Arcati Mainframe Navigator 2025

Glossary

Glossary of Terminology

Definitions of some mainframe-related terms

This glossary is intended as an aide memoire for experienced mainframers and a useful reference for those new to the z/OS world.

#

3270
: IBM's family of dumb, block-mode synchronous screen and printer terminals, which became the standard for terminal/mainframe connectivity.

3270 data stream
: Format used by 3270 devices for communication, and much used for emulation to make PCs look like dumb terminals.

5250
: Terminal standard for the iSeries/400, System/3x etc.

A

ABARS
: Aggregate Backup And Recovery Support. A disaster recovery feature within DFSMShsm for automatically creating files containing back-ups of critical data. The main use of ABARS is to group all the datasets relating to a particular application together.

Abend
: ABnormal ENDing. IBMspeak for an unexpected termination to a program run, eg a crash.

Above the line
: In z/OS, z/VM, and VSE/ESA, above the line refers to virtual/real memory locations with an address greater than 16MB. The 16MB limit resulted from earlier operating systems supporting 24-bit addressing.

ACB
: Access Control Block. The control block used to tie an application program to a VSAM dataset.

Access control
: Enforcing rules governing use of computer resources by restricting both the use and type of use to authorized individuals and the computer resources they are responsible for.

Access method
: IBM-specific jargon for software that moves data between main storage and I/O devices.

ACF/VTAM
: Advanced Communications Function / Virtual Telecommunications Access Method is IBM's proprietary telecommunications software.

ACID
: This acronym describes the properties of a transaction. Atomicity refers to a transaction's changes to the state—either it all happens or nothing happens. Consistency refers to the state of a transaction. It must not violate any of the integrity constraints associated with the state. Isolation refers to the transaction not being affected by others. Durability refers to the survival of changes to state after a transaction completes.

ACL (1)

Access Control Lists specify which users are permitted to access a file or program function. The ACL format is determined by the External Security Manager (ESM). RSH

ACL (2)

Automated Cartridge Library. Synonymous with ATL (Automated Tape Library).

ACO

Automated Console Operations. Automated procedures that replace or reduce the number of actions an operator takes from a console in response to system or network activities.

ADA

Programming language much loved by the military (ADA is a US government standard), which uses it for writing systems for controlling guided missiles and the like. Withdrawn August 1994.

Address Resolution Protocol

The Internet Protocol (IP) used to dynamically map IP addresses to physical hardware Media Access Control (MAC) addresses.

Address space

The virtual storage allocated to an executing task in a mainframe. Generally used within z/OS to mean the space used by one of batch job, system task, or TSO user.

Agile

A modern alternative to waterfall models of project development in which requirements and solutions emerge through collaborative working between developers and users. It results in rapid changes and innovative solutions to problems.

AI

Artificial Intelligence is the simulation of human intelligence processes by machines, especially computer systems. These processes include learning (the acquisition of information and rules for using the information), reasoning (using rules to reach approximate or definite conclusions), and selfcorrection.

AIOps

Originally, Algorithmic IT Operations, although sometimes thought of as artificial intelligence for IT operations, it refers to software that uses machine learning to help IT teams evaluate and act faster and more accurately.

AIX

Advanced Interactive eXecutive. IBM's version of Unix for mid-range systems (System p). It is one of four commercial operating systems that are certified to The Open Group's UNIX 03 standard. It is currently supported on IBM Power Systems alongside IBM i and Linux.

AJAX

Asynchronous Javascript And XML is a way of creating interactive Web applications using a group of technologies together. These technologies include XHTML (or HTML) and CSS; the Document Object Model; and the XMLHttpRequest object.

AMASPZAP

z/OS batch utility to apply a fix directly to object code in situ. Often protected against unauthorized use because of its additional ability to make direct changes to disk.

AMODE

Addressing MODE. Attribute of z/OS programs indicating the length (in bits) of the addresses used in the program. Introduced in MVS/XA to differentiate between the then new 31-bit addressing that expanded the addressable space from 16MB (24 bit) to 2GB. z/ OS introduced 64-bit addressing.

AMS

Access Method Services. z/OS and VSE subsystem for performing various data-related actions on VSAM and ICF catalogs, including defining VSAM datasets, and deleting and copying most dataset types. In short, a multi-purpose utility. Also known as IDCAMS because that is the program name.

Analytics

Extracting hidden value from the massive volumes of data.

Ansible

This popular open-source software is a provisioning, configuration management, and application-deployment tool enabling infrastructure as code.

APAR

Authorized Program Analysis Report. An official report of a software error to IBM. Also used to refer to the patch supplied by IBM to fix the error (PTF is the correct term).

API

Application Program(ming) Interface. Documented programming procedures to access a given piece of software; typically an entry point name and parameter list. The re-use of APIs can speed up application development.

APL

A Programming Language, conceived within IBM by K E Iverson, and popular on the mainframe in the late '70s and early '80s to support end-user activities.

APM

Application Performance Management monitors and manages the performance and availability of software applications in order to meet business needs.

App

This usually refers to a mobile application found on Android and Apple smartphones and tablets.

Applet

A small application program written in the Java that can be retrieved from a Web server and executed in a browser.

APPN

Advanced Peer-to-Peer Networking architecture is an enhancement to SNA architecture. It can handle dynamic multipath routing.

ARM

Automatic Restart Management is a sysplex-wide integrated restart mechanism that can restart MVS subsystems after an abend, restart workloads on another MVS image after an MVS failure, and restart a failed MVS image.

AS/400

Application System/400. IBM's mid-range processor, announced in June 1988. It was replaced by the IBM Power Systems in April 2008. Now called IBM i.

ASCII

American Standard Code for Information Interchange. A modification of the international code which has become a de facto standard (except for IBM which also uses the EBCDIC code) for transmitting data. Uses seven bits plus a parity bit, and includes alphanumeric and control characters. ASCII must be converted to EBCDIC for uploading to IBM mainframes.

ASM
: Auxiliary Storage Manager. The part of z/OS that looks after the I/O operations relating to paging—specifically the pages and page slots on external storage (typically DASD).

Assembler
: Programming language that allows the user to get close to the hardware on IBM mainframes. Assembler statements correspond one-to-one with mainframe, machine-level instructions.

ATL
: Automated Tape Library (also known as Automated Cartridge System—ACS, tape silo, or silo). Type of mass storage system (MSS) in which industry standard tapes are loaded by a robotic arm.

Augmented reality
: Using a device, such as a smartphone or tablet, to view an object, such as server, and see on that device additional information about the object—such as performance information.

Auxiliary storage
: All storage needing a channel I/O to access it (basically cache, SSD, disk, tape, mass storage).

AWLC
: Advanced Workload License Charges is a new monthly licence pricing metric from IBM and applies to z196s.

B

BaaS
: Blockchain as a Service—like Software as a Service (SaaS)—is where cloud-based solutions are consumed to build, host, and operate blockchains while the cloudbased service provider keeps the infrastructure agile and operational.

Backout
: A process that removes all database updates performed by an application that has abended (qv). BAL Basic Assembler Language. The machine language on the original S/360 from which the modern Assembler languages are derived.

Bandwidth
: A measure of how fast a network can transfer information, originally measured in Hertz (Hz), but now used for any measure of network throughput. The more precise definition: frequency range within a radiation band required to transmit a particular signal. Measures the difference between the highest and lowest signal frequencies in millions of cycles per second.

BASIC
: Beginners All-purpose Symbolic Instruction Code. Universal interactive programming language.

Batch
: An accumulation of data brought together for processing or transmission, usually unattended. Less formally, the processing of such data, as opposed to online processing where a user is present to respond interactively.

BCD
: Binary-Coded Decimal. A binary-coded notation in which each of the decimal digits is represented by a binary numeral. This differs from the pure binary notation, where the entire number is represented as a single binary numeral.

BCS
: The Basic Catalog Structure and the VVDS are the two parts of the ICF catalog. The BCS contains dataset and alias names and volume serial numbers.

BCU

A Balanced Configuration Unit comprises processor memory, I/O, storage, and DB2 resources. It is the smallest combination of these that work together efficiently. As more work is added to the system, so more BCUs can be added. This avoids any one component being too big in terms of the others.

BDAM

Basic Direct Access Method allows programmers to access specific blocks of data on DASD.

Benchmark

An agreed workload used as a standard against which to compare the performance of different hardware/software. For a benchmark to be useful it needs to be a public standard.

Big Data

The SNA/APPN command used to activate an LU-LU session following the successful completion of the SNA/APPN session initiation processing.

Big SQL

This allows users to access Hadoop-based data using familiar SQL statements. It utilizes InfoSphere BigInsights.

Bimodal IT

Gartner's management of IT model where one strand is very conservative and unwilling to change and the other strand embraces rapid application development and is tightly linked to business needs.

BIND

The SNA/APPN command used to activate an LU-LU session following the successful completion of the SNA/APPN session initiation processing.

BIOS

Basic Input/Output System. The I/O component of a simple operating system defining the interface between the operating system and the outside world.

Bitcoins

Bitcoins originated in a 2008 concept paper by Satoshi Nakamoto. Bitcoins are a virtual currency that are 'mined' by solving complex algorithms and are usually stored in a digital wallet. Bitcoin exchanges are completely private, which makes them popular with criminals! Many legitimate companies offer products for sale using bitcoins.

BLOB

Binary Large OBject. A generic term for a file containing some kind of binary data (text, image, document, sound, etc). Typically, BLOBs can be transferred and manipulated across a wide range of platforms.

Block

A string of data elements, such as characters, words, or physical records, that are recorded or transmitted as a unit.

Blockchain

A blockchain is a distributed database that maintains a continuously growing list of ordered records. Blockchains are secure by design and an example of a distributed computing system. Once recorded, the data in a block cannot be altered retroactively.

Bluemix

Bluemix is an open-standards, cloud-based platform for building, managing, and running all types of apps, for Web, mobile, big data, and smart devices. It includes Java, mobile back-end development, and application monitoring, all provided as-a-service in the cloud.

BMS
Basic Mapping Support. An interface between CICS and an application to control the movement and presentation of datastreams to and from a dumb terminal. BMS allows data to be displayed without allowing for display-dependent formatting characters.

Boolean
An operation that follows the rules of Boolean algebra.

Boot
To prepare a computer system for operation by loading an operating system.

BPAM
Basic Partitioned Access Method is a low-level access method used to access Partitioned DataSets (PDSs).

