



Windows 10 IoT Enterprise for Wyse 5060 Thin Client Maintenance Release 1

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: 0A71

Release Date: July 2018

Previous Version: 0A60

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Release type and definition

This maintenance release (MR1) is for unified build 0A71 with upgrade capability from Windows Embedded Standard 7P running on Wyse 5060 thin client.

The Wyse 5060 thin client supports Windows 10 IoT Enterprise 64-bit operating system. This Windows version is based on Windows 10 Enterprise 2016 LTSB which is also referred to as Redstone1 (RS1).

NOTE: There are no further maintenance releases for Wyse 5060 thin client with Windows 10 IoT Enterprise.

CAUTION: Please follow proper write filter and Windows Page File usage instructions at all times. Such instructions include making sure that the write filter is enabled during regular use and is disabled only temporarily by an administrator when required for image upgrades, applying security patches, registry changes and application installation. The write filter should be re-enabled as soon as such tasks are completed. Such instructions further include never enabling the Windows Page File feature during regular use of the thin client. Any operation of a Dell Wyse Windows Embedded Thin Client with the write filter turned off during regular use and/or with the Windows Page file enabled will prematurely wear out your Flash/SSD storage, decrease performance and decrease the lifespan of the product. Dell is not responsible for, and will not, warrant, support, repair or replace any thin client device or component that fails to operate properly due to a failure to follow these instructions.

New features

- BIOS is updated to version 1.0H.
- Wyse Device Agent (WDA) is updated to version 14.2.0.51.
- Realtek Ethernet Controller Driver is updated to version 10.26.328.2018.
- Boot Agent (BA) is updated to version 3.7.7.
- VMware Horizon Client is updated to version 4.8.
- Citrix Receiver is updated to version 4.11.
- Citrix HDX RealTime Media Engine is updated to version 2.4.
- Dell Thin Client Application is updated to version 10.0.0.19.
- AMD Display driver is updated to version 9.0.000.8—Version that is displayed in Device Manager 22.19.675.0.
- Realtek Audio driver is updated to version 6.0.1.8397.
- Intel PROSet wireless driver and Intel Bluetooth driver is updated to version 20.40.0.
- Windows Defender is updated to version 1.271.449.0.
- Dell KM632 Wireless Keyboard Caps Lock Indicator version is updated to 2.1.11.1 as part of unquoted service path vulnerability.
- Unified Write Filter tray utility—**UWFTTray.exe**—is updated to version 1.0.4.12.
- UWFSvc—**UWFSvc.exe**—is updated to version 1.0.4.12.
- Microsoft .Net Framework is updated to version 4.7.1.
- Sysprep UI is integrated to version 1.0.0.10.
- Wyse Easy Setup is integrated to version 1.0.1.3289.
- The Win+L key is enabled as an operating system feature.
- C-A-D map is enabled by default.
- QFEs are installed until June 2018.

Boot sequence in BIOS

Table 1. Boot sequence in BIOS

Boot priority order	Component
First boot	Windows Boot Manager
Second boot	Merlin Non-Pxe
Third boot	SATA 0: 32 GB SATA Flash drive
Fourth boot	PXE LAN
Fifth boot	USB HDD
Sixth boot	USB FDC
Seventh boot	USB CD—ROM

NOTE: Flash drive size can be 32 GB or 64 GB based on hardware configuration for SATA 0.

Table 2. BIOS factory settings

SATA Mode	AHCI
BIOS Admin Password	Fireport
Boot Mode	UEFI
Secure Boot	Enabled
Security String	01011536

