Legacy Support Services dba: LevelOne Technology

ERATE SPIN: 143030840
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Core Infrastructure Upgrade Powered by: Enterasys Networks

Prepared for:

Stephenville ISD

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The following quote is submitted following an onsite survey of the Stephenville ISD facilities and existing core network infrastructure.

In conjunction with Enterasys Networks, LevelOne Technology is providing this Statement of Work (SOW) for turn key design, installation, configuration and staff training for the Stephenville ISD Core Infrastructure Upgrade project.
Level One and Enterasys have taken all features and performance requirements into consideration while designing the three proposed solutions included within this proposal. Upon award, LevelOne and Enterasys will work directly with the District Technology Staff to customize the design solution to fulfill all requirements and deliver optimum performance.

Overview/Solution:
Stephenville ISD has aggressively pursued technological initiatives to improve the educational opportunities provided to students and their families. The core infrastructure upgrade is required in order to support current and future technologies.

LevelOne is proposing 3 solution options for turnkey design, implementation, network configuration and training.

1. Full system-wide refresh of the Stephenville ISD core and edge infrastructure.
2. Redundant core and MDF Upgrade with partial edge upgrades
3. MDF Upgrade and partial edge upgrades

The LevelOne/Enterasys solution will provide secure, well-managed and dynamic core IT infrastructures designed to reduce overall IT costs while allowing better use of the Stephenville ISD IT resources. In addition, the upgraded network technologies will provide long-term efficiencies and flexibility to meet future District needs.

LevelOne fully understands the requirements to successfully install a new network with a minimum of disruptions to the day to day operation of the Stephenville ISD. LevelOne will coordinate with Stephenville ISD representatives before the installation begins.

All work performed under this scope will strictly adhere to the latest Stephenville ISD Infrastructure standard.

LevelOne will act as a central point of contact for the implementation in the facility. All services will be provided in accordance with the provided specifications, as well as Stephenville ISD, manufacturer, and industry standards.

Executive Summary:

Enterasys Secure Networks is the Network Infrastructure and Security Division of Siemens Enterprise Communications. The Enterasys Network and Security portfolio provide enterprises, healthcare providers, state and local government agencies, as well as K – 12 customers' comprehensive

solutions that are easily managed from a central management interface. Our unique solutions are easily tailored thus allowing Enterasys to provide the best in class total cost of ownership for our K - 12 customers.

The LevelOne/Enterasys response to the Stephenville ISD RFP will demonstrate:

- A trusted relationship with a vendor team that provides comprehensive solutions expertise that delivers:
- A turnkey solution
- Professional installation, support, knowledge transfer, and training
- Seamless integration and migration that facilitates organic growth greater than 10 years
- Predictable and reliable performance that guarantees and facilitates online learning
- Lifetime warranty and higher than industry standard for support on commercial grade equipment such as edge switches, access points, even on wireless controllers, providing increased investment protection over several years
- A solution that increases visibility at a user and application level thus meeting compliance standards such as the Child Internet Protection Act
- Wired and Wireless infrastructure security that share common policies increasing the security and reliability of the entire network
- Future proofing the infrastructure
- Investing in 10G and IPv6 technology on today's infrastructure
- Network visibility with full unsampled netflow at line rate
- Chassis Based and Modular stack switches that easily facilitate organic growth through a virtual chassis system
- Ease of managing the solution for configuring, troubleshooting, reporting over the entire infrastructure from a single interface.

The Enterasys products proposed for this RFP are: the S series chassis based switch, C series stack switch, visibility and control management of wired and wireless products via Enterasys NMS
Design Solutions

Project Management:

Describe the expertise and resources that will be used by the vendor to manage the project from beginning to end. Identify the stages of implementation and management, detailed timelines and benchmarks that will be accomplished during this project.

Response:
Upon award, LevelOne and Enterasys will meet with the Stephenville ISD staff to layout/plan an implementation process. Timelines and benchmarks will be defined at that time. LevelOne fully understands that much of the process will take place after hours, weekends and/or holidays as to minimize disruption to the daily processes of Stephenville ISD.

Planning Processes

- Development of a work plan that details the activities or tasks required.
- Analyze performance needs and plan accordingly.
- Assess training needs and plan as appropriate.
- Plan for project changes and how they are documented and submitted.
- Complete the scope document that includes how to verify completion of deliverables and how to manage scope change requests.
- Obtain approval to move forward with executing the project plan.

Executing Processes

- Assemble and develop the project team.
- Procure or secure required resources (hardware, services, software, etc.).
- Review plan with project team. Make sure security issues are prominent and addressed.
- Make project information and status available to stakeholders.

Monitoring/Controlling Processes

- Change control and management - modifications of original project scope, schedule and technical strategies.
- Direct and lead the project team.
- Manage project progress.
- Manage project issues and risks.
- Conduct status review meetings.
- Disseminate status reports.
- Implement testing plan.

Plan for a final project review.

- As appropriate, implement training plan.
- Obtain approval to close the project.
- Obtain sign-off from project sponsor and project manager.
- Archive project documentation.

Implementation Timeline:

Describe the project schedule timelines from initiation to the closeout phase of the project.

Response:

Upon award of the project, Level One and Enterasys with work closely with Stephenville ISD to develop a timeline that appropriately meets all parties' satisfaction. It is difficult to pin point timelines without the input and expertise of the District staff.

Preparation:

Identify the physical site preparation needed to accommodate each site's system. The vendor shall be required to obtain permission from the District prior to cutting into or through any part of a building structure, including, but not limited to, drywall and internal fixtures such as desks, wall units,

etc. The vendor shall be responsible for any damage, repair or clean up costs associated with the project. The vendor must return all District property to a state consistent with its pre-existing condition within seven (7) business days following completion of the project. Should the vendor not have clean-up and repair complete within the designated time period, the District reserves the right to complete the clean and repair work itself and charge the costs incurred against its payment owed for the contract. The District may also file a claim against the vendor's proposed account for these costs.

