

Intrado Presentation for Montana

911 and Statewide Public Safety Communications Advisory Councils

December 2nd, 2021

State of Montana

- Company Overview and Vision
- Solution Overview
 - High Level Architecture
 - Next Generation 9-1-1 Databases
 - Visibility Dashboards and Reporting
 - Advanced Features Policy Routing Function
 - Implementation Timeline
 - CPE Compatibility Testing
- Additional Questions

Joint meeting of 911 and Statewide Public Safety Communications Advisory Councils







© 2020 Intrado Corporation - Confidential and Proprietary

Life & Safety Solutions





Complete NG i3 ESInet ready solution

Multi-Layer Public Safety Grade Fault tolerant architecture

Ready for Today, Prepared for Tomorrow

Dedicated Deployment and Service Team

Accelerated Deployment Model





High Level Architecture

- LNG LOR capability
- ESInet to ESInet
- OSP IP ingress
- Tabular(ESN) and i3 Ready
- NENA compliant
- LDB geocoded with X/Y from Jurisdiction GIS data
 - Tabular Fallback
- Interoperability
 - Within Host (CAMA/Transitional/i3)
 - Within ESInet
 - External to Legacy and ESInet bordering PSAPs
- LPG, RFAI and i3 ready
- Dual Paths to Each Georedundant Core
- 99.999% Available
- Secure
- 911 Location and Voice is the Priority, But additional traffic is allowed, prioritized and Delivered





Next Generation 9-1-1 Databases

Location Database (LDB)	GIS Data (ECRF/LVF)
 Dedicated DIU Analyst 9-1-1 Net Standard Processes/procedures 30+ years experience Wireline, Wireless, VOIP Steering tables Connectivity to Wireless/VoIP providers already in place SOI/Data Management processes established Continue to manage LDB/MSAG data until All OSPs are ready to support i3 LVF and LBR or LBV ALL PSAPs are ready to support all i3 protocols Until Carrier Readiness is completed, Carriers will submit records via standard legacy protocols Nena 512 SOI Errors/Stats files Intrado analysts will continue to work MSAG/SOI and communication 	 40 GIS professionals with 500+ years of combined experience Intrado will leverage customer's GIS data for the standard i3 functions by: Uploading the GIS data to the EGDMS through the Spatial Interface. Validating that the GIS data is consistent with NENA guidelines (98+%). Provisioning of the GIS data in the ECRFs and LVFs. Ongoing validation and reporting. GIS data will be used to populate the Intrado geocoding system MSAG coordinator will need to establish and Coordinate process with GIS Authority for updates

Transitional & GIS management Data Flow

- While in Transition Standard processes dictate independent Database management
- OSPs continue to update LDB via Legacy Processes
- LDB is managed through standard procedures
- GIS is maintained via SI (spatial interface)
- Coordination must occur between MSAG coordinator and GIS authority





Dashboards and Training

Intrado Unified Portal (IUP) Dual Factor Authentication Standard Reports CMP (Customer Management Portal) GIS SI LDB Management Ticketing System

Training

Training available for all PSAPs prior to Deployment Additional Quarterly Training for Application updates/Changes Customer Management Portal Spatial Interface 9-1-1 Net Ticketing





Intrado

Reporting

ALI Management

Primary Metrics Summary Reports TSS Error Reports Monthly TN Census Report SOI Reports Monthly ALI Retrieval Report Monthly ANI Failure Report NRF Reports System Performance Reports

Standard Reports

Event Count Reports per Hour Event Count by Routing Reason and Destination. Event Count by Type. Event Count by Incoming Trunk Group. Bridge Call Summary. Routing Database Processing.. Event Setup Time. Event Count Reports per Hour. Circuit Utilization reports

CMP



Policy Routing Function (PRF)

PRF Types	PRF Attributes
 A repository of PSAP-defined routing policies. The following types of routing policies are supported: Abandonment/Night Service Routing Overflow Routing Diversion Routing Special Event Routing 	 Abandonment, Overflow, and Diversion policies can be configured to use any of the following policy attributes Geographically Hierarchically Load-balanced





Implementation Timeline / Migration Approach

- All ILEC traffic will be aggregated at ILEC designated POI (Typically S/R)
- Phased Approach
 - Deployment not dependent on Carrier readiness
 - Phase 1 6 Months
 - Phase 2 6-18 months

• TDM OSP LNG ingress

- Located in Montana
- Carriers are expected to use redundant links.
- DSO's/DS3's available

OSP IP Ingress

Intrado

- Transitional and i3
 Specifications
- i3 Tested, Transitional Live (RTT)
- Established Processes, Procedures, SLAs, test plans.



Intrado provides multiple options for PSAPs to connect

- CAMA using Legacy PSAP Gateway (LPG)
 - Intrado will provide a LPG to convert IP calls to CAMA at PSAP
 - Utilized by PSAPs with CPE that is not capable of supporting SIP
 - Allows PSAP to join to gain the benefits of ESInet now
- Request for Assistance Interface (RFAI)
 - Allows PSAPs to connect to ESInet via IP using ATIS standard RFAI
 - Location Data still delivered via ALI bids/responses
 - Intrado Routers are configured with a Serial Port for ALI
- LPG/RFAI with Geospatial Routing
 - Intrado supports geospatial routing using PSAP GIS data for both LPG and RFAI Options
 - Supports PSAPs with GIS data available without an i3 capable CPE
- NENA i3 Configuration
 - SIP with PIDF-LO (location/location reference delivered via initial call)
 - i3 protocols for location information (LIS/ADR/ECRF queries)

- Intrado provides a multitenant solution to allow PSAPs to connect to ESInet regardless of their CPE or GIS capabilities
- Neighboring PSAPs can utilize different configurations while still being able to transfer calls between PSAPs
- Intrado works with individual PSAPs to determine deployment strategy and plan appropriately



CPE Vendor Integration, Testing & Validation

- Established Processes and Procedures
- "No Cost" Service Order Agreement for i3 integration testing w/Service Guides, test plans for a specific number of test hours, additional hours incur additional costs
- Intrado has a formalized process
 - Step 1 Customer Signs NDA, Intrado provides Interface Specifications
 - Step 2 Customer signs "no-charge" SO with Intrado
 - Step 3 Technical Project manager assigned, begins recurring status calls, shares test plan, etc..
 - Step 4 Configuration request is sent to and completed by customer
 - Step 5 System configured and Connectivity (VPN/Internet) completed and verified
 - Step 6 Testing completed
 - Step 7 Ongoing Test system available for customer verifications
- CPE configuration may be kept in system for future release testing (which allows for no-lead time and independent testing) with additional support from Intrado available using hourly rates
 - Initial setup, configuration and testing is estimated at 2 months. This may change depending on Upcoming deployment prioritization. Future releases would be allowed to be run independently
 - All service guides, and i3 specifications are developed and available to A9-1-1 customers.





- Intrado provides a service-based pricing model
- Low to no upfront costs/Non-Recurring Costs (NRC)
 - Intrado A9-1-1 is live today
- Monthly Recurring Costs (MRC) start after successful implementation
- MRC Pricing components
 - Egress Circuits (from Core to PSAP)
 - Configuration/Database/Call Volume
 - PSAP population based
- Flexible Pricing Structure
 - Allows PSAP by PSAP pricing structure
 - Allows for higher NRC to lower MRC





Follow-up Questions