Breach
This is where a cyberattack has gained access to a network and the mainframe, giving unauthorised access to data and backups to hackers.

BSAM
Basic Sequential Access Method, along with QSAM, is an access method used to access sequential datasets.

Bus
Generic term in data communications to describe a wiring topology (such as that used in Ethernet) in which devices are connected along a single linear medium.

BYOD
Bring your own device is the policy many companies are adopting to allow employees to bring their own mobile devices (laptops, tablets, and smartphones) to their workplace, and to use those devices to access privileged company information and applications.

BYOI
Bring Your Own Identity is the growing practice of taking a validated identity with you and so not needing to remember different user-ids and passwords for different environments. There are security issues.

Byte
A string of 8 bits that represents one EBCDIC character. The IBM mainframe architecture is organized around the concept of the byte.

C

C
A programming language developed at Bell Labs in 1972, so named because its predecessor was named B. Unix was written in C.

C/C++
An optional, separately priced feature of z/OS, available with or without Debug Tool. The C/C++ IBM Open Class Library is included with z/OS, but is only enabled when C/C++ is licensed.

Cache
High-speed buffer between a fast device and a slow device. In large IBM systems cacheing may take place in the CPU (in main or expanded storage), the controller, device head-of-string, or the device itself (eg in a track buffer). It is used to reduce access time.

Capacity on Demand
Processors can be purchased with extra capacity already on-board but not functioning. When extra capacity is required at a site, it is turned on. This is non-disruptive and customers don't pay for the extra capacity until they start using it.

Catalog
: A dataset that contains information about other datasets, eg type, location, size, format. The z/OS master catalog usually also contains entries for user catalogs.

CCL
: Communication Controller for Linux (CCL) on zSeries runs the Network Control Program (NCP) software product in Linux, enabling users to get rid of their legacy 3745 communication controllers running NCP-based SNA workloads to zSeries servers.

CDS
: Configuration DataSet.

CGI
: Common Gateway Interface. A mechanism used by HTTP servers to invoke arbitrary programs for additional processing of certain requests; typically, those involving database access.

Change management
: The methodology for planning and controlling software changes.

Channel
: A specialized computer used in the IBM mainframe architecture to control transfers between devices and the processor unit. The channel offloads some of the processing associated with I/O from the main CPU.

Channel adapter
: Hardware unit to attach a channel to a processor.

Channel attached
: Devices that are directly attached to the processor by cable rather than over a communications link.

Channels
: CICS TS 3.1 introduced a replacement for sizerestricted COMMAREAs—they are channels and containers. Any number of containers can be passed between programs and they are grouped together in channels.

CHPID
: CHannel Path IDentifier. A single byte binary value used to uniquely identify each channel path on an eServer zSeries and previous mainframe systems.

CICS
: Customer Information Control System. General purpose TP monitor for terminal-oriented and intersystem transaction processing in z/OS and VSE/ESA environments. Now with added SOA.

CICS Explorer
: This is a system management tool for CICS systems that's based on the Eclipse platform.

CICSplex
: A CICS complex (CICSplex) is a group of intercommunicating CICS systems.

CICSPlex System Manager (CPSM)
: This provides system management as well as automation and workload management.

CKD
: Count Key Data is a way to format disk drive using cylinder number, track number, and physical record.

Client/server
: Generic term for systems (also known as server/ requester) in which one machine provides a range of services to one or more other machines.

CLIST

Control language used to manage interactive applications in the z/OS TSO environment. Largely superseded by REXX.

Cloud computing

A new name for something similar to client/server computing. A user launches a browser and clicks a link. Somewhere else an application launches and work is done. The mainframe seems to have always worked in this way. Organizations like Microsoft, Amazon, and Google are trying to become big players in this 'new' paradigm.

Cloud Paks

IBM Cloud Paks are AI-powered software that come with pre-integrated data, automation, and security capabilities. They help create hybrid cloud platforms.

CMOS

Complementary Metal Oxide Semiconductor. A chip technology used widely by IBM in its processors, superseding the water-cooled ECL chips on the mainframe.

CMS

Conversational (originally Cambridge—the lab where it was built) Monitor System. Operating system running under VM, and providing timesharing and program development facilities.

COBOL

Programming language, very widely used for commercial applications on the mainframe. Some sources suggest that CICS and COBOL account for 85% of all transactions processed.

Communication Server

IBM's all inclusive, multi-platform, software bundle that provides a plethora of terminal emulation, Web-to-host, and networking capabilities.

Compile

The translation of a high-level programming language (source program) into a machine language program (an executable program).

Compiler

A program that translates high-level programming languages into machine language programs

Composite applications

A composite application is an application built by combining multiple services. This tends to mean taking part of a really useful mainframe application and combining it with some other code so that the mainframe application becomes available over the Web

Compression

Generic term for a method of reducing the amount of space needed to store data, by encoding the data. This is achieved through the elimination of empty fields, gaps, redundancies, and unnecessary data to shorten the length of records or blocks.

Connector

One way of integrating CICS applications as Web services is to use connectors on the mainframe and use native interfaces to permit tight integration with the target application.

Containers

CICS TS 3.1 introduced a replacement for sizerestricted COMMAREAs—they are channels and containers. Any number of containers can be passed between programs and they are grouped together in channels. Channels are deleted when no programs are using them.

Control Point

SNA/APPN/HPR functionality that performs authorization, directory services and configuration management.

CORBA
: Common Object Request Broker Architecture. Set of standards for distributed object management from the Object Management Group (OMG).

Coupling
: Generic term used to mean connecting of processors together into a more or less tightly-knit computing complex. Used specifically by IBM to mean the connection of multiple eServer zSeries processors in a Sysplex. Coupling Facility Hardware from IBM, where common tables can be shared in a Sysplex, for high-speed cacheing, update locking of shared data, list processing and workload balancing between multiple processors.

CPC
: Central Processor Complex.

CPU
: Central Processing Unit. Processor. The part of a computer that executes instructions.

CRM
: Customer Relationship Management refers to the way organizations manage their relationships with customers—including finding, marketing to, selling to, and servicing these customers.

CTG
: CICS Transaction Gateway provides J2EE standardsbased access to CICS applications, which means it's an easy way to make existing CICS applications part of a Service-Oriented Architecture (SOA).

CTC
: Channel-To-Channel connections would link two mainframes and provide high-speed communication.

Cyberattack
: Bad actors trying to and often successfully gaining access to a network and the mainframe, then exfiltrating often confidential data.

CyberSecurity Mesh Architecture (CSMA)
: An integrated approach to securing IT assets regardless of their location. It redefines the perimeters of cybersecurity to the identity of a person or a thing. Gartner predicts that this will reduce the financial implications of cyber incidents by 90% in less than two years.

Cylinder
: The tracks, in an assembly of magnetic disks, that can be accessed without repositioning the access mechanism.

D

DASD
: Direct Access Storage Device. IBMspeak for disk.

DAT
: Dynamic Address Translation. The process by which virtual addresses are converted into real addresses during instruction execution.

Data dictionary
: A data dictionary (DD) is a database containing information about the way items of data are used. Typically a DD contains details of data names, data usage, data structures, data models, and so on.

Data lake
: A data lake is a repository of data stored in its natural format. This could be in a Hadoop-based repository.

Data mining
: The practice of using a data warehouse for highly complex, ad hoc queries.

Data Privacy Passports
: These were introduced with the z15 mainframe. They enable users to protect and provision data, and revoke access to that data at any time. They not only work in the z15 environment, but also across an enterprise's hybrid multi-cloud environment.

Data sewer
: What happens to a data lake as more and more records are added.

Data warehouse
: General term for a collection of database, middleware, and query tools that allow fast, flexible access to nearoperational corporate data.

DataOps
: This is an automated, process-oriented methodology, that's used to improve the quality and reduce the cycle time of data analytics.

DataPower
: IBM WebSphere DataPower SOA Appliances is a family of pre-built, pre-configured rack mountable network devices that accelerate Web services deployments while extending SOA infrastructure.

Dataset
: A unit of data storage and retrieval consisting of one or more data records. Outside of the IBM mainframe environment, people call them files.

DB2
: Database/2. Relational database management system first announced for mainframe environments in 1983. Originally promoted as an end-user tool, but is now IBM's preferred DBMS for just about everything and runs on all platforms.

Db2ZAI
: IBM Db2 AI for z/OS empowers the optimizer in the Db2 for z/OS engine to determine the best-performing query access paths, based on a site's workload characteristics.

Debug
: The human problem determination process for software. Literally, to remove bugs.

DEDB
: Data Entry DataBases are one of two types of IMS fast path database. These databases do not have indexes and are stored in VSAM files.

Defragmentation
: The use of a software utility to improve access and retrieval time by rewriting fragmented data to contiguous sectors of a computer storage medium.

Denial of Service
: An insidious, carefully-orchestrated attack on computer systems or networks to overload their resources with a barrage of requests in the hope of discovering overloadinduced vulnerabilities within the targets or to just disrupt the mission-critical activities of an enterprise.

DeOS
: No longer is DDoS (Distributed Denial of Service) our only worry, we need to think about Destruction Of Service attacks.

Device
: Any computer peripheral, such as tape or DASD, or any object that appears to be a peripheral.

DevOps
: Part DEVelopment and part OPerations, DevOps is a philosophy emphasizing the collaboration and communication between software developers and other IT people, so that building, testing, and releasing software, can happen rapidly, frequently, and more reliably.

DevSecOps
: DevSecOps is DevOps with security consideration introduced earlier in the life cycle of application development in an attempt to minimize vulnerabilities.

DFSMS
: Data Facility Storage Management Subsystem. An element of z/OS and also available for z/VM, as DFSMS/VM. The idea is that you simply tell the system about your storage, back-up, performance, and other requirements of the data, and the system does the rest for you. Of course, it's not really that simple.

DFSMSdfp
: DFSMS Data Facility Product. A component of DFSMS that provides functions for storage, data, program, and device management, in conjunction with distributed data access. Enables the definition of the services to be assigned to new datasets. Handles catalog management and access methods.

DFSMSdss
: DFSMS DataSet Services. An optional, separately priced feature of DFSMS that handles device migration, copy, space management, and dump/restore. It also converts existing data between non-SMS and SMS volumes, and provides an interface for storage administrators (ISMF).

