HP ZCentral Remote Boost

Release notes

This document comprises the release notes for HP ZCentral Remote Boost.

What's new in Release 22.1.1

HP Remote Boost 22.1.1 Sender supports Windows and Linux®. HP Remote Boost 22.1.1 Receiver supports Windows, Linux®, and macOS™.

Experience improvements:

1. Added a receiver property to control whether the in-app survey is offered. (Rgreceiver.EnableSurvey=1)
2. Added support for more widescreen displays when using resolution and layout matching.

Defect Fixes:

1. Addressed an issue where Collaborators could connect into Linux Senders with expired credentials.
2. Addressed a performance issue on Senders with multiple displays.
3. Addressed a performance issue when using Adaptive Image Quality.
4. Addressed an issue with a Wacom pen where pressing either the middle or right click stylus buttons while hovering wasn't working correctly.
5. Addressed an issue where a Linux system with both the Remote Boost Sender and HP Anyware Agent installed may not start either. Now, the HP Anyware Agent will take precedence.
6. Addressed a receiver issue with fractional scaling (e.g. 150%).
7. Addressed an issue where the macOS installer required Rosetta on an Apple Silicon system to allow installation. The receiver itself has been a universal app since 22.1.0.

Operating System Notes:

1. Added support for Windows 10 22H2
2. Added support for Windows 11 22H2
3. Added support for RHEL 9
4. Added support for Ubuntu 22.04
5. Added Receiver support for macOS 13 Ventura

What's new in Release 22.1

HP Remote Boost 22.1 Sender supports Windows and Linux®. HP Remote Boost 22.1 Receiver supports Windows, Linux®, and macOS™.

Experience improvements:

1. A user survey was added to the receiver application.
2. A new property was added to the sender to disable input blocking when screen blanking is enabled. This property was added to support customers with 3Dconnexion devices that would not work properly when screen blanking was enabled.

Notes:

1. If the sender is not licensed, the receiver will not be able to connect to the sender. Previously the connection was allowed and a dialog was presented to the user that no Remote Boost license was found. Current behavior will block the connection and will inform the user that no license was found for the Sender they are trying to connect to. Please note that when connecting using pre-20.4 releases or the 22.0 release of the receiver users will be presented with an “Authorization failed” message when the connection is denied due to no license found for the Sender they are trying to connect to.

Defect Fixes:

8. Addressed an issue where receiver performance could be significantly degraded when using HP3.
1. Addressed an issue where Alt + Scroll keyboard/mouse combination was not being sent properly on Linux systems.
1. Addressed an issue where Mac receiver crashes with uncaught exception.
1. Addressed an issue where you could not login to a RHEL 7.9 KDE sender with 2 or more displays.
1. Addressed an issue where there having both Teradici PCoIP agent and a Remote Boost sender installed on the same system would cause the sender service to continually restart.

What’s new in Release 22.0

HP Remote Boost 22.0 Sender supports Windows and Linux®. HP Remote Boost 22.0 Receiver supports Windows, Linux®, and macOS™.

Experience improvements:

1. By installing ZCentral Remote Boost 22.0, you will now be able to use both Teradici® CA+ and ZCentral Remote Boost with a single license. (The license can only be used to access one remoting solution at a time.)

Notes:

1. With ZCentral Remote Boost 22.0, the promotional offer for a free license to use ZCentral Remote Boost on Z by HP workstations will expire on January 1, 2023. After January 1, 2023, a current subscription to HP’s remote access software must be purchased for future use of this software version.

What’s new in Release 20.4

HP Remote Boost 20.4 Sender supports Windows and Linux®. HP Remote Boost 20.4 Receiver supports Windows, Linux®, and macOS™.

Experience improvements:

1. A user survey was added to the receiver application.
2. A new property was added to the sender to disable input blocking when screen blanking is enabled. This property was added to support customers with 3Dconnexion devices that would not work properly when screen blanking was enabled.

Notes:

1. If the sender is not licensed, the receiver will not be able to connect to the sender. Previously the connection was allowed and a dialog was presented to the user that no Remote Boost license was found. Current behavior will block the connection and will inform the user that no license was found for the Sender they are trying to connect to. Please note that when connecting using pre-20.4 releases or the 22.0 release of the receiver users will be presented with an “Authorization failed” message when the connection is denied due to no license found for the Sender they are trying to connect to.

Defect Fixes:

1. Addressed an issue where receiver performance could be significantly degraded when using HP3.

2. Addressed an issue where Alt + Scroll keyboard/mouse combination was not being sent properly on Linux systems.
3. Addressed an issue where Mac receiver crashes with uncaught exception.
4. Addressed an issue where you could not login to a RHEL 7.9 KDE sender with 2 or more displays.
5. Addressed an issue where there having both Teradici PCoIP agent and a Remote Boost sender installed on the same system would cause the sender service to continually restart.

What's new in Release 20.3.1

HP Remote Boost 20.3.1 Sender supports Windows and Linux®. HP Remote Boost 20.3.1 Receiver supports Windows, Linux®, and macOS™.

Operating System Notes:

6. Added support for Windows 10 21H2
7. Added support for Windows 11
8. Added support for RHEL 8.5
9. Added support for macOS 12

Defect fixes:

6. Addressed an issue on Windows Senders where the cursor shadow was not appearing
7. Addressed an issue where smart card login appeared to be stuck at lock screen after login timeout
8. Addressed a request to allow for the same command line installation for new installs and upgrades
9. Addressed an issue where a black background would appear on the Receiver tool bar
10. Addressed an issue where resolution matching would not work on first attempt with Windows 10 21H2 or Windows 11 Senders
11. Addressed an issue that resulted in a performance regression when a session was woken up after the display went into power saving mode
12. Addressed an issue where the receiver borderless mode would display an unnecessary horizontal scrollbar
13. Addressed a rare Linux Sender crash when audio is enabled
14. Addressed issue where a black connection screen would appear with different Sender and Receiver versions
15. Addressed an issue where CPU usage would be higher than expected with Windows Senders when using a virtual GPU

Known issues:

1. Custom swipe gestures do not work.

Notes:

1. On the macOS Receiver, if you are also using the Rgreceiver.Network.CertificateVerification.CA.Path property and if your CA file contains multiple certificates (root and intermediate CAs) , then the MaxChainSize property will not work correctly. If you want to use the MaxChainSize property on macOS we advise you to configure the sender to send the intermediate CAs instead of having them in the receiver CA file. If you don't want to configure the sender to send the intermediate CAs, then alternatively, on the Receiver side, you can add the root CA and intermediate CAs to the macOS certificate store and disable the Rgreceiver.Network.CertificateVerification.CA.Path file property."

