Oracle® x86 Servers Glossary

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Glossary for Oracle x86 Servers and Related Components

This glossary provides definitions of terms used within documentation for Oracle x86 servers and related hardware and software components.

Where to Find More Information

The terms defined in this glossary have more complete descriptions in the documentation for your Oracle x86 servers and related hardware and software components, firmware, and operating systems. Refer to the product documents for term descriptions that are applied to your server, related components, firmware, or operating system.

Glossary

Numbers and Symbols

1U/2U Rack unit; a standard unit of space (44.45 mm/1.750 in.) into which a server can be mounted in a rack.

A

access control list (ACL) A list of users, groups, or enterprise roles who have permission to access or interact with a particular content item.

accessibility The degree to which software can be used comfortably by a variety of people, including those users who require assistive technologies or those who use the keyboard instead of a pointing device.

add-in card (AIC) A card that can be added to the system, such as a PCIe card.

address A number that is used by system software to identify a storage location. In networking, a unique code that identifies a node to the network.

address resolution A means for mapping Internet addresses into physical MAC addresses or domain addresses.

Address Resolution Protocol (ARP) A protocol used to associate an IP address with a network hardware address (MAC address). See also machine access code (MAC) address.

administrator A person with full access privileges to a managed host system.

Advanced Configuration and Power An open standard that provides operating systems with the ability to perform an orderly shutdown of the operating system when power is removed suddenly. It also provides other features such as the ability to perform discovery and configuration of hardware components.

Interface (ACPI)

Advanced Error Reporting (AER) A detailed error reporting mechanism for PCIe. See also Peripheral Component Interconnect (PCI).

asserted A characteristic of a signal that is used to initiate an action. See also unasserted.

audit log A log that is accessible using Oracle ILOM. This log tracks all interface-related user actions, such as user logins, user logouts, configuration changes, and password changes. This log is helpful for auditing user activity to ensure that no privilege violations have occurred.

authentication A process that verifies the identity of a user in a communication session, or a device or other entity in a computer system, before that user, device, or other entity can access system resources.

authorization A process that grants specific access privileges to a user, such as using a service, or which objects the user is allowed to access, and the type of access that is allowed for each object. Authorization is based on authentication and access control. See also authentication.

Auto Service Request (ASR) An Oracle diagnostic software service provided to customers who have Oracle Premium Support warranty, that automatically opens a service request, downloads telemetry data, and orders parts (if necessary) when a hardware fault is detected. Oracle diagnostic capabilities analyze the data for known issues and send corrective action to the customer.

Automatic System Recovery A RAS feature that initiates a system reboot sequence that bypasses failed system components or a software failure. See also reliability, availability, serviceability (RAS).

availability A measurement of the percentage of time that a system is accessible by users and is providing service. See also reliability and serviceability.

B

bandwidth A measure of the volume of information that can be transmitted over a communication link. Often used to describe the number of bits per second a network can deliver. See also bits per second (bps).

bare metal system A computer without an operating system, which allows microprocessors to boot directly into single-purpose software without loading an operating system.

baseboard management A device used to manage chassis environmental, configuration, and service functions, and receive event data from other parts of the system. Typical functions of the BMC are to measure

controller (BMC) processor temperature, power supply values, and cooling fan status. The BMC can take autonomous action to preserve system integrity.

Basic Input/ Output System (BIOS) System software that controls the loading of the operating system and testing of hardware at system power-on. BIOS is stored in read-only memory (ROM). Also referred to as Legacy BIOS. See also Unified Extensible Firmware Interface (UEFI).

baud rate The rate at which data is transmitted between devices, such as a terminal and a server.

bits per second (bps) A unit of measurement for data transmission speed.

boot A process that automatically runs at system power-on to control the first stage of system initialization and hardware tests. Boot loader software then transfers control to a more complex program that loads the operating system.

boot server A system that provides client systems on the network with the programs and information that the clients need to start. See also client.

