Parallels Remote Application Server version 18 Release Notes

- Parallels Remote Application Server 18.0
- Parallels Remote Application Server 18.1
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Parallels RAS Core

RAS Core v18.3.4.22941 (10 March 2023)

- Improved: Allow changing timeout for network transactions between RAS Console and Connection Broker. Add detailed logs of the loading settings process.

- Critical Fix: Console might fail to complete the login process without restarting the redundancy service.
- Critical Fix: Controller service might stop responding after applying new settings.
- Critical Fix: CWE-15: External control of the system or configuration settings.

- Fixed: Schedule can stop working.
- Fixed: Client policies that use the "computer" criteria do not work.
- Fixed: Web authentication asks for standard credentials.
- Fixed: Synching of Connection Broker state fails when ID is larger than 7,000,000.
- Fixed: Redundancy service can fail to start servicing administration sessions due to corrupted files.
- Fixed: Potential crash when logging in using web authentication (SAML SSO) while remote applications are enabled on Windows Server 2022.
- Fixed: Automatic logon is not triggered when logging in using web authentication (SAML SSO) while remote applications are enabled on Windows Server 2022

RAS Core v18.3.3.22939 (29 November 2022)

- Critical Fix: Possible crash when using drive redirection cache driver.

- Fixed: Fast reconnecting to disconnected sessions might provide a new desktop.
- Fixed: RAS Console log file is not updated.

- Improved: Improved priority for RD Session Host Agent status when drain mode is enabled and a server reboot is pending.
- Improved: Ensure uniqueness for Application package IDs if all packages are deleted.
- Improved: Stability of the Connection Broker server.

RAS Core v18.3.2.22916 (9 August 2022)

- Improved: Ability to open UWP applications without RemoteApps mode. Requires an additional application argument.

- Critical Fix: Possible host crash due to the RasRdpFs.sys driver.

- Fixed: Invitation email is not sent when using Amazon SES as the SMTP provider.
- Fixed: After exiting the published application the floating language bar remains and the session is not closed.
- Fixed: In rare circumstances, a wrong high-resolution icon might be stored.

RAS Core v18.3.0.22908 (16 February 2022)

- Fixed: Possible crash when using FSLogix Profile Container in a Remote PC VDI Guest VM.
- Fixed: VDI Agent may show status of "Not Verified" under unstable network conditions.
- Fixed: No available resources error may occur when trying to access Remote PC VDI Guest VM.
- Fixed: In some scenarios, cloning from a template using Scale Computing HC3 as a VDI provider may fail.
- Fixed: When using Azure AD DS, user groups cannot be assigned to app groups available in the host pools.
- Fixed: In some scenarios, when using multiple Publishing Agents, RAS VDI Agent might remain in the "Synchronizing" state.

RAS Core v18.3.0.22894 (21 December 2021)

- New: Support for Windows 11 as a session host and for Parallels RAS back-end components.
- New: Support for Windows Server 2022 as a session host, Microsoft Hyper-V and for Parallels RAS back-end components.
- New: Ability to disable Device Manager functionality.

- Improved: Stability when using the Parallels RAS Console.
- Improved: Stability when using Device Manager for a large number of devices.

- Fixed: Inability to assign Azure Active Directory users to an Azure Virtual Desktop host pool when using Azure Active Directory Domain Services.
- Fixed: Bidirectional drag and drop is not working as expected for some applications and formats.
- Fixed: Attempts to print a file with a custom page size from Parallels Client for Mac may lead to an error.
- Fixed: Some users may see "The location folder is not available" when trying to download a file from RD Session Hosts in the Parallels HTML5 client.

RAS Core v18.2.0.2.22867 (7 December 2021)

- Fixed: In certain scenarios, deadlocks may be experienced when session counters are read from session hosts. This may result in RAS Agents failing to accept new connections and showing the "Not Verified" state.

RAS Core v18.2.0.22866 (16 November 2021)

- Fixed: When SAML SSO is used and issuing Certificate Authority is configured to force UTF-8 encoding, user's attempts to log in to Session Hosts fail.
- Fixed: When using Parallels Clients prior to version 18.2, RDP UDP tunneling may cause user session disconnections.

- Improved: Support for the latest FSLogix 2105 HF_01 (2.9.7979.62170) which is available directly from the "Install online" option.
- Improved: Handling of RDP UDP sessions.

