



# Dell Wyse SUSE Linux enterprise release 11 SP3 – MR8 Version 11.3.110

## Release Notes

New releases are created to support new hardware platforms, correct defects, make enhancements, or add new features. These releases are tested and supported on current, actively shipping hardware platforms, and those hardware platforms that are within their first year after their official End-of-Life date, as applicable. After the one year time period, new software releases are no longer certified for use with the earlier version of the hardware, even though it is possible that they may still work. This allows us to advance our product with features and functions that might not have been supported by the previous hardware, with previous generation CPUs and supporting components.

**Release Date:** February 2017

**Previous Version:** 11.3.106/11.3.106.01

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## Release type and definition

This SLED11 SP3 Build 11.3.110 release is intended to support updated image for the following platforms :

- Wyse 7010 thin client with Linux (Z50D)
- Wyse 7020 thin client with Linux (Z50Q)

- Wyse 7020 accelerated graphics thin client with Linux (Z50QQ)
- Wyse 5010 thin client with Linux (D50D)
- Wyse 5020 thin client with Linux (D50Q)

## Supported Platforms

The following platforms are supported for this release:

Hardware (Dual Core Platforms)	Memory Configuration (Flash/RAM)	BIOS
Wyse 7010 thin client with Linux (Z50D)	2GB/2GB	3.0L
Wyse 5010 thin client with Linux (D50D)	2GB/2GB	3.0L

Hardware(Quad Core Platforms)	Memory Configuration (Flash/Media/RAM)	BIOS
Wyse 7020 thin client with Linux (Z50Q)	8GB/2GB/2GB	1.0L
Wyse 5020 thin client with Linux (D50Q)	8GB/2GB/2GB	1.0L
Wyse 7020 accelerated graphics thin client with Linux (Z50QQ)	8GB/2GB/4GB	1.0L

**NOTE:** This release does not support Wyse 7010 thin client with Linux (Z50D) – (TPM Hardware - NIST BIOS).

## BIOS Details

This table contains the BIOS details of supported platforms:

Platforms	Version	File Name	Size(Bytes)
Wyse 7010 thin client with Linux	3.0L	30L.ZIP	2961206
Wyse 5010 thin client with Linux			
Wyse 7020 thin client with Linux	1.0L	10L.ZIP	3295808
Wyse 7020 accelerated graphics thin client with Linux			
Wyse 5020 thin client with Linux			

## Build Details

This following section lists the general build details:

## Build Information

<b>Platform : 7010 (Z50D)</b>	
<b>Version</b>	1.4.1115
<b>Build number</b>	11.3.110
<b>Build File Name</b>	11.3.110_Z50D_merlin.exe
<b>Size(Bytes)</b>	989,168,988 bytes
<b>Localization</b>	US

<b>Platform : 5010 (D50D)</b>	
<b>Version</b>	1.4.1115
<b>Build number</b>	11.3.110
<b>Build File Name</b>	11.3.110_D50D_merlin.exe
<b>Size(Bytes)</b>	994,636,826 bytes
<b>Localization</b>	US

<b>Platform : 5020 and 7020 (Z50Q, Z50Qq, D50Q)</b>	
<b>Version</b>	1.4.1115
<b>Build number</b>	11.3.110
<b>Build File Name</b>	11.3.110_Z50Q_D50Q_Z50Qq_merlin.exe
<b>Size(Bytes)</b>	1,094,199,621 bytes
<b>Localization</b>	US

<b>Unified Merlin Image (Without Bios)</b>	
<b>Version</b>	1.4.1115
<b>Build number</b>	11.3.110
<b>Build File Name</b>	11.3.110_Uni-Image-No-Bios_merlin.exe
<b>Size(Bytes)</b>	993,281,138 bytes
<b>Localization</b>	US

## Image package and add-on details

File(s) Name	Version	Build	Size in bytes
image-upgrade-11.3.110-Wyse.zip	1.4.1115	11.3.110	565,374,882 bytes
11.3.110.zip (RSP Package)			565,446,387 bytes
addons-11.3.110-Wyse.zip			419,081,435 bytes

**NOTE:** For more details related to Imaging HAgent and CCM/WDA, refer section [Imaging solutions](#).

## AES Password Encryption Tool

By default, base-64 password encryption is enabled for all connections and global settings. If you want to use AES encryption, you must generate an AES encrypted password by using the **WyselNIkeyCrypt.exe** tool.

