



DATA SHEET

CISCO EMERGENCY RESPONDER VERSION 1.2(2)

Cisco Emergency Responder enables emergency agencies to identify the location of 911 callers and eliminates the need for any administration when phones or people move from one location to another. Enhancing the existing E9-1-1 functionality of Cisco CallManager, Cisco Emergency Responder's real-time location-tracking database and improved routing capabilities direct emergency calls to the appropriate Public Safety Answering Point (PSAP) based on the caller's location.

When coupled with Cisco CallManager, Cisco Emergency Responder surpasses traditional private branch exchange (PBX) capabilities by introducing zero-cost user or phone moves and changes and dynamic tracking of user and phone locations for E9-1-1 safety and security purposes.

FEATURE OVERVIEW

Automatically Locates Phones and Users

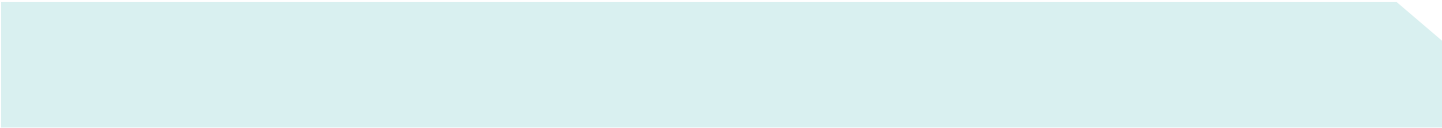
Cisco Emergency Responder proactively queries Cisco CallManager for new phone and user login registration events. In response to these events, Cisco Emergency Responder automatically searches known Cisco Catalyst® switches in the network and finds the location of the phone and the user, based on the switch port to which the phone is attached. This information is then updated in a Cisco Emergency Responder location database, and is used to identify a caller's location when an E9-1-1 call is placed. With this solution, users can move within a campus or between sites, wherever and whenever they want, without any administrative intervention from the IT organization. This eliminates the administrative costs associated with relocating phones or users, while maintaining accurate and updated location information for E9-1-1 state and safety mandates.

Dynamically Routes Emergency Calls and Provides Real-Time Location Information

Cisco Emergency Responder makes informed inbound and outbound call-routing decisions based on the location of emergency callers, and provides crucial location information to emergency operators in Public Safety Answering Points (PSAPs). Outbound emergency calls are directed to a gateway associated with the PSAP that is nearest to the caller, and in the event of an unintentional call disconnect or need for additional information, inbound calls from a PSAP are returned to the original caller.

For example, Dallas telephone users who visit Chicago and dial 911 are connected to a PSAP in Chicago, even though a Cisco CallManager cluster in Dallas processes their calls. The Chicago PSAP receives accurate and updated location information about the 911 callers visiting Chicago from Dallas, and can return their calls. When the Dallas users return home, their subsequent 911 calls are directed to a PSAP in Dallas, with no administrative intervention from the IT organization. Again, the Dallas PSAP receives accurate and updated location information, and can return their calls.

Cisco Emergency Responder achieves this breakthrough in E9-1-1 administration by transcending the traditional method of associating a user's phone number to a physical location. Rather than sending the caller's phone number in the calling party number field of outbound emergency calls, Cisco Emergency Responder sends a different Direct Inward Dial (DID) number that represents the current physical location of the caller. This substitute DID number, called an Emergency Location ID Number (ELIN), acts as a key to the location database which local exchange carriers and PSAPs use to route calls and identify caller location. Data from physical floor plans and site cabling plans are posted a single time to a Private Switch Automatic Location Identification (PS-ALI) database, and no additional updates are required for any user moves, adds, or changes.



This elegant solution both meets and exceeds traditional E9-1-1 requirements. User and phone location changes are automatically updated in real time, whereas traditional E9-1-1 requirements stipulate an update within 24 to 48 hours.

Provides Real-Time Alerts

During an emergency, a reduction of just a few seconds in response time can have an enormous impact on life, health, and property. Cisco Emergency Responder helps minimize response time by providing real-time alerts to onsite personnel through e-mail, pager, telephone call, and Web page notifications. Onsite response personnel then have knowledge of a caller's location, the owner of the originating phone, and the phone number (ELIN) as received by the PSAP. This information facilitates an immediate response before public fire, police, or medical services reach the scene, and improves the effectiveness of public services when they arrive.

