



# Windows 10 IoT Enterprise LTSB-2016 (64-bit) unified build for Latitude 3480 mobile thin client 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.

**Release Date:** 2017-05-31

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## Release type and definition

This release supports Windows 10 IoT Enterprise (WIE10) Unified MUI Build 0A49 for the Ransomware WannaCrypt susceptibility.

WannaCrypt, also known as WannaCry, targets out-of-date Windows systems. This release build contains valid WIE10 security updates—KB4016635, to protect your system from the ransomware WannaCrypt susceptibility.

WIE10 Redstone v12.01 unified build 0A49 supports English and 7 MUI languages.

- English (en-US)
- French France
- German

- Spanish
- Italian
- Simplified Chinese
- Traditional Chinese
- Japanese

## New features

Following are the new features delivered in this release.

### Unified build

This build supports English and 7 MUI languages (en-US, fr-FR, de-DE, ja-JP, zh-CN, zh-TW, it-IT, es-ES).

### Threat Defense

Dell Data Protection | Threat Defense (powered by Cylance) detects and blocks malware before it can affect your computer. Cylance uses a mathematical approach to malware identification, using machine learning techniques instead of reactive signatures, trust-based systems or sandboxes. Cylance's approach renders new malware, viruses, bots, and future variants useless. Dell Data Protection | Threat Defense analyzes potential file executions for malware in the Operating System (OS).

Threat Defense agent version : 2.0.1422

### Hardware supported features

- Option for 802.11 a/b/g/n/ac wireless.
- Kaby Lake Celeron processor.
- Bluetooth BT 4.x via WLAN Card.

### Menu Driven Custom/ConfigMgr Sysprep

- Supports Menu driven Custom/ConfigMgr Sysprep –User is given choice to select the option.
- Shrinking of disk option available during Sysprep –This reduces the image pull/push time in case of larger disks.
- Shrinking must be done from diskmgmt console.

### New connection brokers versions

- VMware Horizon client: 4.3.0.4209
- Citrix Receiver: 14.6.0.12010
- Ericom Web connect -7.5.1

### Out-of-Box driver installation

All the respective device drivers have been pre-installed in the OS as compared to the legacy approach wherein there were pre-staged drivers.

### Newer Dell Wallpapers

Wyse wallpapers and themes replaced with Dell wallpapers and themes.

### XML driven PowerShell scripts

Customization scripts are ported to PowerShell scripts and based on XML file input.

### Logging support

Logging support is added for customization scripts.

**Flash.sys** Hostname calculation and preservation – Option to enable and disable Hostname calculation in flash.sys



- User get an option to disable or enable Hostname calculation.
- Ensure that altering the MAC ID for a client doesn't perform a Hostname calculation.
- Rest of the logic and flow remains the same as older flash.sys implementation.
- If user required a host name calculation to be performed after a change in MAC ID (NIC card change), they must use MINWITHNET.

**Event viewer log preservation** –Option to enable and disable preservation of Event viewer logs

Allows the user with an option to enable or disable Event log saving while Write Filter (UWF) is on. This decision has been made to allow the user to collect event logs in case required for debugging or analysis purposes.

**Dell thin client application** –Replacement for client information application with new user interface

Dell thin client application to view the general information about the thin client device, system shortcuts, custom fields, RAM disk, Auto logon, CAD map tool and support information.

**NOTE: RAM disk size is set to 512 MB by default.**

## User credential details

### User account

- Account name– User
- Password– DellCCCvdi

### Administrator account

- Account name– Administrator
- Password– DellCCCvdi

### TightVNC

- Password– DELL

### BIOS

- Admin password– Fireport (Configured in factory)

## OS architecture

### WIE10 Image structure

- All WIE10 (64-bit) builds are delivered in Merlin format.
- Builds will have 5 partitions
  - 100 MB Merlin
  - 450 MB Windows recovery
  - 100MB EFI system
  - 16 MB MSR and rest as OS partition
- 16MB MSR partition are be visible in disk manager. Partition structure is based on GPT partition table
- 100 MB EFI system partition is FAT32 showing without the drive letter and file system property in disk management. 100 MB EFI system partition contains Merlin BA (Boot Agent).
- WSI-Builds can be pulled and pushed using WSI. Legacy setting has to be enabled in BIOS for supporting PXE pull/push. WDM- Only Non-PXE image push is supported for Latitude 3480 mobile thin client.
- Image (build package) files is in compressed format.

