Public Warning System Failure and Restart Indication Support on SBc Interface

Feature Summary and Revision History

Summary Data

Applicable Product(s) or Functional Area	MME
Applicable Platform(s)	• ASR 5000 • VPC-DI • VPC-SI
Feature Default	Enabled - Configuration Required
Related Changes in This Release	Not Applicable
Related Documentation	*MME Administration Guide*

Revision History

Revision Details	Release
MME is enhanced to show two new failure message types. Session manager and MME manager facility stack are updated to handle the PWS failure and restart indications.	21.28

Feature Description

The MME uses the SBc interface, between the MME and the Cell Broadcast Center (CBC), for warning message delivery and control functions.

The MME supports a Commercial Mobile Alert System (CMAS)—SBc interface and underlying protocols. CBC sends Warning Messages over the SBc-AP interface and relays to all relevant eNodeBs over the S1-AP interface.

MME upon receiving Public Warning System (PWS) failure or restart indication starts a CBC transaction to notify MME on the failure or restart.

Session manager and MME manager facility stack are updated to handle the PWS failure and restart indications.

The CMAS functionality is enabled in the networks to provide warning notifications to subscribers.

Important A valid license key is required to enable the SBc interface. Contact your Cisco account representative for information on how to obtain a license.

How It Works

The MME accepts incoming SBc associations coming from multiple CBCs.

The MME is responsible for the delivery of the Warning Messages received from CBC to all relevant eNodeBs serving the given TAI list. In the absence of TAI list in the received Warning Message, MME sends the Warning Message to all connected eNodeBs.

The MME acknowledges to CBC when it has started distributing the Warning Message to all relevant eNodeBs. If a response is not received from any eNodeB, it shall not result in any exclusive error messaging to CBC.

Even if the MME node is experiencing congestion, Warning Messages are forwarded and not dropped.

When connected to multiple CBCs, the uniqueness of Warning Messages as identified by Message Type, Message Identifier and Serial Number, must be ensured across these CBCs.

Warning Message Call Flows

In compliance with 3GPP TS 29.168 v15.1.0, the MME supports the following procedures:

- Write-Replace Warning Procedure
- Stop Warning Procedure
- Error Indication Procedure
- Write-Replace Warning Indication Procedure
- Stop Warning Indication Procedure
- PWS Failure Indication
- PWS Restart Indication