

Dell Wyse ThinOS Version 8.6 and ThinOS Lite 2.6 Operating System

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.

© 2018 — 2020 Dell Inc. or its subsidiaries. All rights reserved. Dell, EMC, and other trademarks are trademarks of Dell Inc. or its subsidiaries. Other trademarks may be trademarks of their respective owners.

Contents

| | |
|---|-----------|
| 1 Overview | 9 |
| 2 Version matrix | 10 |
| 3 ThinOS 8.6_303 and ThinOS Lite 2.6_303 | 14 |
| Release summary | 14 |
| Priority and recommendations | 14 |
| Compatibility | 14 |
| Supported platforms | 14 |
| Previous versions | 15 |
| Supported packages | 15 |
| New and enhanced features | 16 |
| Network icon added to taskbar | 16 |
| Show Key feature for Wyse Management Suite group token | 16 |
| Change registration code for Amazon WorkSpaces | 16 |
| Wyse Management Suite Proxy information using DHCP options or DNS SRV records | 16 |
| Supports RC4_HMAC_MD5 for RDP connections | 17 |
| Limit core dumps by clearing NVRAM | 17 |
| ENERGY STAR 8 compliance | 17 |
| Supports TicTok smart cards | 17 |
| Important notes | 17 |
| Limitations | 17 |
| Tested environments matrix | 17 |
| INI parameters | 24 |
| Fixed issues | 25 |
| Known issues | 27 |
| 4 ThinOS 8.6_206 and ThinOS Lite 2.6_206 | 29 |
| Release summary | 29 |
| Priority and recommendations | 29 |
| Compatibility | 29 |
| Supported platforms | 29 |
| Previous versions | 30 |
| Supported packages | 30 |
| New and enhanced features | 31 |
| Updates to ThinOS packages | 31 |
| Citrix Receiver updates | 31 |
| Cisco Jabber updates | 31 |
| Amazon WorkSpaces updates | 31 |
| Behavior while closing the lid on the Wyse 5470 Thin Client | 32 |
| Network support on Wyse 5470 Thin Client | 32 |
| Korean language support | 32 |
| Word wrap feature | 32 |
| Customize connection broker agent window and icons | 33 |

| | |
|--|-----------|
| Important notes..... | 33 |
| Limitations..... | 33 |
| Tested environments matrix..... | 34 |
| INI parameters..... | 36 |
| Fixed issues..... | 37 |
| Known issue..... | 39 |
| | |
| 5 ThinOS 8.6_028 and ThinOS Lite 2.6_028..... | 40 |
| Release summary..... | 40 |
| Priority and recommendations..... | 40 |
| Compatibility..... | 40 |
| Supported platforms..... | 40 |
| Previous versions..... | 41 |
| Packages..... | 41 |
| Fixed issue..... | 42 |
| | |
| 6 ThinOS 8.6_204..... | 43 |
| Release summary..... | 43 |
| Priority and recommendations..... | 43 |
| Compatibility..... | 43 |
| Supported platforms..... | 43 |
| Packages..... | 43 |
| BIOS information..... | 44 |
| New and enhanced features..... | 44 |
| Disable touch screen on Dell Wyse 5470 Thin Client..... | 44 |
| Disable touchpad while typing on Dell Wyse 5470 Thin Client..... | 44 |
| Enable Wake-on-LAN on Dell Docking Station WD19..... | 44 |
| Important notes..... | 44 |
| Limitations..... | 44 |
| INI parameters..... | 45 |
| Fixed issues | 45 |
| | |
| 7 ThinOS 8.6_111..... | 47 |
| Release summary..... | 47 |
| Priority and recommendations..... | 47 |
| Compatibility..... | 47 |
| Supported platforms..... | 47 |
| Packages..... | 47 |
| Previous version..... | 48 |
| New and enhanced features..... | 48 |
| Sleep mode..... | 48 |
| Important notes..... | 48 |
| Sleep mode limitations..... | 48 |
| | |
| 8 ThinOS 8.6_108..... | 49 |
| Release summary..... | 49 |
| Compatibility..... | 49 |
| BIOS information..... | 49 |
| Platform information..... | 49 |

| | |
|--|----|
| New and enhanced features..... | 50 |
| Display features..... | 50 |
| DP audio port feature..... | 50 |
| Troubleshooting features..... | 50 |
| Frames per second (FPS) display..... | 50 |
| Text color customization on login window..... | 50 |
| Smart card as Proximity Card of Imprivata..... | 50 |
| New system variable for MAC address..... | 51 |
| Reconnect workflow for VMware Horizon View broker..... | 51 |
| VMware Horizon package..... | 51 |
| Teradici Cloud Access broker type..... | 51 |
| Username Hint option for VMware Horizon View broker..... | 51 |
| Touchpad..... | 51 |
| Wyse Management Suite support..... | 52 |
| New connection under low privilege..... | 52 |
| Battery information..... | 52 |
| Behavior while closing the lid..... | 53 |
| Fn key combinations..... | 53 |
| FR package..... | 54 |
| Network features and limitations..... | 54 |
| Docking station features and limitations..... | 54 |
| SD card reader..... | 54 |
| Sleep mode..... | 54 |
| Touch Panel..... | 55 |
| Important notes..... | 55 |
| Limitations..... | 55 |
| Tested environment..... | 56 |
| Tested peripherals matrix..... | 57 |
| INI parameters..... | 61 |
| Known issues..... | 62 |

9 ThinOS 8.6_106.....63

| | |
|--|----|
| Release summary..... | 63 |
| Compatibility..... | 63 |
| BIOS information..... | 63 |
| Platform information..... | 63 |
| New and enhanced features..... | 64 |
| Display resolution..... | 64 |
| DP audio port..... | 64 |
| Troubleshooting features..... | 64 |
| On-Screen Display (OSD) feature..... | 64 |
| Frames per second (FPS) display..... | 64 |
| Text color customization on login window..... | 64 |
| Smart card as Proximity Card of Imprivata..... | 65 |
| New system variable for MAC address..... | 65 |
| Reconnect workflow for VMware Horizon View broker..... | 65 |
| VMware Horizon package..... | 65 |
| Teradici Cloud Access broker type..... | 65 |
| Username Hint option for VMware Horizon View broker..... | 65 |
| Wyse Management Suite support..... | 65 |


| | |
|---|-----------|
| New connection under low privilege..... | 66 |
| FR package..... | 66 |
| Sleep mode..... | 66 |
| Important notes..... | 66 |
| Limitations..... | 66 |
| Tested environments matrix..... | 67 |
| Tested peripherals matrix..... | 68 |
| INI parameters..... | 72 |
| Known issues..... | 72 |
| 10 ThinOS 8.6_027 and ThinOS Lite 2.6_027..... | 73 |
| Release summary..... | 73 |
| Priority and recommendations..... | 73 |
| Compatibility..... | 73 |
| Supported platforms..... | 73 |
| Previous versions..... | 74 |
| Supported packages..... | 74 |
| New and enhanced features..... | 75 |
| Updates to ThinOS packages..... | 75 |
| VMware updates..... | 75 |
| Amazon WorkSpaces updates..... | 80 |
| Imprivata updates..... | 81 |
| ThinOS enhancements..... | 81 |
| Important notes..... | 82 |
| Tested environment..... | 82 |
| Fixed issues..... | 83 |
| INI parameters..... | 85 |
| 11 ThinOS 8.6_024 and ThinOS Lite 2.6_024..... | 86 |
| Release summary..... | 86 |
| Priority and recommendations..... | 86 |
| Compatibility..... | 86 |
| Supported platforms..... | 86 |
| Previous versions..... | 87 |
| Packages..... | 87 |
| New and enhanced features..... | 88 |
| Updates to ThinOS packages..... | 88 |
| VMware Client updates..... | 88 |
| Teradici updates..... | 93 |
| Imprivata updates..... | 93 |
| UI enhancements..... | 93 |
| Important notes..... | 94 |
| Tested environment..... | 94 |
| Fixed issues..... | 95 |
| INI parameters..... | 96 |
| 12 ThinOS 8.6_019 and ThinOS Lite 2.6_019..... | 98 |
| Release summary..... | 98 |
| Priority and recommendations..... | 98 |

| | |
|-------------------------------------|------------|
| Compatibility..... | 98 |
| Supported platforms..... | 98 |
| Previous versions..... | 99 |
| New and enhanced features..... | 99 |
| Updates to ThinOS packages..... | 99 |
| Sleep mode in ThinOS..... | 99 |
| Miscellaneous..... | 100 |
| Important notes..... | 100 |
| Tested environment..... | 100 |
| Fixed issues..... | 101 |
| INI parameters..... | 104 |
| 13 ThinOS 8.6_015..... | 106 |
| Release summary..... | 106 |
| Priority and recommendations..... | 106 |
| Compatibility..... | 106 |
| Supported platforms..... | 106 |
| Previous versions..... | 106 |
| Packages..... | 106 |
| New and enhanced features..... | 107 |
| Sleep mode in ThinOS..... | 107 |
| Important notes..... | 107 |
| 14 ThinOS 8.6_013..... | 108 |
| Release scope..... | 108 |
| Release type and definition..... | 108 |
| Supported platform..... | 108 |
| BIOS information..... | 108 |
| Packages..... | 109 |
| Feature support matrix..... | 109 |
| Citrix Receiver feature matrix..... | 111 |
| VMware Horizon feature matrix..... | 113 |
| Important notes..... | 115 |
| New and enhanced features..... | 116 |
| INI parameters..... | 127 |
| Tested environment..... | 128 |
| Tested peripherals..... | 129 |
| Known issues..... | 134 |
| 15 ThinOS Lite 2.6_013..... | 135 |
| Release scope..... | 135 |
| Release type and definition..... | 135 |
| Supported platform..... | 135 |
| BIOS information..... | 135 |
| Packages..... | 135 |
| Feature support matrix..... | 136 |
| Citrix Receiver feature matrix..... | 136 |
| Important notes..... | 138 |
| New and enhanced features..... | 138 |

| | |
|---|------------|
| INI parameters..... | 140 |
| Tested environment..... | 141 |
| Tested peripherals..... | 141 |
| Known issues..... | 146 |
| 16 Upgrading firmware..... | 148 |
| Downloading the installation file..... | 148 |
| Firmware upgrade..... | 148 |
| Firmware upgrade using FTP server..... | 149 |
| Firmware upgrade using HTTPS..... | 150 |
| Firmware upgrade using Wyse Management Suite..... | 151 |
| 17 Resources and support..... | 152 |
| Additional resources..... | 152 |
| 18 Contacting Dell..... | 153 |

Overview

Dell Wyse ThinOS software is designed to run on a broad array of Dell Wyse hardware platforms. Dell Wyse ThinOS Lite family of products are zero clients built for Citrix Virtual Apps and Desktops environments. New releases are created to support new hardware platforms, correct defects, make enhancements, or add new features. These releases are tested and supported on current, actively shipping hardware platforms, and those hardware platforms that are within their first year after their official End of Life date. Beyond the one year time period, new software releases are no longer certified for use with the older hardware, even though it is possible that they may still work. This allows us to advance our product with features and functions that might not have been supported by the previous hardware, with previous generation CPUs and supporting components.

 **NOTE: For details about the previous versions, 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 ThinOS release, and helps you select which version of ThinOS software is appropriate for your work environment.

Table 1. Version matrix

| Release version | Release date | Supported platforms | Release Notes |
|---------------------|---------------|--|---|
| ThinOS 8.6_303 | April 2020 | <ul style="list-style-type: none"> • Wyse 3020 Thin Client with ThinOS (T10D) • Wyse 3030 LT Thin Client with ThinOS • Wyse 3030 LT Thin Client with PColP • Wyse 3040 Thin Client with ThinOS • Wyse 3040 Thin Client with PColP • Wyse 5010 Thin Client with ThinOS (D10D) • Wyse 5010 Thin Client with PColP (D10DP) • Wyse 5040 AIO Thin Client with ThinOS (5212) • Wyse 5040 AIO Thin Client with PColP (5213) • Wyse 5060 Thin Client with ThinOS • Wyse 5060 Thin Client with PColP • Wyse 5070 Thin Client with ThinOS • Wyse 5070 Thin Client with PColP • Wyse 5070 Extended Thin Client with ThinOS • Wyse 5070 Extended Thin Client with PColP • Wyse 5470 Thin Client with ThinOS • Wyse 5470 Thin Client with PColP • Wyse 5470 All-in-One Thin Client with ThinOS • Wyse 5470 All-in-One Thin Client with PColP • Wyse 7010 Thin Client with ThinOS (Z10D) | Release version ThinOS 8.6_303 |
| ThinOS Lite 2.6_303 | April 2020 | <ul style="list-style-type: none"> • Wyse 3020 Zero Client for Citrix • Wyse 5010 Zero Client for Citrix | Release version ThinOS Lite 2.6_303 |
| ThinOS 8.6_206 | November 2019 | <ul style="list-style-type: none"> • Wyse 3010 Thin Client with ThinOS (T10) • Wyse 3020 Thin Client with ThinOS (T10D) • Wyse 3030 LT Thin Client with ThinOS • Wyse 3030 LT Thin Client with PColP • Wyse 3040 Thin Client with ThinOS • Wyse 3040 Thin Client with PColP • Wyse 5010 Thin Client with ThinOS (D10D) • Wyse 5010 Thin Client with PColP (D10DP) • Wyse 5040 AIO Thin Client with ThinOS (5212) • Wyse 5040 AIO Thin Client with PColP (5213) • Wyse 5060 Thin Client with ThinOS • Wyse 5060 Thin Client with PColP • Wyse 5070 Thin Client with ThinOS • Wyse 5070 Thin Client with PColP • Wyse 5070 Extended Thin Client with ThinOS • Wyse 5070 Extended Thin Client with PColP • Wyse 5470 Thin Client with ThinOS | Release version ThinOS 8.6_206 |

| Release version | Release date | Supported platforms | Release Notes |
|---------------------|----------------|---|---|
| | | <ul style="list-style-type: none"> Wyse 5470 Thin Client with PCoIP Wyse 5470 All-in-One Thin Client with ThinOS Wyse 5470 All-in-One Thin Client with PCoIP Wyse 7010 Thin Client with ThinOS (Z10D) | |
| ThinOS Lite 2.6_206 | November 2019 | <ul style="list-style-type: none"> Wyse 3010 Zero Client for Citrix Wyse 3020 Zero Client for Citrix Wyse 5010 Zero Client for Citrix | Release version ThinOS Lite 2.6_206 |
| ThinOS 8.6_028 | November 2019 | <ul style="list-style-type: none"> Wyse 3010 Thin Client with ThinOS (T10) Wyse 3020 Thin Client with ThinOS (T10D) Wyse 3030 LT Thin Client with ThinOS Wyse 3030 LT Thin Client with PCoIP Wyse 3040 Thin Client with ThinOS Wyse 3040 Thin Client with PCoIP Wyse 5010 Thin Client with ThinOS (D10D) Wyse 5010 Thin Client with PCoIP (D10DP) Wyse 5040 AIO Thin Client with ThinOS (5212) Wyse 5040 AIO Thin Client with PCoIP (5213) Wyse 5060 Thin Client with ThinOS Wyse 5060 Thin Client with PCoIP Wyse 5070 Thin Client with ThinOS Wyse 5070 Thin Client with PCoIP Wyse 5070 Extended Thin Client with ThinOS Wyse 5070 Extended Thin Client with PCoIP Wyse 7010 Thin Client with ThinOS (Z10D) | Release version ThinOS 8.6_028 |
| ThinOS Lite 2.6_028 | November 2019 | <ul style="list-style-type: none"> Wyse 3010 Zero Client for Citrix Wyse 3020 Zero Client for Citrix Wyse 5010 Zero Client for Citrix | Release version ThinOS Lite 8.6_028 |
| ThinOS 8.6_204 | October 2019 | <ul style="list-style-type: none"> Wyse 5470 Thin Client Wyse 5470 All-in-One Thin Client | Release version ThinOS 8.6_204 |
| ThinOS 8.6_111 | September 2019 | Wyse 5070 Extended Thin Client | Release version ThinOS 8.6_111 |
| ThinOS 8.6_108 | August 2019 | Wyse 5470 Thin Client | Release version ThinOS 8.6_108 |
| ThinOS 8.6_106 | August 2019 | Wyse 5470 All-in-One Thin Client | Release version ThinOS 8.6_106 |
| ThinOS 8.6_027 | August 2019 | <ul style="list-style-type: none"> Wyse 3010 Thin Client with ThinOS (T10) Wyse 3020 Thin Client with ThinOS (T10D) Wyse 3030 LT Thin Client with ThinOS Wyse 3030 LT Thin Client with PCoIP Wyse 3040 Thin Client with ThinOS Wyse 3040 Thin Client with PCoIP Wyse 5010 Thin Client with ThinOS (D10D) Wyse 5010 Thin Client with PCoIP (D10DP) Wyse 5040 AIO Thin Client with ThinOS (5212) Wyse 5040 AIO Thin Client with PCoIP (5213) Wyse 5060 Thin Client with ThinOS Wyse 5060 Thin Client with PCoIP Wyse 5070 Thin Client with ThinOS Wyse 5070 Thin Client with PCoIP | Release version ThinOS 8.6_027 |

| Release version | Release date | Supported platforms | Release Notes |
|---------------------|--------------|---|---|
| | | <ul style="list-style-type: none"> Wyse 5070 Extended Thin Client with ThinOS Wyse 5070 Extended Thin Client with PCoIP Wyse 7010 Thin Client with ThinOS (Z10D) | |
| ThinOS Lite 2.6_027 | August 2019 | <ul style="list-style-type: none"> Wyse 3010 Zero Client for Citrix Wyse 3020 Zero Client for Citrix Wyse 5010 Zero Client for Citrix | Release version ThinOS Lite 2.6_027 |
| ThinOS 8.6_024 | June 2019 | <ul style="list-style-type: none"> Wyse 3010 Thin Client with ThinOS (T10) Wyse 3020 Thin Client with ThinOS (T10D) Wyse 3030 LT Thin Client with ThinOS Wyse 3030 LT Thin Client with PCoIP Wyse 3040 Thin Client with ThinOS Wyse 3040 Thin Client with PCoIP Wyse 5010 Thin Client with ThinOS (D10D) Wyse 5010 Thin Client with PCoIP (D10DP) Wyse 5040 AIO Thin Client with ThinOS (5212) Wyse 5040 AIO Thin Client with PCoIP (5213) Wyse 5060 Thin Client with ThinOS Wyse 5060 Thin Client with PCoIP Wyse 5070 Thin Client with ThinOS Wyse 5070 Thin Client with PCoIP Wyse 5070 Extended Thin Client with ThinOS Wyse 5070 Extended Thin Client with PCoIP Wyse 7010 Thin Client with ThinOS (Z10D) | Release version ThinOS 8.6_024 |
| ThinOS Lite 2.6_024 | June 2019 | <ul style="list-style-type: none"> Wyse 3010 Zero Client for Citrix Wyse 3020 Zero Client for Citrix Wyse 5010 Zero Client for Citrix | Release version ThinOS Lite 2.6_024 |
| ThinOS 8.6_019 | April 2019 | <ul style="list-style-type: none"> Wyse 3010 Thin Client with ThinOS (T10) Wyse 3020 Thin Client with ThinOS (T10D) Wyse 3030 LT Thin Client with ThinOS Wyse 3030 LT Thin Client with PCoIP Wyse 3040 Thin Client with ThinOS Wyse 3040 Thin Client with PCoIP Wyse 5010 Thin Client with ThinOS (D10D) Wyse 5010 Thin Client with PCoIP (D10DP) Wyse 5040 AIO Thin Client with ThinOS (5212) Wyse 5040 AIO Thin Client with PCoIP (5213) Wyse 5060 Thin Client with ThinOS Wyse 5060 Thin Client with PCoIP Wyse 5070 Thin Client with ThinOS Wyse 5070 Thin Client with PCoIP Wyse 5070 Extended Thin Client with ThinOS Wyse 5070 Extended Thin Client with PCoIP Wyse 7010 Thin Client with ThinOS (Z10D) | Release version ThinOS 8.6_019 |
| ThinOS Lite 2.6_019 | April 2019 | <ul style="list-style-type: none"> Wyse 3010 Zero Client for Citrix Wyse 3020 Zero Client for Citrix Wyse 5010 Zero Client for Citrix | Release version ThinOS Lite 2.6_019 |

| Release version | Release date | Supported platforms | Release Notes |
|------------------------|---------------------|---|---|
| ThinOS 8.6_015 | June 2018 | <ul style="list-style-type: none"> · Wyse 5040 AIO Thin Client with ThinOS (5212) · Wyse 5040 AIO Thin Client with PCoIP (5213) | Release version ThinOS 8.6_015 |
| ThinOS 8.6_013 | December 2018 | <ul style="list-style-type: none"> · Wyse 3010 Thin Client with ThinOS (T10) · Wyse 3020 Thin Client with ThinOS (T10D) · Wyse 3030 LT Thin Client with ThinOS · Wyse 3030 LT Thin Client with PCoIP · Wyse 3040 Thin Client with ThinOS · Wyse 3040 Thin Client with PCoIP · Wyse 5010 Thin Client with ThinOS (D10D) · Wyse 5010 Thin Client with PCoIP (D10DP) · Wyse 5040 AIO Thin Client with ThinOS (5212) · Wyse 5040 AIO Thin Client with PCoIP (5213) · Wyse 5060 Thin Client with ThinOS · Wyse 5060 Thin Client with PCoIP · Wyse 5070 Thin Client with ThinOS · Wyse 5070 Thin Client with PCoIP · Wyse 5070 Extended Thin Client with ThinOS · Wyse 5070 Extended Thin Client with PCoIP · Wyse 7010 Thin Client with ThinOS (Z10D) | Release version ThinOS 8.6_013 |
| ThinOS Lite 2.6_013 | December 2018 | <ul style="list-style-type: none"> · Wyse 3010 Zero Client for Citrix · Wyse 3020 Zero Client for Citrix · Wyse 5010 Zero Client for Citrix | Release version ThinOS Lite 2.6_013 |

ThinOS 8.6_303 and ThinOS Lite 2.6_303

Release summary

Dell Wyse ThinOS software is designed to run on a broad array of Dell Wyse hardware platforms. Patch or add-on releases are created to support the existing hardware platforms, correct defects, make enhancements, or add new features. These releases are tested and supported on shipping hardware platforms.

Version

ThinOS 8.6_303 and ThinOS Lite 2.6_303

Release date

April 2020

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

Supported platforms

NOTE: Support for Wyse 3010 Thin Client with ThinOS and Wyse 3010 Zero Client for Citrix have been depreciated from this release onwards since it is end of software support.

Table 2. Supported platforms

| Platform | Image file name | BIOS file name | BIOS version |
|--|-----------------|----------------|----------------|
| Wyse 3020 Thin Client with ThinOS (T10D) | T10D_wnos | Not applicable | Not applicable |
| Wyse 3020 zero client for Citrix | T00D_xen | Not applicable | Not applicable |
| Wyse 3030 LT Thin Client with ThinOS | U10_wnos | U10_bios.bin | 1.0G |
| Wyse 3030 LT Thin Client with PCoIP | PU10_wnos | PU10_bios.bin | 1.0G |
| Wyse 3040 Thin Client with ThinOS | A10Q_wnos | A10Q_bios.bin | 1.2.5 |
| Wyse 3040 Thin Client with PCoIP | PA10Q_wnos | A10Q_bios.bin | 1.2.5 |
| Wyse 5010 Thin Client with ThinOS (D10D) | ZD10_wnos | D10G_bios.bin | 3.0U |
| Wyse 5010 Thin Client with PCoIP (D10DP) | PD10_wnos | PD10G_bios.bin | 3.0U |

| Platform | Image file name | BIOS file name | BIOS version |
|---|-----------------|------------------|--------------|
| Wyse 5010 zero client for Citrix | ZD00_xen | D10G_bios.bin | 3.0U |
| Wyse 5040 AIO Thin Client (5212) | ZD10_wnos | AIO10G_bios.bin | 3.0U |
| Wyse 5040 AIO Thin Client with PColP (5213) | PD10_wnos | PAIO10G_bios.bin | 3.0U |
| Wyse 5060 Thin Client with ThinOS | D10Q_wnos | D10Q_bios.bin | 1.0J |
| Wyse 5060 Thin Client with PColP | PD10Q_wnos | PD10Q_bios.bin | 1.0J |
| Wyse 5070 Thin Client with ThinOS | X10_wnos | X10_bios.bin | 1.4.2 |
| Wyse 5070 Thin Client with PColP | PX10_wnos | X10_bios.bin | 1.4.2 |
| Wyse 5470 Thin Client with ThinOS | X10_wnos | 5470_bios.bin | 1.2.1 |
| Wyse 5470 Thin Client with PColP | PX10_wnos | 5470_bios.bin | 1.2.1 |
| Wyse 5470 AIO Thin Client with ThinOS | X10_wnos | 5470AIO_bios.bin | 1.3.1 |
| Wyse 5470 AIO Thin Client with PColP | PX10_wnos | 5470AIO_bios.bin | 1.3.1 |
| Wyse 7010 Thin Client with ThinOS (Z10D) | ZD10_wnos | Z10G_bios.bin | 3.0U |

Previous versions

ThinOS 8.6_206 and ThinOS Lite 2.6_206

Supported packages

NOTE: From this release onwards, there are no updates for Flash Redirection (FR) and TCX packages.

Table 3. Supported packages

| Platform name | Package versions | | |
|---|--------------------------|--------------------|-----------------------|
| | Horizon v5.1.19052918 | RTME v2.8.54007 | JVDI 12.6.19091611 |
| Wyse 3020 Thin Client with ThinOS (T10D) | Not supported | Not supported | Not supported |
| Wyse 3020 Zero Client for Citrix | Not supported | Not supported | Not supported |
| Wyse 3030 LT Thin Client with ThinOS | Supported | Supported | Supported |
| Wyse 3030 LT Thin Client with PColP | Supported | Supported | Supported |
| Wyse 3040 Thin Client with ThinOS | Supported | Supported | Supported |
| Wyse 3040 Thin Client with PColP | Supported | Supported | Supported |
| Wyse 5010 Thin Client with ThinOS (D10D) | Supported | Supported | Supported |
| Wyse 5010 Thin Client with PColP (D10DP) | Supported | Supported | Supported |
| Wyse 5010 Zero Client for Citrix | Supported | Supported | Not supported |
| Wyse 5040 AIO Thin Client (5212) | Supported | Supported | Supported |
| Wyse 5040 AIO Thin Client with PColP (5213) | Supported | Supported | Supported |
| Wyse 5060 Thin Client with ThinOS | Supported | Supported | Supported |
| Wyse 5060 Thin Client with PColP | Supported | Supported | Supported |

| Platform name | Package versions | | |
|--|--------------------------|--------------------|-----------------------|
| | Horizon v5.1.19052918 | RTME v2.8.54007 | JVDI 12.6.19091611 |
| Wyse 5070 Thin Client with ThinOS | Supported | Supported | Supported |
| Wyse 5070 Thin Client with PCoIP | Supported | Supported | Supported |
| Wyse 5470 Thin Client | Supported | Supported | Supported |
| Wyse 5470 Thin Client with PCoIP | Supported | Supported | Supported |
| Wyse 5470 AIO Thin Client | Supported | Supported | Supported |
| Wyse 5470 AIO Thin Client with PCoIP | Supported | Supported | Supported |
| Wyse 7010 Thin Client with ThinOS (Z10D) | Supported | Supported | Not supported |

New and enhanced features

Network icon added to taskbar

A network icon is added to the taskbar on the classic desktop. The network icon is displayed irrespective of whether the Ethernet cable is connected to the thin client. Clicking the network icon displays the **Network Setup** window that can be used to configure your network settings.



Figure 1. Taskbar with the network icon

Show Key feature for Wyse Management Suite group token

You can view the Wyse Management Suite Group Token key that is entered by the user or administrator in the **Central Configuration** window. To view the specified group token key, click the **Show Key** button. Verify whether the specified group token key is correct. You can also press the F5 key to display the group token. When you press other keys on the keyboard, the group token is masked automatically.

Change registration code for Amazon WorkSpaces

ThinOS enables you to modify the registration code anytime from the Amazon WorkSpaces (AWS) login window. This feature is applicable if you are connecting to AWS using the registration code. Deploy the INI parameter `EnableAWSREGCode={yes, no}` to use this feature.

Wyse Management Suite Proxy information using DHCP options or DNS SRV records

You can use DHCP option tags or DNS records to define the Wyse Management Suite proxy (SOCKS5) information. You can fetch proxy settings using the DHCP option or DNS SRV records during the system bootup. The DNS record takes precedence over the DHCP option tag. To specify the proxy information, you must select the **Enable Proxy Settings on DNS/DHCP Server** check box on the **Proxy tab** in the **Network Setup** window.

For more information about how to use DHCP options or DNS SRV records to configure the Wyse Management Suite proxy settings, see the *Dell Wyse ThinOS 8.6 Administrator's Guide* at www.dell.com/support.

Supports RC4_HMAC_MD5 for RDP connections

RC4_HMAC_MD5 is supported for RDP connections to compliment with AES128_HMAC_SHA1 or AES256_HMAC_SHA1.

Limit core dumps by clearing NVRAM

You can clear Non-Volatile Random-Access Memory (NVRAM) to resolve the low memory issue and increase the user login time. Use the INI parameter `LimitCoredumpPartition={yes,no}` to configure this feature. Deploying this parameter reduces the total number of saved core dumps by limiting the space on NVRAM. For information about this parameter, see the *Dell Wyse ThinOS Version 8.6 INI Reference Guide* at www.dell.com/support.

ENERGY STAR 8 compliance

ThinOS and ThinOS Lite-based devices are ENERGY STAR 8 compliant. To enable or disable ENERGY STAR 8 on your thin client, deploy the INI parameter `enableEEE={0,1}`.

Supports TicTok smart cards

ThinOS supports TicTok smart cards from this release onwards.

Important notes

Limitations

- **VMware Blast**—The following limitations are applicable for Wyse 5060 Thin Clients:
 - ThinOS supports two displays with 1080p resolution. The VDI graphic performance is good.
 - ThinOS supports single display with 4K resolution. However, the VDI graphic performance is not smooth. It is recommended that you do not use a single 4K display.
NOTE: It is recommended that you use the Wyse 5070 Thin Client for 4K optimized VDI graphic performance.
 - You cannot launch a Blast session on a 4K display. This is a known issue.
- **PCoIP**—The following limitations are applicable for Wyse 5060 Thin Clients:
 - Connected to VM with GPU—Dual 4K is supported. The VDI graphic performance is good on each Virtual Machine.
 - Connection to VM without GPU
 - ThinOS supports two displays with 1080p resolution. The VDI graphic performance is good.
 - ThinOS supports single display with 4K resolution. However, the VDI graphic performance is not smooth. It is not recommended to use a single 4K display.
NOTE: It is recommended that you use the Wyse 5070 Thin Client for 4K optimized VDI graphic performance.

Tested environments matrix

The following tables display the testing environment for the respective attributes:

Table 4. Tested environment - General components

| Component | Version |
|-----------------------|---------|
| Wyse Management Suite | 1.4.1 |
| Imprivata OneSign | 6.3 |
| NetScaler | 12.1 |
| StoreFront | 3.15 |

Table 5. Test environment - VDI

| VDI | Windows 7 | Windows 10 | Ubuntu 18 | Windows Server 2008 R2 | Windows Server 2012 R2 | Windows Server 2016 | Windows Server 2019 | APPs |
|--|------------|------------|------------|------------------------|------------------------|---------------------|---------------------|--------|
| VMware Horizon 7.11 | Not tested | Tested | Not tested | Not tested | Tested | Tested | Tested | Tested |
| Citrix Virtual Apps and Desktops 7 1912 LTSR | Not tested | Tested | Tested* | Not tested | Tested | Tested | Tested | Tested |
| Remote Desktop Services (RDS) 2012 R2/2016 | Not tested | Not tested | Not tested | Not tested | Tested | Tested | Not tested | Tested |

*Only basic connections are tested.

Table 6. Tested environment - RTME

| Citrix Virtual Apps and Desktops/Citrix Virtual Apps | Operating system | RTME | Skype for Business client | Skype for Business Server |
|--|---------------------|------|---------------------------|---------------------------|
| 7.1912 LTSR | Windows 10 | 2. 8 | Skype for Business 2016 | Skype for Business 2015 |
| | Windows Server 2016 | 2. 8 | Skype for Business 2016 | Skype for Business 2015 |
| | Windows Server 2019 | 2. 8 | Skype for Business 2016 | Skype for Business 2015 |

Tested peripheral devices

This section lists the tested peripheral devices.

Table 7. Tested peripheral devices

| Product Category | Peripherals | Wyse 3040 | Wyse 5070 | Wyse 5470 All-in-One | Wyse 5470 | Wyse 5060, 5010, and 7010 |
|------------------|--|----------------|----------------|----------------------|----------------|---------------------------|
| Audio | Logitech USB headset-H-390-Logitech | Tested | Tested | Tested | Tested | Tested |
| | Plantronics USB Headset-C320-M | Tested | Tested | Tested | Tested | Tested |
| | USB Headset-SC60-Sennheiser | Tested | Tested | Tested | Tested | Tested |
| | USB Headset-Jabra UC350-Dell | Tested | Tested | Tested | Tested | Tested |
| | Analog Headset-Jabra UC350-Dell | Tested | Tested | Tested | Tested | Tested |
| | Analog Headset-Boat Mobile Headset-Boat | Tested | Tested | Tested | Tested | Tested |
| | Dell Pro Stereo Headset - UC150 - Skype for Business | Tested | Tested | Not applicable | Tested | Not applicable |
| | Dell Pro Stereo Headset - Skype for Business - UC350 | Tested | Tested | Tested | Tested | Not applicable |
| | Dell Professional Sound Bar (AE515M) | Tested | Tested | Not applicable | Tested | Not applicable |
| | Dell USB Sound Bar (AC511M) | Tested | Tested | Not applicable | Tested | Not applicable |
| | Jabra PRO 935 USB MS Lync Headset | Not applicable | Tested | Not applicable | Not applicable | Not applicable |
| | Dell 2.0 Speaker System - AE215 | Not applicable | Not applicable | Tested | Tested | Not applicable |
| | Dell Wireless 2.1 Speaker System - AE415 | Not applicable | Not applicable | Tested | Tested | Not applicable |

| Product Category | Peripherals | Wyse 3040 | Wyse 5070 | Wyse 5470 All-in-One | Wyse 5470 | Wyse 5060, 5010, and 7010 |
|-------------------------|--|------------------|------------------|-----------------------------|------------------|----------------------------------|
| | Jabra Evolve 65 MS Stereo - Headset | Not applicable | Not applicable | Tested | Tested | Not applicable |
| | Jabra Engage 65 Stereo Headset | Not applicable | Not applicable | Tested | Tested | Not applicable |
| | Plantronics Savi W440M-400 Series convertible wireless headset - DECT 6.0 | Not applicable | Not applicable | Tested | Tested | Not applicable |
| | Plantronics Voyager Focus UC B825-M headset for Microsoft Lync | Not applicable | Not applicable | Tested | Tested | Not applicable |
| Adapters and Cables | Dell Adapter - DisplayPort to DVI (Single Link) | Tested | Tested | Not applicable | Not applicable | Not applicable |
| | Dell Adapter - DisplayPort to HDMI 2.0 (4K) | Tested | Tested | Tested | Not applicable | Not applicable |
| | Dell Adapter - DisplayPort to VGA | Tested | Tested | Not applicable | Not applicable | Not applicable |
| | C2G - USB 2.0 A (Male) to DB9 (Serial) (Male) Adapter | Not applicable | Tested | Tested | Tested | Not applicable |
| | Dell Adapter - USB-C to DisplayPort | Not applicable | Tested | Not applicable | Tested | Not applicable |
| | Dell Adapter - USB-C to HDMI | Not applicable | Tested | Not applicable | Not applicable | Not applicable |
| | Dell Adapter - USB-C to VGA | Not applicable | Tested | Not applicable | Not applicable | Not applicable |
| | Trendnet USB to Serial Converter RS-232 | Not applicable | Tested | Tested | Tested | Not applicable |
| | Dell Adapter - HDMI to DVI | Not applicable | Not applicable | Not applicable | Tested | Not applicable |
| | Dell Adapter - HDMI to VGA | Not applicable | Not applicable | Not applicable | Tested | Not applicable |
| | Dell USB-C Mobile Adapter Slayer 3 | Not applicable | Not applicable | Not applicable | Tested | Not applicable |
| | StarTech.com 1 Port USB to RS232 DB9 Serial Adapter Cable - Serial adapter - USB 2.0 | Not applicable | Not applicable | Tested | Tested | Not applicable |
| Keyboard and Mouse | Dell Laser Scroll USB 6-Buttons Silver and Black Mouse | Tested | Tested | Tested | Tested | Not applicable |
| | Dell USB Wired Keyboard - KB216 | Tested | Tested | Tested | Not applicable | Not applicable |
| | Dell USB Wired Optical Mouse - MS116 | Tested | Tested | Tested | Tested | Not applicable |
| | Dell Premier Wireless Mouse - WM527 | Tested | Tested | Not applicable | Tested | Not applicable |
| | Dell Wireless Keyboard and Mouse - KM636 | Tested | Tested | Tested | Tested | Not applicable |
| | Dell Wireless Mouse - WM326 | Not applicable | Not applicable | Tested | Tested | Not applicable |
| | Seal Shield Silver Seal Waterproof-Keyboards-USB-US-waterproof-white | Tested | Tested | Not applicable | Not applicable | Not applicable |

| Product Category | Peripherals | Wyse 3040 | Wyse 5070 | Wyse 5470 All-in-One | Wyse 5470 | Wyse 5060, 5010, and 7010 |
|------------------|---|-----------|-----------|----------------------|----------------|-------------------------------------|
| | SEAL SHIELD MEDICAL GRADE OPTICAL (Mouse) | Tested | Tested | Not applicable | Not applicable | Not applicable |
| | Man & Machine Its Cool Flat - Keyboard - USB - UK layout - white | Tested | Tested | Not applicable | Not applicable | Not applicable |
| | Man & Machine C Mouse - right and left-handed - optical - 2 buttons - wired - USB - white | Tested | Tested | Not applicable | Not applicable | Not applicable |
| Bluetooth | Bluetooth Keyboard -K380/K480-Logitech | Tested | Tested | Tested | Tested | Tested— Wyse 5060 Thin Client |
| | Bluetooth Keyboard -HP Slim BT Keyboard-HP | Tested | Tested | Tested | Tested | Tested— Wyse 5060 Thin Client |
| | Bluetooth Mouse -M336/M337/M535-Logitech | Tested | Tested | Tested | Tested | Tested— Wyse 5060 Thin Client |
| | Bluetooth Headset Speaker-Calisto 620-Plantronics | Tested | Tested | Tested | Tested | Tested— Wyse 5060 Thin Client |
| | Bluetooth Headset-PLT Focus-Plantronics | Tested | Tested | Tested | Tested | Tested— Wyse 5060 Thin Client |
| | Bluetooth Headset-Jabra -Dell | Tested | Tested | Tested | Tested | Tested— Wyse 5060 Thin Client |
| | Bluetooth Headset-HP Headset 600-HP | Tested | Tested | Tested | Tested | Tested— Wyse 5060 Thin Client |
| Camera | HD Web cam-C525-Logitech | Tested | Tested | Tested | Tested | Tested |
| | HD Web cam-C922 Pro stream-Logitech | Tested | Tested | Tested | Tested | Tested |
| | HD Web cam-C920 Pro stream-Logitech | Tested | Tested | Tested | Tested | Tested |
| Printer | USB Printer-HL-5450DN-Brother | Tested | Tested | Tested | Tested | Tested |
| | USB Printer-MG2570S-Canon | Tested | Tested | Tested | Tested | Tested |
| CD-ROM | USB CD-ROM-DVDRW8X-U-lomega | Tested | Tested | Tested | Tested | Tested |
| USB | USB Drive-Cruzer Blade-SanDisk | Tested | Tested | Tested | Tested | Tested |
| | C-Type USB Drive-USB 3.0-SanDisk | Tested | Tested | Tested | Tested | Not applicable |
| | micro-SDHC EVO plus | Tested | Tested | Tested | Tested | Tested |
| | USB Drive-DT50-Kingston | Tested | Tested | Tested | Tested | Tested |
| | USB Card Reader-HDW-IMP-80-RFID | Tested | Tested | Tested | Tested | Tested |
| | Touch Chip USB Fingerprint-HDW-IMP-1C-STM32 | Tested | Tested | Tested | Tested | Tested |
| Monitor | 4K Monitor-P2415Q | Tested | Tested | Tested | Tested | Tested |
| | 4K Monitor-U2718Q | Tested | Tested | Tested | Tested | Tested |
| | 2K Monitor-UP3017 | Tested | Tested | Tested | Tested | Tested |
| | 2K Monitor-P2414 | Tested | Tested | Tested | Tested | Tested |

| Product Category | Peripherals | Wyse 3040 | Wyse 5070 | Wyse 5470 All-in-One | Wyse 5470 | Wyse 5060, 5010, and 7010 |
|-------------------------|---|------------------|------------------|-----------------------------|------------------|----------------------------------|
| | 2K Monitor-U2414H | Tested | Tested | Tested | Tested | Tested |
| | USB ELO Touch Monitor-ELO2201L-ELO Touch Systems 2015 model | Tested | Tested | Tested | Tested | Tested |
| | E1916H | Tested | Tested | Tested | Not applicable | Not applicable |
| | P1917S | Tested | Not applicable | Not applicable | Not applicable | Not applicable |
| | E1920H | Tested | Tested | Tested | Tested | Not applicable |
| | E2016H | Tested | Tested | Tested | Tested | Not applicable |
| | E2016Hv (China only) | Not applicable | Not applicable | Not applicable | Tested | Not applicable |
| | P2017H | Tested | Not applicable | Not applicable | Not applicable | Not applicable |
| | P2018H | Not applicable | Not applicable | Not applicable | Tested | Not applicable |
| | E2020H | Tested | Tested | Tested | Tested | Not applicable |
| | E2218HN | Tested | Not applicable | Tested | Tested | Not applicable |
| | P2217 | Tested | Not applicable | Not applicable | Not applicable | Not applicable |
| | P2217H | Tested | Tested | Not applicable | Not applicable | Not applicable |
| | P2219H | Tested | Tested | Not applicable | Tested | Not applicable |
| | P2219HC | Tested | Tested | Not applicable | Tested | Not applicable |
| | E2220H | Tested | Tested | Tested | Tested | Not applicable |
| | E2318H | Tested | Tested | Tested | Tested | Not applicable |
| | P2317H | Tested | Tested | Not applicable | Not applicable | Not applicable |
| | E2417H | Tested | Tested | Tested | Tested | Not applicable |
| | P2415Q | Tested | Tested | Tested | Not applicable | Not applicable |
| | P2417H | Tested | Tested | Not applicable | Not applicable | Not applicable |
| | P2418D | Tested | Not applicable | Not applicable | Not applicable | Not applicable |
| | P2418HT | Tested | Tested | Tested | Not applicable | Not applicable |

| Product Category | Peripherals | Wyse 3040 | Wyse 5070 | Wyse 5470 All-in-One | Wyse 5470 | Wyse 5060, 5010, and 7010 |
|-------------------------|----------------------|------------------|------------------|-----------------------------|------------------|----------------------------------|
| | P2418HZ | Tested | Tested | Not applicable | Not applicable | Not applicable |
| | P2419H | Tested | Tested | Tested | Tested | Not applicable |
| | P2419HC | Tested | Tested | Not applicable | Tested | Not applicable |
| | P2421D | Tested | Tested | Not applicable | Tested | Not applicable |
| | E2420H | Tested | Tested | Tested | Tested | Not applicable |
| | P2719H | Tested | Tested | Tested | Tested | Not applicable |
| | P2719HC | Tested | Tested | Not applicable | Tested | Not applicable |
| | P2720D | Tested | Tested | Not applicable | Tested | Not applicable |
| | E2720H | Tested | Tested | Tested | Tested | Not applicable |
| | P3418HW | Tested | Tested | Tested | Not applicable | Not applicable |
| | MR2416 | Tested | Tested | Not applicable | Not applicable | Not applicable |
| | U2415 | Tested | Tested | Tested | Not applicable | Not applicable |
| | U2419H | Tested | Tested | Tested | Tested | Not applicable |
| | U2419HC | Tested | Tested | Not applicable | Tested | Not applicable |
| | U2518D | Tested | Tested | Tested | Not applicable | Not applicable |
| | U2520D | Tested | Tested | Tested | Tested | Not applicable |
| | U2720Q | Tested | Tested | Tested | Tested | Not applicable |
| | U2718Q (4K) | Tested | Tested | Tested | Tested | Not applicable |
| | U2719D | Tested | Tested | Tested | Tested | Not applicable |
| | U2719DC | Tested | Tested | Not applicable | Tested | Not applicable |
| | U2721DE | Not applicable | Tested | Tested | Tested | Not applicable |
| | E2216H | Not applicable | Tested | Tested | Tested | Not applicable |
| | E2216Hv (China only) | Not applicable | Not applicable | Not applicable | Tested | Not applicable |

| Product Category | Peripherals | Wyse 3040 | Wyse 5070 | Wyse 5470 All-in-One | Wyse 5470 | Wyse 5060, 5010, and 7010 |
|----------------------------------|---|----------------|----------------|----------------------|----------------|---------------------------|
| | E2318HN | Not applicable | Tested | Not applicable | Not applicable | Not applicable |
| | E2420HS | Not applicable | Tested | Tested | Tested | Not applicable |
| | E2720HS | Not applicable | Tested | Tested | Tested | Not applicable |
| | P2016 | Not applicable | Tested | Not applicable | Not applicable | Not applicable |
| | P2319H | Not applicable | Tested | Not applicable | Tested | Not applicable |
| | P2421DC | Not applicable | Tested | Not applicable | Tested | Not applicable |
| | P2720DC | Not applicable | Tested | Not applicable | Tested | Not applicable |
| | P4317Q | Not applicable | Tested | Tested | Not applicable | Not applicable |
| | U2421HE | Not applicable | Tested | Tested | Tested | Not applicable |
| | U4320Q | Not applicable | Tested | Tested | Tested | Not applicable |
| Speech Mic | Olympus DirectRec DR-1200 | Tested | Tested | Tested | Tested | Tested |
| Networking | Add On 1000 Base-T SFP transceiver (RJ-45) | Not applicable | Tested | Not applicable | Not applicable | Not applicable |
| Docking station | Dell Dock - WD19-C | Not applicable | Not applicable | Not applicable | Tested | Not applicable |
| | Dell Business Dock - WD15 | Not applicable | Not applicable | Not applicable | Tested | Not applicable |
| | Dell Thunderbolt Dock - WD19 TB | Not applicable | Not applicable | Not applicable | Tested | Not applicable |
| Storage | Dell Portable SSD, USB-C 250 GB | Not applicable | Not applicable | Not applicable | Tested | Not applicable |
| | Dell USB Slim DVD +/- RW Drive - DW316 | Not applicable | Not applicable | Not applicable | Tested | Not applicable |
| Smart card and smart card reader | Dell KB813 Smart card Keyboard - KB813 | Tested | Tested | Tested | Tested | Not applicable |
| | Dell Keyboard KB813t | Tested | Tested | Tested | Tested | Not applicable |
| | ETOKEN, SAFENET 5300, FIPS, MINI, BLACK, SIGNTS+, PIN_EXCHANGE-TS+PIN | Tested | Tested | Tested | Tested | Not applicable |
| | ETOKEN, SAFENET 5110, FIPS, JAVA/80K, BLACK, ID, (HEX) | Tested | Tested | Tested | Tested | Not applicable |
| | ETOKEN, SAFENET, 5110+, CC, JAVA/80K, BLACK, ID (HEX) | Tested | Tested | Tested | Tested | Not applicable |
| | CARD_IDPrime MD 830 B FIPS 140-2 L2 White PVC | Tested | Tested | Tested | Tested | Not applicable |

| Product Category | Peripherals | Wyse 3040 | Wyse 5070 | Wyse 5470 All-in-One | Wyse 5470 | Wyse 5060, 5010, and 7010 |
|------------------|--|-----------|----------------|----------------------|----------------|---------------------------|
| | CARD_IDPrime MD 3840 B without OTP | Tested | Tested | Tested | Tested | Not applicable |
| | Card_IDPrimeMD840B_white_PVC | Tested | Tested | Tested | Tested | Not applicable |
| | CARD_IDPrime MD3811, Mifare EV1 4K & DESFire EV1, 4K _MPH150_New | Tested | Tested | Tested | Tested | Not applicable |
| | Standard Card _IDPrime NET 510_ white PVC | Tested | Tested | Tested | Tested | Not applicable |
| | Yubikey Neo 5.0 | Tested | Tested | Tested | Tested | Not applicable |
| | E-token pro Aladdin 72 K | Tested | Tested | Tested | Tested | Not applicable |
| Printer | Dell Color Multifunction Printer - E525w | Tested | Not applicable | Not applicable | Not applicable | Not applicable |
| | Dell Color Printer- C2660dn | Tested | Tested | Not applicable | Not applicable | Not applicable |
| | Dell Multifunction Printer - E515dn | Tested | Not applicable | Not applicable | Not applicable | Not applicable |

INI parameters

The following table provides the list of INI parameters:

NOTE: Every INI parameter is associated with a parent INI parameter. Use these INI parameters along with the corresponding parent INI parameters.