Provides Auditing and Reporting

Cisco Emergency Responder tracks and logs administrative changes that affect the emergency location database. This information "audit trail" facilitates a responsible change management process, and is a valuable tool to maintain service availability. In addition, the configuration audit trail is a source of information for investigative or legal proceedings in cases of intentional misuse.

Cisco Emergency Responder also maintains a commented history log of all emergency calls, which facilitates capacity planning for emergency voice trunks, monitoring of emergency call abuse, and documentation of emergency incidents.

KEY BENEFITS

Cisco Emergency Responder enhances the E9-1-1 functionality inherent in Cisco CallManager, and creates an unrivaled "Dynamic E9-1-1" solution for organizations with multi-line telephone systems:

- Meets and exceeds traditional E9-1-1 features
- Automates all user and phone moves, adds, and changes
- Enables users and phones to move an unlimited number of times per day
- Avoids the expense and burden of daily PS-ALI record uploads
- Avoids daily documentation updates that potentially introduce errors
- Enables quicker and more effective emergency response from onsite personnel and public agencies
- Provides configuration auditing to facilitate responsible change management and investigative or legal processes
- Provides call history logs for capacity planning, management of emergency call abuse, and incident documentation
- Is compatible with any emergency number (for example, 999 in UK, E1-1-2 across Europe)

As a result, customers experience cost savings from reduced telecom administration of user moves, adds, and changes. And, by freeing telecom resources from tedious E9-1-1 location database updates, customers can be more productive and focus more of their attention on core strategic initiatives. Because ongoing maintenance of Cisco Emergency Responder is minimal, E9-1-1 compliance is converted from an administrative and financial burden to an opportunity for organizational gains through risk management, loss prevention, site security, employee safety, and community stewardship.

SPECIFICATIONS

Supported Platforms

- Cisco Media Convergence Server, MCS-7845H; highly available server, suitable for platform mounting in 19-inch racks
- Cisco Media Convergence Servers, MCS-7835H and MCS-7835I; highly available servers, suitable for platform mounting in 19-inch racks
- Cisco Media Convergence Server, MCS-7825H and MCS-7825I; powerful platforms at only one rack unit high (1RU), the most space efficient of the Cisco MCS-7800 Server Family
- Cisco Media Convergence Server, MCS-7815I, a powerful mini-tower platform

Scalability	MCS-7815I	MCS 7825H MCS 7825I	MCS-7835H MCS 7835I	MCS 7845H
Switches	200	500	1,000	2,000
Switch Ports	12,000	30,000	60,000	120,000
Manual Phones	1,000	2,500	5,000	10,000
Roaming Phones (remote Cisco ER group)	600 per Cisco ER cluster	1,200 per Cisco ER cluster	2,000 per Cisco ER cluster	3,000 per Cisco ER cluster
IP Phones	6,000	12,000	20,000	30,000

Elements to be Configured Include

Cisco CallManager	<ul style="list-style-type: none"> • Call routing and digit manipulation to forward user-initiated emergency calls and PSAP return calls to and from Cisco Emergency Responder as appropriate
Cisco Emergency Responder	<ul style="list-style-type: none"> • Cisco Emergency Responder version 1.2(2) can be installed only as an upgrade. The upgrade can be performed from the following previous versions of Cisco ER: Cisco ER 1.1(4) and Cisco CER 1.2(1) Upgrades from Cisco ER service patches (for example, Cisco ER 1.1(4) spA or Cisco ER 1.1(4) spB) to Cisco ER 1.2(2) are not supported. If you are running Cisco ER with a service patch, uninstall the service patch before proceeding with the upgrade. • System administration interface—for access to all configuration components or oversight of outsourced vendors • LAN administration interface—for IT LAN group or an outsourced vendor • Emergency Response Location (ERL) administration interface—for IT telecom group or an outsourced vendor
Other Components	<ul style="list-style-type: none"> • Cisco CallManager Backup and Restore Utility Version 3.5.44 • Configure e-mail account on a Simple Mail Transfer Protocol (SMTP) Internet mail server for use by Cisco Emergency Responder • Configure an email-to-pager gateway, or use an email paging service • Configure a PS-ALI transfer application provided by the PS-ALI database service provider (often requires a dialup modem connection) • Provision an E9-1-1 capable voice trunk (Centralized Automated Message Accounting [CAMA] or Primary Rate Interface [PRI]) through a local exchange carrier