Supported peripherals

- Dell Pro stereo headset UC300
- Dell USB Soundbar - AC511
- Dell 2.0 speaker system AE215
- Jabra Pro 935 MS wireless headset (Mono)
- Jabra Pro 930 MS wireless headset
- Logitech B525HD webcam
- Dell Tray Load CD/DVD player(DW316)
- Dell USB wired keyboard - KB216
- Dell USB wired optical mouse - MS116
- Dell USB wired keyboard with Smartcard reader - KB813
- Dell USB wired laser mouse
- Dell wireless mouse - WM326
- Dell 24 Monitor - E2417H
- Dell 23 Monitor - E2316H
- Dell 22 Monitor - E2216H
- Dell 20 Monitor - E2016H
- Dell 20 Monitor - E2016
- Dell 19 Monitor - E1916H
- Dell 19 Monitor - E1916HV
- Dell 27 Monitor - P2717H
- Dell 24 Monitor - P2417H with stand
- Dell 24 Monitor - P2417H without stand
- Dell 23 Monitor - P2317H
- Dell 22 Monitor - P2217H with stand
- Dell 22 Monitor - P2217H without stand
- Dell 22 Monitor - P2217
- Dell 22 Monitor - P2217 without stand
- Dell 20 Monitor - P2016
- Dell 19 Monitor - P1917S
- Dell 24 Monitor - U2415
- Dell 25 Monitor - U2515H
- Dell 27 Monitor - U2717D
- Dell 27 Monitor - U2717DA
- Dell 43 Monitor - P4317Q
- Dell 24 Monitor - MR2416

- Dell 27 Monitor - P2715Q 4K2K (UDH) Monitor, 30 Hz
- Dell 24 Monitor - P2415Q 4K2K (UHD) Monitor, 30 Hz
- Dell 30 Monitor - UP3017
- Power adapter + 3 Foot power cable
- Dell Mono unmanaged printer - E515dn
- Dell Color unmanaged printer - E525w
- Dell Mono managed printer - C2660dn
- Dell Color managed printer - S5840cdn
- DP to HDMI converter
- DP to DVI converter
- DP to VGA converter

System preparation tool—Sysprep UI

The System Preparation tool **Sysprep.exe** can be used with other deployment tools to install Microsoft Windows operating systems. The installation can be completed with minimal intervention by an administrator.

Sysprep.exe calls other executable files during Windows installation. **Sysprep.exe** is located in the **%WINDIR%\system32\sysprep** directory. The file must run from the **%WINDIR%\system32\sysprep** directory, and the Windows version on which it is installed.

The following features are not supported in this release:

- There is no integrated administrator account.
- Microsoft has removed the following Windows 10 features in this release:
 - Measured boot
 - Fast Boot
 - Refresh PC and Reset PC
 - Anti malware
 - Custom branding
 - WIM boot
 - Bing sports
 - Xbox Live
 - Skype
 - Zune videos
 - Zune music
 - People
 - Windows communication software
 - Office note
 - Maps
 - Bing news
 - Store app
 - Edge
 - Cortana
- Boot from USB is not supported, enable this option in BIOS.
- Native PXE imaging support is not available in this version as the boot mode is set to UEFI.
- The following lockdown features are not supported:
 - USB filter
 - Keyboard filter
 - Gesture filter
- Embedded Lockdown Manager is not supported.

Running Custom Sysprep tool

Prerequisite

- Disable Unified Write Filter.
- Logging framework must be available on your thin client.
- PowerShell script execution environment, Custom Sysprep, Configuration Sysprep (SCCM) scripts, and Hostname calculation feature must be available.
- Reduce the flash drive or hard drive size to less than 32 GB.

About this task

When you access the operating system using Custom Sysprep, it is configured according to OEM specification or customer requirement. The information in the user interface is saved as configuration files (.xml) and is used for the Custom Sysprep process. To run the Custom Sysprep tool, do the following:

Steps

- 1 Go to <drive C>\Windows\Setup.
- 2 Right-click **Build_Master.cmd**, and select **Run as administrator**.

The **Config Master** window is displayed.

