



hp data sheet

## Sequelink software for the hp NonStop SQL/MX database

### features at a glance

- deployment across hybrid environments
- enhanced data connectivity
- simplified support
- enterprise value beyond data connectivity

Sequelink software for the HP NonStop SQL/MX database is an end-to-end data connectivity solution. It provides standards-based, bidirectional, and robust database connectivity between NonStop servers and all major platforms and databases. HP combines its leading NonStop technology with that of the market leader in connectivity components, DataDirect Technologies, to offer this highly available and scalable connectivity solution on the NonStop platform. The solution gives the NonStop server the unique ability to perform as a database server as well as an application server in today's complex hybrid environments.

Sequelink is designed to provide superior middleware functionality. It speeds development and deployment by providing applications with broad access to multiple data stores with a single client component for Open Database Connectivity (ODBC), Java Database Connectivity (JDBC), or Microsoft ActiveX Data Objects (ADO)/OLE DB. This architecture allows organizations to configure and manage data access across virtually unlimited data stores, interfaces, and operating systems in the enterprise. Sequelink software also adds value beyond data connectivity with scalable persistent services and a centralized console for management and administration.

## deployment across hybrid environments

Sequelink clients support the latest ODBC, JDBC, and ADO/OLE DB data access standards. They can be deployed in client/server and Web application server environments across heterogeneous desktops and servers to connect to DataDirect's Sequelink servers on major database platforms such as NonStop servers with NonStop SQL software. Sequelink integrates seamlessly with network-centric distributed frameworks such as Sun's Java 2 Platform, Enterprise Edition (J2EE) and, soon, Microsoft .NET. With Sequelink software for the NonStop SQL/MX database, you are assured of a flexible architecture to reach additional databases and platforms consistently, while enjoying the scalability and availability of the NonStop platform (see figure 1).

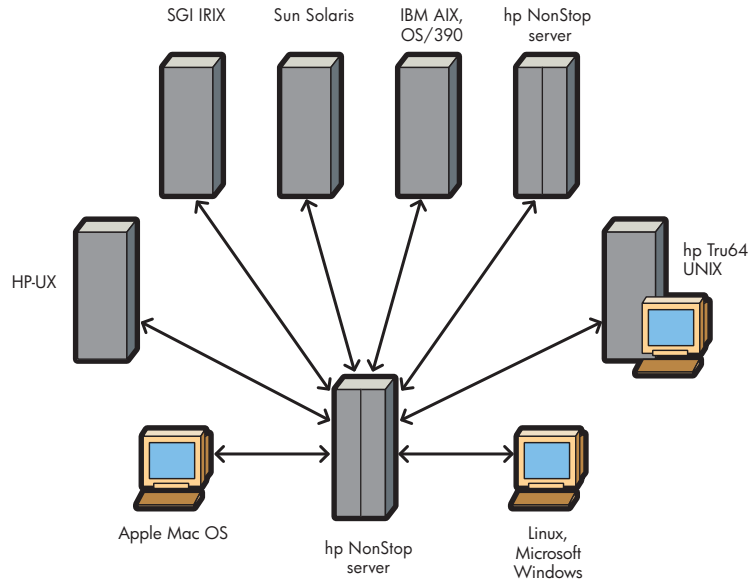


Figure 1. Hybrid environments.

## enhanced data connectivity

Sequelink ODBC and ADO client drivers and the JDBC type 3 drivers on UNIX®, Linux, IBM AIX, and Microsoft Windows NT operating systems can be configured to connect to a persistent and scalable Sequelink server running on NonStop servers to access the mainframe data store, the NonStop SQL/MX database (see figure 2).

## simplified support

Sequelink software provides a single, universal interface for data access that is easy to install and requires near-zero client administration. The Sequelink universal client is database independent, so if you decide to incorporate additional data stores, you do not need to update or install a new Sequelink client. This thin-client architecture drastically reduces the amount of initial configuration and subsequent time spent reconfiguring data access when something changes.

