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IBM® GDPS® and Server Time Protocol (STP) Application Qualification support for the Ciena 565/5100/5200 Advanced Services Platform, Release 11.21*

International Business Machines Corporation and Ciena Communications Inc. have successfully completed application qualification testing of the Ciena 565/5100/5200 Advanced Services Platform, Release 11.21* for the following IBM Parallel Sysplex® and Geographically Dispersed Parallel Sysplex™ (GDPS) IBM zEnterprise EC12 (zEC12), IBM zEnterprise 196 (z196), IBM zEnterprise 114 (z114), IBM zEnterprise BladeCenter Extension (zBX), IBM System z10 (z10 EC, z10 BC), and IBM System z9 (z9 EC, z9 BC) environments:

- GDPS / Peer-to-Peer Remote Copy (PPRC) (Metro Mirror) using the following protocols:
 - FICON for Storage Access
 - FCP for disk mirroring
 - 1x InfiniBand (1x IFB) coupling links for exchanging Server Time Protocol (STP) messages to provide synchronization of servers
- GDPS / Extended Remote Copy (XRC) (z/OS Global Mirror) using FICON for asynchronous remote copy
- zBX over intraensemble data network (IEDN) over 10 Gigabit Ethernet (10 GbE)

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 900 meters of differential delay was introduced into the network. It may also be possible to support some protocols at greater distances, such as FICON, FCP, and InterSwitch Links (ISLs) if approved by IBM RPQ 8P2263.

Qualification Results Summary:

The Ciena 565/5100/5200 Advanced Services Platform, Release 11.21* met IBM Qualification criteria for protocols listed in the table below.

Ciena 565/5100/5200 Advanced Services Platform, Release 11.21*				
Transport Interface	Description	Part Number	Protocols Supported	Supported Distance
OTR 4 Gbps	Single Client port 4Gbps Transparent Optical Transponder	NT0H08AA	4 Gbps FCP/FICON/ISL	100km
10G MOTR v8 VCAT	10G Multiplexer Transponder aggregating signals through virtual concatenation (VCAT) 10:1 1G FCP/FICON/ISL 5:1 2G FCP/FICON/ISL	NT0H15AY	1,2 Gbps FCP/FICON/ISL	100km
OTR 10 Gbps Quad	Dual client, dual line Optical Transponder for transparent transport of 5G, 8G and 10G client services 2:2 8G FCP/FICON/ISL 2:2 10G ISL 2:2 10GbE/ zBX IEDN 2:2 5G Infiniband (1x IFB DDR)	NT0H25AA	1x IFB 5 Gbps (DDR)	100km
			8 Gbps FCP/FICON/ISL, 10 Gbps ISL, 10GbE, zBX IEDN	100km
OTR 10 Gbps Quad with Encryption**	Dual client, dual line Optical Transponder for transparent transport and encryption of 5G, 8G and 10G client services 2:2 8G FCP/FICON/ISL 2:2 10G ISL 2:2 10GbE/ zBX IEDN 2:2 5G InfiniBand (1x IFB DDR)	NT0H25BA	1x IFB 5 Gbps (DDR),	100km
			8 Gbps FCP/FICON/ISL, 10 Gbps ISL, 10GbE, zBX IEDN	

*Although the release level is officially referred to as 11.21, the actual code level is 11.20.87.0. When the software package is downloaded from the Ciena website or installed from a CD-ROM, the package name should be checked to ensure that the code level is 11.20.87.0. Once installed, this can also be verified at the software login screen.

****Ciena 6500 Packet Optical Platform 10G signals can be transmitted through the OTR 10 Gbps Quad Encryption card in the Ciena 565/5100/5200 Advanced Services Platform to encrypt the signals.**

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 PS-IFB and ISC-3 links for STP message passing.
- Fiber-based dispersion compensation units are not supported for STP applications.
- Redundant 565/5100/5200 Advanced Services Platform, utilizing two site-to-site fiber pairs, are recommended for fiber trunk protection of PS-IFB and ISC-3 Server Time Protocol (STP) message passing.

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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