EXHIBIT F: INTERNAL CONNECTIONS PRICE PROPOSAL

			Eligible Items		****	
Equipment	Manufacturer	Part Number	Description	Qty	Unit	Extended
			Site Survey			
	N/A	Professional Services	School Site Survey	1,500	240.00	360,000.0
			Schools Structured Cabling			
			Materials			
Cat 6 Jack	Panduit	CJ688TGBL	Cat 6 connector color black	100,000	7.64	764,444.4
Adhesive Label	Panduit	LS9-75NL-1	3/4" Laminated Adhesive Label	1,575	33.33	52,500.0
Face Plate	Panduit	CFP1IW	Single gang, vertical face plate	100,000	1.87	186,666.6
Patch cord	Panduit	UTPSP3YBU	3 feet category 6 patch cord with TX6	100,000	7.02	702,222.23
Patch cord	Panduit	UTPSP10YBU	10 feet category 6 patch cord with TX6	100,000	9.17	916,666.67
Snap together box	Panduit	JBX3510	Single gang two piece snap together box	100,000	4.17	416,666.67
Race way	Panduit	LD3IW6-A	One piece latching surface race way	102,000	1.51	154,133.33
Fitting	Panduit	DCF3IW-X	Drop ceiling/entrance end fitting	100,000	1.40	140,000.00
Titting	Tanduit	DCI SIW-X	Category 6 riser (CMR) 4-pair UTP	100,000	1.40	140,000.00
Cat 6 Cable	Panduit	PUR6004BU-UY	cooper cable	17,000	216.67	3,683,333.3
			Services			
N/A	N/A	Professional Services	Installation of one UTP cable CAT6 with RJ45 connector, face plate, and certification at 250MHz.	100,000	88.64	8,863,636.36
		SCIVICES	Schools Concentrator Boxes	100,000	00.04	0,003,030.30
			Materials			
Patch panel	Panduit	DP24688TGY	24-port Category 6 patch panel	3,750	172.44	646,666.67
Concentrator	Tanadic	D1 24000101	24 port category o pateri parier	3,730	1/2.44	040,000.07
Box	Panduit	PZAEWM3	PanZone Active wall mount enclosure	3,750	455.56	1,708,333.33
Ground Busbar	Panduit	GB2D0008TPI-	Cround Bushar 1 Irah Hala Crossina	2.750	122.04	464 704 65
	Panduit	1	Ground Busbar 1 Inch Hole Spacing	3,750	123.94	464,791.67
Ground Cable	Panduit	6AWG	Cable color green #6 for ground	3,750	38.89	145,833.33
		Duefereierel	Services			
N/A	N/A	Professional Services	Installation of cabinet, patch panel, race way	3,750	102.27	383,522.72
N/A	N/A	Professional Services	Installation of ground system	3,750	34.09	127,840.91
			Note: Switch interconnections will be done using UTP cabling, if the distance exceeds 295 ft. fiber optic cabling is needed and it will be quoted to the PRDE.			·
			Note: Electrical Materials and Installations if needed will be quoted after the School site survey.			