C

cable management arm (CMA) A device that manages cables connected to a server.

client In the client-server communications model, the client is a process that remotely accesses resources of a compute server, such as compute power or large memory capacity. At times, a server itself can be a client of some other server or service. See also client-server model.

client-server model A network architecture that consists of a database server that uses a relational database management system (DBMS) to quickly respond to user queries (directed from the client). See also client.

cold reset A restart of the server from a completely powered-off state. See also warm reset.

cold service A description of components that must be serviced only when the server is completely powered off and AC power cords are disconnected from the server.

command-line interface (CLI) A user interface that enables you to type executable instructions at a user prompt.

console A logical device or physical device that displays system messages and is used for interactive purposes. A physical console might be a local alphanumeric (ASCII) terminal or local graphics

monitor. A logical device, also known as a system console, gives users privileged access to the operating system to administer hardware, services, operating systems, storage, and more.

converged network adapter (CNA) A network component that combines Fibre Channel HBA and Ethernet NIC functionality on the same adapter card with one or more physical Ethernet ports. Used by FCoE technology. See also Fibre Channel over Ethernet (FCoE).

Coordinated Universal Time (UTC) The international standard for time. UTC was formerly called Greenwich Meridian Time (GMT). UTC is used by NTP servers to synchronize systems and devices on a network. See also Network Time Protocol (NTP).

core file A file created by Oracle Solaris or a Linux operating system when a program malfunctions and terminates. The core file holds a snapshot of memory, taken at the time the fault occurred. This file can be used to determine the cause of the malfunction.

correctable error (CE) An error that can be corrected by error correction code (ECC). See also error correction code (ECC) and uncorrectable error (UE).

CPU module (CMOD) In certain servers (such as the Oracle Servers X7-8 and X8-8), the modules that contains the processor(s) (CPUs) and system memory.

critical event A system event that seriously impairs service and requires immediate attention.

customer-replaceable unit (CRU) A system component that the user can replace without special training and typically without special tools. See also field-replaceable unit (FRU).

D

data terminal equipment (DTE) Equipment that acts like a terminal; most often an actual terminal or terminal emulation software running on a laptop computer.

database server A computer that runs client applications and databases, and is connected to other systems over a network. See also client-server model.

device name The name that the system uses to identify a device. For example, /dev/rst0 (or only rst0) might be the device name for a tape drive.

digital signature A certification of the source of digital data that can ensure data integrity and detect data modificaitons. The signature is a number derived from a public key cryptographic process.

direct memory access (DMA) The transfer of data directly into memory without supervision of the processor. The data is passed on the bus directly between the memory and another device. See also direct virtual memory access (DVMA).

direct virtual memory access (DVMA) A mechanism to enable a device on the SBus to initiate data transfers between it and other SBus devices, such as system memory. See also direct memory access (DMA).

disk backplane (DBP) A backplane designed to hold multiple disks, such as 8-disk or 12-disk implementations.

disk partition A portion of the disk that is reserved for a specific file system and function.

diskfull client A client on a network that relies on a server for resources, such as files, but has its own local disk storage. Some of a diskfull client's files are local and other files are remote. See also diskless client.

diskless client A client on a network that relies on a server for all of its disk storage. See also diskfull client.

domain name The name that is assigned to a group of systems on a local network that share administrative files. A domain name is required for the Network Information Service (NIS) database to work properly.

Domain Name System (DNS) A network service that translates domain names into IP addresses. This is a specific network server that maintains the list of all host names in a domain.

double data rate (DDR) Describes a class of memory module (DIMM) that achieves twice the bandwidth of single rate modules by transferring data on both the rising and falling edges of the clock signal without increasing the clock frequency. See also quad data rate (QDR).

dual in-line memory module (DIMM) A small circuit board (card) that holds memory chips (64-bit path).

Dynamic Host Configuration Protocol (DHCP) A protocol that enables a DHCP server to assign IP addresses dynamically to systems on a Transmission Control Protocol/Internet Protocol (TCP/IP) network.

E

electrostatic discharge (ESD) A sudden, potentially damaging flow of electricity that occurs when two differently charged objects come into contact, for example when a human operator without antistatic protection touches a component.

Enhanced Host Controller Interface (EHCI) An interface that supports USB high-speed signaling.

error correction code (ECC) A type of code that adds extra bits to words or double words, corrects all single-bit errors, and detects all double-bit errors.

