

Dell Wyse ThinOS

Version 9.1 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. 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.

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 or ThinOS application package is appropriate for your work environment.

Table 1. ThinOS firmware version matrix

| Release version | Release date | Supported platforms | Release Notes |
|-----------------|--------------|---|---|
| ThinOS 9.1.2101 | April 2021 | <ul style="list-style-type: none"> Wyse 3040 Thin Client Wyse 5070 Thin Client Wyse 5470 Thin Client Wyse 5470 All-in-One Thin Client | Release version ThinOS 9.1.2101 |
| ThinOS 9.1.1131 | January 2021 | <ul style="list-style-type: none"> Wyse 3040 Thin Client Wyse 5070 Thin Client Wyse 5470 Thin Client Wyse 5470 All-in-One Thin Client | Release version ThinOS 9.1.1131 |

Table 2. ThinOS application package version matrix

| Application package version | Release date | Supported platforms | Release Notes |
|--------------------------------------|--------------|---|---|
| Citrix_Workspace_App_2 1.4.0.11_1 | May 2021 | <ul style="list-style-type: none"> Wyse 3040 Thin Client Wyse 5070 Thin Client Wyse 5470 Thin Client Wyse 5470 All-in-One Thin Client | Citrix Workspace app package for ThinOS |

Citrix Workspace app 2104 package for ThinOS

Release summary

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

Citrix_Workspace_App_21.4.0.11_1.pkg

Release date

May 2021

Supported platforms

The Dell Wyse ThinOS Citrix Workspace app 2104 package is supported on the following Dell Wyse thin clients:

- Wyse 3040 Thin Client
- Wyse 5070 Thin Client
- Wyse 5470 Thin Client
- Wyse 5470 All-in-One Thin Client

Installing the application package

Download the application package

Steps

1. Go to www.dell.com/support.
2. In the **Enter a Service Tag, Serial Number, Service Request, Model, or Keyword** field, type the model number of your device.
3. Select the product from the searched results to load the product page.
4. On the product support page, click **Drivers & downloads**.
5. Select the operating system as **ThinOS**.
6. Locate the application package—**ThinOS 9.1.2101 Citrix package v21.4.0.11_1 for Dell Wyse 3040, 5070, 5470 and 5470 All-in-One Thin Clients**.
7. Download the application package file.

Install the application package using Wyse Management Suite

Prerequisites

- The thin client must be registered to Wyse Management Suite.
- Create a group in Wyse Management Suite with a group token.
- Ensure you have downloaded the application package. See, [Download the application package](#).

Steps

1. Go to the **Groups & Configs** page and select a group.
2. From the **Edit Policies** drop-down menu, click **ThinOS 9.x**. The Configuration Control | ThinOS window is displayed.
3. In the left pane, click **Standard**.
4. From the **Standard** menu, expand **Firmware**, and click **Application Package Updates**.

NOTE: If you cannot locate the **Application Package Updates** option under the **Standard** tab, use the **Advanced** tab.

5. Click **Browse** and select the application package to upload.
6. From the drop-down menu, select the uploaded application package.
7. Click **Save & Publish**.
The thin client downloads the package to install and restarts. The package version is upgraded.

Compatibility

Application package information

- Application package name—Citrix_Workspace_App_21.4.0.11_1.pkg
- Supported Firmware—ThinOS version 9.1.2101

Previous version

Citrix_Workspace_App_21.1.0.14_8 .pkg

Citrix Workspace app feature matrix

Table 3. Citrix Workspace app feature matrix

| Feature | | ThinOS 9.1.2101 + Citrix Workspace app 2104 | ThinOS limitations |
|------------------|---|---|--------------------|
| Citrix Workspace | Citrix Virtual Apps | Supported | Not available |
| | Citrix Virtual Desktops | Supported | Not available |
| | Citrix Content Collaboration (Citrix Files) | N/A | Not available |
| | Citrix Access Control Service | N/A | Not available |
| | Citrix Workspace Browser | N/A | Not available |
| | SaaS/Webapps with SSO | Not supported | Not available |
| | Citrix Mobile Apps | N/A | Not available |
| | Intelligent Workspace features | N/A | Not available |

Table 3. Citrix Workspace app feature matrix (continued)

| Feature | | ThinOS 9.1.2101 + Citrix Workspace app 2104 | ThinOS limitations |
|-------------------------|--|---|---|
| Endpoint Management | Auto configure using DNS for Email Discovery | Supported | Not available |
| | Centralized Management Settings | Supported | Not available |
| | App Store Updates/Citrix Auto updates | N/A | Not available |
| UI | Desktop Viewer/Toolbar | Supported | Not available |
| | Multi-tasking | Supported | Not available |
| | Follow Me Sessions (Workspace Control) | Supported | Not available |
| HDX Host Core | Adaptive transport | Supported | Not available |
| | Session reliability | Supported | Not available |
| | Auto-client Reconnect | Supported | Not available |
| | Bi-directional Content redirection | N/A | Not available |
| | URL redirection | N/A | URL redirection has limitations in Citrix Workspace app for Linux client. It requires launch client browser through Local app access policy (which is not supported in Linux client) to access the URL redirection blacklist URL. Citrix support recommends using Browser Content Redirection (BCR) in Linux client to replace URL redirection. |
| | File open in Citrix Workspace app | N/A | Not supported. No local file explorer on ThinOS. |
| | Browser content redirection | Limited support | Only supports WebKitGTK+, does not support CEF. BCR with CEF. |
| | Multipoint ICA | Supported | Not available |
| | Multistream ICA | Not supported | Not available |
| | SDWAN support | Not supported | Not available |
| HDX IO/Devices/Printing | Local Printing | Supported | Not available |
| | Generic USB Redirection | Supported | Not available |
| | Client drive mapping/File Transfer**** | Supported | Not available |
| HDX Integration | Local App Access | N/A | Not available |
| | Multi-touch | N/A | Not available |
| | Mobility pack | N/A | Not available |
| | HDX Insight | Supported | Not available |

Table 3. Citrix Workspace app feature matrix (continued)

| Feature | | ThinOS 9.1.2101 + Citrix Workspace app 2104 | ThinOS limitations |
|--------------------------------|--|---|---|
| | HDX Insight with NSAP VC | Supported | Not available |
| | EUEM Experience Matrix | Supported | Not available |
| | Session Sharing | Supported | Not available |
| HDX Multi-media | Audio Playback | Supported | Not available |
| | Bi-directional Audio (VoIP) | Supported | Not available |
| | Webcam redirection | Supported | Webcam redirection works for 32-bit applications. For example, Skype and GoToMeeting. You can use a 32-bit browser to verify webcam redirection online. For example, www.webcamtests.com . This is Citrix binary design. |
| | Video playback | Supported | Not available |
| | Flash redirection | N/A | Citrix Linux binary supports only x86 client. |
| | Microsoft Teams Optimization | Supported | Not supported through proxy server in ThinOS. |
| | Skype for business Optimization pack | Supported | Not supported through proxy server. |
| | Cisco Jabber Unified Communications Optimization | Supported | Not available |
| | Unified Communication Zoom Cloud Meeting Optimization | Supported | Not supported through proxy server. |
| | Unified Communication Cisco Webex Teams Offloading (tVDI) | Supported | Supports Webex Teams optimization mode through proxy server which is configured in ThinOS Network Proxy by APT/ Wyse Management Suite. It does not support the proxy configured by DHCP Option 252. |
| | Unified Communication Cisco Webex Meetings Offloading (wVDI) | Supported | Supports Webex Meetings optimization mode through proxy server which is configured in ThinOS Network Proxy by APT/ Wyse Management Suite. It does not support the proxy configured by DHCP Option 252. |
| Windows Multimedia redirection | Supported | Not available | |
| UDP Audio | Supported (not with NetScaler Gateway) | Limited support—Not supported with Citrix ADC | |

Table 3. Citrix Workspace app feature matrix (continued)

| Feature | | ThinOS 9.1.2101 + Citrix Workspace app 2104 | ThinOS limitations |
|----------------|--|---|--|
| | | | (formerly NetScaler) due to Citrix's limitation. |
| HDX Graphics | H.264-enhanced SuperCodec | Supported | Not available |
| | Client hardware acceleration | Supported | Not available |
| | 3DPro Graphics | Supported | Not available |
| | External Monitor Support | Supported | Not available |
| | True Multi Monitor | Supported | Not available |
| | Desktop Composition redirection | N/A | Not available |
| | Location Based Services (Location available via API-description) | N/A | Not available |
| Authentication | Federated Authentication (SAML/Azure AD) | Supported | Does not support lock terminal when logging on Netscaler with web-based authentication such as OTP and Azure SAML SSO. |
| | RSA Soft Token | Supported | Not available |
| | Challenge Response SMS (Radius) | Supported | Not available |
| | OKTA Multi factor authentication (Radius and SAML) | Limited supported (only supports Radius) | Does not support OKTA SAML authentication. |
| | DUO multi factor authentication | Supported | Not available |
| | Smart cards (CAC, PIV etc) | Supported | Not available |
| | User Cert Auth via NetScaler Gateway (via Browser Only) | N/A | Not available |
| | Proximity/Contactless Card | Supported | Not available |
| | Credential insertion (For example, Fast Connect, Storebrowse) | Supported | Not available |
| | Pass Through Authentication | Supported | Not available |
| | Save credentials (on-premise and only SF) | N/A | Not available |
| | NetScaler nFactor Authentication | Not supported | Not available |
| | NetScaler Full VPN | Not supported | Not available |
| | Biometric Authentication such as Touch ID and Face ID | Supported (only supports Touch ID) | Only supports Touch ID. |
| | Single Sign-On to Citrix Files App | N/A | Not available |

Table 3. Citrix Workspace app feature matrix (continued)

| Feature | | ThinOS 9.1.2101 + Citrix Workspace app 2104 | ThinOS limitations |
|-----------------------|--|---|--|
| | Single Sign on to Citrix Mobile apps | N/A | Not available |
| | Anonymous Store Access | Supported | Not available |
| Security | TLS 1.2 | Supported | Not available |
| | TLS 1.0/1.1 | Not supported | Not supported—ThinOS 9.1 does not provide the configuration to change TLS. |
| | DTLS 1.0 | Supported | Not available |
| | DTLS 1.2 | Not supported | Not available |
| | SHA2 Cert | Supported | Not available |
| | Smart Access | Not supported | Not available |
| | Remote Access via Citrix Gateway | Supported | Does not support lock terminal when logging on Netscaler with web-based authentication such as OTP and Azure SAML SSO. |
| | Workspace for Web Access | N/A | ThinOS does not provide local browser. |
| | IPV6 | Not supported | Not supported—Able to sign in but cannot connect to the session. |
| Keyboard Enhancements | Dynamic Keyboard Layout Synchronization with Windows VDA | Supported | Not available |
| | Unicode Keyboard Layout Mapping with Windows VDA | Supported | Not available |
| | Client IME Enhancements with Windows VDA | N/A | Not available |
| | Language Bar Show/Hide with Windows VDA Applications | N/A | Not available |
| | Option Key mapping for server-side IME input mode on Windows VDA | N/A | Not available |
| | Dynamic Keyboard Layout Synchronization with Linux VDA | Not supported | Not available |
| | Client IME Enhancements with Linux VDA | N/A | Not available |
| | Language Bar support for Linux VDA Applications | Not supported | Not available |
| | Keyboard sync only when a session is launched—client Setting in ThinOS | Supported | Not available |
| | Server default setting in ThinOS | Supported | Not available |

Table 3. Citrix Workspace app feature matrix (continued)

| Feature | | ThinOS 9.1.2101 + Citrix Workspace app 2104 | ThinOS limitations |
|--|---|---|-------------------------------|
| | Specific keyboard in ThinOS | Supported | Not available |
| New features listed in Citrix Workspace App release note but not in feature matrix | Service continuity (Technical Preview) (CWA2104) | Not supported | Not available |
| | Pinning multi-monitor screen layout (CWA2103) | Not supported | Not available |
| | App Protection(CWA2101) | Not supported | Not available |
| | Authentication enhancement is available only in cloud deployments (CWA2012) | Not supported | Not available |
| | Multiple audio (CWA2012 and CWA2010) | Not supported | Not available |
| | Citrix logging (CWA2009) | Supported | Not available |
| | Cryptographic update (CWA2006) | Not supported | Not available |
| | Transparent user interface (TUI)(CWA1912 and CWA1910) | Not supported | Not available |
| | GStreamer 1.x supportexperimental feature(CWA1912) | Supported | Not available |
| | App indicator icon(CWA1910) | Not supported | Not available |
| | Latest webkit support(CWA1908 and CWA1906) | Supported | Not available |
| | Bloomberg audio redirection (CWA1903) | Supported | Not available |
| | Bloomberg v4 keyboard selective redirection support(CWA1808) | Supported | Does not support hotplugging. |
| ThinOS VDI configuration | Broker Setting | Supported | Not available |
| | PNA button menu | Supported | Not available |
| | Sign on window function | Supported | Not available |
| | Workspace mode | Supported | Not available |
| | Admin policy tool | Supported | Not available |

New and enhanced features

- Updated the Citrix Workspace app version to 21.4.0.11. You must upgrade to ThinOS 9.1.2101 to use the updated Citrix Workspace app.
- Updated the Citrix RealTime Media Engine (RTME) version to 2.9.300.
- Resolved the choppy audio issue when using Microsoft Teams with VDI optimization. In Citrix Workspace app 2104, Citrix has disabled the echo cancellation feature by default. Users are recommended to use USB headsets and not embedded device

speakers or microphones. For more information about the Citrix Workspace app 2104 release, see the Citrix documentation at docs.citrix.com. For information about the fixed issues, see the [Fixed issues](#) section.

Limitations

- Service continuity Tech Preview feature of Citrix Workspace is not supported in Wyse ThinOS Citrix Workspace app 2104.
- Multistream ICA feature is not supported in Wyse ThinOS Citrix Workspace app 2104.

Tested environments matrix

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

Table 4. Tested environment—General components

| Component | Version |
|---------------------------------|------------------------------|
| Wyse Management Suite | 3.2 |
| Imprivata OneSign | 7.1.005.42 |
| Citrix ADC (formerly NetScaler) | 12.0/12.1/13.0 |
| StoreFront | 1912 LTSR and later versions |

Table 5. Test environment—Citrix

| Citrix Virtual Apps and Desktops | Windows 10 | Windows Server 2016 | Windows Server 2019 | APPs |
|--|------------|---------------------|---------------------|--------|
| Citrix Virtual Apps and Desktops/Citrix Virtual Apps 7.15 LTSR Cumulative Update 5 (CU5) | Tested | Tested | Not tested | Tested |
| Citrix Virtual Apps and Desktops 7 1912 LTSR | Tested | Tested | Tested | Tested |
| Citrix Virtual Apps and Desktops 7 2006 | Tested | Tested | Tested | Tested |

Known issues

Table 6. Known issues

| Issue ID | Description | Workaround |
|-----------|--|--|
| DTOS-2620 | Distorted audio and video output is observed when using Microsoft Teams with Citrix HDX optimized mode. | There is no workaround in this release. |
| DTOS-2685 | Distorted audio and video playback output is observed when viewed on YouTube. | There is no workaround in this release. |
| DTOS-2332 | The Citrix session may stop responding. | Restart the thin client using the ThinOS shut down menu. You can also force restart the thin client by pressing and holding down the power button. |
| DTOS-2731 | When you log out from an ICA session during a video playback with Browser Content Redirection (BCR) enabled, the session fails to relaunch. An error log Wrong XML format is displayed on the Event Log tab. | Add the available DNS server in the ThinOS Network Setup window. Ensure that the client network can always ping the Citrix VDI. |

Table 6. Known issues (continued)

| Issue ID | Description | Workaround |
|-------------------------|--|---|
| DTOS-2612/ DTOS-2728 | If the Webex Meeting optimization mode is enabled in an ICA session and you disconnect the session, the device fails to end the wfica process and the ICA desktop may stop responding. | Restart the thin client using the ThinOS shutdown menu. If you do not use WebEx Meeting optimization mode, it is recommended to disable Cisco WebEx Meetings Virtual channel using either Admin Policy Tool or Wyse Management Suite. |
| DTOS-2760 | The Citrix session may not respond for five seconds and have distorted audio during a video playback when the server renders the video. | Enable the Multimedia Redirection (MMR) feature as default. |
| DTOS-2755 | When the ICA published application fails to launch, an incorrect error message is displayed. | There is no workaround in this release. |
| DTOS-2754 | When the user launches the desktop or application under the maintenance mode, an incorrect error message is displayed. | There is no workaround in this release. |
| DTOS-2746 | The audio recording is incomplete when you use a redirect headset to record audio in a ICA session. This is a known issue identified by Citrix. | Map a USB headset into the session and record the audio with the mapped USB headset. |
| DTOS-2745 | The application fails to reconnect to one or more sessions if there are more than two disconnected sessions. | Manually reconnect the disconnected session. |
| DTOS-2674 | The analog headset output sound quality is not good when using the Webex application. | Use a USB headset. |
| DTOS-2613 | The thin client may restart automatically if you disconnect the ICA session from the Citrix desktop viewer toolbar. | There is no workaround in this release. |
| DTOS-2777 | The thin client may restart when you sign out of your Citrix account. | There is no workaround in this release. |
| DTOS-2542 | The ICA session may stop responding for about a minute once the Citrix Workspace app log is enabled and starts to join the Microsoft Teams meeting. | Disable the Citrix Workspace app log capture. |
| DTOS-2781 | The user is unable to open any system window when the user tries to log in using Citrix Netscaler and Smartcard server. | Restart the thin client. |
| DTOS-2541 | The Microsoft Teams video may stop responding. This is a known issue identified by Citrix. | There is no workaround in this release. |

Fixed issues

Table 7. Fixed issues

| Issue ID | Description |
|--|--|
| DTOS-2549 | Fixed an issue where the user is unable to launch a Citrix session. This issue is fixed by Citrix. |
| DTOS-2339 | Fixed the issue where the Citrix session may get disconnected when attending a Microsoft Teams meeting or a call for a long duration of time. This issue is fixed by Citrix. |
| DTOS-2146 | Fixed the issue where audio and video are not clear when more than two users have joined the MS Teams meeting. |
| DTOS-2029/ DTOS-1625/ DTOS-1566/ DTOS-1463/ DTOS-1462/ | Fixed the issue where audio is distorted when screen is shared during a Microsoft Teams meeting. This issue is fixed by Citrix [RFLNX-6537]. |

Table 7. Fixed issues (continued)

| Issue ID | Description |
|-------------------------|--------------------|
| DTOS-1413/ DTOS-1015 | |

ThinOS 9.1.2101

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 9.1.2101

Release date

April 2021

Firmware upgrade

The following firmware upgrade scenarios are supported:

- ThinOS 8.6 > ThinOS 9.1.1131 > ThinOS 9.1.2101
- ThinOS 9.0.xxxx > ThinOS 9.1.2101 (DTOS_Full_9.1.2101.pkg)
- ThinOS 9.1.1131 > ThinOS 9.1.2101 (DTOS_Diff_9.1.2101.pkg)

For more information, see the *Dell Wyse ThinOS Version 9.1 Migration Guide* at www.dell.com/support.

Upgrade 9.x to later versions

You can upgrade from ThinOS 9.0.xxxx to ThinOS 9.1.2101, or from 9.1.1131 to ThinOS 9.1.2101. If you are running ThinOS 9.0 image, Dell Technologies recommends that you upgrade from ThinOS 9.0.4024 or later version to ThinOS 9.1.2101.

Prerequisites

The thin client must be registered to Wyse Management Suite.

- Create a group in Wyse Management Suite with a group token.
- Ensure you have downloaded the ThinOS 9.x OS firmware to upgrade.

About this task

Follow the below steps to upgrade:

Steps

1. Go to the **Groups & Configs** page and select a group.
2. From the **Edit Policies** drop-down menu, click **ThinOS 9.x**. The Configuration Control | ThinOS window is displayed.
3. In the left pane, click **Standard**.
4. From the **Standard** menu, expand **Firmware**, and click **OS Firmware Updates**.

 **NOTE:** If you cannot locate the **OS Firmware Updates** option under the **Standard** tab, use the **Advanced** tab.

5. Click **Browse** and select the **ThinOS 9.x OS** firmware to upload.

NOTE: Based on your preferred upgrade scenario and the existing ThinOS firmware version present in the group, you must select either the Diff_9.1.2101 or Full_9.1.2101 ThinOS image.

6. From the **Select the ThinOS Firmware to deploy** drop-down menu, select the uploaded firmware.

7. Click **Save & Publish**.

The thin client downloads the firmware to install and restarts. The firmware version is upgraded.

NOTE: When you upgrade from ThinOS 9.0 to 9.1, the thin client downloads all the application packages that are applicable to 9.1. After you upgrade to 9.1, all the application packages are removed and you must reinstall the application packages. Dell Technologies recommends you to upgrade from ThinOS 9.0 to 9.1 without installing the application packages. If you add multiple application packages along with the operating system image in the same Wyse Management Suite group, the upgrade may fail due to low disk space. In this scenario, you must reset to factory default settings for upgrading the ThinOS client again.

NOTE: Ensure that the Wyse 5070 BIOS version is 1.3.1 or later before upgrading to ThinOS 9.1. If you upgrade to ThinOS 9.1 with earlier BIOS version and then upgrade the BIOS version to 1.3.1 or later, the device may fail to boot.

NOTE: There are chances that the upgrade might failed with event log stating Failed to install. In such an event, you may reboot the device and upgrade again.

NOTE: ThinOS 9.0.1136 cannot upgrade the operating system firmware, or install the application packages after September 2021. You can disable time server on ThinOS, change the system time to August 2021, then upgrade the operating system firmware or install the application packages. Dell Technologies recommends you to upgrade to ThinOS 9.1.1131 or later version when the issue is fixed. For more information about how to upgrade from ThinOS 9.1.2101 to a later version using Wyse Management Suite, see the *Dell Wyse ThinOS Version 9.1 Migration Guide* at www.dell.com/support.

Upgrade to ThinOS 9.1.1131 from ThinOS 8.6

If you are running ThinOS 8.6 version, you must first install the ThinOS 9.1.1131 image and then upgrade to ThinOS 9.1.2101.

The device reboots after the ThinOS image is downloaded. Once the upgrade completes, the device is automatically registered to Wyse Management Suite. All device settings are erased after you upgrade from ThinOS 8.6 to 9.1 except the Wyse Management Suite server settings, wireless connections, wireless certificates, and proxy settings. Dell Technologies recommends you to back up your device settings before you initiate the upgrade process.

NOTE: Ensure that the Wyse 5070 BIOS version is 1.3.1 or later before upgrading to ThinOS 9.1. If you upgrade to ThinOS 9.1 with earlier BIOS version and then upgrade the BIOS version to 1.3.1 or later, the device may fail to boot.

NOTE: For more information about how to install the ThinOS 9.1.1131 image, see the *Dell Wyse ThinOS Version 9.1 Migration Guide* at www.dell.com/support. For information about how to upgrade from ThinOS 9.1.1131 to ThinOS 9.1.2101, see [Upgrade 9.x to later versions](#) section.

Compatibility

Release build and package versions

- DTOS_Diff_9.1.2101.pkg
- DTOS_Full_9.1.2101.pkg
- Cisco_Jabber_12.9.2.304552_5.pkg
- Cisco_WebEx_Meetings_40.10.11.15_6
- Cisco_WebEx_VDI_41.1.0.17621_3.pkg (formerly formerly Cisco WebEx Teams)
- Citrix_Workspace_App_21.1.0.14_8.pkg
- EPOS_Connect_5.0.4.6205_19.pkg
- HID_Finger_Reader_210217_5.pkg
- Jabra_7.2.0_10.pkg

- Microsoft_WVD_1.0_1086.pkg
- Teradici_PCoIP_20.07.6_25.pkg
- VMware_Horizon_2012.8.1.0.17349998_6.pkg
- Zoom_Citrix_5.4.59458.0109_3.pkg
- Zoom_Horizon_5.4.59458.0109_3.pkg
- Imprivata_PIE_7.1.005.0039_1097.pkg

Previous version

ThinOS 9.1.1131

Tested BIOS details

Table 8. Tested BIOS details

| Platform name | BIOS version |
|----------------------------------|--------------|
| Wyse 3040 Thin Client | 1.2.5 |
| Wyse 5070 Economy Thin Client | 1.9.0 |
| Wyse 5070 Standard Thin Client | 1.9.0 |
| Wyse 5070 Extended Thin Client | 1.9.0 |
| Wyse 5470 All-in-One Thin Client | 1.7.1 |
| Wyse 5470 Mobile Thin Client | 1.6.1 |

If you are upgrading BIOS on the Wyse 5470 Thin Client, ensure that you have connected the device to the external power source using the power adapter. If you do not connect the power adapter, BIOS update fails. In this event, you cannot upgrade BIOS even after you connect the power adapter. As a workaround, do the following:

1. Install a different version of the BIOS.

i NOTE: A different version of the BIOS package may also fail to install. But, the installation status does not matter. You can continue to the next step regardless of the result.

2. Connect the device to the external power source using the power adapter.
3. Upgrade BIOS to the latest version.

i NOTE: When you use the BIOS upgrade feature for the first time, the BIOS package downloads even if the existing BIOS version is the same version that is uploaded.

Citrix Workspace app feature matrix

Table 9. Citrix Workspace app feature matrix

| Feature | ThinOS 9.1.2101 | ThinOS 9.1.2101 limitations | |
|------------------|---|-----------------------------|---------------|
| Citrix Workspace | Citrix Virtual Apps | Supported | Not available |
| | Citrix Virtual Desktops | Supported | Not available |
| | Citrix Content Collaboration (Citrix Files) | N/A | Not available |
| | Citrix Access Control Service | N/A | Not available |
| | Citrix Workspace Browser | N/A | Not available |
| | SaaS/Webapps with SSO | Not supported | Not available |
| | Citrix Mobile Apps | N/A | Not available |

Table 9. Citrix Workspace app feature matrix (continued)

| Feature | | ThinOS 9.1.2101 | ThinOS 9.1.2101 limitations |
|-------------------------|--|-----------------|---|
| | Intelligent Workspace features | N/A | Not available |
| Endpoint Management | Auto configure using DNS for Email Discovery | Supported | Not available |
| | Centralized Management Settings | Supported | Not available |
| | App Store Updates/Citrix Auto updates | N/A | Not available |
| UI | Desktop Viewer/Toolbar | Supported | Not available |
| | Multi-tasking | Supported | Not available |
| | Follow Me Sessions (Workspace Control) | Supported | Not available |
| HDX Host Core | Adaptive transport | Supported | Not available |
| | Session reliability | Supported | Not available |
| | Auto-client Reconnect | Supported | Not available |
| | Bi-directional Content redirection | N/A | Not available |
| | URL redirection | N/A | URL redirection has limitations in Citrix Workspace app for Linux client. It requires launch client browser through Local app access policy (which is not supported in Linux client) to access the URL redirection blacklist URL. Citrix support recommends using Browser Content Redirection (BCR) in Linux client to replace URL redirection. |
| | File open in Citrix Workspace app | N/A | Not supported. No local file explorer on ThinOS. |
| | Browser content redirection | Limited support | Only supports WebKitGTK+, does not support CEF. BCR with CEF. |
| | Multiport ICA | Supported | Not available |
| | SDWAN support | Not supported | Not available |
| HDX IO/Devices/Printing | Local Printing | Supported | Not available |
| | Generic USB Redirection | Supported | Not available |
| | Client drive mapping/File Transfer**** | Supported | Not available |
| HDX Integration | Local App Access | N/A | Not available |
| | Multi-touch | N/A | Not available |
| | Mobility pack | N/A | Not available |
| | HDX Insight | Supported | Not available |

Table 9. Citrix Workspace app feature matrix (continued)

| Feature | ThinOS 9.1.2101 | ThinOS 9.1.2101 limitations | |
|--------------------------------|--|---|---|
| | HDX Insight with NSAP VC | Supported | Not available |
| | EUEM Experience Matrix | Supported | Not available |
| | Session Sharing | Supported | Not available |
| HDX Multi-media | Audio Playback | Supported | Not available |
| | Bi-directional Audio (VoIP) | Supported | Not available |
| | Webcam redirection | Supported | Webcam redirection works for 32-bit applications. For example, Skype and GoToMeeting. You can use a 32-bit browser to verify webcam redirection online. For example, www.webcamtests.com . This is Citrix binary design. |
| | Video playback | Supported | Not available |
| | Flash redirection | N/A | Citrix Linux binary supports only x86 client. |
| | Microsoft Teams Optimization | Supported | Not supported through proxy server in ThinOS. |
| | Skype for business Optimization pack | Supported | Not supported through proxy server. |
| | Cisco Jabber Unified Communications Optimization | Supported | Not available |
| | Unified Communication Zoom Cloud Meeting Optimization | Supported | Not supported through proxy server. |
| | Unified Communication Cisco Webex Teams Offloading (tVDI) | Supported | Supports Webex Teams optimization mode through proxy server which is configured in ThinOS Network Proxy by APT/ Wyse Management Suite. It does not support the proxy configured by DHCP Option 252. |
| | Unified Communication Cisco Webex Meetings Offloading (wVDI) | Supported | Supports Webex Meetings optimization mode through proxy server which is configured in ThinOS Network Proxy by APT/ Wyse Management Suite. It does not support the proxy configured by DHCP Option 252. |
| Windows Multimedia redirection | Supported | Not available | |
| UDP Audio | Supported (not with NetScaler Gateway) | Limited support—Not supported with Citrix ADC | |

