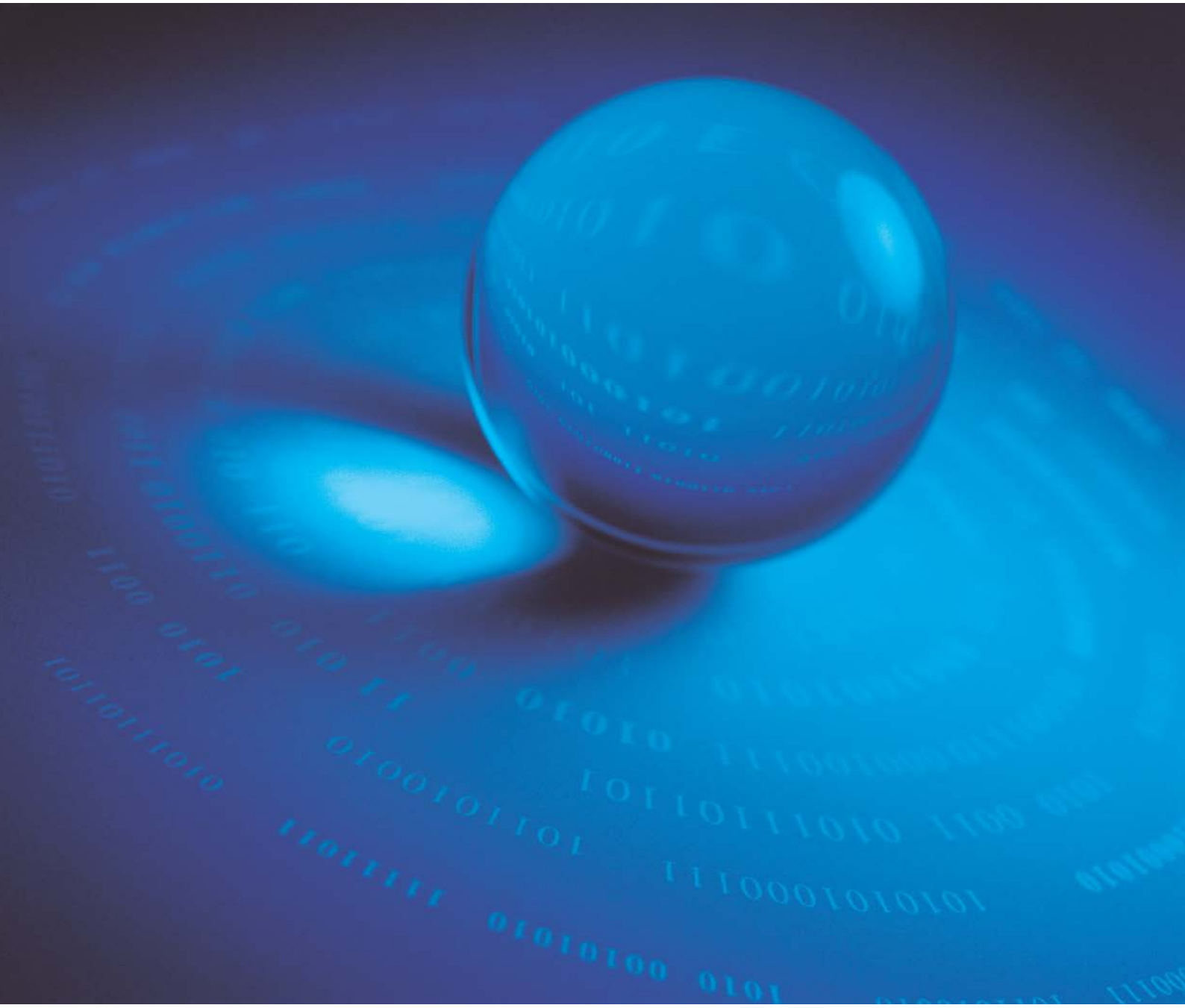
Application of EnterSafe Minidriver for EFS

V1.0



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Revision History:

Date	Version	Description
January 2008	1.0	1st Edition

EnterSafe

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Test report No. 70407310011
Test standards: EN 55022/1998 EN 55024/1998

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FCC certificate of approval

This Device is conformance with Part 15 of the FCC Rules and Regulations for Information Technology Equipment.