Ethernet An industry-standard type of local area network (LAN) that enables real-time communication between systems connected directly through cables.

Ethernet 10/100/ 1000BASE-T The most widely used LAN access method defined by IEEE 802.3 standard; uses standard RJ-45 connectors and telephone wire. 100BASE-T is referred to as Fast Ethernet; 1000BASE-T is referred to as Gigabit Ethernet. See also Gigabit Ethernet.

event A change in the state of a system or software.

event log A log, accessible using Oracle ILOM, that tracks informational, warning, or error messages about a device, such as the addition or removal of a component or the failure of a component. The properties of the events recorded in the log can include: the severity of the event, the event provider (class), and the date and time the event was logged. This log is helpful when troubleshooting the system or monitoring system performance. See also syslog and system event log (SEL).

externally initiated reset (XIR) A signal that sends a "soft" reset to the processor in a domain. XIR does not reboot the domain. An XIR is generally used to escape from a hung system so that a user can reach the console prompt.

extreme core count (XCC) Refers to the number of processor cores.

Extreme Flash (EF) Designates a specific Oracle Exadata storage server configuration.

F

failover The automatic transfer of a service from one system, or more often a subsystem, to another system to provide redundant service.

fault A detected error condition in the hardware or software.

Fault Management Architecture (FMA) Software that can be used to manage server faults from the host operating system in a similar way that you manage faults in Oracle ILOM.

Fault Management shell See Oracle Fault Management Shell.

Fibre Channel (FC) A high-speed network technology that runs primarily on optical fiber cables. See also Fibre Channel over Ethernet (FCoE).

Fibre Channel over Ethernet (FCoE) A method to map FC frames over selected full-duplex IEEE 802.3 networks, allowing FC to leverage 10 GigabitEthernet networks while preserving the FC protocol. See also Fibre Channel (FC).

field-programmable gate array (FPGA) Circuity that includes critical system logic for the motherboard and disk backplanes.

field-replaceable unit (FRU) A system component that is replaceable at the customer site only by qualified Oracle Services personnel. See also customer-replaceable unit (CRU).

firmware Software that is typically used to help with the initial booting of a system and with system management.

flash memory A special type of non-volatile solid-state memory that can be electrically erased and reprogrammed, making it more economical than traditional memory modules (DIMMs).

front indicator module (FIM) A module that contains the front panel controls and indicators.

fully qualified domain name A unique Internet name of a system, such as www.oracle.com. The FQDM includes the host server name (www), its second-level domain (oracle) and its top-level domain (com). An FQDN can be mapped to the IP address of a system.

G

General Purpose I/O (GPIO) Inputs and outputs with no predefined purpose, often used for custom system designs.

Gigabit Ethernet An Ethernet technology that transfers data up to 1000M bits per second.

graphics proccessing unit (GPU) A performance accelerator for GPU optimized applications.

H

hard disk drive (HDD) A data storage device that uses rapidly rotating, rigid magnetic disks to store and retrieve digital data in a random access manner. See also solid state drive (SSD).

Hardware Management Pack (HMP) See Oracle Hardware Management Pack.

high availability (HA) A capability of a system to mask many individual points of failure or to significantly compensate for them. This type of system might be built with limited hardware and/or software components to minimize the impact of failures. Generally, this type of system is less costly than a fault tolerant system. See also failover.

High Capacity (HC) Designates a specific Oracle Exadata storage server configuration.

high core count (HCC) Refers to the number of processor cores.

host A system, such as a backend server, with an assigned IP address and host name. The host is accessed by other remote systems on the network. See also local host.

host bus adapter (HBA) A controller board that connect the I/O expansion bus to the Small Computer System Interface (SCSI) subsystem.

host bus adapter SuperCap A supercapacitor assembly on the HBA card that provides short term backup of primary power. See also host bus adapter (HBA).

host channel adapter (HCA) A switched fabric communications link primarily used in high-performance computing. See also InfiniBand host channel adapter (IB-HCA).

host ID Part of the 32-bit IP address used to identify a host on a network.

host name The name of a particular machine within a domain. Host names always map to a specific IP address.