The password encryption method is as follows:

### Base64 Encryption Password in INI file

- 1 Log in to the thin client.
- 2 Open the xterm.
- 3 Type regencode followed by password in plain text.

### AES Encryption Password in WyselNIKeyCrypt.exe

For AES Encryption support, use PasswordEncryptionCode=2 in ini parameter. All Passwords related to connections and users in INI file must be AES encoded.

Use the following procedure for creating AES Encrypted password:

- 1 Copy the **WyselNIkeyCrypt.exe** on any windows machine.
- 2 Double click the .exe to open.
- 3 Enter the plain text password in Password to encode Edit Box.
- 4 Click **Encrypt**.
- 5 Copy the encrypted password and place it in the ini file where the password field is mapped.

**NOTE:** Non-English characters are not supported for AES encryption password.

## Features

This section provides all the features supported in this release.

## Existing features

Sanity test is conducted on all the existing features and the same are listed as follows:

- Imprivata
- RDP
- Ericom, SSH,VNC
- Quad Display on Z50Qq

- 802.1x
- vWorkspace 8.5
- CCM

The testing of display, imaging, and all the peripherals which includes keyboard, printers, webcams are also carried out.

## New features

The following features are included in the current release:

- Citrix Receiver Updates 13.4.2
- VMWare Horizon View Client 4.3
- Ericom InterConnect 11.0.3.0
- Security Updates

## Ericom InterConnect 11.0.3.0

This release will have the new Ericom InterConnect 11.0.3.0 which was already available. This will also have the latest INI related fixes which were unknowingly broken in previous version.

## Citrix ICA 13.4.2

This release will have Citrix ICA 13.4.2 integrated with minimal set of features provided by Citrix.

## Features supported

- Desktop Viewer

Desktop Viewer allows you to effectively interact with multiple virtual desktops and their native desktops simultaneously. Desktop Viewer toolbar functionality allows you to switch a session between windows and full-screen session windows, including multi-monitor support for the intersected monitors. You can switch between desktop sessions and work with more than one desktop using multiple XenDesktop connections on the same user device. Keys to minimize all desktop sessions, the Ctrl+Alt+Del keyboard sequence, disconnect, and log off session, are provided to conveniently manage the user's session.

- Support for Relative Mouse and Absolute Mouse modes
- Credential insertion SDK (CISDK) for proximity card and thin client OEM integration
- Support for SecMaker CID
- Support for selective H264

Customers using the SoC SDK might be required to update the H264 optimization.

- Improvements in the authentication dialogs

Citrix Receiver for Linux now allows the title of its authentication dialogs to be changed by a HTTP response header with the name X-Citrix-AM-Title. A user can more easily tell what they are logging onto.

- Enhanced FTU experience - particularly when you are using the SMS authentication
- Enhanced default smart card support

When connecting to a StoreFront server that allows smart card authentication, if no value has been set for **PKCS11module** in the **\$ICAROOT/config/AuthManConfig.xml** configuration file, Receiver uses the **opensc-pkcs11.so** driver if it finds it in one of the standard locations. This means that it might prompt you to insert a reader or card without any change to **AuthManConfig.xml**. If you do not want to use a smart card, select the **Log on with another method** link.

- As part of the continuing work to improve security, Receiver for Linux now uses version 1.0.1t of OpenSSL for TLS connections.

## Add-on modification

In this Citrix release, enumeration of apps for storefront connection demands a file `appsrv.ini` to be present in `/usr/lib/ICAClient/config` directory. This is taken care at the time of building add-on.

