Parallels Remote Application Server version 16.5 Release Notes

- Parallels Remote Application Server 16.5

The below are the release notes for version 16.5, the Upgrade Procedure can be found here.

Parallels Remote Application Server version 16.5 update 4 - Hotfix 1 (Nov 22, 2019)

RAS Core v16.5.4.1-20916

- Fixed: In certain scenarios RAS Publishing Agent service may crash.

Parallels Remote Application Server version 16.5 update 4 (July 24, 2019)

RAS Core v16.5.4-20914

- New: Added an option to process schedules for servers which were offline at the start of the scheduled event once the servers are back online.

- Improved: Max number of sessions per RDSH server increased to 1000, default is 250.
- Improved: Published RAS Console leaves window frame marks after dragging.
- Improved: Update Certificates for Trusted.pem.

- Fixed: RAS offline activation could fail in some scenarios.
- Fixed: Turbo.Net applications cannot be started in some scenarios.
- Fixed: Icons of some published applications disappear from the taskbar after the application is launched.
- Fixed: Secondary PA can stop processing connection requests in some scenarios.
- Fixed: Registration of RAS farm in DualShield fails if done from the console running on Windows 10 or Windows 2019 in some configurations.
- Fixed: In some configurations RAS RD Session Host agents does not accept connections with the error "RDSH Agent not enabled".
- Fixed: HTML5 client provides 32-bit Linux client instead of 64-bit when used from Ubuntu 18.04.
- Fixed: Download link for Linux client from HTML5 client.
- Fixed: RAS Client Manager identifies IPv4 addresses from MAC OS based machines as hybrid IPv4/IPv6 addresses.
- Fixed: RAS Gateway service crashes in IPv6 environments in some scenarios when address is assigned statically.
- Fixed: Slow authentication process when using MFA with SecureAuth.
- Fixed: The RAS client policy "Add RAS Connection Automatically when starting web or shortcut items" does not work.
- Fixed: HTTPS links do not work when updating the URL with a custom xml location for client updates.
- Fixed: VDI - When using Microsoft Hyper-V, VM used as a RAS Template is not shown in the list of available VMs after removal of RAS Template in some scenarios.
- Fixed: VDI - When using KVM, VMs used as RAS templates with missing <source mode .../> parameter might experience issues in cloning.
- Fixed: VDI - some guest VMs can disappear from UI after mass recreation operation from the template in some scenarios.
• **Fixed:** VDI - In some scenarios double click on a published desktop that is linked to a VDI pool results in connection to two VDI guests.

• **Fixed:** VDI agent crashes when trying to connect to non-existing guest VM.

• **Fixed:** VDI - When using x3 PAs and VDI hosts in same environment PA may experience crashes in some scenarios.

• **Fixed:** When specifying to "Store only the following folders on the user profile disk" from the user profile disk data settings, some excluded folders are still stored on the UPD when there are three or more RDSH servers.

• **Fixed:** Applications on already existing session can be slow to connect or lagging UX when “Show application after redirection of all printers” setting is activated.

• **Fixed:** "Parameter is not valid" error is thrown when printing from customer's application to a printer which is not set as default in a remote session.

• **Fixed:** Printing several jobs in parallel from customer application causes some of the jobs to stuck.

• **Fixed:** When redirecting the printer with duplex printing and server side preferences are used, printer's properties from redirected application does not have the option "Print on both sides".

• **Fixed:** Printer prints an extra blank page if server side preferences are used with some models of printers.

• **Fixed:** For custom application client side printer preferences dialogue is shown in spite of whether server side preferences are selected or not.

• **Fixed:** RAS Gateway closes established connections after being disabled in RAS console and if RDP UDP is used.

• **Fixed:** User access rights shown by Effective Access button are not always calculated correctly.

• **Fixed:** Some pdf documents generated by custom software are printed with incorrect printout starting from second page.

• **Fixed:** "Delete source file(s) after attach" option does not remove source file from the local workstation when using published customer's application.

**HTML5 Gateway:**

• **Improved:** Size of some fields in OTP authentication dialogue box is not enough to fully display the text in case of long strings.

• **Fixed:** Error System.TimeZoneNotFoundException is thrown in some scenarios when try to open published .Net application in HTML5 client.

• **Fixed:** Browser published with URL as parameter can't be opened in HTML5 client if URLs are configured to be redirected.