hot service A description of components that can be serviced while the server is powered on and running in Main power mode. See also Main power mode.

hot spare Drive(s) within a storage system that are held in reserve to replace any other failed drive.

hot-plug The ability to install or replace a component, while the system is powered on, without interrupting the system operation. In some cases the user must prepare the system for the hot-plug operation by performing certain administrative tasks. After a new component is inserted, the user might need to instruct the system to reconfigure the device into the system. See also hot-swap.

hot-swap The ability to install or replace a component while the system is powered on and in operation. These components can be removed or inserted without preparing the operating system. The system either automatically recognizes the component change and configures it or requires user interaction to configure the system. In either case a reboot is not required. All hotswappable components are hot pluggable, but not all hotpluggable components are hot swappable. See also hot-plug.

HWdiag commands A command-line utility accessed by using the Oracle ILOM Diag shell that is used to check the status of system components.

I

in-band system management Server management capability that is enabled only when the operating system is initialized and the server is functioning properly. See also out-of-band (OOB) system management.

InfiniBand (IB) Networking standard used in high-performance computing that provides very high throughput and low latency.

InfiniBand host channel adapter (IB-HCA) A switched fabric communications link primarily used in high-performance computing. See also host channel adapter (HCA).

Integrated Lights Out Manager (ILOM) See Oracle Integrated Lights Out Manager (ILOM).

Intelligent Platform Management Interface (IPMI) — A hardware-level interface specification for out-of-band management of servers over a number of different physical interconnects. Monitoring and control of hardware is implemented independent of the main processor (CPU), BIOS, and operating system. IPMI functionality includes FRU inventory reporting, system monitoring, logging, system recovery (including local and remote system resets and power-on and power-off capabilities), and alerting. See also IPMItool.

Internet Protocol (IP) address — A unique 32-bit value that identifies network hosts using Transmission Control Protocol/ Internet Protocol. No two network hosts can be assigned the same IP address.

IPMItool — A utility used to manage IPMI functions on either a local or remote system. Functions include managing FRU information, local area network configuration, sensor readings, and remote system power control.

J

Java Development Kit (JDK) — A software development environment for writing applets and applications in the Java programming language.

Java Remote System Console — An Oracle ILOM console that enables users to redirect devices (keyboard, mouse, video display, storage devices) from a local desktop to a remote host server.

Java runtime environment (JRE) — A subset of the JDK that enables developers to redistribute the runtime environment. The Java runtime environment consists of the Java virtual machine (JVM), Java core classes, and supporting files. See also Java Development Kit (JDK).

K

kernel — The core of the operating system that manages the hardware and provides fundamental services, such as filing and resource allocation, that the hardware does not provide.

key identity properties (KIP) — Information stored in FRU components that is used for service entitlement and warranty coverage. It includes information such as product name, product part number, and serial number.

keyboard, video, mouse, — A series of interfaces that enables a system to respond to keyboard, video, mouse, and storage events.

storage (KVMS)

L

LAN on Motherboard (LOM) Chip circuits embedded on the system motherboard that can provide network connections, thereby eliminating the need for a separate NIC to access a local area network, such as Ethernet. See also network interface card (NIC).

large form factor (LFF) Refers to the size of the drive bays. See also small form factor (SFF).

lights out management (LOM) Technology that enables out-of-band communication with the server even when the operating system is not running. This allows users to switch the server on and off; view system temperatures, fan speeds, and so forth; and restart the system from a remote location.

Lightweight Directory Access Protocol (LDAP) A standard, extensible directory access protocol that provides a common language that LDAP clients and servers use to communicate.

load-reduced dual inline memory module (LRDIMM) A load-reduction dual inline memory module that supports higher densities than registered dual inline memory modules (RDIMMs) and contains a memory buffer (MB) chip, as opposed to a register, in order to reduce and minimize the load on the server memory bus. See also registered dual inline memory module (RDIMM).

local host A computer on which a software application is running. See also host.

logical device (LDEV) A device connected to a host, identified by a LUN. See also logical unit number (LUN).

logical disk A section of a formatted disk allocated by the software. Also called a partition. See also partition.

logical drive (LD) A group of physical drives configured with a RAID level. Each logical drive can be configured for a different RAID level. See also redundant array of independent disks (RAID).

logical unit number (LUN) A three-bit identifier used on a SCSI bus to distinguish between up to eight devices (logical units) with the same SCSI ID. See also logical device (LDEV).

low core count (LCC) Refers to the number of processor cores.

