

1. Record Nr.	UNINA9910814485403321
Titolo	FICON native implementation and reference guide // [Bill White ... et al.]
Pubbl/distr/stampa	San Jose, CA, : IBM Redbooks, c2002
Edizione	[2nd ed.]
Descrizione fisica	x, 268 p. : ill
Collana	IBM redbooks FICON native implementation and reference guide
Altri autori (Persone)	WhiteBill
Disciplina	004.6
Soggetti	Fibre Channel (Standard) Computer interfaces - Standards
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"October 2002." "SG24-6266-01."
Nota di contenuto	Front cover -- Contents -- Notices -- Trademarks -- Preface -- The team that wrote this redbook -- Become a published author -- Comments welcome -- Chapter 1. Overview -- 1.1 How to use this redbook -- 1.2 Introduction to FICON -- 1.3 zSeries and S/390 9672 G5/G6 I/O connectivity -- 1.4 zSeries and S/390 FICON channel benefits -- Chapter 2. FICON topology and terminology -- 2.1 Basic Fibre Channel terminology -- 2.2 FICON channel topology -- 2.2.1 Point-to-point configuration -- 2.2.2 Switched point-to-point configuration -- 2.2.3 Cascaded FICON Directors configuration -- 2.3 Access control -- 2.4 Fibre Channel and FICON terminology -- 2.4.1 Point-to-point connection terms -- 2.4.2 Switched topology connection terms -- Chapter 3. FICON architecture and addressing -- 3.1 Fibre Channel architecture -- 3.2 Introduction to FC-FS and FC-SB-2 -- 3.2.1 F_Port Login (FLOGI) -- 3.2.2 N_Port Login (PLOGI) -- 3.2.3 Point-to-Point FC-FS and FC-SB-2 communication initialization -- 3.2.4 Switched point-to-point FC-FS and FC-SB-2 communication initialization -- 3.2.5 Cascaded Director FC-FS and FC-SB-2 communication initialization -- 3.2.6 Fabric support Extended Link Services -- 3.2.7 Fabric address support (switched point-to-point) -- 3.2.8 Fabric address support (FICON support for cascaded Directors) -- 3.3 z/Architecture FICON channel I/O request flow -- 3.3.1 zSeries Channel Subsystem Port address generation -- 3.4 FICON FC-SB-2

communication -- 3.4.1 FICON frame format -- 3.4.2 Native FICON frame process -- 3.4.3 Buffer-to-buffer credit -- Chapter 4. Processor support -- 4.1 zSeries and 9672 G5/G6 processor support -- 4.1.1 ESCON and FICON channel connectivity support -- 4.1.2 FICON channel support for zSeries processors -- 4.1.3 zSeries-supported ESCON and FICON I/O types -- 4.1.4 FICON Express on the zSeries processors -- 4.1.5 FICON-supporting products.

4.1.6 Support for cascaded FICON Directors -- Chapter 5. FICON - Fibre Channel cabling -- 5.1 Basic implementation options -- 5.2 Basic FICON cabling terminology -- 5.3 Key items for fiber cable planning -- 5.3.1 FOSA types and fiber modes -- 5.3.2 Link loss budget -- 5.3.3 Distance considerations -- 5.4 Fiber extender and fiber repeater -- 5.5 Reusing of existing cables and trunks -- 5.6 Mixed cabling implementation example -- Chapter 6. z/OS and OS/390 software support -- 6.1 z/OS and OS/390 FICON APARs -- 6.2 HCD -- 6.2.1 HCM -- 6.3 IOCP -- 6.3.1 zSeries processors -- 6.3.2 9672 G5/G6 processor -- 6.4 System Automation I/O-Ops -- 6.4.1 FICON Director management software -- 6.5 RMF -- 6.6 DFSMS -- 6.7 z/VM and VM/ESA -- 6.8 VSE/ESA -- 6.9 TPF -- Chapter 7. FICON channel configurations -- 7.1 Differences between FICON channels and ESCON channels -- 7.2 FICON channel configuration support -- 7.2.1 Design steps -- 7.3 FICON point-to-point configuration design -- 7.4 FICON switched point-to-point configuration design -- 7.5 Cascaded FICON Directors configuration -- 7.5.1 Levels of binding -- 7.5.2 Design steps for a cascaded FICON Director environment -- 7.6 FICON design awareness areas -- 7.6.1 S/390 architecture, FICON and ESCON implementations -- 7.6.2 FICON channel to control unit characteristics -- 7.7 FICON and ESCON channel connectivity differences -- 7.7.1 ESCON (CNC) channel connectivity to LCUs -- 7.7.2 FICON Bridge (FCV) channel connectivity to LCUs -- 7.7.3 FICON channel connectivity to LCUs -- 7.8 ESCON and FICON connectivity intermix -- 7.9 Remote site connections and distances -- 7.9.1 Remote site connections using ESCON channels -- 7.9.2 Remote site connections using FICON channels -- 7.9.3 GDPS and FICON channels -- 7.10 FICON connectivity recommendations -- 7.10.1 Channel path connections -- 7.10.2 How many FICON channels.