				Schools Network Switches			
) s	Switch	Cisco	SGE2010P	Cisco 48-port 10/100/ 1000 Gigabit Stackable Switch with PoE	14,250	1,449.78	20,659,402.:
				Note: Total Amount of SFP's for Switches Interconnections will be based upon distance from main cabinet. If distance is less than 295 ft. an SFP is not needed to provide connectivity for the switch.			
	N/A	N/A	Professional Services	Professional Services for School Network Switch Configuration and Validation	14,250	240.00	3,420,000.
	N/A	N/A	Professional Services	Professional Services for School Network Switch Installation	14,250	60.00	855,000.
				Schools UPS			
L	JPS	Eaton	5PX3000RT2U	Eaton 5PX rack/tower UPS. 3000 VA / 2700W, 2U, 120V, L5-30P input, (1) L5-30R and (6) 5-20R output	14,250	522.22	7,441,666.
N	N/A	N/A	Professional Services	Professional Services for School UPS Installation and Validation	14,250	60.00	855,000.
				Schools Terminal Server			
s	Server	Hewlett-Packard	628691-001	HP ProLiant DL120 G7 E3-1220 4GB-U 250GB LFF Cold Plug SATA B110i RAID 400W Svr	750	827.17	620,380.
N	Memory	Hewlett-Packard	500670-B21	HP 2GB (1x2GB) Dual Rank x8 PC3- 10600 (DDR3-1333) Unbuffered CAS-9 Memory Kit	750	42.61	31,956.
100	Hard Disk Drive	Hewlett-Packard	458928-B21	HP 500GB 3G SATA 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive	1,500	195.00	292,500.
V	Varranty	Hewlett-Packard	UJ252E	HP 3 year 4 hour 13x5 ProLiant DL120 Hardware Support	750	353.26	264,945.
N	N/A	N/A	Professional Services	Professional Services for School Terminal Server Installation and Validation	750	240.00	180,000.
				DOE Central Office			
				Switch DE 10/100/1000 + 4 SFP STACKABLE **POE**			
S	witch	Cisco	SGE2010P	Cisco 48-port 10/100/ 1000 Gigabit Stackable Switch with PoE GBIC (SFP) SX Multi Mode LC	150	1,449.78	217,467.
S	FP	Cisco	GLC-SX-MM=	GE SFP, LC connector SX transceiver	300	194.44	58,333.3
W	Vireless AP	Cisco	AIR-AP1142N- A-K9	Access Point 802.11a/g/n Fixed Auto AP; Int Ant; A Reg Domain	10	386.94	3,869.4
iC	OS	Cisco	S114W7K9- 12421JA	Cisco 1140 Series IOS WIRELESS LAN	10	0.00	0.0
	AP Bracket	Cisco	AIR-AP- BRACKET-1	802.11n AP Low Profile Mounting Bracket (Default)	10	0.00	0.0
	eiling Grid lip	Cisco	AIR-AP-T-RAIL- F	Ceiling Grid Clip for Aironet APs - Flush Mount 3 Years Cisco Manufacturer Support	10	0.00	0.0
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Varranty	Cisco	CON-CSSPD- 1142NA	8X5XNBD 802.11a/g/n Fixed Auto AP; Int Ant; A Reg Domain	10	49.74	497.3

			Professional Services for DOE Central			
		Professional	Office Switch and AP Configuration and			
N/A	N/A	Services	Validation	150	240.00	36,000.00
		Professional	Professional Services for DOE Central			
N/A	N/A	Services	Office Switches and AP Installation	150	60.00	9,000.00
Fiber Patch	Koning &	LCLCDUPMM-	Panduit LC-LC, duplex MM 62.5 Fiber			
Cord	Hartman	3M	Patch Cord	300	14.41	4,323.53
			Eaton 5PX rack/tower UPS. 3000 VA / 2700W, 2U, 120V, L5-30P input, (1) L5-			
UPS	Eaton	5PX3000RT2U	30R and (6) 5-20R output	20	522.22	10,444.44
		Professional	Professional Services for DOE Central			
N/A	N/A	Services	Office UPS Installation and Validation	20	60.00	1,200.00
			Miscellaneous			
		Professional				
N/A	N/A	Services	Travel Expenses	1,500	40.00	60,000.00
						Total
						54,739,245.28

			Ineligible Items			
Equipment	Manufacturer	Part Number	Description	Qty	Unit	Extended
			E-Rate Consultant			
		Subcontracted	Estimated E-Rate Consulting Services			
N/A	N/A	Services	for PRDE Internal Connections Project	1	106,666.67	106,666.67
	A CONTRACTOR		Miscellaneous		State of the	
		Performance				
N/A	N/A	Bond	Performance Bond	1	75,000.00	75,000.00
						Total
						181,666.67

Proposal Notes:

- 1. Unitary price per drop including equipment and services is \$158.80.
- 2. Unitary price per concentrator box equipment and installation is \$927.20.
- 3. Switch interconnections will be done using UTP Cat 6 cabling, if the distance exceeds 295 ft. and fiber optic cabling is needed it will be quoted to the PRDE.
- 4. Electrical Materials and Services if needed will be quoted after the School site survey.
- 5. Total Amount of SFP's for Switches Interconnections will be based upon distance from main cabinet. If distance is less than 295 ft. an SFP is not needed to provide connectivity for the switch.