Table 9. Citrix Workspace app feature matrix (continued)

| Feature | | ThinOS 9.1.2101 | ThinOS 9.1.2101 limitations |
|----------------|--|--|--|
| | | | (formerly NetScaler) due to Citrix's limitation. |
| HDX Graphics | H.264-enhanced SuperCodec | Supported | Not available |
| | Client hardware acceleration | Supported | Not available |
| | 3DPro Graphics | Supported | Not available |
| | External Monitor Support | Supported | Not available |
| | True Multi Monitor | Supported | Not available |
| | Desktop Composition redirection | N/A | Not available |
| | Location Based Services (Location available via API-description) | N/A | Not available |
| Authentication | Federated Authentication (SAML/Azure AD) | Supported | Does not support lock terminal when logging on Netscaler with web-based authentication such as OTP and Azure SAML SSO. |
| | RSA Soft Token | Supported | Not available |
| | Challenge Response SMS (Radius) | Supported | Not available |
| | OKTA Multi factor authentication (Radius and SAML) | Limited supported (only supports Radius) | Does not support OKTA SAML authentication. |
| | DUO multi factor authentication | Supported | Not available |
| | Smart cards (CAC, PIV etc) | Supported | Not available |
| | User Cert Auth via NetScaler Gateway (via Browser Only) | N/A | Not available |
| | Proximity/Contactless Card | Supported | Not available |
| | Credential insertion (For example, Fast Connect, Storebrowse) | Supported | Not available |
| | Pass Through Authentication | Supported | Not available |
| | Save credentials (on-premise and only SF) | N/A | Not available |
| | NetScaler nFactor Authentication | Not supported | Not available |
| | NetScaler Full VPN | Not supported | Not available |
| | Biometric Authentication such as Touch ID and Face ID | Supported (only supports Touch ID) | Only supports Touch ID. |
| | Single Sign-On to Citrix Files App | N/A | Not available |

Table 9. Citrix Workspace app feature matrix (continued)

| Feature | | ThinOS 9.1.2101 | ThinOS 9.1.2101 limitations |
|-----------------------|--|-----------------|--|
| | Single Sign on to Citrix Mobile apps | N/A | Not available |
| | Anonymous Store Access | Supported | Not available |
| Security | TLS 1.2 | Supported | Not available |
| | TLS 1.0/1.1 | Not supported | Not supported—ThinOS 9.1 does not provide the configuration to change TLS. |
| | DTLS 1.0 | Supported | Not available |
| | DTLS 1.2 | Not supported | Not available |
| | SHA2 Cert | Supported | Not available |
| | Smart Access | Not supported | Not available |
| | Remote Access via Citrix Gateway | Supported | Does not support lock terminal when logging on Netscaler with web-based authentication such as OTP and Azure SAML SSO. |
| | Workspace for Web Access | N/A | ThinOS does not provide local browser. |
| | IPV6 | Not supported | Not supported—Able to sign in but cannot connect to the session. |
| Keyboard Enhancements | Dynamic Keyboard Layout Synchronization with Windows VDA | Supported | Not available |
| | Unicode Keyboard Layout Mapping with Windows VDA | Supported | Not available |
| | Client IME Enhancements with Windows VDA | N/A | Not available |
| | Language Bar Show/Hide with Windows VDA Applications | N/A | Not available |
| | Option Key mapping for server-side IME input mode on Windows VDA | N/A | Not available |
| | Dynamic Keyboard Layout Synchronization with Linux VDA | Not supported | Not available |
| | Client IME Enhancements with Linux VDA | N/A | Not available |
| | Language Bar support for Linux VDA Applications | Not supported | Not available |
| | Keyboard sync only when a session is launched—client Setting in ThinOS | Supported | Not available |
| | Server default setting in ThinOS | Supported | Not available |

Table 9. Citrix Workspace app feature matrix (continued)

| Feature | | ThinOS 9.1.2101 | ThinOS 9.1.2101 limitations |
|--|---|-----------------|-------------------------------|
| | Specific keyboard in ThinOS | Supported | Not available |
| New features listed in Citrix Workspace App release note but not in feature matrix | Pinning multi-monitor screen layout(CWA2103) | Not supported | Not available |
| | App Protection(CWA2101) | Not supported | Not available |
| | Authentication enhancement is available only in cloud deployments (CWA2012) | Not supported | Not available |
| | Multiple audio (CWA2012 and CWA2010) | Not supported | Not available |
| | Citrix logging (CWA2009) | Supported | Not available |
| | Cryptographic update (CWA2006) | Not supported | Not available |
| | Transparent user interface (TUI)(CWA1912 and CWA1910) | Not supported | Not available |
| | GStreamer 1.x supportexperimental feature(CWA1912) | Supported | Not available |
| | App indicator icon(CWA1910) | Not supported | Not available |
| | Latest webkit support(CWA1908 and CWA1906) | Supported | Not available |
| | Bloomberg audio redirection (CWA1903) | Supported | Not available |
| | Bloomberg v4 keyboard selective redirection support(CWA1808) | Supported | Does not support hotplugging. |
| ThinOS VDI configuration | Broker Setting | Supported | Not available |
| | PNA button menu | Supported | Not available |
| | Sign on window function | Supported | Not available |
| | Workspace mode | Supported | Not available |
| | Admin policy tool | Supported | Not available |

VMware Horizon feature matrix

Table 10. VMware Horizon feature matrix

| Feature | | ThinOS 9.1.2101 |
|---------------------|------------------------------|--|
| Broker Connectivity | XML-API version | 15 |
| | SSL certificate verification | Supported with VDI, RDS Hosted Desktops and Apps |
| | Disclaimer dialog | Supported with VDI, RDS Hosted Desktops and Apps |

Table 10. VMware Horizon feature matrix (continued)

| Feature | | ThinOS 9.1.2101 |
|-----------------------|---|--|
| | UAG compatibility | Supported with VDI, RDS Hosted Desktops and Apps |
| | Shortcuts from server | Not supported |
| | Pre-install shortcuts from server | Not supported |
| | File type association | Not supported |
| | Phone home | Supported with VDI, RDS Hosted Desktops and Apps |
| Broker Authentication | Password authentication | Supported with VDI, RDS Hosted Desktops and Apps |
| | Single sign on | Supported with VDI, RDS Hosted Desktops and Apps |
| | Certificate authentication | Not supported |
| | RSA authentication | Supported with VDI, RDS Hosted Desktops and Apps |
| | Integrated RSA SecurID token generator | Not supported |
| | Radius | Supported with VDI, RDS Hosted Desktops and Apps |
| | Kiosk mode | Supported with VDI, RDS Hosted Desktops and Apps |
| | Remember credentials | Not supported |
| | Log in as current user | Not supported |
| | Nested log in as current user | Not supported |
| | Log in as current user 1-way trust | Not supported |
| | OS biometric authentication | Not supported |
| | Un-authentication access | Supported with VDI, RDS Hosted Desktops and Apps |
| Smart card | x.509 certificate authentication (Smart Card) | Supported with VDI, RDS Hosted Desktops and Apps |
| | CAC support | Supported with VDI, RDS Hosted Desktops and Apps |
| | .Net support | Supported with VDI, RDS Hosted Desktops and Apps |
| | PIV support | Supported with VDI, RDS Hosted Desktops and Apps |
| | Java support | Not supported |
| | Purebred derived credentials | Not supported |
| | Device Cert auth with UAG | Not supported |
| Desktop Operations | Reset | Supported only with VDI |
| | Restart | Supported only with VDI |
| | Log off | Supported with VDI, RDS Hosted Desktops and Apps |

Table 10. VMware Horizon feature matrix (continued)

| Feature | | ThinOS 9.1.2101 |
|--|---|--|
| Session Management (Blast Extreme & PCoIP) | Switch desktops Multiple connections | Supported with VDI, RDS Hosted Desktops and Apps |
| | Multi-broker/multi-site redirection - Universal | Supported with VDI, RDS Hosted Desktops and Apps |
| | App launch on multiple end points | Supported with VDI, RDS Hosted Desktops and Apps |
| | Auto-retry 5+ minutes | Supported with VDI, RDS Hosted Desktops and Apps |
| | Blast network recovery | Supported with VDI, RDS Hosted Desktops and Apps |
| | Time zone synchronization | Supported with VDI, RDS Hosted Desktops and Apps |
| | Jumplist integration (Windows 7- Windows 10) | Not supported |
| Client Customization | Command line options | Not supported |
| | URI schema | Not supported |
| | Launching multiple client instances using URI | Not supported |
| | Preference file | Not supported |
| | Parameter pass-through to RDSH apps | Not supported |
| | Non interactive mode | Not supported |
| | GPO-based customization | Not supported |
| Protocols supported | Blast Extreme | Supported with VDI, RDS Hosted Desktops and Apps |
| | H.264 - HW decode | Supported with VDI, RDS Hosted Desktops and Apps |
| | H.265 - HW decode | Not supported |
| | Blast Codec | Supported with VDI, RDS Hosted Desktops and Apps |
| | JPEG/PNG | Supported with VDI, RDS Hosted Desktops and Apps |
| | Switch encoder | Supported with VDI, RDS Hosted Desktops and Apps |
| | BENIT | Supported with VDI, RDS Hosted Desktops and Apps |
| | Blast Extreme Adaptive Transportation | Supported with VDI, RDS Hosted Desktops and Apps |
| | RDP 8.x, 10.x | Supported with VDI, RDS Hosted Desktops and Apps |
| | PCoIP | Supported with VDI, RDS Hosted Desktops and Apps |
| Features/Extensions Monitors/ Displays | Dynamic display resizing | Supported with VDI, RDS Hosted Desktops and Apps |

Table 10. VMware Horizon feature matrix (continued)

| Feature | ThinOS 9.1.2101 | |
|-------------------------------|--|--|
| | VDI windowed mode | Supported with VDI, RDS Hosted Desktops and Apps |
| | Remote app seamless window | Not supported |
| | Multiple monitor support | Supported with VDI, RDS Hosted Desktops and Apps |
| | External monitor support for mobile | Not supported |
| | Display pivot for mobile | Not supported |
| | Number of displays supported | 4 |
| | Maximum resolution | 3840x2160 |
| | High DPI scaling | Supported only with VDI |
| | DPI sync | Supported with VDI, RDS Hosted Desktops and Apps |
| | Exclusive mode | Not supported |
| | Multiple monitor selection | Supported with VDI, RDS Hosted Desktops and Apps |
| Input Device (Keyboard/Mouse) | Language localization (EN, FR, DE, JP, KO, ES, CH) | Supported with VDI, RDS Hosted Desktops and Apps |
| | Relative mouse | Supported only with VDI |
| | External Mouse Support | Supported with VDI, RDS Hosted Desktops and Apps |
| | Local buffer text input box | Not supported |
| | Keyboard Mapping | Supported with VDI, RDS Hosted Desktops and Apps |
| | International Keyboard Support | Supported with VDI, RDS Hosted Desktops and Apps |
| | Input Method local/remote switching | Not supported |
| | IME Sync | Supported with VDI, RDS Hosted Desktops and Apps |
| Clipboard Services | Clipboard Text | Supported with VDI, RDS Hosted Desktops and Apps |
| | Clipboard Graphics | Not supported |
| | Clipboard memory size configuration | Supported with VDI, RDS Hosted Desktops and Apps |
| | Drag and Drop Text | Not supported |
| | Drag and Drop Image | Not supported |
| Connection Management | IPv6 only network support | Supported with VDI, RDS Hosted Desktops and Apps |
| | PCoIP IP roaming | Supported with VDI, RDS Hosted Desktops and Apps |
| Optimized Device Redirection | Serial (COM) Port Redirection | Supported with VDI, RDS Hosted Desktops and Apps |
| | Client Drive Redirection/File Transfer | Not supported |

Table 10. VMware Horizon feature matrix (continued)

| Feature | | ThinOS 9.1.2101 |
|------------------------|---|--|
| | Scanner (TWAIN/WIA) Redirection | Supported with VDI, RDS Hosted Desktops and Apps |
| | x.509 Certificate (Smart Card/ Derived Credentials) | Supported with VDI, RDS Hosted Desktops and Apps |
| | Gyro Sensor Redirection | Not supported |
| Real-Time Audio-Video | Audio in (input) | Supported with VDI, RDS Hosted Desktops and Apps |
| | Video in (input) | Supported with VDI, RDS Hosted Desktops and Apps |
| | Multiple webcams | Not supported |
| USB Redirection | USB redirection | Supported with VDI, RDS Hosted Desktops and Apps |
| | Policy: ConnectUSBOnInsert | Supported with VDI, RDS Hosted Desktops and Apps |
| | Policy: ConnectUSBOnStartup | Supported with VDI, RDS Hosted Desktops and Apps |
| | Connect/Disconnect UI | Not supported |
| | USB device filtering (client side) | Supported with VDI, RDS Hosted Desktops and Apps |
| | Isochronous Device Support | Supported only with VDI |
| | Split device support | Supported with VDI, RDS Hosted Desktops and Apps |
| | Bloomberg Keyboard compatibility | Supported only with VDI |
| Unified Communications | Skype for business | Supported with VDI, RDS Hosted Desktops and Apps |
| | Zoom Cloud Meetings | Supported with VDI, RDS Hosted Desktops and Apps |
| | Cisco Jabber Softphone | Supported with VDI, RDS Hosted Desktops and Apps |
| | Cisco WebEx Teams | Supported with VDI, RDS Hosted Desktops and Apps |
| | Microsoft Teams RTAV | Supported with VDI, RDS Hosted Desktops and Apps |
| | Microsoft Teams offload | Not supported |
| Multimedia Support | Multimedia Redirection (MMR) | Not supported |
| | HTML5 Redirection | Not supported |
| | Directshow Redirection | Not supported |
| | URL content redirection | Not supported |
| | Browser content redirection | Not supported |
| Graphics | vDGA | Supported only with VDI |
| | vSGA | Supported only with VDI |

Table 10. VMware Horizon feature matrix (continued)

| Feature | ThinOS 9.1.2101 | |
|-----------------------|---|---|
| | NVIDIA GRID vGPU | Supported with VDI, RDS Hosted Desktops and Apps |
| | Intel vDGA | Supported only with VDI |
| | AMD vGPU | Supported only with VDI |
| 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 | VMware Integrated Printing | Supported with VDI, RDS Hosted Desktops and Apps (Only PS printer class is supported) |
| | Location Based Printing | Not supported |
| | Native Driver Support | Not supported |
| Security | FIPS-140-2 Mode Support | Supported with VDI, RDS Hosted Desktops and Apps |
| | Imprivata Integration | Supported with VDI, RDS Hosted Desktops and Apps |
| | Opswat agent | Not supported |
| | Opswat on-demand agent | Not supported |
| | TLS 1.1/1.2 | Supported with VDI, RDS Hosted Desktops and Apps |
| Session Collaboration | Session Collaboration | Supported with VDI, RDS Hosted Desktops and Apps |
| | Read-only Collaboration | Supported with VDI, RDS Hosted Desktops and Apps |
| Update | Update notifications | Not supported |
| | App Store update | Not supported |
| Other | Smart Policies from DEM | Supported with VDI, RDS Hosted Desktops and Apps |
| | Access to Linux Desktop - Blast Protocol Only | Supported only with VDI |
| | Workspace ONE mode | Supported with VDI, RDS Hosted Desktops and Apps |
| | Nested - basic connection | Supported with VDI, RDS Hosted Desktops and Apps |

For limitations related to VMware features on ThinOS in the release, see the [Limitations](#) section. For detailed information about the VMware Horizon features, see the Horizon documentation at docs.vmware.com.

New and enhanced features

Flash protection reliability

Flash protection reliability is enhanced in this release to extend flash life. You must upgrade to ThinOS 9.1.2101 to use this enhancement.

Keyboard layout updates

ThinOS supports the Macedonian, Macedonian – Standard, Belgian, and Belgian (Comma) keyboard layouts. You can configure the keyboard layout from ThinOS local UI, Admin Policy Tool, or the Wyse Management Suite policy settings. For more information about how to configure the settings, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Limitation: The VMware blast session does not support the newly added keyboard layouts namely Belgian (Comma), Macedonian, and Polish (Legacy). To use the Macedonian keyboard layout, you must set the local keyboard layout as Macedonian (standard), and Horizon will sync it into blast session. The RDP session does not support the Macedonian (standard) keyboard layout, if you set the local keyboard layout as Macedonian (standard), the keyboard layout will be set as Macedonian in RDP session.

New options added for Customize Privilege Level

When you set the user privilege to **Customize**, you can manually select options that you want to enable or disable in the ThinOS system menu. From ThinOS 9.1.2101 onwards, **Add Connection**, **Global Connection Settings**, and **DHCP** options are added. The **DHCP** option is only available after you enable **Network Setup**.

Supports external secure MQTT for Wyse Management Suite server

If you enable the external secure MQTT option on the Wyse Management Suite server, the thin client automatically fetches the MQTT server <tls://xxx.xxx.xxx:8443>.

NOTE: If port 1883 is blocked in the Wyse Management Suite server, the ThinOS client cannot switch to the External Secure MQTT server from the External MQTT server. If you are blocking port 1883, select **External Secure MQTT** as **Preferred MQTT** in the Wyse Management Suite server first.

New background picture for ThinOS

The default background picture of ThinOS is changed.

Shutdown menu update

The default selection on **Shutdown** menu is changed from **Restart** to **Shutdown**.

Display port audio design enhancement

The display port (DP) audio design has been changed on Wyse 5070 Thin Client, Wyse 5470 Thin Client, and Wyse 5470 All-in-One Thin Client. In the previous release, HDMI/DP audio options used to be displayed in the **Playback Devices** list on **Peripherals > Audio** tab without monitors being connected. From ThinOS 9.1.2101 onwards, HDMI/DP audio options are displayed in **Playback Devices** list on **Peripherals > Audio** tab when monitors that support display audio are connected.

Limitation: When two monitors with display audio supported are connected to the Dell WD19 docking station, the HDMI/DP audio option does not appear after one of monitors is disconnected. Dell Technologies recommends you not to hot plug monitors to the Dell WD19 docking station. However, the Dell WD19 docking station can be hot plugged.

Poly EagleEye Mini webcam support

The Poly EagleEye Mini webcam is functional on both ThinOS local and VDI session.

Limitation: The Poly EagleEye mini webcam cannot redirect to Blast session.

VNC password restriction

The VNC password length is restricted to eight characters. When you enter more or less than eight characters, red tips are displayed to notify you to follow the rule and enter the correct password.

Proxy

A new app list value HORIZON is added in the **Apply proxy server on** field on the **Proxy** tab. For the VMware Broker logon to use the proxy, you should specify the **Apply proxy server on** field as HORIZON. However, VMware broker with tunnel enabled and VMware application can use proxy when you specify any value in the **Apply proxy server on** field.

On the **Proxy** tab, the following options are available:

- Proxy Types—You can use HTTP proxy, HTTPS proxy and SOCKS5 proxy types. The proxy type enables the thin client to connect to the application such as Wyse Management Suite.
- Proxy values—You can enter values for the HTTP proxy, HTTPS proxy and SOCKS5 proxy types. Adding proxy values enable the thin client to connect to the proxy server.

Table 11. VDI logon or session launch that goes through proxy

| Component | Features | PAC proxy | GUI proxy |
|-----------------------------------|-----------------------------|-----------|--|
| Citrix | http broker log in | No | No |
| | http broker session launch | No | No |
| | https broker log in | Yes | Yes (RTME value added in the Apply proxy server on application list field) |
| | https broker session launch | Yes | Yes (RTME value added in the Apply proxy server on application list field) |
| VMware | broker log in | Yes | Yes (HORIZON value added in the Apply proxy server on application list field) |
| | session launch | Yes | Yes (HORIZON value added in the Apply proxy server on application list field) |
| Windows Virtual Desktop | broker log in | Yes | Yes (WVD value added in the Apply proxy server on application list field) |
| | session launch | No | No |
| Microsoft Remote Desktop Services | broker log in | No | No |
| | session launch | No | No |
| Amazon WorkSpaces | broker log in | No | No |
| | session launch | No | No |
| Teradici Cloud | broker log in | No | No |
| | session launch | No | No |

Table 11. VDI logon or session launch that goes through proxy (continued)

| Component | Features | PAC proxy | GUI proxy |
|-----------------------|----------------------------------|-----------|--|
| Wyse Management Suite | Wyse Management Suite connection | Yes | Yes (WMS value added in the Apply proxy server on application list field) |

Citrix Workspace App update

The Citrix Workspace App version is updated to 2101.

- ICA session cursor pattern—The ICA session cursor pattern setting is added in the Admin Policy tool or Wyse Management Suite policy settings to configure the cursor behavior during a Citrix session. Sign off from the Broker agent or reboot the client to make this setting take effect. The setting can force areas of the cursor to be black or white. The following values can be used:
 - ffff,ffff—Enter this value to set the cursor color as black. This value is set by default.
 - 0,0—Enter this value to set the cursor color as white.
 - aaaa,5555—Enter this value to set the cursor color in a dotted pattern.
- Citrix logging—Supports export of Citrix logs for troubleshooting purposes. For more information about how to export Citrix Workspace App logs in ThinOS, see the *Dell Wyse ThinOS 9.1 Administrator's Guide* at www.dell.com/support.

Limitations:

- Zoom optimization using the proxy server is not supported.
- Microsoft Teams optimization using the proxy server is not supported.
- RTME using the proxy server is not supported.
- Pause/Break and Scroll Lock does not function in Citrix session when the Keyboard Layout Mode is set as Server Default. You must change the Keyboard Layout Mode to non Server Default and reboot the client to make Pause/Break and Scroll Lock work.
- The maximum supported compatible version of Webex Meetings app on the hosted virtual desktop is 41.3 for WebexMeetings v40.10.11.15.6 pkg. To use Webex meetings optimization in ThinOS, IT administrators must not upgrade Webex meeting server site higher than 41.3. For more information, see help.webex.com.
- If a user logs in to the Citrix broker using the web-based login, the **Last User** and **Last Logged-in User** entries are not displayed on Wyse Management Suite. Also, the user credentials that are pushed to the client using Wyse Management Suite cannot be used for logging into the Citrix broker that uses the web-based login. You can use the web-based login when configuring the Citrix ADC using Azure AD SAML with SSO and Citrix ADC Native OTP features.

Microsoft Direct Remote Desktop Protocol updates

- Supports **Auto-Connect on Start-Up**—You can configure the **Auto-Connect on Start-Up** option from ThinOS local UI, Admin Policy Tool, or the Wyse Management Suite policy settings. Enabling this option allows the thin client to automatically connect to a Remote Desktop Protocol connection on system startup. For more information about how to configure the **Auto-Connect on Start-Up**, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.
 - NOTE:** The **Save local connections** option should be enabled before experiencing this feature. Go to **Wyse Management Suite** or **Admin Policy Tool** > **Session Settings** > **Global Session Settings** to enable the option.
- Supports Remote Desktop Gateway—You can log on to the Remote Desktop Gateway using the ThinOS Local UI. For more information about how to configure the **Remote Desktop Gateway**, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Windows Virtual Desktop

Supports Active Directory Federation Server (ADFS) logon—You can use your ADFS server login to join the on-premises Active Directory with the Azure Active Directory. You must ensure that you have an Azure Active Directory, public domain name, and on-premises Active Directory. Also, ensure that you have configured the ADFS and Azure AD Connect. For more information about how to log in to the Windows Virtual Desktop, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

HID fingerprint reader support

ThinOS supports using the HID global software with HID fingerprint reader in Citrix ICA session. For more information about how to use the HID fingerprint reader, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

The supported devices are as below:

- HID EikonTouch 4300 Fingerprint Reader
- HID EikonTouch TC510 Fingerprint Reader
- HID EikonTouch TC710 Fingerprint Reader
- HID EikonTouch M211 Fingerprint Reader
- HID EikonTouch V311 Fingerprint Reader

Imprivata updates

- **Imprivata PIE VDI silent mode**—VDI silent mode allows ThinOS to load the VDI configurations from the **Remote Connections** window in ThinOS. By default, Imprivata OneSign policy controls the VDI selection. You can use either the Admin Policy Tool or the Wyse Management Suite policy settings to configure the VDI silent mode. For more information about how to configure the Imprivata PIE VDI silent mode, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.
NOTE: RDP is not supported in VDI silent mode.
- **Imprivata fingerprint reader**—The Imprivata fingerprint device must be configured to get better experience with the fingerprint authentication. You can configure the fingerprint device for Citrix ICA, PCoIP, and VMware blast sessions. You can use either the Admin Policy Tool or the Wyse Management Suite policy settings to configure the Imprivata fingerprint reader settings. For more information about how to configure the fingerprint device, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Teradici cloud access updates

You can configure the security mode from **System Setup > Remote Connection > Broker Setup > Teradici CCloud Access** from the ThinOS local UI. The following security mode types have been added:

- Full (never connects to untrusted servers)
- Warning (warns before connecting to untrusted servers)
- Low (does not verify identity certificates)

NOTE: For more information about how to configure the security modes, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide*, at www.dell.com/support.

Supports the Bloomberg keyboard

ThinOS supports Bloomberg Keyboard STB 100. The keyboard has two connection methods. One method uses a single USB cable to the USB port of the system. The second method is to connect dual USB cables to a KVM USB switch. In a single USB cable connection, the keyboard device ID is vid-1188_pid-9545. All the six interfaces are under this device ID. In the dual USB cable connection, the keyboard device IDs are vid-1188_pid-9525 for one device and vid-1188_pid-9535 for the other five devices. ThinOS supports Bloomberg keyboard with single USB and dual USB.

The following table describes the keyboard functionalities that are supported in VDI sessions:

Table 12. Supported keyboard functionalities in VDI sessions

| VDI session | Functionality | |
|----------------|---|---|
| | Redirect the entire keyboard into a session | Split keyboard and partly redirect into a session |
| Citrix ICA | Supported | Supported |
| VMware Horizon | Supported | Supported |
| PCoIP | Supported | Not Supported |

You must use either the Admin Policy Tool or the Wyse Management Suite policy settings to configure the keyboard features. For more information about how to configure the Bloomberg keyboard features, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Limitations:

- The Bloomberg keyboard is only supported under redirection.
- Hot plugging the Bloomberg keyboard is not supported. You must configure the keyboard before logging in to the Broker agent and launching the session.
- Disconnecting the Bloomberg keyboard cables when it is redirected into session may cause the session to close or the system to randomly reboot.

Important notes

VMware Horizon

The tested keyboard layouts are as below:

- Belgian
- Belgian Comma
- Slovakian
- Slovakian (QWERTY)
- Turkish F
- Macedonian
- Macedonian (Standard)
- French Canadian
- French
- Swiss German
- German
- Danish
- Swedish
- Polish Programmer
- Polish (Legacy)

USB redirection

- USB redirection for webcam or audio can be used for test purpose. The performance is expected to be bad when the audio or camera is used as USB redirection devices. Unexpected behavior such as system not responding or reboot may happen when these devices are used.
- Webcam or audio must be used by map method to get good performance.

Horizon with Imprivata PIE

VMware Horizon Client Native PCoIP is used instead of Teradici PCoIP when logging in to the Horizon View broker using Imprivata PIE mode.

Limitations

VMware Horizon

- Blast session:
 - There is a probability that the session is black when a blast session is launched. During this time, you can try to disconnect and relaunch (sign-off broker and sign in again) the session.
- JVDI audio or video call:
 - In a blast session on Wyse 5470 Thin Client, sometimes there is no audio in JVDI audio or video call.
- Zoom optimization:

- Once Zoom is launched, the video appears to be offset sometimes, which is a known issue. You must sign off from the blast session, relaunch the session, and zoom again. Zoom optimization using the proxy server is not supported for Horizon blast.
- Zoom optimization using the proxy server is not supported for Horizon blast.
- Printing in blast session:
 - At the moment, ThinOS only supports PS printer in blast session as VMware has removed thin print support from Horizon 8.0 and client 2006 onwards. However, some printers may not be supported, it is according to the printer model used.
- Application multilaunch does not work.

Monitors on Dell WD19 docking station: On Wyse 5470 devices, ThinOS supports one quad HD display at 30 Hz and two full HD displays at 60 Hz on Dell WD19 docking station. If two displays with a resolution greater than 1920x1080 are connected simultaneously, different behaviors may occur, which are as below:

- The resolutions are random, you must change the resolutions to 1920x1080 or lower to make both the displays work. You must reconnect the Dell WD19 docking station once to get the correct resolutions.
- The second connected monitor is disabled, you must enable it in Display Setup first, then change the resolutions to 1920x1080 or lower to make both the displays work. You must reconnect the Dell WD19 docking station once to get the correct resolutions.

Fingerprint reader: If you have installed both Imprivata and HID packages on ThinOS, you cannot use the Fingerprint reader on the KSI-1700 keyboard after restarting your ThinOS device.