M

M.2 Specification for internally mounted expansion cards and associated connectors.

machine access code (MAC) address Worldwide unique, 48-bit, hardware-encoded address number that uniquely identifies a piece of network hardware. See also network interface card (NIC).

Main power mode The server power mode that is entered after the service processor boots into Standby power mode. In Main power mode, power is supplied to all server components, the server boots, and the operating system functions. See also Standby power mode.

major event A system event that impairs service, but not critically. See also critical event and minor event.

man pages A set of online UNIX documentation.

Management Information Base (MIB) A collection of objects in a virtual database used to manage entities for Simple Network Management Protocol (SNMP).

mean time before failure (MTBF) The average time a component works without failure.

mean time to repair (MTTR) The average time it takes to repair a failed component.

MegaTransfers per second (MT/s) A unit of measurement, often used when referring to memory modules (DIMMs).

minor event A system event that does not impair current service, but which requires attention before it becomes more severe. See also major event and critical event.

mirroring The process of duplicating data from a primary location to a secondary location, so that data is still available if the primary location fails. Referred to as RAID-1 in disk arrarys. See also redundant array of independent disks (RAID) and striping.

mount The process of accessing a directory from a disk attached to a machine making the mount request or from a remote disk on a network. See also unmount.

mount point A directory to which you mount a file system that exists on a remote machine.

multipath I/O (MPIO) A fault-tolerance and performance enhancement technique where there is more than one physical path between the processor in a computer system and its mass storage devices through the buses, controllers, switches, and bridge devices connecting them.

multipathing A higher availability option that provides two independent paths to storage and/or networks. An intermediate software layer is generally required to mask the failure of one path from the application. When both paths are functional, higher bandwidth and throughput is possible as a secondary benefit beyond higher availability. See also high availability (HA).

N

Network Access Control (NAC) name A network device container name. Physical device address used for remote access, configuration, and management.

network interface card (NIC) A card that connects a workstation or server to a network. Also known as a network interface controller.

network management port (NET MGT) An Ethernet port for access to the server SP. See also service processor (SP).

Network Time Protocol (NTP) A protocol that synchronizes the clocks between computer systems over packet-switched, variable-latency data networks. Often used to synchronize servers with Coordinated Universal Time (UTC). See also Coordinated Universal Time (UTC).

node An addressable point or device on a network. A node can connect a computing system, a terminal, or various peripheral devices to the network.

Node Manager An Oracle ILOM feature that collects power telemetry from the power supplies and communicates with the processors to affect changes in core voltage and frequency and with the memory controller to affect changes in memory utilization. Node Manager manages the processor and memory performance levels to achieve a user-set power limit that the system must not exceed. See also Oracle Integrated Lights Out Manager (ILOM).

non-maskable interrupt (NMI) An interrupt that standard interrupt masking techniques cannot mask.

non-volatile memory express (NVMe) A specification for accessing solid state drives (SSDs) that are attached through the PCIe Express bus. See also solid state drive (SSD) and PCI Express (PCIe).

non-volatile random access memory (NVRAM) A type of memory that ensures that data is not lost when system power is off.

O

operator A user with limited privileges to a managed host system. See also administrator.

Oracle Fault Management Shell An Oracle ILOM command shell that is used to diagnose, view, and manage fault activity on a server or other devices.

Oracle Hardware Management Pack An Oracle software solution that provides CLI tools to manage or monitor a system through the host operating system command line, as well as an SNMP monitoring agent.

Oracle ILOM Remote System Console Plus A graphical remote console feature of Oracle ILOM that enables users to redirect devices (keyboard, mouse, video display, storage media) from a desktop to a remote host server.

