

Glossary

A

ACPI

Advanced Configuration and Power Interface, an industry specification for BIOS and hardware extensions to configure PC hardware and perform power management. Windows 2000 and later, as well as Linux 2.4 and later support ACPI. Windows can only enable or disable ACPI support at installation time.

AHCI

Advanced Host Controller Interface, the interface that supports SATA devices such as hard disks. See [Section 5.1, “Hard Disk Controllers”](#).

AMD-V

The hardware virtualization features built into modern AMD processors. See [Section 10.3, “Hardware Virtualization”](#).

API

Application Programming Interface.

APIC

Advanced Programmable Interrupt Controller, a newer version of the original PC PIC (programmable interrupt controller). Most modern CPUs contain an on-chip APIC, called a local APIC. Many systems also contain an I/O APIC (input output APIC) as a separate chip which provides more than 16 IRQs. Windows 2000 and later use a different kernel if they detect an I/O APIC during installation. Therefore, an I/O APIC must not be removed after installation.

ATA

Advanced Technology Attachment, an industry standard for hard disk interfaces which is synonymous with IDE. See [Section 5.1, “Hard Disk Controllers”](#).

B

BIOS

Basic Input/Output System, the firmware built into most personal computers which is responsible of initializing the hardware after the computer has been turned on and then booting an operating system. Oracle VM VirtualBox ships with its own virtual BIOS that runs when a virtual machine is started.

C

COM

Microsoft Component Object Model, a programming infrastructure for modular software. COM enables applications to provide application programming interfaces which can be accessed from various other programming languages and applications. Oracle VM VirtualBox makes use of COM both internally and externally to provide a comprehensive API to 3rd party developers.

D

DHCP

Dynamic Host Configuration Protocol. This enables a networking device in a network to acquire its IP address and other networking details automatically, in order to avoid having to configure all devices in a network with fixed IP addresses. Oracle VM VirtualBox has a built-in DHCP server that delivers an IP addresses to a virtual machine when networking is configured to NAT. See [Chapter 6, Virtual Networking](#).

E

EFI

Extensible Firmware Interface, a firmware built into computers which is designed to replace the aging BIOS. Originally designed by Intel, most modern operating systems can now boot on computers which have EFI instead of a BIOS built into them. See [Section 3.14, "Alternative Firmware \(EFI\)"](#).

EHCI

Enhanced Host Controller Interface, the interface that implements the USB 2.0 standard.

G

GUI

Graphical User Interface. Commonly used as an antonym to a "command line interface". In the context of Oracle VM VirtualBox, we sometimes refer to the main graphical **VirtualBox** program as the "GUI", to differentiate it from the **VBoxManage** interface.

GUID

See UUID.

I

IDE

Integrated Drive Electronics, an industry standard for hard disk interfaces. See [Section 5.1, "Hard Disk Controllers"](#).

I/O APIC

See APIC.

iSCSI

Internet SCSI. See [Section 5.10, "iSCSI Servers"](#).

M

MAC

Media Access Control, a part of an Ethernet network card. A MAC address is a 6-byte number which identifies a network card. It is typically written in hexadecimal notation where the bytes are separated by colons, such as 00:17:3A:5E:CB:08.

MSI

Message Signaled Interrupts, as supported by modern chipsets such as the ICH9. See [Section 3.5.1,](#)

[“Motherboard Tab”](#). As opposed to traditional pin-based interrupts, with MSI, a small amount of data can accompany the actual interrupt message. This reduces the amount of hardware pins required and allows for more interrupts and better performance.

N

NAT

Network Address Translation. A technique to share networking interfaces by which an interface modifies the source and/or target IP addresses of network packets according to specific rules. Commonly employed by routers and firewalls to shield an internal network from the Internet, Oracle VM VirtualBox can use NAT to easily share a host's physical networking hardware with its virtual machines. See [Section 6.3, “Network Address Translation \(NAT\)”](#).

