

HP customer case study: HP c-Class blade servers ensure successful operation of the press centre during the Eurovision Song Contest

Industry: Media

HP blade servers allow easier control of several hundred virtual machines



“Within just five days, we installed everything and defined all 400 users. The virtual environment also meant that we didn't have to engage as many people for maintenance.” Drago Samardžić, director, COMING Company

Objective:

- Serbian state broadcaster, Radio Televizija Srbije (RTS), had to create a reliable press centre for the several thousand journalists attending the annual Eurovision Song Contest.

Approach:

- After a demonstration of virtualisation technology, a combined solution of 200 Thin Clients and 200 desktop computers was chosen.
- HP c-Class blade servers and VMware Infrastructure software were chosen as the basis of the system.

IT improvements:

- Fast system configuration: five days for 400 virtual machines.
- Easy creation of secure desktop environments.

Business benefits:

- Significantly lower power consumption – 30 per cent reduction for the data centre.
- Up to three times fewer people for system maintenance, and up to four times faster problem-solving.



The organisation of the Eurovision Song Contest was a logistical challenge. It was necessary to host more than 2,000 people from the delegations of 43 participant countries, while a further 3,500 journalists followed the competition. At the same time, organising the Eurovision Song Contest also presented a technical challenge, it was imperative that the technology in the competition press centre functioned perfectly, and that journalists following the competition had trouble-free Internet access.

Selecting a solution

During planning, the COMING company (www.coming.rs) recommended a system to Radio Televizija Srbije (RTS) that provided up to 400 virtual desktop computers using Thin Clients. However, as this was the first time that such a large virtual system had been built, RTS's technical service chose a combined solution of 200 Thin Clients and 200 standard computers, so that the standard infrastructure could be used if the virtualisation solution did not function as expected.

Customer solution at a glance

Primary hardware

- HP c-Class blade servers
- HP Compaq t5720 Thin Clients

Primary software

- SAP Enterprise Resource Planning

HP Services

- Support in the set-up which included extensive testing
- Ongoing maintenance

“RTS made a very brave decision in accepting our recommendation to use, for the first time, virtualisation technology for a system of that size, says COMING director Drago Samardžić. Prior to this project, we'd had chance to review a case study of desktop environment virtualisation, where a system of 57 virtual machines had been installed in laboratory conditions.”

Powerful technology

It was necessary to design a system that could provide fast and reliable operations for 600 users simultaneously. In addition to 200 Thin Clients and 200 desktop computers, 100 cable connection locations for laptop computers were provided, as well as capacity for over 100 wireless connections. The software chosen for the system was the VMware Infrastructure 3 solution for the creation of virtual hosts and virtual computers, while VMware Virtual Desktop Manager (VDM) software was selected for virtual machine management. All the data accessed by users was placed on two NetApp FAS2020 iSCSI units, each with 2.1 Terabytes of primary SAS storage for virtual system support and 3.5 Terabytes of secondary SATA storage for back-up systems, giving a total capacity of 11.2 Terabytes.

Cisco Systems routers and HP ProCurve networking switching accessories were used for networking, while an HP blade platform was used for the core system. It was decided that six HP ProLiant BL480c servers would be built into two C7000 chassis, each with two 3 GHz four-core processors and 28GB of RAM memory.

Having been activated, these servers operated for over 25 days non-stop without a single problem being reported. The two-chassis solution was chosen to give 100 per cent redundancy (the system could continue working normally even if half the power supply collapsed and the cooling fans stopped

working), and also because this platform will continue to be used as the basis for Radio Televizija Srbije's (RTS) technology system and disaster recovery solution.

Simpler maintenance

The virtual environment was chosen due to the many advantages it offers over physical infrastructure. Firstly, the time required for system maintenance is significantly shorter; maintenance of the physical infrastructure takes four times as long when administrative staff have to go to each individual computer to sort out problems. This also entails three times as many employees, as well as travel expenses to where the computers in need of servicing are located. Virtual machine users also save time; activation of desktop environments on Thin Clients proved to be two to three times faster than desktop computers.

“In a virtual environment, all the work is performed from one remote location. If a virtual machine starts behaving unexpectedly, it can be removed with one click and the system will automatically make a new one,” Samardžić explains. “Each machine is encapsulated, and even if a virus appears due to a lack of protection, it cannot spread any further. Data is located in a central place where it is regularly backed up, and users can access their virtual desktop computers from any location.”

Electricity savings are also exceptionally important. Thin Clients use only seven watts of power, while office computers use at least 180 watts. With the same level of investment in physical and virtualised infrastructures, the costs for using a virtualised environment can be up to 50 per cent lower. “At current electricity prices, for three to four years of regular office use, savings on electricity bills alone would be worth 50 per cent of the value of the entire system,” concludes Samardžić.

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