

intel[®] Technical Note

Enterprise Server Group
Server Software Technology

Interfacing Platform Event Paging with Global System for Mobile Telecommunications

Background and Overview

Platform Event Paging (PEP), currently available on the Intel[®] C440GX+ and L440GX+ server systems, provides proactive numeric page notifications via an external modem on the server COM2 port if a problem is detected on a managed server. Pages are configured in BIOS setup, where it is possible to enable/disable each possible event and to configure the paging service phone number and numeric message.

The Server Management firmware then generates the pages, regardless of the Operating System running on the managed server and regardless of the state of that Operating System. Pages can also be generated during pre-boot and post-boot states, as long as standby power is available (the server system is plugged into a powered wall outlet).

When the System Administrator receives a page notification, he/she can use the Emergency Management Port Console application to dial into the server system to begin assessment and troubleshooting activities.

Pages can be configured for the following events:

- Temperature Sensor out of range
- Voltage Sensor out of range
- Chassis Intrusion [Security Violation]
- Power Supply Fault
- BIOS: Uncorrectable ECC error
- BIOS: POST Error Code
- FRB Failures (Note: Page will be repeated for each successive FRB time-out until the log limit is reached.)
- Fatal NMI (NMI from source other than Front Panel NMI or Uncorrectable ECC Error)
- Watchdog Timer reset, power down, or power cycle
- System restart (reboot)
- Fan failures

Global System Messaging (GSM) refers to the set of telecommunication standards and digital network services defined and overseen by the European Telecommunication Standards Institute (ETSI).

A unique feature of GSM, compared to older analog systems, is the Short Message Service (SMS). SMS is a bi-directional service for sending short alphanumeric (up to 160 bytes) messages in a store-and-forward fashion. For point-to-point SMS, a message can be sent to another subscriber in the service, and an acknowledgement of receipt is provided to the sender.

Integration

PEP has had issues using GSM for paging, but the following two integration methods have proven successful:

- 1) PEP will successfully send a numeric page to GSM if the service provider offers a "pager to Short Message Service (SMS)" gateway that allows the sending of a numeric page to a GSM mobile phone. It is necessary to check with the local service provider to see if this is available since not all GSM service providers allow this functionality.
- 2) The "Caller ID" feature on most mobile phones can be configured to associate descriptive text with an incoming phone number. When PEP generates an alert it dials the mobile phone number. As the mobile phone rings with the incoming call, the "Caller ID" configuration would then display text such as "SERVER1 has generated an error. Please use EMP to call 555-555-5555". This approach allows PEP to completely bypass any paging or messaging services.

Note that the number of characters that can be associated with an incoming call number is dependant on your mobile service provider. In addition, if the mobile phone is switched off or if the holder of the phone is in a non-signal area at the time of the call, the message will not get through.