SIEMENS

Siemens OPENLink

A Premier Interoperability Solution

Answers for life.

Siemens OPENLink
General Overview

Connect Multiple Healthcare IT Systems to Support Care Coordination

The need to seamlessly connect many different systems is becoming more crucial as today's healthcare environment worldwide becomes more complex. Siemens OPENLink™ is an application-independent interface engine that provides healthcare organizations with industry-standard, cost-effective connectivity development and management. Siemens has been successfully addressing interoperability and interfacing disparate systems in the healthcare industry for more than 20 years.

Business Goals

Connectivity between disparate systems is absolutely necessary to actively support the flow of information. Built on proven, cutting-edge technology, Siemens OPENLink provides innovative and intuitive tools to deliver this connectivity.
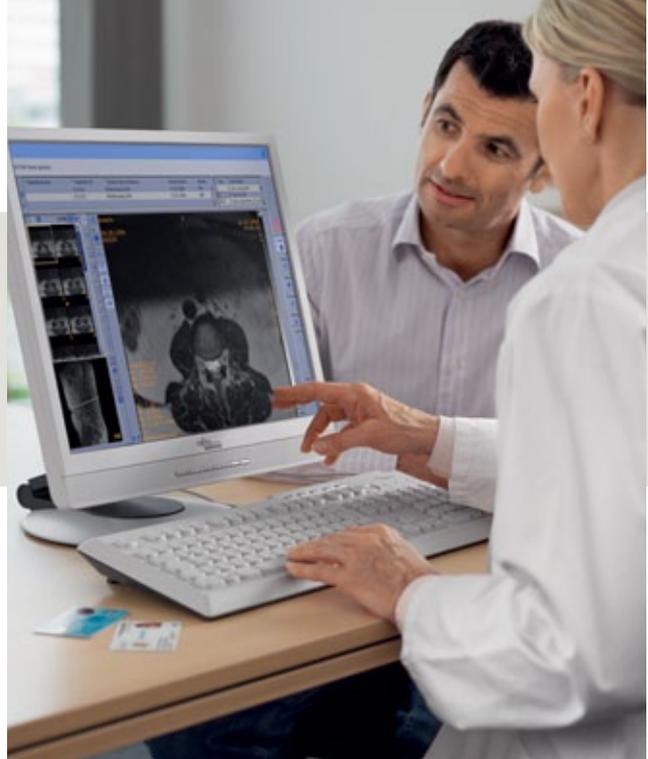
These tools empower information technology professionals to manage complex information exchanges to achieve their business goals, including:

- Increased patient and physician satisfaction.
- Improved operational efficiency.
- Increased health system profitability.
- Enhanced competitive position.
- Effective application interoperability.

Key Capabilities

Siemens OPENLink empowers healthcare systems to achieve their business goals by:

- Facilitating secure, reliable information sharing across applications, anywhere in the enterprise.
- Constantly monitoring communication links in order to re-establish data flow if an application experiences a problem.
- Providing nearly immediate monitoring and troubleshooting tools for the immediate identification and correction of any problem that may impede the flow of data.
- Allowing for automatic failover of interfaces in the event of a hardware problem.
- Offering scalability for the healthcare enterprise's current and future interoperability needs.
- Increasing control over interface implementation and support and decreasing dependence on application vendors.
- Supplying support for protocols and connections, including web services, EDI, SOAP and RESTful web services, X12, XML, HTTP/HTTPS, TCP/IP (including IPv4 and IPv6), ODBC, secure FTP, and SMTP for email transaction delivery.
- Improving user productivity with tools that do not require programming experience and streamlining interface development, implementation, and management.
- Speeding implementation by providing model definitions for a variety of industry standards, as well as for products from Siemens and other vendors.

Reliability

Siemens OPENLink is a solution that works with your applications, regardless of the type or vendor, and does not limit the design or type of applications that may be installed in the future, helping to protect your investments in information technology. It can be implemented as a redundant system and many customers choose this option. Siemens OPENLink was the first application in the healthcare industry to receive the IBM® "ClusterProven" distinction. Redundant Siemens OPENLink systems are also available on HP® clusters using HP's NonStop™ technology.

