

# **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.

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# 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 Dell Wyse ThinOS release, and helps you select which version of ThinOS software is appropriate for your work environment.

**Table 1. Version matrix (continued)**

Release version	Release date	Supported platforms	Release Notes
ThinOS 8.6_710	March 2021	<ul style="list-style-type: none"> <li>• Wyse 3040 Thin Client with ThinOS</li> <li>• Wyse 3040 Thin Client with PCoIP</li> <li>• Wyse 5010 Thin Client with ThinOS (D10D)</li> <li>• Wyse 5010 Thin Client with PCoIP (D10DP)</li> <li>• Wyse 5040 AIO Thin Client with ThinOS (5212)</li> <li>• Wyse 5040 AIO Thin Client with PCoIP (5213)</li> <li>• Wyse 5060 Thin Client with ThinOS</li> <li>• Wyse 5060 Thin Client with PCoIP</li> <li>• Wyse 5070 Thin Client with ThinOS</li> <li>• Wyse 5070 Thin Client with PCoIP</li> <li>• Wyse 5070 Extended Thin Client with ThinOS</li> <li>• Wyse 5070 Extended Thin Client with PCoIP</li> <li>• Wyse 5470 Thin Client with ThinOS</li> <li>• Wyse 5470 Thin Client with PCoIP</li> <li>• Wyse 5470 All-in-One Thin Client with ThinOS</li> <li>• Wyse 5470 All-in-One Thin Client with PCoIP</li> <li>• Wyse 7010 Thin Client with ThinOS (Z10D)</li> </ul>	<a href="#">Release version ThinOS 8.6_710</a>
ThinOS 8.6_606	December 2020	<ul style="list-style-type: none"> <li>• Wyse 3040 Thin Client with ThinOS</li> <li>• Wyse 3040 Thin Client with PCoIP</li> <li>• Wyse 5010 Thin Client with ThinOS (D10D)</li> <li>• Wyse 5010 Thin Client with PCoIP (D10DP)</li> <li>• Wyse 5040 AIO Thin Client with ThinOS (5212)</li> <li>• Wyse 5040 AIO Thin Client with PCoIP (5213)</li> <li>• Wyse 5060 Thin Client with ThinOS</li> <li>• Wyse 5060 Thin Client with PCoIP</li> <li>• Wyse 5070 Thin Client with ThinOS</li> <li>• Wyse 5070 Thin Client with PCoIP</li> <li>• Wyse 5070 Extended Thin Client with ThinOS</li> <li>• Wyse 5070 Extended Thin Client with PCoIP</li> <li>• Wyse 5470 Thin Client with ThinOS</li> <li>• Wyse 5470 Thin Client with PCoIP</li> <li>• Wyse 5470 All-in-One Thin Client with ThinOS</li> </ul>	<a href="#">Release version ThinOS 8.6_606</a>

**Table 1. Version matrix (continued)**

Release version	Release date	Supported platforms	Release Notes
		<ul style="list-style-type: none"> <li>• Wyse 5470 All-in-One Thin Client with PCoIP</li> <li>• Wyse 7010 Thin Client with ThinOS (Z10D)</li> </ul>	
ThinOS 8.6_511	September 2020	<ul style="list-style-type: none"> <li>• Wyse 3040 Thin Client with ThinOS</li> <li>• Wyse 3040 Thin Client with PCoIP</li> <li>• Wyse 5010 Thin Client with ThinOS (D10D)</li> <li>• Wyse 5010 Thin Client with PCoIP (D10DP)</li> <li>• Wyse 5040 AIO Thin Client with ThinOS (5212)</li> <li>• Wyse 5040 AIO Thin Client with PCoIP (5213)</li> <li>• Wyse 5060 Thin Client with ThinOS</li> <li>• Wyse 5060 Thin Client with PCoIP</li> <li>• Wyse 5070 Thin Client with ThinOS</li> <li>• Wyse 5070 Thin Client with PCoIP</li> <li>• Wyse 5070 Extended Thin Client with ThinOS</li> <li>• Wyse 5070 Extended Thin Client with PCoIP</li> <li>• Wyse 5470 Thin Client with ThinOS</li> <li>• Wyse 5470 Thin Client with PCoIP</li> <li>• Wyse 5470 All-in-One Thin Client with ThinOS</li> <li>• Wyse 5470 All-in-One Thin Client with PCoIP</li> <li>• Wyse 7010 Thin Client with ThinOS (Z10D)</li> </ul>	<a href="#">Release version ThinOS 8.6_511</a>
ThinOS 8.6_412	July 2020	<ul style="list-style-type: none"> <li>• Wyse 3020 Thin Client with ThinOS (T10D)</li> <li>• Wyse 3030 LT Thin Client with ThinOS</li> <li>• Wyse 3030 LT Thin Client with PCoIP</li> <li>• Wyse 3040 Thin Client with ThinOS</li> <li>• Wyse 3040 Thin Client with PCoIP</li> <li>• Wyse 5010 Thin Client with ThinOS (D10D)</li> <li>• Wyse 5010 Thin Client with PCoIP (D10DP)</li> <li>• Wyse 5040 AIO Thin Client with ThinOS (5212)</li> <li>• Wyse 5040 AIO Thin Client with PCoIP (5213)</li> <li>• Wyse 5060 Thin Client with ThinOS</li> <li>• Wyse 5060 Thin Client with PCoIP</li> <li>• Wyse 5070 Thin Client with ThinOS</li> <li>• Wyse 5070 Thin Client with PCoIP</li> <li>• Wyse 5070 Extended Thin Client with ThinOS</li> <li>• Wyse 5070 Extended Thin Client with PCoIP</li> <li>• Wyse 5470 Thin Client with ThinOS</li> <li>• Wyse 5470 Thin Client with PCoIP</li> <li>• Wyse 5470 All-in-One Thin Client with ThinOS</li> <li>• Wyse 5470 All-in-One Thin Client with PCoIP</li> <li>• Wyse 7010 Thin Client with ThinOS (Z10D)</li> </ul>	<a href="#">Release version ThinOS 8.6_412</a>

**Table 1. Version matrix (continued)**

<b>Release version</b>	<b>Release date</b>	<b>Supported platforms</b>	<b>Release Notes</b>
ThinOS Lite 2.6_412	July 2020	<ul style="list-style-type: none"> <li>● Wyse 3020 Zero Client for Citrix</li> <li>● Wyse 5010 Zero Client for Citrix</li> </ul>	<a href="#">Release version ThinOS 8.6_412</a>
ThinOS 8.6_303	April 2020	<ul style="list-style-type: none"> <li>● Wyse 3020 Thin Client with ThinOS (T10D)</li> <li>● Wyse 3030 LT Thin Client with ThinOS</li> <li>● Wyse 3030 LT Thin Client with PCoIP</li> <li>● Wyse 3040 Thin Client with ThinOS</li> <li>● Wyse 3040 Thin Client with PCoIP</li> <li>● Wyse 5010 Thin Client with ThinOS (D10D)</li> <li>● Wyse 5010 Thin Client with PCoIP (D10DP)</li> <li>● Wyse 5040 AIO Thin Client with ThinOS (5212)</li> <li>● Wyse 5040 AIO Thin Client with PCoIP (5213)</li> <li>● Wyse 5060 Thin Client with ThinOS</li> <li>● Wyse 5060 Thin Client with PCoIP</li> <li>● Wyse 5070 Thin Client with ThinOS</li> <li>● Wyse 5070 Thin Client with PCoIP</li> <li>● Wyse 5070 Extended Thin Client with ThinOS</li> <li>● Wyse 5070 Extended Thin Client with PCoIP</li> <li>● Wyse 5470 Thin Client with ThinOS</li> <li>● Wyse 5470 Thin Client with PCoIP</li> <li>● Wyse 5470 All-in-One Thin Client with ThinOS</li> <li>● Wyse 5470 All-in-One Thin Client with PCoIP</li> <li>● Wyse 7010 Thin Client with ThinOS (Z10D)</li> </ul>	<a href="#">Release version ThinOS 8.6_303</a>
ThinOS Lite 2.6_303	April 2020	<ul style="list-style-type: none"> <li>● Wyse 3020 Zero Client for Citrix</li> <li>● Wyse 5010 Zero Client for Citrix</li> </ul>	<a href="#">Release version ThinOS Lite 2.6_303</a>
ThinOS 8.6_206	November 2019	<ul style="list-style-type: none"> <li>● Wyse 3010 Thin Client with ThinOS (T10)</li> <li>● Wyse 3020 Thin Client with ThinOS (T10D)</li> <li>● Wyse 3030 LT Thin Client with ThinOS</li> <li>● Wyse 3030 LT Thin Client with PCoIP</li> <li>● Wyse 3040 Thin Client with ThinOS</li> <li>● Wyse 3040 Thin Client with PCoIP</li> <li>● Wyse 5010 Thin Client with ThinOS (D10D)</li> <li>● Wyse 5010 Thin Client with PCoIP (D10DP)</li> <li>● Wyse 5040 AIO Thin Client with ThinOS (5212)</li> <li>● Wyse 5040 AIO Thin Client with PCoIP (5213)</li> <li>● Wyse 5060 Thin Client with ThinOS</li> <li>● Wyse 5060 Thin Client with PCoIP</li> <li>● Wyse 5070 Thin Client with ThinOS</li> <li>● Wyse 5070 Thin Client with PCoIP</li> <li>● Wyse 5070 Extended Thin Client with ThinOS</li> <li>● Wyse 5070 Extended Thin Client with PCoIP</li> <li>● Wyse 5470 Thin Client with ThinOS</li> <li>● Wyse 5470 Thin Client with PCoIP</li> </ul>	<a href="#">Release version ThinOS 8.6_206</a>

**Table 1. Version matrix (continued)**

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

**Table 1. Version matrix (continued)**

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



**Table 1. Version matrix**

Release version	Release date	Supported platforms	Release Notes
		<ul style="list-style-type: none"> <li>• Wyse 5070 Thin Client with ThinOS</li> <li>• Wyse 5070 Thin Client with PCoIP</li> <li>• Wyse 5070 Extended Thin Client with ThinOS</li> <li>• Wyse 5070 Extended Thin Client with PCoIP</li> <li>• Wyse 7010 Thin Client with ThinOS (Z10D)</li> </ul>	
ThinOS Lite 2.6_019	April 2019	<ul style="list-style-type: none"> <li>• Wyse 3010 Zero Client for Citrix</li> <li>• Wyse 3020 Zero Client for Citrix</li> <li>• Wyse 5010 Zero Client for Citrix</li> </ul>	<a href="#">Release version ThinOS Lite 2.6_019</a>
ThinOS 8.6_015	June 2018	<ul style="list-style-type: none"> <li>• Wyse 5040 AIO Thin Client with ThinOS (5212)</li> <li>• Wyse 5040 AIO Thin Client with PCoIP (5213)</li> </ul>	<a href="#">Release version ThinOS 8.6_015</a>
ThinOS 8.6_013	December 2018	<ul style="list-style-type: none"> <li>• Wyse 3010 Thin Client with ThinOS (T10)</li> <li>• Wyse 3020 Thin Client with ThinOS (T10D)</li> <li>• Wyse 3030 LT Thin Client with ThinOS</li> <li>• Wyse 3030 LT Thin Client with PCoIP</li> <li>• Wyse 3040 Thin Client with ThinOS</li> <li>• Wyse 3040 Thin Client with PCoIP</li> <li>• Wyse 5010 Thin Client with ThinOS (D10D)</li> <li>• Wyse 5010 Thin Client with PCoIP (D10DP)</li> <li>• Wyse 5040 AIO Thin Client with ThinOS (5212)</li> <li>• Wyse 5040 AIO Thin Client with PCoIP (5213)</li> <li>• Wyse 5060 Thin Client with ThinOS</li> <li>• Wyse 5060 Thin Client with PCoIP</li> <li>• Wyse 5070 Thin Client with ThinOS</li> <li>• Wyse 5070 Thin Client with PCoIP</li> <li>• Wyse 5070 Extended Thin Client with ThinOS</li> <li>• Wyse 5070 Extended Thin Client with PCoIP</li> <li>• Wyse 7010 Thin Client with ThinOS (Z10D)</li> </ul>	<a href="#">Release version ThinOS 8.6_013</a>
ThinOS Lite 2.6_013	December 2018	<ul style="list-style-type: none"> <li>• Wyse 3010 Zero Client for Citrix</li> <li>• Wyse 3020 Zero Client for Citrix</li> <li>• Wyse 5010 Zero Client for Citrix</li> </ul>	<a href="#">Release version ThinOS Lite 2.6_013</a>

# ThinOS 8.6\_710

## Topics:

- [Release summary](#)
- [Compatibility](#)
- [New and enhanced features](#)
- [Important notes](#)
- [Fixed issues](#)
- [INI parameters](#)
- [Known issues](#)

## 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\_710

## Release date

March 2021

## Priority and recommendations

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

## Compatibility

### Supported platforms

**Table 2. Supported platforms**

Platform	Image file name	BIOS file name	BIOS version
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


**Table 2. Supported platforms**

Platform	Image file name	BIOS file name	BIOS version
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	1.9.0
Wyse 5070 Thin Client with PColP	PX10_wnos	X10_bios.bin	1.9.0
Wyse 5470 Thin Client with ThinOS	X10_wnos	5470_bios.bin	1.6.1
Wyse 5470 Thin Client with PColP	PX10_wnos	5470_bios.bin	1.6.1
Wyse 5470 AIO Thin Client with ThinOS	X10_wnos	5470AIO_bios.bin	1.7.1
Wyse 5470 AIO Thin Client with PColP	PX10_wnos	5470AIO_bios.bin	1.7.1
Wyse 7010 Thin Client with ThinOS (Z10D)	ZD10_wnos	Z10G_bios.bin	3.0U

## Previous version

ThinOS 8.6\_606

## Supported packages

 **NOTE:** From the v8.6\_303 release onwards, there are no updates for Flash Redirection (FR) and TCX packages.

**Table 3. Supported packages**

Platform name	Package versions		
	Horizon v5.1.20121717	RTME v2.8.54007	JVDI 12.6.20091418
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 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
Wyse 5070 Thin Client with ThinOS	Supported	Supported	Supported
Wyse 5070 Thin Client with PColP	Supported	Supported	Supported
Wyse 5470 Thin Client	Supported	Supported	Supported
Wyse 5470 Thin Client with PColP	Supported	Supported	Supported
Wyse 5470 AIO Thin Client	Supported	Supported	Supported

**Table 3. Supported packages**

Platform name	Package versions		
	Horizon v5.1.20121717	RTME v2.8.54007	JVDI 12.6.20091418
Wyse 5470 AIO Thin Client with PCoIP	Supported	Supported	Supported
Wyse 7010 Thin Client with ThinOS (Z10D)	Supported	Supported	Not supported

## Client agent and package versions

- VMware Horizon client v5.1.20121717
- RTME v2.8.54007
- JVDI v12.6.20091418
- Citrix Receiver v14.0.20050800
- Microsoft v10.0 includes support for Windows 10, Windows Server 2016, and Windows Server 2019
- Supports AWS
- Imprivata Agent v6.2 (client-side)

## New and enhanced features

### Supports display rotation to flip 180 degrees

A **Flip 180 degrees** option is added to the **Rotation** drop-down list from ThinOS 8.6\_xx which enables the user to change the display to a landscape mode. Ensure that the current resolution is set to 0 degrees or 180 degrees.

**NOTE:** For the Flip 180 degrees option to work efficiently, the screen direction must be at 0 or 180 degrees. If either of the 90-degree screen rotation is already applied, changing the option to Flip 180 degrees only rotates the screen to 90 degrees more.

### Support for Inclusive language

The user INI is updated to `Device_Security=allow_list/block_list` from `Device_Security=white_list/black_list`. The functionality of this parameter remains the same.

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

### Enable or disable the Citrix Self Service Password Reset pin icon and pin change

The user has an option to disable or enable the Citrix SSPR pin icon and SSPR pin change radio button.

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

### Support to disable the default behavior of Client discovery methods

From ThinOS 8.6\_6xx onwards, after the initial INI configurations are received by the thin client from Wyse Management Suite, the options `DNSFileServerDiscover`, `WMSEnable`, and `DHCPOptionsRemap` are disabled by default if they are not previously defined. These options are enabled after a factory reset or you can use INI parameters to enable these options.

