

Windows 10 Enterprise 2019 LTSC for Dell Wyse Thin Clients

Release Notes



Notes, cautions, and warnings

 **NOTE:** A NOTE indicates important information that helps you make better use of your product.

 **CAUTION:** A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

 **WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.

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Overview

The Windows 10 Enterprise 2019 LTSC operating system is designed to run on Dell Wyse Thin Clients. New releases are created to support new hardware platforms, correct defects, make enhancements, or add new features.

i **NOTE:** For details about the previous version, if applicable, or to determine which version of the operating system you need to select for your thin client, see [Version Matrix](#).

Version matrix

The following version matrix lists the platforms supported in each Windows 10 Enterprise 2019 LTSC for Dell Wyse Thin Clients release, and helps you select which type of thin client is appropriate for your work environment:

Table 1. Version matrix

Release version	Release date	Supported platforms	Release Notes
10.04.XX.06.21.00	July 2021	<ul style="list-style-type: none"> • Wyse 5070 Thin Client • Wyse 5470 Thin Client • Wyse 5470 All-in-One Thin Client 	Windows 10 Enterprise LTSC-2019 Maintenance Release 1
10.04.07.09.20.00	December 2020	<ul style="list-style-type: none"> • Wyse 5070 Thin Client • Wyse 5470 Thin Client • Wyse 5470 All-in-One Thin Client 	Windows 10 Enterprise 2019 LTSC for Dell Wyse Thin Clients

Windows 10 Enterprise LTSC-2019 Maintenance Release 1

Release summary

This release note contains information about the Windows 10 IoT Enterprise unified build 10.04.XX.06.21.00 that runs on Wyse 5070 Thin Client, Wyse 5470 Thin Client, and Wyse 5470 All-in-One Thin Client. The operating system is based on Windows 10 Enterprise 2019 LTSC, also known as Redstone 5 (RS5). This is a Windows 10 IoT Enterprise (LTSC 2019) unified build MR1 which supports English and MUI Languages.

NOTE: There are 16 other supported languages which can be downloaded using the **Settings** feature.

This build can be pushed on thin clients with 32 GB eMMC, 64 GB SSD, 128 GB SSD and 256 GB SSD and higher with 4 GB RAM and 8 GB RAM.

NOTE: Thin clients running Windows 10 IoT Enterprise Redstone 1 purchased before 10-03-2019 cannot be updated to Redstone 5 without purchasing additional license. This can be accomplished by reviewing your SA/CLA agreement with Microsoft or through distribution.

Version

10.04.XX.06.21.00

Release date

July 2021

Priority and recommendations

Recommended: Dell recommends applying this update during your next scheduled update cycle. The update contains feature enhancements or changes that will help keep your system software current and compatible with other system modules (firmware, BIOS, drivers and software).

Compatibility

Build details

Table 2. Build details of Wyse 5070 Thin Client

Release detail	Specification
Platform	Wyse 5070 Thin Client
Product	Windows 10 IoT Enterprise 2019 LTSC
Build version/Kernal version	10.0
Build number	10.04.06.06.21.00

Table 2. Build details of Wyse 5070 Thin Client (continued)

Release detail	Specification
BIOS version	1.9.0

Table 3. Build details of Wyse 5470 Thin Client

Release detail	Specification
Platform	Wyse 5470 Thin Client
Product	Windows 10 IoT Enterprise 2019 LTSC
Build version/Kernal version	10.0
Build number	10.04.08.06.21.00
BIOS version	1.6.0

Table 4. Build details of Wyse 5470 All-in-One Thin Client

Release detail	Specification
Platform	Wyse 5470 All-in-One Thin Client
Product	Windows 10 IoT Enterprise 2019 LTSC
Build version/Kernal version	10.0
Build number	10.04.07.06.21.00
BIOS version	1.7.0

Connection brokers

- VMware Horizon client version 8.1.0.15949 is supported.
- Citrix Workspace 19.12.3000.6 is supported.
- Citrix RTME version 2.9.300.2604 is supported.

Hardware capability

Display settings for Wyse 5070 Thin Client

By default, the Display Settings UI is available in both user mode and admin mode. Any changes to display preferences made through this UI is saved for the user.

Table 5. Port preferences

Thin Client	Port preferences
Wyse 5070 Thin Client with Celeron processor	<ul style="list-style-type: none">• Optional port can be used as second RJ-45, SFP, VGA, or second serial port.• If wireless is enabled, the optional port cannot be used as second RJ-45 or SFP.• When monitor is connected on USB-C port, DisplayPort 2 becomes inactive.
Wyse 5070 Thin Client with Pentium processor	<ul style="list-style-type: none">• Optional port can be used as second RJ-45, SFP, VGA, or second serial port.• If wireless is enabled, the optional port cannot be used as second RJ-45 or SFP.• Back headset is disabled if front headphone is used.• When monitor is connected on USB-C port, DisplayPort 2 becomes inactive.

Table 5. Port preferences (continued)

Thin Client	Port preferences
	<ul style="list-style-type: none"> When the VGA monitor is present on VGA optional port, DisplayPort 3 becomes inactive.
Wyse 5070 Extended Thin Client	<ul style="list-style-type: none"> Optional port can be used as second RJ-45, SFP, or VGA. If wireless is enabled, the optional port cannot be used as second RJ-45 or SFP. Back headset is disabled if front headphone is used. When a monitor is connected using USB-C port, DisplayPort 2 becomes inactive. When a VGA monitor is connected the VGA optional port, DisplayPort 3 becomes inactive. Power option is available on the first serial port. PCIe slot is available.

Wyse 5070 Thin Client with Celeron processor

Table 6. Wyse 5070 Thin Client with Celeron processor

Number of Displays	Supported display resolution	
	4K resolution ¹	Non- 4K resolution ²
One display	Yes	Yes
Two displays	Yes	Yes
Three displays	No ³	Yes ³

1. 4K resolution—3840 x 2160 @ 60 Hz
2. Non-4K resolution—Up to 2560 x 1600 @ 60 Hz
3. VGA port does not support 4K display. However, it supports a display with 1080p screen resolution.

Table 7. Ports

Ports	DP1	DP2	VGA	USB Type-C
Monitor priority	1	2B ²	3	2A ²
4K display resolution	Yes	Yes	No ¹	Yes
Non-4K resolution	Yes	Yes	Yes ¹	Yes

1. VGA port does not support 4K display. However, it supports a display with 1080p screen resolution.
2. DP2 and USB Type-C port are mutually exclusive with USB Type-C port taking higher priority.

Wyse 5070 Thin Client with Pentium processor

Table 8. Wyse 5070 Thin Client with Pentium processor

Number of Displays	Supported display resolution	
	4K resolution ¹	Non- 4K resolution ²
One display	Yes	Yes

Table 8. Wyse 5070 Thin Client with Pentium processor (continued)

Number of Displays	Supported display resolution	
	4K resolution ¹	Non-4K resolution ²
Two displays	Yes	Yes
Three displays	No ³	Yes

1. 4K resolution—3840 x 2160 @ 60 Hz
2. Non-4K resolution—Up to 2560 x 1600 @ 60 Hz
3. If you connect three displays, two monitors will have 4K resolution and one monitor will have 2560 x 1600 @ 60 Hz.

Table 9. Ports

Ports	DP1	DP2	DP3	VGA	USB Type-C
Monitor priority	1	2B ²	3B ³	3A ³	2A ²
4K display resolution	Yes	Yes	Yes	No ¹	Yes
Non-4K resolution	Yes	Yes	Yes	Yes	Yes

1. VGA port does not support 4K display. However, it supports a display with 1080p screen resolution.
2. DP2 and USB Type-C port are mutually exclusive with USB Type-C port taking higher priority.
3. DP3 and VGA port are mutually exclusive with VGA port taking higher priority.

Wyse 5070 Extended Thin Client with AMD GPU

Table 10. Wyse 5070 Extended Thin Client with AMD GPU

Number of Displays	Supported display resolution	
	4K resolution ¹	Non- 4K resolution ²
One display	Yes	Yes
Two displays	Yes	Yes
Three displays⁴	Yes	Yes
Four displays⁵	Yes	Yes
Five displays	No ³	Yes
Six displays	No ³	Yes

1. 4K resolution—3840 x 2160 at 60 Hz
2. Non-4K resolution—Up to 2560 x 1600 at 60 Hz – Supports only up to four monitors with 4K screen resolution at 60 Hz.
3. If you connect five or six displays, four monitors will have 4K resolution and other monitors will have a maximum resolution of 2560 x 1600 at 60 Hz.
4. For three displays, Dell recommends that you configure first two 4K displays on the main board (DP1~DP3), and the third 4K display on AMD GPU card.
5. For four displays, Dell recommends that you configure first two 4K displays on the main board (DP1~DP3), and the remaining two 4K displays on AMD GPU card.

