Dell Wyse ThinLinux Maintenance Release v1.0.5 Release Notes

Software releases are created to correct defects, make enhancements, or add new features. These releases are tested on all current, actively shipping platforms and operating systems as applicable. This release notes contain details on the supported platforms, any changes in the configuration settings and licensing details as well. The bug fixes along with the workarounds are documented in the release notes. Any changes in the feature functionality from an end-user perspective are listed with the description of each feature at a high level.

Current Version: 1.0.5
Release Date: 26 May 2017
Previous Version: 1.0.3.1

Contents

Release type and definition

ThinLinux v1.0.6 supports updated BIOS for SUSE Linux Enterprise Server (SLES) SP2 release with all the features and languages supported by ThinLinux 1.0.3.1 and 1.0.5 for Wyse 3030 LT thin client and Wyse 5060 thin client platforms.

Supported platforms

The following are the platforms supported in this release:

Table 1. Supported platforms

Thin client	Memory configuration—Flash/RAM	BIOS Version
Wyse 3030 LT thin client	4 GB/ 2 GB	1.0E
Wyse 5060 thin client	8 GB/ 4 GB	1.0F

BIOS details

The following table contains BIOS details of the supported platforms:

Table 2. BIOS details

Thin client	BIOS Version	File Name	Size in Bytes
Wyse 3030 LT thin client	1.0E	10E.zip	3,914,980
Wyse 5060 thin client	1.0F	10F.zip	13,331,821

Build details

Following are the build details

Table 3. Image package details

Platform : Wyse 5060 thin client	
Build version	4.4.21-69.1.11864.0.PTF.1007653-default
Build number	1.0.6
Build file name	1.0.6_5060_merlin.exe
Size (bytes)	788,218,726

Table 4.

Platform : Wyse 3030 LT thin client	
Build version	4.4.21-69.1.11864.0.PTF.1007653-default
Build number	1.0.6
Build file name	1.0.6_3030LT_merlin.exe
Size (bytes)	777,166,851

Table 5. Package details

File(s) name	Build (version)	Size in bytes
image-upgrade-1.0.6-Wyse.zip	1.0.6 (4.4.21-69.1.11864.0.PTF.1007653-default)	683,909,662
all-addons-1.0.6-Wyse.zip		733,867,262
1.0.6.zip		683,632,895

AES password encryption tool

When the INI parameters are used, base-64 encryption is enabled for all passwords by default. If anyone wants to use AES encryption, they must generate an AES encrypted password by using the **WyseINIkeyCrypt.exe** tool.

ThinLinux supports two password encryption methods for all the passwords in connections and global settings used in INI.

The two methods are as follows:

Base64 Encryption Passwords

- All passwords in INI file are base-64 encrypted by default.
- To generate base-64 encrypted password follow these steps:
  - Log in to thin client
  - Open the xterm
  - Type **regencode** followed by password in plain text

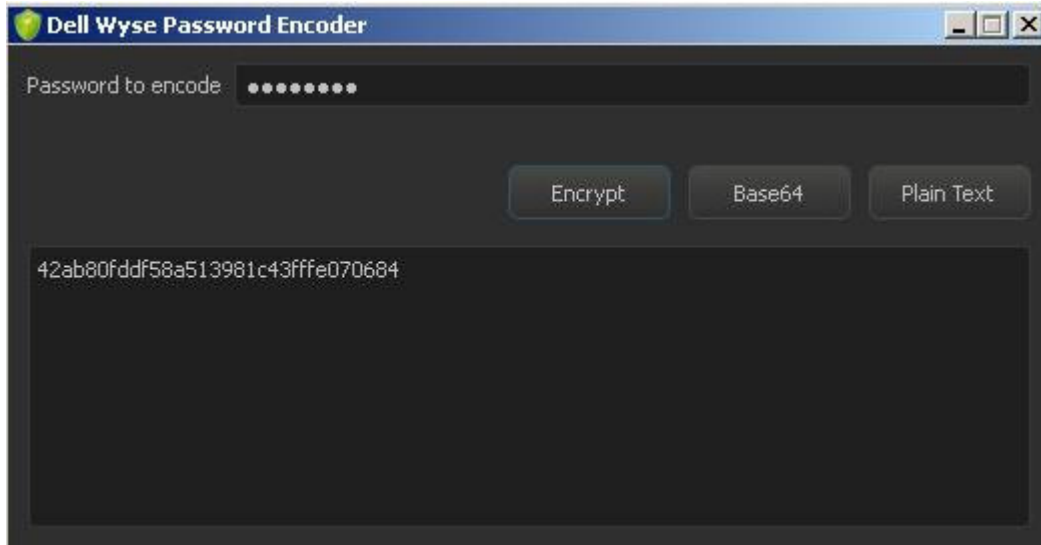   Example: thinuser@LWT- regencode password