• **Fixed:** Maximized window of an application restores to normal size in HTML5 client after switching to the Application launcher and back.

• **Fixed:** Summertime is not applied in the published application in HTML5 client.

**HALB v16.5.4-20905**

• **Improved:** Linux kernel has been updated to address known vulnerabilities.

• **Fixed:** Settings fail to apply after removal from the farm and reset of appliance.

• **Fixed:** Slow performance on a sessions established through HALB when RDP UDP is used.

• **Fixed:** RDP sessions periodically disconnect with encryption error (3078).

**RAS PowerShell v16.5.4-20914**

• **Fixed Commands:** Invoke-VDITemplateCmd "Template" -Command ExitMaintenance -ForceStopUpdateGuests.
Parallels Client (Windows) v16.5.4-20906

- **New**: Added an ability to store connection credentials in config file of the client.

- **Improved**: Prevented switching of focus between windows of remote applications when scanning.
- **Improved**: Control elements of MSTSC are put on top of all windows of the local OS when used as a published application and is maximized.
- **Improved**: Created desktop shortcuts are removed after policy "Create shortcuts configured on server" is turned off.
- **Improved**: Corrected error message when an admin tries to activate the farm with a malformed or incorrect license key.
- **Improved**: Size of some fields in OTP authentication dialogue box is not enough to fully display the text in case of long strings.

- **Fixed**: Maximization of the window hides the taskbar is some scenarios when multiple monitors are used.
- **Fixed**: RDP connection bar is missing on Windows Server 2016 / 2019 / Windows 10 desktops if group policy "Always prompt for password upon connection" is enabled.
- **Fixed**: Expired password cannot be changed in some scenarios when using TekRadius server.
- **Fixed**: Error "Object is locked" can be thrown in some scenarios on upgrade in RAS console.
- **Fixed**: License information loading could fail in some scenarios in virtual environments (when node is up but network interface driver is not yet operational).
- **Fixed**: Windows start menu icon overlays Parallels logo in desktop replacement mode.

Parallels Client (Chrome App) v16.5.4-20904

- **Fixed**: Several keystrokes are not transferred to remote session for Japanese language.
- **Fixed**: No message box about an error in case of SSL error when graphic acceleration is used.

CloudPortal v16.5.4-20906

- **Fixed**: Several vulnerabilities reported by security scan tools.

Parallels Remote Application Server version 16.5 update 3 - Hotfix 2 (April 10, 2019)

RAS Core v16.5.3.2-20746

- **Fixed**: Universal printing from many users at the same time might result in printing jobs not processed.
- **Fixed**: "Parameter is not valid" exception is sometimes thrown when printing.

Parallels Client (Windows) v16.5.3.2-20746

- **Fixed**: Incorrect font might be used when printing the second page in a job.

Parallels Remote Application Server version 16.5 update 3 - Hotfix 1 (March 26, 2019)

RAS Core v16.5.3-20743

- **Fixed**: Sometimes duplicate session is created on VDI desktop opening

Parallels Client (Chrome App) v16.5.3-20744
• **Fixed:** Some keystrokes are not transferred to remote session for Japanese language

Parallels Remote Application Server version 16.5 update 3 (February 27, 2019)

**RAS Core v16.5.3-20739**

- **New:** Ability to read RAS session variables for remote desktop sessions.
- **New:** VDI: Support for Scale Computing HC3 hypervisor.

- **Improved:** Delayed and slow data transfer during drag and drop when a network path is not accessible by a server application.
- **Improved:** Allow a 2nd Level Authentication filter to use a non-standard MAC address from devices with such an address.

- **Fixed:** Clone requests from an RDSH group fail if the VDI agent is not connected to the master PA.
- **Fixed:** Policies - Primary connection name not being saved.
- **Fixed:** Printer spooler crashing in some cases on an RDSH host.
- **Fixed:** A PDF document would print with empty pages in some cases.
- **Fixed:** VDI session connection details are not updated after a reconnection from a different client.
- **Fixed:** Single sign-on would not work for the RAS Console in some cases.

**HTML5 Gateway:**

- **New:** Added policies support for URL redirection.

**HALB v16.5.3-20735**

- **Fixed:** Appliance security updates fail to install.

**Parallels Client (Windows) v16.5.3-20735**

- **Improved:** Delayed and slow data transfer during drag and drop when a network path is not accessible by a server application.

- **Fixed:** Second-level authentication not prompting the user after a PC restart.
- **Fixed:** UI not updating properly when using splitter control and sizing the window.