Table 8. INI parameters

| INI parameters | Description |
|------------------------------------|---|
| [enableEEE={0,1}] | This parameter enables or disables ENERGYSTAR 8 on your ThinOS-based client. By default, the value is set to 1. |
| [Microphone={yes, no}] | This parameter enables or disables microphone devices on the Wyse 5470 All-in-One Thin Client. The default value in BIOS is set to yes. |
| [InternalSpeaker={yes, no}] | This parameter enables or disables internal speakers on the Wyse 5470 All-in-One Thin Client. The default value in BIOS is set to yes. |
| [OneSignTimeout=0 to 30] | This parameter enables you to set the timeout for the OneSign login window. The value range is 0–30 s. By default, the value is set to 20 s. 0 means no timeout and the OneSign login window stays forever. |
| [SkipEnter={yes, no}] | This parameter enables or disables the ability to log in as an anonymous user without pressing the Enter key. |
| [LimitCoredumpPartition={yes, no}] | This parameter reduces the total number of saved coredumps by limiting the space on Non-Volatile Random Access Memory (NVRAM). Enabling this option reduces the user login time. |
| [EnableAWSREGCode={yes, no}] | This option enables or disables the ability to change the registration code for connecting to Amazon Workspaces. |

For more information about the newly added INI parameters, see the *Dell Wyse ThinOS 8.6 INI Reference Guide* at www.dell.com/support.

Fixed issues

Table 9. Fixed issues

| Issue ID | Description |
|-------------|---|
| THINOS-1485 | Resolved the issue where black boxes are displayed in an ICA session when you are using Office applications. |
| THINOS-1674 | Resolved the issue where the session may disconnect abruptly. |
| THINOS-1705 | Resolved the issue where the Shutdown dialog box stops responding when you click Sign off from account . This issue is observed on Wyse 5070 and 5010 thin clients. |
| THINOS-1805 | Resolved the issue that is observed when adding or removing SSIDs for thin clients using Wyse Management Suite. |
| THINOS-1831 | Resolved the issue where you cannot log in to a direct RDP connection when the authentication server is Windows 2012. |
| THINOS-1840 | Resolved the issue where the audio is distorted when you connect two headset devices. This issue is observed on the Wyse 5060 Thin Client. |
| THINOS-1841 | Resolved the issue where a certificate error is observed when you change groups using Wyse Management Suite. |
| THINOS-1854 | Resolved the issue where the thin client does not power on using smart card. This issue is observed on the Wyse 5010 thin client. |
| THINOS-1855 | Resolved the issue where the system log displays two displays even though you have connected a single display. This issue is observed on the Wyse 3020 Thin Client. |
| THINOS-1856 | Resolved the issue where black patches or objects are displayed on the screen when you drag a published application window. |
| THINOS-1862 | Resolved the issue where you cannot connect to the Azure RDP session from ThinOS. |
| THINOS-1867 | Resolved the issue where a virtual driver error is observed with NVIDIA GRID GPU. This issue is observed on the Wyse 5070 Thin Client. |
| THINOS-1883 | Resolved the issue where the audio is enabled after you remove the YubiKey. The audio is disabled when you insert the YubiKey. |
| THINOS-1884 | Resolved the issue where blue lines are displayed when you connect to the Windows 2008 R2 SP1 server using RDP. This issue is observed on the Wyse 5070 Thin Client. |
| THINOS-1896 | Resolved the issue where the Auto Connect list is distorted when you use the Japanese language build. |
| THINOS-1910 | Resolved the issue where the thin client does not check in after you perform a factory rest. |
| THINOS-1921 | Resolved the issue where the Citrix session disconnects and takes time to reconnect during WiFi roaming. This issue is observed on the Wyse 5070 Thin Client. |
| THINOS-1931 | Resolved the issue where the VMware VDI screen stops responding when using a USB keyboard. |
| THINOS-1934 | Resolved the issue where the trap error is observed and the thin client stops responding. This issue is observed on the Wyse 3040 Thin Client. |
| THINOS-1937 | Resolved the issue that is observed when connecting a printer to the Wyse 5070 Thin Client. |
| THINOS-1978 | Resolved the issue where lines are displayed on the screen when you set the screen orientation to vertical. |
| THINOS-1982 | 996078773 - Touch keyboard is displayed when the virtual machine is locked. |
| THINOS-1993 | Resolved the issue where you cannot take screenshots on the secondary display. This issue is observed on Wyse 5010 Thin Client. |
| THINOS-2017 | Resolved the issue where the on-screen keyboard is displayed in an RDP session. This issue is observed on Wyse 5010 Thin Client. |
| THINOS-2020 | Resolved the issue where mouse and keyboard respond slowly on the Wyse 3040 Thin Client. |
| THINOS-2031 | Resolved the issue where pressing the power button does not shut down the device when there is an active session. |

| Issue ID | Description |
|-------------|--|
| THINOS-2032 | Resolved the issue where the mouse pointer is distorted in a VMware View 7.8.0 session. |
| THINOS-2045 | Resolved the issue where the display settings that are manually overridden, changes after you reboot the system twice. |
| THINOS-2054 | Core dump occurs when you connect the HP LaserJet Pro-M404 DN printer to Wyse 3040 and 3020 thin clients. |
| THINOS-2057 | Resolved the issue where the display on Wyse 3040 Thin Client changes after you upgrade from ThinOS 8.5_024 to 8.6_027. |
| THINOS-2063 | Resolved the issue where View_Client_Client_ID is not displayed in the registry. |
| THINOS-2064 | Resolved the issue where the display changes after you upgrade from ThinOS 8.5.x to 8.6.x using Wyse Management Suite 1.4. |
| THINOS-2076 | Resolved the XenDesktop restart timing issue that occurs after upgrading to ThinOS 8.6_027. |
| THINOS-2082 | Resolved the issue where the Access Gateway with SMS Passcode does not work on Wyse 5470 Thin Clients. |
| THINOS-2089 | Resolved the issue where there is no audio on a Jabra Evolve 30 Headset that is connected. |
| THINOS-2092 | Resolved the issue where the Citrix password expiry may not work. |
| THINOS-2095 | Resolved the issue where the Wyse 5010 Thin Client crashes during a Skype conference call. |
| THINOS-2096 | Resolved the issue where multiple instances of Direct RDP connections that are configured from Wyse Management Suite are not applied to ThinOS . |
| THINOS-2099 | Resolved the trap issue that is observed in a Citrix session. |
| THINOS-2104 | Resolved the one-way audio issue that is observed on Wyse 5010 Thin Client. |
| THINOS-2109 | Resolved the trap issue that is observed on Wyse 5010 and 3040 Thin Clients. |
| THINOS-2118 | Resolved the issue where multiple clicks can open multiple VDI sessions on the Wyse 5070 Thin Client. |
| THINOS-2130 | Resolved the issue where the ThinOS and WDM USB are not synchronized correctly. |
| THINOS-2139 | Resolved the issue where an error occurs when connecting to a Citrix session. The issue is observed when the published desktop is powered off or you restart the device. |
| THINOS-2150 | Resolved the issue where the Zebra barcode scanner adds ! when using the Blast protocol. |
| THINOS-2154 | Resolved the issue where the fingerprint reader prompt remains open and the thin client is slow when you log in after a firmware upgrade. The issue is observed on Wyse 5010 and Wyse 5070 thin client running ThinOS 8.6_02x. |
| THINOS-2158 | Resolved the issue where the Wyse 5060 Thin Client stops responding when a headset is plugged in. |
| THINOS-2162 | Resolved the issue where thin clients receive core dump randomly. |
| THINOS-2164 | Resolved the issue where the error 0x1f72fao is displayed on the Wyse 5470 Thin Client running ThinOS 8.6_204. |
| THINOS-2166 | Resolved the issue where the Zebra barcode scanner adds a special character when using Blast protocol. |
| THINOS-2167 | Resolved the issue where a trap error is observed when using screensaver on the Wyse 5470 Thin Client running ThinOS 8.6_027. |
| THINOS-2177 | Resolved the issue where an error message that states <i>Credentials match a different user than the user that has already been identified during authentication attempt</i> is displayed on the Wyse 3040 Thin Client. |
| THINOS-2178 | Resolved the issue where the NEC EA234 display cannot enter the standby mode when you disable the DP audio on the Wyse 3040 Thin Client. |
| THINOS-2183 | Resolved the issue where a trap error related to PulseAudio is observed on the Wyse 5010 Thin Client. |
| THINOS-2186 | Resolved the issue where Wyse 3020 thin clients are not part of filters in Wyse Management Suite. |
| THINOS-2194 | Resolved the issue that is observed on new CAC cards. |

| Issue ID | Description |
|-------------|---|
| THINOS-2197 | Resolved the issue where the trap error VDCAMN is displayed. |
| THINOS-2200 | Resolved the issue where thin clients receive core dumps randomly from pulse audio. This is observed on thin clients running ThinOS 8.6_027. |
| THINOS-2201 | Resolved the issue where thin clients receive core dumps randomly from WiFi. This is observed on thin clients running ThinOS 8.6_027. |
| THINOS-2202 | Resolved the issue where the Phones (MTP/PTP) Redirection is enabled by default in RDP/RDS sessions. |
| THINOS-2203 | Resolved the issue where the multiple instances of direct RDP connections that are configured from Wyse Management Suite are not applied to ThinOS. |
| THINOS-2223 | Resolved the issue where the CAC cards cannot find a valid certificate on ThinOS 8.6_027. |
| THINOS-2225 | Resolved the issue with the usage of AWS MFA INI parameter. This issue is observed on the Wyse 5470 Thin Client running ThinOS 8.6_206. |
| THINOS-2229 | Resolved the issue where unlocking the ThinOS screensaver username is case-sensitive. This issue is observed on the Wyse 5040 Thin Client running ThinOS 8.6_206. |
| THINOS-2295 | Resolved the issue while switching the audio between DisplayPort audio and USB headset. |
| THINOS-2299 | Resolved the issue where the BLAST performance reduces on Wyse 3040 and Wyse 5070 thin clients running ThinOS 8.6_206. |
| THINOS-2300 | Resolved the issue where thin clients receive core dumps randomly from wireless roaming and pulse audio. |
| THINOS-2302 | Resolved the issue where the thin client prompts you to press the Enter key for anonymous user login. |
| THINOS-2308 | Resolved the issue where the DVI signal takes first preference on the Wyse 3040 Thin Clients. |
| THINOS-2335 | Resolved the issue where core dumps are randomly received when an HP Laser Jet Pro M40N printer is connected. |
| THINOS-2337 | Resolved the issue where the SMS PASSCODE authentication does not work when attempting to connect to a Citrix session. |
| THINOS-2409 | Resolved the issue where the smart card reader provides an incorrect certificate file for Citrix login. This issue is observed on the Wyse 5070 Thin Client. |

Known issues

Table 10. Known issues

| Issue ID | Description | Workaround |
|-------------|--|---|
| THINOS-2394 | Taskbar is not displayed in a VDI session after you turn off the primary screen. | There is no workaround in this release. |
| THINOS-2385 | The Wake-On-LAN feature does not work through Wyse Device Manager. | There is no workaround in this release. |
| THINOS-2405 | Connection broker information for multilogon is insufficient. | There is no workaround in this release. |
| THINOS-2370 | The system stops responding when you set the display rotation to either 90 degrees left or right in a launched session. | There is no workaround in this release. |
| THINOS-2368 | When the Wyse 3040 Thin Client enters the sleep mode, pressing a keyboard key restarts the device. | There is no workaround in this release. |
| THINOS-2352 | IEEE-FAST-GTC message prompting for username is displayed even though the username is specified in the FAST-GTC configuration settings. This issue is observed on the Wyse 5470 Thin Client. | There is no workaround in this release. |
| THINOS-2396 | A trap issue is observed when you remove the Cruzer Blade USB Pen drive from the Wyse 3040 Thin Client. | There is no workaround in this release. |

| Issue ID | Description | Workaround |
|-----------------|---|---|
| THINOS-2395 | A trap issue related to audio is observed on the Wyse 5070 Thin Client with PCoIP. | There is no workaround in this release. |
| THINOS-2358 | When you use a Bluetooth headset with Intel AC 7265 Dual Band Wireless Chipset, the thin client does not automatically reconnect after you restart the device. This issue is observed on the Wyse 5060 Thin Client. | There is no workaround in this release. |
| THINOS-2350 | Manual reboot by pressing the power button is required for ping to work when you use a Dell Docking Station WD19 with Wyse 5470 Thin Client. | There is no workaround in this release. |
| THINOS-2347 | The IPv6 warning message is not displayed when you use a static IP that is used by other devices. This issue is observed on the Wyse 5470 Thin Client. | There is no workaround in this release. |
| THINOS-2324 | Two mouse cursors are displayed when you launch a VMware session in a window mode. | There is no workaround in this release. |
| THINOS-2319 | Record and Play buttons on the Audio tab cannot be used when you are connected to a Bluetooth audio device. | There is no workaround in this release. |
| THINOS-2129 | When you power on the thin client with lid closed, the external monitor is not set as the main screen. This issue is observed on the Wyse 5470 Thin Client. | There is no workaround in this release. |
| THINOS-2378 | A trap issue is observed when you are playing a Citrix MMR video in an ICA session. | There is no workaround in this release. |
| THINOS-2329 | Record and Play buttons on the Audio tab stops working when you connect and disconnect two headsets multiple times. This issue is observed on the Wyse 5060 Thin Client. | There is no workaround in this release. |
| THINOS-1773 | A coredump error is observed when you change the wireless security from WPA2 to WPA. This issue is observed on the Wyse 3040 Thin Client. | There is no workaround in this release. |
| THINOS-2399 | A trap issue is observed when you try to export IDE troubleshooting files. | There is no workaround in this release. |
| THINOS-2288 | A trap error screen is not displayed when you click the Force Coredump option. | There is no workaround in this release. |
| THINOS-2396 | A trap issue is observed when you disconnect the Cruzer blade USB pen drive from the Wyse 3040 Thin Client. | There is no workaround in this release. |
| THINOS-2369 | OMNIKEY 3121 and IDBridge CT31 PIV smart card readers cannot read information from smart cards. | There is no workaround in this release. |
| THINOS-2414 | Touch screen stops responding after you minimize the RDP or VMware session. This issue is observed on the P2418HT monitor. | There is no workaround in this release. |
| THINOS-2413 | Touch screen stops responding in the extended mode on the Wyse 5470 All-in-One Thin Client. | There is no workaround in this release. |

ThinOS 8.6_206 and ThinOS Lite 2.6_206

Release summary

Dell Wyse ThinOS software is designed to run on a broad array of Dell Wyse hardware platforms. Patch or add-on releases are created to support the existing hardware platforms, correct defects, make enhancements, or add new features. These releases are tested and supported on shipping hardware platforms.

Version

ThinOS 8.6_206 and ThinOS Lite 2.6_206

Release date

November 2019

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

Supported platforms

Table 11. Supported platforms

| Platform | Image file name | BIOS file name | BIOS version |
|--|-----------------|----------------|----------------|
| Wyse 3010 Thin Client with ThinOS (T10) | DOVE_boot | Not applicable | Not applicable |
| Wyse 3010 zero client for Citrix | T00_xen.bin | Not applicable | Not applicable |
| Wyse 3020 Thin Client with ThinOS (T10D) | T10D_wnos | Not applicable | Not applicable |
| Wyse 3020 zero client for Citrix | T00D_xen | Not applicable | Not applicable |
| Wyse 3030 LT Thin Client with ThinOS | U10_wnos | U10_bios.bin | 1.0G |
| Wyse 3030 LT Thin Client with PCoIP | PU10_wnos | PU10_bios.bin | 1.0G |
| Wyse 3040 Thin Client with ThinOS | A10Q_wnos | A10Q_bios.bin | 1.2.5 |
| Wyse 3040 Thin Client with PCoIP | PA10Q_wnos | A10Q_bios.bin | 1.2.5 |
| Wyse 5010 Thin Client with ThinOS (D10D) | ZD10_wnos | D10G_bios.bin | 3.0U |
| Wyse 5010 Thin Client with PCoIP (D10DP) | PD10_wnos | PD10G_bios.bin | 3.0U |

| Platform | Image file name | BIOS file name | BIOS version |
|---|-----------------|------------------|--------------|
| Wyse 5010 zero client for Citrix | ZD00_xen | D10G_bios.bin | 3.0U |
| Wyse 5040 AIO Thin Client (5212) | ZD10_wnos | AIO10G_bios.bin | 3.0U |
| Wyse 5040 AIO Thin Client with PColP (5213) | PD10_wnos | PAIO10G_bios.bin | 3.0U |
| Wyse 5060 Thin Client with ThinOS | D10Q_wnos | D10Q_bios.bin | 1.0J |
| Wyse 5060 Thin Client with PColP | PD10Q_wnos | PD10Q_bios.bin | 1.0J |
| Wyse 5070 Thin Client with ThinOS | X10_wnos | X10_bios.bin | 1.3.1 |
| Wyse 5070 Thin Client with PColP | PX10_wnos | X10_bios.bin | 1.3.1 |
| Wyse 5470 Thin Client with ThinOS | X10_wnos | 5470_bios.bin | 1.1.1 |
| Wyse 5470 Thin Client with PColP | PX10_wnos | 5470_bios.bin | 1.1.1 |
| Wyse 5470 AIO Thin Client with ThinOS | X10_wnos | 5470AIO_bios.bin | 1.2.0 |
| Wyse 5470 AIO Thin Client with PColP | PX10_wnos | 5470AIO_bios.bin | 1.2.0 |
| Wyse 7010 Thin Client with ThinOS (Z10D) | ZD10_wnos | Z10G_bios.bin | 3.0U |

Previous versions

ThinOS 8.6_027 for all ThinOS platforms except Wyse 5470 and Wyse 5470 All-in-One Thin Clients

ThinOS 8.6_204 for Wyse 5470 and Wyse 5470 All-in-One Thin Clients

ThinOS Lite 2.6_027 for all ThinOS Lite platforms

Supported packages

Table 12. Supported packages

| Platform name | Packages | | | | |
|--|----------------------|--------------------------|--------------------|-------------------|-----------------------|
| | FR v1.28.19061716 | Horizon v5.1.19052918 | RTME v2.8.54007 | TCX v7.1.41853 | JVDI 12.6.19091611 |
| Wyse 3010 Thin Client with ThinOS (T10) | Not supported | Not supported | Not supported | Not supported | Not supported |
| Wyse 3010 Zero Client for Citrix | Not supported | Not supported | Not supported | Not supported | Not supported |
| Wyse 3020 Thin Client with ThinOS (T10D) | Not supported | Not supported | Not supported | Not supported | Not supported |
| Wyse 3020 Zero Client for Citrix | Not supported | Not supported | Not supported | Not supported | Not supported |
| Wyse 3030 LT Thin Client with ThinOS | Supported | Supported | Supported | Supported | Supported |
| Wyse 3030 LT Thin Client with PColP | Supported | Supported | Supported | Supported | Supported |
| Wyse 3040 Thin Client with ThinOS | Supported | Supported | Supported | Supported | Supported |
| Wyse 3040 Thin Client with PColP | Supported | Supported | Supported | Supported | Supported |
| Wyse 5010 Thin Client with ThinOS (D10D) | Supported | Supported | Supported | Supported | Supported |
| Wyse 5010 Thin Client with PColP (D10DP) | Supported | Supported | Supported | Supported | Supported |
| Wyse 5010 Zero Client for Citrix | Supported | Supported | Supported | Supported | Not supported |

| Platform name | Packages | | | | |
|---|----------------------|--------------------------|--------------------|-------------------|-----------------------|
| | FR v1.28.19061716 | Horizon v5.1.19052918 | RTME v2.8.54007 | TCX v7.1.41853 | JVDI 12.6.19091611 |
| Wyse 5040 AIO Thin Client (5212) | Supported | Supported | Supported | Supported | Supported |
| Wyse 5040 AIO Thin Client with PCoIP (5213) | Supported | Supported | Supported | Supported | Supported |
| Wyse 5060 Thin Client with ThinOS | Supported | Supported | Supported | Supported | Supported |
| Wyse 5060 Thin Client with PCoIP | Supported | Supported | Supported | Supported | Supported |
| Wyse 5070 Thin Client with ThinOS | Supported | Supported | Supported | Supported | Supported |
| Wyse 5070 Thin Client with PCoIP | Supported | Supported | Supported | Supported | Supported |
| Wyse 5470 Thin Client | Supported | Supported | Supported | Supported | Supported |
| Wyse 5470 Thin Client with PCoIP | Supported | Supported | Supported | Supported | Supported |
| Wyse 5470 AIO Thin Client | Supported | Supported | Supported | Supported | Supported |
| Wyse 5470 AIO Thin Client with PCoIP | Supported | Supported | Supported | Supported | Supported |
| Wyse 7010 Thin Client with ThinOS (Z10D) | Supported | Supported | Supported | Supported | Not supported |

New and enhanced features

Updates to ThinOS packages

Updated the JVDI package to version 12.6.19091611

Citrix Receiver updates

Updated the Citrix Receiver on ThinOS to version 14.0.19071816.

Cisco Jabber updates

- The JVDI package on ThinOS is updated from version 12.1.52977 to 12.6.19091611.
- ThinOS supports only audio calls on the following platforms:
 - Wyse 5010 Thin Client with ThinOS
 - Wyse 5010 Thin Client with PCoIP
 - Wyse 5040 All-in-One Thin Client with ThinOS
 - Wyse 5040 All-in-One Thin Client with PCoIP
 - Wyse 3030 LT Thin Client with ThinOS
 - Wyse 3030 LT Thin Client with PCoIP

For more information about the JVDI limitation, see the [Limitation](#) section in this document.

Amazon WorkSpaces updates

Multi factor authentication for Amazon WorkSpace

ThinOS supports Multi-Factor Authentication (MFA) on Amazon WorkSpaces. If your server supports MFA, use the following INI parameter to enable the MFA feature:

```
ConnectionBroker=AWS Host=wsnrt+KQRQWM UseRegistrationCode=yes EnableMFA=yes.
```

The MFA token input box is enabled. Use the Google Authenticator on your mobile device and enter the code that is generated.

If your server does not support MFA, use the following INI parameter:

```
ConnectionBroker=AWS Host=wsnrt+KQRQWM UseRegistrationCode=yes EnableMFA=no.
```

Enable AWS connection via registration code using the INI parameter

You can use the INI parameter `UseRegistrationCode=yes` to connect to AWS using a registration code. The **Connect via Registration code** check box is selected automatically if you enable the option using the INI parameter.

Behavior while closing the lid on the Wyse 5470 Thin Client

The behavior while closing the lid on the Wyse 5470 Thin Client is changed as follows:

- **No**—Only the built-in display is turned off and any external displays connected to the thin client are still turned on when the lid is closed.
- **Shutdown**—The thin client shuts down when the lid is closed.
- **Off Display**—The built-in display and any external displays connected to the thin client are turned off when the lid is closed. This is the default value.


Known issue—If the close lid INI parameter is set to `no` and the lid is closed, the built-in display is turned off. However, when you press the power button on the Dell Docking Station WD19 to power on the thin client, the built-in display is turned on.

Workaround—Open the lid and close the lid again, the built-in display is turned off.

Network support on Wyse 5470 Thin Client

ThinOS supports the following network combinations on the Wyse 5470 Thin Client:

- Onboard Ethernet port + Ethernet port on the docking station
- Onboard Ethernet port + Wireless
- Ethernet port on the docking station + Wireless

 **NOTE: You do not need to reboot the system when you connect or disconnect the Dell Docking Station WD19 for the network to work.**

Onboard Ethernet port + Ethernet port on the docking station + Wireless—You can use the combination of these three network interfaces together. However, the following known issues are observed while using this combination:

- You can connect to the network using any two network interfaces and select the network interface that is not connected as the default option. The network can be used in this scenario, but the preferred network type cannot be determined.
For example, two ethernet ports are connected and you select the wireless option as default without connecting the device to wireless. The network can be used in this scenario, but the preferred network type cannot be determined.
- You can connect to the network using all three available network interfaces together. The preferred network type cannot be determined in this scenario.

Korean language support

The Korean language option is added in the **Locale** drop-down list on the **General** tab in the **System Preferences** window. You can select this option to change the language to Korean for the user login-experience.

Word wrap feature

The word wrap feature enables you to fit large text inside the available display area of the active window. To enable the word wrap feature, use the INI parameter `wordwrap`.

For example, `noticefile=dell_notice resizable=no wordwrap=yes`.

The default value is `no`. When you change the value to `yes`, the text is confined to the display area and the horizontal scroll bar is disabled.

Customize connection broker agent window and icons

You can create customized PCoIP icons for the ThinOS user interface using .png, .jpg, or .bmp files. This feature is available for the following platforms:

- Wyse 3030 LT Thin Client with PCoIP
- Wyse 3040 Thin Client with PCoIP
- Wyse 5010 Thin Client with PCoIP
- Wyse 5040 AIO Thin Client with PCoIP
- Wyse 5060 Thin Client with PCoIP
- Wyse 5070 Thin Client with PCoIP
- Wyse 5470 Thin Client with PCoIP
- Wyse 5470 AIO Thin Client with PCoIP

To customize the broker agent window and icons, do the following:

1. To enable this feature, use the INI parameter `SignOn=yes BitmapsMap={yes,no}`

You must set `BitmapsMap` as `yes` for changing integrated bitmap images in to customized bitmap images.

2. Place the text file **bitmaps.map** in the same folder as ThinOS builds.

Similar to the **PrinterMap** file, each line in the file is of the format `integrated bitmap file name=customized bitmap file`.

3. Place the image files in the bitmap folder that is located inside the folder that contains ThinOS builds.

The following are some examples:

- `m_pcoip.ico=1-1_16.png`
- `pcoip.ico=1-1_32.png`
- `vdm.png=3_355x85.png`
- `horizon_wallpaper.jpg=Bugatti-Veyron-Wallpaper-Hd-1080p-uSa4W-1366x768.jpg`

Important notes

Limitations

- **VMware Blast**—The following limitations are applicable for Wyse 5060 Thin Clients:
 - ThinOS supports two displays with 1080p resolution. The VDI graphic performance is good.
 - ThinOS supports single display with 4K resolution. However, the VDI graphic performance is not smooth. It is recommended that you do not use a single 4K display.
 - **NOTE: From ThinOS 8.6 onwards, it is recommended that you use the Wyse 5070 Thin Client for 4K optimized VDI graphic performance.**
 - You cannot launch a Blast session on a 4K display. This is a known issue.
- **PCoIP**—The following limitations are applicable for Wyse 5060 Thin Clients:
 - Connected to VM with GPU—Dual 4K is supported. The VDI graphic performance is good on each Virtual Machine using NVIDIA M60 GPU with 4090 MB of video memory.
 - Connection to VM without GPU
 - ThinOS supports two displays with 1080p resolution. The VDI graphic performance is good.
 - ThinOS supports single display with 4K resolution. However, the VDI graphic performance is not smooth. Dell does not recommend using a single 4K display.
 - **NOTE: From ThinOS 8.6 onwards, it is recommended that you use the Wyse 5070 Thin Client for 4K optimized VDI graphic performance.**
- **JVDI**—The following limitations are applicable for all JVDI supported thin clients:
 - The JVDI package uses a major portion of the disk on platforms with low disk space. If you install the JVDI package on thin clients with low disk space, other large packages may fail to extract and install. For example, you cannot install JVDI, Horizon, and RTME packages together on Wyse 5010 Thin Client. However, on Wyse 5010 and Wyse 5040 All-in-One Thin Clients, you can install the ThinOS packages as follows:
 - RTME, FR, and JVDI can be installed simultaneously.

- RTME, TCX, FR, and Horizon can be installed simultaneously.

This limitation is not applicable for the following platforms with more disk space:

- Wyse 3030LT Thin Client
- Wyse 3040 Thin Client
- Wyse 5060 Thin Client
- Wyse 5070 Thin Client
- Wyse 5470 Thin Client
- Wyse 5470 All-in-One Thin Client
- You can delete the JVDI package when the VDI connection fails on the thin client. After you delete the JVDI package, the VDI connection is recovered.

Tested environments matrix

The following tables display the testing environment for the respective attributes:

Table 13. Tested environment - General components

| Component | Version |
|-----------------------|----------------|
| Wyse Management Suite | 1.4.0 |
| Imprivata OneSign | 6.2.1 |
| Wyse Device Manager | 5.7.3 |
| Caradigm | 6.3.1 |
| NetScaler | 11.1/12.0/12.1 |
| StoreFront | 3.15 |
| Web Interface | 5.4 |
| SecureMatrix | 4.1.0 |

Table 14. Test environment

| | Windows 7 | Windows 10 | Ubuntu 16 | Windows Server 2008 R2 | Windows Server 2012 R2 | Windows Server 2016 | Windows Server 2019 | APPs |
|--|------------|------------|---------------------|------------------------|------------------------|---------------------|---------------------|------------|
| VMware Horizon 7.0 | Tested | Tested | Tested ⁴ | Tested | Tested | Tested | Tested | Tested |
| Citrix Virtual Apps and Desktops 5.6 | Tested | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested |
| Citrix Virtual Apps 6.5 | Not tested | Not tested | Not tested | Tested | Not tested | Not tested | Not tested | Tested |
| Citrix Virtual Apps and Desktops/ Citrix Virtual Apps 7.6 | Tested | Not tested | Not tested | Not tested | Tested | Not tested | Not tested | Not tested |
| Citrix Virtual Apps and Desktops/ Citrix Virtual Apps 7.15 | Tested | Tested | Not tested | Tested | Tested | Tested | Not tested | Tested |
| Citrix Virtual Apps and Desktops/ | Tested | Tested | Not tested | Not tested | Tested | Tested | Not tested | Tested |

| | Windows 7 | Windows 10 | Ubuntu 16 | Windows Server 2008 R2 | Windows Server 2012 R2 | Windows Server 2016 | Windows Server 2019 | APPs |
|---|-----------|------------|------------|------------------------|------------------------|---------------------|---------------------|------------|
| Citrix Virtual Apps 7.18 | | | | | | | | |
| Tera PCM for Amazon Web Services (AWS) 1.03 | Tested * | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested |
| Tera Cloud Access | Tested * | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested |
| Microsoft RDS 2012 R2 and 2016 | Tested | Tested | Not tested | Tested | Tested | Tested | Not tested | Tested |

*AWS Workspace VM Operating System Windows 7 style is based on 2008 R2 RDSH.

¹Only supports desktop connectivity to the Ubuntu desktop; USB redirection or other Multimedia optimization techniques are currently not supported.

Table 15. Tested environment - Citrix Virtual Apps and Desktops

| Citrix Virtual Apps and Desktops/Citrix Virtual Apps | Operating system | RTME | Skype for Business client | Skype for Business Server |
|--|---------------------|------|---------------------------|---------------------------|
| 7.15 | Windows 7 | 2.7 | Skype for Business 2016 | Skype for Business 2015 |
| | Windows 10 | 2.7 | Skype for Business 2016 | Skype for Business 2015 |
| | Windows Server 2016 | 2.7 | Skype for Business 2016 | Skype for Business 2015 |
| 7.18 | Windows 7 | 2.7 | Skype for Business 2016 | Skype for Business 2015 |
| | Windows 10 | 2.7 | Skype for Business 2016 | Skype for Business 2015 |
| | Windows Server 2016 | 2.7 | Skype for Business 2016 | Skype for Business 2015 |

Tested peripheral devices

This section lists the tested peripheral devices.

• Audio

- Logitech USB headset-H-390-Logitech
- Plantronics USB Headset-C320-M-Plantronics
- USB Headset-SC60-Senheiser
- USB Headset-Jabra UC350-Dell
- Analog Headset-Jabra UC350-Dell
- Analog Headset-Boat Mobile Headset-Boat

• Bluetooth

- Bluetooth Keyboard -K380/K480-Logitech
- Bluetooth Keyboard -HP Slim BT Keyborad-HP
- Bluetooth Mouse -M336/M337/M535-Logitech
- Bluetooth Headset Speaker-Calisto 620-Plantronics
- Bluetooth Headset-PLT Focus-Plantronics
- Bluetooth Headset-Jabra -Dell
- Bluetooth Headset-HP Headset 600-HP

• Camera

- HD Web cam-C525-Logitech
- HD Web cam-C922 Pro stream-Logitech

- HD Web cam-C920 Pro stream-Logitech
- **Printer**
 - USB Printer-HL-5450DN-Brother
 - USB Printer-MG2570S-Canon
- **CD-ROM**
 - USB CD-ROM-DVDRW8X-U-lomega
- **USB**
 - USB Drive-Cruzer Blade-Sandisk
 - C-Type USB Drive-USB 3.0-Sandisk
 - microSDHC EVO plus
 - USB Drive-DT50-Kingston
 - USB Card Reader-HDW-IMP-80-RFID
 - TouchChip USB Finger-print-HDW-IMP-1C-STM32
- **Monitor**
 - 4K Monitor-P2415Q
 - 4K Monitor-U2718Q
 - 2K Monitor-UP3017
 - 2K Monitor-P2414
 - 2K Monitor-U2415
 - 2K Monitor-U2414H
 - USB ELO Touch Monitor-ELO2201L-ELO Touch Systems
- **Dock**
 - Dell WD-19 (Type-C)
- **Speech Microphone**
 - Olympus DirectRec DR-1200

INI parameters

The following table provides the list of INI parameters:

 **NOTE: Every INI parameter is associated with a parent INI parameter. Use these INI parameters along with the corresponding parent INI parameters.**

Table 16. INI parameters

| INI parameters | Description |
|-----------------------------------|---|
| [BlockPhones={yes, no, 1, 0}] | This parameter enables you to stop the Media Transfer Protocol (MTP) devices from redirecting into the session when you set the parameter to 1 or <i>yes</i> . |
| [eap_packet_timeout={}] | This parameter defines the timeout value of the EAP process. By default, the value is set to 3 s. If the thin client does not receive the EAP response packet from the access point in a specified time period, it considers this EAP process as timeout and failure. |
| [WlanReconnectCount={4, 20000}] | This parameter enables you to specify the number of times the thin client scans for the hidden SSID when the access points in a wireless connection take longer time to reboot. |
| [WlanBeaconTimeout={0, None}] | This parameter enables you to set the number of seconds to wait, in order to initiate roaming after beacon loss timeout in a wireless connection. By default, the value is set to 2 s. |
| [WlanNextRoam={0, None}] | This parameter specifies the minimum time that is taken between two consecutive roaming sessions in a wireless connection. By default, the value is set to 5 s. |
| [TrackpadDisableOnType={yes, no}] | This parameter disables the trackpad while typing. By default, the value is set to <i>no</i> . |
| [TouchScreenDisable={yes, no}] | This parameter allows you to disable the touch screen of the Dell Wyse 5470 Thin Client. By default, the value is set to <i>no</i> . |

| INI parameters | Description |
|---------------------------------|--|
| [EnableMFA={yes, no}] | This parameter allows you to enable the MFA option in the Amazon WorkSpaces login window. If this parameter is enabled, the automatic sign-on is disabled on the system. By default, the value is set to no. |
| [UseRegistrationCode={yes, no}] | This parameter enables you to enter a registration code as the broker address instead of IP/URL. This parameter works only with Amazon WorkSpaces. By default, the value is set to no. |
| [BitmapsMap={yes, no}] | This parameter enables you to map integrated bitmaps to customized bitmaps. |
| [HorizonIsClassic={yes, no}] | This parameter enables you to set the VMware mode in classic mode. |
| [WordWrap={yes, no}] | This parameter allows you to enable the word wrap feature. Enabling this feature wraps the text to display correctly. By default, the value is set to no. |

For more information about the newly added INI parameters, see the *Dell Wyse ThinOS 8.6 INI Reference Guide* at www.dell.com/support.