What's new in Release 20.3

HP Remote Boost 20.3 Sender supports Windows and Linux®. HP Remote Boost 20.3 Receiver supports Windows, Linux®, and macOS™.

Experience improvements:

1. Enhanced the certificate configuration workflow making it easier to configure and use signed certificates
2. Added remote microphone support on Linux senders and Windows/Linux receivers allowing users to stream local microphone input to a remote system
3. Advanced Video Compression (AVC) on macOS is now fully supported

Operating System Notes:

1. Added support for RHEL 8.4

Defect fixes:

1. Addressed an issue that occurs when using multiple monitors where both monitors display a black screen
2. Addressed an issue where login attempts resulted in a black screen when using AVC with macOS
3. Addressed an issue in which clicking on a Wacom device does not work in Maya

Deprecated properties:

1. Rgsender.IsReconnectOnConsoleDisconnectEnabled is a deprecated property and will be removed in an upcoming release
2. We are improving the backend of our video pipeline. Due to this work, the following properties have been deprecated and will be removed or replaced in an upcoming release:
    - These properties will be removed in an upcoming release:
        - Rgsender.MediaStream.NvidiaEncode.PreferredCapturer
        - Rgsender.Encoder.Mfx.MaxPixels
        - Rgsender.Encoder.Mfx.MaxBitrate
        - Rgsender.Encoder.Mfx.MinBitrate
        - Rgsender.Encoder.Umc.MaxBitrate
        - Rgsender.Encoder.Umc.MinBitrate
        - Rgsender.Encoder.Umc.GopSize
        - Rgsender.Encoder.DefaultBitrate
        - Rgsender.Encoder.DefaultFramerate
        - Rgsender.Nvidia.MinDriver.NvFBC
        - Rgsender.IsNizzaMonitorEnabled
        - Rgsender.PreferredDisplayMethods
        - Rgsender.Capturer.Nvidia.ByteSwap
        - Rgsender.Compatibility.Cursor.PreferredCursorMethod
        - Rgreceiver.IsGlobalImageUpdateMutable
        - Rgreceiver.IsGlobalImageUpdateEnabled
        - Rgreceiver.Decoder.ThreadPoolSize
        - Rgreceiver.IsNizzaMonitorEnabled
        - Rgreceiver.ImageCodec.Decode.UseMFX
    - These properties will be replaced in an upcoming release:
        - Rgsender.Encoder.ThreadPoolSize
        - Rgreceiver.ImageCodec.DecodePipeline.Threads

Known issues:

2. When the display view window spans multiple displays with different scaling factors, the toolbar can become unresponsive. To fix this, either set all receiver monitors to the same scaling factor or add Rgreceiver.EnableHighDPIScaling=0 to the receiver configuration file.
3. On RHEL 8, the receiver will sometimes remain in setup mode after the shift key is released. To exit setup mode, repeat the setup mode key sequence.
4. Certain elements of the receiver UI such as the launcher and the toolbar may display small, black lines or boxes. This will be addressed in an upcoming release.
5. The cursor may not appear in certain areas of a few applications. This will be addressed in an upcoming release.

What's new in Release 20.2.1

HP Remote Boost 20.2.1 Sender supports Windows and Linux®. HP Remote Boost 20.2.1 Receiver supports Windows, Linux®, and macOS™.

Defect fixes:

16. Addressed an issue where the receiver crashes after updating from RGS 7.4 to Remote Boost 20.1 or newer
17. Addressed an issue where adjusting the "Image Quality" slider causes a disproportional increase in FPS and bandwidth
18. Addressed an authentication issue when connecting using an auto-launch file on macOS
19. Addressed performance issues related to the "Adaptive Image Quality" performance setting
20. Addressed a performance issue that occurred on Linux when using Advanced Video Compression

What's new in Release 20.2

HP Remote Boost 20.2 Sender supports Windows and Linux®. HP Remote Boost 20.2 Receiver supports Windows, Linux®, and macOS™.

Experience improvements:

1. Minor UI updates to enhance usability
2. UI DPI scaling now supports fractional scaling e.g.150%
3. Added support for Game Mode on Linux senders, which enables the use of Unreal Engine when connecting from a Windows receiver to a Linux sender
4. Advanced Video Compression (AVC) is now available as a preview on macOS
5. Minor performance improvements

Operating System Notes:

1. Remote Boost 20.2 does not support Windows 7, Windows 8, or RHEL 6.

Compatibility Notes:

1. For floating license installations, please install the latest license server release (11.17.2.0) as Remote Boost 20.2 Sender is not compatible with previous license server releases.
2. Removed support for deprecated plugin interfaces
3. By default, the Remote Boost 20.2 Sender will use the most secure options. This means that connections to RGS 7.4 and earlier clients will not succeed unless the Remote Boost 20.2 Sender EnableLegacySecurity property or installer option is configured. This option is available to facilitate transition to current security practices and will be removed in a future release. See the Remote Boost User Guide for details.

Security Improvements:

1. LINUX USERS: Linux packages have been updated with integrity signatures. For information on how to verify the integrity of RHEL or Ubuntu install packages visit the HP ZCentral Remote Boost Linux Package Verification page.

Deprecated properties:

1. The following preferred resolution properties have been removed:
    - Rgreceiver.Session.<n>.VirtualDisplay.IsPreferredResolutionEnabled
    - Rgreceiver.Session.<n>.VirtualDisplay.PreferredResolutionHeight
    - Rgreceiver.Session.<n>.VirtualDisplay.PreferredResolutionWidth

2. The Rgreceiver.IsMatchReceiverPhysicalDisplaysEnabled property has been removed.
3. We are improving the backend of our video pipeline. Due to this work, the following properties have been deprecated and will be removed or replaced in an upcoming release:
    - These properties will be removed in an upcoming release:
        - Rgsender.MediaStream.NvidiaEncode.PreferredCapturer
        - Rgsender.Encoder.Mfx.MaxPixels
        - Rgsender.Encoder.Mfx.MaxBitrate
        - Rgsender.Encoder.Mfx.MinBitrate
        - Rgsender.Encoder.Umc.MaxBitrate
        - Rgsender.Encoder.Umc.MinBitrate
        - Rgsender.Encoder.Umc.GopSize
        - Rgsender.Encoder.DefaultBitrate
        - Rgsender.Encoder.DefaultFramerate
        - Rgsender.Nvidia.MinDriver.NvFBC
        - Rgsender.IsNizzaMonitorEnabled
        - Rgsender.PreferredDisplayMethods
        - Rgsender.Capturer.Nvidia.ByteSwap
        - Rgsender.Compatibility.Cursor.PreferredCursorMethod
        - Rgreceiver.IsGlobalImageUpdateMutable
        - Rgreceiver.IsGlobalImageUpdateEnabled
        - Rgreceiver.Decoder.ThreadPoolSize
        - Rgreceiver.IsNizzaMonitorEnabled
        - Rgreceiver.ImageCodec.Decode.UseMFX
    - These properties will be replaced in an upcoming release:
        - Rgsender.Encoder.ThreadPoolSize
        - Rgreceiver.ImageCodec.DecodePipeline.Threads

