



Product Release Notes: NComputing vSpace[®] Server 6.6.2.3 for L-series, M-series and vSpace Client

Product: NComputing vSpace Server for L-series and M-series devices and vSpace Client

Version: 6.6.2.3

This release supports 64-bit versions of Microsoft Windows Server[®] 2008 R2 SP1, Windows MultiPoint Server[®] 2011 (WMS), and single user instances of Windows 7 SP1* (32- and 64-bit)
Note: this release does NOT support any other earlier 64-bit or 32-bit Windows operating systems (e.g. it does NOT support Server 2008 64-bit or Server 2008 32-bit)

This vSpace software can be configured to deliver a Windows 7 end-user experience through vSpace virtual desktops running on Windows Server 2008 R2 SP1, Windows Multipoint Server 2011, and single user instances of Windows 7*. (For licensing details, see www.ncomputing.com/mslicensing)

Supported Hardware: NComputing L300, L230, L130 and M300 plus devices running NComputing vSpace Client.

These notes contain important information, please read this entire document prior to installing or upgrading.

What's New:

This release replaces the previous vSpace L-6.5.1.10 release and adds support for the new M300 desktop virtualization kits and vSpace Client. It also implements a number of new vSpace capabilities, and the following bullet items list key changes. The sections that follow include important information on additional changes, notes for installation and known errata. Please read ALL of these Release Notes to ensure your deployment is as smooth as possible.

Key new features:

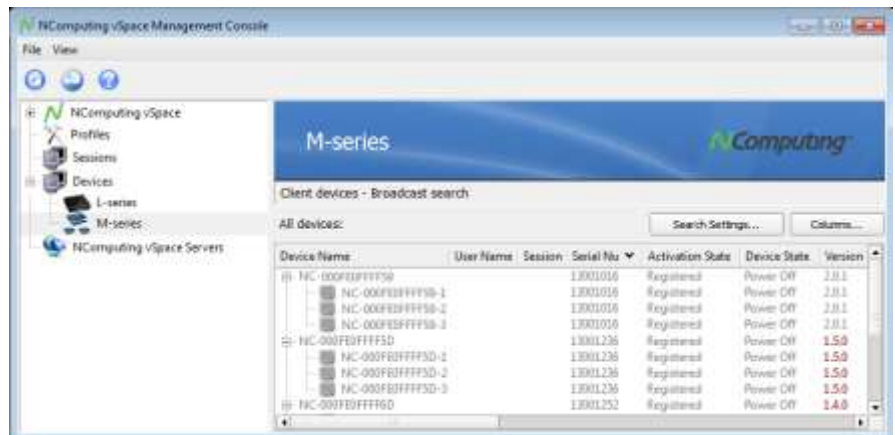
- **Supports the new M300 desktop virtualization kits:** the M300 kits include NComputing's new 3-in-1 client technology based on the Numo 2 System-on-Chip. Please see the M300 section of our website for complete product details.
- **Supports vSpace Client:** this is the first version of vSpace Server that fully supports the released version of vSpace Client. See the vSpace Client release notes for further details.
- **New vSpace Performance Profiles:** unique performance profiles can be configured for each of the device types that can

connect to this vSpace Server version. These profiles affect the streaming performance, bandwidth utilization and other aspects of the desktop experience and can be customized to best fit a given deployment environment (e.g. high-speed LAN versus low-speed WAN networks). Pre-set profiles are included for each device type.

