

Document name: Upgrading EcFAT from 3.0 to 3.1	Version 3.1.2
Internal reference: Products/EcFAT/Upgrade3.0to3.1/4537	



Upgrading EcFAT from version 3.0 to 3.1

Version 3.1.2

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1 Introduction

EcFAT 3.1 is an incremental release from EcFAT 3.0.

It is EmbCode's policy to only introduce API changes that requires code rewrite with new major versions.

Despite this policy, ECF_SetFileAttributes() has been changed EcFAT 3.1 compared to EcFAT 3.0. The reasoning behind this is explained below.

This document describes how to rewrite EcFAT 3.0 code to work with EcFAT 3.1.

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2 Upgrading

2.1 Change API for ECF_SetFileAttributes

2.1.1 Why is the API changed?

```
ECF_ErrorCode ECF_SetFileAttributes(  
    struct ECF_FileHandle *pFileHandle,  
    uint8_t newAttributes  
);
```

The ECF_SetFileAttributes() introduced in EcFAT 3.0 was unfortunate for several reasons.

1. It clears all the attribute flags that are not passed as newAttributes.

This makes it very complicated to set or remove a single flag without affecting other flags. It can be done via ECF_GetFileInfo() but that function takes a path and not a struct ECF_FileHandle so the resulting code isn't very clear.

2. It takes a struct ECF_FileHandle as parameter. This is not ideal for two reasons:
 - a. You need to open the file to set the attributes and the more common case is probably that you want to specify a path to the file directly instead of first opening it.
 - b. It was impossible to set the attributes of a directory.

2.1.2 How to change the code

If you previously had (assuming fileHandle was opened on the file "A:\myfile.dat"):

```
err = ECF_SetFileAttributes(&fileHandle, ECF_ATTR_READ_ONLY);
```

Change it to:

```
err = ECF_SetAttributes("A:\\myfile.dat",  
    ECF_ATTR_READ_ONLY, ECF_ATTR_ALL);
```

2.2 Read-only attribute for files and directories are now enforced

In contrast to EcFAT 3.0, the Read-only attributes (ECF_ATTR_READ_ONLY) is enforced in EcFAT 3.1.

If you have read-only files on your disk that you opened in read/write in EcFAT 3.0 these will now return ECFERR_FILEISREADONLY.

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If the Read-only attributes is set for a directory, all the files and directories in that directory will be read-only, regardless of of how their individual read-only attribute is set.

2.3 ECF_FORMAT_ALIGN has been replaced

ECF_FORMAT_ALIGN used the cluster size passed to ECF_Format() to align the formatted disk to the cluster size.

It has now been removed. Use m_fnGetDriveProperty() in struct ECF_BlockDriver instead to return the block device alignment using ECF_DRIVEPROPERTY_SECTORSPERBLOCK. EcFAT will use this value to align the disk.