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

## Enable Home wireless setup when user privilege set to None

In this release, you can enable the home wireless icon from the Network Setup window. Deploy the INI parameter `EnableHomeWireless={yes}` with the user privilege set to None to enable this feature.

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

## Support for DelayReboot feature


Once the configurations are applied from Wyse Management Suite to the thin client, you can delay the reboot of your thin client using this INI parameter. Deploy the INI parameter `DelayReboot={yes}` to enable this parameter. 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](http://www.dell.com/support).

## Important notes

### Limitations

- VMware Blast—ThinOS does not support dual displays with 4K resolution on Wyse 5060 Thin Clients.
- PCoIP—The following limitations are applicable for Wyse 5060 Thin Clients:
  - Connection to VM without GPU
    - ThinOS does not support dual displays with 4K resolution.
- Citrix virtual apps and desktop 2003/2006—The following limitations are applicable for Citrix virtual apps and desktop 2003/2006:
  - To make legacy graphics work, you must enable Citrix policy.
    - To configure Citrix policy, launch Citrix Studio and go to **Policies > Create Policy**.
    - Search for the particular keyword and follow the on-screen instructions. For example, you can search for the keyword **legacy**.
  - If this policy is not enabled, then user sees choppy patches on the desktop when application or folder are moved over the desktop.


 **NOTE:** Dell Technologies recommends that you use the Wyse 5070 Thin Client for 4K optimized VDI graphic performance.

Workaround: Perform either of the following:

- Legacy graphics mode and Optimize for 3D graphics workload with graphics card enabled server.
- Legacy graphics mode and Enable video codec for compression set to full screen with graphics card disabled server.

Known Issues:

- Calculator app is displayed in the background, when you drag the app from one screen to another.
- Images in PPT are displayed distorted.

 **NOTE:** These issues occur only with latest Citrix version.

**Table 4. Support matrix**

Broker agent	VDA	Policies
Virtual Apps and Desktop 7 2006	Virtual Apps and Windows 10 1903 Windows 10 1603	Policy must be enabled.
XenDesktop CU6	Virtual Apps and Desktop 7 2003	Policy must be enabled.

- Mobile HotSpot networks—The following limitation is applicable for Mobile HotSpot networks: When the ThinOS thin client is connected to the mobile hotspot, inappropriate results are displayed. The mobile hotspots from iPhone and Xiaomi mobile phones are not recommended.

## Tested environments matrix

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

**Table 5. Tested environment - General components**

Component	Version
Wyse Management Suite	3.1
Imprivata OneSign	7.1
NetScaler	13.0
StoreFront	3.15

**Table 6. Test environment - VDI**

VDI	Windows 10	Windows Server 2012 R2	Windows Server 2016	Windows Server 2019	APPs
VMware Horizon 8 2006	Tested	Tested	Tested	Tested	Tested
VMware Horizon 7.13	Tested	Tested	Tested	Tested	Tested
Citrix Virtual Apps and Desktops 7 2006	Tested	Tested	Tested	Tested	Tested
Citrix Virtual Apps and Desktops 7 2012	Tested	Tested	Tested	Tested	Tested
Remote Desktop Services (RDS) 2012 R2/2016/2019	Not tested	Tested	Tested	Tested	Tested
Citrix workspace 1912	Not tested	Not tested	Tested	Not tested	Tested

\*Only basic connections are tested.

**Table 7. Tested environment - RTME**

Citrix Virtual Apps and Desktops/Citrix Virtual Apps	Operating system	RTME Client	RTME	Skype for Business client	Skype for Business Server
Citrix Virtual Apps and Desktop 7 2003	Windows 10	2.8.54007	2.8	Skype for Business 2016	Skype for Business 2015 or latest
	Windows Server 2016	2.8.54007	2.8	Skype for Business 2016	Skype for Business 2015
	Windows Server 2019	2.8.54007	2.8	Skype for Business 2016	Skype for Business 2015

**Table 8. JVDI 12.6 support matrix**

**Table 8. JVDI 12.6 support matrix**

Platform	Supported	JVDI version
Wyse 3040 Thin Client	Audio and video	12.6
Wyse 5070 Thin Client	Audio and video	12.6
Wyse 5060 Thin Client	Audio and video	12.6
Wyse 5010 Thin Client	Audio only	12.6
Wyse 5040 All-in-One Thin Client	Audio only	12.6

**NOTE:** JVDI audio support is only for Wyse 5010 and 5040 thin clients.

## Tested peripheral devices for ThinOS 8.6\_710

This section lists the tested peripheral devices for ThinOS 8.6\_710.

**Table 9. Tested peripheral devices for ThinOS 8.6\_710**

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 UC Voice 550a MS	Tested	Tested	Tested	Tested	Tested
	USB headset Jabra BIZ 2400 II USB	Tested	Tested	Tested	Tested	Tested
	USB headset Jabra Evolv 65 USB	Tested	Tested	Tested	Tested	Tested
	Analog Headset Sennheiser CX 180	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-UC350	Tested	Tested	Tested	Tested	Not applicable
	Dell Professional Sound Bar (AE515M)	Tested	Tested	Not applicable	Tested	Tested
	Dell USB Sound Bar (AC511M)	Tested	Tested	Not applicable	Tested	Tested
	Dell 2.0 Speaker System - AE215	Not applicable	Not applicable	Tested	Tested	Tested
	Dell Wireless 2.1 Speaker System - AE415	Not applicable	Not applicable	Tested	Tested	Tested
	Jabra Evolve 65 MS Stereo - Headset	Not applicable	Not applicable	Tested	Tested	Tested
Jabra Engage 65 Stereo Headset	Not applicable	Not applicable	Tested	Tested	Tested	
Jabra Pro 935 USB Headset for Lync	Not applicable	Tested	Not applicable	Not applicable	Not applicable	

**Table 9. Tested peripheral devices for ThinOS 8.6\_710**

<b>Product Category</b>	<b>Peripherals</b>	<b>Wyse 3040</b>	<b>Wyse 5070</b>	<b>Wyse 5470 All-in-One</b>	<b>Wyse 5470</b>	<b>Wyse 5060, 5010, and 7010</b>
	Dell Professional headset (UC150)	Tested	Tested	Not applicable	Tested	Not applicable
	Plantronics Voyager Focus UC B825M headset for 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 Dual USB-A with Power Pass- Combo Adapter	Not applicable	Not applicable	Tested	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 Adapter - USB-C to HDMI/DisplayPort	Not applicable	Tested	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



**Table 9. Tested peripheral devices for ThinOS 8.6\_710**

<b>Product Category</b>	<b>Peripherals</b>	<b>Wyse 3040</b>	<b>Wyse 5070</b>	<b>Wyse 5470 All-in-One</b>	<b>Wyse 5470</b>	<b>Wyse 5060, 5010, and 7010</b>
	Seal Shield Silver Seal Waterproof-Keyboard-USB-US-waterproof-white	Not applicable	Not applicable	Tested	Tested	Not applicable
	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
	HP LJ Pro MFP M435	Tested	Tested	Tested	Tested	Tested
	Dell C2660dn Color Laser	Tested	Tested	Tested	Tested	Tested
	Dell B2360d-dn Laser Printer	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	Not Applicable	Tested	Not Applicable	Tested	Not applicable
	micro-SDHC EVO plus	Tested	Tested	Tested	Tested	Tested
	USB Drive-DT50-Kingston 3.0	Tested	Tested	Tested	Tested	Tested

**Table 9. Tested peripheral devices for ThinOS 8.6\_710**

<b>Product Category</b>	<b>Peripherals</b>	<b>Wyse 3040</b>	<b>Wyse 5070</b>	<b>Wyse 5470 All-in-One</b>	<b>Wyse 5470</b>	<b>Wyse 5060, 5010, and 7010</b>
	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
	4k monitor -Dell U4320Q	Tested	Tested	Tested	Tested	Tested
	4k monitor -Dell P2415	Tested	Tested	Tested	Tested	Tested
	5k monitor- Dell U4919DW	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
	2K Monitor-UP3017	Tested	Tested	Tested	Tested	Tested
	2K Monitor-P2414	Tested	Tested	Tested	Tested	Tested
	2K Monitor-U2414H	Tested	Tested	Tested	Tested	Tested
	2K Monitor-Dell P2210	Tested	Tested	Tested	Tested	Tested
	2K Monitor-Dell U2412M	Tested	Tested	Tested	Tested	Tested
	2K Monitor-Dell P2418HT	Tested	Tested	Tested	Not applicable	Tested
	USB ELO Touch Monitor-ELO2201L-ELO Touch Systems 2015	Tested	Tested	Tested	Not applicable	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	

**Table 9. Tested peripheral devices for ThinOS 8.6\_710**

<b>Product Category</b>	<b>Peripherals</b>	<b>Wyse 3040</b>	<b>Wyse 5070</b>	<b>Wyse 5470 All-in-One</b>	<b>Wyse 5470</b>	<b>Wyse 5060, 5010, and 7010</b>
	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
	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

**Table 9. Tested peripheral devices for ThinOS 8.6\_710**

<b>Product Category</b>	<b>Peripherals</b>	<b>Wyse 3040</b>	<b>Wyse 5070</b>	<b>Wyse 5470 All-in-One</b>	<b>Wyse 5470</b>	<b>Wyse 5060, 5010, and 7010</b>
	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
	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
	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
Dongle	USB-C Mobile Adapter with DP/HDMI/VGA/Gigabit Ethernet/USB-C/USB-A	Not applicable	Not applicable	Not applicable	Tested	Not applicable
Smart card reader	Dell KB813 Smartcard Keyboard - KB813	Tested	Tested	Tested	Tested	Not applicable

**Table 9. Tested peripheral devices for ThinOS 8.6\_710**

Product Category	Peripherals	Wyse 3040	Wyse 5070	Wyse 5470 All-in-One	Wyse 5470	Wyse 5060, 5010, and 7010
	Dell keyboard KB813t	Tested	Tested	Tested	Tested	Not applicable
Smart cards	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
	GEMALTO DLGX4 128 Kv2 (BETA 2)	Tested	Tested	Tested	Tested	Not applicable
	GEMALTO TOPDLGX4 144	Tested	Tested	Tested	Tested	Not applicable
	Giesecke & Devrient FIPS 201 SCE 7.0 (Alt Token)	Tested	Tested	Tested	Tested	Not applicable
	Giesecke & Devrient FIPS 201 SCE 7.0 (BETA)	Tested	Tested	Tested	Tested	Not applicable
	Giesecke & Devrient FIPS 201 SCE 7.0 (T=0)	Tested	Tested	Tested	Tested	Not applicable
	Giesecke & Devrient FIPS 201 SCE 3.2	Tested	Tested	Tested	Tested	Not applicable
	Oberthur ID-One Cosmo v8.0 128K	Tested	Tested	Tested	Tested	Not applicable
	Oberthur ID-One Cosmo v5.5 128K	Tested	Tested	Tested	Tested	Not applicable
	CARD_IDPrime MD 830 B FIPS 140-2 L2 White PVC	Tested	Tested	Tested	Tested	Not applicable
	CARD_IDPrime MD 3840 B w/o 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 Alladin 72 K	Tested	Tested	Tested	Tested	Not applicable	

## Fixed issues

**Table 10. Fixed issues**

Issue ID	Description
THINOS-2327	Resolved the issue where the VMware Blast session disconnects every 26 to 36 hours when the user uses a Blast Direct-Connection in the Dell Wyse 3040 Thin Client.

**Table 10. Fixed issues**

Issue ID	Description
THINOS-2444	Resolved the issue where the barcode scanner failed to scan the barcodes correctly.
THINOS-2456	Resolved the issue where the session becomes unresponsive when the user tries to switch between ThinOS 8.6_206 and ThinOS 8.6_303.
THINOS-2489	Resolved the issue of trap error on the Wyse 3040 Thin Client when the user tries to eject the card reader.
THINOS-2527	Resolved the issue where trap error occurs when an Elo touch screen display is connected to the thin client.
THINOS-2538	Resolved the issue where the users were not able to upgrade to Horizon or RTME package when the language is selected as German.
THINOS-2543	Resolved the issue when the Display Setup window is displayed when the user uses the FN + F8 key combination while configuring a VDI connection Broker agent in zero mode.
THINOS-2544	Resolved the issue when you open or close the lid on the Wyse 5470 Thin Client that is connected to an external monitor becomes unstable.
THINOS-2556	Resolved the issue where the user experienced a black screen while deploying two VDI sessions in the windows mode.
THINOS-2560	Resolved the issue where the package delivery from Wyse Management Suite fails when the system language is set to Japanese.
THINOS-2561	Resolved the issue where the remote connections are not accessible for users when the sign-on privilege is set to None.
THINOS-2565	Resolved the issue where the user selects an audio device and the device automatically sets the device selection to Intel SST Audio Device once the thin client restarts.
THINOS-2575	Resolved the issue where the users were not able to disable the system preferences using INI parameter.
THINOS-2580	Resolved the issue where the manual Remote Desktop Protocol connection disconnects once the thin client reboots.
THINOS-2588	Resolved the keyboard chatter issue.

## INI parameters

The following table provides the list of INI parameters:

**i** **NOTE:** Every INI parameter is associated with a parent INI parameter. Use these INI parameters along with the corresponding parent INI parameters. For more information about the newly added INI parameters, see the *Dell Wyse ThinOS 8.6 INI Reference Guide* at [www.dell.com/support](http://www.dell.com/support).

**Table 11. INI parameters**

INI parameters	Description
SignOn={yes} [EnableScSSPR={yes, no}] [EnableScPinChange={yes, no}]	This parameter hides the smart card pin change icon on setting the user INI to EnableScSSPR=no. If the user INI is set to EnableScPinChange=no, then the smart card pin change radio button is not displayed. The default value is set to yes in both the parameters. Ensure that the SignOn parameter is set to yes.
DelayReboot={yes}	This parameter enables the user to delay the reboot of the thin client when the configurations are applied from the Wyse management Suite and all changes made are applied on the next reboot. By default, the value is set to no.
PRIVILEGE={none, Low, High} [EnableHomeWireless={yes, no}]	The EnableHomewireless parameter allows to configure the wireless network setup even when the user INI is set to PRIVILEGE=None. By default, the value is set to no.

**Table 11. INI parameters**

INI parameters	Description
MultiHead={yes, no} [Rotate={left, right, flip}]	This parameter enables the user to flip the display 180 degree to a landscape display mode when the user INI is set to Rotate=flip.
SecurityPolicy={full, warning, low} [DNSFileServerDiscover={yes, no}]	This parameter is disabled if it is not defined using the user INI parameter after initial configurations are received by the thin client from Wyse Management Suite. This parameter can be enabled after a factory reset of the thin client or if the user INI is set to DNSFileServerDiscover=yes. As a security update, this parameter is disabled if it is not enabled by the user manually.
WMSEnable={yes, no} [Discover={yes, no}]	This parameter is disabled if it is not defined using the user INI parameter after initial configurations are received by the thin client from Wyse Management Suite. The thin client fails to collect the new Wyse Management Suite entries modified in the DNS record. This parameter can be enabled after a factory reset or if the user INI is set to Discover=yes.
DHCPOptionsRemap={yes} [Discover={yes, no}]	This parameter is disabled if it is not defined using the user INI parameter after initial configurations are received by the thin client from Wyse Management Suite. The thin client fails to collect the new Wyse Management Suite entries from DHCP scope options. This parameter can be enabled after a factory reset or if the user INI is set to Discover=yes. As a security update, this parameter is disabled if it is not enabled by the user manually.
**PRIVILEGE={None}	When the PRIVILEGE parameter is set to None and the user presses the key combination <b>Windows+ P</b> or <b>Fn + F8</b> , the display setup window is disabled.
DEVICE_SECURITY=allow_list/ block_list	The parameter name is changed to DEVICE_SECURITY=allow_list/ block_list. The functionality of this parameter remains the same.

