

# **SAS<sup>®</sup> IT Resource Management 3.2 Glossary**



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**SAS® IT Resource Management 3.2: Glossary**

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## Contents

<i>SAS IT Resource Management 3.2: Glossary</i> .....	v
<b>Chapter 1 • Glossary</b> .....	<b>1</b>
SAS IT Resource Management: Glossary .....	1



# SAS IT Resource Management

## 3.2: Glossary

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### **Audience**

The audience for this glossary is any person who uses SAS IT Resource Management.



## Chapter 1

# Glossary

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SAS IT Resource Management: Glossary .....	1
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## SAS IT Resource Management: Glossary

- adapter**  
specialized software that loads raw IT performance data from diverse data sources into staged tables that can then be input to other processes. Adapters that are supported by SAS IT Resource Management consist of template tables, transformations, and staging code.
- age limit**  
in a table, a unit of time that describes how long existing data is to be kept in an aggregation table of an IT data mart when new data is processed.
- aggregate**  
another term for summarize.
- aggregation**  
the process of grouping data by means of a statistic such as a sum, average, minimum, or maximum.
- analysis variable**  
a numeric variable that is used to calculate statistics or to display values. Usually an analysis variable contains quantitative or continuous values, but this is not required.
- attribute**  
a property of an object, component, or other entity. Examples of attributes include name, size, or color.
- autoexec file**  
a file that contains SAS statements that are executed automatically when SAS is invoked. The autoexec file can be used to specify some of the SAS system options, as well as to assign librefs and filerefs to data sources that are used frequently.
- availability**  
the percentage of time that a system is available to respond to the requests of its users.
- axis**  
a one-dimensional line that represents the scale that is used for plotting the values of x, y, or z coordinates.

backload

to load into a staged table data that is older than the most recently processed data.

batch job

a unit of work that is submitted to an operating system for batch processing. For example, under UNIX, a batch job is a background process; under Windows, a batch job is a task; and under z/OS, a batch job is a set of JCL statements.

batch mode

a method of executing SAS programs in which a file that contains SAS statements plus any necessary operating environment commands is submitted to the computer's batch queue. After you submit the program, control returns to your computer, and you can perform other tasks. Batch mode is sometimes referred to as running in the background. The program output can be written to files or printed on an output device.

browser

See Web browser.

BY variable

a variable that is named in a BY statement and whose values define groups of observations to process.

capacity planning

the process of measuring performance, availability, and workload volume in a particular computing environment and comparing these measurements over time to baseline values. The object of capacity planning is to predict when resources will need to be upgraded.

chart

a graph in which graphical elements such as bars or pie slices show the magnitude of data values. The graphical elements can represent one data value or a range of data values.

class variable

See classification variable.

classification variable

a variable whose values are used to group (or classify) the observations in a data set into different groups that are meaningful for analysis. A classification variable can have either character or numeric values. Classification variables include group, subgroup, category, and BY variables. Short form: class variable.

client tier

the portion of a distributed application that requests services from the server tier. The client tier typically uses a small amount of disk space, includes a graphical user interface, and is relatively easy to develop and maintain.

collector

another term for data collector.

continuous values

values of a variable that theoretically could indicate an uncountable number of possible values. For example, a variable that measures the temperature of water in degrees Celsius under normal conditions is continuous because it can have any value from 0 to 100, even though the thermometer that is used is not able to measure temperatures beyond a particular level of decimal precision.

control data set

one of the data sets that the duplicate-data-checking macros maintain and use to determine whether data from a log has already been processed.



**CPU normalization**

the act or process of taking CPU usage values that have been collected on CPUs that operate at different speeds and multiplying those values by normalization factors so that the charges assessed for CPU usage are equitable no matter what type of CPU is used. The normalization factors are based on comparisons to one particular type of CPU that has been specified as the standard for a particular site. CPU normalization is sometimes referred to as processor normalization.

**cron**

a UNIX utility for executing batch jobs on a periodic basis.

**data collector**

software that collects logged performance data that is related to IT services. The data collector could be a facility of the operating system, a product that is provided by a third-party vendor, or software that is written by consultants or by SAS IT Resource Management customers.

**date format**

in SAS software, the instructions that tell SAS how to write numeric values as date values.

**datetime format**

in SAS software, the instructions that tell SAS how to write numeric values as datetime values.

**delimiter**

a character that serves as a boundary that separates the elements of a character string, a program statement, a data line, or a list of arguments.

**duplicate data**

1) observations that have identical values in all of the BY or CLASS variables. 2) observations that come from the same log. The meaning that is intended is explained when the term is used.

**duplicate-data-checking macros**

the set of macros that controls whether data from a log can be processed again in either a performance data warehouse or the tables of an IT data mart.

