

FCP-4: Additional FCP FC-4 Feature bits (08-366r0)

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Problem statement:

The number of FC-4 Feature bits is down to one, and there is discussion of a need for a new bit. Thus a mechanism to obtain additional FC-4 Feature bits for FCP is needed.

Proposal: Assign one (or more) FC-4 TYPE(s) for additional FCP usage.

7 FC-4 specific Name Server registration and objects

7.1 Overview of FC-4 specific objects for the Fibre Channel Protocol

The Name Server for a Fibre Channel fabric is defined by FC-GS-6. FCP specific objects are defined in this clause for use by the Name Server. FC-GS-6 provides complete descriptions of the operations that are performed to register objects with a Name Server and to query the Name Server for the value of the objects.

7.2 FC-4 TYPEs object

The FC-4 TYPEs object (see FC-GS-6) indicates a set of supported data structure type values for Device_Data and FC-4 Link_Data frames (see FC-FS-3). FC-4 TYPEs are defined for FCP TYPE

An FCP_Port shall register the FCP Fibre Channel Protocol TYPE (08h) with the Name Server using the RFT_ID request CT_IU. This registration shall precede registration of the [FCP TYPE 08h](#) FC-4 Features object.

If additional FC-4 Features (see 7.3) are to be registered, then an FCP_Port shall register the additional FCP Fibre Channel Protocol TYPE (30h) with the Name Server using the RFT_ID request CT_IU. This registration shall precede registration of the [FCP TYPE 30h](#) FC-4 Features object.

7.3 FC-4 Features object

The FC-4 Features object (see FC-GS-6) defines a 4-bit field for each possible FC TYPE code. The object is a 32-word array of 4-bit values. FC-4 Feature bits are defined for FCP TYPE 08h and additional FC-4 Feature bits are defined for FCP TYPE 30h.

The 4-bit FC-4 Feature field for FCP [TYPE 08h](#) is inserted in bits 3 - 0 of word 1. The format of the 4-bit FC-4 Feature field for FCP [TYPE 08h](#) is shown in table 12.

Table 12 - FCP TYPE 08h definition of FC-4 Feature bits

Word 1 bit	Description of bit
3	Reserved Additional FCP FC-4 Features
2	Contains one or more peripheral devices that are not peripheral device type 00h (i.e., direct access block device).
1	FCP initiator function supported
0	FCP target function supported

If bit 3 of word 1 is set to one, then additional FCP FC-4 Features may be registered for FCP TYPE 30h (table 13). If bit 3 of word 1 is set to zero, then no additional FCP FC-4 Features are registered for FCP TYPE 30h.

The 4-bit FC-4 Feature field for FCP TYPE 30h is inserted in bits 3 - 0 of word 6. The format of the 4-bit FC-4 Feature field for FCP TYPE 30h is shown in table 13.

Table 13 - FCP TYPE 30h definition of FC-4 Feature bits

Word 6 bit	Description of bit
3	Reserved
2	Reserved
1	Reserved
0	Reserved

An FCP_Port shall register ~~its~~ the FCP TYPE 08h FC-4 Features object with a Name Server using the RFF_ID request CT_IU. An FCP_Port may register the FCP TYPE 30h FC-4 Features object with a Name Server using the RFF_ID request CT_IU.

The FC-4 Features objects may be obtained by any N_Port or NL_Port from a Name Server using a GFF_ID request CT_IU, which requests the FC-4 Features object for a specified Port Identifier. The object is provided in the GFF_ID accept CT_IU.

A list of all the Port Identifiers matching the domain and area addressing and a specified FC-4 Features object may be obtained by any N_Port or NL_Port from a Name Server using the GID_FF request CT_IU. The FC-4 Features object is a parameter in the GID_FF request CT_IU.