DFSMShsm
: DFSMS Hierarchical Storage Manager. An optional, separately priced feature of DFSMS. It is a sophisticated automated system for both back-up and hierarchical storage management. It includes an ISPF interface for end users who wish to migrate, recall, back-up, or recover individual datasets, or to override the default migration and/or back-up parameters.

DFSMSrmm
: DFSMS Removable Media Manager. Its goal was to integrate the system managed storage principles of DFSMS into all removable media, most notably tape and optical.

Digital reinvention
: Successful digital reinvention follows a fundamental rethink or reimagining of how an organization operates and how it engages with its environment and customers.

Digital Transformation (DX)
: Another way of describing the inevitable change in technology that occurs in businesses that plan to stay in business.

Disruptive technology
: Henry Ford said: "If I had asked people what they wanted, they would have said faster horses". That's an example of a disruptive technology—something that changes the way people do things.

DL/I
: Data Language/I. The I is the Roman numeral One. The data manipulation language within IMS DB. DL/I is also the product name for IBM's VSE/ESA implementation of IMS DB.

DLSw
: Widely-used SNA/APPN(/NetBIOS)-over-TCP/IP transport mechanism which, however, unlike EE, does not support SNA COS or routing.

DMZ
: A De-Militarized Zone is used in the on-going war against viruses and malware etc. Typically, one computer accepts incoming data and send outgoing data. Behind it is a firewall, and behind that is the protected LAN.

Docker
: Docker is a software container platform. Everything you need to make the software work is packaged into this container. It includes libraries and settings to run on any platform. This way, you get an efficient, lightweight, selfcontained system, plus the assurance that the software will always run the same, no matter where it's deployed. IBM has Docker Enterprise Edition for IBM Cloud.

Domino
: Web server technology from Lotus (June 1996), which allows browsers to interact with Notes and access Notes databases. Now closely integrated with WebSphere.

DRaaS
: Disaster Recovery as a Service is the replication and hosting of physical or virtual servers by a third-party to provide failover in the event of a catastrophe.

E

EBCDIC
: Extended Binary Coded Decimal Interchange Code. Coded 8-bit character set (giving 256 characters) used by IBM mainframes.

e-business
: Used to refer to business transactions that use the Internet.

ECI
: The External Call Interface is used by CICS to allow non-CICS programs to invoke programs under CICS.

Eclipse
: Eclipse is an Open Source IDE. IBM's version is sold as WebSphere Studio Workbench. The Eclipse platform comprises the platform run-time, the workspace, the workbench, the Standard Widget Toolkit (SWT), the Version and Configuration Management (VCM), and the help system. Eclipse comes with a large number of plug-ins. The user interface for Eclipse is known as the workbench.

Edge computing
: Putting some computing power at the furthest reaches of the network to control IoT devices, for example.

EE
: HPR-over-UDP/IP, created by committee and codified in RFC 2353 in 1998, which permits SNA/APPN networking, replete with native COS and routing, across IP networks.

EJB
: Enterprise JavaBeans. A server-side, transactionoriented extension to the JavaBeans component model specification published by Sun. EJB are JavaBeans, but have no user interface and are designed to run within a special EJB container. In principle, any properly coded EJB should run within any fully compliant EJB container.

Enqueue
: The z/OS expression (often abbreviated to ENQ) for requesting resource serialization. ENQ can be used to put a user-named entry in the system resource queue in order to prevent another program using a serially usable resource.

Enterprise Content Management (ECM)
: This refers to a way of organizing and storing an organization's documents, and other content, that relate to the organization's processes. Nowadays, ECM can be used when talking about strategies, methods, and tools used throughout the life-cycle of the content. ECM also covers the capture, search, and networking of documents with digital archiving, document management, and workflow.

Enterprise Extender
: Enterprise Extender (EE) is a combination of SNA encapsulated in IP packets, so it can be thought of as a kind of protocol.

EPI
A CICS External Presentation Interface service is an implementation of a service that can be created from a 3270 terminal. EPI provides communication with 3270 terminal-based CICS applications.

ERP
Enterprise Resource Planning systems try to integrate all the data and processes that exist within an organization into a single unified system. Error log A dataset or file that contains a record of machine checks on device errors, which are stored for later analysis.

ESB
An Enterprise Service Bus is a software architecture construct that is standards-based and flexible. It is an attempt to separate the service being called and the required transport medium.

ESCON
Enterprise System Connectivity. The high-speed fibre-optic channel architecture (using a serial, packetswitched protocol) first available on ES/9000 and 3090Js and many peripherals. Replaced by FICON in May 1998, though still available.

ESDS
Entry Sequenced DataSet is a VSAM sequential dataset.

ESM
External Security Manager is a vendor software product that performs security authorization checking. RACF, ACF2, and Top Secret are ESMs. ESMs verify a user's identity, determine whether a user is permitted to access a dataset (ie file) or resource, log a user's activities, and decide whether a user can view or administer controls. RSH

ESS
The Total Storage Enterprise Storage Server, codenamed shark, is a high-speed data storage product.

EWLC
Entry Workload Licence Charges allow customers only pay for peak z/OS usage, not for full machine capacity.

F

FBA
Fixed Block Architecture is a way of formatting disk drives where space is allocated in fixed-length blocks rather than cylinders.

FDBR
Fast DataBase Recovery creates a separate IMS control region (the Fast Database Recovery region) to monitor an IMS subsystem. If it detects a failure, it will recover any database resources that are locked by the failed IMS, so they're available for other IMS subsystems.

FHE
Fully Homomorphic Encryption allows users to perform addition and multiplication operations on encrypted data, which, when decrypted, gives the same output as would have been produced using unencrypted data.

Fibre optic channel
Channel technology which replaced copper bus-andtag channel cables with fibre-optic links.

FICON
FIbre CONnection. Mainframe channel that implements the ANSI FCS transport. Each FICON channel can handle over 4,000 I/O operations per second, equivalent to eight ESCON(qv) channels. The FICON channel link speed is 100MB/sec full duplex, compared with 17MB/sec simplex with ESCON links.

Firewall
: Specialized software designed to prevent unauthorized access to a computer system while permitting validated, non-harmful interactions to get through.

Flat file
: Any file (dataset, mainframe parlance) stored in a file access method without an index which, of course, eliminates all relational DBMSs.

Floating point
: One of several methods of storing numbers on an IBM mainframe and most other computers. Similar to scientific notation, such as 3.75 times 10 to the 25th power, only it is 2 or 16 that is taken to some power.

FLPA
: The Fixed Link Pack Area is an area of storage containing modules loaded at IPL time.

FORTRAN
: FORmula TRANslation. A programming language best suited for engineering, scientific, and mathematical applications.

Fragmentation
: When an operating system writes data to disk or other storage media, and there is insufficient contiguous space, the data is then written to discontiguous sectors. The result is fragmented data. Fragmentation can cause increased data access times because the operating system must search different tracks for information.

FTP
: File Transfer Protocol is an application layer protocol that uses TCP and Telnet services to transfer bulk data files between machines or hosts.

Fog computing or fog networking or fogging
: This is an architecture that uses edge devices to carry out a substantial amount of computation, storage, and communication locally and routed over the Internet backbone.

FWLC
: Flat Workload License Charge. A flat monthly charge for a software product, no matter what size of zSeries server it is being run on.

G

Gamification
: A way of making using the software more fun—like in a game—and so people are more likely to do it. It has applications in mundane tasks such as updating a knowledgebase.

Gateway
: One way of integrating CICS applications as Web services is to use gateways, which run off the mainframe on middle tier servers and may well use traditional methods, such as screen scraping.

GDG
: Generation Data Group. Collection of (z/OS non-VSAM) datasets all with the same logical name (GDG Base Entry); the individual datasets are uniquely identified by the generation number which is stored as part of the dataset name.

GDPR
: General Data Protection Regulation applies to any organization storing data about EU citizens.

GDPS
: Geographically Dispersed Parallel Sysplex is an application to manage z/OS remote copy configuration and storage subsystems, to automate various tasks, and perform failure recovery for a sysplex located at two sites.

GTF
: Generalized Trace Facility. An optional z/OS utility that records system events, which can be used for problem diagnosis.

GitHub
: A Web-based Git version-control repository hosting service, which is available on mainframes.

GUIDE
: Guidance for Users of Integrated Data processing Equipment. For many years, an international user group for users of large IBM equipment. Main GUIDE interests were in applications and the commercial world. Depending on the area of the world you live in, it either stepped aside for SHARE or merged with SHARE (now GUIDE/SHARE in Europe, for example).

H

Hackathon
: A caffeine-rich events where teams use APIs to create customer-friendly applications quickly.

Hadoop
: An open-source software framework for storage and large-scale processing of data-sets, ie Big Data. On a mainframe, it runs in a Linux partition (Linux on System z).

Hadoop Distributed File System (HDFS)
: A filesystem used to store Big Data.

HALDB
: High-Availability Large Databases are the newest (since V7) IMS databases. They are like souped-up very big full-function databases.

HBase
: This is a non-relational, distributed database, written in Java that is used to store Big Data.

HCD
: Hardware Configuration Definition is an interactive tool used to define the hardware configuration.

HDA
: Head/Disk Assembly. The read/write head and associated bits and pieces that read data from disks. The implication is also of a sealed unit, at least from the customer perspective, as opposed to a removable disk pack.

HFS
: Hierarchical File System comes with Linux and refers to the way files are stored.

HiperBatch
: A way of running batch jobs in hyperspace, so there was far less I/O and things ran faster.

HMC
: Hardware Management Console used to manage hardware.

Host
: A computer system that is a server and/or serves attached terminals. Often used to refer to mainframe.

HPR
: High-Performance Routing is an extension to APPN networking providing improved routing performance and reliability.

HSA
: High-Speed Adapter is the name for subchannels on some servers.

HTML
HyperText Mark-up Language is a “mark-up language” for defining the structure of a document—eg Web pages.

HTTP
HyperText Transfer Protocol is the protocol used to request, transfer, and display hypertext documents.

Hub
A generic term for a device that has a single connection to the host and many connections for other devices to connect to it.

Hybrid cloud
Public and private cloud services can be integrated with on-premises infrastructure to a produce a hybrid cloud environment with orchestration, management, and application portability across all three.

Hybrid working
Working from anywhere, including, but not restricted the office and home.

I

I/O
Input/output. Refers to the transmission of data into or out of a processor’s memory. This would include communication lines and peripherals such as disk drives.

