

SAS/IntrNet[®] 9.3

Overview



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SAS/IntrNet® 9.3: Overview

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What's New in SAS/IntrNet 9.3

Overview

SAS/IntrNet software provides the ability to manage your configuration through the SAS Deployment Manager.

General Enhancements

SAS/IntrNet Application Dispatcher includes the following enhancement:

- The SAS/IntrNet Configuration Utility has been replaced by the SAS/IntrNet Service Tasks in the SAS Deployment Manager. The Create a New IntrNet Service utility on Windows and the inetcfg.pl script on UNIX are no longer available.

Chapter 1

Overview of SAS/IntrNet Software

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About SAS/IntrNet Software

SAS/IntrNet software provides a powerful suite of tools that enable you to create and deploy Web-enabled applications. These dynamic applications can provide remote access to your organization's data and bring the computing power of SAS to any desktop, regardless of whether SAS software is installed. SAS/IntrNet software includes the following components:

Application Dispatcher

enables you to build dynamic applications that give users access to the power of SAS from their Web browsers.

htmSQL

is a Common Gateway Interface (CGI) program that enables you to perform SQL processing from a Web page.

SAS/CONNECT Driver for Java

enables you to build Java applications and applets that send requests to SAS servers on behalf of a user. The tunnel feature is a complementary tool, which enables you to move your SAS server software to a machine other than your Web server.

MDDB Report Viewer

enables you to use a Web browser to generate and view reports and graphs of data that are stored in a multidimensional database (MDDB).

SAS/IntrNet Monitor

is a desktop application that displays the current running status of configured load-managing Application Servers and stand-alone Application Servers. To start the SAS/IntrNet Monitor, do the following:

- On Windows, select **Start** ⇒ **Programs** ⇒ **SAS** ⇒ **IntrNet** ⇒ **Monitor**.
- On UNIX, execute `<SASHOME>/SASIntrNetMonitor/9.3/InetMon.exe`.

See the product Help for more information.

Xplore Sample Web Application

can dynamically access a variety of SAS data and file types for reporting, generating graphics, and performing drill-down analysis of the Web.

Glossary

access control

a method of controlling the type of access that each user has to data or to an application's functionality.

Active Server Pages

an application environment that enables you to use HTML pages, scripts, and ActiveX server components to create Web applications.

API

See application programming interface.

Application Broker

a Common Gateway Interface (CGI) application that resides on a Web server and which is invoked in order to process information from an HTML form. The Application Broker's configuration file defines the services that are available to Application Dispatcher applications.

Application Dispatcher

a component of SAS/IntrNet software that enables you to send information from a browser to a SAS session for processing and which returns the results to your browser. The Application Dispatcher includes the Application Broker and the Application Server.

Application Dispatcher application

the combination of one or more input components (such as HTML pages or HTML forms) and one or more Dispatcher programs. A Dispatcher application can also consist of several HTML pages or forms and several Dispatcher programs.

Application Dispatcher program

a program that is run by the Application Server and which produces the output from a Dispatcher application. A Dispatcher program can be a SAS language program, a SOURCE catalog entry, an SCL catalog entry, or a compiled macro.

Application Load Manager

an optional component of the Application Dispatcher that distributes requests to multiple Application Servers. The Application Load Manager keeps track of Application Servers as they are started and terminated, and it ensures that none of the servers becomes overloaded.

application programming interface

a set of software functions that facilitate communication between applications and other kinds of programs or services. Short form: API.

Application Server

a SAS session that is waiting for input from the Application Broker, or which is launched on demand by the Application Broker.

ASP

See Active Server Pages.

authentication

See client authentication.

authorization

the process of determining which users have which permissions for which resources. The outcome of the authorization process is an authorization decision that either permits or denies a specific action on a specific resource, based on the requesting user's identity and group memberships.

