



St. Charles County Government
 Network Architecture & Support Services, RFP 13-170
 Pre-Bid Attendance Register
 Thursday, November 21, 2013

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TECHNICAL REVIEW

INTRODUCTION

The main purpose of this project is to integrate scalable and flexible electronic resources and security appliances for network and application resiliency that includes local and remote virtualization systems to existing and planned networks currently in service.

SCOPE

This document provides the basic information that will allow, with a component level approach, the design of a complete data communication system with the capacity to integrate multiple technologies.

The scope shall include, but not be limited to: providing analysis, recommendations, documentation and demonstration of compliance on all applicable network architecture and security standards and best practices.

1. Type of traffic and priorities.

There are different types of traffic considered on each column of the table shown below, and they will be moved forward or backward according with the conditions and priorities of real emergency situations.

Table with 5 columns: Voice, System, Data, Video/Door Security, and Priority. The Priority row shows values 2, 2 & 4, 6 & 8, and 6.

2. Architecture Overview

2.1. Data Center

2.2. Saint Charles County Data Center

2.2.1. Included equipment

- NICE Inform Server Archive (provided separately)
Central File Storage
Video Server with two cameras (provided separately)

2.2.2. Required network connections

- The SCC Data Center will be connected to the Microwave Communications Network through an Alcatel Lucent Router Model 7705.
St. Charles County Emergency Communications Center.
St. Charles County User Base.
Remote Operations Center Site in Wentzville.
RF Tower Sites.

- Internet Service with redundant connection.

2.3. Remote O/C Site (Wentzville)

2.3.1. Included equipment

- NICE NPX Logger (provided separately)
- NICE Inform Server (provided separately)
- NICE SNMP Manager (provided separately; however, scope of this project should include consideration of replacement once discovery is conducted)

2.3.2. Required network connections

- The Remote O/C Site in Wentzville will be connected to the Microwave Communications Network through an Alcatel Lucent Router Model 7705
- Wireless connection

2.4. Distribution and Connection

2.4.1. Remote Sites (Towers)

Each remote site is connected to the microwave system using an Alcatel-Lucent 7705 Router. The ECS Network shall extend to each site for independent control and performance management of video surveillance, electronic door access systems and wireless connection for technical service.

2.4.2. This proposal shall include the following equipment

- Device(s) to integrate the remote site with the ECS Data Center, the video surveillance and door access systems.
- Wireless connection

2.4.3. Remote sites list

| Site Designator | Site Name |
|-----------------|--------------------|
| 1.2 | Veteran’s Memorial |
| 3.0 | St. Peters-Howell |
| 4.1 | South 94 |
| 5.2 | Schluersburg |
| 8.2 | Barnard |
| 9.9 | Dardenne Prairie |
| 10.1 | Schroeder |

| Site Designator | Site Name |
|-----------------|-------------------|
| 11.1 | Indian Camp Creek |
| 12.5 | Riverdale |
| 13.0 | TR Hughes |
| 14.1 | Bethman |
| 15.1 | Ameren |
| 24.0 | SCC Admin |

2.4.3.1. Site Management & Service Connection

- 1 Wireless Connection for Site Service and Maintenance

2.4.3.2. Video Server and Cameras

- 1 Video Server connection (provided separately)
- 4 Exterior cameras (provided separately)
- 2 Interior Cameras (provided separately)

2.4.3.3. Shelter Door Access Pad

- 2 Sensors (provided separately)

2.4.4. PSAP sites list

| Site Designator | Site Name |
|-----------------|----------------|
| 19.0 | Wentzville |
| 20.0 | Lake St. Louis |
| 21.0 | St. Peters |

| Site Designator | Site Name |
|-----------------|-------------|
| 22.0 | O'Fallon |
| 23.0 | St. Charles |

2.4.4.1. Site Management & Service Connection

- 1 ECS Network Connection for Service and Maintenance

2.4.4.2. NICE

- 1 NPX Logger (provided separately)