## Known issues

**Table 12. Known issues (continued)**

Issue ID	Description	Workaround
THINOXSUS-706	Smartcard authentication option is not available with Blast Protocol in Windows Server 2012 R2 and Windows Server 2016 after locking the user profile.	There is no workaround in this release.
THINOXSUS-367	When you use a Dell Docking Station WD19 with Dell Wyse 5470 Thin Client, you have to press the power button for a manual reboot for the ping to function.	There is no workaround in this release.
THINOXSUS-586	Home window is visible in the Citrix session.	There is no workaround in this release.
THINOXSUS-431	Traces of ThinOS window border remain while hovering over published apps.	There is no workaround in this release.
THINOXSUS-483	Session reconnection fails with VMware Horizon View 7.12 when using the CAC card.	There is no workaround in this release.
THINOXSUS-971	Wyse 5470 AiO Thin Client with a 32 GB eMMC SanDisk SSD does not respond when user tries to put the system to sleep.	There is no workaround in this release.
THINOXSUS-965	On Wyse 3040 Thin Client, a display issue is observed while using Citrix XD 2006 and Citrix XD 2012 Broker client	There is no workaround in this release.

**Table 12. Known issues**

<b>Issue ID</b>	<b>Description</b>	<b>Workaround</b>
	with a dual monitor setup. The display issue occurs when one of the monitor is set to 90 degrees rotation display in the dual display setup.	
THINOXSUS-1010	The Citirx Virtual Delivery Agent Cumulative Update 2 fails to reconnect with the server operating system.	There is no workaround in this release.
THINOXSUS-1032	A mouse issue is observed while using the VMware blast mode.	There is no workaround in this release.
THINOXSUS-1057	The 180 degrees flip rotation display setup fails when the user tries to enable it on Wyse 5060 Thin Client.	There is no workaround in this release.
THINOXSUS-1060	The 180 degrees flip rotation display fails to work on touch screen monitors.	There is no workaround in this release.



# ThinOS 8.6\_606

## Topics:

- [Release summary](#)
- [Compatibility](#)
- [New and enhanced features](#)
- [Important notes](#)
- [Fixed issues](#)
- [Known issues](#)

## 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.

**NOTE:** The default central configuration protocol is updated from **ftp** to **https** for central configuration and first boot wizard window. For more information, see [Central Configuration settings update](#).

## Version

ThinOS 8.6\_606

## Release date

December 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

**Table 13. Supported platforms**

Platform	Image file name	BIOS file name	BIOS version
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


**Table 13. Supported platforms**

Platform	Image file name	BIOS file name	BIOS version
Wyse 5010 Thin Client with PCoIP (D10DP)	PD10_wnos	PD10G_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	1.8.0
Wyse 5070 Thin Client with PCoIP	PX10_wnos	X10_bios.bin	1.8.0
Wyse 5470 Thin Client with ThinOS	X10_wnos	5470_bios.bin	1.5.0
Wyse 5470 Thin Client with PCoIP	PX10_wnos	5470_bios.bin	1.5.0
Wyse 5470 AIO Thin Client with ThinOS	X10_wnos	5470AIO_bios.bin	1.6.0
Wyse 5470 AIO Thin Client with PCoIP	PX10_wnos	5470AIO_bios.bin	1.6.0
Wyse 7010 Thin Client with ThinOS (Z10D)	ZD10_wnos	Z10G_bios.bin	3.0U

## Previous version

ThinOS 8.6\_511

## Supported packages

 **NOTE:** From the v8.6\_303 release onwards, there are no updates for Flash Redirection (FR) and TCX packages.

**Table 14. Supported packages**

Platform name	Package versions		
	Horizon v5.1.19052918	RTME v2.8.54007	JVDI 12.6.20091418
Wyse 3040 Thin Client with ThinOS	Supported	Supported	Supported
Wyse 3040 Thin Client with PCoIP	Supported	Supported	Supported
Wyse 5010 Thin Client with ThinOS (D10D)	Supported	Supported	Supported
Wyse 5010 Thin Client with PCoIP (D10DP)	Supported	Supported	Supported
Wyse 5040 AIO Thin Client (5212)	Supported	Supported	Supported
Wyse 5040 AIO Thin Client with PCoIP (5213)	Supported	Supported	Supported
Wyse 5060 Thin Client with ThinOS	Supported	Supported	Supported
Wyse 5060 Thin Client with PCoIP	Supported	Supported	Supported
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

**Table 14. Supported packages**

Platform name	Package versions		
	Horizon v5.1.19052918	RTME v2.8.54007	JVDI 12.6.20091418
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

## Client agent and package versions


- VMware Horizon client v5.1.19052918
- RTME v2.8.54007
- JVDI v12.6.20091418
- Citrix Receiver v14.0.20050800
- Microsoft v10.0 includes support for Windows 10, Windows Server 2016, and Windows Server 2019
- Supports AWS
- Imprivata Agent v6.2 (client-side)

## New and enhanced features

### Central Configuration settings update

Updated the **File Servers/Path** field in central configuration and first boot wizard window. Below listed are the changes in the **File Servers/Path** field:

- The **File Servers/Path** field is updated with **https://** after imaging the thin client or after performing a factory reset.
- If the DHCP scope option is configured with the server address, the **File Servers/Path** field is updated with **https://server address//Wyse**.
- If the DHCP scope option is configured with **ftp://server address**, **http://server address**, or **https://server address**, the **File Servers/Path** field is updated with **ftp://server address/Wyse**, **http://server address/Wyse**, or **https://server address/Wyse** respectively.
- If **ftp://** or **http://** is used in the **File Servers/Path** field, a warning message is displayed. This message is also added in the event log.

 **NOTE:** Dell Technologies recommends using **HTTPS** instead of **FTP** or **HTTP** as it is a secure connection. A warning icon along with a message is displayed on the Broker agent login window when you attempt to connect to an unsecure connection.

## Important notes

For more information about upgrading docking station firmware using ThinOS, see the ThinOS Administrator's Guide at [www.dell.com/support](http://www.dell.com/support).

## Limitations

- VMware Blast—ThinOS does not support dual displays with 4K resolution on Wyse 5060 Thin Clients.
- PCoIP—The following limitations are applicable for Wyse 5060 Thin Clients:
  - Connection to VM without GPU
    - ThinOS does not support dual displays with 4K resolution.

**NOTE:** Dell Technologies recommends that you use the Wyse 5070 Thin Client for 4K optimized VDI graphic performance.

- Citrix virtual apps and desktop 2003/2006—The following limitations are applicable for Citrix virtual apps and desktop 2003/2006:
  - To make legacy graphics work, you must enable Citrix policy.
    - To configure Citrix policy, launch Citrix Studio and go to **Policies > Create Policy**.
    - Search for the particular keyword and follow the on-screen instructions. For example, you can search for the keyword **legacy**.
  - If this policy is not enabled, then user sees choppy patches on the desktop when application or folder are moved over the desktop.

Workaround: Perform either of the following:

- Legacy graphics mode and Optimize for 3D graphics workload with graphics card enabled server.
- Legacy graphics mode and Enable video codec for compression set to full screen with graphics card disabled server.

Known Issues:

- Calculator app is displayed in the background, when you drag the app from one screen to another.
- Images in PPT are displayed distorted.

**NOTE:** These issues occur only with latest Citrix version.

**Table 15. Support matrix**

Broker agent	VDA	Policies
Virtual Apps and Desktop 7 2006	Virtual Apps and Windows 10 1903 Windows 10 1603	Policy must be enabled.
XenDesktop CU6	Virtual Apps and Desktop 7 2003	Policy must be enabled.

- Mobile HotSpot networks—The following limitation is applicable for Mobile HotSpot networks: When the ThinOS thin client is connected to the mobile hotspot, inappropriate results are displayed. The mobile hotspots from iPhone and Xiaomi mobile phones are not recommended.

## Tested environments matrix

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

**Table 16. Tested environment - General components**

Component	Version
Wyse Management Suite	3.1
Imprivata OneSign	7.1
NetScaler	13.0
StoreFront	3.15

**Table 17. Test environment - VDI (continued)**

VDI	Windows 7	Windows 10	Windows Server 2008 R2	Windows Server 2012 R2	Windows Server 2016	Windows Server 2019	APPs
VMware Horizon 8 2006	Not tested	Tested	Not tested	Tested	Tested	Tested	Tested
Citrix Virtual Apps and Desktops 7 2006	Not tested	Tested	Not tested	Tested	Tested	Tested	Tested
Citrix Virtual Apps and	Not tested	Tested	Not tested	Tested	Tested	Tested	Tested

**Table 17. Test environment - VDI**

VDI	Windows 7	Windows 10	Windows Server 2008 R2	Windows Server 2012 R2	Windows Server 2016	Windows Server 2019	APPs
Desktops 7 15 CU6							
Remote Desktop Services (RDS) 2012 R2/2016/2019	Not tested	Not tested	Not tested	Tested	Tested	Tested	Tested
Citrix workspace 1912	Not tested	Not tested	Not tested	Not tested	Tested	Not tested	Tested


\*Only basic connections are tested.

**Table 18. Tested environment - RTME**

Citrix Virtual Apps and Desktops/Citrix Virtual Apps	Operating system	RTME Client	RTME	Skype for Business client	Skype for Business Server
Citrix Virtual Apps and Desktop 7 2003	Windows 10	2.8.54007	2.8	Skype for Business 2016	Skype for Business 2015 or latest
	Windows Server 2016	2.8.54007	2.8	Skype for Business 2016	Skype for Business 2015
	Windows Server 2019	2.8.54007	2.8	Skype for Business 2016	Skype for Business 2015

**Table 19. JVDI 12.6 support matrix**

Platform	Supported	JVDI version
Wyse 3040 Thin Client	Audio and video	12.6
Wyse 5070 Thin Client	Audio and video	12.6
Wyse 5060 Thin Client	Audio and video	12.6
Wyse 5010 Thin Client	Audio only	12.6
Wyse 5040 All-in-One Thin Client	Audio only	12.6

 **NOTE:** JVDI audio support is only for Wyse 5010 and 5040 thin clients.

## Tested peripheral devices for ThinOS 8.6\_606

This section lists the tested peripheral devices for ThinOS 8.6\_606.

**Table 20. Tested peripheral devices for ThinOS 8.6\_606**

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

**Table 20. Tested peripheral devices for ThinOS 8.6\_606**

<b>Product Category</b>	<b>Peripherals</b>	<b>Wyse 3040</b>	<b>Wyse 5070</b>	<b>Wyse 5470 All-in-One</b>	<b>Wyse 5470</b>	<b>Wyse 5060, 5010, and 7010</b>
	USB Headset-SC60-Sennheiser	Tested	Tested	Tested	Tested	Tested
	USB headset Jabra UC Voice 550a MS	Tested	Tested	Tested	Tested	Tested
	USB headset Jabra BIZ 2400 II USB	Tested	Tested	Tested	Tested	Tested
	USB headset Jabra Evolv 65 USB	Tested	Tested	Tested	Tested	Tested
	Analog Headset Sennheiser CX 180	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 Professional Sound Bar (AE515M)	Tested	Tested	Not applicable	Tested	Tested
	Dell USB Sound Bar (AC511M)	Tested	Tested	Not applicable	Tested	Tested
	Dell 2.0 Speaker System - AE215	Not applicable	Not applicable	Tested	Tested	Tested
	Dell Wired 2.1 Speaker System - AE415	Not applicable	Not applicable	Tested	Tested	Tested
	Jabra Evolve 65 MS Stereo - Headset	Not applicable	Not applicable	Tested	Tested	Tested
	Jabra Engage 65 Stereo Headset	Not applicable	Not applicable	Tested	Tested	Tested
	Dell Professional headset (UC150)	Tested	Tested	Not applicable	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 Dual USB-A with Power Pass- Combo Adapter	Not applicable	Not applicable	Tested	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 VGA	Not applicable	Not applicable	Not applicable	Tested	Not applicable

**Table 20. Tested peripheral devices for ThinOS 8.6\_606**

<b>Product Category</b>	<b>Peripherals</b>	<b>Wyse 3040</b>	<b>Wyse 5070</b>	<b>Wyse 5470 All-in-One</b>	<b>Wyse 5470</b>	<b>Wyse 5060, 5010, and 7010</b>
	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
	Seal Shield Silver Seal Waterproof-Keyboard-USB-US-waterproof-white	Not applicable	Not applicable	Tested	Tested	Not applicable
	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

**Table 20. Tested peripheral devices for ThinOS 8.6\_606**

Product Category	Peripherals	Wyse 3040	Wyse 5070	Wyse 5470 All-in-One	Wyse 5470	Wyse 5060, 5010, and 7010
	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
	HP LJ Pro MFP M435	Tested	Tested	Tested	Tested	Tested
	Dell C2660dn Color Laser	Tested	Tested	Tested	Tested	Tested
	Dell B2360d-dn Laser Printer	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	Not Applicable	Tested	Not Applicable	Tested	Not applicable
	micro-SDHC EVO plus	Tested	Tested	Tested	Tested	Tested
	USB Drive-DT50-Kingston 3.0	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
	4k monitor -Dell U4320Q	Tested	Tested	Tested	Tested	Tested
	4k monitor -Dell P2415	Tested	Tested	Tested	Tested	Tested
	5k monitor- Dell U4919DW	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
	2K Monitor-UP3017	Tested	Tested	Tested	Tested	Tested
	2K Monitor-P2414	Tested	Tested	Tested	Tested	Tested
	2K Monitor-U2414H	Tested	Tested	Tested	Tested	Tested
	2K Monitor-Dell P2210	Tested	Tested	Tested	Tested	Tested
	2K Monitor-Dell U2412M	Tested	Tested	Tested	Tested	Tested
	2K Monitor-Dell P2418HT	Tested	Tested	Tested	Not applicable	Tested
	USB ELO Touch Monitor-ELO2201L-ELO Touch Systems 2015	Tested	Tested	Tested	Not applicable	Tested
	E1916H	Tested	Tested	Tested	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



**Table 20. Tested peripheral devices for ThinOS 8.6\_606**

<b>Product Category</b>	<b>Peripherals</b>	<b>Wyse 3040</b>	<b>Wyse 5070</b>	<b>Wyse 5470 All-in-One</b>	<b>Wyse 5470</b>	<b>Wyse 5060, 5010, and 7010</b>
	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
	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

**Table 20. Tested peripheral devices for ThinOS 8.6\_606**

<b>Product Category</b>	<b>Peripherals</b>	<b>Wyse 3040</b>	<b>Wyse 5070</b>	<b>Wyse 5470 All-in-One</b>	<b>Wyse 5470</b>	<b>Wyse 5060, 5010, and 7010</b>
	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
	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

**Table 20. Tested peripheral devices for ThinOS 8.6\_606**

Product Category	Peripherals	Wyse 3040	Wyse 5070	Wyse 5470 All-in-One	Wyse 5470	Wyse 5060, 5010, and 7010
	P2421DC	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
Smart card reader	Dell KB813 Smartcard Keyboard - KB813	Tested	Tested	Tested	Tested	Not applicable
	Dell keyboard KB813t	Tested	Tested	Tested	Tested	Not applicable
	Sun microsystem SCR 3311	Tested	Tested	Tested	Tested	Not applicable
	Cherry SmartTerminal SMART Card Reader - ST-1044U	Tested	Tested	Not applicable	Not applicable	Not applicable
	Cherry SmartTerminal ST-1144 SMART Card Reader - USB 2.0	Tested	Tested	Tested	Tested	Not applicable
	Cherry KC 1000 SC - Keyboard - with Smart Card reader - USB - English - US - black - TAA Compliant - JK-A0104EU-2	Tested	Tested	Tested	Tested	Not applicable
Smart cards	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
	CARD_IDPrime MD 3840 B w/o 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 Alladin 72 K	Tested	Tested	Tested	Tested	Not applicable
Printer	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

## Fixed issues

**Table 21. Fixed issues**

Issue ID	Description
THINOS-2525	Fixed the issue where the <b>Swap dual screens</b> functionality is fixed when using ThinOS 8.6_412 version.
THINOS-2520	Fixed the issue where the credentials of outlook appear on screen when the outlook remote application is launched from Windows 2019 server.
THINOS-2512	Fixed the issue where the Dell Wyse 3040 Thin Client stops responding when switching from a monitor with DisplayPort to a monitor without DisplayPort.
THINOS-2510	Fixed the issue where the MAC address based authentication and EAP-TLS configuration was not successful when using ThinOS 8.6_412 version.
THINOS-2494	Fixed the issue where during the VMware blast session, scrolling functionality of the mouse was triggered when the forward and backward web navigation side mouse buttons were clicked.
THINOS-2491	Fixed the issue where users do not get logged off in roaming session using the <code>AutoSignoff</code> command.
THINOS-2487	Fixed the issue where the <code>AutoSignoff</code> command was working randomly while logging off or disconnecting with the PCoIP desktop using ThinOS 8.6_303 version.