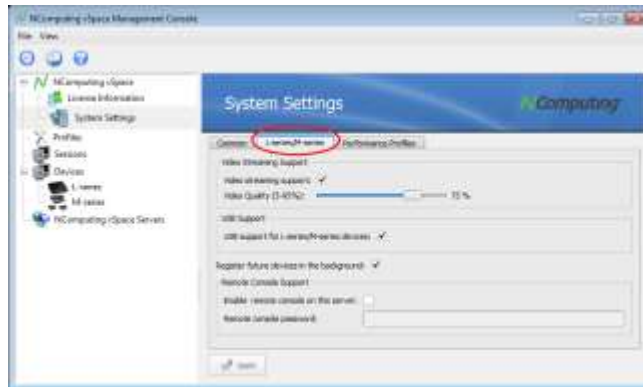
- **New L300 and M300 firmware:** vSpace Server 6.6.2.3 contains new firmware for both L-series devices (FW version 1.6.0) and the new M300 devices (FW version 2.0.2). You **MUST** update your L300s and M300s from their factory configuration to use with this release.
- **Overall performance, stability, USB device enumeration and Management Console improvements**

Additional Changes:

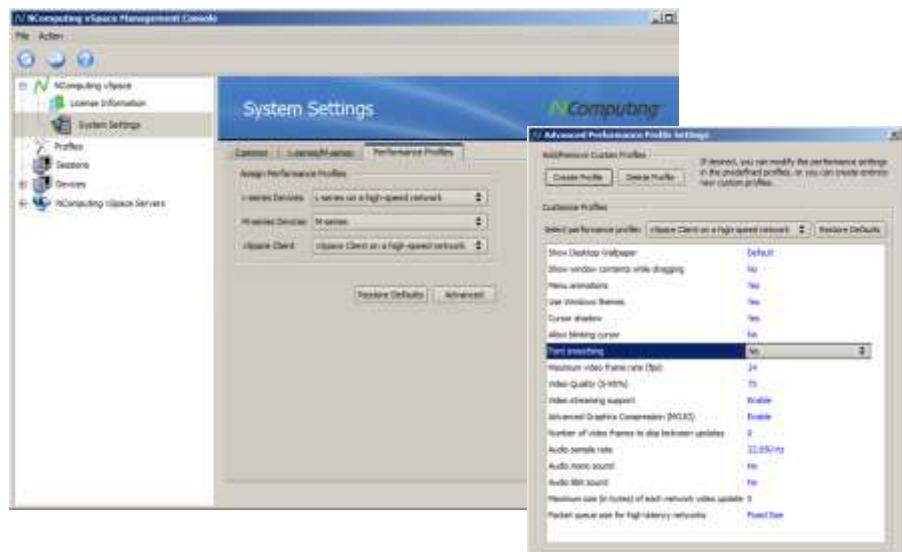
- **vSpace Management Console adds new “Devices” section to show M300 kits:** The M300 kits are shown as consisting of three client devices; each with a unique device name created by appending -1, -2, or -3 to the name (admin changeable) stored inside the M300 large client. (The large client has devicename-1) And as previously implemented for L300’s, the “Version” column displays which firmware revision is installed on each M300 kit, and any “out of date” firmware is indicated by displaying the version number in **RED**.



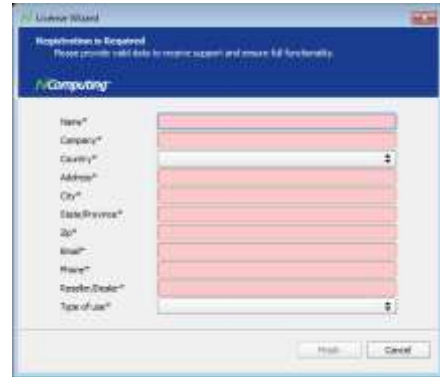
- Combined L-series/M-series System Settings: Update of L300 firmware required:** A number of vSpace system settings apply to both L-series and M300 devices, and these are now grouped together under a single tab in the vSpace Management Console. (Note: the Video Quality slider setting is now overridden by the settings in the Performance Profiles)



- Performance Profiles tab:** This vSpace version introduces the concept of performance profiles for each type of supported Ethernet access device and the vSpace Client. Each of the three device/client types has its own profile consisting of type-specific overrides to the system-wide default settings for video streaming, compression, audio performance, and Windows desktop settings (for example, the Advanced Profile settings now override the Video Quality setting in the L-series/M-series settings tab). Depending on your environment's capabilities and your user community needs, you may wish to customize these parameters to minimize network bandwidth requirements for a particular type of device/client. Please see the vSpace User Guide for more information on using these parameters.



