सत्यमेव जयते

Ministry of Home Affairs,
Govt. of India

Emergency Response Support System (ERSS 2.0)

Guidelines

January 2026

ERSS 2.0

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Preamble

Transition to ERSS 2.0

This document outlines the updated guidelines for the **Emergency Response Support System Phase II (ERSS 2.0)**, which serves as the upgraded version of the **National Emergency Response System (NERS)** application. ERSS 2.0 builds upon the framework established in the earlier version, ERSS 1.0, as per the NERS Guidelines.

While the core structure, guiding principles, policies and workflows of ERSS remain mostly unchanged, certain deviations and enhancements have been introduced to address challenges encountered during the initial deployment phase of ERSS 1.0. All modifications and upgrades in ERSS have been duly reviewed and approved in timely manner, through the appropriate channels.

This version of **ERSS 2.0 Policies and Guidelines** is issued as an **amendment** to the original **NERS guidelines** and shall henceforth serve as the primary point of reference for ERSS.

The guidelines presented in this document **supersedes** the guidelines and policies mentioned in NERS guidelines document. Any references to the earlier version shall now be read in conjunction with or replaced by the provisions outlined herein**,** unless explicitly stated otherwise.

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1. Introduction

1.1 Vision of Govt. of India

During the year 2015, the Ministry of Home Affairs, Government of India, introduced a modernized approach to emergency services to improve accessibility, transparency, and decision-making processes. A key aspect of this initiative was the establishment of a unified emergency response centre for each State and Union Territory, along with the launch of a nationwide single emergency number '112', to handle all kinds of emergencies across the country.

To ensure transparency and efficiency, a centralized and integrated Emergency Response Support System (ERSS) was envisioned. This system was designed to receive and process multiple signals, and its development was entrusted to C-DAC, leveraging their expertise in implementing Dial-100 solutions across various Indian cities.

1.2 About ERSS -112

In India, the first-generation emergency support systems based on phone numbers such as 100, 101 and 108 were operated manually from separate control rooms. With technological advancements, these systems gradually transformed into semi/ fully automated emergency response systems, predominantly operating on a regional basis.

The Emergency Response Support System (ERSS) 112 system includes a unified platform for receiving distress signals and coordinating multi-service dispatch developed indigenously by C-DAC Thiruvananthapuram as per the guidelines of MHA. The ERSS -112 system includes a software platform that fully automates the operations of the State Emergency Response Centre (SERC), also known as Public Safety Answering Point (PSAP). This is supported by District Coordination Centres (DCCs) and rescue vehicles equipped with Mobile Data Terminals (MDTs) for field operations. The software supports both centralized and distributed dispatch from ERC and DCC.

Since 2018, C-DAC successfully developed and implemented the first phase of ERSS across all States and Union Territories. Since then, the system has been operating reliably, managing the growing number of emergency requests, effectively and efficiently.

1.3 ERSS 2.0

The ERSS 2.0 represents a significant evolution from traditional emergency communication platforms, incorporating advanced technologies to improve emergency reporting, response time, and situational awareness. Designed to align with global standards and technological trends, ERSS 2.0 aims to prove a multi-channel, intelligent and integrated emergency response ecosystem.

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The generalised requirement includes but not limited to:

1. Multi-Modal Emergency Communication: The system must support the reception of emergency signal from both conventional and modern channels, including voice calls, SOS, SMS, email, Web requests, WhatsApp, Chat, Media Crawling, social media, IoT signal, integration with external helplines, etc.
2. Multiple dispatch options (from State capital, District / City, Rescue Stations) for faster actions
3. Resilient and Scalable Infrastructure, dual connectivity between main control room and coordination centres
4. Enhanced vehicle management solution, ensuring fail safe operations enabled through multiple devices for real-time operations.
5. Support integration of Drones and Surveillance systems, Digital Mobile Radios (DMR), Vehicle tracking and dispatch systems, etc.
6. Advanced Analytics and visualisation support, which process real-time and historical data to identify trends, predictive analytics, and data driven decision support.
7. Enterprise Real-Time Monitoring System for identification and faster redressal of issues.

2. Server Infrastructure and Storage

Server infrastructure consists of physical and virtual resources, along with hardware, software and network components that enable data storage, processing and communication. Accordingly, the server and storage infra recommended in the approved project implementation plan shall be provided to the states.

Policy on Inclusion of Non-Approved Items in Project Implementation

- If a state requires any items not originally covered in the approved implementation plan, but essential for ERSS in that state, then the state shall request to Total Solution Provider.
- The replacement must be cost-equivalent or of lesser value to ensure no additional financial burden on the project.