System Capacity

A single Cisco Emergency Responder server supports a full Cisco CallManager version 4.0 cluster of 30,000 phones and 2000 LAN switches with attached phones in the same PS-ALI database reporting area. Cisco recommends a second Emergency Responder server to form a fully redundant Cisco Emergency Responder Group with the same capacity and increased availability compared with a single Cisco Emergency Responder server. A single Cisco Emergency Responder Group can support one or more Cisco CallManager clusters, provided that the total number of phones and LAN switches with attached phones is within the system capacity. Larger campuses and distributed systems are supported via a network of Cisco Emergency Responder groups called a Cisco Emergency Responder Cluster.

Note that trunk and bandwidth capacity planning are critical to ensure that audio paths are available for emergency calls. Cisco Emergency Responder does not address trunk or bandwidth capacity planning; this is a planning function associated with the underlying telephony system. Some organizations rely on a minimal Grade of Service (GoS) recommendation of P=0.01, though many organizations opt for more stringent call completion requirements.

FEATURES

Administrative Features

- Server administration is partitioned to maintain configuration integrity and allow simultaneous access by groups with different areas of functional responsibility:
 - Full Cisco Emergency Responder administrative access
 - ERL Administration Interface—allows modifications only to E9-1-1 location information
 - LAN Administration Interface—allows modifications only to LAN switch search parameters
- Supports major Cisco CallManager releases—release 3.1, 3.2, 3.3 and 4.0.
- Authentication and authorization are compatible with Microsoft™ networked user account services
- Configuration data is stored in the same directory that is used by Cisco CallManager
- Support for Microsoft Active Directory
- Support for Cisco IP Telephony Applications Backup Utility Version 3.5.44—provides a reliable and convenient way to perform regularly scheduled automatic or user-invoked backups of your data.
- Password Encryption—Cisco ER 1.2(2) uses a password encryption method to authenticate the user name and password login
- Ethernet ports are automatically identified on specified Cisco Catalyst switches
- Support for CiscoWorks IP Telephony Environment Monitor 2.0 (ITEM)—a suite of network management applications that monitor and manage IP telephony implementations.
- ERLs are flexibly assigned to specific Ethernet ports, to an entire line card in a Cisco Catalyst switch, or to an entire Cisco Catalyst switch
- Configure Subnet-based ERLs—support for 3rd party switches
- One or more ELINs can be specified for each ERL
- Independent emergency-response personnel contact information can be configured for each ERL
- ERL configuration changes are tracked and audited
- ERL Debug Tool—the phone extension is used as the search criteria and displays the ERL for the phone. This diagnostic tool is used to verify Cisco ER configuration during ERL creation and assignment phase and to troubleshoot calls directed to incorrect ERLs.
- Bulk Import/Export of Manual Phone Configuration—to facilitate bulk creation of manually-configured phones
- Media-Access-Control (MAC) address discovery by Content Addressable Memory (CAM) table search can be enabled or disabled on a per-switch basis
- Multiple data import and export functions for bulk administration
- Manual PS-ALI entries are accommodated for broader endpoint support
- Automatic Location Information formatting tools for specific carriers: Bell Canada, SBC PacBell, SBC South Western Bell.

User Features for Onsite Emergency Response Personnel

- Real-time web alerts— Cisco ER 1.2(2) displays 911 calls in the web alert screen immediately after the emergency call is received and routed by Cisco ER call-routing service.
- Simplified Web interface to search current user and phone locations
- Call history review with an editable comment field per call
- Auto-refreshing Web alert screen that displays summary information for all unacknowledged emergency calls
- Simple links to detailed location information for acknowledged emergency calls