    cGFzc3dvcmQ=

    Encrypted output for **password** is **cGFzc3dvcmQ=**

AES password encryption

- For AES Encryption support, add **PasswordEncryptionCode=2** ini parameter in INI file.
- All Passwords related to connections and users in INI file can be AES encrypted.
- Use the following procedure for creating AES Encrypted password:
  a   Copy the **WyseINIKeyCrypt.exe** on any windows machine.
  b   Open the .exe by clicking twice.
  c   Enter the plain text password in **Password to encode** edit box.
  d   Click **Encrypt** get AES encrypted password.
  e   Click **Base64** button to get base-64 encrypted password.

Figure 1. Dell Wyse Password Encoder

- Copy the encrypted password and place it in the INI file where password field is mapped.
- Non-English characters are not supported for AES encryption password.

New features

Following are the supported features:

Functional behavior and components update

The basic functional behavior remains the same as ThinLinux 1.0.5.

BIOS

- Wyse 3030LT thin client BIOS v1.0E:
  - Data Wipe –Enabling this feature allows users to securely erase the data from all internal storage devices like HHD, SSD, mSATA, and eMMC. Data is wiped on the next restart.
  - By default Data Wipe option is disabled.
- Wyse 5060 thin client BIOS v1.0F:
  - Data Wipe – Enabling this feature allows users to securely erase the data from all internal storage devices like HHD, SSD, mSATA, and eMMC. Data is wiped on the next restart.
  - By default Data Wipe option is disabled.

Citrix ICA v13.5

This release is integrated with Citrix ICA v13.5

Features supported

This release provides the following new features, enhancements, and also resolves previously reported issues.

- Support for multi-stream ICA
- Support for the HTML5 video redirection
- Support for GStreamer 1.x

HTML5 video redirection validation: To validate HTML 5 video redirection, you can use the test page if the redirection works. HTML 5 video redirection uses video redirection technology, to check if the video is played on client side, also checks that the actual HTML5

Redirection is working or not, and similarly MMR is validated. But instead of playing the video in Windows Media Player, the following URL plays the video in the **Session** browser:www.citrix.com/virtualization/hdx/html5-redirect.html

ICA Multi-stream Validation: To configure multistream ICA on the XenApp/XenDesktop VDA, see Product documentation. On the Linux client, enable multistream ICA support by setting the following in `All_Regions.ini`:

```
[WFClient]

AllowMultiStream=TRUE
```

After the configuration, when you try connecting a session on the client side, **netstat -t** shows multiple TCP connections between client and server.

For more information, see www.citrix.com/virtualization/hdx/html5-redirect.html and Docs.citrix.com/en-us/xenapp-and-xendesktop/7-13/policies/reference/ica-policy-settings/multistream-connections-policy-settings.html

For new ini parameters for ICA multi-stream, see INI parameters

VMware View client v4.4

VMware View client v4.4 is integrated as part of this MR release.