USB

This equipment is USB based.

WEEE

Dispose in separate collection.

Contents

1 Overview

1.1 What's Encrypted File System

The Encrypting File System (EFS) is a file system driver with filesystem-level encryption available in Microsoft Windows (2000 and later) operating systems, except Windows XP Home Edition, Windows Vista Basic, and Windows Vista Home Premium. The technology transparently allows files to be encrypted on NTFS file systems to protect confidential data from attackers with physical access to the computer.

1.2 Preparing for EnterSafe Minidriver

Before use EFS with EnterSafe Minidriver, the following requirements should be satisfied:

1. Install EnterSafe Minidriver;
2. Certificate installation on the EnterSafe Minidriver Token;
3. Folder creation;
4. Folder encryption.

2 Infrastructure Configuration

2.1 Architecture

The general infrastructure needed is:

- Windows Client on an NTFS partition, Windows Vista as an example.
- Active Directory
- Certificate Authority

2.2 Microsoft Encrypted File System

2.2.1 Prerequisite

In order to successfully accomplish the following use case, you need a computer running Windows Vista and a user account with administration rights.

In order to support the Encrypted File System, the File System Type must be set to NTFS. This is done when installing the Widows operating system.

2.2.2 Widows Vista Properties

To activate the EFS using the EnterSafe Minidriver Token, you must proceed as follows:

1. On the Windows Vista Control Panel, select **Administrative Tools**.
2. Click on **Local Security Policy** (you must be a member of the Administrator Group).
3. On the Public Key Policies, right-click on **Encrypting File System** and select **Properties**. The Encrypting File System Properties dialog appears as shown in Figure 1:

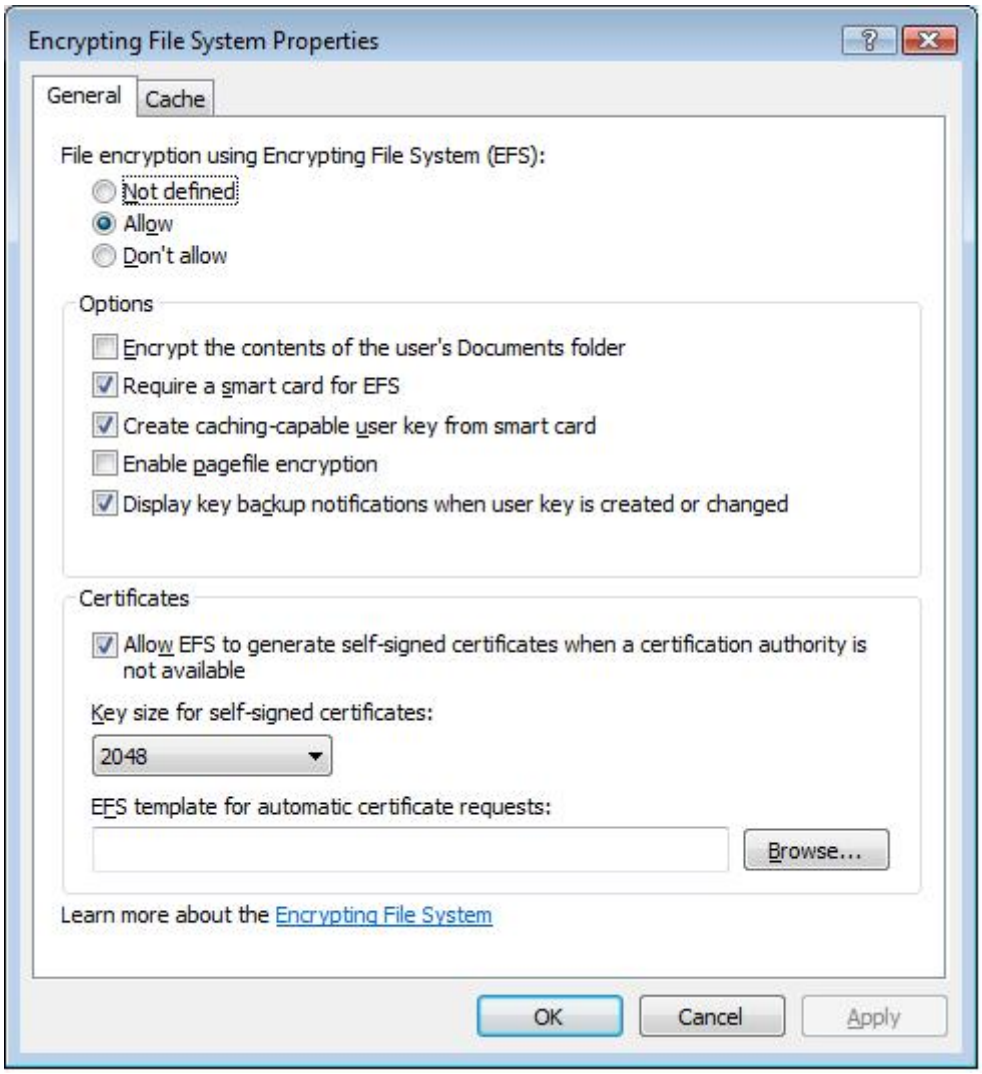

Figure 1 Encrypting File System Properties-General

4. In File encryption using **Encryption File System (EFS)** area, select **Allow**.
5. In **Options** area, check **Require a smart card for EFS**.
6. In Certificates area, clear **Allow EFS to generate self-signed certificates when a certification authority is not available**.
7. In the Encrypting File System Properties area click on the **Cache** tab. By checking the **User locks workstation**, you clear the encryption session key cache when the workstation is locked, as shown in Figure 2:

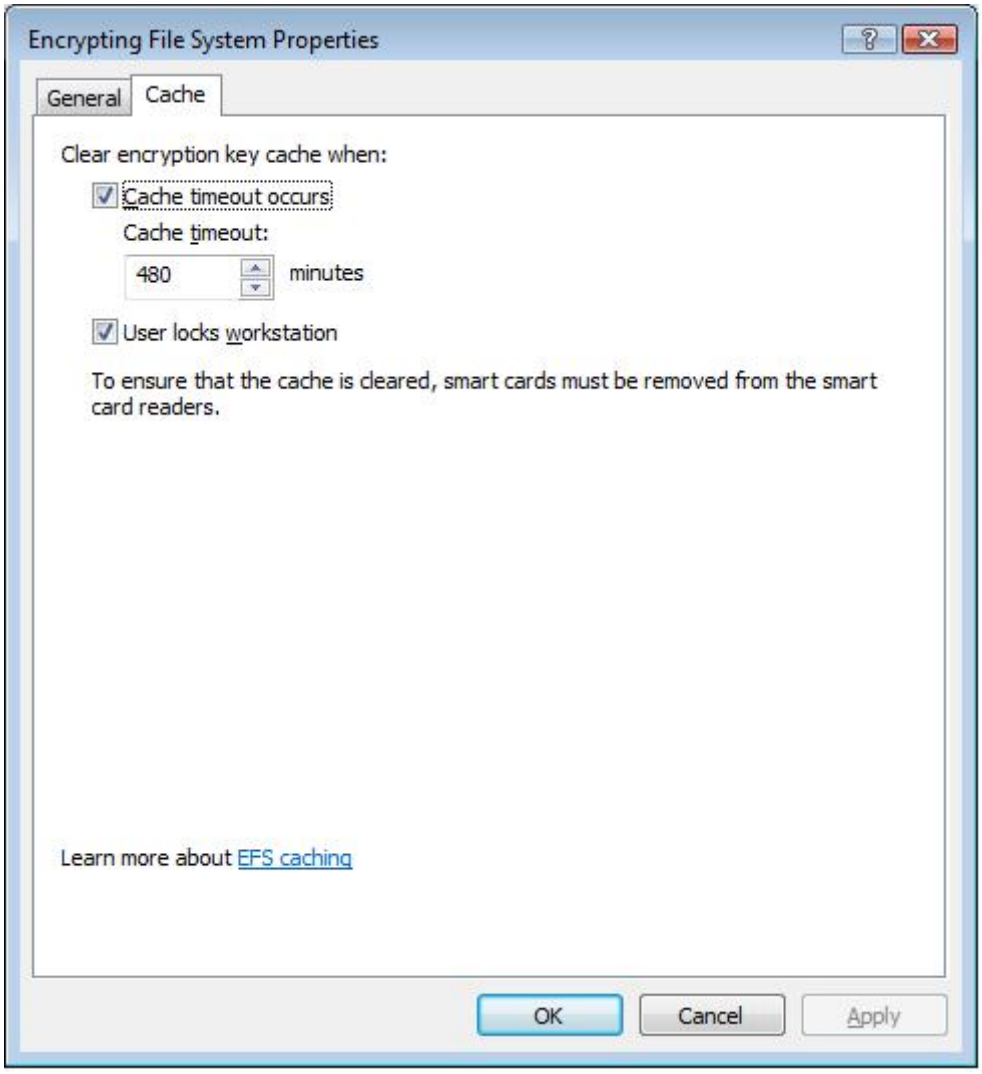

Figure 2 Encrypting File System Properties-Cache

Note:The procedure is not necessary for operating systems earlier than Windows Vista.

3 EnterSafe Minidriver Token Use Cases

3.1 Performing EFS Operations With An Existing Certificate

Before using the EnterSafe Minidriver Token for EFS, the Token should contain a smart card logon certificate. And the certificate must have the EFS attribute.

After you log on to the workstation, please create a folder for the EFS, for example, named EFS_example. And create a file in the folder.

To encrypt the folder and its files, proceed as follows:

1. Right-click on the EFS_example folder and then click on **Properties**, as shown in Figure 3:

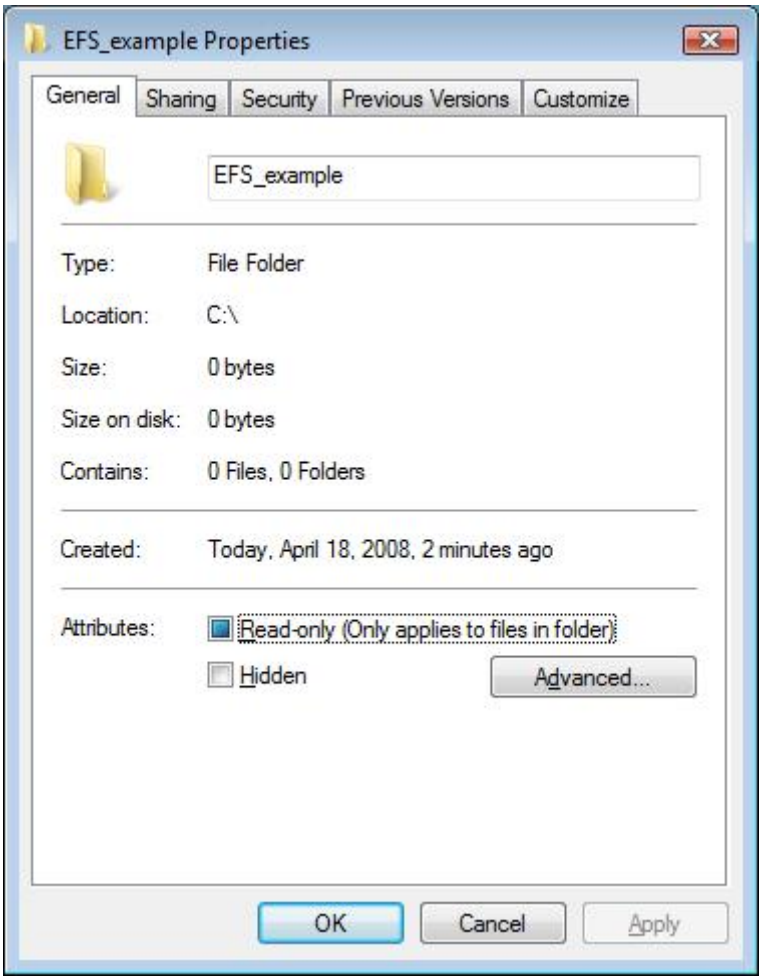

Figure 3 EFS folder Properties

2. Click on **Advanced**, as shown in Figure 4:

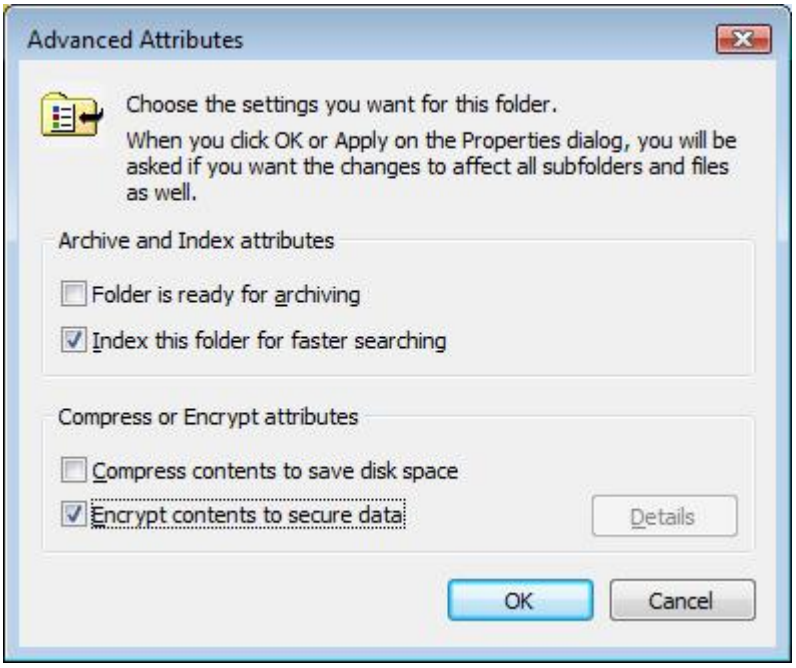

Figure 4 Advanced Attributes

3. In the **Advanced Attributes** dialog, you must check **Encrypt contents to secure data** and then click on **OK** twice.

4. In the **Confirm Attribute Changes**, select **Apply changes to this folder, subfolder and files** and then click on OK.

Figure 5 Confirm Attribute Changes

5. In the Encryption File System dialog, select **Use an existing smart card certificate**, as shown in Figure 6:

Figure 6 Select an existing smart card certificate

6. Select the user certificate and then click on OK, as shown in Figure 7:

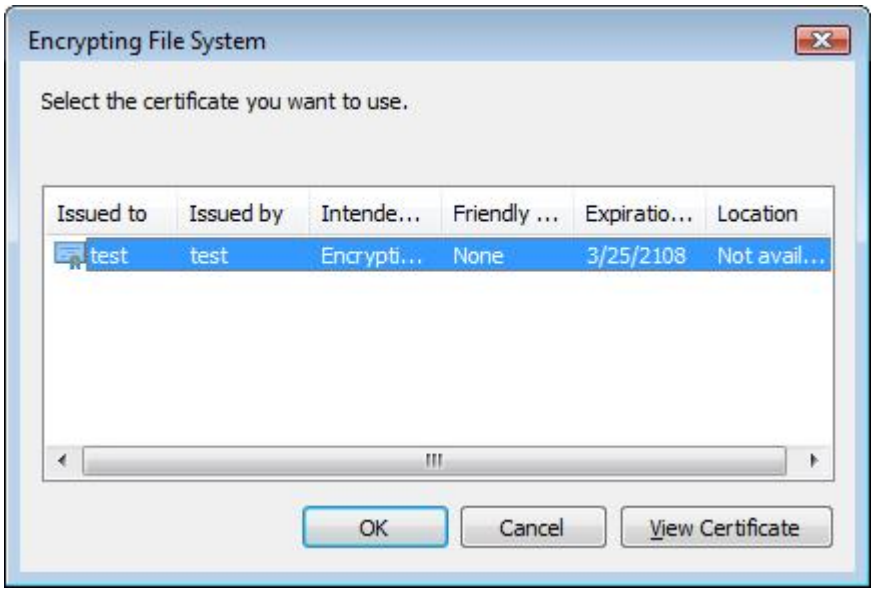

Figure 7 Select a certificate

7. Then the PIN dialog pops up. Enter your PIN code and then click on OK, as shown in Figure 8:

Figure 8 PIN dialog

The EFS_exmaple folder is now encrypted.