In this release, the connection manager issues is fixed, which is related to creating and launching a connection for NetScaler Gateway configured with storefront.

## Usage details

There are no changes with respect to the way we use Citrix 13.4 as compared to earlier versions. Launching connections from connection manager and from browser is same as it was in previous ICA version. There are no new INI parameters added in this release.

## Limitation

When the session is launched in full screen mode and smart card is used as authentication mode, session hangs at the welcome screen of the VDI during logon.

# VMware 4.3

## Overview

VMware View client 4.3 is integrated as part of this maintenance release which has support for Linux remote desktops which requires View Agent 6.1.1 or later. This version of View Client has VMware Blast as a new protocol which VMware has released.

## Custom resolution setting

Now users can give custom resolution setting. The maximum and minimum values for the resolution is limited to the native monitor resolution.

## Printing from a View Desktop

The virtual printing feature allows end users with View Client to use local or network printers from a View desktop without requiring the additional print drivers installed in the View desktop.

With virtual printing, after a printer is added on a local computer, View adds that printer to the list of available printers on the View desktop. No further configuration is required. For each printer available through this feature, you can set preferences for data compression, print quality, double-sided printing, color, and so on. Users who have administrator privileges can still install printer drivers on the View desktop without creating a conflict with the virtual printing component.

To send print jobs to a USB printer, you can either use the USB redirection feature or use the virtual printing feature.

## Setting printing preferences for the Virtual Printer feature on a Remote Desktop

The Horizon Client 4.2 or later is available from the VMware website. This feature has certain requirements which are as follows:

- The remote desktop must have View Agent 6.0.2 or later installed.
- You must use the PCoIP display protocol.

After a printer is added on the local computer, Horizon Client adds that printer to the list of available printers on the remote desktop. No further configuration is required.

## Prerequisites

Verify that the Virtual Printing component of View Agent is installed on the remote desktop. In the remote desktop file system, verify if this following folder exists: **C:\Program Files\Common Files\ThinPrint**.

## Feature description

The new View client contains the following new features:

- Pass command-line arguments when launching a remote application from a URI.

You can use the arguments query to pass command-line arguments when you launch a remote application from a URI.

- USB redirection on RDS-hosted desktops.

You can plug the USB devices into the Linux client systems and have these devices redirected to RDS-hosted desktops.

- Monitor detection when selecting multiple monitors

You can easily distinguish, by using color and number, to know which physical monitor is associated with which monitor icon in the client UI.

- Client drive redirection feature enhancements

You can now automatically connect removable storage devices through Client Directory Redirection (CDR) instead of USB redirection.

- Multiple monitors support with H.264 hardware decoding

The H.264 hardware decoding feature, which previously only supported single monitor, is now enabled to support multiple monitors.

## Environment

The environment contains Horizon 6.0.1 with Feature Pack Update 6.0.2, 6.1.1 or later and also has Connection Manager as backend. However, it will support previous Horizon server versions for Published Desktop. The client side contains the VMware View client.

## Limitations

For security reasons, this release does not support Federal Information Processing Standard (FIPS) mode.

## Display

This release will have FGLRX 15.302-1 and GFX\_SUPPORT 00.08 integrated with latest fixes for Wyse 7020 accelerated graphics thin client device.

# Security updates

## Overview

This includes the list of packages which is updated based on security updates published by Novell as part of SLED11SP3 security updates to fix some known critical vulnerabilities.

## Feature description

Security upgrade includes updates for the following packages:

- Linux Kernel – 3.0.101-84-pae - Only for SP3 MR8
- C Library (glibc) – (glibc-2.11.3-17.95.2) - Only for SP3 MR8

## INI parameters information

For detailed information on all the INI parameters refer the INI guide.