Fixed issues

Table 17. Fixed issues

| Issue number | Description |
|--------------|---|
| THINOS-1154 | Resolved an issue where switching from PC to Wyse 5040 Thin Client using a KVM switch does not work. This issue is observed when you upgrade the ThinOS firmware. |
| THINOS-1054 | Resolved an issue where a distorted text or a pink patch is observed in Outlook when you connect to the VMware View Client using the Blast Protocol. |
| THINOS-1577 | Resolved an issue with Skype that is observed when you use shared desktops on a thin client with RTME 2.7. |
| THINOS-978 | Resolved an issue where the mouse performance is bad at high resolutions. |
| THINOS-1576 | Resolved an issue with latency that is observed when you connect to a Blast protocol. |
| THINOS-1641 | Resolved an issue with mouse that is observed when you connect to Server 2016 using RDP. |
| THINOS-771 | Resolved Blast performance issue on Wyse 5070 Thin Clients. |
| THINOS-1584 | Resolved a WYSE Core Dump issue on Wyse 3040 Thin Client. |
| THINOS-1652 | Resolved an issue where the OK or Cancel button does not respond when you update the ThinOS firmware. |
| THINOS-1613 | Resolved an issue where multiple logins to two different domains simultaneously on a single thin client fails. This is observed when you use a single smartcard on a Wyse 3040 Thin Client with two different certificates. |
| THINOS-1591 | Resolved an issue where the Citrix login fails after the firmware upgrade. This is observed on the Wyse 5040 All-in-One Thin Client. |
| THINOS-1245 | Resolved an issue where some words on the ThinOS Lite user interface are distorted. This issue is observed on the ThinOS Lite v2.6_013. |
| THINOS-1325 | Resolved an issue with EAP re-authentication. This issue is observed occasionally. |
| THINOS-1734 | Resolved an issue where the default value of the Audio Quality is changed to high. This issue is observed on the Wyse 5060 Thin Client with ThinOS 8.6_024. |
| THINOS-1525 | Resolved an issue where a duplicate mouse cursor is observed on the Wyse 3010 Thin Client with ThinOS 8.6_019. |
| THINOS-1006 | Resolved an issue with Blast artefacts that is observed during the session on the Wyse 3040 Thin Client |
| THINOS-1634 | Resolved an issue where the video performance is poor in a Blast session on the Wyse 5070 Thin Client with ThinOS 8.6_019. |
| THINOS-1412 | Resolved the issue where the thin client does not reboot automatically. This issue is observed when you move the device from an empty group to a group with pre-existing policy on Wyse Management Suite. |

| Issue number | Description |
|--------------|---|
| THINOS-1794 | Resolved an issue where the mouse disappears when you hover over the Epic application. This issue is observed when you upgrade ThinOS to 8.6_024 |
| THINOS-1830 | Resolved an issue where the cursor disappears in a Window 10 VDI session. This issue is observed when you upgrade ThinOS to 8.6_024 on the Wyse 5070 Thin Client. |
| THINOS-1673 | Resolved an issue where the mouse cursor stops responding and a new cursor appears. This issue is observed when you upgrade ThinOS to 8.6_024 on the Wyse 5070 Thin Client. |
| THINOS-1774 | Resolved an issue where the mouse cursor stays on the screen. This issue is observed when you upgrade ThinOS to 8.6_024 on the Wyse 3020 Thin Client. |
| THINOS-780 | Resolved an issue where three displays that are connected to the Wyse 5070 Thin Client with Pentium processor stops responding. This issue is observed when you upgrade ThinOS firmware to 8.6. |
| THINOS-1184 | Resolved an issue where the Phones Redirection (MTP/PTP) is enabled by default. This is observed in thin clients running ThinOS firmware 8.5 and 8.6. |
| THINOS-1670 | Resolved an issue where the values specified in the domain list are ignored when you use a Horizon Composer. This issue is observed on the Wyse 5070 Thin Client with ThinOS 8.6_024 |
| THINOS-1758 | Resolved an issue where the SNMP Walker displays the platform details incorrectly. |
| THINOS-1643 | Resolved an issue where the unlock with a pin option is not available when you remove a smart card. |
| THINOS-1671 | Resolved an issue where the thin client displays incorrect monitor details on the Wyse 5070 Thin Client with ThinOS 8.6_024. |
| THINOS-1687 | Resolved an issue where the Wyse ThinOS is displayed as ThinOS Lite in Wyse Management Suite 1.3 and 1.4. |
| THINOS-1828 | Resolved an issue where the ThinOS policy for direct RDP displays connections incorrectly in Wyse Management Suite. |
| THINOS-1817 | Resolved a trap issue TRAP page Fault WaveOut_LPEDP Audio:188 |
| THINOS-1763 | Resolved an issue where the trap fault or core dump is observed in a Citrix session when you use the SnagIT v18.2.3 software. |
| THINOS-1814 | Resolved an issue where the Korean/English toggle key on the Korean 103 KYBD keyboard does not work in a Blast session. |
| THINOS-1926 | Resolved an issue where the scheduled reboot from Wyse Management Suite does not work when you have already launched an active session on the client. |
| THINOS-1743 | Resolved an issue where the thin client stops responding in a Citrix session. This issue is observed on ThinOS 8.6_024. |
| THINOS-1751 | Resolved an issue where multiple coredumps are observed on Wyse 5010 Thin Clients with ThinOS 8.6_027. |
| THINOS-1752 | Resolved an issue where multiple coredumps are observed on Wyse 3040 Thin Clients with ThinOS 8.6_027. |
| THINOS-1783 | Resolved an issue with the ThinOS Speech Mike that is observed on the PCoIP client. |
| THINOS-1947 | Resolved a trap issue Trap: EIP 0x14c5e9 (pool) that is observed on the Wyse 5010 and 3040 thin clients. |
| THINOS-1706 | Resolved an issue with the full screen display that is observed when you connect to MS 2016 server using RDP. |
| THINOS-1735 | Resolved an issue where the network disconnects abruptly on the Wyse 3040 Thin Client. |
| THINOS-1853 | Resolved a trap issue where a black screen is observed when you connect to a Blast session. This issue is observed on the Wyse 5010 Thin Client with ThinOS 8.6_027. |
| THINOS-1919 | Resolved a trap issue Coredump-Panic:heap free pool (vmware-remotemks-container) on Wyse 5010 and 3040 Thin Clients with ThinOS 8.6_027. |
| THINOS-1956 | Resolved a trap issue that is observed when you use SafeNet 5110 in a Blast session. This issue is observed on the Wyse 3040 Thin Client with ThinOS 8.6_027. |
| THINOS-1920 | Resolved an issue where WiFi roaming fails in certain access points. |

| Issue number | Description |
|---------------------|---|
| THINOS-1466 | Resolved an issue where you need to power off and power on the device to reconnect to the WLAN access point. This issue is observed on the Wyse 3040 Thin Client. |
| THINOS-1850 | Resolved a trap issue that is observed in a VMware Blast session on ThinOS 8.6_024. |
| THINOS-1866 | Resolved an issue where the certificate information is still displayed on the screen after you remove the CAC card from the thin client. |
| THINOS-2188 | Resolved an issue where some windows are not displayed properly on a ThinOS Japanese build. |

Known issue

Table 18. Known issue

| Issue number | Description | Workaround |
|---------------------|--|---|
| THINOS-2146 | If you enable IEEE802.1x for ENET1, and reconnect the Ethernet cable to the Dell Docking Station WD19, the network authentication fails. | There is no workaround in this release. |

ThinOS 8.6_028 and ThinOS Lite 2.6_028

Release summary

Dell Wyse ThinOS software is designed to run on a broad array of Dell Wyse hardware platforms. Patch or add-on releases are created to support the existing hardware platforms, correct defects, make enhancements, or add new features. These releases are tested and supported on shipping hardware platforms.

Version

ThinOS 8.6_028 and ThinOS Lite 2.6_028

Release date

November 2019

Priority and recommendations

Urgent: Dell highly recommends applying this update as soon as possible. The update contains changes to improve the reliability and availability of your Dell system.

Compatibility

Supported platforms

Table 19. Supported platforms

| Platform | Image file name | BIOS file name | BIOS version |
|--|-----------------|----------------|----------------|
| Wyse 3010 Thin Client with ThinOS (T10) | DOVE_boot | Not applicable | Not applicable |
| Wyse 3010 Zero Client for Citrix | T00_xen.bin | Not applicable | Not applicable |
| Wyse 3020 Thin Client with ThinOS (T10D) | T10D_wnos | Not applicable | Not applicable |
| Wyse 3020 Zero Client for Citrix | T00D_xen | Not applicable | Not applicable |
| Wyse 3030 LT Thin Client with ThinOS | U10_wnos | U10_bios.bin | 1.0G |
| Wyse 3030 LT Thin Client with PCoIP | PU10_wnos | PU10_bios.bin | 1.0G |
| Wyse 3040 Thin Client with ThinOS | A10Q_wnos | A10Q_bios.bin | 1.2.5 |
| Wyse 3040 Thin Client with PCoIP | PA10Q_wnos | A10Q_bios.bin | 1.2.5 |
| Wyse 5010 Thin Client with ThinOS (D10D) | ZD10_wnos | D10G_bios.bin | 3.0U |
| Wyse 5010 Thin Client with PCoIP (D10DP) | PD10_wnos | PD10G_bios.bin | 3.0U |

| Platform | Image file name | BIOS file name | BIOS version |
|---|-----------------|------------------|--------------|
| Wyse 5010 Zero Client for Citrix | ZD00_xen | D10G_bios.bin | 3.0U |
| Wyse 5040 AIO Thin Client (5212) | ZD10_wnos | AIO10G_bios.bin | 3.0U |
| Wyse 5040 AIO Thin Client with PCoIP (5213) | PD10_wnos | PAIO10G_bios.bin | 3.0U |
| Wyse 5060 Thin Client with ThinOS | D10Q_wnos | D10Q_bios.bin | 1.0J |
| Wyse 5060 Thin Client with PCoIP | PD10Q_wnos | PD10Q_bios.bin | 1.0J |
| Wyse 5070 Thin Client with ThinOS | X10_wnos | X10_bios.bin | 1.3.1 |
| Wyse 5070 Thin Client with PCoIP | PX10_wnos | X10_bios.bin | 1.3.1 |
| Wyse 7010 Thin Client with ThinOS (Z10D) | ZD10_wnos | Z10G_bios.bin | 3.0U |

Previous versions

ThinOS 8.6_027

ThinOS Lite 2.6_027

Packages

Table 20. Supported packages

| Platform name | Packages | | | | |
|---|----------------------|--------------------------|--------------------|-------------------|---------------------|
| | FR v1.28.19061716 | Horizon v5.1.19052918 | RTME v2.8.54007 | TCX v7.1.41853 | JVDI v12.1.52977 |
| Wyse 3010 Thin Client with ThinOS (T10) | Not supported | Not supported | Not supported | Not supported | Not supported |
| Wyse 3010 Zero Client for Citrix | Not supported | Not supported | Not supported | Not supported | Not supported |
| Wyse 3020 Thin Client with ThinOS (T10D) | Not supported | Not supported | Not supported | Not supported | Not supported |
| Wyse 3020 Zero Client for Citrix | Not supported | Not supported | Not supported | Not supported | Not supported |
| Wyse 3030 LT Thin Client with ThinOS | Supported | Supported | Supported | Supported | Not supported |
| Wyse 3030 LT Thin Client with PCoIP | Supported | Supported | Supported | Supported | Not supported |
| Wyse 3040 Thin Client with ThinOS | Supported | Supported | Supported | Supported | Supported |
| Wyse 3040 Thin Client with PCoIP | Supported | Supported | Supported | Supported | Supported |
| Wyse 5010 Thin Client with ThinOS (D10D) | Supported | Supported | Supported | Supported | Not supported |
| Wyse 5010 Thin Client with PCoIP (D10DP) | Supported | Supported | Supported | Supported | Not supported |
| Wyse 5010 Zero Client for Citrix | Supported | Supported | Supported | Supported | Not supported |
| Wyse 5040 AIO Thin Client (5212) | Supported | Supported | Supported | Supported | Not supported |
| Wyse 5040 AIO Thin Client with PCoIP (5213) | Supported | Supported | Supported | Supported | Not supported |
| Wyse 5060 Thin Client with ThinOS | Supported | Supported | Supported | Supported | Supported |
| Wyse 5060 Thin Client with PCoIP | Supported | Supported | Supported | Supported | Supported |
| Wyse 5070 Thin Client with ThinOS | Supported | Supported | Supported | Supported | Supported |

| Platform name | Packages | | | | |
|--|----------------------|--------------------------|--------------------|-------------------|---------------------|
| | FR v1.28.19061716 | Horizon v5.1.19052918 | RTME v2.8.54007 | TCX v7.1.41853 | JVDI v12.1.52977 |
| Wyse 5070 Thin Client with PCoIP | Supported | Supported | Supported | Supported | Supported |
| Wyse 7010 Thin Client with ThinOS (Z10D) | Supported | Supported | Supported | Supported | Not supported |

Fixed issue

Fixed a security vulnerability issue (CVE-2019-9506) related to encryption on Bluetooth Basic Rate (BR) and Enhanced Data Rate (EDR) connections.

For more information about the issue, see the CVE-2019-9506 article at cve.mitre.org.

ThinOS 8.6_204

Release summary

Dell Wyse ThinOS software is designed to run on a broad array of Dell Wyse hardware platforms. Patch or add-on releases are created to support the existing hardware platforms, correct defects, make enhancements, or add new features. These releases are tested and supported on shipping hardware platforms.

Version

ThinOS 8.6_204

Release date

October 2019

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

Supported platforms

Table 21. Supported platforms

| Platform | ThinOS | ThinOS with PCoIP |
|----------------------------------|----------|-------------------|
| Wyse 5470 Thin Client | X10_wnos | PX10_wnos |
| Wyse 5470 All-in-one Thin Client | X10_wnos | PX10_wnos |

Packages

Table 22. Packages

| Package name | Version |
|--------------|---------------|
| FR | 1.28.19061716 |
| Horizon | 5.1.19052918 |
| RTME | 2.8.54007 |
| JVDI | 12.1.19091610 |

BIOS information

Table 23. BIOS information

| Platform | BIOS Version | BIOS BIN file name to use for ThinOS update |
|----------------------------------|--------------|---|
| Wyse 5470 Thin Client | 1.1.1 | 5470_bios.bin |
| Wyse 5470 All-in-one Thin Client | 1.2.0 | 5470AIO_bios.bin |

New and enhanced features

Disable touch screen on Dell Wyse 5470 Thin Client

The INI parameter to disable the touch screen in Dell Wyse 5470 Thin Client is Device=mobile TouchscreenDisable=yes, no.

Disable touchpad while typing on Dell Wyse 5470 Thin Client

- The touchpad can be enabled or disabled while typing on the integrated keyboard of the Dell Wyse 5470 Thin Client.
- The touchpad can be disabled momentarily when you type using the integrated keyboard and it will be enabled automatically when you stop typing.
- The touchpad can also be permanently disabled and enabled in the **Peripherals > Mouse** window.
- The INI parameter to enable or disable the touchpad is Device=Mobile TrackpadDisableOnType=yes, no.
- The INI parameter to enable or disable the touchpad permanently is Device=Mobile TrackpadDisable=yes, no.

Enable Wake-on-LAN on Dell Docking Station WD19

ThinOS supports the Wake-on-LAN feature over the Dell Docking Station WD19 to wake up thin clients from sleep mode or the shutdown state. To use this feature, you must add the INI parameter wakeonusb=yes.

Important notes

Limitations

- DP (HDMI/Type-C) audio limitations:
 - It is disabled by default and has to be enabled in the **Peripherals** window to use.
 - DP or HDMI or Type-C audio displays as DP audio on Wyse 5470 Thin Client.
 - It does not support hot plug, it should be plugged into HDMI or Type-C or DP cable first and then powered on.
 - It does not support converter.
 - If there is only one DP audio supported display on Dell docking station WD19, DP audio would work. If there are two DP audio supported monitors on Dell docking station WD19, DP audio does not work.
 - It does not support display power off or power on. For the following scenarios, you need to reboot to make DP audio work:
 - Press power button to power off the display and power it on again.
 - The screen saver mode is turn off screen.
 - Click **Apply** in the **Display Setup** window.
- Sleep mode limitations:
 - ThinOS cold reboots when resumed from sleep for 1 hour. You can change the timer by INI `sleep=yes, MaxSleepPeriod=[0-255]` (does not reboot if set to 0).
 - If there is plug in or out Dell docking station WD19 and if there is a monitor plugged into Dell docking station WD19, ThinOS cold reboots when resumed from sleep mode
 - ThinOS resumes from sleep mode immediately for following scenarios:

- If enable USB wake up, (use INI wakeonusb=yes) click the **OK** button to manually enter sleep mode, do not move or click the mouse or press keyboard immediately, or system resumes immediately.
- If enable USB wake up, (use INI "wakeonusb=yes") do not press **Sleep** button on USB keyboard to manually enter sleep mode, or system resumes immediately.
- Only the USB devices on root hub wakes up unit from sleep mode. USB devices on USB hub or Dell docking station WD19 cannot wake up unit from sleep mode.
- Known issue:
 - It takes about 1 minute to enter sleep mode and resume when Dell docking station WD19 is connected.
 - If it enters sleep mode and resume with displays on Dell docking station WD19, the system may stop responding or second display may not be powered on.
- Audio jack ports on Dell docking station WD19—There are two ports on Dell docking station WD19, however ThinOS supports only one port. The global headset port works by default. You can use INI `EnableSecondaryPort=1` or `EnableSecondaryPort=yes` to make speaker out port work. The global headset jack port will be disabled.

INI parameters

Table 24. INI parameters

| Usage | Description |
|-----------------------------------|---|
| wakeonusb=[yes,no] | This parameter enables or disables wake up from suspend state by using usb. The only limitation is that the USB devices must connect to root hub. |
| OsdRepeatRate={0,1,2} | This feature is only supported on the Wyse 5470 All-in-One Thin Client. This feature is designed to increase the speed of the OSD button used for adjusting the brightness of the screen. The value ranges from 0-2, for example, the parameter value is set to 0 which is default, it takes 20 seconds to adjust the brightness of the screen from 0 to 100. If the value is set to 2, it will take 10 seconds to adjust the brightness of the screen from 1 to 100. |
| OsdRepeatDelay={0,1,2} | This feature is only supported on the Wyse 5470 All-in-One Thin Client. This feature is designed to decrease the speed of the OSD button used for adjusting the brightness of the screen. The value ranges from 0-2, for example, the parameter value is set to 0 which is default, it takes 20 seconds to adjust the brightness of the screen from 0 to 100. If the value is set to 2, it will take 50 seconds to adjust the brightness of the screen from 1 to 100. |
| EnableSecondaryPort =[yes,no,1,0] | This parameter enables the secondary port. The INI parameter has to be set to 1 or yes to enable the secondary audio port which is present on the back of the Dell WD19 docking station port and disables the front one. |
| [TrackpadDisableOnType={yes, no}] | This parameter is available only for the Dell Wyse 5470 Thin Client. This option disables the trackpad while typing. The default INI parameter is set to no. This parameter can be enabled by changing the INI parameter to Yes. |
| [TouchScreenDisable={yes, no}] | This parameter is available only for the Dell Wyse 5470 Thin Client. The parameter allows you to disable the touchscreen of the Dell 5470 Thin Client. By default the value is set to no. |

Fixed issues

Table 25. Fixed Issues for Wyse 5470 Thin Client

| Issue umber | Description |
|-------------|--|
| THINOS-1266 | Wake on LAN from the S3 power state failed from Dell docking station WD19. |
| THINOS-1447 | DP audio does not work with HDMI or Type-C port. |

| Issue number | Description |
|---------------------|---|
| THINOS-1469 | DP Audio does not work on Dell WD19 docking station through Type C and DP HDMI ports. |
| THINOS-1479 | Multi Touch input does not work appropriately in RDP session when external display is connected. |
| THINOS-1488 | Audio fails to work in stereo speaker output port from Dell WD19 docking station when any analog audio devices are connected. |
| THINOS-1508 | Broker resource icon still displayed on desktop with Broker agent login dialog after waking up from sleep mode. |
| THINOS-1651 | The U2718Q display does not power on after it is hot plugged from the HDMI port on the thin client. |
| THINOS-1656 | The Wyse Management Suite setting is not automatically received from DHCP or DNS option. This issue is observed while using a Dell WD 19 docking station. |
| THINOS-1770 | HD audio is rendered through the onboard speakers after deleting and re-plugging the analog headset. |

Table 26. Fixed Issues for Wyse 5470 All-in-one Thin Client

| Issue number | Description |
|---------------------|---|
| THINOS-1177 | Peripherals window and Troubleshooting window with Chinese or Japanese font are truncated. |
| THINOS-1164 | ERR: /user/bin/vdloader -d /usr/lib/l: trap 14 occurs when disconnect ICA desktop during JVDI video call. |

ThinOS 8.6_111

Release summary

Dell Wyse ThinOS software is designed to run on a broad array of Dell Wyse hardware platforms. Patch or add-on releases are created to support the existing hardware platforms, correct defects, make enhancements, or add new features. These releases are tested and supported on shipping hardware platforms.

Version

ThinOS 8.6_111

Release date

September 2019

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

Supported platforms

Table 27. Supported hardware platforms

| Platform | Image file name | BIOS file name | BIOS version |
|--|-----------------|----------------|--------------|
| Wyse 5070 Extended Thin Client with ThinOS | X10_wnos | X10_bios.bin | 1.1.4 |
| Wyse 5070 Extended Thin Client with PCoIP | PX10_wnos | X10_bios.bin | 1.1.4 |

Packages

Table 28. Packages

| Package name | Version |
|--------------|------------|
| FR | 1.27.53767 |
| Horizon | 5.0.53374 |
| RTME | 2.7.52738 |
| TCX | 7.1.41853 |
| JVDI | 12.1.52086 |

Previous version

Release 8.6_027

New and enhanced features

Sleep mode

The sleep mode enables the power-saving state and the thin client quickly resumes full power operations without loss of data.

ThinOS VDI broker and sessions log off due to security concern. You must log in to the broker sessions after resuming from sleep mode.

- To manually enter the sleep mode, open the ThinOS shut down menu, select the **Sleep** option and click **OK**. The device automatically enters sleep mode when ThinOS is idle for twenty minutes. This is the default value. You can set the idle time in the **System Preferences** dialog box. Sleep mode timer starts after screen is turned off by the screen saver. The screen flashes for one second before automatically entering the sleep mode.
- To resume from ThinOS sleep mode:
 - Press the power button.
 - Click the USB mouse or move the wireless USB mouse.
i **NOTE: This feature is disabled by default. Use INI parameter `wakeonusb=yes` to enable the feature.**
 - Press any key on the USB keyboard.
i **NOTE: This feature is disabled by default. Use INI parameter `wakeonusb=yes` to enable the feature.**
 - Use the **Wake on LAN** feature to wake up from sleep mode.

Important notes

Sleep mode limitations

- When using more than one display on a Wyse 5070 Extended Thin Client with different resolution settings, resuming from sleep mode may result in a distorted display. Disabling the sleep mode fixes the issue. To disable the sleep mode, perform either of the following steps:
 - On the ThinOS client desktop, go to **System Preference > General** and select **Disable** from the timer drop-down list of the **After Turn Off Screen** option.
 - Use the following INI parameter `sleep=no`.
- If you have enabled the USB Wake up option, clicking or moving the mouse pointer, or pressing any key on the keyboard resumes the thin client from sleep immediately.
- If the Bluetooth scan window is open, the thin client cannot enter the sleep mode.
- Only the USB 2.0 ports support the wake on USB.

ThinOS 8.6_108

Release summary

Dell Wyse ThinOS software is designed to run on a broad array of Dell Wyse hardware platforms. The ThinOS version 8.6.1 is released to support the Wyse 5470 thin client.

Version

ThinOS 8.6_108

Release date

August 2019

Compatibility

BIOS information

The following table contains the details of the latest BIOS along with this release.

Table 29. BIOS information

| Platform | BIOS version | BIOS BIN file name to use for ThinOS update |
|-----------------------|--------------|---|
| Wyse 5470 thin client | 1.0.0 | 5470_bios.bin |

Platform information

The following tables list the supported platforms and their firmware names in this release:

Table 30. Platform information

| Platform | Firmware | | Build number |
|-----------------------|-------------|------------------------|--------------|
| | Wyse ThinOS | Wyse ThinOS with PCoIP | |
| Wyse 5470 thin client | X10_wnos | PX10_wnos | 8.6_108 |

Table 31. Package information

| Packages | Version |
|------------------|------------|
| FR.i386.pkg | 1.27.53767 |
| JVDI.i386.pkg | 12.1.52086 |
| horizon.i386.pkg | 5.0.53374 |
| RTME.i386.pkg | 2.7.52738 |

New and enhanced features

Display features

The default resolution on the Wyse 5470 thin client is 1366x768 or 1920x1080, depending on the configuration.

The following are the display behaviors:

- Wyse 5470 thin client supports up to three simultaneous displays.
- Built-in display stays on by default.
- The Wyse 5470 thin client supports up to two 4K extra displays.
- HDMI, DisplayPort over USB Type-C, and USB Type-C ports are prioritized over the VGA port.
- When a USB Type-C display is present, there will be no display on the VGA port.
- If a VGA display is present, a third display that is connected is prioritized and the VGA display is turned off.
- If a VGA display is not present, a third display that is connected is ignored.

DP audio port feature

ThinOS supports DP audio only over one port. You must select the relevant port in the Peripherals dialog box.

Troubleshooting features

- New target option `IDE` can be used to select the destination for importing and exporting files. If `IDE` is selected, the destination is redirected to ThinOS C: Disk of IDE.

 **NOTE: Extract CMOS and Restore CMOS features are supported only in USB and File Server options.**

- Click **Export IDE trouble_shoot** to export the folder `C:/wnos/trouble_shoot` from `IDE C:` to USB or file server. This button is enabled only when the target is USB or file server.
- Click **Delete IDE trouble_shoot** to delete the folder `C:/wnos/trouble_shoot` from IDE.
- You can select 1 day to 5 days in **Days to keep troubleshooting files in IDE**. After you reboot, the files in `C:/wnos/trouble_shoot` are checked. If the created date is older than the days that you set, the files are removed.
- Select the **Enable Application Console Log** check box to save all application console logs in the `trouble_shoot` folder with the name `TerminalName_proc_name_date_time.log`
- **Application list** is a filter for application console logs. It is empty by default and no filters are applied. When it is empty, the console logs of all applications are saved to the target folder.

You can filter the applications for logs using **Application list**. The name in the list can be part of the application name. For example, PCoIP application name is `/pcoip/pcoip` and Blast application name is `/usr/lib/vmware/view/usb/horizon`. If you want the console log of these two applications, enter `pcoip;vmware`.

Frames per second (FPS) display

Frames per second (FPS) is displayed in the **Performance Monitor** window.

Text color customization on login window

You can customize the text color in the login window or the lock window by using the INI parameter—`Signon=yes`
`SignonStatusColor="rrr ggg bbb"`.

 **NOTE: The default text color is gray.**

Smart card as Proximity Card of Imprivata

The feature to treat smart card authentications as proximity card authentications is added.

You can use a smart card as proximity card and authenticate the user. When you insert the smart card, it is considered as a proximity card tap and removing the smart card is considered as tap-out. To use a smart card as proximity card, go to **Policies > Computer Policy** in the OneSign Administrator console and select the **Treat smart card authentications as proximity card authentications** check box.

New system variable for MAC address

New system variable \$UMAC for MAC address in uppercase format is added.

Reconnect workflow for VMware Horizon View broker

The INI parameter `VMWaitTimer={0-3600}` is added to enhance the reconnect workflow of the VMware Horizon View broker.

The option **VMWaitTimer** specifies the time remaining in seconds to reconnect to a Horizon desktop before exiting the desktop. When the connection fails while connecting to a Horizon desktop, a message *Horizon Error- Waiting to recover* is displayed along with the countdown timer. The range is 0–3600. The value is taken as 20 by default if the value set is lesser than 20. If the value set is greater than 3600, 3600 is taken as the value by default. After the count down reaches 0, the connection is canceled and you can exit to the ThinOS desktop.

VMware Horizon package

VMware Horizon package is updated to version 5.0.53374.

- Supports the relative mouse feature in a PCoIP session.

When you enable the relative mouse feature, Horizon Client uses absolute coordinates to transmit data about the mouse pointer movements and improves the mouse performance. To enable the relative mouse feature on a classic desktop, right-click the remote desktop icon on the ThinOS taskbar, and click **Enable Relative Mouse**. To enable the relative mouse feature on a zero desktop, go to the ThinOS connection menu, and click the **A** icon that is displayed after the PCoIP session name.

- Supports the High Color Accuracy feature in a Blast session with H.264 enabled.

This option enables Horizon Client to use a superior color fidelity when H.264 decoding is enabled. To enable the High Color Accuracy feature, go to **Global Connection Settings**, click the **Horizon** tab, and select the **High Color Accuracy** check box.

Teradici Cloud Access broker type

Teradici Cloud Access is added as a new broker type. You can enter the FQDN name or the IP address of the broker server.

Username Hint option for VMware Horizon View broker


ThinOS 8.6.1 supports the **Username Hint** option during smart card authentication for the Horizon View broker.

You can enable users to specify the account to be used in the **Username Hint** field when you log in to a Horizon View session using a smart card. To enable the **Username Hint** option, go to the View Administrator Admin console, and select the **Allow smart card user hints** check box when editing the View Server Connection settings. Enabling this option allows you to use a single smart card certificate to authenticate to multiple user accounts.

When signing in using a smart card, you must enter the username besides the smart card PIN. If the username does not match the smart card certificate, the sign in fails with an error message *No user could be found for your Certificate*.

Touchpad

The touchpad on the Wyse 5470 thin client contains two buttons for the right and left mouse-clicks. ThinOS supports the following touchpad gestures on the Wyse 5470 thin client:

- Moving the mouse cursor
 - Moving with one finger, the entire touchpad including the area with the buttons can be used for the mouse cursor movement.
 **NOTE: The sensitivity of the cursor movement on the area with the buttons is slower compared to the other areas. This design is for the stability of the buttons.**
- Left-click
 - Tapping with one finger anywhere on the touchpad works as the mouse left-click.
 - Pressing the left button on the touchpad works as the mouse left-click.
- Right-click
 - Tapping with two fingers anywhere on the touchpad works as the mouse right-click.
 - Pressing the right button on the touchpad as the mouse right-click.

- Moving windows
 - Press and hold the left button and move the window by dragging a second finger on the touchpad.
 - Dragging a window by tapping twice on the touchpad with one finger is not supported.

Disabling touchpad

- You can disable the touchpad by going to **Start menu > System Setup > Peripherals > Mouse** and checking the **Disable trackpad** option.
- You can also disable the touchpad using the INI parameter `Device=Mobile TrackpadDisable=yes`.

Wyse Management Suite support

You can manage Wyse 5470 thin client using Wyse Management Suite 1.4 and later versions.

NOTE: If you disable the internal network interface card (NIC), Wyse Management Suite cannot recognize the thin client.

Wyse Management Suite 1.4 can differentiate between the BIOS of Wyse 5070 and 5470 thin clients. But it cannot differentiate between the ThinOS images. All images are treated as of Wyse 5070 thin client.

There are two ways to separate a Wyse ThinOS image

- Add a description while uploading the image.
- Create separate groups for different platforms.

NOTE: Group Registration Key is encrypted and is displayed as asterisks (*).

New connection under low privilege

A new connection under low privilege can be added.







Battery information

To view the battery information, go to **System information > Status window**. With the AC adapter plugged in and charging, the remaining time is displayed as **Charging**.

Battery indicator is on systray in classic mode and on the zero toolbar in zero mode.

The following table contains the battery indicators:

Table 32. Battery indicators

| Battery status | Icon |
|--|---|
| While charging with the AC adapter |  |
| Battery 90% - 100% without connecting the AC adapter |  |
| Battery 50% - 89% without connecting the AC adapter |  |
| Battery 25% - 49% without connecting the AC adapter |  |
| Battery 9% - 24% without connecting the AC adapter |  |
| Battery 0% - 8% without connecting the AC adapter |  |

- When the battery is lower than 12%, a notification is displayed at the right-bottom with the remaining percentage.
- Plugging in the AC adapter to charge the device increases the brightness by and disconnecting the AC adapter decreases the brightness by 10%.
- If you adjust the brightness after disconnecting the AC adapter, the brightness does not change after the adapter is plugged in. In this case, the current brightness replaces the default value.
- It takes approximately 5 seconds for the battery icon to be updated after plugging in or plugging out the AC adapter.
- Critical battery level is 5% by default. You can change the default value by using the INI parameter `Device=Mobile BatteryAutoPowerOff={3-20}`.

- When the battery reaches the critical level, ThinOS powers off automatically. You must plug in the AC power to power on the thin client.

Behavior while closing the lid

Thin client behaves in the following manner when lid is closed:

- With the AC adapter plugged in—Closing the lid turns off all the screens including external displays.
- Without the AC adapter plugged in—Closing the lid turns off the system.

You can change close lid behavior by using the following INI parameters:

- Behavior change with the AC adapter—`Device=Mobile CloseLidCharge={No, ShutDown, OffDisplay}`
- Behavior change without the AC adapter—`Device=Mobile CloseLidDisCharge={No, ShutDown, OffDisplay}`

 **NOTE: Closing the lid turns off all screens including external displays.**

Fn key combinations

Wyse 5470 thin client supports the following Fn key combinations:

 **NOTE: Blast protocol does not support Fn keys.**

Table 33. Fn key combinations

| Key | ThinOS Local | VDI Session (RDP/ICA/PCoIP) |
|------------------|-----------------------------|------------------------------------|
| Fn + Esc | Fn lock/unlock | Fn lock/unlock |
| Fn + F1 | Mute | Mute |
| Fn + F2 | Volume down | Volume down |
| Fn + F3 | Volume up | Volume up |
| Fn + F4 | Not applicable—session only | Previous file in media player list |
| Fn + F5 | Not applicable—session only | Play/Pause in media player |
| Fn + F6 | Not applicable—session only | Next file in media player list |
| Fn + F7 | Not applicable | Not applicable |
| Fn + F8 | Displays the Setup window | Not applicable—ThinOS local only |
| Fn + F9 | Not applicable—session only | Displays the search window |
| Fn + F10 | Keyboard light | Not applicable—ThinOS local only |
| Fn + F11 | Screen dimming | Not applicable—ThinOS local only |
| Fn + F12 | Screen lighting | Not applicable—ThinOS local only |
| Fn + Ctrl | Mouse right-click | Mouse right-click |
| Fn + PrtScr | Turn on/off wireless | Not applicable—ThinOS local only |
| Fn + Right arrow | Not applicable—session only | End |
| Fn + Left arrow | Not applicable—session only | Home |
| Fn + Up arrow | Not applicable—session only | Page up |
| Fn + Down arrow | Not applicable—session only | Page down |

If the WiFi is turned on, pressing **Fn + PrtScr** disables the WiFi on the thin client. The **Disable Wireless Device** check box and the **Always** option are selected in the **Network Setup** window.

If the WiFi is turned off, pressing **Fn + PrtScr** enables the WiFi on the thin client. The **Disable Wireless Device** check box is cleared in the **Network Setup** window.

FR package

FR package is updated to version 1.27.53767.

Network features and limitations

Wyse ThinOS supports only the following two networks simultaneously.

- Internal network interface card (NIC) and the NIC on the docking station.
- Internal NIC and WiFi.

NOTE: A combination of internal NIC + NIC on the docking station + WiFi is not supported.

Disabling the internal NIC and using the NIC on the docking station causes the following issues:

- Wyse Management Suite fails to recognize the thin client.
- ThinOS displays all network information as 0.

Docking station features and limitations

Wyse 5470 thin client supports only the Dell docking station WD19. The features and limitations are the following:

- USB Type-C port and the HDMI ports on the Dell docking station WD19 are mutually exclusive.
- Supports one Quad HD display at 30 Hz and two Full HD displays at 60 Hz.
- If two displays with resolution greater than 1920x1080 are connected simultaneously, only one display works. You must change the resolutions to 1920x1080 or lower in **Display Setup** to make both the displays work.
- DisplayPort, HDMI, and USB Type-C audio over the Dell WD19 docking station is not supported.
- Wake-on-LAN feature over the Dell WD19 docking station is not supported.
- Audio port on the Dell WD19 docking station is not supported.

NOTE: You can update the Dell Docking Station - WD19 firmware using VDI session on Wyse ThinOS.

- **WD19 dock is redirected to the VDI session by default.**
- **Launch the Dock firmware update utility in the VDI session to update the firmware.**

SD card reader

Wyse 5470 thin client contains an SD card reader. You can insert an SD card and use it as removable storage in ThinOS.

Sleep mode

The sleep mode enables the power-saving state and the thin client resumes power without loss of data.

- ThinOS VDI broker session logs off after resuming from sleep mode for security. You must log in to the broker session again after resuming from sleep mode.

NOTE: If you do not want to lose VDI sessions or to login to broker again, it is recommended to disable sleep mode by using the INI parameter `Sleep=no`.

- The device automatically enters sleep mode when ThinOS is idle for 20 minutes. This value is the default value. You can set the idle time in the **System Preferences** dialog box.

NOTE: The option **Battery is for the status without AC power and **plugged in** is for the status with AC power.**

- To enable the thin client to automatically enter the sleep mode, set the **Turn Off Screen** as screen saver. Sleep mode timer starts after screen is turned off by the screen saver.
- Before automatically entering the sleep mode the screen flashes for one second.
- To manually enter sleep mode, open the ThinOS shut down menu, select the **Sleep** option, and click **OK**.

- **Screen Saver** and **After Turn Off Screen** options are always the same when the thin client is on **Battery** or if the AC adapter is **Plugged in**. Only the **Timer** option is different.
- To resume the thin client from sleep mode, perform any of the following steps:
 - Press the power button.
 - Click the USB mouse or move the wireless USB mouse.
 - ⓘ **NOTE: This feature is disabled by default and requires the AC adapter to be plugged in. Use INI parameter `wakeonusb=yes` to enable the feature.**
 - Press any key on the USB keyboard.
 - ⓘ **NOTE: This feature is disabled by default and requires the AC adapter to be plugged in. Use INI parameter `wakeonusb=yes` to enable the feature.**
 - Press any key on the default keyboard.
 - Use the Wake on LAN feature to wake up from sleep mode.
 - ⓘ **NOTE: This feature requires the AC adapter to be plugged in.**
- When you resume the system from sleep mode in the following scenarios, the system is first turned off and then turned on to load the ThinOS operating system (cold reboot):
 - If the system is on sleep mode for 1 hour.
 - ⓘ **NOTE: You can change the timer setting using the INI parameter `Sleep=yes`, `MaxSleepPeriod={0-255}`.**
 - If the Dell docking station WD19 is plugged in or out with a display attached to the docking station.

Known issues

- The thin client fails to enter sleep mode if the Bluetooth scan window is open.
- The following scenarios resume the thin client from sleep mode if you enable the INI parameter `wakeonusb=yes`:
 - If you move the mouse or press the keys on the keyboard immediately after clicking the OK button to enter the sleep mode .
 - If you press the sleep button on the USB keyboard to enter the sleep mode .

Touch Panel

Touch screen is an optional configuration for Wyse 5470 thin client. It is recommended to use the default 1920x1080 resolution on the touch screen version of the thin client. If you use a custom resolution, the touch screen does not calibrate accurately.

Table 34. Single and multi touch support

| Local and Sessions | Single touch | Multi touch |
|--------------------|--------------|--|
| ThinOS local | Supported | Not applicable |
| RDP | Supported | Supported—both desktop and application |
| ICA | Supported | Not Supported |
| Blast | Supported | Not Supported |
| PCoIP | Supported | Not Supported |

Important notes

Wyse 5470 thin client does not support Device Manager (WDM) and Wyse TCX.

Limitations

DP audio

There are some feature limitations for DP audio on the Wyse 5470 thin client.

- DP audio is disabled by default.
- HDMI, DisplayPort over USB Type-C port, and USB Type-C port audio displays as DP audio.
- Hot plugging is not supported. Plug in HDMI or USB Type-C device and reboot the thin client for the DP audio to work.

- Converter is not supported.
- USB Type-C audio is not supported.
- Supports only audio over the integrated HDMI port with selected monitors.
- Audio over DisplayPort, HDMI, and USB Type-C using the Dell WD19 docking station is not supported.
- Turning off or turning on the display is not supported. Restart the thin client for the DP audio to work in the following scenarios:
 - If the power button is pressed, to power off, and then power on the display
 - If you use **Turn Off Screen** as the screen saver
 - If you click **Apply** on the **Display setup** window

Camera

The features and limitations depend on the type of camera that is used. It is recommended to use a camera such as Logitech C930e that supports hardware encoding.

The integrated camera on the Wyse 5470 thin client does not support hardware encoding, so the performance is limited as the following:

- On an RTME-enabled thin client, the camera performance on Skype for Business is limited to a maximum resolution of 640 x 360 using HD configuration, 960 x 540 using Full HD configuration, and 1280 x 720 if Logitech C930e camera is used.
- On a JVDI-enabled client, the CPU usage of the integrated camera is 10% higher than the CPU usage of Logitech C930e camera. The difference in the CPU usage is observed while video calling on Cisco Jabber in an ICA session.

Tested environment

The following tables display the testing environment for the respective attributes:

Table 35. Tested environment - General components

| Component | Version |
|-----------------------|----------------|
| Wyse Management Suite | 1.4.0 |
| Imprivata OneSign | 5.5 |
| Caradigm | 6.3.1 |
| NetScaler | 11.1/12.0/12.1 |
| StoreFront | 3.15 |
| Web Interface | 5.4 |
| SecureMatrix | 4.1.0 |

Table 36. Tested environment

| | Windows 7 | Windows 10 | Ubuntu 16 | Windows Server 2008 R2 | Windows Server 2012 R2 | Windows Server 2016 | Windows Server 2019 | APPs |
|---|------------|------------|---------------------|------------------------|------------------------|---------------------|---------------------|------------|
| VMware Horizon 7.5 | Tested | Tested | Tested ¹ | Tested | Tested | Tested | Tested | Tested |
| Citrix Virtual Apps and Desktops 5.6 | Tested | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested |
| Citrix Virtual Apps 6.5 | Not tested | Not tested | Not tested | Tested | Not tested | Not tested | Not tested | Tested |
| Citrix Virtual Apps and Desktops/ Citrix Virtual Apps 7.6 | Tested | Not tested | Not tested | Not tested | Tested | Not tested | Not tested | Not tested |
| Citrix Virtual Apps and | Tested | Tested | Not tested | Tested | Tested | Tested | Not tested | Tested |

| | Windows 7 | Windows 10 | Ubuntu 16 | Windows Server 2008 R2 | Windows Server 2012 R2 | Windows Server 2016 | Windows Server 2019 | APPs |
|--|-----------|------------|------------|------------------------|------------------------|---------------------|---------------------|------------|
| Desktops/ Citrix Virtual Apps 7.15 | | | | | | | | |
| Citrix Virtual Apps and Desktops/ Citrix Virtual Apps 7.18 | Tested | Tested | Not tested | Not tested | Tested | Tested | Not tested | Tested |
| Tera PCM for Amazon Web Services (AWS) 1.03 | Tested * | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested |
| Tera Cloud Access | Tested * | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested |
| Microsoft RDS 2012 R2 and 2016 | Tested | Tested | Not tested | Tested | Tested | Tested | Not tested | Tested |

*AWS Workspace VM Operating System Windows 7 style is based on 2008 R2 RDSH.

¹Only supports desktop connectivity to the Ubuntu desktop; USB redirection or other Multimedia optimization techniques are currently not supported.

