



# Community Hospital & Clinic Information System Development

## Overview

Community Hospital & Clinic Information System (CHCIS) was designed and created for in-patient/out-patient hospitals and clinics in US and Canada. CHCIS features customizable and scalable core functionality, as well as powerful integration capabilities that extend the functional scope of the system by leveraging legacy applications and other in-house and external provider systems.

Community Hospital & Clinic Information System architecture is based on three major components: Application Server, Business Applications (Core Application Services), Legacies and 3rd party systems. CHCIS main modules are Hospital Department/Ward Management and Integration. Because of its modular architecture, CHCIS is easily tailored to the in-patient or out-patient practice requirements of any community hospital or clinic. CHCIS is a cross-platform solution, combining cost-effective and open source technologies.

The highly configurable patient's intake form is a unique component of Community Hospital & Clinic Information System. Its main goal is to enable a thorough assessment of the patient's status and admission to the treatment facility. Information from the intake form is used to create a powerful database used for analytics and research.

CHCIS solution also addresses support for the standardization of work-flow procedures and data exchange. HL7 support for data communications, HIPAA compliance in security and privacy aspects and ICD-9/ICD-10 coding standards are major advantages. A number of unique components based on Oracle solutions were developed, i.e. Calendar/Schedule, Medical Administration Records (MAR) components and others. Online billing for insurance companies based on HICFA-1500 was implemented.

The integration capabilities of CHCIS enable system interoperability as well as medical staff and doctor's communications. In this regard, integration support for telemedicine, conferencing and mobile device enabling capabilities is a major benefit.

## System Architecture

The Community Hospital & Clinic Information System has evolved into a reliable high technology solution for the medical sector based on J2EE technology. It is flexible in its selection of data management systems and integration solutions. It can be deployed with various cost-effective software platform configurations.

Java/J2EE platform dictates the use of an application server/container along with HTTP servers—a large variety of J2EE containers/servers is supported. The server side of the system can be deployed on Microsoft Windows, UNIX and Linux platforms as a homogeneous platform or as a cluster of heterogeneous platforms. On the client side is a web browser, thus enabling easy deployment of a client workstation using any operating system.

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## Tools and Technologies

### Operating System

- Linux, ucLinux (microLinux), embedded Linux
- Unix, Digital UNIX/Tru64 UNIX
- Microsoft Windows family
- Microsoft Windows CE/mobile

### Application Platform

- Java/J2EE
- Oracle Forms

### Tools

- Java-based Spring framework, JSP, Struts, EJB
- Oracle Forms 6i, PL/SQL

### RDBMS

- Oracle
- Microsoft SQL Server
- Sybase
- DB2
- PostgreSQL
- MySQL
- MaxDB
- Firebird