Tested environments matrix

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

Table 13. Tested environment—General components

| Component | Version |
|---------------------------------|------------------------------|
| Wyse Management Suite | 3.2 |
| Imprivata OneSign | 7.1.005.42 |
| Citrix ADC (formerly NetScaler) | 12.1/13.0 |
| StoreFront | 1912 LTSR and later versions |

Table 14. Test environment—Citrix

| Citrix Virtual Apps and Desktops | Windows 10 | Windows Server 2012 R2 | Windows Server 2016 | Windows Server 2019 | APPs |
|---|------------|------------------------|---------------------|---------------------|--------|
| Citrix Virtual Apps and Desktops/ Citrix Virtual Apps 7.15 LTSR Cumulative Update 5 (CU5) | Tested | Tested | Tested | Not tested | Tested |
| Citrix Virtual Apps and Desktops 7 1912 LTSR | Tested | Tested | Tested | Tested | Tested |
| Citrix Virtual Apps and Desktops 7 2006 | Tested | Not tested | Tested | Tested | Tested |

Table 15. Tested environment—VMware Horizon

| VMware | Windows 10 | Windows Server 2012 R2 | Windows Server 2016 | Windows Server 2019 | Windows Server 2016 APPs | Windows Server 2019 APPs |
|---------------------|------------|------------------------|---------------------|---------------------|--------------------------|--------------------------|
| VMware Horizon 7.12 | Tested | Tested | Tested | Tested | Tested | Tested |
| VMware Horizon 2006 | Tested | Not tested | Not tested | Tested | Not tested | Tested |

Table 16. Test environment—Microsoft RDP

| Microsoft RDP | Windows 7 | Windows 10 | Windows Server 2008 R2 | Windows Server 2012 R2 | Windows Server 2016 | Windows Server 2019 | APPs |
|---------------------------------|------------|------------|------------------------|------------------------|---------------------|---------------------|--------|
| Remote Desktop Services 2012 R2 | Tested | Tested | Not tested | Tested | Not tested | Not tested | Tested |
| Remote Desktop Services 2016 | Tested | Tested | Not tested | Not tested | Tested | Not tested | Tested |
| Remote Desktop Services 2019 | Not tested | Tested | Not tested | Not tested | Not tested | Tested | Tested |

Table 17. Test environment—WVD

| Windows Virtual Desktop | Windows 7 | Windows 10 | Windows Server 2008 R2 | Windows Server 2012 R2 | Windows Server 2016 | Windows Server 2019 | APPs |
|-------------------------|------------|------------|------------------------|------------------------|---------------------|---------------------|--------|
| 2019(MS-Prod) | Not tested | Tested | Not tested | Not tested | Not tested | Not tested | Tested |
| 2020(ARMv2) | Not tested | Tested | Not tested | Not tested | Not tested | Not tested | Tested |

Table 18. Tested environment—Skype for Business

| Citrix VDI | Operating system | RTME Client | RTME Agent | Skype for Business client | Skype for Business Server |
|---|---------------------|-------------|------------|---------------------------|---------------------------|
| Citrix Virtual Apps and Desktops 7 1912 LTSR Citrix Virtual Apps and Desktops 7 2006 | Windows 10 | 2.9.100 | 2.9.100 | Skype for Business 2016 | Skype for Business 2015 |
| | Windows server 2016 | | | | |
| | Windows server 2019 | | | | |

Table 19. Tested environment—Skype for Business

| VMware VDI | Operating system | Skype for Business Client | Skype for Business Agent | Skype for Business client | Skype for Business Server |
|--|---------------------|---------------------------|--------------------------|---------------------------|---------------------------|
| VMware Horizon 7.12 VMware Horizon 7.5 App VMware Horizon 2006 | Windows 10 | 5.4 | 7.5, 7.12 | Skype for Business 2016 | Skype for Business 2015 |
| | Windows server 2016 | | | | |
| | Windows server 2019 | | | | |

Table 20. Tested environment—JVDI

| Citrix VDI | Operating system | JVDI | JVDI agent | Jabber software |
|---|---------------------|--------|------------|-----------------|
| Citrix Virtual Apps and Desktops 7 1912 LTSR Citrix Virtual Apps and Desktops 7 2006 | Windows 10 | 12.9.2 | 12.9.2 | 12.9.2 |
| | Windows server 2016 | | | |
| | Windows server 2019 | | | |

Table 21. Tested environment—JVDI

| VMware VDI | Operating system | JVDI | JVDI agent | Jabber software |
|--|---------------------|--------|------------|-----------------|
| VMware Horizon 7.12 VMware Horizon 2006 | Windows 10 | 12.9.2 | 12.9.2 | 12.9.2 |
| | Windows server 2016 | | | |

Table 21. Tested environment—JVDI (continued)

| VMware VDI | Operating system | JVDI | JVDI agent | Jabber software |
|------------|---------------------|------|------------|-----------------|
| | Windows server 2019 | | | |

Table 22. Tested environment—Zoom

| Citrix VDI | Operating system | Zoom package | Zoom software |
|--|---------------------|----------------|-------------------|
| Citrix Virtual Apps and Desktops 7 1912 LTSR | Windows 10 | 5.4.59458.0109 | 5.4.9(59458.0109) |
| | Windows server 2016 | | |
| Citrix Virtual Apps and Desktops 7 2006 | Windows server 2019 | | |

Table 23. Tested environment—Zoom

| VMware VDI | Operating system | Zoom package | Zoom software |
|---------------------|---------------------|----------------|-------------------|
| VMware Horizon 7.12 | Windows 10 | 5.4.59458.0109 | 5.4.9(59458.0109) |
| VMware Horizon 2006 | Windows server 2016 | | |
| | Windows server 2019 | | |

Table 24. Tested environment—Cisco WebEx Teams

| Citrix VDI | Operating system | WebEx Teams | WebEx Teams software |
|--|---------------------|--------------|----------------------|
| Citrix Virtual Apps and Desktops 7 1912 LTSR | Windows 10 | 41.1.0.17621 | 41.1.0.17621 |
| | Windows server 2016 | | |
| Citrix Virtual Apps and Desktops 7 2006 | Windows server 2019 | | |

Table 25. Tested environment—Cisco WebEx Teams

| VMware VDI | Operating system | WebEx Teams | WebEx Teams software |
|---------------------|---------------------|--------------|----------------------|
| VMware Horizon 7.12 | Windows 10 | 41.1.0.17621 | 41.1.0.17621 |
| VMware Horizon 2006 | Windows server 2016 | | |
| | Windows server 2019 | | |

Tested peripherals

This section lists the supported peripheral devices.

- Monitor
 - E1916H
 - E1920H
 - E2016H
 - E2016Hv (China only)
 - E2020H
 - E2216H
 - E2216Hv (China only)
 - E2218HN
 - E2220H
 - E2318H
 - E2417H
 - E2420H
 - E2420HS
 - E2720H

- E2720HS
- P2016
- P1917S
- P2017H
- P2018H
- P2217
- P2217H
- P2219H
- P2219HC
- P2317H
- P2319H
- P2415Q
- P2417H
- P2418D
- P2418HT
- P2418HZ
- P2419H
- P2419HC
- P2421D
- P2421DC
- P2719H
- P2719HC
- P2720D
- P2720DC
- P3418HW
- P4317Q
- MR2416
- U2415
- U2419H
- U2419HC
- U2518D
- U2520D
- U2718Q (4K)
- U2719D
- U2719DC
- U2720Q
- U2721DE
- U2421HE
- U4320Q
- U4919DW
- Dell P2715Q(3840x2160)
- Dell S2719HS (1920x1080)
- Dell S2817Q(3840x2160)
- Printer
 - Dell B1165nfw Mono Multifunction Printer
 - Dell B1265dnf Multifunction Laser Printer
 - Dell B2360d Laser Printer
 - Dell Color Multifunction Printer - E525w
 - Dell Color Printer - C2660dn
 - Dell Multifunction Printer - E515dn
- Keyboard and Mouse
 - Dell Laser Scroll USB 6-Buttons Silver and Black Mouse - Naruto
 - Dell Laser Wired Mouse - MS3220 - Morty
 - Dell Mobile Pro Wireless Mice - MS5120W - Splinter
 - Dell Mobile Wireless Mouse - MS3320W - Dawson
 - Dell Multi-Device Wireless Keyboard and Mouse Combo - KM7120W

- Dell Multi-Device Wireless Mouse - MS5320W - Comet
- Dell USB Wired Keyboard - KB216
- Dell USB Wired Optical Mouse - MS116
- Dell Premier Wireless Mouse - WM527
- Dell Wireless Keyboard and Mouse - KM636
- Dell Wireless Mouse - WM326
- Seal Shield Silver Seal Waterproof-Keyboard-USB-US-waterproof-white
- Seal Shield Medical Grade Optical Mouse
- 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 Mouse - WM126_BLACK
- Dell Wireless Keyboard and Mouse—KM632
- Dell Keyboard KB212-B
- Bloomberg Keyboard STB 100
- Microsoft Arc Touch Mouse 1428
- SpaceNavigator 3D Space Mouse
- SpaceMouse Pro
- Adapters and cables
 - Dell Adapter - DisplayPort to DVI (Single Link) - DANARBC084 - DANARBC084
 - Dell Adapter - DisplayPort to HDMI 2.0 (4K) - DANAUBC087 - DANAUBC087
 - Dell Adapter - DisplayPort to VGA - DANBNBC084 - DANBNBC084
 - C2G - USB 2.0 A (Male) to DB9 (Serial) (Male) Adapter
 - Dell Adapter - USB-C to DisplayPort - DBQANBC067 - DBQANBC067
 - Dell Adapter - USB-C to Dual USB-A with Power Pass-Through - DBQ2BJBC070 - Combo Adapter
 - Dell Adapter - USB-C to HDMI/DP - DBQAUNBC070
 - Dell Adapter - USB-C to HDMI - DBQAUBC064 - DBQAUBC064
 - Dell Adapter - USB-C to VGA - DBQBNBC064 - DBQBNBC064
 - Trendnet« USB to Serial Converter RS-232
 - Dell Adapter - HDMI to DVI - DAUARBN004 - DAUARBN004
 - Dell Adapter - HDMI to VGA - DAUBNBC084 - DAUBNBC084
 - StarTech.com 1 Port USB to RS232 DB9 Serial Adapter Cable - Serial adapter - USB 2.0 - RS-232
- Audio
 - Dell Pro Stereo Headset - UC150 - Skype for Business
 - Dell Pro Stereo Headset - Skype for Business - UC350
 - Dell Professional Sound Bar (AE515M)
 - Dell USB Sound Bar (AC511M)
 - Jabra PRO 935 USB MS Lync Headset - 935-15-503-185 - 935-15-503-185
 - Dell 2.0 Speaker System - AE215
 - Dell Wired 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
 - Jabra Pro 9450
 - Jabra Speak 510 MS Bluetooth
 - Jabra BIZ 2400 Duo USB MS
 - Jabra Evolve 75
 - Plantronics SAVI W740/Savi W745—Hot plugging and Bluetooth functions are not supported.
 - Plantronics Blackwire 5220 Series
 - Sennheiser SC 660 USB ML
 - Logitech S-150
 - Polycom Deskphone CX300
 - Philips
 - LFH3610/00 Speechmike Premium—Only whole device redirection is supported. Hot plugging is not supported.
- Camera
 - Logitech C920 HD Pro webcam

- Logitech C930e HD webcam
- Logitech C922 Pro Stream webcam
- Poly EagleEye Mini webcam
- USB
 - SanDisk Cruzer 16 GB
 - SanDisk USB 3.1 and Type-C 16 GB
 - Kingston DTM30 32 GB
- Smart card readers
 - Dell Smartcard Keyboard - KB813
 - Dell keyboard KB813t
 - Sun microsystem SCR 3311
 - Cherry SmartTerminal SMART Card Reader - ST-1044U
 - Cherry SmartTerminal ST-1144 SMART Card Reader - USB 2.0
 - CHERRY KC 1000 SC - Keyboard - with Smart Card reader - USB - English - US - black - TAA Compliant - JK-A0104EU
 - OMNIKEY HID 3021
 - OMNIKEY OK CardMan3121
 - HID OMNIKEY 5125
 - HID OMNIKEY 5421
 - SmartOS powered SCR335
 - SmartOS powered SCR3310
 - Cherry keyboard RS 6600 with smart card
 - Cherry keyboard RS 6700 with smart card
 - Cherry keyboard KC 1000 SC with smart card
 - Dell keyboard KB813—Smartcard reader
 - Dell Keyboard SK-3205—Smartcard reader
 - Gemalto IDBridge CT710
 - GemPC Twin
- Proximity card readers
 - RFIDeas RDR-6082AKU
 - Imprivata HDW-IMP-60
 - Imprivata HDW-IMP-75
 - OMNIKEY 5025CL
 - OMNIKEY 5326 DFR
 - OMNIKEY 5321 V2
 - OMNIKEY 5321 V2 CL SAM
 - OMNIKEY 5325 CL
 - KSI-1700-SX Keyboard
- Fingerprint readers
 - KSI-1700-SX Keyboard
 - Imprivata HDW-IMP-1C
 - HID EikonTouch 4300 Fingerprint Reader
 - HID EikonTouch TC510 Fingerprint Reader
 - HID EikonTouch TC710 Fingerprint Reader
 - HID EikonTouch M211 Fingerprint Reader
 - HID EikonTouch V311 Fingerprint Reader
- HFA
 - BLED112HDW-IMP-IIUR—BLEdongle
- Networking
 - Add On 1000 Base-T SFP transceiver (RJ-45)
- Docking station
 - Dell Dock - WD19-C
 - Dell Thunderbolt Dock - WD19TB (does not support thunderbolt display)
- Storage
 - Dell Portable SSD, USB-C 250GB
 - Dell External Tray Load ODD (Agate)-DVD Writer
- Teradici remote cards

- Teradici host card 2220
- Teradici host card 2240

Tested smart cards

Table 26. Tested smart cards

| Smart Card information from the ThinOS event log | Driver | Provider (CSP) | Card type |
|--|------------------------------------|--|--|
| ActivIdentity V1 | ActivClient 7.1 | ActivClient Cryptographic Service Provider | Oberthur CosmopolC 64k V5.2 |
| ActivIdentity V1 | ActivClient 7.1 | ActivClient Cryptographic Service Provider | Gemalto Cyberflex Access 64K V2c |
| ActivIdentity v2 card | ActiveClient 7.2 | ActivClient Cryptographic Service Provider | Gemalto TOPDLGX4 |
| ActivIdentity v2 card | ActiveClient 7.2 | ActivClient Cryptographic Service Provider | G&D SCE 3.2 |
| ActivIdentity v2 card | ActiveClient 7.2 | ActivClient Cryptographic Service Provider | Oberthur IDOne 5.5 |
| ActivIdentity v2 card | ActiveClient 7.2 | ActivClient Cryptographic Service Provider | Oberthur Cosmo V8 |
| ActivIdentity crescendo card | ActiveClient 7.2 | ActivClient Cryptographic Service Provider | Giesecke and Devrient SmartCafe Expert 7.0 (T=0) |
| ID Prime MD v 4.0.2 | Safenet Authentication Client 10.8 | eToken Base Cryptographic Provider | IDPrime MD 840 |
| ID Prime MD v 4.0.2 (Gemalto 840) | Safenet Authentication Client 10.8 | eToken Base Cryptographic Provider | IDPrime MD 840 B |
| ID Prime MD v 4.1.0 | Safenet Authentication Client 10.8 | eToken Base Cryptographic Provider | IDPrime MD 3810 MIFARE 1K |
| ID Prime MD v 4.1.3(Gemalto 3811) | Safenet Authentication Client 10.8 | eToken Base Cryptographic Provider | IDPrime MD 3811 Mifare-Desfire |
| ID Prime MD v 4.1.1 | Safenet Authentication Client 10.8 | eToken Base Cryptographic Provider | IDPrime MD 830-FIPS |
| ID Prime MD v 4.3.5 | Safenet Authentication Client 10.8 | eToken Base Cryptographic Provider | IDPrime MD 830-FIPS Rev B |
| ID Prime MD v 4.4.2 | Safenet Authentication Client 10.8 | eToken Base Cryptographic Provider | IDPrime MD 940 |
| Etoken Java (aladdin) | Safenet Authentication Client 10.8 | eToken Base Cryptographic Provider | IDCore30B eToken 1.7.7 |
| Etoken Java (aladdin) (black USB drive) | Safenet Authentication Client 10.8 | eToken Base Cryptographic Provider | SafeNet eToken 510x |
| Etoken Java (aladdin) (black USB drive) | Safenet Authentication Client 10.8 | eToken Base Cryptographic Provider | SafeNet eToken 5110 |
| Etoken Java (aladdin) (black USB drive) | Safenet Authentication Client 10.8 | eToken Base Cryptographic Provider | SafeNet eToken 5110 FIPS |
| Etoken Java (aladdin) (black USB drive) | Safenet Authentication Client 10.8 | eToken Base Cryptographic Provider | SafeNet eToken 5110 CC |
| N/A (Buypass BelDu) | Net iD 6.8.1.31, 2.0.44 | Net iD - CSP | BelDu 6.0.4 |
| N/A (GEMALTO IDPrime SIS) | Net iD 6.8.1.31, 2.0.44 | Net iD - CSP | IDPrime SIS 4.0.2 |

Table 26. Tested smart cards (continued)

| Smart Card information from the ThinOS event log | Driver | Provider (CSP) | Card type |
|--|-------------------------|------------------------|------------------------|
| Rutoken ECP 2.0 (2100) | Rutoken Drivers 4.6.3.0 | Aktiv ruToken CSP v1.0 | Rutoken ECP 2.0 (2100) |
| Rutoken 2151 | Rutoken Drivers 4.6.3.0 | Aktiv ruToken CSP v1.0 | Rutoken (2151) |

Known issues

Table 27. Known issues

| Issue ID | Description | Workaround |
|-------------------------|--|--|
| DTOS-2531 | If you have connected to a wireless network on a ThinOS device that is connected to the Dell WD19 docking station, sometimes, you cannot connect to the wireless network again after the ThinOS firmware update is installed and your device is automatically restarted. | You must restart the ThinOS client again. |
| DTOS-2515 | When trying to export Citrix Workspace app logs, sometimes, the Advanced button is not displayed after you click the Citrix Workspace app package entry inside the Packages table. | Click a blank row inside the Packages table multiple times, and then click the Citrix Workspace app package entry. |
| DTOS-2214 | Log in to a Citrix server with workspace mode enabled may fail when HTTP user Agent is set. | You must log in with classic mode or modern mode. |
| DTOS-2199 | The inclusion of the Teradici log file may cause the decompression of the Export logs to fail. | You must launch the PCoIP session to generate the PCoIP logs. |
| DTOS-2196 | The Add connection option must be disabled after Broker agent sign-off. | There is no workaround in this release. |
| DTOS-2183 | The FastDisconnect key does not function in a VMware blast session. | Reboot the system and change settings. |
| DTOS-2173 | There is no sound output when using the Dell U2722DE monitor audio jack. | There is no workaround in this release. |
| DTOS-2150 | Video in a Zoom call may be offset. | Sign off from the session and log off from the Broker agent. You may need to do this several times. |
| DTOS-2147 | The Citrix default Cursor Pattern settings do not work. | Enter the default value manually in Wyse Management Suite server or Admin Policy tool. |
| DTOS-2121 | Some ELO touch monitors supported in ThinOS 8.6 may not function in ThinOS 9. | There is no workaround in this release. |
| DTOS-2054/ DTOS-2035 | The client stops responding and reboots when the Poly EagleEye Mini webcam redirects into VMware blast session. | Reboot box and relaunch the session. |
| DTOS-2053 | Citrix Multifarm with NetScaler only enumerates sessions from the first Citrix Broker agent. | Log in with Classic or Workspace mode, and launch the sessions from Connection Manager. |
| DTOS-2043 | The client cannot change the screen saver setting from Disabled to Others . | Change the system mode. |
| DTOS-2037 | The top border of the desktop may get hidden when selecting Window Mode in a full-screen session. | Click Full-screen or Window Mode again in Desktop Viewer. |
| DTOS-2036 | USB device redirection does not work in a Citrix session after hot-swapping a device. | Disconnect and reconnect the session to redirect the device . |
| DTOS-2034 | The Home button in ICA Desktop Viewer switches to full-screened application. | Press Ctrl+Alt+Down to switch to desktop. |

Table 27. Known issues (continued)

| Issue ID | Description | Workaround |
|-----------------|--|--|
| DTOS-2032 | The Sign out and Sign out and forget options do not work in the Windows Virtual Desktop login window. | Special configuration is required on the WVD server for the web login window. |
| DTOS-2011 | The starting COM number for USB Serial devices cannot be selected. | The USB port starts from COM3. The onboard serial port is COM1, and the first USB serial port is COM3 regardless of the USB port. Swap COM1 and COM3, the COM1 in session is COM3 in local and the COM3 in session is COM1 in local. |
| DTOS-2006 | Intermittent issues where the Wyse 5470 All-in-One client cannot resume after a prolonged sleep period. | Tap the mouse to wake up client. |
| DTOS-2002 | Headless (no monitor) booting is not supported. | Boot up with monitor connected. |
| DTOS-1979 | Random issue occurs where the PCoIP session does not launch, instead displays an error message stating disconnect message 255. | Reboot the thin client. |
| DTOS-1960 | Android phone redirection may not work after hot swap. | Relaunch the desktop. |
| DTOS-1953 | Locale Setting in Global Session Settings menu does not work when using VMware blast protocol. | Set Locale from the UI. |
| DTOS-1952 | Reconnect setting in Global Session Settings menu works for RDSH session, but not for VMware blast VDI session. | Set reconnect from the UI. |
| DTOS-1948 | Enable Auto Connect in Global Session Settings menu does not work when using VMware blast protocol. | Set auto connect from the UI. |
| DTOS-1942 | Enable Full Screen Mode in Global Session Settings menu does not work when using Blast protocol. | Change to full screen from the UI. |
| DTOS-1938 | All outgoing VMware Horizon connection goes through proxy. | There is no workaround in this release. |
| DTOS-1934 | Fast Disconnect Setting (Ctrl+F12) disconnects all VMware blast sessions but not the current session. | There is no workaround in this release. |
| DTOS-1933 | Citrix RTME does not use proxy server. | There is no workaround in this release. |
| DTOS-1877 | Open and close Network Setup window displays the IEEE802.1x credential window with saved credentials cleared. | Do not click OK to close Network Setup window if wired IEEE802.1x is configured. Click Cancel to close. |
| DTOS-1848 | Type-C USB disk redirects into a VMware blast session on the initial attempt. | Relaunch the blast session. |
| DTOS-1819 | Volume control issues are seen when using a VDI session. | There is no workaround in this release. |
| DTOS-1818 | Touch screen double-click functionality is hard to control in a VDI session. | Use mouse or keyboard, or hold touch to display the right click menu to open. |
| DTOS-1817 | Belgian (Comma) keyboard mapping is not supported in a VMware blast session. | There is no workaround in this release. |
| DTOS-1816 | There are issues while changing the main screen from screen 1 to screen 2. | Manually drag the session to main screen. |
| DTOS-1804 | Removing IEEE802.1x wired authentication ENET1 configurations in Wyse Management Suite does not remove them from the client. | You must also disable the Enable EAP Authentication option for ENET1. |
| DTOS-1797 | Right-click X cannot be used to log off VMware blast sessions in modern mode. | There is no workaround in this release. |

Table 27. Known issues (continued)

| Issue ID | Description | Workaround |
|-----------------|--|---|
| DTOS-1793 | External monitors using 2560x1440 resolution may not function when connected to Wyse 5470 Mobile Clients. | This issue has been found on Dell P2718Q monitor. You may use a different monitor. |
| DTOS-1770 | Random issue occurs where VMware blast sessions display a black screen after launch. | Relaunch the blast session or log in again to the Horizon Broker agent and relaunch session. |
| DTOS-1755 | Orientation or resolution may not be restored after reboot or power off. | There is no workaround in this release. |
| DTOS-1751 | While running a full screen VMware blast session the display test window does not appear as expected. | Close the blast session first then change the display setting. |
| DTOS-1743 | Smartcard certificate selection menu may prompt for certificate selection when connecting to NetScaler with smartcard. | Close the Select Certificate window, then press Esc on the user login window or reboot client to get the Select Client Certificate window. |
| DTOS-1728 | The VPN connection is not restored automatically after waking up from sleep mode. | Manually connect VPN. |
| DTOS-1692 | You cannot enable Microsoft Teams VDI optimization through proxy. | There is no workaround in this release. |
| DTOS-1681 | When using Imprivata ProvelD Embedded, smart cards treat as token may not function as expected. | It may work after reboot. |
| DTOS-1658 | Teradici intermittently displays an error message on launch and fails to connect. | Reinitialize the Teradici Broker agent by pressing the Esc key. |
| DTOS-1653 | Dell P2418HT Touch monitors when connected to a Wyse 3040 client may display a black screen after reboot. | Do not use the direct DP cable, there is no issue when you use DP to HDMI or DP to VGA convertor. |
| DTOS-1643 | Wyse 5470 Mobile Client enables a secondary monitor as the primary monitor. | Reconfigure it manually. |
| DTOS-1626 | The applications and desktops icon of two stores are displayed on the desktop when the first store login is canceled. | Log off from the server and log in again. |
| DTOS-1613 | Intermittent issue occurs after the client resumes from sleep mode. | There is no workaround in this release. |
| DTOS-1603 | Mouse cursor focus must be on password field if a default username is set in Admin Policy. | Use mouse or keyboard to switch the mouse cursor. |
| DTOS-1600 | When the network connection is down for more than 3 minutes, VMware blast sessions may not be able to launch without relogging back into the Horizon Broker agent. | Relogin to the horizon Broker agent. |
| DTOS-1578 | When changing resolutions with rotation enabled, the system setting bar may be detached from the left terminal border. | Close the window and open it again. |
| DTOS-1548 | Applications may not restart after unlock. | There is no workaround in this release. |
| DTOS-1547 | Proximity card readers intermittently do not function after client shutdown or reboot. | There is no workaround in this release. |
| DTOS-1473 | The Citrix Log Preferences window must be on top when displayed. | Keep the Citrix Log Preferences window at the top. |
| DTOS-1357 | NetScaler timeouts are not honored when with smartcard authentication. | Do not set the NetScaler timeout or reboot client when the issue happens. |

Table 27. Known issues (continued)

| Issue ID | Description | Workaround |
|-----------------------|--|---|
| DTOS-1000 | Zoom application in Horizon blast does not perform VDI optimization intermittently. | Exit Zoom, sign off from the session, relaunch the blast session and relaunch Zoom. This may need to be done several times. |
| DTOS-996 | Timeouts do not work using NetScaler with Citrix Workspace mode. | User can login with Classic mode or Modern mode. |
| DTOS-910 | Redirection issues noted when hot swapping SpeechMike devices in VDI session. | Redirect the whole device and not just the HID interface. Do not hotplug the device. |
| DTOS-856 | Audio issues can be experienced when connecting multiple Bluetooth audio devices. | There is no workaround in this release. |
| DTOS-845 | User policies may not be applied when using a smartcard at SignOn. | There is no workaround in this release. |
| DTOS-817/ DTOS-815 | With Span Mode enabled, launching two ICA desktops using Default window mode does not place the second session in full screen on the second monitor. | There is no workaround in this release. |
| DTOS-771 | A second monitor may not be recognized when plugged into a docking session until entering the Display Setup menu. | Perform the display test on Display Setup window. You may need to replug the docking station. |
| DTOS-657 | Intermittent audio and audio-video sync issues occur when using Browser Content Redirection (BCR). | Disable BCR. |
| DTOS-477 | Unified Communication echo occurs when using onboard speaker, mic, or analog audio devices. | There is no workaround in this release. |
| DTOS-402 | A blank webpage is unexpectedly displayed after closing the Workspace One window. | Close and reopen the Workspace One window. |
| DTOS-385 | The client may report two monitor labels in the display setup window after unplugging an external monitor from the client. | Plug out the cable swiftly. |
| DTOS-273/ DTOS-210 | Camera devices are not detected in Zoom if the camera is attached after meeting has started. | End and rejoin the meeting to make the camera available in Zoom. |
| DTOS-209 | Jabra Panacast camera displays a black video window in Microsoft Teams and Skype for Business. | Reconnect the session. |
| DTOS-36 | No out of paper message is displayed in the test print menu when the printer is out of paper. | There is no workaround in this release. |

Fixed issues

Table 28. Fixed issues

| Issue ID | Description |
|----------------------------------|---|
| DTOS-1783/ DTOS-1823/ DTOS-1581 | Fixed issues where device details are not correctly reported in Wyse Management Suite. |
| DTOS-1571/ CIPS-19704 | Fixed the issue where password values using umlauts (üöä) do not work with VMware Horizon. |
| DTOS-2039/ DTOS-1623/ CIPS-20640 | Fixed the issue where Copy and Paste functions do not work consistently in Citrix sessions. |
| DTOS-1986/ CIPS-19996 | Fixed the issue where closed lid of Wyse 5470 Thin Client does not turn off the display. |
| DTOS-1482/ CIPS-19845 | Added support for the Logitech H390 USB headset. |

Table 28. Fixed issues (continued)

| Issue ID | Description |
|--|--|
| DTOS-1718/ CIPS-20153 | Fixed an issue where the Cisco JVDI package install fails when using a Wyse Management Suite local repository. |
| DTOS-2100/ CIPS-20499 | Fixed an issue that prevents the use of international keyboard layouts in VMware Horizon PCoIP sessions. |
| DTOS-1433 | Fixed the issue where Alt+Tab do not work as expected in direct RDP sessions. |
| DTOS-1526/ CIPS-19799 | Added support for modern WebRTC apps. |
| DTOS-1824/ DTOS-1584/ DTOS-1580 | Fixed the issue where Wyse Management Suite displays a message stating Unknown Connection Type and no installed applications. |
| DTOS-924/ DTOS-1013 | Added the ability to use system variable password values to unlock the client. |
| DTOS-1135/ DTOS-1624/ CIPS-19086/ CIPS-19500 | Fixed the issue where an error message stating Please load a correct client certificate is displayed. This issue occurs while upgrading from ThinOS 9.0 to ThinOS 9.1. |
| DTOS-1931/ CIPS-20398 | Fixed the issue where some client configurations do not load after the client is reset to factory defaults. |
| DTOS-1908/ CIPS-20004 | Fixed the issue where the Default Username would not populate when switching between select groups. |
| DTOS-1290/ CIPS-19507 | Fixed issue where the Wyse Management Suite group registration key is lost when upgrading from ThinOS 8.6. |
| DTOS-1805/ CIPS-20274 | Fixed the issue where the first digit that is entered into the PIN field is lost. |
| DTOS-1984/ CIPS-20198 | Fixed the mouse cursor accuracy issue pertaining to minimized applications. |
| DTOS-1879/ CIPS-20370 | Fixed the issue where the Fn+ (right) Ctrl (Menu key) does not function as expected on Wyse 5470 Mobile Thin Client. |
| DTOS-2028/ CIPS-20577 | Changed the ThinOS 9.1 menu defaults to Restart instead of Shutdown . |
| DTOS-1717 | Fixed the issue where Citrix Director and Microsoft BgInfo displays the client loopback address for connected sessions instead of the client address. |
| DTOS-1725/ CIPS-20175 | Fixed the Citrix Workspace mode issue where you cannot launch a second session using the ThinOS hot keys (Ctrl+Alt+Down arrow). |
| DTOS-1563/ CIPS-19853 | Fixed the issue where Citrix Workspace App HDX Monitor can report the client IP as 127.0.0.1. |
| DTOS-1568/ CIPS-19953 | Fixed an issue where the Pause/Break and Scroll Lock keys does not function in Citrix session. |
| DTOS-1850 | Fixed an issue where no dialog box is displayed when using SMS with Azure MFA. |
| DTOS-1035 | Added support for the Chicony HP Skylab USB Smartcard Keyboard. |
| DTOS-1048/ CIPS-19044 | Fixed the issue where Topaz Signature Pads cannot be redirected into Citrix session. |
| DTOS-1465/ CIPS-19333 | Fixed multiple issues pertaining to Citrix Multi-Factor Authentication. |