These redundant hardware configurations mean Siemens OPENLink operates with availability levels that are among the highest in the industry, enabling load balancing and demonstrating quick, automatic failover.

Industry Standards

Siemens has helped to define industry standards, and we make it our business to understand how these standards impact your work. Siemens OPENLink supports the necessary standards to connect disparate systems and actively support the flow of information. Siemens OPENLink complies with and supports industry standards for data messaging, including support for HL7 version 2.x and 3.x, X12, and XML. A starter set of HL7 transactions is included. Siemens is also a benefactor member of the HL7® organization.

Features in Support of HIPAA and ARRA Meaningful Use

Siemens OPENLink is designed to assist you in meeting the Health Insurance Portability and Accountability Act (HIPAA) and American Recovery and Reinvestment Act (ARRA) Meaningful Use regulations by providing Secure Socket Layer (SSL) on TCP/IP connections, secure FTP, mutual authentication support on HTTPS, and support for X12 transactions for the transport of financial transactions.

Change Tracking provides customers with a valuable tool for meeting HIPAA privacy and security rules. The Database Change Log file provides a detailed historical journal of changes to any interface or interface components made through the Siemens OPENLink graphical user interface (GUI). In addition, the Database Change Log file can be used for troubleshooting interface errors by providing a mechanism to research the history of setup changes in interface definitions.

This log is protected from change by anyone other than the application and can be secured so only authorized users may disable logging.

The Security Audit Log, which is also protected, provides detailed information about actions taken to the system such as stopping an interface or connection, or resetting a definition. Invalid login attempts are also logged.

Global Presence

Siemens OPENLink delivers data flow reliability in enterprises around the world. Healthcare systems worldwide have made Siemens OPENLink a key component of their organizations. Siemens OPENLink is chosen by many different types of organizations to help resolve the common problem of connectivity between multiple information systems, including ancillary, hospital, physician, or enterprise applications. It anticipates the market nuances experienced by healthcare enterprises throughout the world and can provide intuitive tools to address these subtle differences.

Cost-Effective Solution

Prior to Siemens OPENLink, point-to-point interfaces were often costly to install and maintain and usually required vendor intervention to implement even simple changes. For over two decades, Siemens OPENLink has addressed this issue by providing a cost-effective, single source of data interchange management. The solution is designed to enable non-programmers to create and change interfaces, helping to control IT development costs.

Flexibility and Control

Siemens OPENLink provides an open platform for connecting disparate applications, enabling them to communicate easily and cost effectively. Siemens OPENLink enables the healthcare enterprise to interface virtually any system to any system, using any industry-standard protocols, independent of data format. The flexibility and control available with Siemens OPENLink allows a healthcare enterprise to determine its own rate and direction of growth in the area of information management and application connectivity, without restriction to the type and design of applications used. Siemens OPENLink has been tested and proven to connect current systems without restriction to the systems you incorporate in the future. Siemens OPENLink offers high availability, scalability, and reliability—and increases your control and connectivity throughout the healthcare system.

Delivery Options

Siemens OPENLink is available in multiple configurations to best meet your needs. Implementation can occur at your site or remotely as a cloud-based, remotely hosted system. We can help you decide which option is best for you and your business needs. Perhaps you need interoperability but do not want to manage it at your site. In this case, you may want the benefits of implementing the solution remotely. With the hosted option, Siemens builds and monitors the interfaces at the Siemens Healthcare Computing Center. The Center is equipped with uninterrupted power service (UPS) and emergency generator systems to reduce risk related to external power source failures. Remote implementations also include:

- Siemens maintenance and monitoring of the production interfaces.

- Automatic failover of interfaces in the event of hardware or system problems, reducing the likelihood of interrupted data flow.

- Optimization of the system to help ensure that the addition of interfaces will not impact performance or capacity.

