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Report of Successful Completion of Qualification Testing

International Business Machines Corporation and Hitachi, Ltd. have successfully completed compatibility and interoperability testing of Hitachi Universal Storage Platform™ V (Hitachi USP V) series products at code level 60.01.68-00/37 in the following IBM System z10, IBM System z9, and IBM eServer zSeries environments:

IBM and Hitachi hereby confirm that testing has been successfully completed in the following environments:

Servers	**IBM System z10 Enterprise Class (z10 EC) at Driver 73G bundle 38**
	IBM System z9 Enterprise Class (z9 EC) at D67L
	IBM eServer zSeries (z990, z900, z800) at D55K
Operating Systems	**z/OS V1.9**
	z/VM V5.3
	z/VSE V4.1
	Linux on System z – Novell SUSE SLES 9 and SLES 10
Channel Types	**ESCON** **FICON** **FCP (communication with SCSI devices)**
Extended Functions	**N_Port ID Virtualization (NPIV) on FCP**
	Modified Indirect Data Address Word (MIDAW) facility support on FICON
	Intermixed FICON and FCP traffic in single director or switch and cascaded (single hop) configurations
Storage	**Hitachi Universal Storage Platform™ V (Hitachi USP V) series products**

More detailed testing results are available from IBM or Hitachi on request.

R. W. Leonard
IBM Systems &Technology Group, System Assurance
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Test Summaries:

- Hitachi Universal Storage Platform™ V (Hitachi USP V) series products - at DKCMain 60-01-68-00/37
- ESCON and FICON on z10 EC, z9 EC, z990, z900, and z800 through supported directors, switches, and direct connection
- FCP and NPIV on z10 EC, z9 EC, z990, z900, and z800 through supported directors and switches
- Intermixed FICON and FCP traffic in single director or switch and cascaded (single hop) configurations
- Limited FICON and MIDAW facility (IBM System z10 and System z9 I/O architecture) testing was completed at IBM. Feature enablement is at Hitachi's option.

IBM does not make any representations or warranties of any kind regarding the Hitachi products and is not liable for such products or any claims made regarding such products. The fact that the listed Hitachi products passed the enumerated IBM tests does not imply that the products will operate properly in any particular customer environment. Hitachi retains sole responsibility for its products, the performance of such products and all claims relating to such products, including without limitation its products' compliance to product specifications, safety requirements, regulatory agencies requirements and industry standards.

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Attachment A -- Test Matrix

Test Case	Successfully Completed Error Free Test Shifts (REFTS)	Test Case Description
System Assurance Kernel (SAK) Testing	✔	SAK is an IBM proprietary test suit which does a range of architectural limit testing. The DASD test programs that were run on ESCON and FICON channels include IFDASD, IDASD0, IDSCAN, IDASDX, and ICTVDR.
zOS CHNLDRVR	✔	CHNLDRVR is an IBM proprietary DASD test program that runs under z/OS on ESCON and FICON channels.
VSE	✔	IPL and running of associated jobs under the z/VSE operating system
MixPlex Configurations	✔	Testing of different MixPlex system configurations. Systems are added and removed from Plex. Various error conditions are invoked to make sure the Plex recovers gracefully.
FCP	✔	FCP testing with the PAWS test to be run with error conditions such as broken cables and InterSwitch Links (ISLs).
VM	✔	IPL and running of associated jobs under the z/VM operating system.

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