Response:
LevelOne does not foresee the need to alter any of the physical building structure with the project. Should unforeseen circumstances arise; LevelOne/Enterasys will contact the proper Stephenville ISD staff member prior to any physical building manipulations.

Installation and Configuration:
Install and connect the physical devices at each site. Configure each component in coordination with the SISD Technology Department to provide the services determined.

Response:
The implement stage can be a single iteration or multiple iterations depending on Stephenville ISD's environment and the level of complexity involved with the hardware, firmware, feature sets and/or solutions that are being implemented. At a minimum, Enterasys prefers doing the implementation of products and software in two stages, a Pilot and a full Implementation.

Enterasys Professional Services will design, configure and test the new core and edge switches for the project to ensure a successful implementation of this critical application.

During the hardware installation, the installed network components will be tested with the client for overall connectivity, functionality, failover and performance.

Training:
Describe the training that will be included for users, staff, and technicians. Provide recommendations for the District to support the technology infrastructure and systems being installed including: skills, roles, responsibilities, required certifications or skill set and procedures. Include the training of District staff to properly support these new components to the infrastructure.

Response:
Enterasys offers a modular approach to education and certification that delivers maximum flexibility as you achieve your technology education goals.

Enterasys offers the following technical training options:

<u>Classroom Attendance via our Authorized Training Centers</u>
Students have the opportunity to attend classes at either our Enterasys offices or any of our Authorized Partner Training Centers. Our technically educated instructors will lead you through a

combination lecture and hands-on lab courses that are designed to provide students with the information that they need in order to maximize their investments in Enterasys products and solutions. For a complete list of training center locations, please visit the following link: http://www.enterasys.com/services-training/enterasys-training-locations.aspx

Onsite Training (Suggested)
Onsite training delivers personalized classes focused on the topics that are important to achieving your business objectives. Our technically educated instructors come to your facility with the equipment, expertise and courseware to provide you with a valuable learning experience.

Regional Training
Powered by the Enterasys Mobile Classroom, Enterasys Technical Training brings our classes on the road, providing the same level of technical hands-on experiences that students would gain at our Authorized Training Centers but in a more convenient location: Closer to You. For a complete listing of locations and schedule classes, please visit the following link: http://www.enterasys.com/services-training/ClassSchedule.aspx

Classroom Attendance via the Enterasys Virtual Classroom
Imagine the possibility of attending an Enterasys Technical Training course from the comfort of either your home or office. Now you can by signing up for a class offered in the Enterasys Virtual Classroom. The Enterasys live Virtual Classroom offers students the opportunity to take the same courses offered at our training locations, over the Internet using their personal computer. Within these classes, students would be exposed to the same material, the same technically educated instructors and the same lab exercises that they would have been exposed to had they attended an actual training class. We are currently offering the following classes via the Enterasys Virtual Classroom: IPS, SIEM, Advanced SIEM and NAC. For a complete listing of classes currently offered using the Enterasys Virtual Classroom, please visit the following link and select N. America Virtual Classroom: http://www.enterasys.com/services-training/ClassSchedule.aspx

To meet the training needs of Stephenville ISD we recommend the following course:
Switching NMS and Policy Boot Camp.
Please see the course description below:

Course Overview: Students will learn methods to properly configure and manage their Enterasys switching and policy enabled environments using a combination of both Command Line Interface (CLI) and network management software (NMS Console, Inventory Manager and Policy Manager) applications. This knowledge will be reinforced through actual hands-on experience with networking equipment in a lab environment, where students will perform real world tasks configuring convergence and traffic management protocols, as well as implementing security and management capabilities.

Course Objectives: Upon completion of this course, students will have gained the working knowledge to successfully configure and manage their network implementation as well as take the

Switching NMS & Policy Specialist certification exams.

Course Agenda:

- Overview of device management capabilities which include discussions on firmware upgrade processes, statistical capabilities, configuration management, archiving, reset / restore wizard and template usage using a combination of NMS Console and Inventory Manager applications.
- Introduction to communication security methods (SNMPv3), NMS device groups, Topology Manager, Flexviews, and configuring both alarms and events within Console.
- Configuration and implementation of 802.1Q VLAN's including egress configuration parameters, Multiple Spanning Tree (802.1s) protocol discussions, convergence protection using Span Guard and recommended practices for implementation, and bandwidth optimization utilizing Link Aggregation (802.3ad).
- Introduction to Policy deployment, including policy configuration approaches, deploying static policy for trusted and un-trusted (guest) users and the deployment of dynamic policy for trusted users.
- Hands-on instruction for creating roles, services, and rules as well as Class of Service (CoS) implementation for assigning rate limits and CoS priority. Authentication mechanisms including RADIUS and 802.1x supplicant configurations are also discussed.

At Enterasys we believe our goal is to consistently deliver best-in-class service as part of our mission to be your favorite technology provider. We stand behind our words, "There is nothing more important than our customers."

For more information on our Training please see: http://www.enterasys.com/services-training/training.aspx

Documentation:
Describe what documentation will be provided about the entire system for maintenance, troubleshooting, changing configurations and any other necessary functions.

Response: Enterasys offers complete documentation for all of our products. All documentation is available on the Enterasys Support Site (http://www.enterasys.com/support/). The following documentation is provided for the proposed products.

