

STATEMENT OF WORK (SOW)
FOR
HOUSTON INFORMATION TECHNOLOGY
SERVICES

**Project Name: Intrado E911 Emergency
Routing Service and Location Manager
Implementation**

Technology Category: Professional Services

DATE: 5-15-2023

1. **INTRODUCTION**

This document describes the Implementation of Emergency Routing Services (ERS) and location manager with Intrado for Microsoft (MS) Teams Telephony for HITS. When a 911 call is placed via MS Teams Telephony, the call must be routed to the correct PSAP. With Dynamic routing a MS Teams users 911 call can also include location information. The key deliverable is to integrate with Intrado that is certified MS Teams Emergency Routing Service provider.

2. **BACKGROUND**

The current ERS is not certified as one of the MS Teams vendors for E911 services. CovergeOne is a Texas DIR cooperative to procure annual Intrado named ERS users, VPN connectivity and one time professional services provided by Intrado.

The objective of this SOW is to implement Intrado Emergency Routing Service (ERS) to provide E911 support for the Customer Microsoft Teams environment. This service provides accurate physical location information for every Customer endpoint to the appropriate 911 answering point (PSAP). The MS Teams Cloud PBX will manage the location information for all their users.

3. **SCOPE OF SERVICES**

Scope of Services (Deliverables)

Intrado will provide Customer with remote installation and start-up assistance to effectively operate the Product. An experienced deployment engineer will work with Customer, via phone and Internet connection, to advise on configuration and testing of the Product. As part of Implementation Services, Intrado will do the following, to the extent applicable to the Product:

- Provide recommendations for product deployment and configuration as per best practices.
- Site preparation requirements
- Compatibility requirements
- Network and IP address requirements, including firewall port access.
- Prepare the Product for Customer's network.
- Advise and assist Customer to configure the Product per Customer's technical and business requirements.
- Provide advisory and remedial support (product usage advice, software execution or functionality, interpretation of product technical documentation).
- Propose a high level project plan outlining key milestones for the deployment and participate in regular project meetings.
- Assist Customer with integration with the telephony and data network.
- Assist Customer with Emergency Response Location ("ERL") data validation and provisioning.
- Assist in running Intrado Product acceptance test plan ("ATP") that verifies:
 - IP connectivity between the various solution components
 - Feature configuration
 - Fallback scenarios
 - System performance
 - Readiness to go live
- Assist Customer with troubleshooting and correct any deficiencies if applicable.
- Monitor the deployed Product performance for a period of up to thirty (30) days after go-live.

4. **REQUIREMENTS: IMPLEMENTATION, INSTALLATION AND OR SERVICES**

a. **Solution Components**

High Level System Overview

In Microsoft Teams, the customer validates user and location information in the O365 environment. Once the call is routed from the Customer Teams environment into our ERS over Commodity Internet, the ERS will receive the caller's location data in the SIP invite PIDF-LO section. The ERS will then route the call to the PSAP and include the caller's location data.

In a failover/un-provisioned call scenario as well as for remote users, the call will be routed to the ECRC (Emergency Call Response Center), where U.S.-based APCO-trained dispatchers will confirm the caller's location and transfer the call to the appropriate PSAP.

Microsoft Teams

Subscriber Provisioning

Microsoft Teams client will be provisioned via O365 using PowerShell. O365 LIS must be configured with

endpoints and ERLs. In the ERS, the subscribers' 10-digit DIDs (or telephone numbers) are provisioned manually or through batch file in the ERS dashboard or via the ERS SOAP API Interface.

Intrado also provides a PowerShell script to provision endpoints automatically in the ERS. Subscribers' DIDs already present in the O365 system are retrieved and added to the ERS. The script is executed from a Windows machine and it uses Microsoft Teams PowerShell and ERS SOAP API.

Note: An endpoint for licensing and billing purposes is defined as a Microsoft Teams user (or subscriber) with a valid 10-digit DID number.

Call Routing Configuration

Remote users

When a user is remote, Teams uses the location services provided by the respective operating system to suggest an address. This will be accomplished using a combination of global positioning service (GPS), nearby wireless access points, cell towers, and your IP address to determine your device's location. Depending on the capabilities of your device, your device's location can be determined with varying degrees of accuracy and may in some cases be determined precisely.

The end user can then confirm the location of a suggested address, edit it, or manually enter a new one. If the user confirms the location, the call will go directly to the PSAP that covers that location. If the user requires to edit that suggested location, or enter a new one, then the location will need to be verified by our ECRC to determine the correct PSAP for that location.

A confirmed, edited, or manually entered address is then saved on the Teams client so that the user-confirmed address is automatically used when the client is connected to that network. The user-saved addresses are automatically cleared when the Teams client is signed out.