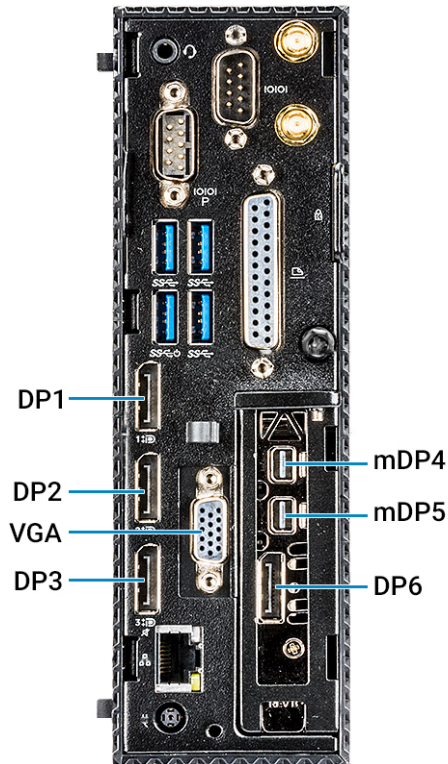


Figure 1. Ports of Wyse 5070 Extended Thin Client

Table 11. Ports

Ports	DP1	DP2	DP3	VGA	USB-C	mDP4 ³	mDP5 ⁴	DP6 ⁵
Monitor priority	1	2B ⁶	3B ⁷	3A ⁷	2A ⁶	4	5	6
4K display resolution	Yes	Yes	Yes	No ¹	Yes	Yes	Yes	Yes
Non-4K resolution	Yes	Yes	Yes	Yes ²	Yes	Yes	Yes	Yes

1. VGA port does not support 4K display. However, it supports a display with 1080p screen resolution.
2. VGA port supports 1080p screen resolution.
3. mDP4 port refers to the top mDP port of the AMD GPU slot.
4. mDP5 port refers to the middle mDP port of the AMD GPU slot.
5. DP6 refers to the bottom DP port of the AMD GPU slot.
6. DP2 and USB Type-C port are mutually exclusive with USB Type-C port taking higher priority.
7. DP3 and VGA port are mutually exclusive with VGA port taking higher priority.

Monitor priority—The following order defines the monitor priority set on Windows 10 IoT Enterprise for Wyse 5070 thin client:

- DP1 > DP2 > DP3 > mDP4 > mDP5 > DP6
- DP1 > USB-C > DP3 > mDP4 > mDP5 > DP6

- DP1 > DP2 > VGA > mDP4 > mDP5 > DP6
- DP1 > USB-C > VGA > mDP4 > mDP5 > DP6

Audio capability—Audio is supported on all DP ports except DP3.

Supported languages

- English (en-US)
- German (de-DE)
- French France (fr-FR)
- French Canada (fr-CA)
- Italian (it-IT)
- Spanish (es-ES)
- Japanese (ja-JP)
- Korean (ko-KR)
- Chinese Simplified (zh-CN)
- Chinese traditional (zh-TW)
- Brazilian Portuguese (pt-BR)
- Dutch Netherlands (nl-NL)
- Danish Denmark (da-DK)
- Finnish Finland (fi-FI)
- Norwegian Norway (nb-NO)
- Russian Russia (ru-RU)
- Swedish Sweden (sv-SE)

Important notes

Hardware support information

- Rich 4K display capability is provided.
- Option for 802.11 a/b/g/n/ac wireless is provided.
- Intel Celeron® J4105 CPU at 1.50 GHz (Economy configuration), Intel Pentium® Silver J5005 at 1.50 GHz (Standard and Extended configuration) is supported.
- Video adapters—DP to DVI, DP to VGA—is supported.
- Dynamic throttling for higher performance is supported.

Test Environment

Table 12. Test Environment

Thin client	CPU Name	Build Package Name	Product Version	RAM	SSD Size	BIOS Version
Wyse 5070 Thin Client with Celeron processor	Intel(R) Celeron(R) J4105 CPU at 1.50 GHz	WIE10_LTSC_2019_UNIFIED_October2020	10.04.06.06.21.00	8 GB	64 GB—Apacer	1.11.1
Wyse 5070 Thin Client with Pentium processor	Intel(R) Pentium(R) Silver J5005 CPU at 1.50 GHz	WIE10_LTSC_2019_UNIFIED_October2020	10.04.06.06.21.00	8 GB	64 GB—Apacer	1.11.1

Table 12. Test Environment (continued)

Thin client	CPU Name	Build Package Name	Product Version	RAM	SSD Size	BIOS Version
Wyse 5070 Extended Thin Client with Pentium processor	Intel(R) Pentium(R) Silver J5005 CPU at 1.50 GHz	WIE10_LTSC_2019_UNIFIED_October2020	10.04.06.06.21.00	8 GB	64 GB—Apacer	1.11.1
Wyse 5070 thin client with Celeron processor	Intel(R) Celeron(R) J4105 CPU at 1.50 GHz	WIE10_LTSC_2019_UNIFIED_October2020	10.04.06.06.21.00	4 GB	32 GB eMMC—Default	1.11.1
Wyse 5470 All-in-One Thin Client	Intel Celeron® J4105 CPU @ 1.50GHz	WIE10_LTSC_2019_UNIFIED_October2020	10.04.07.06.21.00	4GB	32GB eMMC	1.8.1
	Intel Celeron® J4105 CPU @ 1.50GHz	WIE10_LTSC_2019_UNIFIED_October2020	10.04.07.06.21.00	8GB	128GB	1.8.1
Wyse 5470 Thin Client	Intel Celeron® J4100 CPU @ 1.10GHz,	WIE10_LTSC_2019_UNIFIED_October2020	10.04.08.06.21.00	4GB	32GB	1.8.1
	Intel Celeron® J4100 CPU @ 1.10GHz,	WIE10_LTSC_2019_UNIFIED_October2020	10.04.08.06.21.00	8GB	128GB	1.8.1

Table 13. Additional details

Component	Version
Wyse Management Suite	1.4 and later versions
Boot Agent	4.0.5
USB Imaging Tool	1.2.4

Used and free space details

Table 14. Used and free space details

Platform	SSD\eMMC Size	Used Space	Free Space
Wyse 5070 Thin Client	128 GB	14.6 GB	99.2 GB
Wyse 5470 All-in-One Thin Client	32 GB	14.6 GB	11.1 GB
Wyse 5470 Thin Client	128 GB	13.5 GB	100 GB

QFEs

Table 15. QFEs

KB Number	Update Description
KB4601060	Update for Microsoft WIE10
KB4465065	Update for Microsoft WIE10
KB4580325	Security Update for Microsoft WIE10
KB5000859	Security Update for Microsoft WIE10

Table 15. QFEs (continued)

KB Number	Update Description
KB5000822	Security Update for Microsoft WIE10

For more information, see support.microsoft.com.

Operating system components

Table 16. Driver details

Drivers/ Files	Wyse 5070 Thin Client	Wyse 5470 All-in-One Thin Client	Wyse 5470 Thin Client
Display Adapter	Intel UHD Graphics 600 (26.20.100.6998) Citrix Indirect Display Adapter (12.40.44.247)	Intel UHD Graphics 600 (26.20.100.6998) Citrix Indirect Display Adapter (12.40.44.247)	Intel UHD Graphics 600 (26.20.100.6998) Citrix Indirect Display Adapter (12.40.44.247)
Network Adapter	Realtek (10.32.1206.2018)	Realtek (10.32.1206.2018)	Realtek (10.32.1206.2018)
Audio	Realtek Audio (6.0.8955.1) Intel display audio (10.27.0.4)	Intel display audio (10.26.0.6) Realtek audio (6.0.8955.1)	Intel display audio (10.27.0.4) Realtek audio (6.0.8955.1)
Wireless Adapter	Intel (21.70.0.6)	Intel (21.70.0.6)	Intel (21.70.0.6)
Bluetooth	Intel (21.70.0.3)	Intel (21.70.0.3)	Intel (21.70.0.3)
Wyseramdisk.sys (Wyse RAM Disk driver)	5.0.2183.5	5.0.2183.5	5.0.2183.5
CAD-MAP-VDI	3.0.6.0	3.0.6.0	3.0.6.0

Table 17. Common application, features, and files

Application	Version
WDA	14.5.2.16
PlatVsys	1.0.0.4
VMWare Horizon Client	8.1.0.15949
Merlin	4.0.7
Quick Config (Wyse Easy Setup)	2.0.0.161
ALM	1.1.0.3
xDCM	1.0.0.3
DCM	10.3.0.121
Citrix Workspace 1912	19.12.3000.6
Citrix RTME	2.9.300.2604
CAD Map	3.0.6.0
SCCM	5.00.8790.1007(2019)
Build Content	1.0.0.8
MUI tool	1.0.0.10
Dell Thin Client App	10.0.0.27
MS Lync VDI 2013	15.0.4420.1017
Custom Sysprep	1.0.0.17
Quick Start	No Version

Table 17. Common application, features, and files (continued)

Application	Version
Ericom PowerTerm interconnect for thin clients	12.5.1
Ericom connect WebConnect client	7.5.1

