

HP Integrity servers provide a robust platform for new Croatian healthcare portal



“Healthcare Insurance in Croatia is now delivered more efficiently for millions of citizens, thanks to our new Web Portal which runs on a powerful combination of HP Integrity servers and IBM Software - Informix and WebSphere Middleware.” Hrvoje Jezidžić, assistant director for organisation, development and information, HZZO

Objective:

The Croatian Government's Institute for Health Insurance (HZZO) wanted a more efficient way to exchange vital treatment and billing information with the republic's healthcare providers.

Approach:

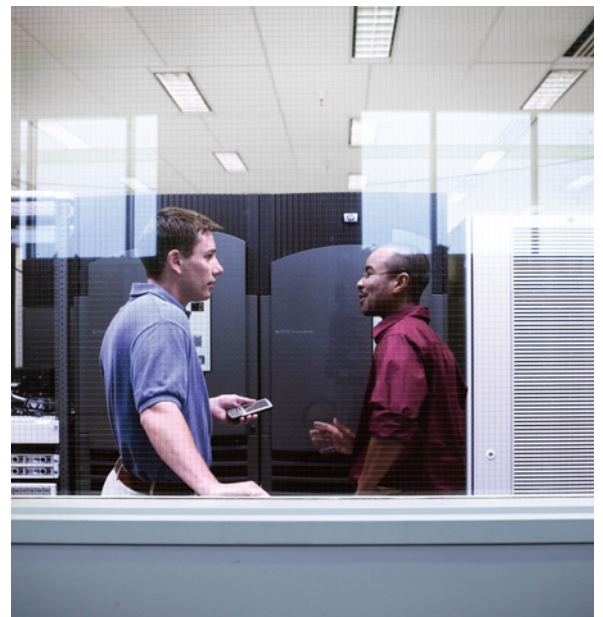
- HZZO replaced its practice of posting letters and floppy discs with a new Web Portal where information can be obtained electronically by 5,000 doctors, 1,000 chemists and 65 hospitals.
- The portal uses IBM WebSphere Application Server and WebSphere Portal v6.0 Middleware with IBM Informix database software to provide access for all partners and HZZO employees.
- The infrastructure is based on an HP Integrity Superdome server running the HP-UX operating system and links to HP storage devices.
- Additional HP Integrity servers are used for customer application development and to support the Middleware.

IT improvements:

- HZZO believes its IBM software runs best on an HP Integrity platform. Using this combination has increased functionality and is more cost-effective than other hardware options.
- The inbuilt reliability of HP hardware supports high availability and reduces unplanned maintenance requirements.

Business benefits:

- HZZO and its healthcare partners now have a faster, more secure and flexible way to exchange data from a single point of contact, providing a quicker and more efficient service for the residents of Croatia.
- It also puts HZZO and healthcare at the forefront of the ambitious e-Croatia programme, a national drive to use the Internet and technology to improve services for residents.



Hrvatski Zavod za Zdravstveno Osiguranje (HZZO) is the Croatian Institute for Health Insurance which manages the country's mandatory health insurance system.

Four million residents of Croatia pay into the system and HZZO reconciles their contributions against any treatments and drugs that they receive, ensuring that all records are up-to-date and bills are paid.

To do this, HZZO must constantly exchange treatment and billing information with the country's primary and secondary healthcare providers, which include 5,000 doctors, 1,000 chemists and 65 hospitals.

Electronic communication

Previously, this enormous task was done by posting out letters and floppy disks but that was time consuming, slow and inefficient. A new and faster communication system was required and it was decided to create a Web Portal that could be regularly updated by HZZO and where healthcare providers could gain rapid electronic access to the information they need. This plan was also a significant development in the

Customer solution at a glance

Primary hardware

- HP Integrity Superdome server
- HP Integrity rx8640 server
- HP Integrity rx7640 server
- HP Integrity rx1620 server
- HP Integrity rx2620 server
- HP StorageWorks XP1024 disk array

Primary software

- IBM WebSphere Application Server v6.0
- IBM WebSphere Portal v6.0 – Middleware
- IBM Informix IDS v11
- HP ServiceGuard v11.18
- HP Integrity Virtual Machines
- HP-UX 11i v3.0 Operating Systems
- Entrust security software

HP services

- Implementation advice
- Ongoing Proactive 24 support

government's ambitious e-Croatia programme which promotes use of the Internet to improve the quality of service to citizens of the republic. With an improved billing management track record system, the overall implementation helps to reduce costs.