Defect fixes:

1. Addressed an issue where the receiver window does not scale properly when switching between full screen, borderless, and bordered mode
2. Addressed an issue where certificate chains larger than three are denied by default
3. Addressed an issue where input is offset from the position of the cursor when using a Wacom pen on some apps
4. Addressed an issue where Shift + Numpad hotkeys do not function the same as locally
5. Addressed an issue where frequent disconnects occur on macOS, due to a power saving feature that closes apps not in use
6. Addressed an issue where trackpad scrolling is overly sensitive when connecting to a Linux Sender
7. Addressed an issue on macOS receivers where the eraser on a Wacom pen occasionally shows up as a pen-tip
8. Addressed an issue where tablet events are not correctly injected on the Sender in a connection with mixed DPI environments
9. Addressed an issue where the ‘minimize’ button does not work in Borderless & Fullscreen mode on ThinPro
10. Addressed an issue where a Linux sender is unresponsive after disconnect or logout

Known issues:

1. A Remote Boost 20.2 Sender may not start on RHEL 8.4. Full support for RHEL 8.4 will be added in an upcoming release.
2. On a ThinPro receiver, the number of senders that are saved and displayed on the receiver GUI might not match the value set in the rgreceiverconfig file. To avoid this issue, set Rgreceiver.MaxSenderListSize.IsMutable = 0 in the rgreceiverconfig file.
3. When connecting to a virtual machine on a VMware ESXi host, the screen may remain black until a subsequent connection or by enabling AVC.

What's new in Release 20.1.2

HP Remote Boost 20.1.2 Sender supports Windows and Linux®. HP Remote Boost 20.1.2 Receiver supports Windows, Linux®, and macOS™.

Experience improvements:

1. Minor UI updates to enhance usability

Compatibility Notes:

1. By default, the Remote Boost 20.1.2 Sender will use the most secure options. This means that connections to RGS 7.4 and earlier clients will not succeed unless the Remote Boost 20.1.2 Sender EnableLegacySecurity property or installer option is configured. This option is available to facilitate transition to current security practices and will be removed in a future release. See the User Guide for details.
2. The COM and ICE plugin application facility interfaces are now deprecated and will be removed in the next release.

Deprecated properties:

1. The property EnableAnonymousCiphers is a deprecated name for a property that is now called EnableLegacySecurity. See the User Guide for details.

Defect fixes:

1. Addressed an issue where the Delete key is blocked after pressing and releasing CTRL then ALT
2. Addressed an issue where the pen does work on the first sender in directory mode
3. Addressed an issue where the ReceiverConfigApp does not prompt for Admin credentials
4. Addressed an issue where the Collaboration Notification button in the SenderConfigApp appears in the wrong state
5. Updated license server installers to address a FlexLM security vulnerability
6. Addressed an issue on Mac with ISO keyboards where the Tilde key generates an incorrect character
7. Addressed an issue with webcams on ThinPro receivers
8. Addressed an issue where Remote Boost does not successfully start from Leostream on older versions of Windows 10

Known issues:

1. When connecting to a virtual machine on a VMware ESXi host, the screen may remain black until a subsequent connection or by enabling AVC.

What's new in Release 20.1.1

HP Remote Boost 20.1.1 Receiver supports macOS™.

Operating System notes:

1. Remote Boost 20.1.1 addresses an issue specific to Apple certificates and is only available on macOS

Defect fixes:

1. Fixed an issue where after January 5, 2021, users would no longer be able to install the MacOS version of the HP Remote Boost Receiver.

What's new in Release 20.1

HP Remote Boost 20.1 Sender supports Windows and Linux®. HP Remote Boost 20.1 Receiver supports Windows, Linux®, and macOS™.

Experience improvements:

1. Technology preview for enhanced Wacom support. Wacom support is added for Windows, macOS, RHEL, and Ubuntu receivers connecting to Windows and Linux Senders. See “Wacom Support Information” below for more details.
2. Administrators have greater control over which users can access Senders through the userfilter.txt file.
3. Added support for hardware accelerated Advanced Video Compression encode on Linux senders with GeForce and additional Quadro cards.

Compatibility Notes:

1. By default, the Remote Boost 20.1 Sender will use the most secure options. This means that connections to RGS 7.4 and earlier clients will not succeed unless the Remote Boost 20.1 Sender EnableLegacySecurity property or installer option is configured. This option is available to facilitate transition to current security practices and will be removed in a future release. See the User Guide for details.
2. The COM and ICE plugin application facility is now deprecated and will be removed in the next release.

Deprecated properties:

1. The property EnableAnonymousCiphers is a deprecated name for a property that is now called EnableLegacySecurity. See the User Guide for details.

Defect fixes:

1. Addressed several issues during a hardware accelerated Advanced Video Compression connection to a Linux machine with a Nvidia GPU
2. Addressed an issue where the wrong keys were being transmitted on macOS keyboards
3. Addressed an issue with Num Lock and Cap Lock on Linux Senders not matching the receiver
4. Addressed an issue that occasionally prevented the Receiver from starting on macOS Catalina
5. Addressed an issue where display resolution and layout matching failed on VMware vGPU senders with rotated monitors
6. Addressed an issue where Caps Lock is inverted on initial connection

Known issues:

1. When connecting to a virtual machine on a VMware ESXi host, the screen may remain black until a subsequent connection or by enabling AVC

Wacom Support Information

1. The HP Remote Boost Receiver (Windows, macOS, RHEL, and Ubuntu) now supports Wacom pen displays and pen tablets when used with a Remote Boost Sender.
2. Adjustments to Wacom display mapping, Express Key buttons, and pen buttons are performed on the Receiver system. The Wacom Tablet Properties application on Windows, the Wacom Tablet controls under System Preferences on macOS, or Wacom Tablet controls under the Devices section of Settings on Linux can be used on the Receiver to adjust settings and verify the pen is working properly.
3. Windows and Mac Receiver Solution
    a. Wacom drivers must be installed on the Receiver system.
    b. Consider disabling the Remote USB feature on a Windows Remote Boost Receiver. If the Wacom USB connection is made after the Remote Boost connection is established, the Wacom device will be captured and exported to the Sender.
    c. Wacom Tablet controls allow the user to specify application specific behavior on the Receiver. Since Wacom controls on the Sender are not available, this feature is not supported for Sender applications. Changing Wacom tablet controls on the Receiver will apply to all Sender applications.

d. Some Wacom devices are touch enabled. This may cause the Receiver to use the touch interface or it may cause interference with pen events. Consider disabling touch on the Wacom device.

