
REQUEST
FOR
PROPOSAL

For RWHC ITN
FCC Pilot Program
Network Expansion Project

Requested by
Rural Wisconsin Health Cooperative
Information Technology Network

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1. Background:

A consortium of independent Wisconsin community hospital, organized as the Rural Wisconsin Health Cooperative Information Technology Network (ITN), is requesting proposals to enhance an existing wide area network, a frame relay network that was developed in response to the significant challenges rural providers face when trying to implement IT or telehealth projects. Currently, over 20 hospitals, clinics, regional providers, and others are connected to the WAN.

Four of these hospitals have recently committed to implementing a shared community electronic health record (EHR) environment (with integrated CCHIT certified hospital and physician practice applications), which will provide rural facilities with EHR/HIS applications, such as Lab, Radiology, Pharmacy, Nurse Charting, E-MAR, CPOE, and others. As these facilities begin to use telecommunications to access EHR systems, the dependability, stability, and security of these systems (and the communication systems over which they are accessed) become especially critical. Shared EHR and FCC Pilot Program planners aim to enhance the network to meet the “mission critical” nature of Shared EHR participant needs in the following ways: (1) by implementing a redundant server/datacenter configuration, (2) protecting against network downtime by expanding the current network to create redundant connections for all Shared EHR participants, and (3) enhancing the security and network management features of the WAN.

This RFP addresses the telecommunications, perimeter hardware, network management and monitoring hardware and software, implementation, and support needs of the Shared EHR group. It is anticipated that several vendors will be required to provide all of the components requested. Vendors are encouraged to make proposals on those parts of the project where they feel they can effectively provide a solution.

The network enhancements requested in this RFP must be implemented to benefit only the 4 hospitals identified in this RFP. Any traffic, connections, hardware, and software will be specified out, installed, and used only for/by these Pilot Program participants. However, the proposed elements should be scalable, so that additional eligible entities can be added in the future. Entities ineligible for Pilot Program funds may also be added in the future, with the requirement that they pay their fair share of the cost associated with their usage.

Vendors must in all cases clearly indicate when solutions either require or are dependent upon additional hardware, systems and/or vendors, so that all costs of the functionality requested/promised are accounted for. If the vendor is unable to provide the costs for a dependent vendor system, this **must** be indicated in the response.

2. Due Date and Contact Instructions

All contact regarding this RFP shall be directed to:

David Chitwood
Datacenter Manager
RWHC Information Technology Network
880 Independence Lane
Sauk City, WI 53583

Phone: (608) 644-3242
Fax: (608) 643-4936
E-mail: dchitwood@rwhc.com

Response to this RFP are required within 3 weeks of the date the RFP is posted on the FCC website and should be in possession of David by no later than 3:00 p.m. CST of the RFP due date.

All questions regarding this RFP should be submitted in Word format and sent to David by e-mail at least a week prior to the RFP response due date.

3. Proposal Evaluation

Proposed vendor responses will be based on but not limited to the following:

- Compliance with the RFP guidelines
- Proposed implementation time frames
- Solution functions and features and suitability of vendor's solution to meet project goals
- Evaluation team members satisfaction with the proposed solution including information obtained during demonstrations, site visits, and reference calls
- Cost of solution

The RWHC group reserves the right to issue any resulting order with the vendor whose proposal, in the judgment of the group, most nearly conforms to the specifications and will best serve the needs of RWHC ITN participant members as described herein. RWHC ITN reserves the right to waive all technicalities in selecting or rejecting any or all proposals which satisfy or fail to satisfy respectively the best interests of the RWHC ITN group. The RWHC ITN group is not obligated to accept any proposal received. It may accept proposals in whole or in part, or may reject all proposals.

4. Requested Solutions, Features, and Functions

4.01 General Overview:

This section provides is a general overview of all the components required to meet the participant goals of enhancing the data network in preparation for the abovementioned Shared EHR project. The project involves components at four hospitals and two Data Centers in different locations in the state of Wisconsin. Descriptions of the sites and how

the components will broken out by site are provided in section 4.02. A more detailed discussion of the components requested is provided in section 4.03.