## List of Add-Ons

The following tables provide the information about base and optional add-ons for all the platforms:

Base
addon_support-1.0.1-1.11
ath9k_pwr_save_off-1.0-0.0
auto_signoff_shutdown-0.0-00.01
bios_util-1.0-1.8
compat_wireless-4.1.1-5.1
custom_conn-1.0.0-01.12
delayed_update-2.00.07-01.047
device_settings-1.0.5-00.08
diagnostics-1.0.2-02.05
epson_tmu325_fix-1.00.01-00.001
ericom_powerterm-11.0.3.0-04.24
ericom_webconnect-1.03.03-00.07
ethtool-6.2.6.39-0.16.31+1
factory_reset-1.0.2-01.38



Base
fglrx-thin-15.302-1
flash-player-lite-11.2.202.540-0.23.1+1
gfx_support-1.0.0-00.08
gststreamer-lite-0.10.35-2.9.46+1
gst_mmr_basic_plugin-3.1.1-20130328.1
gsynaptics-0.9.14-70.18+1
hagent-5.5.38-00.00
ica-13.4.2.10146724-01.08
idle_shutdown-0.0-00.01
import_certs-2.0.1-02.05
imprivata-1.0.0-00.08
imprivata_conn-1.0.0-00.16
ini_upgrade_settings-1.0.4-00.05
jre-1.7.0_71-fcs.01
kernel-thin-3.0.101-84.1
libapr-util-1.3.4-12.22.21.1+1
libapr1-1.3.3-11.18.17.1+1
libcap-progs-2.11-2.17.1+1
libcicu-4.0-7.28.1+1
libvdpau-0.4.1-16.16.26+1
libxerces-c-3.1.1-7.1.1+1
locales-0.1-0.1+1
lxc-0.8.0-0.25.1+1
mixed_env_upgrade-1.0.0-01.00
MozillaFirefox-lite-38.2.0esr-1
network_auth-1.0.1-0.1
nss_ini-1.00.01-02.21

Base
openssh-client-6.2p2-0.13.1+1
openssh-server-6.2p2-0.13.1+1
openssl101-1.0.1p-71.1
openvpn-2.0.9-143.40.5+1
pcsc-1.8.8-3.3+1
perl-modules-0.13-70.7+1
platform_util-1.0.3-0.1
power-manager-2.24.1-17.55.10+1
qt47-4.7.4-2+1
rdp-1.00.00-07.010
rpmbuild-4.4.2.3-37.56.1+1
scep_client-1.0.23-00.02
ssh_conn-5.1.0-04.22
tc_logger-1.0.0-0.0
tightvnc-viewer-1.3.9-81.13.1+1
timezone-1.0.1-1.10
unclutter-8-1044.20+1
usb-serial-1.0.0-00.01
usb3cam-1.0.0-01.01
va_plugin-0.4.1-20120726.2
viance-1.1.1-00.38
vmware_viewclient-4.3.0-4710754.10
vnc-server-2.28.1-2.3.1.3+1
vnc_viewer-1.2.9-01.12
vworkspace-8.5.0-42.0
wda-2.0.3-00.1
web_browser-38.2.0-00.33

Base
wifi-firmware-20110923-0.48.1+1
wyseconmgr-1.0.11-02.60
wysesysinfo-2.0.2-03.10
wyse_init-1.0.6-08.067
wyse_pam-1.0.1-02.32
wyse_rdpclient-8.01.03-02.000
wyse_user_admin-1.0.0-00.11
Xnest-7.4-27.81.7+1
xterm-lite-238-1.16+1
zeromq-2.1.7-1+1

Optional
ad_support-1.0.1-01.06
bluetooth-4.99-0.7.91+1
elo_usb-3.5-0.3
gst_mmr_mpeg2_plugin-0.10.18-1
gst_mmr_plugin-3.1.1-17.18
junipervpn-6.5r3.1-4
lang-de-1.4.1115-1
lang-en_GB-1.4.1115-1
lang-es-1.4.1115-1
lang-fr-1.4.1115-1
lang-it-1.4.1115-1
lang-ja-1.4.1115-1
lang-ko-1.4.1115-1
lang-nl-1.4.1115-1
lang-tr-1.4.1115-1
lang-zh-1.4.1115-1

