

vtServer v2.10.0 Release Notes

This document describes version 2.10.0 (release 40) of the vtServer software package. vtServer is an emulation package for legacy HP/DEC Alpha and VAX hardware platforms that runs on 64-bit x86 processors. vtServer is installed on Bare Metal: that is, on a physical processor or virtual machine (VM) with no pre-installed operating system. The vtServer package consists of the following components:

- vtAlpha – Alpha system emulation component;
- vtVAX – VAX system emulation component;
- vtServer – the common infrastructure for the emulation components;
- vtMonitor – a web browser-based management and configuration interface.

For detailed information regarding these components, see the *vtServer vtAlpha/vtVAX Bare Metal Reference Manual*.

1 vtServer Installation and Update Procedure

The vtServer software may be installed on a new host platform, installed over an existing installation, or it may be updated incrementally. These options are described in more detail below.

1.1 Installation

The installation process installs a complete version of the vtServer software package on a server with no previous vtServer installation or it will overwrite an existing vtServer installation. When overwriting an existing installation, a backup of all software configuration values and all emulation configurations may be created using the vtMonitor BACKUP command prior to the installation. After installing vtServer the configuration data may be restored using vtMonitor.

The vtServer installation kit is available in three formats: on a DVD-ROM; as an .iso format file that can be burned to a DVD or used as a virtual DVD device when installing vtServer in a virtual machine; or on a USB thumb drive. Detailed installation instructions are provided in the *vtServer vtAlpha/vtVAX Bare Metal Reference Manual*.

1.2 Incremental Update

The incremental update process is the preferred method for updating existing vtServer installations. A complete set of incremental updates is provided on the distribution media (DVD, .iso file, or Carry-on Alpha/VAX USB drive); individual update kits may also be uploaded to the host or provided on external disks. When the Update function is initiated, vtServer will automatically determine which update kits are needed and apply them, if available. When supplying individual update files, be aware that the update file for each version of vtServer between the current version and the target version must be provided.

For a detailed description of the update process, please see the *vtServer vtAlpha/vtVAX Bare Metal Reference Manual*.

1.3 Installing Additional Display Drivers

In some special circumstances (e.g., when using 3D graphics or extended OpenGL functionality, or when more than two displays are required) non-standard display drivers are required. Kits containing these drivers for a number of ATI and NVIDIA adapters are now included on the vtServer distribution media. To determine which kit contains the drivers for your device, please do the following:

1. Insert the vtServer distribution DVD in any system (it is readable by Windows).
2. Using a file browser such as Windows Explorer, navigate to the /kits directory.
3. Search the 'support' text file for the vendor of your adapter for the desired device(s).
4. Install the required kit following the directions below.

If you have requirements that are not satisfied with these kits, please contact your vtAlpha or vtVAX support contact for assistance.

The display drivers may be installed using either vtMonitor or the host console using the vtServer blue screen menus.

To install the drivers using vtMonitor:

1. Insert the distribution DVD in a drive on the system vtMonitor is being run from and mount the disk.
2. In the vtMonitor browser window, click on Toolbox > Host > Product Updates.
3. A new tab or window will be opened. Click on the Choose File button in this window.
4. Navigate to the /kits directory on the vtServer distribution DVD.
5. Select the desired driver kit and click on Update.
6. Reboot the host system.
7. Login to the host console.
8. Select the menu graphics > display > monitor.
9. Review and customize the display settings, as required.

To install the drivers using the vtServer menus:

1. Login on the host console.
2. Insert the vtServer distribution media in a drive.
3. Select the menu configuration > update > optional.
4. Select the drive containing the distribution media.
5. Select the desired driver kit and click on OK.
6. Follow steps 6-9 above.

1.4 Post-update Instructions

After installing or updating vtServer, the host system must be rebooted.

The cache should be cleared on any browsers that have been used with previous versions of vtMonitor. Failure to do so may result in unpredictable behavior.

2 vtServer 2.10.0 Release Highlights

vtServer contains several significant enhancements:

- Support for VAX 4000 model 90
- Upgrade of the Host Control Kernel with support for the latest hardware devices
- New version of license management software with improved fail-over mechanism
- UEFI boot (next to BIOS boot) is added to support newer hardware. The boot screen reflects this new feature.

These and other changes are described in the sections that follow.

3 Security Updates

3.1 SSL V3 Disabled

Support for SSL V3 has been disabled in the web server (used for vtMonitor) due to a recently-discovered security vulnerability (CVE-2014-3566, commonly known as POODLE). Secure connections now use TLS only. For more information on the vulnerability, see:

<https://web.nvd.nist.gov/view/vuln/detail?vulnId=CVE-2014-3566>

3.2 New Checksum for Distribution Kits

The checksums provided for our downloadable installation kits now use a SHA512 hash instead of an MD5 hash for improved security.