- System security and automatic upgrades to the latest releases.

- Siemens support of the hardware and application of software updates.

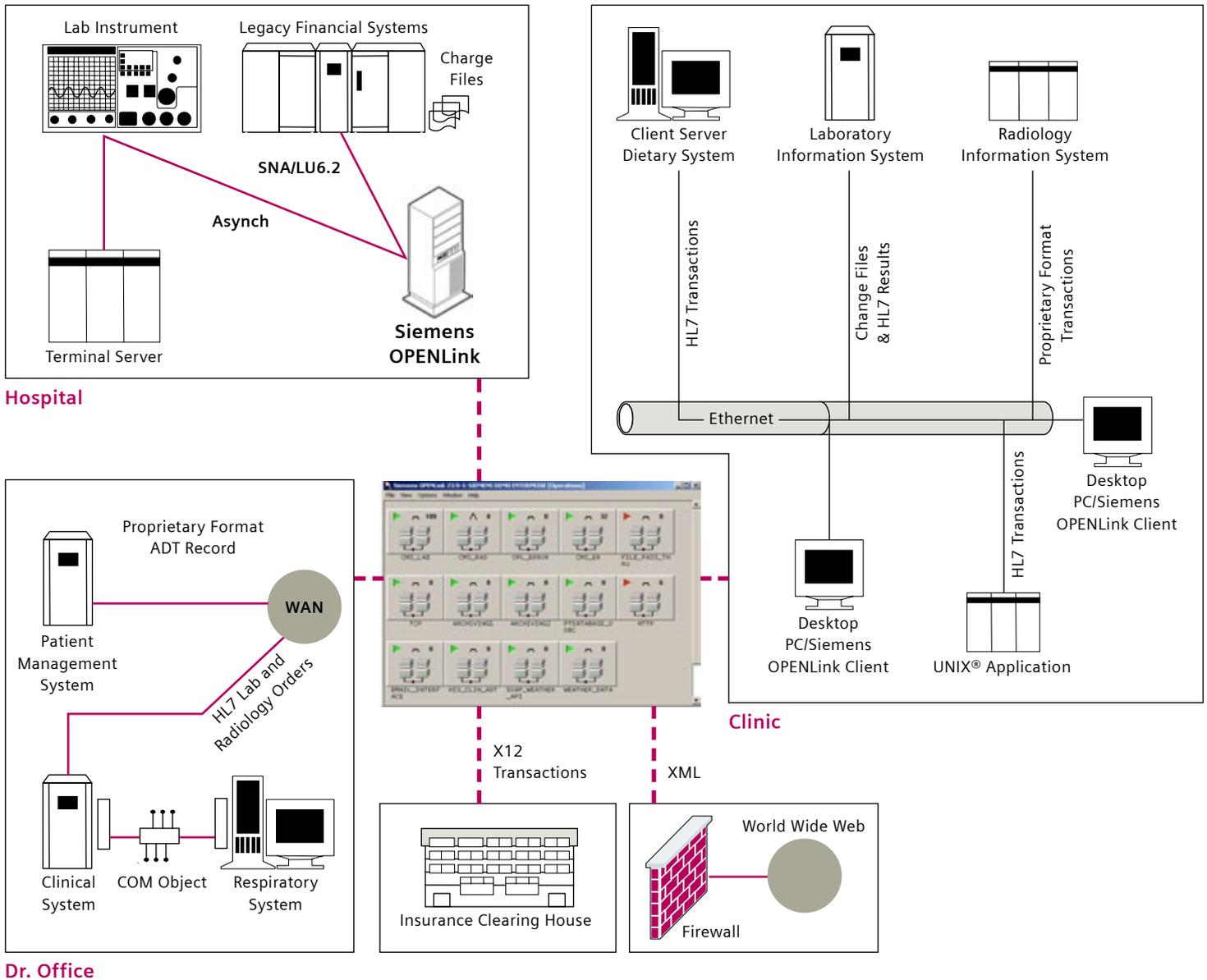- On-site staffing 24 hours per day, seven days per week, 365 days per year.