<b>Optional</b>
merlin_nonpxe-3.4.4-00.02
printer-drivers-canon-1.3.9-2.31+1
printer-drivers-epson-1.3.9-2.31+1
printer-drivers-generic-1.3.9-2.31+1
printer-drivers-hp-1.3.9-2.31+1
scim-1.4.7-166.36.1+1
screensaver-themes-2.28.3-0.32.1+1
tcx_aur-1.3.0-0.12
tcx_usb-3.0.27-00.00
xdmcp-7.4.0-02.26
xorg_swcursor-1.0.0-01.01

## Fixed issues

The following issues are fixed in this release:

<b>CIRs</b>	<b>Description</b>
CIR87653	D50Q 11.3.106 cannot check into WDM if discovery method is CNAME
CIR86327	Mouse and Keyboard do not work when RDP session in taken
CIR82445	Increase speaker volume on D class
CIR87761	L-shape setting causes flickering monitors
CIR87068	Linux D50Q 11.3.092 Mouse Curser Problems
CIR85963	D50Q 11.3.092 Poor video streaming
CIR85308	D50Q only perform a time synchronization on boot up, needs to be scheduled
CIR89218	D50D 11.3.106 video performance NOT good
CIR88946	Enhancement request for new Citrix Receiver 13.3.2
CIR88798	Z50D middle mouse button not working in 11.3.106
CIR89135	Z50D middle mouse button not working in 11.3.106
CIR89245	Dell Wyse 2849804 - D50D 11.2.062 - unable to access IBM 5251-11 from INI file.

CIRs	Description
CIR89262	Defect CIR - 89194: SR#934105363: Wyse-CPF : 5020 / SUSE / CONFIG : Missing binaries for Zephyr
CIR89449	D50D Unable to remove multiple add-ons from Linux thin client Oracle case #2891084
CIR89812	Z50D: Upgraded to 11.3.106/01 user ICA performance
CIR90000	'jumpy mouse' issue w/ IE based app
CIR90169	Ericom Terminal Types not parsing from ini file
CIR90217	D50Q Mouse delay while connecting to Horizon View session
CIR90206	7020: 11.3.106: Quad monitor: Require all screens to be in full screen mode (Inactive)
CIR90414	Z50QQ:11.3.106: Automate View 6.2/7.0.2 session taskbar to remain at bottom of the screen
CIR81465	Need INI parameter to break default MIRROR behavior with dual display
CIR84324	Z50D 11.2.092 Time parameters not mapping correctly to Citrix virtual session

## Known issues

The following table lists the known issues for this release:

Issues summary
The INI parameter is not getting reflected in Vmware session.EnableFIPSMODE VMWareView.ShowImageCacheHits VMWareView.ImageCacheSize
Keyboards are not mapping in PCoIP and Blast protocols
SmartCard access is not working in RDP protocol
Webcam redirection, sound recording is not working in VMware RDP protocol
SLED11 MP3 MR8: Web connect does not connect when providing credentials in connection manager
SLED 11 Mr8 : Terminal Name is getting blank once we launch the connection with Terminal Type as "IBM 5251-11" in Ericom Powerterm
SLED 11 MR8 11.3.109 : FR is not working while playing online videos in XenApp(6.5) server
SLED11 SP3 MR8 11.3.108 RDP: Recording not working in desktop session while giving the commands from client
SLED11 MR 8 : The INI parameter "Fullscreen=yes" is showing as blank in Ericom Connection
SLED11 MR8 : Browser connection is launching only with default resolution in both GUI and INI methods

