[MS-FSCC]: File System Control Codes

Errata below are for Protocol Document Version V45.0 – 2018/09/12.

Errata Published*	Description
2019/08/05	In Section 2.3.42, FSCTL_QUERY_FILE_REGIONS Reply, the length of the Region field has been changed from 24 bytes to variable.
2019/08/05	In Section 2.3.41, FSCTL_QUERY_FILE_REGIONS Request, a new Reserved field has been added to the end of the data element. Added: Reserved (4 bytes): A 32-bit unsigned integer that is reserved. This field SHOULD be 0x00000000 and MUST be ignored.
2019/08/05	In Section 2.3.41, FSCTL_QUERY_FILE_REGIONS Request, new product behavior notes have been added to FILE_REGION_USAGE_VALID_CACHED_DATA and FILE_REGION_USAGE_VALID_NONCACHED_DATA. Added: <30> Section 2.3.41: This region usage flag can only be specified for volumes using the NTFS file system. <31> Section 2.3.41: This region usage flag can only be specified for volumes using the ReFS file system. In Section 2.3.42.1, FILE_REGION_INFO, the DesiredUsage field has been changed from: DesiredUsage (4 bytes): A 32-bit unsigned integer that indicates the usage for the given region of the file. The valid values are defined in section 2.3.41. Changed to: DesiredUsage (4 bytes): A 32-bit unsigned integer that indicates the usage for the given region of the file. See table below.

Value	Meaning
0x00000000	The given range is invalid. It does not match the criteria of the requested DesiredUsage as specified in section 2.3.41.
FILE _USAGE_VALID_CACHED_DATA 0x00000001	Defines those regions of the file that exists before VDL as it exists in the cache manager.<32>

Errata Published*	Description
	<table><tr><td>FILE _USAGE_VALID_NONCACHED_DATA 0x00000002</td><td>Defines those regions of the files that exist before VDL on the storage device.<33></td></tr></table> <32> Section 2.3.42.1: The NTFS file system is the only file system that returns this region usage value. <33> Section 2.3.42.1: The ReFS file system is the only file system that returns this region usage value.
2018/12/10	In Section 2.1.5, Pathname, the following has been removed: ● Each pathname component MUST be no more than 255 characters in length. In Section 2.1.5.2, Filename, the following has been added: ● A filename MUST be at least one character but no more than 255 characters in length. In Section 2.1.5.3, Streamname, the following has been added: ● A streamname MUST be no more than 255 characters in length.
2018/12/10	In Section 2.3.9.2, SMB2_DUPLICATE_EXTENTS_DATA_EX, a new field called Reserved has been added to the packet diagram and the field descriptions. Added: Reserved (4 bytes): This field SHOULD be set to zero and MUST be ignored.
2018/11/12	In the sections listed below, the description of the EaSize field has been changed. Section 2.4.8, FileBothDirectoryInformation Section 2.4.14, FileFullDirectoryInformation Section 2.4.17, FileIdBothDirectoryInformation Section 2.4.18, FileIdFullDirectoryInformation Changed from: EaSize (4 bytes): A 32 -bit unsigned integer that contains the combined length, in bytes, of the extended attributes (EA) for the file. Changed to: EaSize (4 bytes): If FILE_ATTRIBUTE_REPARSE_POINT is set in the FileAttributes field, this field MUST contain a reparse tag as specified in section 2.1.2.1. Otherwise, this field is a 32 -bit unsigned integer that contains the combined length, in bytes, of the extended attributes (EA) for the file.,
2018/11/12	In Section 2.4, File Information Classes, the following has been added:

Errata Published*	Description		

File information class	Level	Uses
…	…	…
FileIdInformation	59	Query<78>
…	…	…

<78> Section 2.4: The FileIdInformation information class is supported in the NTFS and ReFS file systems in Windows 8 and subsequent and Windows Server 2012 and subsequent.

The following new section has been added:

Section 2.4.43   FileIdInformation

This information class is used to query the volume serial number and fileid information for a file.

A FILE_ID_INFORMATION data element, defined as follows, is provided by the server.

0	1	2	3	4	5	6	7	8	9	1 0	1	2	3	4	5	6	7	8	9	2 0	1	2	3	4	5	6	7	8	9	3 0	1
VolumeSerialNumber																														
…																														
FileId																														
…																														
…																														
…																														

VolumeSerialNumber (8 bytes): A 64-bit unsigned integer that contains the serial number of the volume where the file is located.

FileId (16 bytes): An opaque 128-bit signed integer that is an identifier of the file. For file systems that support file identifiers that are less than 128 bits, the unsupported portions of this value MUST be set to zero.<121>

This operation returns a status code as specified in section 2.2. Upon success, the status code returned by the function that processes this file information class is STATUS_SUCCESS. The most common error codes are listed in the following table.

Error Code	Meaning
STATUS_INFO_LENGTH_MISMATCH 0xC0000004	The specified information record length does not match the length that is required for the specified information class.

*Date format: YYYY/MM/DD