4. Linux Receiver Solution

    a. When installing the Remote Boost Receiver, do NOT use the "-legacyWacom" installer flag or answer yes when prompted to enable Legacy Wacom support. This will enable the older Linux Wacom solution, which will only work from Linux Receivers to Linux Senders.

5. Windows Sender Solution

    a. Wacom drivers are not required on the Sender system.

    b. If Wacom Tablet controls are available on the Sender, it will not show the device as being connected. Any adjustments to the Wacom device need to be done on the Receiver system.

    c. Applications on the Sender need to be configured to use Windows Ink. Some applications can only use the Wacom Wintab API rather than Windows Ink. These applications will not work with this solution. Most pen enabled applications will use Windows Ink by default or can be configured to use Windows Ink. Many Windows applications will have improved support for Windows Ink in the most recent versions of the application.

    d. When using the pen for input on the Sender, the cursor will often be displayed as a small dot. This is expected behavior.

    e. Windows has a setting to cause the pen cursor to be hidden. Use Pen & Windows Ink controls in Windows Settings to specify desired behavior.

6. Linux Sender Solution

    a. Wacom Tablet controls on the Sender will not show the device as being connected. Any adjustments to the Wacom device need to be done on the Receiver system.

    b. Some GTK-based applications will require manual configuration to enable the virtual Wacom device. It will appear on configuration menus as "Remote Boost Wacom Tablet".

What’s new in Release 20.0.1

HP Remote Boost 20.0.1 Sender supports Windows and Linux®. HP Remote Boost 20.0.1 Receiver supports Windows, Linux®, and macOS™.

Operating System Notes:

1. RHEL 8.2 and Ubuntu 20.04 are supported with Xorg sessions. Wayland is not supported and is disabled by Remote Boost installers.

Compatibility Notes:

1. By default, the Remote Boost 20.0.1 Sender will use the most secure options. This means that connections to RGS 7.4 and earlier clients will not succeed unless the Remote Boost 20.0.1 Sender EnableLegacySecurity property or installer option is configured. See the User Guide for details.

Experience improvements:

1. Auto-launch files are now supported on Linux and macOS. See user guide for details.
2. Implemented borderless mode on the macOS Receiver. Borderless mode is a frameless window mode that can span multiple monitors (unlike the full screen mode). This is the default mode when match resolution is enabled and the Receiver has more than one monitor. Note that to allow a window to span more than one monitor in macOS you need to disable the “Displays have separate Spaces” setting in the Mission Control preference panel.

Deprecated properties:

1. The Rgreceiver.IsBordersEnabled property has been deprecated. If you used it in your configuration file you can use the new Rgreceiver.WindowMode property instead.

Defect fixes:

1. Addressed an issue where the Receiver closes with non-ascii username
2. Addressed an issue on Windows Senders where the mouse would jump
3. Addressed an issue where audio would not play on Ubuntu 20.04 Sender
4. The Vmouse driver can now be installed silently
5. Allow ALSA audio capture at 48K samples/sec. See /opt/hpremote/rgsender/audio/README.txt for details
6. Addressed an issue where very low-level audio can drop out
7. Addressed an issue where the Sender screen(s) didn't blank with Windows 10 20H1
8. Addressed an issue that prevented hardware-accelerated decode on GeForce cards on Windows
9. Addressed an issue where the port name (if specified) would not be persisted in the launcher UI sender dropdown dialog
10. Addressed an issue where Linux senders can hang on logout
11. Notarized the MacOS Receiver application
12. Addressed an issue where the cursor can persistently jitter with Linux senders
13. Addressed an issue where Hotkey N was not minimizing the Receiver window in Borderless mode.

Known issues:

1. AVC acceleration is not supported on RHEL 8.x or Ubuntu 18.04
2. DPI aware scaling only works for integral scaling values (e.g. 200%, 300%, etc.). Non integral scaling values (e.g. 150%) will scale to the nearest integral value.
3. DPI aware scaling on Linux is tied to the screen resolution and not the scale factor set in the desktop manager. For example, a 1920x1200 resolution 24" display will be treated as 100% scaling, and a 3820x2160 resolution 27" display will be treated as 200% scaling.
4. On Windows receivers with multiple monitors using different scale factors, there is the possibility of visual artifacts when moving the receiver window between monitors.

What's new in Release 20.0

HP Remote Boost 20.0 Sender supports Windows and Linux®. HP Remote Boost 20.0 Receiver supports Windows, Linux®, and macOS™.

Operating System Notes:

1. RHEL 8.1 and Ubuntu 18.04 are supported with Xorg sessions. Wayland is not supported and is disabled by Remote Boost installers.
2. Support is no longer provided for SUSE.

Compatibility Notes:

1. By default, the Remote Boost 20.0 Sender will use the most secure options. This means that connections to RGS 7.4 and earlier clients will not succeed unless the Remote Boost 20.0 Sender EnableLegacySecurity property or installer option is configured. See the User Guide for details.
2. HP Remote Graphics Software has been rebranded to HP ZCentral Remote Boost. The branding changes do not impact compatibility with previous versions or change installed file names and directory paths.

Experience improvements:

1. Remote Boost User Interface adjusts to high DPI displays
2. When the Receiver window is resized and scaled pixel mode is selected on the toolbar, the contents of the sender desktop will be automatically scaled to fit the Receiver window. This does not affect the resolution on the sender.
3. Improved performance for WACOM Cintiq and Wacom Intuos remoting for Linux® to Linux® sessions.

Deprecated properties:

1. The Rgreceiver.IsBordersEnabled property has been deprecated. If you used it in your configuration file you can use the new Rgreceiver.WindowMode property instead.