Table 28. Fixed issues (continued)

| Issue ID | Description |
|-----------------------|---|
| DTOS-1539/ CIPS-19719 | Fixed the issue where the Imprivata HDW-IMP-1C fingerprint reader is not supported by Imprivata EPCS. |
| DTOS-1569/ CIPS-19498 | Improved Imprivata proximity login consistency. |
| DTOS-1820 | Fixed the issue where Logitech C270 cameras with built-in microphone fail to record audio. |
| DTOS-1612/ CIPS-20027 | Fixed the issue where the Swiss German Keyboard layout does not work in PColP sessions. |
| DTOS-1758/ CIPS-20226 | Fixed the issue where you cannot launch the selected VM desktop. |
| DTOS-1028 | Added Belgian keyboard layouts. |
| DTOS-1033/ CIPS-18441 | Fixed the issue where webcam video might drop after joining a VDI Optimized Microsoft Teams meeting. |
| DTOS-1042 | Improved performance in Citrix sessions. |
| DTOS-1114/ DTOS-1193 | Fixed the issue where System Preferences can be accessed with Privilege=None. |
| DTOS-1254 | Fixed the issue where date format stays as DD/MM/YYYY despite being changed. |
| DTOS-1410/ CIPS-19659 | Fixed the issue where the cursor does not auto focus on the PIN field when using smart card-based authentication. |
| DTOS-1412 | Fixed the issue where VNC does not function after upgrading to ThinOS 9.1. |
| DTOS-1422 | Fixed the issue where Fn keys do not function in PColP and VMware blast session. |
| DTOS-1464/ CIPS-19782 | Added Turkish F keyboard layout. |
| DTOS-1561 | Fixed the issue where Direct RDP connections do not autoconnect. |
| DTOS-1567/ CIPS-19584 | Fixed the issue where a select group domain entry is incorrectly displayed. |
| DTOS-1583/ CIPS-19994 | Fixed the issue where the mouse cursor text selector is displayed as a black box. |
| DTOS-1590/ CIPS-19921 | Fixed the issue where Devices do not display the correct information in the Wyse Management Suite dashboard. |
| DTOS-1697/ CIPS-20051 | Fixed the issue where the EULA window is displayed after a factory reset if the device takes an extended period to get an IP address. |
| DTOS-1227/ CIPS-19766 | Fixed the issue where you cannot authenticate inside a virtual machine with a smart card. |
| DTOS-1038 | Fixed the issue where the Disable Default User on Login Console configuration does not work as expected for Wyse Management Suite parent & child groups. |
| DTOS-1591/ CIPS-20017 | Fixed the issue where Fast disconnect keys do not work in Direct RDP sessions. |
| DTOS-1469/ CIPS-19817 | Fixed the issue where Wyse Management Suite check-in information is incomplete. |
| DTOS-1822/ CIPS-20260 | Improved Copy and Paste consistency in Citrix sessions. |

Table 28. Fixed issues (continued)

| Issue ID | Description |
|--|--|
| DTOS-1046 | Fixed the French Canadian keyboard layout issues pertaining to accented characters. |
| DTOS-1458/ DTOS-1252/ CIPS-19553 | Fixed the keyboard layout issues when using VNC. |
| DTOS-1575/ CIPS-19985 | Fixed an issue where the cursor may not move in Citrix sessions. |
| DTOS-1573 | Fixed the issue where RDP sessions may intermittently close due to an error message stating Missed heartbeat threshold exceeded. |
| DTOS-1970 | Fixed the noise issue that occurs through speakers attached to the analog audio jack. This issue happens while playing audio and video. |
| DTOS-1932/ CIPS-20396 | Fixed the issue where the cursor focus is not returned to the smart card PIN code field after entering a wrong PIN code. |
| DTOS-1880 | Enabled Microsoft Ergonomic keyboard support. |
| DTOS-1349/ CIPS-19506 | Fixed an issue where the Windows key does not function in an RDP session. |
| DTOS-1049 | Qualified Cisco Meraki Mesh and Eero Mesh Wi-Fi routers. |
| DTOS-1016/ CIPS-18644 | Fixed an issue where the second login screen is not displayed as expected when using nFactor authentication. |
| DTOS-1459/ CIPS-19405 | Added support for Ingenico credit card reader redirection. |
| DTOS-1535 | Fixed an issue pertaining to RDP session resizing. |
| DTOS-1449/ CIPS-19611 | Fixed the issue where administrators are unable to change MQTT settings for Wyse Management Suite servers. |
| DTOS-1036/ CIPS-18087 | Fixed a condition that leads to a Dell logo reboot loop. |
| DTOS-1255/ CIPS-19503 | Fixed an issue where Horizon RSA does not prompt for the next token. |
| DTOS-1199/ CIPS-19442 | Added Slovakia keyboard layout. |
| DTOS-1039/ CIPS-18370 | Fixed an issue where third-party keyboards with smart card interfaces do not authenticate correctly inside a virtual machine. |
| DTOS-1231/ DTOS-1031/ CIPS-19502/ CIPS-18440 | Fixed an issue where host names with - do not resolve correctly. |
| DTOS-1045 | Fixed an issue where the keyboard stops working after Ctrl+Alt+Up/Down key combinations to switch between sessions. |
| DTOS-1019/ CIPS-17601 | Fixed the issue where integrated webcam device does not redirect in Microsoft Teams if the local system language is set as French or German. |
| DTOS-1020 | Added an enhancement to configure the cursor pattern in a Citrix session. For more information, see the Citrix Workspace app update section. |
| DTOS-1014 | Fixed an issue where the Citrix sessions stop responding intermittently. |
| DTOS-1023/ CIPS-17838 | Fixed an issue where the audio drops during Microsoft Teams call when sharing the screen or using a webcam. |

Table 28. Fixed issues (continued)

| Issue ID | Description |
|--------------------------|---|
| DTOS-1021 | Enabled system variable \$TN support with 802.1X Authentication Settings. |
| DTOS-1040/ CIPS-18693 | Fixed the display issue while using Dell U4320Q monitors in four display modes. |
| DTOS-1063 | Fixed the issue where devices do not automatically connect to Wi-Fi when using Machine certificates. |
| DTOS-2156 | Fixed the issue where the Wyse Management Suite Cloud Configurations are not fully applied after the initial device check-in to the Wyse Management Suite server. |
| THINOSX-7125 | Fixed the issue where USB Redirected Audio devices does not reappear after disconnecting and reconnecting to a Citrix session. |
| THINOSX-6988 | Fixed the issue where Azure AD with MFA does not lock screen as intended. |
| THINOSX-7195 | Fixed the issue where headsets are not automatically set as a default device in Microsoft Teams. |
| THINOSX-7749 | Fixed an issue where Smart card only authentication does not work when connecting through Citrix NetScaler. |
| THINOSX-7904 | Fixed the issue where Microsoft Teams does not recognize headphone automatically in the ICA session. |
| THINOSX-7926 | Enabled system variable \$TN ability to lock the password field which was also part of ThinOS 8.6.x. |
| THINOSX-7936 | Fixed the issue where Disable Default User on Login Console config does not work correctly for Wyse Management Suite parent & child group. |
| THINOSX-7957 | Fixed the issue where the internal speaker volume is too low even when the device volume is set as maximum on ThinOS. |
| THINOSX-7969 | Fixed the issue where you cannot change full screen mode to Window mode with privilege level. |
| THINOSX-7995/ CIPS-18845 | Fixed the issue where ThinOS 9.x devices do not allow UPN login. |

ThinOS 9.1.1131

Upgrade to ThinOS 9.1 from ThinOS 8.6

Use the Wyse Management Suite version 3.1 or later to upgrade your ThinOS 8.6-based thin clients to ThinOS version 9.1. Dell Technologies recommends that you use Dell Wyse Management Suite for large deployments.

You cannot boot into ThinOS 9.1 when you perform the following operations in BIOS setup:

- Disable onboard Network Interface Card (NIC), Trusted Platform Module (TPM), or Platform Trust Technology (PTT).
- Clear TPM or PTT.

For more information about how to upgrade from ThinOS version 8.6 to ThinOS version 9.1, see the *Dell Wyse ThinOS Version 9.1 Migration Guide* at www.dell.com/support.

NOTE: All device settings are erased after you upgrade from ThinOS 8.6 to 9.1 except the Wyse Management Suite server settings, wireless connections, wireless certificates, and proxy. You must back up your device settings before you start the upgrade process. Once upgraded to ThinOS 9.1, you can downgrade to ThinOS 8.6 only by using the Merlin image.

Compatibility

Supported platforms

Table 29. Supported platforms

| Platform name | Image file name |
|----------------------------------|-------------------|
| Wyse 3040 Thin Client | DTOS_9.1_1131.pkg |
| Wyse 5070 Thin Client | DTOS_9.1_1131.pkg |
| Wyse 5470 Thin Client | DTOS_9.1_1131.pkg |
| Wyse 5470 All-in-One Thin Client | DTOS_9.1_1131.pkg |

Supported packages

NOTE: For a given ThinOS release, you can install only those packages that are mentioned in the supported packages section.

Table 30. Supported packages

| Platform names | Name | Description | Version |
|---|----------------------|--|------------------------|
| <ul style="list-style-type: none"> • Wyse 3040 Thin Client • Wyse 5070 Thin Client • Wyse 5470 Thin Client | Citrix_Workspace_App | The package supports Citrix Workspace App with RTME client integrated. | 20.12.0.12_1 |
| <ul style="list-style-type: none"> • Wyse 5470 All-in-One Thin Client | Teradici_PCoIP | The package supports the Teradici PCoIP connection. | 20.07.6_13 |
| | VMware_Horizon | The package supports VMware Blast. | 2006.8.0.0.16522670_42 |

Table 30. Supported packages (continued)

| Platform names | Name | Description | Version |
|----------------|----------------------|---|----------------------|
| | Imprivata_PIE | The package supports Imprivata with ProvelD Embedded feature. | 7.1.005.00.0039_1097 |
| | Cisco_Jabber | The package supports Cisco Jabber. | 12.9.2.304552_3 |
| | Zoom_Horizon | The package supports Zoom Meetings for VMware Horizon. | 5.4.59208.1207_1 |
| | Zoom_Citrix | The package supports Zoom Meetings for Citrix. | 5.4.59208.1207_2 |
| | Cisco_WebEx_Meetings | The package supports Cisco Webex Meetings for VDI. | 40.10.11.15_4 |
| | Cisco_WebEx_Teams | The package supports Cisco Webex Teams for VDI. | 40.11.0.17133_3 |
| | Microsoft_WVD | The package supports Windows Virtual Desktop. | 1.0_1060 |
| | Jabra | The package supports Jabra headsets. | 7.2.0_10 |
| | EPOS_Connect | The package supports EPOS Connect. | 5.0.4.6205_19 |

Tested BIOS details

Table 31. Tested BIOS details

| Platform name | BIOS version |
|----------------------------------|--------------|
| Wyse 3040 Thin Client | 1.2.5 |
| Wyse 5070 Thin Client | 1.8.0 |
| Wyse 5470 Thin Client | 1.5.0 |
| Wyse 5470 All-in-One Thin Client | 1.6.0 |

ThinOS 9.1 and ThinOS 8.6 feature comparison

ThinOS 9.1 and ThinOS 8.6 local features comparison matrix

Table 32. ThinOS 9.1 and ThinOS 8.6 local features comparison matrix

| Feature | | ThinOS 8.6 | ThinOS 9.1 |
|---------------|-------------------|---------------|---------------|
| Management | File server | Supported | Not supported |
| | WDM | Supported | Not supported |
| | WMS | Supported | Supported |
| | INI | Supported | Not supported |
| | Admin policy tool | Not supported | Supported |
| System update | Merlin | Supported | Supported |

Table 32. ThinOS 9.1 and ThinOS 8.6 local features comparison matrix (continued)

| Feature | | ThinOS 8.6 | ThinOS 9.1 |
|---------|--|---|--|
| | OS update | Supported | Supported |
| | PKG update | Supported | Supported |
| | PKG delete | Supported | Supported |
| | PKG delete all | Supported | Supported |
| | PKG compatibility | Supported | Not supported |
| | PKG Details window | Not supported | Supported |
| | BIOS update | Supported | Supported |
| | EPOS headset firmware update | Not supported | Supported |
| | Jabra headset firmware update | Not supported | Supported |
| Boot | Power button to power on/off | Supported | Supported |
| | Hold power button to force power off | Supported | Supported |
| | Wake on LAN from shutdown status | Supported | Supported |
| | Wake on LAN from shutdown status via SFP | Not supported | Supported |
| | Wake on USB from shutdown status | Supported | Supported |
| | Restart in menu | Supported | Supported |
| | Shutdown in menu | Supported | Supported |
| | Shutdown info | Supported | Not supported |
| | Reset to factory in shutdown menu | Supported | Supported |
| | Shutdown with session pop-up | Supported | Supported |
| | Power management - auto power off | Supported on Wyse 5070 Extended Thin Client, Wyse 5470 All-in-One, and Wyse 5470 Thin Client. | Supported on Wyse 5070 Thin Client, Wyse 5470 All-in-One, and Wyse 5470 Thin Client. |
| Sleep | Power management - auto sleep | Supported on Wyse 5070 Extended Thin Client, Wyse 5470 All-in-One, and Wyse 5470 Thin Client. | Supported on Wyse 5070 Thin Client, Wyse 5470 All-in-One, and Wyse 5470 Thin Client. |
| | Wyse 5470 Thin Client— Power management - with or without AC power | Supported | Supported |
| | Sleep in shutdown menu | Supported | Supported |
| | Sleep with session | Supported | Supported |
| | Ethernet speed 10M in sleep mode | Supported | Supported |

Table 32. ThinOS 9.1 and ThinOS 8.6 local features comparison matrix (continued)

| Feature | | ThinOS 8.6 | ThinOS 9.1 |
|-------------|---|--|-----------------------------|
| | USB wake up from sleep mode | Supported—Disabled by default, must enable in INI parameters | Supported—No disable policy |
| | Wyse 5470 Thin Client—On-board keyboard wake up from sleep mode | Supported | Supported |
| | Wyse 5470 Thin Client—Open lid wake up from sleep mode | Supported | Supported |
| | Power button wake up from sleep mode | Supported | Supported |
| | Wake-On-LAN from sleep mode | Supported | Supported |
| | Wake-On-LAN from sleep mode via SFP | Not supported | Supported |
| | Wyse 5470 Thin Client—Dock USB wake up from sleep mode | Not supported | Supported |
| | Wyse 5470 Thin Client—Dock Wake-On-LAN from sleep mode | Supported | Supported |
| Lock | Lock terminal | Supported | Supported |
| | Unlock terminal | Supported | Supported |
| | Sign off in unlock menu | Supported | Supported |
| | Restart in unlock menu | Supported | Supported |
| | Shutdown in unlock menu | Supported | Supported |
| | Reset to factory in unlock menu | Supported | Supported |
| | Lock after resume from screensaver | Supported | Supported |
| BIOS | Password change | Supported | Supported |
| | Audio enable or disable | Supported | Supported |
| | USB enable or disable | Supported | Supported |
| | ACRecovery option | Supported | Supported |
| | Wake-On-LAN option | Supported | Supported |
| | Wake on USB option | Supported | Supported |
| | Auto Power options | Supported | Supported |
| | Admin Lock option | Supported | Supported |
| | USB Boot option | Supported | Supported |
| | OSD option—Wyse 5470 All-in-One only | Supported | Supported |
| | MAC Pass through option—Wyse 5470 Thin Client only | Supported | Supported |
| Secure Boot | Not supported | Supported | |

Table 32. ThinOS 9.1 and ThinOS 8.6 local features comparison matrix (continued)

| Feature | | ThinOS 8.6 | ThinOS 9.1 |
|-----------------|---|-------------------|------------------------|
| Desktop mode | Classic mode | Supported | Supported |
| | Zero mode | Supported | Changed to Modern mode |
| | StoreFront mode | Supported | Not supported |
| | Workspace mode | Not supported | Supported |
| Shortcut Keys | Ctrl+Alt+Up—Zero mode | Supported | Not supported |
| | Ctrl+Alt+Down | Supported | Supported |
| | Ctrl+Alt+Left | Supported | Supported |
| | Ctrl+Alt+Right | Supported | Supported |
| | Ctrl+Alt+Del | Not supported | Supported |
| | PrintScreen | Supported | Supported |
| | Alt+PrintScreen | Supported | Supported |
| | G—reset to factory settings | Supported | Not supported |
| | V—reset display to the maximum resolution that the thin client supports | Supported | Supported |
| | Ctrl+C | Supported | Supported |
| | Ctrl+V | Supported | Supported |
| | Ctrl+X | Supported | Supported |
| | Ctrl+Z | Supported | Supported |
| | Alt+Tab | Supported | Supported |
| | Windows | Supported | Supported |
| | ESC | Supported | Supported |
| | Alt+F4 | Supported | Supported |
| | Space Bar | Supported | Supported |
| | Tab | Supported | Supported |
| | Arrow Keys | Supported | Supported |
| Shortcut menu | Administrator Mode | Supported | Supported |
| | Hide all windows | Supported | Supported |
| | Copy to clipboard | Supported | Supported |
| | Purge clipboard | Supported | Supported |
| | Lock Terminal | Supported | Supported |
| | Group Sessions | Supported | Not supported |
| | Performance Monitor | Supported | Supported |
| Start/Left Menu | SystemSetup-Network Setup | Supported | Supported |
| | SystemSetup-Remote Connections | Supported | Supported |
| | SystemSetup-Central Configuration | Supported | Supported |
| | SystemSetup-VPN Manager | Supported | Supported |

Table 32. ThinOS 9.1 and ThinOS 8.6 local features comparison matrix (continued)

| Feature | | ThinOS 8.6 | ThinOS 9.1 |
|------------------|------------------------------------|--|--|
| | SystemSetup-System Preference | Supported | Supported |
| | SystemSetup-Display | Supported | Supported |
| | SystemSetup-Peripherals | Supported | Supported |
| | SystemSetup-Printer | Supported | Supported |
| | SystemSetup-Admin Policy Tool | Not supported | Supported |
| | System Information | Supported | Supported |
| | System Tools | Supported | Supported |
| | Troubleshooting | Supported | Supported |
| | Applications | Supported | Not supported |
| | Shutdown | Supported | Supported |
| SystemTray | Battery—Wyse 5470 Thin Client only | Supported | Supported |
| | Show Desktop | Supported | Supported |
| | System Information | Supported | Supported |
| | Volume | Supported | Supported |
| | Time | Supported—Click to switch | Supported—Click to display window |
| | Wireless Icon | Supported | Supported |
| | Citrix receiver icon | Supported | Supported |
| Taskbar | Start menu Icon on taskbar | Supported | Supported |
| | VDI icon on taskbar | Supported | Supported |
| | ThinOS window icon on taskbar | Supported—Only Connect Manager and VPN | Supported—All ThinOS windows |
| Zero/Modern mode | Admin mode icon on sign on window | Supported | Not supported |
| | Zero/Modern toolbar | Supported | Supported |
| | Hover mouse to show zero toolbar | Supported | Supported |
| | Mouse click to show zero toolbar | Supported | Supported |
| | Disable when only 1 session | Supported | Supported—Not limited with session numbers |
| | Disable home icon | Supported | Not supported |
| | Ctrl+ESC to cancel network | Supported | Not supported |
| Network | Network cable plug pop-up | Supported | Supported |
| | Dual NIC | Supported | Supported |
| | Multi network default gateway | Supported | Supported |
| | DNS | Supported | Supported |

Table 32. ThinOS 9.1 and ThinOS 8.6 local features comparison matrix (continued)

| Feature | ThinOS 8.6 | ThinOS 9.1 |
|---|--|---|
| WINS | Supported | Supported |
| TCP timeout | Supported | Supported |
| DHCP options | Supported | Supported |
| IPv4 disable/enable | Supported—Must Enable IPv6 advanced option first | Supported |
| IPv4 dynamic/static | Supported | Supported |
| IPv6 disable/enable | Supported | Supported |
| IPv6 dynamic/static | Supported | Supported |
| IPv6 advanced settings | Supported | Not supported |
| IPv6 wait for DHCP | Supported | Not supported |
| IPv6 DNS | Supported | Supported—Merged to DNS on General tab |
| Ethernet_Speed | Supported | Supported |
| IEEE8021.x - TLS (user/machine) | Supported | Supported |
| IEEE8021.x - LEAP | Supported | Supported |
| IEEE8021.x - PEAP (MSCHAPV2/GTC) | Supported | Supported |
| IEEE8021.x - FAST (MSCHAPV2/GTC) | Supported | Supported |
| IEEE8021.x - Pop-up credential window | Supported | Supported |
| IEEE8021.x - SSO | Supported | Supported |
| IEEE8021.x - Hide domain | Supported | Supported |
| IEEE8021.x - Validate certificate | Supported | Supported |
| IEEE8021.x - Connect servers | Supported | Supported |
| Wireless | | |
| Scan window | Supported | Supported |
| Auto pop-up scan window if no ENET link | Supported | Supported |
| Add SSID | Supported | Supported |
| Remove SSID | Supported | Supported |
| Change SSID properties | Supported | Supported |
| SSID info on WLAN tab | Supported | Supported |
| IPv4 Config | Supported | Supported |
| IPv6 Config | Supported | Supported |
| Up/Down button to adjust priority | Supported | Set in Wyse Management Suite or Admin policy tool |
| Connect button to connect SSID | Not supported | Supported |
| Disable - ENETup | Supported | Supported |

Table 32. ThinOS 9.1 and ThinOS 8.6 local features comparison matrix (continued)

| Feature | | ThinOS 8.6 | ThinOS 9.1 |
|---------|--|---------------|---------------|
| | Disable - Always | Supported | Supported |
| | Connect to hidden SSID | Supported | Supported |
| | Security - Open | Supported | Supported |
| | Security - Open (WEP) | Supported | Not supported |
| | Security - Share key | Supported | Not supported |
| | Security - WPA/WPA2 Personal | Supported | Supported |
| | Security - WPA/WPA2 ENT - TLS (user/machine) | Supported | Supported |
| | Security - WPA/WPA2 ENT - LEAP | Supported | Supported |
| | Security - WPA/WPA2 ENT - PEAP (MSCHAPV2/GTC) | Supported | Supported |
| | Security - WPA/WPA2 ENT - FAST (MSCHAPV2/GTC) | Supported | Supported |
| | Security - WPA/WPA2 ENT - Pop-up credential window | Supported | Supported |
| | Security - WPA/WPA2 ENT - SSO | Supported | Supported |
| | Security - WPA/WPA2 ENT - Hide domain | Supported | Supported |
| | Security - WPA/WPA2 ENT - Validate certificate | Supported | Supported |
| | Security - WPA/WPA2 ENT - Connect servers | Supported | Supported |
| | Roaming | Supported | Supported |
| | 2.4G 11b/g/n | Supported | Supported |
| | 5G 11a/n/ac | Supported | Supported |
| | 11k/r | Not supported | Supported |
| | FIPS enable/disable | Not supported | Supported |
| | Max SSID number | 8 | 64 |
| Proxy | HTTP | Supported | Supported |
| | HTTPS | Supported | Supported |
| | SOCKS5 | Supported | Supported |
| | Proxy on WMS | Supported | Supported |
| | Proxy on WVD | Not supported | Supported |
| | Global | Supported | Supported |
| | Proxy on FR | Supported | Not supported |
| | Proxy on RTME | Supported | Supported |
| VPN | Add/Remove VPN | Supported | Supported |
| | Auto connection on OS startup | Supported | Supported |

Table 32. ThinOS 9.1 and ThinOS 8.6 local features comparison matrix (continued)

| Feature | | ThinOS 8.6 | ThinOS 9.1 |
|----------------|--------------------------|-------------------|--|
| | Show progress details | Supported | Supported |
| | Show debug info | Not supported | Supported |
| | Credential pop-up window | Supported | Supported |
| | Max VPN number | 4 | 10 |
| Screensaver | Turn Screen off | Supported | Supported |
| | Moving image | Supported | Supported |
| | Showing Pictures | Supported | Supported |
| | Disabled | Supported | Supported |
| | Playing video | Supported | Supported |
| | Flying bubbles | Supported | Not supported |
| | Timer | Supported | Supported |
| Locale | English | Supported | Supported |
| | German | Supported | Supported |
| | French | Supported | Supported |
| | Italian | Not supported | Supported |
| | Spanish | Not supported | Supported |
| | Japanese | Supported | Supported |
| | Simple Chinese | Supported | Supported |
| | Traditional Chinese | Supported | Supported |
| | Korean | Supported | Supported |
| | Latin | Supported | Not supported |
| | Locale msg files | Supported | Not supported |
| | Font files | Supported | Not supported |
| Terminal name | Terminal name change | Supported | Change in Wyse Management Suite or Admin policy tool |
| Time/Date | Time zone | Supported | Supported |
| | DayLight | Supported | Automatic |
| | Time format | Supported | Supported |
| | Date format | Supported | Supported |
| | Timer servers | Supported | Supported |
| | Change Date/Time | Supported | Supported |
| Custom info | Custom info 1 | Supported | Supported |
| | Custom info 2 | Supported | Supported |
| | Custom info 3 | Supported | Supported |
| | Custom location | Supported | Supported |
| | Custom contact | Supported | Supported |
| Display | Mirror mode | Supported | Supported |
| | Extended mode | Supported | Supported |

Table 32. ThinOS 9.1 and ThinOS 8.6 local features comparison matrix (continued)

| Feature | | ThinOS 8.6 | ThinOS 9.1 |
|----------|---|---------------------------------------|---|
| | Change main screen | Supported | Supported |
| | Change resolution | Supported | Supported |
| | Rotation - portrait | Supported | Supported |
| | Rotation - portrait (flipped) | Supported | Supported |
| | Rotation - landscape (flipped) | Not supported | Supported |
| | Rotation - landscape | Supported | Supported |
| | Display settings preview test | Supported | Supported |
| | Screen identify | Supported | Supported |
| | Screen position adjustment | Supported | Supported |
| | Disable current monitor | Not supported | Supported |
| Keyboard | Keyboard Layout | Supported | Supported |
| | Delay before repeat | Supported | Supported |
| | Repeat Rate | Supported | Supported |
| | Numlock status | Not supported | Supported |
| | Disabled keys | Not supported | Supported |
| | Character set | Supported | Supported |
| Mouse | Mouse speed | Supported | Supported |
| | Mouse pointer size | Small/big | Supported |
| | Swap left and right | Supported | Supported |
| | Reverse mouse wheel scroll | Supported | Supported |
| | Trackpad enable or disable— Wyse 5470 Thin Client only | Supported | Supported |
| Audio | HD audio | Supported | Supported |
| | On-board HD speaker enable/ disable | Supported | Supported |
| | USB audio | Supported | Supported |
| | Auto change to new plugged USB device | Supported | Supported |
| | Auto change after plug out current device | Last selected devices | HD audio |
| | DP audio | Supported | Supported |
| | DP audio enable or disable | Supported | Supported on Wyse 3040 Thin Client (enabled on other platforms, can't disable) |
| | DP audio port selection | DP audio can only work on one port | On Wyse 5070 Thin Client, DP audio works on both DP1 and DP2 ports. On Wyse 5470 Thin Client, DP audio works on both HDMI and USB Type- C ports. |
| | Analog audio | Supported | Supported |

Table 32. ThinOS 9.1 and ThinOS 8.6 local features comparison matrix (continued)

| Feature | | ThinOS 8.6 | ThinOS 9.1 |
|--------------|--|-----------------------|---|
| | Analog headset record boost option | Supported | Not supported |
| | Analog headset pop up | Can enable or disable | Can't enable again after checking as it does not show again |
| | Analog options - headset/headphone/speaker | Supported | Supported |
| | Playback device change | Supported | Supported |
| | Record device change | Supported | Supported |
| | Playback device mute/unmute | Supported | Supported |
| | Record device mute/unmute | Supported | Supported |
| | Test recorder | Supported | Supported |
| | Test recorder info to show current device in event log | Supported | Not supported |
| Serial | Basic settings | Supported | Supported |
| | Serial touch screen selection | Supported | Not supported |
| Camera | Camera selection | Supported | Supported |
| | Optimize for CPU | Supported | Not supported |
| | Format change | Supported | Not supported |
| | Resolution change | Supported | Not supported |
| | FPS change | Supported | Not supported |
| | Video controls change | Supported | Not supported |
| | Preview | Supported | Supported |
| Touch screen | Bind touch screen and monitor | Not supported | Supported |
| | Touch screen requires calibration | Supported | Not supported |
| Bluetooth | Scan window | Supported | Supported |
| | Bluetooth mouse | Supported | Supported |
| | Bluetooth keyboard | Supported | Supported |
| | Bluetooth keyboard with PIN | Supported | Supported |
| | Bluetooth headset—call level quality only | Only supports one | Only supports one |
| | Remove device | Supported | Supported |
| | Re-connect after OS reboot/sleep | Supported | Supported |
| | Re-connect after device re-power on | Supported | Supported |
| | Max support number | 7 | 7 |
| System Info | General info | Supported | Supported |
| | Copyright | Supported | Supported |

Table 32. ThinOS 9.1 and ThinOS 8.6 local features comparison matrix (continued)

| Feature | | ThinOS 8.6 | ThinOS 9.1 |
|-----------------|---|--------------------|--|
| | Event log | Supported | Supported |
| | Status info | Supported | Merged to General, removed some fields |
| | ENET info | Supported | Supported |
| | WLAN info | Supported | Supported |
| | About versions | Supported | Supported |
| | IPv6 info | Supported | Merged to ENET/WLAN |
| System Tools | Device info | Supported | Supported |
| | Certificates import | Supported | Supported |
| | Certificates remove | Supported | Supported |
| | Certificates view details | Supported | Supported |
| | SCEP | Supported | Supported |
| Troubleshooting | Target | USB/FileServer/IDE | USB |
| | CMOS extract/restore | Supported | Supported |
| | Performance monitor | Supported | Supported |
| | Export system settings | Export INI | Supported |
| | Import system settings | Not supported | Supported |
| | Force coredump | Supported | Supported |
| | Export shadow tmp | Supported | Merged to export logs |
| | Export Screenshot | Supported | Supported |
| | Export IDE trouble_shoot | Supported | Not supported |
| | Delete IDE trouble_shoot | Supported | Not supported |
| | Days to keep trouble_shoot in IDE | Supported | Not supported |
| | Export logs | Not supported | Supported |
| | Export event log | Supported | Merged to export logs |
| | Export event log - enable/disable smart card log | Supported | Merged to export logs |
| | Export event log - enable/disable application console log | Supported | Merged to export logs |
| | Export event log application list | Supported | Not supported |
| | Export PColP log | Supported | Merged to export logs |
| | Wired network capture | Supported | Supported |
| | Wireless capture | Supported | Supported |
| | USB packets capture | Supported | Supported |
| | Ping | Supported | Supported |
| Trace route | Supported | Supported | |
| Telnet | Supported | Supported | |