**Parallels Client (Linux) v16.5.3-20735**

- **Fixed:** Empty pages would print in some cases from Parallels Client running on Raspberry Pi 3.
- **Fixed:** Modal would open in the background and block the launcher in some cases.
- **Fixed:** A redirected smart card would not work in a remote session in some cases.
- **Fixed:** Printers would not redirect to a remote session when redirection is enforced via policies.

**Parallels Client (Mac) v16.5.3-20740**

- **New:** Display password requirements to the user when changing the AD password.
• **New**: Added AD password expiration notification. A user will be notified when the password expiration date approaches and will be able to change the password.

• **Fixed**: A redirected smart card would not work in a remote session in some cases.

Parallels Client (iOS) v16.5.3-20739

• **New**: Reconnection settings configuration, managed via policies.
• **New**: Display password requirements to the user when changing the AD password.
• **New**: Added AD password expiration notification. A user will be notified when the password expiration date approaches and will be able to change the password.

• **Improved**: Use high definition icons in App Switcher.

Parallels Client (Android) v16.5.3-20739

• **New**: Display password requirements to the user when changing the AD password.
• **New**: Added AD password expiration notification. A user will be notified when the password expiration date approaches and will be able to change the password.

• **Improved**: Use high definition icons in App Switcher.
• **Improved**: Display a more descriptive error message when a connection fails due to expired or invalid RDP license.

• **Fixed**: Shortcuts from a hardware keyboard don't work in a remote session.
• **Fixed**: Occasional application crash.
• **Fixed**: Keyboard hides unexpectedly when editing connection settings on certain devices.
• **Fixed**: Dumbo mouse appearance on smaller devices when keyboard is opened.

Parallels Client (Chrome App) v16.5.3-20735

• **New**: Added ability to map the Windows logo key to a shortcut key.

Reporting v16.5.3-20735

• **Fixed**: Processing of retention settings.

Parallels Remote Application Server version 16.5 update 2 hotfix 2 (January 21, 2019)

RAS Core v16.5.2.20594

• **Fixed**: Problems with Dualshield authentication due to support for multiple domains.

Parallels Client (Linux) v16.5.2.20595

• **Fixed**: Linux client not respecting universal printing policies set from the server.

Parallels Remote Application Server version 16.5 update 2 hotfix 1 (December 21, 2018)
Fixed: HALB stops working after updates are applied.

Parallels Remote Application Server version 16.5 update 2 (December 07, 2018)

RAS Core v16.5.2-20589

- **Improved:** Second level authentication - Dualshield provider can now be used in a multi-domain environment.
- **Improved:** Modified the High cipher strength string to achieve the A rating in SSL Lab testing.
- **Improved:** Optimized the drag and drop transfer for selected applications.
- **Fixed:** Moving an RDSH server from one site to another could result in the Agent status reported as being "not verified".
- **Fixed:** When using a round-robin load balancing method, servers would not load balance connections correctly in some cases.
- **Fixed:** Some fonts would not print correctly in NextGen applications.
- **Fixed:** A printed page was scaled incorrectly in some cases.
- **Fixed:** On a guest VM recreation, a corresponding computer object could be accidentally removed from Active Directory.
- **Fixed:** An RDP session was shown as active for some time in the Parallels RAS console after the session logoff.
- **Fixed:** The IP address field could become empty for a running guest VM in the Parallels RAS console.
- **Fixed:** In the event of a logon storm, multiple users could be connected to the same VDI guest VM.

HTML5 Gateway:

- **Fixed:** An incorrect number of remaining days could possibly be stated in the password expiration reminder message.

HALB v16.5.2-20588

- **Fixed:** On a rare occasion, HALB could stop working after configuring SSL Offloading due to incorrect certificate file formatting.

Parallels Client (Windows) v16.5.2-20590

- **New:** Option for enhanced move/size of published application windows.
- **Improved:** Optimized the drag and drop transfer for selected applications.
- **Fixed:** When in desktop replacement mode, and a published desktop is set to start automatically on machine startup, the desktop is started in the background.
- **Fixed:** When closing some applications, a black box remains where the application window used to be.
- **Fixed:** Single sign-on may not work in case of switching between user accounts in Windows.
- **Fixed:** Unexpected behavior when moving published applications across monitors after changing monitor placement.
- **Fixed:** Blank pages instead of the actual content could be printed from Internet Explorer.