Broker

See Application Broker.

browser

See Web browser.

cascading style sheet

a set of specifications that control how HTML elements are displayed in a Web browser. For example, you can use a CSS to specify fonts, sizes, and colors of the text in HTML documents. Cascading style sheets make it easier for authors of HTML documents to maintain a consistent style on multiple pages.

catalog

See SAS catalog.

catalog entry

See SAS catalog entry.

CGI

a programming interface that enables a Web server to communicate with an external program and to pass the results back to a user.

character entity reference

a symbolic reference in the form &name that enables you to insert a special character into an HTML document. You can use a character entity reference when you need to insert a character that is not on your keyboard or when you cannot insert a character directly because of its significance in the HTML.

client

an application that requests either resources or services from a server, possibly over a network.

client authentication

the process of verifying the identity of a person or process for security purposes.

Common Gateway Interface

a programming interface that enables a Web server to communicate with an external program and to pass the results back to a user.

Common Metadata Repository

a general-purpose metadata management facility that provides metadata services to SAS/EIS applications. The Common Metadata Repository enables SAS/EIS software to share metadata with other SAS products.

configuration file

a file that defines the services that are available for Application Dispatcher applications. This file resides on the Web server, often in the same directory as the Application Broker.

content type

a value that tells a client's Web browser how to interpret and display a transferred object such as an image file, a sound file, or a video file. For example, GIF, JPG, TIFF, MIDI, and WAV are content types.

continuation character

in htmSQL, a character that can be used in your configuration file. If the last non-blank character of the line is a continuation character, then at run time, the continuation character (and all blank spaces that immediately precede and follow the continuation character) is replaced with the contents of the next line (minus leading white space).

cookie

a character string that contains information about a visitor to a Web site. The Web server sends cookies to a computer via a browser. Applications use cookies to uniquely identify visitors and sessions.

cube

See multidimensional database.

data set

See SAS data set.

data source definition file

a file that identifies a SAS/SHARE server that htmSQL can get data from. A data source definition can also specify SAS data libraries or an external database management system (DBMS) that htmSQL accesses through that server.

database management system

a software application that enables you to create and manipulate data that is stored in the form of databases. Short form: DBMS.

DBMS

See database management system.

debug flag

a value that is assigned to the `_DEBUG` variable in order to activate various debugging features. You can specify a debug flag with any Application Dispatcher request.

descriptor information

information about the contents and attributes of a SAS data set. For example, the descriptor information includes the data types and lengths of the variables, as well as which engine was used to create the data. SAS creates and maintains descriptor information within every SAS data set.

directive

a processing instruction in the Application Broker configuration file. Each Application Broker directive contains a keyword and a value.

drill down

to explore data and access information by moving from summary information to more detailed data from which the summary is derived. For example, you could click folders in a hierarchy from the top downwards to find a specific file. Drilling down provides a method of exploring multidimensional data by moving from one level of detail to the next.

dynamic query

in htmSQL, a query that enables Web page users to customize the query by specifying their own values for search parameters. The query is written using variable references that are given values when users access the Web page.

encryption

the act or process of converting data to a form that is unintelligible except to the intended recipients.

engine

a component of SAS software that reads from or writes to a file. Various engines enable SAS to access different types of file formats.

firewall

a set of related programs that protect the resources of a private network from users from other networks. A firewall can also control which outside resources the internal users are able to access.

hidden field

in an HTML form, a field whose name and value are not visible in the Web browser.

host

See host operating environment.

host operating environment

the operating environment (computer, operating system, and other software and hardware) that is identified by an IP address or by a domain name and that provides centralized control for software applications.

HTML

See HyperText Markup Language.

HTTP

a protocol for transferring data to the Internet. HTTP provides a way for servers and Web clients to communicate. It is based on the TCP/IP protocol. Short form: HTTP.

HTTP header

a group of fields that precedes any output that is created by an Application Dispatcher program. Each line of the header is a field, and each field consists of a

name (for example, Content-type: or Expires) and a value (for example, text/html or 02 Feb 2002 00:00:00 GMT). The Application Server generates a default HTTP header if the Application Dispatcher program does not generate one.