Configuration Guides
C-Series:

- **Enterasys C5 CLI Reference Guide**: This document describes how to use the C5 Command Line Interface (CLI) to configure and manage C5 switches.
- **Release Notes**

S-Series:

- Enterasys S-Series CLI Reference
- Enterasys S-Series Configuration Guide

- Release Notes

Enterasys Network Management Suite (NMS):

- **NMS Suite PDF Portfolio**: A portfolio of all the NMS Suite manuals that lets you view and download each individual PDF document, as well as perform a search on the entire documentation set.
- **Release Notes**: The NMS Release Notes provide information on the new features and enhancements included in version 4.1, as well as system requirements, and installation and upgrade information.
- **Firmware Support**: Contains information on the supported firmware for each NMS application.
- **Installation Guide**: Provides instructions for installing the Enterasys NMS Suite of products. It includes steps for installing and launching NMS, and for launching NMS applications on remote NMS clients. It also includes information for those upgrading from an earlier version of NMS.
- **Console Manual**: A PDF version of the Console online Help.
- **Inventory Manager**: A PDF version of the Inventory Manager online Help.
- **Policy Manager**: A PDF version of the Policy Manager online Help.
- **Policy Control Console Manual**: A PDF version of the Policy Control Console online Help.

Hardware Documentation

C-Series:

- Enterasys C5 Gigabit Ethernet Switch Hardware Installation Guide
- C5 Gigabit Ethernet Switch Quick Reference

S-Series:

- **Chassis Hardware Installation Guide**
- **Hardware Installation Guide**
- **S-Series IO and IO Fabric Modules Quick Reference**
- **S-Series Option Modules Quick Reference**: This Quick Reference provides installation instructions and information about S-Series option modules.
- **Hardware Installation Guide:** This guide provides an overview, installation and removal instructions, and specifications for the S-Series option modules.

Feature Guides

A list of guides to assist with understanding and implementing features on Enterasys products.

- **Compiled Feature Guide Book**: Includes all the currently published feature guides in a single document.
- **Authentication**: Authentication is the ability of a network access server, with a database of valid users and devices, to acquire and verify the appropriate credentials of a user or device (supplicant) attempting to gain access to the network.
- **Configuring Power over Ethernet Management**: This document provides information about configuring and monitoring Power over Ethernet (PoE) on PoE-compliant Enterasys switches.

- **Configuring VLANs**: A VLAN is a Virtual Local Area Network — a grouping of network devices that is logically segmented by functions, project teams, or applications without regard to the physical location of users by using 802.1Q VLAN-capable switching devices and assigning each switch port in a particular group to a VLAN.
- **Ethernet OAM**: Ethernet Operations, Administration, and Maintenance (OAM) is a collection of standards provided by multiple standards bodies to enable network operators a means to effectively monitor and troubleshoot individual Ethernet links. The Enterasys modular switch OAM implementation supports the IEEE 802.3-2008 Clause 57 standard.
- **Flex-Edge**: Flex-Edge is the capability to classify and prioritize traffic as it enters the switch, assert flow control, and ensure that higher priority traffic received by the switch is forwarded to the packet processor ahead of lower priority traffic.
- **Link Aggregation**: IEEE 802.3ad link aggregation provides a standardized means of grouping multiple parallel Ethernet interfaces into a single logical Layer 2 link. The formed group of Ethernet interfaces is referred to as a Link Aggregation Group (LAG). Dynamic LAG formation and activation is provided by the Link Aggregation Control Protocol (LACP).
- **Link Flap Detection**: The link flap detection feature monitors link flapping which indicates a Layer 1 (physical layer) problem, such as a faulty cable or GBIC.
- **Load Sharing Network Address Translation (LSNAT):** LSNAT is a load balancing routing feature. It provides load sharing between multiple servers grouped into server farms that can be tailored to an individual service or all services, without requiring any modification to clients or servers. Examples of well-known services are HTTP on port 80, SMTP (e-mail) on port 25, or FTP on port 21. LSNAT is defined in RFC 2391.
- **Multicast**: Multicast is a “one source to many destinations” method of simultaneously sending information over a network using the most efficient delivery strategy over each link.
- **Neighbor Discovery**: Neighbor discovery is the Layer 2 process in which a device identifies and advertises itself to its directly connected neighbors.
- **NetFlow**: NetFlow is a flow-based data collection protocol that provides information about the packet flows being sent over a network.
- **Network Address Translation**: Network Address Translation (NAT) and Network Address Port Translation (NAPT) are methods of concealing a set of host addresses on a private network behind a pool of public addresses. Together they are referred to as traditional NAT. A traditional NAT configuration is made up of a private network and a public network that are connected by a router with NAT enabled on it.
- **Policy:** Policy is a component of Secure Networks that provides for the configuration of role-based profiles for securing and provisioning network resources based upon the role the user or device plays within the enterprise.
- **Port Mirroring**: This document describes how to configure port mirroring on Enterasys switches.
- **Quality of Service (QoS):** This document describes how to configure Quality of Service on Enterasys switches.
- **RADIUS Snooping**: RADIUS-Snooping (RS) is one of the Enterasys MultiAuth suite of authentication methods. RS resides on the distribution-tier switch, allowing for management of any directly connected edge switch that uses the RADIUS protocol to authenticate a

network end-station, but does not support the full complement of the Enterasys Policy capabilities.

- **SNMP:** This document describes how to configure the Simple Network Management Protocol (SNMP) on Enterasys switches.
- **Spanning Tree**: The Spanning Tree Protocol (STP) resolves the problems of physical loops in a network by establishing one primary path between any two devices. Duplicate paths are barred from use and become standby or blocked paths until the original path fails, at which point duplicate paths can be brought into service.
- **Syslog**: This document describes how to configure and monitor Syslog on Enterasys switches.
- **TACACS+: TACACS+,** a security protocol developed by Cisco Systems, can be used as an alternative to the standard RADIUS security protocol (RFC 2865). TACACS+ runs over TCP and encrypts the body of each packet.
- **Transparent Web Cache Balancing:** Transparent Web Cache Balancing (TWCB) provides for the storing of frequently accessed web objects on a cache of local servers.