General Terms and Conditions:

- 1. All costs provided for the Department of Education as part of this RFP are valid for 180 days after RFP deadline.
- 2. Prices include shipping to Puerto Rico.

- 3. Standard Invoice and Payment Terms will be based upon Project Progress Billing Schedule.
- 4. Product delivery time from date of order could vary depending on the manufacturer and contingent to stock availability and other situations out of Netxar's control such as: acts of nature, airline and carrier strikes, etc.
- 5. Any situation that may arise regarding these product items and/or services after project approval should be forwarded to Netxar's Help Desk (787) 765-0058.
- 6. Netxar guarantees all Professional Services for 30 days from the date each individual service is accepted by the Customer. This guarantee applies only to errors and omissions from Netxar. Netxar warrants that the services will be performed in a professional, workmanlike and timely manner.
- 7. While a Professional Service is being performed, the Customer may not modify the related products or the work in process without proper coordination with Netxar.
- 8. Once any Professional Service is accepted by Customer, Netxar is not responsible for any modifications or additions to the implemented services performed by Customer which may cause any malfunction or performance degradation. Otherwise, the Customer will be billed on a time and material basis for any effort invested by Netxar to correct this situation. In this case, any effort put forth by Netxar must be previously approved by the customer.



E-RATE FY2012 INTERNAL CONNECTIONS

RFP NO: SF (OC) 2011-017

TECHNICAL OVERVIEW

Solution. Scope. Deliverables

Netxar Technologies 17 Ponce St San Juan, PR 00917 www.netxar.com



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Document History

Created by	Date	Version	Revision	Comments
Freddy Bello	February 2012	0.1	1	Initial Draft



Introduction

As a company, Netxar Technologies a Digicel Company of is committed to partnering with COMMONWEALTH OF PUERTO RICO DEPARTMENT OF EDUCATION to ensure that the agency not only achieves its strategic imperatives business goal but also enjoy the benefits of a world-class communications solution.

This Technical Solution Document is created to respond to "RFP NO: SF (OC) 2011-017 REQUEST FOR PROPOSALS FOR E-RATE FY2012 INTERNAL CONNECTIONS. This document allows Netxar to has a better idea of the business challenge and the operational requirements to be addressed by the internal connections solution.

This document covers the intended solution model components and the Scope of the services and deliverables

Netxar Technologies a Digicel Company is committed to with PUERTO RICO DEPARTMENT OF EDUCATION



Solution Components Overview

PR DOE Schools:

Cisco SGE2010 Series Switches

The Cisco® SGE2010P 48-Port Gigabit Switch allows you to expand your network securely. Web-based configuration of the switch is secured using SSL. The Cisco SGE2010P is optimized for maximum system availability, with fully redundant stacking, redundant power options, and dual images for resilient firmware upgrades. The switch helps secure the network through IEEE 802.1Q VLANs, IEEE 802.1X port authentication, access control lists (ACLs), denial-of-service (DoS) prevention, and MAC-based filtering. The enhanced quality of service (QoS) and traffic-management features help ensure clear and reliable voice and video communications.

For wireless or voice over IP (VoIP) deployments, the Cisco SGE2010P supports the IEEE 802.3af standard for Power over Ethernet (PoE). Automatic load sensing enables the circuitry to detect PoE on the end device before providing power. For safety, each port has independent overload and short-circuit protection, along with LED indicators to show power status. It provides 15W of available PoE power on up to 24 of the Gigabit Ethernet ports for powering PoE-enabled wireless access points or VoIP handsets. The maximum PoE available per device for all ports is 360W.

The Cisco SGE2010P provides resilient stacking for up to four units, or 192 ports. A stack of units is managed as a single switch with one web management interface. The Cisco SGE2010P can coexist in a stack with the Cisco SGE2000 and SGE2000P 24-Port Gigabit Switches, and the Cisco SGE2010 48-Port Gigabit Switch, for a maximum of 192 ports in a stack. The stacking capability includes master/backup unit behavior, ring and chain architecture, and hot insertion and removal of units.