Table 37. Tested environment - Citrix Virtual Apps and Desktops

| Citrix Virtual Apps and Desktops/Citrix Virtual Apps | Operating system | RTME | Skype for Business client | Skype for Business Server |
|--|---------------------|------|---------------------------|---------------------------|
| 7.15 | Windows 7 | 2.7 | Skype for Business 2016 | Skype for Business 2015 |
| | Windows 10 | 2.7 | Skype for Business 2016 | Skype for Business 2015 |
| | Windows Server 2016 | 2.7 | Skype for Business 2016 | Skype for Business 2015 |
| 7.18 | Windows 7 | 2.7 | Skype for Business 2016 | Skype for Business 2015 |
| | Windows 10 | 2.7 | Skype for Business 2016 | Skype for Business 2015 |
| | Windows Server 2016 | 2.7 | Skype for Business 2016 | Skype for Business 2015 |

Tested peripherals matrix

The following are the list of tested devices for this release:

Audio

- UC150 - Dell Stereo Headset - Skype for Business
- UC 350 - Dell Pro Stereo Headset - Skype for Business
- Dell USB Sound Bar (AC511M)
- Dell Professional Sound Bar (AE515M)
- AE215 - 2.0 Speaker System
- Dell 2.1 Speaker System - AE415
- Jabra Evolve 65 MS Stereo - Headset
- Jabra Engage 65 Stereo Headset
- Plantronics Savi W440M-400 Series convertible wireless headset - DECT 6.0
- Plantronics Voyager Focus UC B825-M headset for Microsoft Lync
- Dell USB SoundBar AC511

Cables

- C2G USB C to DisplayPort Adapter Converter - USB-C to DisplayPort Black external video adapter - black
- Belkin Universal HDMI to VGA Adapter with Audio - Video converter - HDMI - B2B
- Dell USB to Ethernet adapter
- Trendnet USB to Serial Converter RS-232 - 2.25 ft
- C2G - USB 2.0 A (Male) to DB9 (Serial) (Male) Adapter
- StarTech.com 1 Port USB to RS232 DB9 Serial Adapter Cable - Serial adapter - USB 2.0 - RS-232
- Dell TYPE-C-DP convertor
- Dell TYPE-C-HDMI convertor
- USB-to-Serial converter

Keyboard/Mouse

- Dell Laser Scroll USB 6-Buttons Silver and Black Mouse
- Dell MS116 USB Wired Optical Mouse Black
- Dell Wireless Mouse - WM326
- Dell Premier Wireless Mouse - WM527
- Dell Wireless Keyboard and Mouse Combo- KM636
- Dell USB Wired keyboard with Smartcard Reader - KB813
- Cherry smartcard keyboard - JK-A0104EU-2
- Dell KM636 Wireless Keyboard and Mouse
- Dell wireless Keyboard/mouse KM632
- Dell Keyboard KB212-B
- Dell Keyboard KB216p
- Dell Mouse MS111-P
- Dell keyboard KB813 (Smartcard reader)
- Dell Keyboard SK-3205 (Smartcard reader)
- Cherry RS 6700 USB (Smartcard reader)
- Dell Optical Wireless Mouse – WM122
- Dell Optical Wireless Mouse – WM123
- Logitech M557 mouse, Bluetooth
- Microsoft ARC mouse 1350
- Microsoft ARC touch mouse 1592, Bluetooth
- Rapoo E6100, BlueTooth

Monitors

- Dell 20 Monitor | E2016H
- Dell 20 Monitor | E2016Hv (China only)
- Dell 22 Monitor | E2216H
- Dell 22 Monitor | E2216Hv (China only)
- Dell 22 Monitor | E2218HN
- Dell 23 Monitor | E2318H
- Dell 24 Monitor | E2417H
- Dell 20 Monitor | P2018H
- Dell 22 Monitor | P2219H
- Dell 23 Monitor | P2319H
- Dell 24 Monitor | P2419H
- Dell 27 Monitor | P2719H
- Dell 22 Monitor | P2219HC
- Dell 24 Monitor | P2419HC
- Dell 27 Monitor | P2719HC
- Dell UltraSharp 24 Monitor U2419H
- Dell UltraSharp 24 Monitor U2419HC
- Dell UltraSharp 27 Monitor U2719D
- Dell UltraSharp 27 Monitor U2719DC
- Dell UltraSharp 27 Monitor U2718Q 4K
- Dell P2415Q (3480x2160)
- Dell P2715Q (3840x2160)
- Dell U2414HB (1920x1080)
- Dell U2518D (2560x1440)

- Dell U2713HMT (2560x1440)
- Dell U2713HMT (2560x1440)
- Dell U2718Q (3840x2160)
- Dell S2718D (2560x1440)
- Dell S2817Q (3840x2160)
- Dell P2418HZ (1920x1080)
- Dell S2817Q (3840x2160)
- Dell P2419H (2560x1440)
- Dell P3418HW (2560x1080)
- Dell E2318H (1920x1080)

Printers

- Dell B1163 Mono Multifunction Printer—Not supported Generic / Text Only
- Dell B1165nfw Mono Multifunction Printer—Not supported Generic / Text Only
- Dell B1260dn Laser Printer
- Dell B1265dnf Multifunction Laser Printer
- Dell B2360d Laser Printer
- Dell B2360dn Laser Printer
- Dell B2375dnf Mono Laser Multifunction Printer
- HP LaserJet P2055d
- HP LaserJet P2035
- HP LaserJet 1022n
- HP Color LaserJet CM1312MFP
- EPSON PLQ-20K

USB headsets

- Jabra PRO 935 MS
- Jabra Speak 510 MS, Bluetooth
- Jabra Evolve 75
- Jabra Evolve 40 MS Mono
- Jabra GN2000
- Jabra PRO 9470, Bluetooth—Only by USB, does not support Bluetooth
- Plantronics BLACKWIRE C710, BlueTooth
- Plantronics Calisto P240 D1K3 USB handset
- Plantronics DA80
- Plantronics Voyager Focus UC B825
- SENNHEISER SC 260 USB MS II
- SENNHEISER SC 660 USB ML
- SENNHEISER D 10 USB ML-US Wireless DECT Headset
- SENNHEISER SP 10 ML Speakerphone for Lync
- POLYCOM Deskphone CX300
- Plantronics Blackwire 3220 USB-A

Analog headset

- Logitech h150
- Philips

Speechmike Premium

- LFH3610/00 SPEECHMIKE PREMIUM—only redirect tested

USB webcam

- Logitech C920 HD Pro Webcam
- Logitech C930e HD Webcam
- Microsoft LifeCam HD-3000
- Logitech C922 HD Webcam
- Microsoft LifeCam Studio

Data storage

- SanDisk USB 3.0 16 GB

- SanDisk USB3.1 and Type-C 16 GB
- Sony N50 16 GB

Storage

- Dell Portable SSD, USB-C 250GB (Edison)—NTFS by default and can only work by redirecting to VDI session
- Dell External Tray Load ODD (Agate) (DVD Writer)

USB DVD RW

- BENQ DVD Drive
- Dell external DVDRW Drive
- Dell DW316

Mobile Phone

- Samsung Galaxy S7

Smartcard reader

- OMNIKEY HID 3021
- HID OMNIKEY 5125
- HID OMNIKEY 5421
- HID OMNIKEY 5325 CL
- Actividentity USB reader 2.0
- Cherry keyboard RS 6600 with smart card
- Cherry keyboard RS 6700 with smart card
- Dell keyboard KB813 (Smartcard reader)
- Dell Keyboard SK-3205 (Smartcard reader)

Remote connection card

- Teradic host card 2220

Proximity card reader

- HID OMNIKEY 5321
- OMNIKEY 5025 CL
- OMNIKEY 5326 DFR
- HDW-IMP-75
- HDW-IMP-60
- RDR-6082AKU

Keyboard/reader

- Finger Print Keyboard KSI 1700

Finger print reader

- Finger Print HDW-IMP-1C

Table 38. Smart card details

| Smart card information from ThinOS event log | Driver | Provider (CSP) | Card type |
|--|--------------------------|--|----------------------------------|
| ActivIdentity V1 | ActivClient 6.2 | ActivClient Cryptographic Service Provider | Oberthur CosmopolC 64k V5.2 |
| ActivIdentity V1 (IDClassic 230) | ActivClient 6.2 | ActivClient Cryptographic Service Provider | Gemalto Cyberflex Access 64K V2c |
| Gemalto/IDPrime.NET (Gemalto .net 510) | Gemalto Mini driver 1.21 | Microsoft Base Smart Card Crypto Provider | Axalto Cryptoflex.NET(V7.2.1.0) |
| ID Prime MD v 4.0.2 (Gemalto 840) | Gemalto Mini driver 1.21 | Microsoft Base Smart Card Crypto Provider | IDPrime MD T=0 (V 7.3.2.11) |
| ID Prime MD v 4.1.0 (Gemalto 3810) | Gemalto Mini driver 1.21 | Microsoft Base Smart Card Crypto Provider | IDPrime MD T=0 (V 7.4.0.7) |
| ID Prime MD v 4.1.1 (Gemalto 830) | Gemalto Mini driver 1.21 | Microsoft Base Smart Card Crypto Provider | IDPrime MD T=0 (V 7.4.1.7) |

| Smart card information from ThinOS event log | Driver | Provider (CSP) | Card type |
|--|---------------------------------------|--|---------------------------------|
| ID Prime MD v 4.3.5 (Gemalto 830) | Gemalto Mini driver 1.21 | Microsoft Base Smart Card Crypto Provider | IDPrime MD T=0 (V 7.6.5.4) |
| Etoken CardOS | SafeNet Authentication Client 8.2.133 | eToken Base Cryptographic Provider | Siemens CardOS V4.2B |
| Etoken CardOS (white USB key) | SafeNet Authentication Client 8.2.133 | eToken Base Cryptographic Provider | Siemens CardOS V4.2 |
| Etoken Java(aladdin) (blue USB key) | SafeNet Authentication Client 8.2.133 | eToken Base Cryptographic Provider | eToken PRO Java 72K OS755 |
| Etoken Java(aladdin) (black USB key) | SafeNet Authentication Client 8.2.133 | eToken Base Cryptographic Provider | SafeNet eToken 510x |
| Etoken Java(aladdin) (black USB key) | SafeNet Authentication Client 8.2.133 | eToken Base Cryptographic Provider | SafeNet eToken 5110 |
| A.E.T. Europe B.V. | SafeSign-Identity-Client-3.0.76 | SafeSign Standard Cryptographic Service Provider | G&D STARCOS 3.0 T=0/1 0V300 |
| A.E.T. Europe B.V. | SafeSign-Identity-Client-3.0.76 | SafeSign Standard Cryptographic Service Provider | Giesecke & Devrient StarCos 3.2 |
| PIV (Yubico) (black USB key) | YubiKey PIV Manager | Microsoft Base Smart Card Crypto Provider | YubiKey 4.3.3 |
| cv cryptovision gmbh (c) v1.0ns | cv_act_scinterface_6.1.6 | cv act sc/interface CSP | G&D STARCOS 3.2 |
| Bypass BelDu | Net iD 6.7.2.36, 2.0.37 | Net iD - CSP | BelDu 6.0.4 |
| GEMALTO IDPrime SIS | Net iD 6.7.2.36, 2.0.37 | Net iD - CSP | IDPrime SIS 4.0.2 |
| ActivIdentity V2 | ActiveClient 7.0 | ActivClient Cryptographic Service Provider | Oberthur ID One 128 v5.5 |
| ActivIdentity V2 | ActiveClient 7.0 | ActivClient Cryptographic Service Provider | G&D FIPS 201 SCE 3.2 |
| ActivIdentity V2 | ActiveClient 7.0 | ActivClient Cryptographic Service Provider | Gemalto TOPDLGX4 144 |

INI parameters

The following table provides the list of INI parameters:

NOTE: Every INI parameter is associated with a parent INI parameter. Use these INI parameters along with the corresponding parent INI parameters.

Table 39. INI parameters

| INI parameters | Description |
|--|--|
| MACPASSConfigure={yes, no, Integrated} | The parameter allows the thin client to enable or disable the MAC Address Pass Through function, or use the integrated NIC. |
| MaxSleepPeriod={0-255} | This parameter specifies the maximum time period the thin client is allowed to be in sleep mode. The thin client reboots after resuming from sleep mode. If the value is set to 0, the thin client resumes from sleep without rebooting. |
| CloseLidCharge={No, ShutDown, OffDisplay} | The parameter allows you to set the behavior of thin client when you close the lid with the AC adapter connected. |
| CloseLidDisCharge={No, ShutDown, OffDisplay} | The parameter allows you to set the behavior of thin client when you close the lid with the device running on battery. |

| INI parameters | Description |
|----------------------------|---|
| BatteryAutoPowerOff={3-20} | The parameter shuts down the thin client when the battery capacity is lower than a set value. |

Known issues

Table 40. Known issues

| ID | Description | Workaround |
|--------------|---|--|
| THINOS-1266 | The Wakeup-On-Lan functionality stops working when you attempt to resume the thin client from the S3 and S5 power states using WD19 docking station. | Use Wakeup-On-Lan functionality from the integrated Ethernet port. |
| THINOS-1447 | DisplayPort audio does not work with HDMI or USB Type-C port. | There is no workaround in this release. |
| THINOS-1469 | DisplayPort audio does not work when using USB Type-C port, DisplayPort, and HDMI port over Dell WD19 docking station. | There is no workaround in this release. |
| THINOS-1479 | Multi-touch input fails to work properly in an RDP session when an external display is connected. | Use multi-touch in RDP without the external display or with only one external display connected. |
| THINOSH-1485 | After restoring the thin client to factory restore settings, the Bluetooth connection may fail when you connect to a Bluetooth device the first time. However, the thin client connects to the Bluetooth device from second instance onwards. | There is no workaround in this release. |
| THINOS-1488 | Audio does not work from stereo speaker output jack on WD19 docking station when you connect an analog audio device. | Use the integrated audio output jack. |
| THINOS-1651 | The U2718Q display does not turn on after hot plugging to the integrated HDMI port. | Reboot the thin client after hot plugging the display. |
| THINOS-1656 | Wyse Management Suite settings are not automatically fetched from the DHCP/DNS options when you use the WD19 dock. | Use the integrated Ethernet port. |

ThinOS 8.6_106

Release summary

Dell Wyse ThinOS software is designed to run on a broad array of Dell Wyse hardware platforms. The ThinOS version 8.6.1 is released to support the Wyse 5470 All-in-One thin client.

Version

ThinOS 8.6_106

Release date

August 2019

Compatibility

BIOS information

Table 41. BIOS information

| Platform | BIOS Version | BIOS BIN file name to use for ThinOS update |
|----------------------------------|--------------|---|
| Wyse 5470 All-in-One thin client | 1.0.0 | 5470AIO_bios.bin |

Platform information

Table 42. Platform information

| Platform | Firmware name | | Build number |
|----------------------------------|---------------|------------------------|--------------|
| | Wyse ThinOS | Wyse ThinOS with PCoIP | |
| Wyse 5470 All-in-One thin client | X10_wnos | PX10_wnos | 8.6_106 |

Table 43. ThinOS packages

| Packages | Version |
|------------------|------------|
| FR.i386.pkg | 1.27.53767 |
| JVDI.i386.pkg | 12.1.52086 |
| horizon.i386.pkg | 5.0.53374 |
| RTME.i386.pkg | 2.7.52738 |

New and enhanced features

Display resolution

The Wyse 5470 All-in-One thin client supports a default resolution of 1920 x 1080.

DP audio port

Wyse 5470 All-in-One thin client uses only one port for DP audio. Only **Port 1** is available on the **Audio** tab.

Troubleshooting features

- New target option **IDE** can be used to select the destination for importing and exporting files. If **IDE** is selected, the destination is redirected to ThinOS C: Disk of IDE.

 **NOTE: Extract CMOS and Restore CMOS features are supported only in USB and File Server options.**

- Click **Export IDE trouble_shoot** to export the folder `C:/wnos/trouble_shoot` from **IDE C:** to USB or file server. This button is enabled only when the target is USB or file server.
- Click **Delete IDE trouble_shoot** to delete the folder `C:/wnos/trouble_shoot` from IDE.
- You can select 1 day to 5 days in **Days to keep troubleshooting files in IDE**. After you reboot, the files in `C:/wnos/trouble_shoot` are checked. If the created date is older than the days that you set, the files are removed.
- Select the **Enable Application Console Log** check box to save all Linux application console logs in the `trouble_shoot` folder with the name `TerminalName_proc_name_date_time.log`
- **Application list** is a filter for application console logs. It is empty by default and no filters are applied. When it is empty, the console logs of all applications are saved to the target folder.

You can filter the applications for logs using **Application list**. The name in the list can be part of the application name. For example, PCoIP application name is `/pcoip/pcoip` and Blast application name is `/usr/lib/vmware/view/usb/horizon`. If you want the the console log of these two applications, enter `pcoip;vmware`.

On-Screen Display (OSD) feature

Use the On-Screen Display (OSD) buttons on the right of the device to adjust the luminance of the backlight. Minimum is 1 and maximum is 100.

- Press and hold the first button from the top to increase brightness.
- Press and hold the second button from the top to decrease brightness.
- Press the screen-off button to turn off or turn on the display. When the display is turned off, you can use a mouse or a keyboard to wake up the thin client.

Frames per second (FPS) display

Frames per second (FPS) is displayed in the **Performance Monitor** window.

Text color customization on login window

You can customize the text color in the login window or the lock window by using the INI parameter—`Signon=yes`
`SignonStatusColor="rrr ggg bbb`.

 **NOTE: The default text color is gray.**

Smart card as Proximity Card of Imprivata

The feature to treat smart card authentications as proximity card authentications is added.

You can use a smart card as proximity card and authenticate the user. When you insert the smart card, it is considered as a proximity card tap and removing the smart card is considered as tap-out. To use a smart card as proximity card, go to **Policies > Computer Policy** in the OneSign Administrator console and select the **Treat smart card authentications as proximity card authentications** check box.

New system variable for MAC address

New system variable \$UMAC for MAC address in uppercase format is added.

Reconnect workflow for VMware Horizon View broker

The INI parameter `VMWaitTimer={0-3600}` is added to enhance the reconnect workflow of the VMware Horizon View broker.

The option **VMWaitTimer** specifies the time remaining in seconds to reconnect to a Horizon desktop before exiting the desktop. When the connection fails while connecting to a Horizon desktop, a message *Horizon Error- Waiting to recover* is displayed along with the countdown timer. The range is 0–3600. The value is taken as 20 by default if the value set is lesser than 20. If the value set is greater than 3600, 3600 is taken as the value by default. After the count down reaches 0, the connection is canceled and you can exit to the ThinOS desktop.

VMware Horizon package

VMware Horizon package is updated to version 5.0.53374.

- Supports the relative mouse feature in a PCoIP session.

When you enable the relative mouse feature, Horizon Client uses absolute coordinates to transmit data about the mouse pointer movements and improves the mouse performance. To enable the relative mouse feature on a classic desktop, right-click the remote desktop icon on the ThinOS taskbar, and click **Enable Relative Mouse**. To enable the relative mouse feature on a zero desktop, go to the ThinOS connection menu, and click the **A** icon that is displayed after the PCoIP session name.

- Supports the High Color Accuracy feature in a Blast session with H.264 enabled.

This option enables Horizon Client to use a superior color fidelity when H.264 decoding is enabled. To enable the High Color Accuracy feature, go to **Global Connection Settings**, click the **Horizon** tab, and select the **High Color Accuracy** check box.

Teradici Cloud Access broker type

Teradici Cloud Access is added as a new broker type. You can enter the FQDN name or the IP address of the broker server.

Username Hint option for VMware Horizon View broker

ThinOS supports the **Username Hint** option during smart card authentication for the Horizon View broker.

You can enable users to specify the account to be used in the **Username Hint** field when you log in to a Horizon View session using a smart card. To enable the **Username Hint** option, go to the View Administrator Admin console, and select the **Allow smart card user hints** check box when editing the View Server Connection settings. Enabling this option allows you to use a single smart card certificate to authenticate to multiple user accounts.

When signing in using a smart card, you must enter the username besides the smart card PIN. If the username does not match the smart card certificate, the sign in fails with an error message *No user could be found for your Certificate*.

Wyse Management Suite support

You can manage Wyse 5470 All-in-One thin client using Wyse Management Suite 1.4 and later versions. Wyse Management Suite 1.4 can differentiate between the BIOS of Wyse 5070 and 5470 All-in-One thin clients. But it cannot differentiate between the ThinOS images. All images are treated as of Wyse 5070 thin client.

There are two ways to separate a Wyse ThinOS image:

- Add a description while uploading the image.

- Create separate groups for different platforms.

NOTE: Group Registration Key is encrypted and is displayed as asterisks (*).

New connection under low privilege

A new connection under low privilege can be added.

FR package

FR package is updated to version 1.27.53767.

Sleep mode

The sleep mode enables the power-saving state and the thin client resumes power without loss of data.

- ThinOS VDI broker session logs off after resuming from sleep mode for security. You must log in to the broker session again after resuming from sleep mode.

NOTE: If you do not want to lose VDI sessions or to login to broker again, it is recommended to disable sleep mode by using the INI parameter `Sleep=no`.

- The device automatically enters sleep mode when ThinOS is idle for 20 minutes. This value is the default value. You can set the idle time in the **System Preferences** dialog box.
- To enable the thin client to automatically enter the sleep mode, set the **Turn Off Screen** as screen saver. Sleep mode timer starts after screen is turned off by the screen saver.
- As the Wyse 5470 All-in-One thin client does not have a battery, **plugged in** is always selected.
- To manually enter sleep mode, open the ThinOS shut down menu, select the **Sleep** option, and click **OK**.
- To resume the thin client from sleep mode, perform any of the following steps:

- Press the power button.
- Click the USB mouse or move the wireless USB mouse.

NOTE: This feature is disabled by default. Use INI parameter `wakeonusb=yes` to enable the feature.

- Press any key on the USB keyboard.

NOTE: This feature is disabled by default. Use INI parameter `wakeonusb=yes` to enable the feature.

- Use the Wake on LAN feature to wake up from sleep mode.

- **Known issues**

- After you enable the INI parameter `wakeonusb=yes`, the thin client resumes from sleep mode when you click the **OK** button, and immediately move the mouse cursor or press any key on the keyboard.
- If you press the `Sleep` key on the USB keyboard to enter sleep mode, the system stops responding.

Important notes

Wyse 5470 AIO does not support Wyse Device Manager (WDM) and Wyse TCX.

Limitations

DP audio features and limitations

There are some feature limitations for DP audio on the Wyse 5470 All-in-One thin client.

- DP audio is disabled by default.
- Hot plug is not supported. The DP cable must be plugged in first, the power on or reboot the AIO to make the DP audio function.
- Converter is not supported.
- Turning off or turning on the display is not supported. Restart the thin client for the DP audio to work in the following scenarios:
 - If the power button is pressed, to power off, and then power on the display
 - If you use **Turn Off Screen** as the screen saver

- If you click **Apply** in the **Display setup** window

Camera

The features and limitations depend on the type of camera that is used. It is recommended to use a camera such as Logitech C930e that supports hardware encoding.

The integrated camera on the Wyse 5470 All-in-One thin client does not support hardware encoding, so the performance is limited as the following:

- On an RTME-enabled thin client, the camera performance is limited to a maximum resolution of 960 x 540 using Full HD configuration, and 1280 x 720 if Logitech C930e camera is used.
- On a JVDI-enabled client, the CPU usage of the integrated camera is 10% higher than the CPU usage of Logitech C930e camera. The difference in the CPU usage is observed while video calling on Cisco Jabber in an ICA session.

Tested environments matrix

The following tables display the testing environment for the respective attributes:

Table 44. Tested environment - General components

| Component | Version |
|-----------------------|----------------|
| Wyse Management Suite | 1.4.0 |
| Imprivata OneSign | 5.5 |
| Caradigm | 6.3.1 |
| NetScaler | 11.1/12.0/12.1 |
| StoreFront | 3.15 |
| Web Interface | 5.4 |
| SecureMatrix | 4.1.0 |

Table 45. Test environment

| | Windows 7 | Windows 10 | Ubuntu 16 | Windows Server 2008 R2 | Windows Server 2012 R2 | Windows Server 2016 | Windows Server 2019 | APPs |
|--|------------|------------|---------------------|------------------------|------------------------|---------------------|---------------------|------------|
| VMware Horizon 7.5 | Tested | Tested | Tested ⁴ | Tested | Tested | Tested | Tested | Tested |
| Citrix Virtual Apps and Desktops 5.6 | Tested | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested |
| Citrix Virtual Apps 6.5 | Not tested | Not tested | Not tested | Tested | Not tested | Not tested | Not tested | Tested |
| Citrix Virtual Apps and Desktops/ Citrix Virtual Apps 7.6 | Tested | Not tested | Not tested | Not tested | Tested | Not tested | Not tested | Not tested |
| Citrix Virtual Apps and Desktops/ Citrix Virtual Apps 7.15 | Tested | Tested | Not tested | Tested | Tested | Tested | Not tested | Tested |
| Citrix Virtual Apps and Desktops/ | Tested | Tested | Not tested | Not tested | Tested | Tested | Not tested | Tested |

| | Windows 7 | Windows 10 | Ubuntu 16 | Windows Server 2008 R2 | Windows Server 2012 R2 | Windows Server 2016 | Windows Server 2019 | APPs |
|---|-----------|------------|------------|------------------------|------------------------|---------------------|---------------------|------------|
| Citrix Virtual Apps 7.18 | | | | | | | | |
| Tera PCM for Amazon Web Services (AWS) 1.03 | Tested * | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested |
| Tera Cloud Access | Tested * | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested |
| Microsoft RDS 2012 R2 and 2016 | Tested | Tested | Not tested | Tested | Tested | Tested | Not tested | Tested |

*AWS Workspace VM Operating System Windows 7 style is based on 2008 R2 RDSH.

¹Only supports desktop connectivity to the Ubuntu desktop; USB redirection or other Multimedia optimization techniques are currently not supported.

Table 46. Tested environment - Citrix Virtual Apps and Desktops

| Citrix Virtual Apps and Desktops/Citrix Virtual Apps | Operating system | RTME | Skype for Business client | Skype for Business Server |
|--|---------------------|------|---------------------------|---------------------------|
| 7.15 | Windows 7 | 2.7 | Skype for Business 2016 | Skype for Business 2015 |
| | Windows 10 | 2.7 | Skype for Business 2016 | Skype for Business 2015 |
| | Windows Server 2016 | 2.7 | Skype for Business 2016 | Skype for Business 2015 |
| 7.18 | Windows 7 | 2.7 | Skype for Business 2016 | Skype for Business 2015 |
| | Windows 10 | 2.7 | Skype for Business 2016 | Skype for Business 2015 |
| | Windows Server 2016 | 2.7 | Skype for Business 2016 | Skype for Business 2015 |

Tested peripherals matrix

The following are the list of tested devices for this release:

Audio

- UC150 - Dell Stereo Headset - Skype for Business
- UC 350 - Dell Pro Stereo Headset - Skype for Business
- AE215 - 2.0 Speaker System
- Dell 2.1 Speaker System - AE415
- Jabra Evolve 65 MS Stereo - Headset
- Jabra Engage 65 Stereo Headset
- Plantronics Savi W440M-400 Series convertible wireless headset - DECT 6.0
- Plantronics Voyager Focus UC B825-M headset for Microsoft Lync

Cables

- Dell Adapter - DisplayPort to HDMI 2.0 (4K)
- Dell Adapter - DisplayPort to VGA
- Dell USB to Ethernet adapter
- C2G - USB 2.0 A (Male) to DB9 (Serial) (Male) Adapter
- StarTech.com 1 Port USB to RS232 DB9 Serial Adapter Cable - Serial adapter - USB 2.0 - RS-232

Keyboard/Mouse

- Dell Laser Scroll USB 6-Buttons Silver and Black Mouse
- Dell MS116 USB Wired Optical Mouse Black

- Dell Wireless Mouse - WM326
- Dell Wireless Keyboard and Mouse Combo- KM636
- Dell USB Wired keyboard with Smartcard Reader - KB813
- Seal Shield Silver Seal Waterproof - Keyboard - USB - US - waterproof - white
- SEAL SHIELDTM MEDICAL GRADE OPTICAL
- Man & Machine Its Cool Flat - Keyboard - USB - UK layout - white
- Man & Machine C Mouse - Mouse - right and left-handed - optical - 2 buttons - wired - USB - white
- Dell Wireless Keyboard and Mouse - Tangerine MLK
- Dell wireless Keyboard/mouse KM632

Monitors

- Dell 20 Monitor | E2016H
- Dell 22 Monitor | E2216H
- Dell 22 Monitor | E2218HN
- Dell 23 Monitor | E2318H
- Dell 24 Monitor | E2417H
- Dell 27 Monitor | P2719H
- Dell 24 Monitor | P2418HT
- Dell 27 Monitor | P2719HC
- Dell UltraSharp 24 Monitor U2415H
- Dell UltraSharp 24 Monitor U2419HC
- Dell UltraSharp 27 Monitor U2719D
- Dell UltraSharp 27 Monitor U2719DC
- Dell UltraSharp 27 Monitor U2718Q 4K
- Dell UltraSharp 34 Monitor P3418HW
- Dell P2415Q (3480x2160)
- Dell P2715Q (3840x2160)
- Dell U2414HB (1920x1080)
- Dell U2518D (2560x1440)
- Dell U2713HMT (2560x1440)
- Dell U2713HMT (2560x1440)
- Dell U2718Q (3840x2160)
- Dell S2718D (2560x1440)
- Dell S2817Q (3840x2160)
- Dell P2418HZ (1920x1080)
- Dell S2817Q (3840x2160)
- Dell P2419H (2560x1440)
- Dell P3418HW (2560x1080)
- Dell E2318H (1920x1080)

Printers

- Dell B1163 Mono Multifunction Printer—Not supported Generic / Text Only
- Dell B1165nfw Mono Multifunction Printer—Not supported Generic / Text Only
- Dell B1260dn Laser Printer
- Dell B1265dnf Multifunction Laser Printer
- Dell B2360d Laser Printer
- Dell B2360dn Laser Printer
- Dell B2375dnf Mono Laser Multifunction Printer
- HP LaserJet P2055d
- HP LaserJet P2035
- HP LaserJet 1022n
- HP Color LaserJet CM1312MFP
- EPSON PLQ-20K

USB headsets

- Jabra PRO 935 MS
- Jabra Speak 510 MS, Bluetooth
- Jabra Evolve 75

- Jabra Evolve 40 MS Mono
- Jabra GN2000
- Jabra PRO 9470, Bluetooth—Only by USB, does not support Bluetooth
- Plantronics BLACKWIRE C710, BlueTooth
- Plantronics Calisto P240 D1K3 USB handset
- Plantronics DA80
- Plantronics Voyager Focus UC B825
- SENNHEISER SC 260 USB MS II
- SENNHEISER SC 660 USB ML
- SENNHEISER D 10 USB ML-US Wireless DECT Headset
- SENNHEISER SP 10 ML Speakerphone for Lync
- POLYCOM Deskphone CX300
- Plantronics Blackwire 3220 USB-A

Analog headset

- Logitech h150
- Philips
- DJ400

USB webcam

- Logitech C920 HD Pro Webcam
- Logitech C930e HD Webcam
- Microsoft LifeCam HD-3000
- Logitech C922 HD Webcam
- Microsoft LifeCam Studio
- Jabra PRO 9470, Bluetooth

Data storage

- SanDisk USB 3.0 16 GB
- SanDisk USB3.1 and Type-C 16 GB
- SanDisk USB 3.0 16GB
- Sony N50 16 GB
- Kingston DataTraveler G3 8GB
- Kingston DTM30 32GB

USB DVD RW

- SAMSUNG PorTable DVD Writer SE-208
- Dell external DVDRW Drive
- Dell DW316

Mobile Phone

- Samsung Galaxy S7

Smartcard reader

- OMNIKEY HID 3021
- HID OMNIKEY 5125
- HID OMNIKEY 5421
- HID OMNIKEY 5325 CL
- Actividentity USB reader 2.0
- Cherry keyboard RS 6600 with smart card
- Cherry keyboard RS 6700 with smart card
- Dell keyboard KB813 (Smartcard reader)
- Dell Keyboard SK-3205 (Smartcard reader)

Remote connection card

- Teradic host card 2220

Proximity card reader

- HID OMNIKEY 5321
- OMNIKEY 5025 CL

- OMNIKEY 5326 DFR
- HDW-IMP-75
- HDW-IMP-60
- RDR-6082AKU

Keyboard/reader

- Finger Print Keyboard KSI 1700

Finger print reader

- Finger Print HDW-IMP-1C

Table 47. Smart card details

| Smart card information from ThinOS event log | Driver | Provider (CSP) | Card type |
|--|---------------------------------------|--|----------------------------------|
| ActivIdentity V1 | ActivClient 6.2 | ActivClient Cryptographic Service Provider | Oberthur CosmopolC 64k V5.2 |
| ActivIdentity V1 (IDClassic 230) | ActivClient 6.2 | ActivClient Cryptographic Service Provider | Gemalto Cyberflex Access 64K V2c |
| Gemalto/IDPrime.NET (Gemalto .net 510) | Gemalto Mini driver 1.21 | Microsoft Base Smart Card Crypto Provider | Axalto Cryptoflex.NET(V7.2.1.0) |
| ID Prime MD v 4.0.2 (Gemalto 840) | Gemalto Mini driver 1.21 | Microsoft Base Smart Card Crypto Provider | IDPrime MD T=0 (V 7.3.2.11) |
| ID Prime MD v 4.1.0 (Gemalto 3810) | Gemalto Mini driver 1.21 | Microsoft Base Smart Card Crypto Provider | IDPrime MD T=0 (V 7.4.0.7) |
| ID Prime MD v 4.1.1 (Gemalto 830) | Gemalto Mini driver 1.21 | Microsoft Base Smart Card Crypto Provider | IDPrime MD T=0 (V 7.4.1.7) |
| ID Prime MD v 4.3.5 (Gemalto 830) | Gemalto Mini driver 1.21 | Microsoft Base Smart Card Crypto Provider | IDPrime MD T=0 (V 7.6.5.4) |
| Etoken CardOS | SafeNet Authentication Client 8.2.133 | eToken Base Cryptographic Provider | Siemens CardOS V4.2B |
| Etoken CardOS (white USB key) | SafeNet Authentication Client 8.2.133 | eToken Base Cryptographic Provider | Siemens CardOS V4.2 |
| Etoken Java(aladdin) (blue USB key) | SafeNet Authentication Client 8.2.133 | eToken Base Cryptographic Provider | eToken PRO Java 72K OS755 |
| Etoken Java(aladdin) (black USB key) | SafeNet Authentication Client 8.2.133 | eToken Base Cryptographic Provider | SafeNet eToken 510x |
| Etoken Java(aladdin) (black USB key) | SafeNet Authentication Client 8.2.133 | eToken Base Cryptographic Provider | SafeNet eToken 5110 |
| A.E.T. Europe B.V. | SafeSign-Identity-Client-3.0.76 | SafeSign Standard Cryptographic Service Provider | G&D STARCOS 3.0 T=0/1 0V300 |
| A.E.T. Europe B.V. | SafeSign-Identity-Client-3.0.76 | SafeSign Standard Cryptographic Service Provider | Giesecke & Devrient StarCos 3.2 |
| PIV (Yubico) (black USB key) | YubiKey PIV Manager | Microsoft Base Smart Card Crypto Provider | YubiKey 4.3.3 |
| cv cryptovision gmbh (c) v1.0ns | cv_act_scinterface_6.1.6 | cv act sc/interface CSP | G&D STARCOS 3.2 |
| Buypass BelDu | Net iD 6.7.2.36, 2.0.37 | Net iD - CSP | BelDu 6.0.4 |
| GEMALTO IDPrime SIS | Net iD 6.7.2.36, 2.0.37 | Net iD - CSP | IDPrime SIS 4.0.2 |

INI parameters

The following table provides the list of INI parameters:

NOTE: Every INI parameter is associated with a parent INI parameter. Use these INI parameters along with the corresponding parent INI parameters.

Table 48. INI parameters

| INI parameters | Description |
|----------------------------------|---|
| OSDConfigure={yes, no} | This parameter allows you to enable or disable the On-Screen Display (OSD) function on the thin client. |
| USBSidePortTop={yes, no} | This parameter allows you to enable or disable the top USB port on the left side of the thin client. If the USB port is disabled, the operating system cannot detect the device that is attached to this port. |
| USBSidePortBottom={yes, no} | This parameter allows you to enable or disable the bottom USB port on the left side of the thin client. If the USB port is disabled, the operating system cannot detect the device that is attached to this port. |
| USBRearPortTopLeft={yes, no} | This parameter allows you to enable or disable the top-left USB port on the back of the thin client. If the USB port is disabled, the operating system cannot detect the device that is attached to this port. |
| USBRearPortTopRight={yes, no} | This parameter allows you to enable or disable the top-right USB port on the back of the thin client. If the USB port is disabled, the operating system cannot detect the device that is attached to this port. |
| USBRearPortBottomLeft={yes, no} | This parameter allows you to enable or disable the bottom-left USB port on the back of the thin client. If the USB port is disabled, the operating system cannot detect the device that is attached to this port. |
| USBRearPortBottomRight={yes, no} | This parameter allows you to enable or disable the bottom-right USB port on the back of the thin client. If the USB port is disabled, the operating system cannot detect the device that is attached to this port. |
| MaxSleepPeriod={0-255} | This parameter specifies the maximum time period the thin client is allowed to be in sleep mode. The thin-client reboot after resuming from sleep mode. When this parameter is set to 0, the thin client resumes from sleep mode without rebooting. |

Known issues

Table 49. Known issues

| ID | Description | Workaround |
|-------------|---|--|
| THINOS-1177 | Chinese/Japanese fonts in the Peripheral and Troubleshooting windows are distorted or shortened. | Use the Locale option and change the language to English. |
| THINOS-1164 | A trap error : /user/bin/vdloader - d /usr/lib/I: trap 14 occurs when you disconnect an ICA desktop during the JVDI video call. | End the JVDI video call and then disconnect the ICA desktop. |

ThinOS 8.6_027 and ThinOS Lite 2.6_027

Release summary

Dell Wyse ThinOS software is designed to run on a broad array of Dell Wyse hardware platforms. Patch or add-on releases are created to support the existing hardware platforms, correct defects, make enhancements, or add new features. These releases are tested and supported on shipping hardware platforms.

Version

ThinOS 8.6_027

ThinOS Lite 2.6_027

Release date

August 2019

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

Supported platforms

Table 50. Supported platforms

| Platform | Image file name | BIOS file name | BIOS version |
|--|-----------------|----------------|----------------|
| Wyse 3010 Thin Client with ThinOS (T10) | DOVE_boot | Not applicable | Not applicable |
| Wyse 3010 zero client for Citrix | T00_xen.bin | Not applicable | Not applicable |
| Wyse 3020 Thin Client with ThinOS (T10D) | T10D_wnos | Not applicable | Not applicable |
| Wyse 3020 zero client for Citrix | T00D_xen | Not applicable | Not applicable |
| Wyse 3030 LT Thin Client with ThinOS | U10_wnos | U10_bios.bin | 1.0G |
| Wyse 3030 LT Thin Client with PCoIP | PU10_wnos | PU10_bios.bin | 1.0G |
| Wyse 3040 Thin Client with ThinOS | A10Q_wnos | A10Q_bios.bin | 1.2.5 |
| Wyse 3040 Thin Client with PCoIP | PA10Q_wnos | A10Q_bios.bin | 1.2.5 |
| Wyse 5010 Thin Client with ThinOS (D10D) | ZD10_wnos | D10G_bios.bin | 3.0U |

| Platform | Image file name | BIOS file name | BIOS version |
|---|-----------------|------------------|--------------|
| Wyse 5010 Thin Client with PCoIP (D10DP) | PD10_wnos | PD10G_bios.bin | 3.0U |
| Wyse 5010 zero client for Citrix | ZD00_xen | D10G_bios.bin | 3.0U |
| Wyse 5040 AIO Thin Client (5212) | ZD10_wnos | AIO10G_bios.bin | 3.0U |
| Wyse 5040 AIO Thin Client with PCoIP (5213) | PD10_wnos | PAIO10G_bios.bin | 3.0U |
| Wyse 5060 Thin Client with ThinOS | D10Q_wnos | D10Q_bios.bin | 1.0J |
| Wyse 5060 Thin Client with PCoIP | PD10Q_wnos | PD10Q_bios.bin | 1.0J |
| Wyse 5070 Thin Client with ThinOS | X10_wnos | X10_bios.bin | 1.1.4 |
| Wyse 5070 Thin Client with PCoIP | PX10_wnos | X10_bios.bin | 1.1.4 |
| Wyse 7010 Thin Client with ThinOS (Z10D) | ZD10_wnos | Z10G_bios.bin | 3.0U |

Previous versions

ThinOS 8.6_024

ThinOS Lite 2.6_024

Supported packages

Table 51. Supported packages

| Platform name | Packages | | | | |
|---|----------------------|--------------------------|--------------------|-------------------|---------------------|
| | FR v1.28.19061716 | Horizon v5.1.19052918 | RTME v2.8.54007 | TCX v7.1.41853 | JVDI v12.1.52977 |
| Wyse 3010 Thin Client with ThinOS (T10) | Not supported | Not supported | Not supported | Not supported | Not supported |
| Wyse 3010 Zero Client for Citrix | Not supported | Not supported | Supported | Not supported | Not supported |
| Wyse 3020 Thin Client with ThinOS (T10D) | Not supported | Not supported | Not supported | Not supported | Not supported |
| Wyse 3020 Zero Client for Citrix | Not supported | Not supported | Supported | Not supported | Not supported |
| Wyse 3030 LT Thin Client with ThinOS | Supported | Supported | Supported | Supported | Not supported |
| Wyse 3030 LT Thin Client with PCoIP | Supported | Supported | Supported | Supported | Not supported |
| Wyse 3040 Thin Client with ThinOS | Supported | Supported | Supported | Supported | Supported |
| Wyse 3040 Thin Client with PCoIP | Supported | Supported | Supported | Supported | Supported |
| Wyse 5010 Thin Client with ThinOS (D10D) | Supported | Supported | Supported | Supported | Not supported |
| Wyse 5010 Thin Client with PCoIP (D10DP) | Supported | Supported | Supported | Supported | Not supported |
| Wyse 5010 Zero Client for Citrix | Supported | Supported | Supported | Supported | Not supported |
| Wyse 5040 AIO Thin Client (5212) | Supported | Supported | Supported | Supported | Not supported |
| Wyse 5040 AIO Thin Client with PCoIP (5213) | Supported | Supported | Supported | Supported | Not supported |
| Wyse 5060 Thin Client with ThinOS | Supported | Supported | Supported | Supported | Supported |
| Wyse 5060 Thin Client with PCoIP | Supported | Supported | Supported | Supported | Supported |

| Platform name | Packages | | | | |
|--|----------------------|--------------------------|--------------------|-------------------|---------------------|
| | FR v1.28.19061716 | Horizon v5.1.19052918 | RTME v2.8.54007 | TCX v7.1.41853 | JVDI v12.1.52977 |
| Wyse 5070 Thin Client with ThinOS | Supported | Supported | Supported | Supported | Supported |
| Wyse 5070 Thin Client with PCoIP | Supported | Supported | Supported | Supported | Supported |
| Wyse 7010 Thin Client with ThinOS (Z10D) | Supported | Supported | Supported | Supported | Not supported |

New and enhanced features

Updates to ThinOS packages

- Updated the Citrix Real-time Media Engine (RTME) package to version 2.8.54007.
- Updated the VMware Horizon package to version 5.1.19052918.
- Updated the Flash Redirection (FR) package to version 1.28.19061716.

VMware updates

Horizon Client version update

VMware Horizon Client is updated from version 5.0 to 5.1. The latest version offers increased Blast performance on ThinOS.

Relative mouse feature in Blast session

ThinOS supports the relative mouse feature in a Blast session.

When you enable the relative mouse feature, Horizon Client uses absolute coordinates to transmit data about the mouse pointer movement and improve the mouse performance. To enable the relative mouse feature, use the INI parameter `SessionConfig=BlastEnableRelativeMouse=yes`.

The relative mouse feature is applicable only for the following thin clients:

- Wyse 3030 LT Thin Client
- Wyse 3040 Thin Client
- Wyse 5010 Thin Client
- Wyse 5040 AIO Thin Client
- Wyse 5060 Thin Client
- Wyse 5070 Thin Client

NOTE: The Blast performance is improved on all the supported thin clients except the Wyse 5060 Thin Client.

Known issue

When the relative mouse feature is enabled in a Blast session, you must press Ctrl+Alt to release the mouse pointer in the following scenarios:

Table 52. Scenarios

| Desktop mode | Scenario |
|--------------|---|
| Classic mode | In a session window (not full screen), you cannot move the mouse pointer to the local ThinOS taskbar, and you cannot move the mouse pointer outside the session window. |
| Zero mode | In a session where the mouse pointer is positioned on the left panel of the screen, the ThinOS taskbar does not work. |

USB device splitting in Blast session

ThinOS supports the USB device splitting feature on the Nuance Dictaphone PowerMic II microphone in a Blast session. The USB device splitting feature enables you to split the composite device into its components. To enable this feature, use the following INI parameters:

```
Device=vusb InterfaceRedirect=yes
Device=vusb ForceRedirect=0x00,0x00,0x03,0x00,0x00
SessionConfig=Blast viewusb.IncludeVidPid=Vid-0554_Pid-1001
viewusb.SplitVidPid=Vid-0554_Pid-1001(exintf:00;exintf:01;exintf:02)
```

After you enable the USB device splitting feature, the buttons on the PowerMic II are redirected to the blast session, and the audio mapping is retained in the local device.

For more information about the supported USB devices and USB configurations, see the *Nuance SpeechMagic VMware View Extension - Supported USB Devices and USB Configuration* article at kb.vmware.com.