RAS Core v18.2.0.22861 - 3 November 2021

- New: Preferred routing for published resources which allows control through which access layer machines a user session is created.
- New: Support for FSLogix version 2105.
- New: Ability to open application in full screen when using Wyse thin clients.
- New: Policy to control redirection of video capture devices that are plugged in during an active session.
- New: Allow opening reports by using the default browser.
- New: Ability to refrain from resolving user group names by adding the following registry entry HKLM\Software\Parallels\2XController\ResolveGroupNames = 0.
- New: Support for Nutanix Acropolis (AOS) 5.20 as a VDI provider.
- New: Support for Scale computing HC3 versions 8.6.5 and 8.8 as a VDI provider.

- Improved: Allow editing theme colors using hex value directly.
- Improved: All references to "Windows Virtual Desktop" were changed to "Azure Virtual Desktop".
- Improved: Various UI layouts and text was improved.
- Improved: Reduce the time required to synchronize the authentication tokens between multiple Publishing Agents.
- Improved: Increased security on port 20002 & 20003 of the RAS Publishing Agent.
- Improved: Error message when VDI Remote PC pool is out of resources with the message "A specific machine was not found. Please inform your system administrator".
- Improved: Current users' entries in the licensing page may not be automatically refreshed when administrator views the licensing page.
- Improved: CPU and memory counters sampling rate increased to reflect better the counter value.
- Improved: Increased timeout for SAML authentication.
- Improved: Force, by using a registry key, applications to use system command messages to change windows state (min, max, restore).

- Critical Fix: UDP tunneling broken when using Parallels Client 18.
- Critical Fix: RAS management console crashes when using "Upload System Report to Parallels..." or "Troubleshoot and Request Support..." commands.

- Fixed: RD Session Host schedule command on a group could fail to be triggered if a different RD Session Host group is disabled.
- Fixed: Forwarding Secure Client Gateway states after upgrades.
- Fixed: Incorrect change password complexity requirements are shown if user does not specify UPN suffix.
- Fixed: SSL certificates previously referenced in HALB configuration are not allowed to be deleted.
- Fixed: Reset console sessions may still show in the RAS management console.
- Fixed: UDP detection in the RAS management console might fail for non English operating system.
- Fixed: RD Session Host Autoscale settings controls do not fit in the UI for German and Russian languages.
- Fixed: Upgrade from Parallels RAS 17 version would switch user profile from UDP to none. Manual reconfiguration is required for already completed upgrades.
- Fixed: Grey window may appear instead of the published applications.
- Fixed: Possible crash in 2xController.exe when using Android devices.
- Fixed: active configuration is used.
- Fixed: Cloned VMs might disappeared from desktops view in the RAS management console when using Nutanix as a VDI provider.
- Fixed: Multi-tenancy configuration using SAML SSO might not work due to a conflict in identifying IdPs per tenant.
- Fixed: When publishing installed application within the RAS management console, the start in property might contain invalid information resulting in failure to launch the application.
- Fixed: Only the first certificate is used when importing IdP setting and there are multiple certificates available.
- Fixed: Installing RAS RD Session Host Agent can result in state "RDS role was not installed", if the server is not joined to a domain.
- Fixed: Administrator with Theme only permissions is not allowed control actions in the RD Session Host session page, while allowed in the global sessions page.
- Fixed: In case using Azure Virtual Desktop error "Resource Group. Please choose another resource group." might pop up while creating templates.
- Fixed: Azure Virtual Desktop session times out when autoscale commands are triggered on empty personal host pool.
- Fixed: Pushing a secondary Publishing Agent with a Secure Client Gateway might fail to install.
- Fixed: Guest VM may fail to recreate after changing of organizational unit in the template settings.
- Fixed: Legacy printing redirection (for non Windows client) might fail to redirect printers.
- Fixed: Google Authenticator MFA might request user to enroll again.
- Fixed: If Publishing Agent is in standby mode and only the Secure Client Gateway can connect to it, application launching might fail with error code 01/00000005.
- Fixed: Universal TWAIN scan might result in a black page.
- Fixed: Possible black printout when using non Windows client.
- Fixed: Upgrades from versions prior Parallels RAS 18.1 are automatically installing the WebAdministration service irrespective of the features installed.

- Fixed: Application Information tab might contain wrong information about shortcuts if the settings are inherited.

RAS Core v18.1.0.22733 (3 September 2021)

- Improved: Stability when using accelerated file retrieval (drive cache redirection) functionality.
- Improved: Resource utilization by reducing the unnecessary amount of log messages produced by the CPU load balancer.
- Improved: Scalability by providing an ability to completely switch off application monitoring.

- Fixed: In some scenarios, upgrade to version 18.1.22724 may get stuck.