Software running on the Cisco SGE2010P interacts with provisioning, management, and security software on both the site's services router and the service provider's equipment. This interaction provides a simple, one-step installation and access to web-administered features for the administrator and users. Simple, affordable network operations throughout the network's lifetime are the result.



- Forty-eight 10/100/1000 Ethernet ports
- 4 mini Gigabit Interface Converter (mini-GBIC) slots (shared with 4 Ethernet ports) for fiber Gigabit Ethernet expansion
- IEEE 802.3af PoE delivered over any of the forty-eight 10/100/1000 ports



- 15.4W available power to a Gigabit Ethernet port for PoE-enabled wireless access point or VoIP handsets (maximum per-device PoE delivery of 360W available for all ports)
- Dual images for resilient firmware upgrades
- 96 Gbps nonblocking, store-and-forward switching capacity
- Simplified QoS management using 802.1p, differentiated services (DiffServ) or type of service (ToS) traffic prioritization
- Power redundancy when used with the Cisco RPS1000 380W Redundant Power Supply Unit
- Fully resilient stacking provides optimized growth with simplified management
- ACLs for granular security and QoS implementation
- · Configuration and monitoring from a standard web browser
- Secure remote management of the switch via Secure Shell (SSH) and SSL encryption
- 802.1Q-based VLANs enable segmentation of networks for improved performance



EATON UPS 5X

The Eaton 5PX UPS is an integrated power management solution. Paired seamlessly with Intelligent Power Software Suite, the 5PX provides the tools you need to manage your equipment, even in virtualized environments. Designed with managed outlet segments, you can monitor energy consumption on the intuitive LCD screen. It also delivers more power than comparable UPSs and has an efficiency rating of up to 99%

- Enables you to customize UPS settings, view load and power consumption through the interactive LCD screen interface
- Fully integrated with Intelligent Power Software Suite for continuous up time of servers and virtual machines.
- Monitors and manages power consumption through managed outlets
- · Provides more real power (watts) to protect more equipment and leave room for expanding IT systems
- Extends battery service life by 50% with ABM Technology
- Protects you with a three-year warranty, which includes the battery







Terminal Server HP Proliant DL120 G7

The HP ProLiant DL120 G7 Server is an entry-level, rack-optimized server, ideal for environments running dedicated applications (IT Infrastructure applications/scale-out applications). Built using the latest industry-standard technologies, it delivers affordable performance and provides essential features for varied computing needs

The ProLiant DL120 G7 Server supports the latest Intel® Xeon® E3, Intel® Core™ i3, and Intel Celeron® processors. An array of dual-core, quad-core, and Intel Pentium® processors gives you the option to choose the appropriate processor based on your application demands and budgets. The new Intel Xeon E3-1200 processors offer significant performance improvement (up to 25%), and four additional PCI-Express lanes, over the 3400 series processors.

The uniprocessor 1U server provides two PCI-Express slots and an option of redundant power supply support. Additional upgrades, including HP SAS HBAs and Smart Array Controllers, provide support for SAS LFF and SFF hard disk drives. The integrated remote management, HP Integrated Lights-Out 3 (iLO 3), reduces physical visits to servers, thus cutting down operational costs. iLO 3 also enables simplified server setup, power and thermal optimization, and embedded health monitoring.





PR DOE Central Office

Cisco SGE2010 Series Switches

The Cisco® SGE2010P 48-Port Gigabit Switch allows you to expand your network securely. Web-based configuration of the switch is secured using SSL. The Cisco SGE2010P is optimized for maximum system availability, with fully redundant stacking, redundant power options, and dual images for resilient firmware upgrades. The switch helps secure the network through IEEE 802.1Q VLANs, IEEE 802.1X port authentication, access control lists (ACLs), denial-of-service (DoS) prevention, and MAC-based filtering. The enhanced quality of service (QoS) and traffic-management features help ensure clear and reliable voice and video communications.