4 Host Platform Changes

4.1 Configuration

4.1.1 New Host Control Kernel

A new version of the host control kernel, which includes support for the newest host hardware components (chipset, peripherals, etc.) and the latest security patches, is included in this release. See the *vtServer 2.10.0 Host Platform Compatibility List* for information regarding supported devices.

4.1.2 Video Drivers

When used strictly as the host system console display, for booting and configuring vtServer, many of video adapters will work acceptably using the default drivers provided by vtServer. If they are used for the video display of a virtual Alpha or VAX workstation and the default drivers do not provide adequate performance, device-specific drivers may need to be installed. The procedure for installing these drivers is provided in section 1.3 of this document.

4.1.2.1 Legacy Video Adapters and Drivers

Previous releases of vtServer provided drivers for a number of legacy video adapters. These drivers are not compatible and are no longer provided beginning with version 2.10.0. If any of these legacy drivers are detected during the update, the process will terminate with an error message. To proceed with the update, remove the drivers by booting from the installation DVD of the installed version of vtServer and selecting the Repair option. After the repair is completed, boot from the 2.10.0 DVD and select the Update option.

When used strictly as the host system console display, for booting and configuring vtServer, many of the legacy video adapters will work acceptably using the default drivers provided by vtServer. If they are used for the video display of a virtual Alpha or VAX workstation and the default drivers do not provide adequate performance, the video adapter will need to be replaced with a supported model.

4.2 Administration

4.2.1 Updated License Validation Software

The following bug fixes and enhancement have been made to the vtServer license validation software:

Occasionally the license validation code would fail to load properly. A mechanism was added to automatically rest the license validation software if it is not operational.

The license failover algorithm has been changed to search for available production licenses on all license servers before reserving a Disaster Recovery License.

The vtMonitor license information display has been enhanced to show additional detail regarding the content and usage of all license keys that are accessible to the host.

4.2.2 Source IP Address Added to Email Alert Messages

Alerts sent by email now contain the IP address of the host system generating the alert to facilitate identification of the source in a multi-host environment.

4.2.3 Limiting Log File Size

In previous versions of vtServer there was no throttle on system logging. When extended logging/tracing options were enabled for troubleshooting, it was possible for the log files to grow until all available disk space was consumed, which would cause the emulators to crash.

As a preliminary measure, in version 2.10.0 logging is disabled when free disk space drops below 5%. In a future version of vtServer, a log file rotation feature will be implemented.

5 Emulation

5.1 vtAlpha

5.1.1 Incorrect WWID Generation

Previously, virtual TruCluster SCSI disks on the third or subsequent controller could be assigned an incorrect WWID. This has been fixed in this version.

5.1.2 Show Devices SRM Command is Now Supported

The vtAlpha SRM console command parser now recognizes SHOW DEVICES as equivalent to the SHOW DEVICE command.

5.2 vtVAX

5.2.1 VAX 4000-90 Support

vtVAX now includes full virtualization of the VAX 4000-90. Previous, users replacing a VAX 4000-90 system had to emulate other VAX models, such as the VAX 3600, which required additional steps to accommodate differences in disk and network device names.

The VAX 4000-90 virtualization requires a memory based license (i.e., 128, 256, or 512 MB); vtVAXStation licenses are not valid for this configuration.

5.2.2 Serial Line Devices not Responsive [MVII, 3900, 4100, 4200]

An error in the device autoconfiguration vector assignments resulted in TXA serial line devices being non-responsive in configurations that also contained two XQ network adapters. This error has been corrected.

5.3 Common Emulation Features

5.3.1 None in this release

5.4 Emulation Configuration and Control Changes

5.4.1 Logical Disks and FibreChannel Multipath

A timing problem that led to occasional multipath configuration errors after a host reboot has been resolved.

5.4.2 Disk Labels with Embedded Spaces

Multiple spaces are now permitted in disk labels.

5.5 vtMonitor

5.5.1 Browser Caching

Prior to vtServer version 2.10.0, web browsers would cache vtMonitor pages for extended periods of time, which often resulted in unpredictable behavior following a vtServer update if the browser cache is not cleared. Effective with this release, the browser caching is disabled so that it will no longer be necessary to clear the cache.

Note: The cache must be cleared after updating to version 2.10.0 to remove information cached by the previous release. Clearing the cache will not be required when updating to releases after 2.10.0.

6 Restrictions

6.1 Current Release

- None