RAS Core v18.1.0.22724 (23 August 2021)

- Fixed: Guest VM cloning may fail in an Active Directory with multiple Domain Controllers.
- Fixed: An Azure Virtual Desktop host cloned from a template may fail to join a host pool.
- Fixed: When using Remote PCs, automatically adding users to the "Remote Desktop Users" group may not always work.
- Fixed: When using Microsoft Azure as a provider with autoscale capability, new hosts are not added to the RD Session Host group as expected.

- Improved: Improved performance by removing unnecessary logs from the shell.log file.

RAS Core v18.1.0.22715 (28 July 2021)

- Fixed: Parallels RAS Console may crash when trying to update a RAS Agent from the "Site" view.
- Fixed: User groups configured when completing the new Guest Agent wizard are not added to the "Remote Desktop Users" group in the resulting Guest VM.
- Fixed: Template creation may fail due to an outdated RAS Guest Agent on the Guest VM when using Microsoft Azure as a provider.
- Fixed: Some RAS files may get deleted during the upgrade to version 18.0 or higher.

RAS Core v18.1.0.22707 (14 July 2021)

- New: The Sessions category to view all sessions from RD Session Hosts, VDI, Azure Virtual Desktop and Remote PC over VDI. In addition, the Resources tab has been added to the new category displaying all running published resources along with their respective session details.
- New: Self-service Remote PC access to auto-enroll a standalone Remote PC by user or programmatically by the Administrator.
- New: Azure Virtual Desktop features:
- Override host sizes created from a template per host pool.
- RDP Shortpath configuration at host (standalone), host pool and Site defaults levels.
- Support for SAML SSO when using Microsoft Azure as IdP and Parallels Client feature set configured in advanced mode.
- Template repair option.
- New: Computer management tools and troubleshooting menu available for VDI and Azure Virtual Desktop templates.
- New: Guest VM restart operation.
- New: Support for High Availability (HA) scenario for template distribution on several Microsoft Hyper-V hosts.
- New: Support for VMware ESXi 7.0 and VMware vCenter 7.0.
- New: Ability to reuse sequential numbers when naming VDI guest VMs or Azure Virtual Desktop hosts.
- New: The Details dialog window explaining a reason for the "Failed to create" status
- New: Bidirectional clipboard control with ability to enable or disable clipboard redirection for Client to Server or vice versa.
- New: Bidirectional file transfer control for HTML5 Client with ability to allow or deny upload or download.

- New: Ability to specify and force default upload or download location when using file transfer in HTML5 Client Portal.
- New: Multi-factor Authentication inclusion options for user/group, IP, MAC and Gateways.
- New: Maintenance mode for published resources showing “In maintenance” in the published resource’s display name with ability for Administrators to set a customized and localized message when a resource is launched by the user.
- New: Multiple IP addresses or DNS names may be specified in the Tenant Broker for a single Tenant.
- New: Certificate requests are created with SHA256 encryption.
- New: Added FSlogix exclusions to the Windows Defender Advanced Threat Protection (ATP) section in the automated image optimization feature.
- New: FSLogix Profile Container load status in the RAS Console.
- New: RAS policy to set client-side logging configuration including log level, start and duration for logging, viewing and clearing of logs.
- New: Logon control options update for the RD Session Hosts with a new option to configure persistent Drain after reboot.
- New: Support for Subject Alternative Name (SAN) when creating self-signed certificates or SSL certificate requests.
- New: Updated requirements for Not For Resale (NFR) licensed Parallels RAS Farms which are required to be running on a supported Parallels RAS version. For additional information, please see KB article https://kb.parallels.com/en/125180
- New: Added support for H.264/AVC 444 mode.

- Improved: Stability and security improvements.
- Improved: Scalability improvements supporting up to 1000 Remote PCs when using Remote PC as a VDI provider.
- Improved: Scalability improvements supporting up to 2000 VDI Guest VMs when using VMware vCenter as a VDI provider.
- Improved: Entering and exiting the maintenance mode is done as a background task.
- Improved: Ability to suppress SSL certificate warnings when using Dell Wyse devices.
- Improved: Additional scheduling options in the Device Manager scheduler with ability to specify days of the week to execute device power operations, and log or lock options.
- Improved: Administrator’s workflow when using templates with ability to directly assign to RD Session host groups or Azure Virtual Desktop host pools.
- Improved: Duplicates from RASAttachment.zip are excluded to minimize archive size.