## Known issues

**Table 22. Known issues**

Issue ID	Description	Workaround
THINOXSUS-706	Smartcard authentication option is not available with Blast Protocol in Windows Server 2012 R2 and Windows Server 2016 after locking the user profile.	There is no workaround in this release.
THINOXSUS-367	Manual reboot by pressing the power button is required for ping to work when you use a Dell Docking Station WD19 with Dell Wyse 5470 Thin Client.	There is no workaround in this release.
THINOXSUS-586	Home window is visible in the Citrix session.	There is no workaround in this release.
THINOXSUS-480	Incorrect text is displayed in Dell EULA during first boot wizard when using the Japanese Merlin image.	There is no workaround in this release.
THINOXSUS-431	Traces of ThinOS window border remain while hovering over published apps.	There is no workaround in this release.
THINOXSUS-790	On the Dell U4919DC 5K monitor, the resolution is displayed twice in the resolution dropdown when connected to the Dell Wyse 5070 Thin Client.	There is no workaround in this release.
THINOXSUS-483	Session reconnection fails with VMware Horizon View 7.12 when using the CAC card.	There is no workaround in this release.

# ThinOS 8.6\_511

## Topics:

- [Release summary](#)
- [Compatibility](#)
- [New and enhanced features](#)
- [Important notes](#)
- [INI parameters](#)
- [Fixed issues](#)
- [Known issues](#)

## 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.

**NOTE:** The factory shipped Merlin image for ThinOS version 8.6\_412 fails to establish the PCoIP connection. To resolve this issue, you must upgrade your ThinOS from version 8.6\_412 to 8.6\_511 using the File Server or Wyse Management Suite.

## Version

ThinOS 8.6\_511

## Release date

September 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 v8.6\_303, Wyse 3020 Thin/Zero Client, Wyse 3030 LT Thin Client, Wyse 5010 zero client for Citrix has been deprecated.

**Table 23. Supported platforms**

Platform	Image file name	BIOS file name	BIOS version
Wyse 3040 Thin Client with ThinOS	A10Q_wnos	A10Q_bios.bin	1.2.5


**Table 23. Supported platforms**

Platform	Image file name	BIOS file name	BIOS version
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
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	1.7.1
Wyse 5070 Thin Client with PCoIP	PX10_wnos	X10_bios.bin	1.7.1
Wyse 5470 Thin Client with ThinOS	X10_wnos	5470_bios.bin	1.4.0
Wyse 5470 Thin Client with PCoIP	PX10_wnos	5470_bios.bin	1.4.0
Wyse 5470 AIO Thin Client with ThinOS	X10_wnos	5470AIO_bios.bin	1.5.2
Wyse 5470 AIO Thin Client with PCoIP	PX10_wnos	5470AIO_bios.bin	1.5.2
Wyse 7010 Thin Client with ThinOS (Z10D)	ZD10_wnos	Z10G_bios.bin	3.0U

## Previous versions

ThinOS 8.6\_412 and ThinOS Lite 2.6\_412

## Supported packages

 **NOTE:** From the v8.6\_303 release onwards, there are no updates for Flash Redirection (FR) and TCX packages.

**Table 24. Supported packages**

Platform name	Package versions		
	Horizon v5.1.19052918	RTME v2.8.54007	JVDI 12.6.20091418
Wyse 3040 Thin Client with ThinOS	Supported	Supported	Supported
Wyse 3040 Thin Client with PCoIP	Supported	Supported	Supported
Wyse 5010 Thin Client with ThinOS (D10D)	Supported	Supported	Supported
Wyse 5010 Thin Client with PCoIP (D10DP)	Supported	Supported	Supported
Wyse 5040 AIO Thin Client (5212)	Supported	Supported	Supported
Wyse 5040 AIO Thin Client with PCoIP (5213)	Supported	Supported	Supported

**Table 24. Supported packages**

Platform name	Package versions		
	Horizon v5.1.19052918	RTME v2.8.54007	JVDI 12.6.20091418
Wyse 5060 Thin Client with ThinOS	Supported	Supported	Supported
Wyse 5060 Thin Client with PCoIP	Supported	Supported	Supported
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

## Client agent and package versions

- VMware Horizon client v5.1.19052918
- RTME v2.8.54007
- JVDI v12.6.20091418
- Citrix Receiver v14.0.20050800
- Microsoft v10.0 includes support for Windows 10, Windows Server 2016, and Windows Server 2019
- Supports AWS
- Imprivata Agent v6.2 (client-side)

## New and enhanced features

### Security in RDS Broker agent login and Microsoft Broker agent

A security pop-up window has been added in the RDSH environment which is similar to VMware and RDP protocol, along with a security option in remote connection for Microsoft Broker agent.

### Security update for connection brokers and third-party authentication

Dell Technologies recommends the below options for central configuration:

- Use HTTPS communications instead of FTP or HTTP.
- For HTTPS connection, a certificate is required for more secure connection.
- Ensure that File Server directory access is limited to administrators.
- If you use an FTP connection, a warning message is displayed, recommending to use a user-specific username. This warning message is also added in the event log.
- For connection brokers and third-party authentication applications, a security message is displayed in the sign-on window. This message can be enabled or disabled by using INI parameters.

# 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.
- **Citrix virtual apps and desktop 2003/2006**—The following limitations are applicable for Citrix virtual apps and desktop 2003/2006:
  - To make legacy graphics work , you must enable Citrix policy.
  - If this policy is not enabled then use will see choppy patches on the desktop when application or folder are moved over the desktop.

**Workaround:** Perform either of the following:

  - **Legacy graphics mode** and **Optimize for 3D graphics workload** with graphics card enabled server.
  - **Legacy graphics mode** and Enable video codec for compression set to full screen with graphics card disabled server.

**Known Issues:**

  - Calculator app is displayed in the background, when you drag the app from one screen to another.
  - Images in PPT are displayed distorted.
  - **NOTE:** This issues occur only with latest Citrix version.

**Table 25. Support matrix**

Broker	VDA	Policies
Virtual Apps and Desktop 7 2006	Virtual Apps and Desktop 7 2003 Windows 10 1603 Windows 10 1903	Policy needs to be enabled
Virtual Apps and Desktop 7 2003	Virtual Apps and Windows 10 1903 Windows 10 1603	Policy needs to be enabled
XenDesktop CU4	Virtual Apps and Desktop 7 2003	Policy needs to be enabled

- **Mobile HotSpot networks**—The following limitation is applicable for Mobile HotSpot networks: When the ThinOS thin client is connected to the mobile hotspot, inappropriate results are displayed. Currently, the mobile hotspot from iPhone and Xiaomi mobile phones are not recommended.

## Tested environments matrix

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

**Table 26. Tested environment - General components**

Component	Version
Wyse Management Suite	2.1
Imprivata OneSign	7.1



**Table 26. Tested environment - General components**

Component	Version
NetScaler	12.1
StoreFront	3.15

**Table 27. Test environment - VDI**

VDI	Windows 7	Windows 10	Windows Server 2008 R2	Windows Server 2012 R2	Windows Server 2016	Windows Server 2019	APPs
VMware Horizon 7.12	Not tested	Tested	Not tested	Tested	Tested	Tested	Tested
Citrix Virtual Apps and Desktops 2003	Not tested	Tested	Not tested	Tested	Tested	Tested	Tested
Citrix Virtual Apps and Desktops 2006	Not tested	Tested	Not tested	Tested	Tested	Tested	Tested
Remote Desktop Services (RDS) 2012 R2/2016/2019	Not tested	Not tested	Not tested	Tested	Tested	Tested	Tested
Citrix workspace 1912	Not tested	Not tested	Not tested	Not tested	Tested	Not tested	Tested

\*Only basic connections are tested.

**Table 28. Tested environment - RTME**

Citrix Virtual Apps and Desktops/Citrix Virtual Apps	Operating system	RTME Client	RTME	Skype for Business client	Skype for Business Server
Citrix Virtual Apps and Desktop 7 2003	Windows 10	2.8.54007	2. 8	Skype for Business 2016	Skype for Business 2015 or latest
	Windows Server 2016	2.8.54007	2. 8	Skype for Business 2016	Skype for Business 2015
	Windows Server 2019	2.8.54007	2. 8	Skype for Business 2016	Skype for Business 2015

**Table 29. JVDI 12.6 support matrix**

Platform	Supported	JVDI version
Wyse 3040 Thin Client	Audio and video	12.6
Wyse 5070 Thin Client	Audio and video	12.6
Wyse 5060 Thin Client	Audio and video	12.6
Wyse 5010 Thin Client	Audio only	12.6
Wyse 5040 All-in-One Thin Client	Audio only	12.6

**NOTE:** JVDI audio support is only for Wyse 5010 and 5040 Thin Clients.

## Tested peripheral devices for ThinOS 8.6\_511

This section lists the tested peripheral devices for ThinOS 8.6\_511.

**Table 30. Tested peripheral devices for ThinOS 8.6\_511**

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 UC Voice 550a MS	Tested	Tested	Tested	Tested	Tested
	USB headset Jabra BIZ 2400 II USB	Tested	Tested	Tested	Tested	Tested
	USB headset Jabra Evolv 65 USB	Tested	Tested	Tested	Tested	Tested
	Analog Headset Sennheiser CX 180	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 - 935-15-503-185 - 935-15-503-185	Not applicable	Tested	Not applicable	Not applicable	Not applicable
	Dell 2.0 Speaker System - AE215	Not applicable	Not applicable	Tested	Tested	Not applicable
	Dell Wired 2.1 Speaker System - AE415	Not applicable	Not applicable	Tested	Tested	Not applicable
	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

**Table 30. Tested peripheral devices for ThinOS 8.6\_511**

<b>Product Category</b>	<b>Peripherals</b>	<b>Wyse 3040</b>	<b>Wyse 5070</b>	<b>Wyse 5470 All-in-One</b>	<b>Wyse 5470</b>	<b>Wyse 5060, 5010, and 7010</b>
	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	Tested
	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-Keyboard-USB-US-waterproof-white	Tested	Tested	Not applicable	Not applicable	Not applicable
	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

**Table 30. Tested peripheral devices for ThinOS 8.6\_511**

Product Category	Peripherals	Wyse 3040	Wyse 5070	Wyse 5470 All-in-One	Wyse 5470	Wyse 5060, 5010, and 7010
	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
	HP LJ Pro MFP M435	Tested	Tested	Tested	Tested	Tested
	Dell C2660dn Color Laser	Tested	Tested	Tested	Tested	Tested
	Dell B2360d-dn Laser Printer	Tested	Tested	Tested	Tested	Tested
CD-ROM	USB CD-ROM-DVDRW8X-U-Iomega	Tested	Tested	Tested	Tested	Tested
USB	USB Drive-Cruzer Blade-SanDisk	Tested	Tested	Tested	Tested	Tested
	C-Type USB Drive-USB 3.0-SanDisk	Not Applicable	Tested	Not Applicable	Tested	Not applicable
	micro-SDHC EVO plus	Tested	Tested	Tested	Tested	Tested
	USB Drive-DT50-Kingston 3.0	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
	4k monitor -Dell U4320Q	Tested	Tested	Tested	Tested	Tested
	4k monitor -Dell P2415	Tested	Tested	Tested	Tested	Tested
	5k monitor- Dell U4919DW	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
	2K Monitor-UP3017	Tested	Tested	Tested	Tested	Tested

**Table 30. Tested peripheral devices for ThinOS 8.6\_511**

<b>Product Category</b>	<b>Peripherals</b>	<b>Wyse 3040</b>	<b>Wyse 5070</b>	<b>Wyse 5470 All-in-One</b>	<b>Wyse 5470</b>	<b>Wyse 5060, 5010, and 7010</b>
	2K Monitor-P2414	Tested	Tested	Tested	Tested	Tested
	2K Monitor-U2414H	Tested	Tested	Tested	Tested	Tested
	2K Monitor-Dell P2210	Tested	Tested	Tested	Tested	Tested
	2K Monitor-Dell U2412M	Tested	Tested	Tested	Tested	Tested
	2K Monitor-Dell P2418HT	Tested	Tested	Tested	Not applicable	Tested
	USB ELO Touch Monitor-ELO2201L-ELO Touch Systems 2015	Tested	Tested	Tested	Not applicable	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

**Table 30. Tested peripheral devices for ThinOS 8.6\_511**

<b>Product Category</b>	<b>Peripherals</b>	<b>Wyse 3040</b>	<b>Wyse 5070</b>	<b>Wyse 5470 All-in-One</b>	<b>Wyse 5470</b>	<b>Wyse 5060, 5010, and 7010</b>
	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
	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

**Table 30. Tested peripheral devices for ThinOS 8.6\_511**

<b>Product Category</b>	<b>Peripherals</b>	<b>Wyse 3040</b>	<b>Wyse 5070</b>	<b>Wyse 5470 All-in-One</b>	<b>Wyse 5470</b>	<b>Wyse 5060, 5010, and 7010</b>
	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
	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
	U4919	Not applicable	Tested	Not applicable	Not applicable	Not applicable
Speech Mic	Olympus DirectRec DR-1200	Tested	Tested	Tested	Tested	Tested
Docking station	Dell Dock - WD19-C	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 reader	Dell KB813 Smartcard Keyboard - KB813	Tested	Tested	Tested	Tested	Not applicable
	Dell keyboard KB813t	Tested	Tested	Tested	Tested	Not applicable

**Table 30. Tested peripheral devices for ThinOS 8.6\_511**

<b>Product Category</b>	<b>Peripherals</b>	<b>Wyse 3040</b>	<b>Wyse 5070</b>	<b>Wyse 5470 All-in-One</b>	<b>Wyse 5470</b>	<b>Wyse 5060, 5010, and 7010</b>
	Sun microsystem SCR 3311	Tested	Tested	Tested	Tested	Not applicable
	Cherry SmartTerminal SMART Card Reader - ST-1044U	Tested	Tested	Not applicable	Not applicable	Not applicable
	Cherry SmartTerminal ST-1144 SMART Card Reader - USB 2.0	Tested	Tested	Tested	Tested	Not applicable
	CHERRY KC 1000 SC - Keyboard - with Smart Card reader - USB - English - US - black - TAA Compliant - JK-A0104EU-2	Tested	Tested	Tested	Tested	Not applicable
Smart cards	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
	CARD_IDPrime MD 3840 B w/o 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 Alladin 72 K	Tested	Tested	Tested	Tested	Not applicable
CAC smart cards	Oberthur Cosmo V8	Tested	Tested	Tested	Tested	Not applicable
	Oberthur IDOne 5.5	Tested	Tested	Tested	Tested	Not applicable
	G&D SCE 7.0 (T=0)	Tested	Tested	Tested	Tested	Not applicable
	G&D SCE 7.0 (C1150)	Tested	Tested	Tested	Tested	Not applicable
	G&D SCE 7.0 (PIV)	Tested	Tested	Tested	Tested	Not applicable
	G&D SCE 3.2	Tested	Tested	Tested	Tested	Not applicable
	Gemalto TOPDLGX4	Tested	Tested	Tested	Tested	Not applicable
	G&D SCE 7.0 (BETA)	Tested	Tested	Tested	Tested	Not applicable
	Gemalto DLGX4 (BETA)	Tested	Tested	Tested	Tested	Not applicable



**Table 30. Tested peripheral devices for ThinOS 8.6\_511**

Product Category	Peripherals	Wyse 3040	Wyse 5070	Wyse 5470 All-in-One	Wyse 5470	Wyse 5060, 5010, and 7010
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:

**i** **NOTE:** Every INI parameter is associated with a parent INI parameter. Use these INI parameters along with the corresponding parent INI parameters. For more information about the newly added INI parameters, see the *Dell Wyse ThinOS 8.6 INI Reference Guide* at [www.dell.com/support](http://www.dell.com/support).