ICETOOL
An enhanced DFSORT utility that includes the OUTFIL feature.

IBM i
An operating system running on IBM Power Systems. It was originally named OS/400 and ran on AS/400s.

IBM Z
IBM’s mainframe family of processors, eg z15, z14, etc.

ICF
Integrated Catalog Facility contains catalog information about datasets. It is made up BCS and VVDS. ICF Integrated Coupling Facility is a component of a Parallel Sysplex. It allows multiple processors to share, cache, update, and balance data access.

ICSF
Integrated Cryptographic Service Facility is part of MVS security, protecting data on the mainframe.

IDAA (IBM DB2 Analytics Accelerator)
This high-performance appliance integrates IBM Netezza and zEnterprise technologies, providing fast results for complex and data-intensive DB2 queries on data warehousing, business intelligence, and analytic workloads.

IDCAMS
Access Method Services. Multi-purpose batch VSAM utility program.

IDE
Integrated Development Environment. Salesmen say it stands for “It Does Everything”, and unlucky customers as “I Do Everything”! An IDE could be a glorified text editor right up to all-singing all-dancing software like Eclipse and Visual Studio.

IEBCOMPR
z/OS Compare Datasets utility does a logical compare of datasets. Replaced by SuperC in ISPF/PDF.

IEBCOPY
z/OS Library Copy utility for copying members of a partitioned dataset (PDS), unloading a PDS into a sequential dataset and back again. Unloading is especially useful for copying a PDS to tape.

IEBGENER
: z/OS Sequential Copy/Generate Dataset utility. Replaced by ICEGENER in DFSORT and several non-IBM products.

IEBPTPCH
: z/OS Print-Punch utility for producing a hard copy of datasets and library members. Replaced by ISPF/ PDF's hardcopy capabilities.

IEBUPDTE
: z/OS Update Dataset utility. Can only be used for PDS members and sequential datasets with fixed-length records no greater than 80 bytes in length.

IEHLIST
: z/OS List System Data utility for listing a VTOC or the directory of a PDS.

IEHMOVE
: z/OS Move System Data utility for moving or copying logical collections of operating system data. Replaced by DFSMSdss.

IETF
: Internet Engineering Task Force. An open community of network designers, operators, vendors, and researchers concerned with the evolution of the Internet architecture and the smooth operation of the Internet.

IFL
: Integrated Facility for Linux. Dedicated Linux processor on the zSeries.

IIOP
: Internet Inter-ORB Protocol is an object-oriented protocol that makes it possible for distributed programs written in different programming languages to communicate over the Internet.

IML
: Initial Microcode (sometimes Machine) Load. The first step in starting up a mainframe, during which the firmware is automatically copied into the machine.

IMS
: Information Management System. Vintage but extremely powerful system for transactional workloads, still underpinning many of the world's business-critical applications. Composed of two systems: Database Manager (IMS DB) and a Transaction Manager (IMS TM).

IMS catalog
: The IMS catalog contains information about IMS program resources, database resources, and relevant application metadata that IMS controls.

IMS Connect
: This is an integrated TCP/IP gateway for IMS, allowing user-written applications to access IMS data and transaction services from any TCP/IP client. It also supports callout from IMS applications to outside services.

IND$FILE
: Mainframe file transfer program.

Info/Man
: IBM Information/Management. Software problem, change and configuration management software. Now called Tivoli Information Management for z/OS.

Integrity Monitoring
: Integrity Monitoring (IM) software offers security features such as whitelisting; early warning of infrastructure (parmlib, system files) changes; unusual activity by users; and surgical restore jobs; as well as regular checking that changes to data and backups are not unauthorized; and sending alerts.

Internet of Things (IoT)

This refers to devices such a remote sensors, CCTV, weather satellites, etc that will be monitoring thrughout the day, and producing data that can be captured and analysed.

IOCDS

Input/Output Configuration DataSet. The dataset specifying the I/O devices that can be connected to a mainframe.

IOCP

Input/Output Configuration Program. The program describing the I/O configuration to the channel subsystem.

Internet of Everything (IoE)

The concept originated at Cisco, who defines IoE as "the intelligent connection of people, process, data, and things". With IoT, all communications are between machines, IoE adds machine-to-people (M2P), and technology-assisted people-to-people (P2P) interactions to machine-to-machine (M2M) communications.

IP

Internet Protocol. An Internet protocol that routes data through networks. IP acts as an intermediary between the higher protocol layers and the physical network. It does not provide error recovery or flow control.

IP address

The numerical Internet Protocol (IP) address of an Internet computer. Every computer has a unique numerical IP address. IPv6, which offers 64-bit addressing, is meant to replace IPv4, which only offers 32-bit addressing. One day, all the addresses available with 32-bit addressing are meant to be used up!

IPL

Initial Program Load. The first part of the process of loading an operating system into a machine.

IRC

Inter-Region Communication is a CICS facility providing communication between CICS regions using functions such as Multiregion Operation (MRO) and Distributed Program Link (DPL).

IRD

Intelligent Resource Director. z/OS feature for redistributing workloads on the fly.

ISHELL

ISHELL (ISPF Shell) is the name of the panel displayed after issuing the ISH command. It can be used to view files and directories.

ISPF

Interactive System Productivity Facility. Menu and screen management system.

ISPF/PDF

ISPF/Program Development Facility. ISPF facility providing access to application development services for end users and programmers. Incorporates C and REXX programming support, and some support for programmable workstations.

ISV

Independent Software Vendor. A software vendor which isn't part of and/or doesn't belong to a hardware manufacturer.

IT4IT

This Reference Architecture prescribes holistic management of the business of IT with continuous insight and control, enabling 'Boundaryless Information Flow' across the entire IT Value Chain. It provides prescriptive guidance on how to design, procure, and implement the functionality needed to run IT. The endto- end, 'how to' emphasis of the IT Value Chain and IT4IT Reference Architecture also enables the state of services that IT delivers to be systematically tracked across the service life-cycle.

ITIL

Information Technology Infrastructure Library. ITIL provides a framework of best practice guidance for IT service managers. The actual ITIL publications cover areas such as service strategy, service design, service transition, service operation, and continual service improvement.

J

J2EE

Java 2 Platform, Enterprise Edition. The Java Software Development Kit (SDK) tools, APIs, and run-time (ie execution) environment targeted at Java developers building enterprise-class, server-side applications.

Java

An object-oriented programming environment developed by Sun towards the end of 1995. Java creates applets which can be downloaded across the Internet, and which will allow clients to interact with objects on the Web and intranet servers.

Java Virtual Machine

The facility allowing Java applets/source code to run on a computer.

JavaBeans

A platform-independent, software component technology for building reusable Java components called Beans. The JavaBeans component model specifies how to build reusable software components, how the resulting Beans describe their properties to visual rapid application development tools, and how they communicate with each other. Beans can be combined to create applications or applets.

JavaScript

An interpreted scripting language.

JCA

Java EE Connector Architecture can connect existing CICS applications to external Java applications using the CICS Transaction Gateway.

JCICS

The CICS Java class library (JCICS) can be used by Java applications to access CICS services. JCL Job Control Language. The language used on the mainframe to describe the steps of a batch job (files to be used, programs to be run, etc).

JDBC

Java DataBase Connectivity. An API that is designed for use by Java database applications, and has the same characteristics as Open Database Connectivity (ODBC).

JDK

Java Development Kit. Software development kit from Sun consisting of a Java compiler, a debugger, standard Java classes, and a Java run-time (ie JVM) for Unix.

Jenkins

A continuous integration tool used most often for software development

JES2 and JES3

Job Entry Subsystem 2. One of two batch processing subsystems available for z/OS, both developed in the 1960s and with a different heritage and different control statements. Each reads batch jobs in, schedules their execution and spools their output. JES2 is by far the more popular.

JMS

The Java Message Service is a Java API to messageoriented middleware (MOM). JNDI Java Naming and Directory Interface is really two APIs used to keep track of, and access, dispersed data.

JNI
The Java Native Interface is a programming interface for writing Java native methods and embedding the Java virtual machine into native applications.

JSON
JavaScript Object Notation is an open standard format using human-readable text to send data objects as an alternative to XML.

JSP
JavaServer Pages. Uses XML-like tags and scriptlets to encapsulate logic that fills out the dynamic content of HTML pages.

JVM
See Java Virtual Machine.

K

Kantara Initiative
This is an organization dedicated to advancing technical and legal innovation related to digital identity management. It isn't a standards body, buts make recommendations to standards bodies about digital identity management.

Kerberos
Security system for Unix environments derived from MIT's Project Athena. Uses a trusted server to ensure that there are no unwanted systems in the network.

Kernel
The core of an operating system that performs basic functions such as allocating hardware resources.

Kilobit
1024 bits, or 2 to the 10th power, when referring to processor storage, real and virtual storage, and channel volume. However, when referring to disk storage capacity it is 1000 bits. Abbreviated as Kb.

Kilobyte
1024 bytes, or 2 to the 10th power, when referring to processor storage, real and virtual storage, and channel volume. However, when referring to disk storage capacity it is 1000 bytes. Abbreviated as KB.

KSDS
Key Sequenced DataSet is a type of VSAM dataset in which the physical location of records is controlled by the key used.

Kubernetes
This is an open-source container-orchestration system for automating application deployment, scaling, and management. It was originally designed by Google.

KVM
Kernel-based Virtual Machine is a virtualization module in the Linux kernel that allows the kernel to function as a hypervisor.

Kyndryl
Once IBM's Managed Infrastructure Services business, in 2021 it became a separate company.

L

LAN
: Local Area Network. A generic term for the transport mechanism for a local (eg site or building) network. The thing that makes current LANs special is their intimacy with the connected machines; effectively the LAN acts as an extension to the internal bus of the attached system, and allows a single system to be built from physically dispersed components.

Language Environment
: LE provides a common run-time environment for major programming languages. The common library of runtime services includes message handling, condition handling, storage management routines and time/date functions.

Latency
: A measure of response time. On a disk drive, how long it takes for the first bit of requested data to rotate under the head. In a network, the minimum elapsed time for a message to be transmitted, consisting of the aggregate delay contributed by the communications links and devices along the way.

LDAP
: Lightweight Directory Access Protocol. An Internet directory management standard that provides a consistent way to manage user access to network resources, such as information, applications and systems.

LDS
: Linear DataSet is a type of VSAM dataset that can be kept permanently in memory thus improving performance.