3. Integration with External Systems

Standard and secure Application Programming Interfaces (API) shall be used for exchange of data between two systems. A seamless transfer of data between ERSS and the external system shall be carefully carried out, without compromising the performance of ERSS.

Push and **Pull** are the two main methods of API-based communication. The main distinction between Push and Pull APIs is found in the way they communicate.

- **Push API** (RECOMMENDED): External systems send data to ERSS 2.0 in real-time when an incident occurs. This ensures instant updates and better system responsiveness.

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- **Pull API** (NOT RECOMMENDED): ERSS 2.0 tries to fetch data from external systems on demand. This may cause delays or failure due to network issues, risk of blocking and retry problems etc. This approach is not suitable for emergencies and hence not recommended.

4. Data Backup and Retention Policy

The purpose of this data backup policy is to ensure the availability, integrity and recoverability of State/UT's data by establishing a comprehensive backup and recovery process. The primary goal is to minimize data loss and restore data within a minimum time in case of accidental deletion, hardware failure, or disasters. The retention period in the context of ERSS 2.0 typically refers to how long data such as call records, case details etc., has to be stored and maintained in the system before being archived or deleted, based on policy and compliance requirements.

- State shall have backup mechanism and policies to ensure data integrity, availability, and disaster recovery readiness etc.
- Data should be maintained in the live database for one year. After that the data will be archived and preserved using a suitable storage mechanism.
- Archived data shall retained for 3 years from the date of archival.

5. Response Time

Government of India centrally maintains information and statistics of ERSS in National Support Service (NSS) System for the management and evaluation of ERSS. Statistics include state wise call volume, event information, response time etc. Authorised officials of central ministry/state department can view this information through the NSS portal.

Performance of ERSS 2.0 is evaluated in terms of Response Time of handling emergency calls. It refers to the time duration between the moment a service request is received by the Emergency Response Support System (ERSS) from the victim or caller and the actual delivery of the requested service.

This applies to all actionable events where a service has been provided either by the call taker, dispatcher, or by vehicle. An Actionable Event refers to a service instance that involves an action, which can occur at various stages of the emergency response workflow such as:

- Call - Taker
- Dispatcher
- Emergency Response Units (ERU)

Response Time Calculation and Normalization Rule for Performance Metrics

To ensure uniformity and standardization across varying scenarios, a capping mechanism is introduced in calculating the Response Time (RT) for Call Taker, Dispatcher, and Emergency Response Unit (ERU) services. The capping mechanism refers to the process of limiting a reported response time to a predefined maximum threshold. This threshold is known as the Cap Threshold.

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If the actual measured value exceeds this threshold, it will be capped to the threshold value for the purpose of reporting.

The actual response time calculation at various service points is as follows:

Service Point	Response Time (RT) Calculation	Cap Threshold (CT)
Call Taker	RT = Time of service delivery at Call Taker - Call Attended Time	5 minutes
Dispatcher	RT = Time of service delivery at Dispatcher - Event Read Time at Dispatcher	5 minutes
ERU	RT = Vehicle Reach Time - Service Accept Time	50 minutes

The total response time is the sum of response times at each service points (i.e., Response time of call taker, dispatcher and ERU).

Total Response Time = **Call Taker Response Time** + **Dispatcher Response Time** + **Emergency Response Unit (ERU) Response Time**

Note: The Cap Threshold (CT) values are determined based on the historical data and practical experiences from various States.

Normalized Response Time (NRT)

To eliminate the effect of extreme delays in various services, the Normalized Response Time is calculated using a pre-determined cap threshold. This approach ensures that the response time is recorded in a normalized form, allowing for consistent and fair performance evaluation across different service types.

- If the actual **Response Time (RT)** is **less than or equal to** the **Cap Threshold (CT)**, the **Normalized Response Time** is equal to the actual response time.

  If RT ≤ CT, then NRT = RT

- If the actual **Response Time** exceeds the **Cap Threshold (CT)**, the **Normalized Response Time** is limited to the Cap Threshold value.

  If RT > CT, then NRT = CT

The key factors influencing Response Time are:

1. Number of Available Vehicles
2. Distance to Incident Location and traffic
3. Geographical and Infrastructure challenges like rural, hilly or remote regions, weather and terrain further affect accessibility and time.

State/UT-Specific Variability

To ensure fair performance assessment across diverse regions:

- The normalized response time rule helps standardise performance metrics despite the differences in geography, infrastructure, vehicle availability and operational practices.
- Any additional integrations or exceptions may be documented and considered for analysis.

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- The States/UTs shall be responsible for sharing detailed operational data—including the split-up of response times and call statistics—whenever requested by the competent authority.