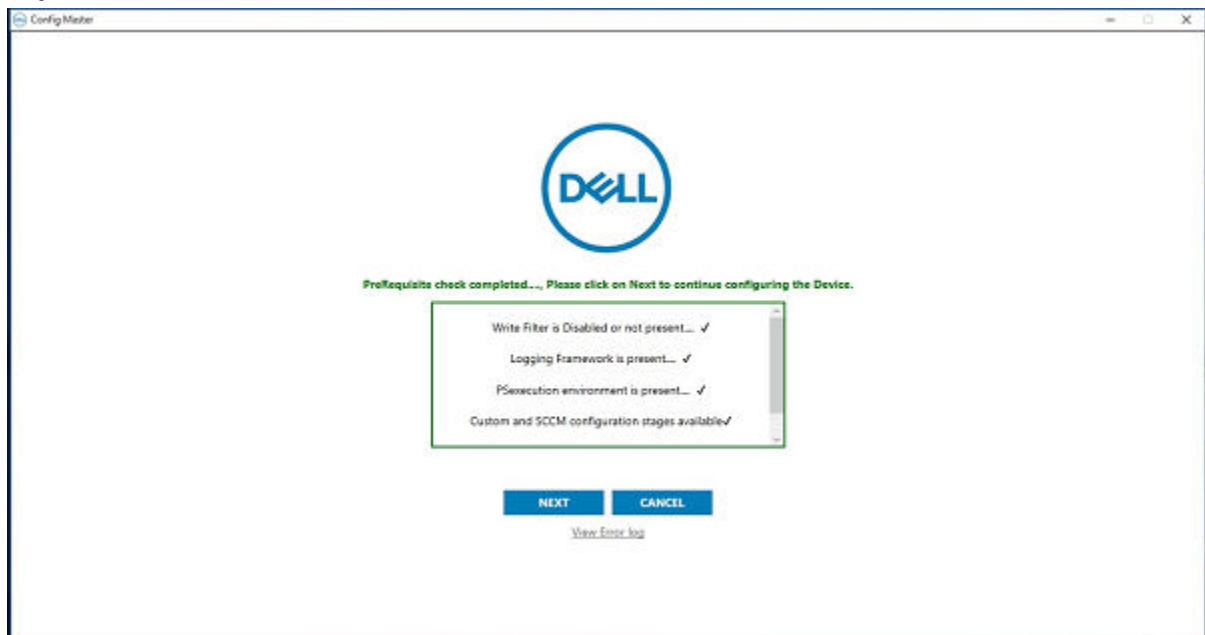


Figure 1. Config Master

- 3 Click **Next**.
The **Configuration** screen is displayed.

Configurations

☒ Custom configuration ☐ SCCM configuration

Host Name calculation

☒ Enable ☐ Disable ☐ Retain current settings

Configure Domain options

User Name:

Password :

Domain :

OU :

☐ Configure OU option **Save Credentials**

Configure local account credentials

☒ Enable local account credential changes

Next **Cancel**

Figure 2. Configurations

- 4 Select **Custom configuration** in the **Configurations** section.
- 5 Enable or disable hostname calculation in the **Host Name calculation** section.
- 6 Enter the appropriate values in the **Configure Domain options** section, and click **Save Credentials**.
- 7 Click **OK** when prompted.
- 8 Select **Enable local account credentials changes**.
The changes that are made to the credentials are applied.
- 9 Click **Next**.
The **Credentials Manager** page is displayed.

Credential Manager

Admin
User

User Name: Admin

Enter New Password:

Confirm New Password:

Save

Apply Cancel

Figure 3. Credential manager

- 10 Select the user account, and type the login credentials.
- 11 Click **Save**.
- 12 Click **Apply** to save the changes.

This process takes 5–10 minutes to complete. The device turns off after the Sysprep process is complete.

NOTE: If SFC scan is enabled, the process may take 45–60 minutes to complete.

Unified Write Filter

To enable or disable the Write Filter, see *Microsoft Windows 10 IoT Enterprise Administrators Guide* at [Dell support site](#).

CAUTION: Please follow proper write filter and Windows Page File usage instructions at all times. Such instructions include making sure that the write filter is enabled during regular use and is disabled only temporarily by an administrator when required for image upgrades, applying security patches, registry changes and application installation. The write filter should be re-enabled as soon as such tasks are completed. Such instructions further include never enabling the Windows Page File feature during regular use of the thin client. Any operation of a Dell Wyse Windows Embedded Thin Client with the write filter turned off during regular use and/or with the Windows Page file enabled will prematurely wear out your Flash/SSD storage, decrease performance and decrease the lifespan of the product. Dell is not responsible for, and will not, warrant, support, repair or replace any thin client device or component that fails to operate properly due to a failure to follow these instructions.

- When you disable the Write Filter from the system tray, a caution message is displayed.