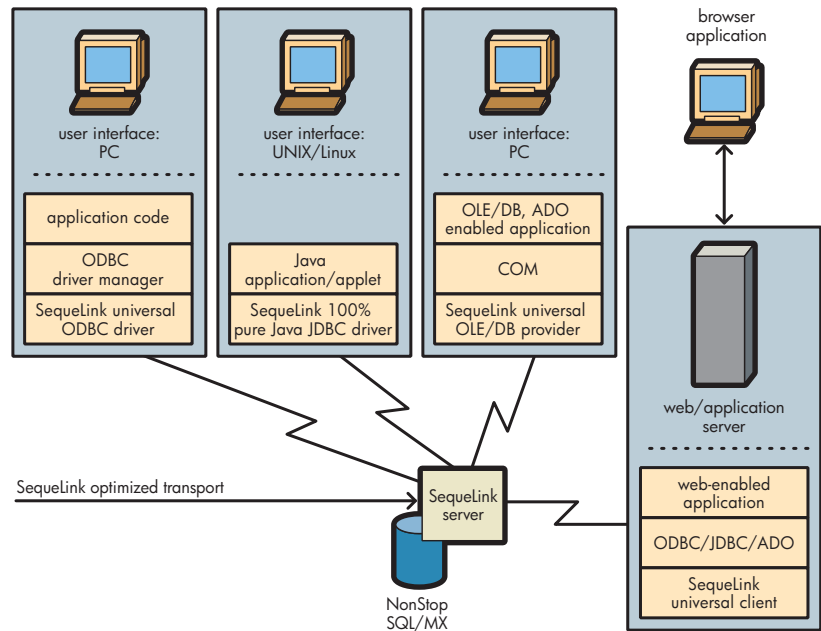


Figure 2. Enhanced connectivity.

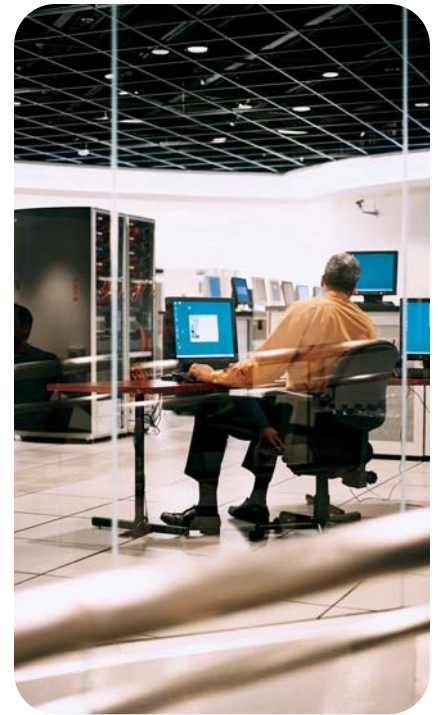
## enterprise value beyond data connectivity

In addition to data connectivity, Sequelink software for the NonStop SQL/MX database allows you to configure and manage your data access environment from a single point of control. It provides scalable, persistent connectivity services that can be configured to use either conventional TCP/IP or HP Parallel Library TCP/IP software. Services can be configured as persistent processes with a choice of processor distribution, leveraging the NonStop ODBC/MX configuration and management environment on NonStop servers.

## Sequelink for NonStop SQL/MX enterprise-level services

### data connectivity

Sequelink software for the NonStop SQL/MX database delivers enterprise-strength data connectivity through its unique common server architecture. Its universal ODBC, JDBC, and ADO/OLE DB clients on the desktop or Web application server use the Sequelink Common Server database management system (DBMS) interface to access multiple databases concurrently (see figure 3). This eliminates the inconvenience and expense of installing and maintaining multiple drivers and multiple vendor-specific middleware for each database brand across potentially thousands of users.



### near-zero client administration

Sequelink software reduces configuration errors and administration overhead. One thin universal client is installed and configured on the desktop or application server, regardless of the brands of databases to be accessed. Installation is streamlined, and configuration across clients can be remotely managed through server-side data sources.

### centralized configuration, monitoring, and management

Sequelink software has centralized configuration, monitoring, and management through the NonStop software manager that provides similar capabilities for NonStop ODBC/MX software. Centralized management allows for streamlined administration, faster development, and event traceability. These capabilities reduce costs, improve productivity, and provide higher reliability, availability, and serviceability.

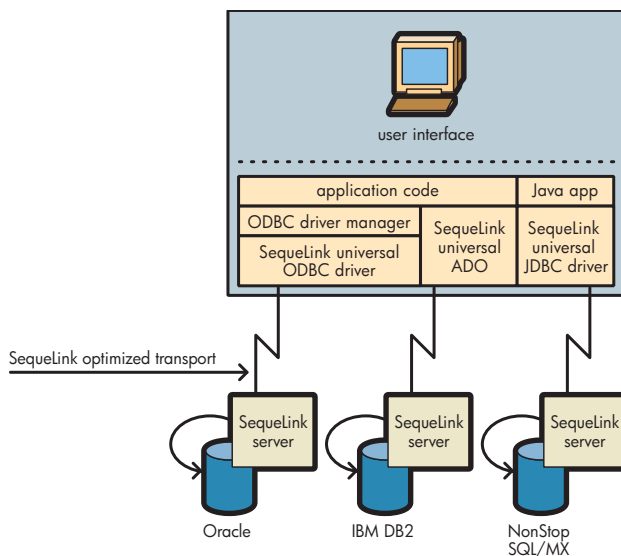


Figure 3. Sequelink data connectivity.