Supported peripherals

Table 18. Supported peripherals

Product Category	Peripherals	Wyse 5070 Thin Client	Wyse 5470 All-in-One Thin Client	Wyse 5470 Thin Client
Audio	Dell Pro Stereo Headset - UC150 - Skype for Business	✓	N/A	✓
	Dell Pro Stereo Headset - Skype for Business - UC350	✓	✓	✓
	Dell Professional Sound Bar (AE515M)	✓	N/A	✓
	Dell USB Sound Bar (AC511M)	✓	N/A	✓
	Jabra PRO 935 USB MS Lync Headset - 935-15-503-185 - 935-15-503-185	✓	N/A	N/A
	Dell 2.0 Speaker System - AE215	N/A	✓	✓
	Dell Wireless 2.1 Speaker System - AE415	N/A	✓	✓
	Jabra Evolve 65 MS Stereo - Headset	N/A	✓	✓
	Jabra Engage 65 Stereo Headset	N/A	✓	✓
	Plantronics Savi W440M-400 Series convertible wireless headset - DECT 6.0	N/A	✓	✓
	Plantronics Voyager Focus UC B825-M headset for Microsoft Lync	N/A	✓	✓
Adapters/Cables	Dell Adapter - DisplayPort to DVI (Single Link) - DANARBC084 - DANARBC084	✓	N/A	N/A
	Dell Adapter - DisplayPort to HDMI 2.0 (4K) - DANAUBC087 - DANAUBC087	✓	✓	N/A
	Dell Adapter - DisplayPort to VGA - DANBNBC084 - DANBNBC084	✓	N/A	N/A
	C2G - USB 2.0 A (Male) to DB9 (Serial) (Male) Adapter	✓		✓
	Dell Adapter - USB-C to DisplayPort - DBQANBC067 - DBQANBC067	✓	N/A	✓
	Dell Adapter - USB-C to HDMI - DBQAUBC064 - DBQAUBC064	✓	N/A	N/A
	Dell Adapter - USB-C to VGA - DBQBNBC064 - DBQBNBC064	✓	N/A	N/A
	Trendnet« USB to Serial Converter RS-232	✓	✓	✓
	Dell Adapter - HDMI to DVI - DAUARBN004 - DAUARBN004	N/A	N/A	✓
	Dell Adapter - HDMI to VGA - DAUBNBC084 - DAUBNBC084	N/A	N/A	✓
	Dell Adapter - USB-C to Dual USB-A with Power Pass-Through - DBQ2BJBC070 - Combo Adapter	N/A	N/A	✓

Table 18. Supported peripherals (continued)

Product Category	Peripherals	Wyse 5070 Thin Client	Wyse 5470 All-in-One Thin Client	Wyse 5470 Thin Client
	Dell Adapter - USB-C to HDMI/DisplayPort with Power Pass-Through - DBQAUANBC070 - Combo Adapter	N/A	N/A	✓
	Dell USB-C Mobile Adapter - DA300 - Slayer 3 - DA300	N/A	N/A	✓
	StarTech.com 1 Port USB to RS232 DB9 Serial Adapter Cable - Serial adapter - USB 2.0 - RS-232	N/A	✓	✓
Input Devices	Dell Laser Scroll USB 6-Buttons Silver and Black Mouse - Naruto	✓	✓	✓
	Dell USB Wired Keyboard - KB216	✓	✓	N/A
	DellUSB Wired Optical Mouse - MS116	✓	✓	✓
	Dell Premier Wireless Mouse - WM527	✓	N/A	✓
	Dell Wireless Keyboard and Mouse - KM636	✓	✓	✓
	CHERRY KC 1000 SC - Keyboard - with Smart Card reader - USB - English - US - black - TAA Compliant - JK-A0104EU-2	✓	N/A	N/A
	Dell Wireless Mouse - WM326	N/A	✓	✓
	Dell keyboard KB813t	✓	✓	✓
	Dell keyboard KB813	✓	✓	✓
Monitors	E1916H	✓	✓	N/A
	P1917S	N/A	N/A	N/A
	E1920H	✓	✓	✓
	E2016H	✓	✓	✓
	E2016Hv (China only)	N/A	N/A	✓
	P2017H		N/A	N/A
	P2018H	N/A	N/A	✓
	E2020H	✓	✓	✓
	E2218HN	N/A	✓	✓
	P2217	N/A	N/A	N/A
	P2217H	✓	N/A	N/A
	P2219H	✓	N/A	✓
	P2219HC	✓	N/A	✓
	E2220H	✓	✓	✓
	E2318H	✓	✓	✓
	P2317H	✓	N/A	N/A
	E2417H	✓	✓	✓
	P2415Q	✓	✓	N/A
	P2417H	✓	N/A	N/A
	Dell 24 Monitor - P2418D	N/A	N/A	N/A
P2418HZ	✓	N/A	N/A	

Table 18. Supported peripherals (continued)

Product Category	Peripherals	Wyse 5070 Thin Client	Wyse 5470 All-in-One Thin Client	Wyse 5470 Thin Client
	P2419H	✓	✓	✓
	P2419HC	✓	N/A	✓
	P2421D	✓	N/A	✓
	E2420H	✓	✓	✓
	P2418HT	✓	✓	N/A
	P2719H	✓	✓	✓
	P2719HC	✓	N/A	✓
	P2720D	✓	N/A	✓
	E2720H	✓	✓	✓
	P3418HW	✓	✓	N/A
	MR2416	✓	N/A	N/A
	U2415	✓	✓	N/A
	U2419H	✓	✓	✓
	U2419HC	✓	N/A	✓
	U2518D	✓	✓	N/A
	U2520D	✓	✓	✓
	U2720Q	✓	✓	✓
	U2718Q (4K)	✓	✓	✓
	U2719D	✓	✓	✓
	U2719DC	✓	N/A	✓
	Dell UltraSharp 27 USB-C HUB monitor - U2721DE	✓	✓	✓
	E2216H	✓	✓	✓
	E2216Hv (China only)	N/A	N/A	✓
	E2318HN	✓	N/A	N/A
	E2420HS	✓	✓	✓
	E2720HS	✓	✓	✓
	P2016	✓	N/A	N/A
	P2319H	✓	N/A	✓
	P2421DC	✓	N/A	✓
	P2720DC	✓	N/A	✓
	P4317Q	✓	✓	N/A
	U2421HE	✓	✓	✓
	U4320Q	✓	✓	✓
	Dell UltraSharp 49 Curved Monitor - U4919DW	✓	N/A	N/A
Networking	Add On 1000 Base-T SFP transceiver (RJ-45)	✓	N/A	N/A
	Dell Adapter - USB 3.0 to Ethernet PXE Boot - DBJBCBC064	N/A	N/A	✓

Table 18. Supported peripherals (continued)

Product Category	Peripherals	Wyse 5070 Thin Client	Wyse 5470 All-in-One Thin Client	Wyse 5470 Thin Client
Docking station	Dell Dock - WD19-C (code name Salomon)	N/A	N/A	✓
	Dell Business Dock - WD15 - WD15 - WD15 - Imperial Express	N/A	N/A	✓
	Dell Thunderbolt Dock - WD19TB - WD19TB - Salomon - Thunderbolt - WD19TB	N/A	N/A	✓
Storage	Dell Portable SSD, USB-C 250GB (Edison)	N/A	N/A	✓
	Dell USB Slim DVD +/û RW Drive - DW316 - DW316 - DW316 - Agate	N/A	N/A	✓
Smart Card / Readers	Cherry Smart Terminal SMART Card Reader - ST-1044U	✓	N/A	N/A
	Cherry Smart Terminal ST-1144 SMART Card Reader - USB 2.0	✓	N/A	✓
	CHERRY KC 1000 SC - Keyboard - with Smart Card reader - USB - English - US - black - TAA Compliant - JK-A0104EU-2	N/A	N/A	✓
	ETOKEN,SAFENET 5110, FIPS,JAVA/80K,BLACK,ID, (HEX)	✓	✓	✓
	ETOKEN, SAFENET, 5110+,CC,JAVA/80K,BLACK,I, D (HEX)	✓	✓	✓
	CARD_IDPrime MD 830 B FIPS 140-2 L2 White PVC	✓	✓	✓
	CARD_IDPrime MD 3840 B w/o OTP	✓	✓	✓
	Card_IDPrimeMD840B_white_PVC	✓	✓	✓
	CARD_IDPrime MD3811, Mifare EV1 4K&DESFire EV1, 4K _MPH150_New	✓	✓	✓
	Standard Card _IDPrime NET 510_ white PVC	✓	✓	✓
	Ybikey Neo 5.0 PIV Card	✓	✓	✓
	E-token pro Aladdin 72 K	✓	✓	✓
	Sun microsystem SCR 3311	✓	✓	✓
Printers	Dell Color Multifunction Printer - E525w	N/A	N/A	N/A
	Dell Color Printer- C2660dn - Raffles	✓	N/A	N/A
	Dell Multifunction Printer - E515dn - SparrowHawk Wired	N/A	N/A	N/A

Fixed issues

The following are the fixed issues in this release:

- WIN-1593—The operating system is certified with VMware Workspace ONE certification.
- WIN-1594—The operating system is certified with VMware Carbon Black Sensor certification.
- WIN-1595—The operating system is certified with Windows Autopilot certification.

Windows 10 Enterprise 2019 LTSC for Dell Wyse Thin Clients

Release summary

This release note contains information about the Windows 10 IoT Enterprise unified build 10.04.07.09.20.00 that runs on Wyse 5070 Thin Client, Wyse 5470 Thin Client, and Wyse 5470 All-in-One Thin Client. The operating system is based on Windows 10 Enterprise 2019 LTSC, also known as Redstone 5 (RS5).

This build can be pushed on thin clients with 32 GB eMMC, 64 GB SSD, 128 GB SSD and 256 GB SSD and higher with 4 GB RAM and 8 GB RAM.

NOTE: Thin clients running Windows 10 IoT Enterprise Redstone 1 purchased before 10-03-2019 cannot be updated to Redstone 5 without purchasing additional license. This can be accomplished by reviewing your SA/CLA agreement with Microsoft or through distribution.