- Fixed: In some scenarios, RAS Console may experience crashes when downloading Azure Virtual Desktop Agent.
- Fixed: In some scenarios, RAS Publishing Agent may experience crashes when upgrading from version 17.1 to 18.0 or when launching an RDP session from the Parallels Client for Android.
- Fixed: Unexpectedly high CPU usage by RAS VDI Agent.
- Fixed: Accidental BSOD on RD Session Host start when accelerated file retrieval (drive redirection cache) is enabled.
- Fixed: Incorrect "Cloning Failed" agent state reported by Guest VM agent or for non-cloned Guest VMs.
- Fixed: In certain scenarios, when using dynamic desktop access, users are not added to the Remote Desktop Users group.
- Fixed: VDI agent may hang due to lack of response from provider when using Nutanix as a VDI provider.
- Fixed: Installer starts Windows client under admin account that was used for elevation.
- Fixed: For certain applications, printing on Xerox 7830 printer from a specific tray was not successful.
- Fixed: Email invite option stays grayed out until at least one RD Session Host is added, even if published resources from VDI, Remote PC or Azure Virtual Desktop are already configured.
- Fixed: RAS RD Session Host agent may experience crashes if printing spooler hangs.
- Fixed: Application filtering may not work if UPN is longer than 21 characters.
- Fixed: Search logic for published resources when using the Publish from tab for individual servers scenario.
- Fixed: Unable to install secondary Publishing Agent to a Tenant broker farm.
- Fixed: Password cannot be changed if username is specified with alternative UPN suffix.
- Fixed: A reconnection between the Secure Client Gateway and the Publishing Agent may fail due to a socket leak.

- Fixed: Granting custom administrator permissions to view and manage sessions for one specific RD Session Host group allows the custom administrator to see sessions from all other agents in the farm.
- Fixed: Desktops being cloned simultaneously may fail to create when using Scale Computing as a VDI provider.
- Fixed: SSL certificate is not applying to RAS Secure Client Gateway when configured via Site defaults.
- Fixed: Parallels Client configured to use the Direct connection mode ignores the "Restrict direct desktop access to the following users" option.
- Fixed: When using RAS Universal Printing to print in PDF format, last page in document may be squeezed vertically.
- Fixed: In case one out of three Publishing Agents gets powered off abruptly, users are not able to reconnect to existing session running on a Guest VM.
- Fixed: In some cases, user is unable to reconnect to existing session and a new session is created.
- Fixed: In case “Publishing session timeout” is longer than 1 hour, power actions on Guest VMs are not carried out. (RAS-48165)
- Fixed: UPD configuration is not automatically disabled when FSLogix Profile Containers are enabled.
- Fixed: Unnecessary license reactivation notifications are sent from Tenant Broker.
- Fixed: Guest VM running Windows Server 2019 cannot be added as RD Session Host template when using Nutanix as a VDI provider.
- Fixed: Some RAS files may get deleted during upgrade from version 18.0.
- Fixed: After an upgrading to version 18.0 the licensing information shown in the RAS Console may not be correct and Peak Usage and Usage Today are not updated in real-time.
- Fixed: Clones may fail to create if template role is created on Microsoft Hyper-V cluster by SCVMM.
- Fixed: Multiple CPU utilization email notifications received at the same time.
- Fixed: Template might fail to distribute to standalone Hyper-V hosts managed by Microsoft SCVMM.

RAS Core v18.0.1.1.22497 (16 March 2021)

- Improved: Windows Virtual Desktop auto-scaling for pooled and personal host pools.
- Improved: Agent requirement when using Remote PCs.
- Improved: Extended range for HALB disconnects and timeout settings.
- Improved: Publishing Agent stability improvements.

- Fixed: High CPU usage by VDI Agent.
- Fixed: In some scenarios, Publishing Agent may occasionally display the "Not Verified" state or the service may experience crashes.
- Fixed: Guest VM Agent may experience crashes in RD Session Host over VDI scenario.
- Fixed: Published applications hosted on a Windows Server 2019 RD Session Host may not launch if the option "Use RemoteApp if available" is enabled.
- Fixed: In some scenarios, a remote user can connect to a Remote PC despite another locally logged in user.
- Fixed: In some scenarios, Guest VMs on Microsoft Azure may not be enumerated.
- Fixed: Incorrect Administrators' session names may show in the RAS Console.
- Fixed: Printer redirection may fail after an upgrade to version 18.0.
- Fixed: In some cases, Universal Printer adds an extra blank page.
- Fixed: When using several Secure Client Gateways accessed through HALBs, shutdown commands initiated from the Device Manager may not be successful.
- Fixed: Parallels Clients 17.1 are not allowed to launch published resources if FIPS is enabled.
- Fixed: Incorrect SSL extension error when using Dell Wyse ThinOS with RAS version 17.1 and above.
- Fixed: When using RAS Tenant Broker, published resources may not launch after an upgrade to version 18.0.
- Fixed: When using RAS Tenant Broker, HALB settings are not loaded correctly after an upgrade to version 18.0.
- Fixed: When using Microsoft Hyper-V as a VDI provider, Cluster Shared Folders can become unavailable for new templates.
- Fixed: After an upgrade from RAS version 17.0.1, RDP-UDP tunneling may stop working unexpectedly.
- Fixed: In rare scenarios, submitting the system report to Parallels may fail.

