

Public Safety Operations Centres

Public safety operation centres in Italy, responsible for EEN (European Emergency Number) 112 and EMS (Emergency Medical Service) 118, have chosen NEC's Express5800 Fault Tolerant server product to provide service continuity for mission critical IT systems.

Safety is a key issue for citizens and expectations are extremely high. Many different agencies are involved in the area of "emergency response", such as health emergency services, alpine rescue, fire department, police & civil protection. Emergency services are contacted by dialling a toll free number corresponding to a specific agency, or by connecting to a Public Safety Access Point (PSAP).



EXPECTED BENEFITS

A system that guarantees:

- Continuous application availability, 24 x 7 with no performance overhead
- Non-stop operation of all hardware components
- Simplified management (*Fault Tolerant utilities are automated and do not require administrator intervention*)
- Support for any application, and a wide range of operating systems
- No special skills or expensive service charges are required to maintain and operate the product
- Pro-active support and remote diagnostics provided directly by NEC or an approved NEC service partner

The Challenge: Guarantee high Performance associated with a High Standard of Reliability

A single emergency number

A European Union mandate requires all member states to activate a single European Emergency Number (112) to enable all citizens in any country and speaking any language, to receive technical, health or security assistance as soon as possible and in accordance with EU regulations.

The introduction of a single emergency number can be a challenge. Various local organisations can operate in significantly different ways, depending on local needs and characteristics. However the common goal is to provide emergency services in an efficient and coordinated manner. To achieve this goal, one key factor is the establishment of local, national or European emergency management centres, equipped with the most advanced operating tools, which are also capable of withstanding common IT failures.

Coordination and control is crucial

In any business or organisation the key focus is always the provision of reliable and efficient services. In the case of a Public Safety Operations Centre it becomes a necessity to guarantee the continuous operation of all essential systems. A public safety centre must continue to operate even in the most challenging of circumstances. To achieve a high level of operational uptime, infrastructure components

must be fault tolerant with the ability to recover from complex failures. Emergency operations centres are not isolated entities; from a technological point of view they are often integrated with regional information systems and mobile equipment on the ground that transmit clinical information in real time about patients being transported by ambulance or to the emergency rescue services. For this reason the IT infrastructure is an important consideration for an emergency organisation.



Efficient emergency services are a key focus for all European and Local Governments.

- The creation of the EEN 112 PSAP in the Province of Varese is the first centralised emergency service centre in Italy, in which all public emergency information systems are integrated in the same control room environment with the 112 telephone number as the single point of contact for the ambulance, police and rescue services.
- The 5 operations centres coordinating all the EMS in the Liguria Region are structurally integrated with the mobile information systems on the ground, enabling the response units to seamlessly exchange information with hospitals and other health centres, and providing them with the maximum amount of real-time information about the patients and their situation while they are being treated in the field.

THE SOLUTION

CUTTING EDGE NEC TECHNOLOGY WITH 99.999% SERVICE CONTINUITY.

Provides a highly available solution to support both the EMS and EEN operations centres and other out-of-hours Care Services and other Coordination Centres.

Beta 80 Group has integrated NEC's Express5800/R320a Fault Tolerant Server to protect the database, and information flow of each centre, the solution provides high-efficiency common data protection standards for these environments in which every second counts and where each component is an essential tool in helping to make life-and-death decisions.

The tests carried out in the laboratory and in the field have shown that integrating "emma" with NEC's Fault Tolerant server provides an advanced solution, guaranteeing continuous uptime for all mission critical applications within the emergency service centre environment.



"The 99.999% operational continuity of the NEC Fault Tolerant server is the essential feature of the integration with the emma platform. The NEC Fault Tolerant has made it possible to achieve the objectives of infrastructure reliability and data security and secondly to study new developments and integrations that may need to be added to the public safety service, without having to worry about upgrading the technological component" Oscar Bocchini, Senior Vice-President – International Development Manager, Beta 80 Group

emma - EMERGENCY MANAGEMENT SOFTWARE



emma
emergency
management

A multi level logical platform

An emergency centre based on "emma" has various application modules that depend on actual operational needs, to provide operators and managers with complete supervision ability over all activities and data.

Integrating a control centre management software platform

"emma" (emergency management) is a specialised software platform used in control centres. It has been on the market since 1992 and today is leader in Italy, thanks to a huge development work, carried out in cooperation with well known experts in this field.

The "emma" platform is a highly scalable, configurable and customisable management application, integrating all the most advanced technologies available on the market.

Features include:

- Integration with most PBX telephone switches
- Integration with radio and GPS systems
- Advanced GIS for incident location
- Opening of centre activity to the internet ("emma" Web module)
- Highly secure and reliable hardware infrastructure Integration and interoperability between the various agencies involved - with different tasks - in rescue services.

NEC FAULT TOLERANT SERVER

NEC's Fault Tolerant is a NEC-plus-ultra technology



NEC's Fault Tolerant guarantees business continuity with a number of key benefits,

- Non-stop operation server with all hardware components duplicated in a single solution, eliminating common points of failure with real time synchronisation. In the event of a malfunction the system continues seamlessly allowing "hot" replacement of the failed components with no loss of service.
- Total systems compatibility with Windows 2003 R2 EE, 32 & 64 bit, Windows 2008 64 bit, Linux Red Hat 5.x & VMware VSphere
- No skills required, unlike a traditional cluster solution, the Fault Tolerant Utilities are invisible to the administrator and automated.
- Cost efficient when compared with a traditional cluster solution. The Fault Tolerant Server only requires one copy of the Operation System and Applications.
- Remote diagnostic monitoring service provided either by NEC directly or an NEC service partner. This bundled service provides another level of business continuity with no manpower overhead on the internal I.T administration team.
- As the replacement of the failed part is done by module (CRU: Customer Replace Unit), and not individual components, no special skills are necessary and the system synchronises automatically on installation of the replacement part.

The Fault Tolerant server ensures both fast response times, in compliance with regulation, and high reliability to ensure continuity of service in all environmental conditions safeguarding the integrity of the data.



A partner of excellence

Beta 80 Group is a partner of excellence of integrated emergency management projects. Beta 80 Group gives strategic consulting and support, designs and sizes the technical infrastructure, supplies, installs, starts-up and gives 24/7 helpdesk and assistance. This experience generated a product platform (named emma – emergency management), specifically configurable to meet the needs of diverse organizations.



BETA 80 GROUP

References of the integrated emma platform

The NEC Fault Tolerant server is integrated in the "emma" platform and guarantees reliability and business continuity in 7 Emergency Operations Centres throughout Italy.

These include:

- ASL Monza e Brianza
- EEN 112 Varese
- 118 Liguria – sites at Genoa, La Spezia, Imperia, Savona, Lavagna

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NEC Corporation

7-1, Shiba 5-chome - Minato-ku - Tokyo 108-8001 - Japan
www.nec.com

NEC IT Platform Solutions Division European Headquarters

10, rue Godefroy 92821 Puteaux Cedex - France
www.nec-itplatform.com

Tel: +33 1 42 91 80 00
Fax: +33 1 42 91 88 61