



## SAS/IntrNet®

### *Exploiting Web technology from an IT perspective*

As a technology adviser, you confront the challenges of distributing reports and applications, integrating operational systems and e-channel information and ensuring security. You've got more and more data to manage, more questions to answer, and less money to work with. Like other IT professionals, you're looking for ways to reduce software maintenance, shield users from the complexities of your operations infrastructure, and reap the benefits of thin clients.

#### **Extending decision-making to any user, any time, anywhere**

SAS provides a solution for uniting your distributed network with easy-to-use data analysis and decision-support tools. With SAS/IntrNet® software and the Web, you can develop your own Internet, intranet and extranet applications. You'll save valuable time and resources by giving users the ability to access data, applications and reports from any server on your network, NT, UNIX, the mainframe—even from handheld devices and mobile phones. And they can share their results with anyone in the world through one common interface—a Web browser.

#### **Competing at Internet speed—get it only from SAS**

SAS/IntrNet offers integration with the broadest set of tools, and they're all from SAS, the industry leader in decision support and data warehousing. Anyone with an inexpensive desktop or

handheld computer and an industry-standard browser can access SAS' highly acclaimed decision-support tools, our data warehousing and data mining solutions, OLAP, query and reporting, and prepackaged solutions. We've been in the information business for nearly a quarter-century, providing solutions that help companies gain the knowledge they need about their customers, their suppliers and their own organizations.

SAS® Web technology extends the power of SAS worldwide, allowing you to:

- Cut development costs by applying a standard application framework.
- Reduce the requirements for client-side software and maintenance.
- Direct users to reports and applications and spend less time answering questions.
- Protect your data by building and deploying secure applications.
- Maximize your return on investment by developing applications —first for small groups, then extending them to more users.
- Reduce training costs with Web browsers that are intuitive and easy-to-use.
- Spend more time focusing on ensuring that information brings competitive advantage.
- Provide users with reports they can share with anyone inside or outside your organization—whether they're in the office, at home, or in an airport.



**SAS is the first data warehousing and decision-support vendor to provide a full range of Web technology.**

#### **Distributing reports worldwide**

No longer will you face urgent requests to fulfill individual reporting needs.

An Output Delivery System (ODS) empowers users with an almost limitless number of options for displaying results. With ODS, they can:

- Generate HTML files for formatting results.
- Generate output for high-resolution printers.
- Generate output data sets directly from procedures.
- Customize output through templates.
- Combine raw data with templates.
- Store links to output objects.
- Use standard table definitions provided or customize their own.

A single line of code instructs SAS/IntrNet to move analytical results directly to your intranet, making them accessible to anyone with a Web browser. This eliminates the need to distribute hard-copy reports—and reduces reliance on your IT staff.

#### **Distributing applications worldwide**

SAS/IntrNet extends the full power of SAS by providing dynamic access to data warehouse and decision-support tools via the Web. Users can query information dynamically, generate reports on demand and perform sophisticated analyses, all from a Web-based application. Only the right people can see sensitive information; host-based authentication checks requests for access against the user name and password and encrypts this information as it's passed between the browser and server. With both Common Gateway Interface (CGI) and Java technologies at your fingertips, you can quickly and easily build dynamic Web applications and distribute them worldwide. You do this by tapping the data and compute services of SAS/IntrNet software.

#### **SAS/IntrNet® data services**

Comprehensive data services allow Web-based applications to perform SQL queries for reporting, analysis and dynamic Web content. With SAS/ACCESS®, users gain access to the most current data—data produced by SAS applications and from other sources as well—to streamline the reporting and application process.

Data services with SAS/IntrNet include:

- **htnSQL CGI application.** Enables dynamic SQL queries, formats data and displays results to the Web browser. For UNIX and Windows Web servers.
- **JDBC driver (100% Pure Java).** Allows any JDBC-compliant application to access SAS data sources across the Web.
- **ODBC drivers.** Enable Windows-based, ODBC-compliant Web servers to access SAS data sources.

#### **SAS/IntrNet® compute services**

Going beyond simple querying and report generation, compute services allow users to access and execute remote SAS programs from the Web and perform sophisticated analysis and decision support. The Application Dispatcher and the SAS/CONNECT® driver for Java form the core of SAS/IntrNet compute services.