RAS Core v18.0.0.22346 (18 December 2020)

- Fixed: After an attempt to enter maintenance mode, Template used in VDI providers goes into "Not available" state in cases where VDI agent is connected to secondary Publishing Agent.
- Fixed: FSLogix version 2009 configuration fails in the Templated VDI Desktops scenario.
- Fixed: In some scenarios, Enrollment Server may get stuck in "Synchronizing" state.
- Fixed: In rare scenarios, RAS management console may crash.
- Fixed: In case of using Web or SAML authentication, logon does not complete due to a crash in the Publishing Agent.

RAS Core v18.0.22341 (16 December 2020)

- New: System Requirements Updates and Deprecations:

Publishing Agent is supported on Windows Server 2008 R2 and above.
Secure Client Gateway is supported on Windows Server 2008 R2 and above.
VDI Agent is supported on Windows Server 2008 R2 and above.
Microsoft Hyper-V or Hyper-V cluster as a VDI provider is supported on Windows Server 2012 R2 and above.
Discontinued support for Standalone VDI Agent Appliance.
Discontinued support for Citrix Hypervisor as a VDI Provider.
Discontinued support for QEmu KVM with Libvirt as a VDI Provider.
Discontinued support for Deepnet Server provider under Deepnet configuration.
Removal of built-in Turbo.net public repository integration in the RAS Console.
New: Microsoft Windows Virtual Desktop Integration with ability to configure and manage Windows Virtual Desktop resources from the RAS console and user access from the Parallels Client. New core capabilities include:
Adding of Providers and new or existing Workspaces.
Adding of new or existing pooled (multi-session) or personal (single-session) host pools.
Adding and managing of session hosts to host pools.
Creating and managing Templates from custom hosts, Azure Marketplace or Shared Image Gallery.
Auto-scaling of session hosts within host pools. (Experimental)
Universal printing and scanning integration and Drive cache redirection.
Session details and management.
Scheduler to disable or reboot session hosts.
Publishing of Windows Virtual Desktop Applications and Desktops from multi-session or single session hosts.

- New: Web-based Management Portal as an evolution from the Helpdesk Management Tool, including additional support and configuration for the following components:

Farm Settings, Site Settings and Site Defaults
Publishing Agent
Secure Client Gateways
SSL Certificate Manager
RD Session Hosts
Publishing resources from RD Session Hosts
Universal Printing and Scanning
Connection Settings
Active Directory Authentication
Multi-Factor Authentication
Licensing
Help and Support

- New: FSLogix Profile Containers integration in the RAS Console to deploy, configure and manage FSLogix on RD Session Hosts, VDI and Windows Virtual Desktop session hosts.
- New: UX Evaluator and advanced session metrics including logon duration, logon duration breakdown, connection quality and latency, reconnects, incoming and outgoing data, bandwidth usage and availability, and more.
- New: Automated Image Optimization for RD Session Hosts, VDI and Windows Virtual Desktop multi-session or single session hosts.

- New: VDI Features:

Ability to distribute a single Template to several standalone Microsoft Hyper-V hosts.
Ability to set a default power state for new clones created from a template.
MAC addresses' pool management capability for Microsoft Hyper-V Cluster.

- New: Accelerated file retrieval with drive cache redirection capability.
- New: CPU Optimization (previously known as CPU Load Balancer) with granular control.
- New: Parallels RAS Client policies to control high level camera redirection, touch pointer device redirection and RemoteFX USB redirection.
- New: Custom Security Verification methods when using RADIUS as MFA provider.
- New: Added support for RDP-UDP tunneling over third-party load balancers.
- New: RAS Console embedded browser, based on Edge. Optionally the RASBrowserPlugin.msi can be installed.
- New: Time-based One-Time Password (TOTP) tolerance when using Google Authenticator or any other TOTP MFA provider.
- New: MFA RADIUS configuration supports second RADIUS Hostname/IP address for High Availability in Active/Active or Active/Passive mode.
- New: Ability to exclude specific published resources from session prelaunch.