**Table 31. INI parameters**

INI parameters	Description
SessionConfig=RDP [desktopmode={fullscreen, window}]	This parameter is only available for the RDP desktops that are published in the VMware Broker agent. The default is fullscreen mode for an RDP desktop.
SignOn={yes, no, NTLM} [EnableMessage={yes, no}]	EnableMessage addresses the vulnerability issue- PSRC-12979. It is used to display the security warning message on the signon window based on the FileServer path. The default is yes. A warning message is displayed on top of the signon window when FTP/HTTP is configured on the FileServer path otherwise no message is displayed.
Device=Wireless [WlanFnKeyDisable={0,1}]	The default value is 0. This parameter is used to disable the Fn+PrtScr key in a wireless connection. It is only available for Wyse 5470 Mobile Thin Client.
[PowerFnKeyDisable={0,1}]	The default value is 0. This parameter is used to disable the Fn+Insert key. It is only available for Wyse 5470 Mobile Thin Client.
[ClassicModeAppsEnable={0,1}]	The default value is 0. This parameter is used to display the Published applications which has the Keyword Mandatory property set. It is only available for the Citrix Broker agent in classic mode.
Device=Wireless [DeleteWirelessProfile={0,1}]	The default value is 0. This parameter is used to delete the specified wireless profile from the NVRAM. For example- device=wireless SSID=ThinOS DeleteWirelessProfile=yes will delete the ThinOS SSID from the NVRAM if configured.
ConnectionBroker={default, VMware, Microsoft, Quest, AWS} [EnableAWSREGCode={yes,no}]	This option enables or disables the ability to change the registration code for connection to AWS. If the value is set to yes, you can modify the registration code for connecting to AWS by the logon window. If set to no, the registration code field will be disabled and if this INI is not defined then the broker server or registration code can be entered manually from the GUI.

## Fixed issues

**Table 32. Fixed issues**

Issue ID	Description
THINOS-2505	Fixed the issue where the Blast main screen application switches display after reconnection.

**Table 32. Fixed issues**

Issue ID	Description
THINOS-2500	Fixed the issue where the wireless profile cannot be deleted from NVRAM through INI.
THINOS-2498	Fixed the issue where the Wyse ThinOS stops responding while accessing the Citrix VDI.
THINOS-2497	Fixed the issue where the key sequence <b>Ctrl+Alt+Left=No</b> does not work when <b>Manualoverride=Yes</b> is used.
THINOS-2496	Fixed the issue where the Keyword Mandatory Citrix Application Properties fail in the 8.6_412 version.
THINOS-2492	Fixed the issue where trap errors occur while using RDP session on WLAN.
THINOS-2485	Fixed the AWS time-out issue in ThinOS VDI mode.
THINOS-2484	Fixed the issue where the Equifax root certificate expires on June 2020 and does not auto renew automatically.
THINOS-2483	Fixed the issue where the audio changes to other available audio outputs when the Thin Client resumes from the power-saving mode.
THINOS-2482	Fixed the issue where the Deny policy set does not work in a Citrix Broker agent session.
THINOS-2475	Fixed the issue where after disconnecting the VGA cable during a VMware session two displays appear in the desktop display settings.
THINOS-2472	Fixed the issue where the key combination <b>Fn+Insert</b> powers off the Thin Client.
THINOS-2469	Fixed the issue where the key combination <b>Fn+PrtScr</b> does not get disabled.
THINOS-2468	Fixed the issue where a variable cannot be used for Subject Alternative Name   SCEP   WTOS.
THINOS-2467	Fixed the issue where there is no audio output from the display port when the Dell U4320Q monitor with 4k resolution is connected.
THINOS-2466	Fixed the issue where the Giesecke & Devrient FIPS 201 SCE CAC 7.0 cards do not work with omnikey or cherry keyboard readers.
THINOS-2464	Fixed the issue where the Wyse 5040 All-in-One Thin Client recognitions are reversed after updating to ThinOS 8.6_303.
THINOS-2461	Fixed the issue where manual override does not retain when a group is changed.
THINOS-2457	Fixed the dual monitor issue with Wyse 5040 All-in-One Thin Client.
THINOS-2455	Fixed the issue where VDI session shows artifacts on Windows Server 2008 R2 desktop.
THINOS-2453	Fixed the issue where VDI session shows artifacts on Windows 7 desktop.
THINOS-2450	Fixed the issue where the microphone stops working arbitrarily when connected to AWS.
THINOS-2426	Fixed the issue where the cherry keyboard smart card reader does not recognize the Giesecke & Devrient SCE 7.0 card.

**Table 32. Fixed issues**

Issue ID	Description
THINOS-2407	Fixed the issue where the auto signoff fails while using PCoIP through the Wyse Management Suite.
THINOS-2332	Fixed the issue where the auto signoff fails while using PCoIP after upgrading to ThinOS 8.6_206.
THINOS-2326	Fixed the issue where users do not get logged off in roaming session.
THINOS-2296	Fixed the issue where the ThinOS client disconnects while in roaming mode.
THINOS-2224	Fixed the issue where the client audio drops and the client stops responding.
THINOS-2215	Fixed the issue where the RDP session disconnects while using the Micro-SIP application.

## Known issues

**Table 33. Known issues**

Issue ID	Description	Workaround
THINOXSUS-706	Smartcard authentication option is not available with Blast Protocol in Windows Server 2012 R2 and Windows Server 2016 after locking the user profile.	There is no workaround in this release.
THINOXSUS-367	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.
THINOXSUS-586	Home window is visible in the Citrix session.	There is no workaround in this release.
THINOXSUS-480	Incorrect text is displayed in Dell EULA during first boot wizard when using the Japanese Merlin image.	There is no workaround in this release.
THINOXSUS-431	Traces of ThinOS window border remain while hovering over published apps.	There is no workaround in this release.
THINOXSUS-790	Dell U4919DC monitor with 5k resolution is displayed twice in the resolution dropdown when connected to the Wyse 5070 Thin Client.	There is no workaround in this release.
THINOXSUS-786	FTP security window is not displayed while navigating from the General tab to WDA and back to General tab for FTP configuration.	There is no workaround in this release.
THINOXSUS-780	Trap occurs while launching the View PCoIP session.	There is no workaround in this release.
THINOXSUS-377	Touch screen monitor fails to work with Wyse 5470 AIO Thin Client when the display is extended.	There is no workaround in this release.
THINOXSUS-483	Session reconnection fails with VMware Horizon View 7.12 when using the CAC card.	There is no workaround in this release.

# ThinOS 8.6\_412 and ThinOS Lite 2.6\_412

## Topics:

- [Release summary](#)
- [Compatibility](#)
- [New and enhanced features](#)
- [Important notes](#)
- [INI parameters](#)
- [Fixed issues](#)
- [Known issues](#)

## 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\_412 and ThinOS Lite 2.6\_412

## Release date

July 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 34. 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


**Table 34. Supported platforms**

Platform	Image file name	BIOS file name	BIOS version
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
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	1.5.0
Wyse 5070 Thin Client with PCoIP	PX10_wnos	X10_bios.bin	1.5.0
Wyse 5470 Thin Client with ThinOS	X10_wnos	5470_bios.bin	1.3.1
Wyse 5470 Thin Client with PCoIP	PX10_wnos	5470_bios.bin	1.3.1
Wyse 5470 AIO Thin Client with ThinOS	X10_wnos	5470AIO_bios.bin	1.5.2
Wyse 5470 AIO Thin Client with PCoIP	PX10_wnos	5470AIO_bios.bin	1.5.2
Wyse 7010 Thin Client with ThinOS (Z10D)	ZD10_wnos	Z10G_bios.bin	3.0U

## Previous versions

ThinOS 8.6\_303 and ThinOS Lite 2.6\_303

## Supported packages

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

**Table 35. Supported packages**

**Table 35. 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 PCoIP	Supported	Supported	Supported
Wyse 3040 Thin Client with ThinOS	Supported	Supported	Supported
Wyse 3040 Thin Client with PCoIP	Supported	Supported	Supported
Wyse 5010 Thin Client with ThinOS (D10D)	Supported	Supported	Supported
Wyse 5010 Thin Client with PCoIP (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 PCoIP (5213)	Supported	Supported	Supported
Wyse 5060 Thin Client with ThinOS	Supported	Supported	Supported
Wyse 5060 Thin Client with PCoIP	Supported	Supported	Supported
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

### ENERGY STAR 8.0 compliance

ThinOS and ThinOS Lite-based devices like 5470 mobile, 5070, 3040, 5470 All in One Thin Client are ENERGY STAR 8.0 compliant.

### Network icons added to Zero desktop

The following network icons are added to the taskbar on the Zero desktop:

- Wireless—
- Wired—
- Default—

The respective icon is displayed based on the connection type and if there is no connection, the default icon is displayed. 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.

## Security warning for anonymous user

Dell recommends the below options for center configuration:

- Use HTTPS communications instead of FTP or HTTP.
- For HTTPS connection, a certificate is required for more secure connection.
- Ensure that File Server directory access is limited to administrators.
- If you use FTP with anonymous user, a message is displayed. Same message is displayed in the event log also.

## Supports End User License Agreement

ThinOS 8.6\_412 supports End User License Agreement (EULA) from this release onwards. It appears before the First Boot Wizard screen.

## Mouse cursor accuracy

Mouse cursor speed is increased in this release. Mouse speed can be configured from INI and locally at client from 1 to 11 speed. However, in Wyse Management Suite this new speed can be configured by using advanced INI only.

## Supports South Asia smart card and middleware

ThinOS 8.6\_412 supports Cryptovision smart card driver cv\_act\_scinterface\_7.1.5 from this release.

## Supports RDS 2019

ThinOS 8.6\_412 supports Remote Desktop Session Host 2019 for Windows Server 2019 from this release onwards.

## Support U49 monitors and bloomberg keyboard with Horizon Broker connection

ThinOS 8.6\_412 supports 5k resolution for Dell U49 series monitors, and bloomberg keyboard for VMware Horizon Client using USB redirection.

## New INI parameters available for Teradici cloud access

You can use the INI parameter `TeradiciCloudAccess` to use Teradici cloud access. This parameter is added for INI **ConnectionBroker** to set Teradici as the broker. It is only available with ThinOS 8.6\_412 PCoIP build.

## Updated cipher suits

Updated the cipher suits. Below ciphers are added in this release:

- 0x02F TLS\_ECDHE\_RSA\_WITH\_AES\_128\_GCM\_SHA256
- 0x030 TLS\_ECDHE\_RSA\_WITH\_AES\_256\_GCM\_SHA384
- 0x023 TLS\_ECDHE\_ECDSA\_WITH\_AES\_128\_CBC\_SHA256
- 0x024 TLS\_ECDHE\_ECDSA\_WITH\_AES\_256\_CBC\_SHA384
- 0x009E TLS\_DHE\_RSA\_WITH\_AES\_128\_GCM\_SHA256
- 0x009F TLS\_DHE\_RSA\_WITH\_AES\_256\_GCM\_SHA384

## New system variables for ethernet and wireless MAC addresses

Two new INI parameters are supported to use the variables \$EMAC.ini and \$WVAC.ini, to check if the appropriate <mac\_id>.ini files are loaded. You can add the \$EMAC.ini/\$WVAC.INI in the INI file which is placed in the relevant <mac\_id>.ini files. The https location of these INI files is /inc/folder.

## Supports secure RDP

The default behavior should not allow connection to server when ThinOS RDP client failed to verify server certificate. If user INI is set to securitymode=high then user will not be able to connect to RDP VM. If user INI is set to securitymode=Warning then user will get the security pop up but will be able to connect to RDP. If user ini is set to securitymode=Low then user will not get any security pop up and will be able to connect to RDP.

## 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.
- **Citrix virtual apps and desktop 2003**—The following limitations are applicable for Citrix virtual apps and desktop 2003:
  - To make legacy graphics work , you must enable Citrix policy.
  - If this policy is not enabled then use will see choppy patches on the desktop when application or folder are moved over the desktop.

**Workaround:** Perform either of the following:

- **Legacy graphics mode** and **Optimize for 3D graphics workload** with graphics card enabled server.
- **Legacy graphics mode** and Enable video codec for compression set to full screen with graphics card disabled server.

**Known Issues:**

- Calculator app is displayed in the background, when you drag the app from one screen to another.
- Images in PPT are displayed distorted.

**NOTE:** This issues occur only with latest Citrix version.

**Table 36. Support matrix**

Broker	VDA	Policies
Virtual apps and desktop 7 2003	Virtual apps and desktop 7 2003 Windows 10 1603 Windows 10 1903	Policy needs to be enabled
Xen desktop CU4	Virtual apps and desktop 7 2003 : Windows 10 1603	Policy needs to be enabled
Xen desktop CU4	Virtual apps and desktop 7 2003	Policy needs to be enabled

- **Mobile HotSpot networks**—The following limitation is applicable for Mobile HotSpot networks:



When the ThinOS thin client is connected to the mobile hotspot, inappropriate results are displayed. Currently, the mobile hotspot from iPhone and Xiaomi mobile phones are not recommended.

## Tested environments matrix

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

**Table 37. Tested environment - General components**

Component	Version
Wyse Management Suite	2.0
Imprivata OneSign	7.1
NetScaler	12.1
StoreFront	3.15

**Table 38. Test environment - VDI**

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

\*Only basic connections are tested.

**Table 39. Tested environment - RTME**

Citrix Virtual Apps and Desktops/Citrix Virtual Apps	Operating system	RTME Client	RTME	Skype for Business client	Skype for Business Server
Citrix virtual apps and desktop 7 2003	Windows 10	2.8.54007	2. 8	Skype for Business 2016	Skype for Business 2015 or latest
	Windows Server 2016	2.8.54007	2. 8	Skype for Business 2016	Skype for Business 2015
	Windows Server 2019	2.8.54007	2. 8	Skype for Business 2016	Skype for Business 2015

## Tested peripheral devices for ThinOS 8.6\_412 and ThinOS Lite 2.6\_412

This section lists the tested peripheral devices for ThinOS 8.6\_412 and ThinOS Lite 2.6\_412.

