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Glassboro Public Schools Statement of Work

SOW #GLSBRO20170512NUTANIXv.3

May 12, 2017

SERVER REFRESH WITH NUTANIX





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SECTION 1 BUSINESS CASE

Glassboro Public Schools, hereafter referred to as Glassboro, is seeking a hyper-converged solution to replace their aging servers and storage.

This project will benefit the school by optimizing the efficiency of the servers and storage and improving their resiliency and security. The Nutanix platform, because of its revolutionary approach to combining servers and storage in one block eliminates bottlenecks that slow down typical server-storage setups. It comes out of the box with a self-healing military level Security Technical Implementation Guide (STIG). Its advanced software removes planned downtime and reduces unplanned downtime by over 90%. The school will also reap benefits in shorter troubleshooting response times thanks to the single pane of glass management and highly rated single vendor hardware support. Finally, there will be significant savings seen in lower power and cooling requirements, resulting in a greener facility.

PBG Sells Nutanix Products under NJEDge Contract # 6882649

Notes:

v.2 of this SOW changed all support to 5 years.





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SECTION 2 PROJECT OVERVIEW

2.1 Project Timeline

This contract will commence at Glassboro's discretion based on a schedule agreed upon by Glassboro and PBG.

2.2 Project Assumptions and Responsibilities

- a) Glassboro must provide PBG the information it requires, in a timely manner, to successfully complete the project.
- b) Glassboro will be responsible for providing PBG with any required passwords for the creation of an account for the sole purposes of PBG completing the project.
- c) Glassboro will be responsible for furnishing any network related information as needed.
- d) Glassboro will be responsible to provide all software and licenses not explicitly purchased through this proposal.
- e) Glassboro must have sufficient 10GB network connections and sufficient 208V power in place for the successful completion of the project

2.3 Project Scope

The Project Includes:

1. Assistance with the configuration of Cisco 9K switches that the Nutanix will be connecting to.





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SECTION 3 PROJECT ORGANIZATION

3.1 Roles and Responsibilities

Role	Responsibility
Stakeholders Glassboro	<ul style="list-style-type: none">➤ Ensure that project is fully integrated with other key initiatives➤ Provide resources / personnel to support the project➤ Validate Mission, Scope, Strategic Objectives. and Deliverables➤ Facilitate resolution of core issues affecting project success
Owner George Weeks Glassboro Public Schools	<ul style="list-style-type: none">➤ Provide overall day-to-day direction and guidance➤ Protect project team against conflicting priorities➤ Arrange appropriate facility and equipment for trainings➤ Appropriately reward high-performing team members
Project Leader PBG Project Manager TBD PBG Networks	<ul style="list-style-type: none">➤ Organize, structure, staff, and manage project➤ Compile and manage a detailed project plan➤ Identify required resources➤ Ensure that project is progressing per defined timeline➤ Provide detailed day-to-day guidance and direction➤ Identify and facilitate resolution to routine issues and high-threat problems➤ Coordinate the technical and functional training and testing
Functional Team Members (see below)	<ul style="list-style-type: none">➤ Execute and monitor project activities and tasks➤ Identify and facilitate resolution to issues➤ Surface issues requiring management support➤ Test and validate converted content and system functionality

PROJECT MANAGEMENT

PBG will assign a Project Manager who will act as a point of contact (POC) for implementation and technical issues as well as scheduling. Before, during, or after the engagement, Client Project Manager can be reached at 1.856.931.1604 option 2 between the hours of 8:30am to 5:30pm. If an emergency occurs outside of those hours, please contact PBG technical support by e-mailing support@pbgnetworks.com or call 1.856.931.1604, option 4, for immediate attention. PBG supplies 90 days of phone support for all educational clients with 4-hour response.





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3.2 Project Stakeholders

Approver Name	Title

3.3 Functional Team Members

Functional Area	Role	Responsibility
		➤
		➤
		➤
		➤
		➤
		➤
		➤
		➤
		➤
		➤
		➤
		➤





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SECTION 4 IMPLEMENTATION STRATEGY

4.1 Nutanix Initial Setup and Configuration

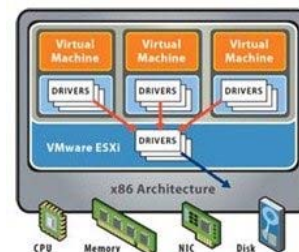
1. Proper configuration of Nutanix before it is deployed into the virtualization environment. Once PBG has the cluster up and running, PBG will upgrade the Nutanix Operating System to the latest version of NOS.