- Improved: Stability and Scalability improvements supporting up to 2000 guests VMs running on Microsoft Hyper-V Cluster in the same Parallels RAS Site.
- Improved: Upgraded to OpenSSL 1.0.2u.
- Improved: Updated SQLite & SQLCipher to v4.
- Improved: Updated XRDP to 0.9.12.
- Improved: SAML Configuration by showing Service Provider details during configuration.
- Improved: Proxy Authentication to support empty logon credentials.
- Improved: RDP tunneled session count to include sessions connecting through HTML5 Gateway.
- Improved: RDP Session load balancing algorithm.
- Improved: Internal protocol used for redundancy service communication update to use TLS.
- Improved: Agent update status.
- Improved: Wake-On-Lan (WoL) working across subnets.
- Improved: Updated EULA.
- Improved: Licensing trial information.

- Critical Fix: Settings synchronization issues between multiple Publishing Agents.

- Fixed: SAML authentication with users in OUs with special characters.
- Fixed: Console enables Apply settings when not required.
- Fixed: Application auditing is disabled when "Enable application monitoring" is switched off.
- Fixed: Saving of RAS Console credentials when accessed as a published application.
- Fixed: Published applications that make use of taskbars.
- Fixed: Published application's "Save As" location.
- Fixed: Sometimes session disconnections occur when using Microsoft Remote Desktop Client.
- Fixed: Microsoft Excel might not print properly if "Fit Sheet on One Page" option is enabled.
- Fixed: Domain name is mandatory while registering a Remote PC VDI provider.
- Fixed: Remote PCs from different subnets can be added to a static Remote PC VDI provider.
- Fixed: Guest VMs might disappear from the Desktops tab in the RAS console after live migration on Microsoft Hyper-V Cluster.
- Fixed: Published resources might not be launched from a dynamic Remote PC VDI Provider.
- Fixed: Remote user might connect a Remote PC despite another locally logged in user.
- Fixed: Remote PCs list might not be imported properly.
- Fixed: Guest connection timeout option may not work as expected.
- Fixed: RAS console might crash while updating RAS Guest Agents.
- Fixed: VDI pool may not be available for publishing.

RAS REST API

RAS REST API v18.3.4.22941 (10 March 2023)

- Critical Fix: CWE-23: Relative path traversal.

RAS REST API v18.3.22894 (21 December 2021)

- Improved: Pre-logon message length set in PreLogonMessage has been extended to accept up to 500 characters.

RAS REST API 18.2.0.22861 (3 November 2021)

- New functionality to configure Notifications and scripts:

/api/NotificationDefaultSettings: Get, Update
/api/NotificationScripts/{id}: List, Get, Create, Update, Delete
/api/Notifications/{id}:Get, Delete
/api/Notifications/{id}/Events List, Get, Create, Update, Delete
/api/Notifications/{id}/Resources List, Get, Create, Update, Delete

- New functionality to configure mailbox settings:

/api/MailboxSettings: Get, Update
/api/MailboxSettings/Test: Send test mail

- New functionality to configure mailbox settings:

/api/MailboxSettings: Get, Update
/api/MailboxSettings/Test: Send test mail

- New functionality to create and send a system report:

/api/Support/SendSystemReport: Send report to support
/api/Support/SendSupportRequest: Send report with email
/api/Support/DownloadReport: download report

- New functionality to configure PubItem routing:

/api/PubItems/{id}/PreferredRoute: List, Get, Create, Update, Delete

- New functionality to configure Custom routes:

/api/CustomRoutes/{id}: List, Get, Create, Update, Delete

- Added properties to PubItem, PubFolder, PubRDSApp, PubRDSDesktop, PubVDIApp, PubVDIDesktop:

PreferredRoutes
PreferredRoutingEnabled

- Added property to GW and HALB:

PublicAddress

- Added properties to RAS License:

AlertMessage

NeedsAttention
StatusMessage

- Added property to PubDefaultSettings and PubRDSApp:

StartFullscreen

- Improved RAS License activation and PA Promotion:

Ability to pass the mac address to bind the license with.

- Improved adding of RAS Administrators:

Ability to create an account using AD user SID.