- Registration integrated into Installer:** Customer registration data is now entered during the interactive installation process, and if internet access is available to the host system, the software will automatically be registered. If internet access is not available, registration will proceed once internet access is available - or offline registration can be used. During installation, do not cancel out of the data entry screen to ensure proper functionality.



- Host connected USB device assignment:** vSpace 6.6.2.3 does not support host connected USB device assignment and the option for setting the assignments is removed from the vSpace Management Console in this release.
- WMS 2011 Multipoint Manager project a station to another station feature:** This release supports this capability for user stations as well as the administration console station.
- CPU Utilization viewed from within Console:** a new option has been added to the Sessions list view in the Management Console to allow administrators to add a column that shows the current CPU utilization for a given session. To add this column, right click on the header bar in the session view screen and select "Show CPU load." To hide the column, right click on the header again and select "Hide CPU load."

Important installation notes on this release:

- Upgrading an existing L-series vSpace host:** to upgrade from the previous vSpace L-6.5.1.10 release, run the new installer over the existing installation. Note however, that if you are using ANY beta version of software (or you are using version 6.6.1.14 that was included on the CD with early M300 shipments) you must first uninstall vSpace and opt to remove the registration data before running the new installer.
- Update of L300 and M300 firmware required:** Remember that this software release includes new firmware for the L300 access device (firmware version 1.6.0) and M300 (firmware version 2.0.2). You must update your L300s and M300 to the latest version.
- Registration Required:** All vSpace releases do require registration. The Registration Wizard is now integrated into

the installer, and if direct Internet access is available on the host (that is, TCP ports 80 or 3630 are open to the internet), vSpace will register using the information collected during the interactive install. Until your system is registered, registration reminder popups will be displayed whenever an administrator logs-in or whenever the NComputing Management Console is launched. You can perform offline registration by emailing the offline .txt file created by the registration wizard to: registration@ncomputing.com

- **Do not install on a system previously used as a U-series or X-series host:** This release is only intended to be installed on a clean OS or to upgrade a current L-series vSpace host. Do not install it on any host OS where vSpace for the U- or X-series was previously installed.
- **Licensing server required:** Microsoft RDS CALs (for Server 2008 R2) or WMS CALs (for WMS) are required to use the system in a multi-user configuration. You must also implement a Microsoft licensing server to enable connections. For more information on license requirements, see www.ncomputing.com/mslicensing and refer to the NComputing Knowledge Base for information on setting up a license server (search on "licensing" or go to: http://www.ncomputing.com/kb/How-to-Configure-a-Remote-DesktopLicensing-Server-for-vSpace-6_281.html).
- **.MSI File** – running the vSpace_6.6.2.3_setup.exe file will extract and copy a "setup.msi" file to the same directory from which you launched the setup.exe file. The .MSI file can be used for silent installation as described below.
- **Support for silent mode installation:** This version supports silent/centralized installation. To perform a silent install (and registration if needed), please follow the instructions in the following Knowledge Base articles:

www.ncomputing.com/kb/Installing-vSpace-from-the-Windows-CommandLine_303.html

and

www.ncomputing.com/kb/vSpace-Silent-Registration_307.html
- **MSI Installer and Uninstaller Options:** The MSI installer has "ADDUSERS=0" available as a command line option to enable silent installs while suppressing the popup window asking if you want to add new users. An option is added to the uninstaller to provide options for handling an existing vSpace host license during a silent uninstall. The available options when running from the Command Line are:
 - "DELETELICENSE=0" – do NOT remove vSpace license
 - "DELETELICENSE=1" – popup box will appear