HTTP tunneling

a method of transferring data between clients and servers that otherwise could not exchange data because of applet security restrictions, firewalls, or other security restrictions on a network. HTTP tunneling is frequently used to enable an applet to connect to a server that is on a different computer system than the applet's Web server.

HyperText Markup Language

a coding system in which the codes indicate the layout and style of the text in a text file. Other HTML codes enable you to embed electronic objects such as images, sounds, video streams, and applets (small software applications) into HTML documents. All Web browsers can process HTML documents. Short form: HTML.

HyperText Transfer Protocol

See HTTP.

inetcfg

See SAS/IntrNet configuration utility.

input component

a part of an Application Dispatcher application that usually consists either of static HTML pages that contain URL references or of dynamically generated HTML pages that contain either HTML forms or links to an Application Broker URL. The input component selects the appropriate Application Dispatcher program to run and passes data to that program.

input file

in htmSQL, a file that contains the HTML and SQL code that you want processed.

Internet Media type

another term for MIME type.

IP address

a unique network address that is assigned to each computer that is connected to the Internet. The IP address can be specified in either of two formats: Internet Protocol Version 4 (IPv4) or Internet Protocol Version 6 (IPv6). The IPv4 format consists of four parts in dot-decimal notation, as in 123.456.789.0. The IPv6 format can consist of up to eight groups of four hexadecimal characters, delimited by colons, as in FE80:0000:0000:0000:0202:B3FF:FE1E:8329.

Java Database Connectivity

See JDBC.

Java plug-in

program code that enables an applet to use the most current Java features rather than using a browser's default Java virtual machine.

JavaServer page

a type of servlet that enables users to create Java classes through HTML. Short form: JSP.

JDBC

a standard interface for accessing SQL databases. JDBC provides uniform access to a wide range of relational databases. It also provides a common base on which higher-level tools and interfaces can be built. Short form: JDBC.

JSP

See JavaServer page.

launch service

a type of Application Server service that starts a new server for each Application Dispatcher request.

library engine

an engine that accesses groups of files and puts them in the correct form for processing by SAS utility windows and procedures. A library engine also determines the fundamental processing characteristics of the library and presents lists of files for the library directory.

library member

a type of SAS file in a SAS library. Types of SAS files include a data set, a view, a catalog, a stored program, and an access descriptor.

library reference

See libref.

libref

a SAS name that is associated with the location of a SAS library. For example, in the name MYLIB.MYFILE, MYLIB is the libref, and MYFILE is a file in the SAS library.

macro variable

a variable that is part of the SAS macro programming language. The value of a macro variable is a string that remains constant until you change it. Macro variables are sometimes referred to as symbolic variables.

MDDB

See multidimensional database.

MDDB Report Viewer

a CGI-based viewer that enables users to generate and view data that is stored in a multidimensional database (MDDB) without starting a SAS session. The data can be displayed either in a report format or as a graph.

Message Router

one of the tunnel feature's server programs. The Message Router is a CGI program that passes requests to the SAS server, provided that the statement or request meets certain criteria. The Message Router receives processed statements or requests from the Session Agent and then passes them to the applet that is running on the client machine.

metabase

a repository in which data sources (tables or MDDBs) have been registered for a SAS/EIS application.

metadata

descriptive data about data that is stored and managed in a database, in order to facilitate access to captured and archived data for further use.

metadata repository

a collection of related metadata objects, such as the metadata for a set of tables and columns that are maintained by an application. A SAS Metadata Repository is an example.

MIME

a method of registering content types and their associated actions with mechanisms for actions such as retrieval and display. Short form: MIME.

MIME type

Multipurpose Internet Mail Extensions type. Examples of MIME types include image/jpeg, application/zip, and text/html.

multidimensional database

a specialized data storage structure in which data is presummarized and cross-tabulated and then stored as individual cells in a matrix format, rather than in the row-and-column format of relational database tables. The source data can come either from a data warehouse or from other data sources. MDDBs can give users quick, unlimited views of multiple relationships in large quantities of summarized data.