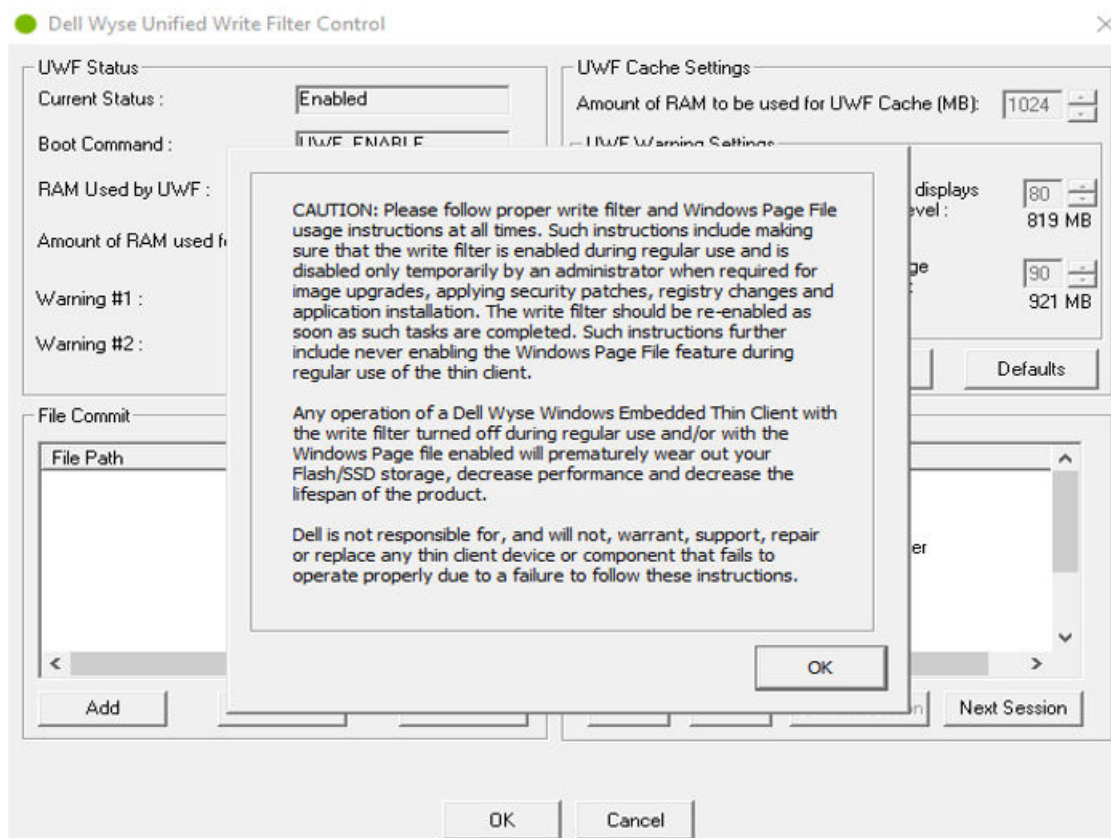


Figure 4. UWF caution message

- After the Write Filter is disabled, a caution message is displayed during every reboot to notify that the client is used in Write Filter disable state.

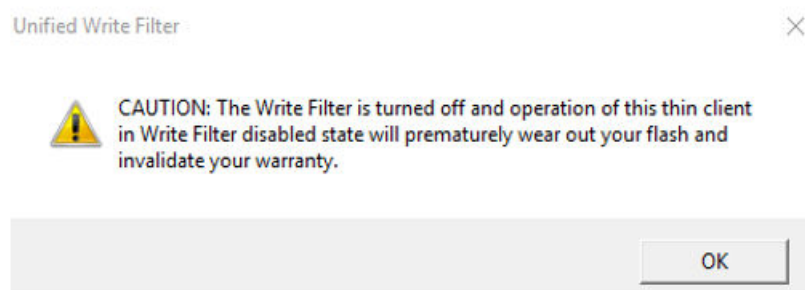


Figure 5. UWF caution pop-up

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\WPA

Energy Star specifications

Wyse 5060 thin client with Windows 10 IoT Enterprise RS1 meets the ENERGY STAR version 6.0.

