

IBM Corporation
2455 South Road
Poughkeepsie, New York 12601
USA

Hitachi, Ltd.
322, Nakazato, Odawara-shi
Kanagawa-ken 250-0872
JAPAN

Date: 07/20/2018

Report of Successful Completion of Qualification Testing

International Business Machines Corporation and Hitachi, Ltd. have successfully completed compatibility and interoperability testing of the Hitachi Virtual Storage Platform (VSP®) G1500 and F1500 at code level DKCMain 80-06-02 in the IBM Z® environments listed in the table below.

IBM and Hitachi hereby confirm that testing for the support of FICON® and zHPF connectivity and extended functions, described in the Test Summaries (below) and in Attachment A - Test Matrix, has been successfully completed for the following:

Servers	IBM z14, z14 Model ZR1
	IBM z13®, IBM z13s®
Operating Systems	z/OS® V2.3, z/OS V2.2
Extended Functions	Modified Indirect Data Address Word (MIDAW) facility support on FICON and High Performance FICON for IBM Z (zHPF) including: Multi-Track Bi-Directional Data Transfer (Bi-Di) BSAM/QSAM support Format Write
Storage	Hitachi Virtual Storage Platform (VSP®) G1500 and F1500

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

Test Summaries:

- Hitachi Virtual Storage Platform (VSP®) G1500 and F1500- running DKCMain code level: 80-06-02.
- FICON and zHPF (including Multi-Track and Bi-Directional Data Transfer) on a z14, z14 ZR1, z13, z13s, through supported directors/switches and direct connection.
- Limited MIDAW facility (z14, z14 ZR1, z13, z13s) testing was completed at IBM.

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.

The terms FICON, zHPF, IBM, IBM Z, z14, z13, z13s and z/OS are trademarks or registered trademarks of International Business Machines Corporation.

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 can perform a range of architectural limit testing. The DASD test programs that were run on FICON and zHPF (including Multi-Track and Bi-Directional Data Transfer) channels include IFDASD, IDASD0, IDSCAN, IDASDX, IFCKD0, and ICTVDR.
z/OS CHNLDRVR	✓	CHNLDRVR is an IBM proprietary DASD test program that runs under z/OS on FICON and zHPF (including Multi-Track and Bi-Directional Data Transfer) channels.
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.



Tina L. Wile
 IBM Z Connectivity Program Manager
 Systems & Technology Group
 International Business Machines Corporation

Qualification Letter Version History:

- 07/20/2018: Initial Version