New features

- **Support for Blast Extreme Adaptive Transport (BEAT)**: With the VMware Blast display protocol, Horizon Client for Linux uses TCP networking when it connects to a server or BEAT, if the agent and Blast Secure Gateway (if enabled) supports BEAT connectivity. You can select network condition options to use only TCP networking or BEAT networking.
- **Support unauthenticated access to remote RDSH applications**: You can connect published applications using an unauthenticated access account with Horizon Client.
- **Hide security information for enhanced security**: Horizon 7 version 7.1 administrator can configure global settings to hide security information in Horizon Client for Linux, including server URL information and the Domain drop-down menu. To authenticate, when the **Domain** drop-down menu is hidden in Horizon Client, you must provide domain information by entering your user name in the format **domain\username** or **username@domain** in the **User name** text box.
- **Support restart of a remote desktop**: You can restart a remote desktop from the Horizon Client for Linux. Restarting a remote desktop is equivalent to the Windows operating system restart command.
- **USB redirection support for remote applications**: Locally attached USB devices can be connected to remote applications.
- **OpenSSL 1.02 K support**: The OpenSSL Library is updated to version openssl-1.0.2k.
- **VMware Access Point renamed to VMware Unified Access Gateway**: With version 2.9, VMware Access Point is renamed to VMware Unified Access Gateway. This change is not reflecting in Horizon 7 version 7.1, and Horizon Client 4.4 documentation sets.

For new ini parameters for VMware BEAT, see INI parameters.

Auto screen lock

Auto screen lock allows you to lock the screen. The screen lock time out can be set through UI settings, and INI parameters. Alternatively, you can also use the keyboard shortcut—Ctrl+Alt+l or Windows key+l to activate the screen lock. To set the Screen lock from UI, click **System Settings** > **System** > **Power**.

(i) **NOTE: This auto screen lock feature is dependent on Turn off screen setting. If set to never, then the screen saver timeout is disabled.**

For more information about the INI parameters, see INI parameters

Hide application icon

Admin can now hide application icons which should be invisible to non-admin users.

For more information about the INI parameters, see INI parameters

Firewall settings

Firewall settings allows you to configure firewall through **System Settings UI**, and INI parameters. For Firewall Setting UI, click **System Settings** > **Security** > **Firewall**.

Firewall configuration is managed using the `iptables` command-line utility, that uses policy chains to allow or block traffic. iptables provides a packet filtering framework for Linux, that allows you to filter network traffic that flows in and out of your server/workstation.

Example Script:

- `/usr/sbin/iptables -A OUTPUT -p icmp -j DROP`
- `/usr/sbin/iptables -A INPUT -p icmp -j ACCEPT`

The above mentioned script is used to Drop ICMP Output Connections and Accept ICMP Input Connections. For more information on using `iptables`, see https://www.suse.com/communities/blog/basic-iptables-tutorial/

For more information about the INI parameters, see INI parameters

Custom info settings

Custom info settings allows you to set custom info through UI, and INI parameters. While the admin user can view and modify the custom info, non-admin user can only view the custom info.

To set the Custom info from UI, click **System Settings** > **System** > **Custom Info**.

For more information about the INI parameters, see INI parameters

INI parameters

Table 6. INI parameters

INI Parameter	Value type	Description
ICAMultiStream={Yes/No}	Boolean —Yes/No Default: No	You can enable or disable ICA MultiStream.
NetworkMode= {poorconnect/ excellentconnect/ typicalconnect}	Text—poorconnect/excellentconnect/ typicalconnect Default:typicalconnect	Select Vmware Network Mode based on user Bandwidth according to BEAT functionality.
UnauthAccessEnabled={Yes/No}	Boolean—Yes/No Default: No	UnauthAccessEnabled enable/disable the UnAuthenticated access for Published Applications (Vmware).
UserDomainName={Yes/No}	Boolean —Yes/No Default: No	Vmware: UserDomainNameEnable/Disable function User Name with Domain, that is Domain/user.
VMWareView.SendCtrlAltDelToVM={Yes/No}	Boolean—Yes/No Default: No	Vmware: CTRL-ALT-DEL Key eventA global parameter to control the passing of CTRL-ALT-DEL key event to the VM.

