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IBM® GDPS® Application Qualification support for Ciena ActivFlex 6500 Packet Optical Platform Release 7.01.

International Business Machines Corporation and Ciena Communications Inc. have successfully completed application qualification testing of the Ciena ActivFlex 6500 Packet Optical Platform running software release level 7.01, for the following IBM Parallel Sysplex and Geographically Dispersed Parallel Sysplex™ (GDPS) IBM zEnterprise 196 (z196), IBM System z10 (z10 EC, z10 BC) , and IBM System z9 (z9 EC, z9 BC) .

GDPS / Peer-to-Peer Remote Copy (PPRC) (Metro Mirror) using the following protocols:

- FICON for Storage Access
- FCP for synchronous remote copy of disk data
- ISC-3 Peer Mode or 1x Infiniband Coupling Links (1x IFB) for exchanging CF data and Server Time Protocol (STP) messages .

GDPS / Extended Remote Copy (XRC) (z/OS Global Mirror) using FICON for asynchronous remote copy of disk data.

The supported distances for the protocols supported for these GDPS applications are defined in the Qualification Results Summary below.

* Applications greater than 100km require RPQ 8P2263 or 8P2340 to assure that they adhere to the bounds of our qualification. If the distance exceeds the distance in the table below, additional testing may be required to approve the RPQ.

** To extend FICON Express 8 Links beyond 10 km requires cascaded FICON Directors. Refer to the list of qualified FICON Directors on the Resource Link web site www.ibm.com/servers/resourcelink.

Qualification Results Summary:

The Ciena ActivFlex 6500 Packet Optical Platform Release 7.01 met IBM Qualification criteria for protocols identified above.

Transport Interface	Description	Part Number	Protocols Supported	Supported Distances
SuperMux 24 Port I/O 1x XFP/10x SFP	Multiplexer Optical TRansponder aggregating up to 10 1G, 5 2G or 2 4G signals	NTK535FAE5	Fibre Channel (FCP) (FC 100/200/400) 1/2/4 Gbps,	*135 km
			1/2/4 Gbps FICON	*135 km
			1/2/4 Gbps ISL	135 km
			GbE	135 km
Flex MOTR 8xSFP, 2xXFP	Multiplexer Optical TRansponder aggregating 1G, 2G or 4G signals with flexible mappings	NTK531YAE5	Fibre Channel (FCP) (FC 100/200/400) 1/2/4 Gbps,	*135 km
			1/2/4 Gbps FICON	*135 km
			1/2/4 Gbps ISL	135 km
			2 Gbps ISC-3 Peer	*135 km
			GbE	135 km
2x10G OTR with strong FEC and FC800/FC1200	Dual client, dual line Optical TRansponder for transparent transport of 5G, 8G and 10G client services	NTK530PME5	5Gbps 1x IFB (DDR)	*135 km
			Fibre Channel (FCP) (FC800) 8Gbps	**135 km
			8Gbps FICON	**135 km
			8Gbps ISL	135 km
			10GbE	135 km

Note: Ciena ActivFlex 6500 Packet Optical Platform wavelengths can be transported over the ActivSpan 4200 Advanced Services Platform as an alien wavelength. The ActivSpan 4200 must be running a qualified release level using only qualified photonic line components.

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 or IFB links transporting STP messages.
- Redundant Ciena ActivFlex 6500 platforms, utilizing two site-to-site fiber pairs are recommended for fiber trunk protection of ISC-3 and 1x Infiniband links used to transport STP messages.

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