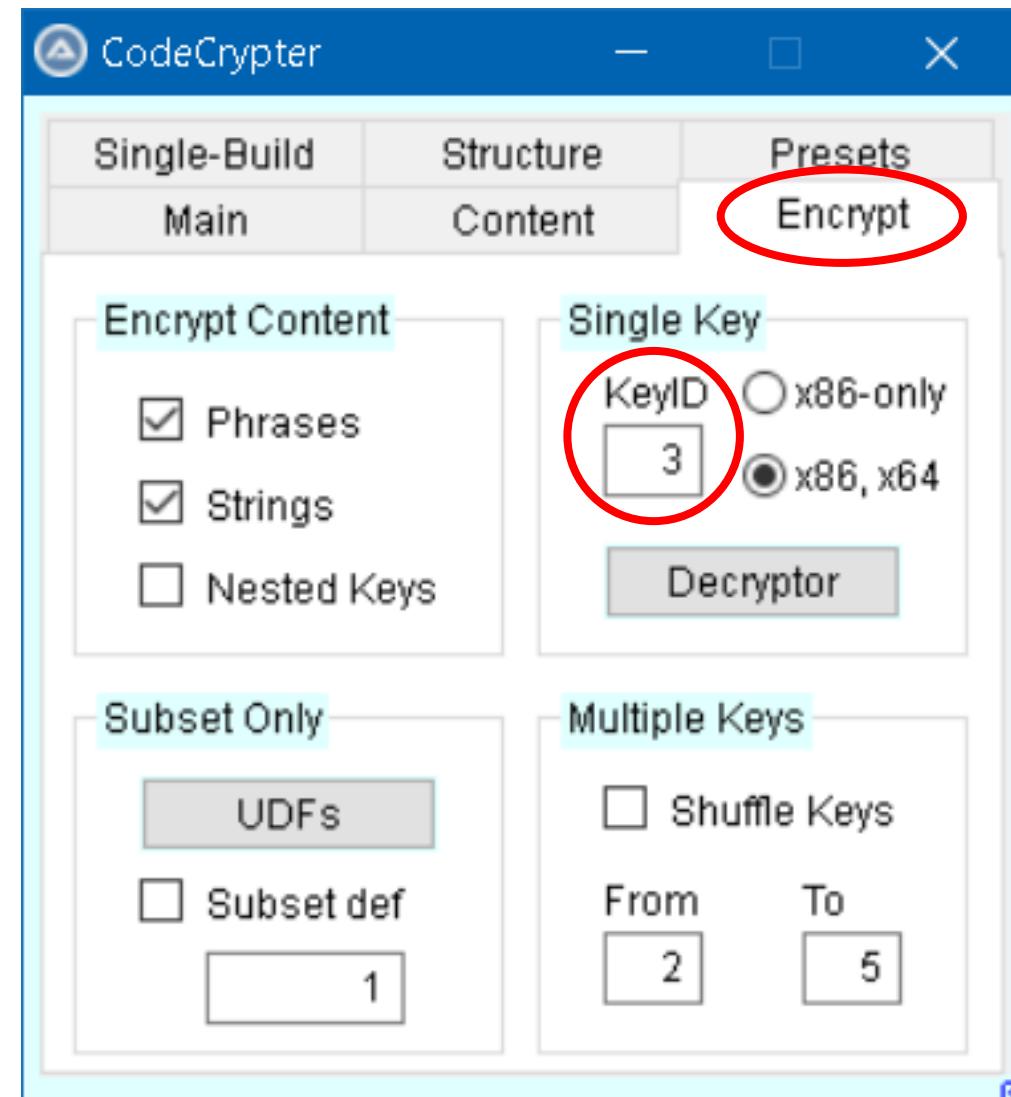
- Start **CodeCrypter**.
- Press **[Source]** to load your script.  
(the CS\_DATA path is filled automatically).
- Tick Options **[Create MCF0]** and **[BackTranslate]**
- Press **[Run]** (this will take a long time), then Exit.
- A new test file **MCF0test.au3** has been created in your target file's home directory. Open it in Scite, check for errors, and do test-runs.  
Ensure that it works exactly as the original.



# Encrypting an Autolt script with *CodeCrypter*

## Step 5 of 5

- Restart **CodeCrypter**.
- Under Tab Encrypt, specify the **Key ID**; this is the selector in array **\$CCkey** in *MCFinclude.au3*
- Under Tab Main, disable option **[Create MCF0]** and enable option **[Encrypt]**; then Press **[Run]**.
- A new **encrypted** file **MCF0test.au3** is created in your target's home directory.
- Open it in Scite, check for errors, do test-runs.  
Ensure that it works exactly as the original.