1. 100 Mb Connection between the two Data Centers (Sauk City, WI and Madison, WI)
2. 20 Mb Connections between each Hospital and the Data Centers
3. Lower Bandwidth Synchronous Failover Connections
4. Dedicated connections between St Josephs and clinics
5. Wide Area Network Termination Hardware (including installation) for each facility to manage redundant telecommunications lines. Termination hardware will be capable of providing the following features
 - a. High Availability/Failover/Redundancy
 - b. Bandwidth Management/Quality of Service
 - c. Virtual Private Network capabilities
 - d. Threat Management
 - e. Intrusion Detection/Intrusion Prevention
6. Network Monitoring Software (including installation) capable of monitoring the following:
 - a. Network Bandwidth
 - b. Availability
 - c. Threshold alerts
7. Network Testing to certify appropriate Security and Availability
8. Network Management Hardware/Software Solution (including installation) to facilitate efficient and secure distribution of CCHIT-certified applications over the network. Network management hardware/software will be capable of providing the following features:
 - a. Manage Network by maximizing number of concurrent connections
 - b. Manage Network by maximizing bandwidth utilization
 - c. Manage and maximize network application performance
 - d. Mechanism for managing security of access to network resources
9. One Full-Time Employee (FTE) to help design and manage Wide Area Network and components; position to be posted as a direct hire.

4.02 Per Site Breakout:

This section provides descriptions of the sites involved, along with a detailed breakdown of the above components based on FCC Pilot Program planners' determination of per site needs.

Tomah Memorial Hospital (321 Butts Avenue, Tomah, WI, 54660)

Description: Tomah Memorial Hospital is a 25-bed, Critical Access Hospital located in the eastern half of Monroe County. The hospital provides a wide range of medical, surgical, obstetrical, and sub-acute care services. TMH also provides 24-hour emergency coverage. The hospital also has two nurse-midwives that provide obstetrical care. TMH provides services for a population of around 20,000 people. Their hospice program covers a five county territory. The two closest hospitals are 20 miles and 34 miles respectively, making their emergency room services especially vital to the community.

The median household income in Tomah is \$31,986; the median age of the community is 37.9 years. Medicare patients comprise 40% of their business. According to Wisconsin Hospital Association (WHA) reported data, in 2005 Tomah had 942 inpatient admissions and 18,000 outpatient visits. Tomah employs 137 FTEs, including 3 “provider” FTEs that take primary responsibility for assessing the patient. The Tomah Orthopedic Clinic employs 2 physicians, 1 nurse, and 1 nurse practitioner. The clinic had 5000 2006 visits.

1. 20Mb Dedicated Connection to Wide Area Network that terminates at Madison Data Center (222 W Washington St, Madison, WI)
2. Alternative Synchronous Fail-over Connection for dedicated access to the Data Center if main connection fails
 - a) This connection will be as redundant of the primary connection as possible (i.e. not using the same local loop, etc.)
 - b) Carriers are asked to quote 3 separate speeds for this connection (1.5 meg, 3 meg, and 4.5 meg)
3. Wide Area Network Termination Hardware (including installation) to manage the above redundant telecommunication lines. Hardware should include the following:
 - a. High Availability/Failover/Redundancy
 - b. Bandwidth Management/Quality of Service
 - c. Virtual Private Network capabilities
 - d. Threat Management
 - e. Intrusion Detection/Intrusion Prevention

St. Joseph’s Community Health Services (400 Water Avenue, Hillsboro, WI, 54634)
St. Joseph’s Community Health Services is a 25-bed Critical Access Hospital. Geographically isolated, the facility seeks to preserve access to hospital and long-term care services in a rural community spanning five counties: Vernon; Monroe; Juneau; Sauk; and Richland. SJCHS is an independent, non-profit corporation governed by a board of directors. The service area population is approximately 18,000 people. Vernon County (including the city of Hillsboro and area surrounding St. Joseph’s Community Health Services) is designated a Health Professional Shortage Area. In addition to the hospital and a nursing home, SJCHS also operates three of the physician practice clinics that service the community: one contiguous to the hospital, one in Wonewoc, and one in Elroy, which has been designated as a medically underserved area. According to WHA reported data, in 2005 SJCHS had 520 inpatient admissions and 17,500 outpatient visits. SJCHS employs 107.9 FTEs, including 8 “provider” FTEs that take primary responsibility for assessing the patient. The three St Joseph’s Family Clinics employ 6 physicians, 15 nurses, and 3 nurse practitioners. The clinics had a combined 19,000 2006 clinic visits.

