



APPENDIX A

Customer Name: City of Aurora

Street Address: 44 E. Downer Place

City, State, Zip: Aurora, IL 60505

The Agreement referenced below by and between Sentinel Technologies, Inc., (Contractor) with principal offices at 2550 Warrenville Road, Downers Grove, Illinois 60515, and City of Aurora (Customer) with principal offices at 44 E. Downer Place, Aurora, IL 60505 is hereby appended to include the following:

Commencement Date Agreement No. 001-Amended Addendum No. 043-ST

Executive Summary

Customer is implementing a new 911 system for their PSAP operations. Within this effort, Customer requires Contractor's assistance with the SIP integration between Intrado's Viper system and the existing Cisco CallManager for inbound/outbound non-emergency calls.

In order to integrate the Viper system with CallManager, Contractor must implement a Cisco Unified Boarder Element (CUBE) solution. Given that, the scope of the Project is as follows:

- Implementation of two (2) virtual CUBE's on Customer provided VMware infrastructure.
- Integration between Cisco CallManager and Intrado Viper utilizing SIP trunk.

Project Phases

Phase 1 - Project Initiation Meeting

Contractor will coordinate a kick-off meeting to review and approve the Scope of Work. Resources from Customer and Contractor will be introduced and their roles for the project will be discussed. Contractor will then coordinate a time for a site (or virtual) visit to draft a blueprint of all proposed work. High-level timelines for project milestones will also be identified and discussed.

Phase 2 - Analysis & Design

Contractor will perform a high-level audit of Customer's relevant infrastructure. The data collected from this audit will be used to generate a design for the implementation of the solution. Contractor will inform Customer of any design requirements that will need to be completed by Customer's team prior to the start of the next phase (such as provisioning of storage space, acquisitions of licenses, and other essential design components not covered within this document). Upon Customer acceptance of the blueprint, Contractor will coordinate specific dates and times appropriate for accommodating the necessary work efforts. Work requiring a network outage will be scheduled during an appropriate maintenance window.

Phase 3 - Staging

During the staging phase, equipment will be unboxed, burned-in, configured and tested off-site before being repacked and delivered for onsite implementation. This ensures maximum efficiency and quality while minimizing the disruptions and impacts to Customer's environment.

Phase 4 - Implementation

Contractor will proceed with the implementation of all items specified within this Scope of Work and further detailed in the Customer approved Design Document.

Phase 5 - Post Support

Contractor is dedicated to being available for the resolution of any problems or issues that arise during the post-support portion of the Project.

Phase 6 - Project Completion

Upon conclusion of all phases of work, Contractor will provide Customer with updated design documents for the Project. Contractor will then arrange for a meeting with Customer to review the status of all project items. If no project item remains open, Contractor's Project Manager will request Customer sign off to close the Project.

Solution Design

The Intrado Viper system cannot support the concept of "route groups" where multiple SIP trunks can be grouped together to provide high availability or alternate paths across multiple SIP trunks to all CallManagers in a cluster.

The Viper system can only peer with one IP Address, therefore direct integration to each CallManager in the cluster is not possible. To solve this problem and to provide high-availability (i.e. redundancy), a Cisco Unified Border Element (CUBE) will be introduced between CallManager and the Viper system. The HA CUBE configuration utilizes Router Redundancy Group (RG) protocol to provide an Active/Passive pair of CUBEs.

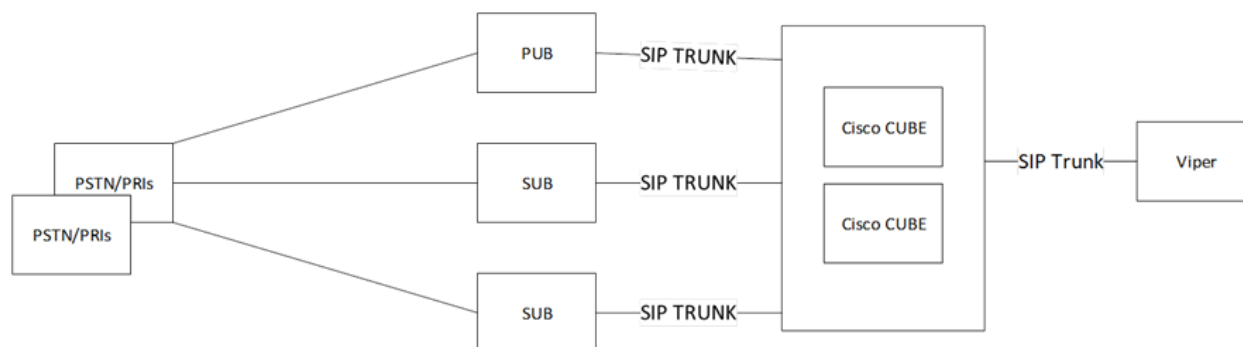
RG protocol utilizes a virtual IP address for internal and external interfaces which will float between CUBEs depending on which CUBE is active. All signaling and media is sourced from (and sent to) the Virtual IP address.