Legacy system
: The description given to any system that's been around longer than the programmer who wants to change it. Some 'legacy systems' can be comparatively recent and, despite popular perceptions, they are certainly not exclusive to the mainframe.

Liberty profile
: This is a cut down version of the WebSphere Liberty product. It provides a way for CICS, IMS, and DB2 users to easily allow their applications to link to apps running in mobile devices and the Internet of Things.

LIFO
: Last In, First Out. A queuing technique where the most recent addition to the queue is processed first. Also known as a push-down stack.

Linear Dataset
: A VSAM dataset type, similar to an ESDS, but which always has 4096 byte blocks, and which can be kept permanently in memory for enhanced performance.

Linux
: An Open Source Unix variant that seems to run on everything from workstations (where Microsoft haters insist it will replace Windows) to mainframes (where IBM has spent bags of money making it run well).

Listener
: An application that 'listens' for input on a line and then acts on it.

Load module
: A program in a form that can be loaded into memory for immediate execution.

Logical Partitioning
: A way of dividing up a processor's capacity under PR/ SM into physically separate areas (LPARs or Logical PARtitions) for resilience, performance or security reasons.

LPA
Link Pack Area. The z/OS area used for resident programs, eg those programs which are most frequently used and (usually for performance reasons) should not be loaded by each application program from libraries stored on disk.

LPAR
Logical PARtitioning is a way of dividing up a processor's capacity.

LSR
Local Shared Resources. A technique for improving CICS performance by the sharing of a common buffer pool for VSAM datasets.

LU
SNA's software interface (or 'port') through which end users gain access to the SNA network. LU 6.2 SNA's protocol suite for program-to-program communications.

LUW
Logical Unit of Work is the amount of work that will be backed out in the event of a failure. For example, a CICS transaction is processing away happily and then something goes wrong. The LUW defines how much of what has been processed will be backed out and how much that occurred previously can be left. Large LUWs are efficient providing that failures are rare. Small LUW use processing power, but are more efficient for recovery after a failure.

M

M2M
Machine-to-machine is used when talking about machines, devices, and equipment that can communicate with each other. And that communication can be wired or wireless.

MAC
Media Access Control. Generic term for the way in which workstations gain access to transmission media.

Macro
A preprocessor (precompiler), and the statements it processes, for Assembler. Generates Assembler instructions and machine instruction mnemonics as well as allowing assembly time conditional logic.

Mainframe
A high-performance computer serving many people at once and running many different applications concurrently.

Man-in-the-Middle
Data siphoning scheme where fraudulent software manages to insert itself, undetected, between two network partners by actively emulating the two partners being deceived.

MapReduce
A process used on Big Data at runtime that maps the data and reduces it.

Master catalog
The z/OS catalog where the search begins for a dataset.

MCM
The MultiChip Module (MCM) contains the Central Electronic Complex (CEC) of a S/390 system.

Measured usage
The method of charging for software based on the monthly usage. Same as Usage-based pricing.

Megabit
1,048,576 bits. Abbreviated as Mb.

Megabyte
: Roughly one million bytes—actually 1,048,576 bytes. Abbreviated as MB.

MFLOPS
: MegaFLOPS. One MFLOPS is one million floating point operations per second—a common measure of numerically intensive compute power.

MIB
: Management Information Base. Generic term (often used specifically in relation to the SNMP management protocol) for the database of the objects managed in a network—usually a LAN.

Microcode
: Although it can have very specific alternative meanings, its most common usage is as a synonym for firmware.

Microsecond
: 1/1,000,000 of a second.

Microsoft
: The company that made the shrewd move of persuading IBM to use its DOS operating system for the IBM PC. The rest is history.

Middleware
: Though it defies definition, its primary role is to provide connectivity and other shared services between platforms. There are numerous types.

MIME
: Multipurpose Internet Mail Extensions. An encoding format allowing e-mail messages containing a variety of media forms (audio, video, image, and text) to be sent across the Internet.

MIPS
: Million Instructions Per Second (or Meaningless Indicator of Processor Speed). A crude and not very meaningful way of expressing raw computer power, widely used for comparing the power of different mainframe models and for demonstrating the futility of comparing the mainframe with other platforms.

Mirroring
: The technique of constantly maintaining a parallel copy of critical datasets, so that the duplicate data can be used if there is a problem with the main data.

MLPA
: The Modified Link Pack Area is an area of storage used to contain re-enterable routines from APF-authorized libraries.

MobileFirst
: MobileFirst is a set of mobile software, services, and solutions for businesses offered by IBM.

MOM
: Message Oriented Middleware. For example, WebSphere MQ.

MongoSQL
: This is an Open Source NoSQL database that uses JSON-like documents with dynamic schemas for speed.

MPF
: Message Processing Facility. A utility in z/OS that controls message display and message processing, typically to suppress unnecessary system messages. A first step towards automated operations.

MQSeries
: Messaging and Queueing Series—see WebSphere MQ.

MRO
Multi-Region Operation is a function of the CICS Inter- Region Communication facility enabling communication between CICS regions.

MSDBs
Main Storage DataBases are one of two types of IMS fast path database. These databases do not have indexes and are stored in VSAM files.

MSS
Mass Storage System is hardware for storing large amounts of archive data, typically involving the use of a jukebox mechanism to retrieve discrete data cartridges.

MSU
Millions of Service Units. Measure of mainframe compute power, used selectively by IBM as an alternative to MIPS. Opinions vary as to how the two metrics compare.

MTBF
Mean Time Between Failures. The average value of the length of time between consecutive failures under stated conditions of a system.

MTO
Master Terminal Operator. Software enabling a terminal to control a subsystem, eg CICS.

MTTR
Mean Time To Recovery or Repair. The average time required for corrective maintenance. See also MTBF.

Multiplexer
A generic device (also known as a mux) that combines data from two or more devices, transmits the data as a single datastream over a high-speed communications medium, and disentangles (de-multiplexes) the data at the other end.

Multi-point
Communications configuration in which a single primary node communicates with two or more secondary nodes (which cannot communicate with one another, except through the primary). Also known as multi-drop.

MVP
Minimum Viable Product is often created at hackathons.

MVS
Multiple Virtual Storage. In z/OS's long history, MVS has the honour of being its name for the longest period (about 20 years), and the operating system is still referred to as MVS by many mainframe technical specialists. Popularly believed to stand for Man Versus System.

N

Nabla containers
These are a new type of container designed for strong isolation on a host. Nabla replaces the typical VM hypervisor interface of hypercalls and vmexits with simple system calls (syscalls), and so reduces the attack surface.

Nanosecond
1/1,000,000,000 of a second.

NAS
Network Attached Storage.

.NET
.NET is a Microsoft strategy for creating Web services. In essence, a Windows user should be able to run applications locally or over the Web without noticing the difference. Visual Studio .NET is a development environment that is currently available.

NetView
SNA network management product. Announced mid-1986. Although it started off life as a rather halfhearted bundling of various mainframe-centric network management products (including NCCF, NLDM, NPDA, VNCA, and NMPF), by mid-1995 it had turned into a fully-fledged distributed network management system, with a strong focus on distributed Unix boxes as network management workstations. Replaced by Tivoli NetView and other products.

NFS
Network File System. Set of Unix protocols (originally developed by Sun Microsystems) for file sharing across a LAN. Built on top of Ethernet and TCP/IP.

NJE
Network Job Entry. JES facility enabling multiple hosts to share job queues and system spools.

Node
In SNA, a total unit of network-attachable functionality, realized in software, that gets implemented within a device or runs on a computer.

NoSQL
NoSQL databases don't have to use SQL, but may. They are different from traditional relational databases.

Notes
Lotus groupware product that IBM took on in June '91.

OAuth
This is an open standard for authorization. It allows people to access third-party Web sites using their validated Facebook or Twitter IDs.

OCR
Optical Character Recognition. OCR software is used to convert scanned documents into machine-readable text files.

ODBC
Open DataBase Connectivity. An API created by Microsoft that allows Windows applications to access relational databases, such as DB2 and Oracle, and other data sources using SQL statements.

OEM
Original Equipment Manufacturer. An OEM is a manufacturer who makes a product and sells it to another company, which puts its own badge on it and sells it to the end user.

Office 365
A Cloud-based version of Microsoft's Office suite of enterprise-grade productivity applications. As well as Word and Excel, users get Outlook, SharePoint, Forms, and Team sites.

OLAP
On-Line Analytical Processing. A term coined by database guru Ted Codd and used to refer to multidimensional analysis and reporting applications of the EIS and Information Warehouse type.

OLE
Object Linking and Embedding. Microsoft-sponsored standard for moving and linking data and other objects between applications and systems in Windows.

OLTEP
On-Line Test and Execution Program. IBM engineer's tool for analysis of hardware problems.

OLTP
On-Line Transaction Processing. Generic term for highthroughput, very resilient transaction systems. OLTP tends to be used to refer to systems with some degree of fault tolerance.

OMG
Object Management Group. A group of vendors responsible for standards for object management and interoperability including CORBA, UML, MOF and CWM. IBM joined in 1991.

OMVS
The OMVS command is used to invoke the z/OS Unix shell.From here you can use shell commands or utilities requesting services from the system. You could also write shell scripts and run shell scripts or programs written in C.

Online Reorganization (OLR)
Using OLR with IMS HALDBs, the databases remain available to applications throughout the OLR reorganization process.

Open Systems
Computer systems that provide either interoperability, portability, of freedom from proprietary standards, depending on your perspective.

OpenEdition
'Open' version of MVS that was replaced by Unix System Services in z/OS and OpenEdition Shell and Utilities in z/VM.

OpenID
This provides a way for users to consolidate their digital identities by having a single OpenID when connecting to different Web sites.

ORB
Object Request Broker. A specialized object that allows other objects to communicate with each other to make and receive requests and responses. OS/390 Replacement for MVS, announced in 1995. Now superseded by z/OS, but still used in some mainframe sites.

OSA
Open Systems Adapter is an integrated hardware feature allowing zSeries 900 platforms to provide connectivity directly to clients on LANs.

OSA Express
Open Systems Adapter-Express are an IBM adapter family consisting of integrated hardware features that are designed to provide direct connection for zSeries and S/390 Parallel Enterprise Servers G5 and G6 to high speed routers and switches, to other high-speed servers, and to clients on LANs.

OSAM (Overflow Sequential Access Method)
This is an IMS-specific access method that optimizes the I/O channel program for IMS access patterns.