### maximum scalability and performance

Figure 4 shows how Sequelink's server architecture supports peer-to-peer persistent scalable services on the NonStop server while increasing the number of concurrent and connected users for large-scale demands. Sequelink software ensures support for increased loads, avoiding the poor performance and downtime often associated with moving to demanding environments such as e-business. Automatic management of pools of configured server instances supports both connection and resource caching, greatly improving the runtime access environment. Workload management supports distribution of work over processors, network adapters, and other system resources while sustaining a single system image.

### maximum fault tolerance

Sequelink software supports the NonStop attributes of failover detection and automatic recovery. The service survives any component failure without client or administrator intervention. Applications can resume their access immediately for most failures and within seconds for more significant failures. Data integrity is always guaranteed with the underlying NonStop SQL/MX and NonStop Transaction Management Facility (NonStop TMF)

software. Additionally, single failures affect at most a single connection; that is, all other application connections remain unaffected by the failure of one application connection. Service availability recovers automatically, with no impact on existing connections.

### security

Sequelink software works with the NonStop SQL/MX database, leveraging NonStop ODBC/MX services, to support administrator-configured read-only access.

### flexible deployment

Sequelink universal clients can be deployed across heterogeneous desktops and servers to connect to Sequelink servers on major database platforms. Sequelink can be

configured in a two-tier architecture or in a multi-tier architecture to gain access to additional databases and platforms.

### internet and intranet enablement

Sequelink universal clients include e-business-ready features such as 100% Pure Java; J2EE Certification Test Suite (CTS) certified for JDBC 2.0 optional package support (JDBC 3.0 compliant); highly scalable connection and statement pooling; and support for the latest ODBC and ADO specifications for Microsoft Active Server Pages enablement. The Sequelink Java (JDBC type 3) driver can be used to connect other platforms to the NonStop server and to connect a Web application on a NonStop server to another database server.

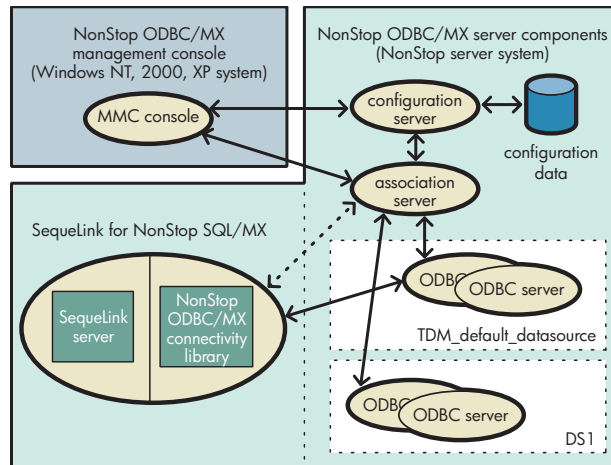


Figure 4. Scalable Sequelink software on NonStop servers.

## Sequelink for ODBC, ADO, and JDBC

DataDirect Sequelink's universal client components—based on the ODBC, ADO/OLE DB, and JDBC standard interfaces—provide connectivity to multiple databases for commercial and custom applications. Sequelink's thin-client design means that only one universal component needs to be installed on client workstations or on a shared Web application server for consistent access to one or more data stores—relational or mainframe. All universal clients use the Sequelink Common Server DBMS interface for data access, which is typically installed on the database server (see figure 5).

- *Sequelink ODBC or ADO*: A complete, end-to-end middleware solution for connecting applications, platforms, and data across the enterprise. Sequelink software allows you to configure and manage data access for all your standards-based applications across multiple data stores, operating systems, and deployment options, ranging from client/server to Web application servers to distributed frameworks to NonStop SQL/MX databases. A Sequelink ODBC client on NonStop servers allows connectivity from applications running on a NonStop server to other database servers.

- *Sequelink Java*: A complete, end-to-end middleware solution for connecting Java applications to all major data stores—even mainframe data. Sequelink Java is a type 3 JDBC driver, which is designed for superior middleware functionality. It provides enterprise-class features such as centralized management and distributed transactions in the future. Sequelink Java is JDBC 3.0 compliant and J2EE CTS certified and serves as a Sun Microsystems reference platform for JDBC 2.0 under J2EE.