Vendor Experience:
Describe your organization's K-12 experience with core infrastructure systems/projects and the resources that will be used on this project. K-12 experience is a mandatory requirement for consideration of your organization's proposal. All vendors must submit documentation verifying the vendor's Department of Information Resources (DIR) or TIPS/TAPS Purchasing Cooperative status.

Response

TIPS/TAPS Contract Numbers: 01092707-02 // 1072308 // 08-032609
DIR and TCPN Contracts are Pending Approval and should be in effect by January 2012

Service and Warranty:
Describe warranties, guarantees, help desk offerings and other support that will be available during and after this project. Supply a detailed list of service level agreements offered by your organization. The description should include scope of service and annual charges to support and maintain the new system.

Response:
As a customer-centric company, Enterasys endeavors to provide the best possible workmanship and design to ensure a positive first impression for our clients. In the event that one of our products fails due to defects in one of these factors, we have developed a comprehensive warranty that protects Stephenville ISD and promises a simple way to get your products repaired as soon as possible. Below are the warranties for the proposed products:

<u>S-Series</u>
The Enterasys S-Series comes with a one-year hardware warranty beginning from the date of shipment to End User. Entitlements during the applicable warranty period include 8 a.m. to 5 p.m. telephone support based on end user's local time Monday through Friday, excluding Enterasys

recognized holidays and advanced exchange replacement parts for the first 30 days of the warranty period.

C-Series
The Enterasys C-Series comes with a Lifetime Warranty on hardware beginning from the date of shipment to End User. The Lifetime Warranty is defined as sales discontinuation plus five years. Entitlements during the applicable warranty period include 8 a.m. to 5 p.m. telephone support based on end user's local time Monday through Friday, excluding Enterasys recognized holidays, firmware releases, coverage for power supplies, fans, and I/O modules and a next business day advanced exchange service level objective.

The Enterasys C-Series also comes with Integrated Component Coverage which warrants to the end user that any power supplies, fans and cables provided with any Product covered under the Warranty will be free from defects in material and workmanship.

For full warranty terms and conditions please go to:
http://www.enterasys.com/support/warranty.aspx.

Enterasys Network Management Suite (NMS)
The software warranty provides coverage on media only for 90 days. For software warranty terms please refer to section 2 Software Warranty of Enterasys Networks' Standard Warranty at:
http://www.enterasys.com/support/warranty.aspx.

Maintenance (Service)
Enterasys' standard warranties ensure products are protected against manufacturing defects, while our maintenance agreements typically enhance these services with additional features or extend the duration of coverage.

Enterasys offers a wide range of support options with all of the post-implementation support services you need—online, onsite or over the phone—to maintain high network availability and performance. Because we recognize that each business' needs are unique, we have developed a comprehensive set of support options from which Stephenville ISD can choose. The Enterasys SupportNet portfolio is both flexible and innovative, allowing Stephenville ISD to select the level of service that is right for your organization--and yields the best return for your infrastructure investment.

The proposed solution includes the following SupportNet plans:

- SupportNet—The cornerstone offering of the portfolio features the core technical services required to support all your hardware products effectively. Services include telephone and web support, firmware upgrades, and next-business-day parts delivery.
- SupportNet Software Application Service—Maintain the best performance from your Enterasys software, such as Enterasys NMS, Dragon® intrusion and network defense, and Enterasys NAC™ proactive protection solution. Includes all maintenance releases plus minor

and major product upgrades, 24x7 technical phone support, and web access to the latest technical information.

The additional offerings within the SupportNet program are as follows:

- SupportNet Premium—Building on the comprehensive support offered with SupportNet, SupportNet Premium provides faster response options for replacement parts: 2-hour or 4-hour around-the-clock delivery.
- SupportNet Onsite—If you don't have the in-house resources to match your maintenance requirements, SupportNet Onsite brings Enterasys-certified engineers to your site, in addition to providing the other services included in SupportNet.
- SupportNet Onsite Premium—Delivering the same comprehensive level of engineering expertise to your premises as SupportNet Onsite, SupportNet Onsite Premium offers faster response options: 2-hour or 4-hour around-the-clock delivery.

Total Cost of Ownership:
Identify the total cost of ownership on a District-wide basis for a ten-year period. Define the limits of performance of the installed systems that the District will realize after implementation.

Response:
Enterasys solutions are purposely designed to reduce Total Cost of Ownership by driving down IT costs through strong engineering principles and developing products for a 7-10 year technology lifecycle (vs. industry 3-year average).

The proposed Enterasys products offer capabilities that allow for future growth and investment protection. Enterasys Networks products are also standards-based and designed with our own technologies. This guarantees our ability to offer long product lifecycles and consistent engineering throughout the product families. Backwards and forwards compatibility ensures that Stephenville ISD can enjoy the maximum value from their investment. In addition, Enterasys' End of Service Life Policy is such that Enterasys will continue to provide support for a period of five (5) years from the date of discontinuation, provided that the end-user customer maintains an active service contract.

One example of Enterasys unique technology that we build into our infrastructure is that we develop our own ASICs, the packet processors at the heart of our modular switch-routers. Where other vendors use commercially available ASICs or easier-to-develop generic packet processors, over 15 years ago - before most of our competitors were even in business - we designed our own flow-based packet processors with a unique capability. We call this technology “Coreflow2”. Our newest products represent the second generation of this technology, and to this day we are the only enterprise vendor with a flow-based switch-router. Coreflow2 automatically classifies and enforces application traffic at line rate, bi-directionally, and is designed to classify and control traffic all the way up to the application level at line rate speeds of up to100 gigabits per second. With this capability, we’ve essentially enabled a host of emerging and future technologies, and that’s something none of our competitors can lay claim to. The Enterasys S-Series delivers maximum agility

with reduced TCO by delivering longer lifecycles with flexible CoreFlow2 technology and adaption to new standards via software upgrades rather than expensive and downtime intensive hardware swaps.

