

# Donghua University

In China, Sun and Oracle Deliver  
a Digitized Campus Solution



Customer Success Story

## Industry

- Education

## Issues and Challenges

- Multiple separate information systems
- Limited information sharing capabilities
- Excessive support costs and inefficiencies due to lack of integration

## Solution

- Unified “digital campus” platform integrating disparate systems
- Strong security and identity management capabilities
- Consistent service development/delivery platform

## Results

- Smooth-running, efficient information-sharing platform
- New capabilities: remote learning, online education, etc.
- Simpler, centralized administration and management
- Future-ready networks: easier to change and upgrade

## Products/Services

- Systems: Sun™ Fire servers
- Software: Solaris™ OS and OpenSolaris™ OS
- Database: Oracle Database

## URL Reference

[sun.com/oracle](http://sun.com/oracle)

The close partnership between Sun and Oracle — and the tight integration between the companies’ products — has allowed Donghua University to make the move to a “digital campus” solution. Now students, faculty, and administrators across the entire university have secure, protected access to more and better services, and the IT department can manage them all from a central location.

### Unified Platform, Strong Security

Donghua University was looking to modernize its computing architecture to take better advantage of the Internet and network-based services. Previously, the university operated dozens of separate information systems, each customized for specific end-user tasks, each requiring separate support and maintenance. Costs were spiraling out of control and functionality was limited because of the lack of integration.

The University selected Wisdom System Co., Ltd., an integrator with extensive experience in the education industry, to assist in creating a digital campus solution.

While the term “digital campus” has different meanings to different institutions, in general it refers to integrating and unifying the digital resources of the university so that a single network can provide students, faculty, staff, and administrators with comprehensive services. In the digital campus, information can flow freely within departments, among different departments, and between the campus and external sources — with strong security and identity protection.

The digital campus creates whole new classes of education opportunities, such as remote education, online teaching, and videoconferencing. Utilization of these infor-

mation technologies can enable the university to provide services that were not available previously, enriching teaching, management, and administration alike.

### Platform Technologies: Sun and Oracle

The digital campus solution outlined by Wisdom System Co. was an information portal that consisted of three interdependent layers.

- The **foundation layer** provides the basic hardware platform and basic service support, including a unified authentication platform, which provides the entire university with unified digital identity and authorization control services
- The **application layer** delivers the core software programs and provides information management support
- The **service layer** is a platform where data and services converge; users may access all authorized information services via the information portal of the service layer

The information portal would integrate applications of all business systems to allow information sharing; and the unified authentication system would provide security, privacy and confidentiality via single-sign-on capabilities.

Data sharing would be enabled by migrating to Oracle Database, a platform that supports data integration campus-wide. The adoption of Oracle Database would ensure unified management of both existing and new data. With a

high level of compatibility, near-infinite scalability, extremely high availability, and a track record of success in thousands of other universities worldwide, Oracle Database seemed the obvious choice for Donghua University.

The hardware platform was an equally easy selection. Donghua University chose to run its Oracle Database on servers from Sun Microsystems. According to a University spokesperson, “the Sun server platform and Oracle database cooperate well with each other. In the process of constructing our digital campus system, our network platform has been performing very stably and the database has delivered the integrated data sharing we expected.”

#### **Solaris 10 OS: Backbone of the Digital Campus**

Donghua University’s Sun servers run the Solaris™ 10 Operating System (OS). Solaris 10 is supported on both the UltraSPARC™-based systems and AMD Opteron-based systems running at Donghua University, and provides extremely advanced capabilities, such as Solaris Containers virtualization technology and Solaris Zones.

With Solaris Zones, for example, it is possible to run multiple applications on the same server with rock-solid security. Together, Solaris Containers and Solaris Zones allow Donghua University to isolate applications from each other, control resource utilization more efficiently, and provide an isolated environment for running applications within a single instance of Solaris.

The recent release of the OpenSolaris™ OS, a community-developed, open source version of the Solaris OS, is also a huge advantage for Donghua University. OpenSolaris is free and easy to acquire. It runs on more than 900 different systems from Sun, HP, IBM, Dell, Fujitsu, and others—and provides access to a repository of more than 1,000 open source packages. That means Donghua was able to download it quickly and begin exploring its capabilities—using tools many students were already familiar with—and then deploy on multiple platforms.

OpenSolaris delivers the best of both worlds: everything the IT world expects from the Solaris OS—stability, performance, scalability, security, and compatibility with existing environments—and the free, unfettered accessibility of open source software.

#### **The Result: All Requirements Satisfied**

Thanks to the strong alliance between Sun and Oracle, and the equally strong working relationship with Wisdom System Co., the Donghua University digital campus solution is now meeting all of the requirements—and expectations—of students and faculty. “The strong integration enables our university to run stably and efficiently on the unified platform,” said a Donghua University spokesperson.

“The Sun server platform and Oracle database cooperate well with each other... the database has delivered the integrated data sharing we expected.”

#### **Donghua University spokesperson**



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