Note:- All state has to share the requested data advised by policy makers to ensure the availability of required information in NSS.

6. Scrap Policy

The scrapping process is systematic procedures intended to dispose of assets that have become obsolete, damaged, or are no longer valuable to operations.

This policy applies to:

- All hardware assets (servers, storage devices, networking equipment, personal computers, etc.)
- All software assets (operating systems, applications, tools, etc.) used in ERSS and ERSS 2.0 across all States and Union Territories.

Criteria for Scrapping

Assets may be considered for scrapping under the following conditions:

- Reached End-of-Life (EOL) as per manufacturer guidelines.
- Non-functional or irreparably damaged.
- No longer required for operational or security purposes.
- Obsolete due to technology upgrades (e.g., transition to ERSS 2.0).

7. General Guidelines

- **Call Taking Personnel:** Public Safety Answering Point (PSAP) resources for call handling shall be deploy in accordance with the Advisory dated 17.11.2016, which has already been issued to all States/UTs wherein it was mentioned that "*States/UTs are requested to identify required number of call takers (depending upon the volume of calls to various existing emergency numbers) and deploy them at State Emergency Response Centres (SERCs), who may be suitably trained Government servants belonging to Police, Health or Fire Services, or other appropriate departments or skilled outsourced personnel to discharge these functions*".
- **Facility Management Services (FMS):** State shall engage Facility Management Support staff for 24 x 7 technical support at the ERC. *(Note: Before engaging FMS, state shall carry out a compulsory background verification.)*

  Responsibilities of FMS includes:
  - Technical support to resolve, hardware, software, network infrastructure and connectivity related issues.
  - Ensuring the security of ERSS

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- Assist and facilitate police officials in compiling and generating reports from the ERSS systems; however, FMS personnel are NOT authorized to sign any statutory documents or reports pertaining to ERSS.

- **Software upgrade/maintenance:** This will be scheduled in every **3 months**, or as and when required, which includes necessary updates and performance optimisations. The state authority shall decide the most suitable time window for scheduled downtime.
- **Location Identification Mechanisms (LBS/ELS)** are provided through the Telecom Service Provider and using other third-party services like Google ELS
- **Social media:** ERSS 2.0 shall support integration with social media such as WhatsApp.
- **Whitelisting:** There shall be option for designating specific phone numbers or caller profiles that are never blocked or filtered by the ERSS. The purpose of whitelisting is to allow prioritized access to VIP callers and other relevant numbers by bypassing regular call handling protocols.
- **Blacklisting:** Option shall be provided in the call taking application, to blacklist a phone number, if the call is found to be Abusive or Threat calls, Deliberate Misuse or Prank or Nuisance Calls, or creating disruption of Services (auto-dialling). Blacklisted numbers can be reinstated only by the authorized official.
- **Blocklisting:** Option shall be provided in the ERSS system to automatically filter the unintended or misrouted calls, while preserving immediate access for legitimate emergencies. There must be provision for unblocking, the blocked numbers after a time span.

8. Promotion and Publicity

Promotion of the single emergency number 112 is essential to ensure widespread public awareness and accessibility. Periodic Publicity campaigns may include print and digital media, radio, television, public announcements, and community outreach programs.

All promotional content must adhere to national branding guidelines and be designed to be accessible, with targeted outreach to diverse population segments, especially in rural and high-risk areas.

9. Responsibility Disclaimer

The implementation agency will only manage backup and storage as per the above guidelines. It will not be responsible for any data loss, access issues, or recovery failures caused by factors outside its control, such as user-side errors, third-party systems, or infrastructure failures not managed by the agency.

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10. Annexure A – Glossary

List of Abbreviations	
API	Application Programming Interface
COTS	Commercial-Off-The-Shelf
DC	Data Center
DCC	District Coordination Centre
DR	Disaster Recovery
ELS	Emergency Location Service
ERC	Emergency Response Centre
ERSS	Emergency Response Support System
FMS	Facility Management Services
GIS	Geographical Information System
GPS	Global Positioning System
ILL	Internet Leased Line
LBS	Location Based Services
MDT	Mobile Data Terminal
MHA	Ministry of Home Affairs
MPLS	Multiprotocol Label Switching
NSS	National Support Service
PFT	Portable Field Tablet
PSAP	Public Safety Answering Point
SERC	State Emergency Response Centre
SIM	Subscriber Identity Module
SIP	Session Initiation Protocol
SMS	Short Messaging Service
SOP	Standard Operating Procedure
SOS	Save Our Souls
TSP	Total Service Provider
UT	Union Territory
URL	Uniform Resource Locator
VM	Virtual Machine

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