A heart beat interface is established between each CUBE which shares state data on the CUBE and calls traversing the active CUBE. This data is replicated to the passive member CUBE. In the event that the active CUBE fails, the passive node assumes control and is promoted to active. The virtual IP address is seized by the promoted CUBE. Since state data is always synchronized and all signaling is sourced from the virtual IP address, active calls are preserved and any new calls will proceed as normal.

The HA CUBE implementation allows all CallManager nodes to register with CUBE. This provides multiple redundant SIP trunks to the CallManager cluster. Since the Viper system can only communicate with one IP address, the HA CUBEs provide two major roles:

1. The CUBE enables the Viper system to access all CallManager through the CUBEs.
2. The HA CUBEs provide high-availability in case a CUBE fails.

The following diagram depicts the proposed solution.



Scope of Work

Contractor will provide professional services to implement the proposed solution. These services include the following.

High Availability CUBEs

The CUBEs will be implemented as virtual machines. These machines have the following requirements:

- Customer provided VMware resources per VM
 - 2 vCPU.
 - 4 GB vCPU.
 - 8 GB vDisk.
 - ESXi 6.5 or 6.7



- G711 CODEC.
- SIP & RTP protocols (non-encrypted).
- Connectivity to three (3) distinct vnets.
 - Heartbeat network interface.
 - Inside network interface – CallManager.
 - Outside network interface – Viper.
- The CUBES should reside on separate ESXi host/blades to provide redundancy.

Contractor will install and configure the CUBES on the Customer VMware resources. Contractor will configure the required dial plans and integrations to CallManager and Viper to facilitate the calling between systems.

Contractor will coordinate with Intrado to establish a SIP trunk between the HA CUBEs and the Viper system utilizing SIP PING to determine trunk status. The configuration of the Viper system is the responsibility of the Customer and/or Intrado.

Cisco CallManager

Contractor will configure a SIP trunk between the CallManager cluster and the HA CUBEs utilizing SIP PING to determine trunk status.

Contractor will configured the appropriate dial and route plans to support the following:

- Extension-to-extension calling between CallManager IP Phones and Viper hosted extensions.
- Inbound DID calling from the PSTN to Viper hosted phones.
- Outbound PSTN calling from Viper hosted phones.

Unity voicemail integration for Viper hosted phones is out of scope.

Customer is responsible for identifying the extensions and DIDs that are to be hosted on the Viper system.

System Testing

Contractor, Customer, and Intrado will cooperate in the testing of the proposed solution. Contractor is responsible for resolution of any issues with respect to the configuration of the CallManager and the HA CUBEs. Customer and/or Intrado are responsible for resolution of Viper related issues.

Contractor will test the following sceneries:

- CUBE failure – to and from active and passive CUBEs in the HA pair
- Trunk failures between CallManagers and the HA CUBEs.

Cutover / Migration Strategy

Contractor has provided Engineering and Project Management professional services to support a cutover/migration strategy. The project team will deploy the solution within an estimated one (1) cutover window. Any additional cutovers, or phased installation work will be added into the scope via a Project Change Request (PCR), and may require additional professional services to complete.

Cutover Planning Services Provided by CONTRACTOR

Prior to any cutover, Contractor will provide a “Solution Installation and Cutover Plan” which details the following:

- Start-time and End-time targeted for the maintenance window required for the cutover.
- Step-by-step plan for the work that is to be done prior to the installation, during the installation, and after the installation.
- Task ownership for each of the tasks identified.
- Task durations for each of the tasks identified.
- Back-out plan – along with a timeframe that identifies when it would be initiated.
- Test and Acceptance plans to be executed.



Once the cutover/installation plan has been created, Contractor and Customer will meet to review and approve the plan. Prior to the cutover, a “go/no-go” call will take place to once again review the cutover plan, and ensure that all stakeholders involved in the cutover are available, and all pre-cutover tasks have been completed successfully in preparation for the maintenance window. If Customer requests to cancel and reschedule a cutover, rescheduling charges may apply. Any impact to Customer resource schedules as a result of a “no-go” call, will be Customer’s responsibility.