**duration**

1) in records that represent interval data but which do not contain a value for the length of the interval, a value in seconds that represents the length of time between records. 2) in records that represent interval data and which do contain a value for the length of the interval, that value in seconds. 3) in observations for interval-type tables, the variable that contains the length of the interval in seconds.

**ETL (extract, transform, and load)**

the process of extracting IT performance data from a data source, transforming the data, and loading it into an IT data mart.

**external file**

a file that is created and maintained by a host operating system or by another vendor's software application. Either data or stored SAS statements can be read from an external file. Data can be written as output to an external file. A SAS data set is not an external file.

**folder**

a repository for objects that are of the same type.

**gallery**

a group of reports that are stored on the SAS Content Server that can be filtered and managed by Gallery Manager.

global macro variable

a macro variable that can be referenced in either global or local scope in a SAS program, except where there is a local macro variable that has the same name. A global macro variable exists until the end of the session or program.

graphical user interface

any system that uses graphical objects such as windows, menus, icons, buttons, and check boxes to represent the functions of a software application and to enable the user to interact with the application. By contrast, a command-line interface requires users to interact with the software application by entering text. Many graphical user interfaces use visual metaphors for real-world objects such as file cabinets, folders, rulers, and scissors. Short form: GUI.

graphics output device

any terminal, printer, or other output device that is capable of displaying or producing graphical output.

GUI

See graphical user interface.

host

an operating environment that is identified by a name. For example, a domain name or an IP address can be used to identify a computer or a router.

HTML

See HyperText Markup Language.

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.

ID variable

a variable that contains an alternate identifier for the data in a class variable. For example, the value of a class variable could be a device address, and the value of the corresponding ID variable could be the name of the device. ID variables are useful for identification because their values rarely change.

index

a component of a SAS data set that enables SAS to access observations in the SAS data set quickly and efficiently. The purpose of SAS indexes is to optimize WHERE-clause processing and to facilitate BY-group processing.

informat

See SAS informat.

information map

a collection of data items and filters that provides a user-friendly view of a data source. When you use an information map to query data for business needs, you do not have to understand the structure of the underlying data source or know how to program in a query language.

Internet

the proper name of the super-network that connects many smaller networks around the world and which enables all the computers on those networks to exchange information. All of the computers on the Internet use the same set of communication protocols, called TCP/IP. The World Wide Web uses the Internet as an electronic highway.

**interval-type table**

a table in which each observation represents an interval of time. The timestamp in the observation typically represents the beginning of the interval, and the duration in the observation represents the length of the interval.

**intranet**

a private network of interconnected networks within a single company or organization. These networks use the same TCP/IP communication protocols that are used on the public, worldwide Internet, but they are either closed to the Internet or they are connected to the Internet via a firewall. A firewall enables internal users to access the Internet, but prevents unauthorized outsiders from accessing the intranet. In other words, intranets enable companies or organizations to share information without making that information available to everyone who has access to the Internet.

**IT**

information technology.

**IT data mart**

a logical collection of the jobs, data, information maps, tables, and other elements that support the extracting, transforming, and loading (ETL) of IT data.

**job**

a collection of SAS tasks that can create output.

**keep status**

1) for a table, a value that indicates whether the table is to be used or ignored. 2) for a variable in a table, a value that indicates whether the variable is to be used or ignored.

**key performance indicator**

a measurement that shows whether an organization is progressing toward its stated goals. Short form: KPI.

**keyword parameter**

a type of macro parameter that is identified by its name, followed by an equal sign. Multiple keyword parameters can be provided in any order, and must follow any positional parameters.

**KPI**

See key performance indicator.

**LAN**

local area network.

**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.

**local macro variable**

a macro variable that is available only within the macro in which it was created and within macros that are invoked from within that macro. A local macro variable ceases to exist when the macro that created it stops executing.

**LPAR**

logical partition.

**machine**

any type of data processing hardware that can be recognized by SAS IT Resource Management as a single unit. A machine can be a single physical machine such as a computer, a router, or a telephone switch. It can also be a logical entity such as a

logical partition of an IBM z Series system or a domain on the Solaris operating system. A computer in which multiple CPUs share the same memory could also be regarded as a single machine.

macro

a SAS catalog entry that contains a group of compiled program statements and stored text.

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.

management information base

a virtual database for data that is gathered by one or more SNMP agents. Short form: MIB.

mean

the arithmetic average, which is calculated by adding the values of a sample variable and dividing this sum by the number of observations.

measure

a classification of data items. The values of measure data items are aggregated (unless otherwise specified) and can be used in computations or analytical expressions.

metadata

data about data. For example, metadata typically describes resources that are shared by multiple applications within an organization. These resources can include software, servers, data sources, network connections, and so on. Metadata can also be used to define application users and to manage users' access to resources. Maintaining metadata in a central location is more efficient than specifying and maintaining the same information separately for each application.