Table 32. ThinOS 9.1 and ThinOS 8.6 local features comparison matrix (continued)

| Feature | | ThinOS 8.6 | ThinOS 9.1 |
|----------------------------------|--|---------------|---|
| | Telnet - port | Not supported | Supported |
| | Telnet - color theme | Not supported | Supported |
| | Network Diagnostics | Not supported | Supported |
| Encryption | Encryption on unit without TPM | Supported | Supported |
| | Encryption on unit with TPM | Supported | Supported |
| | Encryption on user data partition | Supported | Supported |
| | Encryption on OS partition | Not supported | Supported |
| Smart Card | Smart card requirement - Yes/No/Optional | Supported | Supported |
| | Smart card plug out behavior—None/Lock/Signoff/KillSession | Supported | Supported |
| | Single cert - no pop-up window | Supported | Supported |
| | Multi cert - pop-up window | Supported | Supported |
| | Cert details on pop-up window | Not supported | Supported |
| | Change PIN | Supported | Supported |
| | Unlock card | Supported | Supported |
| | Username Hint for VMWare | Supported | Not supported |
| | Multi log on | Supported | Not supported for different broker agents |
| OOBE | Reset to factory | Supported | Supported |
| | EULA check | Not supported | Supported |
| | Ctrl+ESC to exit | Supported | Supported |
| | Select network (WiFi, Ethernet) | Supported | Supported |
| | Import settings from USB/WMS | Supported | Supported |
| | Select language | Supported | Supported |
| | Select keyboard layout | Supported | Supported |
| | Select Time Zone/Time server | Supported | Supported |
| | Set WMS server | Supported | Supported |
| | Enable/Disable SSL warning | Supported | Not supported |
| | Certificates manager | Supported | Not supported |
| Set different broker types | Supported | Supported | |
| Wyse 5470 All-in-One Thin Client | OSD button to adjust brightness | Supported | Supported |
| | Brightness bar | Supported | Supported |

Table 32. ThinOS 9.1 and ThinOS 8.6 local features comparison matrix (continued)

| Feature | | ThinOS 8.6 | ThinOS 9.1 |
|--|---|---------------|------------|
| | OSD button to turn on/off screen | Supported | Supported |
| | USB wake up from OSD turn off screen | Supported | Supported |
| Wyse 5470 Thin Client | SD card | Supported | Supported |
| | Touch screen - single touch as left click | Supported | Supported |
| | Touch screen - drag window | Supported | Supported |
| | Touch screen - single touch and hold to show right click menu | Supported | Supported |
| | Touch screen - touch twice as double click | Supported | Supported |
| | Trackpad - left button | Supported | Supported |
| | Trackpad - right button | Supported | Supported |
| | Trackpad - single touch as left click | Supported | Supported |
| | Trackpad - touch twice as double click | Supported | Supported |
| | Trackpad - move finger as mouse move | Supported | Supported |
| | Trackpad - touch twice to move window | Not supported | Supported |
| | Trackpad - hold left button and touch to move window | Supported | Supported |
| | Trackpad - move two finger to scroll | Not supported | Supported |
| | Trackpad - disable while typing | Supported | Supported |
| | Fn key | Supported | Supported |
| | AC plug in/out to change brightness | Supported | Supported |
| | Close lid - turn off internal display | Supported | Supported |
| | Close lid - turn off all display | Supported | Supported |
| | Close lid - shutdown | Supported | Supported |
| | Battery different status icons | Supported | Supported |
| Battery tooltips | Supported | Supported | |
| Low battery warning pop-up | Supported | Supported | |
| Critical battery level to auto power off | Supported | Supported | |
| Dock - display - single 4K 30Hz | Supported | Supported | |
| Dock - display - dual 1080P | Supported | Supported | |

Table 32. ThinOS 9.1 and ThinOS 8.6 local features comparison matrix (continued)

| Feature | | ThinOS 8.6 | ThinOS 9.1 |
|---------|--------------------------------|-------------------------------------|------------------------------|
| | Dock - display audio | Can't work with two monitors | Supported |
| | Dock - USB/USB Type-C | Supported | Supported |
| | Dock - jack audio | INI to select only one port to work | Both ports can work together |
| | Dock - RJ45 | Supported | Supported |
| | Dock - power button | Supported | Supported |
| | Dock - firmware update via VDI | Supported | Supported |

Citrix Workspace app feature comparison matrix


 **NOTE:** Citrix features that are not listed in the feature matrix table are not supported by ThinOS.

Table 33. Citrix Workspace app feature comparison matrix

| Feature | | ThinOS 8.6 | ThinOS 9.1 |
|-------------------------|--|------------------------------|--|
| Citrix Workspace | Citrix Virtual Apps | Supported | Supported |
| | Citrix Virtual Desktops | Supported | Supported |
| Endpoint Management | Auto configure using DNS for Email Discovery | Not supported | Supported |
| | Centralized Management Settings | Supported | Supported |
| UI | Desktop Viewer/Toolbar | Not supported | Supported |
| | Multi-tasking | Supported | Supported |
| | Follow Me Sessions (Workspace Control) | Supported | Supported |
| HDX Host Core | Adaptive transport | Supported (Only support TCP) | Supported |
| | Session reliability | Supported | Supported |
| | Auto-client Reconnect | Supported | Supported |
| | Browser content redirection | Not supported | Limited support—Will support CEF-based framework after Citrix announces its default framework in Linux binary. |
| | Multiport ICA | Supported | Supported |
| HDX IO/Devices/Printing | Local Printing | Supported | Limited support—Enables the users to print documents through local auto-created printers including using Citrix UPD (only PS, due to Citrix known issue) and native printer driver (V3). |
| | USB printer redirection | Supported | Supported |
| | Generic USB Redirection | Supported | Supported |

Table 33. Citrix Workspace app feature comparison matrix (continued)

| Feature | | ThinOS 8.6 | ThinOS 9.1 |
|-----------------|--|---|---|
| | Client drive mapping/File Transfer**** | Supported | Supported |
| HDX Integration | HDX Insight | Supported | Supported |
| | EUEM Experience Matrix | Supported | Supported |
| | Session Sharing | Supported | Supported |
| HDX Multi-media | Audio Playback | Supported | Supported |
| | Bi-directional Audio (VoIP) | Supported | Supported |
| | Web-cam redirection | Supported | Supported |
| | Video playback | Supported | Supported |
| | Flash redirection | Supported (x86 only) | Limited support—Citrix Linux binary supports only x86 client. |
| | Microsoft Teams Optimization | Not supported | Limited support—On Wyse 3040 Thin Client, only audio is supported. Video and screen sharing features are not supported. |
| | Skype for business Optimization pack | Supported | Supported |
| | Cisco Jabber Unified Communications Optimization | Supported | Supported |
| | Zoom Meetings Optimization | Not supported | Supported |
| | Unified Communication Cisco Webex Teams Offloading (tVDI) | Not supported | Supported |
| | Unified Communication Cisco Webex Meetings Offloading (wVDI) | Not supported | Supported |
| | Windows Multimedia redirection | Supported (MMR, HTML5, and QUMU are supported) | Supported |
| | UDP Audio | Supported | Limited support—Not supported with Citrix ADC (formerly NetScaler) due to Citrix's limitation. |
| Multiple Audio | Supported | Not supported—ThinOS 9.1 does not support this feature as of now. The support for this feature is planned for a future release. However, Citrix Linux binary supports this feature. | |
| HDX Graphics | H.264-enhanced SuperCodec | Supported | Supported |
| | Adaptive Display V2 | Not supported | Supported |
| | Client hardware acceleration | Supported | Supported |

Table 33. Citrix Workspace app feature comparison matrix (continued)

| Feature | ThinOS 8.6 | ThinOS 9.1 | |
|-----------------------|---|-----------------------------------|--|
| | 3DPro Graphics | Supported | |
| | External Monitor Support | Supported | |
| | True Multi Monitor | Supported | |
| Authentication | Federated Authentication (SAML/Azure AD) | Not supported | |
| | RSA Soft Token/RSA Hard Token | Supported | |
| | Challenge Response SMS (Radius) | Supported | |
| | OKTA Multi factor authentication | Supported | |
| | DUO multi factor authentication | Supported | |
| | Smart cards such as CAC, PIV and so on | Supported | |
| | Proximity/Contactless Card | Supported | |
| | Credential insertion (For example, Fast Connect, Storebrowse) | Supported | |
| | Pass Through Authentication | Supported | |
| | Citrix ADC (formerly NetScaler) Native OTP | Not supported | |
| | Biometric Authentication such as Touch ID or Face ID.) | Supported—Only supports Touch ID. | Supported—Only supports Touch ID. |
| | Anonymous Store Access | Supported | Supported |
| Security | TLS 1.2 | Supported | |
| | TLS 1.0/1.1 | Supported | Not supported—ThinOS 9.1 does not provide the configuration to change TLS. |
| | DTLS 1.0 | Supported | Supported |
| | DTLS 1.2 | Supported | Not supported—Citrix Linux binary does not support this feature. |
| | SHA2 Cert | Supported | Supported |
| | Remote Access via Citrix Gateway | Supported | Supported |
| | IPV6 | Supported | Not supported—Able to sign in but not able to connect to the session. |
| Keyboard Enhancements | Dynamic Keyboard Layout Synchronization with Windows VDA | Not supported | Supported |

Table 33. Citrix Workspace app feature comparison matrix (continued)

| Feature | | ThinOS 8.6 | ThinOS 9.1 |
|---------|--|---------------|------------|
| | Unicode Keyboard Layout Mapping with Windows VDA | Not supported | Supported |
| | Keyboard sync only when a session is launched—client Setting in ThinOS | Supported | Supported |
| | Server default setting in ThinOS | Not supported | Supported |
| | Specific keyboard in ThinOS | Not supported | Supported |

VMware Horizon feature comparison matrix

Table 34. VMware Horizon feature comparison matrix

| Feature | | ThinOS 8.6 | ThinOS 9.1 |
|-----------------------|---|---------------|---------------|
| Broker Connectivity | XML-API version | 13 | 15 |
| | SSL certificate verification | Supported | Supported |
| | Disclaimer dialog | Supported | Supported |
| | UAG compatibility | Not supported | Supported |
| | Shortcuts from server | Not supported | Not supported |
| | Pre-install shortcuts from server | Not supported | Not supported |
| | File type association | Not supported | Not supported |
| | Phone home | Supported | Supported |
| Broker Authentication | Password authentication | Supported | Supported |
| | Single sign on | Supported | Supported |
| | Certificate authentication | Not supported | Not supported |
| | RSA authentication | Supported | Supported |
| | Integrated RSA SecurID token generator | Not supported | Not supported |
| | Radius | Supported | Supported |
| | Kiosk mode | Supported | Supported |
| | Remember credentials | Not supported | Not supported |
| | Log in as current user | Not supported | Not supported |
| | Nested log in as current user | Not supported | Not supported |
| | Log in as current user 1-way trust | Not supported | Not supported |
| | OS biometric authentication | Not supported | Not supported |
| | Un-authentication access | Supported | Supported |
| Smart card | x.509 certificate authentication (Smart Card) | Supported | Supported |
| | CAC support | Supported | Supported |

Table 34. VMware Horizon feature comparison matrix (continued)

| Feature | ThinOS 8.6 | ThinOS 9.1 | |
|--|---|-------------------------|---|
| | .Net support | Supported | Supported |
| | PIV support | Supported | Supported |
| | Java support | Not supported | Not supported |
| | Purebred derived credentials | Not supported | Not supported |
| | Device Cert auth with UAG | Not supported | Not supported |
| Desktop Operations | Reset | Supported only with VDI | Supported only with VDI |
| | Restart | Supported only with VDI | Supported only with VDI |
| | Log off | Supported | Supported |
| Session Management (Blast Extreme & PCoIP) | Switch desktops Multiple connections | Supported | Supported |
| | Multi-broker/multi-site redirection - Universal | Supported | Supported |
| | App launch on multiple end points | Supported | Supported |
| | Auto-retry 5+ minutes | Supported | Supported |
| | Blast network recovery | Supported | Supported |
| | Time zone synchronization | Supported | Supported |
| | Jumplist integration (Windows 7-Windows 10) | Not supported | Not supported |
| Client Customization | Command line options | Not supported | Not supported |
| | URI schema | Not supported | Not supported |
| | Launching multiple client instances using URI | Not supported | Not supported |
| | Preference file | Not supported | Not supported |
| | Parameter pass-through to RDSH apps | Not supported | Not supported |
| | Non interactive mode | Not supported | Not supported |
| | GPO-based customization | Not supported | Not supported |
| Protocols supported | Blast Extreme | Supported | Supported |
| | H.264 - HW decode | Supported | Supported |
| | H.265 - HW decode | Not supported | Not supported—Planned to add support on a future release. |
| | Blast Codec | Supported | Supported |
| | JPEG/PNG | Supported | Supported |
| | Switch encoder | Supported | Supported |
| | BENIT | Supported | Supported |
| | Blast Extreme Adaptive Transportation | Supported | Supported |
| | RDP 8.x, 10.x | Supported | Supported |
| | PCoIP | Supported | Supported |

Table 34. VMware Horizon feature comparison matrix (continued)

| Feature | | ThinOS 8.6 | ThinOS 9.1 |
|--|--|-------------------------|-------------------------|
| Features/Extensions Monitors/Displays | Dynamic display resizing | Supported | Supported |
| | VDI windowed mode | Supported | Supported |
| | Remote app seamless window | Not supported | Not supported |
| | Multiple monitor support | Supported | Supported |
| | External monitor support for mobile | Not supported | Not supported |
| | Display pivot for mobile | Not supported | Not supported |
| | Number of displays supported | 4 | 4 |
| | Maximum resolution | 3840x2160 | 3840x2160 |
| | High DPI scaling | Supported only with VDI | Supported only with VDI |
| | DPI sync | Supported | Supported |
| | Exclusive mode | Not supported | Not supported |
| | Multiple monitor selection | Supported | Supported |
| Input Device (Keyboard/ Mouse) | Language localization (EN, FR, DE, JP, KO, ES, CH) | Supported | Supported |
| | Relative mouse | Supported only with VDI | Supported only with VDI |
| | External Mouse Support | Supported | Supported |
| | Local buffer text input box | Not supported | Not supported |
| | Keyboard Mapping | Supported | Supported |
| | International Keyboard Support | Supported | Supported |
| | Input Method local/remote switching | Not supported | Not supported |
| | IME Sync | Supported | Supported |
| Clipboard Services | Clipboard Text | Supported | Supported |
| | Clipboard Graphics | Not supported | Not supported |
| | Clipboard memory size configuration | Supported | Supported |
| | Drag and Drop Text | Not supported | Not supported |
| | Drag and Drop Image | Not supported | Not supported |
| Connection Management | IPv6 only network support | Supported | Supported |
| | PCoIP IP roaming | Supported | Supported |
| Optimized Device Redirection | Serial (COM) Port Redirection | Not supported | Supported |
| | Client Drive Redirection/File Transfer | Not supported | Not supported |
| | Scanner (TWAIN/WIA) Redirection | Not supported | Supported |
| | x.509 Certificate (Smart Card/Derived Credentials) | Supported | Supported |

Table 34. VMware Horizon feature comparison matrix (continued)

| Feature | | ThinOS 8.6 | ThinOS 9.1 |
|------------------------|------------------------------------|-------------------------|---|
| | Gyro Sensor Redirection | Not supported | Not supported |
| Real-Time Audio-Video | Audio in (input) | Supported | Supported |
| | Video in (input) | Supported | Supported |
| | Multiple webcams | Not supported | Not supported |
| USB Redirection | USB redirection | Supported | Supported |
| | Policy: ConnectUSBOnInsert | Supported | Supported |
| | Policy: ConnectUSBOnStartup | Supported | Supported |
| | Connect/Disconnect UI | Not supported | Not supported |
| | USB device filtering (client side) | Supported | Supported |
| | Isochronous Device Support | Supported only with VDI | Supported only with VDI |
| | Split device support | Supported | Supported |
| | Bloomberg Keyboard compatibility | Not supported | Not supported—Planned to add support on a future release. |
| | Smartphone sync | Not supported | Not supported |
| Unified Communications | Skype for business | Supported | Supported |
| | Zoom Cloud Meetings | Not supported | Supported |
| | Cisco Jabber Softphone | Not supported | Supported |
| | Cisco WebEx Teams | Not supported | Supported |
| | Microsoft Teams RTAV | Not supported | Supported |
| | Microsoft Teams offload | Not supported | Not supported—VMware does not support this feature yet with the Horizon Linux client. |
| Multimedia Support | Multimedia Redirection (MMR) | Not supported | Not supported—VMware does not support this feature. |
| | HTML5 Redirection | Not supported | Not supported—VMware does not support this feature. |
| | Directshow Redirection | Not supported | Not supported—VMware does not support this feature. |
| | URL content redirection | Not supported | Not supported—VMware does not support this feature. |
| | Browser content redirection | Not supported | Not supported—VMware does not support this feature. |
| Graphics | vDGA | Supported only with VDI | Supported only with VDI |
| | vSGA | Supported only with VDI | Supported only with VDI |
| | NVIDIA GRID vGPU | Supported | Supported |
| | Intel vDGA | Supported only with VDI | Supported only with VDI |
| | AMD vGPU | Supported only with VDI | Supported only with VDI |
| Mobile Support | Client-side soft keyboard | Not supported | Not supported |
| | Client-side soft touchpad | Not supported | Not supported |

Table 34. VMware Horizon feature comparison matrix (continued)

| Feature | | ThinOS 8.6 | ThinOS 9.1 |
|-----------------------|---|----------------------------|----------------------------|
| | Full Screen Trackpad | Not supported | Not supported |
| | Gesture Support | Not supported | Not supported |
| | Multi-touch Redirection | Not supported | Not supported |
| | Presentation Mode | Not supported | Not supported |
| | Unity Touch | Not supported | Not supported |
| Printing | Client printer redirection (UPD only) | Limited support—Blast only | Limited support—Blast only |
| | Native Driver Support | Not supported | Not supported |
| | USB printer redirection | Supported | Supported |
| Security | FIPS-140-2 Mode Support | Not supported | Supported |
| | Imprivata Integration | Supported | Supported |
| | Opswat agent | Not supported | Not supported |
| | Opswat on-demand agent | Not supported | Not supported |
| | TLS 1.1/1.2 | Supported | Supported |
| Session Collaboration | Session Collaboration | Not supported | Supported |
| | Read-only Collaboration | Not supported | Supported |
| Update | Update notifications | Not supported | Not supported |
| | App Store update | Not supported | Not supported |
| Other | Smart Policies from DEM | Supported | Supported |
| | Access to Linux Desktop - Blast Protocol Only | Supported only with VDI | Supported only with VDI |
| | Workspace ONE mode | Not supported | Supported |
| | Nested - basic connection | Supported | Supported |

Windows Virtual Desktop and RDP feature comparison matrix

Table 35. Windows Virtual Desktop and RDP feature comparison matrix

| Category Supported | Features | ThinOS 8.6 | ThinOS 9.1 |
|--------------------|--|-----------------------|---------------|
| Service | Direct connection to Desktop via RDP | Supported | Supported |
| | Microsoft Remote Desktop Services broker (Local) | Supported | Supported |
| | Windows Virtual Desktop (Azure) | Not supported | Supported |
| Session | Desktop | Supported | Supported |
| | Remote App (Integrated) | Supported | Not supported |
| | Remote App (Immersive) | Supported (Zero mode) | Supported |
| Input | Keyboard | Supported | Supported |
| | Mouse | Supported | Supported |
| | Single touch | Supported | Supported |

Table 35. Windows Virtual Desktop and RDP feature comparison matrix (continued)

| Category Supported | Features | ThinOS 8.6 | ThinOS 9.1 |
|--------------------|--------------------------------|---------------|---------------|
| | Multi-touch | Supported | Not supported |
| Audio Visual | Audio in | Supported | Supported |
| | Audio out | Supported | Supported |
| Storage | Folder/Drive Redirection | Supported | Supported |
| Clipboard | Clipboard (text) | Supported | Supported |
| | Clipboard (object) | Supported | Supported |
| | Clipboard (file) | Supported | Not supported |
| Redirections | Printer | Supported | Not supported |
| | Serial Port | Supported | Not supported |
| | SmartCard | Supported | Not supported |
| | USB (General) | Supported | Not supported |
| Session Experience | Dynamic Resolution | Supported | Supported |
| | Start Command | Supported | Supported |
| | Desktop Experience | Supported | Not supported |
| | Desktop Scale Factor | Supported | Supported |
| | Multi-Monitor (All) | Supported | Supported |
| | Restricted full screen session | Supported | Supported |
| | Keyboard Layout Mapping | Supported | Not supported |
| | Time Zone Mapping | Supported | Supported |
| | RemoteFX | Supported | Not supported |
| | Video/Audio/Online playback | Supported | Supported |
| | Compression | Supported | Supported |
| | Optimize for low speed link | Supported | Supported |
| Graphics (CODECs) | H.264 Support | Supported | Supported |
| | H.264 AVC-444 | Supported | Not supported |
| | TSMC (MMR) | Supported | Not supported |
| | VOR | Supported | Not supported |
| Authentication | TS Gateway Supported | Supported | Supported |
| | - TSGW II | Not supported | Not supported |
| | - TSGW III | Not supported | Not supported |
| | - TSGW WebSocket | Not supported | Not supported |
| | - TSGW + UDP | Not supported | Not supported |
| | NLA | Supported | Supported |
| | SmartCard | Supported | Not supported |
| | Imprivata | Supported | Supported |

Display comparison matrix

Table 36. Display comparison matrix


| Platforms | ThinOS 8.6 | | | ThinOS 9.1 | | |
|----------------------------------|-----------------------|---------------------------------|--|--------------------------------|---------------------------------|--|
| | Max resolution | Max number of displays (Local) | Rotation types | Max resolution | Max number of displays (Local) | Rotation types |
| 5070 extended | 3840x2160 | 6 | <ol style="list-style-type: none"> 1. None 2. Left turn 90 degrees 3. Right turn 90 degrees | 3840x2160 | 6 | <ol style="list-style-type: none"> 1. Portrait 2. Portrait (flipped) 3. Landscape (flipped) 4. Landscape |
| 5070 Pentium | 3840x2160 | 3 | | 5120 x 1440 | 2 | |
| 5070 Celeron | 3840x2160 | 2 | | 3840x2160 | 2 | |
| A10Q | 2560x1440 | 2 | | 5120 x 1440 | 2 | |
| Wyse 5470 Thin Client | 1920x1080 or 1366x768 | 3 including 2 external monitors | | 3840x2160 | 2 | |
| Wyse 5470 All-in-One Thin Client | 1920x1080 | 2 including 1 external monitor | | 2560x1440 | 2 | |
| | | | | 1920x1080 or 1366x768 | 3 including 2 external monitors | |
| | | | 1920x1080 | 2 including 1 external monitor | | |

New and enhanced features

New ThinOS features

Admin Policy Tool

ThinOS 9.1 does not support FTP, HTTP, HTTPS file server, and INI parameter settings. You can configure these settings using a local management tool called Admin Policy Tool. Wyse Management Suite and Admin Policy Tool user interfaces are identical. However, Dell Technologies recommends that you use Wyse Management Suite to configure ThinOS 9.1.

 **NOTE:** After you reset the thin client to factory default settings, the device starts the First Boot Wizard application by default. You can use the Admin Policy Tool to change the default settings for First Boot Wizard.

Admin Policy Tool feature list

The following table displays the list of features that are supported by the Admin Policy Tool in ThinOS 9.1:

Table 37. Admin Policy Tool feature list

| Feature | Sub-Feature | Restart required |
|----------------------------|------------------------|---|
| Region & Language Settings | Region & Language | None |
| Privacy & Security | Account Privileges | None |
| Privacy & Security | Certificates | None |
| Privacy & Security | Security Policy | Yes. You must reboot the thin client to make all the settings to take effect. |
| Privacy & Security | SCEP | None |
| Privacy & Security | Device Security | None |
| Broker Settings | Citrix Broker Settings | None |

Table 37. Admin Policy Tool feature list (continued)

| Feature | Sub-Feature | Restart required |
|-----------------------|-----------------------------------|--|
| Broker Settings | Teradici Cloud Access Settings | None |
| Broker Settings | VMWare Broker Settings | None |
| Broker Settings | Windows Virtual Desktop Settings | None |
| Broker Settings | Microsoft Remote Desktop Settings | None |
| Broker Settings | Global Broker Settings | None |
| Broker Settings | Amazon WorkSpaces Settings | None |
| Session Settings | Global Session Settings | None |
| Session Settings | Citrix Session Settings | None |
| Session Settings | Blast Session Settings | None |
| Session Settings | PCoIP Session Settings | None |
| Session Settings | RDP and WVD Session Settings | None |
| Login Experience | Login Settings | None |
| Login Experience | Session settings | None |
| Login Experience | 3rd Party Authentication | None |
| Login Experience | SmartCard Settings | Yes. You must reboot the thin client to make all the settings to take effect. |
| Personalization | Desktop | Yes. You must reboot the thin client to make all the settings to take effect. Desktop background image can only be configured using Wyse Management Suite. |
| Personalization | Screen Saver | None |
| Personalization | User Experience Settings | None |
| Personalization | Shortcut Keys | None |
| Personalization | Device Info | None |
| Peripheral Management | Monitor | None |
| Peripheral Management | Mouse | None |
| Peripheral Management | Keyboard | None |
| Peripheral Management | RFIdeas Reader | None |
| Peripheral Management | Printers | None |
| Peripheral Management | Audio | Yes. You must reboot the thin client to make all the settings to take effect. |
| Peripheral Management | Touch | None |
| Peripheral Management | Serial Port | None |
| Peripheral Management | USB Redirection | Yes. You must reboot the thin client to make all the settings to take effect. |
| Peripheral Management | Device Headset Settings | Yes. You must reboot the thin client to make all the settings to take effect. |
| Peripheral Management | CCID | Yes. You must reboot the thin client to make all the settings to take effect. |
| Firmware | OS Firmware Updates | None |

Table 37. Admin Policy Tool feature list (continued)

| Feature | Sub-Feature | Restart required |
|-----------------------|-----------------------------|--|
| Firmware | BIOS Firmware Updates | None |
| Firmware | Application Package Updates | None |
| System Settings | Device Settings | None |
| System Settings | Power and Sleep Settings | None |
| System Settings | Scheduled Reboot Settings | None |
| System Settings | Scheduled Shutdown Settings | None |
| Network Configuration | Proxy Settings | None |
| Network Configuration | Wireless | Yes. You must reboot the thin client to make all the settings to take effect. |
| Network Configuration | Ethernet Settings | None |
| Network Configuration | DHCP Settings | None |
| Network Configuration | DNS Settings | None |
| Network Configuration | VPN Settings | None |
| Network Configuration | Bluetooth Settings | Yes. You must reboot the thin client to make all the settings to take effect. |
| Network Configuration | Common Settings | None |
| Services | VNC Service | None |
| Services | WMS Settings | None |
| Services | Troubleshooting Settings | None |
| BIOS | Dell Wyse 3040 | Yes. You must reboot the thin client to make all the settings to take effect. Limitation —You can only enable Secure Boot using the admin policy tool. If you want to disable Secure Boot, you must change the setting in BIOS screen. i NOTE: If the BIOS does not have a password and if you are setting a new password, only the password gets applied after the first reboot. Other setting changes are applied after the second reboot. |
| BIOS | Dell Wyse 5070 | Yes. You must reboot the thin client to make all the settings to take effect. Limitation —You can only enable Secure Boot using the admin policy tool. If you want to disable Secure Boot, you must change the setting in BIOS screen. i NOTE: If the BIOS does not have a password and if you are setting a new password, only the password gets applied after the first reboot. Other setting changes are applied after the second reboot. |
| BIOS | Dell Wyse 5470 | Yes. You must reboot the thin client to make all the settings to take effect. Limitation —You can only enable Secure Boot using the admin policy tool. If you |

Table 37. Admin Policy Tool feature list (continued)

| Feature | Sub-Feature | Restart required |
|---------|--------------------|--|
| | | want to disable Secure Boot, you must change the setting in BIOS screen. ⓘ NOTE: If the BIOS does not have a password and if you are setting a new password, only the password gets applied after the first reboot. Other setting changes are applied after the second reboot. |
| BIOS | Dell Wyse 5470 AIO | Yes. You must reboot the thin client to make all the settings to take effect. Limitation —you can only enable Secure Boot using the admin policy tool. If you want to disable Secure Boot, you must change the setting in BIOS screen. ⓘ NOTE: If the BIOS does not have a password and if you are setting a new password, only the password gets applied after the first reboot. Other setting changes are applied after the second reboot. |

Support for Wyse Management Suite 3.1

Dell Wyse Management Suite Version 3.1 is the next generation management solution that enables you to centrally configure, monitor, manage, and optimize your ThinOS 9.1-based thin clients. Wyse Management Suite 3.1 uses an enhanced user interface to configure the ThinOS 9.1 settings.

For information about using Wyse Management Suite 3.1 to manage your ThinOS-based devices, see the *Dell Wyse Management Suite Version 3.1 Administrator's Guide* at www.dell.com/support

Smart card sign-in

ThinOS allows you to sign in using a smart card. The following are the changes that are made to the smart card sign-in feature:

- **View** button is added to the **Select Certificate** window to view the certificate details.
- **Log on with another method** is added to the smart card sign-in window.

For information about the ThinOS 9.1 features, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support

Enhanced User Interface

ThinOS 9.1 uses an enhanced user interface with modern desktop and icons. The ThinOS desktop consists of the following screen elements:

- Desktop menu
- Taskbar
- Connection and application shortcuts
- Broker agent login window
- New Modern mode style

For information about the desktop features, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support

Account privileges

Account privilege is used to control the user permission to access admin policy and system menu items. Users can change the user privilege to **High**, **Customize**, and **None** from Wyse Management Suite or the admin policy tool.

For information about ThinOS 9.1 features, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support

Change group notice

A new change group notice message is displayed when Wyse Management Suite group is changed. A message is also displayed when a new firmware or package is pushed from Wyse Management Suite.