Parallels Client (macOS) v16.5.2-20585

- **New:** Support Dark Mode on macOS 10.14 Mojave.
• **New**: Connect automatically to a newly registered RAS farm.

• **Fixed**: Published applications launching via URL Schema commands.

• **Fixed**: Impossible to restore minimized windows for some published applications.

Parallels Client (Linux) v16.5.2-20588

• **Fixed**: Published applications launching via URL Schema commands.

• **Fixed**: Launching published applications via HTML5 Client could fail with the "Invalid Credentials" error.

• **Fixed**: A maximized published application window could be displayed incorrectly.

• **Fixed**: When establishing a connection, incorrect user credentials could be used if multiple connections for the same farm exist in Parallels Client, each using different user credentials.

• **Fixed**: Printers are not redirected to a remote session if redirection is configured via policies.

• **Known problems**: Authentication with smart card may not work properly with the Linux client

Parallels Client (iOS) v16.5.2-20594

• **New**: Automatically adjust the pointer position in the Dumbo mouse mode.

• **Improved**: Automatically adjust the application toolbar position to keep it visible when the keyboard is shown.

• **Improved**: Show the scale factor in the Dumbo mouse mode only when a remote screen is actually zoomed in.

• **Improved**: UI appearance on iPhone XS, iPhone XR, and iPhone XS Max.

• **Fixed**: Published applications launching via URL Schema commands.

• **Fixed**: Multiple temporary connections can be created after a published application is launched via URL Schema.

Parallels Client (Android) v16.5.2-20594

• **New**: Automatically adjust the pointer position in the Dumbo mouse mode

• **Fixed**: Published applications launching via URL Schema commands.

• **Fixed**: Multiple temporary connections can be created after multiple published applications are launched via URL Schema.

• **Fixed**: On tablet devices, a remote screen scrolls unnecessarily in the Touch mouse mode.

• **Fixed**: Parallels Client crashes on startup after a fingerprint is removed from a device.

• **Fixed**: Parallels Client crashed sometimes after connecting to a remote session.

• **Fixed**: Shortcuts to published applications are not removed after the connection is reconfigured for another RAS farm.

Parallels Client (Chrome App) v16.5.2-20585

• **New**: Display password requirements to the user when changing the AD password.

• **New**: Added AD password expiration notification. A user will be notified when the password expiration date approaches and will be able to change the password.
Parallels Remote Application Server version 16.5 update 1 hotfix 3 (November 11, 2018)

RAS Core v16.5.1.20460

- **Fixed:** Specifying description of the client results to many popups with Size Limit

Parallels Remote Application Server version 16.5 update 1 hotfix 2 (November 09, 2018)

RAS Core v16.5.1.20458

- **Fixed:** Applications in folders were not showing to the end user.

Parallels Remote Application Server version 16.5 update 1 hotfix 1 (October 11, 2018)

RAS Core v16.5.1.20454

- **Fixed:** Possible crash in Publishing Agent when using multiple sites.

Parallels Remote Application Server version 16.5 update 1 (October 8, 2018)

RAS Core v16.5.1.20451

- **New:** Added support of VMware ESXi 6.7 and VMware vCenter 6.7
- **New:** Added delegation of session management to custom administrators for specified themes
- **New:** Added new counter "RAS Client connections" to Secure Client Gateway counters
- **New:** Added command line tool to add a root administration account
- **Updated:** EULA
- **Improved:** Scanning redirection over TWAIN
- **Fixed:** Client password policy is not applied under certain conditions
- **Fixed:** Scanning redirection on Win2003 does not work under certain conditions
- **Fixed:** RAS Agents statuses are not always correct
- **Fixed:** Sometimes guest VM is no longer provided to clients if there was an attempt of direct connection
- **Fixed:** User may connect to a guest VM with a disconnected session of another user
- **Fixed:** VDI agent may crash on a clone creation on Hyper-V 2008r2

**HTML5 Gateway:**

- **Fixed:** Audio redirection
HALB v16.5.1.20453

- **Fixed:** Appliance does not accept connections when system is out of resources

RAS PowerShell v16.5.1.20451

- **New:** Added RAS Objects and Enums to Documentation

Reporting v16.5.1.20447

- **New:** Added option in "Applications Usage report" to show "RAS published applications only" or "All applications"