## Build behavior

### Internet Explorer 11



- Performance enhancements: IE 11 is the quickest version of the browser yet. Microsoft has included support for web standards like CSS animations, HTML5 spell checking, and improved Java script performance.
- Security enhancements: The main security addition to IE 11 is Enhanced Protected Mode, which locks down parts of the Windows operating system, preventing the browser from accessing the OS.

#### Customizations

- First run customizations is disabled
- IE 11 enhanced protection mode is enabled
- Start page and default page set to [www.dell.com/wyse](http://www.dell.com/wyse)
- IE cookies & cache are redirected to C:\
- Cache content to 250 MB
- Clears browsing history on IE exit

#### Citrix receiver

USB redirection works for all users of the client machine with all published xendesktops, irrespective of the setting simplify device connections for me in the xendesktops connection preferences UI

#### Energy Star specification

Latitude 3480 mobile thin client with WIE10 Redstone (64-bit) meets the Energy Star version 6.0 thin client requirement

Following are default values set in control panel applet of power options:

#### Power plugged in

- Supports WOL Power off states
- Supports Idle State wake
- Screen off timer set to 10 minutes
- Sleep timer set to 5 minutes

#### On battery

- Supports WOL Power off states
- Supports Idle State wake
- Screen off timer set to 5 minutes
- Sleep timer set to 5 minutes

**SCCM2016 information** SCCM is supported for standard deployment of images. Refer SCCM admin guide for more details.

#### Following are UWF exclusion list to support their respective features

##### UWF File Folder Exclusions

- C:\Users\Admin\AppData\LocalLow
- C:\Users\User\AppData\LocalLow
- C:\Program Files\Windows Defender
- C:\Program Files (x86)\Windows Defender
- C:\Windows\WindowsUpdate.log
- C:\Windows\Temp\MpCmdRun.log
- C:\ProgramData\Microsoft\Windows Defender
- C:\program files\Wyse\WDA\Config
- C:\Users\Public\Documents\Wyse
- C:\Wyse\WCM\ConfigMgmt
- C:\Wyse\WCM



- C:\Wyse\WDA
- C:\Windows\System32\spp

#### UWF Registry Exclusions

- HKLM\Software\Wyse\ConfigMgmt
- HKLM\SYSTEM\CurrentControlSet\Control\WNT\UWFSvc
- HKLM\SOFTWARE\Microsoft\Windows Defender
- HKLM\SOFTWARE\Microsoft\Windows\CurrentVersion\HomeGroup
- HKLM\SOFTWARE\Microsoft\Windows NT\CurrentVersion\NetworkList
- HKLM\SYSTEM\WPAX

- 1 Changing admin password in Sysprep.xml  
Scripts to support changing Admin password is part of this build. This scripts is invoked as part of custom sysprep.
- 2 Domain join support in Sysprep.xml  
Scripts to support domain join the client as part of sysprep is included as part of this build. This is be done by getting domain join credentials as part of the Custom sysprep script execution while creating golden image.
- 3 BIOS  
For Latitude 3480 mobile thin client BIOS is decoupled, so it is not a part of build.
- 4 Key board filter  
User can see keyboard filter to disable undesirable key presses or combinations. For example, you can disable common Windows key combinations like Ctrl+Alt+Delete and Alt+Tab. You can disable any key or key combination. This feature was not available in WIE10 threshold but added in WIE10 Redstone.
- 5 Windows ATP  
Windows Defender ATP is a new service in Redstone build that helps enterprises to detect, investigate, and respond to advanced attacks on their networks. This feature is in scope of this release.