Network Architecture:
Describe required VLANs or other network architectural considerations necessary to implement your organization's solution. Describe requirements for the District's network and security infrastructure that are necessary for your solution to provide optimum performance.

Response:
All proposed Enterasys product support IEEE 802.1Q VLANs. Additional information needs to be understood regarding the existing infrastructure and protocols to determine if changes would be need to be made to any existing infrastructure components. Enterasys will work with the District to design the solution to fulfill all requirements and deliver optimum performance.

Quality of Service:
Describe quality of service requirements for the network and security
Infrastructure.

Response:
Additional information on the existing infrastructure is needed to determine specific requirements. All proposed Enterasys switches provide a set of QoS and traffic shaping services (S-Series) that can ensure the viability of all traffic on the network (voice, video, and data). Enterasys switches support advanced multi-layer packet classification, granular rate limiting and highly accurate queue schedulers. The benefit of the Enterasys QoS model is the ability to establish role-based prioritization and rate-limiting policies from a central command console and allow the switches to enforce the appropriate policies automatically when specific end systems, such as a VoIP pone, and specific applications are identified on the network.

Enterasys switches, along with the proposed Enterasys NMS software, use a role-based model to associate traffic with appropriate QoS. Roles are established in policy profiles that can be associated with individual users, systems, services or ports. Enterasys policy profiles enable network administrators to write a set of rules that can control and prioritize various types of network traffic. The rules that make up a policy profile contain both classification definitions and actions to be enforced when a classification is matched. Classifications include Layer 2, Layer 3 and Layer 4 fields. Policy actions that can be enforced include VLAN assignment, filtering, inbound rate limiting, outbound rate shaping (S-Series), priority class mapping and logging.

Security:
Describe the structure of your solution to provide maximum security feature sets and recommend improvements of existing practices.

Response:

With the Enterasys solution security is embedded in all products' core architecture. Enterasys solution provides strong support for role-based assignment of network, application, and device access with unique policy capabilities and support for multiple standards-based user authentication methods. Rules and other controls define who is allowed to access the network and the services or resources that can be accessed. Many classes of common accidental or malicious threats can be effectively addressed by "hardening" the network with best practice rules and policy settings. This is particularly important in K-12 environments, where a broad range of device types and legacy systems are networked with a new generation of education applications.

References:
All proposals will include three (3) references for systems similar to that proposed to the District. Contact information, titles, telephone numbers, and email addresses of the people directly involved with similar implementations should be included.

Response:
Baylor University
Scott Day
Network Manager
(254) 710-4781
scott_day@baylor.edu
700 S University Parks Drive
WACO, TX 76706

Aldine ISD
John Crumbley
Director of Information Technology
(281) 985-7339
jcrumbley@aldine.k12.tx.us
1617 Lauder Road
Houston, TX 77039

Hawkins ISD
Mike Henderson
Technology Director
(903)769-2181
231 Hawk Drive
Hawkins, TX 75765

Summary:
All proposals should include a summary document that clearly articulates the design, standards, specifications, and security features of the proposed system.

Response:

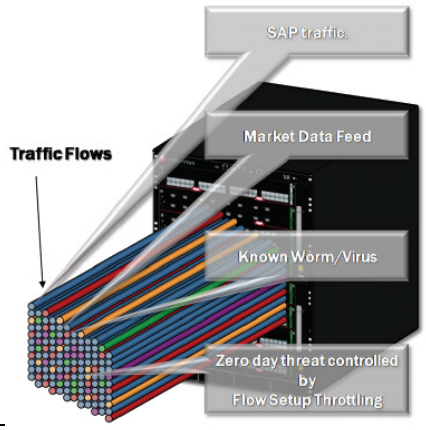
Enterasys offers a variety of managed switches, wireless and security products delivering solutions to meet customer needs from the edge of the network to the core. Switching and routing solutions include chassis, stackable and standalone options. The products we feel best meet the goals and objectives of the Core Infrastructure Upgrade for Stephenville Independent School District include the Enterasys S-Series and C-Series switches, and Enterasys Network Management Suite (NMS). The proposed S-Series and C-Series switches all support Enterasys' industry leading policy solution which provides granular control by user and application roles over priority and security parameters, as well as enabling full user mobility. These controls can be enforced statically and dynamically for multiple users, with multiple authentication methods, on a single port at the same time. Enterasys policy enabled switches allow you to proactively prevent security incidents and assure service level requirements by either rate limiting, prioritizing, denying or quarantining traffic based on user privileges, application priority or required protocols. The end result is an easier way to manage the networked infrastructure as an integrated system through a proven combination of automation, visibility and control capabilities. These types of control can be implemented GLOBALLY using one integrated network management platform, and do not require any additional devices or segmentation on the network. They are built-in to the switches, and controlled through one centralized management application, Enterasys NMS.

The following provides a summary of each product followed by a description and key differentiators of the three recommended Enterasys solutions.

S-Series

The highly versatile Enterasys S-Series delivers both the comprehensive functionality and configuration flexibility to be deployed as a premium high-density network edge access device, high performance distribution layer switch, resilient enterprise class core router, or as a data center virtualization solution. Unlike competitive solutions lacking comprehensive centralized management and adequate high availability services, the Enterasys S-Series drives down operational costs through a combination of management automation, a robust and highly resilient distributed architecture, built-in security, and flexible power configurations specifically designed to reduce power and cooling costs.