Siemens has more than 30 years of experience providing these benefits through the delivery of remote applications. Our ability to deliver high-quality remote systems provides peace of mind. An additional choice is the Siemens OPENLink stand-alone option, which is similar to the hosted option except the customer is responsible for building its own interfaces.
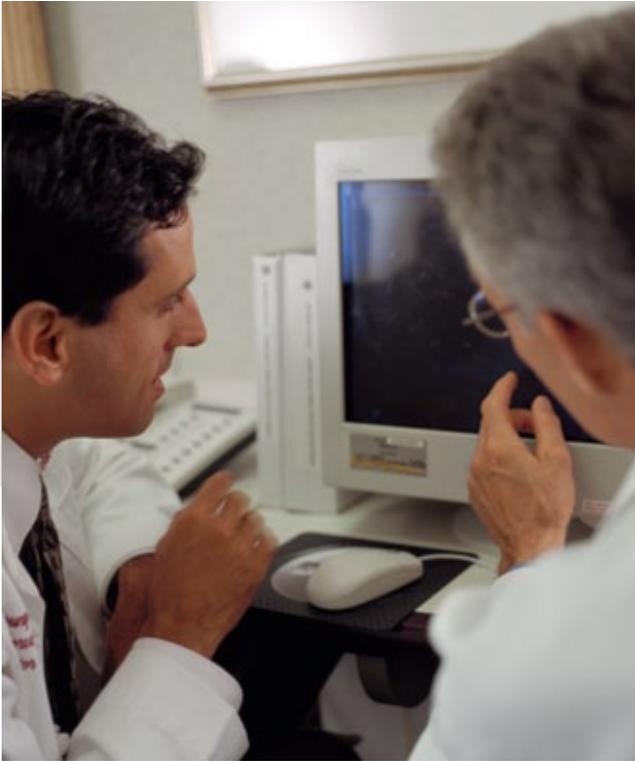
Support for Web-Based Applications

Siemens OPENLink enables you to send and receive data to and from web-based application servers through support of HTTP/HTTPS, web services using SOAP or RESTful web services, proxy server support, and authentication. Your applications that are not web based can communicate with web-based servers via Active Server pages, providing your enterprise with the ability to expand its reach in your community.

When you need to build a new XML-based interface, Siemens OPENLink provides the ability to import an XML schema to automatically create it. This facilitates faster interface development to your web-based applications.

Siemens OPENLink offers high availability, scalability, and reliability—and increases your control and connectivity throughout the healthcare system.

Hospital

Lab Instrument

Legacy Financial Systems

Charge Files

SNA/LU6.2

Asynch

Terminal Server

Siemens OPENLink

Clinic

Client Server Dietary System

Laboratory Information System

Radiology Information System

HL7 Transactions

Change Files & HL7 Results

Proprietary Format Transactions

Ethernet

HL7 Transactions

Desktop PC/Siemens OPENLink Client

Desktop PC/Siemens OPENLink Client

UNIX® Application

Dr. Office

Proprietary Format ADT Record

WAN

Patient Management System

HL7 Lab and Radiology Orders

Clinical System

COM Object

Respiratory System

X12 Transactions

XML

Insurance Clearing House

World Wide Web

Firewall

Simple Network Management Protocol

Simple Network Management Protocol (SNMP) support in Siemens OPENLink facilitates the centralization of your IS monitoring activities. You can use SNMP to broadcast alerts to destinations, including a network management application. Network management applications are one way to send emails and pages and run scripts upon receipt of certain SNMP traps. While Siemens OPENLink provides much in the way of problem management and error reporting, some customers opt to couple Siemens OPENLink with existing network management applications for added benefits.