INI Parameter	Value type	Description
Display.LockScreenTimeout={0/60/120/180/240/300/480/600/720/900}	Numbers—0/60/120/180/240/300/480/600/720/900 Default: 0	Auto Lockscreen Timeout sets lockscreen timeout value (in seconds). A value of 0, means that auto lockscreen is disabled.
Custom.HideFirefox={Yes/No}	Boolean—Yes/No Default: No	Hide Firefox Browser IconHide/Show Firefox Browser Icon for user login.This setting does not have any effect on admin login.
Custom.HideSettings={Yes/No}	Boolean—Yes/No Default: No	Hide/Show Firefox Browser Icon for user login.This setting does not have any effect on admin login
Firewall.Enable={Yes/No} \ script=script_file_name	Boolean—Yes/No Default: No	Enable/Disable firewall and also set the firewall script. ⓘ NOTE: The firewall script file should be placed under firewall directory in the ini-server root directory.
CustomInfo={Yes/No} \location="..." \contact="..." \custom1="..." \custom2="..." \custom3="..."	Boolean—Yes/No Default: No	Sets the custom fields: Location, Contact, Custom1, Custom2, and Custom3
Desktop="" ForceDownload={Yes/No}	Boolean—Yes/No Default:No	Desktop Background ImageNew option for the Desktop INI parameter to enable force download of a specified image file.
TerminalName="..."	String	Set Terminal Name
IPV6.Disable={Yes/No}	Boolean—Yes/No Default: No	You can disable/enable IPv6.

Existing features

- New Enhanced UI
- User, Session, Login, and Administration
- System Settings App
- Connections and VDI(Citrix and RDP)
- Import/Export Configuration
- Citrix Desktop Appliance mode
- Management
- 802.1X and SCEP
- INI files and INI settings support
- Network and Wireless modules
- Add-ons Management
- Imaging solutions
- Display settings and Quad display
- Dual 4K support (3840X2160@30hz)
- Custom GNOME
- Firefox Web Browser
- System Information

- Factory Reset
- Security
- Logs and Tools
- Energy Star
- Language Support (ThinLinux default language will be set to **English-US**). You can change system language from **Language** page. Supported languages are:
  - English
  - France French
  - Spanish
  - German
  - Dutch
  - Japanese
  - Portuguese
  - Chinese—Simplified
  - Korean

RPMs list

Table 7. RPMs list

Optional Addons	
32bit_runtime-1.0.0-01.00.x86_64.rpm	lsb5-5.0-3.1.x86_64.rpm
at-3.1.14-7.3.x86_64.rpm	lsb5-core-5.0-3.1.x86_64.rpm
bc-1.06.95-6.56.x86_64.rpm	lsb5-desktop-5.0-3.1.x86_64.rpm
chrome_opt-1.0-0.20.x86_64.rpm	lsb5-imaging-5.0-3.1.x86_64.rpm
ed-1.9-3.63.x86_64.rpm	lsb5-languages-5.0-3.1.x86_64.rpm
ericom_powerterm-8.3.0-00.09.x86_64.rpm	m4-1.4.16-15.74.x86_64.rpm
glibc-i18ndata-2.22-49.16.noarch.rpm	mailx-12.5-28.1.x86_64.rpm
google-chrome-stable_current_x86_64.rpm	man-2.6.6-1.32.x86_64.rpm
groff-1.22.2-5.429.x86_64.rpm	merlin_nonpxe-3.4.5-00.02.x86_64.rpm
groff-full-1.22.2-5.429.x86_64.rpm	ncurses-devel-5.9-40.124.x86_64.rpm
gstreamer-plugin-gstclutter-2.0.18-1.5.x86_64.rpm	netpbm-10.66.3-4.1.x86_64.rpm
gxditview-1.22.2-5.429.x86_64.rpm	oem_branding-1.0.0-00.06.x86_64.rpm
hplip-3.14.6-3.14.x86_64.rpm	opensc-0.13.0-2.1.3.x86_64.rpm
hplip-hpijs-3.14.6-3.14.x86_64.rpm	perl-HTML-Tidy-1.56-1.48.x86_64.rpm
hplip-sane-3.14.6-3.14.x86_64.rpm	perl-Net-DBus-1.0.0-8.53.x86_64.rpm
ica_32bit-13.5.0.10185126-00.07.x86_64.rpm	perl-Tie-IxHash-1.23-3.19.noarch.rpm

