



What does SAS/IntrNet do?

SAS/IntrNet software provides access to the proven broad server capabilities of SAS for enterprise Web-client application development.

Why is SAS/IntrNet important?

SAS/IntrNet software enables organizations to exploit strategic intelligence delivered by SAS software via the Web to large user communities inside and outside of the organization. From advanced analytics to warehousing exploitation, SAS/IntrNet allows organizations to maximize their return on investment in SAS.

For whom is SAS/IntrNet designed?

SAS/IntrNet is for SAS customers who want to take existing SAS applications and make them available on the Web using CGI, GWAPI or ISAPI, or for customers who wish to leverage the power of SAS with Web-enablement as a key requirement.

SAS/IntrNet® Software

Web-enable your SAS reports and applications

As competition has intensified and information has been recognized as a key corporate asset, the desire to make information more widely available within companies has increased. As a result, IT departments struggle to keep up with the requests by an ever-growing number of users for reports and access to business data.

SAS/IntrNet software can help your organization meet the increasing demand for business information by providing fast and easy Web-enabled access to the proven broad server capabilities of SAS for enterprise applications development.

SAS/IntrNet software provides large user communities inside and outside of the organization with dynamic, real-time access to information delivered via Web browsers so decision makers can easily exploit the strategic intelligence derived from SAS. Reports are delivered faster and decision makers quickly get the answers they need wherever they are. In addition, you eliminate the need for expensive desktop client installs and time-consuming applications maintenance.

From advanced SAS analytics to warehousing exploitation, SAS/IntrNet enables your organization to efficiently maximize the opportunities that intelligence brings.

Key benefits

- **Timely access to up-to-date business information.** Up-to-date, consolidated information can be delivered throughout the entire organization at any time and from any location in the world, even while users are traveling. Your decision makers get the information they need sooner, improving their ability to manage the business.
- **Simplified distribution of reports and applications across the enterprise.** In addition to the client-side benefits of Web-based delivery, only SAS/IntrNet offers the server-side flexibility and scalability that is provided by the load-balancing capabilities of the Application Dispatcher and support for multiple platforms. The ability to run across platforms, from Windows to UNIX to the mainframe, enables you to leverage existing IT infrastructure and makes it easy to distribute SAS reports even as the number of users continues to grow.
- **No need for expensive workforce retraining.** With SAS/IntrNet software, no third-party programming skills are required to Web-enable existing SAS applications. A combination of SAS programming skills, a little HTML knowledge and the power of the SAS server will deliver impressive results. Applications can be Web-enabled very quickly and return on investment realized almost immediately without the need for expensive workforce retraining.

Product overview

SAS/IntrNet software extends SAS' powerful data retrieval and analysis functionality to the Web with a suite of CGI and Java tools that lets you create and deploy Web-enabled reports and applications. Whether you are building Internet, intranet or extranet applications, SAS/IntrNet software can assist you in delivering business-critical information to users all over the world.

The software comes equipped with a modern set of enabling tools that have been designed with the flexibility to develop various styles of Web-client information delivery applications. Split broadly into two areas, SAS/IntrNet software offers:

- **Data services** that allow users to make SQL type queries to the SAS server. This means users can query, update and report data.
- **Compute services**, which go beyond simple querying and report generation to provide users with full access to the analytic capabilities of SAS. Any nonvisual functionality provided by the SAS server can be accessed and utilized with compute services.

Extend your SAS programs to any Web client

The Application Dispatcher enables the use of Web browsers to run any SAS program that can be executed in batch mode on a SAS server. It is made up of the Application Broker and the Application Server. To access and analyze data, a Web user completes an HTML form by selecting items and filling in fields. When the user selects the option to submit the information, it is sent to the Application Broker, a lightweight CGI program that passes information to the Application Server.

For organizations with security policies that discourage the use of CGI programs, SAS also offers an ISAPI Application Broker, which can replace the CGI Application Broker on Windows machines and the GWAPI Application Broker, which can replace the CGI Application Broker on mainframes.

After the Application Broker has sent the information to the Application Server that is installed on a SAS server, the Application Server executes the application and sends the results back to the Web browser where the user can retrieve them. No SAS software is required on the client machine, and no CGI/ISAPI/GWAPI programming experience is needed to use the Application Dispatcher.

SQL processing from your Web pages for up-to-date intelligence

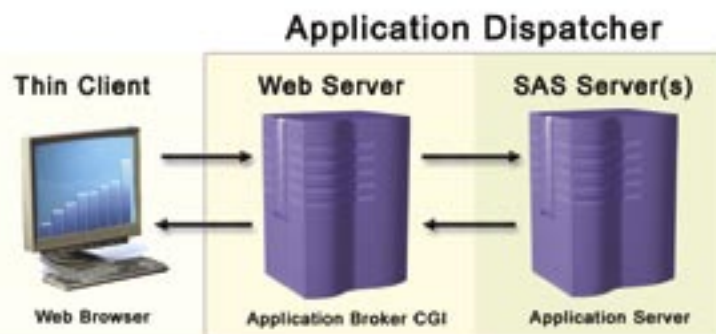
Using SAS/IntrNet's htmSQL enables SQL processing from your Web pages via a SAS/SHARE® server or the SAS Scalable Performance Data Server®. The user enters information into an HTML form and submits it to the htmSQL CGI script, which is designed to process SQL type queries that are embedded in HTML. Updates

and queries on the data source are performed by htmSQL and results are formatted according to a template in the input file.