**Table 40. Tested peripheral devices for ThinOS 8.6\_412 and ThinOS Lite 2.6\_412**

**Table 40. Tested peripheral devices for ThinOS 8.6\_412 and ThinOS Lite 2.6\_412**

<b>Product Category</b>	<b>Peripherals</b>	<b>Wyse 3040</b>	<b>Wyse 5070</b>	<b>Wyse 5470 All-in-One</b>	<b>Wyse 5470</b>	<b>Wyse 5060, 5010, and 7010</b>
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
	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

**Table 40. Tested peripheral devices for ThinOS 8.6\_412 and ThinOS Lite 2.6\_412**

<b>Product Category</b>	<b>Peripherals</b>	<b>Wyse 3040</b>	<b>Wyse 5070</b>	<b>Wyse 5470 All-in-One</b>	<b>Wyse 5470</b>	<b>Wyse 5060, 5010, and 7010</b>
	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-Keyboard-USB-US-waterproof-white	Tested	Tested	Not applicable	Not applicable	Not applicable
	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

**Table 40. Tested peripheral devices for ThinOS 8.6\_412 and ThinOS Lite 2.6\_412**

Product Category	Peripherals	Wyse 3040	Wyse 5070	Wyse 5470 All-in-One	Wyse 5470	Wyse 5060, 5010, and 7010
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
	2K Monitor-U2414H	Tested	Tested	Tested	Tested	Tested
	USB ELO Touch Monitor-ELO2201L-ELO ET2201L-2UWA-0-MT-GY-G	Tested	Tested	Tested	Tested	Tested

**Table 40. Tested peripheral devices for ThinOS 8.6\_412 and ThinOS Lite 2.6\_412**

<b>Product Category</b>	<b>Peripherals</b>	<b>Wyse 3040</b>	<b>Wyse 5070</b>	<b>Wyse 5470 All-in-One</b>	<b>Wyse 5470</b>	<b>Wyse 5060, 5010, and 7010</b>
	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

**Table 40. Tested peripheral devices for ThinOS 8.6\_412 and ThinOS Lite 2.6\_412**

<b>Product Category</b>	<b>Peripherals</b>	<b>Wyse 3040</b>	<b>Wyse 5070</b>	<b>Wyse 5470 All-in-One</b>	<b>Wyse 5470</b>	<b>Wyse 5060, 5010, and 7010</b>
	P2418D	Tested	Not applicable	Not applicable	Not applicable	Not applicable
	P2418HT	Tested	Tested	Tested	Not applicable	Not applicable
	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

**Table 40. Tested peripheral devices for ThinOS 8.6\_412 and ThinOS Lite 2.6\_412**

<b>Product Category</b>	<b>Peripherals</b>	<b>Wyse 3040</b>	<b>Wyse 5070</b>	<b>Wyse 5470 All-in-One</b>	<b>Wyse 5470</b>	<b>Wyse 5060, 5010, and 7010</b>
	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
	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

**Table 40. Tested peripheral devices for ThinOS 8.6\_412 and ThinOS Lite 2.6\_412**

Product Category	Peripherals	Wyse 3040	Wyse 5070	Wyse 5470 All-in-One	Wyse 5470	Wyse 5060, 5010, and 7010
	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 reader	Dell KB813 Smartcard Keyboard - KB813	Tested	Tested	Tested	Tested	Not applicable
	Dell keyboard KB813t	Tested	Tested	Tested	Tested	Not applicable
	Sun microsystem SCR 3311	Tested	Tested	Tested	Tested	Not applicable
	Cherry SmartTerminal SMART Card Reader - ST-1044U	Tested	Tested	Tested	Tested	Not applicable
	Cherry SmartTerminal ST-1144 SMART Card Reader - USB 2.0	Tested	Tested	Tested	Tested	Not applicable
	CHERRY KC 1000 SC - Keyboard - with Smart Card reader - USB - English - US - black - TAA Compliant - JK-A0104EU-2	Tested	Tested	Tested	Tested	Not applicable
Smart cards	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
	CARD_IDPrime MD 3840 B w/o 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 Alladin 72 K	Tested	Tested	Tested	Tested	Not applicable
CAC smart cards	Oberthur Cosmo V8	Tested	Tested	Tested	Tested	Not applicable



**Table 40. Tested peripheral devices for ThinOS 8.6\_412 and ThinOS Lite 2.6\_412**

Product Category	Peripherals	Wyse 3040	Wyse 5070	Wyse 5470 All-in-One	Wyse 5470	Wyse 5060, 5010, and 7010
	Oberthur IDOne 5.5	Tested	Tested	Tested	Tested	Not applicable
	G&D SCE 7.0 (T=0)	Tested	Tested	Tested	Tested	Not applicable
	G&D SCE 7.0 (C1150)	Tested	Tested	Tested	Tested	Not applicable
	G&D SCE 7.0 (PIV)	Tested	Tested	Tested	Tested	Not applicable
	G&D SCE 3.2	Tested	Tested	Tested	Tested	Not applicable
	Gemalto TOPDLGX4	Tested	Tested	Tested	Tested	Not applicable
	G&D SCE 7.0 (BETA)	Tested	Tested	Tested	Tested	Not applicable
	Gemalto DLGX4 (BETA)	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 41. INI parameters**

INI parameters	Description
Device=mouse [Speed={1-11}] [Swap={yes, no}] [FlipFlopWheel={yes, no}]	The speed parameter is used to configure the speed of the moving mouse. 1 is the slowest, and 11 is the fastest. The default value is 6. This parameter replaces the MouseSpeed parameter.  If the option Swap is set to yes, the right button is set as the primary button. The default value is no.  If the option FlipFlopWheel is set to yes, the mouse scroll wheel is inverted. The default value is no.
[MultiVDISupport= {yes, no}]	This parameter enables multi VDI Support that allows simultaneous login for Blast and ICA published desktops (if configured) when broker type is VMware View. The default value in BIOS is set to no.
[BatteryScreenSaver={0}]	This parameter disables screensaver during Battery Mode. This parameter is applicable to Wyse 5470 Thin Client.

**Table 41. INI parameters**

INI parameters	Description
[ConnectionBroker = TeradiciCloudAccess]	New value TeradiciCloudAccess is added for INI ConnectionBroker to set Teradici as the broker.  TeradiciCloudAccess is the Teradici broker, and it is only available with the PColP build.
[Swap={no, yes}]	The default value is no. The Yes or no option is used with older ThinOS 7.x builds to swap dual monitors when <b>Mainscreen</b> is set as 1 or 2. Swap=yes puts monitor 2 on the left, or on top of monitor 1 according to the orientation.
[Include=<\$mac.ini file or {username}.ini file>]	<\$MAC.ini> loads /wnos/inc/mac-address.ini. <\$EMAC.ini> loads /wnos/inc/<ethernet 1 interface mac>.ini <\$WMAC.ini> loads /wnos/inc/<wireless interface mac>.ini  <b>i</b> <b>NOTE:</b> The file name does not include the symbol : in the MAC address. See also the Exit parameter for information on how to stop the Include parameter. <{username}.ini> Loads /wnos/inc/ {username}-address.ini.  The file name does not include the symbol: in the {username} address. See also the Exit parameter for information on how to stop the Include parameter.

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

## Fixed issues

**Table 42. Fixed issues**

Issue ID	Description
THINOS-2443	Resolved the issue where Sony digital camera DSC-W810 fails to redirect into the PColP session when you turn on the camera later and connect to the active PColP session.
THINOS-2442	Resolved the issue where the Sony digital camera DSC-W810 does not continuously get redirected to the PColP session.
THINOS-2441	Resolved an issue where an error is displayed when you connect the UAG from ThinOS 8.6_303, with or without smart card.
THINOS-2440	Resolved the issue where a ThinOS 8.6-based thin client reboot, when you change the WMS group token in INI.
THINOS-2438	Resolved the issue where WMS message does not display client's time zone settings.
THINOS-2437	Resolved the issue where the User Sign On Window is displayed during multiple Tap in or Tap out, and does not go away.
THINOS-2433, THINOS-2400	Resolved the issue where the integrated mic fails to record after you upgrade to ThinOS 8.6_206.
THINOS-2423	Resolved the issue where the Keyboard does not give multiple inputs, when you press two keys together for a second. This issue is observed only on PColP Thin clients or protocol.
THINOS-2420	Resolved an issue where VMware UAG Server using smart card login fails when you upgrade to ThinOS8.6_206.

**Table 42. Fixed issues**

Issue ID	Description
THINOS-2411	Resolved the issue where an INI parameter is required for Wyse 5470 to disable the screen saver for Battery Mode.
THINOS-2410	Resolved the issue where the mouse movement does not follow the expected direction.
THINOS-2408	Resolved the issue where mouse cursor focus is not working as expected. This issue is observed only in the Japanese version of the firmware.
THINOS-2402	Resolved the issue where the unlock option is disabled in smart card self-service option.
THINOS-2390	Resolved the issue where the session connection got timed out while authentication.
THINOS-2387	Resolved the issue where ThinOS 8.6 device drops connection when you try to connect to Amazon WorkSpace in stopped state.
THINOS-2376	Resolved the issue where session Reliability warning dialog box is displayed.
THINOS-2363	Resolved the issue where a nontouch monitor is displayed as a touch enabled monitor, in the View RDP sessions.
THINOS-2359	Resolved the issue where SCEP displays an error when ThinOS is set to German Language.
THINOS-2356	Resolved the issue where the mouse tracking is off when ELO 1523 L is calibrated on 8.6_028 or 8.6_206.
THINOS-2339	Resolved the issue where you are unable to authenticate using smart card.
THINOS-2307	Resolved the issue where multiple VDI brokers are not supported when you upgrade to ThinOS8.6_206.
THINOS-2205	Resolved the issue where ThinOS Taskbar disappears when you remove a display from the multimonitor setup in a VMware Session.
THINOS-2203	Resolved the issue where multiple direct RDP connections configured in ThinOS are not working properly.
THINOS-2196	Resolved the issue when the correct domain is not auto that is selected when you enroll for a new Imprivata badge.
THINOS-2091	Resolved the issue where a black rectangle is displayed when accessing an application in Citrix.
THINOS-1851	Resolved the issue where Wyse 3040 fails to recognize the ukey smart card.
THINOS-1621	Resolved the issue where RDP session uses only RC4 algorithm when AES is configured.

## Known issues

**Table 43. Known issues**

Issue ID	Description	Workaround
THINOXSUS-467	Graphics issue is observed in Citrix 2008 and 2012 published desktops, when you	There is no workaround in this release.

**Table 43. Known issues**

Issue ID	Description	Workaround
	play a video in the background and drag the window.	
THINOXSUS-454	A broken mouse cursor symbol is observed in VMware blast or PCoIP session in span mode.	There is no workaround in this release.
THINOXSUS-431	Traces of ThinOS windows border remain while hovering over published applications.	There is no workaround in this release.
THINOXSUS-296	A black patch is displayed in the mouse pointer and mouse loading in blast session.	There is no workaround in this release.
THINOXSUS-436	The display resolution 1440X900 appears twice under the Resolution tab with P2016 monitor.	There is no workaround in this release.
THINOXSUS-424	A Trusted Platform Module Seal data fail is observed when TPM is off or disabled in the event log.	There is no workaround in this release.
THINOXSUS-318	When you click windows start button, start window is not displayed.	There is no workaround in this release.
THINOXSUS-399	The clipboard image is not getting pasted in the Paint application of Citrix Broker agent, in both published and inside session.	There is no workaround in this release.
THINOXSUS-444	Warning window is displayed on RDSH server when you sign off after closing all the published applications.	There is no workaround in this release.
THINOXSUS-367	Ping functionality is not working when you connect the WD19 Dock to client.	There is no workaround in this release.
THINOXSUS-428	Half screen is displayed on the external monitor as auto resize is not working on 5470 mobile device.	There is no workaround in this release.
THINOXSUS-462	The task bar is not appearing properly in both monitors.	There is no workaround in this release.
THINOXSUS-437	The display of the monitor is unavailable when you use span mode with Docker on 5470 mobile client.	There is no workaround in this release.
THINOXSUS-306	Lock screen is displayed in the secondary monitor instead of the primary monitor.	There is no workaround in this release.
THINOXSUS-435	Unable to synchronize Num Lock in Blast session.	There is no workaround in this release.
THINOXSUS-362	Unable to record and play Bluetooth audio in the audio tab.	There is no workaround in this release.
THINOXSUS-369	When you rotate the display to left or right at 90 degrees with launched session, the system stops responding.	There is no workaround in this release.
THINOXSUS-345	When you disconnect and reconnect type C cable, the task bar is displayed in the secondary monitor, instead of the primary monitor.	There is no workaround in this release.

**Table 43. Known issues (continued)**

<b>Issue ID</b>	<b>Description</b>	<b>Workaround</b>
THINOXSUS-304	The images in PPT are displayed distorted.	There is no workaround in this release.
THINOXSUS-441	Keyboard sequence is not working in Citrix server using Wyse Management Suit.	There is no workaround in this release.
THINOXSUS-457	The Alt+Tab is not working accordingly when tested in Citrix Broker agent using Wyse Management Suit.	There is no workaround in this release.
THINOXSUS-440	OneSign logs off when INI is passed as "taptolock=0 suspendaction=0"	There is no workaround in this release.
THINOXSUS-439	Unable to validate fingerprint authentication when you use it as primary authentication factor.	There is no workaround in this release.
THINOXSUS-479	When you connect the U4320Q monitor with 4K resolution, there is no audio from the display port.	There is no workaround in this release.
THINOXSUS-482	An error message is displayed, when you use a CAC-based smart card, and reconnect to session after closing or disconnecting using the Close option.	There is no workaround in this release.
THINOXSUS-483	Session reconnects to a Server 2019 Desktop, or App with smart card fails with Horizon View 7.12.	There is no workaround in this release.

# ThinOS 8.6\_303 and ThinOS Lite 2.6\_303

## Topics:

- [Release summary](#)
- [Compatibility](#)
- [New and enhanced features](#)
- [Important notes](#)
- [INI parameters](#)
- [Fixed issues](#)
- [Known issues](#)

## 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 44. 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

**Table 44. Supported platforms**

Platform	Image file name	BIOS file name	BIOS version
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
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	1.4.2
Wyse 5070 Thin Client with PCoIP	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 PCoIP	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 PCoIP	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 45. Supported packages**

**Table 45. 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 PCoIP	Supported	Supported	Supported
Wyse 3040 Thin Client with ThinOS	Supported	Supported	Supported
Wyse 3040 Thin Client with PCoIP	Supported	Supported	Supported
Wyse 5010 Thin Client with ThinOS (D10D)	Supported	Supported	Supported
Wyse 5010 Thin Client with PCoIP (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 PCoIP (5213)	Supported	Supported	Supported
Wyse 5060 Thin Client with ThinOS	Supported	Supported	Supported
Wyse 5060 Thin Client with PCoIP	Supported	Supported	Supported
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](http://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](http://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 46. Tested environment - General components**

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

**Table 47. 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 48. 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 for ThinOS 8.6\_303 and ThinOS Lite 2.6\_303

This section lists the tested peripheral devices for ThinOS 8.6\_303 and ThinOS Lite 2.6\_303.

**Table 49. Tested peripheral devices for ThinOS 8.6\_303 and ThinOS Lite 2.6\_303**

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

**Table 49. Tested peripheral devices for ThinOS 8.6\_303 and ThinOS Lite 2.6\_303**

<b>Product Category</b>	<b>Peripherals</b>	<b>Wyse 3040</b>	<b>Wyse 5070</b>	<b>Wyse 5470 All-in-One</b>	<b>Wyse 5470</b>	<b>Wyse 5060, 5010, and 7010</b>
	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
	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

**Table 49. Tested peripheral devices for ThinOS 8.6\_303 and ThinOS Lite 2.6\_303**

Product Category	Peripherals	Wyse 3040	Wyse 5070	Wyse 5470 All-in-One	Wyse 5470	Wyse 5060, 5010, and 7010
	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-Keyboard-USB-US-waterproof-white	Tested	Tested	Not applicable	Not applicable	Not applicable
	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

**Table 49. Tested peripheral devices for ThinOS 8.6\_303 and ThinOS Lite 2.6\_303**

Product Category	Peripherals	Wyse 3040	Wyse 5070	Wyse 5470 All-in-One	Wyse 5470	Wyse 5060, 5010, and 7010
	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
	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

**Table 49. Tested peripheral devices for ThinOS 8.6\_303 and ThinOS Lite 2.6\_303**

<b>Product Category</b>	<b>Peripherals</b>	<b>Wyse 3040</b>	<b>Wyse 5070</b>	<b>Wyse 5470 All-in-One</b>	<b>Wyse 5470</b>	<b>Wyse 5060, 5010, and 7010</b>
	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

**Table 49. Tested peripheral devices for ThinOS 8.6\_303 and ThinOS Lite 2.6\_303**

<b>Product Category</b>	<b>Peripherals</b>	<b>Wyse 3040</b>	<b>Wyse 5070</b>	<b>Wyse 5470 All-in-One</b>	<b>Wyse 5470</b>	<b>Wyse 5060, 5010, and 7010</b>
	P2418HT	Tested	Tested	Tested	Not applicable	Not applicable
	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

**Table 49. Tested peripheral devices for ThinOS 8.6\_303 and ThinOS Lite 2.6\_303**

Product Category	Peripherals	Wyse 3040	Wyse 5070	Wyse 5470 All-in-One	Wyse 5470	Wyse 5060, 5010, and 7010
	E2216H	Not applicable	Tested	Tested	Tested	Not applicable
	E2216Hv (China only)	Not applicable	Not applicable	Not applicable	Tested	Not applicable
	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



**Table 49. Tested peripheral devices for ThinOS 8.6\_303 and ThinOS Lite 2.6\_303**

Product Category	Peripherals	Wyse 3040	Wyse 5070	Wyse 5470 All-in-One	Wyse 5470	Wyse 5060, 5010, and 7010
	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
	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 50. 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](http://www.dell.com/support).

## Fixed issues

**Table 51. 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 <b>Shutdown</b> dialog box stops responding when you click <b>Sign off from account</b> . 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.

**Table 51. Fixed issues**

<b>Issue ID</b>	<b>Description</b>
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.
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.

**Table 51. Fixed issues**

<b>Issue ID</b>	<b>Description</b>
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 <b>[</b> 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.
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.

**Table 51. Fixed issues**

Issue ID	Description
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.
THINOS-2418	Resolved an issue where the Bluetooth device fails to reconnect after you upgrade the BIOS from v1.1.4.

## Known issues

**Table 52. 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.
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.