Optional Addons	
kernel-default-extra-4.4.21-69.1.11864.0.PTF.1007653.x86_64.rpm	perl-X11-Protocol-0.56-12.19.x86_64.rpm
libcairo-script-interpreter2-1.15.2-20.2.x86_64.rpm	perl-XML-Twig-3.44-3.12.noarch.rpm
libieee1284-0.2.11-53.144.x86_64.rpm	perl-XML-XPath-1.13-99.19.x86_64.rpm
libjpeg62-62.1.0-30.1.x86_64.rpm	perl-XML-XPathEngine-0.14-3.16.noarch.rpm
liblcms1-1.19-17.31.x86_64.rpm	phonon-backend-gstreamer-4.7.2~git20140418-3.4.x86_64.rpm
libmng1-1.0.10-113.5.x86_64.rpm	postfix-2.11.8-27.11.x86_64.rpm
libnetpbm11-10.66.3-4.1.x86_64.rpm	psutils-p17-1022.64.x86_64.rpm
libphonon4-4.7.1-2.34.x86_64.rpm	python-gobject2-2.28.6-24.80.x86_64.rpm
libpipeline1-1.2.6-1.20.x86_64.rpm	python-qt4-4.10.3-7.11.x86_64.rpm
libpng15-15-1.5.22-4.1.x86_64.rpm	python-sip-4.15.4-6.3.x86_64.rpm
libqt4-4.8.6-7.1.x86_64.rpm	sane-backends-1.0.24-1.237.x86_64.rpm
libqt4-sql-4.8.6-7.1.x86_64.rpm	sane-backends-autoconfig-1.0.24-1.237.x86_64.rpm
libqt4-sql-sqlite-4.8.6-7.1.x86_64.rpm	snmp-mibs-5.7.3-4.2.x86_64.rpm
libqt4-x11-4.8.6-7.1.x86_64.rpm	star-1.5final-69.1.x86_64.rpm
libQtWebKit4-4.8.6+2.3.3-3.1.x86_64.rpm	tack-5.9-40.124.x86_64.rpm
libreoffice_bundle-1.0.0-00.00.x86_64.rpm	time-1.7-5.13.x86_64.rpm
libreoffice_calc_express-1.0.0-00.00.x86_64.rpm	unzip-6.00-32.1.x86_64.rpm
libsensors4-3.4.0-4.5.x86_64.rpm	wget-1.14-10.3.x86_64.rpm
libsnmp30-5.7.3-4.2.x86_64.rpm	wyse_lang-1.0.0-00.08.x86_64.rpm
libtidyp-1_04-0-1.04-13.55.x86_64.rpm	xdg-utils-20140630-5.1.noarch.rpm
lsb-release-2.0-28.1.noarch.rpm	

Fixed issues

Following are the fixed issues in this release:

Table 8. Fixed issues

Issue no	Issue description
CIR89554	Wyse 3030LT thin client - Linux - CTRL-ALT-DEL not passing through to VM.
CIR90324	JSON - ThinLinux device Configuration - Certificate issues.