Defect fixes:

1. Addressed an issue where sender displays did not return to their initial state after disconnecting on Linux
2. Addressed issues where resolution and layout display matching did not always work
3. Addressed issues when the connection to the sender was lost or keyboard quit working when RDP was used in conjunction with Remote Boost

Known issues:

1. AVC acceleration is not supported on RHEL 8.x or Ubuntu 18.04
2. DPI aware scaling only works for integral scaling values (e.g. 200%, 300%, etc.). Non integral scaling values (e.g. 150%) will scale to the nearest integral value.
3. DPI aware scaling on Linux is tied to the screen resolution and not the scale factor set in the desktop manager. For example, a 1920x1200 resolution 24" display will be treated as 100% scaling, and a 3820x2160 resolution 27" display will be treated as 200% scaling.
4. On Windows receivers with multiple monitors using different scale factors, there is the possibility of visual artifacts when moving the receiver window between monitors.
5. When using VMware ESXi with Windows 7-based virtual machines with NVIDIA graphics, if the cursor is not displayed, set the following property in the rgsenderconfig file: Rgsender.Compatibility.Cursor.PreferredCursorMethod=generic

What's new in Release 7.7

HP RGS 7.7 Sender supports Windows and Linux®. HP RGS 7.7 Receiver supports Windows, Linux®, and macOS™.

Operating System Notes:

1. RHEL 7.7 is supported
2. ThinPro 7.1 is supported

Performance and bandwidth improvements:

1. HP Velocity is supported on the macOS Receive

Experience improvements:

1. HP RGS was modified to update frames more regularly on the Receiver to reduce "stutter," especially for video playback.
2. New properties have been added to explicitly set the display resolution and layout of sender displays. See the RGS User Guide for information about the properties: Rgsender.Display.*. In the Receiver settings UI, "Match Receiver display resolution" and "Match Receiver display layout" have been collapsed into one option, "Match Receiver display resolution and layout."

Defect fixes:

1. Addressed an intermittent issue where external networking software would cause the Receiver to be disconnected from the Sender
2. Addressed an issue where oddly sized monochrome cursors were not displayed correctly
3. Addressed an issue on ThinPro Receiver where a borderless window could not be moved in setup mode
4. Addressed an issue where Setup Mode was staying grayed out when using Hotkey N

What's new in Release 7.6.1

HP RGS 7.6.1 Sender supports Windows and Linux®. HP RGS 7.6.1 Receiver supports Windows, Linux®, and macOS™.

Defect fixes:

1. Addressed issues with keyboard mapping including the <Alt><Gr> key sequence on a macOS™ keyboard: ‘ and ~
2. Addressed an issue on macOS™ where the keyboard input is incorrect after taking a screenshot using <command><shift><4>
3. Addressed a Sender crash when adding or removing borders with AVC enabled

What's new in Release 7.6

HP RGS 7.6 Sender supports Windows and Linux®. HP RGS 7.6 Receiver supports Windows, Linux®, and macOS™.

Operating System Notes:

1. RHEL 6.10 and 7.6 are supported
2. ThinPro 7.0 is supported
3. HP RGS install packages include only the 64-bit (and not the 32-bit) Windows Sender and Receiver

Performance and bandwidth improvements:

1. Decreased idle CPU usage on Linux senders using HP3
2. Increased performance for AVC on Windows 10 senders with Intel graphics

Experience improvements:

1. RGS was modified to use the OS Keyboard Input Language on the sender system resulting in a seamless experience when switching languages. The sender and receiver keyboard input languages no longer need to match, and multiple OS Keyboard Input Languages may be defined on the sender and/or the receiver. All sender supported keyboard input languages work with RGS. To use the new keyboard experience, both RGS Sender and Receiver must be 7.6 or later.
2. A new property has been added for resolution matching on Windows Senders with NVIDIA graphics without a display. When enabled, RGS Sender loads an EDID if the system is determined to have no physical displays attached. See the RGS User Guide for information about the property:

   Rgsender.Compatibility.Displays.ForceEdidOnHeadless

Defect fixes:

1. Addressed issues with AVC where the connection would drop or fail with hybrid graphics when the sender system has an external display, the screen is locked, or when the display goes into power save mode
2. Addressed a resolution matching issue with Z2 Mini sender systems with NVIDIA graphics
3. Addressed black screen and resolution matching issues on Windows sender systems without an attached display
4. Addressed an issue on Linux and ThinPro Receivers where a borderless window could not be moved in setup mode
5. Addressed an issue where AutoHotKey application remapping of the Caps Lock key to a Control Key would not work with RGS
6. Addressed an issue where the PAM module could not be used on Linux to filter connections with IP addresses

7. Addressed an issue on ThinPro where the RGS launcher was not redisplayed if a connection to the sender system could not be completed
8. Addressed an issue where Receiver cannot connect to Linux Sender if home folder does not exist
9. Addressed an issue where HP RGS Sender would not find the Pre-load license for HP Z Workstations on Linux when Secure boot is enabled.

Known Issues:

1. RGS Sender and Receiver on Windows rely on Microsoft run-time libraries delivered with Windows Update. Installation can fail if the dependencies are not installed. For example, with a non-silent install of RGS on Windows 7 or 8.1, the installation can fail with the message, “The program can’t start because api-ms-win-crt-runtimeI1-1-0.dll is missing from your computer.” Windows Update must be used to install the Microsoft Security Monthly Quality Rollup before installing HP RGS.

What’s new in Release 7.5.1

HP RGS 7.5.1 Sender supports Windows and Linux®. HP RGS 7.5.1 Receiver supports Windows, Linux®, and macOS™.

Certificates:

1. HP RGS attempts to verify the identity of the sender using a public-key infrastructure (PKI) certificate before a connection is made. By default, HP RGS Sender creates a self-signed certificate but can be configured to use a certificate issued by a Certificate Authority (CA).

– By default, when users connect to a Sender, they will see a message about verification failure unless a certificate issued by a CA is configured or the Receiver’s Certificate Verification Error Policy is changed to suppress errors. The best way for users to verify the identity of the sender if a CA certificate is not used is to provide them with the Fingerprint of the Sender certificate that they can compare with the Fingerprint displayed in the verification message. See the User Guide for detailed information.

Defect fixes:

1. Fixed an intermittent layout matching issue on Linux® / ThinPro receivers.

Future release planning:

1. Starting with RGS 7.6 only the 64-bit Windows Sender and Receiver will be released, and the 32-bit versions will be discontinued.

What’s new in Release 7.5

HP RGS 7.5 Sender supports Windows and Linux®. HP RGS 7.5 Receiver supports Windows, Linux®, and macOS™.