1. 20Mb Dedicated Connection to Wide Area Network that terminates at Madison Data Center (222 W Washington St, Madison, WI)
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- a. This connection will be as redundant of the primary connection as possible (i.e. not using the same local loop, etc.)
- b. Carriers are asked to quote 3 separate speeds for this connection (1.5 meg, 3 meg, and 4.5 meg)
- 3. Wide Area Network Termination Hardware (including installation) to manage the above redundant telecommunication lines. Hardware should include the following:
 - a. High Availability/Failover/Redundancy
 - b. Bandwidth Management/Quality of Service
 - c. Virtual Private Network capabilities
 - d. Threat Management
 - e. Intrusion Detection/Intrusion Prevention
- 4. Dedicated Clinic Connections

Elroy Clinic

- a. 1.5 Mb synchronous connection from SJCHS to Elroy Clinic (1705 Omaha Street, Elroy, WI, 53929)

Wonewoc Clinic

- b. 1.5 Mb synchronous connection from SJCHS to Wonewoc Clinic (301 Railroad Street, Wonewoc, WI, 53968)

Boscobel Area Health Care (205 Parker Street, Boscobel, WI, 53805)

Boscobel Area Health Care is a 25 bed Critical Access Hospital that includes a 68-bed, long-term care facility/nursing home; a 16-bed mental health unit that serves a nine-county area; and two family practice clinics. The service area is concentrated in the most southwest portion of the state, which is almost entirely agricultural; BAHC's service population is about 17,000 people. Demographic data reflect poverty and unemployment rates that exceed state averages. BAHC is located in a Health Professional Shortage Area. Specialty and general surgeons perform procedures on patients who are admitted for acute care or for outpatient surgery. Like most of hospitals involved with this initiative, their surgical area is staffed with RNs, OR technicians, and certified registered nurse anesthetists. According to WHA reported data, in 2005 BAHC had 1,377 inpatient admissions and 10,080 outpatient visits. BAHC employs 174.8 FTEs, including 7 "provider" FTEs that take primary responsibility for assessing the patient.

- 1. 20Mb Dedicated Connection to Wide Area Network that terminates at Madison Data Center (222 W Washington St, Madison, WI)
- 2. Alternative Synchronous Fail-over Connection for dedicated access to the Data Center if main connection fails
 - a. This connection will be as redundant of the primary connection as possible (i.e. not using the same local loop, etc.)
 - b. Carriers are asked to quote 3 separate speeds for this connection (1.5 meg, 3 meg, and 4.5 meg)
- 3. Wide Area Network Termination Hardware (including installation) to manage the above redundant telecommunication lines. Hardware should include the following:
 - a. High Availability/Failover/Redundancy

- b. Bandwidth Management/Quality of Service
- c. Virtual Private Network capabilities
- d. Threat Management
- e. Intrusion Detection/Intrusion Prevention

Memorial Hospital of Lafayette County (800 Clay Street, Darlington, WI, 53530)
 Memorial Hospital of Lafayette County (Darlington, WI) is a 25-bed Critical Access Hospital that provides a full range of acute care inpatient and outpatient services to approximately 18,500 residents in the following Wisconsin counties: Lafayette, Iowa and Green. Built in 1952, MHLIC offers inpatient services in acute care, surgery, obstetrics, orthopedics, and cardiac care. Outpatient services include multi-slice CT scanning, ultrasound, mammography, MRI/MRA, nuclear medicine, PET/CT, bone densitometry, general radiography, lab services, pharmacy, cardiac and pulmonary rehab, physical therapy, occupational therapy, speech therapy, respiratory therapy, pulmonary function testing, dietary counseling, same-day surgery, and renal dialysis. Their outpatient clinic has specialists available to see patients for cardiology, gynecology, orthopedics, ENT, urology, general surgery, neurology, podiatry, and audiology.

1. 20Mb Dedicated Connection to Wide Area Network that terminates at Madison Data Center (222 W Washington St, Madison, WI)
2. Alternative Synchronous Fail-over Connection for dedicated access to the Data Center if main connection fails
 - a. This connection will be as redundant of the primary connection as possible (i.e. not using the same local loop, etc.)
 - b. Carriers are asked to quote 3 separate speeds for this connection (1.5 meg, 3 meg, and 4.5 meg)
3. Wide Area Network Termination Hardware (including installation) to manage the above redundant telecommunication lines. Hardware should include the following:
 - a. High Availability/Failover/Redundancy
 - b. Bandwidth Management/Quality of Service
 - c. Virtual Private Network capabilities
 - d. Threat Management
 - e. Intrusion Detection/Intrusion Prevention

Rural Wisconsin Health Cooperative Information Technology Network – Primary and Secondary Data Centers (222 W. Washington, Madison, WI and 880 Independence Lane, Sauk City, WI)

