

Content

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Is the data real or is it a...



In a world where crackers abound and privacy is key encryption is also required. The ability to securely pass information from point A to point B without anyone at a random point C able to intercept the data is becoming paramount to companies. Storing passwords to the disk drive without those passwords being compromised becomes priority.

Mirage is a programmer's interface to some of the most sophisticated encryption routines available today, all without learning how encryption works. With a simple function call anyone can protect their data so securely that it would take a cracker hundreds of years to break the code.

Is the data real or is it a Mirage?

Decrypt Method

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Decrypts an 8-bit character string with a 4-bit password string using the encryption method and mode specified.

Syntax

Decrypt (*Data As String, DataLen As Long, Password As String, Method As Byte, mode As Byte*) As String

The **Decrypt** method syntax has these parts:

Part	Description
<i>Data</i>	8-bit character string to encrypt
<i>DataLen</i>	Length of Data variable
<i>Password</i>	4-bit password string
<i>Method</i>	A predefined encryption method
<i>Mode</i>	The mode of encryption to use
<i>Output</i>	An 8-bit character string representing the encrypted data

Method

Description

Twofish

MIRAGE_TW
Block size: 12
Password len
Supported m

Mode

ECB

CBC

CFB

Remarks

Data and Password data restrictions vary depending on the Method and Mode selected.

Encrypt Method

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Encrypts an 8-bit character string with a 4-bit password string using the encryption method and mode specified.

Syntax

Encrypt (*Data As String, DataLen As Long, Password As String, Method As Byte, mode As Byte*) As String

The **Encrypt** method syntax has these parts:

Part

<i>Data</i>	8-bit character string to encrypt
<i>DataLen</i>	Length of Data variable
<i>Password</i>	4-bit password string
<i>Method</i>	A predefined encryption method
<i>Mode</i>	The mode of encryption to use
<i>Output</i>	An 8-bit character string representing the encrypted data

Method

Description

<i>Twofish</i>	MIRAGE_TWOFISH Block size: 128 bits (16 characters) Password length: 72-256 bits (9-32 characters) Supported modes: ECB, CBC, CFB
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Mode

Description

<i>ECB</i>	MIRAGE_MODE_ECB Electronic Code Book The input block must be a multiple of the block size.
<i>CBC</i>	MIRAGE_MODE_CBC Cipher Block Chaining The input block must be a multiple of the block size.
<i>CFB</i>	MIRAGE_MODE_ECB K-bit Cipher FeedBack The input block can be any length.

Remarks

Data and Password data restrictions vary depending on the Method and Mode selected.

Mirage Control Events

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Mirage Control has no Events.

Note: Demonstration and international versions are limited to 40 bit keys. Any key lengths longer are trimmed and padded with zeroes.

Mirage Control Example

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Mirage Control Visual Basic Example.

```

' Encrypt methods
Public Const MIRAGE_TWOFISH = &H0

' Encryption modes
Public Const MIRAGE_MODE_ECB = &H10
Public Const MIRAGE_MODE_CBC = &H11
Public Const MIRAGE_MODE_CFB = &H12
Public Const MIRAGE_MODE_OFB = &H13

Private Function StringToMode(ByVal mode As String)
    Select Case UCase(mode)
        Case "ECB"
            StringToMode = MIRAGE_MODE_ECB
        Case "CFB"
            StringToMode = MIRAGE_MODE_CFB
        Case "CBC"
            StringToMode = MIRAGE_MODE_CBC
        Case Else
            StringToMode = -1
    End Select
End Function

Private Sub Decrypt_Click()
    Dim key As String
    Dim ret As String
    Dim data As String
    Dim mode As Integer

    mode = StringToMode(Combo1.Text)
    key = Mirage1.StrToHex(Text2.Text, Len(Text2.Text))
    data = Mirage1.HexToStr(Text3.Text, Len(Text3.Text))
    ret = Mirage1.Decrypt(data, Len(data), key, MIRAGE_TWOFISH, mode)
    If Len(data) <> Len(ret) Then
        Debug.Print "Error occurred."
    End If
    Text4.Text = ret
End Sub

Private Sub Encrypt_Click()
    Dim key As String
    Dim ret As String
    Dim data As String
    Dim mode As Integer

    mode = StringToMode(Combo1.Text)
    key = Mirage1.StrToHex(Text2.Text, Len(Text2.Text))
    ret = Mirage1.Encrypt(Text1.Text, Len(Text1.Text), key, 0, mode)
    If InStr(1, ret, Chr(0)) Then
        Debug.Print "Null found.  " & Len(Text1.Text) & ":" & Len(ret)
    End If
    data = Mirage1.StrToHex(ret, Len(ret))
    Text3.Text = data
End Sub

Private Sub Go_Click()
    Dim i As Long