Version

10.04.07.09.20.00

Release date

December 2020

Compatibility

Build details

Table 19. Build details of Wyse 5070 Thin Client

Release detail	Specification
Platform	Wyse 5070 Thin Client
Product	Windows 10 IoT Enterprise 2019 LTSC
Build version/Kernal version	10.0
Build number	10.04.06.11.20.00
BIOS version	1.9.0

Table 20. Build details of Wyse 5470 Thin Client

Release detail	Specification
Platform	Wyse 5470 Thin Client
Product	Windows 10 IoT Enterprise 2019 LTSC
Build version/Kernal version	10.0

Table 20. Build details of Wyse 5470 Thin Client (continued)

Release detail	Specification
Build number	10.04.08.11.20.00
BIOS version	1.6.0

Table 21. Build details of Wyse 5470 All-in-One Thin Client

Release detail	Specification
Platform	Wyse 5470 All-in-One Thin Client
Product	Windows 10 IoT Enterprise 2019 LTSC
Build version/Kernal version	10.0
Build number	10.04.07.11.20.00
BIOS version	1.7.0

Connection brokers

- VMware Horizon client version 5.4.0.10892 is supported.
- Citrix Workspace 1912 19.12.0.119 is supported.
- Ericom Web connect version 7.5.1 is supported.

Supported languages

- English (en-US)
- German (de-DE)
- French France (fr-FR)
- French Canada (fr-CA)
- Italian (it-IT)
- Spanish (es-ES)
- Japanese (ja-JP)
- Korean (ko-KR)
- Chinese Simplified (zh-CN)
- Chinese traditional (zh-TW)
- Brazilian Portuguese (pt-BR)
- Dutch Netherlands (nl-NL)
- Danish Denmark (da-DK)
- Finnish Finland (fi-FI)
- Norwegian Norway (nb-NO)
- Russian Russia (ru-RU)
- Swedish Sweden (sv-SE)

Hardware capability

Display settings for Wyse 5070 Thin Client

By default, the Display Settings UI is available in both user mode and admin mode. Any changes to display preferences made through this UI is saved for the user.

Table 22. Port preferences

Thin Client	Port preferences
Wyse 5070 Thin Client with Celeron processor	<ul style="list-style-type: none"> Optional port can be used as second RJ-45, SFP, VGA, or second serial port. If wireless is enabled, the optional port cannot be used as second RJ-45 or SFP. When monitor is connected on USB-C port, DisplayPort 2 becomes inactive.
Wyse 5070 Thin Client with Pentium processor	<ul style="list-style-type: none"> Optional port can be used as second RJ-45, SFP, VGA, or second serial port. If wireless is enabled, the optional port cannot be used as second RJ-45 or SFP. Back headset is disabled if front headphone is used. When monitor is connected on USB-C port, DisplayPort 2 becomes inactive. When the VGA monitor is present on VGA optional port, DisplayPort 3 becomes inactive.
Wyse 5070 Extended Thin Client	<ul style="list-style-type: none"> Optional port can be used as second RJ-45, SFP, or VGA. If wireless is enabled, the optional port cannot be used as second RJ-45 or SFP. Back headset is disabled if front headphone is used. When a monitor is connected using USB-C port, DisplayPort 2 becomes inactive. When a VGA monitor is connected the VGA optional port, DisplayPort 3 becomes inactive. Power option is available on the first serial port. PCIe slot is available.

Wyse 5070 Thin Client with Celeron processor

Table 23. Wyse 5070 Thin Client with Celeron processor

Number of Displays	Supported display resolution	
	4K resolution ¹	Non- 4K resolution ²
One display	Yes	Yes
Two displays	Yes	Yes
Three displays	No ³	Yes ³

1. 4K resolution—3840 x 2160 @ 60 Hz

2. Non-4K resolution—Up to 2560 x 1600 @ 60 Hz

3. VGA port does not support 4K display. However, it supports a display with 1080p screen resolution.

Table 24. Ports

Ports	DP1	DP2	VGA	USB Type-C
Monitor priority	1	2B ²	3	2A ²
4K display resolution	Yes	Yes	No ¹	Yes

Table 24. Ports (continued)

Ports	DP1	DP2	VGA	USB Type-C
Non-4K resolution	Yes	Yes	Yes ¹	Yes

1. VGA port does not support 4K display. However, it supports a display with 1080p screen resolution.
2. DP2 and USB Type-C port are mutually exclusive with USB Type-C port taking higher priority.

Wyse 5070 Thin Client with Pentium processor**Table 25. Wyse 5070 Thin Client with Pentium processor**

Number of Displays	Supported display resolution	
	4K resolution ¹	Non- 4K resolution ²
One display	Yes	Yes
Two displays	Yes	Yes
Three displays	No ³	Yes

1. 4K resolution—3840 x 2160 @ 60 Hz
2. Non-4K resolution—Up to 2560 x 1600 @ 60 Hz
3. If you connect three displays, two monitors will have 4K resolution and one monitor will have 2560 x 1600 @ 60 Hz.

Table 26. Ports

Ports	DP1	DP2	DP3	VGA	USB Type-C
Monitor priority	1	2B ²	3B ³	3A ³	2A ²
4K display resolution	Yes	Yes	Yes	No ¹	Yes
Non-4K resolution	Yes	Yes	Yes	Yes	Yes

1. VGA port does not support 4K display. However, it supports a display with 1080p screen resolution.
2. DP2 and USB Type-C port are mutually exclusive with USB Type-C port taking higher priority.
3. DP3 and VGA port are mutually exclusive with VGA port taking higher priority.

Wyse 5070 Extended Thin Client with AMD GPU**Table 27. Wyse 5070 Extended Thin Client with AMD GPU**

Number of Displays	Supported display resolution	
	4K resolution ¹	Non- 4K resolution ²
One display	Yes	Yes
Two displays	Yes	Yes
Three displays⁴	Yes	Yes
Four displays⁵	Yes	Yes
Five displays	No ³	Yes

Table 27. Wyse 5070 Extended Thin Client with AMD GPU (continued)

Number of Displays	Supported display resolution	
Six displays	No ³	Yes

1. 4K resolution—3840 x 2160 at 60 Hz
2. Non-4K resolution—Up to 2560 x 1600 at 60 Hz – Supports only up to four monitors with 4K screen resolution at 60 Hz.
3. If you connect five or six displays, four monitors will have 4K resolution and other monitors will have a maximum resolution of 2560 x 1600 at 60 Hz.
4. For three displays, Dell recommends that you configure first two 4K displays on the main board (DP1~DP3), and the third 4K display on AMD GPU card.
5. For four displays, Dell recommends that you configure first two 4K displays on the main board (DP1~DP3), and the remaining two 4K displays on AMD GPU card.

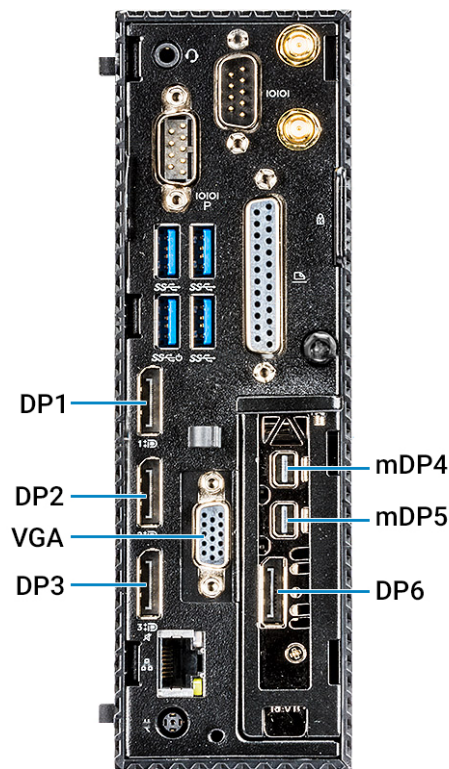


Figure 2. Ports of Wyse 5070 Extended Thin Client

Table 28. Ports

Ports	DP1	DP2	DP3	VGA	USB-C	mDP4 ³	mDP5 ⁴	DP6 ⁵
Monitor priority	1	2B ⁶	3B ⁷	3A ⁷	2A ⁶	4	5	6
4K display resolution	Yes	Yes	Yes	No ¹	Yes	Yes	Yes	Yes

Table 28. Ports (continued)

Ports	DP1	DP2	DP3	VGA	USB-C	mDP4 ³	mDP5 ⁴	DP6 ⁵
Non-4K resolution	Yes	Yes	Yes	Yes ²	Yes	Yes	Yes	Yes

- VGA port does not support 4K display. However, it supports a display with 1080p screen resolution.
- VGA port supports 1080p screen resolution.
- mDP4 port refers to the top mDP port of the AMD GPU slot.
- mDP5 port refers to the middle mDP port of the AMD GPU slot.
- DP6 refers to the bottom DP port of the AMD GPU slot.
- DP2 and USB Type-C port are mutually exclusive with USB Type-C port taking higher priority.
- DP3 and VGA port are mutually exclusive with VGA port taking higher priority.

Monitor priority—The following order defines the monitor priority set on Windows 10 IoT Enterprise for Wyse 5070 thin client:

- DP1 > DP2 > DP3 > mDP4 > mDP5 > DP6
- DP1 > USB-C > DP3 > mDP4 > mDP5 > DP6
- DP1 > DP2 > VGA > mDP4 > mDP5 > DP6
- DP1 > USB-C > VGA > mDP4 > mDP5 > DP6

Audio capability—Audio is supported on all DP ports except DP3.

Important notes

Hardware support information

- Rich 4K display capability is provided.
- Option for 802.11 a/b/g/n/ac wireless is provided.
- Intel Celeron® J4105 CPU at 1.50 GHz (Economy configuration), Intel Pentium® Silver J5005 at 1.50 GHz (Standard and Extended configuration) is supported.
- Video adapters—DP to DVI, DP to VGA—is supported.
- Dynamic throttling for higher performance is supported.