VMware Horizon Client feature matrix

Table 53. VMware Horizon Client feature matrix

| | Client type | ThinOS |
|--------------------------------|--|---------------|
| Client Appearance and Workflow | Customer branding | Not supported |
| | Kiosk mode | Supported |
| | In-product help | Not supported |
| | Online help | Not supported |
| | English localization | Supported |
| | French localization | Supported |
| | German localization | Supported |
| | Japanese localization | Supported |
| | Traditional Chinese localization | Supported |
| | Simplified Chinese localization | Supported |
| | Korean localization | Not supported |
| Spanish localization | Not supported | |
| Broker Connectivity | XML-API version | 13 |
| | SSL | Supported |
| | SSL certificate verification | Supported |
| | Disclaimer dialog | Supported |
| | Security Server compatibility | Supported |
| | UAG compatibility | Supported |
| | Multi-broker/Multi-site redirection - DaaS | Not supported |
| | Client info | Supported |
| Phonehome | Not supported | |
| Broker Authentication | Password authentication | Supported |
| | Password change | Supported |
| | RSA authentication | Supported |
| | Radius | Supported |
| | Integrated RSA SecurID token generator | Not supported |

| | Client type | ThinOS |
|--|---|---------------------|
| | Single Sign On | Supported |
| | Log in as current user | Not supported |
| | Nested log in as current user | Not supported |
| | Biometric authentication | Not supported |
| | Unauthentication access | Supported |
| Smart card | x.509 certificate authentication (Smart Card) | Supported |
| | CAC support | Supported |
| | .Net support | Supported |
| | PIV support | Not supported |
| | Java support | Not supported |
| | Purebred derived credentials | Not supported |
| Desktop Operations | Reset | Supported |
| | Restart | Not supported |
| | Log off | Supported |
| Session Management (Blast Extreme and PCoIP) | Switch desktops | Supported |
| | Multiple Connections | Supported |
| | App Launch on Multiple end points | Supported |
| | Auto-Retry | Supported |
| | Auto-Retry 5+ minutes | Supported |
| | Fullscreen mode | Supported |
| | Fullscreen toolbar | Not supported |
| | Windowed mode | Supported |
| | Time Zone Synchronization | Supported |
| | Jumplist integration (Windows 7-Windows 10) | Not supported |
| Client Customization | Command Line Options | Not supported |
| | URI Schema | Not supported |
| | Preference File | Supports only Blast |
| | Non Interactive Mode | Not supported |
| | GPO-based customization | Not supported |
| Protocols supported | Blast Extreme | Supported |
| | H.264 - HW decode | Supported |
| | H.265 - HW decode | Not supported |
| | JPEG/PNG | Supported |
| | Blast Extreme Adaptive Transportation | Supported |
| | RDP 6.x | Supported |
| | RDP 7.x | Supported |
| | RDP 8.x, 10.x | Supported |

| | Client type | ThinOS |
|---|--|---------------------|
| | PCoIP | Supported |
| Protocol Enhancements Protocol Enhancements | RDP-VC Bridge | Supports only Blast |
| | Session Enhancement SDK | Not supported |
| Features / Extensions Monitors / Displays | Dynamic Display Resizing | Supported |
| | Multiple Monitor Support | Supported |
| | External Monitor Support | Supported |
| | Display Pivot | Supported |
| | Multiple Aspect Ratio support | Supported |
| | Number of displays supported | 4 |
| | Maximum Resolution | 3840x2160 |
| | Video out | Supported |
| | High DPI scaling | Not supported |
| | DPI Sync | Supported |
| | Exclusive Mode | Not supported |
| | Multiple Monitor Selection | Supported |
| Input Device (Keyboard / Mouse) | Relative mouse | Supported |
| | External Mouse Support | Supported |
| | Local buffer text input box | Not supported |
| | Keyboard Mapping | Supported |
| | Unicode Keyboard Support | Not supported |
| | International Keyboard Support | Supported |
| | Input Method local/remote switching | Not supported |
| | IME Sync | Not supported |
| Clipboard Services | Clipboard Text | Supports only Blast |
| | Clipboard Graphics | Not supported |
| | Clipboard memory size configuration | Not supported |
| | Drag and Drop | Not supported |
| Client Caching | View Agent to Client-side caching | Supports only Blast |
| Connection Management | Blast network recovery | Supported |
| | IPv6 support | Supported |
| | PCoIP IP roaming | Supported |
| High-Level Device Redirection | Serial (COM) Port Redirection | Not supported |
| | Client Drive Redirection/File Transfer | Not supported |
| | Scanner (TWAIN/WIA) Redirection | Not supported |
| | x.509 Certificate (Smart Card) | Supported |
| | Gyro Sensor Redirection | Not supported |
| Real-Time Audio-Video | Analog in (input) | Supported |
| | Real-Time Audio-Video | Supported |

| | Client type | ThinOS |
|------------------------|---|---------------------|
| | Multiple webcams | Not supported |
| USB Redirection | Generic USB/HID | Supported |
| | Policy: ConnectUSBOnInsert | Supported |
| | Policy: ConnectUSBOnStartup | Supported |
| | Connect/Disconnect UI | Not supported |
| | USB device filtering (client side) | Supported |
| | Isochronous Device Support | Supported |
| | Split device support | Supported |
| | Bloomberg Keyboard compatibility | Not supported |
| | Smartphone sync | Supported |
| | USB 3.0 | Supported |
| | USB Redirection USB storage devices | Supported |
| Unified Communications | Cisco UC Jabber | Not supported |
| | Avaya UC One-X Desktop | Not supported |
| | Mitel UCA | Not supported |
| | Microsoft Lync 2013 | Not supported |
| | Skype for business | Supports only Blast |
| Multimedia Support | Multimedia Redirection (MMR) | Not supported |
| | Flash URL Redirection (Unicast/Multicast) | Not supported |
| | Flash Redirection | Not supported |
| | HTML5 Redirection | Not supported |
| Graphics | vDGA | Supported |
| | vSGA | Supported |
| | NVIDIA GRID VGPU | Supported |
| | Intel vDGA | Supported |
| | AMD vGPU | Supported |
| Mobile Support | Client-side soft keyboard | Not supported |
| | Client-side soft touchpad | Not supported |
| | Full Screen Trackpad | Not supported |
| | Gesture Support | Not supported |
| | Multi-touch Redirection | Not supported |
| | Presentation Mode | Not supported |
| | Unity Touch | Not supported |
| Printing | Printer Redirection | Supports only Blast |
| | Location Based Printing | Supports only Blast |
| | Native Driver Support | Not supported |
| | PDF Download | Not supported |
| Security | FIPS-140-2 Mode Support | Not supported |

| | Client type | ThinOS |
|-----------------------|---|---------------|
| | Imprivata Integration | Supported |
| | TLS 1.0 | Supported |
| | TLS 1.1 | Supported |
| | TLS 1.2 | Supported |
| | Client Device Authentication | Not supported |
| Session Collaboration | Session Collaboration | Not supported |
| | Read-only Collaboration | Not supported |
| Update | Automatic Updates | Not supported |
| | App Store update | Not supported |
| Other | Smart Policies | Not supported |
| | File Type Association | Not supported |
| | URL content redirection | Not supported |
| | Remember credentials | Supported |
| | Access to Linux Desktop - Blast Protocol | Supported |
| | Audio Playback | Supported |
| | Seamless Window | Not supported |
| | Launching multiple client instances using URI | Not supported |
| | One-click Install of Client | Not supported |
| | Parameter pass-through to RDSH apps | Not supported |
| | Performance Tracker | Supported |
| | Shortcuts from server | Not supported |
| Workspace ONE mode | Not supported | |


Supported—Both PCoIP and Blast protocols are supported.

Not supported—Both PCoIP and Blast protocols are not supported.

Amazon WorkSpaces updates

Direct connection mode support

ThinOS supports a direct connection mode that enables you to connect to the Amazon WorkSpace by using your WorkSpace registration code. To connect to Amazon WorkSpaces using the registration code, select the **Connect via registration code** check box, and enter the WorkSpace registration code.

 **NOTE: The WorkSpace registration code is provided to you in your welcome email after you set up Amazon WorkSpaces.**

In this release, the **MFA token** option is disabled in the login window when you connect to Amazon WorkSpaces using the registration code.

If you do not select the **Connect via registration code** check box, you must enter the broker server IP to connect to WorkSpaces.

 **NOTE: You cannot configure the direct connection mode using the INI parameter or Wyse Management Suite.**

Imprivata updates

Grace period to skip second authentication factor

Imprivata enables you to establish grace periods to skip the second authentication factor. ThinOS supports the grace period feature during subsequent logins.

You must specify a time limit for the grace period on the OneSign server. After you specify the grace period, you must first use the proximity badge, and then enter password or OneSign PIN for the initial login. During subsequent logins within the configured grace period, you are promoted only for a single factor authentication, and you can log in without the second authentication factor.

If you tap the proximity card after the time limit that you have specified for the grace period, the **Grace period expired** message is displayed in the second factor authentication window. If a wrong password or a PIN is entered, a warning message is displayed.

ThinOS enhancements

Disable onboard serial port

ThinOS enables you to disable the onboard serial port on the following platforms:

- Wyse 5070 Thin Client with Celeron processor
- Wyse 5070 Thin Client with Pentium processor
- Wyse 5070 Extended Thin Client with Pentium processor

To disable or enable the onboard serial port, use the INI parameter `Device=SerialDisable={yes, no}`. The default value is no. This option does not affect the USB serial devices. The value that you specify is saved into NVRAM and a system reboot is required for changes to take effect.

After the onboard port is disabled, all the port values—COM1, COM2, COM3, and COM4—are available for USB serial device mapping. You can view the ThinOS event log to know the local serial port name that is used when a USB serial device is attached to the thin client.

CA validation default value for Wyse Management Suite

CA validation is required when you import certificates into your Wyse Management Suite server. By default, the **CA Validation** check box is selected to improve the security when using the Wyse Management Suite cloud. This change affects connections to any of the following servers:

- *.dellmobilitymanager.com
- *.cloudclientmanager.com
- *.wysemanagementsuite.com

Table 54. CA Validation

| Wyse Management Suite deployment | CA Validation |
|----------------------------------|---|
| Private cloud | When you deploy Wyse Management Suite on a private cloud, the Enable CA Validation check box is available to configure after you specify the server details in the WMS Server field. By default, the check box is selected. |
| Public cloud | When you deploy Wyse Management Suite on a public cloud, the Enable CA Validation check box is selected by default. You cannot disable the Enable CA Validation option. |

Rutoken smart card support

Rutoken smart card supports two-factor user authentication and enables you to store digital certificates. ThinOS supports the following Rutoken devices:

- Rutoken 2151
- Rutoken ECP 2.0 (2100)

OMNIKEY smart card reader support

ThinOS supports the OMNIKEY 5321v2 smart card reader by HID Global.

Important notes

If Cisco Jabber (JVDI) fails to register with Cisco Unified Communications Manager, add the DNS servers and DNS domains that are used by the Citrix host and the Cisco Unified Communications Manager servers to ThinOS. You can either specify the domain name and server IP on the **General** tab in **Network Setup**, or add the DNS server and the domain value to the DHCP server that provides the IP address information to the ThinOS client. For issues related to Cisco Unified Communications, contact the Cisco support at www.cisco.com.

Tested environment

The following tables display the testing environment for the respective attributes:

Table 55. Tested environment - General components

| Component | Version |
|-----------------------|----------------|
| Wyse Management Suite | 1.4.0 |
| Wyse Device Manager | 5.7.3 |
| Imprivata OneSign | 6.2.1 |
| Caradigm | 6.3.1 |
| NetScaler | 11.1/12.0/12.1 |
| StoreFront | 3.15 |
| Web Interface | 5.4 |
| SecureMatrix | 4.1.0 |

Table 56. Tested environment

| | Windows 7 | Windows 10 | Ubuntu 16 | Windows Server 2008 R2 | Windows Server 2012 R2 | Windows Server 2016 | Windows Server 2019 | APPs |
|--|------------|------------|---------------------|------------------------|------------------------|---------------------|---------------------|------------|
| VMware Horizon 7.5 | Tested | Tested | Tested ⁴ | Tested | Tested | Tested | Tested | Tested |
| Citrix Virtual Apps and Desktops 5.6 | Tested | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested |
| Citrix Virtual Apps 6.5 | Not tested | Not tested | Not tested | Tested | Not tested | Not tested | Not tested | Tested |
| Citrix Virtual Apps and Desktops 7.6 and Citrix Virtual Apps 7.6 | Tested | Not tested | Not tested | Not tested | Tested | Not tested | Not tested | Not tested |
| Citrix Virtual Apps and Desktops 7.5 and Citrix Virtual Apps 7.15 | Tested | Tested | Not tested | Tested | Tested | Tested | Not tested | Tested |
| Citrix Virtual Apps and Desktops 7.18 and Citrix Virtual Apps 7.18 | Tested | Tested | Not tested | Not tested | Tested | Tested | Not tested | Tested |

| | Windows 7 | Windows 10 | Ubuntu 16 | Windows Server 2008 R2 | Windows Server 2012 R2 | Windows Server 2016 | Windows Server 2019 | APPs |
|---|-----------|------------|------------|------------------------|------------------------|---------------------|---------------------|------------|
| Tera PCM for Amazon Web Services (AWS) 1.03 | Tested* | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested |
| Tera Cloud Access | Tested* | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested |
| Remote Desktop Services (RDS) | Tested | Tested | Not tested | Tested | Tested | Tested | Not tested | Tested |

*AWS Workspace VM Operating System **Windows 7 style** is based on 2008 R2 RDSH.

¹Only supports desktop connectivity to the Ubuntu desktop; USB redirection or other Multimedia optimization techniques are currently not supported.

Table 57. Tested environment - Citrix Virtual Apps and Desktops

| Citrix Virtual Apps and Desktops/ Citrix Virtual Apps | Operating System | RTME | Lync client | Skype for Business (SFB) server |
|--|------------------|------|-------------------------|---------------------------------|
| 7.15 | Windows 7 | 2.8 | Skype For Business 2016 | Skype For Business 2015 |
| | Windows 10 | 2.8 | Skype For Business 2016 | Skype For Business 2015 |
| | Windows 2016 | 2.8 | Skype For Business 2016 | Skype For Business 2015 |
| 7.18 | Windows 7 | 2.8 | Skype For Business 2016 | Skype For Business 2015 |
| | Windows 10 | 2.8 | Skype For Business 2016 | Skype For Business 2015 |
| | Windows 2016 | 2.8 | Skype For Business 2016 | Skype For Business 2015 |

Fixed issues

Table 58. Fixed issues

| Issue number | Summary |
|-----------------------------|--|
| THINOS-1808 | Resolved an issue where Wyse 5040 Thin Clients with PCoIP display an incorrect BIOS file in the System Information window. |
| THINOS-1786/ THINOS-1753 | Resolved an issue where ThinOS cannot connect to an RDS Gateway after applying the latest NTLM security patch. |
| THINOS-1710 | Resolved an issue where changing display settings results in the ICA session login failure. |
| THINOS-1672 | Resolved an issue where the event log in the System Information window does not show information related to displays attached to the thin client. |
| THINOS-1648 | Resolved an issue where Wyse 5070 Thin Clients with an internal smart card reader cannot detect PIV cards. |
| THINOS-1635/ THINOS-1207 | Resolved an issue that results in a trap event. |
| THINOS-1620 | Resolved an issue where the cursor disappears when you use an RDP to connect to Server 2016 from a Citrix desktop session. |
| THINOS-1612 | Resolved an issue where Excel does not render properly on a Windows 7 virtual machine. |
| THINOS-1587 | Resolved an issue where the cursor may be not available in a Citrix desktop session. |

| Issue number | Summary |
|-----------------------------|---|
| THINOS-1583 | Resolved an issue where the USB device splitting feature on Nuance PowerMic II (allowing RTAV to be used for audio and USB redirection for HID button controls) does not work properly. |
| THINOS-1575 | Resolved an issue where scanning a smart card with an HID-compliant RFID reader results in system failure. |
| THINOS-1541 | Resolved an issue where ThinOS fails to authenticate with Citrix NetScaler 11.1.57.3 when you use the RSA two-factor authentication. |
| THINOS-1463 | Resolved an issue where the <code>No More Active Sessions</code> message is displayed when you launch a published application from Citrix StoreFront. |
| THINOS-1431 | Resolved an issue where the fiber network module defaults to ENET01 on the Wyse 5070 Thin Client and the 802.1x parameters cannot be assigned. |
| THINOS-1406 | Resolved an issue where the system response is slow when you move an application window in a Citrix session. |
| THINOS-1392 | Resolved an issue where multiple login screens may be displayed. |
| THINOS-1377 | Resolved an issue with the <code>SelectServerList</code> parameter where the default desktop fails when you define two desktops from the same server. |
| THINOS-1327 | Resolved an issue where you can access the locked session when you change the thin client display settings locally. |
| THINOS-1284 | Resolved an issue where the display order is changed after you upgrade the ThinOS firmware to 8.6_013. |
| THINOS-1264 | Resolved an issue where the administrator cannot export screenshots using the HTTPS file server. |
| THINOS-1195 | Resolved an issue where a wireless policy with a hidden SSID cannot automatically connect after the access point reboot. |
| THINOS-1193 | Resolved an issue with audio quality. This issue is observed when an audio file is played for more than 30 seconds. |
| THINOS-1192 | Resolved an issue where the thin client may not boot to the ThinOS desktop when you do not connect a display to the device. |
| THINOS-1174/ THINOS-1110 | Resolved an issue where the device locks the Active Directory user account after two failed attempts. |
| THINOS-1172 | Resolved an issue where the direct RDP connection policies create duplicate connections on the ThinOS desktop. |
| THINOS-1051 | Resolved an issue where the wireless connection is disconnected when you use Cisco 2800/3800 access points. |
| THINOS-1017 | Resolved an issue where the VDI session stops responding. |
| THINOS-928 | Resolved an issue where the connection to Wyse Management Suite fails. |
| THINOS-924 | Resolved an issue where the administrator cannot export INI settings using the HTTPS file server. |
| THINOS-916 | Resolved the issue where the system takes a long time to boot. This issue occurs when the file server is not defined. |
| THINOS-892 | Resolved an issue where the video does not play smoothly when the Citrix RAVE is enabled. |
| THINOS-836 | Resolved an intermittent issue where the inserted CAC smart card is not detected and the <code>Insert a smart card</code> message is displayed instead of a pin entry box in a VDI session. |
| THINOS-810 | Resolved a display artifact issue that is observed when you start a Citrix session. |
| THINOS-775 | Resolved an issue where black boxes are displayed on the local ThinOS desktop when you use the help menu of the published Word applications in Citrix Virtual Apps. |
| THINOS-760 | Resolved an issue where the audio is distorted in a Blast session. |
| THINOS-1813 | Resolved an issue where the warning message is not displayed when you change the BIOS settings. |

INI parameters

The following table provides the list of newly added INI parameter in this release:

 **NOTE: Every INI option is associated with a corresponding INI parameter. Use these INI options along with the corresponding INI parameter.**

Table 59. INI parameters

| INI parameters | Description* |
|--|--|
| Device=Screen [SupportBigMonitor={yes, no}] | The SupportBigMonitor parameter enables you to connect displays with screen resolution up to 3440 x 1440. This parameter is applicable only to the Wyse 3040 Thin Client. |
| SessionConfig=Blast [EnableRelativeMouse={yes, no}] | The EnableRelativeMouse parameter enables or disables the relative mouse feature in a Blast session. The default value is no . |

*For detailed descriptions, see the *Dell Wyse ThinOS Version 8.6 INI Reference Guide* at www.dell.com/manuals.

ThinOS 8.6_024 and ThinOS Lite 2.6_024

Release summary

Dell Wyse ThinOS software is designed to run on a broad array of Dell Wyse hardware platforms. Patch or add-on releases are created to support the existing hardware platforms, correct defects, make enhancements, or add new features. These releases are tested and supported on shipping hardware platforms.

Version

ThinOS 8.6_024

ThinOS Lite 2.6_024

Release date

June 2019

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

Supported platforms

Table 60. Supported platforms

| Platform | Image file name | BIOS file name | BIOS version |
|--|-----------------|----------------|--------------|
| Wyse 3010 thin client with ThinOS (T10) | DOVE_boot | N/A | N/A |
| Wyse 3010 zero client for Citrix | T00_xen.bin | N/A | N/A |
| Wyse 3020 thin client with ThinOS (T10D) | T10D_wnos | N/A | N/A |
| Wyse 3020 zero client for Citrix | T00D_xen | N/A | N/A |
| Wyse 3030 LT thin client with ThinOS | U10_wnos | U10_bios.bin | 1.0G |
| Wyse 3030 LT thin client with PCoIP | PU10_wnos | PU10_bios.bin | 1.0G |
| Wyse 3040 thin client with ThinOS | A10Q_wnos | A10Q_bios.bin | 1.2.5 |
| Wyse 3040 thin client with PCoIP | PA10Q_wnos | A10Q_bios.bin | 1.2.5 |
| Wyse 5010 thin client with ThinOS (D10D) | ZD10_wnos | D10G_bios.bin | 3.0U |

| Platform | Image file name | BIOS file name | BIOS version |
|---|-----------------|------------------|--------------|
| Wyse 5010 thin client with PCoIP (D10DP) | PD10_wnos | PD10G_bios.bin | 3.0U |
| Wyse 5010 zero client for Citrix | ZD00_xen | D10G_bios.bin | 3.0U |
| Wyse 5040 AIO thin client (5212) | ZD10_wnos | AIO10G_bios.bin | 3.0U |
| Wyse 5040 AIO thin client with PCoIP (5213) | PD10_wnos | PAIO10G_bios.bin | 3.0U |
| Wyse 5060 thin client with ThinOS | D10Q_wnos | D10Q_bios.bin | 1.0J |
| Wyse 5060 thin client with PCoIP | PD10Q_wnos | PD10Q_bios.bin | 1.0J |
| Wyse 5070 thin client with ThinOS | X10_wnos | X10_bios.bin | 1.1.4 |
| Wyse 5070 thin client with PCoIP | PX10_wnos | X10_bios.bin | 1.1.4 |
| Wyse 7010 thin client with ThinOS (Z10D) | ZD10_wnos | Z10G_bios.bin | 3.0U |

Previous versions

ThinOS 8.6_019

ThinOS Lite 2.6_019

Packages

Table 61. Packages supported

| Packages | FR | Horizon | RTME | TCX | JVDI |
|---|---------------|-----------|-----------|-----------|---------------|
| Version | 1.26.53224 | 5.0.53374 | 2.7.52738 | 7.1.41853 | 12.1.52977 |
| Wyse 3010 Thin Client with ThinOS (T10) | Not supported | | | | |
| Wyse 3010 Zero Client for Citrix | Not supported | | | | |
| Wyse 3020 Thin Client with ThinOS (T10D) | Not supported | | | | |
| Wyse 3020 Zero Client for Citrix | Not supported | | | | |
| Wyse 3030 LT Thin Client with ThinOS | Supported | Supported | Supported | Supported | Not supported |
| Wyse 3030 LT Thin Client with PCoIP | Supported | Supported | Supported | Supported | Not supported |
| Wyse 3040 Thin Client with ThinOS | Supported | Supported | Supported | Supported | Supported |
| Wyse 3040 Thin Client with PCoIP | Supported | Supported | Supported | Supported | Supported |
| Wyse 5010 Thin Client with ThinOS (D10D) | Supported | Supported | Supported | Supported | Not supported |
| Wyse 5010 Thin Client with PCoIP (D10DP) | Supported | Supported | Supported | Supported | Not supported |
| Wyse 5010 Zero Client for Citrix | Supported | Supported | Supported | Supported | Not supported |
| Wyse 5040 AIO Thin Client (5212) | Supported | Supported | Supported | Supported | Not supported |
| Wyse 5040 AIO Thin Client with PCoIP (5213) | Supported | Supported | Supported | Supported | Not supported |

| Packages | FR | Horizon | RTME | TCX | JVDI |
|--|-----------|-----------|-----------|-----------|---------------|
| Wyse 5060 Thin Client with ThinOS | Supported | Supported | Supported | Supported | Supported |
| Wyse 5060 Thin Client with PCoIP | Supported | Supported | Supported | Supported | Supported |
| Wyse 5070 Thin Client with ThinOS | Supported | Supported | Supported | Supported | Supported |
| Wyse 5070 Thin Client with PCoIP | Supported | Supported | Supported | Supported | Supported |
| Wyse 7010 Thin Client with ThinOS (Z10D) | Supported | Supported | Supported | Supported | Not supported |

New and enhanced features

Updates to ThinOS packages

- Updated the VMware Horizon package to version 5.0.53374.
- Updated the Flash Redirection package to version 1.26.53224.

VMware Client updates

- Updated the VMware Horizon package version from 4.8 to 5.0.

If you are upgrading your thin client to ThinOS version 8.6_024, ensure that the Horizon server or agent version is updated to 7.5 or later to support the latest Horizon Client version 5.0.

- Supports the relative mouse feature in a PCoIP session.

When you enable the relative mouse feature, Horizon Client uses absolute coordinates to transmit data about the mouse pointer movements and improves the mouse performance. To enable the relative mouse feature on a classic desktop, right-click the remote desktop icon on the ThinOS taskbar, and click **Enable Relative Mouse**. To enable the relative mouse feature on a zero desktop, go to the ThinOS connection menu, and click the **A** icon that is displayed after the PCoIP session name.

The relative mouse feature is applicable only for the following PCoIP-enabled thin clients:

- Wyse 3030 LT thin client
- Wyse 3040 thin client
- Wyse 5010 thin client
- Wyse 5040 AIO thin client
- Wyse 5060 thin client
- Wyse 5070 thin client
- Supports the High Color Accuracy feature in a Blast session with H.264 enabled. H.264 is disabled by default from this release. You can enable H.264 using GUI or INI parameters.

The High Color Accuracy option enables Horizon Client to use a superior color fidelity when H.264 decoding is enabled. To enable the High Color Accuracy feature, go to **Global Connection Settings**, click the **Horizon** tab, and select the **High Color Accuracy** check box.

The High Color Accuracy option is available on the following platforms:

- Wyse 3030 LT thin client
- Wyse 3040 thin client
- Wyse 5060 thin client
- Wyse 5070 thin client

You can also use the INI parameter `SessionConfig=BLAST RemoteDisplay.allowClientH264YUV444=TRUE/FALSE` to enable the High Color Accuracy feature.

- Supports the **Username Hint** option during smart card authentication for the Horizon View broker.

You can enable users to specify the account to be used in the **Username Hint** field when you log in to a Horizon View session using a smart card. To enable the **Username Hint** option, go to the View Administrator Admin console, and select the **Allow smart card user hints** check box when editing the View Server Connection settings. Enabling this option allows you to use a single smart card certificate to authenticate to multiple user accounts.

- Enhanced the reconnect workflow for VMware Horizon View broker using the INI parameter `VMWaitTimer={0-3600}`.
The option `VMWaitTimer` specifies the time remaining in seconds for reconnecting to a Horizon desktop before exiting the desktop. When the connection fails while connecting to a Horizon desktop, a message `Horizon Error- Waiting to recover` is displayed along with the countdown timer.

VMware Horizon Client feature matrix

Table 62. VMware Horizon Client feature matrix

| | Client type | ThinOS |
|--------------------------------|---|---------------|
| Client Appearance and Workflow | Customer branding | Not supported |
| | Kiosk mode | Supported |
| | In-product help | Not supported |
| | Online help | Not supported |
| | English localization | Supported |
| | French localization | Supported |
| | German localization | Supported |
| | Japanese localization | Supported |
| | Traditional Chinese localization | Supported |
| | Simplified Chinese localization | Supported |
| | Korean localization | Not supported |
| | Spanish localization | Not supported |
| Broker Connectivity | XML-API version | 13 |
| | SSL | Supported |
| | SSL certificate verification | Supported |
| | Disclaimer dialog | Supported |
| | Security Server compatibility | Supported |
| | UAG compatibility | Supported |
| | Multi-broker/Multi-site redirection - DaaS | Not supported |
| | Client info | Supported |
| | Phonehome | Not supported |
| Broker Authentication | Password authentication | Supported |
| | Password change | Supported |
| | RSA authentication | Supported |
| | Radius | Supported |
| | Integrated RSA SecurID token generator | Not supported |
| | Single Sign On | Supported |
| | Log in as current user | Not supported |
| | Nested log in as current user | Not supported |
| | Biometric authentication | Not supported |
| | Unauthentication access | Supported |
| Smart card | x.509 certificate authentication (Smart Card) | Supported |

| | Client type | ThinOS |
|--|---|---------------------|
| | CAC support | Supported |
| | .Net support | Supported |
| | PIV support | Not supported |
| | Java support | Not supported |
| | Purebred derived credentials | Not supported |
| Desktop Operations | Reset | Supported |
| | Restart | Not supported |
| | Log off | Supported |
| Session Management (Blast Extreme and PCoIP) | Switch desktops | Supported |
| | Multiple Connections | Supported |
| | App Launch on Multiple end points | Supported |
| | Auto-Retry | Supported |
| | Auto-Retry 5+ minutes | Supported |
| | Fullscreen mode | Supported |
| | Fullscreen toolbar | Not supported |
| | Windowed mode | Supported |
| | Time Zone Synchronization | Supported |
| | Jumplist integration (Windows 7-Windows 10) | Not supported |
| Client Customization | Command Line Options | Not supported |
| | URI Schema | Not supported |
| | Preference File | Supports only Blast |
| | Non Interactive Mode | Not supported |
| | GPO-based customization | Not supported |
| Protocols supported | Blast Extreme | Supported |
| | H.264 - HW decode | Supported |
| | H.265 - HW decode | Not supported |
| | JPEG/PNG | Supported |
| | Blast Extreme Adaptive Transportation | Supported |
| | RDP 6.x | Supported |
| | RDP 7.x | Supported |
| | RDP 8.x, 10.x | Supported |
| | PCoIP | Supported |
| Protocol Enhancements Protocol Enhancements | RDP-VC Bridge | Supports only Blast |
| | Session Enhancement SDK | Not supported |
| Features / Extensions Monitors / Displays | Dynamic Display Resizing | Supported |
| | Multiple Monitor Support | Supported |
| | External Monitor Support | Supported |

| | Client type | ThinOS |
|---------------------------------|--|---------------------|
| | Display Pivot | Supported |
| | Multiple Aspect Ratio support | Supported |
| | Number of displays supported | 4 |
| | Maximum Resolution | 3840x2160 |
| | Video out | Supported |
| | High DPI scaling | Not supported |
| | DPI Sync | Supported |
| | Exclusive Mode | Not supported |
| | Multiple Monitor Selection | Supported |
| Input Device (Keyboard / Mouse) | Relative mouse | Supports only PColP |
| | External Mouse Support | Supported |
| | Local buffer text input box | Not supported |
| | Keyboard Mapping | Supported |
| | Unicode Keyboard Support | Not supported |
| | International Keyboard Support | Supported |
| | Input Method local/remote switching | Not supported |
| | IME Sync | Not supported |
| Clipboard Services | Clipboard Text | Not supported |
| | Clipboard Graphics | Not supported |
| | Clipboard memory size configuration | Not supported |
| | Drag and Drop | Not supported |
| Client Caching | View Agent to Client-side caching | Supports only Blast |
| Connection Management | Blast network recovery | Supported |
| | IPv6 support | Supported |
| | PCoIP IP roaming | Supported |
| High-Level Device Redirection | Serial (COM) Port Redirection | Not supported |
| | Client Drive Redirection/File Transfer | Not supported |
| | Scanner (TWAIN/WIA) Redirection | Not supported |
| | x.509 Certificate (Smart Card) | Supported |
| | Gyro Sensor Redirection | Not supported |
| Real-Time Audio-Video | Analog in (input) | Supported |
| | Real-Time Audio-Video | Supported |
| | Multiple webcams | Not supported |
| USB Redirection | Generic USB/HID | Supported |
| | Policy: ConnectUSBOnInsert | Supported |
| | Policy: ConnectUSBOnStartup | Supported |
| | Connect/Disconnect UI | Not supported |
| | USB device filtering (client side) | Supported |

| | Client type | ThinOS |
|------------------------|---|---------------------|
| | Isochronous Device Support | Supported |
| | Split device support | Supported |
| | Bloomberg Keyboard compatibility | Not supported |
| | Smartphone sync | Supported |
| | USB 3.0 | Supported |
| | USB Redirection USB storage devices | Supported |
| Unified Communications | Cisco UC Jabber | Not supported |
| | Avaya UC One-X Desktop | Not supported |
| | Mitel UCA | Not supported |
| | Microsoft Lync 2013 | Not supported |
| | Skype for business | Supports only Blast |
| Multimedia Support | Multimedia Redirection (MMR) | Not supported |
| | Flash URL Redirection (Unicast/Multicast) | Not supported |
| | Flash Redirection | Not supported |
| | HTML5 Redirection | Not supported |
| Graphics | vDGA | Supported |
| | vSGA | Supported |
| | NVIDIA GRID vGPU | Supported |
| | Intel vDGA | Supported |
| | AMD vGPU | Supported |
| Mobile Support | Client-side soft keyboard | Not supported |
| | Client-side soft touchpad | Not supported |
| | Full Screen Trackpad | Not supported |
| | Gesture Support | Not supported |
| | Multi-touch Redirection | Not supported |
| | Presentation Mode | Not supported |
| | Unity Touch | Not supported |
| Printing | Printer Redirection | Supports only Blast |
| | Location Based Printing | Supports only Blast |
| | Native Driver Support | Not supported |
| | PDF Download | Not supported |
| Security | FIPS-140-2 Mode Support | Not supported |
| | Imprivata Integration | Supported |
| | TLS 1.0 | Supported |
| | TLS 1.1 | Supported |
| | TLS 1.2 | Supported |
| | Client Device Authentication | Not supported |
| Session Collaboration | Session Collaboration | Not supported |

| | Client type | ThinOS |
|--------------------|---|---------------|
| | Read-only Collaboration | Not supported |
| Update | Automatic Updates | Not supported |
| | App Store update | Not supported |
| Other | Smart Policies | Not supported |
| | File Type Association | Not supported |
| | URL content redirection | Not supported |
| | Remember credentials | Supported |
| | Access to Linux Desktop - Blast Protocol | Supported |
| | Audio Playback | Supported |
| | Seamless Window | Not supported |
| | Launching multiple client instances using URI | Not supported |
| | One-click Install of Client | Not supported |
| | Parameter pass-through to RDSH apps | Not supported |
| | Performance Tracker | Supported |
| | Shortcuts from server | Not supported |
| Workspace ONE mode | Not supported | |

Supported—Both PCoIP and Blast protocols are supported.

Not supported—Both PCoIP and Blast protocols are not supported.

Teradici updates

Supports the Teradici Cloud Access connection broker. Teradici technology enables you to securely access the remote applications using Teradici Cloud Access. You can manage and optimize your PCoIP-enabled clients. You can configure the Teradici Cloud Access broker setup from the **Remote Connections** dialog box.

Imprivata updates

Added support to treat smart card authentications as proximity card authentications.

You can use a smart card as proximity card and authenticate the user. When you insert the smart card into the smart card reader, the Imprivata agent uses the smart card unique serial number as the Unique ID (UID) of the proximity card. To use a smart card as proximity card, go to **Policies > Computer Policy** on the OneSign Administrator console and select the **Treat smart card authentications as proximity card authentications** check box.

UI enhancements

- UI enhancement to capture logs of the application console. To enable the client to log error messages of an application console, select the **Enable Application Console Log** check box in the **Troubleshooting** window. All logs are saved to the **trouble_shoot** folder with the name `TerminalName_proc_name_date_time.log`.
- UI enhancement to select DisplayPorts for DP audio. In the **Audio** tab, you can click either **Port 1** or **Port 2** to select your DisplayPort preference.
- UI enhancement to display Frames Per Second (FPS) in the **Performance Monitor** window. You can use the **Performance Monitor** option to display the CPU usage history with Frames Per Second (FPS), memory usage, and networking information.
- Supports customizing the text color in the lock window using the INI parameter `SignonStatusColor="rrr ggg bbb"`. The option specifies the sign-on status and the unlocking status text color respectively in the RGB string format. The decimal numbers rrr, ggg, and bbb are in the range of 0—255. By default, the status text color is light red ("255 60 60") for ThinOS lite and gray for ThinOS.

- Supports creating a VDI connection by a low-privileged user using the INI parameter `EnableNewConnection={yes,no}`. If the `PRIVILEGE` parameter is set to **Low** and the `EnableNewConnection` parameter is set to **yes**, an option to create a connection is enabled in the **Connect Manager** window on the classic desktop. On the zero desktop, the **Add Connection** button is added.
- Supports a new system variable—`$UMAC`—for MAC address in the uppercase format.

NOTE:

- For more information about the ThinOS features, see the latest *Dell Wyse ThinOS Version 8.6 Administrator's Guide* at www.dell.com/manuals.
- For more information about the newly added parameters, see the latest *Dell Wyse ThinOS Version 8.6 INI Reference Guide* at www.dell.com/manuals.

Important notes

Tested environment

The following tables display the testing environment for the respective attributes:

Table 63. Tested environment - General components

| Component | Version |
|-----------------------|----------------|
| Wyse Management Suite | 1.4.0 |
| Wyse Device Manager | 5.7.3 |
| Imprivata OneSign | 5.5 |
| Caradigm | 6.3.1 |
| NetScaler | 11.1/12.0/12.1 |
| StoreFront | 3.15 |
| Web Interface | 5.4 |
| SecureMatrix | 4.1.0 |

Table 64. Test environment

| | Windows 7 | Windows 10 | Ubuntu 16 | Windows Server 2008 R2 | Windows Server 2012 R2 | Windows Server 2016 | Windows Server 2019 | APPs |
|---|------------|------------|---------------------|------------------------|------------------------|---------------------|---------------------|------------|
| VMware Horizon 7.5 | Tested | Tested | Tested ¹ | Tested | Tested | Tested | Tested | Tested |
| Citrix Virtual Apps and Desktops 5.6 | Tested | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested |
| Citrix Virtual Apps 6.5 | Not tested | Not tested | Not tested | Tested | Not tested | Not tested | Not tested | Tested |
| Citrix Virtual Apps and Desktops 7.6 and Citrix Virtual Apps 7.6 | Tested | Not tested | Not tested | Not tested | Tested | Not tested | Not tested | Not tested |
| Citrix Virtual Apps and Desktops 7.5 and Citrix Virtual Apps 7.15 | Tested | Tested | Not tested | Tested | Tested | Tested | Not tested | Tested |

| | Windows 7 | Windows 10 | Ubuntu 16 | Windows Server 2008 R2 | Windows Server 2012 R2 | Windows Server 2016 | Windows Server 2019 | APPs |
|---|-----------|------------|------------|------------------------|------------------------|---------------------|---------------------|------------|
| Citrix Virtual Apps and Desktops 7.18 and Citrix Virtual Apps7.18 | Tested | Tested | Not tested | Not tested | Tested | Tested | Not tested | Tested |
| Tera PCM for Amazon Web Services (AWS) 1.03 | Tested* | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested |
| Tera Cloud Access | Tested* | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested | Not tested |
| Amazon Web Services (AWS) | Tested | Tested | Not tested | Tested | Tested | Tested | Not tested | Tested |

*AWS Workspace VM Operating System **Windows 7 style** is based on 2008 R2 RDSH.

¹Only supports desktop connectivity to the Ubuntu desktop; USB redirection or other Multimedia optimization techniques are currently not supported.

Table 65. Tested environment - Citrix Virtual Apps and Desktops

| Citrix Virtual Apps and Desktops/ Citrix Virtual Apps | Operating System | RTME | Lync client | Skype for Business (SFB) server |
|--|------------------|------|-------------------------|---------------------------------|
| 7.15 | Windows 7 | 2.7 | Skype For Business 2016 | Skype For Business 2015 |
| | Windows 10 | 2.7 | Skype For Business 2016 | Skype For Business 2015 |
| | Windows 2016 | 2.7 | Skype For Business 2016 | Skype For Business 2015 |
| 7.18 | Windows 7 | 2.7 | Skype For Business 2016 | Skype For Business 2015 |
| | Windows 10 | 2.7 | Skype For Business 2016 | Skype For Business 2015 |
| | Windows 2016 | 2.7 | Skype For Business 2016 | Skype For Business 2015 |

Fixed issues

Table 66. Fixed issues

| Issue number | Summary |
|-----------------------|--|
| THINOS-852 | Resolved the issue where the mouse scrolling doubles when using Blast protocol. |
| THINOS-756 | Resolved the issue with the display quality. |
| THINOS-779 | Resolved the Intel wireless issue that results to the occasional session reconnect. |
| THINOS-781 | Resolved the occasional issue that occurs with the audio output when switching between USB audio playback devices. |
| THINOS-792 | Resolved the issue where the mouse cursor disappears when using a VMware PCoIP session. |
| THINOS-838 | Resolved the issue where the Oberthur ID-One PIV v8 cards does not function with certain smart card readers. |
| THINOS-875, TIR 98995 | Resolved the issue where the main display changes from first display to the second after an image update. |
| THINOS-932 | Resolved the issue where the session focus is not correctly after Imprivata login. |

| Issue number | Summary |
|--------------------------|--|
| THINOS-999 | Resolved the issue that occasionally causes <code>reconnect=yes</code> command to fail after a network outage. |
| THINOS-1031 | Reduced DisplayPort audio delays. |
| THINOS-1032, TIR 99052 | Resolved the issue where the mouse cursor is displayed in black and white after hardware cursor is enabled in Blast session. |
| THINOS-1171 | Resolved the issue where the mouse pointer disappears when using PCoIP. |
| THINOS-1004, THINOS-1127 | Resolved the USB device reporting issues when attaching or removing USB devices by improving the reliability. |
| THINOS-931 | Resolved the issue where the system does not wake up from sleep mode after locking it. |
| THINOS-1390 | Resolved the issue that prevents ThinOS to boot when a monitor is not connected. |
| THINOS-1053 | Resolved the issue where pink blotches or blurred text is observed in VM Blast sessions. |
| THINOS-1240 | Improved the quality of Citrix HDX microphone audio. |
| THINOS-1308 | Improved the reliability when using a Belkin Omni F1DN104D KVM. |
| THINOS-1367 | Resolved the issue where the audio could not be played on the internal speaker when multiple devices are attached to the client. |
| THINOS-1464 | Resolved the issue where, enabling wireless twice occasionally causes the firmware to stop responding. |
| THINOS-1241 | Resolved the issue that occurs when using the NEC 27Wmi4 monitor. |

INI parameters

The following table provides the list of newly added INI parameter in this release:

 **NOTE: Every INI option is associated with a corresponding INI parameter. Use these INI options along with the corresponding INI parameter.**

Table 67. INI parameters

| INI parameters | Description* |
|---|--|
| [VMWaitTimer={0-3600}] | The parameter specifies the time remaining in seconds for reconnecting to a Horizon desktop before exiting the desktop. When the connection fails while connecting to a Horizon desktop, a message <code>Horizon Error- Waiting to recover</code> is displayed along with the countdown timer. The range is 0–3600. After the count down reaches 0, the connection is canceled and you can exit to the ThinOS desktop. |
| [RemoteDisplay.allowClientH264YUV444={True, false}] | The parameter allows you to enable or disable the High Color Accuracy feature in a Blast session with H.264 enabled. |
| [EnableNewConnection={yes, no}] | The parameter enables you to create a connection for a low-privileged user. When you set the <code>PRIVILEGE</code> parameter to Low and the <code>EnableNewConnection</code> parameter to yes , an option to create a connection is enabled in the Connect Manager window. In zero mode, the Add Connection button is added along with connection properties. |

| INI parameters | Description* |
|---------------------------------|--|
| SignonStatusColor="rrr ggg bbb" | The parameter specifies the sign-on status and the unlocking status text color respectively in the RGB string format. The decimal numbers rrr, ggg, and bbb are in the range of 0—255. By default, the status text color is light red ("255 60 60") for ThinOS lite and gray for ThinOS. |

*For detailed descriptions, see the *Dell Wyse ThinOS Version 8.6 INI Reference Guide* at www.dell.com/manuals.

ThinOS 8.6_019 and ThinOS Lite 2.6_019

Release summary

Dell Wyse ThinOS software is designed to run on a broad array of Dell Wyse hardware platforms. Patch or add-on releases are created to support the existing hardware platforms, correct defects, make enhancements, or add new features. These releases are tested and supported on shipping hardware platforms.

Version

ThinOS 8.6_019 and ThinOS Lite 2.6_019

Release date

April 2019

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

Supported platforms

Table 68. Supported platforms

| Platform name | Image file name | BIOS file name |
|---|-----------------|------------------|
| Wyse 3010 thin client with ThinOS (T10) | DOVE_boot | Not applicable |
| Wyse 3010 zero client for Citrix | T00_xen.bin | Not applicable |
| Wyse 3020 thin client with ThinOS (T10D) | T10D_wnos | T10D_bios.bin |
| Wyse 3020 zero client for Citrix | T00D_xen | T10D_bios.bin |
| Wyse 3030 LT thin client with ThinOS | U10_wnos | U10_bios.bin |
| Wyse 3030 LT thin client with PCoIP | PU10_wnos | PU10_bios.bin |
| Wyse 3040 thin client with ThinOS | A10Q_wnos | A10Q_bios.bin |
| Wyse 3040 thin client with PCoIP | PA10Q_wnos | A10Q_bios.bin |
| Wyse 5010 thin client with ThinOS (D10D) | ZD10_wnos | D10G_bios.bin |
| Wyse 5010 thin client with PCoIP (D10DP) | PD10_wnos | PD10G_bios.bin |
| Wyse 5010 zero client for Citrix | ZD00_xen | ZD00_bios.bin |
| Wyse 5040 AIO thin client (5212) | ZD10_wnos | AIO10G_bios.bin |
| Wyse 5040 AIO thin client with PCoIP (5213) | PD10_wnos | PAIO10G_bios.bin |

| Platform name | Image file name | BIOS file name |
|--|-----------------|----------------|
| Wyse 5060 thin client with ThinOS | D10Q_wnos | D10Q_bios.bin |
| Wyse 5060 thin client with PColP | PD10Q_wnos | PD10Q_bios.bin |
| Wyse 5070 thin client with ThinOS | X10_wnos | X10_bios.bin |
| Wyse 5070 thin client with PColP | PX10_wnos | X10_bios.bin |
| Wyse 7010 thin client with ThinOS (Z10D) | ZD10_wnos | Z10G_bios.bin |

Packages

Table 69. Packages

| Package name | Version |
|--------------|------------|
| FR | 1.24.51190 |
| Horizon | 4.8.51817 |
| RTME | 2.7.52738 |
| TCX | 7.1.41853 |
| JVDI | 12.1.52977 |

Previous versions

- ThinOS 8.6_015 for Wyse 5040 AIO thin client and Wyse 5040 AIO thin client with PColP.
- ThinOS 8.6_013 for all ThinOS-based platforms except Wyse 5040 AIO thin client and Wyse 5040 AIO thin client with PColP.
- ThinOS 2.6_013 for all ThinOS Lite-based platforms.

New and enhanced features

Updates to ThinOS packages

- Cisco Jabber Softphone for VDI (JVDI) package is updated to version 12.1.52977.
i NOTE: The JVDI package is applicable to Wyse 3040 thin clients, Wyse 5060 thin clients, and Wyse 5070 thin clients.
- VMware Horizon package is updated to version 4.8.51817.
- Citrix RealTime Media Engine (RTME) package is updated to version 2.7.52738 to support the RTME agent 2.7.