2.5. User Access

2.5.1. Saint Charles ECS Operations Center

2.5.1.1. Operations Center

- Client service, Inform user, Internet Shortcut (CPU).
- Video & Door management (CPU)
- Wireless access point
- Operations Staff
- Remote users
- Local users
- Applications
- ALU Monitor and Control
- P25 Monitor and Control
- Site Civil Monitoring
- Site Security
- ECS Network
- Accesses
- Central file storage

2.5.2. Saint Charles County User Base

- SCC Information Systems
- NICE Inform Users
- Video & Door Remote Users

2.6. Network Security

2.6.1. The security policy associated with protecting the St. Charles County ECS will include, but should not be limited to, the following potential threat vectors:

- Internet
- Remote access and VPN hosts
- Remote office / branch networks
- Partner connections
- Campus networks
- Unprotected Data Center networks

2.7. Quality of Service (QoS)

Describe the resilience of proposed network performance and reliability including management capabilities, limitations and adaptability.

3. Applications Tools

Describe the proposed application toolset provided for real-time, post-event and forensic:

- Monitoring
- Management
- Statistical Analysis

4. Hardware and Product List

4.1. Data Center

4.2. Distribution and Connection

4.3. User Access

SAMPLE

| Equipment ID | Functional Area | Product Description | Part Number | Software |
|--------------|-----------------|---------------------|----------------|-----------|
| 1 | Data Center | Layer 3 Switch | Brand X ABC123 | Release X |
| 2 | Data Center | Wireless Controller | Brand Y 789ZYZ | 4.0 |

5. Configuration

Describe the following based on the proposed topology.

- 5.1. Equipment Configuration – *e.g., IP plan, subnet(s), protocols, ACLs, VLANs, port security*
- 5.2. Network Administration and Services – *e.g., user management services, monitoring, troubleshooting, configuration management*
- 5.3. Network Security – *e.g., security compliance to national and industry standards*

6. Physical interconnections

6.1. Equipment cabling diagram



PRE-BID CONFERENCE MINUTES

The following minutes and answers express our understanding of the items discussed. Please respond in writing if further clarification or action is needed.

GENERAL

- The requested architecture and support services are requested for greenfield deployment of an “ECS Network”.
- The network design will utilize the Alcatel-Lucent microwave, MPLS network for transport purposes. The topography of this network is depicted in the provided Microwave MPLS Connection Architecture.
- The ECS Network will host applications critical to public safety as well as provide for design for potential hosting of future upgrades to existing public safety services thus the proposed core system must be capable of future expansion without service interruptions, redundancy for operational resiliency and comprehensive security for protection of applications, services as well as connected networks. This model is illustrated in the provided ECS Network Concept.
- Respondent will supply the adopted industry standards and best practices and demonstrate adherence to the same in the proposed design.
- Respondents are encouraged to list hardware/software vendor support.
- Respondents are required to provide security recommendations contemplated in the proposed design.

EQUIPMENT PROVISIONING

- Respondent shall provide pricing for hardware (routers, switches, etc.) used in the proposed design including pricing for a 1 TB data storage solution. Respondent shall provide all hardware warranty information including any projections for current hardware/software technology roadmaps and end-of-life projections.
- Respondent shall include pricing for optional extended hardware and software warranties.