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- 96 Gbps nonblocking, store-and-forward switching capacity

9



- Simplified QoS management using 802.1p, differentiated services (DiffServ) or type of service (ToS) traffic prioritization
- Power redundancy when used with the Cisco RPS1000 380W Redundant Power Supply Unit
- Fully resilient stacking provides optimized growth with simplified management
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- · Configuration and monitoring from a standard web browser
- Secure remote management of the switch via Secure Shell (SSH) and SSL encryption
- 802.1Q-based VLANs enable segmentation of networks for improved performance



Cisco Aironet Access Point 1140

The Cisco® Aironet® 1140 Series Access Point is a business-ready, 802.11n access point designed for simple deployment and energy efficiency. The high-performance platform, which offers at least six times the throughput of existing 802.11a/g networks, prepares the business for the next wave of mobile devices and applications. Building on the Cisco Aironet heritage of RF excellence, the 1140 Series combines the industry's most widely deployed 802.11n technology with a sleek industrial design that blends seamlessly into any enterprise environment. Designed for sustainability, the 1140 Series delivers high performance from standard 802.3af Power over Ethernet while decreasing waste with multiunit eco-packs and Energy Star certified power supplies.





EATON UPS 5X

The Eaton 5PX UPS is an integrated power management solution. Paired seamlessly with Intelligent Power Software Suite, the 5PX provides the tools you need to manage your equipment, even in virtualized environments. Designed with managed outlet segments, you can monitor energy consumption on the intuitive LCD screen. It also delivers more power than comparable UPSs and has an efficiency rating of up to 99%

- Enables you to customize UPS settings, view load and power consumption through the interactive LCD screen interface
- Fully integrated with Intelligent Power Software Suite for continuous up time of servers and virtual machines.
- Monitors and manages power consumption through managed outlets
- · Provides more real power (watts) to protect more equipment and leave room for expanding IT systems
- Extends battery service life by 50% with ABM Technology
- Protects you with a three-year warranty, which includes the battery

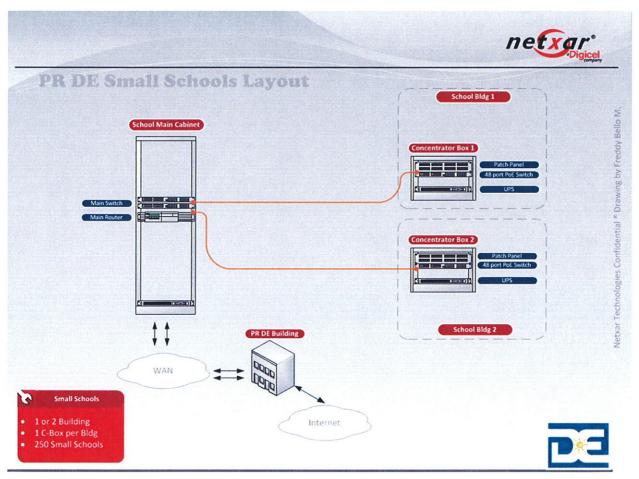






Solution Architecture

Small Schools

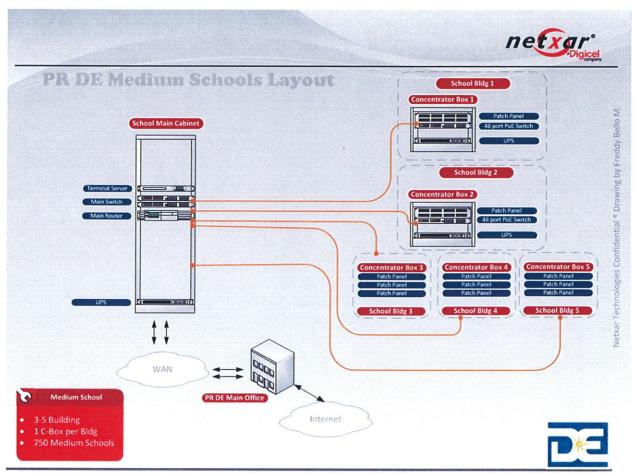


March 7, 2012 Page 1

This layout considers that any small school is a facility with up to 2 Buildings with classroom. Each building will host a Concentrator Box with a Patch Panel, a switch with 48 Ports 10/100/1000 PoE and UPS, compliance with the RFP description "One Ethernet switch for each concentrator box, 48-port 10/100/1000Mbps models + 2 SFP, with or without IEEE 802.3af PoE." All the Concentrator Boxes will have an uplink to the main telecomm gabinet on each School.