The following values are set by default in control panel applet of Power options:

- Supports WOL Power off states.
- Supports Idle State wake.
- Screen off timer set to 10 minutes.
- Sleep timer set to 15 minutes.

Support matrix

Table 3. Support matrix

Platform	Wyse 5060 thin client
Operating system	Windows 10 IoT Enterprise RS1
Flash size	32 GB
Used space	13.9 GB
Free space	15.2 GB
Build number, and build size	<ul style="list-style-type: none"> • 5060_0A71_32GB_Standard.exe—10.6 GB (11,465,460,243 bytes) • 5060_0A71_32GB_Upgrade.exe—10.7 GB (11,501,836,175 bytes)
BIOS version	1.0H
RAM	4 GB and 8 GB
Flash drive	32 GB
Languages	en-US, Fr-CA, Fr-FR, De-DE, Es-ES, It-IT, Pt-BR, zh-CN, Zh-TW, Ja-JP, Ko-KR.

Table 4. Product information

Product name	Windows 10 Enterprise 2016 LTSC
Model Name	Wyse 5060 LD thin client
Product Version	12.01—Build 0A71.30GB
Windows Embedded version	10.0 Build—14393
Manufacturer	Dell Inc.

Table 5. General details

Platform	Wyse 5060 thin client
WDM version	5.7.3
Wyse Management Suite version	1.2
USB Imaging Tool version	3.1.0
Boot Agent version	3.7.7
Language control application version	1.0.0
SCCM version	Microsoft System Center Configuration Manager 2016 Version 1606 Console Version: 5.0.8412.1313 Site version: 5.0.8412.1000

Table 6. BIOS details

BIOS version	1.0H
FD file name	10H
Type of file	.FD file
Size	8.51 MB (8,933,456 bytes)

Table 7. Processor details

Name	AMD GX-424CC SOC with Radeon(TM) R5E Graphics
Speed	2400 MHz
Address width	64 bits
Data width	64 bits

Fixed issues

Table 8. Fixed issues

Issue number	Description
CIR95060 and CIR95365	WDA does not report IP address to Wyse Management Suite.
CIR94726	Wyse Management Suite does not report Custom fields from Windows 10 IoT Enterprise devices.
CIR95364	C-A-D tool—Hotkey Win+L.
CIR5077	Incorrect passwords in the Registry-Auto login field.

Known issues

Table 9. Known issues

Issue number	Description	Workaround
WS-2155	When you set the policy rule as Upgrade Only and deploy an image from Wyse Management Suite server, the system does not boot. The Update Now message is displayed after every reboot when you upgrade the image from Windows Embedded Standard 7P to Windows 10 IoT Enterprise.	Select Force this version rule when you create a policy.
WS-2043	YouTube videos do not play in full screen in the admin kiosk mode.	There is no workaround.
WS-1669	Windows To Go window does not open when you click the icon in the write filter enabled state.	Disable write filter.
WS-1654	Low memory issue is observed when YouTube videos are played in VMware session, Citrix session, and Internet Explorer.	There is no workaround.
WS-2154	The error message Windows could not complete the installation. To install Windows on this computer, restart the installation is displayed, while Imaging from Wyse Management Suite server with Logitech HD Webcam C930e and multiple USB drives are connected to the device.	Do not connect any external peripherals except keyboard and mouse.
WS-1395	In Dell thin client application, custom field changes require reboot to reflect in Wyse Device Manager server. A message is not displayed to prompt a reboot when you click Apply .	There is no workaround.

Device manager components and driver versions

Table 10. Device manager components and driver versions

Component Name	Driver Version
AMD Radeon R5E Graphics	22.19.675.0
Realtek PCIe GbE Family Controller	10.26.328.2018
Speakers (Realtek High Definition Audio)	10.0.14393.0