Sleep mode in ThinOS

The sleep mode enables the power-saving state and the thin client quickly resumes full power operations without loss of data.

- The sleep mode feature is supported on the following platforms:
 - Wyse 5040 AIO thin client with ThinOS (5212)
 - Wyse 5040 AIO thin client with PColP (5213)
- The following are the UI enhancements in ThinOS to support the sleep mode feature:
 - The sleep mode option is added in the ThinOS lock window and the shutdown dialog box.
 - The sleep timer is added in the **System Preferences** dialog box.
- The following windows are not closed in sleep mode:
 - Performance Monitor
 - Troubleshooting
 - System Information
 - System Tools

- VPN Manager
- Central Configuration
- System Preferences
- Display
- Printer Set Up
- Remote Connections
- Network Set Up

NOTE: Peripherals windows are closed in sleep mode to reinitialize any peripheral devices after resuming from sleep mode.

- ThinOS VDI broker and sessions log off due to security concern. You must log in to the broker sessions after resuming from sleep mode.
- To enable the thin client to automatically enter sleep mode, set the **Turn Off Screen** as screen saver. The device automatically enters sleep mode when ThinOS is idle for 20 minutes. This is the default value. You can set the idle time in the **System Preferences** dialog box. Sleep mode timer starts after screen is turned off by screen saver.
- To manually enter sleep mode, open the ThinOS shut down menu, select the **Sleep** option and click **OK**.
- To resume from ThinOS sleep mode, do any of the following:
 - Press the power button.
 - Click the USB mouse.
 - Press any key on the USB keyboard.
 - Use the **Wake on LAN** feature to wake up from sleep mode.

Miscellaneous

- Added support for VMware Blast virtual channel on Imprivata Biometrics and Proximity devices.
- Added support for NetID.
- Added support for the OMNIKEY 5422 card reader.
- Added support for User Datagram Protocol (UDP) through TS Gateway connections.
- Added support to disable DES, 3DES or both the cipher suites for TLS clients.

Important notes

Tested environment

The following tables display the testing environment for the respective attributes:

Table 70. Tested environment - General components

| Component | Version |
|-----------------------|-----------|
| Wyse Management Suite | 1.3.0 |
| Wyse Device Manager | 5.7.3 |
| Imprivata OneSign | 5.5 |
| Caradigm | 6.3.1 |
| NetScaler | 11.1/12.0 |
| StoreFront | 3.12 |
| Web Interface | 5.4 |
| SecureMatrix | 4.1.0 |

Table 71. Tested environment - VDI components

| | Windows 7 | Windows 10 | Linux | Windows Server 2008 R2 | Windows Server 2012 R2 | Windows Server 2016 | APPs |
|---|------------|------------|------------|------------------------|------------------------|---------------------|--------|
| VMware Horizon 7.5 | Tested | Tested | Tested | Tested | Tested | Tested | Tested |
| Citrix Virtual Apps and Desktops 5.6 | Tested | Not tested | | | | | |
| Citrix Virtual Apps 6.5 | Not tested | | | Tested | Not tested | | Tested |
| Citrix Virtual Apps and Desktops 7.15 | Tested | Tested | Not tested | Tested | Tested | Tested | Tested |
| Citrix Virtual Apps 7.15 | | | | | | | |
| Tera PCM for Amazon Web Services (AWS) 1.03 | Tested* | Not tested | | | | | |
| Microsoft RDS 2012 R2 and 2016 | Tested | Tested | Not tested | | Tested | Tested | Tested |

*AWS Workspace VM Operating System **Windows 7 style** is based on 2008 R2 RDSH.

Table 72. Tested environment - Citrix Virtual Apps and Desktops

| Citrix Virtual Apps and Desktops/ Citrix Virtual Apps | Operating System | RTME | Lync client | Skype for Business (SFB) server |
|--|------------------|------|-------------------------|---------------------------------|
| 7.15 | Windows 7 | 2.7 | Skype For Business 2016 | Skype For Business 2015 |
| | Windows 8.1 | 2.7 | Skype For Business2016 | Skype For Business 2015 |
| | Windows 10 | 2.7 | Skype For Business 2016 | Skype For Business 2015 |
| | Windows 2016 | 2.7 | Skype For Business 2016 | Skype For Business 2015 |

Fixed issues

Table 73. Fixed issues

| Defect ID | Description |
|---------------------------|--|
| TIR95878/ THINOXSUS-36 | Resolved an issue where the UDP transport does not function with Terminal Server Gateway. |
| TIR97782/ THINOXSUS-38 | Resolved an issue where the last modified date file attribution is not displayed correctly when you use a USB Mass Storage device. |
| TIR98754/ THINOXSUS-17 | Resolved an issue where the Shift + ALT + F2 key combinations do not work in a Citrix session. |
| TIR96801 | Resolved a Wyse Device Manage check-in issue that resulted in prolonged delays during booting process. |
| TIR98503 | Improved the RDP performance on Wyse 5070 thin clients. |
| TIR96984 | Resolved an issue where the turn off display timer settings for power management in a Horizon PCoIP Virtual Machine do not take effect. |
| TIR97261 | Improved the stability of PCoIP. |
| TIR97559/ THINOS-800 | Upgraded SMB version 1 printer support to SMB version 2. |
| TIR97720/ THINOXSUS-12 | Improved the stability of ELO IntelliTouch display ET2201L . |
| TIR97750 | Improved audio delays observed in previous builds. |

| Defect ID | Description |
|---------------------------|---|
| TIR97890/ THINOXSUS-13 | Resolved an issue where the Incorrect Password error that is displayed when you use the user.ini configuration files with a language parameter other than US defined. |
| TIR97803 | Improved wireless roaming on Wyse 3040 thin client. |
| TIR98114 | Resolved a smart card issue where Admin CAC cards do not prompt for pin when inserted. |
| TIR98275 | Added a new \$CMAC ThinOS system variable for use with Cisco ISE 802.1x Policy Engine. |
| TIR98273 | Enhanced the DelCertificate parameter to support wildcard support. |
| TIR98445/ THINOXSUS-34 | Resolved an issue where the smart card login fails when TLS is forced to use v1.1 or v1.2. |
| TIR98195 | Resolved an ET2201L monitor issue where the Touchscreen tab in the user interface is not available to configure. |
| TIR98298 | Improved the stability of Lock Terminal. |
| TIR98197 | Resolved a server certificate check failure that is observed when multiple common names are defined in the certificate. |
| TIR98303 | Resolved an RDP Gateway connection issue that is observed when defining a custom port. |
| TIR98961/ THINOXSUS-66 | Resolved an issue where connection descriptions are incorrect when you use Japanese fonts. |
| TIR98742/ THINOXSUS-22 | Resolved an RDP connection issue that is observed when you use a wireless connection and an FQDN hostname. |
| TIR98414 | Improved the performance of the Imprivata application HA event. |
| TIR98464 | Added the ability to prompt for credentials when you attempt to connect to VPN. |
| TIR98719/ THINOXSUS-30 | Added the ability for ThinOS to connect to a Horizon View Direct Connection Plugin using a Windows XP Virtual Machine. |
| TIR98491 | Resolved an issue where the CMOS: Failed To Set Admin Password message is displayed in the ThinOS event log for successful BIOS password changes. |
| TIR98539 | Resolved an issue where the desktop autolaunch feature does not function when you use the OnDesktop=desktops parameter. |
| TIR98537 | Including the OnDesktop parameter to work in Zero Desktop or VDI mode. |
| TIR98517 | Resolved a NetScaler connection issue pertaining to Content-Length. |
| TIR98658/ THINOXSUS-11 | Resolved an issue where a blank display is observed when you switch between the IOGEAR KVM display ports. |
| TIR98878/ THINOXSUS-42 | Resolved an ALT-GR issue where the French keyboard language does not display the @ character for CTRL +ALT+0. |
| TIR98686/ THINOXSUS-5 | Resolved a Blast protocol stability issue when using the M*Modal Fluency device. |
| TIR98703 | Improved PCoIP stability when using the redirected USB camera devices. |
| TIR98962 | Improved the OpenConnect VPN workflow to search for INI file updates after a VPN connection is established. Ability to display VPN connection failure messages is also improved. |
| TIR98907 | Improved the stability of ThinOS. |
| TIR98894/ THINOXSUS-45 | Resolved an Imprivata agent issue where the grave key does not function. |
| TIR98949/ THINOXSUS-61 | Improved the stability of RDP smart card. |
| TIR98953 | Resolved a PowerMic USB redirection stability issue that resulted in device reset error messages in the event log (VUSB: device_reset error -19). |

| Defect ID | Description |
|-----------------------------|--|
| TIR99018/ THINOXSUS-52 | Resolved an issue where a failed sign-on attempt is passed twice to Active Directory during sign-on. |
| TIR98993/ THINOXSUS-50 | Improved client stability when using displays with 2K resolution. |
| TIR99003 | Added support for connecting to Citrix Workspaces using the Citrix receiver and not using Workspaces App (CWA). |
| TIR98995/ THINOXSUS-58 | Resolved an issue where the main screen changes from display 1 to display 2 when using a dual display-setup on Wyse 5040 AIO thin client. |
| TIR99042/ THINOS-780 | Resolved a ringer volume issue. |
| TIR99045/ THINOXSUS-59 | Resolved a boot stability issue that is observed when you use an Olympus RecMic DR-1200 device that is connected to a USB port. |
| TIR98445 | Resolved an issue where you cannot connect to Citrix StoreFront when using TLS 1.2 with a smart card. |
| TIR98907/ THINOS-818 | Improved stability of the operating system. |
| THINOS-754 | Resolved an issue when the operating system is idle for a long time. |
| TIR98907 | Resolved an issue with peer to peer calls functionality when you use RTME 2.4. |
| TIR98624 | Resolved display issues that are observed when you use a virtual machine PuTTY, and cmd application windows. |
| TIR98601 | Improved client stability when using smart phone connections. |
| TIR98594 | Resolved an issue where you cannot update screen during VNC. |
| TIR98598/ THINOXSUS-7 | Resolved an issue where the FullScreen=No option parameter is ignored when using RDS connections. |
| TIR98653/ THINOXSUS-6 | Resolved an issue where DP Audio is limited to DP2 when you use dual displays on Wyse 3040 thin client. |
| TIR98413 | Improved the stability of operating system. |
| TIR97970 | SecurityPolicy parameter to include options to enable or disable cipher suites. |
| TIR98750/ THINOXSUS-14 | ThinOS Classic RemoteApp RDS Focus AXAPTA—Resolved an issue where the form disappears from the screen when you click the Print icon. |
| TIR98926/ THINOXSUS-47 | Resolved an issue where Wyse Management Suite messages that are sent to ThinOS are not displayed correctly when you select the Chinese language. |
| TIR99060 | Improved the cursor display and lost frame rate when you play a video or browse a web page in a Blast session. |
| TIR99053 | Resolved an issue where the screen swap feature from left to right does not function on Wyse 3020 thin client. |
| TIR98971 | Improved the stability of the operating system when disconnecting from a Citrix session. |
| TIR98621/ THINOXSUS-53 | Resolved an issue where the USB redirection does not function when using App volumes. |
| TIR96832/ THINOS-772 | Resolved the session display issues when using Citrix Virtual Apps 6.5 and 7.15 on Wyse 5070 thin client. |
| TIR98974/ THINOS-770 | Resolved an issue where an incorrect character case is observed when you press and release both shift keys simultaneously. |
| TIR99038 | Resolved an issue where CTRL+ Pause and CTRL+ Scroll Lock cannot be distinguished in a Citrix session. |
| TIR98969 | Resolved an issue where the local clipboard is not cleared during logout. |
| THINOS-817 | Resolved an issue that is related to a smart card read failure. |
| THINOS-874, THINOS - 751 | Resolved an issue where the device restarts when you set the AutoSignOff=Yes and Shutdown=yes parameters. |

INI parameters

The following table provides the list of newly added INI parameter in this release:

NOTE: Every INI parameter is associated with a parent INI parameter. Use these INI parameters along with the corresponding parent INI parameters.

Table 74. INI parameters

| INI parameters | Description* |
|---|---|
| EnableVsync=[yes, no] | The EnableVsync parameter enables or disables the Vertical Synchronization feature. The value is not stored in NVRAM. If you deploy this parameter on unsupported devices such as Wyse 3010, 3020 and 3030 LT thin clients, the value is ignored. |
| DelCertificate={filename} | This parameter enables you to delete certificate file corresponding to AddCertificate. You can set the DelCertificate value to all, builtin, or provide a specific name. From this release, the specific file name supports wildcard variables such as \$TN.pfx, \$TN, and WT*.pfx. |
| [DriverLogLevel={1-4}] [DriverDebugLevel={1-7}] | The DriverLogLevel parameter enables you to change the debug level of Intel wireless driver or firmware printing. The following are the values and the corresponding debug levels: <ul style="list-style-type: none"> • 1—Error • 2—Warn • 3—Info • 4—Debug For example, if you set the debug level value to 1 (Error) you can get the useful error information. The DriverDebugLevel parameter specifies which information related to Intel wireless driver or firmware needs to be printed. This option is valid only with the DriverLogLevel parameter. Ensure that you specify a value for the DriverLogLevel parameter before you use this parameter. The following are the valid values: <ul style="list-style-type: none"> • #define DBGLVL1 (IWL_DL_INFO) • #define DBGLVL2 (DBGLVL1 IWL_DL_FW_ERRORS) • #define DBGLVL3 (DBGLVL2 IWL_DL_TEMP IWL_DL_POWER) • #define DBGLVL4 (DBGLVL3 IWL_DL_ASSOC IWL_DL_TE) • #define DBGLVL5 (DBGLVL4 IWL_DL_DROP IWL_DL_RADIO) • #define DBGLVL6 (DBGLVL5 IWL_DL_SCAN IWL_DL_HT) • #define DBGLVL7 (DBGLVL6 IWL_DL_MAC80211 IWL_DL_FW) |
| Sleep=[yes, no] [program=[Sleep, Power off]] [timer=[0, 1, 5, 10, 15, 30, 60, 120, 300, 600]] | The Sleep parameter enables or disables the sleep mode feature. The sleep mode enables the thin client to enter the power-saving state and quickly resumes full power operations without loss of data. The default value is yes. The program parameter specifies whether the thin client must enter the sleep mode or power off after the screen is turned off by screen saver. The default value is Sleep. The timer parameter specifies the time in minutes to either enter the sleep mode or shut down the client after the screen saver starts. The default value is 10 minutes. |
| [TLSDisableCipher={cipher_name_list}] | The TLSDisableCipher parameter confines the TLS client to stop using the listed cipher suites. |

| INI parameters | Description* |
|---|---|
| | <p>In this release, DES, 3DES or both can be disabled. For example, to disable both, use <code>TLSDisableCipher=DES;3DES</code>.</p> |
| <pre>[PlayBackEnableList={device name string}] [RecordEnableList={device name string}]</pre> | <p>The <code>PlayBackEnableList</code> and <code>RecordEnableList</code> parameters enable you to specify the list of audio devices that are mapped to an ICA session. You can separate each audio device with a comma.</p> <p>The audio device name is displayed in Event Log after you connect and disconnect the device from the terminal. If the actual device name does not match with the device in the list, the device cannot be mapped to the ICA session. Setting the value to "" results in mapping of all devices. This is similar to no INI setting.</p> <p>The terminal default device that is available in the list is set as the default device in the session. If there are no default devices in the list, the first valid device in the list is set as the default device in the session.</p> |
| <pre>[ShowAdmin={yes, no}]</pre> | <p>The <code>ShowAdmin</code> parameter enables or disables the local admin button in the ThinOS Lite login window when <code>StoreFront</code> is disabled.</p> <p>In this release, if the <code>ShowAdmin</code> parameter is set to no, and the SSPR button is enabled, the SSPR button is positioned in the place of the admin button.</p> |
| <pre>[EnableReplay={yes, no}]</pre> | <p>The <code>EnableReplay</code> parameter enables or disables the audio tab in the Troubleshooting window. You can replay pcap files of the UDP audio.</p> |
| <pre>SetNetIDLicense={yes, no} [Name=License name] [Company=License company] [Value=License value] [trace=NetID driver log path and name]</pre> | <p>The <code>SetNetIDLicense</code> parameter enables or disables the usage of SecMaker NetID smart card pkcs11 drivers.</p> <p>The parameters <code>Name</code>, <code>Company</code>, and <code>Value</code> specify the license name, license company, and the license value respectively.</p> <p>The <code>trace</code> parameter enables you to set the driver log path and file name. For example, <code>trace=/tmp/secmaker.log</code>.</p> |
| <pre>[SCHidePINLeft={yes, no}]</pre> | <p>The <code>SCHidePINLeft</code> parameter enables you to hide or display the number of attempts remaining to enter a correct PIN for the smart card. The default value is no.</p> |
| <pre>[PowerSaveControl={0, 1}] [RSSIAmend={}]</pre> | <p>The <code>PowerSaveControl</code> parameter enables or disables power saving for Intel wireless chips. The default value is 0. This parameter is applicable to Wyse 5060 thin client. When you enable the wireless powersave feature on the Wyse 5060 thin client, the wireless stops functioning occasionally. To resolve this issue, disable the powersave feature using the <code>PowerSaveControl</code> parameter.</p> <p>The <code>RSSIAmend</code> parameter enables you to manually modify the value of wireless RSSI. This parameter is applicable to Wyse 5070 thin client. <code>RSSIAmend=5</code> means that the signal level is increased, and <code>RSSIAmend=-5</code> means that the signal level is decreased.</p> |
| <pre>SmbVersionRange={version_range}</pre> | <p>The <code>SmbVersionRange</code> parameter controls the SMB protocol version that is used in SMB printer communication. The client only uses the SMB version that is specified in <code>version_range</code>.</p> <p>The format of <code>version_range</code> is <code>lowest_version, highest_version</code>. LM2 stands for LAN manager 2, SMB1 for SMB version 1, and SMB2 for SMB version 2. For example, <code>SmbVersionRange=SMB2, SMB2</code> means only SMB version 2 is allowed; <code>SmbVersionRange=, SMB2</code> means SMB version 2 and all the supported lower versions can be used. Default version range is set by <code>SmbVersionRange=, SMB1</code>. By default, SMB2 is not supported.</p> |

*For detailed descriptions, see the *Dell Wyse ThinOS Version 8.6 INI Reference Guide* at www.dell.com/support.

ThinOS 8.6_015

Release summary

Dell Wyse ThinOS software is designed to run on a broad array of Dell Wyse hardware platforms. Patch or add-on releases are created to support the existing hardware platforms, correct defects, make enhancements, or add new features. These releases are tested and supported on shipping hardware platforms.

Version

ThinOS 8.6_015

Release date

March 2019

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

Supported platforms

The following table lists the supported hardware platforms:

Table 75. Supported platforms

| Platform | Image file name | BIOS file name |
|---|-----------------|------------------|
| Wyse 5040 AIO Thin Client (5212) | ZD10_wnos | AIO10G_bios_bin |
| Wyse 5040 AIO Thin Client with PCoIP (5213) | PD10_wnos | PAIO10G_bios_bin |

Previous versions

ThinOS 8.6_013

Packages

The following table lists the packages:

Table 76. Packages

| Package name | Version |
|--------------|------------|
| FR | 1.24.51190 |
| Horizon | 4.8.51816 |

| Package name | Version |
|--------------|-----------|
| RTME | 2.5.49272 |
| TCX | 7.1.41853 |

New and enhanced features

Sleep mode in ThinOS

The sleep mode enables the power-saving state and the thin client quickly resumes full power operations without loss of data.

- The following UI enhancements are made in ThinOS to support the sleep mode feature:
 - The sleep mode option is added in the ThinOS lock window and the shut down dialog box.
 - The sleep timer is added in the **System Preferences** dialog box.
- The following ThinOS native windows are not closed in sleep mode:
 - Performance Monitor
 - Troubleshooting
 - System Information
 - System Tools
 - VPN Manager
 - Central Configuration
 - System Preferences
 - Display
 - Printer Set Up
 - Remote Connections
 - Network Set Up

NOTE: Peripherals windows are closed in sleep mode to re-initialize any peripheral devices after resuming from sleep mode.

- ThinOS VDI broker and sessions log off due to security concern. You must log in to the broker sessions after resuming from sleep mode.
- To enable the thin client to automatically enter sleep mode, set the **Turn Off Screen** as screen saver. The device automatically enters sleep mode when ThinOS is idle for 20 minutes. This is the default value. You can set the idle time in the **System Preferences** dialog box. Sleep mode timer starts after screen is turned off by screen saver.
- To manually enter sleep mode, open the ThinOS shut down menu, select the **Sleep** option and click **OK**.
- To resume from ThinOS sleep mode:
 1. Press the power button.
 2. Click the USB mouse.
 3. Press any key on the USB keyboard.
 4. Use the **Wake on LAN** feature to wake up from sleep mode.

Important notes

- The USB interface is closed in sleep mode. All USB devices such as USB drives, Bluetooth, audio devices, video devices, and camera are reinitialized after resuming from sleep mode.
- The wired network, wireless network, and VPN are disconnected in sleep mode. However, the network configurations are saved.
- Display functionality is not affected in sleep mode.
- CPU/GPU enters into suspend mode and consumes less power.
- All the ThinOS configurations—file server, INI, VDI configuration, network configuration, and so on—are saved automatically in sleep mode. The INI parameters are not reloaded from the file server after resuming from sleep mode.

ThinOS 8.6_013

Release scope

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

Release type and definition

This release note contains information about the new features, supported platforms, and tested environment for ThinOS version 8.6.

Supported platform

The following table provides the list of supported platforms in this release:

Table 77. Platform and build information

| Platform | ThinOS | ThinOS with PCoIP |
|---------------------------|-----------|-------------------|
| Wyse 3040 thin client | A10Q_wnos | PA10Q_wnos |
| Wyse 5060 thin client | D10Q_wnos | PD10Q_wnos |
| Wyse 5010 thin client | ZD10_wnos | PD10_wnos |
| Wyse 7010 thin client | ZD10_wnos | Not available |
| Wyse 5040 AIO thin client | ZD10_wnos | PD10_wnos |
| Wyse 3030 LT thin client | U10_wnos | PU10_wnos |
| Wyse 3020 thin client | T10D_wnos | Not available |
| Wyse 3010 thin client | DOVE_boot | Not available |
| Wyse 5070 thin client | X10_wnos | PX10_wnos |

BIOS information

The following table provides the list of latest BIOS available with this release:

Table 78. BIOS information

| Platform | BIOS version |
|--------------------------|-----------------|
| Wyse 3010 thin client | EC 3.02 |
| Wyse 3020 thin client | wloader 7.1_216 |
| Wyse 5010 thin client | 3.0U |
| Wyse 5040 thin client | 3.0U |
| Wyse 5060 thin client | 1.0H |
| Wyse 3030 LT thin client | 1.0G |

| Platform | BIOS version |
|-----------------------|--------------|
| Wyse 3040 thin client | 1.2.5 |
| Wyse 7010 thin client | 3.0U |
| Wyse 5070 thin client | 1.1.3 |

Packages

The following table provides the list of the packages that are included in ThinOS version 8.6 release:

NOTE: Dell recommends that you use these packages along with the released ThinOS firmware.

Table 79. Packages

| Package name | Version |
|------------------|------------|
| FR.i386.pkg | 1.24.51190 |
| JVDI.i386.pkg | 12.1.51895 |
| horizon.i386.pkg | 4.8.51816 |
| RTME.i386.pkg | 2.5.49272 |
| TCX.i386.pkg | 7.1.41853 |

NOTE: JVDI package is introduced from ThinOS version 8.6 to support Cisco Jabber. When you download the JVDI.zip package, the README WITH EULA.txt and JVDI.i386.pkg files are unzipped. Ensure that you open the readme file and read the EULA agreement. For more information about installing the JVDI package on ThinOS, see the *Dell Wyse ThinOS Version 8.6 Administrator's Guide* at www.dell.com/support.

Feature support matrix

The following table provides the list of new features that are supported on each platform:

Table 80. Feature support matrix

| Feature | Wyse 3010 thin client | Wyse 3020 thin client | Wyse 5010 thin client | Wyse 5040 thin client | Wyse 7010 thin client | Wyse 3030 LT thin client | Wyse 3040 thin client | Wyse 5060 thin client | Wyse 5070 thin client |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------------------------|-----------------------|-----------------------|-----------------------|
| Cisco Jabber Softphone for VDI | Not supported | Not supported | Not supported | Not supported | Not supported | Not supported | Limited support* | Limited support* | Limited support* |
| Update RTME Package to version 2.5 | Not supported | Not supported | Limited support* | Limited support* | Limited support* | Limited support* | Limited support* | Limited support* | Limited support* |
| VMware Horizon Virtualization Pack for Skype for Business | Not supported | Not supported | Limited support* | Limited support* | Limited support* | Limited support* | Limited support* | Limited support* | Limited support* |
| Upgrade Horizon package to version 4.8 | Not supported | Not supported | Limited support* | Limited support* | Limited support* | Limited support* | Limited support* | Limited support* | Limited support* |
| Multiple logins with Citrix and VMware Horizon | Supported | Supported | Supported | Supported | Supported | Supported | Supported | Supported | Supported |

| Feature | Wyse 3010 thin client | Wyse 3020 thin client | Wyse 5010 thin client | Wyse 5040 thin client | Wyse 7010 thin client | Wyse 3030 LT thin client | Wyse 3040 thin client | Wyse 5060 thin client | Wyse 5070 thin client |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------------------------|-----------------------|-----------------------|-----------------------|
| BIOS update | Not supported | Not supported | Supported | Supported | Supported | Supported | Supported | Supported | Supported |
| Export and restore BIOS settings | Not supported | Not supported | Supported | Supported | Supported | Supported | Supported | Supported | Supported |
| Package check | Not supported | Not supported | Supported | Supported | Supported | Supported | Supported | Supported | Supported |
| Telnet | Supported | Supported | Supported | Supported | Supported | Supported | Supported | Supported | Supported |
| Report locally attached devices to Wyse Device Manager | Supported | Supported | Supported | Supported | Supported | Supported | Supported | Supported | Supported |
| Vertical Synchronization | Not supported | Not supported | Supported | Supported | Supported | Not supported | Supported | Supported | Supported |
| PCoIP connections using Teradici Remote Workstation card | Not supported | Not supported | Limited support* | Limited support* | Limited support* | Limited support* | Limited support* | Limited support* | Limited support* |
| Okta integration through Citrix NetScaler | Supported | Supported | Supported | Supported | Supported | Supported | Supported | Supported | Supported |
| Display selection when launching RDP connection in full screen | Supported | Supported | Supported | Supported | Supported | Supported | Supported | Supported | Supported |
| Desktop scaling factor for RDP connection | Supported | Supported | Supported | Supported | Supported | Supported | Supported | Supported | Supported |
| Icon folders for StoreFront interface | Supported | Supported | Supported | Supported | Supported | Supported | Supported | Supported | Supported |
| Caradigm Way2Care enhancement | Supported | Supported | Supported | Supported | Supported | Supported | Supported | Supported | Supported |
| Wireless IP configuration | Supported | Supported | Supported | Supported | Supported | Supported | Supported | Supported | Supported |
| By default, DP audio is disabled (Factory default settings) | Not supported | Not supported | Not supported | Not supported | Not supported | Not supported | Supported | Not supported | Not supported |
| Changes to monitor priority on Wyse 5070 Extended thin client | Not supported | Not supported | Not supported | Not supported | Not supported | Not supported | Not supported | Not supported | Supported |

| Feature | Wyse 3010 thin client | Wyse 3020 thin client | Wyse 5010 thin client | Wyse 5040 thin client | Wyse 7010 thin client | Wyse 3030 LT thin client | Wyse 3040 thin client | Wyse 5060 thin client | Wyse 5070 thin client |
|--------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------------------------|-----------------------|-----------------------|-----------------------|
| Display GUI update | Supported | Supported | Not supported | Not supported | Not supported | Not supported | Not supported | Not supported | Supported |

* Only certain features are supported.

Citrix Receiver feature matrix

Table 81. Citrix Receiver feature matrix

| | Features | Operating System—ThinOS |
|----------------|--|------------------------------|
| Content | XenApp Applications | Supported |
| | XenDesktop Desktops | Supported |
| | Follow Me Apps/Subscriptions | Supported |
| | Offline Apps (App V) | Not applicable |
| | File Open In Receiver | Not applicable |
| | Desktop Viewer/Toolbar | Not supported |
| | Multitasking | Supported |
| | Follow Me Sessions (Workspace Control) | Supported |
| | URL Redirection | Not supported |
| HDX | Audio Playback | Supported |
| | UDP Audio | Supported |
| | Bidirectional Audio (VoIP) | Supported |
| | Web Cam (Video Chat) | Supported |
| | Video Playback | Supported |
| | Flash Redirection | Supported (x86 only) |
| | Skype for business Optimization pack | Supported (x86 only) |
| | Cisco Jabber Unified Communications Optimization | Supported (x86 only) |
| | Windows Multimedia Redirection | Supported |
| | Local Printing | Supported |
| | H.264-enhanced SuperCodec | Supported |
| | Adaptive Transport | Limited support ¹ |
| | Framehawk | Not supported |
| | Client hardware acceleration | Limited support |
| | Desktop Composition redirection | Not supported |
| | 3DPro Graphics | Supported |
| | Remote FX | Not supported |
| | Location-Based Services | Not supported |
| | Client drive mapping/File Transfer* | Supported |
| | Generic USB redirection | Supported |

| | Features | Operating System—ThinOS |
|-----------------------------------|--|--------------------------------|
| | SDWAN Support | Verification needed |
| | Local App Access | Not applicable |
| | Multi-touch | Not supported |
| | Mobility Pack | Not applicable |
| | HDX Insight | Supported |
| | Experience Metrics | Supported |
| | External Monitor | Supported |
| | True Multi Monitor | Supported |
| | Session Sharing | Supported |
| | Session Reliability | Supported |
| | Auto Client reconnect | Supported |
| | Multi-port ICA | Supported |
| Security and communication | Receiver for Web Access | Not applicable |
| | Remote Access via NetScaler Gateway | Supported |
| | NetScaler Full VPN | Supported |
| | RSA Soft Token | Supported |
| | Challenge Response SMS | Supported |
| | User Cert Auth via NetScaler Gateway | Supported |
| | Smart Card (CAC, PIV and so on) | Supported |
| | Proximity/Contact less Card (Fast Connect) | Supported |
| | Pass Through Authentication | Supported |
| | SAN Cert | Verification needed |
| | SHA2 Certs | Supported |
| | TLS 1.1/1.2 | Supported |
| | AES and 3DES Encryption | Supported |
| | Smart Access | Supported |
| IPv6 | Supported | |
| Updates | Auto Discovery/Configuration | Not supported |
| | App Store Updates/Citrix updates | Not supported |

*File transfer feature applies to HTML5/Chrome Receiver only.

¹Adaptive transport is a data transport mechanism for Citrix Virtual Apps and Desktops. This mechanism enables the underlying protocol to switch between the Citrix protocol called Enlightened Data Transport (EDT) and Transmission Control Protocol (TCP) for better performance. EDT is added on top of UDP and enhances the data throughput for all ICA virtual channels. ThinOS supports adaptive transport using Transmission Control Protocol (TCP), and does not support adaptive transport through User Datagram Protocol (UDP) except the audio channel. For more information about Adaptive transport, see docs.citrix.com/en-us/citrix-virtual-apps-desktops/technical-overview/hdx/adaptive-transport.html.

For more information about Citrix Receiver features, see the Citrix documentation at www.citrix.com.

VMware Horizon feature matrix

Table 82. VMware Horizon feature matrix

| | Client type | Operating System—ThinOS |
|---|---|-------------------------|
| Client appearance and workflow | Customer branding | Not supported |
| | Kiosk mode | Supported* |
| | Localization (EN, FR, DE, JP, CH, KR, SP) | Supported* |
| Broker connectivity | XML - API Version | 14 |
| | SSL, SSL Certificate Verification | Supported* |
| | Disclaimer Dialog | Supported* |
| | Security Server compatibility | Supported* |
| | Multi Broker/Multi Site Redirection -DaaS | Not supported |
| | Client Information | Supported* |
| | Phonehome | Not applicable |
| | USB Phonehome | Not applicable |
| Broker authentication | Password authentication and password change | Supported* |
| | RSA authentication | Supported* |
| | Radius | Supported* |
| | Integrated RSA SecurID token generator | Supported* |
| | Log in as current user, Nested log in as current user | Not supported |
| | Biometric authentication | Not supported |
| | Unauthentication access | Supported* |
| Smart card | x.509 certificate authentication | Supported* |
| | CAC support and .Net support | Supported* |
| | PIV support | Supported* |
| | Derived credentials | Not supported |
| Desktop operations | Reset and Restart | Supported* |
| | Log out | Supported* |
| Session authentication | Smart card | Supported* |
| | Single Sign-On | Supported* |
| Session management (Blast Extreme and PCoIP) | Switch desktops | Supported* |
| | Auto-retry | Supported* |
| | Full screen mode, Full screen toolbar | Supported* |
| | Window mode | Supported* |
| | Time zone synchronization | Supported* |
| | Jumplist integration (Windows 7-Windows 10) | Not supported |
| Client customization | Command-Line options | Not supported |
| | URI schema | Not supported |
| | Preference file | Not supported |

| | Client type | Operating System—ThinOS |
|--|---|--------------------------------|
| | Non Interactive Mode | Not supported |
| | GPO-based customization | Not supported |
| Protocols | Blast Extreme | Supported* |
| | Blast H.264 -HW decode | Supported* |
| | Blast JPEG / PNG | Supported* |
| | Blast Extreme adaptive transportation | Supported* |
| | RDP 6.x and RDP 7.x | Supported* |
| | RDP 8.x and 10.x | Supported* |
| | PCoIP | Teadici is supported |
| Protocol enhancements | RDP—VC Bridge | Supported* |
| | Session Enhancement SDK | Not supported |
| Monitors/displays | Dynamic display resizing | Supported* |
| | Multiple monitor support and multiple monitor selection | Supported* |
| | External monitor support | Not applicable |
| | Display pivot | Supported* |
| | Multiple aspect ratio support | Supported* |
| | Number of displays supported | 4 |
| | Maximum resolution | 3840x2160 |
| | Video out | Supported* |
| | High DPI scaling and DPI Sync | Supported* |
| | Exclusive mode | Not supported |
| Input device—keyboard/ mouse | Relative mouse | Not supported |
| | Local buffer text input box | Not supported |
| | Keyboard mapping | Supported* |
| | Unicode keyboard support | Not supported |
| | International keyboard support | Supported* |
| | Input method local/remote switching | Not supported |
| | IME Sync | Not supported |
| Clipboard services | Clipboard text | Supported* |
| | Clipboard graphics | Not supported |
| | Clipboard memory size configuration | Not supported |
| Client caching | View Agent to Client—side caching | Not supported |
| Connection management | Blast network recovery | Supported* |
| | IPv6 support | Supported in Blast session |
| | PCoIP IP roaming | Supported* |
| High-level device redirection | Serial (COM) port redirection | Not supported |
| | Client Drive redirection/File transfer | Supported* |
| | Scanner (TWAIN/WIA) Redirection | Not supported |

| | Client type | Operating System—ThinOS |
|-------------------------------|--|----------------------------|
| | x.509 Certificate (Smart card) | Supported* |
| Real-time Audio-Video | Real-time Audio-Video | Supported* |
| USB Redirection | Generic USB/HID | Supported* |
| Unified communications | Cisco UC Jabber | Not supported |
| | Avaya UC One-X Desktop | Not supported |
| | Microsoft Lync 2013 | Not supported |
| | Skype for business | Supported in Blast session |
| Multimedia | Multimedia Redirection (MMR) | Not supported |
| | Flash URL Redirection (Unicast/Multicast) | Not supported |
| | Flash Redirection | Not supported |
| Graphics | vDGA, vSGA, Intel vDGA, AMD vGPU | Supported in VDI session |
| | NVIDIA GRID vGPU | Supported* |
| Printing | Printer Redirection, Location Based Printing | Supported in Blast session |
| Security | FIPS-140-2 mode support | Not applicable |
| | Imprivata Integration | Supported* |
| | TLS 1.0, TLS 1.1, TLS 1.2 | Supported* |
| | Client Device Authentication | Not supported |

*Supported with VDI, RDS Hosted Desktops and applications.

For more information about VMware Horizon features, see the VMware Horizon documentation at www.vmware.com.

Important notes

This section contains information about firmware upgrade and system configuration that you need to know before using ThinOS version 8.6.

Firmware upgrade and downgrade

- On Wyse 5070 Extended thin client, the AMD firmware is upgraded to a newer version. If you want to downgrade ThinOS from 8.6 to 8.5.1, you must shut down and boot the thin client again. If you do not shut down and reboot, a black screen is displayed on the monitor that is connected to the AMD GPU port. Also, the AMD DP port sequence is updated.
- On Wyse 5070 thin clients, the Bluetooth firmware is upgraded to a newer version from ThinOS 8.5_108. If you want to update the thin client with the Bluetooth module from ThinOS version 8.5_107 to 8.5_108 or later, Dell recommends that you disconnect the power cable and connect the power cable again before you reboot.
- ThinOS 8.6 stores the installed packages (except base and pcoip) in the hidden partition. When you downgrade ThinOS firmware to previous versions, and upgrade the firmware to 8.6 again, the ThinOS device reinstalls the stored packages from the hidden partition. You can delete the package to clean the backup data from the device.
- When you use a file server to update BIOS for Wyse 5060 and 3030 LT thin clients, the BIOS update progress bar disappears after the BIOS update process is complete, and the system reboots after one minute. You must not manually reboot the thin client. During reboot, a black screen is displayed for one minute, and then the device resumes the BIOS update.
- From ThinOS version 8.6, the 16-bit desktop color option is removed from Wyse 3010 and 3020 thin clients.
- From ThinOS version 8.6, the Merlin images include both RTME and Horizon packages.
- From ThinOS version 8.6, the DP audio is disabled by default on Wyse 3040 thin client.
- You must install the JVDI package to use Cisco Jabber.
- If you push Merlin images on Wyse 5010, 5040, and 7010 thin clients with 4 GB or higher flash size, the RTME and Horizon packages are formatted.

System configuration and deployment

- USB redirection must be disabled for audio and video devices to use RTME/RTAV/SFB/JVDI. By default, the USB redirection is disabled on ThinOS. Dell recommends that you do not modify the default settings unless you need the USB redirection for audio and video devices.
- ThinOS BIOS policy can be configured using Wyse Management Suite Console, Wyse Management Suite group INI, Wyse Management Suite advanced settings and FTP INI. Dell recommends that you use any one of the methods to configure the BIOS policy. Setting the BIOS policy simultaneously using different methods may cause a policy mismatch, and the device reboots repeatedly. This reboot loop issue is observed when you select the **reboot immediately** option in the **BIOS policy** settings section on the Wyse Management Suite console.
- All the installed packages are deleted when you update the ThinOS image version between major releases—8.5 or 8.5.1 to 8.6—using FTP, WDM, or Wyse Management Suite.

Solution for updating firmware using FTP and WDM—Ensure that you have set the PKG install parameters in the WNOS.ini, and the pkg files are uploaded in the directory. After the device reboot, the packages are re-installed automatically.

Solution for updating firmware using Wyse Management Suite—Wyse Management Suite App policy works only once after the policy is created. The deleted package cannot be reinstalled using the same policy. Dell recommends that you create a new App policy to install the package after the firmware update is complete.

- WDM vulnerability is fixed in this release. You must configure either the DHCP or the DNS option/record of the WDM server fingerprint to automatically fetch and validate the fingerprint before checking in to the WDM server. However, there is no impact to the ThinOS device functionality if you do not to configure the fingerprint validation environment. For more information about how to set up fingerprint using WDM, see the Frequently asked questions section in the *Dell Wyse ThinOS Version 8.6 Administrator's Guide* at www.dell.com/support.

New and enhanced features

Cisco Jabber Softphone for VDI

Cisco Jabber Softphone for VDI (JVVDI) is the Unified Communications solution that is offered by Cisco for virtual deployments. It supports audio-video conferencing, and instant messaging on the hosted virtual desktops (HVD). The Cisco Jabber Softphone for VDI software offloads the audio or video processing from the virtual desktop servers to the thin client. All audio and video signals are routed directly between the endpoints without entering the HVD.

Cisco Jabber Softphone for VDI enables you to make and receive calls using the Cisco Unified Communications application. Cisco Jabber Softphone for VDI consists of the following two components:

- Cisco JVVDI Agent
- Cisco JVVDI Client

Cisco JVVDI Agent is the JVVDI connector that runs on the Citrix desktop or server. Cisco JVVDI client is the JVVDI package that runs on the thin client. The Jabber client that runs on the Citrix server handles the authentication and the media processing is achieved on the thin client.

Table 83. Supported matrix

| Component | Supported platforms/supported versions |
|--|---|
| Thin client | <ul style="list-style-type: none"> • Wyse 5070 thin client • Wyse 5060 thin client • Wyse 3040 thin client |
| Connection broker for the hosted virtual desktops | <ul style="list-style-type: none"> • Citrix Virtual Apps and Desktops (formerly XenDesktop) 7.x and later • Citrix Virtual Apps (formerly XenApp) 7.x and later |
| Cisco Jabber application on the hosted virtual desktop | Cisco Jabber 12.1.0.16460 |
| Cisco JVVDI agent on the hosted virtual desktop | Cisco JVVDI Agent 12.1.0.266460 |
| Cisco JVVDI client on the thin client | JVVDI.i386.pkg |

The following table provides the data statistics for the platforms that are running JVVDI with 720p resolution:

Table 84. Performance data statistics

| Platform | XenDesktop | VDI | Video call resolution | FPS | Client CPU average usage—default window mode video call | Client CPU average usage—fullscreen video call |
|-----------------------|------------|---------------------|-----------------------|-----|---|--|
| Wyse 5070 thin client | 7.15 LTSR | Windows 10 (64-bit) | 1280 x 720p | 30 | 34-46% | 75-80% |
| Wyse 5060 thin client | 7.15 LTSR | Windows 10 (64-bit) | 1280 x 720p | 30 | 65-70% | 83-88% |
| Wyse 3040 thin client | 7.15 LTSR | Windows 10 (64-bit) | 1280 x 720p | 30 | 84-90% | 98-100% |

The following table provides the data statistics for the platforms that are running JVDI with 360p resolution:

NOTE: Dell recommends that you reduce the video resolution to 640 x 360p with 30fps on the Wyse 3040 thin client.

Table 85. Performance data statistics

| Platform | XenDesktop | VDI | Video call resolution | FPS | Client CPU average usage—default window mode video call | Client CPU average usage—fullscreen video call |
|-----------------------|------------|---------------------|-----------------------|-----|---|--|
| Wyse 5070 thin client | 7.15 LTSR | Windows 10 (64-bit) | 640 x 360p | 30 | 21-28% | 64-76% |
| Wyse 5060 thin client | 7.15 LTSR | Windows 10 (64-bit) | 640 x 360p | 30 | 38-50% | 72-79% |
| Wyse 3040 thin client | 7.15 LTSR | Windows 10 (64-bit) | 640 x 360p | 30 | 56-61% | 89-95% |

Limitations

- JVDI package cannot be installed on Dell Wyse 3030 LT, 5040, 5010, and 7010 thin clients.
- Dell Wyse 3040 thin client supports video call up to 360p. The video call with 720p is not supported due to high CPU cost with multimedia playback simultaneously. Dell recommends that you restrict the video up to 360p in the server settings.
- You cannot use the headset key to pick/end calls. This issue will be resolved in next release.
- Dell does not recommend video call in 4K display resolution on all platforms due to low performance.
- JVDI version in ThinOS 8.6 must be compatible with JVDI agent and Jabber version. For example, JVDI version 12.1 in ThinOS 8.6 supports JVDI agent and Jabber version 12.1.
- Audio output is poor when you enable the JVDI audio during the full screen video call on Wyse 5060 and 3040 thin clients. This is due to hardware performance limitation. Wyse 5070 thin client supports full screen video call with good audio output.

NOTE: JVDI package is introduced from ThinOS version 8.6 to support Cisco Jabber. You must download the JVDI package from the Driver and Downloads tab on your respective thin clients page at www.dell.com/support. When you download the JVDI.zip package, the README WITH EULA.txt and JVDI.i386.pkg files are unzipped. Ensure that you open the readme file and read the EULA agreement before you deploy the package to the ThinOS client.