The folder is now accessible only for the EFS_exmaple. To access the files in this folder, you must log on as EFS_exmaple and use your smart card.

If another user logs on to your PC, he or she cannot open the EFS_exmaple encrypted folder, even if that user has administrative rights for the PC.

If you log on as EFS_exmaple without a smart card, you will be unable to access to the encrypted files. You will be resquested to attach the smart card, as shown in Figure 9:

Figure 9 Prompt to insert a smart card

3.2 Creating A New Certificate For EFS Operations

After you log on to the workstation, please create a folder for the EFS, for example, named EFS_example. And create a file in the folder.

To encrypt the folder and its files, proceed as follows:

1. Right-click on the EFS_example folder and then click on **Properties**, as shown in Figure 10:

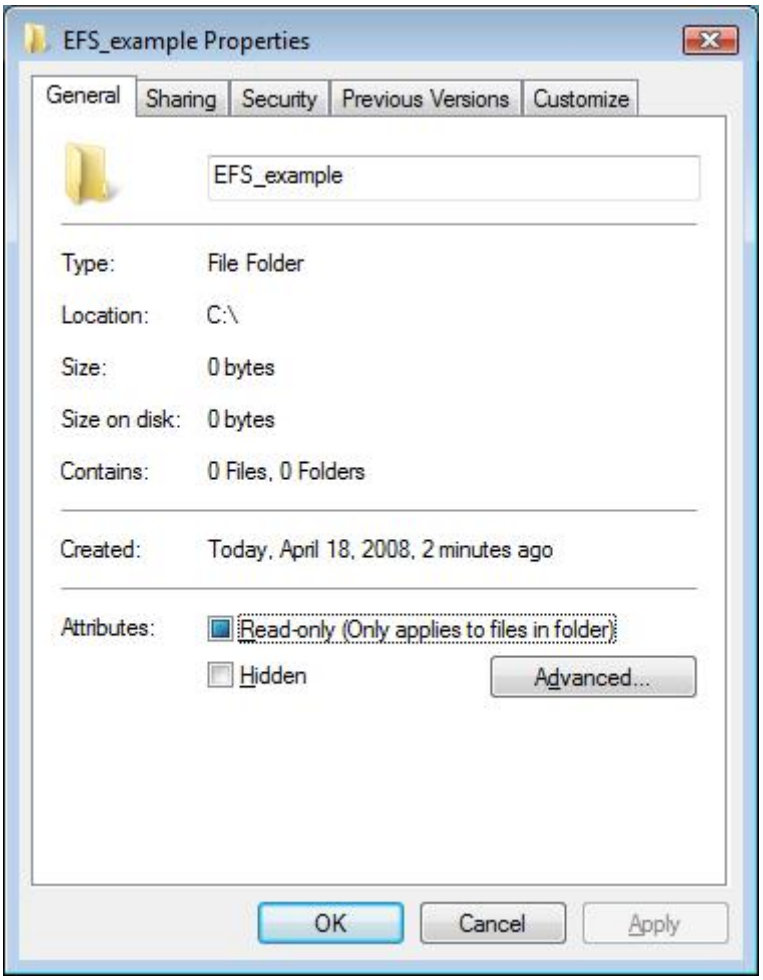

Figure 10 EFS folder properties

2. Click on **Advanced**, as shown in Figure 11:

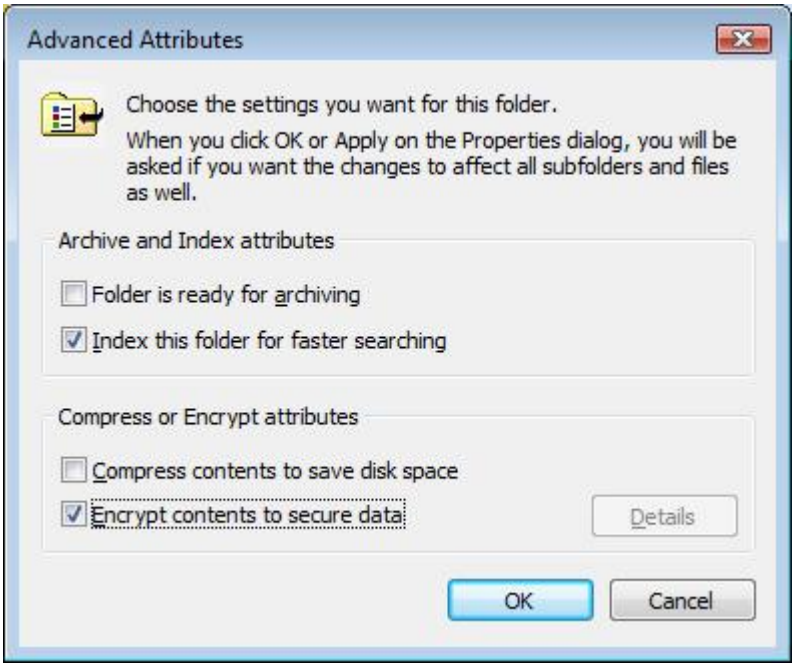