New features:

1. Operating System Notes: Linux®.
2. RHEL 7.5 is supported
3. Performance and bandwidth improvements.
4. Bandwidth required for HP3 on Windows 10 is reduced
5. HP3 performance increase on Windows and Linux® Sender
6. Experience controls Adaptive Image Quality is more responsive

Experience improvements:

1. As of Release 7.5, the operating system manages the HP RGS Receiver Window frame and scrollbars. The toolbar can now be repositioned horizontally by dragging it right or left by moving the cursor to the four dots at the left edge of the toolbar, pressing a mouse button and dragging right or left.
2. When the Receiver Window size is increased beyond the size of the Sender desktop, black bars will appear around the image. A new Hotkey, F, will fit the Receiver Window to the Sender desktop.

Defect fixes:

1. Fixed an issue where Leostream was unable to invoke 64-bit HP RGS on Windows.
2. The UI on macOS™ has been fixed in several areas (e.g. fields with “+” and “-” controls now work as expected).
3. Fixed Advanced Video Compression and HP Velocity activation on Linux® KVM systems.
4. Fixed an issue with remote audio on servers that depend on an audio driver rather than actual audio hardware.
5. Fixed an issue with the ReceiverConfigApp setting, “Process a CTL+ALT+DEL sequence on both the local and remote computers”.
6. Fixed an issue where the HP RGS Receiver would intermittently hang on logout on RHEL 7.4.
7. Fixed a clipboard issue on Linux® Senders when selecting and copying or moving multiple cells in Excel.
8. Fixed an issue related to starting HP RGS from the command line. The HP RGS GUI now correctly displays the hostname/IP address specified on the command line instead of the hostname/IP address from the previously connection.

Known issues:

1. On Windows 10, the Sender diagnostics tab reports that “Changelist display model” is not working. This message is erroneous as the Changlist display model is not supported on Windows 8 or 10.

Future release planning:

1. In the future, only the 64-bit Windows Sender and Receiver will be released, and the 32-bit versions will be discontinued.

What’s new in Release 7.4

HP RGS 7.4 Sender supports Windows and Linux®. HP RGS 7.4 Receiver supports Windows, Linux®, and macOS™.

New features:

1. Floating License Server: The FLEXnet license server for floating licenses must be version
2. 11.14 or later to support RGS 7.4. Local licenses are not affected. The FLEXnet license server is included with the HP RGS package. See the Licensing Guide at hp.com/go/RGS for more information.
3. Operating System Notes: Windows.
4. Windows 10 Fall Creators Update is now supported
5. 64-bit versions of the Sender and Receiver for Windows are now available. If the 32-bit version of RGS is installed, the 64-bit installer may be used to upgrade to 64-bit RGS 7.4. Future versions of RGS will deliver only the 64-bit Sender and Receiver. The
6. 32-bit version will be delivered at least until February of 2018. The 32 and 64-bit versions of RGS are compatible with each other. That is, a 32- bit Receiver can connect to either a 32 or 64-bit Sender and a 64-bit Receiver can connect to either a 32 or 64-bit Sender.
7. The 64-bit version of RGS is installed in C:\Program Files\HP by default RGS 7.4 supports Windows 10 Creators Update (Version 1703)
8. If the Windows 10 version is updated after installing HP RGS, Remote USB may stop working. Uninstall and then reinstall HP RGS

Operating System Notes: Linux®.

Previously, one installer for the Sender and one installer for the Receiver were sufficient for all supported distributions of Linux®. As of RGS 7.4, separate RGS installers are provided for different Linux® Distributions

The Linux® RGS Receiver Package contains two separate installers:

1. Receiver for RHEL 6.x
2. Receiver for RHEL 7.x and SUSE 12

The Linux® RGS Sender and Receiver Package contains the two Receiver in- stallers listed above plus installers for:

1. Sender for RHEL 6.x
2. Sender for RHEL 7.x and SUSE 12
3. Sender for SLED 11
4. RHEL 7.4 and SLED 12 SP3 are now supported
5. Restarting the Linux® Sender no longer requires a restart of the X Server
6. A Receiver is no longer provided for SUSE Linux® Enterprise Desktop 11

Defect fixes:

1. Fixed an issue where Resolution matching was not working with vGPU with NVIDIA® graphics on Windows.
2. Fixed a Linux® Receiver crash when using Advanced Video Compression.
3. Linux® Receiver to Linux® Sender no longer generates erroneous noise during the initial connection when using audio.
4. Toolbar functions are now available on touch devices when the virtual mouse is activated.
5. Fixed an issue where the cursor was incorrect or missing on the macOS™ Receiver.
6. The audio volume can now be adjusted on the sender system for RGS connections.
7. Fixed an issue where Match Receiver display resolutions was not working on headless Linux® sender systems.
8. Fixed several cursor issues.

Known issues:

1. A reboot may be required during an update of the Windows Receiver if Remote USB is installed.
2. RHEL 7.4 requires an update to GDM to avoid a problem where the login screen does not return after a logout. See Ret Hat Bugzilla bug 1469755.
3. On Linux® Receiver, the SETUP MODE sequence + H that is used to hide or unhide the toolbar does not always work as expected. This behavior is planned to be fixed in an upcoming release.

What’s new in Release 7.3.3

HP RGS Release 7.3.3 is a release for Windows and Linux® Senders and Receivers and the macOS™ Receiver.

Defect fixes:

1. Fixed an issue on Windows 10 where Single Sign On and Easy Login would fail when the user is required to press Ctrl + Alt + Delete before login.
2. Fixed an issue on Windows 7 where the Receiver would crash when Global Image Updates are disabled.
3. Added a “Connecting” message when network conditions delay initial display of the Sender desktop.
4. Fixed a crash when closing the Receiver with Advanced Video Compression (AVC) enabled.
5. Addressed a latency issue with connections using AVC.
6. Fixed a Sender crash on Windows 8 Virtual Machines using GPU pass-through.
7. Fixed a Match Resolution issue on Linux® Senders configured with non-default monitor refresh configurations.
8. Fixed a macOS™ receiver disconnect when using a Japanese keyboard layout.

Known Issues:

1. A reboot may be required during an update of the Receiver if Remote USB is installed.

What's new in Release 7.3.2

HP RGS Release 7.3.2 is a release for Windows and Linux® Senders and Receivers and the macOS™ Receiver.