Issues summary
Unable to set TransparentKeyPass in the citrix global settings through INI file as TransparentKeyPassThrough=FullScreenOnly/local/remote.
If we give INI "ScreenSaver=0" ,the default value will be 1 & Screensaver option will not be disabled
SLED 11 MR8 : Same Browser connection is able to launch Multiple times
SLED 11 MR8 : In Browser kiosk mode, checking for Addon compatibility(For the First Launch)
SLED 11 MR8 : New Browser window opening continuously with given Auto Reconnect time
SLED11 MR8 Build:Online YouTube video is lagging when we move the mouse cursor while playing video
Black screen appears when we play windows media files in Fullscreen
SLED 11 MR8 : Imprivata fails to connect
Citrix Receiver does not connect PNAgent service through Netscaler Gateway

## Imaging Solutions

Imaging Solution	Version
WDM	WDM Version : WDM 5.7.1
WSI	5.0.4
USB	2.1.2
HAgent	5.5.38
CCM	R14

## Image Upgrade

Steps to follow:

- 1 Extract image-upgrade to Image upgrade server.
- 2 Upgrade can be done using the FTP/HTTP(s) protocols. At the client side, the image server details need to be configured either through DHCP scope options or using the INI and Upgrade settings applet.
- 3 Upgrade sever Manual configuration.  
**Computer > Control Center > INI and Upgrade settings > image upgrade settings** or **Novell add-on Manager > server settings**.  
**Thin Client Settings** window opens.
- 4 Configure image upgrade details.
- 5 Reboot the client.

FTP upgrade and downgrade options available are:

- No update
- Add-ons only
- Base System only

- Base System and Add-ons only

## Delayed Update

Procedure for delayed Image Update is as follows:

- 1 Image and boot the terminal.
- 2 Log in to the terminal as admin user.
- 3 Set the INI parameter as follows:  
  
In ftp server (/wyse/wlx/mac.ini) and save the file.
- 4 Restart the terminal to download the INI parameter or disconnect and connect the network connection to download the INI file.
- 5 Check if the INI file is downloaded successfully from **Computer > More Applications > Diagnostics > wnos.ini/wlx.ini** .
- 6 Wait for the message to appear and click **Ok** to upgrade immediately or you can delay the upgrade by 5minutes by clicking on **Delayed for 5 minutes**.
- 7 The terminal will go for upgrade and comes up with new image which is mentioned in ftp server for DelayedUpdate. The URL is ftp://X.X.X.X/Build No:xxxxxxx
- 8 Log in to the terminal as admin user.
- 9 Check if the device is upgraded successfully or not, from the **System information** tab.

## HAgent

- Stronger encryption when using secure mode (HTTPS).
- Enhancements to the management protocol used between WDM and HAgent.
- Lockdown of devices after initial discovery. Once device discovers the WDM and get associated, HAgent will never discover the WDM again until it disassociates from the WDM or if the associated WDM is not available.
- Enabling or disabling of discovery options from WDM. Administrator can enable or disable specific type of discovery options from the preference option of WDM. When device gets registered with WDM, server will send the discovery options that are selected, so that the device uses only those selected discovery methods when it goes for discovery any time later. The supported discovery options are DNS hostname/CNAME, DNS SRV record, DHCP option tags and Manual Discovery from the WDM GUI.
- Discovery fallback is available where in the administrator can set a preference, so that if the device misses a set number of periodic check-ins (default is 0 check-ins) with WDM then device will start the discovery process using the selected method of discovery options which are configured during the initial registration of the device with the WDM server.

## Additional information

- When a device is connected to a network and checked-in to the WDM server, disconnecting and connecting to a different network without powering off the client, makes the device to check-in to the first network WDM server 15 times in an interval of one hour. On failure, the device will start the selected discovery methods to find a new WDM server in the current network.
- After the HAgent is upgraded or reset to factory defaults, all the discovery methods are enabled by default. Based on available discovery methods client checks in to WDM server.
- If you manually discover from WDM server using Devices in management console, Agent UI Applet is reflected with IP Address of the WDM Server.
- Manual HAgent discovery takes around 2 minutes.
- HAgent UI Applet discovery settings are applicable only to the WDM methods of discovery. INI method of discovery, is independent of these settings.