RAS REST API 18.1.0.22707 (14 July 2021)

- New functionality to retrieve VDI Template Status:

/api/VDITemplate/{id}/Status: Get, List

- New functionality to configure CPU Optimization Settings:

/api/CPUOptimizationSettings: Get, Update

- New functionality to configure Static Remote PCs in a Provider:

/api/Provider/{id}/RemotePCStatic: List, Create, Get, Delete

/api/Provider/{id}/RemotePCStatic/Import: Import

/api/Provider/{id}/RemotePCStatic/{remotePCStaticId}: Update, Delete

- New functionality to retrieve VDI Template Status:

/api/VDITemplate/Status: List, Get

- New functionality to manage RAS Agents:

/api/Agent: List, Get, Update, Delete

/api/Agent/Logs: Get, Delete, Update

/api/Agent/Diagnostic/PA

/api/Agent/Diagnostic/GW

/api/Agent/Diagnostic/RDS

/api/Agent/Diagnostic/Provider

/api/Agent/Diagnostic/Guest

/api/Agent/Diagnostic/HALBDevice

- New functionality to configure LB Settings:

/api/LBSettings: Get, Update

- New functionality to configure Themes

/api/Theme: Create, Get, List, Update, Delete

/api/Theme/{id}/GroupFilter: Add, List, Delete

/api/Theme/{id}/FooterURL: Add, List, Delete

/api/Theme/{id}/Image: Get, Update

- New functionality to configure HALB Virtual Servers and Devices:

/api/HALB: Create, List, Update, Delete

/api/HALB/Device: Add, List, Update, Delete

/api/HALB/Status: Get, List

- New functionality in Client Polices:

/api/ClientPolicies/{id}/order: modify order

/api/ClientPolicies/{id}/UserGroup: Get, List, Update, Delete

- New functionality to get Published item status:

/api/PubItems/status

- New functionality to Restart a Virtual machine:

/api/Provider/{providerId}/VM/{id}/Restart

- Added File Transfer properties to RDS, GW, GWDefaultSettings, RDSGroup, DefaultSiteSettings
- Added MachineId to: GWSysInfo, RDSSysInfo, PASysInfo, SiteSysInfo, ProviderSysInfo, AgentInfo
- Added Maintaninance properties to Published items
- Added AlternateNames to RASCertificate
- Added properties to ClientPolicy:

Logging (AllowViewLog, AllowClearLog, , LoggingEnabled, LoggingDuration, LoggingStartDateTime)

LocalProxy(LocalProxyAddressEnabled, UseLocalHostProxyIP)

ClipboardDirection

OpenBrowserOnLogout

- Added properties to Provider:

AuthenticationURL

ResourceURI

ManagementURL

- Added properties to RDSGroup:

DrainRemainsBelowSec

MinServersFromTemplate

- Added RestrictionMode property to RAS2FASetting
- Added properties to GW and GWDefaultSettings:

CipherPreference

CORS (AllowCORS, AllowedDomainsForCORS)

BrowserCacheTimeInMonths

DisableWyseCertWarn

ClipboardDirection

Added properties to ClientRules

- RembemberLastUsedMethod
- RedirectClipboard
- RedirectFileTrans
- Added RestrictionMode property to TwoFactorAuthSetting
- Extended RDSession properties with further session details

RAS REST API v18.0.1.1.22490 (16 March 2021)

- New REST API call to manage TOTP users:

api/TOTP/User/

- Added AdminCreate, AdminLastMod, TimeCreate, and TimeLastMod properties to the following objects:

Admin Account, Client Rules, GW, Notifications Event Notification Resource, Notification Script, PA, Provider, PubFolder, PubRDS Desktops, PubVDI Desktops, PubRDS Apps, PubVDI AppsRASPower Permission, RDS, RDS Groups, RDS, Sched Item, RDS Sched Server Group Disable Item, RDS Sched Server Group Reboot Item, Site, Provider, VDI Template, VDI Provider and VDI Pool.

RAS REST API 18.0.0.22341 (16 December 2020)

- New RD Session Host management:

/api/rds/enablelogons

/api/rds/drainuntilrestart

/api/rds/drain

/api/rds/disablelogonsandreconnections

/api/rds/installtsrole

/api/rds/reboot

/api/rds/cancelpendingreboot

/api/rds/canceldisabledstate

/api/rds/shutdown

- New functionality when adding RAS component:

/api/site: Added noRestart noFireWallRules parameters

/api/gw: Added noRestart noFireWallRules parameters

/api/pa: Added noRestart noFireWallRules parameters

/api/rds: Added noFireWallRules noDesktopExperiance noTerminalServices addUsersToRDSUsers parameters