- "DELETEDLICENSE=2" – remove vSpace license without popup
- **Windows MultiPoint Server 2011:**
 - Registry changes are still in place to support the MultiPoint Configuration Wizard that enables repairs of the MultiPoint installation and enables use of sysprep.
 - To accommodate these needs, the LogonTimeout registry setting had to be removed, and as a result, WMS 2011 sessions left at the logon prompt will cycle about every 30-60 seconds.
 - If you wish to prevent the logon screen from cycling, you can manually add the LogonTimeout setting in WMS2011 by creating the following key: HKLM/SYSTEM/CurrentControlSet/Control/TerminalServer/WinStations/RDP-Tcp/LogonTimeout (Type = REG_DWORD, Value = 0x00000708 (1800))
 - Make sure you have updated your WMS installation with the latest update roll-up from Microsoft.

Tips and Performance Recommendations:

- **Memory Requirements:** 64-bit operating systems in general require double the memory of Server 2003; therefore, if you are upgrading an existing vSpace 4 or vSpace 5 host to a 64-bit operating system, please make sure the host has both 64-bit processing support and sufficient memory to accommodate the new operating system and vSpace. See the user manual for specific memory recommendations.
- **Add Users to Remote Desktop Users Group:** The supported Microsoft operating systems require User Group assignments; so administrators will need to adjust user account settings to add the userID's into the "Remote Desktop Users" group.
- **OS Settings:** The Windows Power Options setting should be configured to "High Performance" (under Control Panel > Hardware > Power options). Microsoft's default power settings give a false impression that vSpace CPU utilization is much higher than on previous 32-bit operating systems.
- **Windows 7 Desktop Theme:** If you install the Windows Server 2008 R2 "Desktop Experience" feature, start the "Themes" system service and set it to autostart, then each individual can "personalize" their virtual desktop to use a Windows 7- themed interface. However, remote sessions do not support the Aero "window transparency" feature for overlapping windows.

- **Windows 7* Installation:** If you install vSpace using the “setup.exe” the setup application will automatically raise your Windows 7 privileges prior to selecting the correct MSI file. However, if you want to install vSpace onto Windows 7* directly from an MSI file, you must have administrative rights, and unlike in Server 2008 R2, the actual “Administrator” account is not enabled by default in Windows 7. So, even though you may be logged-in as a Windows 7 user that’s a member of the Administrators group, you still won’t have sufficient “administrative rights” to install vSpace 6 with an MSI and the installer will generate an error message saying: “You need administrative rights to install this software. Installation Failed.”

You need to launch the “Administrative Command Prompt” by going to All Programs > Accessories > Command Prompt and then right-click and select “Run as administrator.” Once the “Administrative Command Prompt” console pops up, launch the installer using the following command:

```
> msixexec /i install-filename.msi
```

- **SP1 update process:** When updating from SP0 to SP1, the best approach is to uninstall vSpace, then apply SP1 and then run the vSpace installer. If vSpace was in place during the SP1 install, re-run the vSpace installer and select the “Repair” option.
- **Best performing virtual desktop experience options:** please apply the recommendations contained in: “Windows Tuning Guide for vSpace 6” (http://www.ncomputing.com/kb/Windows-Tuning-Guide-for-vSpace-6_297.html).
- **Browsers:** Google Chrome has been found to use less system resources than Mozilla Firefox and Internet Explorer (IE) and is therefore recommended for virtual desktop environments when many instances of the browser are launched. Administrators may wish to configure the OS to replace IE as the default browser application for internet access. However, if you choose to use Internet Explorer for browsing:
 - For IE6, IE7, and IE8, turn ON Internet Explorer’s option to “Force offscreen compositing even under Terminal Services”. This setting will prevent the screen flickering that can occur with some web applications when using Internet Explorer in a vSpace virtual desktop. Microsoft removed that option from Internet Explorer 9, so for IE9, enable the “Use software rendering instead of GPU rendering” option as described in Microsoft KB 2528233 located at: <http://support.microsoft.com/kb/2528233>