RWHC ITN is a 501(c)3 consortium who's mission is "to provide community hospitals and their affiliates with health information technology (HIT) applications and support services that promote high quality, cost effective healthcare." RWHC ITN is governed by a board comprised of the four member hospitals participating in this proposal (Tomah Memorial Hospital, St Joseph's Community Health Services, Boscobel Area Healthcare,

and Memorial Hospital of Lafayette County). These four hospitals are all 501(c)3 Critical Access Hospitals. RWHC ITN will be using a Primary Data Center in Madison, WI. The location, 222 W. Washington, is on two electrical grids and is an “Internet Hotel” with three major Internet Service Providers having primary location points in the building. The purpose of the data center is to allow for maximum number of connections with as much bandwidth as possible. Currently, the Primary Data Center has a 12Mb connection to the Internet as well as a number of connections (VPN, Frame Relay, and Fiber) to approximately 20 different facilities. In order to meet the goals of this project, a backup datacenter is being established at RWHC ITN headquarters (880 Independence Lane, Sauk City, WI). The two datacenters will be used to host replicating servers for a CCHIT-certified Electronic Health Record by Healthcare Management Systems (HMS), and to distribute the HMS and other applications.

RWHC ITN Sauk City Datacenter: 880 Independence Lane, Sauk City, WI, 53583

1. 100 Mb Dedication Connection between the two Data Centers (Sauk City, WI and Madison, WI)
2. Alternative Synchronous Fail-over Connection for dedicated access to the Madison Data Center if main connection fails
 - a. This connection will be as redundant of the primary connection as possible (i.e. not using the same local loop, etc.)
 - b. Carriers are asked to quote 3 separate speeds for this connection (1.5 meg, 3 meg, and 4.5 meg)
3. Wide Area Network Termination Hardware (including installation) for each Data Center to manage the above redundant telecommunication lines, as well as connections to each of the hospital sites. Hardware should include the following:
 - a. High Availability/Failover/Redundancy
 - b. Bandwidth Management/Quality of Service
 - c. Virtual Private Network capabilities
 - d. Threat Management
 - e. Intrusion Detection/Intrusion Prevention
4. Network Monitoring Software (including installation) capable of monitoring the following:
 - a. Network Bandwidth
 - b. Availability
 - c. Threshold alerts
5. Network Testing to certify appropriate Security and Availability
6. One Full-Time Employee (FTE) to manage the above components; position to be posted as a direct hire.

RWHC ITN Madison Datacenter: 222 West Washington Ave, Madison, WI, 53703

1. Wide Area Network Termination Hardware (including installation) for each Data Center to manage the above redundant telecommunication lines, as well as connections to each of the hospital sites. Hardware should include the following:
 - a. High Availability/Failover/Redundancy

- b. Bandwidth Management/Quality of Service
 - c. Virtual Private Network capabilities
 - d. Threat Management
 - e. Intrusion Detection/Intrusion Prevention
2. Network Management Hardware/Software Solution (including installation) to facilitate efficient and secure distribution of CCHIT-certified applications over the network. Network management hardware/software will be capable of providing the following features:
- a. Maximize number of concurrent connections
 - b. Maximize bandwidth utilization
 - c. Manage and maximize network application performance
 - d. Mechanism for managing security of access to network resources

4.03 Additional Information Regarding Requested Components:

This section provides additional relevant information regarding the components identified in the General Overview (4.01) section:

1. 100 Mb connection between the two Data Centers (Sauk City, WI and Madison, WI)

The primary purpose of this connection will be to provide the bandwidth required for the use of a Mimix server replicating solution between servers at the two datacenters. If the primary server in Madison were to fail, the secondary server would become the primary server and all participating facilities would access their EHR applications and data from the Sauk datacenter over this connection.

2. 20 Mb connections between each Hospital and the Data Centers

To meet the goals of this project, telecommunications connections 2 and 3 will be as redundant as possible. In order to determine a connection's usefulness in this context, FCC Pilot Program planners request diagrams that identify the precise end-to-end routes of the connections, including final mile information. Carriers not providing this information may be disqualified as unresponsive.

3. Alternative Synchronous Fail-over Connection for dedicated access to the Data Center if main connection fails

- a. This connection will be as redundant of the primary connection as possible (i.e. not using the same local loop, etc.)
- b. Carriers are asked to quote 3 separate speeds for this connection (1.5 meg, 3 meg, and 4.5 meg)

To meet the goals of this project, telecommunications connections 2 and 3 will be as redundant as possible. In order to determine a connection's usefulness in this context, FCC Pilot Program planners request diagrams that identify the precise end-to-end

routes of the connections, including final mile information. Carriers not providing this information may be disqualified as unresponsive.

4. Dedicated Connections Between Hospitals and Clinics

These connections will be between the hospitals and their facility-owned clinics, with 1.5 meg synchronous speeds required.