Component Name	Driver Version
Dell Wyse RAMDisk Driver	5.0.2183.5
Dell Wyse Flash Driver	1.0.7.1
HID Keyboard Device	10.0.14393.206
ACPI x64-based PC	10.0.14393.0
Standard SATA AHCI Controller	10.0.14393.2273
Realtek High Definition Audio	6.0.1.8397
AMD High Definition Audio Device	10.0.1.1
AMD USB 3. 0 eXtensible Host Controller - 1.0 (Microsoft)	10.0.14393.1794
Microsoft Storage Spaces Controller	10.0.14393.2273
AMD GX-424CC SOC with Radeon R5E Graphics	10.0.14393.2273
Microsoft Device Association Root Enumerator	10.0.14393.0
Microsoft GS Wavetable Synth	10.0.14393.0
AMD PSP 1.0 Device	4.4.0.0
Trusted Platform Module 1.2	10.0.14393.2097

Application, feature, and file details

Table 11. Application, feature, and file details

Applications/Features/Files	Compatibility and versions
System Center Configuration Manager (SCCM) Client	5.00.8412.1307 (version that is displayed in Configuration Manager under Control Panel)
BitLocker with TPM	Supported with versions 1.2 and 2.0 (TPM 2.0 firmware is available as a factory configuration. Latest TPM 2.0 firmware version is 5.61).
Microsoft Management Console	Management Console 3.0 version 1607 (Build 14393.2339)
Remote Desktop Connection (RDC)	Remote Desktop Protocol 10.2 supported. Network Level Authentication Shell version 10.0.14393. Control version 10.0.14393.
Internet Explorer 11	11.2339.14393.0 (version that is displayed in About Internet Explorer)
Network Access Protection (NAP)	Not Supported
Background Intelligent Transfer Service	Supported
MSXML	Supported

Applications/Features/Files	Compatibility and versions
Windows Multi touch	Supported
XML Paper specification (XPS)	Supported
Credential Roaming	Supported
WPA2	Supported
CredSSP	Supported
Dell Wyse Wallpaper on All Users	Supported
DirectX 12	Supported
Windows Time Service	Supported
Unified Write Filter Manager (uwfmgr.exe) File version	10.0.14393.2312
NetXClean.exe	3.0.0.8
Disk_Size.exe	3.0.0.5
DWKbFilter.sys	2.3.0.4
DWKbFilterMon.exe	2.2.0.4
DWKbFilterWatchdog.exe	2.2.0.4
RAMDiskSize.exe	1.0.0.2

Installed product details

Table 12. Installed product details

Product Name	Publisher	Version
Citrix Receiver 4.11	Citrix Systems, Inc.	14.11.0.17061
Citrix HDX RealTime Media Engine 2.4	Citrix Systems, Inc.	2.4.0.1233
VMware Horizon Client	VMware, Inc.	4.8.0.1562
Wyse Device Agent	Dell Inc.	14.2.0.51
Dell Open Print Driver	Dell Inc.	1.91.7882.0
Dell KM632 Wireless Keyboard Caps Lock Indicator	Dell	2.1.11.1
Intel Wireless Bluetooth	Intel Corporation	20.40.0
Intel PROSet/Wireless software	Intel Corporation	20.40.0
Microsoft Visual C++ 2005 Redistributable (x64)	Microsoft Corporation	8.0.61000
Microsoft Visual C++ 2008 Redistributable - x86 9.0.30729.4148	Microsoft Corporation	9.0.30729.4148
Microsoft Visual C++ 2008 Redistributable - x64 9.0.21022	Microsoft Corporation	9.0.21022
Microsoft Visual C++ 2008 Redistributable - x64 9.0.30729.4148	Microsoft Corporation	9.0.30729.4148
Microsoft Visual C++ 2008 Redistributable - x64 9.0.30729.6161	Microsoft Corporation	9.0.30729.6161
Microsoft Visual C++ 2015 Redistributable (x64) - 14.0.24212	Microsoft Corporation	14.0.24212.0
Microsoft Visual C++ 2012 Redistributable (x86) - 11.0.61030	Microsoft Corporation	11.0.61030.0