Multipurpose Internet Mail Extensions

See MIME.

numeric character reference

a symbolic reference in the form `&#xnn`; where `xnn` is a decimal number. The decimal number represents a special character and enables you to insert the special character into an HTML document. You can use a numeric character reference when you need to insert a character that is not on your keyboard or when you cannot insert a character directly because of its significance in the HTML.

ODS

See Output Delivery System.

Output Delivery System

a component of SAS software that can produce output in a variety of formats such as markup languages (HTML, XML), PDF, listing, RTF, PostScript, and SAS data sets. Short form: ODS.

path separator character

a character that can be used to separate pathnames or path patterns in the values of the INCLUDE, NOINCLUDE, and DATASRCFILE options.

pool service

a type of Application Server service that starts new servers as needed for Application Dispatcher requests. Once started, a server remains available to process future requests.

port

in a network that uses the TCP/IP protocol, an endpoint of a logical connection between a client and a server. Each port is represented by a unique number.

program

an external SAS file, a SOURCE entry, an SCL entry, or a MACRO entry that is stored in a program library. Application Dispatcher also includes several server administration programs that are built into the server itself.

program component

a SAS program that is part of an Application Dispatcher application. The program is invoked within the Application Server. It receives requests from the server, processes the requests, and returns the results to the Application Broker for delivery to the Web browser.

program library

a SAS library, a partitioned data set, or a directory that has been designated by the server administrator as a location from which programs can be run.

protocol

a set of rules that govern data communications between computers, between computers and peripheral devices, and between software applications. TCP/IP, FTP, and HTTP are examples of protocols.

query string

an optional part of a URL that contains one or more name/value pairs, preceded by a question mark. The name/value pairs are sent as input to a program component.

relative URL

a partial URL that references another location that is relative to a current URL. A relative URL is constructed by omitting the URL protocol, the server name, and (optional) part or all of the path.

repository

a storage location for data, metadata, or programs.

repository manager

a container of information about metadata repositories. The metadata server uses the repository manager to find and manage metadata repositories.

repository registration

the process of registering data that describes a table. Each table that you register in a repository creates a registration in that repository.

request data

data that is delivered as input with a request. The request data includes the information that is required in order to run the program, as well as input data for the program.

return code

a numeric value that indicates whether a request was successful. A return code can also indicate a specific error or warning.

SAS catalog

a SAS file that stores many different kinds of information in smaller units called catalog entries. A single SAS catalog can contain different types of catalog entries.

SAS catalog entry

a separate storage unit within a SAS catalog. Each entry has an entry type that identifies its purpose to SAS.

SAS data set

a file whose contents are in one of the native SAS file formats. There are two types of SAS data sets: SAS data files and SAS data views. SAS data files contain data values in addition to descriptor information that is associated with the data. SAS data views contain only the descriptor information plus other information that is required for retrieving data values from other SAS data sets or from files whose contents are in other software vendors' file formats.

SAS library

one or more files that are defined, recognized, and accessible by SAS and that are referenced and stored as a unit. Each file is a member of the library.

SAS spawner

a program that runs on a remote host and which listens for client requests for connection to the remote host. When the spawner program receives a request, it invokes a SAS session on the remote host.

SAS/IntrNet configuration utility

a program that is used to create an Application Dispatcher service. Short form: inetcfg.

SAS/SHARE driver for JDBC

a data services component of SAS/SHARE software. The SAS/SHARE driver for JDBC enables you to create Java programs that let users access and update data through a direct connection to a SAS/SHARE server. The SAS/SHARE driver for JDBC is part of the SAS/IntrNet Java tools.

SAS/SHARE server

the result of an execution of the SERVER procedure, which is part of SAS/SHARE software. A server runs in a separate SAS session that services users' SAS sessions by controlling and executing input and output requests to one or more SAS libraries.