Since the storage is the backbone of the virtualization environment, we recommend 1 day of testing Nutanix with test virtual machines before deployment. This allows us to verify the integrity of the storage. We will test connectivity, input/output (I/O), and verify operations.



2. One Four Node ESXi Cluster will be created on Nutanix along with a virtual vCenter Server, along with the latest version of VMware. PBG will upgrade to the latest version of vSphere. PBG will also create a new vCenter server for the virtualization environment. VMware highly recommends virtualizing vCenter Server as it removes a single point-of-failure along the ESXi Cluster. This vCenter will serve as the control panel for bringing the remote site online. Since CLIENT has purchased the VMware Standard Suite, the following capabilities will be configured.

- vCenter High Availability (HA)
- vSphere vMotion
- Storage vMotion
- Data Protection
- Clustering
- vSwitches
- vSphere Replication
- VMware Update Manager





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4.2 VM and Data Migration

1. Migrate Virtual Servers from old EMC environment to new Nutanix 4 Node Cluster. Once VMware VMs have been migrated the local VMware tools install will be upgraded as well as the virtual hardware interface. The VMware process must be performed exactly to avoid corrupting the VM. snapshots will not repair the VM in a case where the VM no longer functions.



4.3 Testing and Knowledge Transfer

1. PBG will conduct testing of the vCenter and all native functions of VMware along with the Nutanix cluster.
2. Support and Training of the Virtual environment and Nutanix via certified training personnel. PBG is an authorized Training Center for VMware and Nutanix and various other vendors via Global Knowledge. PBG will train CLIENT to handle and take over virtual environment management, maintenance, and upgrade. Training allows PBG to help CLIENT get the biggest return on investment (ROI) and allows CLIENT to completely take over environment after implementation has finished.

Task Name	Start	Finish	Resource Names
Develop and Approve Plan		05/01/2017	PBG Glassboro
Project Kickoff			PBG, Glassboro
Meeting with all team members. Present Plan			
Technical Readiness			PBG Glassboro
Get IP Addresses and Login information			
Initial Nutanix Installation and Configuration			PBG/Nutanix GSO
VM and Storage Migration			PBG
Knowledge Transfer			PBG
After Implementation Support- per managed support agreement		As Needed	PBG/Nutanix
1st Scheduled Health Check			PBG





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SECTION 5 WARRANTY

PBG Networks, Inc. warrants all pertaining to, and exclusively noted within, the supplied proposal regarding materials, workmanship and the installation and termination of the same for a maximum of One (1) Year from the date of completion and subsequent project sign-off.

The warranty will cover all product deemed defective and/or due to insufficient or failed workmanship. The warranty does not cover abuse, misuse, manmade damage, fire, flood or acts due to that of a non-manmade nature.





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SECTION 6 PROJECT BILLING (US DOLLARS)

PBG requires a Purchase Order, as well as a signed copy of this SOW. be sent to the address below or faxed to:

(856)931-1673

PBG Networks Corporate Headquarters

Attn: Billing

259-A East Browning Rd

Bellmawr, NJ 08031

SECTION 7 PBG NETWORKS CONTRACT VEHICLES

[http://www.pbgnetworks.com/SitePages/Contract Vehicles](http://www.pbgnetworks.com/SitePages/Contract%20Vehicles)

GSA Schedule 70 Contract Numbers:

GSA Schedule 70: No. GS-35F-0119Y & GSA Schedule 70: No. GS-35F-0131R

WSCA Contract Numbers:

WSCA Master Agreement is AR1471

WSCA NJ State Contract Number is 87722

NJEDGE: S6882649

E-Rate: SPIN Number is 143036540





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SECTION 8 PROJECT BUDGET AND SIGNOFF

Total project cost is \$160,699.50 with payment address above:

Approver Name	Title	Signature	Date
George Weeks	Director of IT		

Approval of the Project Plan indicates an understanding of the purpose and content described in this deliverable. By signing this deliverable, everyone agrees work should be initiated on this project and necessary resources should be committed as described herein. A PO in addition to this signed document will be required to proceed with the project. Anything outside this proposal will be added as a separate addendum and will require sign-off by both PBG and Glassboro.