The Web page is designed with htmSQL and it can be as simple or as sophisticated as you want. You can use the HTML elements that your browser supports as well as other formats such as XML, WML, PDF and CSV. You can display the results of any number of SQL statements on a single page and embed the results anywhere in a page. SAS htmSQL dynamically processes the SQL in response to user requests, ensuring that the most current SAS data is displayed in your browser or device on reload. In addition, htmSQL can be used to update back-end data tables.

End-to-end security supported

For security between the Web browser and the Web server, any industry standard, such as Secure Sockets Layer (SSL) and/or firewalls can be used. For security between the Web server and the SAS server, encryption and/or firewalls are supported. With Base SAS, SAS Proprietary Encryption of all data between the Application Broker and Application Server is supported.



The Application Dispatcher framework allows the deployment of SAS programs to multiple users, whether or not they have SAS installed on their machines.

Other encryption standards such as RC2, RC4, DES and TripleDES are offered with SAS/SECURE® software. Administrators can define the required encryption for a service. The SAS server also supports native operating system authentication and authorization to protect access to your systems.

Scalability for optimal resource usage

Intelligent load balancing routes client requests to idle servers ensuring the fastest response times. Servers can be distributed over multiple systems and they can be started automatically during periods of peak load and stopped during periods of inactivity. This optimizes the system for times of peak demand and times of no demand. Also, SAS/IntrNet spans most operating systems from Windows to UNIX to mainframes.

SAS Design-Time Controls let you use your favorite HTML editor

SAS Design-Time Controls are a way to use WYSIWYG (What You See Is What You Get) HTML editors to provide a point-and-click interface for adding SAS content to your Web pages without writing a single line of code. They act like page-component wizards that help you to build parts of your Web page. The controls present a user-friendly, intuitive interface that insulates you from much of the complexity that accompanies sophisticated Web content. You can control the look and feel of your Web pages in a WYSIWYG editor and at the same time access and surface the power of SAS software as it will appear on your Web pages. SAS Design-Time Controls can generate many forms of Web page content, including HTML, JavaScript, Java applets, ActiveX controls, and ASP and JSP code.

Key Features

Application Dispatcher

- Intelligent load balancing:
 - Client requests can be routed to idle servers.
 - Servers can be distributed over multiple systems.
 - Servers can be started automatically during periods of peak load and stopped during periods of inactivity.
- End-to-end security:
 - Secure sockets and/or firewall supported between the Web browser and the Web server.
 - Encryption and/or firewalls supported between the Web browser and the SAS server.
 - Native operating system security for access to the file system.
- Monitoring allows the capturing of information such as:
 - The user who just accessed a report or application.
 - Application execution failures.

htmlSQL

- Embedded SQL:
 - Results of SQL can be embedded anywhere on your Web page.
 - Results can also be embedded in other formats such as PDF, XML, WML and CSV.
- Dynamic updates:
 - Web pages are refreshed with latest SAS data on reload.
 - Data tables on the server can be updated from your htmlSQL page.

SAS/CONNECT® Driver for Java and SAS/SHARE® Driver for JDBC

- Access SAS capabilities from Java applications, applets and servlets.
- Start SAS session, create and access data sets, analyze data and retrieve results.
- Submit SQL to access and update SAS data.

Security

- Socket communications can be restricted by the Java security manager provided by the browser.

Design-Time Controls

- Use with WYSIWYG editors including (but not limited to):
 - Microsoft FrontPage '98.
 - Microsoft FrontPage 2000.
 - Macromedia Dreamweaver 2, 3 and 4.
 - Macromedia Dreamweaver UltraDev.
 - Macromedia Drumbeat 2000.
 - Softquad HoTMetaL Pro 5 and 6.
 - SAS AppDev Studio 3.0: (webAF 3.0).
 - Microsoft Visual InterDev.
- Dialog-driven assistance:
 - Use familiar WYSIWYG editor and control wizard to combine sophisticated design with the power of SAS.
 - Users do not need Design-Time Controls to view Web pages.
- Scheduled publishing of dynamic pages:
 - Refresh content on a schedule and store static HTML for faster access.

SAS/IntrNet® Software Technical Requirements

Supported platforms

- AIX (64-bit), Release 5.1+
- HP/UX (64-bit), Release 11i+
- HP/UX Itanium (64-bit), Release 11i+
- Linux for Intel (32-bit): Red Hat Linux 8.0, RHAS 2.1, RHEL 3.0; SuSE SLES 8, SLES 9
- Linux for Itanium (64-bit): Red Hat RHEL 3.0
- OpenVMS Alpha (64-bit), Release 7.2+ (excluding 7.3)
- OS/390, Version 2, Release 10
- Solaris (64-bit) 8, 9, 10 on SPARC
- Tru64 UNIX (64-bit), Version 5.1A or 5.1B
- Windows (x86-32): Windows NT 4 Server, Windows 2000 Server, Windows Server 2003, Windows XP Professional
- Windows (64-bit on Itanium): Windows Server 2003
- z/OS, Version 1

Client system

- Browser

Web tier

- Web Server with CGI support

Required software

- Base SAS.
- SAS OLAP Server required to run MDDB analysis or reports.
- SAS/SHARE required for SQL data services.
- SAS/CONNECT required to write Java applets that connect directly to the SAS server.
- When you develop custom applications that call SAS routines, appropriate SAS products must be licensed for both the development and deployment environments.



World Headquarters
and SAS Americas
SAS Campus Drive
Cary, NC 27513 USA
Tel: (1) 919 677 8000
Fax: (1) 919 677 4444
U.S. & Canada sales:
(1) 800 727 0025

SAS International
PO Box 10 53 40
Neuenheimer Landsr. 28-30
D-69043 Heidelberg, Germany
Tel: (49) 6221 4160
Fax: (49) 6221 474850

www.sas.com