ADDITIONAL CONSIDERATIONS

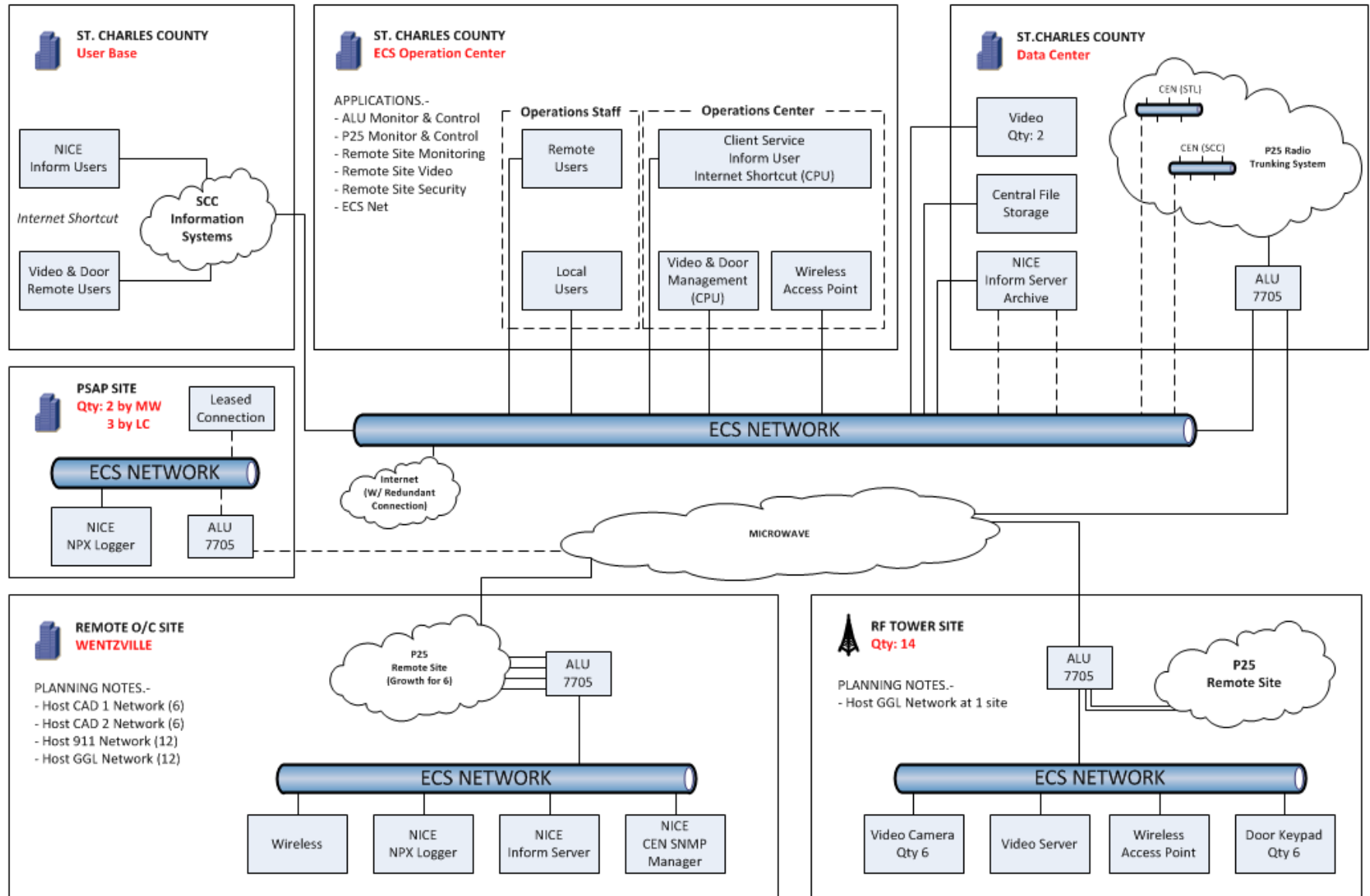
- Each respondent shall provide for 20 contact hours with other County subcontractors (Motorola, Alcatel-Lucent) for exchange of product and network engineering requirements and specifications. Respondent shall decide how many and what type of man-hours required for the 20 contact hours.