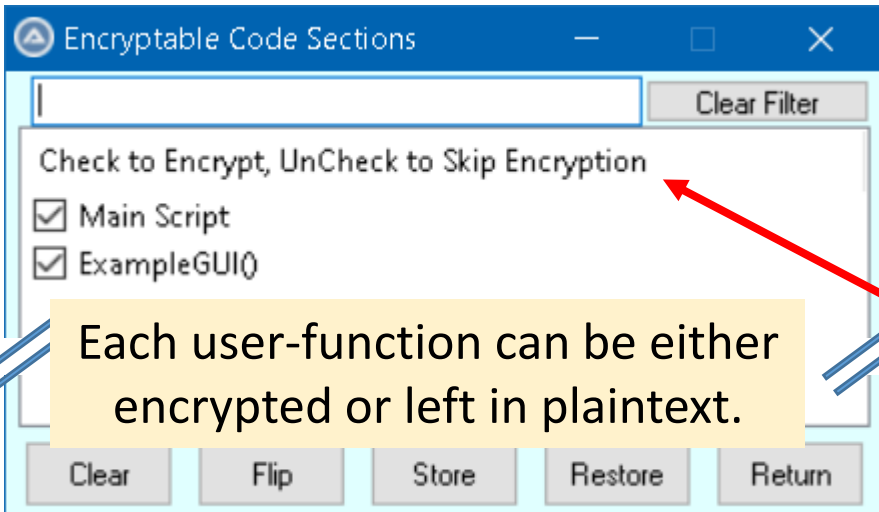
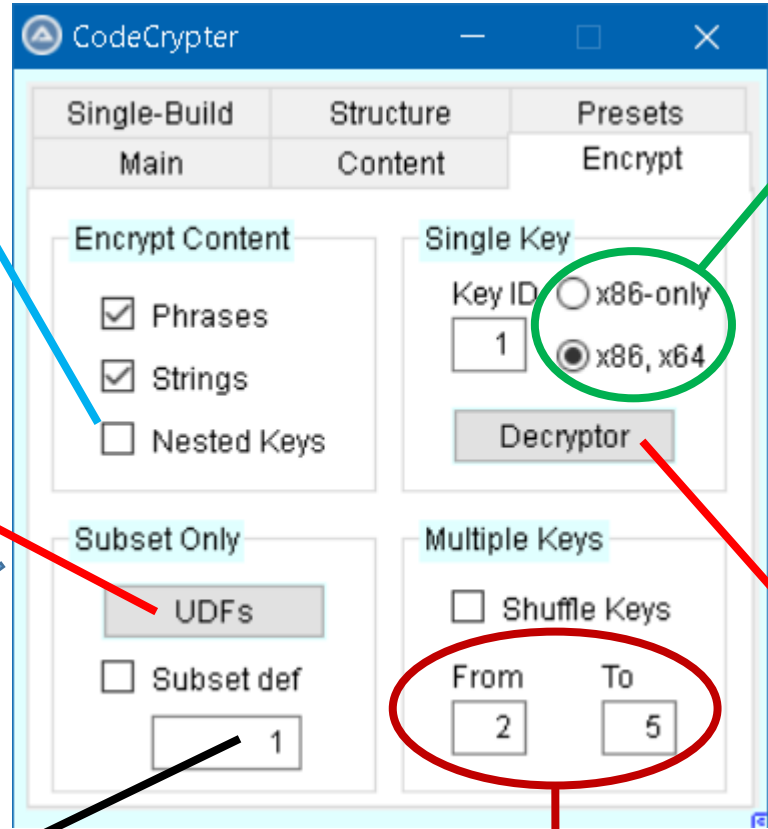
# Encryption Options

Author	AES	Bitness	OS
Ward	machine code	32-bit only	WinXP+
TheXman	Bcrypt dll	32 /64 bit	Win7+

Two-pass encryption re-encrypts the encrypted code, to hide the key-ID. (This does cause more slowdown.)

Select the encryption algorithm

Specify the expected return for any key ID in any environment.