Medium Schools



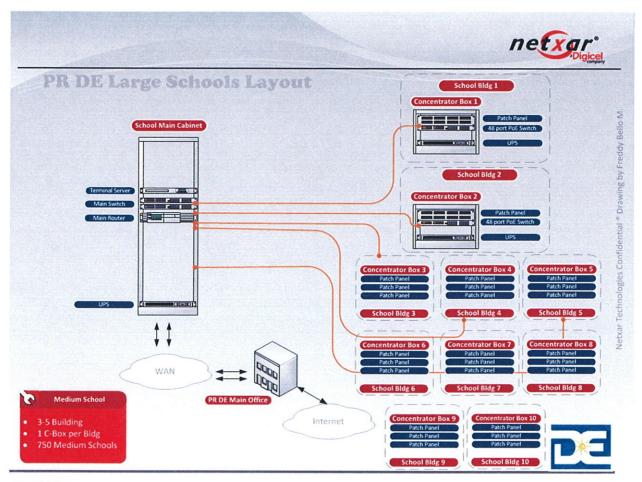
March 7, 2012

This layout considers that any medium school is a facility with 3 to 5 Buildings with classroom. Each building will host a Concentrator Box with a Patch Panel, a switch with 48 Ports 10/100/1000 PoE and UPS, compliance with the RFP description "One Ethernet switch for each concentrator box, 48-port 10/100/1000Mbps models + 2 SFP, with or without IEEE 802.3af PoE." All the Concentrator Boxes will have an uplink to the main telecomm gabinet on each School.

On the Main Rack could be located an optional Terminal Server, because this will be allocated up to 750 units as per the RFP description: <u>"Terminal Servers for 3 classrooms (with approximately 25 computers per classroom) in up to 750 schools."</u>



Large Schools



March 7, 2012 Page 3

This layout considers that any Large School is a facility with 6 to 10 Buildings with classroom. Each building will host a Concentrator Box with a Patch Panel, a switch with 48 Ports 10/100/1000 PoE and UPS, compliance with the RFP description "One Ethernet switch for each concentrator box, 48-port 10/100/1000Mbps models + 2 SFP, with or without IEEE 802.3af PoE." All the Concentrator Boxes will have an uplink to the main telecomm gabinet on each School.

On the Main Rack could be located an optional Terminal Server, because this will be allocated up to 750 units as per the RFP description: <u>"Terminal Servers for 3 classrooms (with approximately 25 computers per classroom) in up to 750 schools."</u>



Cisco Campus Networking Planning, Design and Implementation Services

Scope

- ✓ Cisco Switches
 - o Physical Installation
 - o Basic configuration for Switches Devices
- ✓ Hardening
 - Unwanted services
 - Password
 - Secure Console Access (based on licenses)
- ✓ "Network Ready for Use" Testing
 - Cisco Switches
- ✓ Go Live
- ✓ Documentation "As-Built"
 - o School Switches

Assumptions

- ✓ All TDM Connection (T1/PRI/Analog circuits) is in facility and the proper signaling parameters are known from Telco
- ✓ Power Outlet are in place, near to the concentrator box deployment location
- \checkmark All IP Address to be used on new Campus Deployment should be provided prior installation
- ✓ All Internal Routing Protocol is setup prior IPT Deployment



Professional Services Resources

Netxar is committed to deploy the devices of the current proposal with the highest quality using for them Certified Cisco Professional on the Technologies that this proposal involve, and to use Project Management Practices with certified PMP® personnel to assure the success of the solution.

Activities Breakdown

- Kick-off Meeting
- Planning Session
- Solution Implementation
- Network Ready For Use Testing
- Go Live

Deliverables

- Solution Components installed as agree on Kick-off and Planning Sessions
- Documentation for the solution "As-Built"