## CCM (WDA-2.0.3-00.1)

As part of MR8 release, validation is done on CCM R14 server. There are no additional features added compared to the previous version.

Limitations: WDA UI has **CA validation** field which is added for future use. This Feature **CA Validation** is currently not part of CCM.

# Tested platforms and devices

This section contains the details of all the devices and servers used for testing as a part of SLED 11 MR8 release.

## USB storage devices

Device	Make/Model
USB Flash Drive – 8GB/16GB	Sandisk Ultra USB 3.0 64 GB Transcend USB 2.0 8GB Sony USB 2.0 32GB
USB DVD-RW	Dell CD/DVD DW316
External Portable Hard Disk	Toshiba 3.0 500GB

## Printer devices

Device	Make/Model/Configuration
LaserJet	Dell E515dn
LaserJet	Dell B5460dn

## Display devices

- Dell P1905FP
- Dell P1913S
- Dell UZ2315Hf
- Dell U2414H
- Dell P2210
- Dell UZ2215H
- Dell P4317Q \*
- DELL P2815Q \*
- DELL U2913WM\*

**NOTE:** \* These monitors were used for Quad Display testing.

## Keyboard and pointer devices

- USB: Dell Keyboard – Dell KB216P
- USB: Dell Keyboard - Dell KB212-B
- USB: Dell Mouse – MS111-P
- USB: Dell Mouse –MS116P
- Wireless: Logitech Mouse – M705
- Wireless: Logitech Keyboard – MK710



## Web Cam

- Logitech (HD Pro C920)
- MS Life cam (HD3000)
- Logitech HD Webcam C525

## Smart card devices

Category	Device
Smart Card Reader	Gemalto PC Twin USB Reader
Smart Card	Gemalto .Net V2+
Smart Card	Gemalto .Net V2

## USB headsets

Devices
Plantronics calisto 830
Plantronics Blackwire C720
Plantronics Blackwire C620
Plantronics Blackwire C310 Mono
Jabra handset cisco 450
Jabra BIZ 2400 Mono USB
Logitech H340
Plantronics DA45
Plantronics Savi Office

## Driver details

Drivers Files	Version
Display Adapter	ATI VGA compatible Controller fg1rx-thin-15.302-1
Ethernet Adapter	RealTek RTL-8168E Gigabit Ethernet driver
Audio	HDA-Intel – HDA ATI SB (ALSA Driver)

# Test servers information

The following tables consist of various server/desktops information for different protocols testing:

Citrix 13.4.2		
XenApp6.5	XenApp7.9	XenDesktop 7.12
Windows2008 R2 64bit	Windows2008 R2 64bit	Windows2008 R2 64bit
Servers/Desktops		
NA	NA	Windows7 Ent 32bit
NA	NA	Windows 8.1 Ent 32bit

**NOTE:** Flash Redirection testing is carried out on Internet Explorer 11 version only for the above mentioned XA and XD versions.

VMware Horizon View 7.0.3	
Connection Server	Windows2008 R2 64bit
Desktop	Windows7 Ent 32bit
Desktop	Windows 8.1 Ent 32bit
Desktop	Ubuntu 32/64 bit desktop
RDS Server	Windows2008 R2 64bit/Windows 2012
Desktop	Windows 10

vWorkspace 8.6		
Versions	Server	Desktops
Server version: Quest Software Product version: 8.6.309.4062	Windows 2012	Windows7 Ent-64bit
Desktop: Quest Software Product version: 8.6.309.4062		Windows8.1 Ent -64bit

RDP 8.1	
RDP RAIL Server	Windows2012 R2
RDP TS Gateway Server	Windows2012 R2
Desktop	Windows7 Ent x64
Desktop	Windows 8.1 Ent64-bit