For information about the ThinOS 9.1 features, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Download notice

A new download notice window is displayed when downloading an image or a package from the Wyse Management Suite server.

For information about the ThinOS 9.1 features, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

New system tray items

- Wireless icon—Added a new wireless network icon to the system tray. Clicking the wireless icon on the system tray displays the list of available wireless networks, and you can connect directly by clicking the wireless network.
- Wired network icon—Added a new wired network icon to the system tray.
- Smartcard self-service—Click this icon to open the smart card self-service window. You can use this window to view the smart card details, change PIN, and unlock PIN.

For information about system tray items, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

New DHCP option tag

Added the support of DHCP option 252. This option enables the device to fetch the proxy information from the DHCP server when the device is reset to factory default settings or when you restart the thin client. For example, **http://x.x.x.proxy.pac**.

 **NOTE:** The proxy settings from DHCP option 252 are not displayed on the ThinOS GUI.

Table 38. Proxy support

| Component | Features | PAC proxy | GUI proxy |
|-------------------------------|-----------------------------|-----------|------------------------|
| Citrix | http broker login | No | No |
| | http broker session launch | No | No |
| | https broker login | Yes | Yes (RTME in app list) |
| | https broker session launch | Yes | Yes (RTME in app list) |
| VMware | broker login | Yes | Yes (RTME in app list) |
| | Session launch | Yes | Yes (RTME in app list) |
| Windows Virtual Desktop (WVD) | broker login | Yes | Yes (WVD in app list) |
| | Session launch | No | No |
| Microsoft RDS | broker login | No | No |
| | Session launch | No | No |
| Amazon Workspaces | broker login | No | No |

Table 38. Proxy support (continued)

| Component | Features | PAC proxy | GUI proxy |
|-----------------------|----------------------------------|-----------|---|
| | Session launch | No | No |
| Teradici Cloud | broker login | No | No |
| | Session launch | No | No |
| Wyse Management Suite | Wyse Management Suite connection | Yes | Yes (Wyse Management Suite in app list) |

For information about DHCP option tags, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Captive portal detection for wireless

This feature allows the ThinOS client to display the captive portal web page when you attempt to connect to WiFi.

For information about how to enable the feature, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

EPOS connect headset support

ThinOS 9.1 enables you to configure and manage EPOS headsets that are connected to the thin client. Use Wyse Management Suite or Admin Policy Tool on ThinOS to configure the headset settings.

For information about configuring and managing the feature, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Jabra Xpress headset support

ThinOS 9.1 enables you to configure and manage Jabra Xpress headsets that are connected to the thin client. Use Wyse Management Suite or Admin Policy Tool on ThinOS to configure the headset settings.

For information about configuring and managing the feature, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Install the operating system image and packages using Admin Policy Tool

On ThinOS 9.1, you can upload and install the operating system image and packages using Admin Policy Tool.

For information about the ThinOS 9.1 features, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support

New Citrix features

From ThinOS 9.1 onwards, Citrix Workspace app is updated to version 2012. Some features were not validated after Citrix updated the version. ThinOS 9.1 does not support the features that Citrix supports after the Citrix workspace app version is updated from version 2006. The features that are not supported are app protection, authentication enhancement in cloud deployments, multiple audio, and enhancement to logging. Dell Technologies plans to provide support for these features in a future maintenance release.

Citrix multiple virtual channels

Citrix Workspace App 2012 has a virtual channels count limitation. The current Zoom Meetings Optimization plug-in uses four virtual channels. To use Zoom Optimizations together with Microsoft Teams or any other Cisco optimizations, you must disable other virtual channels. For example, if you are not using Imprivata SSO you can choose to disable the Imprivata virtual channel. Similarly, if you do not use Skype for Business, you can choose to disable the RTME for Skype for Business virtual channel.

NOTE: Configuring **Session Settings > Citrix Session Settings > Keyboard Layout Mode** to use **Dynamic Sync** uses an additional virtual channel.

You can configure the virtual channels settings either using the Wyse Management Suite policy or Admin Policy Tool. To configure the virtual channel settings, do the following:

1. Open the Admin Policy Tool on the ThinOS client or go to ThinOS 9.x policy settings on Wyse Management Suite.
2. On the **Advanced** tab, expand **Session Settings**, and click **Citrix Session Settings**.
3. In the **UC Virtual Channel Settings** section, enable or disable one or more Unified Communications (UC) virtual channels.
4. In the **Other Citrix Virtual Channels Settings** section, enable or disable other Citrix virtual channels such as USB Redirection and Imprivata.

The following combinations are the Unified Communication (UC) optimizations and their default virtual channel settings that are tested for ThinOS 9.1:

Table 39. Unified Communication optimizations and their default virtual channel settings

| Virtual Channel categories | Settings | Default status | Combination 1 | Combination 2 | Combination 3 | Combination 4 | Combination 5 | Combination 6 | Combination 7 |
|--|-------------------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| UC Virtual Channel Settings | Microsoft Teams Optimization | Enabled | Enabled | Disabled | Disabled | Enabled | Disabled | Enabled | Disabled |
| | RTME for Skype for Business | Enabled | Enabled | Disabled | Disabled | Disabled | Disabled | Disabled | Enabled |
| | Zoom Meetings Optimization | Disabled | Disabled | Disabled | Enabled | Enabled | Disabled | Disabled | Disabled |
| | JVDI for Cisco Jabber | Disabled | Disabled | Disabled | Disabled | Disabled | Enabled | Disabled | Disabled |
| | Cisco Webex Meetings for VDI Plugin | Disabled | Disabled | Enabled | Disabled | Disabled | Disabled | Disabled | Disabled |
| | Cisco Webex Teams for VDI Plugin | Disabled | Disabled | Enabled | Disabled | Disabled | Disabled | Disabled | Disabled |
| Other Citrix Virtual Channels Settings | USB redirection | Enabled | Enabled | Enabled | Disabled | Disabled | Enabled | Enabled | Enabled |
| | Imprivata | Enabled | Enabled | Enabled | Enabled | Disabled | Enabled | Enabled | Enabled |

Microsoft Teams optimization

ThinOS supports audio, video, and screen sharing features with Microsoft Teams on Citrix Virtual Apps and Desktops, and Citrix Workspace app.

To enable the Microsoft Teams audio and video optimization feature, you must meet the following requirements:

- Install the Microsoft Teams on your VDI desktop. For more information about the Microsoft Teams installation, see the Optimization for Microsoft Teams article at docs.citrix.com.
- Review the system requirements of Citrix Virtual Apps and Desktops and VDA. For more information about the system requirements, see the Optimization for Microsoft Teams article at docs.citrix.com.

- Enable the Microsoft Teams redirection policy is enabled in Citrix Studio. By default, the Microsoft Teams redirection policy is enabled. For more information about how to enable the Microsoft Teams redirection, see the Multimedia policy settings article at docs.citrix.com.

On the ThinOS client side, you must install the Citrix package using Admin Policy Tool or Wyse Management Suite. For information about how to install the ThinOS application packages, see the *Dell Wyse ThinOS 9.1 Migration Guide* at www.dell.com/support.

To verify if the Microsoft Teams application works in the optimized mode, click **About > Version** to view the Citrix HDX Optimized legend. For more information about how to verify the Microsoft Teams audio optimization, see the *Optimization for Microsoft Teams* article docs.citrix.com.

Microsoft Teams optimization feature matrix

Table 40. Microsoft Teams optimization feature matrix

| Scenario | ThinOS |
|--|---|
| Long meetings | Supported |
| Call—Make an audio call | Supported |
| Call—Answer an audio call | Supported |
| Call—Make a video call | Supported |
| Call—Answer a video call | Supported |
| Call—Turn the camera on or off | Supported |
| Call—Enter or exit full screen | Supported |
| Call—Hold or resume a call | Supported |
| Call—End call | Supported |
| Call—Mute or unmute audio | Supported |
| Call—Transfer | Supported |
| Call—Consult then transfer | Supported |
| Call—Keypad | Not tested |
| Call—Start or stop recording | Supported |
| Call—Turn off or turn on incoming video | Supported |
| Call—Group video call | Supported |
| Call—Group audio call | Supported |
| Call—Invite someone during a call | Supported |
| Meeting | Supported |
| Share screen—Desktop | Supported |
| Share screen—PowerPoint | Supported |
| Chat | Supported |
| Audio or video call in VDI server desktop | Supported |
| Audio or video call in published Microsoft Teams application | Supported |
| Devices—Plug in or disconnect the headset | Supported—Headsets can be automatically selected when you connect a new headset during the call or meeting. Teams use the default audio device that is configured by ThinOS client. If the headset is selected as default, it shows a default: label in Teams device settings. If you plug in a webcam with mic, the mic on the webcam gets selected. You can manually select the audio device in Teams device settings. |

Table 40. Microsoft Teams optimization feature matrix (continued)

| Scenario | ThinOS |
|--|---|
| Devices—Switch headset | Limited support—If you install JVDI package in ThinOS, the switched headset does not work. Dell Technologies recommends to not install JVDI package if you are using Microsoft Teams. |
| Devices—Plug in or disconnect the camera | Supported |
| Devices—Switch camera | Not supported—This is a known Citrix issue. |
| Headset buttons—Answer/Mute/End Call | Limited support—The Answer/End call button is not supported. This is a Citrix Workspace app limitation. |

Microsoft Teams optimization limitations

- Video call and share screen features are not supported on Wyse 3040 Thin Clients due to client resource limitations.
- Video call and share screen features are recommended on Wyse 5070 Thin Clients, 5470 Thin Clients, and Wyse 5470 All-in-One Thin Clients with known issues.
 - The audio gets distorted during a meeting when you share screen from thin client to a laptop or desktop that uses native Microsoft Teams. There is no workaround right now and the issue is being worked on.
 - The audio gets distorted during a meeting when all the participants mute while the screen presenter is sharing the screen or the camera, with audio. Workaround is to ensure that at least one participant has not muted while the screen presenter is sharing screen or has the camera enabled.
 - When users share screen in a Teams meeting between Wyse 5070 thin clients or Wyse 5470 thin clients, the audio gets distorted while talking.
 - The audio gets distorted when you play HTML5 videos using Browser Content Redirection in the shared screen when in a meeting.
 - The audio gets distorted when you browse a website with multiple pictures in the browser while sharing screen.
 - The audio gets distorted occasionally on a thin client with dual core CPU.
- Other known issues for CWA Teams Optimization
 - Depending on your network bandwidth latency, the audio quality may fluctuate. To avoid this issue, ensure that your network bandwidth is adequate for audio or video call. Citrix recommends 200 kbps or higher network speed for a single client.
 - Switching cameras during a Microsoft Teams call is not recommended. This issue is a known Citrix Workspace App limitation [Case #80109986].
 - Session termination or abrupt disconnect may result in unexpected HdxRtcEngine.exe processing exits. This issue is a known Citrix Workspace App limitation [RFLNX-5885].
 - Audio is still played through the first headset when you switch to the second headset during the call. This issue is observed when you have installed the JVDI package on the thin client. Workaround is that if you are using Microsoft Teams (or Zoom), do not install the Cisco JVDI package. This issue is due to Cisco limitation.
 - When using a headset, you cannot answer or end the call through headset buttons. This issue is due to a limitation of Microsoft Teams.

Zoom optimization on Citrix

ThinOS supports audio, video, and screen sharing features with Zoom on Citrix Virtual Apps and Desktops, and Citrix Workspace app.

For information about Zoom optimization, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Zoom optimization feature matrix

Table 41. Zoom optimization feature matrix

| Scenario | ThinOS 9.1 |
|------------------------------|------------|
| Long audio or video meetings | Supported |
| New meeting with audio only | Supported |

Table 41. Zoom optimization feature matrix (continued)

| Scenario | ThinOS 9.1 |
|--|---|
| New meeting with audio and video | Supported |
| Join a meeting | Supported |
| Schedule a meeting | Supported |
| Meeting with multiple participants | Supported |
| End meeting for all | Supported |
| Leave meeting | Supported |
| Share screen directly with meeting ID | Supported |
| Gallery View or Speaker View | Supported |
| Enter or exit Full screen | Supported |
| Mute or unmute audio | Supported |
| Start or stop video | Supported |
| Security—Lock meeting | Supported |
| Security—Enable waiting meeting | Supported |
| Security—Allow participants to share screen | Supported |
| Security—Allow participants to chat | Supported |
| Security—Allow participants to rename themselves | Supported |
| Participants—Invite people to join in meeting | Supported |
| Polls | Supported |
| Chat | Supported |
| Share screen—If 1 monitor is connected | Supported |
| Share screen—If multiple monitors are connected | Supported |
| Share screen—Whiteboard | Supported |
| Share screen—Share one of the applications | Supported |
| Record meeting—Start, Pause, or Stop recording | Supported |
| Live Transcript—Show subtitles | Supported |
| Live Transcript—View full transcript | Supported |
| Live Transcript—Subtitle settings | Supported |
| Support—Request Desktop Control | Supported |
| Support—Request Application Control | Supported |
| Support—Request computer restart | Supported |
| Live on custom live streaming service | Not tested |
| Audio Devices—Plug or unplug headset | Supported |
| Audio Devices—Switch headset | Supported |
| Video Devices—Plug or unplug camera | Supported |
| Video Devices—Switch camera | Supported |
| Video Devices—Choose virtual background | Not supported |
| Headset buttons—Answer/Mute/End Call | Limited support—Only Mute button is supported |

Zoom optimization known issues

- Video blinks when using Logitech C920 web camera during Zoom video call. Dell Technologies recommends using other cameras.
- If you plug in the camera after you start the Zoom meeting, the camera cannot be detected in Zoom. Dell Technologies recommends configuring the camera before the meeting starts.

Cisco Webex Teams optimization

ThinOS supports audio, video, and screen sharing features with Cisco Webex Teams on Citrix Virtual Apps and Desktops, and Citrix Workspace app.

For information about Cisco Webex Teams optimization, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Cisco Webex Teams optimization on Citrix Workspace app feature matrix

Table 42. Cisco Webex Teams optimization on Citrix Workspace app feature matrix

| Scenarios | ThinOS 9.1 |
|--|------------|
| Call—Audio call | Supported |
| Call—Video call | Supported |
| Call—Long audio call | Supported |
| Call—Long video call | Supported |
| Chat | Supported |
| Call—Mute or unmute | Supported |
| Call—Turn on or turn off camera | Supported |
| Full screen | Supported |
| Share screen—screen 1 | Supported |
| Call—Chat during video call | Supported |
| Call—Add guest | Supported |
| Call—New Whiteboard | Supported |
| Camera—Camera setting | Supported |
| Camera—Preview camera | Supported |
| Camera—Plugin or unplug the Camera | Supported |
| Camera—Switch camera during video call | Supported |
| Speaker and Microphone | Supported |
| Plug or remove the headset | Supported |
| Switch headset during audio call | Supported |
| End call | Supported |
| Group audio call | Not tested |
| Group video call | Not tested |
| Group chat | Supported |
| Meetings | Supported |

Cisco Webex Teams optimization known issues

- In **Help > Health Checker > Server connection**, an error message that says *One or more services are inaccessible* is displayed occasionally. When this error message is displayed, you cannot send messages or call other users.
- The device stops responding occasionally during long audio calls.
- Only audio calls and screen sharing is supported on the Wyse 3040 Thin Client. Video calls result in performance issues.

Cisco webex meetings optimization

ThinOS supports audio, video, and screen sharing features with Cisco Webex Meetings on Citrix Virtual Apps and Desktops, and Citrix Workspace app.

For information about Citrix Webex Meetings optimization, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Cisco Webex Meetings optimization feature matrix

Table 43. Cisco Webex Meetings optimization feature matrix

| Scenarios | ThinOS 9.1 |
|---|------------|
| Join meeting | Supported |
| Audio call | Supported |
| Video call | Supported |
| Start video | Supported |
| Stop video | Supported |
| Switch camera during meetings | Supported |
| Adjust volume | Supported |
| Testing microphone | Supported |
| Testing speaker | Supported |
| End meeting | Supported |
| Leave meeting | Supported |
| Change microphone device | Supported |
| Change speaker device | Supported |
| Mute by self | Supported |
| Unmute | Supported |
| Lock meeting | Supported |
| Return meeting | Supported |
| Hotplug headset | Supported |
| Plug out headset | Supported |
| Plug out headset and plug in a new headset device | Supported |
| Disconnect network | Supported |
| Disconnect desktop | Supported |
| Music mode | Supported |
| Polls | Not tested |
| Chat—To everyone | Supported |


Table 43. Cisco Webex Meetings optimization feature matrix (continued)

| Scenarios | ThinOS 9.1 |
|--|------------|
| Chat—To specified participants | Supported |
| Share screen—If 1 monitor is connected | Supported |
| Share screen—If multiple monitors are connected | Supported |
| Share screen—Whiteboard | Supported |
| Share screen—Share one of the applications | Supported |
| Share screen—Switch share content | Supported |
| Share screen—Annotates | Supported |
| Share screen—Pause or Resume | Supported |
| Share screen—View—full screen | Supported |
| Share screen—View—Zoom in/out/to | Supported |
| Share screen—Start or Stop video during share screen | Supported |
| Record meeting—Start, Pause, or Stop recording | Not tested |
| Support—Request Desktop Control | Supported |
| Support—Request Application Control | Supported |
| Stop share screen | Supported |
| Participant | Supported |
| Close Participant | Supported |

Cisco Webex Meetings optimization known issues

Webex meetings are not optimized occasionally.

Workaround—Go to Webex Administration site, and select the **Enable meeting client for VDI** check box under **Common Site Settings > Site Options**.

 **NOTE:** You must have administrator rights to change the setting on Webex Administration.

If you do not have administrator rights, you can change the setting from Registry Editor. Go to **Registry Editor > HKEY_CURRENT_USER > SOFTWARE > WebEx > NativeVDI** and add a parameter with the following values:

- Name—VDIFeatureEnabled
- Type—REG_DWORD
- Data—0x00000001 (1)

Cisco Jabber Softphone for VDI

Cisco Jabber Softphone for VDI (JVDI) is the Unified Communications solution that is offered by Cisco for virtual deployments. In ThinOS 9.1, the Cisco JVDI client package version 12.9.2 is supported on the thin client.

For information about installing JVDI and configuring Cisco Jabber, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Cisco Jabber Softphone for VDI support matrix

Table 44. Cisco Jabber Softphone for VDI support matrix

| Component | Supported platforms and supported versions |
|-------------|--|
| Thin client | Wyse 5470 All-in-One Thin Client |

Table 44. Cisco Jabber Softphone for VDI support matrix (continued)

| Component | Supported platforms and supported versions |
|--|--|
| | Wyse 5470 Thin Client |
| | Wyse 5070 Thin Client |
| | Wyse 3040 Thin Client |
| Connection broker for the hosted virtual desktops | Citrix Virtual Apps and Desktops (formerly XenDesktop) 7.15 LTSR and later |
| | Citrix Virtual Apps (formerly XenApp) 7.15 LTSR and later |
| | Citrix Virtual Apps and Desktops 7 2006 |
| Cisco Jabber application on the hosted virtual desktop | Cisco Jabber 12.9.2 |
| Cisco JVDI agent on the hosted virtual desktop | Cisco JVDI Agent 12.9.2 |
| Cisco JVDI client on the thin client | Cisco Jabber 12.9.2.304552.3 |

Cisco Jabber Softphone for VDI limitations

- Wyse 3040 Thin Client—Video calls in 720p resolution is not supported due to high CPU usage. Dell Technologies recommends restricting the video resolution to 360p from server settings.
- Video calls in 4k resolution using 4k monitors have performance issues.

Federated Authentication (SAML/Azure AD)

ThinOS supports the Citrix Federated Authentication Service (FAS) with Azure Active Directory during single sign-on to Citrix ADC using the Security Assertion Markup Language (SAML) based authentication. The FAS server delegates the user authentication to the Microsoft ADFS server or Azure AD with SAML. Both, Azure AD Multiple Factors Authentication (MFA) and Self-Service Password Reset (SSPR) are supported.

For more information, about integrating Citrix ADC with Azure Active Directory, see the Integrating Citrix ADC (formerly NetScaler) with Microsoft Azure AD documentation at docs.citrix.com.

For information about how to enable Azure Multiple Factor Authentication and Azure Self-Service Password Reset function for Citrix ADC (formerly NetScaler) Single Sign-on with SAML Authentication, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Browser Content Redirection

Browser content redirection enables any web browser content, including HTML 5 videos, to be redirected to the ThinOS client and not redirected on the VDA side.

For more information about Browser Content Redirection, see the Browser Content Redirection article at docs.citrix.com.

For more information about how to enable Browser Content Redirection on ThinOS, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

NOTE: Browser content redirection in ThinOS is based on WebKitGTK+ framework. ThinOS will support Chromium Embedded Framework (CEF) after Citrix announces its default framework in Linux binary.

Citrix HDX Adaptive transport (EDT)

ThinOS supports Citrix HDX Adaptive transport for Citrix Virtual Apps and Desktops. HDX Adaptive transport enables the ICA virtual channels to automatically adapt to varying LAN and WLAN connections and improves the data throughput.

For more information about Citrix HDX Adaptive transport, see the Citrix documentation at docs.citrix.com.

For information about how to enable HDX Adaptive Transport, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

HDX Adaptive Display V2

ThinOS supports the selective use of a video codec (H.264) to compress graphics during video playback in an ICA session. This feature combines the H.264 mode and Thinwire Compatible mode for a better user experience.

For more information about HDX Adaptive Display V2, see the Citrix documentation at docs.citrix.com.

For information about how to HDX Adaptive Display V2, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Citrix ADC Native OTP

Citrix ADC (formerly NetScaler) Native OTP enables Citrix ADC Gateway to use one-time passwords (OTPs) for authentication without the need of an extra authenticating server. A one-time password that is generated by Google Authenticator is considered to be highly secure as passcodes are randomly generated.

For more information about Native OTP support for authentication, see the Citrix ADC Gateway12.0 documentation at docs.citrix.com.

For information about how to log in to Citrix ADC using the passcode, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Autoconfiguration of email-based account discovery using DNS

You can automatically connect to a Citrix session by using an email address. The email address is used to discover the StoreFront or Citrix ADC (formerly NetScaler) Gateway URL.

For more information about how to connect to a Citrix session by using an email-based discovery, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Desktop Viewer/Toolbar

ThinOS 9.1 supports Citrix Desktop Viewer or Toolbar that follows the functionality of Citrix Workspace app v2012. To access Desktop Viewer, click the **Desktop Viewer/Toolbar** button on the top center of the Citrix session screen. The Desktop Viewer functionality allows the user to switch a session between windowed and full-screen session window, including multimonitor support for the intersected monitors. Users can switch between desktop sessions and work with more than one desktop using multiple Citrix VirtualApps and Desktops connections on the same end-point device.

The following toolbar buttons are available:

- Home
- Switch
- Ctrl+Alt+Del
- Window/Full-screen
- Preferences
- Save Layout
- Disconnect
- Sign Out

To hide the Citrix Desktop Viewer toolbar—Go to **Advanced > Session settings > Citrix Session Settings > Desktop Viewer/Toolbar** in Wyse Management Suite or Admin Policy Tool. The option is enabled by default. Disable the option and reboot the thin client to hide the Citrix Desktop Viewer toolbar.

Limitation—When you first click **Save Layout** from the Desktop Viewer/Toolbar, you must enter the user credentials.

For more information about the Desktop Viewer/Toolbar, see the Citrix documentation at www.citrix.com.

Workspace mode

The Workspace mode is a newly launched style that works on the classic mode of the ThinOS device. It enables you to customize the look and feel of your ThinOS to match the Citrix Workspace-based layout of published applications and desktops. Workspace Mode displays both the ThinOS taskbar and the Workspace desktop.

To enable the Workspace Mode option on Admin Policy Tool or Wyse Management Suite, do the following:

1. Go to **Configuration Control > ThinOS > Advanced > Broker Settings > Citrix Broker Settings** in Admin Policy Tool or Wyse Management Suite and enable **Citrix Workspace Mode**.
2. Click **Save & Publish**.

To enable the Workspace Mode option on Admin Policy Tool or Wyse Management Suite, do the following:

1. On the ThinOS desktop, go to **System Setup > Remote Connections** and enable Workspace mode.
2. Click **OK** to save the setting.

Workspace mode is displayed after the next login.

For more information about the Citrix Workspace mode, see the Citrix documentation at www.citrix.com. For more information about configuring the Citrix Broker agent, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Citrix printer update limitations


- The ThinOS solution to support the client printer redirection functionality is limited to Type 3 printers only. However, the solution is subject to changes in the future according to the changes made by Citrix.
- ThinOS supports only PS class when using the Citrix Universal Print Driver policy to automatically create ThinOS client redirected printers. PCL5 and PCL4 classes are not supported. This is a Citrix limitation.

Citrix printer update

The Citrix printer package on ThinOS is updated to CWA2012 to support all the client printer redirection functionality that is available in ThinOS v8.6.


Based on the Citrix Host Printer Policy settings, ThinOS 9.1 supports the following:

- Device-Specific Printer Driver support—This method allows Citrix hosts to automatically create client redirected printer queues based on the peripheral management printer settings of the ThinOS client. The following details are used by the host print manager to automatically create the printer queues:
 - Name—Printer queue name
 - Printer ID (Printer Identification)—Printer driver name
- Citrix Universal Print Driver support—This method allows Citrix hosts to automatically create printer queues based on the peripheral management printer settings of the ThinOS client. The following details are used by the host print manager to automatically create the printer queues:
 - Name—Printer queue name
 - Class—Printer class that is associated by the Citrix host registry to a printer-specific driver name.

 **NOTE:** ThinOS 8.6 supports the association of PS, PCL5, and PCL4 classes. However, ThinOS 9.1 associations are limited to the PS class only.

Keyboard Layout Mode

Keyboard Layout Mode enables the user to select the preferred keyboard layout during a Citrix session.

 **NOTE:** To make the Keyboard Layout Mode to take effect, you must sign off broker or reboot the client.

To select the keyboard layout using Keyboard Layout Mode, go to **Advanced > Session Settings > Citrix Session Settings > Keyboard Layout Mode** on the Admin Policy Tool or Wyse Management Suite. The following are the available selections from the drop-down menu:

- Server Default
- Client Setting
- Dynamic Sync
- Specific Keyboard

Limitations—Citrix Workspace app Linux keyboard sync mode does not support switching the layout in VDA. Keyboard output follows the client Linux keyboard layout and, not the Windows layout. If you are switching the keyboard layout in VDA, you must select Keyboard Layout Mode as **Server Default**. If you select any other drop-down from Keyboard Layout Mode and change the synced keyboard language to any other language layout in VDA, there could be synchronization issues and mismatch in the keyboard output in VDA.

For more information regarding Keyboard Layout Mode, see *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

VMware Horizon

ThinOS 9.1 upgrades VMware Horizon Client to version 2006 that brings the newest capabilities of VMware VDI support.

VMware Horizon Management and configuration

From ThinOS 9.X onwards, INI management is deprecated and the devices are managed using Wyse Management Suite or the Admin Policy Tool. VMware Horizon is also configured and managed using Wyse Management Suite and the Admin Policy Tool.

For the steps to configure VMware Horizon and Blast, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Unified Access Gateway

Unified Access Gateway is used to securely access remote desktops and applications that are outside a corporate firewall. For information about the latest version of Unified Access Gateway, see *Unified Access Gateway Documentation* at www.docs.vmware.com.

VMware released Horizon 7.11 with Unified Access Gateway 3.8 and later uses SAML-based multifactor authentication. It supports many modern cloud-based solutions including Azure multifactor authentication.


For more information about Unified Access Gateway, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Scanner redirection

Scanner redirection helps users to scan information to their remote desktops and applications by using scanning and imaging devices that are connected locally to the Thin Client. Scanner redirection supports scanning and imaging devices that are compatible with TWAIN and WIA formats, and SANE.

For configuring Scanner redirection, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Serial ports redirection

 **NOTE:** This feature is supported only in Blast session.

Serial ports redirection helps users to redirect locally connected serial (COM) ports or USB ports to Serial adapters. Printers, barcode readers, and other serial devices can be used in the remote desktops and published applications by connecting to these ports.

To configure serial ports redirection on ThinOS, do the following:

1. Install the serial port redirection feature in View Agent in the remote session.
2. After launching the VMware Horizon View desktop, open VMware Serial Port Redirection menu from Windows system tray.
The serial port is listed and can be selected.

On Windows Device Manager, the Serial Port is displayed as **Serial Port Redirector over VMware Horizon (COM1)**.

FIPS-140-2 mode

Federal Information Processing Standards (FIPS) is developed by the National Institute of Standards and Technology. These standards are publicly announced standards and are developed for using in computers by nonmilitary American government agencies and government contractors. ThinOS 9.1 can perform cryptographic operations using FIPS (Federal Information Processing Standard) 140-2 compliant algorithms.

To enable FIPS-140-2 mode, go to **System Tools > Certificates** and enable the setting **Enable FIPS**.


Session collaboration

The Session Collaboration feature lets users invite other users to join an existing remote desktop session.

To configure session collaboration on ThinOS, do the following:

1. Launch VMware Horizon View desktop.
2. Click the VMware Session Collaboration icon from Windows system tray.
3. Input username or email address to invite.
4. Send the invitation to the user.

After the other user logs in, the VMware Session Collaboration feature is enabled and both users can work on same session.

 **NOTE:** ThinOS 9.1 supports inviting other users to join the remote desktop session. However, ThinOS 9.1 does not support joining other sessions using session invitations.

Battery state redirection

When the **Enable Battery State Redirection** agent group policy setting is enabled, information about the ThinOS battery is redirected to a Windows remote desktop. The information contains details such as the charging status, percentage of charge, low battery notification, and so on. This setting is enabled by default.

Workspace ONE mode

When a Horizon administrator enables Workspace ONE mode for a Connection Server instance, VMware Horizon client users are redirected to Workspace ONE server to launch their entitlements.

For information about Workspace ONE mode configuration, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Relative mouse

Relative mouse is supported in Blast and PCoIP sessions. It can be enabled or disabled from:

- Wyse Management Suite and Admin Policy Tool
- Blast/PCoIP session menu

Limitation—Due to VMware limitation, the touch screen does not work correctly when the relative mouse feature is enabled.