TRAFFIC ENGINEERING

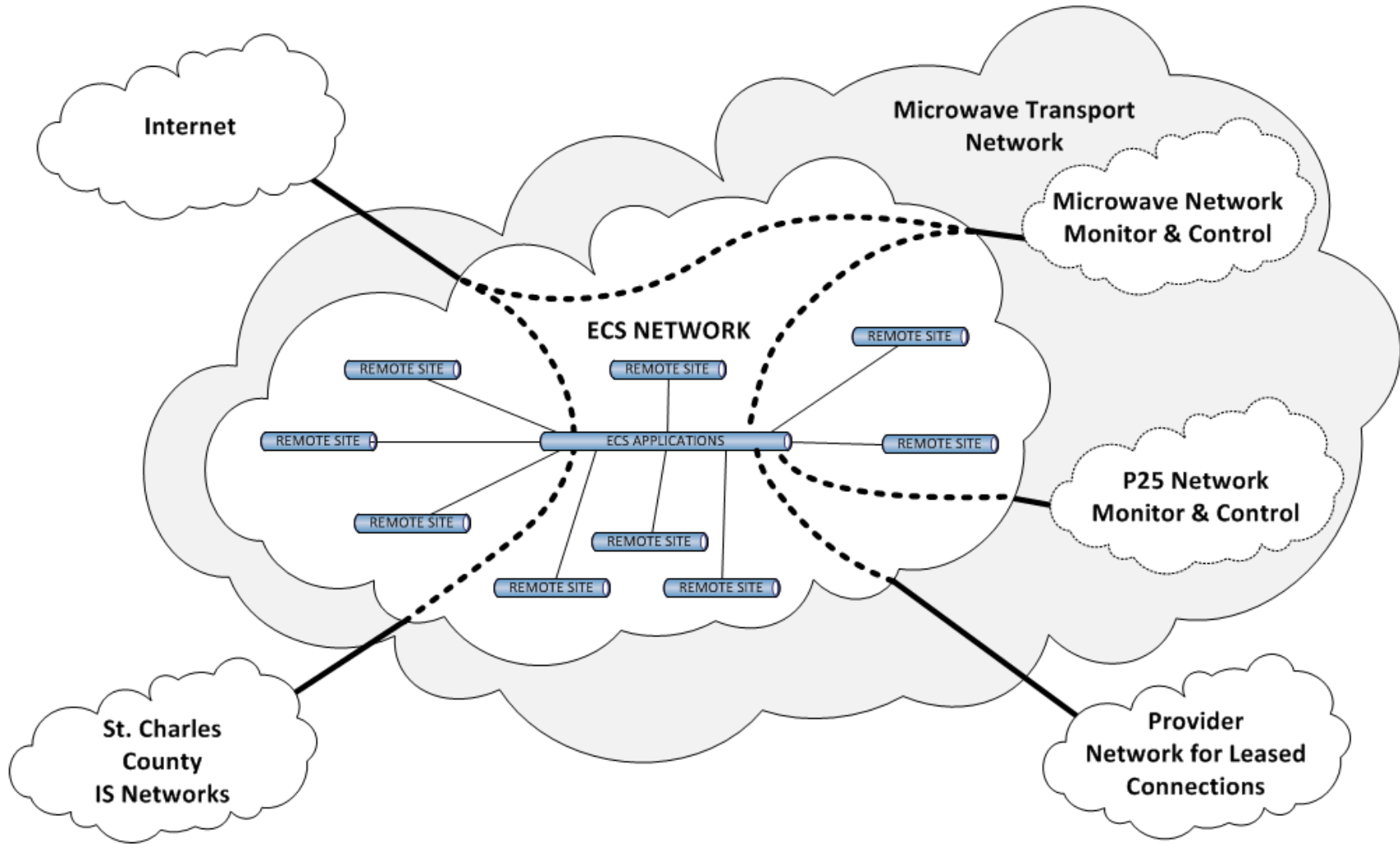
- The successful bidder is expected to provide traffic engineering analysis and recommendations of the Alcatel-Lucent MPLS network based on the new input requirements from the final ECS Network design.



SAINT CHARLES COUNTY
Network Architecture & Support Services, RFP 13-170



ECS Network Concept



Microwave MPLS Connection Architecture