Parallels Client (Windows) v16.5.1.20448

- **New:** Added prompt for permission elevation when installing RAS Client through the RAS Client Downloader

Parallels Client (Linux) v16.5.1.20446

- **New:** Support for FIPS 140-2 compliance (Linux 64-bit)
- **Fixed:** Sometimes remote session windows remain on screen after one was logged off from the remote session
- **Fixed:** Remote session closes unexpectedly

Parallels Client (Mac) v16.5.1.20447

- **New:** Added a virtual PDF printer when using RAS Universal Printer
- **Improved:** Overall stability
- **Fixed:** Some key combinations from AZERTY French keyboard worked incorrectly
- **Fixed:** Microphone redirection doesn’t work on macOS 10.13

Parallels Client (Chrome App) v16.5.1.20446

- **New:** Policies - Support for more granular options.

Parallels Remote Application Server version 16.5 hotfix 1
(August 8, 2018)

RAS Core v16.5.0.20278

- **Fixed:** Sessions manager might report old sessions.
- **Fixed:** Full clone guest agent update may fail to power on a guest VM.
• Fixed: Template update fails with "Guest agent didn't respond" error.
• Fixed: After deployment a forwarding gateway is has Not Verified.
• Fixed: First launch of an App-V application may fail.

Parallels Client (Mac) v16.5.0.20276

• Fixed: Microphone not redirected on macOS 10.13.

Parallels Client (iOS) v16.5.0.20223

• Fixed: Switching between connections causes a published application to disappear.
• Fixed: Possible failure when launching published applications.
• Fixed: Unable to authenticate when second level authentication is enabled.

Parallels Client (Android) v16.5.0.20222

• Fixed: Possible failure when launching published applications.
• Fixed: Application crashing when attempting to configure using the invitation email.

Reporting v16.5.0.20274

• Fixed: Possible upgrade failure from version 16.2.

Parallels Remote Application Server version 16.5 (July 11, 2018)

RAS Core v16.5.0.20263

• New: Console authentication
  ♦ Added support for RAS Single Sign-On.
  ♦ Improved the authentication logon and connections configuration windows.
  ♦ Ability to add domain administrators as root admin accounts on new installations.
  ♦ Automatic logon if a single farm is configured.
  ♦ Ability to auto logoff RAS Console administration session after a set idle time.

• New: Improved notification system
  ♦ Create multiple notifications of the same type.
  ♦ Notification grace period.
  ♦ Trigger notification can be set to be triggered when value is below or above a threshold.
  ♦ Configurable notification intervals.
  ♦ Send emails to non RAS administrators.
  ♦ Run scripts when notification is triggered.
  ♦ Added additional information to the notification emails.

• New: Client policies
  ♦ Split policies into granular blocks for greater flexibility.
  ♦ The policies can now also be applied based on of the client operating system.
  ♦ New settings:
    ◊ Client options: Force PC keyboard
    ◊ Display: Acceleration Mode
    ◊ Browser: Open application in new tab
    ◊ Local devices and resources: Allow file transfer commands
• **New:** Licensing and Publishing agent
  ♦ Added support for maximum number of concurrent users limit when using SPLA license key.
  ♦ Ability to auto promote secondary Publishing agent to master.
  ♦ Ability to set a Publishing agent to run in stand-by mode.

• **New:** Security & Authentication
  ♦ Radius
    - Allow "Forward the first password to Windows authentication provider" for non challenged requests.
  ♦ Added support of Elliptic-curve Diffie–Hellman (ECDH) ciphers to RAS secure proxy gateway.
  ♦ Ability to set the expiry date for self signed certificates created in RAS Console.
  ♦ Support for FIPS 140-2 compliance added to RAS secure proxy gateway.
  ♦ Optimized blocking of unwanted tunnelling sessions in the gateway.

• **New:** Themes enhancement
  ♦ Introduced support for white labelling of Parallels Client (Windows).
  ♦ HTML5: support logos of different sizes.
  ♦ HTML5: ability to hide Parallels Client download link.
  ♦ HTML5: ability to override post logon message.

• **New:** RDSH Groups and auto provisioning of RDSH from a template
  ♦ An RDSH group can now make use of a VDI template to auto provision servers depending on the need.
  ♦ An RSDH server can only reside in to a single RDSH group.