#### vWorkspace

After installation of vWorkspace, install.txt file is created in C:\

#### C-A-D Tool

By default build has C-A-D tool but is in disabled state. To enable

- 1 Login to system using admin account
- 2 Disable the Write Filter
- 3 Launch command prompt in elevated mode
- 4 cd c:\windows\system32
- 5 Run DWKBFILTERMON.exe
- 6 Click enable
- 7 Restart the system

## Fixed issues and enhancements

1.	WIE10: Sometimes windows does not respond for 1-2 min when accessing the file browser or any windows applications/settings
2.	Sysprep tool stops working
3.	BitLocker protection should suspend on executing WIE10_CustomSysprep4man.ps1
4.	WIE10 clients are not discovered in SCCM server



## Known issues

S.no	Issue description	Work around—If any
1.	PAD imaging does not work in WDM environment	Add-on Fix will be released
2.	Observed errors while running ConfigMgr Sysprep	No functionality impact
3.	Attempt to shadow the terminal using VNC viewer fails when the client is in sleep state	VNC issue
4.	When client switched from user mode the Admin tab is showing in pink color intermittently	No functionality impact
5.	Latitude 3480 mobile thin client is taking 90 seconds to boot intermittently	Intermittent
6.	Domain login configuration during custom sysprep prompts four warning messages if user click on submit without entering the details	No functionality impact
7.	SCCM background does not fit to full screen while deploying the image on Latitude 3480 mobile thin client	No functionality impact
8.	Saved YouTube webpage does not open properly	No functionality impact
9.	Optimal resolution is received in client connected via VNC viewer	No functionality impact
10.	Print window is not displayed after pressing ctrl + P for notepad or MS paint applications	No functionality impact
11.	New Dell symbol in background wallpaper is displayed in compressed mode	No functionality impact
12.	WIE10 RS (de-DE) - Run time commands are not localized in respective language	No functionality impact
13.	Unable to configure common image in USB imaging tool	USB solution is under testing
14.	Domain join fails in first boot script when domain user password in set to dellwyse	Do not use the password with any character ending with d, e, l, w, y, and s
15.	Auto login fails while executing first boot script if password is set to password	Do not use the password with any character ending with p, a, s, w, o, r, and d

## Test environment

Platform	Part Number	RAM/HDD/SED	Description
Latitude 3480 mobile thin client	NA	8 GB RAM/128 GB M2-SSD	NA

- All the Servers are installed on VMware VCenter Server 5.1.0
- WDM Server Used: Windows 2K8 R2 Enterprise Server with WDM 5.7.2
- Wyse Management Suite Server: Windows 2K8 R2 Enterprise Server with WMS 1.0 (Basic functionality)
- WSI Server Used: Windows 2K3 R2 Enterprise Server with WSI 5.0.5
- RDP: Windows 2K3 Server, Windows Server 2K8 R2 Enterprise, and Windows Server 2K12
- Citrix XenDesktop: Windows 2K12 R2 Enterprise with Citrix XenDesktop Server 7.13 installed



- Citrix XenDesktop: Windows 2K12 R2 Enterprise with Citrix XenDesktop Server 7.13 installed
- VMView Server: Windows 2K8 R2 Enterprise with VM Horizon View Server 7.1 installed
- Ericom Power Term: Red Hat Linux Server with Ericom Server 9.2 installed
- Ericom Web connect Server: 6.0.0.0

## Build details

Platform(s)	Latitude 3480 mobile thin client
Product	WIE10 –LTSB2016
Build Version	12.01
Build Number	0A49
Localization	English, French France, Spanish, Italian, German, Japanese, Chinese Simplified, Chinese Traditional
WSI/Wizard Compatibility	5.0.5 (Build-263)
WDM	5.7.2
SectorImg.exe	1.0.0.7
BA version	3.5.0
USB Imaging Tool	2.1.4 (Under Testing)