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.

MIB

See management information base.

middle tier

in a SAS business intelligence system, the architectural layer in which Web applications and related services execute. The middle tier receives user requests, applies business logic and business rules, interacts with processing servers and data servers, and returns information to users.

migrate

to populate a new deployment of SAS software with the content, data, or metadata (or a combination of these) from an existing deployment. Migrating might include upgrading to a new software release, converting data or metadata, or other changes to ensure compatibility.

missing value

a type of value for a variable that contains no data for a particular row or column. By default, SAS writes a missing numeric value as a single period and a missing character value as a blank space.

multi-tier architecture

a distributed architecture in which multiple components interact with each other in multiple configurations.

**MXG software**

the software from Merrill Consultants that processes IT performance data records that are generated by the System Management Facility (SMF) under the z/OS operating system, the OS/400 operating system, and their subsystems. MXG software reads the raw IT performance data records and writes them to SAS data sets for further analysis. Examples of analysis are the measurement and management of IT resource capacity, resource utilization, measurement of service objectives, system tuning, and accounting and cost recovery.

**navigate**

to purposefully move from one view of the data in a table (or in some other data structure, such as a cube) to another. Drilling down and drilling up are two examples of navigation.

**network**

a configuration of data processing devices and software that are connected for the purpose of information exchange.

**n-tier architecture**

a type of network architecture that is used in the development of relational business applications. N-tier architecture separates an application's interface, its business logic, and its databases into components, or tiers. This approach enables the tiers to interact with each other in multiple configurations. The tiers can easily be used and reused in new combinations in order to meet dynamic business requirements.

**object**

an entity that can be manipulated by the commands of a programming language. In object-oriented programming, an object is a compilation of attributes (object elements) and behaviors (methods) that describe an entity. Unlike simple data types that are single pieces of information (for example, int=10), objects are complex and must be constructed.

**operating environment**

a computer, or a logical partition of a computer, and the resources (such as an operating system and other software and hardware) that are available to the computer or partition.

**palette**

a stored set of SAS and SAS/GRAPH options, such as colors and patterns, that can be associated with one or more report definitions.

**PDB**

See performance data warehouse.

**PDB level**

another term for level.

**performance data**

information about how your IT system is doing its work. You use this information to determine whether your system is doing work efficiently and to determine how to change its load or its tunable parameters so that it can perform more efficiently.

**performance data warehouse**

logically, a data warehouse that contains detailed and summarized performance data, as well as information (metadata) that is needed for managing the data. Physically, each PDB consists of a coordinated set of nine SAS libraries that contain performance data plus other information that is related to one or more IT services. Short form: PDB.

permanent SAS library

a SAS library that is not deleted when a SAS session ends, and which is therefore available to subsequent SAS sessions.

PGMLIB

the libref (library reference name) for a SAS IT Resource Management program library that is on the local server host.

process

a functional unit of a program or task.

program library

the SAS library in which most of the SAS IT Resource Management software resides. For example, the master data dictionary resides in the program library.

property

any of the characteristics of a component that collectively determine the component's appearance and behavior. Both attributes and methods are types of properties.

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.

publication channel

an information repository that has been established using the SAS Publishing Framework and that can be used to publish information to users and applications.

publish

to deliver electronic information to interested users in a timely manner.

ranking

the process of ordering observations according to values of particular variables.

raw data

data that has not been read into a SAS data set.

remote server profile

a stored set of values that are used for connecting to a remote server host.

report definition

a specification that is used for generating a report. A report definition includes information such as the table, the names of the variables, and the report style.

report gallery

another term for gallery.

repository

a storage location for data, metadata, or programs.

repository access control template

the access control template (ACT) that controls access to a particular repository and to resources for which access controls are not specified. You can designate one repository ACT for each metadata repository. The repository ACT is also called the default ACT.

response time

the amount of time to service a request.

restore

to recover the contents of a backup copy.

**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 types 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 datetime value**

an integer that represents a date and a time in SAS software. The integer represents the number of seconds between midnight, January 1, 1960, and another specified date and time. For example, the SAS datetime value for 9:30 a.m., June 5, 2000, is 1275816600.

**SAS Foundation Services**

a set of core infrastructure services that programmers can use in developing distributed applications that are integrated with the SAS platform. These services provide basic underlying functions that are common to many applications. These functions include making client connections to SAS application servers, dynamic service discovery, user authentication, profile management, session context management, metadata and content repository access, activity logging, event management, information publishing, and stored process execution.

**SAS informat**

a type of SAS language element that applies a pattern to or executes instructions for a data value to be read as input. Types of informats correspond to the data's type: numeric, character, date, time, or timestamp. The ability to create user-defined informats is also supported. Examples of SAS informats are BINARY and DATE. Short form: informat.