Enterasys S-Series provides a highly resilient distributed switching and routing architecture with management and control functions embedded in each module, delivering unsurpassed reliability, scalability, and fault tolerance. The S-Series implements an industry-leading, flow-based switching architecture to intelligently manage individual user and application conversations—far beyond the capabilities of switches that are limited to using VLANs, ACLs, and ports to implement role-based access controls. This architecture ensures that when a specific communications flow is being established between two end points, the first packets in that communication are processed through the multilayer classification engines in the switch I/O modules. In this process, the role is identified, the applicable policies are determined, the packets are inspected, and the action is



determined. After the flow is identified, all subsequent packets associated with that flow are automatically handled in the Enterasys CoreFlow2 custom ASICs without any further processing. In this way, the Enterasys S-Series is able to apply a very granular level of control to each flow at full line rate. Users are identified and roles are applied to ensure each individual user can access their business-critical applications no matter where they connect to the network. S-Series policy rules combined with deep packet inspection can intelligently sense and automatically respond to security threats while improving reliability and quality of the user experience.

Enterasys S-Series supports NetFlow Version 5 and version 9 completely free of charge, which is significant since other vendors require expensive dedicated hardware modules or daughter cards and license fees to implement NetFlow. A distinct Enterasys advantage is flow-based ASIC capabilities that collect NetFlow statistics for every packet in every flow without sacrificing CPU or switching performance. The S-Series implementation enables the collection of NetFlow data on both switched and routed frames, allowing S-Series modules in all areas of a network infrastructure to collect and report flow data at gigabit speeds. The S-Series tracks every packet in every flow, collecting 9,000 flow records per second, per blade on any module. This is an order of magnitude greater NetFlow collection performance than any other NetFlow appliance vendor (over 70,000 flow records per second in a fully populated chassis) and as such can provide network managers with nearly 100% accuracy of who is communicating and with what application across the switch.

The S-Series family consists of the 8-slot S8, 6-slot S6, 4-slot S4, the 3-slot S3, and the fixed configuration S-Series Stand Alone (SSA). Enterasys S-Series I/O modules are high performance, fully-featured switch routers that deliver a fully distributed switching system as well as management and route processing capabilities, where each module is individually driven and managed by on-board processors. Enterasys flow-based ASICs, together with firmware microprocessors, create a traffic control solution that delivers high performance and flexibility. This distributed ASIC-based architecture increases processing power as modules are added for a higher level of scalability and flexibility. I/O modules are available with a wide array of interface types and port densities (10/100/1000BASE-TX, 1000BASE-X SFP, and 10GBASE-X SFP+) to address varied network requirements. All triple speed copper I/O modules are PoE-enabled. A number of I/O modules also include either one or two option-module slots; an option-module slot provides additional media and port speed connectivity via Gigabit and 10 Gigabit Ethernet option modules. This further simplifies network design and reduces the cost of network deployments.

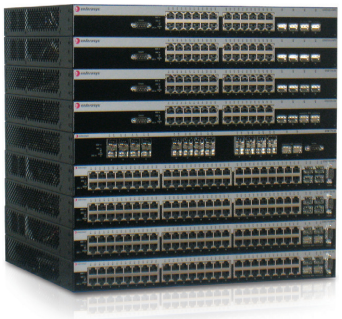
The S-Series includes many standard high availability features including: passive chassis backplane, load sharing/redundant I/O fabrics, hot swappable I/O fabrics and I/O module and multiple host CPU's for N+X redundancy. These hardware-based high availability features allow the S-Series to be deployed in mission critical environments that require 24/7 availability.

Other features include:

- Unsampled NetFlow on every port with no impact on system switching and routing performance

- Standard routing features include static routes, OSPF v1/v2, RIPv1/RIPv2, IPv4, and Multicast routing support (DVMRP, IGMP v1/v2/v3, PIM-SM), Policy Based Routing and Route Maps, and VRRP
- S150 class I/O Modules and I/O fabric modules include all standard IP routing features and also include the following features:
- NAT (Network Address Translation)
- LSNAT (Load sharing Network Address Translation) for server load balancing
- TWCB (Transparent Web Cache Balancing) redirects web page requests to local web cache servers to efficiently manage web access bandwidth and increase web page response time
- S155 class fabric modules have all the standard IP routing features and deliver a hardware upgrade to enhance protocol capacities including:
    - BGP
    - Enhanced queuing
    - Virtual Switch Bonding Ready

C-Series



The Enterasys C5 high-performance Gigabit Ethernet stackable switches provide scalable, wire-rate performance. Along with a switch capacity of 264 Gbps, the C5 provides up to 48 10/100/1000 Ethernet ports as well as the option of Gigabit and 10 Gigabit Ethernet uplink ports. Leveraging the C5's wire-rate stacking capability, as many as eight C5s (both 24-port and 48-port combinations) can be interconnected in a single stack to create a virtual switch that provides 2.11 Tbps of capacity and up to 384 10/100/1000 Ethernet ports as well as the option for up to 16 10GE uplink ports. As port density needs increase additional switches can easily be added to an existing stack group. All switches in the stack are manageable by a single IP address and stack management is redundant. The C5's closed-loop stacking capability utilizes bi-directional switch interconnects to maintain connectivity within the virtual switch despite any physical failures, which includes switches, cables and connections. The C5 also provides reliability features such as Distributed Link Aggregation Groups so that a failure of a single unit does not disconnect the stack from the uplink to the core switch. Delivering advanced Enterasys policy management capabilities, the C5 offers bandwidth, QoS and security policy control for up to three users per port based on L2/L3/L4 traffic visibility. In addition to L2 switching and standard IPv4 RIPv1/v2 support, optional license upgrades enable advanced IPv4 routing and IPv6 routing.

