

vtAlpha-Product Overview

vtAlpha allows the owners of Alpha computer systems to simply copy their Alpha disk content to a general purpose computer and run their Alpha based software unchanged on that new (and totally different) host system.

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

vtAlpha runs on a general purpose computer with the x86-architecture (64 bit) or a virtual equivalent of such a system.

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

The vtAlpha product portfolio is designed to replace any Alpha system in the installed base. Since many different Alpha computer models were manufactured during the existence of this product line we apply the following product group classification:

vtAlpha-AS (Alpha Start)	1 CPU (low speed)	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 is very easy to use. You specify the characteristics of the Alpha computer you intend to replace and vtAlpha will build an exact image of the Alpha hardware your software is used to. This ensures that you don't need to change your software or your processes.

vtAlpha includes a straight forward management tool that helps you to configure and maintain your installed base of virtual Alphas.

System Performance

The vtAlpha solution is designed to meet or exceed the performance of the Alpha computer it replaces. vtAlpha does not apply the same limitations to the amount of virtual Alpha memory as the original Alpha hardware.



Storage Subsystem

vtAlpha includes support for storage attached via virtual **SCSI** or **FibreChannel** adapters. Attachable devices:

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

Logical Disks and Tapes

For vtAlpha these are regular disks, attached to one of the virtual storage adapters configured in the virtual Alpha.

On the host system they are files in one of the directories on the storage devices that are attached to the vtAlpha host.

This way is it possible to combine multiple virtual Alpha disks on a single host disk. Or make really fast backups to logical tapes and include 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 also supported, assigning a physical disk or partition to a virtual disk in vtAlpha. Or to connect a physical tape drive to a virtual Alpha tape.

Reconnecting physical Alpha disks to your virtual Alpha is also an option.

CD-ROM

This is actually a physical or logical disk in a prepared configuration setting, already matching CD-ROM specifications

Network Subsystem

vtAlpha offers support for the following Ethernet adapters:

- E1000
- DE600
- DE500
- DE450
- DE435

All Alpha supported protocols will run on vtAlpha.
OpenVMS and Tru64 Cluster is supported.

In addition vtAlpha includes virtual network switch support, enabling sharing of physical Ethernet adapters by multiple virtual Alphas.

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 your host. You may experience faster network access than you are used to getting from the original Alpha system.

Serial Lines

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

- A VT-like device connected to the host
- Any VT-terminal emulator via Ethernet
- Pseudo terminal on the host system

vtAlpha also includes support for the PBXDA serial lines adapter, that can add 8 serial lines to the two that are always available. vtAlpha will support up to 7 PBXDA adapters.

Supported Alpha Operating Systems

vtAlpha supports both OpenVMS and Tru64 as guest operating systems. Current minimum releases (depending on the model):

- OpenVMS 6.2-1h3
- Digital UNIX / Tru64 3.2C

The product is quickly expanding to include support for older Alpha Operating System versions.

vtAlpha License

vtAlpha is a software product, under End-User License Agreement. The licenses are stored on a license container equipped with USB connector to maximum compatibility. The vtAlpha license key is only 3 mm high when plugged into your host system, limiting the risk of damaging or accidental removal it when in use.

The License Protection Mechanism can control multiple instances of vtAlpha inside one host computer or in a company network, providing you maximum flexibility.

The base license includes support for 1 virtual Alpha CPU. When more CPU's are required extra virtual CPU options can be added.

Host Computer Recommendations

vtAlpha runs on a host that supports 64-bit operations, since the Alpha was a 64-bit system. A regular computer of the x86-64 bit architecture will be sufficient to run vtAlpha.

Host System Advisory

AVT recommends using current computer hardware as host platform for vtAlpha. Systems with Intel Xeon, i7 or AMD Opteron and Phenom multi-core processors will provide adequate performance.

Physical and Virtual Systems supported.

vtAlpha applies the '**Bare Meta**' approach and will run directly on the host system you assign to it. This host can be a real hardware system or a **Virtual Machine** (VMware, KVM, Hyper-V, Xen).

CPUs

vtAlpha requires one dedicated host CPU for every virtual Alpha CPU. In addition to this 1 extra host CPU is required per 2 virtual Alpha CPUs (with a minimum of 1) for adjacent tasks like I/O.

Memory

Per virtual Alpha: Alpha memory + 25% + 1 GB.

vtAlpha supports up to 32 GB virtual Alpha memory, so you can allocate more virtual memory than the original Alpha.

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 component the Alpha software expects and what the host has to offer.

User Documentation

User documentation is included in electronic format at installation and can also be downloaded prior to installation from the AVTware.com website.

System Management

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

Product Origin

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