cistera

Land Mobile Radio Integration with Unified Communications Networks

Cistera LMRconnectIT

Land Mobile Radio communication networks, also known as two-way radio networks are a cornerstone for public agencies, emergency operations and businesses around the world. They are normally confined to their own environment separated from other communication platforms. Radio networks and Telecom networks can now cross communicate to connect critical functions or bridge communications gaps.

Cistera works with global organizations to seamlessly connect Radio Communications Networks with Unified Communications Networks to increase security, compliance, management visibility and quality assurance.

Cistera LMRconnectIT Global Installations

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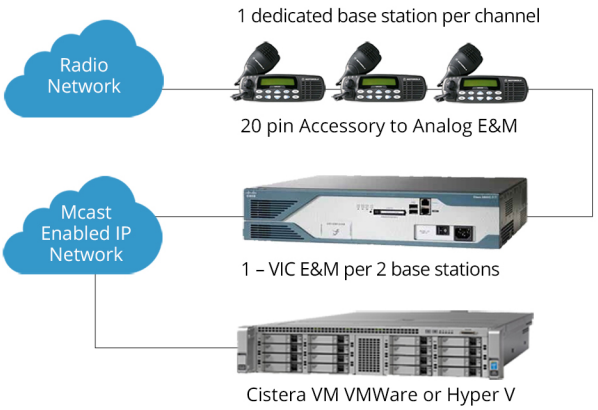
All-channel two-way radio recording? Sure!

Radio traffic across multiple channels can be recorded and retained for follow up, investigative requirements, or regulatory requirements (OSHA, EPA, FEMA, DHS)

Other scenarios are also supported such as recording of traffic from IP phones to hand-held radios and base stations. WAV files can be quickly located and easily downloaded by authorized users for either training or mission-critical purposes. Security is provided by permissions-based user access.

LMR Network



Multi-device seamless communication? No problem!

Using the latest radio-over-IP (RoIP) technology, multiple communication devices can be instantly integrated, monitored and recorded for compliance or training purposes. Having these capabilities preserves the existing two-way radio investment and enhances safety by incorporating the two-way radio protocol into their UC environment as well as providing a full capture mechanism to support quality assurance and compliance requirements.

Once LMR/two-way radios are integrated in a UC environment, they can participate in multicast conferencing as well as event alerting and notification.

Bridge radio network channels? In seconds!

Example: A primary dispatch channel can be bridged to a tactical or EMS channel to form a single entity. This provides the unique opportunity to converge multiple channels into a single entity in critical situations.

Bridging enables multiple entities such as campus safety and first responders, event management or industrial complexes to merge radio networks as needed. It also means all radio traffic can be recorded. In a crisis, emergency first responders will have the ability to communicate and collaborate on plans of action. Rapid configuration can be managed by system administrators with just a few key strokes. The ability to bridge channels together on-the-fly; then separate the groups and return them to their original state provides 'real-time' communication changes when time is critical.

The BIG picture

Cistera's LMRconnectIT leverages the enterprise network platform tools of the Cistera Suite to create a framework for interoperability, recording, monitoring and playback capabilities for all Unified Communications. This framework can scale to support the largest, most demanding environments. The platform conforms to network and technology standards including support for legacy analog and current technology digital radios.

POWERED BY cirrus

The Cistera Suite is built on the Cirrus platform providing security access and authentication, network management, UC platform integration, centralized device management and administration control.

the cistera suite

RecordIT

Real-time communications intelligence - voice recording software with screen capture for some or all calls on all devices 100% of the time

AnalyzeIT

Analyze performance integrating The Cistera Suite with Microsoft Power BI, dynamic speech analytics and reporting tools

