

# CSL

## Client Server Link

*Client Server Link (CSL) opens the HP NonStop server world to the latest technologies so you can move beyond emulator mode, green screens and nonbrowser interfaces. CSL's server component runs on a NonStop system under the NonStop environment, bringing all the advantages of transaction protection data flow to the client platforms. Its client components run on any Windows or Java-enabled platform. In addition, CSL is positioned to replace any Remote Server Call (RSC) with its RSC to CSL migration functionality. You don't have to change your existing NonStop applications while taking advantage of all the additional features of CSL.*

### ■ Replacing RSC easily

CSL offers two easy ways to replace any RSC application without changes to it. Both will save you development time and money:

- Replace the RSC Dynamic Link Library (RSCW32.DLL) with the new CSL Library and your application will now work using CSL. No code changes are required.
- Rename all your RSC API function calls to the CSL function calls in your code to use the CSL components directly by simply doing a "search and replace" on all RSC function calls.

Whichever you choose, your NonStop application will now run faster and can be monitored with the statistics tools that come with CSL.

Plus, using CSL opens the door for you to take your applications to the Web because it includes all the necessary JAVA, XML and J2EE technologies.

### ■ Speed

CSL has been designed for speed. It:

- has re-architected traffic between the client and server, with more activity occurring on the more powerful NonStop servers.
- minimizes the number of handoffs between the client and server platforms for each interaction, reducing network traffic and processing time between them.
- takes advantage of fast throughput and the fastest message transfer possible because it has been specifically designed for the TCP/IP communications protocol.

### ■ Serialization

The CSL Java API provides a built-in mechanism, based on the Java object serialization model, intended to send complex Java objects to (and receive them from) a server. Having serialized an object (no matter how complicated its structure is, or how many nesting levels it has), you will be able to send it to a server as a single whole using just a pair of CSL Java classes. When you need to receive a server response, you will be able to get it as a Java object and deserialize it, greatly decreasing the time required to develop the application, while making it clearer and simpler.

### Key Features:

- Replace RSC easily
- Improves speed
- Client platform independency
- Supports Java, XML, COM and J2EE
- Tools for developing, analyzing and statistics

## ■ XML

The CSL Java API can work with XML data, providing built-in methods that enable you to read data stored in the XML format, serialize it, and send it to a server. Data received from a server can automatically be deserialized and placed into an XML file. The CSL Java API also provides XML-related methods that are used to read / write XML data from / to streams instead of files and provide some extended functionality (such as DTD validation of XML).

Technologies bundled into CSL give programmers the most sophisticated tools for Web enabling NonStop applications easily, cost-effectively, and fast.

## ■ Windows environment

CSL's Windows API makes it possible for developers to also use ASP, DCOM and XML when developing their applications.

## ■ Java

In Java environments, CSL enables programmers to use Java Classes (APIs), JSP, and XML, serialization to develop any Web-based frontend application to the HP NonStop system. Another benefit is that CSL JAVA does not require JAVA on the NonStop or OSS, the POSIX personality of the NonStop system.

The product J2EE Server Link (JSL), also offered by comForte is based on the CSL server components and allows the migration of Pathway applications within an J2EE environment. For further details please see the separate JSL product flyer.

## ■ CSL Analyzer

CSL Analyzer provides application developers all the information they need for optimizing connections. The tool calculates accurate response times for tasks such as:

- establishing and closing connections;
- closing and opening sessions;
- accessing databases;
- beginning, committing, and aborting transactions;
- requesting server times;
- sending dynamic or static messages of any size.

You can also test specific processes and servers on the host, such as Unsolicited Messages Service (UMS) and Access Control Servers (ACS).

## ■ CSL Statistics

CSL Statistics, a Win32 client tool, enables system administrators to analyze events logged by the server side of CSL. The system supports up to several hundred different parameters to be viewed and allows the user to apply unique filters to each. Also, three utilities included in the CSL Java API help convert data defined in the XML format to Java classes that can be immediately used for communication:

- XML Analyzer – analyzes the source XML and reformats it so that it can be further processed by XML2Java utility and converted to a Java class.
- XML2Java – creates a ".java" file from the XML returned by the XML Analyzer. The ".java" file can be used to send and receive data from a server through Java serialization mechanisms.
- Java2XML creates an XML file from a Java serializable class. The utility can be used to receive an XML representation of a Java class that you defined previously in your application.



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