**Table 52. Known issues**

<b>Issue ID</b>	<b>Description</b>	<b>Workaround</b>
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 Cruiser 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

## Topics:

- [Release summary](#)
- [Compatibility](#)
- [New and enhanced features](#)
- [Important notes](#)
- [INI parameters](#)
- [Fixed issues](#)
- [Known issue](#)

## 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 53. 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

**Table 53. Supported platforms**

Platform	Image file name	BIOS file name	BIOS version
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
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 5470 Thin Client with ThinOS	X10_wnos	5470_bios.bin	1.1.1
Wyse 5470 Thin Client with PCoIP	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 PCoIP	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 54. Supported packages**



**Table 54. 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 PCoIP	Supported	Supported	Supported	Supported	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	Supported
Wyse 5010 Thin Client with PCoIP (D10DP)	Supported	Supported	Supported	Supported	Supported
Wyse 5010 Zero Client for Citrix	Supported	Supported	Supported	Supported	Not supported
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 PColP 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 PColP
- Wyse 3040 Thin Client with PColP
- Wyse 5010 Thin Client with PColP
- Wyse 5040 AIO Thin Client with PColP
- Wyse 5060 Thin Client with PColP
- Wyse 5070 Thin Client with PColP
- Wyse 5470 Thin Client with PColP
- Wyse 5470 AIO Thin Client with PColP

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 55. 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

**Table 55. Tested environment - General components**

Component	Version
SecureMatrix	4.1.0

**Table 56. 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 <sup>1</sup>	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/ 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.

<sup>1</sup>Only 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**

**Table 57. 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 for ThinOS 8.6\_206 and ThinOS Lite 2.6\_206


This section lists the tested peripheral devices for ThinOS 8.6\_206 and ThinOS Lite 2.6\_206.

- **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 58. 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> .
[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 <i>no</i> .
[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 <i>no</i> .
[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 <i>no</i> .

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

## Fixed issues

**Table 59. 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.
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.



**Table 59. Fixed issues**

<b>Issue number</b>	<b>Description</b>
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 <code>TRAP page Fault WaveOut_LPEDP Audio:188</code>
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 <code>Trap: EIP 0x14c5e9 (pool)</code> 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 <code>Coredump-Panic:heap free pool(vmware-remotemks-container)</code> 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.
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 60. 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

## Topics:

- [Release summary](#)
- [Compatibility](#)
- [Fixed issue](#)

## 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 61. 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

**Table 61. Supported platforms**

Platform	Image file name	BIOS file name	BIOS version
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
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 62. 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

**Table 62. 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 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
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](https://cve.mitre.org).

# ThinOS 8.6\_204

## Topics:

- [Release summary](#)
- [Compatibility](#)
- [New and enhanced features](#)
- [Important notes](#)
- [INI parameters](#)
- [Fixed issues](#)

## 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 63. 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 64. Packages**

**Table 64. Packages**

Package name	Version
FR	1.28.19061716
Horizon	5.1.19052918
RTME	2.8.54007
JVDI	12.1.19091610

## BIOS information

**Table 65. 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 66. INI parameters**

Usage	Description
<code>wakeonusb=[yes,no]</code>	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.
<code>OsdRepeatRate={0,1,2}</code>	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.
<code>OsdRepeatDelay={0,1,2}</code>	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.
<code>EnableSecondaryPort =[yes,no,1,0]</code>	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.
<code>[TrackpadDisableOnType={yes, no}]</code>	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.



**Table 66. INI parameters**

Usage	Description
[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 67. Fixed Issues for Wyse 5470 Thin Client**

Issue number	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.
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 68. 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/I: trap 14 occurs when disconnect ICA desktop during JVDI video call.

# ThinOS 8.6\_111

## Topics:

- [Release summary](#)
- [Compatibility](#)
- [New and enhanced features](#)
- [Important notes](#)

## 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 69. 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 70. Packages**

**Table 70. 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.  
**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.

## 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

## Topics:

- [Release summary](#)
- [Compatibility](#)
- [New and enhanced features](#)
- [Important notes](#)
- [INI parameters](#)
- [Known issues](#)

## 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 71. 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 72. Platform information**

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

**Table 73. Package information**

**Table 73. 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, PColP 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 74. 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 75. Fn key combinations**



**Table 75. 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.

**i** **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.

**i** **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.

**i** **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.

**i** **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.

**i** **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.

**i** **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.

**i** **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.

**i** **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 76. 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 77. 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 78. 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 <sup>1</sup>	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/ Citrix Virtual Apps 7.18	Tested	Tested	Not tested	Not tested	Tested	Tested	Not tested	Tested

**Table 78. Tested environment**

	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
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.

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

**Table 79. 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 for ThinOS 8.6\_108

The following are the list of tested peripheral 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 headset
- 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

#### **Spechmike 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 80. 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)



**Table 80. Smart card details**

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
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
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:

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

**Table 81. INI parameters**

**Table 81. 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.
BatteryAutoPowerOff={3-20}	The parameter shuts down the thin client when the battery capacity is lower than a set value.

## Known issues

**Table 82. 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

## Topics:

- [Release summary](#)
- [Compatibility](#)
- [New and enhanced features](#)
- [Important notes](#)
- [INI parameters](#)
- [Known issues](#)

## 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 83. 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 84. 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 85. ThinOS packages**

Packages	Version
FR.i386.pkg	1.27.53767

**Table 85. ThinOS packages**

Packages	Version
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, PColP 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 86. 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

**Table 86. Tested environment - General components**

Component	Version
SecureMatrix	4.1.0

**Table 87. 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 <sup>1</sup>	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/ 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.

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

**Table 88. Tested environment - Citrix Virtual Apps and Desktops**



**Table 88. 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 for ThinOS 8.6\_106

The following are the list of tested peripheral 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 89. 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

**Table 89. Smart card details**

<b>Smart card information from ThinOS event log</b>	<b>Driver</b>	<b>Provider (CSP)</b>	<b>Card type</b>
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 90. 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 91. 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

## Topics:

- [Release summary](#)
- [Compatibility](#)
- [New and enhanced features](#)
- [Important notes](#)
- [Fixed issues](#)
- [INI parameters](#)

## 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 92. 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

**Table 92. Supported platforms**

Platform	Image file name	BIOS file name	BIOS version
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
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 93. 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

**Table 93. 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 3030 LT Thin Client with PColP	Supported	Supported	Supported	Supported	Not 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	Not supported
Wyse 5010 Thin Client with PColP (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 PColP (5213)	Supported	Supported	Supported	Supported	Not supported
Wyse 5060 Thin Client with ThinOS	Supported	Supported	Supported	Supported	Supported
Wyse 5060 Thin Client with PColP	Supported	Supported	Supported	Supported	Supported
Wyse 5070 Thin Client with ThinOS	Supported	Supported	Supported	Supported	Supported
Wyse 5070 Thin Client with PColP	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=Blast EnableRelativeMouse=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 94. 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](http://kb.vmware.com).

## VMware Horizon Client feature matrix

**Table 95. 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

**Table 95. VMware Horizon Client feature matrix**

	<b>Client type</b>	<b>ThinOS</b>
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
	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

**Table 95. VMware Horizon Client feature matrix**

	<b>Client type</b>	<b>ThinOS</b>
	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
	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

**Table 95. VMware Horizon Client feature matrix**

	<b>Client type</b>	<b>ThinOS</b>
	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
	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

**Table 95. VMware Horizon Client feature matrix**

	<b>Client type</b>	<b>ThinOS</b>
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
	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

**Table 95. VMware Horizon Client feature matrix**

	<b>Client type</b>	<b>ThinOS</b>
	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 96. CA Validation**

Wyse Management Suite deployment	CA Validation
Private cloud	When you deploy Wyse Management Suite on a private cloud, the <b>Enable CA Validation</b> check box is available to configure after you specify the server details in the <b>WMS Server</b> field. By default, the check box is selected.
Public cloud	When you deploy Wyse Management Suite on a public cloud, the <b>Enable CA Validation</b> check box is selected by default. You cannot disable the <b>Enable CA Validation</b> 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](http://www.cisco.com).

## Tested environment

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

**Table 97. 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

**Table 97. Tested environment - General components**

Component	Version
NetScaler	11.1/12.0/12.1
StoreFront	3.15
Web Interface	5.4
SecureMatrix	4.1.0

**Table 98. Tested environment (continued)**

	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 <sup>1</sup>	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
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	Tested	Tested	Not tested	Tested	Tested	Tested	Not tested	Tested



**Table 98. Tested environment**

	Windows 7	Windows 10	Ubuntu 16	Windows Server 2008 R2	Windows Server 2012 R2	Windows Server 2016	Windows Server 2019	APPs
Services (RDS)								

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

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

**Table 99. 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 100. Fixed issues**

Issue number	Summary
THINOS-1808	Resolved an issue where Wyse 5040 Thin Clients with PCoIP display an incorrect BIOS file in the <b>System Information</b> 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 <b>System Information</b> 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.
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.

**Table 100. Fixed issues**

<b>Issue number</b>	<b>Summary</b>
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:

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

**Table 101. INI parameters**

INI parameters	Description*
Device=Screen [SupportBigMonitor={yes, no}]	The <b>SupportBigMonitor</b> 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 <b>EnableRelativeMouse</b> parameter enables or disables the relative mouse feature in a Blast session. The default value is <b>no</b> .

\*For detailed descriptions, see the *Dell Wyse ThinOS Version 8.6 INI Reference Guide* at [www.dell.com/manuals](http://www.dell.com/manuals).

# ThinOS 8.6\_024 and ThinOS Lite 2.6\_024

## Topics:

- [Release summary](#)
- [Compatibility](#)
- [New and enhanced features](#)
- [Important notes](#)
- [Fixed issues](#)
- [INI parameters](#)

## 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 102. 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

**Table 102. Supported platforms**

Platform	Image file name	BIOS file name	BIOS version
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
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 103. 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

**Table 103. Packages supported**

Packages	FR	Horizon	RTME	TCX	JVDI
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
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 104. 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

**Table 104. VMware Horizon Client feature matrix**

	<b>Client type</b>	<b>ThinOS</b>
	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
	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



**Table 104. VMware Horizon Client feature matrix**

	<b>Client type</b>	<b>ThinOS</b>
	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
	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 PCoIP
	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

**Table 104. VMware Horizon Client feature matrix**

	<b>Client type</b>	<b>ThinOS</b>
	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
	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

**Table 104. VMware Horizon Client feature matrix**

	<b>Client type</b>	<b>ThinOS</b>
	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
	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](http://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](http://www.dell.com/manuals).

## Important notes

## Tested environment

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

**Table 105. 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

**Table 105. Tested environment - General components**

Component	Version
NetScaler	11.1/12.0/12.1
StoreFront	3.15
Web Interface	5.4
SecureMatrix	4.1.0

**Table 106. 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 <sup>4</sup>	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
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.

<sup>4</sup>Only supports desktop connectivity to the Ubuntu desktop; USB redirection or other Multimedia optimization techniques are currently not supported.

**Table 107. 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

**Table 107. 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
	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 108. 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.
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.

**Table 108. Fixed issues**

Issue number	Summary
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 109. 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 <b>Low</b> and the <code>EnableNewConnection</code> parameter to <b>yes</b> , an option to create a connection is enabled in the <b>Connect Manager</b> window. In zero mode, the <b>Add Connection</b> button is added along with connection properties.
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](http://www.dell.com/manuals).

# ThinOS 8.6\_019 and ThinOS Lite 2.6\_019

## Topics:

- [Release summary](#)
- [Compatibility](#)
- [New and enhanced features](#)
- [Important notes](#)
- [Fixed issues](#)
- [INI parameters](#)

## 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 110. 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



**Table 110. Supported platforms**

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

## Packages

**Table 111. 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 PCoIP.
- ThinOS 8.6\_013 for all ThinOS-based platforms except Wyse 5040 AIO thin client and Wyse 5040 AIO thin client with PCoIP.
- 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.  
 **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 PCoIP (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 112. Tested environment - General components**

Component	Version
Wyse Management Suite	1.3.0
Wyse Device Manager	5.7.3
Imprivata OneSign	5.5

**Table 112. Tested environment - General components**

Component	Version
Caradigm	6.3.1
NetScaler	11.1/12.0
StoreFront	3.12
Web Interface	5.4
SecureMatrix	4.1.0

**Table 113. 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 Citrix Virtual Apps 7.15	Tested	Tested	Not tested	Tested	Tested	Tested	Tested
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 114. 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 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 115. 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.

**Table 115. Fixed issues**

Defect ID	Description
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 <b>turn off display</b> 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 <b>ET2201L</b> .
TIR97750	Improved audio delays observed in previous builds.
TIR97890/ THINOXSUS-13	Resolved an issue where the <b>Incorrect Password</b> error that is displayed when you use the <b>user.ini</b> 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 <b>CMOS: Failed To Set Admin Password</b> 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.

**Table 115. Fixed issues**


Defect ID	Description
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 ( <b>VUSB: device_reset error -19</b> ).
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.

**Table 115. Fixed issues**

Defect ID	Description
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/ THINOSUS-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 <code>AutoSignOff=Yes</code> and <code>Shutdown=yes</code> 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 116. INI parameters (continued)**

INI parameters	Description*
<code>EnableVsync=[yes, no]</code>	The <code>EnableVsync</code> 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.
<code>DelCertificate={filename}</code>	This parameter enables you to delete certificate file corresponding to <code>AddCertificate</code> . You can set the <code>DelCertificate</code> value to <b>all</b> , <b>builtin</b> , or provide a specific name.  From this release, the specific file name supports wildcard variables such as <code>\$TN.pfx</code> , <code>\$TN</code> , and <code>WT*.pfx</code> .
<code>[DriverLogLevel={1-4}]</code> <code>[DriverDebugLevel={1-7}]</code>	The <code>DriverLogLevel</code> 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"> <li>• 1—Error</li> <li>• 2—Warn</li> <li>• 3—Info</li> <li>• 4—Debug</li> </ul> For example, if you set the debug level value to 1 (Error) you can get the useful error information.

**Table 116. INI parameters (continued)**

INI parameters	Description*
	<p>The <code>DriverDebugLevel</code> parameter specifies which information related to Intel wireless driver or firmware needs to be printed.</p> <p>This option is valid only with the <code>DriverLogLevel</code> parameter. Ensure that you specify a value for the <code>DriverLogLevel</code> parameter before you use this parameter.</p> <p>The following are the valid values:</p> <ul style="list-style-type: none"> <li>• <code>#define DBGLVL1 (IWL_DL_INFO)</code></li> <li>• <code>#define DBGLVL2 (DBGLVL1   IWL_DL_FW_ERRORS)</code></li> <li>• <code>#define DBGLVL3 (DBGLVL2   IWL_DL_TEMP   IWL_DL_POWER)</code></li> <li>• <code>#define DBGLVL4 (DBGLVL3   IWL_DL_ASSOC   IWL_DL_TE)</code></li> <li>• <code>#define DBGLVL5 (DBGLVL4   IWL_DL_DROP   IWL_DL_RADIO)</code></li> <li>• <code>#define DBGLVL6 (DBGLVL5   IWL_DL_SCAN   IWL_DL_HT)</code></li> <li>• <code>#define DBGLVL7 (DBGLVL6   IWL_DL_MAC80211   IWL_DL_FW)</code></li> </ul>
<pre>Sleep=[yes, no] [program=[Sleep, Power off]] [timer=[0, 1, 5, 10, 15, 30, 60, 120, 300, 600]]</pre>	<p>The <code>Sleep</code> 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 <code>yes</code>.</p> <p>The <code>program</code> 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 <code>Sleep</code>.</p> <p>The <code>timer</code> 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.</p>
<pre>[TLSDisableCipher={cipher_name_list}]</pre>	<p>The <code>TLSDisableCipher</code> parameter confines the TLS client to stop using the listed cipher suites.</p> <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 <b>Event Log</b> 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 <code>no</code>, and the <code>SSPR</code> button is enabled, the <code>SSPR</code> 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 <b>Troubleshooting</b> window. You can replay pcap files of the UDP audio.</p>
<pre>SetNetiDLicense=(yes, no) [Name=License name] [Company=License company] [Value=License value]</pre>	<p>The <code>SetNetiDLicense</code> parameter enables or disables the usage of <code>SecMaker</code> <code>NetiD</code> smart card <code>pkcs11</code> 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>

**Table 116. INI parameters**

INI parameters	Description*
[trace=NetID driver log path and name]	The trace parameter enables you to set the driver log path and file name. For example, trace=/tmp/secmaker.log.
[SCHidePINLeft={yes, no}]	The SCHidePINLeft 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.
[PowerSaveControl={0, 1}] [RSSIAmend={}]	<p>The PowerSaveControl 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 PowerSaveControl parameter.</p> <p>The RSSIAmend parameter enables you to manually modify the value of wireless RSSI. This parameter is applicable to Wyse 5070 thin client. RSSIAmend=5 means that the signal level is increased, and RSSIAmend=-5 means that the signal level is decreased.</p>
SmbVersionRange={version_range}	<p>The SmbVersionRange parameter controls the SMB protocol version that is used in SMB printer communication. The client only uses the SMB version that is specified in version_range.</p> <p>The format of version_range is lowest_version, highest_version. LM2 stands for LAN manager 2, SMB1 for SMB version 1, and SMB2 for SMB version 2. For example, SmbVersionRange=SMB2, SMB2 means only SMB version 2 is allowed; SmbVersionRange=, SMB2 means SMB version 2 and all the supported lower versions can be used. Default version range is set by SmbVersionRange=, SMB1. 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](http://www.dell.com/support).