For more information about Cisco Jabber Softphone for VDI installation procedure, see the *Dell Wyse ThinOS Version 8.6 Administrator's Guide* at www.dell.com/support.

NOTE:

- For more details about accessories for camera, headsets, speakers, see www.cisco.com/c/en/us/products/unified-communications/uc_endpoints_accessories.html.
- For more information about the Cisco Jabber issues, see the *Release notes for Cisco Jabber Softphone for VDI* at www.cisco.com.
- For information about troubleshooting your Cisco Jabber, see the *Deployment and Installation Guide for Cisco Jabber Softphone for VDI* at www.cisco.com.

Table 86. Known issues

| Issue number | Description | Workaround |
|-------------------|---|---|
| TIR97286 | JVDI audio volume slider does not change the audio volume in Wyse 3040 thin client. This issue is due to Cisco Jabber limitation. For more information about the Cisco Jabber issues, see the <i>Release Notes for Cisco Jabber Softphone for VDI—Release 12.1</i> document at www.cisco.com . | Adjust audio volume by using either the ThinOS volume bar, session sound volume, or headset button. |
| TIR97605/TIR98498 | Self-camera or remote video does not work, or a black screen is displayed when you play a video. For more information about the Cisco Jabber issues, see the <i>Release Notes for Cisco Jabber Softphone for VDI—Release 12.1</i> document at www.cisco.com . | Sign out of the session or reboot the ThinOS client and register the JVDI again. |
| TIR97653 | ICA session cannot be launched and WdReceiv: trap 14 error occurs when you enable the ICA session reliability with multiport in JVDI environment. | Enable ICA session reliability without enabling multiport in JVDI environment. |
| TIR97523 | Answer/End/Hold options in headset do not work during the JVDI call. | You can Answer/End/Hold the call by using the Jabber application in the VDI session. |
| TIR98792 | DP audio does not work in JVDI. When you switch the DP audio in the JVDI device selector, the JVDI may re-register again and a redundant DP audio is listed in device selector. JVDI VXC process should not restart when you hotplug or turn off/on the monitor when using the DP audio in JVDI. | Sign out of the ICA session or reboot the ThinOS client. If you require DP audio, Dell recommends that you first set the DP audio in the ThinOS client and then launch the ICA session. |

Update RTME package to 2.5

RTME package—RTME.i386.pkg—is updated to version 2.5.49272. For information about installation and compatibility, see the Citrix RTOP version 2.5 documentation at www.citrix.com/support.

Limitation—ThinOS RTME package update does not support hardware acceleration. For more information, see docs.citrix.com/en-us/hdx-optimization/current-release.

Upgrade Horizon package to version 4.8

In ThinOS version 8.6, you can upgrade the thin client from Horizon version 4.6 to 4.8. VMware Horizon Virtualization Pack for Skype for Business is supported from this release onwards.

Horizon Client version 4.8 and Agent version 7.5 Virtualization Pack for Skype for Business are not compatible with older Horizon Client and Agent releases. If you use Horizon Client 4.8 or later and Horizon Agent 7.5 and later with older Client and Agent releases, then the fallback mode will be enabled on Skype for Business calls. For more information about the Compatibility of Horizon Virtualization Pack for SFB Components, see kb.vmware.com/s/article/54773.

NOTE:

- **If you are upgrading your previous ThinOS client version to 8.6, you must ensure that the Horizon server or agent version is updated to support the Horizon client version 4.8. For information about interoperability matrices for client and server/agent version compatibility, see https://www.vmware.com/resources/compatibility/sim/interop_matrix.**
- **ThinOS supports the hardware cursor in the VMware Blast session. By default, the hardware cursor is disabled. You must use the INI parameter to enable the hardware cursor. For more information about enabling the hardware cursor using the INI parameter, see the *Dell Wyse ThinOS Version 8.6 INI Reference Guide* at www.dell.com/support.**

Limitations

- ThinOS supports up to four 4K displays with limited performance in the Horizon Blast session. Due to low performance, Dell does not recommend using four displays with 4K resolution when H264 is enabled.

- Vertical Synchronization does not work in Blast session with four 4K resolution.
- Video performance is low when you play a video in Blast session with 4K resolution.
- ThinOS supports audio device USB redirection. However, Dell does not recommend using audio device USB direction due to low audio quality.

VMware Horizon Virtualization Pack for Skype for Business

The VMware Horizon Virtualization Pack for Skype for Business enables you to use Skype for Business in a VMware Horizon desktop. Microsoft Skype for Business is a unified communications platform that delivers an optimized user experience for online messaging, audio, and video calling and so on.

ThinOS supports VMware Horizon Virtualization Pack for Skype for Business in a Blast session. PCoIP and RDP protocols do not support this feature.

NOTE:

- For information about configuring Skype for Business, and Optimized and fallback modes in Skype for Business, see the *Dell Wyse ThinOS Version 8.6 Administrator's Guide* at www.dell.com/support.
- For information about the Horizon Agent installation, see the *Setting Up Virtual Desktops in Horizon 7* document at docs.vmware.com.


 **NOTE:** Horizon Client 4.8 or later and Horizon Agent 7.5 and later are not compatible with older Client and Agent releases. Due to this limitation, when you use the Horizon Client 4.8 and Horizon Agent 7.5 with older client and agent releases, Skype for Business calls run in fallback mode and calls are not optimized. Ensure that you review the compatibility matrix of Horizon Virtualization Pack for SFB components at kb.vmware.com/s/article/54773.

Table 87. Functionality matrix

| Features | Support |
|--|-----------------------------------|
| P2P audio and video calls | Yes |
| Conference call | Yes |
| VDI desktop | Yes |
| Presence/IM | Yes |
| RDSH desktop/application | Yes |
| Call park and pickup | Yes |
| Call delegation | Yes |
| Voicemail on Outlook | Yes |
| PSTN | No |
| Mute/unmute | Yes |
| SFB call fallback mode | Yes |
| Call-transfer and call forward | Yes |
| Integration with Outlook, PowerPoint, Word, Yammer, and SharePoint | Yes—only PowerPoint is validated. |
| Multiple monitors | Yes |
| Do not disturb | Yes |

The following table provides the data statistics for Skype for Business performance that is based on 1920 x 1080 display resolution with Logitech 930 Webcam:

 **NOTE:** Performance results may vary with different monitor resolutions and webcams.

Table 88. Performance data statistics

| Platform | VDI | Video call resolution | FPS | Client CPU average usage—default window mode video call | Client CPU average usage—full screen video call |
|--------------------------|---------------------|-----------------------|-------|---|---|
| Wyse 5070 thin client | Windows 10 (64-bit) | 1280 x 720p | 30 | 10-14% | 24-30% |
| Wyse 5060 thin client | Windows 10 (64-bit) | 1280 x 720p | 30 | 28-37% | 63-68% |
| Wyse 3040 thin client | Windows 10 (64-bit) | 1280 x 720p | 30 | 30-40% | 38-55% |
| Wyse 3030 LT thin client | Windows 10 (64-bit) | 1280 x 720p | 30 | 31-40% | 64-75% |
| Wyse 5010 thin client | Windows 10 (64-bit) | 1280 x 720p | 30 | 55-65% | 94-98% |
| Wyse 5040 thin client | Windows 10 (64-bit) | 480 x 268p | 15 | 45-63% | 96-100% |
| Wyse 7010 thin client | Windows 10 (64-bit) | 1280 x 720p | 20-23 | 40-50% | 68-80% |

ThinOS uses VMware binary. For information about the Skype for Business limitations, see docs.vmware.com/en/VMware-Horizon-7/7.5/horizon-remote-desktop-features.

Table 89. Known issues

| Issue number | Description | Workaround |
|--------------|---|--|
| TIR97683 | If the Blast session resolution is higher than 1920 x 1080 during SFB calls with full screen, the mouse stops responding. | Do not use full screen during SFB calls in the blast session with resolution greater than or equal to 2560 x 1440. |
| TIR97223 | On Wyse 5010, 5040, and 7010 thin clients, the performance is low during the Horizon SFB video call. | Do not use Horizon SFB video call on Wyse 5010, 5040, and 7010 thin clients. |
| TIR98356 | You cannot use the headset key to pick/end calls in Blast SFB and JVDI. | There is no workaround in this release. This issue will be fixed in next release. |
| TIR98796 | After you install the JVDI package, the Trap 14 error occurs if you switch the playback device from HD audio to DP audio during the Horizon SFB call. | There is no workaround in this release. |

Multiple logins with Citrix and VMware Horizon

ThinOS supports PNA multiple login feature. You can log in to multiple Citrix StoreFront or PNAgent using different credentials. From this release onwards, you can simultaneously log in to Citrix StoreFront/PNAgent and the VDM server.

To configure the multiple login feature, do the following:

1. Configure the Pnlite server and VDI broker in the INI file as follows:

```
SelectServerList=vdm; \
description="description" host=<fqdn of Horizon Server>
SelectServerList=pna; \
description="description" host=<fqdn of StoreFront Server>
```

Or

```
multilogon=yes
pnliteserver=<fqdn of StoreFront Server>
VDIBroker=<fqdn of Horizon Server>
```

Or

```
multilogon=yes
SelectServerList=vdm; \
description="description" host=<fqdn of Horizon Server>
```



```
SelectServerList=pna; \
description="description" host=<fqdn of StoreFront Server>
```

- In the login window, select either the Citrix or VMware broker to log in, or log in to both Citrix and VMware brokers with different credentials.

Limitation

ThinOS supports a single VDM login even if the `MultiLogon` parameter is set to `yes`. When you log in to the first VDI broker successfully, the succeeding VDI brokers are ignored.

For example:

```
multilogon=yes
VDIBroker=<fqdn of Horizon Server 1>;
VDIBroker=<fqdn of Horizon Server 2>
```

If the first VDI broker login is successful, the second VDI broker is ignored. If the first VDI broker login fails, the second VDI broker is considered.

BIOS update

In this release, ThinOS enables you to update BIOS firmware for Wyse 5060 and 3030 LT thin client by using Wyse Management Suite version 1.3.

For information about the upgrading procedure using Wyse Management Suite, see the *Dell Wyse ThinOS Version 8.6 Administrator's Guide* at www.dell.com/support.

Table 90. Support matrix

| Platform | BIOS type | Update using Wyse Management Suite | Update using File server |
|-------------------------------|----------------|------------------------------------|--------------------------|
| Wyse 5070 thin client | Dell | Supported | Supported |
| Wyse 3040 thin client | Dell | Supported | Supported |
| Wyse 5010 or 5040 thin client | Legacy Wyse | Not supported | Supported |
| Wyse 5060 thin client | Legacy Wyse | Supported | Supported |
| Wyse 3030 LT thin client | Legacy Wyse | Supported | Supported |
| Wyse 3020 thin client | Not applicable | Not applicable | Not applicable |
| Wyse 3010 thin client | Not applicable | Not applicable | Not applicable |

Export and restore BIOS settings

This feature enables you to manually save certain CMOS settings to a specified storage and restore it when required. You can save certain BIOS settings from a USB storage or file server and also restore to a USB storage or file server.

The **Extract CMOS** button is used to save BIOS setting and the **Restore CMOS** button is used to restore the BIOS setting.

Table 91. Support matrix

| Platform | BIOS type | Export and restore BIOS setting |
|-------------------------------|----------------|---------------------------------|
| Wyse 5070 thin client | Dell | Supported |
| Wyse 3040 thin client | Dell | Supported |
| Wyse 5010 or 5040 thin client | Legacy Wyse | Supported |
| Wyse 5060 thin client | Legacy Wyse | Supported |
| Wyse 3030 LT thin client | Legacy Wyse | Supported |
| Wyse 3020 thin client | Not applicable | Not supported |
| Wyse 3010 thin client | Not applicable | Not supported |

For instructions on extracting CMOS and restoring CMOS, see the *Dell Wyse ThinOS Version 8.6 Administrator's Guide* at www.dell.com/support.

Limitation—You can only extract the BIOS settings that are supported by the INI parameter `Device=CMOS` and `Device=DellCMOS`.

Package version check

After you install packages, the ThinOS client restarts and verifies the version of the installed packages. If you have not installed the latest package version, an event log is generated. You can view the logs on the **Event Log** tab in the **System Information** window.

Telnet

Telnet is a terminal emulation client that allows you to connect to a remote host or device.

In ThinOS version 8.6, the **Telnet** tab is added in the **Troubleshooting** window. When you enter the hostname and click **Connect**, the **Telnet** window is displayed and the **Troubleshooting** window is closed automatically.

Disable DisplayPort audio

By default, the DisplayPort audio is disabled on Wyse 3040 thin client from this release onwards. This is the factory default setting. You can enable the audio by using the GUI option or the INI parameter.

If you upgrade ThinOS version from 8.5 to 8.6, the DP audio is not disabled by default. This is because the DP audio is enabled by default on thin client running ThinOS version 8.5. You must reset the thin client running ThinOS version 8.6 to factory default settings to load the default setting.

However, thin clients shipped with the latest version of ThinOS are already configured with the default settings.

Table 92. Known issue

| Issue number | Description | Workaround |
|--------------|--|--------------------------------------|
| TIR94278 | On Wyse 3040 thin client, if you set the display resolution higher than 1920 X 1080, and enable the DisplayPort audio, a black screen is displayed for 10 seconds after the system reboot. | Do not enable the DisplayPort audio. |

Report locally attached devices to Wyse Device Manager

This feature reports locally attached devices such as monitor and USB device to the Wyse Device Manager (WDM) server. This information is displayed in the device detail section on the WDM console.

Limitation—ThinOS supports more than 20 USB devices through the USB hub. However, WDM server shows only 10 devices.

Vertical Synchronization

Vertical Synchronization or V-Sync enables the ThinOS client to synchronize the frame rate of a video with the monitor refresh rate to avoid screen tearing. Screen tearing occurs when the graphic processor delivers display frames more than your monitor can process. As a result, the image appears to be cut in half. Enabling VSync synchronizes the output video of the graphics card to the refresh rate of the monitor. In ThinOS version 8.6, V-Sync is enabled by default.

Table 93. Support matrix

| Platform | V-Sync in ThinOS | V-Sync in ThinOS with PCoIP |
|---------------------------|------------------|-----------------------------|
| Wyse 5070 thin client | Supported | Supported |
| Wyse 3040 thin client | Supported | Supported |
| Wyse 5060 thin client | Supported | Supported |
| Wyse 5010 thin client | Supported | Supported |
| Wyse 5040 AIO thin client | Supported | Supported |
| Wyse 7010 thin client | Supported | Not applicable |
| Wyse 3020 thin client | Not supported | Not applicable |

| Platform | V-Sync in ThinOS | V-Sync in ThinOS with PCoIP |
|--------------------------|------------------|-----------------------------|
| Wyse 3010 thin client | Not supported | Not applicable |
| Wyse 3030 LT thin client | Not supported | Not supported |

Limitation—The ThinOS local client desktop background flashes for a second when RDP session desktop is connected with H.264-AVC444 enabled.

PCoIP connections using Teradici Remote Workstation card

In ThinOS version 8.6, you can directly configure the PCoIP connection after you connect either the TERA2240 Remote Workstation card or TERA2220 Remote Workstation card. This feature only works with the direct PCoIP connection, and does not work when you connect using the Horizon View broker.

i NOTE: The host card version must match the Teradici PCoIP SDK version 2.9. The SDK in ThinOS does not function similar to Teradici zero client firmware. For example, the SDK in ThinOS does not support USB redirection with the host card connection. This feature is mainly for workstation users working on the server remotely.

The following table lists the supported platforms and the corresponding maximum displays that are tested for TERA2220 and TERA2240 host cards:

Table 94. Support matrix—For reference only

| Platform | ThinOS | ThinOS with PCoIP | Maximum displays for TERA2220 host card | Maximum displays for TERA2240 host card |
|--------------------------------|---------------|-------------------|---|--|
| Wyse 5070 thin client—Celeron | Not supported | Supported | 2—with 2560 x 1440 resolution | 2—with 2560 x 1440 resolution |
| Wyse 5070 thin client—Pentium | Not supported | Supported | 2—with 2560 x 1440 resolution | 2—with 2560 x 1440 resolution |
| Wyse 5070 Extended thin client | Not supported | Supported | 2—with 2560 x 1440 resolution | 4—with 1920 x 1200 resolution |
| Wyse 3040 thin client | Not supported | Supported | 2—with 2560 x 1440 resolution | 2—the resolution depends on your display setup |
| Wyse 5060 thin client | Not supported | Supported | 2—with 2560 x 1440 resolution | 2—with 2560 x 1440 resolution |
| Wyse 5010 thin client | Not supported | Supported | 2—with 1920 x 1200 resolution | 2—with 1920 x 1200 resolution |
| Wyse 5040 AIO thin client | Not supported | Supported | 2—with 1920 x 1200 resolution | 2—with 1920 x 1200 resolution |
| Wyse 3030 LT thin client | Not supported | Supported | 2—with 2560 x 1440 resolution | 2—the resolution depends on your display setup |
| Wyse 7010 thin client | Not supported | Not supported | Not supported | Not supported |
| Wyse 3020 thin client | Not supported | Not supported | Not supported | Not supported |
| Wyse 3010 thin client | Not supported | Not supported | Not supported | Not supported |

Table 95. Teradici support matrix

| Display type | Maximum number of displays | Teradici PCoIP processor | Maximum resolution |
|--------------|----------------------------|--------------------------|--|
| Dual display | 2 | TERA2220 | Single display with 2560 x 1600 resolution or two displays with 1920 x 1200 resolution |
| Quad display | 4 | TERA2240 | 2 displays with 2560 x 1600 resolution or four displays with 1920 x 1200 resolution |

The following table provides performance data statistics for host card TERA2240 on Wyse 5070 thin client with Celeron processor:

Table 96. Performance data statistics

| Number of display | Maximum rate defined by user (Mbps) | Input change rate (Mbps) | Output process rate | Maximum Tx bandwidth (Mbps) |
|-------------------|-------------------------------------|--------------------------|---------------------|-----------------------------|
| 1 | 30 | 30 | 22 | 50 |
| | 30 | 30 | 21 | 50 |
| | 60 | 59 | 22 | 101 |
| | 60 | 59 | 30 | 105 |
| 2 | 30 | 30 | 11 | 83 |
| | 30 | 30 | 10 | 50 |
| | 60 | 57 | 11 | 135 |
| | 60 | 57 | 9 | 185 |

For information about configuring PCoIP Direct Connect, see the *Dell Wyse ThinOS Version 8.6 Administrator's Guide* at www.dell.com/support.

NOTE: The TERA2220 host card is tested on the workstation Dell Precision 5820 Tower with graphics card NVIDIA Quadro P2000.

Host card reference documents on Teradici official website:

- Quick Start Guide— www.teradici.com/web-help/pcoip_remote_workstation_card.
- Administrators' guide— www.teradici.com/web-help/pcoip_remote_workstation_card/5.0.1.
- Release Notes— www.teradici.com/web-help/pcoip_remote_workstation_card/5.0.1/release_notes.

Okta integration through Citrix NetScaler

ThinOS supports Okta through the Citrix NetScaler Gateway 11.0 or later. The Okta RADIUS Agent is used for user authentication.

For more information about configuring Citrix NetScaler Gateway to use the Okta RADIUS Agent, see the Citrix NetScaler Gateway Radius Configuration Guide at help.okta.com.

Support matrix

- Citrix environment—All XenDesktop and XenApp
- NetScaler—version 11.0 or later
- Dell Wyse 3040, 5060, 5010, 7010, 5040 AIO, 3030 LT, 3020, 3010, and 5070 thin clients

NOTE: Phone authentication by using Okta is supported only in US and Canada.

Limitation: ThinOS version 8.6 supports only Okta and NetScaler Radius mode.

Display selection when launching RDP connection in full screen

In the previous ThinOS version, if you connect an RDP session in window mode with the default resolution, the first session is displayed on the main screen. If a secondary RDP connection is launched, the second session is displayed on the second screen.

When you connect an RDP session in full screen mode, the connection is displayed on all the screens and there is no option to display full screen on a specific display.

In ThinOS version 8.6, you can select your preferred display on which you want to launch the RDP session in full screen mode. In a multi-display setup, the **Default on Screen X** option is added in the **Display Resolution** drop-down list in the **Connection Properties** window of the RDP connection. For information about selecting the display to launch the RDP connection, and to know how the feature works in different scenarios, see the *Dell Wyse ThinOS Version 8.6 Administrator's Guide* at www.dell.com/support.

You can also enable this option using the INI parameter `onscreen=x`, where the `onscreen` value is the number of displays. For more information about configuring the INI parameter, see the *Dell Wyse ThinOS Version 8.6 INI Reference Guide* at www.dell.com/support.

NOTE: If you switch the display mode between span and mirror modes, you must restart your thin client to apply the settings specified in the `onscreen` INI parameter.

Table 97. Support matrix

| Platform | Display selection | Maximum display support |
|--------------------------------|-------------------|---|
| Wyse 3010 thin client | Supported | DVI-I |
| Wyse 3020 thin client | Supported | DVI-D and DVI-I |
| Wyse 3030 LT thin client | Supported | Two DisplayPorts |
| Wyse 3040 thin client | Supported | Two DisplayPorts |
| Wyse 5010 thin client | Supported | DVI-I and DisplayPort |
| Wyse 5040 thin client | Supported | Built-in port and DisplayPort |
| Wyse 5060 thin client | Supported | Two DisplayPorts |
| Wyse 5070 thin client—Celeron | Supported | Two DisplayPorts |
| Wyse 5070 thin client—Pentium | Supported | Three DisplayPorts |
| Wyse 5070 extended thin client | Supported | Four DisplayPorts and two mini DisplayPorts |
| Wyse 7010 thin client | Supported | DVI-I and DisplayPort |

Desktop scaling factor for RDP connection

The **Desktop Scale Factor** option enables you to define the desktop scale in the client locally. This option is supported in RDP version 8/RDP version 10 or later on the Dell Wyse 3010, 3020, 3030 LT, 3040, 5010, 5040, 5060, 5070, and 7010 thin clients. This feature is not supported in RDP 7.

NOTE: The Desktop Scale Factor is only applicable for RDP connection. Setting this option does not impact the local display scale on the thin client.

You can configure the desktop scaling factor by using `SessionConfig=RDP DesktopScaleFactor=xx` parameters. The value for DesktopScaleFactor is 100~500.

For more information about setting the desktop scaling factor, see the *Dell Wyse ThinOS Version 8.6 Administrator's Guide* at www.dell.com/support.

Icon folders for StoreFront interface

ThinOS version 8.6 supports icon folders for StoreFront interface mode. The icon is added on the desktop, where you can manage the folders. For example, you can add applications into the folder and delete folders including internal applications.

You can configure this option using the INI parameter `SignOn=yes IconGroupStyle=Folder`. For more information, see the Dell Wyse ThinOS Version 8.6 INI Reference Guide at Dell.com/support.

Caradigm Way2Care enhancement

Way2Care is part of Caradigm Identity and Access Management (IAM) portfolio, and is designed to securely access patient information from multiple clinical applications.

A new INI parameter `CaradigmServer=xxx UseWay2Care=yes` is added in this release. you can also set `DisableManualLogon=yes EGPGroup=xxx` along with the CaradigmServer parameter.

This feature uses Way2Care API that is different from the TapServer API. Way2Care uses decimal UID format.

For more information about the CaradigmServer parameter, see Dell Wyse ThinOS Version 8.6 INI Reference Guide at Dell.com/support.

Wireless IP configuration

When wired and wireless network share the same IP configuration, the wireless network is disabled and the wired network is enabled. From ThinOS version 8.6, there is a separate wireless IP configuration.

For information about configuring Wireless IP, see the Dell Wyse ThinOS Version 8.6 Administrator's Guide at Dell.com/support.

Display priority on Wyse 5070 Extended thin client

The display priority on Wyse 5070 Extended thin client is updated to support the latest AMD vBIOS firmware. This is applicable from ThinOS 8.5.1 release.

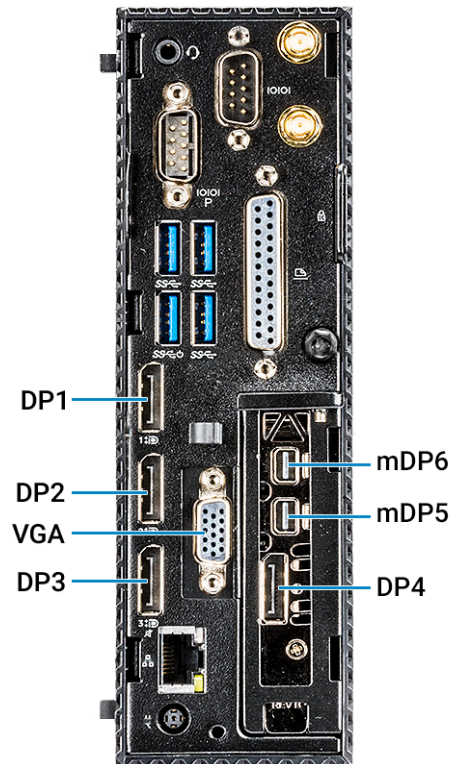


Figure 2. Display priority

The display priority is as follows:

- DP1 > DP2 > DP3 > DP4 > mDP5 > mDP6
- DP1 > USB Type-C > DP3 > DP4 > mDP5 > mDP6
- DP1 > DP2 > VGA > DP4 > mDP5 > mDP6
- DP1 > USB Type-C > VGA > DP4 > mDP5 > mDP6

Display GUI update

Only 32-bit desktop color is supported on Wyse 3010 (T10) and 3020 (T10D) thin clients. The display GUI is changed for Wyse 5070 thin client. However, the display GUI remains same for other ThinOS-based platforms.

For more information about configuring your display settings, see the *Dell Wyse ThinOS Version 8.6 Administrator's Guide* at www.dell.com/support.

Bluetooth pairing update

The Bluetooth Pairing Vulnerability—CVE-2018-5383—is resolved in ThinOS version 8.6 release. For more information about the issue, see www.intel.com/content/www/us/en/security-center/advisory/intel-sa-00128.html.

Affected platforms:

- Wyse 3030 LT thin client with ThinOS
- Wyse 3040 thin client with ThinOS

- Wyse 5010 thin client with ThinOS
- Wyse 5010 thin client with PCoIP
- Wyse 5040 AIO thin client with ThinOS
- Wyse 5040 AIO thin client with PCoIP
- Wyse 5070 thin client
- Wyse 7010 thin client

INI parameters

The following table provides the list of newly added INI parameter in this release:

NOTE: Every INI parameter is associated with a parent INI parameter. Use these INI parameters along with the corresponding parent INI parameters.

Table 98. INI parameters

| INI parameters | Description* |
|---|---|
| [Week={Current, Other, 0, 1, 2, 3, 4}] | Enables you to specify the minimum weeks required to reboot the client after configuring an INI parameter. |
| [disabledKeys={PrtScn;SysRq}] | Enables you to disable keys on the keyboard. |
| [UpgradeOrder={bios, wtos}] | Enables you to specify the upgrade order between BIOS and firmware. |
| [Default={camera device name}] | Enables you to set the default camera device settings. |
| [CAGUserAsUPN={yes, no}] | Enables you to send user details to server in the format similar to an email address (username@fqdn). |
| [CAGExternal={yes, no}] | Enables you to log in to csg with an external network directly without verifying beacons. |
| [enableReminder={yes, no}] | Enables you to postpone the reboot triggered by the Wyse Management Suite agent. |
| SysinfoOntop={yes, no} | Enables the System Information window to be displayed at the top in the Z-Order and overlaps on the nonmode switched full screen session window. |
| [DisableSFInit={yes, no}] | Enables you to disable the StoreFront initialize process after the device reboot. |
| [Host={broker_url}] | The Host option enables you to specify the broker server IP address or FQDN. |
| [AutoConnectList={* host1;host2;host3...}] | The AutoConnectList option specifies the VDI desktops or applications launched automatically when you use VDI to sign in to the session. |
| MultiHead={yes, no} | The MultiHead option enables you to set the span mode or mirror mode for multiple monitors on Wyse 5070 thin client. |
| [ManualOverride={yes, no}] | The ManualOverride option enables you to manually set the monitor layout. |
| [Mainscreen={1,2,3,4,5,6}] | The Mainscreen option enables you to set the required display as a main screen. |
| [Resolution={ddc, width X height}] | The Resolution and Rotate options works when the display is set to mirror mode and MultiHead=no. |
| [Rotate={left, right}] | |
| Screen={1,2,3,4,5,6} | The Screen option enables you to select the screen which you want to set as default. |
| [align={screen id, top center bottom left right, top center bottom left right}] | The align option enables you to set the screen alignment on Wyse 5070 thin client. |
| Connect={ICA, RDP, PCoIP} | The PCoIP value is added to the Connect parameter. |
| [OnScreen={1-6}] | The OnScreen option enables you to specify which display must be in full screen in an RDP session. |
| [EnableHardwareCursor={yes, no}] | Enables you to control the hardware cursor in the Blast session. |
| ManualOverride={no, yes} | The ManualOverride option enables you to retain your personalized settings. |

| INI parameters | Description* |
|---|--|
| [Components={None, display, keyboard, mouse, timezone, network, audio, printer, All}] | The Components option enables you to specify the component for which personalized settings are required. |
| [DesktopScaleFactor={100–500}] | Enables you to set the percentage of desktop scaling factor for RDP connection. |
| [MaxConnect=max] | Enables you to set the maximum number of session connections that you can specify in both wnos.ini and username.ini. |

*For detailed description and default values, see the *Dell Wyse ThinOS Version 8.6 INI Reference Guide* at www.dell.com/support.

Tested environment

The following tables display the testing environment for the respective attributes:

Table 99. Tested environment - General components

| Component | Version |
|-----------------------|--------------------------|
| Wyse Management Suite | 1.3 |
| Wyse Device Manager | 5.7.2 |
| Imprivata OneSign | 5.5.001.22 |
| NetScaler | 10.1/11.0/11.1/12.0/12.1 |
| StoreFront | 3.6/3.15 |
| Web Interface | 5.4 |
| SecureMatrix | 4.1.0 |

Table 100. Tested environment - VDI components

| | Windows 7 | Windows 8.1 | Windows 10 | Linux | Windows Server 2012 R2 | Windows Server 2016 | Apps |
|------------------------------------|----------------|----------------|----------------|----------------|------------------------|---------------------|------|
| VMware Horizon 7.5 | √ | √ | √ | √ | √ | √ | √ |
| XenDesktop 5.6 | √ | Not applicable | | | | | |
| XenApp 6.5 | Not applicable | | | | | | √ |
| XenDesktop/ XenApp 7.18 | Not applicable | | √ | Not applicable | √ | √ | √ |
| XenDesktop/ XenApp 7.15 LTSR | √ | √ | Not applicable | | √ | Not applicable | √ |
| XenDesktop/ XenApp 7.15 LTSR | √ | √ | √ | Not applicable | √ | √ | √ |
| Tera PCM for AWS 1.03 | √ * | Not applicable | | | | | |
| RDS 2012 R2/ 2016 | √ | √ | √ | Not applicable | √ | √ | √ |

*AWS Workspace VM OS Windows 7 style is actually based on 2008 R2 RDSH.

Table 101. Tested environment - Citrix Virtual Apps and Desktops

| XenDesktop/ XenApp | Operating System | RTME | Lync client | Skype for Business (SFB) server |
|-------------------------------|-------------------------|-------------|-------------------------|--|
| 7.15 | Windows 7 | 2.5 | Skype For Business 2016 | Skype For Business 2015 |
| | Windows 8.1 | 2.5 | Skype For Business2016 | Skype For Business 2015 |
| | Windows 10 | 2.5 | Skype For Business 2016 | Skype For Business 2015 |
| | Windows 2016 | 2.5 | Skype For Business 2016 | Skype For Business 2015 |

Tested peripherals

This section lists the tested peripheral devices.

- **Keyboard/ Mouse**

- Dell USB wired keyboard - KB216
- Dell USB wired laser mouse - Naruto
- Dell USB wired optical mouse - MS116
- Dell KM636 wireless keyboard and mouse
- Dell wireless keyboard/mouse KM632
- Dell wireless keyboard/mouse WK636
- Dell Keyboard KB113p
- Dell Keyboard KB216
- Dell Keyboard KB212-B
- Dell Keyboard KB216p/ mouse MS-116p
- Dell keyboard KB813—Smart card reader
- Dell Mouse MS111-P
- Dell Mouse MS116-P
- Dell Keyboard SK-3205—Smart card reader
- Dell Optical Wireless Mouse - WM123
- Dell Optical Wireless Mouse - WM122
- Dell wireless mouse - WM324
- Dell wireless bluetooth travel mouse - WM524
- Dell premier wireless keyboard and mouse
- Dell wireless tablet keyboard/bluetooth
- Logitech Ultrathin touch mouse T630/bluetooth
- Logitech M310 wireless mouse
- Logitech K380 keyboard/bluetooth
- Logitech K480 Keyboard/bluetooth
- Logitech K400 Plus
- Logitech T400 zone touch mouse
- Logitech M557 mouse/bluetooth
- Microsoft wireless mouse 1453
- Microsoft Arc Touch Mouse 1428
- Microsoft ARC mouse 1350
- Microsoft ARC touch mouse 1592/bluetooth
- Microsoft designer bluetooth keyboard/mouse
- Thinkpad compact bluetooth keyboard—bluetooth
- Rapoo E6100, bluetooth
- SpaceNavigator 3D space mouse

- **USB Webcam**

- Logitech C525 HD Webcam
- Logitech C920 HD Pro Webcam
- Logitech C930e HD Webcam
- Logitech BCC950 ConferenceCam
- Logitech USB Webcam 9000

- Logitech C922 Pro Stream Webcam
- Logitech C925e Webcam
- Microsoft LifeCam HD-3000
- Microsoft LifeCam Studio

• **Printer**

- Dell B1163 Mono Multifunction printer—no support for Generic/Text only
- Dell B1165nfw Mono Multifunction printer—no support for Generic/Text only
- Dell B1260dn laser printer
- Dell B1265dnf Multifunction laser printer
- Dell B2360d laser printer
- Dell B2360dn laser printer
- HP LaserJet P2055d
- HP LaserJet P2035
- HP LaserJet 1022n
- HP Color LaserJet CM1312MFP
- EPSON PLQ-20K

• **Mobile device**

- Samsung Galaxy S7
- iPhone XR
- iPhone 7
- iPhone 8 plus
- HTC one-XL—Android 4.2.2

• **USB headset**

- Dell Pro Stereo Headset - Skype for Business - UC350
- Dell 2.0 speaker system - AE215
- Dell Pro Stereo Headset - Skype for Business - UC150
- Microsoft Corporation LifeChat LX-6000 headset
- Dell Pro Stereo Headset UC350
- Jabra PRO 935 MS
- Jabra PRO 9450
- Jabra Speak 510 MS, Bluetooth—Bluetooth
- Jabra Evolve 75
- Jabra Evolve 40 MS Mono
- Jabra UC SUPREME MS /LINK 360, Bluetooth
- Jabra GN2000
- Jabra UC VOICE 750 MS
- Jabra Evolve ENC010 MS Link USB headset
- Jabra EVOLVE HSC040W
- Plantronics SAVI W740/Savi W745—this bluetooth is not supported on ThinOS
- Plantronics Calisto P240 D1K3 USB handset
- Plantronics Blackwire C5210
- Plantronics BLACKWIRE C710, Bluetooth
- Plantronics SAVI W740/Savi W745

 **NOTE: Bluetooth is not supported on ThinOS.**

- Plantronics Calisto P240 D1K3 USB handset
- Plantronics Calisto 620 M, Bluetooth
- Plantronics USB DSP DA40(B)
- SENNHEISER USB SC230

 **NOTE: Volume button does not work correctly with RTME.**

- SENNHEISER SC 260 USB MS II

 **NOTE: Volume button does not work correctly with RTME.**

- SENNHEISER SP 10 ML Speakerphone for Lync
- SENNHEISER SP 20 ML Speakerphone for Lync and mobile devices
- SENNHEISER SC 75 USB MS

 **NOTE: Volume button does not work correctly with RTME.**

- SENNHEISER SC 40 USB MS

 **NOTE: Volume button does not work correctly with RTME.**

- SENNHEISER SDW 5016-EU

 **NOTE: Volume button does not work correctly with RTME.**

- Plantronics Blackwire 3220 USB-A

• **Analog headset**

- Logitech h150
- Philips
- Dell USB SoundBar AC511

• **Monitor**

- Dell 24 Monitor - E2417H
- Dell 24 Monitor - P2417H
- Dell 20 Monitor - E2216H
- Dell 22 Monitor - E2218HN
- Dell 22 Monitor - P2219H
- Dell 22 Monitor - P2219HC
- Dell 23 Monitor - P2319H
- Dell 24 Monitor - P2415Q 4K2K (UHD) monitor
- Dell P2418D—2560x1440
- Dell UltraSharp 34 Monitor - P3418HW
- Dell UltraSharp 27 Monitor - U2518D
- Dell UltraSharp 27 Monitor - U2718Q—4K
- Dell UltraSharp 24 Monitor - U2419H/HC
- Dell UltraSharp 24 Monitor - U2719D/DC
- Dell UltraSharp 24 Monitor - U2719D/DC—310-7225-AO
- Dell E2416Hb—1920x1080
- Dell E2715Hf—1920 x 1080
- Dell E2318H—1920 x 1080
- Dell UP2715K—3840 x 2160/2560 x 1440
- Dell UP3216Qt—3480 x 2160
- Dell P2415Q 4K2K (UHD) monitor
- Dell P2418HZ—1920 x 1080
- Dell P2714Hc—1920 x 1080
- Dell P2715Q—3840 x 2160
- Dell P2815Qf—3840 x 2160
- Dell 43 Monitor - P4317Q
- Dell P4317Qc—3480 x 2160
- Dell U2414HB—1920 x 1080
- Dell U2415—1920 x 1200
- Dell U2713HM—2560 x 1440
- Dell U2518D—2560 x 1440
- Dell U2713HMt—2560 x 1440
- Dell U3415W—3440 x 1440
- Dell U3419W—3440 x 1440
- Dell U2718Qb—3840 x 2160
- Dell U2718Q—3480 x 2160
- Dell U2913 WM—2560 x 1080
- Dell S2718D—2560 x 1440
- Dell 23 Monitor - P2419H
- Dell 24 Monitor - P2419HC
- Dell P2418HZ—1920 x 1080
- Dell P2719H—1920 x 1080
- Dell P2719HC—1920 x 1080
- Dell S2817Q—3840 x 2160

- Add On 1000 Base-T SFP transceiver (RJ-45)—310-7225-AO
- **DVD ROM**
 - BENQ DVD Drive
 - Samsung portable DVD Writer SE-208
 - Dell external DVDRW Drive
 - Dell DW316
- **Cable/Converter**
 - Dell miniDP-VGA convertor
 - Dell TYPE-C-VGA convertor
 - Dell DP-VGA convertor
 - Dell DP-DVI convertor
 - Dell TYPE-C-DP convertor
 - Dell TYPE-C-HDMI convertor
 - USB to Serial converter
 - DisplayPort to HDMI adapter
 - DisplayPort to VGA adapter
 - USB Type-C to DisplayPort adapter
 - USB Type-C to HDMI
 - USB Type-C to VGA adapter
 - USB to Serial adapter—Trendnet
 - USB to Serial adapter—Cables-2-Go
- **Smart card reader**
 - OMNIKEY 3021—Vendor ID 076b, Product ID 3021
 - OMNIKEY 3121—Vendor ID 076b, Product ID 3121
 - OMNIKEY 5022 CL—Vendor ID 076b, Product ID 5022
 - OMNIKEY 5025 CL—Vendor ID 076b, Product ID 502a
 - OMNIKEY 5125—Vendor ID 076b, Product ID 5125
 - OMNIKEY 5321 V2 CL SAM—Vendor ID 076b, Product ID 5341
 - OMNIKEY 5321 V2 Cli—Vendor ID 076b, Product ID 532a
 - OMNIKEY 5321 CR—Vendor ID 076b, Product ID 5320
 - OMNIKEY 5325 CL—Vendor ID 076b, Product ID 5125
 - OMNIKEY 5326 DFR—Vendor ID 076b, Product ID 5326
 - OMNIKEY 5421—Vendor ID 076b, Product ID 5421
 - OMNIKEY 5422—Vendor ID 076b, Product ID 5422
 - OMNIKEY 5427 CK—Vendor ID 076b, Product ID 5427
 - SmartOS powered SCR335
 - Cherry keyboard RS 6600 with smart card
 - Cherry keyboard KC 1000 SC with smart card
 - Dell keyboard KB813—smart card reader
 - Dell Keyboard SK-3205—smart card reader
 - Gemalto IDBridge CT710
 - Gemalto PC Twin
 - RDR-80581AKU—Proximity/Smart card reader
 - RDR-6082AKU—Proximity/Smart card reader
- **Finger Print Reader**
 - HDW-IMP-1C
 - Keyboard KSI 1700
- **Touch screen**
 - Elo Touch Screen USB
 - Elo Touch Screen Serial
 - Dell P2418HT—1920x1080
- **USB drive**
 - SanDisk USB 3.0 16 GB
 - Sandisk cruzer 8 GB
 - SanDisk USB3.1 and Type-C 16 GB

- Kingston USB3.1 and Type-C 32 GB

NOTE: Do not restart your thin client when Kingston USB3.1 and Type-C 32 GB is connected.

- Kingston DataTraveler G3 8 GB
- Kingston DataTraveler Elite 3.0 16 GB
- ADATA S107/16 GB
- PNY USB3.0 16 GB
- Sony N50 16 GB
- Tripp Lite USB2.0 Hub

Networking

- Cisco GLC-T=30-1301-03

SpeechMike Premium

- LFH3610/00 SpeechMike Premium—only redirect
- LFH3200/00 SpeechMike Premium—only redirect

Table 102. Smart card information from ThinOS event log

| Smart Card information from ThinOS event log | Driver | Provider (CSP) | Card type |
|--|---------------------------------------|--|-----------------------------------|
| ActivIdentity V1 (IDClassic 230) | ActivClient 6.2 | ActivClient Cryptographic Service Provider | Gemalto Cyberflex Access 64 K V2c |
| ActivIdentity V2 | ActivClient 6.2 | ActivClient Cryptographic Service Provider | Oberthur CosmopolC 64k V5.2 |
| Gemalto/IDPrime.NET (Gemalto .net 510) | Gemalto Mini driver 1.21 | Microsoft Base Smart Card Crypto Provider | Axalto Cryptoflex.NET (V7.2.1.0) |
| ID Prime MD v 4.0.2 (Gemalto 840) | Gemalto Mini driver 1.21 | Microsoft Base Smart Card Crypto Provider | IDPrime MD T = 0 (V 7.3.2.11) |
| ID Prime MD v 4.1.0 (Gemalto 3810) | Gemalto Mini driver 1.21 | Microsoft Base Smart Card Crypto Provider | IDPrime MD T = 0 (V 7.4.0.7) |
| ID Prime MD v 4.1.1 (Gemalto 830) | Gemalto Mini driver 1.21 | Microsoft Base Smart Card Crypto Provider | IDPrime MD T = 0 (V 7.4.1.7) |
| Etoken CardOS | SafeNet Authentication Client 8.2.133 | eToken Base Cryptographic Provider | Siemens CardOS V4.2B |
| Etoken CardOS (white USB key) | SafeNet Authentication Client 8.2.133 | eToken Base Cryptographic Provider | Siemens CardOS V4.2 |
| Etoken Java(aladdin) (blue USB key) | SafeNet Authentication Client 8.2.133 | eToken Base Cryptographic Provider | eToken PRO Java 72 K OS755 |
| Etoken Java(aladdin) (black USB key) | SafeNet Authentication Client 8.2.133 | eToken Base Cryptographic Provider | SafeNet eToken 510x |
| Etoken Java(aladdin) (black USB key) | SafeNet Authentication Client 8.2.133 | eToken Base Cryptographic Provider | SafeNet eToken 5110 |
| A.E.T. Europe B.V. | SafeSign-Identity-Client-3.0.76 | SafeSign Standard Cryptographic Service Provider | G&D STAB dRCOS 3.0 T =0/1 0V300 |
| A.E.T. Europe B.V. | SafeSign-Identity-Client-3.0.76 | SafeSign Standard Cryptographic Service Provider | Giesecke and Devrient StarCos 3.2 |
| PIV (Yubico) (black USB key) | YubiKey PIV Manager | Microsoft Base Smart Card Crypto Provider | YubiKey 4.3.3 |
| cv cryptovision gmbh (c) v1.0ns | cv_act_scinterface_6.1.6 | cv act sc/interface CSP | G&D STARCOS 3.2 |

Known issues

This section describes the known issues in this release.