• **New:** VDI Improvements
  ♦ VDI Host agent is now installed together with Publishing agent.
  ♦ VDI Host agent can now manage multiple VDI hosts.
  ♦ Retain guest VM MAC address on recreation.
  ♦ VM Guest counter is now unique per template rather than a global value.
  ♦ Ability to specify a number of guests to be cloned once after template creation.
  ♦ Enhanced clone preparation stability.
  ♦ Improved VDI sessions information and management.
  ♦ Ability to retrieve guest VM logs from RAS Console.
  ♦ Updated VDI appliance OS to TurnKey Linux 14.2 (Debian Linux 8 (Jessie))
  ♦ Deprecated support of Windows XP and Windows Vista.

• **New:** Improved RAS Console UX improvements:
  ♦ Improved representation of performance metrics in the Farm \ Site view.
  ♦ Added Disk access counters in Site view.
  ♦ Ability to update a set of agents during a RAS administration session.
  ♦ RDSH UPD settings
    - The Designer has been relocated under the Site category.
    - Ability to import and export Published applications filtering by MAC address.
    - Ability to import and export Farm Audit Settings processes.
    - New publishing device OS filtering.
    - Validation of property sheet is triggered only when the OK button is clicked.
  ♦ Client version column in the Client manager category now display additional information to distinguish portable version of the client.
  ♦ Suppress "Applying Settings window" for admins with view permissions only.
  ♦ Ability to configure HTTP proxy settings from the Administration category.
  ♦ Ability to replicate application target information across all servers and sites.
  ♦ New: Ability to revert settings changes.

• **New:** Share universal printer driver instance for same printer type.
• **New:** Ability to browse and publish existing App-V applications available on RDS hosts.

• **New:** Added system performance counters to RAS secure proxy gateway, RAS publishing agents and RAS RDSH agent.

• **Improved:** Shell detection for grouping applications.

• **Improved:** Reduced the size of RAS appliances.

**HTML5 Gateway:**

- Redesigned user interface.
- Added support for the following policies: "Remote audio recording", "Prohibit change password", "Redirect URLs/MAILTO to the client device", "Keyboard Mode", "Allow file transfer command", "Allow clipboard redirection".

• **New:** Drag & Drop will upload files to the remote server.

• **New:** Ability to launch applications in a separate browser tab.

• **Improved:** CredSSP protocol updated to mitigate against CVE-2018-0886.

• **Improved:** Session persistence is now based on cookies.

• **Improved:** Shortcut keys for desktop session rearranged.

**HALB v16.5.0.20261**

• **New:** Updated HALB appliance OS to TurnKey Linuz 14.2 (Debian Linux 8 (Jessie))

**RAS PowerShell v16.5.0.20263**

• **New Commands:**
  - Invoke-RDSProcessCmd - Sends an RDS Process command (Cmds: Kill).
  - Invoke-RDSSessionCmd - Sends RDS session commands.
  - Invoke-PAPromoteToMaster - Promote to Master of a RAS Publishing Agent server.
  - Set-PAPriority - Change priority of a RAS Publishing Agent server.
  - Invoke-VDISessionCmd - Sends VDI session commands.
  - Invoke-VDITemplateCmd - Invokes a VDI template command (Cmds: EnterMaintenance, ExitMaintenance, RecreateGuests).
  - Add-PubAppFileExt - Adds a file extension for the specified published application.
  - Remove-PubAppFileExt - Removes a file extension for the specified published application.
  - Copy-PubItem - Copies/duplicates a Published item.
  - Move-PubItem - Moves a Published item.
  - Invoke-PubItemCmd - Invokes a Published item command (Cmds: SortFolder).
  - Set-PubItemClientOSFilter - Modifies the filter of type 'Client OS' for the specified published resource.
  - Get-PubItemIcon - Retrieves a published icon and save it to a file path
  - Get-RASPrintingSettings - Retrieves the Parallels RAS Universal Printing settings.
  - Set-RASPrintingSettings - Update RAS Universal Printing settings.
  - Get-RASScanningSettings - Retrieves the Parallels RAS Universal Scanning settings.
  - Set-RASScanningSettings - Update RAS Universal Scanning settings.
  - Add-RASPrintingAutoInstallFont - Adds an Auto install font to Parallels RAS Universal Printing settings.
- Remove-RASPrintingAutoInstallFont - Removes an Auto install font from Parallels RAS Universal Printing settings.
- Get-LicenseDetails - Retrieves Parallels RAS license details.
- Invoke-ClearRASAgentLogs - Removes the Log file of one or more RAS Agents.
- Invoke-RetrieveRASAgentLogs - Retrieve the Log files of one or more RAS Agents.
- Set-RASAgentLogLevel - Updates the Log Level of one or more RAS Agents.
- New-RASFarm - Creates a new RAS Farm setup on the specified server
- Remove-RASFarm - Removes a RAS Farm currently connected to.
- Get-RASSystemSettings - Get the RAS system settings
- Set-RASSystemSettings - Updates the RAS system settings