Oracle Integrated Lights Out Manager (ILOM) Oracle's implementation of lights out management (LOM). An Oracle hardware and firmware solution that enables out-of-band communication with the server even when the operating system is not running. This allows users to switch the server on and off; view system temperatures, fan speeds, and so forth; and restart the system from a remote location.

Oracle VM An Oracle technology for deploying operating systems and application software in a virtualization environment.

Oracle VM Manager A feature of Oracle VM that allows users to manage Oracle VM Servers, virtual machines, and resources. See also Oracle VM.

Oracle VM Server — A managed virtualization environment that provides a lightweight, secure, server platform for running virtual machines (Linux, Oracle Solaris, or Microsoft Windows), also known as domains. See also Oracle VM.

Oracle VTS — A standalone diagnostic tool that can locally or remotely exercise and stress a system.

out-of-band (OOB) system management — Server management capability that is enabled when the operating system network drivers or the server is not functioning properly. See also in-band system management.

P

partition — Sections on a LDEV. Each partition can either have some space allocated to it, or can be empty. See also logical device (LDEV).

PCI Express (PCIe) — An industry-standard bus architecture that supports high-bandwidth peripherals and I/O devices.

Peripheral Component Interconnect (PCI) — An industry-standard bus architecture. See also PCI Express (PCIe).

permissions — A set of privileges granted or denied to a user or group that specify read, write, or execution access to a file or directory.

physical address — An hardware address that matches a memory location; programs that refer to virtual addresses are subsequently mapped to physical addresses.

Platform Event Trap (PET) — A configured alert triggered by a hardware or firmware (BIOS) event. A PET is an IPMI-specific, SNMP trap, which operates independently of the operating system.

power consumption — A value that shows either the input power consumed by the system or the output power provided by the PSUs.

power cycling — The process of turning the power to a system off then on again.

power distribution board (PDB) — A board that brings power from the PSUs to the motherboard. See also power distribution unit (PDU).

power distribution unit (PDU) — Two matching power units in a rack, with each unit sized for the maximum expected power load for all equipment in the rack.

power supply unit (PSU) A power unit in an individual server.

power-on self-test (POST) A type of host firmware that runs at system startup and that tests core system components, including processors, memory, and motherboard I/O bridge integrated circuits.

Preboot eXecution Environment (PXE) An industry-standard client-server interface that enables a server to boot an operating system over Dynamic Host Protocol/Internet Protocol (TCP/IP) network using DHCP. See also Dynamic Host Configuration Protocol (DHCP).

programmable read-only memory (PROM) Non-volatile memory that, once programmed, cannot be programmed again.

proxy A mechanism whereby one system acts on behalf of another system when responding to protocol requests.

Q

quad data rate (QDR) A class of memory module that can transfer up to four words of data in each clock cycle. QDR uses two clocks, one for read data and one for write data. See also double data rate (DDR).

R

rack unit (U) The modular unit of measurement on which panel heights are based. A 1U system is one rack unit, which equals 44.45mm (1.750 inches). A 2U system is two rack units, which equals 88.9 mm (3.5 inches).

radio-frequency identification (RFID) A technology that allows remote identification of a product by the insertion of an electronic tag that can be read by radio waves.

radio-frequency interference (RFI) A disturbance in the radio frequency spectrum that is generated by an external source and that effects electrical circuits.

real-time clock (RTC)	A battery-backed component that maintains the time and date for a system, even when the system is powered off.
reboot	An operating system-level operation that performs a system shutdown followed by a system boot. Power is a prerequisite.
redundancy	A duplication or addition of components for the purpose of achieving fault tolerance.
redundant array of independent disks (RAID)	A set of disk drives that appear to be a single logical disk drive to an application, such as a database or file system. Different RAID levels provide different capacity, performance, availability, and cost characteristics. See also mirroring and striping.
registered dual inline memory module (RDIMM)	A dual inline memory module (DIMM) with improved reliability. The RDIMM, which became available for DDR3 memory, uses a hardware register that buffers the control signals (not the application data) to the modules.
reliability	A capability that enables a system to operate continuously without failures and to maintain data integrity. Reliability influences MTBF. See also availability and serviceability.
reliability, availability, serviceability (RAS)	A description of three aspects of system design that contributes to continuous operation and minimizes system downtime for services. Together RAS features provide for near continuous system operation. See also reliability, availability, and serviceability.
remote keyboard, video, mouse, storage (RKVMS) redirection	A feature that allows redirection of the server keyboard, video output, mouse, and storage devices through a networked system.
reset	A hardware-level operation that performs a system power-off, followed by a system power-on.
Restriction of Hazardous Substances (RoHS)	A European Union (EU) directive that bans the sale of certain electronic equipment containing these materials: lead, mercury, hexavalent chromium, cadmium, and certain brominated flame retardants.
role	An attribute of an Oracle ILOM user account that determines user access rights.
root	In UNIX operating systems, the name of the superuser who has permissions to access any file and to carry out operations not granted to other users. Root is roughly equivalent to the administrator user name in Windows Server operating systems.