- The IE Enhanced Security feature can slow down internet traffic and prevent the browser from working efficiently which may degrade the performance of videos played through the browser. We recommend either uninstalling the feature or using a different web browser.
- **Escaping out of Autoconnect:** When autoconnect is enabled on the L300 or M300 and you wish to access the device's setup screens, use the "Esc" key during the boot cycle to exit the autoconnect process and reach the device setup screens.
- **DirectX is enabled by default** (setting for HKLM/SYSTEM/CurrentControlSet/Control/Multiuser/Disable DirectX is set to 0. Note that with this setting if an Administrator attempts to connect to a disconnected L300 session from the host machine, the system could become unstable. Also, you may encounter problems with Windows Media Player. If you do, you should either: 1) not have a user logged into the host session, 2) turn off the Aero interface on the host session, or 3) uninstall the native video card driver on the host and install the default Windows VGA driver.
- **As with vSpace 6.5.1.10, administrators can limit allowed user sessions to a number lower than specified by the vSpace license:** This capability combined with the L300's auto-failover and server group feature will allow you to implement load balancing so that no server accepts more than a specified number of sessions.

To use this capability, you must manually create two new Registry entries under the registry CurrentControlSet "MultiUser" key:

- EnableUserLoadBalance as a DWord with a value of 1 (after creating this, you can change the value to "0" to disable)
- MaxConnectionCount as a DWord with a value less than the license count (the value 0xFFFFFFFF means use the count defined in the license)

MaxConnectionCount is the total number of current active session connections. Any disconnected sessions will NOT be counted when vSpace calculates this value.

Errata Items:

- **Disabling vSpace remote USB support** in the NComputing Management Console requires a system reboot before the setting takes effect.
- **Windows Portable Devices (WPD) notice:** is a Microsoft driver technology designed for portable devices (that contain a CPU) such as mobile phones, PDAs, digital cameras, and portable media players. If one of these “smart player” type devices has ever been installed on your vSpace host, remotely connected USB drives may show up in Device Manager under BOTH “disk drives” and “portable devices.” In this case, you may see yellow exclamation point warning symbols next to the “portable device” entries. This is expected behavior and the USB drives will operate normally.
- **Video Streaming:** If you overlay other windows on top of a streaming video, the information (text) in the overlaid window may become distorted. Whether or not this distortion occurs depends on the original resolution of the video source and whether the video is being scaled up on the desktop.
- **"Safely remove hardware" or "Eject" commands do not apply** to USB devices plugged into an L300 or an M300 and you don't need to use the commands before removing a USB device.
- **Kiosk mode** is not supported by default in Windows 7. To enable kiosk mode for Windows 7 you must manually add the following DWORD to the registry (advanced users only):
 - Key:**
KEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Terminal Server
 - Value:** "HonorLegacySettings" = (DWORD) 1
- **Advanced Performance Profile settings:**
 - **The Maximum Frame Rate** setting in the Performance Profiles only affects Windows Media Player. Other media players are not affected by this setting.
 - **The Cursor Shadow and Blinking Cursor** setting in the Advanced Performance Profiles currently do not affect sessions.
 - **The Video Quality slider** in the L-series/M-series settings tab is overridden by settings in the Advanced Performance Profiles. Even when the “Default” profile is selected, the video quality slider has no effect. To change the video quality settings, please use the new Performance Profiles.
 - **The Mono audio setting** only applies to vSpace Client when also set for 11 kHz audio and 8-bit sound. The setting does not affect the L300 or M300.

*Windows Server and appropriate client access licenses are required for multiuser environments using NComputing products. Client operating systems such as Windows XP, Windows Vista and Windows 7 are appropriate for single user applications such as 1:1 VDI, display systems and remote access. Additional information on licensing is available at www.ncomputing.com/mslicensing including frequently asked questions.

Contacting Technical Support and Additional Resources



- Visit the NComputing Knowledge Base at www.ncomputing.com/kb for more information.
- To request Technical Support, please visit the NComputing Support page at www.ncomputing.com

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