Note: For more information, please go to <https://docs.microsoft.com/en-us/microsoftteams/emergency-calling-dispatchable-location>

Network Ports and Protocols

The following diagram represents the specific ports and protocols that you must configure your network equipment to enable communication with the ERS.

b. Services

Responsibility Matrix

The responsibility matrix diagram identifies which resources will be responsible for completing each task throughout the project and are grouped by project milestones. Failure of a party to satisfactorily complete a required task could materially impair Intrado's ability to provide Implementation Services.

Table 5-1 - System Planning		
ERL Planning	Survey the enterprise properties and determine the ERLs. Determine the source of the ERL data (authoritative database).	Customer
911 Process Planning	Assign resources and prepare procedures for 911 administration, automation, scripting, and support.	Customer/Intrado

Table 5-2 - Circuits and Accounts to be Ordered, Installed and Configured		
ERS Connectivity	MPLS, NNI or VPN connections must be set up if required.	Customer
ERS Account	Intrado creates an ERS test account (if applicable).	Intrado
Table 5-3 - System Configuration Task		
IP-PBX	Configure the O365 Cloud PBX with a test dial plan (i.e., 811) and additional routing numbers (security, test mode).	Customer
Firewall settings	Configure enterprise firewalls.	Customer
Site Session Border Controllers	Configure site SBCs with alternate routing configuration to both of Intrado's ERS datacenters as well as via PSTN.	Customer
Table 5-4 - 911 Provisioning Task		
Build Network Map	Assign subnets to ERLs (subnet discovery) to Location IDs. Assign switch and switch ports (Layer 2 discovery - LLDP- MED) to Location IDs. Assign wireless BSSIDs to Location IDs.	Customer
Security Desk Settings	Assign security personnel to monitor or receive alerts for 911 calls for ERLs. Assign security desk routing dial plan (if required).	Customer
ERLs	Perform initial upload of ERLs.	Customer
Endpoints	Perform initial upload of Endpoints.	Customer
Table 5-5 - Pre-Production Testing Task		
Testing	Product Acceptance Tests: <ul style="list-style-type: none"> • IP connectivity between the MS Teams certified SBCs and Intrado Emergency Routing Service • Fallbacks • Security Desk routing and notifications • Voice quality 	Customer/Intrado
Sign Off	Sign off and return Acceptance Test Plan for Production call routing.	Customer/Intrado
Table 5-6 - Go Live and Sign Off Task		
Enable ERS account	Set the ERS account to LIVE mode	Intrado
Live 911 Testing (FOA)	Tests: Live 911 calls from various buildings. Confirm that PSAPs are	Customer

**Statement of Work (SOW)
Houston Information Technology Services
Professional Services**

	receiving the correct information	
Service Switchover	Switch dial plan to route 911 calls to production circuits	Customer
System Monitoring	Customer network managers, 911 managers, and Intrado implementation staff perform monitoring of the system for thirty (30) days.	Customer/Intrado

c. Training and Knowledge Transfer

This has minimum training, once it is setup, the main thing is to test the different scenarios of wired, wireless, remote, etc. for MS Teams users and how the calls are routed. Additional information to be provided by Intrado:

- ERS User Guide
- Network Interface Description
- ERS Datasheet
- PBX Configuration Guide

d. Support

Service Guide for Technical Support, License, Maintenance, and Implementation Services

5. PROJECT EVENTS AND TASKS

Approximately five (5) business days after signed acceptance of this SOW, ConvergeOne will assign a project manager that will make contact and start planning a project kick-off meeting. The project kick-off may not take place immediately. Project start times depend on the availability of ConvergeOne and Customer resources.

The expected duration of this project has been budgeted at two (2) weeks from the time of kick-off to completion. If the project exceeds this timeframe, a project change order may be required to extend the engagement, resulting in additional fees.

6. PERIOD OF PERFORMANCE

Implementation of the Solution will occur within 6 months of execution of this Statement of Work. This includes delivery and installation (if necessary) all of the products and services necessary to implement the Solution, training, and any support, other than on-going maintenance services.

7. INVOICES

Describe the Vendor's responsibilities for invoicing the City of Houston.

The fixed fee price for this services engagement is below and will be billed with the following milestone schedule:

Total Price: \$6,750.00

8. DELIVERABLES

Milestones, Deliverables, Schedule and Payment Schedule

The following table identifies possible milestone events and deliverables, the associated schedule, any associated payments.