7.10.3 Maximum I/O concurrency exploitation -- 7.10.4 Mixing different control unit types -- Chapter 8. FICON I/O definitions -- 8.1 FICON topologies versus ESCON topologies -- 8.2 FICON IOCP definitions -- 8.2.1 Point-to-point topology -- 8.2.2 Definition terms used with FICON Directors -- 8.2.3 FICON Director (2032) -- 8.2.4 Switched point-to-point topology -- 8.2.5 FICON support for the cascaded Directors topology -- Chapter 9. FICON migration -- 9.1 Hardware considerations -- 9.1.1 FICON processors -- 9.1.2 Machine definition limits and rules in IOCP and IOCDS -- 9.1.3 FICON Directors -- 9.1.4 FICON control units -- 9.2 Software considerations -- 9.2.1 Channel programming considerations -- 9.2.2 Vendor UIMs -- 9.3 Migration recommendations from ESCON or FCV to FC -- 9.3.1 Migration scenario #1 - ESCON to FICON native (FC) -- 9.3.2 Migration scenario #2 - control unit resources exceeded -- 9.4 Migration recommendations for cascaded FICON Directors -- Chapter 10. FICON CTC implementation -- 10.1 Review of CTC support -- 10.1.1 Parallel 3088 CTC -- 10.1.2 ESCON CTC -- 10.2 ESCON CTC Review -- 10.3 Overview and benefits of FICON CTC -- 10.3.1 FICON CTC -- 10.3.2 Differences between ESCON and FICON CTC -- 10.4 FCTC topology options -- 10.4.1 CTC communication using one FICON channel per processor -- 10.4.2 CTC communication using two FICON channels per processor -- 10.5 FCTC hardware and software support -- 10.5.1

Hardware support -- 10.5.2 Software support -- 10.6
Recommendations for FCTC device numbering scheme -- 10.6.1 FICON
CTC device number recommendations -- 10.7 FCTC configuration and
definition examples -- 10.7.1 FICON CTC using two FC channels per
processor -- 10.7.2 FICON CTC using one FC channel per processor --
10.8 FICON CTC control unit function balancing -- 10.9 Migration
considerations -- 10.10 Operations, availability and recovery.
10.10.1 z/OS commands -- 10.10.2 Configuring for availability --
10.11 FCTC operational and functional characteristics -- 10.11.1
Operational characteristics -- 10.11.2 Considerations for mixing
control units on FICON channels -- Chapter 11. FICON channel
operation and performance -- 11.1 Fibre Channel FICON operation --
11.1.1 FICON channel I/O operations -- 11.1.2 CCW and data prefetch
and pipelining -- 11.1.3 Synchronization of read-write transition --
11.1.4 PCI synchronization -- 11.1.5 Frame multiplexing -- 11.2
Comparison of FICON and ESCON I/O operations -- 11.3 FICON
performance considerations -- 11.3.1 zSeries channel performance
paradigms -- 11.3.2 Parallel - ESCON - FICON comparisons -- 11.3.3
S/390 ESCON and FICON operation -- 11.3.4 zSeries ESCON Channels
-- 11.3.5 zSeries FICON Bridge (FCV) channels -- 11.3.6 zSeries FICON
native (FC) channels -- 11.3.7 zSeries FICON channel benefits -- 11.4
RMF reporting for FICON -- 11.4.1 FICON channel support -- 11.4.2
Device active only time -- Appendix A. Determine the EC level and IOCP
release -- A.1 Determining the EC level of the CPC -- A.2 Determining
the stand-alone IOCP release -- Appendix B. SMF record changes for
FICON -- Appendix C. FICON Director configuration worksheet --
Appendix D. HCD reference panels -- D.1 List of referenced HCD
panels -- Appendix E. Cascaded FICON Directors -- E.1 Examples of
FICON support for cascaded Directors -- Appendix F. z/OS commands
and utilities -- F.1 z/OS commands -- F.2 Systems Automation for zOS
I/O-Ops -- F.3 GTF trace -- F.4 ICKDSF logical paths report --
Glossary -- Related publications -- IBM Redbooks -- Other resources
-- Referenced Web sites -- How to get IBM Redbooks -- IBM Redbooks
collections -- Index -- Back cover.