O

OVF

Open Virtualization Format, a cross-platform industry standard to exchange virtual appliances between virtualization products. See [Section 1.15, “Importing and Exporting Virtual Machines”](#).

P

PAE

Physical Address Extension. This enables access to more than 4 GB of RAM, even in 32-bit environments. See [Section 3.4.2, “Advanced Tab”](#).

PIC

See APIC.

PXE

Preboot Execution Environment, an industry standard for booting PC systems from remote network locations. It includes DHCP for IP configuration and TFTP for file transfer. Using UNDI, a hardware independent driver stack for accessing the network card from bootstrap code is available.

R

RDP

Remote Desktop Protocol, a protocol developed by Microsoft as an extension to the ITU T.128 and T.124 video conferencing protocol. With RDP, a PC system can be controlled from a remote location using a network connection over which data is transferred in both directions. Typically graphics updates and audio are sent from the remote machine and keyboard and mouse input events are sent from the client. An Oracle VM VirtualBox extension package by Oracle provides VRDP, an enhanced implementation of the relevant standards which is largely compatible with Microsoft's RDP implementation. See [Section 7.1, “Remote Display \(VRDP Support\)”](#) for details.

S

SAS

Serial Attached SCSI, an industry standard for hard disk interfaces. See [Section 5.1, “Hard Disk Controllers”](#).

SATA

Serial ATA, an industry standard for hard disk interfaces. See [Section 5.1, “Hard Disk Controllers”](#).

SCSI

Small Computer System Interface. An industry standard for data transfer between devices, especially for storage. See [Section 5.1, “Hard Disk Controllers”](#).

SMP

Symmetrical Multiprocessing, meaning that the resources of a computer are shared between several processors. These can either be several processor chips or, as is more common with modern hardware, multiple CPU cores in one processor.

SSD

Solid-state drive, uses microchips for storing data in a computer system. Compared to classical hard-disks they are having no mechanical components like spinning disks.

T**TAR**

A widely used file format for archiving. Originally, this stood for Tape ARchive and was already supported by very early UNIX versions for backing up data on tape. The file format is still widely used today. For example, with OVF archives using an `.ova` file extension. See [Section 1.15, “Importing and Exporting Virtual Machines”](#).

U**UUID**

A Universally Unique Identifier, often also called GUID (Globally Unique Identifier). A UUID is a string of numbers and letters which can be computed dynamically and is guaranteed to be unique. Generally, it is used as a global handle to identify entities. Oracle VM VirtualBox makes use of UUIDs to identify VMs, Virtual Disk Images (VDI files), and other entities.

V**VM**

Virtual Machine. A virtual computer that Oracle VM VirtualBox enables you to run on top of your actual hardware. See [Section 1.2, “Some Terminology”](#) for details.

VMM

Virtual Machine Manager. The component of Oracle VM VirtualBox that controls VM execution. See [Section 10.2, “Oracle VM VirtualBox Executables and Components”](#) for a list of Oracle VM VirtualBox components.

VRDE

VirtualBox Remote Desktop Extension. This interface is built into Oracle VM VirtualBox to allow Oracle VM VirtualBox extension packages to supply remote access to virtual machines. An Oracle VM VirtualBox extension package by Oracle provides VRDP support. See [Section 7.1, “Remote Display \(VRDP Support\)”](#).

VRDP

See RDP.

VT-x

The hardware virtualization features built into modern Intel processors. See [Section 10.3, “Hardware Virtualization”](#).

X**xHCI**

eXtended Host Controller Interface, the interface that implements the USB 3.0 standard.

XML

The eXtensible Markup Language, a metastandard for all kinds of textual information. XML only specifies how data in the document is organized generally and does not prescribe how to semantically organize content.

XPCOM

Mozilla Cross Platform Component Object Model, a programming infrastructure developed by the Mozilla browser project which is similar to Microsoft COM and enables applications to provide a modular programming interface. Oracle VM VirtualBox makes use of XPCOM on Linux both internally and externally to provide a comprehensive API to third-party developers.