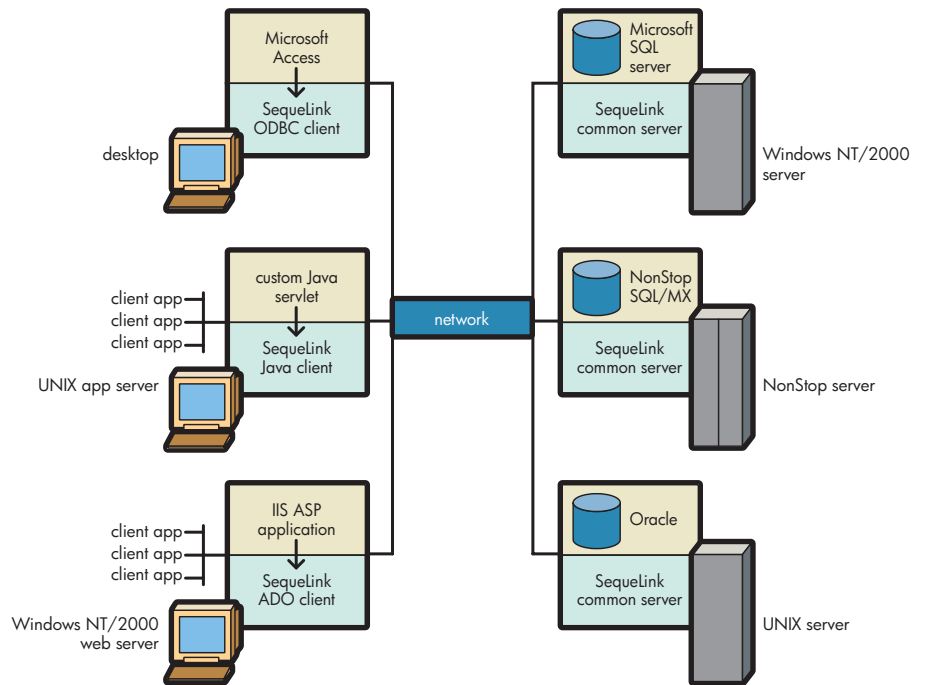


Figure 5. Sequelink clients for ODBC, JDBC, and ADO leverage the Sequelink Common Server for concurrent access to NonStop SQL/MX, Microsoft SQL Server, and Oracle databases from the desktop or Web application server.

## SequeLink features and services

### SequeLink command line

- Creation and management of SequeLink services and server-side data sources
- Live, configurable monitoring and persistent event tracing
- Control functions to start and stop SequeLink services
- Mapping of server data sources to NonStop ODBC/MX services

### universal SequeLink client

- Client installs and configures easily and prevents dynamic link library (DLL) conflicts and multiple DBMS vendor network stacks
- Server data sources
- Quick-install images for easy deployment of client configurations across workstations

### performance architecture

- Fetch ahead and record caching, packet chaining, and deferred execution to minimize network hits

### advanced security and control

- Host-level authentication
- Conventional and Parallel Library TCP/IP network services and Internet Inter-ORB Protocol (IIOP) enablement to allow communication through the firewall for Internet, intranet, and extranet deployment
- Enforceable read-only option to secure data against accidental change

### feature-rich DBMS support

- Scalable, persistent access to NonStop SQL/MX databases leveraging NonStop ODBC/MX services
- Dynamic SQL and full SQL pass-through for accessing NonStop SQL/MX grammar and functions