Product Name	Publisher	Version
Microsoft Visual C++ 2015 Redistributable (x86) - 14.0.24212	Microsoft Corporation	14.0.24212.0
Microsoft Visual C++ 2008 Redistributable - x86 9.0.30729.6161	Microsoft Corporation	9.0.30729.6161
Microsoft Visual C++ 2012 Redistributable (x64) - 11.0.50727	Microsoft Corporation	11.0.50727.1
Microsoft Visual C++ 2013 Redistributable (x86) - 12.0.21005	Microsoft Corporation	12.0.21005.1
Microsoft Visual C++ 2013 Redistributable (x64) - 12.0.30501	Microsoft Corporation	12.0.30501.0
Microsoft Lync Vdi 2013	Microsoft Corporation	15.0.4420.1017
Microsoft Silverlight	Microsoft Corporation	5.1.50905.0
Remote Desktop Connection	Microsoft Corporation	10.0.14393.1358
Unified Write Filter Manager	Microsoft Corporation	10.0.14393.0
Windows Media Player	Microsoft Corporation	12.0.14393.0
Internet Explorer	Microsoft Corporation	11.00.14393.0
LicenseManagerShellExt	Microsoft Corporation	10.0.14393.0
Windows PowerShell	Microsoft Corporation	10.0.14393.0
Snipping Tool	Microsoft Corporation	10.0.14393.0
Touch Keyboard and Handwriting Panel	Microsoft Corporation	10.0.14393.0
Microsoft Contacts Import Tool	Microsoft Corporation	10.0.14393.0
PrintTicket Translation database	ThinPrint GmbH	11.0.229.2
ThinPrint Viewture	ThinPrint GmbH	11.22.2.3
TightVNC	GlavSoft LLC.	2.6.4.0
Vulkan Run Libraries 1.0.54.0	LunarG, Inc.	1.0.54.0
Ericom PowerTerm InterConnect for Thin Clients	Ericom Software	12.0
Realtek High Definition Audio Driver	Realtek Semiconductor Corp.	6.0.1.8397
Realtek Ethernet Controller Driver	Realtek	10.26.328.2018
AMD Software	Advanced Micro Devices, Inc.	9.0.000.8
Ericom Connect WebConnect Client	Ericom Software	7.5.1

Quick Fix Engineering—QFE details

Table 13. Quick Fix Engineering

KB number	Description
KB4033393	Update for Microsoft Windows 10 IoT Enterprise
KB4054855	Update for Microsoft Windows 10 IoT Enterprise
KB4091664	Update for Microsoft Windows 10 IoT Enterprise
KB4093137	Update for Microsoft Windows 10 IoT Enterprise
KB4132216	Update for Microsoft Windows 10 IoT Enterprise

KB number	Description
KB4284833	Update for Microsoft Windows 10 IoT Enterprise

Important notes

- Use the build **5060_0A71_32GB_Upgrade.exe** to upgrade from Windows Embedded Standard 7P to Windows 10 IoT Enterprise through Wyse Management Suite, Wyse Device Manager, or USB Imaging Tool.
- Select **Force this version** rule to create a policy from Wyse Management Suite when you upgrade from Windows Embedded Standard 7P to Windows 10 IoT Enterprise.

The screenshot shows the 'Add WES / ThinLinux Policy' dialog box. The 'Rule' dropdown is highlighted with a green border and set to 'Force this version'. Other fields include Policy name: 'Image Upgrade WES7P_WIE10', Group: 'Default Policy Group', OS Type: 'WES', OS Subtype Filter: 'WES7P (Windows Embedded Star', Platform Filter: 'None selected', OS Image: '5060_0A71_32GB_Upgrade (WES7P, Loca...', and Apply Policy Automatically: 'Do not apply automatically'.

Figure 6. Force this version rule

- Wyse Device Agent and Boot Agent must be pushed to the device before imaging from Wyse Management Suite.
- For USB imaging, the boot mode must be selected as **both** in BIOS settings.
- RAMDiskSize.exe** is created to modify the RAM size to 100 MB in write filter enabled state and 512 MB in write filter disabled state. This RAM size is set for devices with 4 GB RAM and Windows 10 IoT Enterprise.

If the RAM size is greater than 4 GB, the RAM size is set to 512 MB in both write filter enabled state and disabled state.

- vWorkspace is not supported in this build.
- Adobe flash player is not supported in this build. All components specific to adobe flash player are removed.
- To support Wyse Management Suite imaging, upgrade and standard images are created separately, with the change in the common folder structure.