<b>Dell Latitude 3480 Wyse thin client</b>	
Version	12.01
Build Number	0A49.32 GB
Build WSI Package Name	3480_0A49_32GB.exe
Build Size (Bytes)	13,651,905,444 bytes
Localization	English, French France, German, Spain, Italian, Japanese, Chinese Simplified, Chinese Traditional,
<b>BIOS Details</b>	
Platform	Latitude 3480 mobile thin client
Version	1.1.3 1.2.2
Build File Name	NA

## Boot sequence (As appearing in the BIOS):

Boot Sequence in UEFI mode (As should appear in the BIOS in Factory configuration):



- 1 Windows boot Manager
- 2 Merlin Non-Pxe
- 3 Onboard NIC (IPV4)

Other Wyse specific BIOS settings done at factory configuration:

SATA Mode- RAID On

Admin Password- Fireport

## Supported peripherals

Device Name
Dell Pro Stereo Headset UC300 - Lync Certified
Dell Pro Stereo Headset - Skype for Business
Jabra Evolve 65 MS wireless headset (Stereo) - Office Centric
Dell USB Sound Bar
Dell 2.0 Speaker System
Dell Adapter - HDMI to VGA adapter
Dell MS116 USB Wired Optical Mouse
Dell Wireless Mouse - WM326
Dell Wireless Keyboard and Mouse Combo- KM636
Dell USB Wired keyboard with Smartcard Reader - KB813
Dell Entry USB 3.0 dock -D1000
Dell 20 Monitor (Dell E2016H)
Dell 20 Monitor (Dell E2016HV)
Dell 22 Monitor (Dell E2216H)
Dell 22 Monitor (Dell E2216HV)
Dell Ultra Sharp 24 Monitors (Dell U2415)
Dell 21.5" Medical Review Monitor
Dell 20 Monitor
Dell 22 Monitor
Dell 24 Monitor (Dell P2417H)
Dell 23 Monitor (Dell P2317H)
Dell E2318HN
Power Companion (PW7015M)

## Used and free space details

Platform	Flash Size	Used Space (C: Drive)	Free Space
Latitude 3480 mobile thin client	128 GB	14.8 GB	103 GB





# Manufacturing Notes

Details for Manufacturing	
Product Name	Latitude 3480 mobile thin client
Version	12.01
CPU Type / CPU Speed	Intel® Celeron® CPU3865U @1.80 GHz

## OS components

Drivers/ Files	Platforms	Comments
Chipset	Latitude 3480 mobile thin client	Intel Chipset Device software – 10.11.38
Chipset	Latitude 3480 mobile thin client	Intel® Dynamic and Thermal Framework – 8.2.11000.2996
Chipset	Latitude 3480 mobile thin client	Intel® HID Event Filter – 1.1.0.317
Chipset	Latitude 3480 mobile thin client	ST Microelectronics 3-Axis Digital Accelerometer – 2.2.3.13
Chipset	Latitude 3480 mobile thin client	Intel® Serial IO – 30.100.1633.3
chipset	Latitude 3480 mobile thin client	Realtek Card Reader - 10.0.14393.31228(programs and features)
Intel MSR MEI	Latitude 3480 mobile thin client	Intel® Management Engine Interface – 11.6.0.1026
Storage	Latitude 3480 mobile thin client	Intel® 6th Generation Core Processor Family Platform I/O SATA AHCI Controller – 15.2.2.1030
Audio	Latitude 3480 mobile thin client	Realtek Audio – 6.0.1.8037
Display Adapter	Latitude 3480 mobile thin client	Intel® HD Graphics 610 – 21.20.16.4550
Ethernet Adapter	Latitude 3480 mobile thin client	Realtek PCIe GBE Family Controller – 10.12.1007.2016
Wireless Adapter	Latitude 3480 mobile thin client	Qualcomm QCA61x4A 802.11ac Wireless Adapter – 12.0.0.295
Bluetooth	Latitude 3480 mobile thin client	Qualcomm QCA61x4A Bluetooth 4.1 – 10.0.0295
IR Camera	Latitude 3480 mobile thin client	Realtek PC Camera – 10.0.14393.11250 (programs and features)