Documentation and Knowledge Transfer

Within the Project, Contractor will provide:

- Documentation of the setup including a revised Contractor design doc as well as any available vendor-created administrative and/or best practices guides.
- Knowledge transfer including basic functional overviews of products implemented, demonstrating the normal operations as installed in Customer’s environment.
 - Please Note: Knowledge transfer and functional overviews are not a substitute for formal manufacturer Customer Education courses or training. Contractor strongly encourages Customer to attend Manufacturer-sponsored Education classes to gain further insight into the product architecture and its integration.

Contractor welcomes Customer involvement in all aspects of the project life cycle to achieve the highest level of knowledge transfer during the Project. While there is no way to guarantee the level of knowledge transfer that will occur, additional time can be added to the staging, installation, or testing portions of the project to further accomplish this goal. Additional time can easily be added through Contractor’s Project Changed Request (PCR) process.

Customers who seek to get the most out of the knowledge transfer have had a higher degree of success by combining the specific deployment knowledge transfer they receive, combined with formal Cisco course training. Although it is not always possible, Contractor has seen the highest degree of self-sufficiency post-implementation when course work is completed prior to the start of the Project.

Project Management

Contractor will provide a Project Manager who will be fully committed to the success of the project. The Project Manager will be responsible for:

- Complete success of the project.
- Optimal coordination of all resources.
- Guiding Customer on aspects of the project they are required to perform.
- Tracking and reporting of progress.
- Management of agreed to budget issues.
- Management of expected timelines for implementation.
- Changes to the project and communications of changes in writing using a Project Change Request (PCR) form.
- Post-installation document gathering, assembly and presentation.
- Post-installation project completion agreement and signature.

Project management will ensure complete project success. Communication is the cornerstone of all successful projects, and Contractor’s Project Manager will be the central communication mechanism for all parties.

Project Responsibilities and Assumptions

Permits & Access

Unless otherwise agreed, all permits, variances, access to facilities, roof access, building warranty concerns or other site specific information and procedures are the responsibility of Customer. Contractor can assist as needed, but will need to be informed of any requirements prior to the site survey to consider these within the validation process.



Remote Support

Contractor's service estimate assumes remote access support through IP VPN or IP PPP connection. Without this access, additional services may be incurred for optimization and tuning required pre and post installation.

Existing Hardware Compatibility & Firmware Updates

Where Customer provides existing server or other hardware, it is assumed Customer has verified all such hardware is compatible with the versions of the software specified within the scope. This includes relevant firmware updates. Contractor will not be providing firmware updates to any servers as part of this Scope of Work.

3rd Party Integration

Unless noted otherwise, Contractor assumes no reliance on 3rd Party applications, connections or plug-ins to software deployments and updates as specified in this scope. If during Analysis and Planning any required 3rd Party integration is uncovered, additional hours may be incurred.

Labor Union Requirements

Contractor has NOT included any parameters for Union workers. Any requirement would require a subcontract arrangement to be determined up front and would increase the cost of deployment.

Pricing Summary

SIP Integration for Intrado Viper

April 14, 2021

Hardware and Software

	Extended Price
Cisco Virtual CUBE with Redundancy	4,608.00
Hardware and Software Total	4,608.00

Solution Maintenance & Support - 36 Months

	Extended Price
Software Maintenance and Support - 36 Months	3,350.00
Maintenance & Support Total	3,350.00

Total Project: Project Total Cost is based on the combined purchase of all Hardware/Software, Solution Maintenance, and Professional Services from Sentinel as detailed in the attached Bill of Materials. Unbundling or materially reducing any of these essential elements of the solution may result in modifications to the cost of the remaining elements.

	Extended Price
Hardware and Software	4,608.00
Solution Maintenance & Support - 36 Months	3,350.00
Professional Services	6,864.00
Project Total	\$ 14,822.00

***Quote is valid until 05/15/2021**

** plus applicable shipping & handling*



Cisco Virtual CUBE

Cisco Virtual CUBE				
Description	Qty	Unit Price	Ext Price	Special Notes
Cisco Virtual CUBE with Redundancy				
CSR 1000V e-PAK 3-year 10Mbps AppX Package	2	629.00	1,258.00	
Cisco Unified Border Element (CUBE) - E-delivery - top level	1	-	-	
CUBE V14 - 1 Enhanced Trunk Session License	50	67.00	3,350.00	
Hardware and Software Sub-Total:			\$4,608.00	