For steps to enable relative mouse feature, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Limitations for VMware Horizon

- Time zone sync mismatch—Certain time zones mismatch during synchronization due to VMware limitation.
- The keyboard layout sync mismatch—Keyboard layouts mismatch during synchronization due to VMware limitation.
- **CapsLock** and **NumLock** LED does not sync in Blast session.
- Touch screen does not work on seamless application window and RDSH windows due to VMware limitation.
- Right-click and double-click does not work on desktop window for touchscreen due to VMware limitation.
- If VMware Horizon remote session relative mouse is enabled, occasionally the mouse does not work well on VNC.
- Seamless application does not have software development kit support. If you launch two applications on the same server and drag or move one of the windows, the other window shows a black screen temporarily.
- If you change the mouse pointer size to a number greater than 3 in a Blast session, you must use Ctrl+Alt to exit the session and view the floating bar on the ThinOS modern desktop.
- Camera redirection support is limited. A blank screen is displayed. This issue is due to VMware Horizon limitation.
- USB disk mapping is not supported by VMware Horizon on ThinOS 9.1.
- Video performance is poor since Multimedia redirection (MMR) is not supported on ThinOS 9.1.
- Limitations for VMware Horizon in Wyse Management Suite or Admin Policy Tool:
 - If you change any Horizon-related configuration, you must sign off from the broker and sign in again for the changes to be applied.

- Set the force redirect setting for Horizon from **Broker settings > VMware Broker Settings Include Vid/Pid USB Device Redirection according to tooltips**. The setting changes in **Peripheral Management > USB RedirectionvUSB Force Redirect** do not work.

Zoom optimization on VMware

ThinOS supports audio, video, and screen sharing features with Zoom on VMware.

For information about Zoom optimization, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Zoom optimization on VMware feature matrix

Table 45. Zoom optimization on VMware feature matrix

| Scenarios | ThinOS 9.1 |
|--|------------|
| Long audio or video meetings | Supported |
| New meeting with audio only | Supported |
| New meeting with audio and video | Supported |
| Join a meeting | Supported |
| Schedule a meeting | Supported |
| Meeting with multiple participants | Supported |
| End meeting for all | Supported |
| Leave meeting | Supported |
| Share screen directly with meeting ID | Supported |
| Gallery View or Speaker View | Supported |
| Enter or exit full screen | Supported |
| Mute or unmute audio | Supported |
| Start or stop video | Supported |
| Security—Lock meeting | Supported |
| Security—Enable waiting meeting | Supported |
| Security—Allow participants to share screen | Supported |
| Security—Allow participants to chat | Supported |
| Security—Allow participants to rename themselves | Supported |
| Participants—Invite people to join in meeting | Supported |
| Polls | Supported |
| Chat | Supported |
| Share screen—If 1 monitor is connected | Supported |
| Share screen—If multiple monitors are connected | Supported |
| Share screen—Whiteboard | Supported |
| Share screen—Share one of the applications | Supported |
| Record meeting—Start, Pause, or Stop recording | Supported |
| Live Transcript—Show subtitles | Supported |
| Live Transcript—View full transcript | Supported |
| Live Transcript—Subtitle settings | Supported |

Table 45. Zoom optimization on VMware feature matrix (continued)

| Scenarios | ThinOS 9.1 |
|---|---|
| Support—Request Desktop Control | Supported |
| Support—Request Application Control | Not tested |
| Support—Request computer restart | Not tested |
| Live on custom live streaming service | Not tested |
| Audio Devices—Plug or unplug headset | Supported |
| Audio Devices—Switch headset | Supported |
| Video Devices—Plug or unplug camera | Supported |
| Video Devices—Switch camera | Limited support—Camera cannot be detected in Zoom if you plug in the camera after the meeting starts. |
| Video Devices—Choose virtual background | Not applicable |
| Headset buttons—Answer/Mute/End Call | Not tested |

Zoom optimization known issues

- If you plug in the camera after you start the zoom meeting, the camera cannot be detected in Zoom. Workaround is to configure the camera before the meeting starts.
- On Wyse 5470 All-in-One, during a call there is occasional echo.
- Zoom reactions cannot be used during a video call, due to Zoom limitation.
- If the version of the zoom plug-in is lower than the VDI client version, zoom cannot be optimized.
- If you delete the Zoom_Horizon package, Zoom does not work well with Real-Time Audio-Video (RTAV). This is a known issue.
- Zoom optimization does not work occasionally. This is a known issue.
- If you use several Unified Communications (UC) simultaneously, there can be unexpected errors

Cisco Webex Teams optimization on VMware

ThinOS supports audio, video, and screen sharing features with Cisco Webex Teams on VMware.

For information about Cisco Webex Teams optimization, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Cisco Webex Teams optimization on VMware feature matrix

Table 46. Cisco Webex Teams optimization on VMware feature matrix

| Scenarios | ThinOS 9.1 |
|----------------------|---|
| Call—Audio call | Limited Support—Audio and video calls are supported only by TCP connection. |
| Call—Video call | Limited Support—Audio and video calls are supported only by TCP connection. On Wyse 5070 Thin Client, the video screen stays on ThinOS desktop screen if you switch to desktop during a video call. |
| Call—Long audio call | Supported—The device stops responding occasionally during audio and video calls. This is a known issue. |
| Call—Long video call | Supported |
| Chat | Supported |
| Call—Mute or Unmute | Supported |

Table 46. Cisco Webex Teams optimization on VMware feature matrix (continued)

| Scenarios | ThinOS 9.1 |
|--|---|
| Call—Turn on or turn off camera | Supported |
| Full screen | Supported |
| Share screen—Screen 1 | Supported |
| Share screen—Other applications | Not supported—Synchronous with Ubuntu |
| Share screen—Share system audio | Not supported—Synchronous with Ubuntu |
| Share screen—Optimize for video | Not supported—Synchronous with Ubuntu |
| Call—Chat during a video call | Supported |
| Call—Add guest | Supported |
| Call—New whiteboard | Supported |
| Camera—Camera setting | Supported |
| Camera—Preview camera | Supported—The camera does not display any image during a video call. This is a known issue. |
| Camera—Plug or unplug the camera | Supported |
| Camera—Switch camera during a video call | Supported |
| Speaker and microphone | Supported |
| Plug or unplug headset | Supported |
| Switch headset during audio call | Supported |
| End call | Supported |
| Group audio call | Supported |
| Group video call | Supported |
| Group chat | Supported |

Cisco Webex Teams optimization known issues

- In **Help > Health Checker > Server connection**, an error message that says **One or more services are inaccessible** is displayed occasionally. When this error message is displayed, you cannot send messages or call other users.
- The device stops responding occasionally during audio and video calls.
- The video screen stays on ThinOS desktop screen occasionally if you switch to desktop during a video call.
- Audio and video calls are supported only by TCP connection.
- The camera does not display any image during a video call.
- There is an occasional lag on both video and audio calls. The lag can be up to 1 minute.
- Video flickering occurs after dragging the video window.
- The ThinOS local desktop is shared when sharing desktop.
- If you use a large mouse pointer size during Blast session, the mouse hides automatically when playing a video during video calls.
- If you use several Unified Communications (UC) simultaneously, there can be unexpected errors.
- WebEx Teams stops responding occasionally when you create a new whiteboard, due to Cisco limitations.
- The server connection of WebEx Teams occasionally displays incorrect in Horizon.

Cisco Jabber Softphone for VDI on VMware

Cisco Jabber Softphone for VDI (JVDI) is the Unified Communications solution that is offered by Cisco for virtual deployments. In ThinOS 9.1, the Cisco JVDI client package version 12.9 is supported on the thin client.

For information about installing JVDI and configuring Cisco Jabber, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Cisco Jabber Softphone for VDI support matrix on VMware

Table 47. Cisco Jabber Softphone for VDI support matrix on VMware

| Component | Supported platforms and supported versions |
|--|--|
| Thin client | Wyse 5470 All-in-One Thin Client |
| | Wyse 5470 Thin Client |
| | Wyse 5070 Thin Client |
| | Wyse 3040 Thin Client |
| Cisco Jabber application on the hosted virtual desktop | Cisco Jabber 12.9.2 |
| Cisco JVDI agent on the hosted virtual desktop | Cisco JVDI Agent 12.9.2 |
| Cisco JVDI client on the thin client | Cisco Jabber 12.9.2.304552.3 |

Cisco Jabber Softphone for VDI limitations on VMware

- If the Blast session is disconnect, the JVDI cannot register. Workaround is to log off Blast session and sign out Horizon.
- Video is not displayed at times during video call. Workaround is to turn off and turn on the camera.
- When the VDI desktop is minimized, occasionally the video screen on Jabber remains on the ThinOS desktop.
- If the VDI desktop is in window mode, the position of the video screen on Jabber is offset.
- Video calls in 4k resolution using 4k monitors have performance issues.
- If you use a large mouse pointer size during Blast session, the mouse hides automatically when playing a video during video calls.
- If you use several Unified Communications (UC) simultaneously, there can be unexpected errors.

Microsoft Teams on VMware

Microsoft Teams supports only Real Time Audio Video (RTAV) so far, and does not support optimization.

Microsoft Windows Virtual Desktop and Remote Desktop Services

Windows Virtual Desktop

Windows Virtual Desktop (Azure) is a cloud-based desktop and app virtualization service. Windows Virtual Desktop enables customers to access the Windows Virtual Desktop resources that they created on Azure cloud from the ThinOS client.

For the steps to access Windows Virtual Desktop, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Remote Desktop Services

Remote Desktop Services enables a user to connect to a remote device or a virtual machine over a network connection. The following are the updated features:

- RDSH collections—Specifies the collections that are configured on the Microsoft RDS broker. Only the applications or desktops within the specified collections are shown. If the field is empty, all the applications or desktops are shown.

To access RDSH Collections, go to **Admin Policy Tool > Advanced > Broker Settings > Microsoft Remote Desktop Settings**.

- TLS Check CN—Enables or disables the verification of the common name of server certificate when setting up an SSL connection in full security mode. This option is ineffective to SSL connections for Remote Desktop Service. The connection checks the server certificate common name all the times for Remote Desktop Services.

To access TLS Check CN, go to **Admin Policy Tool > Advanced > Privacy & Security > Security Policy**.

NOTE: You must reboot the terminal after you change either of these options.

Limitations in Remote Desktop Services

- Remote Desktop Services applications display is not supported in seamless mode.
- Remote Desktop Services does not support smart card.

Teradici Cloud Access and Amazon Workspaces

Teradici PCoIP version is V2007613.

Configuration and management

1. To configure Teradici Cloud Access broker settings, open Wyse Management Suite or Admin Policy Tool, and go to **Advanced > Broker Settings > Teradici Cloud Access Settings**.
NOTE: To configure Teradici Cloud Access broker settings from ThinOS locally, go to **Remote Connections > Broker Setup**.
2. To configure PCoIP session settings, open Wyse Management Suite or Admin Policy Tool, and go to **Advanced > Session Settings > PCoIP Session Settings**.

PCoIP system tray icon

A new PCoIP system tray icon is added in ThinOS 9.1. From the PCoIP icon, the launched PCoIP sessions can be listed and features such as **Relative Mouse**, **Audio/Video Synchronization**, **Tablet Monitor**, and **Tablet Orientation Left-handed** can be enabled or disabled.

Wacom tablet feature

Wacom Tablet feature can be enabled and disabled from the PCoIP icon. Wacom Tablet mode can be configured from **Session Settings > PCoIP session Settings > Basic Settings > Wacom Tablet Configurations** in Admin Policy Tool or Wyse Management Suite.

NOTE: Wacom tablet feature does not work on VMware Horizon PCoIP session.

For information about the Wacom tablet, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Teradici PCoIP feature matrix

Table 48. Teradici PCoIP feature matrix

| Feature | | ThinOS 9.1 |
|-----------------------|------------------------------|------------|
| Disconnecting Session | Disconnect Session | Supported |
| | Session Reconnection | Supported |
| Changing Window Mode | Activating Full Screen Modes | Supported |
| | Activating Windowed Mode | Supported |
| | Persistent Display Topology | Supported |

Table 48. Teradici PCoIP feature matrix (continued)

| Feature | | ThinOS 9.1 |
|--|--|------------|
| | Minimizing the PCoIP Software Client from a Full-screen Mode | Supported |
| | Fullscreen All Monitors mode | Supported |
| Enhanced Audio and Video Synchronization | Enable Audio and Video Synchronization | Supported |
| Changing the Language | Language localization | Supported |
| Customizable session Features | Session Log ID | Supported |
| | Log Level | Supported |
| | Log File Name | Supported |
| | Force Native Resolution | Supported |
| Branding Your Session Client | Operating system application title and logo | Supported |
| | Session client toolbar title and logo | Supported |
| | Logo displayed in the operating system task bar | Supported |
| | Default menu item label | Supported |
| | About dialog | Supported |
| | Alert and message window titles | Supported |
| Supporting USB Devices | USB redirection | Supported |
| Displays | 4k UHD | Supported |
| | Rotation | Supported |
| Configuring Wacom Tablets | Tablet Monitor | Supported |
| | Tablet orientation left-handed | Supported |

Teradici Remote Workstation Host Card support

ThinOS 9.1 supports direct connection to PCoIP session with Teradici remote workstation card TERA2220 and TERA2240.

Table 49. Teradici Remote Workstation Host Card support matrix

| Remote workstation card processor name | Maximum number of supported displays and resolutions |
|--|--|
| TERA2220 | 2 x 1920x1080 |
| | 1 x 2560x1600 |
| TERA2240 | 1 x 3840x2160 |
| | 4 x 1920x1080 |
| | 2 x 2560x1600 |

Important notes

- The display can have issues when the monitor resolution is greater than the support matrix.
- Rearranging display is supported.
- Rotated display is supported.

Amazon WorkSpaces login window configuration

There are two configuration updates in the Amazon WorkSpaces login window in **Admin Policy Tool > Advanced > Broker Settings > Amazon WorkSpaces Settings**.

- Enable customized login—Enables a customized login window.
- Enable Changing Registration Code from login window—enables user to change Registration Code from Amazon Workspace login window.

For more information about Amazon WorkSpaces, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Imprivata

Multiple VDI support

ThinOS 9.1 Supports Imprivata on Citrix, VMware, and Microsoft VDI solutions in both Imprivata ProvelD Embedded and ProvelD WebApi modes.

The supported VDI solutions include:

- Citrix Virtual Apps and Desktops
- Citrix Virtual Apps
- Microsoft Remote Desktop Services session based and virtual desktop
- Microsoft Remote Desktop Services Remote PC
- Microsoft Remote Desktop Services RemoteApp
- VMware Horizon Desktop
- VMware Horizon Apps

For more information, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

ProvelD embedded

The ProvelD embedded pkg version is updated to Imprivata_PIE_7.1.005.0039_1097 that contains PIE agent 7.1.005.0039.

For ProvelD configuration, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Imprivata feature comparison matrix

Table 50. Imprivata feature comparison matrix

| Feature | | ThinOS 9.1 PIE | ThinOS 9.1 PIW |
|--------------------------------|--|----------------|----------------|
| General Features and Workflows | Imprivata Appliance failover | Supported | Supported |
| | Imprivata offline mode | Not supported | Not supported |
| | Imprivata self- service password reset | Supported | Supported |
| | Third-party self- service password reset | Not supported | Not supported |
| | Non-OneSign user workflow | Supported | Supported |
| | Spine Combined workflow | Not supported | Not supported |
| | Smartcard as proximity card workflow | Supported | Supported |
| Imprivata Walk Away Security | Honors lock command | Not supported | Not supported |
| | Fade to Lock screensaver | Supported | Supported |
| | Notification balloon | Not supported | Supported |

Table 50. Imprivata feature comparison matrix (continued)

| Feature | | ThinOS 9.1 PIE | ThinOS 9.1 PIW |
|---|--|----------------|----------------|
| Citrix Workflows | Citrix Virtual Desktops | Supported | Supported |
| | Citrix Virtual Applications | Supported | Supported |
| | Virtual Kiosk Citrix for Virtual Desktops for Desktops | Supported | Supported |
| | Virtual Kiosk for Citrix Published Applications | Supported | Supported |
| VMware Workflows | VMware Horizon Desktops | Supported | Supported |
| | VMware Published Application Support | Not supported | Supported |
| | Virtual Kiosk for VMware Desktops | Not supported | Supported |
| | Virtual Kiosk for VMware Published Applications | Not supported | Supported |
| Microsoft Workflows | Microsoft RDS/Remote PC Desktops | Supported | Supported |
| | Microsoft RDS Applications | Not supported | Supported |
| | Virtual Kiosk for RDS/Remote PC Desktops | Not supported | Supported |
| | Virtual Kiosk for RDS Published Applications | Not supported | Supported |
| Primary Authentication Modalities via Endpoint Operating System | Password | Supported | Supported |
| | Proximity card | Supported | Supported |
| | Smart card | Not supported | Not supported |
| | Fingerprint biometrics | Supported | Supported |
| | Question and Answer | Supported | Supported |
| Authentication/ Re-Authentication Modalities via Virtual Channel2 | Proximity card | Supported | Supported |
| | Smart card | Not supported | Not supported |
| | Fingerprint biometrics | Supported | Supported |
| | Imprivata Hands Free Authentication | Supported | Not supported |

Identity automation

Identity automation authentication is an enhanced sign-on solution that uses proximity card technology to quickly and securely access a remote session. Users tap in or tap out of their work using proximity card. Identity automation authentication speeds up the user workflow by eliminating the requirement to type their username and password each time they access their work.

For more information about configuring and using identity automation, see the *Dell Wyse ThinOS Version 9.1 Administrator's Guide* at www.dell.com/support.

Changes from ThinOS 8.6

- RDP
 - The RDP settings INI parameters including RDP session settings, RDP connect, RDS broker are replaced by Admin Policy Tool settings.

- In ThinOS 8.6, RemoteApp Integrated mode is supported. However, in ThinOS 9.1, only RemoteApp Immersive mode is supported.
- If you launch RDP connection in window mode with default resolution, the window mode displays the resolution rate of 1024x768.

NOTE: Dell Technologies has moved from the proprietary RDP client to the Windows Virtual Desktop (WVD) Linux SDK for RDP support. This change has resulted in feature loss compared to 8.x due to limitations in the Linux SDK from Microsoft.

- Display setup
 - Added 5120x1440 resolution support on Wyse 5070 Thin Client.
 - Removed the resolution that is lower than 1024x768 from the list.
 - Added the function **Disable current monitor**. This function can turn off the selected monitor.
 - Display setup window—New names for rotation options:
 - Portrait
 - Portrait (flipped)
 - Landscape (flipped)
 - Landscape
- First boot wizard—Updated the OOBE screen and added End User License Agreement (EULA).
- Desktop mode—Changed Zero mode to Modern mode.
- **System information > General**—Removed the status tab, and merged the fields to General tab.
- **System information > ENET**
 - Added ENET option to select ENET port.
 - Added the IPv6 information.
- **System information > WLAN**—Added the IPv6 information.
- **System information > About**—Removed some fields that are not used and added the Wyse Management Suite status.
- **Network Setup > Options**
 - Removed the options that are not supported in ThinOS 9.1.
 - The user class option for DHCP standard in ThinOS 9.1 is RFC2132 and it is the same as ThinOS 8.6.

NOTE: RFC3004 is the standard that is used in ThinOS 9.0. In ThinOS 9.1, it is changed back to RFC2132.
- **Peripherals > Audio**
 - The layout is redesigned.
 - Default audio device rule is changed.
 - When you plug in a new audio device, the device is set as the default audio device.
 - When an audio device is unplugged, HD audio is set as the default device.
- **Peripherals > Camera**—Removed the optimize options and video control settings.
- **Peripherals > Mouse**—Replaced **Enable big mouse pointer** option with **Pointer Size** drop-down.
- **Peripherals > Touchpad**—Added this tab to configure touchpad on Wyse 5470 Thin Client.
- **Remote Connections > Broker Setup**—Changed the Storefront style to Workspace Mode.
- Login window—Smart Card Self-Service icon is moved from login window to the system tray icons.
- RTME—HDX RealTime Media Engine and Citrix Workspace app is integrated as one single component on the client-side.
- SMB printer
 - In ThinOS 9.1, under **Printer > SMBs**, you must type in the name of the system or the FQDN of the host in the **\\host\printer** field to connect to the shared printer. After you input the details in the **\\host\printer** field and move the cursor, an SMB credentials dialog box is displayed prompting you to input the host access username, password, and domain name.
 - Limitations of SMB printer
 - SMB shared printer does not support space in shared name.
 - Shared server credentials do not support domain user. Use local user and input **WORKGROUP** in the **Domain** field.
- Citrix ADC Two-Factor Authentication
 - By default, ThinOS supports LDAP, RSA+LDAP, SMS passcode, DUO, OKTA, and Azure MFA authentication log in. Enter Citrix ADC gateway address in the broker address directly.
 - To log in Citrix ADC (formerly NetScaler) Gateway that uses LDAP+RSA Authentication, go to WMS policy or Admin policy tool, and select **LDAP+RSA** in **Citrix Broker Properties > NetScaler Gateway Authentication Method**.
 - For specific users who want to use Citrix ADC authentication methods, such as RSA, Dell Technologies recommends that you configure the **NetScaler/ADC Authentication Method with RSA** either using the Wyse Management Suite policy or Admin Policy Tool.

- For specific users who want to use Citrix ADC authentication methods, such as LDAP with MFA, Dell Technologies recommends that you configure the **NetScaler/ADC Authentication Method with LDAP** either using the Wyse Management Suite policy or the Admin Policy tool.
- Keyboard layout Synchronization and mapping are supported from ThinOS 9.1.
- Global Connection Settings

Session—Removed the **Auto-connect to local devices** function.

- Session properties
 - Options—Removed the **Auto-connect to local devices** function.
- VMware Horizon—IPv6 format change

When setting up VMware Horizon IPv6 broker connection, you must add the IP address inside brackets. For example, [**IPv6 address**].

What is removed compared to ThinOS 8.6

- Citrix
 - Removed Direct ICA connection.
 - Operation mode
 - Removed Storefront style mode.
 - Removed Multiple audio in ICA desktop.
 - **System Tools > Packages**
 - Removed FR.pkg—ThinOS 9.1 does not support Flash Redirection video.
 - Remove RTME.pkg—HDX RealTime Media Engine, and Citrix Workspace app is integrated as a single component on the thin client.
 - **System Tray > PNA**
 - Removed the Applications button.
 - Removed the Properties button.
- RDP
 - RDP properties
 - Removed the **Browse Hosts in Microsoft Network** button.
 - Removed Console mode.
 - Default on screen x removed from the Display Resolution while connecting multi-screens and span mode display.
 - Removed **Options > Desktop Experience(Check to disable)**.
 - Removed **Options > Auto-connect to local devices > Printer, Serials, USB**.
 - Removed **Options > Mouse queue timer**.
 - **Global Connection Settings > RDP**
 - Removed **Enable TSMM**.
 - Removed **Enable RemoteFX**.
- VMware
 - The Virtual Printing feature is no longer supported in VMware Horizon. Use the VMware Integrated Printing feature instead.
 - Integrated VMware Horizon Linux client 2006 in ThinOS. All the features that are not supported in VMware Horizon 2006 are not supported in ThinOS.
- ThinOS Management
 - Removed Wyse Device Manager support.
 - Removed File server support.
 - Removed **Global INI** and **User INI** from **System Tools**.
- ThinOS client configuration
 - Removed **Time/Date > System Preferences > Enable Daylight Saving**.
 - **Peripherals > Audio**
 - Removed the **Info** button on local Recorder.
 - Removed the function to save local Recorder sample audio file to USB.
 - Removed the **Boost** option.
 - Removed the **Enable DP audio** option.
 - Removed the **Enable headset popup** option.
 - Removed the **Enable LPD service for the printer** option under Ports and SMBs tab in Printer Setup.

- Thin Print is removed.
- **Clear locally saved connections** button is removed.
- **Character Set** list is removed.
- **Touch Screen** tab is removed from Peripherals window.
- **Peripherals > Serial**
 - Removed Serial touch screen settings.
 - Removed the 1.5 radio button from **Serial Port > Stop**.
- **Remote Connection > Broker Setup > Select Broker Type**
 - Removed **Dell vWorkspace**, and **Other**.
 - When **Broker Type** is selected as **Citrix Virtual Apps and Desktops**
 - Removed Storefront style.
 - Remove Account Self-service server.
 - Removed **Use default settings** for **XenApp** and **Xendesktop**.
 - Removed **Visual Experience** tab. Users must use Wyse Management Suite or Admin Policy Tool to switch between Classic and Zero mode.

Important notes

- Not all resolutions in the resolution list in Display setup window are supported on different monitors. It depends on the monitor and the client used.
- If there is no existing LPT printer configuration in the Admin Policy Tool when a USB printer is autodetected on the Printer Setup window, the printer values such as printer name and identification displayed on the Printer Setup window are taken from the printer that is plugged in. If there is an existing LPT printer configuration in the Admin Policy Tool, the printer values displayed on the Printer Setup window are taken from the printer configuration in Admin Policy Tool.
- Dell Technologies recommends to not use the **Enable 3440x1440 resolution** function from the Admin Policy Tool on Wyse 3040 Thin Client unless the monitor that you are using has 3440x1440 as the best resolution. Using this resolution can have some performance issues on Wyse 3040 Thin Client.
- Do not plug in and plug out video cables from the thin client frequently as it may cause unexpected graphics errors.
- After upgrading the client to ThinOS 9.1, the BIOS secure boot option is enabled by default if the BIOS password is set as default or if the BIOS has no password. Disable the secure boot option before you downgrade the thin client to ThinOS 8.6 or 9.0 with a merlin image.
- You cannot boot into ThinOS 9.1 when you perform the following operations in BIOS setup:
 - Disable onboard Network Interface Card (NIC), Trusted Platform Module (TPM), or Platform Trust Technology (PTT).
 - Clear TPM or PTT.
- Downgrading ThinOS 9.1 to ThinOS 8.6 or ThinOS 9.0 using Wyse Management Suite is not supported.
- To downgrade ThinOS 9.1 to ThinOS 8.6 or ThinOS 9.0, you must clear TPM or PTT in BIOS first. Then use the Dell Wyse USB Imaging Tool and Merlin images to downgrade.
- Refer [Citrix multiple virtual channels](#) section, before using Citrix multiple Unified Communication (UC) features.
- DHCP and DNS SRV configurations for Wyse Management Suite can only work after you reset your device to factory default settings.
- If you publish WDA settings or Wyse Management Suite settings policies on the Wyse Management Suite server, ensure that you specify the Group prefix, Group token field, and enable the Show Advanced Configuration option for providing the Wyse Management Suite server details. If not specified, the Wyse Management Suite Group Registration Key is cleared and the Wyse Management Suite server is changed to the default URL—`https://us1.wysemanagementsuite.com`—on the client side.
- Citrix H.264-enhanced SuperCodec depends on Citrix binary to coordinate using software H.264 decoding or hardware decoding. In ThinOS, there are no event logs to show SuperCodec status.
- Before using the Allow list under **System setup > Admin policy tool > Advanced > Privacy&Security > Device Security**, you must do the following:
 1. Select **Allow from Device Security Type**.
 2. Click **Add Row**.
 3. Add **HID,Hub** to the Class area.
 4. Click the **Save&Publish** button. This function takes effect after you restart the client.

Without performing these steps, all USB devices including mouse and keyboard that you connect to the thin client remain inaccessible.
- When using SCEP Administrator URL, you must use **/** at the end of the URL.
- Installing a Cisco_Jabber package could impact audio device settings on Unified communication package such as Cisco Jabber, Zoom_Citrix, Cisco WebEx Meetings, or Cisco WebEx Teams in remote desktops. This impact is due to a Cisco

known issue from ThinOS 9.0. Dell Technologies recommends installing Cisco_Jabber package only for Cisco Jabber VDI users.

- Citrix Universal Print Driver (UPD) supports only PostScript (PS) printing format due to Citrix known limitation from ThinOS 9.0. Dell Technologies recommends using PS capable printers.
- Do not enable video call for Citrix unified communication optimization features on the Wyse 3040 Thin Client. Video call results in performance issues.
- Dell Technologies recommends that you configure the Wyse Management Suite settings before you check in the thin client to the Wyse Management Suite server. The device receives all configurations from the Wyse Management Suite when it is checked in to the Wyse Management Suite server.
- When the device is checked in to Wyse Management Suite, all configurations are pushed from the Wyse Management Suite server to the client and the local settings are discarded.
- When the device is not checked in to Wyse Management Suite, the Admin Policy Tool settings are pushed to the client side.
- When you change any device settings on the ThinOS User Interface (UI), the modified settings are automatically synced to Admin Policy Tool.
- You can configure both Wyse Management Suite and Admin Policy Tool to manage any device settings. After the device reboot or recheck into Wyse Management Suite, the device settings from Wyse Management Suite take priority and override the Admin Policy Tool settings.
- It is not recommended to set **Vendor and Product ID** and **Class** simultaneously. However, if you configure both options simultaneously, the device first checks the **Vendor and Product ID** followed by the **Class** list.
- When you configure Bluetooth, Device Security, VNC Server, NetID License, or Serial Port using the Admin Policy Tool, ensure that you restart the thin client for the settings to take effect.
- To redirect your iPhone device, ensure that the **Exclude disk devices** and **Exclude audio devices** check boxes in the **Global Connection Settings** window are not selected.
- To connect your Android phone and use it on the thin client desktop session by mapping or redirecting, select the option to transfer images on your smartphone. Do not select the option to transfer media files.
- Do not hotplug smart card too quickly.
- PCoIP session under Teradici Access Cloud broker does not support audio or video device redirection due to Teradici limitation. For more information, see *Teradici PCoIP Software Client 20.10 for Windows Administrators Guide* at docs.teradici.com.
- Exit Imprivata PIE mode—Hold **Ctrl** key on your keyboard and click the PIE shutdown icon for the Exit option to be displayed.
- When the relative mouse feature is enabled, the mouse cursor is restricted in Blast/PCoIP session. The following key combinations can release the mouse cursor to ThinOS local client:
 - PCoIP session—Press **Ctrl + Alt + Down** key combination to switch to ThinOS desktop.
 - Blast session—Press **Ctrl + Alt** key combination.
- Horizon Workspace One—If Workspace One web portal displays a blank white page, you must close the web portal window and reconnect the VMware Horizon broker.
- To launch RDP session from Horizon broker, **Enable Credential Security Service Provider** must be enabled in the Wyse Management Suite or Admin Policy Tool, due to a Windows Virtual Desktop limitation.

