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The following is an addendum to the October 4, 2011 qualification letter. FW release level 10.3.2 has replaced FW release level 10.3.

IBM® GDPS® Application Qualification support for the ADVA FSP3000 Release 10.3.2 Dense Wavelength Division Multiplexer (DWDM)

International Business Machines Corporation and ADVA AG Optical Networking have successfully completed application qualification testing of the ADVA FSP3000 Release 10.3.2 DWDM Platform for the following environments:
IBM Parallel Sysplex, Geographically Dispersed Parallel Sysplex™ (GDPS), IBM zEnterprise 196 (z196), z Enterprise Blade Center Extention (zBX), IBM System z10 (z10 EC, z10 BC) , IBM System z9 (z9 EC, z9 BC)and IBM eServer zSeries 990 and 890 (z990, z890).

GDPS / Peer-to-Peer Remote Copy (PPRC) (Metro Mirror) using the following protocols are supported.
- FICON for Storage Access
- FCP for mirroring
- ISC-3 peer mode or 1x IFB for coupling facility (CF) and Server Time Protocol (STP) messaging to provide synchronization of servers.
- 10Gbps Ethernet Links over IBM's Intra Ensemble Data Network (IEDN) to zBX TOR switch

Distances for the protocols supported for these GDPS applications are defined in the Qualification Results Summary below. Longer distances may be approved but require IBM RPQ 8P2263 or 8P2340. Additional testing may be required to approve the RPQ.

Qualification Results Summary:.

ADVA PN Descriptor	Description	Protocols Supported	Supported Distance
Management Modules			
NCU	Node management module with SW load 10.3.2	-	-
Active and Optical Modules			
5TCE	5-port 10G TDM module	4/8/10 Gbps FCP 4/8/10 Gbps ISL ISC-3 Peer Mode 1x IFB DDR (5 Gbps) zBX IEDN Extension	100 km
5TCE-AES	5-port 10G TDM module with AES 256 Encryption	4/8/10 Gbps FCP 4/8/10 Gbps ISL ISC-3 Peer Mode 1x IFB DDR (5 Gbps) zBX IEDN Extention	100km
4TCA-PCN	4-port 4G TDM module	4Gbps FCP 4Gbps ISL ISC-3 Peer Mode	100km
2WCA-PCN	Dual 10G transponder module	8/10 Gbps ISL 8/10 Gbps FCP zBX IEDN Extension	100km
EDFA-C-D20-VGC	Optical Amplifier, Double Stage 20 dBm		N/A
DCG-M/060/SSMF	Managed DCM using Chirped Fiber Bragg Gratings (CFG) 60km		N/A

RSM-OLM#1630		Fiber protection switch		This RSM can not be used alone. It must be used in conjunction with client layer protection.		40km

GDPS Application Limitations:

- IBM GDPS support is limited to DWDM product applications which utilize point-to-point fixed dark fiber network interconnect between sites.
- 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 ISC-3 links or 1x IFB links transporting STP messages.
- Redundant ADVA FSP 3000 platforms, utilizing two site-to-site fiber pairs, are recommended for fiber trunk protection of ISC-3 peer mode Server Time Protocol (STP) message passing protocol links.
- Fiber trunk protection schemes should be designed with two trunk switching modules and four site-to-site fiber pairs carried over at least two diverse routes. STP links should connect using different trunk switching modules to ensure that a fiber trunk protection event does not interrupt all timing links simultaneously.

For the support of other GDPS features please refer to previous product releases and test results.

Results achieved were in a test environment under laboratory conditions. IBM does not make any representations or warranties regarding the ADVA products. ADVA 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.

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