



vtAlpha Product Overview

vtAlpha allows the owners of Alpha computer systems to move their entire Alpha software installation to a more modern environment (X86-64 computer, Virtual Machine or Cloud) without changes.

No software migration is required, saving enormous amounts of effort, time, and money.

Six (6) vtAlpha variants are available to cover the whole range of Alpha systems that were manufactured during its lifetime.

You are no longer locked in; you can now easily move to a more common platform and integrate your Alpha systems in the modern IT infrastructure of your organization.

vtAlpha-AS (Alpha Start)	1 CPU	AlphaStation 200, 250 AlphaServer 300, 400 DEC3000
vtAlpha-BS (Basic Systems)	1 CPU	AlphaServer 800, 1000 AlphaStation 500, 600, DPW AlphaStation XP900, XP1000
vtAlpha-CS (Classic Systems)	1 - 4 CPUs	AlphaServer 2000, 2100 AlphaServer 4000, 4100
vtAlpha-DS (DS Systems)	1 - 2 CPUs	AlphaServer DS10, DS15 AlphaServer DS20, DS25 AlphaServer 1200
vtAlpha-ES (ES Systems)	1 - 4 CPUs	AlphaServer ES40, ES45, ES47
vtAlpha-GS (GS Systems)	1 - 32 CPUs	AlphaServer ES80, GS80, GS160, GS320, GS1280

How does it work?

Since Alpha-based applications won't run on modern computers, vtAlpha creates the Alpha hardware interfaces that the original operating system and user programs expect to find. This way your Alpha software can continue to run without making changes to it.

vtAlpha translates in real-time between the old and the new world.

It facilitates use of modern storage, backup and IT infrastructures that were never supported by the old Alpha computers. Simply specify the configuration of the Alpha computer being replaced and vtAlpha will build a virtual equivalent of that old hardware to run your existing applications on.

After creating a virtual Alpha, binary image copies of the original Alpha disks are transferred to the virtual Alpha host. After that you can boot from these copied disks and resume the operation as usual, without changes to the Alpha software itself.

Storage Subsystem

vtAlpha presents the virtualized Alpha all the hardware interfaces it expects (e.g., KZPBA SCSI and KGPSA FibreChannel) and the storage devices it is used to work with.

The vtAlpha host system can use more modern storage elements, like SAS, SATA, modern SAN or other network-based storage, like iSCSI and NFS.

This is all transparent for the Alpha software, which still 'sees' the old device types. vtAlpha seamlessly connects the old Alpha world to the modern storage equipment.

Supported Storage Devices:

- Physical disks (direct-attached hardware)
- Logical disks (container files on the host storage)
- Physical tapes
- Logical tapes
- CD-ROM (logical and physical)
- Direct SCSI-attached devices of unknown origin

All Alpha disk types and sizes are supported by vtAlpha.

Logical Disks and Tapes

To the virtual Alpha these appear as regular disks or tapes, attached to one of the virtual storage adapters configured in the virtual Alpha. On the host system these will be files in directories on the host-attached storage.

This allows combining multiple virtual Alpha disks on a single host disk. Or making really fast backups to logical tapes and then including these logical tape files (after dismount) in a regular backup process that is used in your organization.

Physical Disks and Tapes

Direct access to physical disks and tapes is supported, by assigning a physical disk or partition to a virtual disk in vtAlpha. Or by connecting a physical tape/disk drive to a virtual Alpha tape/disk.

CD-ROM

Physical DVD/CD-ROMs as Virtual DVD/CD-ROMs (ISO images) are supported, which can be connected as CD-ROM to vtAlpha.

Direct SCSI device

This allows connecting generic SCSI devices for which a custom peripheral driver is present in the Alpha Operating System. vtAlpha only processes the SCSI communication.



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Network Subsystem

vtAlpha offers support for the following Ethernet adapters:

- DEGXA, EI1000 (model dependent)
- DE600, DE500
- DE450, DE435

Virtual network switch support enables sharing the host Ethernet links with multiple virtual Alphas. All Alpha guest OS supported protocols will run on vtAlpha. Virtual LAN (VLAN) infrastructure is supported.

The actual speed of the vtAlpha supported network connections may be better than what the original Alpha Ethernet adapters could deliver, given the higher capacity of the modern network adapters in the host.

Serial Lines

vtAlpha includes support for the two COM ports that are available on every Alpha system: OPA0 & COM2. These virtual devices can be mapped to:

- A physical VT-like device connected to the host
- Any VT-terminal emulator via telnet/ssh
- Pseudo terminal on the host's console

vtAlpha also includes support for the PBXDA serial lines adapter, that can add 8 serial lines to the two that are already available. Up to 7 PBXDA adapters are supported.

License Protection

vtAlpha is a software product available under End-User License.

The licenses are stored on a Smart Card device with USB connector for maximum compatibility/flexibility. This license key is only 3 mm high, limiting the risk of damage or accidental removal when in use.

The License Protection Mechanism can control multiple instances of vtAlpha inside one host computer or in a company network, providing maximum flexibility and fail-over capabilities allowing a low-cost disaster-tolerant installation.

System Management

The product includes the vtMonitor management tool that helps manage and control the virtual Alpha environment from any location that has network access to the vtAlpha host.

It is an easy to use and intuitive user interface that facilitates the management of the virtual Alpha systems as well as the host environment they run on.

Secure Environment

vtAlpha creates a secure environment that can be configured by the system manager to meet the security needs of your company.

Security highlights:

- Access roles and configurable security levels
- Secure communication protocols
- Encrypted environment in the Cloud
- Event logging and alerts (configurable)

Host Computer Environment

vtAlpha installs directly on the host (x86 hardware, Virtual Machine or Cloud) without the need for a pre-installed operating system like Windows or Linux.

This not only assures the security and availability of your virtual Alpha installation, it also saves you the cost and effort to purchase and maintain such additional operating systems.

Everything that is required to run your virtual Alphas and control the host environment is included in the vtAlpha product. It is often referred to as Bare Metal installation.

Storage

For host-based storage you can select any type of device: FibreChannel, SCSI, iSCSI, SATA, SAS, NAS, SAN or NFS. vtAlpha translates between the storage that the Alpha software expects and what the host has to offer.

Orderable Items

Software License to run one virtual Alpha system. This software license includes all virtualized Alpha hardware, up to 32 GB Alpha memory and a specified number of Alpha CPUs.

Annual Software Support Service providing free access to the vtAlpha support group as well as the right to obtain and install newer product versions during the term of the support agreement.

Disaster Recovery License offers 720 hours of the selected vtAlpha product to survive a host hardware break-down.

Product Origin

vtAlpha is developed, maintained and owned by Advanced Virtualization Technologies, The Netherlands (www.avtware.com)

It is distributed in The Americas by Vere Technologies LLC.

Salem Automation, Inc. (www.salemautomation.com) is largest Value-Added-Reseller of Vere Technologies' emulation software in North and South America.