Drivers/ Files	Platforms	Comments
Display Link Graphics Driver	Latitude 3480 mobile thin client	8.0.778.0(programs and features)
USB LAN Driver	Latitude 3480 mobile thin client	Realtek USB Ethernet Controller All-In-One Windows Driver – 10.12.1007.2016(programs and features)
USB Audio	Latitude 3480 mobile thin client	6.3.9600.50(programs and features)
Dell Keyboard driver application	Latitude 3480 mobile thin client	For KM632 & KB212-B
Wyseramdisk.sys (Wyse RAM Disk driver)	Latitude 3480 mobile thin client	Dell Wyse RAM Disk driver-5.0.2183.5 Default value would be 512MB
Flash.sys	Latitude 3480 mobile thin client	Dell Wyse Flash Driver-1.0.7.7
Dell Open Print Driver	Latitude 3480 mobile thin client	1.91.7882.0

Component	Version
RDC	10.0.14393 (RDP 10.2 Supported)(In RDP about) 10.0.14393.0(In Dell thin client application)
Citrix receiver 4.6 (Standard)	14.6.0.12010 (in about window)
	Citrix Online Plugin -14.6.0.12010 (In client application , Programs and Features)
Citrix HDX real time media engine	2.1.200
VMware Horizon client	4.3.0.4209 (In client application, Programs and Features)
	4.3.0 in (VMware Horizon client about)
vWorkspace client	8.6.309.4062
Ericom powerterm interconnect for thin clients	12.0(in programs and features, In client application)
SCCM client	SCCM 2016 client-5.00.8412.1307 (in control panel -> Configuration manager)
Windows media player	12.0.14393 (In client info)
Internet Explorer	11.576.14393.0(About Internet Explorer)
Adobe Flash player 21 NPAPI	21.0.0.213(programs and features)
Tight VNC	2.6.4 (In client Info, About)
Ericom connect web connect	7.5.1(in programs and features, In client application)
.NET Framework	4.6.2



<b>Component</b>	<b>Version</b>
WDA	13.0.1.2
Bit locker with TPM	Supported
Windows Multi touch	Supported
Windows Defender with latest definition	Virus & Spyware definition updates will be updated during release to QA
Microsoft Management Console	Management Console 3.0 Version 1607 (OS Build 14393.5)
Microsoft Silverlight	5.1.50905.0
Background Intelligent Transfer Service (BITS)	Supported
MSXML	Supported
XML Paper Specification (XPS)	Supported
Network Access Protection	Not Supported
Credential roaming	Supported
WPA2	Supported
CredSSP	Supported
Dell Wyse wallpaper on All Users	Supported
DirectX	12
DellThinClientApplication.exe (New Client Application)	10.0.0.11
Unified Write Filter manager -Uwfmgr.exe (File Version)	10.0.14393.0
UWF system tray UI – UWFTray.exe	1.0.4.6
UWF Service – UWFSvc.exe	1.0.4.6
NetXClean.exe	3.0.0.8
Disk_Size.exe	3.0.0.5 (in setup)
DeleteFreeSpace.exe	1.2.1.0 (in setup)
Custom Sysprep support in scripts	Supported (part of build)
Windows Time Service	Supported
Dell open printer driver	1.91.7882.0
Dell CAPS lock indicator application	2.1.10.0604



Component	Version
CAD MAP Application	2.3.0.1
DWkbfFilter.sys	2.2.0.4
DWkbfFilterMon.exe	2.2.0.4
DWkbfFilterWatchdog.exe	

## Total QFE's Present in this build (Updated till March 2017)

Security Update
KB4016635
KB3209498

