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IBM® GDPS® and Server Time Protocol (STP) Application Qualification support for the Huawei OptiX OSN 6800 / OSN 3800 V100R004 Dense Wavelength Division Multiplexing (DWDM) Platform

International Business Machines Corporation and Huawei Technologies Co. Ltd. have successfully completed application qualification testing of the Huawei OptiX OSN 6800 / OSN 3800 V100R004 Dense Wavelength Division Multiplexing (DWDM) Platform for the following IBM Parallel Sysplex and Geographically Dispersed Parallel Sysplex (GDPS) IBM System z10, z9 and IBM eServer zSeries 990 and 890 environments:

- GDPS / Peer-to-Peer Remote Copy (PPRC) (Metro Mirror) using ESCON or Fibre Channel Protocol (FCP), IBM Sysplex Timer and InterSystem Channel-3 (ISC-3) for synchronous remote data copy applications.
- GDPS / Peer-to-Peer Remote Copy (PPRC) (Metro Mirror) using ESCON® or Fibre Channel (FCP) for remote data copy and ISC-3 Peer Mode links with STP message passing for server time synchronization.
- GDPS / Extended Remote Copy (XRC) (z/OS Global Mirror) using FICON for asynchronous remote copy.

Distances for the protocols supported for these GDPS applications are defined in the Qualification Results Summary below. Although STP applications have been successfully tested to a distance of 200km, IBM requires an RPQ (8P2263) to assure applications between 100km and 200km adhere to the bounds of our qualification. This is due to the critical requirement of assuring that no more than 900m of differential delay was introduced into the network. It may also be possible to support some protocols at greater distances, such as FICON, FCP, ESCON and InterSwitch Links (ISLs) if approved by IBM RPQ 8P2263.

Qualification Results Summary:

The Huawei OptiX OSN 6800 / OSN 3800 Dense Wavelength Division Multiplexing (DWDM) Platform met IBM Qualification criteria for Server Time Protocol (STP) and InterSystem Channel (ISC) applications in TDM mode in support of the following IBM Systems z10, z9 (z9 EC, z9 BC) and zSeries 990 and 890 (z990, z890) servers and GDPS Application Solution protocols identified above.

Transport Interface	Description	Part Number	Protocols Supported	Supported Distance
OptiX OSN 6800 / OSN 3800 V100R004 Dense Wavelength Division Multiplexing (DWDM) Platform				
LWXS / LWX2	Arbitrary rate (16Mbit/s-2.7Gbit/s) wavelength conversion board.	TN12LWXS / TN12LWX2	CLO	40 km
LWXS / LWX2	Arbitrary rate (16Mbit/s-2.7Gbit/s) wavelength conversion board.	TN12LWXS / TN12LWX2	ETR	100 km
LOM	8-port multi-service multiplexing & optical wavelength conversion board. Supports GE/FC100/FICON, FC200/FICON Express, FC400..ISC	TN11LOM	Server Time Protocol (STP) 2Gbps ISC-3 Peer Mode 2Gbps FCP/FICON/ISL 1,2, or 4 Gbps	100km , 200 km w/RPQ
LOM	8-port multi-service multiplexing & optical wavelength conversion board. Supports GE/FC100/FICON, FC200/FICON Express, FC400.ISC	TN11LOM	*ISC-3 compatibility mode	40km
TQM/NS2	TQM: 4 x multi-rate tributary service processing board. NS2: 4 x ODU1 multiplexing OTU2 optical interface board.	TN11TQM / TN11NS2	FCP/FICON/ISL 1 2 Gbps	200 km

TQM/NS2	TQM: 4 x multi-rate tributary service processing board. NS2: 4 x ODU1 multiplexing OTU2 optical interface board.	TN11TQM / TN11NS2	ESCON	100km
LSX	10 Gbit/s wavelength conversion board.	TN12LSX	ISL 10 Gbps	100 km
DCM	Dispersion compensation module(based on fiber bragg grating).	FBG-DCM	NA	N/A

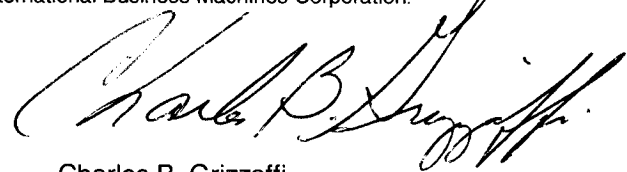
*** Older versions of ISC, such as ISC 1 and ISC 2 are not supported on IBM Servers but should interoperate with ISC 3 compatibility mode and Huawei equipment.**

GDPS Application Limitations:

- IBM GDPS support is limited to DWDM product applications which utilize point-to-point fixed dark fiber network interconnect between Parallel Sysplexes.
- DWDM end-to-end networks, including DWDM components, transport elements and dark fiber links, must not exceed the equivalent of 900 meters differential delay between transmit and receive paths used for GDPS ISC links transporting STP message passing.
- Redundant Huawei Optix platforms, utilizing two site-to-site fiber pairs, are recommended for fiber trunk protection of ETR, Control Link Oscillator (CLO) and ISC-3 Server Time Protocol (STP) message passing protocol links.
- IBM Sysplex Timer ETR / CLO links require the use of single port per channel Client LWXS or LWX2 cards.

Results achieved were in a test environment under laboratory conditions. IBM does not make any representations or warranties regarding Huawei products. Huawei retains sole responsibility for its products, the performance of such products and all claims relating to such products, including without limitation its products' compliance with product specifications, industry standards and safety and other regulatory requirements.

The terms eServer, ESCON, FICON, GDPS, Geographically Dispersed Parallel Sysplex, IBM, Parallel Sysplex, Sysplex Timer, zSeries, and z/OS are trademarks or registered trademarks of International Business Machines Corporation.



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