Test Environment

Table 29. Test Environment

Thin client	CPU Name	Build Package Name	Product Version	RAM	SSD Size	BIOS Version
Wyse 5070 Thin Client with Celeron processor	Intel(R) Celeron(R) J4105 CPU at 1.50 GHz	WIE10_LTSC_2019_UNIFIED_October2020	10.04.07.09.20.00	8 GB	64 GB—Apacer	1.2.4
Wyse 5070 Thin Client with Pentium processor	Intel(R) Pentium(R) Silver J5005 CPU at 1.50 GHz	WIE10_LTSC_2019_UNIFIED_October2020	10.04.07.09.20.00	8 GB	64 GB—Apacer	1.2.4
Wyse 5070 Extended Thin Client with	Intel(R) Pentium(R) Silver J5005	WIE10_LTSC_2019_UNIFIED_October2020	10.04.07.09.20.00	8 GB	64 GB—Apacer	1.2.4

Table 29. Test Environment (continued)

Thin client	CPU Name	Build Package Name	Product Version	RAM	SSD Size	BIOS Version
Pentium processor	CPU at 1.50 GHz					
Wyse 5070 thin client with Celeron processor	Intel(R) Celeron(R) J4105 CPU at 1.50 GHz	WIE10_LTSC_2019_UNIFIED_October2020	10.04.07.09.20.00	4 GB	32 GB eMMC—Default	1.2.4
Wyse 5470 All-in-One Thin Client	Intel Celeron® J4105 CPU @ 1.50GHz	WIE10_LTSC_2019_UNIFIED_October2020	10.04.07.09.20.00	4GB	32GB eMMC	1.52
	Intel Celeron® J4105 CPU @ 1.50GHz	WIE10_LTSC_2019_UNIFIED_October2020	10.04.07.09.20.00	8GB	128GB	1.5.2
Wyse 5470 Thin Client	Intel Celeron® J4100 CPU @ 1.10GHz,	WIE10_LTSC_2019_UNIFIED_October2020	10.04.07.09.20.00	4GB	32GB	1.4.0
	Intel Celeron® J4100 CPU @ 1.10GHz,	WIE10_LTSC_2019_UNIFIED_October2020	10.04.07.09.20.00	8GB	128GB	1.4.0

Table 30. Additional details

Component	Version
Wyse Management Suite	1.4 and later versions
Boot Agent	4.0.5
USB Imaging Tool	1.2.4

Used and free space details

Table 31. Used and free space details

Platform	SSD\eMMC Size	Used Space	Free Space
Wyse 5070 Thin Client	128 GB	14.6 GB	99.2 GB
Wyse 5470 All-in-One Thin Client	32 GB	14.6 GB	11.1 GB
Wyse 5470 Thin Client	32 GB	14.7 GB	11.7 GB

QFEs

Table 32. QFEs

KB Number	Update Description
KB4552924	Update for Microsoft WIE10
KB4465065	Update for Microsoft WIE10
KB4561600	Security Update for Microsoft WIE10
KB4562562	Security Update for Microsoft WIE10
KB4567513	Update for Microsoft WIE10

For more information, see support.microsoft.com.

Operating system components

Table 33. Driver details

Drivers/ Files	Wyse 5070 Thin Client	Wyse 5470 All-in-One Thin Client	Wyse 5470 Thin Client
Display Adapter	Intel UHD Graphics 600 (26.20.100.6998) Citrix Indirect Display Adapter (12.40.44.247)	Intel UHD Graphics 600 (26.20.100.6998) Citrix Indirect Display Adapter (12.40.44.247)	Intel UHD Graphics 600 (26.20.100.6998) Citrix Indirect Display Adapter (12.40.44.247)
Network Adapter	Realtek (10.32.1206.2018)	Realtek (10.32.1206.2018)	Realtek (10.32.1206.2018)
Audio	Realtek Audio (6.0.8955.1) Intel display audio (10.27.0.4)	Intel display audio (10.26.0.6) Realtek audio (6.0.8955.1)	Intel display audio (10.27.0.4) Realtek audio (6.0.8955.1)
Wireless Adapter	Intel (21.70.0.6)	Intel (21.70.0.6)	Intel (21.70.0.6)
Bluetooth	Intel (21.70.0.3)	Intel (21.70.0.3)	Intel (21.70.0.3)
Wyseramdisk.sys (Wyse RAM Disk driver)	5.0.2183.5	5.0.2183.5	5.0.2183.5
CAD-MAP-VDI	3.0.6.0	3.0.6.0	3.0.6.0

Table 34. Common application, features, and files

Application	Version
WDA	14.4.6.5
PlatVsys	1.0.0.4
VMWare Horizon Client	5.4.0.10892
Merlin	4.0.7
Quick Config (Wyse Easy Setup)	2.0.0.161
ALM	1.1.0.3
xDCM	1.0.0.3
DCM	10.3.0.121
Citrix Workspace 1912	19.12.0.119
Citrix RTME	2.9.0.2330
CAD Map	3.0.6.0
SCCM	5.00.8790.1007(2019)
Build Content	1.0.0.8
MUI tool	1.0.0.10
Dell Thin Client App	10.0.0.27
MS Lync VDI 2013	15.0.4420.1017
Custom Sysprep	No Version
Quick Start	No Version
Ericom PowerTerm interconnect for thin clients	12.5.1
Ericom connect WebConnect client	7.5.1

Supported peripherals

Table 35. Supported peripherals

Product Category	Peripherals	Wyse 5070 Thin Client	Wyse 5470 All-in-One Thin Client	Wyse 5470 Thin Client
Audio	Dell Pro Stereo Headset - UC150 - Skype for Business	✓	N/A	✓
	Dell Pro Stereo Headset - Skype for Business - UC350	✓	✓	✓
	Dell Professional Sound Bar (AE515M)	✓	N/A	✓
	Dell USB Sound Bar (AC511M)	✓	N/A	✓
	Jabra PRO 935 USB MS Lync Headset - 935-15-503-185 - 935-15-503-185	✓	N/A	N/A
	Dell 2.0 Speaker System - AE215	N/A	✓	✓
	Dell Wireless 2.1 Speaker System - AE415	N/A	✓	✓
	Jabra Evolve 65 MS Stereo - Headset	N/A	✓	✓
	Jabra Engage 65 Stereo Headset	N/A	✓	✓
	Plantronics Savi W440M-400 Series convertible wireless headset - DECT 6.0	N/A	✓	✓
	Plantronics Voyager Focus UC B825-M headset for Microsoft Lync	N/A	✓	✓
Adapters/Cables	Dell Adapter - DisplayPort to DVI (Single Link) - DANARBC084 - DANARBC084	✓	N/A	N/A
	Dell Adapter - DisplayPort to HDMI 2.0 (4K) - DANAUBC087 - DANAUBC087	✓	✓	N/A
	Dell Adapter - DisplayPort to VGA - DANBNBC084 - DANBNBC084	✓	N/A	N/A
	C2G - USB 2.0 A (Male) to DB9 (Serial) (Male) Adapter	✓		✓
	Dell Adapter - USB-C to DisplayPort - DBQANBC067 - DBQANBC067	✓	N/A	✓
	Dell Adapter - USB-C to HDMI - DBQAUBC064 - DBQAUBC064	✓	N/A	N/A
	Dell Adapter - USB-C to VGA - DBQBNBC064 - DBQBNBC064	✓	N/A	N/A
	Trendnet« USB to Serial Converter RS-232	✓	✓	✓
	Dell Adapter - HDMI to DVI - DAUARBN004 - DAUARBN004	N/A	N/A	✓
	Dell Adapter - HDMI to VGA - DAUBNBC084 - DAUBNBC084	N/A	N/A	✓
	Dell Adapter - USB-C to Dual USB-A with Power Pass-Through - DBQ2BJBC070 - Combo Adapter	N/A	N/A	✓
	Dell Adapter - USB-C to HDMI/DisplayPort with Power Pass-Through - DBQAUANBC070 - Combo Adapter	N/A	N/A	✓
	Dell USB-C Mobile Adapter - DA300 - Slayer 3 - DA300	N/A	N/A	✓
	StarTech.com 1 Port USB to RS232 DB9 Serial Adapter Cable - Serial adapter - USB 2.0 - RS-232	N/A	✓	✓

Table 35. Supported peripherals (continued)

Product Category	Peripherals	Wyse 5070 Thin Client	Wyse 5470 All-in-One Thin Client	Wyse 5470 Thin Client
Input Devices	Dell Laser Scroll USB 6-Buttons Silver and Black Mouse - Naruto	✓	✓	✓
	Dell USB Wired Keyboard - KB216	✓	✓	N/A
	DellUSB Wired Optical Mouse - MS116	✓	✓	✓
	Dell Premier Wireless Mouse - WM527	✓	N/A	✓
	Dell Wireless Keyboard and Mouse - KM636	✓	✓	✓
	CHERRY KC 1000 SC - Keyboard - with Smart Card reader - USB - English - US - black - TAA Compliant - JK-A0104EU-2	✓	N/A	N/A
	Dell Wireless Mouse - WM326	N/A	✓	✓
	Dell keyboard KB813t	✓	✓	✓
	Dell keyboard KB813	✓	✓	✓
Monitors	E1916H	✓	✓	N/A
	P1917S	N/A	N/A	N/A
	E1920H	✓	✓	✓
	E2016H	✓	✓	✓
	E2016Hv (China only)	N/A	N/A	✓
	P2017H		N/A	N/A
	P2018H	N/A	N/A	✓
	E2020H	✓	✓	✓
	E2218HN	N/A	✓	✓
	P2217	N/A	N/A	N/A
	P2217H	✓	N/A	N/A
	P2219H	✓	N/A	✓
	P2219HC	✓	N/A	✓
	E2220H	✓	✓	✓
	E2318H	✓	✓	✓
	P2317H	✓	N/A	N/A
	E2417H	✓	✓	✓
	P2415Q	✓	✓	N/A
	P2417H	✓	N/A	N/A
	Dell 24 Monitor - P2418D	N/A	N/A	N/A
	P2418HZ	✓	N/A	N/A
	P2419H	✓	✓	✓
	P2419HC	✓	N/A	✓
	P2421D	✓	N/A	✓
E2420H	✓	✓	✓	

