



Request for Information

NETWORK INFRASTRUCTURE UPGRADE

August 22, 2013

The Bellingham School District is requesting information regarding equipment and services to upgrade its wired and wireless network infrastructure. The Bellingham School District invites all interested parties to submit a written response to this Request for Information (RFI).

This RFI is being sought strictly for the purpose of gaining knowledge of services and supplies available with an estimate of their corresponding costs and should not be construed as intent, commitment, or promise to acquire services, supplies, or solutions offered.

No contract will result from any response to this RFI.

Information submitted in response to this RFI will become the property of the Bellingham School District.

The Bellingham School District will not pay for any information herein requested nor is it liable for any cost incurred by the vendor.

RFI responses must be received prior to **Friday, August 30, 2013, 12:00 pm** at the following address:

Bellingham School District
Attn: Kathryn Weilage
1306 Dupont St, Bellingham, WA 98225
Telephone Number: 360-676-6529
Fax Number: 360-676-2797
E-mail: kathryn.weilage@bellingshamschools.org

Procedural, administrative, or contractual questions and answers may be directed to the procurement officer listed above. Technical or requirement questions may be directed to:

Technical Contact: John Getchell
1306 Dupont St, Bellingham, WA 98225
Telephone Number: 360-676-6515
Fax Number: 360-647-6832
E-mail: john.getchell@bellingshamschools.org

We appreciate your response to this request.

1.0 PURPOSE AND OBJECTIVES

The purpose of this Request for Information is to assist the Bellingham School District to determine a course of action for upgrading its network infrastructure. The District desires to replace existing equipment which is obsolete or no longer supported by its manufacturer. The primary objective is to implement a robust, stable, reliable and scalable network architecture which will serve the connectivity needs of staff and students.

2.0 PROJECT DESCRIPTION

Wired Infrastructure.

The District network topology is that of a wheel with a hub and spokes. The Central Services office which houses a data center, a core switch, a firewall and the connection to the K-20 network is located at the hub. The data center houses the District's servers and disk storage arrays.

Desired characteristics:

1. Connections from servers/storage arrays to the main data center switch are at 1 GbE and 10 GbE over copper and fiber.
2. The connection from the main data center switch to the core L3 switch in the Central Services MDF is 10 GbE over a multimode fiber link.
3. The MDF core L3 switch also connects to 4 high schools, 4 middle schools, 15 elementary schools and 3 administrative buildings over 10 GbE using single mode fiber links.
4. Each building has an MDF and from 0 to 9 IDFs.
5. All internal connections between the MDF and IDF(s) within a building are at 10 GbE over OM3 or OM4 Multimode 50/125µm fiber optic cable with LC terminations.
6. All switch ports servicing horizontal cabling must support 10/100/1000 Mbit/s full duplex, auto-sensing.
7. Switches supporting telephones and wireless access points must support PoE.
8. The data and PoE switch port capacity in each MDF and IDF includes sufficient ports for the number of active ports shown on the attached worksheet.
9. There is the ability to increase link speeds to 40 GbE to/from the core switch and from MDF to IDF(s).
10. The solution includes software to monitor, manage and troubleshoot the wired network.

Wireless Infrastructure.

The wireless network accepts/denies connections from a variety of District and non-District devices with Microsoft, Apple and Android operating systems. These devices are equipped with various combinations of 802.11A/B/G/N/AC radios. Devices move about buildings freely and from time to time are concentrated in individual classrooms and other gathering spaces such as libraries, cafeterias and auditoriums.

Desired characteristics:

1. There is one wireless access point in each classroom, cafeteria and library.
2. Administrative buildings have a defined number of wireless access points.
3. There are separate VLANs for authenticated users/devices, guest users/devices, and special purpose devices.
4. There is the ability to accommodate connections from clients equipped with 802.11AC radios as such devices are introduced.

5. AP power is provided from PoE/PoE+ switches.
6. The solution includes software to monitor, manage and troubleshoot the wireless network.

3.0 RFI RESPONSE INSTRUCTIONS

The District is asking all interested parties to submit a response containing the following information:

1. Your interest in providing the desired equipment and services.
2. For the wired infrastructure: a listing by model and description of all major hardware items organized by building and MDF/IDF location. Do not include any equipment currently in place.