Because of its importance to the whole of the country's healthcare provision, the new portal had to offer 24x7 availability. A secure, flexible and highly reliable platform was required and after considering hardware vendors that included IBM, HP, and Sun, HZZO chose HP server technology.

"We have worked with HP servers since 1993. HP is an excellent company and we have had a great experience with their people and with their technology," says Hrvoje Jezidžić, assistant director for organisation, development and information at HZZO. "We chose to stay with an HP platform for the new portal because we wanted to protect our existing investment."

Successful combination: Database, Middleware and applications on a single HP-UX infrastructure

Efficient database management is vital for HZZO and for many years it has run IBM's Informix relational database products. The first part of the project was to upgrade from HP-UX PA-RISC servers to HP-UX Integrity Intel Itanium based servers as well as refreshing Informix IDS from v7.0 to v11 and deploy high availability scenarios with HP ServiceGuard. Then, to successfully create the Service Oriented Architecture (SOA) required for its new portal it also chose to use IBM's WebSphere Portal and Application Server 6.0 Middleware smoothly integrated with Informix on HP-UX.

"From the beginning, IBM Informix has worked very well on our HP-UX platform, which means we have not had the need to use any other database systems such as DB2 or Oracle," adds Jezidžić. "Also, we get excellent service from HP with fantastic support and concise documentation and we have never had any problems with the integration of Informix or any other applications.

"When we started to build the new portal, we tested various J2EE Middleware products available on the market and decided that IBM WebSphere was best for us because of its standard compatibility, openness and broad functionalities with our JAM/Panther development platform.

"During the implementation phase we received technical support from both IBM and HP. We got the chance to test the IBM software on an HP-UX Integrity

platform prior to the acquisition. We believe that running the IBM software on HP has provided us with a powerful and optimised solution which is more cost effective when compared with other hardware platforms. Performance and reliability are also excellent."

HZZO's portal runs on an HP Integrity Superdome with 16 Central Processing Units (CPU's) and is linked to an HP StorageWorks XP1024 disk array with 20 Terabytes (TB) of storage capacity. HP Integrity rx8640 and rx7640 servers are used for custom application development with the JAM Panther tools and HP Integrity rx1620 and rx2620 servers, supporting additional WebSphere products. The latest edition of HP Virtual Server Environment with soft partitioning and Integrity Virtual Machines software allow us to significantly improve hardware utilisation, secure production workloads and introduce a level of flexibility never achieved before. Vital security of the site is managed by Entrust security software. HP Technology Services fulfil a Proactive 24 service contract that provides a four-hour fix for issues with critical systems.

Selecting HP-UX Integrity Servers from rx1620 up to HP Integrity Superdome help HZZO to simplify server management and administration costs, whilst providing powerful, homogenous and highly flexible IT infrastructure.

High availability

"The portal has been running on our HP Integrity platform for some time now and it has been a great success," says Jezidžić. "Because our systems are connected to other public service databases in Croatia we have to ensure 24x7 availability and we get that from HP ServiceGuard. In fact, we have had some HP servers that have run for ten years without any problems.

"HZZO, the healthcare providers and the patients all benefit from this new system. We can now retrieve treatment and billing information more quickly and accurately than ever before. By visiting the portal, doctors, chemists and hospitals can download all the information they need more quickly and the residents of Croatia get a more efficient, low-cost service which is in line with the e-Croatia programme," concludes Jezidžić.

Future plans include, enabling patients to visit the portal to choose their preferred doctors and HZZO also plan to build a disaster recovery site to ensure even greater availability of its vital services. The IBM Informix v11 release will definitely help HZZO to set up and synchronise deployments across multiple sites.

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