Figure 11 Advanced Attributes

3. In the **Advanced Attributes** dialog, you must check **Encrypt contents to secure data** and then click on **OK**

twice.

4. In the **Confirm Attribute Changes** area, select **Apply changes to this folder, subfolder and files** and then click on **OK**.

Figure 12 Confirm Attribute Changes

5. In the **Encryption File System** dialog, select **Create a new smart card certificate**, as shown in Figure 13:

Figure 13 Select an existing smart card certificate

6. Then you will be requested to enter the user PIN of the smart card, as shown in Figure 14:

Figure 14 PIN dialog

7. A new smart card certificate is created in your Token.

8. Select the created user certificate and then click on OK, as shown in Figure 15:

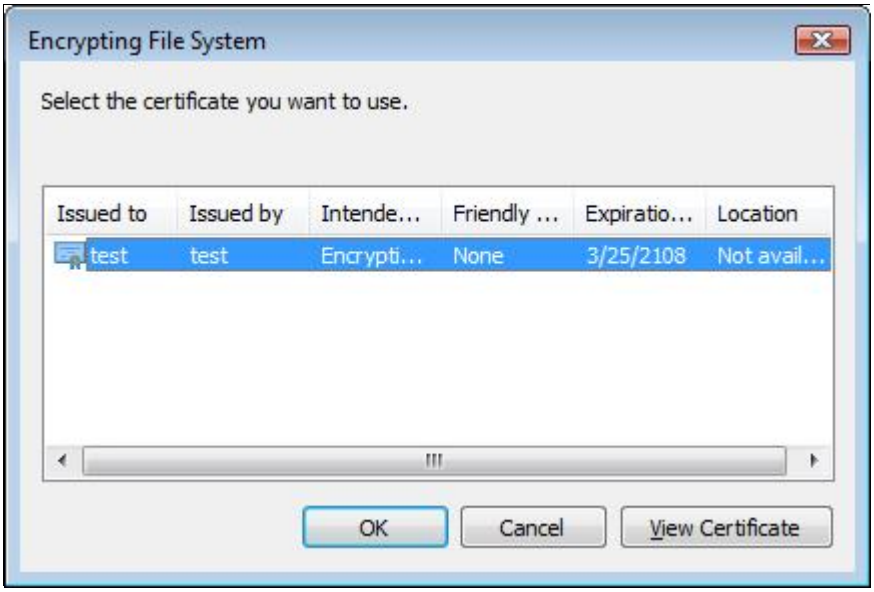

Figure 15 Select a certificate

9. Then you will be requested to enter the user PIN. Enter your PIN code and then click on OK, as shown in Figure 16:

Figure 16 PIN dialog

The EFS_example folder is now encrypted successfully.