S

Secure Shell (SSH) A UNIX shell program and network protocol that enables secure and encrypted log in and execution of commands on a remote system over an insecure network.

Secure Sockets Layer (SSL) A protocol that enables client-to-server communication on a network to be encrypted for privacy. All data exchanged is encrypted with a cipher and hashed to protect it from eavesdropping and alteration. Hypertext Transfer Protocol Secure (HTTPS) uses SSL.

Serial Advanced Technology Attachment (SATA) A computer bus primarily designed for transfer of data between a computer and storage devices (hard disk drives or optical drives).

Serial Attached SCSI (SAS) A computer bus technology primarily designed for high transfer rates of data to and from devices, such as hard drives. SAS is faster and more versatile than SATA.

serial management (SER MGT) port A serial port to the server SP. See also service processor (SP).

service processor (SP) A device used by Oracle ILOM that manages chassis environmental, configuration, and service functions, and receives event data from other parts of the system. Typical functions of the SP are to measure processor temperature, power supply values, and cooling fan status. The SP can take autonomous action to preserve system integrity. See also Oracle Integrated Lights Out Manager (ILOM).

serviceability A measurement of the time required to restore a system to operation when a failure has occurred. Serviceability influences MTTR. See also reliability and availability.

sideband management A connection method to Oracle ILOM over the host data network. See also in-band system management and out-of-band (OOB) system management.

Simple Network Management Protocol (SNMP) A protocol used to exchange data about network activity such as monitoring and notification of network errors and other events.

Single Root I/O Virtualization (SR-IOV) An extension to the PCIe specification that allows a PCIe device, such as a network adapter, to appear to be multiple, separate physical PCIe devices.

single sign-on (SSO)	A form of authentication in which a user enters credentials once to access multiple applications.
Small Computer Systems Interface (SCSI)	A standard for transferring data between computers and peripheral devices.
small form factor (SFF)	Refers to the size of the drive bays. See also large form factor (LFF).
small form factor pluggable plus (SFP+)	A specification for a transceiver for 10 Gigabit Ethernet technology.
solid state drive (SSD)	A data storage device that uses solid-state memory to store persistent data. An SSD emulates a conventional hard disk drive. See also hard disk drive (HDD).
standalone	Describes a computer that does not require support from any other machine. Also called single system.
Standby power mode	A low power mode that is activated on a server when AC power cords are connected and the service processor boots. In Standby power mode, power is supplied only to the components required to run the service processor. The operating system does not boot. See also Main power mode.
stock keeping unit (SKU)	A unique identifier for a component that can be purchased.
storage area network (SAN)	An advanced storage option used to deploy centrally pooled storage that appears to the operating system as local storage.
striping	The combination of one or more physical disks into a single logical disk. The operating system views the logical disk as any other disk-based file system. See also logical disk and mirroring.
superuser	A designated user who has privileges to perform all administrative functions on a UNIX system. Also referred to as root. See also root.
syslog	A log that is accessible using Oracle ILOM. The syslog defines a set of common features for event logging and protocol for transmitting log entries to a remote host. This log can combine events form multiple Oracle ILOM sessions in a single place. Entries recorded in the syslog contain the same information contained in the local event log. See also event log.

system event log (SEL) A log that provides nonvolatile storage for system events that are logged autonomously by the service processor or directly with event messages sent from the host.

system log A log that is accessible using Oracle ILOM. This top-level presents a subset of relevant operational event log entries. The system log provides nonvolatile storage for system events that are logged autonomously by the service processor or directly with event messages from the host. See also event log and event.

