

vtAlpha-BS (Basic Systems), Product Description

vtAlpha-BS is designed to replace one of the following Alpha computer systems:

- AlphaServer 800
- AlphaServer 1000
- AlphaStation 500 or 600
- Digital Personal Workstation (DPW)
- AlphaStation XP900 or XP1000
- DMCC or Flexor with Takara or Eiger CPU



vtAlpha runs on a general purpose computer with a 64-bit Intel or AMD processor architecture. It does not require the installation of a host operating system.

vtAlpha runs on both physical and virtual machines.

vtAlpha is 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 seeing.

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

System Performance

vtAlpha-BS is designed to replace most of the single CPU Alpha systems, as summarized in the supported Alpha systems table.

When installed on a host system with a 3 GHz Intel Xeon / i7 (or comparable) processor it will perform at the speed level of an Alpha EV6 processor.

Virtual Alpha Memory

vtAlpha supports up to 32 GB of virtual Alpha memory.

When the Operating System does not limit the Alpha memory size, you can enlarge the memory of your virtual Alpha at no additional license cost.

Storage Subsystem

vtAlpha logically separates the storage type used inside the virtual Alphas from the storage attached the host.

In the virtual Alpha you can use:

- SCSI
- FibreChannel
- MSCP
- DSSI
- IDE
- RAID

Your vtAlpha host system can use more modern storage elements, like SAS, SATA, the company SAN, or work across the network (iSCSI and NFS).

It is all transparent to your Alpha software, which still sees the world it was used to. vtAlpha seamlessly connects the old Alpha world to the modern storage equipment.

What your virtual Alpha considers to be a SCSI disk may be a SATA device in real life, or a logical disk somewhere on the storage that is attached to your host or the SAN.

Supported storage devices:

- Physical disks (direct-attached hardware)
- Logical disks (container files on the host computer or attached 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

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 it is 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:

- EI1000
- DE600
- DE500
- DE450
- DE435

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

All Alpha 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 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. Up to 7 PBXDA adapters are supported.

Supported Alpha Operating Systems

vtAlpha supports both OpenVMS and Tru64 as guest operating systems. Current minimum releases:

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

Clustering is supported (both OpenVMS and Tru64)

Software License Protection

vtAlpha is a software product, protected by a license key. This key includes a physical USB device with an extremely slim design. The vtAlpha license key is only 3 mm high when plugged into your host system, limiting the risk of damaging or accidentally removal.

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

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.

Host computer recommendations

vtAlpha requires a host system that supports 64-bit operation, since the Alpha was a 64-bit system. A regular computer of the x86-x64 architecture will be sufficient to run vtAlpha.

Host System Advisory

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

vtAlpha applies the '*Bare Metal*' 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 as you may use these in your organization.

CPUs

vtAlpha requires 1 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.

Orderable Items

Software and license to run 1 virtual Alpha system, base license includes 1 virtual Alpha CPU

1 Year support for a vtAlpha license, includes free access to the help desk and the right to obtain and install newer product versions during the term of the support agreement

Disaster Recovery License. This license offers 720 hours of vtAlpha-BS usage that can be consumed in 10 minute portions in case your original license becomes unavailable, or for any other purpose you deem appropriate.

Product Origin

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