The C5 switch models include the following:

- C5G124-24P2: C5 with (24) 10/100/1000 PoE RJ45 ports, (4) combo SFP ports, (2) dedicated stacking ports and external RPS connector. Total active ports per switch: (24) Gigabit ports
- C5G124-48P2: C5 with (48) 10/100/1000 PoE RJ45 ports, (4) combo SFP ports, (2) dedicated stacking ports and external RPS connector. Total active ports per switch: (48) Gigabit ports
- C5K125-48P2: C5 with (48) 10/100/1000 PoE RJ45 ports, (2) combo SFP ports, (2) SFP+, (2) dedicated stacking ports and external RPS connector. Total active ports per switch: (48) Gigabit ports + (2) 1GE or 10GE SFP+ ports

The C-Series highly customizable Layer 2/3/4 packet classification capabilities work together with the eight hardware-based priority queues associated with each Ethernet port to support a suite of differentiated services with as many as 8 distinct priority levels to provide guaranteed Quality of Service (QoS) for critical network traffic. The switches highly customizable Layer 2/3/4 packet classification capabilities together with its intelligent queuing mechanisms ensure that mission-critical applications receive prioritized access to network resources. Making use of Enterasys' policy capabilities, a District network administrator can define distinct roles or profiles that represent specific operational groups within an organization. Each defined role is granted individualized access to specific network services and applications (e.g., administrator, faculty, student, guest) and these access privileges remain associated with users as they move across the network. Users are authenticated via IEEE 802.1X, MAC address, or web authentication, and then assigned a predefined operational role ensuring that each user has access to appropriate information, thus aligning network resource utilization with business goals and priorities.

Enterasys NMS

The Enterasys NMS suite of management applications provides centralized visibility and granular control of SISD solution. The proposed suite of management applications includes: Console with Wireless Manager, Inventory Manager and Policy Manager. NMS is distinctive for granularity that reaches beyond ports and VLANs down to individual users, applications, and protocols. NMS increases efficiency, enabling SISD to avoid time-consuming manual device-by-device configuration tasks. Enterasys NMS enables our customers to take full advantage of the enhanced features and functionality of the proposed Enterasys products. Serving as the centralized command and control component, Enterasys NMS manages all the infrastructure components as a total system. Enterasys NMS is standards-based and can manage all network equipment that is SNMPv1, SNMPv2, or SNMPv3 capable. Vendor specific MIBs can be loaded for additional functionality.

NMS Console enables the network infrastructure to be viewed as a unified whole rather than as a collection of disparate individual components. It transforms complex network data into graphical, business-centric information making the network less complicated and better aligned with business requirements. With its distributed client/server architecture, NMS Console is exceptionally convenient to use. A user with appropriate security credentials anywhere on the network can access a launch page and log into any of the NMS-managed applications. NMS Console simplifies routine and one-time tasks such as reconfiguring switches and access points, monitoring network performance, and isolating faults. It takes advantage of advanced functionality in Enterasys switching, routing, and wireless products including topology maps, FlexViews (graphical depictions of a broad range of network parameters), VLAN management, device discovery, and event logging. Enterasys NMS supports management for IPv6 devices.

NMS Policy Manager centralizes all the policies for users, applications, protocols, VLANs, ports, and data flows. It automates the definition, distribution, and enforcement of policy rules across the entire network. With an intuitive user interface, administrators can define policies once and then automatically distribute and manage them across Enterasys policy-enabled infrastructure devices. Unified wired/wireless policy management consolidates user access to protect IT services. NMS

Policy Manager defines global user policies, dynamically updates and continuously enforces policy across the network environment. Packets are inspected and filtered by the access points and admitted or blocked based on the user's policy. Policy also controls topology management and traffic flows.

Policy Manager significantly streamlines policy administration and overall network management by utilizing a role-based architecture. Individual users, such as administrators, teachers, students or guest users are categorized according to their role within the District. Utilizing roles as the basis for formulating network policies makes it far easier to align network and network operations to effectively manage user access and enforce acceptable use policies.

NMS Inventory Manager is a tool for efficiently documenting and updating the details of the entire network. It simplifies the deployment and management of Enterasys devices and supports basic configuration and firmware device management functions for popular third party devices. IT staff can easily perform a broad list of tasks including device administration on configuration files, schedule firmware updates, archive configuration data, or restore one or multiple devices to a known good state. Script-based configuration allows custom configuration scripts to be pushed to a set of devices. Inventory Manager also tracks configuration changes for Enterasys devices made by other NMS applications, third-party management applications, or the command line interface.

Enterasys NMS provides robust network, configuration and policy management capabilities and is fundamental to the total network visibility and control.

Energy Efficiency

Power and cooling constraints are becoming one of the top issues in the industry today. Enterasys strives to maximize our designs for energy efficiency using industry components with high efficiencies. Enterasys switches and AP's are typically lower in power consumption and cooling requirements when compared to popular competitive offerings. Our stackable switches overall electrical requirement is further reduced by a low current draw and an extreme tolerance for high environmental temperatures.

Enterasys Technical Support Differentiators

Enterasys has several hundred employees in our Global Technical Assistance Center (GTAC), field engineering and professional services teams providing 7x24 multi-tier technical support around the globe. Having all of our support employees in-house provides significant advantages including:

- Personalized customer support. You'll meet your support person via telephone so you know who you'll be working with before you make the final decision to invest with Enterasys.
- Innovative technology behind our support process, which enables us to manage multi-channel customer contact with total cross-functional visibility and response management
- Tight integration with R&D, which fosters group collaboration, accelerates on-the-job training, and enables us to solve problems in real-time
- Low attrition rates, which are achieved by recognizing and investing in our support staff. In fact the average tenure of our GTAC team is more than 10 years

- Two-tier call center design, including support and engineering, allows us to meet our customer's demand for faster results. There is no need to wait through five tiers of escalation as with other vendors

Summary

The proposed infrastructure solution delivers a best of breed solution that provides integrated security across the entire infrastructure, superior intelligence, reliability, availability and scalability to meet Stephenville ISD current and future needs. The proposed network infrastructure solution optimizes network-wide security, enhanced resiliency, and promotes simplified network management for your operational needs. Enterasys solutions are easy to deploy, easy to manage and standards based, delivering Stephenville ISD a superior solution that will meet all RFP objectives. As a worldwide provider of secure networks, Enterasys will continue to support your business needs and provide the networks to meet your requirements and support your growth within your required 10 year time frame and beyond.

