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INFORMATION TECHNOLOGY – FIBRE CHANNEL –

Part 133: Fibre Channel Switch Fabric-3 (FC-SW-3)

FOREWORD

- 1) ISO (International Organization for Standardization) and IEC (International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards. Their preparation is entrusted to technical committees; any ISO and IEC member body interested in the subject dealt with may participate in this preparatory work. International governmental and non-governmental organizations liaising with ISO and IEC also participate in this preparation.
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This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

Introduction

This International Standard describes the requirements for an interconnecting Fabric consisting of multiple Fabric Switch elements to support the ISO/IEC Fibre Channel - Framing and Signaling (FC-FS) and ISO/IEC Fibre Channel - Physical Interface (FC-PI) standards.

FC-SW-3 is one of the Fibre Channel family of standards. ISO/IEC FC-GS-4, is a standard related to Generic Fabric Services and is closely tied to FC-SW-3. ISO/IEC FC-BB-2 describes how Fabrics are extended over transports complementary to Fibre Channel. ANSI/INCITS FC-MI-2 and ANSI/INCITS FC-DA describe interoperability profiles that assists in the interoperability of Switches. ISO/IEC FC-AL-2 specifies the arbitrated loop topology. ISO/IEC FC-SP describes the Security requirements and protocols associated with Fibre Channel networks.

FC-SW-3 describes how switches communicate and interact with one another to form a Fabric of switches. Included are Fabric initialization and configuration, routing, server communication, event distribution and repository exchanges (e.g., zoning information).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

The International Electrotechnical Commission (IEC) and the International Organization for Standardization (ISO) draw attention to the fact that it is claimed that compliance with this document may involve the use of patents as indicated below.

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Brocade Communications Systems Inc. has informed IEC and ISO that it has patent applications or granted patents as listed below.

6 765 919, 6 980 525 and 10/780 147

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INFORMATION TECHNOLOGY

Fibre Channel —

Part 133: Fibre Channel Switch Fabric - 3 (FC-SW-3)

1 Scope

This part of ISO/IEC 14165-133 describes the operation and interaction of Fibre Channel Switches.

This part of ISO/IEC 14165-133 includes:

- a) E_Port Operation and Fabric Configuration;
- b) Path selection (FSPF and FSPF-Backbone);
- c) Bridge Port (B_Port) Operation;
- d) distributed server interaction and communication;
- e) exchange of information between Switches to support zoning;
- f) distribution of Event Notifications between Switches.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

The provisions of the referenced specifications other than ISO/IEC, IEC, ISO and ITU documents, as identified in this clause, are valid within the context of this International Standard. The reference to such a specification within this International Standard does not give it any further status within ISO or IEC. In particular, it does not give the referenced specification the status of an International Standard.

ISO/IEC 14165-122, *Information technology - Fibre channel - Part 122: Arbitrated loop-2 (FC-AL-2)*

ISO/IEC 14165-241, *Information technology - Fibre channel - Part 241: Backbone-2 (FC-BB-2)*

ISO/IEC 14165-251, *Information technology - Fibre channel - Part 251: Framing and signalling (FC-FS)*

ISO/IEC 14165-414, *Information technology - Fibre channel - Part 414: Generic services-4 (FC-GS-4)*

Copies of the following approved IETF standards may be obtained through the Internet Engineering Task Force (IETF) at www.ietf.org.

RFC 905, *ISO Transport Protocol Specification, ISO DP 8073*, April 1984.

RFC 1008, *Implementation Guide for the ISO Transport Protocol*, June 1987.