

# Jeju University Hospital Improves System Performance, Eliminates Network Downtime



제주대학교병원  
CHEJU NATIONAL UNIVERSITY HOSPITAL

Jeju National University Hospital  
Jeju, Republic of Korea  
www.jejunuh.co.kr

## Industry:

Healthcare

## Employees:

650

## Oracle Products & Services:

Oracle Database  
Oracle Real Application Clusters  
Oracle Partitioning

## Oracle Partner

ezCaretech  
Seoul, Korea  
www.ezcaretech.com

*“The new electronic healthcare system based on Oracle Database 11g helps hospital staff complete tasks quickly and easily. This is absolutely crucial in the healthcare environment where fast and efficient patient service is the top priority.” – Lee A-Na, Team Leader of Medical Information Department, Jeju National University Hospital*

Jeju National University Hospital is a teaching hospital, which was established in November 2001. It serves the district of Jeju City, and is a training hospital for interns and the military.

In 2008, Korea’s Ministry for Health, Welfare and Family Affairs recognized the hospital as a specialist intensive care and emergency institution. The hospital was the first regional cerebral and cardiovascular center in Korea, and is the Jeju region’s primary cancer treatment center.

Over recent years, the amount of electronic patient records that needed to be managed and archived had steadily increased, which made data management a difficult task for the Jeju National University Hospital. The hospital’s existing applications also required frequent tuning, which led to an overall decrease in performance.

To rectify the issue, Jeju National University Hospital engaged Oracle Certified Partner ezCaretech to develop an integrated e-healthcare system based on Oracle Database 11g with Real Application Clusters.

The system and database support a range of applications including an electronic medical records workflow (EMR) solution, clinical decision support system and customer relationship management (CRM) platform. The deployment coincided with the hospital’s move to a new 500-ward building to better serve the needs of patients across the region.

## Improved System Performance Enhances Productivity

The implementation of Oracle Database 11g has enhanced system performance, reliability, and availability.

**Key Benefits:**

- Lowered database query response times from several minutes to a few seconds, which helped to improve staff productivity
- Provided maximum availability and eliminated network downtime
- Enabled the hospital to better respond to rapidly changing market conditions

Jeju National University Hospital takes advantage of Oracle Database's data partitioning, which allows the hospital to split database indexes and tables into smaller components. This lowers database query response times from several minutes to a few seconds, which helps staff answer patient enquiries much faster.

"The new electronic healthcare system based on Oracle Database 11g helps hospital staff complete tasks quickly and easily," said Lee A-Na, team leader of medical information department, Jeju National University Hospital. "This is absolutely crucial in the healthcare environment where fast and efficient patient service is the top priority."

Oracle Real Application Clusters 11g enables the hospital to run Oracle Database across a cluster of servers, which provides maximum availability to eliminate network downtime.

"In the healthcare industry, you can't afford any network downtime," said A-Na. "With Oracle Real Application Clusters in place, we are guaranteed that our application infrastructure will stay up and running in the event of a server failure."

Oracle Database's advanced compression capabilities read fewer data blocks off the disk, which improves query performance and helps reduce storage costs inside the hospital's data center.

**Why Oracle?**

Jeju National University Hospital has been using Oracle solutions for several years, and felt that Oracle Database 11g was the best platform to support the e-healthcare system.

"We compared a few databases and decided that Oracle Database 11g had optimization and grid computing features that would support our growth plans now and in the future," said A-Na.

**Implementation Process**

Prior to the rollout, Jeju National University Hospital's IT department and ezCaretech formed a dedicated development team to build the integrated e-healthcare system.

The first stages of the deployment included interviewing users to determine their requirements before verifying the hospital's data and loading it into the database. Lecturers and users were then trained to use the system before pilot tests were conducted.

The solution went live on March 30, 2009.

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