Issue no	Issue description
CIR89429	934684210 - Pro / Wyse 7020 (D50Q) / Dual Monitor is not showing correctly.
CIR89944	Ericom PowerTerm Interconnect Keyboard issue.
CIR89896	ThinLinux: Unable to connect to wireless network specified in WLX.INI file, connections only work when using local GUI.
CIR90120	Wyse 3030LT thin client : Citrix application does not launch in full screen.
CIR90792	Wyse 3030LT thin client : Domain name "SYNCHRONY" does not populate domain name in PAM login.
CIR89977	Wyse 3030LT thin client : There is no option to lock the device.
CIR89070	Enhancement CIR - 91348: ThinLinx - Need GUI and ini parameters to configure firewall.
CIR89389	Allow setting Location, Contact, Custom1, Custom2, and Custom3 WDM fields from local GUI, and INI Just as WTOS currently does.
CIR89970	Wyse 3030LT thin client : There is no option to lock the device.
CIR89971	Wyse 3030LT thin client : Setting applet need be moved from desktop or need option to hide.
CIR89973	Add a force download on every boot optional parameter to the Desktop=image INI parameter Thinlinux background does not update when image file is updated on the server side.
CIR89967	Wyse 3030LT thin client : Built in Firefox is available for the pnagent users.
CIR90600	ThinLinux goes into reboot loop when importing configuration file.
CIR90127	Wyse 3030LT thin client : Citrix icons for published applications are not in proper color.
CIR90144	Strange English and Korea font in web page.
CIR91778	D50Q known middle mouse button issue is also affecting ThinLinux.
CIR89776	Ability to Configure (Turn on or Off) Support for IPV6 Via a Switch or Radio Button.
CIR91709	5020 Linux X11VNC Service not starting.
CIR91576	Cannot print to Windows Shared Network Printers.
CIR89279	Z50Q: Unable to set socket-recv-timeout for RDP-connection in ConnectionManager.
LS-103	The add-on is listed twice in the remove addon list.
LS-109	If IPV6 configured with INI, Network UI does not reflect with changes.
LS-121	Maximized Resolution does not work if Browser Connection is created with INI.
LS-125	System setting not updated when switch to admin mode through the Keyboard shortcuts.

Known issues

Table 9. Known issues

Summary	Work around
Export and Import configuration using Http and https is not working from system setting UI.	You can configure FTP protocol to use this function.
Unable to perform firmware upgrade through WCM, its creating wrong **thin-linux.info**.	NA
WMS: Force base system update in the client is by default setting to off in the Update settings even after making ON using WMS App Policy.	NA
Sporadically smart card is not getting detected while launching the VMWare session	Disconnect the smart card and connect it to the different version of USB ports, that is if disconnected from 3.0, then connect to 2.0 ports.
Citrix 13.5–Certification: HDX Multimonitor Task Bar not visible—Grey Band appears.	NA
Unable to set custom info parameter from the WMS server.	NA
Unable to image with **merlinUpdate.URL** through anonymous user showing as access denied in the **cached_update.log** file.	NA
Under system settings, all the **Menu** names may convert to invalid names and are displayed inside braces when we uninstall and install add-ons.	NA
Wireless: Wireless connection is not creating through INI parameters for the security type WEP - 64 bit and 128 bit.	NA
When unplug network cable, the RDP session is getting disconnected after 1 minute even if we specify as 120 seconds in Socket Recv Timeout.	NA
ThinLinux: Unable to connect citrix server when we set browser protocol as **Use Default** in ThinLinux.	NA
In BIOS, Power Loss Recovery to Last State is not working when we do a hard power off using power button.	NA
Citrix Connection is launching in only one display when two displays connected after selecting **Full screen resolution** with Expand to all monitors option.	NA
The INI Parameters `FileServerUsername=xyz` is not disabling the Use Anonymous option in INI Settings.	NA
VMware Multi-Media redirection is not working.	NA
Unable to launch citrix connection through browser using PIV smart card.	NA