Functional Features

- Supports the following phone types via Cisco Discovery Protocol (CDP) Neighbor search on Cisco Catalyst switches:
 - Cisco IP Phone models 7970, 7960, 7940, 7912,7910, 7905G, 7902
 - Cisco IP Conference Station 7935
 - All other skinny phones with CDP support, with the exception of ATA devices
- Supports the following phone types via CAM table search on Cisco Catalyst switches:
 - Cisco IP SoftPhone 1.2 and 1.3, including connections via IEEE 802.11b wireless Ethernet devices
 - Cisco IP Phone models 12 SP+, VIP 30
 - All skinny-based phones that lack CDP support
- Supports phone tracking using IP subnet:
 - Wireless phones, such as Cisco Wireless IP Phone 7920 and Cisco IP SoftPhones running on 802.11b
 - Cisco IP Communicator
 - Supported Cisco IP Phones connected to Cisco or third-party switches that are not discovered or recognized by Cisco ER.
- Supports the following phone types via manual configuration in Cisco Emergency Responder:
 - Analog phones connected to VG248 and ATA devices
 - H.323 endpoints (see the latest Release Notes for specific endpoints supported)
 - Cisco IP Phones not attached to an identified Cisco Catalyst switch (for example home-based telecommuters, within the boundaries of PS-ALI database service provider territories)
 - Any phone otherwise supported for automatic tracking that is connected to an unsupported switch port
- Supports phones connected to the following Cisco LAN switches (see the latest Release Notes for specific devices supported within each series):
 - Cisco Catalyst 2900 XL Series
 - Cisco Catalyst 2950 Series
 - Cisco Catalyst 3500 Series
 - Cisco Catalyst 3550 Series
 - Cisco Catalyst 3560 Series¹
 - Cisco 3725 & 3745 Multiservice Access Routers

1. Requires ER 1.2(2)sr1.

- Cisco Catalyst 4000 Series
- Cisco Catalyst 4500 Series
- Cisco Catalyst 5000 Series
- Cisco Catalyst 5500 Series
- Cisco Catalyst 6500 Series
- Tracks user and phone location to the ingress Cisco switch port
- Receives emergency calls and changes the value in the calling party number field from the caller's phone number to an ELIN that represents the caller's current location
- Redirects emergency calls to a gateway that connects to the nearest PSAP
- Caches the mapping of real caller phone numbers to ELINs, to enable PSAP callback
- Immediately alerts onsite response personnel about emergency calls via:
 - Real-time web alerts
 - E-mail or pager
 - Automated telephone call
 - Auto-refreshing Web page that requires acknowledgement
- Records acknowledged emergency calls in a call-history log, and includes an editable comment field
- Natively supports CAMA interface using VIC-2CAMA

ORDERING INFORMATION

Description	Part Number
Cisco Emergency Responder Server software, including 100 user licenses	SW-CER-1.2-SVR=
Incremental 100 user license key for Cisco Emergency Responder	KEY-CER1.2-100=
Incremental 500 user license key for Cisco Emergency Responder	KEY-CER1.2-500=
Incremental 1000 user license key for Cisco Emergency Responder	KEY-CER1.2-1K=
Incremental 5000 user license key for Cisco Emergency Responder	KEY-CER1.2-5K=
Incremental 10,000 user license key for Cisco Emergency Responder	KEY-CER1.2-10K=

Cisco Emergency Responder can be purchased with a Cisco MCS-7815I-2.0-EVV1, MCS-7825H-3.0-IPC1, MCS-7835H-3.0-IPC1, MCS-7835I-3.0-IPC1 or MCS-7845H-3.0-IPC1 Media Convergence Server. Customers can also purchase the software and licenses, and provide their own server that has been certified for use with Cisco Emergency Responder.

SERVICE AND SUPPORT SOLUTIONS

Cisco AVVID (Architecture for Voice, Video and Integrated Data) support solutions are delivered by a team of design and technical experts trained and certified in this highly specialized field. Cisco and its specialized channel partners offer implementation services based on tested and verified designs and best practices. Delivered through Cisco and its partners, end-to-end services enable businesses to configure and optimize each converged solution. Cisco service and support solutions enhance the value of your investments in network infrastructure, resulting in an overall reduction in the cost of doing business.

- *Advanced Services* enable you to plan, design, build, implement, and optimize your solution for rapid deployment and increased stability and availability.

- *Technical Support Services* provide the maintenance and troubleshooting you need to keep your solution operational.

Delivered directly or through an ecosystem of best-of-breed service partners, Cisco provides strategic and consultative support that maps to each stage of the solution lifecycle: planning, design, implementation, operation, and optimization (PDIOO).



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