OTC
One Time Charge. An initial license charge. Caused a furore when the concept was introduced, but people seem to have got used to it now. At the beginning of 1999, OTC was dropped from any mainframe software product for which a monthly charge option was available.

OTE
: Open Transaction Environment was introduced with CICS TS 1.3. Its aim is to open up the CICS application execution environment, allowing applications to be defined to execute under their own TCBs within CICS and allowing CICS to better exploit multiple processors.

OTMA (Open Transaction Manager Access)
: This IMS facility is a transaction-based connectionless client/server protocol that functions as an interface for host-based communications servers accessing IMS TM applications using the Cross Systems Coupling Facility (XCF).

Outsourcing
: The notion of contracting out part or all of your IS function to an outside organization. Used to be often used synonymously with facilities management, although strictly speaking facilities management involves delegating responsibility for the whole service rather than just part of it.

P

PaaS
: Platform as a service provides a platform, allowing customers to develop, run, and manage Web applications without the complexity of building and maintaining the infrastructure typically associated with developing and launching an app.

Page
: An essential process within virtual storage technology. Fixed sized blocks (typically 4096 bytes) of memory are freed up by writing their contents to a paging device until any virtual address within that block is referenced.

Parallel Sysplex
: See Sysplex.

Parity bit
: A binary digit check bit appended to a group of binary digits to make the sum of all the digits, including the appended binary digit, even or odd, depending on whether Even or Odd Parity is being used.

Parmlib
: Parameter Library. A dataset in z/OS containing parameter settings. The most important is SYS1. PARMLIB which contains parameter settings for z/OS and many key subsystems.

Parse
: The analysis of the operands entered with a command in addition to the creation of a parameter list for the command processor. It can also refer to the initial processing of source code by a compiler, when it divides up each program statement into its component parts, also known as tokens.

PASCAL
: Programming language, mainly used in academia, though even there it is rarely seen these days.

Patch
: A code modification to correct a reported problem that is sent to software product users after the release of a product.

PAV
: Parallel Access Volumes are used to eliminate I/O supervisor queueing against DASD. Thus improving the performance of anything accessing the disk devices.

PCI
: Peripheral Component Interconnect. Extremely popular PC bus standard originally promoted by Intel and soon supported by IBM, even though it meant dropping its beloved MCA.

PCMCIA
: Personal Computer Memory Card International Association. Industry-standard interface (not just for memory, but for modems, network interfaces, etc) for laptop and notebook computers.

PDF
: Portable Document Format. File definition format used by Adobe Acrobat.

PDS
: Partitioned DataSet. A z/OS feature that is really made up of datasets within a dataset. Each PDS is made up of zero or more members. Each member has all the characteristics of a standard sequential dataset, though all members share the same attributes: those that were defined for the PDS when it was allocated. Each member has a one- to eight-character name that follows the same rules as a level of a standard z/OS dataset name (DSN). Each PDS has a directory of its members, which can also (optionally) contain other information, known as Statistics, which are maintained by software such as the ISPF/PDF editor.

PDSE
: Partitioned DataSet Extended. Software which enables the space freed by expired or deleted PDSs to be reused. Introduced in 1989 in an attempt to address the limitations of the PDS.

Peer-to-peer
: A form of distributed system in which all participating nodes can function as both client and server.

PERL
: Practical Extraction and Reporting Language. A general-purpose Unix scripting language, which is popular for writing CGI programs. Its speed and flexibility make it well suited for form processing and on-the-fly page creation.

Pervasive encryption
: Available with Z14s, it generally means the ability to encrypt everything everywhere without interfering with the user experience. The Z14 can “pervasively encrypt data associated with any application, cloud service, or database all the time”.

Petabyte
: 1024 terabytes (TB)—2 to the fiftieth power, or 1,125,899,906,842,624 bytes. Abbreviated as PB.

PF key
: Program Function key. A single keystroke can be used to perform a specific command.

PGP
: Pretty Good Privacy. Encryption technology which uses the public key approach. Messages are encrypted using a public key, but can only be decoded using a private key kept by the intended recipient of the message.

Phishing
: A malicious scheme to obtain the credentials necessary to access a secure system by masquerading as that system and fooling people into entering the soughtafter credentials.

Picosecond
: 1/1,000,000,000,000 of a second. A time span during which even <insert your least-liked company name here> would not be able to put up prices.

PING
: Packet INternet Groper. A test of reachability in TCP/IP networks. A PING is a program used to test the ability to reach destinations by sending an echo request and waiting for a reply.

Pipeline
: In Linux and other Unix-like operating systems, a pipeline is a set of processes chained together. Output from one process is then input for the next process until all the processes have executed.

PL/I

Programming Language/One. Language developed by IBM. A sort of love-child of COBOL and FORTRAN, it was widely used on the mainframe for many years but never quite achieved the 'universal standard' status that IBM had hoped.

Plain text

Data that is not encrypted. Typically refers to data while it is being transmitted across a network.

PLPA

Pageable Link Pack Area is part of memory containing system-level programs that may be run by multiple address spaces.

Polling

Generic name for a method for controlling devices (eg networked workstations or terminals), in which a computer calls (polls) each device in turn to see whether it wants to communicate.

POP

Principles of Operation. The name of the manual that defined the S/360 and subsequently the S/370 architecture.

Port

Generic noun and/or verb. As a noun, it means a point at which data can enter or leave a data network or individual device; as a verb it means to convert a piece of software written for one environment so that it runs in another.

POSIX

Portable Operating System Interface Standard. Operating system interface standard from the IEEE, designed as a procurement reference standard for ensuring source-level application code portability.

PostScript

Language/protocol cum page description language developed by Adobe Systems for driving high-resolution page printers.

Power Systems

Originally, IBM had the System i running IBM i (OS/400) and the System p series running AIX or Linux. In 2008, IBM merged the two lines of servers and workstations under the same name, Power Systems, with identical hardware and a choice of operating systems, software, and service contracts.

PPP

Purchasing Power Parity is Gustav Cassel's theory (1920) that, in an efficient market, identical goods must have only one price.

PR/SM

Processor Resource/Systems Manager. Logical partitioning hardware technology that makes a single system, even if it has only one processor, look like multiple systems each of which is a Logical PARtition (LPAR).

Private area

Area within z/OS which contains the user's own data/ programs.

Private key

A key known only to the sender or receiver of an encrypted message.

Problem State

A term used in performance measurement to indicate when the machine is performing end-user work. The opposite is Supervisor State, when the machine is spending time generally managing itself.

PROLOG
PROgramming in LOGic. Language mainly used for developing artificial intelligence and expert systems.

PROP
PRogrammable OPerator. A facility in z/VM that allows remote control of a virtual machine, enabling limited automation of routine operator activities.

Proprietary
Proprietary is used to refer to architectures and standards owned by a hardware or software vendor. The term is usually used in opposition to 'open'.

Proxy server
A server that receives and fulfils requests intended for another server.

PRPQ
Programming Request for Price Quotation. IBM terminology for a customer request for a price quotation on alterations or additions to the functional capabilities of system control programming or licensed programs.

PSLC
Parallel Sysplex License Charge, a monthly license charge designed to support the design of a Parallel Sysplex cluster. In a fully qualified Sysplex environment, PSLC software charges are based on the total MSU value for only those machines where the products execute.

PSW
Program Status Word. A hardware register (double word) in the mainframe. The PSW contains the address of the next instruction to be executed and, when an application or system software error occurs, why it happened and other status information.

PTF
Program Temporary Fix. An official IBM temporary patch to a program—often less temporary than IBM and its users would wish. PTFs are distributed on PUTs. Sometimes the term APAR is used instead of PTF.

Public key
A published key value used as one of the two keys in public key encryption.

PWFI
The pseudo wait-for-input option means an IMS MPP region can stay scheduled until another input message appears, avoiding additional application program termination and rescheduling.

Q

QMF
Query Management Facility. Query and report-writing system for DB2 with some analysis and graphics features.

QSAM
Queued Sequential Access Method is an access method for communicating with sequential datasets.

R

RACF
Resource Access Control Facility is IBM's External Security Manager (ESM) for z/OS and z/VM.

RAG
Red/Amber/Green status lights used to indicate in an easily interpretable way the status of a system, with red indicating poor system health.

RAID
: Set of redundancy standards for disk subsystems (RAID 0-6), developed by the University of Berkeley and adopted by the RAID Advisory Board.

RAM
: Random Access Memory, also known as system memory, is the amount of physical memory that is addressable by and directly accessible to the processor chips on the motherboard.

Ransomware
: This is downloaded software that stops you using your PC. The software will usually ask for money before control of your computer is given back to you. Just running anti-virus and anti-malware software is not enough these days. Examples of ransomware include: Brolo, Crowti, FakeBsod, Krypterade, Reveton, and Tescrypt. The number of ransomware attacks is increasing all the time.

RAS
: Reliability, Availability, and Serviceability—the three most desirable properties for IBM computers.

RDBMS
: Relational DataBase Management System. Database system based on relational principles. DB2 is IBM's preferred RDBMS for just about every platform.

Read-only mode
: A mode that does not allow updates to the data being read.

Real storage
: The combination of central and expanded storage. Also known as processor storage.

Red teaming
: This refers to the practice of viewing a problem from an adversary or competitor's perspective—and that usually means looking at issues with security.

Redbook
: A more readable version of an IBM manual Relational database A type of database that allows information in one set of database tables to be connected to information in another set of tables without requiring duplication of information.

RESTful
: REST (Representational State Transfer) is an architectural style used to build Web services that are lightweight, maintainable, and scalable. A service based on REST is called a RESTful service. It links mainframe applications with mobile and cloud apps.

REXX
: Restructured EXtended eXecutor language. A widely used job control language, REXX has become a replacement for existing procedural languages such as CLIST. REXX is an effective programming language in its own right with powerful string processing facilities.

RJE
: Remote Job Entry. Dedicated RJE terminals include 2780/3780 or 3770.

RMF
: Resource Measurement Facility. On-line performance and resource monitor for z/OS. Also includes a formatter for printing performance reports. An optional, separately priced feature of z/OS.

RPA
: Robotic process automation is a way to automate repetitive or routine tasks that are usually performed by knowledge workers. It uses metaphorical software robots. Employees are then free to perform highervalue work.