System Module (SMOD) In certain servers (such as the Oracle Servers X7-8 and X8-8), a module that contains the service processor, storage drive backplanes, real-time clock battery, energy storage module, internal host bus adapter, and USB port.

T

terminal emulator A window that emulates a particular type of terminal for running non-windowing programs. A terminal emulator is most commonly used for typing commands to interact with the computer's operating system.

time-out A specified amount of time after which the server stops trying to finish a service routine that appears to be hung.

trap An event notification made by SNMP agents by their own initiative when certain conditions are detected. SNMP formally defines seven types of traps and permits subtypes to be defined. See also Simple Network Management Protocol (SNMP).

Trusted Execution Technology (TXT) A feature that provides authenticity of a platform and its operating system. When enabled, TXT ensures that the operating system starts in a trusted environment, and provides the operating system with additional security capabilities not available to an untrusted operating system.

Trusted Platform Module (TPM) A standard for a dedicated microprocessor to secure hardware by using integrated cryptographic keys into devices.

U

UBoot A process used by Oracle Services field support personnel to repair and upgrade SP firmware when the SP flash image is corrupted. See also service processor (SP).

UEFI diagnostics A suite of tests that can be run manually or automatically from Oracle ILOM to test and detect problems on processor, memory, disk drives, and network ports.

UEFI Secure Boot	A UEFI feature that defines how platform firmware can authenticate a digitally signed UEFI image, such as an operating system loader or a UEFI driver.
UEFIconfig	Functionality that lets BIOS system variables, such as prioritized list of boot devices, to be viewed and manipulated by both the BIOS and Oracle ILOM for purposes of remote management and scale-out deployments. Enables Oracle ILOM to modify the BIOS Setup configuration and to preserve BIOS Setup configurations between BIOS upgrades.
UltraPath Interconnect (UPI)	An Intel interconnect linking technology for communications between processors.
unasserted	A characteristic of a signal that terminates an action. See also asserted.
uncorrectable error (UE)	An error that cannot be corrected by error correction code (ECC). See also correctable error (CE).
Unified Extensible Firmware Interface (UEFI)	A BIOS-compatible firmware interface that controls the system from power-on until an operating system is booted. UEFI allows you to configure, enable, disable, and manage system components. UEFI replaces Legacy BIOS in newer servers. See also Basic Input/Output System (BIOS).
uniform resource identifier (URI)	A unique string that identifies a resource on the Internet or an intranet.
uninterruptible power supply (UPS)	A device that provides emergency power to a system almost immediately if main power fails.
universally unique identifier (UUID)	A 128-bit value used in distributed systems to uniquely identify information without requiring central coordination.
unmount	The process to remove access to a directory on a disk that is attached to a system or to a remote disk on a system. See also mount.
user account	A record of essential user information that is stored on the system. Each user who accesses a system has a user account.
user identification (UID) number	The number assigned to each user accessing a UNIX system. The system uses UID numbers to identify, by number, the owners of files and directories.

user identification (userid) A unique string identifying a user to a system.

user name A combination of letters, and possibly numbers, that identifies a user to the system.

user privileges An attribute of a user account that designates the operations a user can perform and the resources a user can access.

V

virtual machine An abstract specification for a computing device that can be implemented in different ways, in software or hardware.

Virtualization Technology with Directed I/O (VT-d) Platform virtualization that enables multiple operating systems and applications to run in independent partitions, which behave like a virtual machine.

volume A virtual disk in which a filesystem, a database management system, or an application can place data.

W, X, Y, Z

warm reset A reboot or restart of the server. It requires cycling the server power from Main power mode to Standby power mode and back to Main power mode. See also cold reset.

warm service A description of components that can be serviced while the server is in Standby power mode. See also Standby power mode.

world wide name (WWN) A unique number assigned by the Institute of Electrical and Electronic Engineers (IEEE) that is hard coded into a network storage device and which is used to identify that device.