Summary	Work around
Wyse 3030LT thin client-VMware Blast—unable to minimize the session from desktop viewer when we play media redirection files in full screen.	Use Ctrl+Alt+Down arrow key to minimize the session
On Wyse 3030 LT thin client platform, the thin client do not respond while upgrading or downgrading the merlin image with BIOS v1.0C or 1.0E.	NA

Tested peripherals

Table 10. USB storage devices

Device	Make
USB Flash Drive	• Sandisk Ultra USB 3.0–64 GB • Transcend USB 2.0–8 GB • Sony USB 2.0–32 GB
USB DVD-RW	Dell CD/DVD DW316
External Portable Hard Disk	Toshiba 3.0–500 GB

Table 11. Printer devices

Device	Make
LaserJet	Dell B5465dnf
LaserJet	Dell B5460dn
Laserjet	HP LaserJet pro MFP M435nw

Table 12. Web Cameras

Model	Type
Logitech	HD Webcam C525
Logitech	HD Pro C920
MS Life cam	HD3000

Table 13. Smart Cards

Smart Cards
Gemalto .Net V2+
Yubikey (PIV)

Table 14. Keyboards

Model	Type
USB — Dell KB216P	Dell Keyboard
USB — Dell KB212-B	Dell Keyboard
Wireless — Logitech MK710	Wireless Keyboard

Table 15. Mouse

Model	Type
USB—MS111-P	Dell Mouse
USB—MS116	Dell Mouse
Wireless—Logitech M705	Wireless Mouse

Table 16. Monitors

Model	Type
Dell 19'' 1905FP	Dell Monitor
Dell 19'' P1913S	Dell Monitor
Dell UZ2315Hf,	Dell Monitor
Dell U2414H	Dell Monitor
Dell P2210	Dell Monitor
Dell UZ2215H	Dell Monitor
Dell P2214H	Dell Monitor
Dell 22" S2240T	Dell Monitor
Dell 20'' E2016H	Dell Monitor
Dell 22'' E2216H	Dell Monitor
Dell 23'' E2316H	Dell Monitor
Dell 24" UltraHD P2415Q	Dell 4K Monitor
Dell 27" UltraHD P2715Q	Dell 4K Monitor

Table 17. USB Headsets

Dell Professional Stereo Headset UC550 (Lync certified)
Plantronics calisto 830
Plantronics Blackwire C720

Plantronics Calisto USB speaker phone	
Jabra Speak 410 USB	
Jabra handset cisco 450	
Jabra BIZ 2400 Mono USB	
Logitech H340	
Plantronics Black Wire C520	
Black wire DA45	

Device	Make
DELL IAP-25	DELL

Device	Make
Switch 3750	Cisco

Test environment

Citrix 13.5		
XenApp6.5	XenApp7.13	XenDesktop 7.13
Windows2008 R2 64-bit	Windows2012 R2 64-bit	Windows2012 R2 64-bit
Servers/Desktops		
NA	Windows7 Enterprise 32-bit	Windows7 Enterprise 32-bit
NA	Windows 8.1 Enterprise 32-bit	Windows 8.1 Enterprise 32-bit

VMware Horizon View 7.1	
Connection Server	Windows2012 R2 64-bit
Desktop	Windows7 Enterprise 32-bit
Desktop	Windows 8.1 Enterprise 32-bit
Desktop	Ubuntu 32/64 bit desktop
RDS Server	Windows2008 R2 64-bit/Windows 2012

VMware Horizon View 7.1	
Desktop	Windows 10

RDP 8.1	
RDP RAIL Server	Windows2012 R2
RDP TS Gateway Server	Windows2012 R2
Desktop	Windows7 Enterprise 64-bit
Desktop	Windows 8.1 Enterprise 64-bit

Driver details

Drivers Files	Version
Display Adapter	VGA compatible Controller Radeon HD 8330E
Ethernet Adapter	RealTek RTL-8168 Gigabit Ethernet driver
Audio	HDA-Intel – HDA ATI SB (ALSA Driver)