RPG
Report Program Generator. Programming language widely used on the eServer iSeries 400 and its predecessors, AS/400 and System/3x. As its name implies, originally used mostly for report generation and very strong sort/merge facilities, where it can be used completely non-procedurally.

RRDS
Relative Record DataSet is a type of VSAM file. Each record is accessed directly by its record number.

RSM
Real Storage Manager. The part of z/OS that controls real memory.

S

SAF
System Authorization Facility is the z/OS security API and is invoked by either the RACROUTE macro or z/ OS Unix callable services. Resource Managers (eg CICS, TSO, JES) use RACROUTE to request security authorization checks. SAF passes the request to the External Security Manager (ESM) for a response.

SAML
Security Assertion Mark-up Language addresses the issue of Single Sign-On (SSO). The SAML specification defines three roles: the principal (typically a user), the identity provider (IdP), and the service provider (SP).

SAN
Storage Area Network.

SAP (System Assist Processor)
A System Assist Processor is a specialized processor that assists a central processor on a mainframe.

SASE
Secure Access Service Edge (pronounced “sassy”) is the combination of wide area networking (WAN), and network security services like CASB, FWaaS, and Zero Trust, into a single, cloud-delivered service model.

SCEM
Supply Chain Event Management examines all possible events and factors that might disrupt a supply chain.

SCM
Supply Chain Management applies to all movement and storage of raw materials, work-in-process inventory, and finished goods from point-of-origin to point-of-consumption. It is the process of planning, implementing, and controlling the operations of the supply chain as efficiently as possible.

Screen scraping
A programming technique for interacting with online host applications that generate text-only display output. The display output is read (scraped) right off a virtual screen by the workstation-based software and input generated on a virtual keyboard. What the user sees is quite different, and usually includes a GUI.

SDEPS (Sequential Dependents)
Sequential dependent segments (SDEPs) may be included in an IMS Data Entry Database (DEDB).

SDSF
System Display and Search Facility. Online tool for programmers and operators monitoring jobs awaiting execution in the JES2 input spool queues and, most commonly, viewing the printed output of batch jobs in the Held output spool queues, to save printing it on paper.

Serial number
Term used to denote the machine which you own today, which may be very different from the one you originally bought.

Server
: A device providing database information, or Web pages, any other information. It usually has a number of clients or users of this data.

Service Level Agreement
: Generic term for an agreement between a user and the people providing a computer service. The SLA specifies such things as response time, availability, etc.

Service Unit
: The basic charging unit in usage-based pricing.

Servlet
: A Java applet, without a user interface, that is executed on a Web server. Often used to replace CGI routines, because they support dynamic HTTP requests.

SFM
: Sysplex Failure Manager is used when one of the systems in a parallel sysplex fails. It is responsible for recovery of the system and subsystem.

SGML
: Standard Generalized Mark-up Language. The canonical mark-up language from which HTML and XML are derived.

Shift left
: This is an approach to software testing and system testing in which testing is performed earlier in the lifecycle. That means it's moved to the left on the project timeline. Similarly, quality and security can be moved earlier in the software life-cycle. Although, I'm sure you've spotted the flaw in the thinking—if too much is shifted to the left, then everything is back where it started!

SIEM
: Security Information and Event Management software products and services combine security information management and security event management. They provide real-time analysis of security alerts generated by applications and network hardware.

SIGP
: SIGnal Processor.

Site Reliability Engineer (SRE)
: An SRE will spend half their time on developing new features, scaling, and automation. The other half of their time will be spent on operator-type tasks. They will not only fix problems as they occur, but will also identify the root cause of the problem and create an action plan to address them—ensuring, as far as possible, that the incident doesn't happen again. Often, this will result in more automation.

Skeuomorphism
: Is making one thing look like something else, eg making the digital interface look like a paper one—you often see it with calendar applications that look like desktop paper calendars. The GUI emulates real physical objects that the user will be familiar with. Including skeuomorphism in a UI design is a good idea because it makes an unfamiliar interface look like something familiar—and, therefore, its use becomes more intuitive.

SLA
: A Service Level Agreement is a formally negotiated agreement between two parties (the IT department usually being one of them) where the level of service is formally defined.

SMF
: System Management Facilities. Function within z/OS which collects data on all system activities for use in accounting, performance monitoring, capacity planning, etc. SMF creates log entries (SMF records) of this data.

SMP/E
System Modification Program / Extended is used to install most software products.

SMS
System Managed Storage. The philosophy of letting the computer system manage the storage of data rather than having it done by a human data administrator.

SMTP
Simple Mail Transfer Protocol. The protocol allowing the transmission of e-mail messages across the Internet.

SNA
Systems Network Architecture. IBM's extremely powerful but complex data communications architecture defining levels of protocols for communications between terminals and applications, and between programs. While SNA-only networks have all but disappeared, SNA applications are still very much in evidence in the large enterprise.

SNMP
Simple Network Management Protocol. Unix protocol originally developed for management of TCP/IP networks.

SOA
A Service-Oriented Architecture is a collection of services that communicate with each other. The services are self-contained and do not depend on the context or state of the other service. Mainframe applications become available to Web browsers and now mainframe applications can call other Web services.

SOAP
Simple Object Access Protocol. A lightweight form of middleware for accessing services, objects, and servers in a platform-independent manner.

Sockets
Software interfaces that allow two Unix application programs to talk to one another using TCP/IP protocols.

Solution Consumption License Charges
SCLC applies to a number of Monthly License Charge (MLC) software programs. It offers pay-as-you-go pricing for the actual consumption of CPU, or a 20% saving for a minimum monthly commitment.

Spark
A popular fast engine for large-scale data processing.

Spool
Simultaneous/Shared Peripheral Operation On-Line. DASD storage used as a temporary storage area between devices—eg printer and processor.

SQA
System Queue Area. Storage area in z/OS.

SQL
Structured Query Language. IBM and ANSI standard (they diverge and converge regularly with the passage of time) for access to relational databases.

SRB
Service Request Blocks are requests to execute a service routine and they are usually initiated by system code executing from one address space to perform an action affecting another address space.

SRM
System Resources Manager. Software which is meant to improve throughput by optimizing the use of system resources.

SSCP
: SNA's System Services Control Point, in a hierarchical network, typically implemented on a mainframe within VTAM, that is responsible for directory services and configuration management. Now superseded by the peer-to-peer oriented functionality of APPN/HPR control points.

SSL
: The Secure Sockets Layer is a much-used protocol for managing the security of messages sent over the Internet.

Stand-alone dump
: A display of all used memory locations, typically stored on DASD or tape, created with a program that does not required the operating system to be functioning normally.

Superuser
: A user ID with minimal security restrictions.

Supervisor State
: A term used in performance measurement to indicate when the machine is spending time generally managing itself. The opposite is Problem State, when the machine is performing end-user work.

SupportPac
: A SupportPac is supplied by IBM and contains complementary software, which may be new utilities, or class libraries, or things that IBM thinks will make the product more usable or work better.

SVC
: SuperVisor Call. An interface to operating system functions that is used to protect the operating system from inappropriate user entry. It can also refer to the SVC Assembler mnemonic or machine language instruction it represents.

Swagger
: A simple yet powerful representation of your RESTful API. With the largest ecosystem of API tooling on the planet, thousands of developers are supporting Swagger in almost every modern programming language and deployment environment. With a Swagger-enabled API, you get interactive documentation, client SDK generation, and discoverability.

Swapping
: The process of transferring a complete program between main memory and auxiliary storage (usually disk).

Syncpoint
: A point in a transaction's life when updates are committed. In a distributed environment, where the transactions may be across several databases, the syncpoint enables the commit to be delayed until all the participants can commit simultaneously.

SYSGEN
: System Generation. The process of creating a customized version of an operating system. In the IBM environment this was a complex, error-prone and timeconsuming process.

System i
: Formerly iSeries and now called just i—a later incarnation of the AS/400 family of hardware that runs on Power hardware.

System p
: Formerly pSeries—this is the latest incarnation of the RS/6000 family of hardware.

System z
: Formerly zSeries—this is the name for mainframes running z/OS and/or z/VM and/or other operating systems. Now called IBM Z.

SYSOUT
: z/OS output intended for a printer. The name comes from the JCL DD parameter SYSOUT, where SYSOUT=A means send the output to the JESx Class A spool queue.

Sysplex
: SYStem comPLEX. A processor complex which is formed by loosely coupling System/390 processors together into a single unit (using channel-to-channel adapters or ESCON/FICON fibre-optic links); the processors are synchronized using the Sysplex Timer, and can be managed as a single system image.

T

Tablet
: For many executives, the must-have device is an iPad from Apple or an Android device from Samsung and other suppliers. As a consequence, these now need to be connected to corporate data, with all the concomitant security issues.

TCB
: Task Control Blocks represent tasks executing within an address space. There are usually several TCBs associated with each address space, so more than one task could be running in any one address space at any one time. TCBs are created when a program issues the ATTACH macro to initiate a new task.

TCP/IP
: Transmission Control Protocol/Internet Protocol. Set of protocols for the network and transport layers of a packet-switched data network, most notably the Internet. Developed in the US for the Department of Defense ARPAnet system and has become the de facto standard for most forms of data communication.

telnet
: The remote, or virtual, terminal protocol for the Internet. Allows users to log-in to their home machine from any other machine, or vice versa.

Telum processors
: IBM's new 7-nanometer chip, which is designed to handle AI workloads faster, and improve security and fraud detection for mainframes used by financial services organizations such as banks and insurance companies.

Terabyte
: 1024 gigabytes or 1,099,511,627,776 bytes. Abbreviated as TB.

TeraFLOPS
: 1000 GigaFLOPS, a measure of supercomputer performance.

Third platform
: This is meant to represent the next phase of the IT revolution. The first platform is the mainframe; the second is the PC; and the third comprises cloud services, mobile computing, social networking, and big data analytics.

Threadsafe
: Originally introduced with CICS 3.2, threadsafe refers to the ability of an application to process multi-threaded programs at the same time safely.

tn
: Refers to tn3270, tn3270e and tn5250 collectively or interchangeably.

tn3270
: Specialized TCP/IP telnet protocol which provides compatibility with a 3270 datastream by emulation of the screen buffer. Used for mainframe host access across the Internet and internally within organizations to replace SNA terminal-to-host access with TCP/IP.

tn3270e
: Improved version of tn3270 that supports colour, the 3270 System Request key and other capabilities not present in tn3270.