Milestone 1 (100%) - Final Customer Acceptance of the Project

Statement of Work (SOW)
Houston Information Technology Services
Professional Services

- Deliverables must be provided on the dates specified. Any changes to the delivery date must have prior approval (in writing) by the Project Manager/Contract Manager or designate.
- All deliverables must be submitted in a format approved by the Project Manager/Contract Manager.
- All deliverables must have **acceptance criteria established and a time period for testing or acceptance.**
- If the deliverable cannot be provided within the scheduled time frame, the Vendor is required to contact the Project Manager/Contract Manager in writing with a reason for the delay and the proposed revised schedule. The request for a revised schedule must include the impact on related tasks and the overall project.
- A request for a revised schedule must be reviewed and approved by the Project Manager/Contract Manager before placed in effect. [Contract Terms and Conditions](#) may dictate penalties, costs, and other actions based on the facts related to the request for a revised schedule.
- The Project Manager will complete a review of each submitted deliverable within specified working days for the date of receipt.
- A kickoff meeting will be held at a location and time selected by the Project Manager where the Vendor and its staff will be introduced to the Customer.

9. ACCEPTANCE TESTING

Product Acceptance Tests:

- IP connectivity between the MS Teams certified SBCs and Intrado Emergency Routing Service
- Fallbacks
- Security Desk routing and notifications
- Voice quality

10. ACCEPTANCE CRITERIA

Acceptance Criteria for this Solution will be based on the City of Houston [PO acceptance language](#). Each deliverable created under this Statement of Work will be delivered to the Project Manager with a Deliverable Acceptance Receipt. This receipt will describe the deliverable and provide the project manager with space to indicate if the deliverable is accepted, rejected, or conditionally accepted. Conditionally Accepted deliverables will contain a list of deficiencies that need to be corrected in order for the deliverable to be accepted by the Project Manager.

11. ASSUMPTIONS, PROJECT ROLES AND RESPONSIBILITIES

This section contains assumptions specific to this engagement.

- Unless explicitly stated otherwise, all services will be delivered remotely.
- All non-service impacting work described in this scope will be performed during U.S. normal business hours defined as 8:00 AM to 5:00 PM local time; Monday through Friday, excluding ConvergeOne designated holidays. "Cutover" for the sites will be completed during business hours unless otherwise stated in this scope of work.
- The Customer must identify any specific requirements for maintenance windows and change control. The Customer retains overall responsibility for any business process impact and any Customer-internal change management procedures and communications.
- All services, documentation and project deliverables will be provided in English only.
- ConvergeOne will install specific software versions agreed upon at the time of project kickoff. Upgrades to the software are not included in the SOW. ConvergeOne may choose to install an upgrade if required by the manufacturer or to resolve a problem.

**Statement of Work (SOW)
Houston Information Technology Services
Professional Services**

- The Customer is responsible for the underlying data infrastructure including network and virtualization. Systems must be capable of supporting the proposed solution. ConvergeOne can supply consulting and remediation services to ensure successful implementation, if not included in this scope, through a change order and billed at an additional fee.
- The Customer is responsible for all communications and scheduling of any contractors or vendors not managed by the ConvergeOne Project Manager.
- Any product or service delivery dates communicated outside of this SOW or the Project Plan, are not to be considered valid or binding.
- If the project extends beyond the timeline specified in the Project Plan due to delays caused by parties other than ConvergeOne and its subcontractors, ConvergeOne may invoice for service performed to date.
- The Customer is responsible to verify and arrange the installation of all applicable network connections and provide a functional network for application deployment.
- Projects requiring multiple site visits and/or intervals of inactivity between events must be noted as such prior to acceptance of this SOW.
- The Customer is responsible for relocation, removal and disposal of any previously installed Customer-owned equipment or cabling unless specifically agreed otherwise herein.

11. REPORTS AND MEETINGS

The Vendor is required to provide the Project Manager/Contract Manager with weekly written progress reports of this project. These are due to the Project Manager/Contract Manager by the close of business on the *specify day* each week throughout the life of the project

- The progress reports shall cover all work performed and completed during the week for which the progress report is provided and shall present the work to be performed during the subsequent week.
- The progress report shall identify any problems encountered or still outstanding with an explanation of the cause and resolution of the problem or how the problem will be resolved.
- The Vendor will be responsible for conducting weekly status meetings with the Project Manager/Contract Manager. The meetings will be held on *specify day* of each week - at a time and place so designated by the Project Manager/Contract Manager - unless revised by the Project Manager/Contract Manager. The meetings can be in person or over the phone at the discretion of the Project Manager/Contract Manager.

12. FURNISHED EQUIPMENT AND WORK SPACE

Specify what equipment and/or work space HITS will provide or the expectations of what the Vendor will provide.

Remote Work, vendor will not be onsite.

13. TRAVEL

Travel will require the approval of Houston IT Services OR HITS does not cover travel. (Dependent upon individual requestor)

14. LOCAL MINORITY/WOMEN BUSINESS ENTERPRISE PARTICIPATION:

MWBE Goal% or MWBE Waiver

15. PILOTS CONDUCTED: NA