

Systems for remote control, supervision and control in “Elektromreza Srbije” (SCADA / EMS) must meet the increased number of requests. One of them is high availability. Application of software for high availability ensuring is presented by Nikola Stojakovic, Mladen Nikolic and Aleksandar Mihajlov, all from the Belgrade Institute “Mihajlo Pupin” in the paper of “High availability WEB applications in SCADA / EMS systems”. Their paper was presented at last year’s 32nd Conference of Serbian National Committee of CIGRE (International Council on Large Electric Systems), which was held on Zlatibor. The SCADA / EMS systems for supervision, use software packages (Web applications) because of easy availability and use. The operating mode of high availability system is one in which intervals of system unavailability are minimized, the desire is to achieve a mode in which the “system is resistant to failures”. In this paper, three experts analyzed high availability of Java Web application that runs on Glassfish application server. The server has the ability to work in a cluster with multiple instances in which there are applications that provide desired services (Web monitoring) and replicated critical parts of operational memory. The cluster consists of two instances Glassfish server, installed on two physical machines, so that critical parts of memory are replicated and available on both servers. Apache server is used, that performs forwarding of requests (also balances the load) to the server instances. After the cancellation of some of the instances, divert of the entire content is redirected to the correct instances. Apache server is configured to work in a Linux High Availability cluster. Providing of functionality, necessary for high availability, resulting in loss of performance. An important feature is the takeover time of the system functionality, in case of failure of some of the system components. For configuration of the high availability web server in this case requires three free IP address. Two are used as real physical addresses of machines, and only for internal purposes, and only when the system configuration and in communication between these two computers. The user does not see them and do not approach them. Over the third address users access the web server, or the application itself. To achieve high availability, it is necessary to use larger hardware resources. These (redundant) resources should not exist in the system only as a “reserve” in case of any failures, transmits Serbia-energy.eu