SAS/SHARE server library

a SAS library that has been defined to a SAS/SHARE server. The SAS/SHARE server controls access to the library.

server

software that provides either resources or services to requesting clients, possibly over a network.

server application

an application that runs on a server machine. Users can use server applications without having to load those applications on their client machines.

server library

See SAS/SHARE server library.

service root directory

the directory that contains configuration directories for Application Dispatcher services. Each service has a separate directory in the service root directory.

servlet

a Java program that runs on a Web server. Servlets are a complementary technology to applets, which run in Web browsers. Unlike applet code, servlet code does not have to be downloaded to a Web browser. Instead, servlets send HTML or other

appropriate content back to a browser or to another type of Web-based client application.

Session Agent

a detached process that communicates with the SAS server machine. Based on the statement or request from the applet, the Session Agent either starts a SAS/CONNECT session on the SAS server machine or establishes a connection to a SAS/SHARE server. The Session Agent passes statements or requests from the Message Router directly to the SAS/CONNECT or SAS/SHARE server, and it returns the results of the processed statement or request to the Message Router.

session reconnect

an Application Dispatcher request that connects to an existing session by specifying the `_SERVICE`, `_SERVER`, `_PORT`, and `_SESSIONID` values for that session. Reconnecting to a session enables the requested program to access macro variables and SAS library contents that were created by previous requests during that session.

socket service

a type of Application Server service that routes requests to one or more previously started Application Servers.

SOURCE entry

a type of catalog entry that contains text from SAS text editor windows.

SQL

See Structured Query Language.

static query

in htmSQL, a query that consists of expressions and clauses that contain constant values and no references to variables.

Structured Query Language

a standardized, high-level query language that is used in relational database management systems to create and manipulate objects in a database management system. SAS implements SQL through the SQL procedure. Short form: SQL.

system repository manager

the default repository manager for your site.

TCP/IP

an abbreviation for a pair of networking protocols. Transmission Control Protocol (TCP) is a standard protocol for transferring information on local area networks such as Ethernets. TCP ensures that process-to-process information is delivered in the appropriate order. Internet Protocol (IP) is a protocol for managing connections between operating environments. IP routes information through the network to a particular operating environment and fragments and reassembles information in transfers.

Teletypewriter Network Protocol

See Telnet.

Telnet

a program that provides virtual terminal services that enable you to log on to a server from a terminal that is connected to a client. The client performs as if it were physically connected to the server. Short form: Telnet.

thin client

a computer that is deployed across a network, and is dependent on a server for much of its functionality. In contrast to the more independent rich client machine, thin clients share resources with other computers, thereby reducing the costs for software and support.

time-out

an error condition that is produced when a required response from a device or program is not received after a specified length of time.

translation table

an SAS catalog entry that is used to map data from one encoding to another encoding. SAS language elements that control locale values and encoding properties automatically invoke the appropriate translation table. Translation tables are specific to the operating environment; for example, a translation table that maps the Windows 2 encoding to the ISO Latin 2 encoding.

tunnel feature

an optional feature of SAS/IntrNet that implements HTTP tunneling for Java applets, using the SAS/SHARE driver for JDBC or the SAS/CONNECT driver for Java. HTTP tunneling enables you to move your SAS server software to a machine other than your Web server. The tunnel feature consists of the Message Router and Session Agent programs that are installed on your Web server.

tunneling

See HTTP tunneling.

unsafe character

any character in an input value that could be misinterpreted as part of the syntax of the SAS macro language. Single quotation marks, double quotation marks, ampersands, percent signs, and semicolons are all unsafe characters.

Web browser

a software application that is used to view Web content, and also to download or upload information. The browser submits URL (Uniform Resource Locator) requests to a Web server and then translates the HTML code into a visual display.

Web server

a computer program that delivers (serves) content, such as web pages, over the World Wide Web. It can also refer to the computer or virtual machine that runs the program.