**SAS IT Resource Management client**

a computer on which SAS IT Resource Management software is installed with a client license. The client accesses IT data marts on servers through a telecommunications protocol such as TCP/IP.

**SAS IT Resource Management server**

a computer on which SAS IT Resource Management software is installed with a server license. The server has 'write' access to the IT performance data in IT data marts and is used for processing data through the host operating environment's file system. In addition, the server is used for administering IT data marts.

**SAS library**

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

**SAS Metadata Repository**

one or more files that store metadata about application elements. Users connect to a SAS Metadata Server and use the SAS Open Metadata Interface to read metadata

from or write metadata to one or more SAS Metadata Repositories. The metadata types in a SAS Metadata Repository are defined by the SAS Metadata Model.

SAS procedure

a program that provides specific functionality and that is accessed with a PROC statement. For example, SAS procedures can be used to produce reports, to manage files, or to analyze data. Many procedures are included in SAS software.

SAS Stored Process

a SAS program that is stored on a server and defined in metadata, and which can be executed by client applications. Short form: stored process.

scheduled job

in SAS IT Resource Management, one of a set of batch jobs that typically run at night.

schema

a map or model of the overall data structure of a database. A schema consists of schema records that are organized in a hierarchical tree structure. Schema records contain schema items.

server

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

service

one or more application components that an authorized user or application can call at any time to provide results that conform to a published specification. For example, network services transmit data or provide conversion of data in a network, database services provide for the storage and retrieval of data in a database, and Web services interact with each other on the World Wide Web.

simple index variable

a variable for which an index is built. The index contains information about the values of the variable and about the observations that contain those values.

Simple Network Management Protocol

a protocol or standard that is used for exchanging network management information, which is information that enables the network to be managed. Short form: SNMP.

slowly changing dimensions

a technique for tracking changes to dimension table values in order to analyze trends. For example, a dimension table named Customers might have columns for Customer ID, Home Address, Age, and Income. Each time the address or income changes for a customer, a new row could be created for that customer in the dimension table, and the old row could be retained. This historical record of changes could be combined with purchasing information to forecast buying trends and to direct customer marketing campaigns.

SNMP

See Simple Network Management Protocol.

SNMP agent

a software module that performs network management functions.

staged data

raw data that has been read, possibly transformed, and written to a SAS data set.

staging code

SAS statements that read raw data, transform it, and write it to a SAS data set.

stored process

See SAS Stored Process.



- summarize**  
in aggregations, to accumulate data into tables according to specifications that are defined by the user.
- supplied format**  
a format that is shipped with SAS IT Resource Management.
- supplied report definition**  
a report definition that is shipped with SAS IT Resource Management.
- supplied table definition**  
a table definition that is shipped with SAS IT Resource Management.
- table definition**  
1) the attributes of a particular table. 2) the attributes of a table and the attributes of its associated variables. 3) the attributes of a table and of its associated variables, plus the status information about the data that is associated with the table and its variables. The meaning that is intended is explained where the term is used.
- throughput**  
the rate at which requests for work are serviced by a computer system.
- time format**  
in SAS software, the instructions that tell SAS how to write numeric values as time values.
- transformation**  
in data integration, an operation that extracts data, transforms data, or loads data into data stores.
- tuning**  
the process of tracking the performance of an IT service, comparing the performance to service objectives in order to identify bottlenecks and hardware problems, and then adjusting the service to eliminate the problems. Tuning also involves distributing work equitably to the available computer hardware in order to optimize the use of resources.
- utilization**  
1) for resources that can be partially occupied (for example, memory), the fractional usage of a resource. 2) for resources that cannot be partially busy (for example, a CPU), the ratio of time that a resource is being used to the total elapsed time.
- Web browser**  
a software application such as Microsoft Internet Explorer or Netscape Navigator that provides access to information that is on the Internet or on your company's intranet.
- Web Distributed Authoring and Versioning**  
a set of extensions to the HTTP protocol that enables users to collaboratively edit and manage files on remote Web servers. Short form: WebDAV.
- WebDAV**  
See Web Distributed Authoring and Versioning.
- weight**  
a numerical coefficient that is assigned to an item and which indicates the relative importance of the item in a frequency distribution or population.
- weighting variable**  
a variable whose values represent the weights for each observation.

**WHERE clause**

one or more WHERE expressions used in a WHERE statement, a WHERE function, or a WHERE= data set option.

**WHERE expression**

defines the criteria for selecting observations.

**wizard**

an interactive utility program that consists of a series of dialog boxes, windows, or pages. Users supply information in each dialog box, window, or page, and the wizard uses that information to perform a task.

**workload**

the amount of work a system is experiencing. Workload can be measured in terms such as characters per second, processes per second, or transactions per second.