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ADDENDUM 1 BASIC SUPPORT

In consideration of a case study after the completion of the project, PBG Networks has extended one year of Basic Support for Nutanix and VMware to Glassboro Public Schools. The inclusions and exclusions of the basic support are outlined below. The year of support will commence on the day following the successful completion of the implementation and continue for 365 days. Any tickets open at the conclusion of the year will be resolved under this basic support agreement.

Included with Basic Support:

- Provide Tier 1 Level Support and Escalate to Nutanix / VMware if unable to resolve.
- Provide Ticket creation and escalation with VMware / Nutanix, send to **support@pbgnetworks.com**
- Unlimited number of support requests
- Answer Simple problems and how to questions
- Ascertain / Diagnose Issue and attempt a resolution
- Nutanix / VMware reboot in case node is not reachable
- Re-enable Cluster
- Run quarterly Health Checks VMware / Nutanix.
- Fixing space issue by clearing old logs and unwanted files
- Clearing old logs and unwanted files or backups as per customer request
- Tweak parameters for best performance
- Verify Storage and Memory utilization to protect N+1 Redundancy

Not Included with Basic Support:

- 1.) Nutanix updates and upgrades are not included with Basic Support
- 2.) VMware updates and upgrades are not included with Basic Support





PBG Networks
259-A E. Browning Rd
Bellmawr, NJ 08031
t: 856-931-1604 x111
f: 856.931.1673

Quote

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Date	Quote #
5/10/2017	20170898

Ref Number	CA 9261482
------------	------------

Customer Contact	Ship To
Glassboro Public Schools George Weeks 560 Joseph Bowe Memorial Blvd. Glassboro, NJ 08028	Glassboro Public Schools George Weeks 560 Joseph Bowe Memorial Blvd. Glassboro, NJ 08028

Qty	Item	Description	Price Each	Total
1	Hardware	Nutanix Webscale Platform (NX-1065-G5): 8 x Intel Xeon Processor 2.1GHz 8-core Broadwell E5-2620 v4 20M Cache 32 x 8 x 16GB (128GB per node) 8 x 6TB 3.5" HDD 4 x 1.92TB 3.5" SSD 4 x 10GbE Dual SFP+ Network Adapter Nutanix - NX-1465-G5-01250	80,476.47	80,476.47
8	Hardware	Intel Xeon Processor 2.1GHz 8-core Broadwell E5-2620 v4 20M Cache Nutanix - C-CPU-2620v4	0.00	0.00
32	Hardware	16GB DDR4 Memory Module Nutanix - C-MEM-16GB-DDR4-2400	0.00	0.00
8	Hardware	6TB 3.5" HDD Nutanix - C-HDD-6TB-3.5	0.00	0.00
4	Hardware	1.92TB 3.5" SSD Nutanix - C-SSD-1920GB-3.5-C	0.00	0.00
4	Hardware	10GbE Dual SFP+ Network Adapter Nutanix - C-NIC-10G-2-SI	0.00	0.00
1	Support	5YR Production 24/7 System support for Nutanix 1065-G5. Nutanix - S-PRD-1065-G5-5YR	29,868.67	29,868.67
4	Software	License, PRO entitlement for NX-1065-G5; Valid for life of device Nutanix - L-PRO-1065-G5	1,684.2125	6,736.85
1	Hardware	No Cables and No Transceivers Nutanix - C-CBL-NONE	0.00	0.00

<p>Timely payment is essential to any successful business transaction and business/customer relationship. PBG Networks reserves the right to charge Customer a late penalty of 1.5% per month applied against undisputed overdue amounts, or the maximum rate permitted by law, whichever is less. For more information please visit (www.pbgnetworks.com/terms) for "Payment Terms and Conditions." {All Transactions Are Final!}</p>	Sales Tax (0.0%)
	Total



PBG Networks
 259-A E. Browning Rd
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Quote

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Date	Quote #
5/10/2017	20170898