New features:

1. Support for SUSE Linux® Enterprise 12.2.
2. Support for ThinPro v6.
3. Smart card redirection on Windows receiver supports a wider range of smart card reader devices including virtual smart cards. Smart cards support is not backwards compatible. To use the new solution, both sender and receiver need to be RGS 7.3.2 or later. Smart card redirection is supported on the following senders: Windows 7, 8.1, and10 and now RHEL 6, RHEL 7, and SUSE Linux® Enterprise 12. (Linux® support is new in 7.3.2.) Smart card redirection is supported on Windows receivers only. On Windows-based and ThinPro-based receivers, smart cards can be remoted using Remote USB.
4. MaxImageUpdateRate now applies to AVC. In previous releases this setting only applied to HP3 (the default image codec).

Defect fixes:

1. Fixed an issue on Windows senders with NVIDIA® graphics where the RGS connection could consume unusually high network and CPU resources when the desktop is not changing.
2. Fixed a black screen issue when connecting to a HP ZBook laptop with Hybrid Graphics.
3. Fixed a crash caused by a sender having cloned/duplicate monitors with NVIDIA® Resolution Matching enabled.
4. Fixed a receiver crash in macOS™ Sierra when in Tabbed Mode.

Known issues:

1. The smart card service on RHEL 7 may require additional configuration to start correctly:
2. Add "-c /etc/reader.conf.d/hpremotescr. conf" to the pcscd startup script located at usr/lib/systemd/system/pcscd.service. The
3. ExecStart option in this file should be modified to appear as follows: ExecStart=/usr/sbin/ pcscd --foreground --auto-exit -c /etc/reader. conf.d/hpremotescr.conf.
4. On laptops with touch displays, RGS defaults to the touch interface. One of the symptoms is that Match Receiver display resolution is enabled and cannot be unchecked. To force the desktop user interface for these devices, check the "Force RGS to use the desktop user interface, even on tablets" option in the RGS Receiver Configuration application. See the User Guide for more information.

What's new in Release 7.3.1

HP RGS Release 7.3.1 is a release for Windows and Linux® Senders and Receivers and the macOS™ Receiver.

New features:

1. Support for Windows 10 Anniversary Update (Version 1607).
2. Performance improvement for HP3 on Senders with Windows 8.1 and Windows 10 Anniversary Update and later with AMD or Intel Graphics.
3. Performance improvement for AVC with Windows Receivers (now AVC mode supports 4k like the default HP3 mode).

4. Improved resolution matching when using NVIDIA® graphics on Windows Senders (bare metal or virtualized environments).
5. On by default for Windows 10 Anniversary Update and later. New functionality includes:
6. Intelligent layout matching independent of display order.
7. Automatic creation of “virtual displays” for resolution matching for Senders without displays attached or fewer displays on the Sender than the Receiver.
8. Support for custom resolutions in virtualized environments.
9. New property IceLive.livessl.liveUDP.mtu. When using a VPN, Set the MTU to a value lower than the MTU of the VPN for best performance with HP Velocity. See the User Guide for details.

Defect fixes:

1. Fixed intermittent clipboard issues.
2. Improved reliability of Linux® sender restart after logout.
3. Fixed problems with the mouse in RGS Game Mode.
4. Better smart card remoting on ThinPro.
5. Improved detection of USB ports for USB redirection on Windows.

What’s new in Release 7.2.4

HP RGS Release 7.2.4 is a release for Windows and Linux® Senders and Receivers. The following list describes the changes.

Defect fixes:

1. Fixed a crash or disconnect when using very large cursors. A crosshair will be displayed on the receiver when cursor size exceeds the transport limit.
2. Fixed a crash when using Linux® senders with the Chrome browser.
3. Fixed an issue with the RGS preload license on HP EliteBook 8440w.
4. Smart cards can now be remoted to a sender from a ThinPro v5 receiver.
5. An outline of a window that is being moved or resized is correctly displayed when Reduced Resources is enabled for Metacity Linux® senders.

What’s new in Release 7.2.3

HP RGS Release 7.2.3 is a release for all supported products and platforms.

The following list describes the changes.

1. New features:
2. Sender properties were added to more easily configure VMware virtual machine displays for use with NVIDIA® GRID Graphics.
3. Defect fixes:
4. When logging into a Linux® Sender connected to a domain, domain\user is now an accepted format.
5. If a Linux® Sender is at the login screen and a user disconnects without logging in, it is now possible to reconnect to the RGS Sender.

What’s new in Release 7.2.2

HP RGS Release 7.2.2 is a release for all supported products and platforms.

The following list describes the changes.

New features:

1. Improved smart card functionality for Windows to enable a smart card to be used to authenticate on a receiver and sender simultaneously.
2. Added support for input devices with 5 buttons. Supported for Windows receivers and Windows senders; HP RGS 7.2.2 (or later) must be installed on both the sender and receiver.

Defect fixes:

1. Fixed an issue so that borderless receiver windows correctly snap to the monitor boundary.
2. Fixed an issue on Linux® senders in which certain keys in some languages were not echoed correctly on the receiver.
3. Removed a shared library path restriction Linux® senders to enable alternate X server driver packaging.
4. Fixed an issue on Linux® senders where Pulse audio and Pam security connections could write many repeated messages to the log files.

What's new in Release 7.2.0

HP RGS Release 7.2.0 is a release for all supported products and platforms.

The following list describes the changes.

New features:

1. Support for RHEL 7.2.
2. Support for SLED 12.
3. Support for Windows 10.
4. Beta release of improved smart card functionality for Windows. To enable this functionality, select custom install during installation and enable the smart card option.

Defect fixes:

1. Fixed an HP RGS receiver crash when transitioning from HP RGS to RDP with Advanced Features requested but not activated.
2. Enabled animated cursors on Windows 8 systems when using the GPU display method.
3. Fixed Linux® sender crash when logging off of the sender system while connected to a receiver.
4. Fixed a Linux® receiver issue where excessive X server resources are consumed when the tool bar update statistics are visible.
5. Fixed a receiver issue that resulted in spurious session disconnections.
6. Fixed a rare sender crash during encoding with HP3 or JPEGLS.
7. Reduced the occurrence of receiver network connection warning screens.
8. Fixed black screen issue when running a multi-screen GPU Advanced Video Compression connection.
9. Directory mode now accepts directory.txt entries with spaces inside double quotes.
10. Fixed an issue with cursor position on windows senders with multiple displays that are configured with different levels of scaling.
11. Fixed a crash on exit with embedded receivers after accessing settings panel.