#### **Application Dispatcher**

The Application Dispatcher acts as a gateway from Web browsers to the power of SAS processing. Taking advantage of the Common Gateway Interface (CGI), it supports the widest variety of Web servers, provides access to SAS data sources, powerful analysis and decision-support tools and enables users to execute remote SAS software programs from a Web browser.



## Data and Compute Services

The Application Dispatcher comprises the Application Broker CGI and the Application Server. The Application Broker CGI resides on your Web server and communicates with either a running SAS Application Server or a launched SAS Application Server, sending parameters that describe the data requested and the SAS program to fulfill the request. The Application Server accesses the requested SAS applications, processes the request, formats the results and returns the results to the browser.

Unlike most CGI programs that do large amounts of processing, the CGI portion of the Application Dispatcher acts as a traffic monitor, doing almost no processing and therefore does not affect system performance. For further resource optimization, a load manager provides intelligent server selection, establishing servers on local or remote systems as needed. You can choose to prestart servers, limit the total number of servers per system, and stop servers after idle periods. These features help SAS/IntrNet applications

run faster, handle more users, and scale to larger applications as your needs grow.

While SAS programming experience and a working knowledge of HTML are recommended for building and deploying Web-based applications with the Application Dispatcher, no base-level CGI programming is required. So you can focus on solving business problems, not on learning a new language.

### The Java connection to SAS (100% Pure Java)

The SAS/CONNECT driver for Java provides the Java classes that enable you to write Java programs that communicate with a SAS session. It allows you to harness the compute capabilities of SAS for processing both data and industry-leading analytics, and to return the results to the Java program. It also provides standard HTTP tunneling technology that lets Java-based applications access data from sources other than the originating server, so users have the full computing and data services of SAS at their fingertips.

### Distribute reports

Share reports with anyone inside or outside the organization through a Web browser.

### Distribute applications

Build and distribute applications via the Internet.

### Exploit thin clients

Build applications for different activity thresholds across the client continuum.

### Exploiting the benefits of thin clients

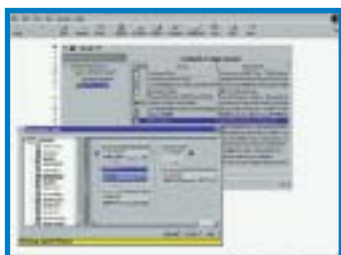
Taking advantage of thin-client interfaces enables you to reduce software maintenance and distribution. You can build applications geared toward different activity thresholds and make them available on every desktop—without requiring SAS on the client machine. You can unlock corporate stores of information from any platform—even the mainframe. SAS' unique MultiVendor Architecture™ (MVA™) allows you to use Windows, UNIX and mainframe servers to deploy thin clients.

### Get applications up and running fast!

It's never been easier to take advantage of thin-client interfaces to the SAS data warehouse and decision-support tools. Use SAS/IntrNet solutions right out of the box:

### Prebuilt business solutions

#### MetaSpace Explorer™ (Java-based)



Allows end users to query, report and navigate through warehouse data using an easy, point-and-click Web interface. Requires SAS/Warehouse Administrator®.

### MDDB Report Viewer



Provides a thin-client interface to multidimensional databases (MDDBs), where users can easily generate and view multidimensional data, reports and graphs. Requires SAS OLAP Server or SAS/MDDB Server® software.

### Sample applications

#### Xplore



Lets users dynamically access a variety of SAS data and file types for reporting, graphics and drill-down analysis. Use Xplore out of the box or customize it for your needs.

SAS/IntrNet gives you the perfect vehicle for extending data analysis and reporting at the lowest possible cost, with the highest rate of return to more users all over the world. To get full

SAS/IntrNet documentation, product demonstrations, technical tips and software downloads, visit the Web technology area of our Web site at [www.sas.com/web](http://www.sas.com/web).

### From SAS, an industry standard

The world's leading organizations have chosen SAS as a stable and committed software partner. We're dedicated to helping our customers use technology to gain more knowledge about their data and their processes. The results? Better outcomes and better returns on your technology investment. SAS is the world's largest privately held software company, serving more than 35,000 customer sites in 110 countries. More than 3.5 million users have seen the power of SAS turn raw data into rare insights.



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