Siemens World-Class Services

- **24x7x365 Support:** Siemens provides support 24 hours a day, seven days a week, 365 days a year. The 24-hour customer support line and Siemens Customer Links provide a constant communication link with Siemens support personnel. Customer Links, Siemens advanced automated system, tracks all incoming customer support requests. Calls are assigned a tracking number for reference by the customer and Siemens support personnel. Customer Links provides a reliable mechanism for asking questions, reporting problems, and tracking the communication between the customer and Siemens support. With a direct connection or through the Siemens HS Customer World website, customers can get detailed updates on the progress of their support call items. At Siemens, customer satisfaction is our number one priority, which is why we continue to invest in streamlining the support process for our customers.

- **webShop:** Siemens OPENLink comes with intuitive tools to build interfaces, but sometimes you may have questions or need a little extra help. Such assistance is readily available through webShop on HS Customer World.

- **Education Classes:** Siemens OPENLink customer education is dedicated to helping you get the most from your system. Most important, Siemens education classes teach skills that you can use immediately upon returning home. Classroom training with plenty of "real-life," hands-on opportunities is available at state-of-the-art educational facilities at several Siemens sites or at your facility. In addition, Siemens OPENLink Enhancement Education, provided as new releases are developed, is available to you through a variety of distance learning technologies.

- **Internet Presence:** Siemens OPENLink customers have access to a website that provides customer-only information related to future versions, releases, new model software, educational material, and new documentation. Customers use this web page to submit requests or requirements for new features and functions as well. In addition, you can quickly gain access to a knowledge base, learn how to subscribe to the Siemens OPENLink customers' listserv, and much more. The listserv is a useful forum where Siemens OPENLink users can communicate with other users, share best practices, and exchange valuable ideas and information.

- **Preparing for the Future:** As the healthcare enterprise moves into the future, interoperability challenges and requirements are growing in both number and complexity. Healthcare reform will continue to place extraordinary demands on systems interoperability. Having the best strategy in place today is essential to meeting tomorrow's needs and managing tomorrow's demands.

Siemens OPENLink
Technical Overview—Innovative Tools for Connectivity Management

Simplified Healthcare Data Exchange across Disparate Systems

Siemens OPENLink's innovative tools simplify data management and manipulation by helping interoperability analysts quickly and easily manage complex information exchange between disparate systems. These tools provide complete control over the implementation and modification of interfaces and allow for troubleshooting and maintenance of these interfaces. These intuitive tools are also supported in a full training/test system for ongoing development.

No programming experience is required to build interfaces with Siemens OPENLink. This means that traditionally difficult programming tasks such as network protocol conversion, message formatting, data translation, and transaction routing are achieved through a GUI. In situations where programming expertise exists, take advantage of these skills by incorporating Microsoft® Visual C++®, COM objects, ODBC Adaptors, SQL queries, Java Wrappers, and other modules to extend Siemens OPENLink capabilities.

Many tools and features of Siemens OPENLink have been developed as a result of direct feedback from customers. Siemens OPENLink is a customer-driven solution, and requirements from Siemens OPENLink users are routinely collected and evaluated.

Advances in technology also drive Siemens OPENLink product direction and enhancements. Siemens OPENLink supports today's healthcare information systems environment. From a single Siemens OPENLink workstation, a user can control the integration and interface needs of one or multiple hospitals, clinics, and other healthcare facilities. When implementing the Siemens OPENLink Enterprise Edition, a single view of all Siemens OPENLink physical servers is presented.

Summary

Siemens OPENLink allows you to connect your new systems and applications based on their own design. This approach has practical advantages in terms of time and cost savings. Be confident that Siemens OPENLink is providing your healthcare enterprise with the very best tools and services for interface management, as well as the flexibility to adapt to the continually changing healthcare environment.

Siemens OPENLink is able to receive information—both real-time and batched—from almost any type of hardware, software, or network. It enables you to achieve an open system environment. This makes Siemens OPENLink the solution for your entire healthcare enterprise. Siemens OPENLink is designed to embrace and advance the benefits of flexibility and control that healthcare providers require today—while helping to reduce costs.

Talk to your Siemens representative to learn how to take advantage of all that this industry-leading interface engine has to offer. Let Siemens and Siemens OPENLink work for you.

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