• Improved Commands:
  - Set-RDS - Added new parameters.
  - Set-RDSDefaultSettings - Added new parameters.
  - Set-GW - Added new parameters.
  - Set-PA - Added new parameters.
  - Set-PubFolder - Can pass '.ico' for -icon param.
  - Set-PubRDSApp - Added new parameters & can pass '.ico' for -icon param.
  - Set-PubRDSDesktop - Can pass '.ico' for -icon param.
  - Set-PubVDIAp - Can pass '.ico' for -icon param.
  - Set-PubVDIDesktop - Can pass '.ico' for -icon param.
  - New-PubFolder - Added new parameters & can pass '.ico' for -icon param.
  - New-PubRDSApp - Added new parameters & can pass '.ico' for -icon param.
  - New-PubRDSDesktop - Added new parameters & can pass '.ico' for -icon param.
  - New-PubVDIAp - Added new parameters & can pass '.ico' for -icon param.
  - New-PubVDIDesktop - Added new parameters & can pass '.ico' for -icon param.
  - New-VDITemplate - Added functionality to convert a VM into a template (previously was required to be a VDIGuest).
  - Set-RASFarmSettings - Added new parameters.
  - New-RDSGroup - Added RDSH template parameters.
  - Set-RDSGroup - Added RDSH template parameters.
  - Add-RDSGroupMember - Added check that can only add standalone RDS servers (not from template).
  - Remove-RDSGroupMember - Added check that can only remove standalone RDS servers (not from template).
  - Set-RASLBSettings - Fixed Load Balancing method type, was bool and now enum with proper values.
  - Add-PubItemUserFilter - Accepts an SID of the user/group account to add for the filter.
  - Remove-PubItemUserFilter - Accepts an SID of the user/group account to remove from the filter.
  - New-RASSession - added connection retries.

• Fixed Commands:
  - Invoke-ExportSettings - Fix export with UNC path.
  - Invoke-ImportSettings - Fix import with UNC path.
  - Get-InvitationEmailSettings - Renamed command (Before was: Get-RASInvitationSettings).
  - Set-InvitationEmailSettings - Renamed command (Before was: Set-RASInvitationSettings).
  - Send-InvitationEmail - Renamed command (Before was: Invoke-SendRASInvitation).
  - Send-TestEmail - Renamed command (Before was: Invoke-TestMailboxSettings).

Parallels Client (Windows) v16.5.0.20264

• New: Add an option to show pinned/unpinned, or hide connection bar for desktop sessions.
• New: Support for FIPS 140-2 compliance (64 bit client only).
• **New:** Support multiple certificates on a smart card.
• **New:** Display password requirements when changing active directory password.
• **New:** Deprecated support of Windows XP and Windows Vista.

• **Improved:** Updated trusted.pem root certificates.
• **Improved:** Task-bar application grouping
• **Improved:** No flashing of windows security pop up during smartcard logon.

**Parallels Client (Linux) v16.5.0.20267**

• **New:** Support for FIPS 140-2 compliance (Linux 32-bit and Linux ARMv7).
• **New:** Policies - Add support for "Enable extended logging".
• **New:** Policies - Support for more granular options.

• **Improved:** Updated trusted.pem root certificates.

**Parallels Client (Mac) v16.5.0.20266**

• **New:** Policies - Add support for "Enable extended logging".
• **New:** Drag'n'Drop support for files in RTFD format

• **Improved:** Updated trusted.pem root certificates.

• **Fixed:** Save Password does not work when authenticating with different domain from NetBIOS.
• **Fixed:** Icon of a published Firefox app appears with a black background.
• **Fixed:** Change keychain entry name from "2X Client" to "Parallels Client".
• **Fixed:** Possible crash when remote application window is closed.

**Parallels Client (iOS) v16.5.20218**

• **New:** Policies - Add support for "Enable extended logging".
• **New:** Policies - Support for more granular options.
• **New:** Automatic logoff from a RAS farm after prolonged inactivity.
• **New:** Quick screen zoom by double-tapping in Dumbo mouse mode.
• **New:** Ability to pin keyboard on the screen.