Software Maintenance

Software Maintenance				
Description	Qty	Unit Price	Ext Price	Special Notes
Software Maintenance and Support - 36 Months				
CSR 1000V e-PAK 3-year 10Mbps AppX Package	2	200.00	400.00	36 Months
SWSS UPGRADES Cisco Unified Border Element (CUBE) - E-	1	-	-	36 Months
SWSS UPGRADES CUBE Redundant Trunk Single Session - 1	50	59.00	2,950.00	36 Months
Maintenance & Support Sub-Total:			\$3,350.00	

General Terms and Assumptions

- With regard to any software licenses installed by Contractor as necessary to effectuate the provision of services under this Agreement, thus not within the scope of the deliverables, Customer is hereby prohibited from duplicating said software in any form or fashion and is further restricted from using the software beyond the intended scope set forth herein. Moreover, Customer is restricted from licensing, sublicensing or transferring said software to any third party (except to a related party) without the express permission of Contractor, under which circumstance the software shall stay under the control and auspices of the Contractor. In the event Customer loses or damages the software, a copy may be provided at a nominal charge. Contractor may, at its discretion, remove said software upon the completion of its provision of services. Alternatively, at the end of this engagement or the license period, whichever occurs first, Customer is required to either destroy or return all copies of said software to Contractor, as expressly directed by Contractor.
- The manufacturer/support provider has the right to inspect any products that have either never had support coverage or have not had support coverage for an extended period to determine their eligibility for maintenance/support. Devices subject to inspection will be flagged as such and are subject to a non-refundable inspection fee, which shall be the responsibility of Customer. Sentinel will work with the manufacturer/support provider on Customer's behalf until device eligibility is determined. Devices that do not pass the inspection will be ineligible for support.
- For products purchased pursuant to this agreement, Contractor agrees to provide storage at no additional charge for up to 90 days. If the storage period exceeds 90 days, Customer agrees to the following: a.) Customer will be responsible to pay a fee of 2% per month for storage of purchased products from that point forward, b.) Customer will be invoiced and will be responsible to pay the unpaid balance for any products purchased from Contractor that have not been paid in full and, c.) Ownership will transfer from Contractor to Customer.
- For all products purchased, it is assumed that prior to order execution with Contractor, Customer has reviewed, understood, and agreed to each manufacturer's respective terms and conditions governing the purchase of products, including, but not limited to, applicable warranties, order cancellation, and return policies. In the event of a return request, Sentinel may assist Customer by facilitating the request between Customer and the manufacturer. In addition, product return requests will be subject to Sentinel's own return policies, which may include restocking fees and/or shipping and handling costs.
- Under no circumstances will Customer have the right to withhold payment to Sentinel due to an alleged breach of any express or implied warranties with regard to the products purchased herein. Any such claim shall be handled directly between the manufacturer and Customer. If Contractor receives any financial relief or incentives intended for Customer as a result of a settlement between Customer and the manufacturer, Contractor agrees to pass through the incentives or financial relief to Customer.



- Sentinel makes no guarantees with respect to this product's compliance with any local, state, or federal privacy laws, including, but not limited to, the Biometric Information Privacy Act (BIPA) and the California Consumer Privacy Act (CCPA), and Customer shall maintain all responsibility and bear all liability with regard to its compliance with such in relation to its use of this product. Customer shall indemnify and hold harmless Sentinel from any third party claims to arise out of any privacy violations with regard to this product.
- Fixed Fee Services will be progress billed monthly based on percentage of completion. Generally, services for all non-business impacting tasks are quoted at a standard rate for labor from 9:00 a.m. – 5:00 p.m. If Customer requires, Contractor can perform some of these services outside of normal business hours at an overtime labor rate. Notwithstanding the above, services related to migrations, cutovers, or changes to critical core infrastructure are assumed to be performed outside of business hours and are included in the services pricing provided in this contract. For the fixed charges listed, the Contractor shall furnish all of the materials and perform all of the work shown on the drawings and/or described in the specifications entitled Appendix A, as annexed hereto as it pertains to work to be performed at designated customer locations. Any alteration or deviation from the above specifications, including but not limited to any such alteration or deviation involving additional material and/or labor costs, will be executed only upon a written order for same, signed by Customer and Contractor, and if there is any charge for such alteration or deviation, the additional charge will be added to the contract price detailed above.

Payment Terms

Hardware/Software: For orders over \$100K, 50% at contract execution, balance upon shipment from manufacturer

All Invoices: Net 30

This quote is valid until 05 / 15 / 2021.

CUSTOMER:
City of Aurora

Signature: _____

Printed Name: _____

Title: _____

Date: _____

P.O. #: _____

CONTRACTOR:
Sentinel Technologies, Inc.

Signature: _____

Printed Name: _____

Title: _____

Date: _____