## SequeLink components

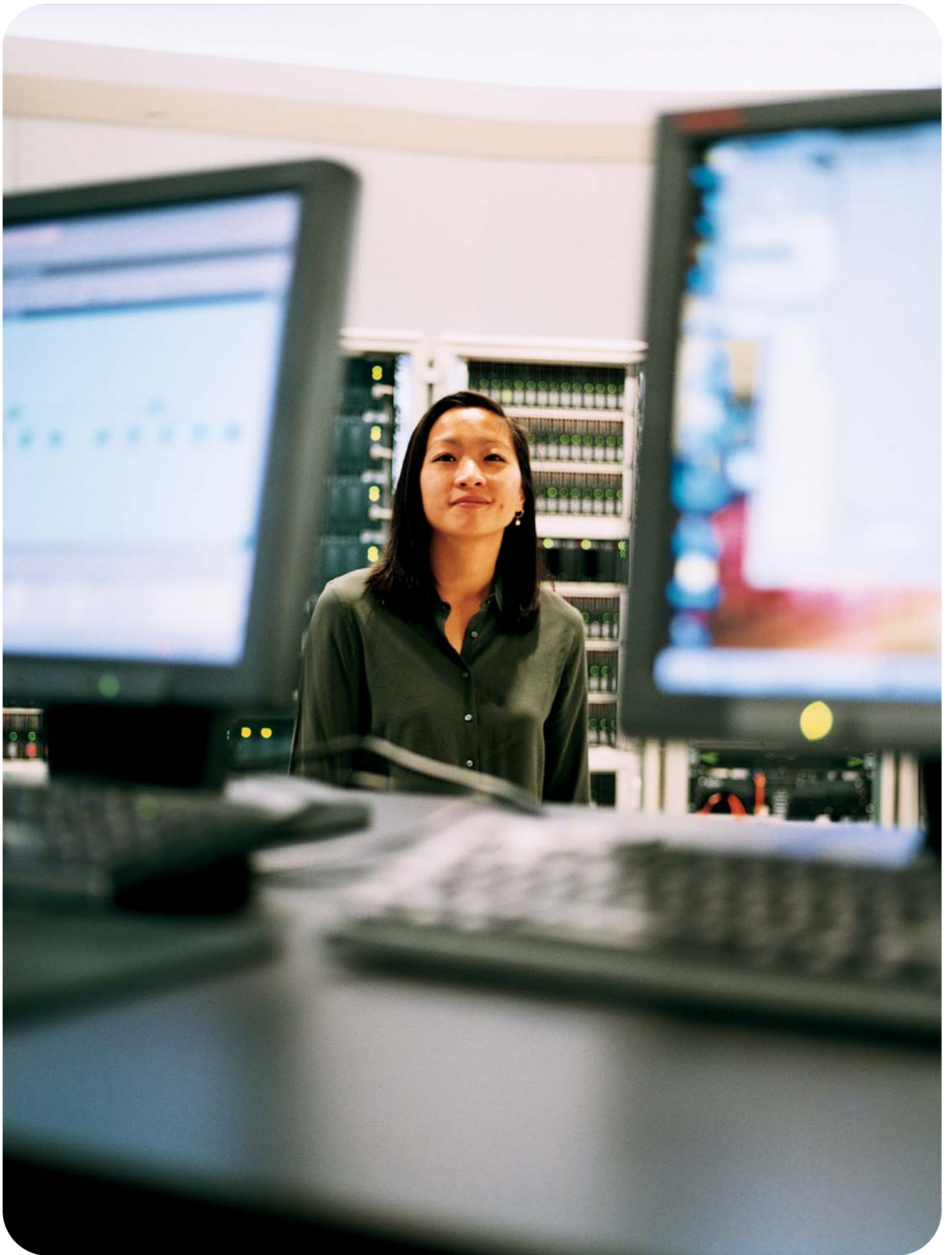
client	SequeLink ODBC	SequeLink Java	SequeLink ADO
server platform	NonStop S-series servers supporting IEEE format		
supported client platforms	Windows 9x or Me; Windows NT, 2000, or XP; HP-UX; IBM AIX; Linux; Sun Solaris; HP Tru64 UNIX; NonStop Kernel operating systems	Java technology-enabled platform or device that supports Java Development Kit (JDK) 1.1 or later or J2EE	Windows 9x or Me; Windows NT, 2000, or XP operating systems
supported databases	SequeLink clients running on NonStop servers can access NonStop SQL/MX, Microsoft SQL Server, Oracle, IBM DB2 Universal Database (UDB), IBM DB2 for OS/390, Sybase, and Informix.		

## ordering information

product ID	description
SR80V1	SequeLink software for the NonStop SQL/MX database  <i>Note:</i> The CD contains SequeLink server for the NonStop SQL/MX database; ODBC drivers for the NonStop Kernel, Windows, Linux, Solaris, HP-UX, Tru64 UNIX, and AIX operating systems; an ADO driver for Windows; a JDBC type 3 driver (for any Java platform); and manuals.

## specifications

system requirements	
hardware	NonStop S-series server
software	NonStop Kernel operating system RVU G06.18 or later with Open System Services (OSS) operating system environment





For more information, go to [www.hp.com/go/nonstop](http://www.hp.com/go/nonstop).

Java is a U.S. trademark of Sun Microsystems, Inc. Microsoft, Windows, and Windows NT are U.S. registered trademarks of Microsoft Corporation. Oracle is a registered U.S. trademark of Oracle Corporation, Redwood City, California. UNIX is a registered trademark of The Open Group. The warranties for HP products and services are set forth in the express limited warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

5981-5091EN

© Copyright 2003 Hewlett-Packard Development Company, L.P.