Table 103. Known issues

| Issue number | Description | Workaround |
|--------------|---|---|
| TIR98812 | You cannot click OK to change the resolution when you set the Left turn 90 degrees screen as a main display. | There is no workaround in this release. |
| TIR98790 | Background is filled with color when you start an application and move the application while previewing the image with two cameras. | There is no workaround in this release. |
| TIR98788 | The USB drive cannot be redirected into the Blast session when you disconnect the USB drive from the device and then connect with the same USB port again. | Use the USB port that is not used. If all ports were used before, reboot the device to remove the USB device information from the device. |
| TIR98781 | Audio output is poor when you enable the JVDI audio during the full screen video call on Wyse 5060 and 3040 thin clients. This is due to hardware performance limitation. Wyse 5070 thin client supports full screen video call with good audio output. | Do not use the JVDI video call with window mode on Wyse 5060 and 3040 thin clients. |
| TIR98780 | Blast Windows 7 session stops working for about 4-5 seconds. | There is no workaround in this release. |
| TIR98768 | Image upgrade using Wyse Management Suite deletes the existing packages while the existing Wyse Management Suite App policy does not install the packages again. | Create a Wyse Management Suite App policy to install the package after upgrading. |
| TIR98755 | Wyse Management Suite BIOS policy settings, and ini BIOS settings may be incompatible that results in a device reboot loop. | Disable either the DellCmos INI or the BIOS setting from Wyse Management Suite. |
| TIR98727 | JVDI troubleshooting logs show incorrect information. | There is no workaround in this release. |
| TIR98714 | Pulse audio is missing and you cannot open any device file. | Reboot the thin client. |
| TIR98605 | If the text copy and paste functionality between the local and Blast sessions requires a session switch, then the last copied content is placed in the session application successfully. | Switch the session between local and Blast session. |
| TIR98580 | You must create a new INI parameter to disable the Vertical Synchronization. | There is no workaround in this release. |
| TIR98561 | Trap (winmgr) error occurs when you wake up the monitor from screen saver. | Reboot the thin client. |
| TIR98550 | You cannot log in to the VDI desktop with Geamalto MD830B L3 smart card through Microsoft Windows Server 2012 Remote Desktop Service. | There is no workaround in this release. |
| TIR98514 | On Wyse 3040 thin client, the cursor performance is low when you use the ELO USB touch screen. | There is no workaround in this release. |
| TIR98486 | On Wyse 5070 thin client, cursor is displayed as double image when you switch between mirror mode and span mode, or when you wake up the monitor from screen saver (turn off screen). | Reboot the thin client. |
| TIR98143 | CAC is not found on the login page of XenApp 7.18 Desktop Server 2016 R2. | There is no workaround in this release. |
| TIR97287 | When you start an ICA session with 4K resolution on Wyse 5010 thin client, a green background is observed. | There is no workaround in this release. |

ThinOS Lite 2.6_013

Release scope

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

Release type and definition

This release note contains information about the new features, supported platforms, and tested environment for ThinOS Lite version 2.6.

Supported platform

The following table provides the list of supported platforms and build information:

Table 104. Supported platform

| Platform | ThinOS Lite/zero client for Citrix |
|-----------------------------|------------------------------------|
| Wyse 3010 zero client—T00X | T00_xen.bin |
| Wyse 3020 zero client—T00DX | T00D_xen |
| Wyse 5010 zero client—D00DX | ZD00_xen |

BIOS information

The following table provides the list of latest BIOS available in this release:

Table 105. BIOS information

| Platform | BIOS version |
|-----------------------------|-----------------|
| Wyse 3010 zero client—T00X | EC 3.02 |
| Wyse 3020 zero client—T00DX | wloader 7.1_216 |
| Wyse 5010 zero client—D00DX | 3.0U |

Packages

The following table provides the list of the packages that are included in ThinOS Lite version 2.6 release.

 **NOTE:** Dell recommends that you use these packages along with the released ThinOS Lite firmware.

Table 106. Packages

| Package name | Version |
|---------------|--|
| FR.i386.pkg | 1.24.51190 |
| RTME.i386.pkg | 2.5.49272—based on the Citrix RTOP version 2.5 |

| Package name | Version |
|--------------|-----------|
| TCX.i386.pkg | 7.1.41853 |

Feature support matrix

The following table provides the list of new features that are supported on each platform:

Table 107. Feature support matrix

| Feature | Wyse 3010 zero client—T00X | Wyse 3020 zero client—T00DX | Wyse 5010 zero client—D00DX |
|--|----------------------------|-----------------------------|-----------------------------|
| Update RTME Package to version 2.5 | Not supported | Not supported | Limited support |
| Package check | Not supported | Not supported | Supported |
| Telnet | Supported | Supported | Supported |
| Report locally attached devices to Wyse Device Manager | Supported | Supported | Supported |
| Vertical Synchronization | Not supported | Not supported | Supported |
| Okta Integration through Citrix NetScaler | Supported | Supported | Supported |
| Icon folders support for StoreFront interface mode | Supported | Supported | Supported |
| Caradigm Way2Care enhancement | Supported | Supported | Supported |
| Wireless IP configuration | Supported | Supported | Supported |
| Display GUI update | Supported | Supported | Not supported |

* Only certain features are supported.

Citrix Receiver feature matrix

Table 108. Citrix Receiver feature matrix

| Features | | Operating System—ThinOS |
|----------------|--|------------------------------|
| Content | XenApp Applications | Supported |
| | XenDesktop Desktops | Supported |
| | Follow Me Apps/Subscriptions | Supported |
| | Offline Apps (App V) | Not applicable |
| | File Open In Receiver | Not applicable |
| | Desktop Viewer/Toolbar | Not supported |
| | Multitasking | Supported |
| | Follow Me Sessions (Workspace Control) | Supported |
| | URL Redirection | Limited support ¹ |
| HDX | Audio Playback | Supported |
| | UDP Audio | Supported |
| | Bidirectional Audio (VoIP) | Supported |
| | Web Cam (Video Chat) | Supported |

| | Features | Operating System—ThinOS |
|-----------------------------------|--|--------------------------------|
| | Video Playback | Supported |
| | Flash Redirection | Supported (x86 only) |
| | Skype for business Optimization pack | Supported (x86 only) |
| | Windows Multimedia Redirection | Supported |
| | Local Printing | Supported |
| | H.264-enhanced SuperCodec | Supported |
| | Adaptive Transport | Limited support ² |
| | Framehawk | Not supported |
| | Client hardware acceleration | Limited support |
| | Desktop Composition redirection | Not supported |
| | 3DPro Graphics | Supported |
| | Remote FX | Not supported |
| | Location-Based Services | Not supported |
| | Client drive mapping/File Transfer* | Supported |
| | Generic USB redirection | Supported |
| | SDWAN Support | Verification needed |
| | Local App Access | Not applicable |
| | Multi-touch | Not supported |
| | Mobility Pack | Not applicable |
| | HDX Insight | Supported |
| | Experience Metrics | Supported |
| | External Monitor | Supported |
| | True Multi Monitor | Supported |
| | Session Sharing | Supported |
| | Session Reliability | Supported |
| | Auto Client reconnect | Supported |
| | Multi-port ICA | Supported |
| Security and communication | Receiver for Web Access | Not applicable |
| | Remote Access via NetScaler Gateway | Supported |
| | NetScaler Full VPN | Supported |
| | RSA Soft Token | Supported |
| | Challenge Response SMS | Supported |
| | User Cert Auth via NetScaler Gateway | Supported |
| | Smart Card (CAC, PIV and so on) | Supported |
| | Proximity/Contact less Card (Fast Connect) | Supported |
| | Pass Through Authentication | Supported |
| | SAN Cert | Verification needed |
| | SHA2 Certs | Supported |

| Features | | Operating System—ThinOS |
|----------|----------------------------------|-------------------------|
| | TLS 1.1/1.2 | Supported |
| | AES and 3DES Encryption | Supported |
| | Smart Access | Supported |
| | IPv6 | Supported |
| Updates | Auto Discovery/Configuration | Not supported |
| | App Store Updates/Citrix updates | Not supported |

*File transfer feature applies to HTML5/Chrome Receiver only.

¹HTML5 limitation

²DTLS audio limitation

For more information about Citrix Receiver features, see the Citrix documentation at www.citrix.com.

Important notes

This section contains information about firmware upgrade and system configuration that you need to know before using ThinOS Lite version 2.6.

Firmware upgrade and downgrade notification

The Local display 16-bit color option is removed from Wyse 3010 and 3020 zero clients.

System configuration and deployment

- ThinOS BIOS policy can be configured using Wyse Management Suite Console, Wyse Management Suite group INI, Wyse Management Suite advanced settings and FTP INI. Dell recommends that you use any one of the methods to configure the BIOS policy. Setting the BIOS policy simultaneously using different methods may cause a policy mismatch, and the device reboots repeatedly. This reboot loop issue is observed when you select the **reboot immediately** option in the **BIOS policy** settings section on the Wyse Management Suite console.
- All the installed packages are deleted when you update the ThinOS Lite version between major releases—2.5 to 2.6—using FTP, WDM, or Wyse Management Suite.

Solution for updating firmware using FTP and WDM—Ensure that you have set the PKG install parameters in the WNOS.ini, and the pkg files are uploaded in the directory. After the device reboot, the packages are re-installed automatically.

Solution for updating firmware using Wyse Management Suite—Wyse Management Suite App policy works only once after the policy is created. The deleted package cannot be reinstalled using the same policy. Dell recommends that you create a new App policy to install the package after the firmware update is complete.

- WDM vulnerability is fixed in this release. You must configure either the DHCP or the DNS option/record of the WDM server fingerprint to automatically fetch and validate the fingerprint before checking in to the WDM server. However, there is no impact to the ThinOS Lite device functionality if you do not to configure the fingerprint validation environment. For more information about how to set up fingerprint using WDM, see the *Dell Wyse ThinOS Lite Version 2.6 Administrator's Guide* at www.dell.com/support.

New and enhanced features

Update RTME package to 2.5

RTME package—RTME.i386.pkg—is updated to version 2.5.49272. For information about installation and compatibility, see the Citrix RTOP version 2.5 documentation at www.citrix.com/support.

Limitations:

- ThinOS RTME package update does not support hardware acceleration. For more information, see the Citrix documentation at docs.citrix.com.
- Answer/Hold /End call options are not supported by using Bluetooth headset button.

Package version check

After you install packages, the ThinOS Lite client restarts and verifies the version of the installed packages. If you have not installed the latest package version, an event log is generated. You can view the logs on the **Event Log** tab in the **System Information** window.

Telnet

Telnet is a terminal emulation client that allows you to connect to a remote host or device.

In ThinOS Lite version 2.6, the **Telnet** tab is added in the **Troubleshooting** window. When you enter the hostname and click **Connect**, the **Telnet** window is displayed and the **Troubleshooting** window is closed automatically.

Report locally attached devices to Wyse Device Manager

This feature reports locally attached devices such as monitor and USB device details to the Wyse Device Manager (WDM) server. This information is displayed in the device detail section on the WDM console.

Limitation—ThinOS supports more than 20 USB devices through the USB hub. However, WDM server shows only 10 devices.

Vertical Synchronization

Vertical Synchronization or V-Sync enables the ThinOS Lite client to synchronize the frame rate of a video with the monitor refresh rate to avoid screen tearing. Screen tearing occurs when the graphic processor delivers display frames more than your monitor can process. As a result, the image appears to be cut in half. Enabling VSync synchronizes the output video of the graphics card to the refresh rate of the monitor. In ThinOS Lite version 2.6, V-Sync is enabled by default.

Table 109. Support matrix

| Platform | ThinOS Lite |
|-----------------------------|---------------|
| Wyse 3010 zero client—T00X | Not supported |
| Wyse 3020 zero client—T00DX | Not supported |
| Wyse 5010 zero client—D00DX | Supported |

Limitation—The ThinOS local client desktop background flashes for a second when RDP session desktop is connected with H.264-AVC444 enabled.

Okta integration through Citrix NetScaler

ThinOS Lite supports Okta through the Citrix NetScaler Gateway 11.0 or later. The Okta RADIUS Agent is used for user authentication.

For more information about configuring Citrix NetScaler Gateway to use the Okta RADIUS Agent, see the Citrix NetScaler Gateway Radius Configuration Guide at help.okta.com.

Support matrix

- Citrix environment—All XenDesktop and XenApp
- NetScaler—version 11.0 or later
- Dell Wyse 3010, 3020, and 5010 zero clients

 **NOTE: Phone authentication by using Okta is supported only in US and Canada.**

Limitation—ThinOS Lite version 2.6 supports only Okta and NetScaler Radius mode.

Icon folders for StoreFront interface

ThinOS Lite version 2.6 supports icon folders for StoreFront interface mode. The icon is added on the desktop, where you can manage the folders. For example, you can add applications into the folder and delete folders including internal applications.

You can configure this option using the INI parameter SignOn=yes IconGroupStyle=Folder. For more information, see the Dell Wyse ThinOS Lite Version 2.6 INI Reference Guide at Dell.com/support.

Caradigm Way2Care enhancement

Way2Care is part of Caradigm Identity and Access Management (IAM) portfolio, and is designed to securely access patient information from multiple clinical applications.

A new INI parameter CaradigmServer=xxx UseWay2Care=yes is added in this release. you can also set DisableManualLogon=yes EGPGGroup=xxx along with the CaradigmServer parameter.

This feature uses Way2Care API that is different from the TapServer API. Way2Care uses decimal UID format.

For more information about the CaradigmServer parameter, see Dell Wyse ThinOS Lite Version 2.6 INI Reference Guide at Dell.com/support.

Wireless IP configuration

When wired and wireless network share the same IP configuration, the wireless network is disabled and the wired network is enabled. From ThinOS Lite version 2.6, there is a separate wireless IP configuration.

For information about configuring Wireless IP, see the Dell Wyse ThinOS Lite Version 2.6 Administrator's Guide at Dell.com/support.

Display GUI update

Only 32-bit desktop color is supported on Wyse 3010 (T00X) and 3020 (T00DX) zero clients.

For more information about configuring your display settings, see the *Dell Wyse ThinOS Lite Version 2.6 Administrator's Guide* at www.dell.com/support.

INI parameters

The following table provides the list of newly added INI parameter in this release:

 **NOTE: Every INI parameter is associated with a parent INI parameter. Use these INI parameters along with the corresponding parent INI parameters.**

Table 110. INI parameters

| INI parameters | Description* |
|---|--|
| [Week={Current, Other, 0, 1, 2, 3, 4}] | Enables you to specify the minimum weeks required to reboot the client after configuring an INI parameter. |
| [disabledKeys={PrtScn;SysRq}] | Enables you to disable keys on the keyboard. |
| [UpgradeOrder={bios, wtos}] | Enables you to specify the upgrade order between BIOS and firmware. |
| [Default={camera device name}] | Enables you to set the default camera device settings. |
| [CAGUserAsUPN={yes, no}] | Enables you to send user details to server in the format similar to an email address (username@fqdn). |
| [CAGExternal={yes, no}] | Enables you to log in to csg with an external network directly without verifying beacons. |
| [enableReminder={yes, no}] | Enables you to postpone the reboot triggered by the Wyse Management Suite agent. |
| SysinfoOntop={yes, no} | Enables the System Information window to be displayed at the top in the Z-Order and overlaps on the nonmode switched full screen session window. |
| [DisableSFInit={yes, no}] | Enables you to disable the StoreFront initialize process after the device reboot. |
| [Host={broker_url}] [AutoConnectList={* host1;host2;host3...}] | The Host option enables you to specify the broker server IP address or FQDN. The AutoConnectList option specifies the VDI desktops or applications launched automatically when you use VDI to sign in to the session. |
| [OnScreen={1-6}] | Enables you to specify which display must be in full screen in an RDP session. |
| ManualOverride={no, yes} [Components={None, display, keyboard, mouse, timezone, network, audio, printer, All}] | The ManualOverride option enables you to retain your personalized settings. The Components option enables you to specify the component for which personalized settings are required. |

*For detailed description and default values, see the *Dell Wyse ThinOS Lite Version 2.6 Administrator's Guide* at www.dell.com/support.

Tested environment

The following tables display the testing environment for the respective attributes:

Table 111. Tested environment - General components

| Component | Version |
|-----------------------|--------------------------|
| Wyse Management Suite | 1.3 |
| Wyse Device Manager | 5.7.2 |
| Imprivata OneSign | 5.5.001.22 |
| NetScaler | 10.1/11.0/11.1/12.0/12.1 |
| StoreFront | 3.6/3.15 |
| Web Interface | 5.4 |
| SecureMatrix | 4.1.0 |

Table 112. Tested environment - VDI components

| | Windows 7 | Windows 8.1 | Windows 10 | Linux | Windows Server 2008 R2 | Windows Server 2012 R2 | Windows Server 2016 | Apps |
|-------------------------------------|-----------|-------------|------------|-------|------------------------|------------------------|---------------------|------|
| XenDesktop 5.6 | √ | | | | | | | |
| XenApp 6.5 | | | | | √ | | | √ |
| Citrix XenDesktop/ XenApp 7.18 | | | √ | | | √ | √ | √ |
| Citrix XenDesktop/ XenApp 7.15 LTSR | √ | √ | | | √ | √ | | √ |
| Citrix XenDesktop/ XenApp 7.15 LTSR | √ | √ | √ | | √ | √ | √ | √ |

*AWS Workspace VM operating system Windows 7 style is based on 2008 R2 RDSH.

Table 113. Tested environment - Citrix Virtual Apps and Desktops

| XenDesktop/ XenApp | Operating System | RTME | Lync client | Skype for Business (SFB) server |
|--------------------|------------------|------|-------------------------|---------------------------------|
| 7.15 | Windows 7 | 2.5 | Skype For Business 2016 | Skype For Business 2015 |
| | Windows 8.1 | 2.5 | Skype For Business 2016 | Skype For Business 2015 |
| | Windows 10 | 2.5 | Skype For Business 2016 | Skype For Business 2015 |
| | Windows 2016 | 2.5 | Skype For Business 2016 | Skype For Business 2015 |

Tested peripherals

This section lists the supported peripheral devices.

- **Keyboard/ Mouse**
 - Dell USB wired keyboard - KB216
 - Dell USB wired laser mouse - Naruto
 - Dell USB wired optical mouse - MS116

- Dell KM636 wireless keyboard and mouse
- Dell wireless keyboard/mouse KM632
- Dell wireless keyboard/mouse WK636
- Dell Keyboard KB113p
- Dell Keyboard KB216
- Dell Keyboard KB212-B
- Dell Keyboard KB216p/ mouse MS-116p
- Dell keyboard KB813—Smart card reader
- Dell Mouse MS111-P
- Dell Mouse MS116-P
- Dell Keyboard SK-3205—Smart card reader
- Dell Optical Wireless Mouse - WM123
- Dell Optical Wireless Mouse - WM122
- Dell wireless mouse - WM324
- Dell wireless bluetooth travel mouse - WM524
- Dell premier wireless keyboard and mouse
- Dell wireless tablet keyboard/bluetooth
- Logitech Ultrathin touch mouse T630/bluetooth
- Logitech M310 wireless mouse
- Logitech K380 keyboard/bluetooth
- Logitech K480 Keyboard/bluetooth
- Logitech K400 Plus
- Logitech T400 zone touch mouse
- Logitech M557 mouse/bluetooth
- Microsoft wireless mouse 1453
- Microsoft Arc Touch Mouse 1428
- Microsoft ARC mouse 1350
- Microsoft ARC touch mouse 1592/bluetooth
- Microsoft designer bluetooth keyboard/mouse
- Thinkpad compact bluetooth keyboard—bluetooth
- Rapoo E6100, bluetooth
- SpaceNavigator 3D space mouse

- **USB Webcam**

- Logitech C525 HD Webcam
- Logitech C920 HD Pro Webcam
- Logitech C930e HD Webcam
- Logitech BCC950 ConferenceCam
- Logitech USB Webcam 9000
- Logitech C922 Pro Stream Webcam
- Logitech C925e Webcam
- Microsoft LifeCam HD-3000
- Microsoft LifeCam Studio

- **Printer**

- Dell B1163 Mono Multifunction printer—no support for Generic/Text only
- Dell B1165nfw Mono Multifunction printer—no support for Generic/Text only
- Dell B1260dn laser printer
- Dell B1265dnf Multifunction laser printer
- Dell B2360d laser printer
- Dell B2360dn laser printer
- HP LaserJet P2055d
- HP LaserJet P2035
- HP LaserJet 1022n
- HP Color LaserJet CM1312MFP
- EPSON PLQ-20K

- **Mobile device**

- Samsung Galaxy S7

- iPhone XR
- iPhone 7
- iPhone 8 plus
- HTC one-XL—Android 4.2.2

- **USB headset**

- Dell Pro Stereo Headset - Skype for Business - UC350
- Dell 2.0 speaker system - AE215
- Dell Pro Stereo Headset - Skype for Business - UC150
- Microsoft Corporation LifeChat LX-6000 headset
- Dell Pro Stereo Headset UC350
- Jabra PRO 935 MS
- Jabra PRO 9450
- Jabra Speak 510 MS, Bluetooth—Bluetooth
- Jabra Evolve 75
- Jabra Evolve 40 MS Mono
- Jabra UC SUPREME MS /LINK 360, Bluetooth
- Jabra GN2000
- Jabra UC VOICE 750 MS
- Jabra Evolve ENC010 MS Link USB headset
- Jabra EVOLVE HSC040W
- Plantronics SAVI W740/Savi W745—this bluetooth is not supported on ThinOS
- Plantronics Calisto P240 D1K3 USB handset
- Plantronics Blackwire C5210
- Plantronics BLACKWIRE C710, Bluetooth
- Plantronics SAVI W740/Savi W745

 **NOTE: Bluetooth is not supported on ThinOS.**

- Plantronics Calisto P240 D1K3 USB handset
- Plantronics Calisto 620 M, Bluetooth
- Plantronics USB DSP DA40(B)
- SENNHEISER USB SC230

 **NOTE: Volume button does not work correctly with RTME.**

- SENNHEISER SC 260 USB MS II

 **NOTE: Volume button does not work correctly with RTME.**

- SENNHEISER SP 10 ML Speakerphone for Lync
- SENNHEISER SP 20 ML Speakerphone for Lync and mobile devices
- SENNHEISER SC 75 USB MS

 **NOTE: Volume button does not work correctly with RTME.**

- SENNHEISER SC 40 USB MS

 **NOTE: Volume button does not work correctly with RTME.**

- SENNHEISER SDW 5016-EU

 **NOTE: Volume button does not work correctly with RTME.**

- Plantronics Blackwire 3220 USB-A

- **Analog headset**

- Logitech h150
- Philips
- Dell USB SoundBar AC511

- **Monitor**

- Dell 24 Monitor - E2417H
- Dell 24 Monitor - P2417H
- Dell 20 Monitor - E2216H
- Dell 22 Monitor - E2218HN
- Dell 22 Monitor - P2219H
- Dell 22 Monitor - P2219HC

- Dell 23 Monitor - P2319H
- Dell 24 Monitor - P2415Q 4K2K (UHD) monitor
- Dell P2418D—2560x1440
- Dell UltraSharp 34 Monitor - P3418HW
- Dell UltraSharp 27 Monitor - U2518D
- Dell UltraSharp 27 Monitor - U2718Q—4K
- Dell UltraSharp 24 Monitor - U2419H/HC
- Dell UltraSharp 24 Monitor - U2719D/DC
- Dell UltraSharp 24 Monitor - U2719D/DC—310-7225-AO
- Dell E2416Hb—1920x1080
- Dell E2715Hf—1920 x 1080
- Dell E2318H—1920 x 1080
- Dell UP2715K—3840 x 2160/2560 x 1440
- Dell UP3216Qt—3480 x 2160
- Dell P2415Q 4K2K (UHD) monitor
- Dell P2418HZ—1920 x 1080
- Dell P2714Hc—1920 x 1080
- Dell P2715Q—3840 x 2160
- Dell P2815Qf—3840 x 2160
- Dell 43 Monitor - P4317Q
- Dell P4317Qc—3480 x 2160
- Dell U2414HB—1920 x 1080
- Dell U2415—1920 x 1200
- Dell U2713HM—2560 x 1440
- Dell U2518D—2560 x 1440
- Dell U2713HMT—2560 x 1440
- Dell U3415W—3440 x 1440
- Dell U3419W—3440 x1440
- Dell U2718Qb—3840 x 2160
- Dell U2718Q—3480 x 2160
- Dell U2913 WM—2560 x 1080
- Dell S2718D—2560 x 1440
- Dell 23 Monitor - P2419H
- Dell 24 Monitor - P2419HC
- Dell P2418HZ—1920 x 1080
- Dell P2719H—1920 x 1080
- Dell P2719HC—1920 x 1080
- Dell S2817Q—3840 x 2160
- Add On 1000 Base-T SFP transceiver (RJ-45)—310-7225-AO


• **DVD ROM**

- BENQ DVD Drive
- Samsung portable DVD Writer SE-208
- Dell external DVDRW Drive
- Dell DW316

• **Cable/Converter**

- Dell miniDP-VGA convertor
- Dell TYPE-C-VGA convertor
- Dell DP-VGA convertor
- Dell DP-DVI convertor
- Dell TYPE-C-DP convertor
- Dell TYPE-C-HDMI convertor
- USB to Serial converter
- DisplayPort to HDMI adapter
- DisplayPort to VGA adapter
- USB Type-C to DisplayPort adapter
- USB Type-C to HDMI

- USB Type-C to VGA adapter
- USB to Serial adapter—Trendnet
- USB to Serial adapter—Cables-2-Go
- **Smart card reader**
 - OMNIKEY HID 3021
 - OMNIKEY OK CardMan3121
 - HID OMNIKEY 5125—Proximity/Smart card reader
 - HID OMNIKEY 5421—Proximity/Smart card reader
 - HID OMNIKEY 5325 CL—Proximity/Smart card reader
 - SmartOS powered SCR335
 - Cherry keyboard RS 6600 with smart card
 - Cherry keyboard KC 1000 SC with smart card
 - Dell keyboard KB813—smart card reader
 - Dell Keyboard SK-3205—smart card reader
 - Gemalto IDBridge CT710
 - Gemalto PC Twin
 - OMNIKEY 5326 DFR—Proximity/Smart card reader
 - RDR-80581AKU—Proximity/Smart card reader
 - RDR-6082AKU—Proximity/Smart card reader
 - OMNIKEY 5025 CL—Proximity/Smart card reader
 - OMNIKEY 5321 v2—Proximity/Smart card reader
- **Finger Print Reader**
 - HDW-IMP-1C
 - Keyboard KSI 1700
- **Touch screen**
 - Elo Touch Screen USB
 - Elo Touch Screen Serial
 - Dell P2418HT—1920x1080
- **USB drive**
 - SanDisk USB 3.0 16 GB
 - Sandisk cruzer 8 GB
 - SanDisk USB3.1 and Type-C 16 GB
 - Kingston USB3.1 and Type-C 32 GB

 **NOTE: Do not restart your thin client when Kingston USB3.1 and Type-C 32 GB is connected.**

 - Kingston DataTraveler G3 8 GB
 - Kingston DataTraveler Elite 3.0 16 GB
 - ADATA S107/16 GB
 - PNY USB3.0 16 GB
 - Sony N50 16 GB
 - Tripp Lite USB2.0 Hub
- **Networking**
 - Cisco GLC-T=30-1301-03
- **SpeechMike Premium**
 - LFH3610/00 SpeechMike Premium—only redirect
 - LFH3200/00 SpeechMike Premium—only redirect

Table 114. Smart card information from ThinOS event log

| Smart Card information from ThinOS event log | Driver | Provider (CSP) | Card type |
|--|-----------------|--|-----------------------------------|
| ActivIdentity V1 (IDClassic 230) | ActivClient 6.2 | ActivClient Cryptographic Service Provider | Gemalto Cyberflex Access 64 K V2c |
| ActivIdentity V2 | ActivClient 6.2 | ActivClient Cryptographic Service Provider | Oberthur CosmopolC 64k V5.2 |

| Smart Card information from ThinOS event log | Driver | Provider (CSP) | Card type |
|--|---------------------------------------|--|-----------------------------------|
| Gemalto/IDPrime.NET (Gemalto .net 510) | Gemalto Mini driver 1.21 | Microsoft Base Smart Card Crypto Provider | Axalto Cryptoflex.NET (V7.2.1.0) |
| ID Prime MD v 4.0.2 (Gemalto 840) | Gemalto Mini driver 1.21 | Microsoft Base Smart Card Crypto Provider | IDPrime MD T = 0 (V 7.3.2.11) |
| ID Prime MD v 4.1.0 (Gemalto 3810) | Gemalto Mini driver 1.21 | Microsoft Base Smart Card Crypto Provider | IDPrime MD T = 0 (V 7.4.0.7) |
| ID Prime MD v 4.1.1 (Gemalto 830) | Gemalto Mini driver 1.21 | Microsoft Base Smart Card Crypto Provider | IDPrime MD T = 0 (V 7.4.1.7) |
| Etoken CardOS | SafeNet Authentication Client 8.2.133 | eToken Base Cryptographic Provider | Siemens CardOS V4.2B |
| Etoken CardOS (white USB key) | SafeNet Authentication Client 8.2.133 | eToken Base Cryptographic Provider | Siemens CardOS V4.2 |
| Etoken Java(aladdin) (blue USB key) | SafeNet Authentication Client 8.2.133 | eToken Base Cryptographic Provider | eToken PRO Java 72 K OS755 |
| Etoken Java(aladdin) (black USB key) | SafeNet Authentication Client 8.2.133 | eToken Base Cryptographic Provider | SafeNet eToken 510x |
| Etoken Java(aladdin) (black USB key) | SafeNet Authentication Client 8.2.133 | eToken Base Cryptographic Provider | SafeNet eToken 5110 |
| A.E.T. Europe B.V. | SafeSign-Identity-Client-3.0.76 | SafeSign Standard Cryptographic Service Provider | G&D STAb dRCOS 3.0 T =0/1 0V300 |
| A.E.T. Europe B.V. | SafeSign-Identity-Client-3.0.76 | SafeSign Standard Cryptographic Service Provider | Giesecke and Devrient StarCos 3.2 |
| PIV (Yubico) (black USB key) | YubiKey PIV Manager | Microsoft Base Smart Card Crypto Provider | YubiKey 4.3.3 |
| cv cryptovision gmbh (c) v1.0ns | cv_act_scinterface_6.1.6 | cv act sc/interface CSP | G&D STARCOS 3.2 |

Known issues

This section describes the known issues in this release.

Table 115. Known issues

| Issue number | Description | Workaround |
|--------------|--|---|
| TIR98812 | You cannot click OK to change the resolution when you set the Left turn 90 degrees screen as a main display. | There is no workaround in this release. |
| TIR98790 | Background is filled with color when you start an application and move the application while previewing the image with two cameras. | There is no workaround in this release. |
| TIR98768 | Image upgrade using Wyse Management Suite deletes the existing packages while the existing Wyse Management Suite App policy does not install the packages again. | Create a Wyse Management Suite App policy to install the package after upgrading. |
| TIR98755 | Wyse Management Suite BIOS policy settings, and ini BIOS settings may be incompatible that results in a device reboot loop. | Disable either the DellCmos INI or the BIOS setting from Wyse Management Suite. |
| TIR98714 | Pulse audio is missing and you cannot open any device file. | Reboot the thin client. |
| TIR98580 | You must create a new INI parameter to disable the Vertical Synchronization. | There is no workaround in this release. |
| TIR98561 | Trap (winmgr) error occurs when you wake up the monitor from screen saver. | Reboot the thin client. |

| Issue number | Description | Workaround |
|---------------------|--|---|
| TIR98550 | You cannot log in to the VDI desktop with Gemalto MD830B L3 smart card through Microsoft Windows Server 2012 Remote Desktop Service. | There is no workaround in this release. |
| TIR98143 | CAC is not found on the login page of XenApp 7.18 Desktop Server 2016 R2. | There is no workaround in this release. |

Upgrading firmware

Downloading the installation file

1. Go to www.dell.com/support.
2. In the **Enter a Service Tag, Serial Number, Service Request...** field, type the Service Tag or the model number of your device, and press Enter or click the search icon.
3. On the product support page, click **Drivers & downloads**.
4. Select the appropriate operating system.
5. From the list, locate the file entry and click the download icon.

Firmware upgrade

Firmware upgrade is the process of updating your existing ThinOS firmware version to the latest version. To upgrade the ThinOS firmware, use any of the following:

- File Transfer Protocol (FTP) Windows server
- HTTP/HTTPS Windows server
- Dell Wyse Management Suite

NOTE: Ensure that you are enrolled in our Software Maintenance Program and are eligible to receive new versions of ThinOS software and subsequent releases of corresponding documentation uploaded on Dell Digital Locker. To avoid uncertain issues, ensure that when you upgrade your firmware, you do not skip versions.

Table 116. Firmware images

| Platform | ThinOS | ThinOS with PCoIP |
|--|-----------|-------------------|
| Wyse 3010 thin client | DOVE_boot | Not available |
| Wyse 3020 thin client | T10D_wnos | Not available |
| Wyse 3030 LT thin client | U10_wnos | PU10_wnos |
| Wyse 3040 thin client | A10Q_wnos | PA10Q_wnos |
| Wyse 5010 thin client | ZD10_wnos | PD10_wnos |
| Wyse 5040 AIO thin client | ZD10_wnos | PD10_wnos |
| Wyse 5060 thin client | D10Q_wnos | PD10Q_wnos |
| Wyse 7010 thin client | ZD10_wnos | Not available |
| Wyse 5070 thin client-Celeron processor | X10_wnos | PX10_wnos |
| Wyse 5070 thin client-Pentium processor | X10_wnos | PX10_wnos |
| Wyse 5070 Extended thin client-Pentium processor | X10_wnos | PX10_wnos |

Table 117. BIOS binary files

| Platform | BIOS binary filename |
|--------------------------|----------------------|
| Wyse 3010 thin client | Not available |
| Wyse 3020 thin client | Not available |
| Wyse 3030 LT thin client | U10_bios.bin |

| Platform | BIOS binary filename |
|--------------------------------------|----------------------|
| Wyse 3030 LT thin client with PColP | PU10_bios.bin |
| Wyse 3040 thin client | A10Q_bios.bin |
| Wyse 3040 thin client with PColP | A10Q_bios.bin |
| Wyse 5010 thin client | D10G_bios.bin |
| Wyse 5010 thin client with PColP | PD10G_bios.bin |
| Wyse 5040 AIO thin client | AIO10G_bios.bin |
| Wyse 5040 AIO thin client with PColP | PAIO10G_bios.bin |
| Wyse 5060 thin client | D10Q_bios.bin |
| Wyse 5060 thin client with PColP | PD10Q_bios.bin |
| Wyse 7010 thin client | Z10G_bios.bin |

Table 118. Package information

| Package name | Details |
|------------------|---|
| Base.i386.pkg | Automatically updated upon firmware upgrade. |
| Pcoip.i386.pkg | Automatically updated upon firmware upgrade of a PColP client. |
| RTME.i386.pkg | Upload the new package to central configuration, and system can update without INI configuration. |
| Horizon.i386.pkg | Upload the new package to central configuration, and configure the INI parameter to update this package. |
| FR.i386.pkg | Upload the new package to central configuration, and configure the INI parameter for update this package. |
| TCX.i386.pkg | Upload the new package to central configuration, and configure the INI parameter to update this package. |

NOTE:

- For information about the ThinOS build number, package versions, and BIOS versions, see the latest *Dell Wyse ThinOS Release Notes*.
- To downgrade the ThinOS firmware, ensure that you set the INI parameter `Autoload=2`, and follow the procedure using the FTP server.

Firmware upgrade using FTP server

Ensure that you have set up a Windows PC or Server with Microsoft Internet Information Services (IIS) and FTP services installed. If you do not have the FTP server installed, then refer to the article about how to setup an FTP server at support.microsoft.com.

Installing the Windows IIS creates the directory `C:\inetpub\ftproot`, which is known as the FTP root. In the `ftproot` directory, create a folder `wyse` and a sub folder `wnos`. The directory structure must read as `C:\inetpub\ftproot\WYSE\wnos`.

To upgrade the ThinOS firmware using FTP server:

1. Ensure that you have downloaded the latest ThinOS firmware and latest ThinOS packages that corresponds to your thin client model. If the firmware and packages are in the form of a compressed self-extracting (.EXE) or zipped file (.ZIP), then extract the files.
2. Place the extracted firmware files in the `C:\inetpub\ftproot\WYSE\wnos` folder, and the packages to `C:\inetpub\ftproot\WYSE\wnos\pkg` on your FTP server.
3. Create a `wnos.ini` text file (using a text editor) in the `C:\inetpub\ftproot\WYSE\wnos` folder with the following INI parameters:
`Autoload=2 loadpkg=1 Addpkg=TCX,FR,horizon`

The option `Autoload=2`, ensures that the thin client uses the firmware installed on the server to upgrade, only if the firmware on the thin client is older than the version on the server. The option `LoadPkg` specifies how to update the external packages. If `LoadPkg` is not in the statement, it will inherit the value of `AutoLoad`.

Base package and the PCoIP package are integrated into the ThinOS firmware image. Installing the latest ThinOS firmware image automatically installs the latest version of these packages on the ThinOS client. If you set `AutoLoad=1 LoadPkg=0`, the firmware is checked, but the packages are not checked. The packages check is performed after firmware check. From ThinOS 8.3, the external packages update mechanism is changed. Some packages are default, and loaded according to value of `LoadPkg`. For example RTME. Some packages need additional parameter `AddPkg` to add. For example, FR, Horizon, and TCX. The option `AddPkg` is for adding packages. It depends on the value of `LoadPkg`. For more information about the INI parameter usage, see Dell Wyse ThinOS INI Reference Guide.

4. Save the `wnos.ini` file.
5. On the ThinOS client desktop, navigate to **System Setup > Central Configuration > General**.
6. In the **General** tab, enter the IP address of the FTP server or directory. For example: `150.00.0.260/wyse`. The **Username** field must have the value `Anonymous` and the **Password** field is already pre-configured.

NOTE:

- **If there is no default password or if the password is changed, then you must set your password. For example, `abe@abc.com`.**
You can also reset the thin client to factory default settings. When you reset the thin client to factory default settings, the anonymous user is configured with the default password. However, you need to reconfigure the thin client.
- **You can also use DHCP option tags 161 and 162 to configure the ThinOS client, file server and path information. You must create these options on your DHCP server, configure them with the correct server information, and enable the DHCP server scope in your environment.**

7. Click **OK**.
8. Restart the thin client and wait until the auto-installation of packages is complete.

To verify that the thin client is upgraded, on the ThinOS desktop, navigate to **System Information > General**, and check the System Version.

Firmware upgrade using HTTPS

Ensure that you have set up a Windows PC or Server with Microsoft Internet Information Services (IIS) and HTTPS services installed. If you do not have the HTTPS server installed, then refer to the article about how to setup an HTTPS server at support.microsoft.com.

Ensure that the web server can identify the file types used by ThinOS. Create two MIME types under IIS. The MIME's option needs to be configured on a per site basis. On a default IIS, install:

1. Launch the IIS admin console.
2. Browse to the default website, right-click and select **Properties**.
3. Click the **HTTP Headers** tab, and in the **MIME Map** section, select **File types > New Type**.
4. Add the two MIME types. Use `.INI` and `.` for the associated extension fields.
5. Apply the settings and close the IIS admin console.

Installing IIS creates the default directory `C:\inetpub\wwwroot`, which is known as the WWW root. In the `wwwroot` directory, create a folder `WYSE` and a sub folder `wnos`. The directory structure must read as `C:\inetpub\wwwroot\WYSE\wnos`.

To upgrade the ThinOS firmware using HTTPS server:

1. Ensure that you have downloaded the latest ThinOS firmware and latest ThinOS packages that corresponds to your thin client model. If the firmware and packages are in the form of a compressed self-extracting (.EXE) or zipped file (.ZIP), then extract the files.
2. Place the extracted firmware files in the `C:\inetpub\wwwroot\WYSE\wnos` folder, and the packages to `C:\inetpub\wwwroot\WYSE\wnos\pkg` on your HTTPS server.
3. Create a `wnos.ini` text file (using a text editor) in the `C:\inetpub\wwwroot\WYSE\wnos` folder with the following INI parameters:
`Autoload=2 loadpkg=1 Addpkg=TCX,FR,horizon`

The option `Autoload=2`, ensures that the thin client uses the firmware installed on the server to upgrade, only if the firmware on the thin client is older than the version on the server. The option `LoadPkg` specifies how to update the external packages. If `LoadPkg` is not in the statement, it will inherit the value of `AutoLoad`.

Base package and the PCoIP package are integrated into the ThinOS firmware image. Installing the latest ThinOS firmware image automatically installs the latest version of these packages on the ThinOS client. If you set `AutoLoad=1 LoadPkg=0`, the firmware is checked, but the packages are not checked. The packages check is performed after firmware check. From ThinOS 8.3, the external packages update mechanism is changed. Some packages are default, and loaded according to value of `LoadPkg`. For example RTME.

Some packages need additional parameter `AddPkg` to add. For example, FR, Horizon, and TCX. The option `AddPkg` is for adding packages. It depends on the value of `LoadPkg`. For more information about the INI parameter usage, see Dell Wyse ThinOS INI Reference Guide.

4. Save the `wnos.ini` file.
5. On the ThinOS client desktop, navigate to **System Setup > Central Configuration > General**.
6. In the **General** tab, enter the IP address of the file server or directory. For example: `https://IPaddress/wyse`.

i **NOTE:** You can also use DHCP option tags 161 and 162 to configure the ThinOS client, file server and path information. You must create these options on your DHCP server, configure them with the correct server information, and enable the DHCP server scope in your environment.

7. Click **OK**.
8. Restart the thin client and wait until the auto-installation of packages is complete.

Firmware upgrade using Wyse Management Suite

Ensure that you have created a custom group and assigned the ThinOS devices to that group in Wyse Management Suite. For more information, see the latest *Dell Wyse Management Suite Administrator's Guide*.

Ensure that your ThinOS clients are registered to Wyse Management Suite. For more information, see the latest *Dell Wyse ThinOS 8.5 Administrator's Guide*.

To upgrade the ThinOS firmware using Wyse Management Suite:

1. Ensure that you have downloaded the latest ThinOS firmware and ThinOS packages that corresponds to your thin client model.
2. Log in to Wyse Management Suite using valid credentials.
3. On the **Apps & Data** page, in the **OS Image Repository** section, click **ThinOS**.
4. Click **Add Firmware File**.
The **Add File** dialog box is displayed.
5. Browse and select the downloaded firmware file. Enter an appropriate description.
6. Click **Upload**.
The ThinOS firmware file is uploaded, and the firmware file is listed on the **Apps & Data - ThinOS OS Image Repository** page.
7. Select the check box that corresponds to your ThinOS firmware file.
8. On the **Groups & Configs** page, select a custom group, and click **Edit Policies > ThinOS**.
The **Select ThinOS Configuration Mode** screen is displayed.
9. Click **Advanced Configuration**.
10. In the **Device Configuration** pane, click **Firmware Upgrade**, and then click **Configure this item**.
11. From the **Platform type** drop-down list, select your thin client model.
12. From the **Firmware to auto deploy** drop-down list, select the firmware file that corresponds to your thin client model.
13. Click **Save & Publish**.
The thin client restarts, and the firmware version is upgraded.

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 and click the search icon or press Enter.
4. Click **Manuals & documents**.

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 **Manuals & documents**.

Topics:

- [Additional resources](#)

Additional resources

Table 119. Additional resources

| Resource | Content |
|---|--|
| Dell support website— www.dell.com/manuals . | Administrator's Guide, INI Reference Guide, and Release Notes. |
| Citrix support website— docs.citrix.com . | Documentation for Citrix software. |
| VMware support website— docs.vmware.com . | Documentation for VMware software. |
| Microsoft support website— support.microsoft.com . | Documentation for Microsoft software. |

Contacting Dell

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

If you do not have an active Internet connection, you can find contact information on your purchase invoice, packing slip, bill, or the product catalog.