Desired format:

Building	Switch Model	Description	Unit Cost	Qty	Extended Cost	Accessories*	Total Cost
ABC Elementary							
MDF	XYZ123	#ports, etc.	1500.00	1	1500.00	100.00	1600.00
MDF	ABC456	#ports, etc.	800.00	6	4800.00	600.00	5400.00
IDF 1	DEF789	#ports, etc.	900.00	1	900.00	100.00	1000.00
IDF 1	ABC456	#ports, etc.	800.00	3	2400.00	300.00	2700.00
IDF 2	DEF789	#ports, etc.	900.00	1	900.00	100.00	1000.00
IDF 2	ABC456	#ports, etc.	800.00	2	1600.00	200.00	1800.00

*Accessories includes items necessary for installation and operation of the basic equipment such as GBICs, stacking cables, rack mounts, etc.

3. For the wireless infrastructure indicate the cost per building based on the number of locations to be served per the wireless worksheet. Include as separate line items any additional equipment such as controllers or other appliances comprising the system.
4. Depending on your core competencies in the wired and wireless areas you may respond to either or both sections.
5. A detailed, itemized cost estimate to provide the equipment and services identified in the attached worksheet (See 2. above). Note carefully, and fully respond to the cost parameters and other required information included in each worksheet. Identify all relevant initial and recurring costs to include but not limited to hardware, software, firmware, licensing, maintenance (on-site, 24 x 7), programming, configuration, installation, testing and training.
6. Identify all public sector procurement contracts valid for use by Washington state k-12 school districts that cover the products and services listed in your response.
7. Estimated lead time for receipt of materials once an order is placed.

Y K'GNGUU'SWITCH-PORT INVENTORY

Building	Classrooms	Library	Cafeteria
Alderwood Elementary	23	1	1
Carl Cozier Elementary	28	1	1
Columbia Elementary	14	1	1
Cordata Elementary	32	1	1
Geneva Elementary	30	1	1
Happy Valley Elementary	26	1	1
Larrabee Elementary	11	1	1
Lowell Elementary	14	1	1
Northern Heights Elementary	24	1	1
Parkview Elementary	16	1	1
Roosevelt Elementary	30	1	1
Silver Beach Elementary	27	1	1
Sunnyland Elementary	20	1	1
Wade King Elementary	28	1	1
Fairhaven Middle	36	1	1
Kulshan Middle	35	1	1
Shuksan Middle	38	1	1
Whatcom Middle	38	1	1
Bellingham High	57	1	1
Options High	6	0	0
Squalicum High	68	1	1
Sehome High	56	1	1
Central Services	12	0	0
Maintenance	4	0	0
Transportation	3	0	0
Warehouse	1	0	0
Total APs	677	21	21

Cost parameters:

1. Client base will be a mixture of 802.11A,B,G,N and eventually AC.
2. Numbers of APs per building are for cost comparison only.
3. Proposed solution must include all necessary hardware and software such as controllers, appliances, mounting brackets, management systems, etc.
4. AP power is provided from PoE/PoE+ switches.

Other required information:

1. Provide all one-time and recurring hardware, firmware and software licensing costs for individual components and the total system package.
2. Provide description and costs for all available SLA options for hardware and software support, installation and training.
3. Describe hardware and software warranty terms of coverage and duration.
4. Identify any public sector procurement contracts valid for use by K-12 school districts in Washington state for the products used in your proposed solution.

Wired Switch Port Inventory

[illegible]

Wired Switch Port Inventory

[illegible]

Wired Switch Port Inventory

Building	IDF 8				IDF 9			
	Data Ports In Use	POE Ports In Use	Phone Ports In Use	Wiring Category	Data Ports In Use	POE Ports In Use	Phone Ports In Use	Wiring Category
Alderwood Elementary								
Carl Cozier Elementary								
Columbia Elementary								
Cordata Elementary								
Geneva Elementary (Note 1)								
Happy Valley Elementary								
Larrabee Elementary								
Lowell Elementary								
Northern Heights Elementary								
Parkview Elementary								
Roosevelt Elementary (Note 2)								
Silver Beach Elementary (Note 3)								
Sunnyland Elementary								
Wade King Elementary								
Fairhaven Middle								
Kulshan Middle								
Shuksan Middle								
Whatcom Middle								
Bellingham High								
Options High								
Squalicum High								
Sehome High	18	3	0	5e	42	3	0	5e
Central Services (Note 4)								
Maintenance								
Transportation								
Warehouse								