```

```

Dim tmp As String
Dim key As String
Dim ret As String
Dim data As String
Dim mode As Integer

Randomize
tmp = ""
For i = 1 To 64
    tmp = tmp & Chr(Asc("a") + CInt(Rnd * 26))
Next
Text1.Text = tmp
tmp = ""
For i = 1 To 32
    tmp = tmp & Chr(Asc("a") + CInt(Rnd * 26))
Next
Text2.Text = tmp
mode = StringToMode(Combo1.Text)
key = Mirage1.StrToHex(Text2.Text, Len(Text2.Text))
ret = Mirage1.Encrypt(Text1.Text, Len(Text1.Text), key, 0, mode)
If InStr(1, ret, Chr(0)) <> 0 Or Len(ret) <> Len(Text1.Text) Then
    Debug.Print "Null found. " & Len(Text1.Text) & ":" & Len(ret)
End If
data = Mirage1.StrToHex(ret, Len(ret))
If (Len(data) \ 2) <> Len(ret) Then
    Debug.Print "StrToHex " & Len(data) & ":" & Len(ret)
End If
Text3.Text = data
End Sub

```

Note: Demonstration and international versions are limited to 40 bit keys. Any key lengths longer are trimmed and padded with zeroes.

HexToString Method

[See Also](#) [Example](#) [Properties](#) [Methods](#) [Events](#) [Support](#) [Order](#)

Converts a 4-bit hex string to an 8-bit character string.

Syntax

HexToString (*Data As String, DataLen As Long*) As String

The **HexToString** method syntax has these parts:

Part	Description
<i>Data</i>	4-bit hex string
<i>DataLen</i>	Length of Data variable
<i>Output</i>	8-bit character string

Remarks

The output will be half the length of the input.

Mirage Control Methods

[See Also](#) [Example](#) [Properties](#) [Methods](#) [Events](#) [Support](#) [Order](#)

Mirage Control has the following Methods:

[StringToHex](#)

[HexToString](#)

[Encrypt](#)

[Decrypt](#)

Note: Demonstration and international versions are limited to 40 bit keys. Any key lengths longer are trimmed and padded with zeroes.

Product Purchase

[See Also](#) [Example](#) [Properties](#) [Methods](#) [Events](#) [Support](#) [Order](#)

Pricing Information

Mirage single user license is US \$49.00, You may obtain site license pricing information from WinWare Inc's web site at <http://www.winwareinc.com> or call (949) 675-7140.

Delivery

We will eMail your registered copy, a shipping and handling fee of US \$15.00 will apply if you want it delivered via regular mail.

Order Online

You can order Mirage online using secure shopping at WinWare Inc's web site.

<http://www.winwareinc.com>

Phone

Please have your credit card handy and Call 800-507-4357 or 949-675-7140

E-Mail

To order by email, send your name, email, company, address, telephone number, fax number, product name, quantity desired, and credit card number / expiration date to:

sales@winwareinc.com

Fax

To order by fax, send your name, email, company, address, telephone number, fax number, product name, quantity desired, and credit card number / expiration date to:

949-675-7149

Mail

To order by mail, send your name, email, company, address, telephone number, fax number, quantity desired, and a check or money order for the correct amount to:

WinWare Incorporated
Order Processing
3334 East Coast Hwy. # 419
Corona del Mar CA 92625

Product Support

[See Also](#) [Example](#) [Properties](#) [Methods](#) [Events](#) [Support](#) [Order](#)

Registered users can access technical support for Mirage on the web at <http://www.winwareinc.com>, or via email at support@winwareinc.com.

Before contacting technical support

Please be sure to include the following items when contacting WinWare for technical support:

- Version of Mirage that you are using.
- Your full name as stated upon registration
- A brief and specific description of your problem or request. Lengthy or complicated descriptions take more time to analyze and will usually require additional time to respond -- please be patient.

Mirage Control Properties

[See Also](#) [Example](#) [Properties](#) [Methods](#) [Events](#) [Support](#) [Order](#)

Mirage Control has no public properties.

Note: Demonstration and international versions are limited to 40 bit keys. Any key lengths longer are trimmed and padded with zeroes.

See Also

[See Also](#) [Example](#) [Properties](#) [Methods](#) [Events](#) [Support](#) [Order](#)

Cryptography and Security Links

[eEye Digital Security Team](#)

[RSA Laboratories](#)

[Counterpane Systems](#)

Note: Demonstration and international versions are limited to 40 bit keys. Any key lengths longer are trimmed and padded with zeroes.

StringToHex Method

[See Also](#) [Example](#) [Properties](#) [Methods](#) [Events](#) [Support](#) [Order](#)

Converts an 8-bit character string to a 4-bit hex string.

Syntax

StringToHex (*Data As String, DataLen As Long*) As String

The **StringToHex** method syntax has these parts:

Part	Description
<i>Data</i>	8-bit character string
<i>DataLen</i>	Length of Data variable
<i>Output</i>	4-bit hex string

Remarks

The output will be twice the length as the input.