5. Wide Area Network Termination Hardware (including installation) for each facility to manage redundant telecommunications lines. Termination hardware will be capable of providing the following features:

- a. High Availability/Failover/Redundancy**
- b. Bandwidth Management/Quality of Service**
- c. Virtual Private Network capabilities**
- d. Threat Management**
- e. Intrusion Detection/Intrusion Prevention**

The termination hardware will manage the redundant connections, so that if one fails, the other will automatically engage, with as little disruption to end-users as possible. It will also allow participants to segregate bandwidth for specific purposes (QOS) and provide the other functions listed. Vendors will need an understanding of the level of traffic or concurrent connections from each site to determine what model device to propose. Vendors should assume 80 concurrent connections from each of the 4 sites, and 300 concurrent connections for each datacenter site. For more information or questions, please contact David Chitwood.

6. Network Monitoring Software (including installation) capable of monitoring the following:

- a. Network Bandwidth**
- b. Availability**
- c. Threshold alerts**

Vendors may need an understanding of the level of traffic or concurrent connections from each site to determine what configuration to propose. Vendors should assume 80 concurrent connections from each of the 4 sites, and 300 concurrent connections for each datacenter site. For more information or questions, please contact David Chitwood.

7. Network Testing to certify appropriate Security and Availability

Please clearly identify all the testing services that will be provided as part of this certifications process, including port sniffing, probing, wireless assessment, personnel assessment, etc.

8. Network Management Hardware/Software Solution (including installation) to facilitate efficient and secure distribution of CCHIT-certified applications

over the network. Network management hardware/software will be capable of providing the following features:

- a. Manage Network by maximizing number of concurrent connections**
- b. Manage Network by maximizing bandwidth utilization**
- c. Manage and maximize network application performance**
- d. Mechanism for managing security of access to network resources**

Vendors will need an understanding of the level of traffic or concurrent connections from each site to determine what software/hardware configuration to propose. Vendors should assume 300 concurrent connections to be managed. For more information or questions, please contact David Chitwood. Also, it is critical that the hardware configuration proposed not have a single point of failure, as the network management solution will be distributing mission-critical applications and data. Please include a discussion of redundant features proposed.

9. One Full-Time Employee (FTE) to help design and manage Wide Area Network and components; position to be posted as a direct hire.

This position will be a direct hire position, and not a consulting position, so please do not provide consulting proposals related to this. The position will be posted on the RWHC Health Careers website, along with other locations, resumes will be assessed, and interviews will be conducted.

5. Pricing and Cost Information

Vendors submitting proposals should identify all costs associated with the solution or subset solution that they are quoting. Not all of the costs associated with the solutions will qualify for FCC funds, and it is critical that RWHC ITN and participants understand the complete cost of ownership. Quotes must include the following:

For telecommunications solutions:

1. Implementation Fees, including any cost of required hardware, for end to end connectivity
2. Ongoing transmission fees for end to end connectivity
3. Any other costs associated with the solution and/or description of requirements that are prerequisites for the solution that may add additional cost to RWHC ITN and its participants

For hardware and/or software solutions:

1. Purchase price
2. Installation costs
3. Ongoing support costs and support hour limits that may add costs
4. Any other costs associated with the solution and/or description of requirements that are prerequisites for the solution that may add additional cost to RWHC ITN and its participants

For network testing:

1. All costs associated with the solution and/or description of requirements that are prerequisites for the solution that may add additional cost to RWHC ITN and its participants

6. Implementation Schedule Description

The RWHC ITN participants are on a tight schedule that requires the implementation of all or most of the above components by June, 2008. Please include a plan with timeline, and address your ability to meet project timeline goals. Identify any circumstances that may create potential delays.

7. Service and Performance Level Agreements

Please include information regarding service levels and any service level guarantees associated with the solution, including uptime and response time guarantees. Vendors are encouraged to include strong guarantees, as this will be one of the proposal evaluation criteria.

8. System Tests and Acceptance Provisions

- A. Any contract resulting from this solicitation will contain specific system test provisions. These provisions will be developed by the RWHC ITN consortium and the vendor in accordance with the general concepts described in this RFP and executed in mutually agreed upon test environment.
- B. Any contract resulting from this RFP will contain specific system acceptance provisions. Acceptance plans will be developed and executed in advance of delivery. Payment for the system shall not become due until acceptance plans as agreed to and incorporated into the contract are met. A payment schedule will be tied to a work plan with critical milestones. Failure to achieve milestones will impact the payment schedule along with other hard and soft remedies.

The RWHC ITN consortium expects that any contract resulting from this RFP will contain guarantees to the performance of the proposed solution to the specified speeds, transaction volumes, uptime rates, etc. Vendors have been asked to describe their service and performance level agreements. Respondents to this RFP should describe their capability of meeting these expectations and describe the terms of their response time guarantees.