Table 35. Supported peripherals (continued)

Product Category	Peripherals	Wyse 5070 Thin Client	Wyse 5470 All-in-One Thin Client	Wyse 5470 Thin Client
	P2418HT	✓	✓	N/A
	P2719H	✓	✓	✓
	P2719HC	✓	N/A	✓
	P2720D	✓	N/A	✓
	E2720H	✓	✓	✓
	P3418HW	✓	✓	N/A
	MR2416	✓	N/A	N/A
	U2415	✓	✓	N/A
	U2419H	✓	✓	✓
	U2419HC	✓	N/A	✓
	U2518D	✓	✓	N/A
	U2520D	✓	✓	✓
	U2720Q	✓	✓	✓
	U2718Q (4K)	✓	✓	✓
	U2719D	✓	✓	✓
	U2719DC	✓	N/A	✓
	Dell UltraSharp 27 USB-C HUB monitor - U2721DE	✓	✓	✓
	E2216H	✓	✓	✓
	E2216Hv (China only)	N/A	N/A	✓
	E2318HN	✓	N/A	N/A
	E2420HS	✓	✓	✓
	E2720HS	✓	✓	✓
	P2016	✓	N/A	N/A
	P2319H	✓	N/A	✓
	P2421DC	✓	N/A	✓
	P2720DC	✓	N/A	✓
	P4317Q	✓	✓	N/A
	U2421HE	✓	✓	✓
	U4320Q	✓	✓	✓
	Dell UltraSharp 49 Curved Monitor - U4919DW	✓	N/A	N/A
Networking	Add On 1000 Base-T SFP transceiver (RJ-45)	✓	N/A	N/A
	Dell Adapter - USB 3.0 to Ethernet PXE Boot - DBJBCBC064	N/A	N/A	✓
Docking station	Dell Dock - WD19-C (code name Salomon)	N/A	N/A	✓
	Dell Business Dock - WD15 - WD15 - WD15 - Imperial Express	N/A	N/A	✓

Table 35. Supported peripherals (continued)

Product Category	Peripherals	Wyse 5070 Thin Client	Wyse 5470 All-in-One Thin Client	Wyse 5470 Thin Client
	Dell Thunderbolt Dock - WD19TB - WD19TB - Salomon - Thunderbolt - WD19TB	N/A	N/A	✓
Storage	Dell Portable SSD, USB-C 250GB (Edison)	N/A	N/A	✓
	Dell USB Slim DVD +/û RW Drive - DW316 - DW316 - DW316 - Agate	N/A	N/A	✓
Smart Card / Readers	Cherry Smart Terminal SMART Card Reader - ST-1044U	✓	N/A	N/A
	Cherry Smart Terminal ST-1144 SMART Card Reader - USB 2.0	✓	N/A	✓
	CHERRY KC 1000 SC - Keyboard - with Smart Card reader - USB - English - US - black - TAA Compliant - JK-A0104EU-2	N/A	N/A	✓
	ETOKEN,SAFENET 5110, FIPS,JAVA/80K,BLACK,ID, (HEX)	✓	✓	✓
	ETOKEN, SAFENET, 5110+,CC,JAVA/80K,BLACK,I, D (HEX)	✓	✓	✓
	CARD_IDPrime MD 830 B FIPS 140-2 L2 White PVC	✓	✓	✓
	CARD_IDPrime MD 3840 B w/o OTP	✓	✓	✓
	Card_IDPrimeMD840B_white_PVC	✓	✓	✓
	CARD_IDPrime MD3811, Mifare EV1 4K&DESFire EV1, 4K_MPH150_New	✓	✓	✓
	Standard Card _IDPrime NET 510_ white PVC	✓	✓	✓
	Ybikey Neo 5.0 PIV Card	✓	✓	✓
	E-token pro Aladdin 72 K	✓	✓	✓
	Sun microsystem SCR 3311	✓	✓	✓
Printers	Dell Color Multifunction Printer - E525w	N/A	N/A	N/A
	Dell Color Printer- C2660dn - Raffles	✓	N/A	N/A
	Dell Multifunction Printer - E515dn - SparrowHawk Wired	N/A	N/A	N/A

Fixed issues

The following are the fixed issues in this release:

- WIN-1334—Fixed the boot loop issue observed in Wyse 5470 All-in-One Thin Clients.
- WIN-1313—Fixed the issue where Wyse Easy Setup 2.0 stops responding when you configure the sleep settings using Wyse Management Suite.
- WIN-1311—Fixed the issue observed after you configure keyboard layout and host name in the Custom Sysprep.
- WIN-1304—Fixed the issue where an issue is observed with the Windows Defender Quick scan when Dell Secure Client is enabled.
- WIN-1303—Fixed the issue where the Windows Defender definitions stops responding when Dell Secure Client is enabled.
- WIN-1302—Fixed the issue where you cannot configure AppLocker on Wyse 5070 Thin Clients.
- WIN-1300—Fixed the issue where Windows Defender uses excessive RAM on Wyse 5470 Thin Clients.
- WIN-1299—Fixed the issue where the Wyse Management Suite information is not cleared after the sysprep process. This issue led to incorrect registration information.
- WIN-1285—Fixed the issue where the client settings are cleared if the network is not available for more than five minutes.
- WIN-1265—Fixed the issue where Bit Locker with alphanumeric pin stops responding on Wyse 5070 Thin Clients.

- WIN-1231—Fixed the issue where **Not Defined** error message is displayed when you deploy group policy settings to Wyse 5070 Thin Clients.
- WIN-890—Fixed the issue where AIRBUS - Webcam HD performance issues are observed when you are using WebEx through View session.
- WIN-1301—Fixed the issue where the merlin non-pxe boot option is not displayed in Wyse 5070 Thin Clients.
- WIN-1179—Fixed the issue with Hotkeys in a Citrix session.
- WES-616—Fixed the issue where the keyboard language indicator does not respond.

New and enhanced features

Wyse Easy Setup

Wyse Easy Setup enables administrators to quickly and easily deploy configurations on thin clients.

Wyse Easy Setup enables you to:

- Create a dedicated browser-focused client by configuring the Internet Explorer settings.
- Configure multiple broker connections such as Citrix, VMware, and Remote Desktop Protocol (RDP).
- Configure a device to create a dedicated application for a particular line of business.

You can create a kiosk mode to lock down a Windows device to prevent users from accessing any features or functions on the device outside of the kiosk mode. You can also customize the kiosk interface to enable or disable user access to specific settings.

For more information, see *Wyse Easy Setup Administrator's Guide* and *Release notes* at downloads.dell.com/wyse.

Dell Application Store

Dell Application Store is a bundle of Edge Device Software consisting of third-party applications and Dell applications.

The following are the third-party applications that are bundled in the Dell Application Store for build version, 10.04.XX.06.21.00:


- Citrix Workspace App 1912 LTSR and Citrix HDX RTME 2.9.100
- VMware Horizon Client version 8.1.0
- Zoom plug-in for Citrix and VMware version 5.0.24002.0619
- TightVNC version 2.8.59.0
- Cisco WebEx VDI version 41.4.0.18516
- Cisco JVDI Client version 12.9.0.52532
- Cisco WebEx VDI Meetings version 41.4.7.10

The following are the third-party applications that are bundled in the Dell Application Store for build version, 10.04.07.09.20.00:

- Citrix Workspace App 1912 LTSR and Citrix HDX RTME 2.9.100
- VMware Horizon Client version 8.0.0
- Zoom plug-in for Citrix and VMware version 5.0.24002.0619
- TightVNC version 2.8.27


The following are the Dell applications that are bundled in the Dell Application Store for build version, 10.04.XX.06.21.00:

- Dell Secure Client version 1.0.0.199
- Dell Application Control Center (DACC) version 1.0.0.14
- Wyse Easy Setup version 2.0.0.180

 **NOTE:** TightVNC and DACC are installed automatically when you install Dell Application store.


The following are the Dell applications that are bundled in the Dell Application Store for build version, 10.04.07.09.20.00:

- Dell Secure Client version 1.0.0.197
- Dell Application Control Center (DACC) version 1.0.0.14
- Wyse Easy Setup version 2.0.0.162

 **NOTE:** TightVNC and DACC are installed automatically when you install Dell Application store.

Install Dell Application Store manually

You can install Dell Application Store manually using any of the following methods:

- Using the `DellApplicationStore.exe` installer file .
 1. Double-click the .exe file and click **Install**.
 2. Select the required application and accept EULA to proceed with the installation.
- Exporting `DellApplicationStore.exe` installer file.
 1. Export the configuration.
 2. Save PowerShell file in thin client.
 -  **NOTE:** Do not save the file to `C:\Wyse\WAPPS\DASrepository` folder.
 3. Close the Dell Application Store installer.