AlertIT

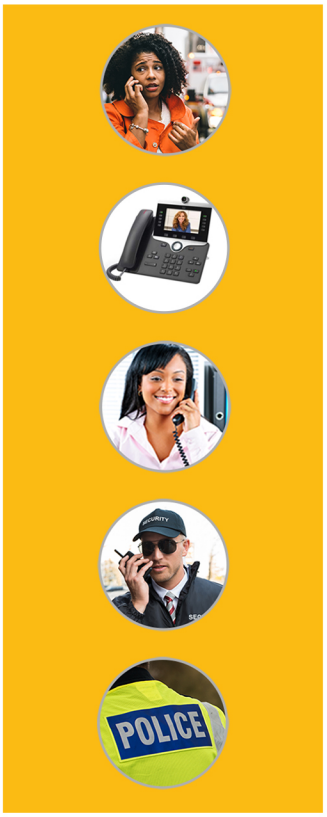
AlertIT is a feature rich tool for broadcast and scheduling within public facilities also providing alerts and situational awareness to first responders

LMRconnectIT

LMRconnectIT integrates radio communications with existing Unified Communications platforms keeping field teams connected at all times

Key features of LMRconnectIT

- Recording of all working channels, not just one
- Capture and retain records based on retention policies
- Search for key files based on channel, date, time of day
- Multiple channel bridging - up to 10 channels per group
- Predefined bridging groups
- On-the-fly bridging with simple administration
- Multicast recording over local and wide area networks
- Integration into Cistera's AlertIT for emergency notifications
- Multicast conferencing
- Cisco UC phone environment integration
- Optional support for Cisco IPICS-enabled switches
- Live monitoring of radio traffic at a desktop or Cisco IP phone
- Create LMR channel groups for all call requirements



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How does LMRconnectIT integrate with your current network?

- A dedicated base station for each channel to be monitored (Base stations are “listening only” no transmission)
- Base stations can be a re-purposed spare or model no longer in use but still fully functional
- A Cisco Integrated Service Router (ISRs) with E&M VIC interfaces. Radios interface with the ISR via a specialty cable sold by Cistera as part of the integration. Cables are radio manufacturer and model specific.
- Multicast enabled network.
- Optional integration with Cisco Unified Communications Manager (CUCM) and Cisco Unified Communications Manager Express (CUCM Express) platforms to create a single communications entity.

NOTE: Voice packets reach a dial-peer on the router that is configured with a static IP address and a unique port number. This dial-peer should direct traffic to an E&M port on the router. An endpoint should be connected to the E&M interface that is properly configured to join the talk group. If data does not reach the E&M interface, Cistera’s LMRconnectIT application will not be fully functional. Cabling to support this is available based on specific radio models.

OPTIONAL: Cisco’s IP Interoperability and Collaboration System (IPICS) routing configuration. Cisco IPICS can provide interoperability between the telephony, two-way radio, mobile and analog phone environments.

Feature	Description
Unified Communications Support	Any authorized Cisco UC supported can participate in any talk group, Talk groups are defined as a phone to radio bridge which can include more than a single radio channel (call all).
Multicast Recording	LMRConnectIT will record any defined talk group at pre-defined intervals.
Talk Groups	LMRconnectIT supports multiple talk groups per instance.
Multicast Devices	There is no limit to the number of multicast devices that can be present on any given multicast address.
Bridging	Multiple instances can be bridged together to create large scalable networks of mobile radios as well as telephony devices.
Rapid Broadcast Integration	LMRconnectIT easily integrates with Cistera AlertIT, which merges the emergency alerting and notification features of AlertIT with LMRconnectIT.
Tone Insertion	Supports wide variety of tones in multicast sessions.
Protocols	SIP RFC 3261, G.711, G.729, Real-Time Transport/Real Time Control Protocol (RTP/RTCP; RFC 3550) RFC 2833 (RTP Pay- load for Dual Tone Multifrequency [DTMF] Digits Session Description Protocol (SDP: RFC 2327) Ipv4, LDAP v3, SMTP (RFC 2821) HTTPv1 Secure Sockets Layer (SSL) versions 2 and 3 Network Time Protocol (NTP v 3 and 4).
Network Connectivity and Bandwidth	VM server: two virtual 1Gbps ethernet connections.