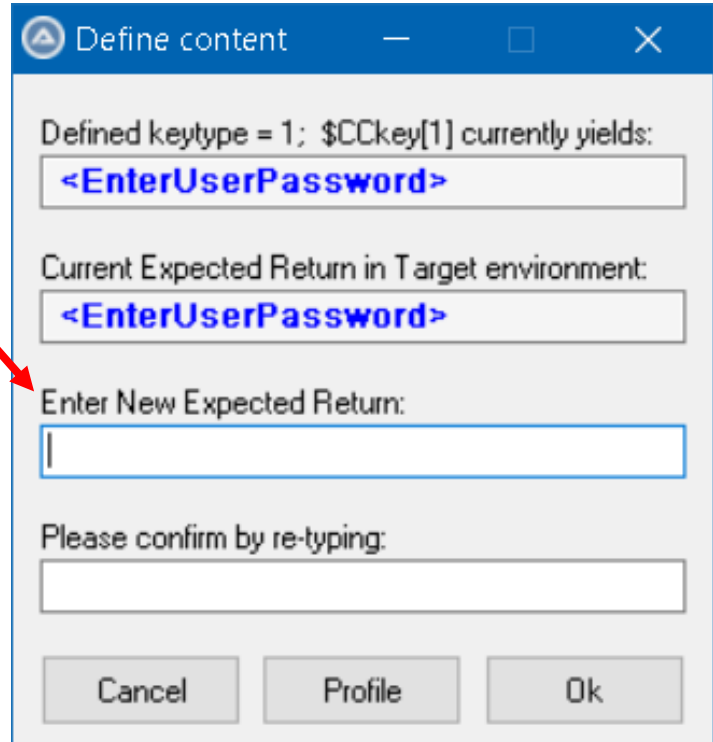


Each user-function can be either encrypted or left in plaintext.

Define a Subset of lines to encrypt:

- $[ 0 < S < 1 ]$  = random proportion
- $[ S > 1 ]$  = every  $S^{\text{th}}$  line

Randomly select from a range of encryption key IDs per line.



# Final Result

Script **HelloWorld.au3**, encrypted with user password: *test*.

## Features

- AES is practically unbreakable
- Each encryption pass is unique
- Fast decryption calls = minimal slow-down
- Optional targeted encryption of sensitive parts only
- **The decryption key is never stored** in the script, but **extracted from the run-time environment**
- The environment's expected *response* of key definitions can also be user-defined.

```
1 MCFinclude.au3 2 helloworld.au3 3 MCF0test.au3
1575
1576 Func _MCFCC_Init($type=0,$query=True,$useCNG=False)
1577     $CCkey[3]=Execute(_MCFCNG("0x5B455592487BDA749E25541BB82C02DD"))
1578     $CCkey[4]=Execute(_MCFCNG("0x5766D...))
1579     $CCkey[5]=Execute(_MCFCNG("0xE6A87...))
1580     $CCkey[6]=Execute(_MCFCNG("0x7C73B...))
1581     $CCkey[7]=Execute(_MCFCNG("0x6D08096...))
1582     If Execute(_MCFCNG("0x0A8FBAA2646DD3C1A2D91C1310DBFEAAE33735E52EA6CFC063EE6DC0EC0B6EC78...))
1583     $type=Execute(_MCFCNG("0xD06055E70F97B4788DC748E9BB8B6481E6D6086530F65EE95278BCD7EE001B...))
1584     If Execute(_MCFCNG("0xB481D364196DE...))
1585     If Execute(_MCFCNG("0xC4924A7D31901...))
1586     If Execute(_MCFCNG("0x037261753500E929E53E34101EC17BF422E7DE7842631013AA4A1508D36AAC038...))
1587     $CCkeytype=$type
1588     Switch $useCNG
1589     Case True
1590     For $cc= 1 to Execute(_MCFCNG("0x0343059751FC6A3CD2A548A464648FEFF5A9B29F44C5EAB17E1A63...))
1591     If Execute(_MCFCNG("0x7CC342AB67B439...))
1592     If Execute(_MCFCNG("0x87DD7B43BD9D04...))
1593     Next
1594     Case Else
1595     Execute(_MCFCNG("0x989DA7E15A948E05A410BA72A696C5CAE4ED5C099E4F61444480FCD154CF704F"))
1596     EndSwitch
1597 EndFunc
1598
1599 Execute(_MCFCNG("0x9E0647B2A325A15B968C71B73C0F20B736AC99191BAFA5A0593D84B7FFBAB932F66321F5...))
1600 Execute(_MCFCNG("0xC58E6731B492E6859F9D4311AE8...))
1601
1602 Func ExampleGUI()
1603     Local $hGUI=Execute(_MCFCNG("0x8D3806CCED7...))
1604     Local $myButton=Execute(_MCFCNG("0x340F8F8...))
1605     Execute(_MCFCNG("0xDFAD8783444D5ABC8B847FE...))
1606     While Execute(_MCFCNG("0xF89398FD8B6929018...))
1607     Switch Execute(_MCFCNG("0xF10448FE7E1D40C1...))
1608     Case $GUI_EVENT_CLOSE,$myButton
1609     ExitLoop
1610     EndSwitch
1611     WEnd
1612     Execute(_MCFCNG("0x88B0D3FF426F6CA19...))
1613 EndFunc
1614
```

Encryption key definitions are themselves fixed-key encrypted.

Password query at start-up is here.

Key generation is here.

Original script starts here.

Protected Application  
Please Enter Password:  
[password field]  
OK Cancel

Functions and variable names can additionally be obfuscated.