Exported PowerShell run the application using administrator privileges.
 4. Open cmd prompt using administrator privileges and run `DellApplicationstore.exe -silent..`

Install Dell application store using Wyse Management Suite

Steps

1. Register the device to Wyse Management Suite server and add the device to respective add-on group.
2. Download the `Exportconfig.ps1 / .exe` file.
3. Copy `Exportconfig.ps1 / .exe` file to the Wyse Management Suite server repository.
4. Log in to the Wyse Management Suite server.
5. Go to **Portal Administration > File Repository**.
6. Check the **File Repository** and click **Sync Files**.
7. Go to **Apps & Data > App Inventory > Thin Client** and verify the files that are listed in the thin client.
8. Go to **Apps & Data > App Inventory > Thin Client > Add Policy**.
9. Configure the options, enter the silent parameter as `--silent`, and click **Save**.
10. Click **Yes** to schedule the job immediately.
11. In the **Apply Policy** window, add the description of the policy and select the type of execution as per user preference.
12. Click **Preview** and then click **Schedule**.

Install Dell application store using SCCM

Prerequisites

On the client, do the following:

1. Log in to Administrator account and disable the Write Filter.
2. Join the thin client to the required SCCM Domain (set DNS if client is on other domain).
3. Log in as Domain User and change the Domain Administrator Time zone to SCCM Server Time zone.
4. Go to **Control Panel > Configuration Manager > Site > Configure Settings** and click the SCCM Site code.
5. Click **Apply**.
6. Click **Actions** Tab and run action item.
7. Enable the Write filter.

Steps

1. Create a folder in SCCM share path and copy the created .ps1 file and DAS application
2. Launch SCCM Server.
3. Click **Asset and Compliance**, right-click **Device Collection**, and select **Create Device collection**.
4. Add registered ThinClients to the group.
5. Go to **Software Library > Application Management** and right-click **Packages**.
6. Create a package for `DellApplicationStore.exe` with `--silent` as parameter in command line.

7. Right-click the created package for DAS application and distribute the package by selecting distribute point.
8. Go to **Software Library > Operating System** and right-click **Task Sequence**.
9. Create a custom task sequence.
10. Right-click Custom task sequence that is created and click **Edit**.
11. Click **Add > General > Power Shell Script** and provide the valid name.
12. Select the **Enter a PowerShell script** radio button.
13. Click **Add Script > Open** and select the .ps1 file.
14. Select **Bypass in Power Shell Execution** drop-down button and click **Apply**.
15. Go to **Add > Software > Install Package** and provide the valid name.
16. Browse the DAS distributed Package, click **Apply**, and then click **OK** button.
17. Right-click the edited task sequence and deploy immediately on created device collection.

Next steps

Client Side

1. On client, run the action items until you get the install notification from SCCM server.
2. The installation fails during the first time, and it retries after 10 minutes. The installation is successful during the second time.

Quick Start

The Quick Start application launches when you boot into a thin client for the first time. This tool displays the software and hardware features of the thin client. It also provides information about the VDI applications, management software, and supported peripherals.

You can also configure Wyse Easy Setup application using the Quick Start application.

After you exit the Quick Start application, the user desktop is displayed by default. You can also launch the tool later from the **Start** menu.

MUI build behavior

Windows 10 IoT Enterprise unified build provides multi-language support. The default language is English—en-us.

To change the language of the build, do the following:

1. Go to `C:\Windows\Setup\Tools`.
2. Right-click `LanguageConfig.exe` and click **Run as Administrator**.
3. Select the language.
4. Push the image using Wyse Management Suite server or USB Imaging Tool.
5. Run Custom Sysprep to pull the image, and push it to the target thin client.

NOTE:

- To configure Bit locker with TPM, use the **Configure TPM platform validation profile for native UEFI firmware configurations** group policy.
- To view the event logs, run the `Event Viewer Errors.docx` file.
- To update Windows defender definition, you must increase the write filter threshold value.

Overlay Optimizer

Overlay Optimizer is a software component that works with Unified Write Filter (UWF). Overlay Optimizer provides write protection and extends the uptime of devices. Overlay optimizer works on Windows 10 IoT Enterprise operating system.

The UWF protects the disk by storing the changes in the RAM overlay. When an application tries to write data to the disk, write filter redirects the write operations to the RAM overlay. The overlay size is preconfigured and cannot increase dynamically. When the overlay runs out of space over a period, the device restarts.

The Overlay Optimizer monitors the UWFs' overlay space and the content. Overlay Optimizer identifies higher overlay space consumption in write filter and moves the unused content to the Overlay Optimizer's disk overlay. Clearing the UWF overlay extends the device uptime.

For more information, see Overlay Optimizer Release notes at downloads.dell.com/wyse.

Application Launch Manager

The Application Launch Manager (ALM) version 1.1.0.2 enables you to start an application that is based on predefined events such as service startup, user login/logoff, or system shutdown in system account. You can also configure multilevel logs which are essential for troubleshooting using the `DebugLog.xml` file.

You can add or remove application configuration nodes from the ALM configuration file using the command-line interface.

xData Cleanup Manager

xData Cleanup Manager (xDCM) version 1.1.0.2 prevents extraneous information from being stored on the local disk. xDCM can be used to automatically clean up directories that are used to temporarily cache the information. A clean-up is triggered on either service startup, user logoff, or system shutdown.

It also enables you to configure multilevel logs which are essential for troubleshooting. You can clean up files, folders, and enable or disable xDCM using Application Programming Interface (API). You can also add or remove configuration nodes from the xDCM configuration file using command-line interface.

NOTE:


- Existing `NetXclean.ini` configurations are ported to new `xDataCleanupConfig.xml`.
- Contents in the xData Cleanup Manager are cleaned by default.

BIOS details

Wyse 5070 thin client supports Dell BIOS and Wyse BIOS entries. The BIOS image is included in the latest Wyse Management Suite release.


C-A-D tool

The C-A-D tool allows administrators to map the `Ctrl+Alt+Del` key combination of VDI applications to display the `Ctrl+Alt+Del` screen of the VDI application. If the C-A-D tool is enabled, you can use `Ctrl+Alt+Del` key combination for all VDI applications.

 NOTE: By default, the C-A-D tool is enabled.

Dell Thin Client Application

You can view and configure thin client device, system shortcuts, custom fields, RAM disk, autologon, and CAD map using the Dell Thin Client application.

 NOTE: By default, RAM disk size is 512 MB for thin clients with 8 GB RAM, and 100 MB when the write filter is enabled for thin clients with 4 GB RAM.

Dell wallpapers

Older wallpapers and themes are replaced with the new Dell wallpapers and themes.

ENERGY STAR specification

Windows 10 IoT Enterprise on Wyse 5070 thin client is ENERGY STAR version 7.0 compliant.

The following are the details in the Control Panel applet for power options:

- Supports Wake on LAN (WoL) during power off.
- Supports Idle state wake up from the sleep mode.
- Screen off timer is 10 minutes.
- Sleep timer is 15 minutes.

Ericom Connect Client

Ericom Connect Client maximizes the value of Terminal Servers (RDS), virtual desktops (VDI), Web applications, Cloud services, and legacy host systems. For IT departments of all sizes, PowerTerm Web Connect streamlines the management and utilization of IT resources, and also protects earlier IT investments and improves the end user-experience.

Ericom PowerTerm InterConnect

PowerTerm InterConnect consists of several robust terminal emulation applications supporting the host access of large and small organizations. PowerTerm InterConnect product provides fast and reliable access to data residing on the broadest range of hosts. It enables enterprises to standardize on a single host access solution.

Event Viewer log preservation

Event Viewer log preservation feature allows you to enable or disable Event Viewer log saving when the File Based Write Filter (FBWF) or Unified Write Filter (UWF) is enabled. This feature enables you to collect event logs if they are required for debugging or analysis purposes.

Internet Explorer 11

- **Performance enhancements**—Microsoft has included support for web standards such as CSS animations, HTML5 spell checking, and improved JavaScript performance.
- **Security enhancements**—The main security addition to Internet Explorer 11 is **Enhanced Protected Mode**, which locks down parts of the Windows operating system, preventing the browser from accessing the operating system.

The following Internet Explorer 11 features are customized by default:

- First run customizations are disabled.
- Internet Explorer 11 enhanced protection mode is enabled.
- Internet Explorer cookies and cache are redirected to z : RAM Disk.
- Cache content is limited to 100 MB.
- Browsing history is cleared when you exit Internet Explorer.

Keyboard filters

You can use keyboard filters to disable key presses or combinations. For example, you can disable common Windows key combinations such as Ctrl+Alt+Delete and Alt+Tab. You can disable any key or key combination.

Log files for customization

A log file is created for the customization scripts where you can view the overall script execution.

Out-of-Box driver install

All the respective device drivers are preinstalled in the operating system.

System Center Configuration Manager 2016 server information

System Center Configuration Manager (SCCM) is supported for standard deployment of images.

User accounts

You can log in as an administrator or as a standard user.

Unified Write Filter

About this task

Unified Write Filter (UWF) is a sector-based write filter that protects your storage media. UWF redirects the write attempts to a virtual overlay, and intercepts the write attempts to the protected volume. This improves the stability, reliability of the device thereby reducing the wear on write media, such as solid-state drives. In UWF, overlay is a virtual storage space that saves changes made on the protected volume. If the file system attempts to modify a protected sector, UWF will copy the sector from the protected volume to the overlay, and the overlay is updated. If an application tries to read from that sector, UWF returns the data from the overlay, so that the system appears to have written to the volume, while the volume remains unchanged. For more information, see the Unified Write Filter documentation at www.microsoft.com.

