



Performances and recent evolutions of EMSC Real Time Information services

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The EMSC (<http://www.emsc-csem.org>) operates Real Time Earthquake Information services for the public and the scientific community which aim at providing rapid and reliable information on the seismicity of the Euro-Mediterranean region and on significant earthquakes worldwide. These services are based on parametric data rapidly provided by 66 seismological networks which are automatically merged and processed at EMSC. A web page which is updated every minute displays a list and a map of the latest earthquakes as well as additional information like location maps, moment tensors solutions or past regional seismicity.

Since 2004, the performances and the popularity of these services have dramatically increased. The number of messages received from the contributors and the number of published events have been multiplied by 2 since 2004 and by 1.6 since 2005 respectively. The web traffic and the numbers of users of the Earthquake Notification Service (ENS) have been multiplied by 15 and 7 respectively. In terms of performances of the ENS, the median dissemination time for Euro-Med events is minutes in 2008.

In order to further improve its performances and especially the speed and robustness of the reception of real time data, EMSC has recently implemented a software named QWIDS (Quake Watch Information Distribution System) which provides a quick and robust data exchange system through permanent TCP connections. At the difference with emails that can sometimes be delayed or lost, QWIDS is an actual real time communication system that ensures the data delivery. In terms of hardware, EMSC implemented a high availability, dynamic load balancing, redundant and scalable web servers infrastructure, composed of two SUN T2000 and one F5 BIG-IP switch. This will allow coping with constantly increasing web traffic and the occurrence of huge peaks of traffic after widely felt earthquakes.