Known issues:

1. Windows 10 senders using HP3 with NVIDIA® graphics will operate with reduced performance or display a black screen pending a future NVIDIA® driver release. Workaround for a black screen is to configure the Comparitron display method. See HP RGS Sender Configuration in the Documentation.
2. Windows 10 senders using AVC with NVIDIA® graphics may display an offset cursor or a blank display if a screen is set to lower than its native resolution.
3. A workaround is to disable GPU accelerated AVC rendering. See HP RGS Receiver Configuration in the Documentation.
4. Linux® senders with NVIDIA® graphics on RHEL
5. 7.x and SLED 12 may display transient screen corruption with drivers lower than 352.41

What's new in Release 7.1.1

HP RGS Release 7.1.1 is a release for the Windows sender. The following list describes the changes.

Defect fixes:

1. Fixed loss of mouse cursor control when using scaled displays.
2. Fixed floor control issue when using software Comparitron.

What's new in Release 7.1.0

HP RGS Release 7.1.0 is a release for all supported products and platforms.

The following list describes the changes.

New features:

1. Improved performance with default HP3 codec, with higher framerate and/or higher screen resolution compared to 7.0. HP RGS HP3 can now use multiple CPU cores. The amount of system CPU resource consumed by HP RGS can be controlled via properties, see the user guide for details.
2. WACOM tablet remoting with full functionality for Linux® to Linux® sessions.
3. Improved audio experiences on Linux® using the PulseAudio system for capture and playback. The sender can be configured to capture using Alsa. See the user guide for more details.
4. Advanced Video Compression (AVC) is now GPU accelerated on Linux® sender systems with GRID capable NVIDIA® graphics devices. AVC on Linux® also supports multi-monitor.
5. AVC has been updated to the latest GRID SDK from NVIDIA® on Windows and Linux® platforms.
6. Support for RHEL 7.
7. New tools to configure properties via a UI, avoiding the need to directly edit the corresponding text-based files (rgsendeconfig and rgreceiverconfig).

See the user guide for more details.

Defect fixes:

1. Fixed an issue with the GPU display method on NVIDIA® graphics devices with 10-bit displays that resulted in very high bandwidth consumption.
2. Fixed animated cursors (the busy cursor) on RHEL 6 senders.

Notes:

1. The force full screen update option is enabled by default and has been removed from the UI. Its receiver property is

2. “Is Global Image Updates Enabled”.
3. This property prevents screen tearing. With it on, the performance of low powered receiver systems with multiple (3 or more) displays may be adversely affected.
4. Support for 32-bit Linux® operating systems other than HP ThinPro is no longer available.
5. Support for RHEL 5 is no longer available.

Known issues:

1. Windows 8/8.1 senders without a mouse connected will not display a mouse cursor. This is a current limitation of Windows 8/8. A solution is under investigation.
2. The performance of AVC on displays using a resolution greater than full HD (1920x1080) varies depending on the content.
3. AVC does not currently support 4K or ultra HD (3840x2160) resolutions.
4. RHEL 7 senders with NVIDIA® graphics will exhibit screen corruption unless the Option “NoFlip” is set to true in xorg.conf.
5. A solution is under investigation.

What’s new in Release 7.0.2

HP RGS Release 7.0.2 is a release for all supported products and platforms.

The following list describes the changes.

New features:

1. Add support for RHEL 6.6

Defect fixes:

1. Fixed an issue that resulted in the cursor disappearing for users in a collaboration session.
2. Fixed an issue that could result in the Windows desktop remaining unlocked after using Switch User.
3. Fixed an issue that could result in the Windows desktop remaining unlocked after an HP RGS session reconnect.
4. Fixed an issue that caused a login attempt to fail after a previous failed login attempt.
5. Fixed an issue that caused a login delay to result in a login failure and cause a subsequent login attempt to fail.
6. Fixed an issue that cause a login cancellation to display a login failure message and cause a subsequent login attempt to fail.
7. Fixed a key mapping problem with the Brazilian ABNT2 keyboard layout.

What’s new in Release 7.0.1

HP RGS Release 7.0.1 is a release for all supported products and platforms.

The following list describes the changes.

New features:

1. Added a sender property, Rgsender. PreferredLicenseOrder, that allows ordering and selection of HP RGS license types, see rgsenderconfig for details.
2. Easy Login functionality is no longer limited to certain hardware platforms. The property Rgsender.
3. IsAnonymousConnectionForceEnabled has been removed. See the user guide for details on Easy Login.

Defect fixes:

1. Fixed HP Velocity connection instability with some Receiver platforms.
2. Removed mirror driver from sender install on Windows 8 and later because Microsoft does not support mirror drivers starting with Windows.
3. The “changelist” capture method is not available on Windows 8 as a result.
4. Fixed an issue with Logitech Wireless keyboards on ThinPro.
5. Fixed an issue that resulted in the collaboration notification dialog appearing behind other Windows.

What’s new in Release 7.0.0

HP RGS Release 7.0.0 comes with a new list of supported platforms. Please consult the support matrix to ensure that your platforms supported. The following list describes high level changes.

New features:

1. Upgraded HP Velocity to version 2. This version offers further improved connectivity and protection compared to previous versions. Traffic protected by HP Velocity now uses UDP, rather than TCP. The new version of HP Velocity is not compatible with older versions of HP Velocity. Only connections between HP RGS 7 Senders and Receivers will benefit from HP Velocity 2.1.

A host of new tablet features has been introduced:

2. Gesture-to-hotkey mapping. Users can assign a series of keystrokes to a gesture via the new gestures tab in the UI.
3. Virtual Mouse. The virtual mouse allows for precise onscreen mouse control on a tablet.
4. Zoom & Pan. Tablet users can zoom and pan around the Sender desktop.
5. Various improvements to the user interface for touch optimization and improved toolbar control.

Defect fixes:

1. Remote USB installation on 64-bit Windows Embedded has been fixed.
2. Virtual audio driver is installed on blade systems more consistently.
3. Connections no longer end immediately when a Windows Remote Desktop Service session is created by another application. This should improve the way HP RGS interacts with other remote desktop applications.

Known issues:

1. When an HP RGS session ends, it is possible that the Sender monitor will remain blanked. The problem can be resolved by connecting again with HP RGS and then disconnecting normally.
2. When using NVIDIA® graphics with 10-bit monitors, older drivers can cause the image to have color problems. This issue can be resolved by setting a property. Some recent NVIDIA® drivers solve this problem.
3. On Windows touch devices, increasing the Sender display resolution while connected can cause problems with tapping the confirm resolution dialog box. Use a USB mouse or the virtual mouse to click the button.

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