TPF
: Transaction Processing Facility. Low-function but high performance mainframe TP monitor for very large communications systems. Derived from ACP (Airline Control Program), which was derived from PARS (Programmed Airline Reservation System).

TPIPE
: IMS Connect communicates with IMS through logical connections called transaction pipes (TPIPEs).

Transport layer
: The network layer responsible for quality of service and accurate delivery of information, ie error detection/correction occurs here.

TSO
: Time Sharing Option. These days, everyone just says TSO when they mean TSO/E.

TSO/E
: Time Sharing Option/Extensions. An element of z/OS that provides an on-line interactive environment for programmers and users. Best known for the ISPF/PDF environment that runs on TSO/E. Can also be used to test batch programs.

TXSeries
: A merging of CICS, Encina and IBM Transaction Server.

U

UCB
: Unit Control Block is used to control access to devices.

UDDI
: Universal Description Discovery and Integration is a directory model for Web services. UDDI is a specification for maintaining standardized directories of information about Web services, recording their capabilities, location, and requirements.

Unified Resource Manager
: The Unified Resource Manager is an integrated System z management facility responsible for platform management on z196s. This tool set enables clients to install, monitor, manage, optimize, diagnose, and service resources and workloads from a single point.

Unit of work
: The statements executed between one commit point and the next—usually a group of SQL statements which would need to be rolled back as a group if any single statement in the group could not be executed. It's the basic recovery unit.

Unix
: A misspelling of UNICS (UNiplexed Information and Computing Service). A hardware-independent operating system originally for minicomputers.

Unix System Services
: A full function Unix implementation under z/OS that complies with the POSIX standard. Originally introduced as OpenEdition.

Usage pricing
: The principle of charging for software on the basis of the amount of work done, eg the number of transactions or the amount of batch data processed.

User catalog
: In z/OS, an ICF catalog created to reduce the number of entries in the Master Catalog, thereby improving performance.

V

VIO
: Virtual I/O. Hyper-efficient z/OS paging technique. Simulates DASD using real storage and so avoids the overhead of channel activity.

VIPA (Virtual IP Addressing)
: This frees hosts from depending on a particular physical network interface for communication with a TCP/IP stack.

Virtual storage
: A technique for giving programs the illusion that they have massive quantities of main storage to themselves. The technique works by allowing programs to address lots of virtual memory, but making the operating system page the required data in and out of real main store and to and from a paging device at the appropriate time. The technique enables cheap DASD to be used instead of expensive main storage.

Virtualization
: A way of dividing up a computer's components and sharing them in order to maximize their usefulness.

VM
: Virtual Machine. Mainframe operating system which can act as a hypervisor, enabling users to run multiple OSs on a single machine. There are two components to VM—the hypervisor itself, which provides resources to the virtual machines; and CMS, which provides conversational and timesharing facilities. VM was on the way out when IBM discovered a new role for the software: z/VM can host hundreds (technically thousands) of Linux images on the mainframe at a fraction of the cost of distributed hardware.

VOLSER
: Volume Serial Number. The key identifying a tape or other storage volume. Maximum six characters. Most installations use a six-digit VOLSER for in-house tapes to easily differentiate them from DASD volumes.

Volume
: The unit of physical storage. Originally the volume equated to a single disk or tape, but logical volumes are more the norm today, especially with most current DASD devices emulating previous products and VTS doing volume stacking on tape.

VPA
: A Virtual Personal Assistant is piece of AI (artificial intelligence) just for you. It can schedule meetings and tell you what the weather's like.

VSAM
: Virtual Storage Access Method (aka Very Slow And Mysterious). IBM mainframe proprietary software for direct (by key or by record number) or sequential processing of fixed and variable length records on DASD.

VSE
: Virtual Storage Extended. For many years, VSE was IBM's principal operating system for small to mediumsize mainframes. A few years back it looked as if VSE support would slowly be withdrawn, but customer support is strong and the re-dubbed z/VSE now looks set to continue for some time.

VTAM
: Virtual Telecommunication Access Method. The main SNA subsystem resident in the mainframe, which manages session establishment and data flow between terminals and application programs, or between application programs.

VTOC
: Volume Table Of Contents. The area of a disk used to store the directory of components, including datasets, held on that volume. Anything that takes DASD space is listed in the VTOC. For example, the index and data components of a VSAM KSDS file are listed in the VTOC, but not the cluster name, which is only listed in the catalog.

VVDS
: The VSAM Volume DataSet along with the BCS make up the ICF catalog structure. The VVDS is a special type of ESDS. It is created automatically whenever a VSAM component (including a BCS) is allocated on a volume which does not yet have a VVDS. The VVDS is always called SYS1.VVDS.Vvolser.

VWLC
: Variable Workload License Charge. IBM software pricing scheme that allows users to license a product for a capacity less than the total capacity of the system. Replaced by AWLC on zEnterprise mainframes.

W

WAS
: WebSphere Application Server. IBM's Java application server. WAS for z/OS version 6.0.1 supports J2EE 1.4 and many mainframe-specific functions.

Watson Explorer
: Watson Explorer combines content and data from different systems and presents it in a single view.

Web 2.0
: A practically meaningless term in itself (the Web is not software with version and release numbers) that can be used as a way of highlighting some of the new technologies that are available over the Internet and identifying the companies that are using them, like Google Earth, Flickr, etc.

WebSphere
: An IBM Internet-focused software platform that supports e-business applications and sits at the heart of IBM's middleware strategy. The foundational products are WebSphere Application Server and WebSphere MQ.

WebSphere Application Server (WAS) Liberty profile
: This is a cut-down version of WAS containing only the features required by the applications used on the server.

WebSphere MQ (WMQ)
: Originally MQSeries. IBM software/middleware that provides a message queuing infrastructure; it sits on various systems in a heterogeneous environment, providing integration between disparate systems and applications.

WebSphere Optimized Local Adapters (WOLA)
: A part of WAS for z/OS that provides a low-overhead communication mechanisms for exchanging high volumes of messages.

Web service
: Web services are essentially "mini" applications that include a description of what another application does, how to accesses it, and what data it requires. They are often utilized in integration projects where disparate systems may have difficulty interacting with each other without the use of the common standards.

WLM
: Workload Manager. Feature within SRM for simplifying the management of system resources such as CPU and storage. eWLM reportedly adds the ability to define business performance objectives across disparate systems.

WMLz
: IBM Watson Machine Learning for z/OS lets users build machine learning models using their IDE and platform of choice and then deploy scoring services within transactional applications and monitor them on IBM Z.

Workload License Charges
: An IBM software licensing scheme which charges according to required software capacity, not hardware capacity.

WSAT
: Web Services Atomic Transaction is now supported in CICS TS 3.1. Web services can be configured to take part in an extended or global unit of work. This is known as an atomic transaction. Recoverable updates are not committed or backed out until instructed to do so by the Web service.

WSDL
: Web Services Description Language is the standard format for describing a Web service. A WSDL definition describes how to access a Web service and what operations it will perform. WSDL (along with SOAP and UDDI) is one of the three foundation standards of Web services.

WSRR
: WebSphere Service Registry and Repository is used with WebSphere in SOA environments.

WTO
: Write To Operator. A message sent to the mainframe operator console from JCL or an application program.

X

XML
: eXtensible Mark-up Language is a W3C recommendation and provides a standard approach for describing, capturing, processing, and publishing information.

X-Terminal
: A type of terminal developed in the Unix world that provides a GUI type environment (usually X-Windows) without the need for a programmable workstation.

Z

z/Architecture
: IBM's latest architecture for mainframes and peripherals.

z/OS
: The latest incarnation of MVS, the principal operating system for the IBM mainframe. Announced in October 2000, it brought with it support for 64-bit addressing and a broad range of technical innovations. As well as running on zSeries machines, it also runs on System/390 G5 and G6 processors and Multiprise 3000 systems.

z/OS Connect
: z/OS Connect is built on IBM WAS Liberty profile running on z/OS, and is a gateway providing a way to consume data and services hosted on IBM Z from mobile, cloud, and Web applications.

z/OSMF
: z/OS Management Facility allows users to manage various aspects of a z/OS system from a browser. It's intelligent, and helps users more easily manage and administer a mainframe system by simplifying day-to day operations and administration of a z/OS system.

Z/TPF
: The latest version of the Transaction Processing Facility, a low-function but high-performance TP monitor for very large data communications systems.

z/VM
: The latest version of the much-loved Virtual Machine, a hypervisor that enabled users to run multiple operating systems on a single machine.

zAAP
: A Java co-processor for the z890 and z990, which allows customers to offload Java application processing without paying software costs for the additional capacity.

Zap
: Affectionate name for various utilities (AMASPZAP, aka SUPERZAP in z/OS), which can be used to apply a fix directly to object code in situ. Zapping is a bad thing—it creates programs in which the object code does not agree with the source, and which are hence totally unmaintainable.

zBX
: The zEnterprise BladeCenter Extension (zBX) on operates as a tightly-coupled extension to the z196 and z114 mainframes through a high-performance private network. Users then add POWER7 or System x blades to four racks.

zCX
: z/OS Container Extensions let users run Linux on Z applications as Docker containers in a z/OS system to directly support z/OS workloads.

Zero day vulnerability
: This is a hole in a piece of software that is unknown to the vendor.

zFS
: zSeries File System is a Unix file system that can be used in addition to HFS.

zIIP
: z9 Integrated Information Processor. A co-processor similar to zAAP (the idea is that you pronounce them ZIP and ZAP), but designed to off-load DB2 work and integrate data across the enterprise. Like zAAP, you pay for the hardware but do not incur IBM software charges for the additional capacity. Minimum requirement: z9- 109 with z/OS 1.6 or later and DB2 V8.

Zombie computers
: These are used to spread e-mail spam and launch distributed denial-of-service (DDOS) attacks.

Zombie data
: This is old forgotten data that you thought you'd deleted, but hadn't.

Zombie programs
: These are the programs that hackers use to gain access to your computer. They are often called 'bots'.

Zoom
: Video-conferencing software that now seems to be everywhere. Used for business meetings and family chats.

Zowe
: Zowe is the first Open Source framework for IBM Z. It allows development and operations teams to securely manage, control, script, and develop on the mainframe like any other cloud platform. These new developers do not need to have previous mainframe experience!

ZTNA
: Zero Trust Network Access is a way of working requiring the strict verification of every individual and device that attempts to access a network or other business resource.