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Customer Contact	Ship To
Glassboro Public Schools George Weeks 560 Joseph Bowe Memorial Blvd. Glassboro, NJ 08028	Glassboro Public Schools George Weeks 560 Joseph Bowe Memorial Blvd. Glassboro, NJ 08028

Qty	Item	Description	Price Each	Total
4	Vendor Consulting	Nutanix cluster deployment, per node basis. DELIVERED BY: Nutanix GSO PRICED: Per Node. Nutanix - CNS-INST-1-NC	1,573.15	6,292.60
1	Vendor T&E	Nutanix Time and Expense (T&E). Priced per T&E unit. Estimate of unit count by project location and duration. Nutanix - CNS-T&E-NC	750.00	750.00
1	Shipping	Shipping	550.00	550.00
		NJEDGE Contract# 6882649		
		Per SOW #GLSBRO20170512NUTANIXv.3		
		See Also Addendum 1- Basic Support PBG Networks		

<p>Timely payment is essential to any successful business transaction and business/customer relationship. PBG Networks reserves the right to charge Customer a late penalty of 1.5% per month applied against undisputed overdue amounts, or the maximum rate permitted by law, whichever is less. For more information please visit (www.pbgnetworks.com/terms) for "Payment Terms and Conditions." {All Transactions Are Final!}</p>	<p>Sales Tax (0.0%) \$0.00</p>
	<p>Total \$124,674.59</p>



PBG Networks
 259-A E. Browning Rd
 Bellmawr, NJ 08031
 t: 856-931-1604 x111
 f: 856.931.1673

Quote

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Date	Quote #
4/12/2017	20170865

Ref Number	CA 9088767
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Customer Contact	Ship To
Glassboro Public Schools George Weeks 560 Joseph Bowe Memorial Blvd. Glassboro, NJ 08028	Glassboro Public Schools George Weeks 560 Joseph Bowe Memorial Blvd. Glassboro, NJ 08028

Qty	Item	Description	Price Each	Total
8	Software	Academic VMware vSphere 6 Standard for 1 processor VMware Inc. - VS6-STD-A	560.53	4,484.24
40	VMware Support	Academic Production Support/Subscription VMware vSphere 6 Standard for 1 processor for 1 year VMware Inc. - VS6-STD-P-SSS-A	274.085	10,963.40
1	Software	Academic VMware vCenter Server 6 Standard for vSphere 6 (Per Instance) VMware Inc. - VCS6-STD-A	3,377.31	3,377.31
5	VMware Support	Academic Production Support/Subscription VMware vCenter Server 6 Standard for vSphere 6 (Per Instance) for 1 year VMware Inc. - VCS6-STD-P-SSS-A	1,271.992	6,359.96
		NJSBA Contract Contract: E-8801-ACESCPS Per SOW #GLSBRO20170512NUTANIXv.3		

<p>Timely payment is essential to any successful business transaction and business/customer relationship. PBG Networks reserves the right to charge Customer a late penalty of 1.5% per month applied against undisputed overdue amounts, or the maximum rate permitted by law, whichever is less. For more information please visit (www.pbgnetworks.com/terms) for "Payment Terms and Conditions." {All Transactions Are Final!}</p>	<p>Sales Tax (0.0%) \$0.00</p>
	<p>Total \$25,184.91</p>



PBG Networks
259-A E. Browning Rd
Bellmawr, NJ 08031
t: 856-931-1604 x111
f: 856.931.1673

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Quote

Date	Quote #
4/5/2017	20170853

Ref Number	
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Customer Contact	Ship To
Glassboro Public Schools George Weeks 560 Joseph Bowe Memorial Blvd. Glassboro, NJ 08028	Glassboro Public Schools George Weeks 560 Joseph Bowe Memorial Blvd. Glassboro, NJ 08028

Qty	Item	Description	Price Each	Total
1	Professional Servi...	Per SOW #GLSBRO20170512NUTANIXv.3	10,840.00	10,840.00

Timely payment is essential to any successful business transaction and business/customer relationship. PBG Networks reserves the right to charge Customer a late penalty of 1.5% per month applied against undisputed overdue amounts, or the maximum rate permitted by law, whichever is less. For more information please visit (www.pbgnetworks.com/terms) for "Payment Terms and Conditions." {All Transactions Are Final!}	Sales Tax (0.0%) \$0.00
	Total \$10,840.00