• **Improved:** On-screen toolbar appearance.

• **Fixed:** Copy-paste of a text in RTF format from a remote session to a local app on iOS 11.
• **Fixed:** Possible crash on RAS connection removal if a policy has been pushed from it.
• **Fixed:** Remote session doesn't lock in portrait or landscape orientation.
• **Fixed:** Possible crash on connections import.

**Parallels Client (Android) v16.5.20218**

• **New:** Policies - Add support for "Enable extended logging".
• **New:** Policies - Support for more granular options.
• **New:** Automatic logoff from a RAS farm after prolonged inactivity.
• **New:** Quick screen zoom by double-tapping in Dumbo mouse mode.
• **New:** Ability to pin keyboard on the screen.
• **New:** Keyboard "Text" mode: send whole words and phrases to a remote session.

• **Improved:** On-screen toolbar appearance.

• **Fixed:** Possible crash when setting custom resolution for a remote session.
• **Fixed:** Possible crash when scrolling through published applications.
• **Fixed:** Default apps in Contacts are replaced with Client.
• **Fixed:** Crash on Android 8 after adding published item shortcut to a Home screen.
• **Fixed:** Crash on Android 8 if Client is minimised while on published items screen.

**Parallels Client (Chrome App) v16.5.0.20261**

• **New:** Connection properties advanced settings - reconnection support.
• **New:** Policies - Add support for "Reconnection".
• **New:** Policies - Add support for "File transfer command".
• **New:** Support for remote audio recording (not supported for accelerated client).

• **Improved:** CredSSP protocol updated to mitigate against CVE-2018-0886.
• **Improved:** Updated trusted.pem root certificates.

**VDI Appliance v16.5.0.20261**

• **New:** Updated HALB appliance OS to TurnKey Linuz 14.2 (Debian Linux 8 (Jessie))

**Reporting v16.5.0.20264**

**CloudPortal v16.5.0.20264**

**RAS Performance Monitor v16.5.0.20261**

• **New:** Added the following counter to the RAS Gateways:
  ♦ Cached Sockets.
  ♦ Wyse connections over SSL.
  ♦ Wyse connections.
  ♦ Client Manager Connections over TCP SSL.
  ♦ Client Manager Connections over TCP.
  ♦ HTML5 Connections over SSL.
  ♦ HTML5 Connections.
  ♦ Redirected HTTPS.
  ♦ Redirected HTTP.
  ♦ UDP RDP Tunnels over DTLS.
  ♦ UDP RDP Tunnels.
  ♦ Tunneled RDP over SSL.
  ♦ Tunneled RDP.
Known Issues

- **Core**
  - Excluded fonts might still be embedded in print job.

- **RDSH**
  - Groups and auto provisioning of RDSH from a template
  - The agent status of a newly added RDSH host might be shown as "non verified".
  - Scheduled server group reboot does not include servers created from a RDSH template.

- **VDI**
  - Upgrade of VDI template might fail with error 'Guest agent didn't respond'.
  - Log message [E 06/00000039/TXXXX/PXXXX] dd-mm-yy hh:mm:ss - Failed to get persistent guest id for XXXXXXXX-XXXX-XXXX-XXXX-XXXX-XXXXX in host X, might shown in the log. Log can be ignored.
  - Guest VMs listing might fail on vCenter 6.5.0.
  - URL/email redirection does not work.
  - Console might hang on attempt to remove "failed to create" guest if AD is inaccessible.
  - Scheduled tasks to disable VDI hosts are ignored.

- **RAS Gateway**
  - A Gateways set in forwarding mode might result in a "non verified" state. Setting the gateway to the normal mode and back to the forwarding mode from RAS Console running on the gateway can fix the problem.

- **App-V**
  - Applications might fail to start if launched for the first time. Wait a few seconds and retrying to lunch the application solves the problem.

- **PowerShell**
  - Using New-VDITemplate with option -FolderNamePath will not generate VMs in the desired folder.

- **Parallels Client (iOS)**
  - If the Legacy client is also installed on a device HTML5 Client might detect and use it instead of using Parallels Client.
  - App Launcher might become empty if an idle RAS session has been logged off automatically.

- **Parallels Client (Chrome)**
  - Audio redirection might crash the client on low spec chromebooks.