 **CAUTION: Failure to keep the Write Filter turned on (except for regular maintenance or Application/Driver installs or upgrades) will prematurely wear out your Flash/SSD storage and invalidate your warranty.**

Next steps

The following are the default file folders excluded from being filtered by UWF:

- 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

The following are the default registries excluded from being filtered by UWF:

- 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
- HKLM\SYSTEM\CurrentControlSet\Control\WNT\DWCADTool

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.

Windows Defender Advanced Threat Protection

Windows Defender Advanced Threat Protection feature helps enterprises to detect, investigate, and respond to advanced attacks on their networks.

XML driven PowerShell scripts

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

USB redirection

USB redirection is applicable for all users of the client machine with all the published XenDesktop irrespective of the setting **Simplify device connections for me** in the XenDesktop connection preferences user interface.

Sysprep using User Interface

The System Preparation tool (Sysprep) can now be configured using the inbuilt user interface. Using this tool the data gets cleared from the system and the system can be customized as per the requirement. The operating system will be like a new installation.

The Sysprep tool is used with other deployment tools to install the Microsoft Windows operating systems with minimal intervention by an administrator.

`Buildmaster.cmd` is the main program that calls other executable files that prepares the thin client for the Windows installation.

`Buildmaster.cmd` is located in the `<drive C>\Windows\Setup` on all installations.

Sysprep must always be run from the `<drive C>\Windows\Setup` and must run on the version of Windows with which it was installed.


The Sysprep tool contains the following two options:

- Custom Sysprep, see [Running the Custom Sysprep tool](#).
- Config Sysprep, see [Running the Config Sysprep tool](#).

Prerequisites

The following are the pre-requisites to run the Custom Sysprep tool:

- Unified Write Filter must be disabled.
- Logging framework must be available on your thin client.
- Power Shell script execution environment must be available.
- Custom Sysprep and Configuration Sysprep (SCCM) scripts must be available.
- Host Name calculation feature must be available.
- If the flash drive or HDD size is more than 32 GB, reduce it to less than 32 GB for a better custom sysprep process.


 **NOTE:** You cannot access the thin client if you terminate the Sysprep process. Make sure that the device is ready before you use the Sysprep tool.

 **CAUTION:** After you run the Sysprep tool, enable the Unified Write Filter to ensure device security.

Running Custom Sysprep tool

Prerequisites

- Disable File based 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 16 GB.

 **NOTE:** You must shrink the drive C manually to reduce the hard drive size to 16 GB or less.

About this task

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.

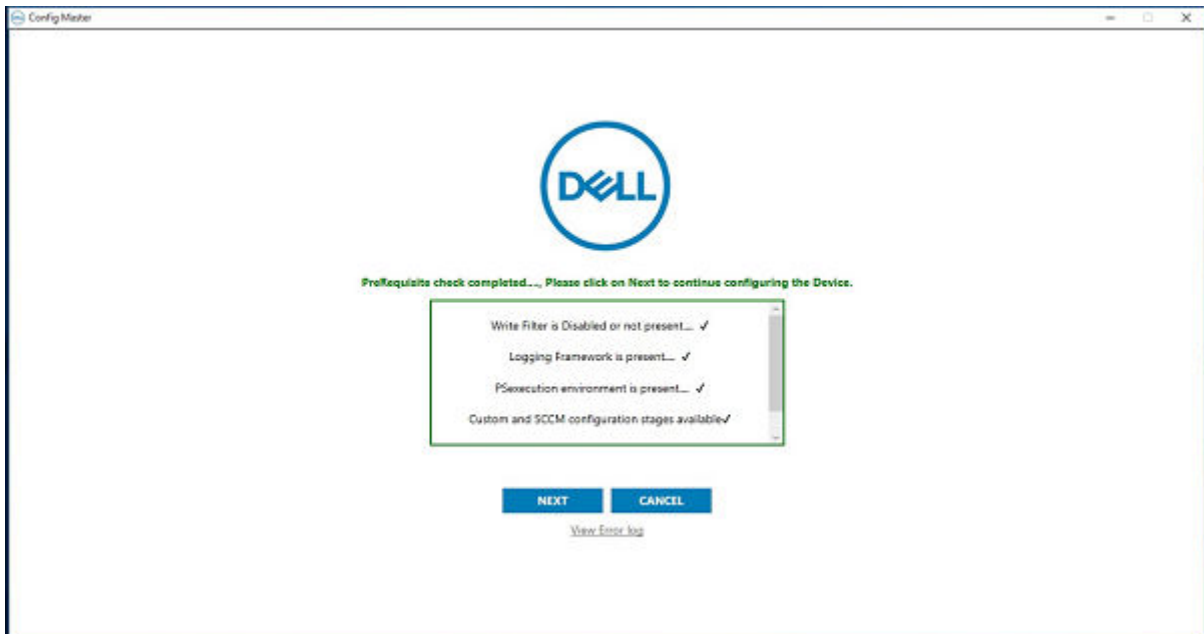


Figure 3. Config Master

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

Figure 4. Configuration

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**—optional.
7. Click **OK** when prompted—optional.
8. Select **Enable local account credentials changes**—optional.
The changes that are made to the credentials are applied.

9. Click **Next**.

The **Credential Manager** page is displayed.

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: You cannot access the thin client if you terminate the Sysprep process. Make sure that the device is ready before you use the Sysprep tool.

Running the Config Sysprep tool

About this task

To run the Config 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.

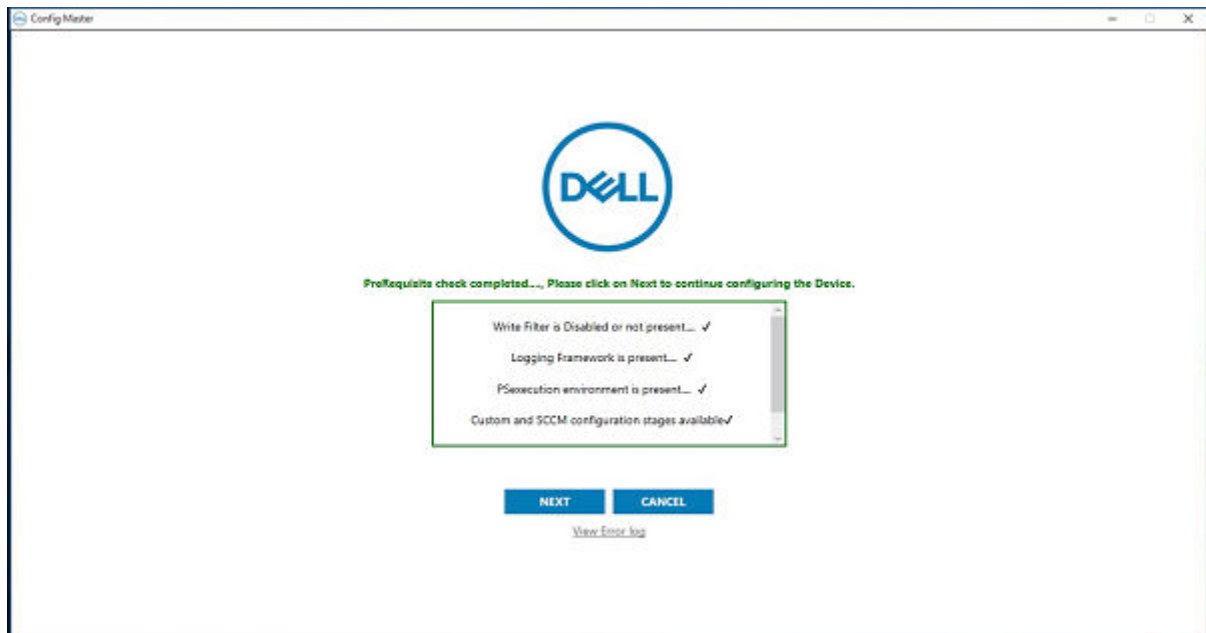


Figure 5. Config Master

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

Configure local account credentials

Enable local account credential changes

Figure 6. Configuration

4. In the **Configurations** section, select **SCCM configuration**.
5. In the **Host Name calculation** section, enable or disable hostname calculation.

NOTE: The **Configure Domain Option** and **Configure local account credentials** field are grayed out.
6. Click **Apply** to save the changes.
After the completion of SCCM Config Sysprep, the HAgent service ends. You can now perform the pull operation using SCCM.

Resources and support

Accessing documents using the product search

1. Go to www.dell.com/support.
2. In the **Enter a Service Tag, Serial Number, Service Request, Model, or Keyword** search box, type the product name. For example, **Wyse 3040 thin client** or **Wyse ThinOS**.

A list of matching products is displayed.

3. Select your product.
4. Click **Documentation**.


Accessing documents using product selector

You can also access documents by selecting your product.

1. Go to www.dell.com/support.
2. Click **Browse all products**.
3. Click **Thin Clients**.
4. Click the desired category, either **Wyse Hardware** or **Wyse Software**.
5. Click the desired product.
6. Click **Documentation**.

Contacting Dell

About this task

 **NOTE:** If you do not have an active Internet connection, you can find contact information from your purchase invoice, packing slip, bill, or Dell product catalog.

Dell provides several online and telephone-based support and service options. Availability varies by country/region or region and product, and some services may not be available in your area. To contact Dell for sales, technical support, or customer service issues:

Steps

1. Go to www.dell.com/support.
2. Select your support category.
3. Verify your country/region or region in the **Choose a Country/Region** drop-down list at the bottom of the page.
4. Select the appropriate service or support link that is based on your need.