Solution Summary
The proposed solution includes three options, good, better and best.

Option 1 (good) fulfills all upgrade requirements and the subsequent options deliver additional equipment and benefits over the base option. Option 1 for the MDF includes six C5K125-48P2 switches, each providing 48 10/100/1000Base-TX 802.3af/802.3at PoE ports, two combo SFP ports and two 10GbE SFP+ ports for the MDF. Each switch is populated with a 1000Base-SX SFP, and can be upgraded to support 10GbE in the future by populating the SFP+ ports with a 10GbE transceiver. The solution also includes 20 C5G124-48P2 switches to replace the existing Cisco switches. Each providing 48 10/100/1000Base-TX 802.3af/802.3at PoE ports and four combo SFP ports. Each switch will be populated with one 1000Base-SX SFP.

Option 2 (better) includes the switches mentioned above as well as an Enterasys S4 chassis populated with two SK5208-0808-F6 S155 I/O fabric modules which each provide eight 10GBASE-X SFP+ ports and two option slots. The S4 is also populated with two ST1206-0848 I/O modules which each provide 10/100/1000BASE-T RJ45 ports and two option module slots. Four of the eight available option module slots will be populated with the SOK1208-0204 Option Module providing four 10GBASE-X SFP+ ports. The chassis as configured provided 32 10GBASE-X SFP+ ports, 96 10/100/1000Base-TX ports, and four option module slots for future expansion. The chassis also include 3 S-AC-PS power supplies for N+1 power redundancy.

Option 3 (best) includes the S4 chassis as detailed above and provides individual C-Series stack groups in each closet to improve the current design. A total of sever C5K125-48P2 switches, 50 C5G124-48P2 and 11 C5G124-24P2 switches are proposed to meet the needs of the following closets: Admin MDF, Admin IDF, Maintenance, Transportation, JH 208, JH 113, JH MDF, HS 200 Hall 1, HS 200 Hall 2, HS 500 Hall, HSV 12, HSV 22, HSV 24, HS ATH, HS LLIB, Tech, CEN Main IDF, CEN MDF, CEN Annex 1, CEN Annex 2, CHAM CAF, CHAM Lib, CHAM 108, CHAM 202, CHAM 306, Hook MDF, Hook Lib, Hook 3rd, Hook 4th, Int MDF left, Int MDF Right, INT Annex and on-site spares.

E-Rate SPIN:
Future expansion may include E-rate eligible components. Each bidder must submit a valid SPIN number with their proposal and provide any services under the regulations and guidelines of the Universal Services E-rate Program.

Response:
LevelOne is a full service USAC Priority II Services Provider. (ERATE SPIN 143030840)

Requested Services and Deliverables

The following deliverables are to be provided by the vendor. Additional deliverables may be identified during discovery.

- Reporting recommendations should be specific to the SISD design solution; engineering data, equipment specifications, OS versions, etc.

  Response:
  Enterasys and Level One Technologies will work with SISD to determine necessary reporting requirements.

- Visio or similar drawings of locations or counts of network equipment

  Response:
  Four Visio drawings are attached. 1) Existing Network 2) Good Option 3) Better Option 4) Best option.

- Detailed pricing structures by unit, in electronic format

  Response:
  Pricing options for each proposed solution are attached in a digital format. 1) Good 2) Good Option 3) Better Option 4) Best option.

- Detailed unit technical information

  Response:
  Data sheets for all Hardware and software are attached.

- An assessment statement of the feasibility of at least ten years of the equipment being viable to the district, without the need of physical upgrades or replacement.

  Response:

Enterasys solutions are purposely designed to reduce Total Cost of Ownership by driving down IT costs through strong engineering principles and developing products for a 7-10 year technology lifecycle (vs. industry 3-year average).

The proposed Enterasys products offer capabilities that allow for future growth and investment protection. Enterasys Networks products are also standards-based and designed with our own technologies. This guarantees our ability to offer long product lifecycles and consistent engineering throughout the product families. Backwards and forwards compatibility ensures that Stephenville ISD can enjoy the maximum value from their investment. In addition, Enterasys' End of Service Life Policy is such that Enterasys will continue to provide support for a period of five (5) years from the date of discontinuation, provided that the end-user customer maintains an active service contract.

One example of Enterasys unique technology that we build into our infrastructure is that we develop our own ASICs, the packet processors at the heart of our modular switch-routers. Where other vendors use commercially available ASICs or easier-to-develop generic packet processors, over 15 years ago - before most of our competitors were even in business - we designed our own flow-based packet processors with a unique capability. We call this technology “Coreflow2”. Our newest products represent the second generation of this technology, and to this day we are the only enterprise vendor with a flow-based switch-router. Coreflow2 automatically classifies and enforces application traffic at line rate, bi-directionally, and is designed to classify and control traffic all the way up to the application level at line rate speeds of up to100 gigabits per second. With this capability, we’ve essentially enabled a host of emerging and future technologies, and that’s something none of our competitors can lay claim to. The Enterasys S-Series delivers maximum agility with reduced TCO by delivering longer lifecycles with flexible CoreFlow2 technology and adaption to new standards via software upgrades rather than expensive and downtime intensive hardware swaps.

Attachments

Please see the completed attachments as part of our proposal response:
Data Sheets
Product Warranty
Visio Drawings
Individual Quote Options (3)

LevelOne Service Deliverables:

Centralized Project Management

The main point of contact at LevelOne for project related communication is Braden Downs, braden_downs@levelonetechnology.com (254-749-7662)

Additional Contacts are:
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Chip Thompson, chip_thompson@levelonetechnology.com (254-214-7681)

Stephenville ISD:

Signature: _____
Printed: _____
Title: _____
Date: _____

Level One Technology:

Signature: _____
Printed: _____
Title: _____
Date: _____