# ThinOS 8.6\_015

## Topics:

- [Release summary](#)
- [Compatibility](#)
- [New and enhanced features](#)
- [Important notes](#)

## 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. This release is intended for ThinOS on specified 5470 and 5470 All-in-One 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

The following table lists the supported hardware platforms:

**Table 117. 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

### Previous versions

ThinOS 8.6\_106 and ThinOS 8.6\_108

# Packages

The following table lists the packages:


**Table 118. Packages**

Package name	Version
FR	1.28.19061716
Horizon	5.1.19052918
RTME	2.8.54007
JVDI	12.1.19091610

## 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

# ThinOS 8.6\_013

## Topics:

- [Release scope](#)

## 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 119. 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 120. BIOS information**

Platform	BIOS version
Wyse 3010 thin client	EC 3.02

**Table 120. BIOS information**

Platform	BIOS version
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
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 121. 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](http://www.dell.com/support).

## Feature support matrix

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

**Table 122. Feature support matrix (continued)**

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	Not supported	Not supported	Limited support*	Limited support*	Limited support*	Limited support*	Limited support*	Limited support*	Limited support*

**Table 122. Feature support matrix (continued)**

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
Skype for Business									
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
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

**Table 122. 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
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
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 123. Citrix Receiver feature matrix**

Features		Operating System—ThinOS
<b>Content</b>	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
<b>HDX</b>	Audio Playback	Supported
	UDP Audio	Supported
	Bidirectional Audio (VoIP)	Supported
	Web Cam (Video Chat)	Supported
	Video Playback	Supported

**Table 123. Citrix Receiver feature matrix**

	<b>Features</b>	<b>Operating System—ThinOS</b>
	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 <sup>4</sup>
	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
<b>Security and communication</b>	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

**Table 123. Citrix Receiver feature matrix**

Features		Operating System—ThinOS
	SHA2 Certs	Supported
	TLS 1.1/1.2	Supported
	AES and 3DES Encryption	Supported
	Smart Access	Supported
	IPv6	Supported
<b>Updates</b>	Auto Discovery/Configuration	Not supported
	App Store Updates/Citrix updates	Not supported

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

<sup>1</sup>Adaptive 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](https://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](http://www.citrix.com).

## VMware Horizon feature matrix

**Table 124. VMware Horizon feature matrix**

	Client type	Operating System—ThinOS
<b>Client appearance and workflow</b>	Customer branding	Not supported
	Kiosk mode	Supported*
	Localization (EN, FR, DE, JP, CH, KR, SP)	Supported*
<b>Broker connectivity</b>	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
<b>Broker authentication</b>	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*
<b>Smart card</b>	x.509 certificate authentication	Supported*
	CAC support and .Net support	Supported*



**Table 124. VMware Horizon feature matrix**

	<b>Client type</b>	<b>Operating System—ThinOS</b>
	PIV support	Supported*
	Derived credentials	Not supported
<b>Desktop operations</b>	Reset and Restart	Supported*
	Log out	Supported*
<b>Session authentication</b>	Smart card	Supported*
	Single Sign-On	Supported*
<b>Session management (Blast Extreme and PCoIP)</b>	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
<b>Client customization</b>	Command-Line options	Not supported
	URI schema	Not supported
	Preference file	Not supported
	Non Interactive Mode	Not supported
	GPO-based customization	Not supported
<b>Protocols</b>	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
<b>Protocol enhancements</b>	RDP—VC Bridge	Supported*
	Session Enhancement SDK	Not supported
<b>Monitors/displays</b>	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
<b>Input device—keyboard/ mouse</b>	Relative mouse	Not supported

**Table 124. VMware Horizon feature matrix**

	<b>Client type</b>	<b>Operating System—ThinOS</b>
	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
<b>Clipboard services</b>	Clipboard text	Supported*
	Clipboard graphics	Not supported
	Clipboard memory size configuration	Not supported
<b>Client caching</b>	View Agent to Client—side caching	Not supported
<b>Connection management</b>	Blast network recovery	Supported*
	IPv6 support	Supported in Blast session
	PCoIP IP roaming	Supported*
<b>High-level device redirection</b>	Serial (COM) port redirection	Not supported
	Client Drive redirection/File transfer	Supported*
	Scanner (TWAIN/WIA) Redirection	Not supported
	x.509 Certificate (Smart card)	Supported*
<b>Real-time Audio-Video</b>	Real-time Audio-Video	Supported*
<b>USB Redirection</b>	Generic USB/HID	Supported*
<b>Unified communications</b>	Cisco UC Jabber	Not supported
	Avaya UC One-X Desktop	Not supported
	Microsoft Lync 2013	Not supported
	Skype for business	Supported in Blast session
<b>Multimedia</b>	Multimedia Redirection (MMR)	Not supported
	Flash URL Redirection (Unicast/Multicast)	Not supported
	Flash Redirection	Not supported
<b>Graphics</b>	vDGA, vSGA, Intel vDGA, AMD vGPU	Supported in VDI session
	NVIDIA GRID vGPU	Supported*
<b>Printing</b>	Printer Redirection, Location Based Printing	Supported in Blast session
<b>Security</b>	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](http://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](http://www.dell.com/support).

## New and enhanced features

### Cisco Jabber Softphone for VDI

Cisco Jabber Softphone for VDI (JVDI) 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 JVDI Agent
- Cisco JVDI Client

Cisco JVDI Agent is the JVDI connector that runs on the Citrix desktop or server. Cisco JVDI client is the JVDI 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 125. Supported matrix**

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

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

**Table 126. 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 127. 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](http://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](http://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](http://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](http://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](http://www.cisco.com).

**Table 128. 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 <a href="http://www.cisco.com">www.cisco.com</a> .	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 <a href="http://www.cisco.com">www.cisco.com</a> .	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](http://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](https://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](https://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](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](http://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](http://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](https://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](https://kb.vmware.com/s/article/54773).


**Table 129. Functionality matrix**

Features	Support
P2P audio and video calls	Yes
Conference call	Yes
VDI desktop	Yes
Presence/IM	Yes
RDSH desktop/application	Yes

**Table 129. Functionality matrix**

Features	Support
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 130. 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](https://docs.vmware.com/en/VMware-Horizon-7/7.5/horizon-remote-desktop-features).

**Table 131. 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.

**Table 131. Known issues**

Issue number	Description	Workaround
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>
```

2. 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](http://www.dell.com/support).

**Table 132. 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 133. 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](http://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 134. 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 135. 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
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.

**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 136. 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 137. 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 138. 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

**Table 138. Performance data statistics**

Number of display	Maximum rate defined by user (Mbps)	Input change rate (Mbps)	Output process rate	Maximum Tx bandwidth (Mbps)
	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](http://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](http://www.teradici.com/web-help/pcoip_remote_workstation_card).
- Administrators' guide— [www.teradici.com/web-help/pcoip\\_remote\\_workstation\\_card/5.0.1](http://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](http://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](http://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](http://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](http://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 139. 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](http://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](http://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 Version 8.6 INI Reference Guide at [Dell.com/support](http://Dell.com/support).

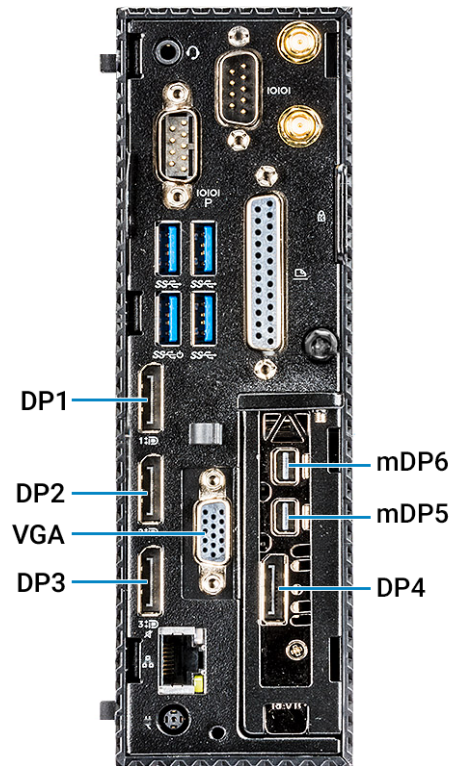
## Wireless IP configuration

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](https://www.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](https://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](http://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 140. 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 <b>System Information</b> 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 <b>Host</b> option enables you to specify the broker server IP address or FQDN. The <b>AutoConnectList</b> option specifies the VDI desktops or applications launched automatically when you use VDI to sign in to the session.
MultiHead={yes, no} [ManualOverride={yes, no}] [Mainscreen={1,2,3,4,5,6}] [Resolution={ddc, width X height}] [Rotate={left, right}]	The <b>MultiHead</b> option enables you to set the span mode or mirror mode for multiple monitors on Wyse 5070 thin client. The <b>ManualOverride</b> option enables you to manually set the monitor layout. The <b>Mainscreen</b> option enables you to set the required display as a main screen. The <b>Resolution</b> and <b>Rotate</b> options works when the display is set to mirror mode and MultiHead=no.

**Table 140. INI parameters**

INI parameters	Description*
Screen=[1,2,3,4,5,6] [align={screen id, top center bottom left right, top center bottom left right}]	The <b>Screen</b> option enables you to select the screen which you want to set as default. The <b>align</b> option enables you to set the screen alignment on Wyse 5070 thin client.
Connect=[ICA, RDP, PCoIP] [OnScreen={1-6}]	The PCoIP value is added to the <b>Connect</b> parameter. The <b>OnScreen</b> 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] [Components={None, display, keyboard, mouse, timezone, network, audio, printer, All}]	The <b>ManualOverride</b> option enables you to retain your personalized settings. The <b>Components</b> 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](http://www.dell.com/support).

## Tested environment

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

**Table 141. 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 142. 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	√	√	√



**Table 142. Tested environment - VDI components**

	Windows 7	Windows 8.1	Windows 10	Linux	Windows Server 2012 R2	Windows Server 2016	Apps
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 143. 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 peripheral devices for ThinOS 8.6\_013

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 144. 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

**Table 144. Smart card information from ThinOS event log**

Smart Card information from ThinOS event log	Driver	Provider (CSP)	Card type
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 145. Known issues**

Issue number	Description	Workaround
TIR98812	You cannot click OK to change the resolution when you set the <b>Left turn 90 degrees</b> 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.

**Table 145. Known issues**

<b>Issue number</b>	<b>Description</b>	<b>Workaround</b>
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 Gemalto 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

## Topics:

- [Release scope](#)

## 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 146. 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 147. 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 148. Packages**

Package name	Version
FR.i386.pkg	1.24.51190
RTME.i386.pkg	2.5.49272—based on the Citrix RTOP version 2.5
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 149. 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 150. Citrix Receiver feature matrix**

Features		Operating System—ThinOS
<b>Content</b>	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

**Table 150. Citrix Receiver feature matrix**

	<b>Features</b>	<b>Operating System—ThinOS</b>
	URL Redirection	Limited support <sup>4</sup>
<b>HDX</b>	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)
	Windows Multimedia Redirection	Supported
	Local Printing	Supported
	H.264-enhanced SuperCodec	Supported
	Adaptive Transport	Limited support <sup>2</sup>
	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	
<b>Security and communication</b>	Receiver for Web Access	Not applicable
	Remote Access via NetScaler Gateway	Supported
	NetScaler Full VPN	Supported
	RSA Soft Token	Supported
	Challenge Response SMS	Supported

**Table 150. Citrix Receiver feature matrix**

Features		Operating System—ThinOS
	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
<b>Updates</b>	Auto Discovery/Configuration	Not supported
	App Store Updates/Citrix updates	Not supported

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

<sup>1</sup>HTML5 limitation

<sup>2</sup>DTLS audio limitation

For more information about Citrix Receiver features, see the Citrix documentation at [www.citrix.com](http://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](http://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](http://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](http://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 151. 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](http://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](https://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 Lite Version 2.6 INI Reference Guide at [Dell.com/support](https://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](https://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](https://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 152. 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.

**Table 152. INI parameters**

INI parameters	Description*
[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 <b>System Information</b> 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 <b>Host</b> option enables you to specify the broker server IP address or FQDN. The <b>AutoConnectList</b> 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 <b>ManualOverride</b> option enables you to retain your personalized settings. The <b>Components</b> 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](http://www.dell.com/support).

## Tested environment

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

**Table 153. 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 154. 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					√			√

**Table 154. Tested environment - VDI components**

	Windows 7	Windows 8.1	Windows 10	Linux	Windows Server 2008 R2	Windows Server 2012 R2	Windows Server 2016	Apps
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 155. 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 peripheral devices for ThinOS Lite 2.6\_013

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 156. 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

**Table 156. Smart card information from ThinOS event log**

Smart Card information from ThinOS event log	Driver	Provider (CSP)	Card type
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 157. Known issues**

Issue number	Description	Workaround
TIR98812	You cannot click OK to change the resolution when you set the <b>Left turn 90 degrees</b> 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.
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.
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

## Topics:

- [Downloading the installation file](#)
- [Firmware upgrade](#)

## Downloading the installation file

1. Go to [www.dell.com/support](http://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 click **Search**.
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

**i** **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 158. 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 159. BIOS binary files**

**Table 159. 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
Wyse 3030 LT thin client with PCoIP	PU10_bios.bin
Wyse 3040 thin client	A10Q_bios.bin
Wyse 3040 thin client with PCoIP	A10Q_bios.bin
Wyse 5010 thin client	D10G_bios.bin
Wyse 5010 thin client with PCoIP	PD10G_bios.bin
Wyse 5040 AIO thin client	AIO10G_bios.bin
Wyse 5040 AIO thin client with PCoIP	PAIO10G_bios.bin
Wyse 5060 thin client	D10Q_bios.bin
Wyse 5060 thin client with PCoIP	PD10Q_bios.bin
Wyse 7010 thin client	Z10G_bios.bin

**Table 160. Package information**

Package name	Details
Base.i386.pkg	Automatically updated upon firmware upgrade.
Pcoip.i386.pkg	Automatically updated upon firmware upgrade of a PCoIP 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](http://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.

- 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.
- 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.

- Save the `wnos.ini` file.
- On the ThinOS client desktop, navigate to **System Setup > Central Configuration > General**.
- 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.

- Click **OK**.
- 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](https://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:

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

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

A list of matching products is displayed.

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

### Accessing documents using product selector

You can also access documents by selecting your product.

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

#### Topics:

- [Additional resources](#)

## Additional resources

**Table 161. Additional resources**

Resource	Content
Dell support website— <a href="http://www.dell.com/manuals">www.dell.com/manuals</a> .	Administrator's Guide, INI Reference Guide, and Release Notes.
Citrix support website— <a href="http://docs.citrix.com">docs.citrix.com</a> .	Documentation for Citrix software.
VMware support website— <a href="http://docs.vmware.com">docs.vmware.com</a> .	Documentation for VMware software.
Microsoft support website— <a href="http://support.microsoft.com">support.microsoft.com</a> .	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](http://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.