Tested environments matrix

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

Table 51. Tested environment—General components

| Component | Version |
|---------------------------------|------------------------------|
| Wyse Management Suite | 3.1 |
| Imprivata OneSign | 7.1.005.39 |
| Citrix ADC (formerly NetScaler) | 12.0/12.1/13.0 |
| StoreFront | 1912 LTSR and later versions |

Table 52. Test environment—Citrix

| Citrix Virtual Apps and Desktops | Windows 7 | Windows 10 | Windows Server 2008 R2 | Windows Server 2012 R2 | Windows Server 2016 | Windows Server 2019 | APPs |
|--|------------|------------|------------------------|------------------------|---------------------|---------------------|--------|
| Citrix Virtual Apps and Desktops/Citrix Virtual Apps 7.6 | Not tested | Not tested | Tested | Tested | Not tested | Not tested | Tested |
| Citrix Virtual Apps and Desktops/Citrix Virtual Apps 7.15 LTSR Cumulative Update 5 (CU5) | Not tested | Tested | Not tested | Tested | Tested | Not tested | Tested |
| Citrix Virtual Apps and Desktops 7 1912 LTSR | Not tested | Tested | Not tested | Tested | Tested | Tested | Tested |
| Citrix Virtual Apps and Desktops 7 2006 | Not tested | Tested | Not tested | Not tested | Tested | Tested | Tested |

Table 53. Tested environment—VMware Horizon

| VMware | Windows 10 | Windows Server 2012 R2 | Windows Server 2016 | Windows Server 2019 | APPs |
|---------------------|------------|------------------------|---------------------|---------------------|--------|
| VMware Horizon 7.12 | Tested | Tested | Tested | Tested | Tested |
| VMware Horizon 2006 | Tested | Not tested | Not tested | Tested | Tested |

Table 54. Test environment—Microsoft RDP

| Microsoft RDP | Windows 7 | Windows 10 | Windows Server 2008 R2 | Windows Server 2012 R2 | Windows Server 2016 | Windows Server 2019 | APPs |
|-------------------------|------------|------------|------------------------|------------------------|---------------------|---------------------|--------|
| Remote Desktop Services | Tested | Tested | Tested | Tested | Not tested | Not tested | Tested |
| Remote Desktop Services | Tested | Tested | Tested | Not tested | Tested | Not tested | Tested |
| Remote Desktop Services | Not tested | Tested | Not tested | Not tested | Not tested | Tested | Tested |

Table 55. Test environment—WVD

| Windows Virtual Desktop | Windows 7 | Windows 10 | Windows Server 2008 R2 | Windows Server 2012 R2 | Windows Server 2016 | Windows Server 2019 | APPs |
|-------------------------|------------|------------|------------------------|------------------------|---------------------|---------------------|--------|
| 2019(MS-Prod) | Not tested | Tested | Not tested | Not tested | Not tested | Not tested | Tested |
| 2020(ARMv2) | Not tested | Tested | Not tested | Not tested | Not tested | Not tested | Tested |

Table 56. Tested environment—Skype for Business

| Citrix VDI | Operating system | RTME Client | RTME Agent | Skype for Business client | Skype for Business Server |
|--|---------------------|-------------|------------|---------------------------|---------------------------|
| Citrix Virtual Apps and Desktops/Citrix Virtual Apps 7.15 LTSR Cumulative Update 5 (CU5) | Windows 10 | 2.9.100 | 2.9.100 | Skype for Business 2016 | Skype for Business 2015 |
| | Windows server 2016 | | | | |
| | Windows server 2019 | | | | |
| Citrix Virtual Apps and Desktops 7 1912 LTSR | | | | | |

Table 56. Tested environment—Skype for Business (continued)

| Citrix VDI | Operating system | RTME Client | RTME Agent | Skype for Business client | Skype for Business Server |
|---|------------------|-------------|------------|---------------------------|---------------------------|
| Citrix Virtual Apps and Desktops 7 2006 | | | | | |

Table 57. Tested environment—Skype for Business

| VMware VDI | Operating system | Skype for Business Client | Skype for Business Agent | Skype for Business client | Skype for Business Server |
|---------------------|---------------------|---------------------------|--------------------------|---------------------------|---------------------------|
| VMware Horizon 7.12 | Windows 10 | 5.4 | 7.12 | Skype for Business 2016 | Skype for Business 2015 |
| | Windows server 2016 | | | | |

Table 58. Tested environment—JVDI

| Citrix VDI | Operating system | JVDI | JVDI agent | Jabber software |
|--|---------------------|--------|------------|-----------------|
| Citrix Virtual Apps and Desktops/Citrix Virtual Apps 7.15 LTSR Cumulative Update 5 (CU5) | Windows 10 | 12.9.2 | 12.9.2 | 12.9.2 |
| | Windows server 2016 | | | |
| | Windows server 2019 | | | |
| Citrix Virtual Apps and Desktops 7 1912 LTSR | | | | |
| Citrix Virtual Apps and Desktops 7 2006 | | | | |

Table 59. Tested environment—JVDI

| VMware VDI | Operating system | JVDI | JVDI agent | Jabber software |
|---------------------|---------------------|--------|------------|-----------------|
| VMware Horizon 7.12 | Windows 10 | 12.9.2 | 12.9.2 | 12.9.2 |
| VMware Horizon 2006 | Windows server 2016 | | | |

Table 60. Tested environment—Zoom

| Citrix VDI | Operating system | Zoom package | Zoom software |
|--|---------------------|------------------|--------------------|
| Citrix Virtual Apps and Desktops/Citrix Virtual Apps 7.15 LTSR Cumulative Update 5 (CU5) | Windows 10 | 5.4.59208.1207.2 | 5.4.6 (59208.1207) |
| | Windows server 2016 | | |
| | Windows server 2019 | | |
| Citrix Virtual Apps and Desktops 7 1912 LTSR | | | |
| Citrix Virtual Apps and Desktops 7 2006 | | | |

Table 61. Tested environment—Zoom

| VMware VDI | Operating system | Zoom package | Zoom software |
|---------------------|---------------------|------------------|--------------------|
| VMware Horizon 7.12 | Windows 10 | 5.4.59208.1207.1 | 5.4.6 (59208.1207) |
| VMware Horizon 2006 | Windows server 2016 | | |

Table 62. Tested environment—Cisco WebEx Teams

| Citrix VDI | Operating system | WebEx Teams | WebEx Teams software |
|---|---------------------|-----------------|----------------------|
| Citrix Virtual Apps and Desktops/Citrix Virtual Apps 7.15 LTSR Cumulative Update 5 (CU5) Citrix Virtual Apps and Desktops 7 1912 LTSR Citrix Virtual Apps and Desktops 7 2006 | Windows 10 | 40.11.0.17133.3 | 40.11.0.17133 |
| | Windows server 2016 | | |
| | Windows server 2019 | | |

Table 63. Tested environment—Cisco WebEx Teams

| VMware VDI | Operating system | WebEx Teams | WebEx Teams software |
|--|---------------------|-----------------|----------------------|
| VMware Horizon 7.12 VMware Horizon 2006 | Windows 10 | 40.11.0.17133.3 | 40.11.0.17133 |
| | Windows server 2016 | | |

Tested peripherals matrix

The supported peripherals are not limited to the tested peripherals. The following tables display the tested peripherals:

Table 64. Tested peripherals matrix

| Product Category | Peripherals | Wyse 3040 | Wyse 5070 | Wyse 5470 AIO | Wyse 5470 |
|------------------|--|------------|------------|---------------|------------|
| Audio devices | Dell Pro Stereo Headset - UC150 - Skype for Business | Tested | Tested | Not tested | Tested |
| | Dell Pro Stereo Headset - Skype for Business - UC350 | Tested | Tested | Tested | Tested |
| | Dell Professional Sound Bar (AE515M) | Tested | Tested | Not tested | Tested |
| | Dell USB Sound Bar (AC511M) | Tested | Tested | Not tested | Tested |
| | Jabra PRO 935 USB Microsoft Lync Headset - 935-15-503-185 - 935-15-503-185 | Not tested | Tested | Not tested | Not tested |
| | Dell 2.0 Speaker System - AE215 | Not tested | Not tested | Tested | Tested |
| | Dell Wired 2.1 Speaker System - AE415 | Not tested | Not tested | Tested | Tested |
| | Jabra Evolve 65 MS Stereo - Headset | Not tested | Not tested | Tested | Tested |
| | Jabra Engage 65 Stereo Headset | Not tested | Not tested | Tested | Tested |

Table 64. Tested peripherals matrix (continued)

| Product Category | Peripherals | Wyse 3040 | Wyse 5070 | Wyse 5470 AIO | Wyse 5470 |
|-------------------------|---|------------------|------------------|----------------------|------------------|
| | Plantronics Savi W440M-400 Series convertible wireless headset - DECT 6.0 | Not tested | Not tested | Tested | Tested |
| | Plantronics Voyager Focus UC B825-M headset for Microsoft Lync | Not tested | Not tested | Tested | Tested |
| Input devices | Dell Laser Scroll USB 6-Buttons Silver and Black Mouse | Tested | Tested | Tested | Tested |
| | Dell Laser Wired Mouse - MS3220 | Tested | Tested | Tested | Tested |
| | Dell Mobile Pro Wireless Mice - MS5120W | Tested | Tested | Not tested | Tested |
| | Dell Mobile Wireless Mouse - MS3320W | Tested | Tested | Not tested | Tested |
| | Dell Multi-Device Wireless Keyboard and Mouse Combo - KM7120W | Tested | Tested | Not tested | Tested |
| | Dell Multi-Device Wireless Mouse - MS5320W | Tested | Tested | Not tested | Tested |
| | Dell USB Wired Keyboard - KB216 | Tested | Tested | Tested | Not tested |
| | DellUSB Wired Optical Mouse - MS116 | Tested | Tested | Tested | Tested |
| | Dell Premier Wireless Mouse - WM527 | Tested | Tested | Not tested | Tested |
| | Dell Wireless Keyboard and Mouse - KM636 | Tested | Tested | Tested | Tested |
| | Dell Wireless Mouse - WM326 | Not tested | Not tested | Tested | Tested |
| | Seal Shield Silver Seal Waterproof-Keyboard-USB-US-waterproof-white | Not tested | Not tested | Not tested | Not tested |
| | Seal Shield Medical Grade Optical Mouse | Not tested | Not tested | Not tested | Not tested |
| | Man & Machine Its Cool Flat - | Not tested | Not tested | Not tested | Not tested |

Table 64. Tested peripherals matrix (continued)

| Product Category | Peripherals | Wyse 3040 | Wyse 5070 | Wyse 5470 AIO | Wyse 5470 |
|---------------------|---|------------|------------|---------------|------------|
| | Keyboard - USB - UK layout - white | | | | |
| | Man & Machine C Mouse - Mouse - right and left-handed - optical - 2 buttons - wired - USB - white | Not tested | Not tested | Not tested | Not tested |
| | Dell Wireless Mouse - WM126_BLACK | Not tested | Not tested | Not tested | Not tested |
| Adapters and cables | Dell Adapter - DisplayPort to DVI (Single Link) - DANARBC084 - DANARBC084 | Tested | Tested | Not tested | Not tested |
| | Dell Adapter - DisplayPort to HDMI 2.0 (4K) - DANAUBC087 - DANAUBC087 | Tested | Tested | Tested | Not tested |
| | Dell Adapter - DisplayPort to VGA - DANBNBC084 - DANBNBC084 | Tested | Tested | Not tested | Not tested |
| | C2G - USB 2.0 A (Male) to DB9 (Serial) (Male) Adapter | Not tested | Tested | Tested | Tested |
| | Dell Adapter - USB-C to DisplayPort - DBQANBC067 - DBQANBC067 | Not tested | Tested | Not tested | Tested |
| | Dell Adapter - USB-C to Dual USB-A with Power Pass-Through - DBQ2BJBC070 - Combo Adapter | Not tested | Not tested | Not tested | Tested |
| | Dell Adapter - USB-C to HDMI/DP - DBQAUANBC070 | Not tested | Not tested | Not tested | Tested |
| | Dell Adapter - USB-C to HDMI - DBQAUBC064 - DBQAUBC064 | Not tested | Tested | Not tested | Not tested |
| | Dell Adapter - USB-C to VGA - DBQBNBC064 - DBQBNBC064 | Not tested | Tested | Not tested | Not tested |

Table 64. Tested peripherals matrix (continued)

| Product Category | Peripherals | Wyse 3040 | Wyse 5070 | Wyse 5470 AIO | Wyse 5470 |
|-------------------------|---|------------------|------------------|----------------------|------------------|
| | Trendnet« USB to Serial Converter RS-232 | Not tested | Tested | Tested | Tested |
| | Dell Adapter - HDMI to DVI - DAUARBN004 - DAUARBN004 | Not tested | Not tested | Not tested | Tested |
| | Dell Adapter - HDMI to VGA - DAUBNBC084 - DAUBNBC084 | Not tested | Not tested | Not tested | Tested |
| | StarTech.com 1 Port USB to RS232 DB9 Serial Adapter Cable - Serial adapter - USB 2.0 - RS-232 | Not tested | Not tested | Tested | Tested |
| Monitors | E1916H | Tested | Tested | Tested | Not tested |
| | E1920H | Tested | Tested | Tested | Tested |
| | E2016H | Tested | Tested | Tested | Tested |
| | E2016Hv—China only | Not tested | Not tested | Not tested | Tested |
| | E2020H | Tested | Tested | Tested | Tested |
| | E2216H | Not tested | Tested | Tested | Tested |
| | E2216Hv—China only | Not tested | Not tested | Not tested | Tested |
| | E2218HN | Tested | Not tested | Tested | Tested |
| | E2220H | Tested | Tested | Tested | Tested |
| | E2318H | Tested | Tested | Tested | Tested |
| | E2318HN | Not tested | Tested | Not tested | Not tested |
| | E2417H | Tested | Tested | Tested | Tested |
| | E2420H | Tested | Tested | Tested | Tested |
| | E2420HS | Not tested | Tested | Tested | Tested |
| | E2720H | Tested | Tested | Tested | Tested |
| | E2720HS | Not tested | Tested | Tested | Tested |
| | P2016 | Not tested | Tested | Not tested | Not tested |
| | P1917S | Tested | Not tested | Not tested | Not tested |
| | P2017H | Tested | Not tested | Not tested | Not tested |
| | P2018H | Not tested | Not tested | Not tested | Tested |
| | P2217 | Tested | Tested | Not tested | Not tested |
| | P2217H | Tested | Tested | Not tested | Not tested |
| | P2219H | Tested | Tested | Not tested | Tested |
| | P2219HC | Tested | Tested | Not tested | Tested |

Table 64. Tested peripherals matrix (continued)

| Product Category | Peripherals | Wyse 3040 | Wyse 5070 | Wyse 5470 AIO | Wyse 5470 |
|-------------------------|---|------------------|------------------|----------------------|------------------|
| | P2317H | Tested | Tested | Not tested | Not tested |
| | P2319H | Not tested | Tested | Not tested | Tested |
| | P2415Q | Tested | Tested | Tested | Not tested |
| | P2417H | Tested | Tested | Not tested | Not tested |
| | P2418D | Tested | Not tested | Not tested | Not tested |
| | P2418HT | Tested | Tested | Tested | Not tested |
| | P2418HZ | Tested | Tested | Not tested | Not tested |
| | P2419H | Tested | Tested | Tested | Tested |
| | P2419HC | Tested | Tested | Not tested | Tested |
| | P2421D | Tested | Tested | Not tested | Tested |
| | P2421DC | Not tested | Tested | Not tested | Tested |
| | P2719H | Tested | Tested | Tested | Tested |
| | P2719HC | Tested | Tested | Not tested | Tested |
| | P2720D | Tested | Tested | Not tested | Tested |
| | P2720DC | Not tested | Tested | Not tested | Tested |
| | P3418HW | Tested | Tested | Tested | Not tested |
| | P4317Q | Not tested | Tested | Tested | Not tested |
| | MR2416 | Tested | Tested | Not tested | Not tested |
| | U2415 | Tested | Tested | Tested | Not tested |
| | U2419H | Tested | Tested | Tested | Tested |
| | U2419HC | Tested | Tested | Not tested | Tested |
| | U2518D | Tested | Tested | Tested | Not tested |
| | U2520D | Tested | Tested | Tested | Tested |
| | U2718Q (4K) | Tested | Tested | Tested | Tested |
| | U2719D | Tested | Tested | Tested | Tested |
| | U2719DC | Tested | Tested | Not tested | Tested |
| | U2720Q | Tested | Tested | Tested | Tested |
| | U2721DE | Not tested | Tested | Tested | Tested |
| | U2421HE | Not tested | Not tested | Tested | Tested |
| | U4320Q | Not tested | Tested | Tested | Tested |
| | U4919DW | Not tested | Tested | Not tested | Not tested |
| | ELO IntelliTouch ZB(Worldwide) E382790 | Not tested | Tested | Not tested | Not tested |
| | ELO PCAP E351600 | Not tested | Tested | Not tested | Not tested |
| Networking | Add On 1000 Base-T SFP transceiver —RJ-45 | Not tested | Tested | Not tested | Not tested |

Table 64. Tested peripherals matrix (continued)

| Product Category | Peripherals | Wyse 3040 | Wyse 5070 | Wyse 5470 AIO | Wyse 5470 |
|--------------------|--|------------|------------|---------------|------------|
| Docking station | Dell Dock - WD19-C | Not tested | Not tested | Not tested | Tested |
| | Dell Thunderbolt Dock - WD19TB —Thunderbolt Display is not supported | Not tested | Not tested | Not tested | Tested |
| Storage | Dell Portable SSD, USB-C 250 GB | Not tested | Tested | Not tested | Tested |
| | Dell External Tray Load ODD (Agate) —DVD Writer | Not tested | Tested | Not tested | Tested |
| Smart card readers | Dell Smartcard Keyboard - KB813 | Tested | Tested | Tested | Tested |
| | Dell keyboard KB813t | Tested | Tested | Tested | Tested |
| | Sun microsystem SCR 3311 | Not tested | Tested | Not tested | Not tested |
| | Cherry SmartTerminal SMART Card Reader - ST-1044U | Not tested | Tested | Not tested | Not tested |
| | Cherry SmartTerminal ST-1144 SMART Card Reader - USB 2.0 | Not tested | Tested | Tested | Tested |
| | CHERRY KC 1000 SC - Keyboard - with Smart Card reader - USB - English - US - black - TAA Compliant - JK-A0104EU- | Not tested | Tested | Not tested | Tested |
| Printers | Dell Color Multifunction Printer - E525w | Tested | Not tested | Not tested | Not tested |
| | Dell Color Printer-C2660dn | Tested | Tested | Not tested | Not tested |
| | Dell Multifunction Printer - E515dn | Tested | Not tested | Not tested | Not tested |

Tested peripheral devices

This section lists the tested peripheral devices.

- Monitor
 - Dell P2715Q(3840x2160)
 - Dell S2719HS (1920x1080)
 - Dell S2817Q(3840x2160)
- Printer
 - Dell B1165nfw Mono Multifunction Printer

- Dell B1265dnf Multifunction Laser Printer
- Dell B2360d Laser Printer
- Keyboard and Mouse
 - DELL Wireless Keyboard and Mouse—KM632
 - Dell Keyboard KB212-B
 - Microsoft Arc Touch Mouse 1428
 - SpaceNavigator 3D Space Mouse
 - SpaceMouse Pro
- Audio
 - Jabra Pro 9450
 - Jabra Speak 510 MS Bluetooth
 - Jabra BIZ 2400 Duo USB MS
 - Jabra Evolve 75
 - Plantronics SAVI W740/Savi W745—Hot plugging and Bluetooth functions are not supported.
 - Plantronics Blackwire 5220 Series
 - Sennheiser SC 660 USB ML
 - Logitech S-150
 - Polycom Deskphone CX300
 - Philips
 - LFH3610/00 Speechmike Premium—Only whole device redirection is supported. Hot plugging is not supported.
- Camera
 - Logitech C920 HD Pro webcam
 - Logitech C930e HD webcam
 - Logitech C922 Pro Stream webcam
- USB
 - SanDisk Cruzer 16 GB
 - SanDisk USB 3.1 and Type-C 16 GB
 - Kingston DTM30 32 GB
- Smart card readers
 - OMNIKEY HID 3021
 - OMNIKEY OK CardMan3121
 - HID OMNIKEY 5125
 - HID OMNIKEY 5421
 - SmartOS powered SCR335
 - SmartOS powered SCR3310
 - Cherry keyboard RS 6600 with smart card
 - Cherry keyboard RS 6700 with smart card
 - Cherry keyboard KC 1000 SC with smart card
 - Dell keyboard KB813—Smartcard reader
 - Dell Keyboard SK-3205—Smartcard reader
 - Gemalto IDBridge CT710
 - GemPC Twin
- Proximity card readers
 - RFIDeas RDR-6082AKU
 - Imprivata HDW-IMP-60
 - Imprivata HDW-IMP-75
 - OMNIKEY 5025CL
 - OMNIKEY 5326 DFR
 - OMNIKEY 5321 V2
 - OMNIKEY 5321 V2 CL SAM
 - OMNIKEY 5325 CL
 - KSI-1700-SX Keyboard
- Fingerprint readers
 - KSI-1700-SX Keyboard
 - Imprivata HDW-IMP-1C
- HFA

- BLED112HDW-IMP-IIUR—BLEdongle
- Teradici remote cards
 - Teradici host card 2220
 - Teradici host card 2240

Tested smart cards

Table 65. Tested smart cards

| Smart Card information from the ThinOS event log | Driver | Provider (CSP) | Card type |
|--|------------------------------------|--|--|
| ActivIdentity V1 | ActivClient 7.1 | ActivClient Cryptographic Service Provider | Oberthur CosmopolC 64k V5.2 |
| ActivIdentity V1 | ActivClient 7.1 | ActivClient Cryptographic Service Provider | Gemalto Cyberflex Access 64K V2c |
| ActivIdentity v2 card | ActiveClient 7.2 | ActivClient Cryptographic Service Provider | Gemalto TOPDLGX4 |
| ActivIdentity v2 card | ActiveClient 7.2 | ActivClient Cryptographic Service Provider | G&D SCE 3.2 |
| ActivIdentity v2 card | ActiveClient 7.2 | ActivClient Cryptographic Service Provider | Oberthur IDOne 5.5 |
| ActivIdentity v2 card | ActiveClient 7.2 | ActivClient Cryptographic Service Provider | Oberthur Cosmo V8 |
| ActivIdentity crescendo card | ActiveClient 7.2 | ActivClient Cryptographic Service Provider | Giesecke and Devrient SmartCafe Expert 7.0 (T=0) |
| ID Prime MD v 4.0.2 | Safenet Authentication Client 10.8 | eToken Base Cryptographic Provider | IDPrime MD 840 |
| ID Prime MD v 4.0.2 (Gemalto 840) | Safenet Authentication Client 10.8 | eToken Base Cryptographic Provider | IDPrime MD 840 B |
| ID Prime MD v 4.1.0 | Safenet Authentication Client 10.8 | eToken Base Cryptographic Provider | IDPrime MD 3810 MIFARE 1K |
| ID Prime MD v 4.1.3(Gemalto 3811) | Safenet Authentication Client 10.8 | eToken Base Cryptographic Provider | IDPrime MD 3811 Mifare-Desfire |
| ID Prime MD v 4.1.1 | Safenet Authentication Client 10.8 | eToken Base Cryptographic Provider | IDPrime MD 830-FIPS |
| ID Prime MD v 4.3.5 | Safenet Authentication Client 10.8 | eToken Base Cryptographic Provider | IDPrime MD 830-FIPS Rev B |
| ID Prime MD v 4.4.2 | Safenet Authentication Client 10.8 | eToken Base Cryptographic Provider | IDPrime MD 940 |
| Etoken Java (aladdin) | Safenet Authentication Client 10.8 | eToken Base Cryptographic Provider | IDCore30B eToken 1.7.7 |
| Etoken Java (aladdin) (black USB drive) | Safenet Authentication Client 10.8 | eToken Base Cryptographic Provider | SafeNet eToken 510x |
| Etoken Java (aladdin) (black USB drive) | Safenet Authentication Client 10.8 | eToken Base Cryptographic Provider | SafeNet eToken 5110 |
| Etoken Java (aladdin) (black USB drive) | Safenet Authentication Client 10.8 | eToken Base Cryptographic Provider | SafeNet eToken 5110 FIPS |
| Etoken Java (aladdin) (black USB drive) | Safenet Authentication Client 10.8 | eToken Base Cryptographic Provider | SafeNet eToken 5110 CC |
| N/A (Buypass BelDu) | Net iD 6.8.1.31, 2.0.44 | Net iD - CSP | BelDu 6.0.4 |

Table 65. Tested smart cards (continued)

| Smart Card information from the ThinOS event log | Driver | Provider (CSP) | Card type |
|--|-------------------------|------------------------|------------------------|
| N/A (GEMALTO IDPrime SIS) | Net iD 6.8.1.31, 2.0.44 | Net iD - CSP | IDPrime SIS 4.0.2 |
| Rutoken ECP 2.0 (2100) | Rutoken Drivers 4.6.3.0 | Aktiv ruToken CSP v1.0 | Rutoken ECP 2.0 (2100) |
| Rutoken 2151 | Rutoken Drivers 4.6.3.0 | Aktiv ruToken CSP v1.0 | Rutoken (2151) |

Fixed issues

Table 66. Fixed issues

| Issue ID | Description |
|--------------|--|
| THINOSX-7997 | Fixed the issue where the published applications do not display full screen on secondary monitor when Seamless window mode is enabled. |
| THINOSX-7957 | Fixed the issue where the internal speaker volume remains too low even after the device volume is set to maximum on ThinOS. |
| THINOSX-7925 | Fixed the issue where the audio device changes automatically when the display is turned on from sleep. |
| THINOSX-7903 | Fixed the issue on systems that run ThinOS 9.0.3030 where Citrix ADC (formerly NetScaler) 12.1 build 58.15 cannot start the desktop. |
| THINOSX-7842 | Fixed the issue where the login box crashes if a wrong password or passcode is typed on Citrix ADC (formerly NetScaler) login. |
| THINOSX-7755 | Fixed the issue where ThinOS attempts to push checkin configuration before the device gets IP. |
| THINOSX-7753 | Wyse 5470 Thin Client with ThinOS 9.0.3030—Fixed the issue where the system variable \$TN is not accepted in the 802.1X authentication settings. |
| THINOSX-7477 | Wyse 5470 All-in-One Thin Client—Fixed the issue where the integrated webcam does not redirect in Microsoft Teams if the local system language is set to French or German. |
| THINOSX-7242 | Fixed the issue where the shortcut key combination Windows key + L does not lock the thin client. |
| THINOSX-7183 | Fixed the issue where the Logitech webcam C920 is not detected on Wyse 5070 Thin Client. |
| THINOSX-7114 | Wyse 3040 Thin Client with ThinOS 9.0 2081—Fixed the issue where Azure AD displayed Citrix Workspace App error when you sign in after the client being idle. |

Known issues

Table 67. Known issues

| Issue ID | Description | Workaround |
|----------|---|--|
| DTOS-790 | Citrix - 80160001—The audio gets distorted when you play HTML5 videos using Browser Content Redirection in the shared screen while screen sharing on Microsoft Teams. | Disable Browser Content Redirection before you share a website on Microsoft Teams meeting. |

Table 67. Known issues (continued)

| Issue ID | Description | Workaround |
|-----------------|---|---|
| DTOS-273 | If you plug in the camera after you start the Zoom meeting, the camera cannot be detected in Zoom. | Configure the camera before you start the meeting. |
| DTOS-279 | ICA session is not scalable when the resolution on the client is changed. | Disconnect and reconnect the session after the client resolution is changed. |
| DTOS-288 | You must reenter password after you save layout. | Enter the username and password of the ICA session. |
| DTOS-657 | When you use Browser Content Redirection, the audio occasionally drops, and the video is not synchronized with the audio. | Disable Browser Content Redirection. |
| DTOS-780 | Lock terminal is not supported when you log in Citrix ADC (formerly NetScaler) with web-based authentication such as OTP or Azure saml single sign on. | This feature is not supported in this release. |
| DTOS-870 | Citrix80175782—On Microsoft Teams, the audio gets distorted during a meeting when all the participants mute while the screen presenter is sharing the screen or the camera, with audio. | Ensure that at least one participant has not muted while the screen presenter is sharing screen or has the camera enabled. |
| DTOS-921 | SaaS app cannot be launched. | This feature is not supported in this release. |
| DTOS-923 | Chromium Embedded Framework (CEF) for Browser Content Redirection (BCR) is not working. | This feature is not supported in this release. |
| DTOS-939 | App protection for Citrix is not working. | This feature is not supported in this release. |
| DTOS-940 | Authentication enhancement in Citrix cloud deployments does not work. | This feature is not supported in this release. |
| DTOS-941 | Citrix multiple audio is not working. | This feature is not supported in this release. |
| DTOS-942 | Citrix logging does not work. | This feature is not supported in this release. |
| DTOS-983 | Com port mapping in ICA session is not working. | This feature is not supported in this release. |
| DTOS-991 | Cursor in a Citrix ICA session is not configured. | By default, the cursor shape is set as full solid black shape. The limitation is that the full solid black cursor is not visible with an application that has a black background. |
| DTOS-999 | There is a delay of 15 s when you play a recorded sound from the voice recorder in Citrix 3D pro desktop. | There is no workaround. |
| DTOS-943 | If you delete the Zoom_Horizon package, Zoom does not work well with Real-Time Audio-Video (RTAV) for Horizon View. | Install the Zoom_Horizon package. |
| DTOS-1149 | Authenticate to domain controller (NTLM) cannot work when you use the broker type as None. | There is no workaround. You must select a VDI broker to use NTLM. |

Resources and support

Accessing documents using the product search

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

A list of matching products is displayed.

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


Accessing documents using product selector

You can also access documents by selecting your product.

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

Contacting Dell

Prerequisites

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

About this task

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 sales, technical support, or customer service issues:

Steps

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