/api/VdiGuest: Added noRestart noFireWallRules parameters

/api/Provider: Added noRestart noFireWallRules noDesktopExperiance noTerminalServices noAllowRemoteConnections addUsersToRDSUsers parameters

- New functionality to clear cached sessions for authenticated RAS Clients:

/api/ConnectionSettings/ClearSessionCache

- New functionality to retrieve Permissions of the logged Admin:

/api/Session/CurrentAdminPermissions

- New functionality to configure Performance Monitor Settings:

/api/PerformanceMonitor: Get, Update

- New functionality to configure Reporting Settings:

/api/Reporting: Get, Update

- New functionality to configure RAS Client policies:

/api/ClientPolicies:List, Create, Get, Update, Delete

/api/ClientPolicies/{id}/MACFilters: Create, Delete

/api/ClientPolicies/{id}/Connections: List, Create,Get, Delete

/api/ClientPolicies/export:Export a RAS Client Policy to xml file.

/api/ClientPolicies/import:Import a Client Policy from a xml file.

- New functionality to configure and manage a VDI Provider:

/api/Provider:List, Create, Get, Update, Delete

/api/Provider/{id}/Status

/api/Provider/{id}/VM/{id}Get, Start, Stop, Suspend, Reset

/api/Provider/{id}/VM/{id}/Guest:List, Create, Get, Update, Delete

/api/Provider/{id}/VM/{id}/Guest/User: List, Create, Get, Delete

/api/Provider/{id}/VM/{id}/Guest: Status, LogOff, Disconnect, SendMsg

/api/Provider/{id}/VM/{id}/Guest/Process/{pId}Get, Kill

/api/VDIGuestDefaultSettings: Get, Update

/api/VDIPool:List, Create, Get, Update, Delete

/api/VDIPool/{vdiPoolId}/Members/{id?} Create, Get, Delete

/api/VDITemplate: List, Create, Get, Update, Delete

/api/VDITemplate/{id}/LicenseKey: Create, Get, Update, Delete

/api/VDITemplate/{id}: EnterMaintenance, ExitMaintenance, RecreateGuests, CreateGuests

/api/VDITemplate/{id}/Guests

/api/PubItems/Apps/VDI: List

/api/PubItems/{id}/Apps/VDI: Create, Get, Update, Delete

/api/PubItems/Desktops/VDI:List

/api/PubItems/{id}/Desktops/VDI Create, Get, Update, Delete

- New functionality to configure FXLogix:

/api/FSLogix: Get, Update

/api/FSLogix/UploadInstall: Upload FSLogix setup

/api/RDS/{id}/FSLogix/ProfileContainer: Get, Update

/api/RDS/{id}/FSLogix/ProfileContainer/FolderExclusion: List, Create, Get, Update, Delete

/api/RDS/{id}/FSLogix/ProfileContainer/UserExclusion: List, Create, Get, Update, Delete

/api/RDSGroups/{id}/FSLogix/ProfileContainer: Get, Update

/api/RDSGroups/{id}/FSLogix/ProfileContainer/FolderExclusion: List, Create, Get, Update, Delete

/api/RDSGroups/{id}/FSLogix/ProfileContainer/UserExclusion: List, Create, Get, Update, Delete

/api/RDSDefaultSettings/{id}/FSLogix/ProfileContainer: Get, Update

/api/RDSDefaultSettings/{id}/FSLogix/ProfileContainer/FolderExclusion: List, Create, Get, Update, Delete

/api/RDSDefaultSettings/{id}/FSLogix/ProfileContainer/UserExclusion: List, Create, Get, Update, Delete

/api/VDITemplate/{id}/FSLogix/ProfileContainer: Get, Update

/api/VDITemplate/{id}/FSLogix/ProfileContainer/FolderExclusion: List, Create, Get, Update, Delete

/api/VDITemplate/{id}/FSLogix/ProfileContainer/UserExclusion: List, Create, Get, Update, Delete

/api/VDIGuestDefaultSettings/{id}/FSLogix/ProfileContainer: Get, Update

/api/VDIGuestDefaultSettings/{id}/FSLogix/ProfileContainer/FolderExclusion: List, Create, Get, Update, Delete

/api/VDIGuestDefaultSettings/{id}/FSLogix/ProfileContainer/UserExclusion: List, Create, Get, Update, Delete

- Improved TOTP user management:

api/TOTP/User/ Post Import a set of TOTP users from a csv file. usersCsv SiteId

api/TOTP/User/ Delete Reset all or specific users. Users, AllUsers, SiteId

api/TOTP/User/ Search for users by pattern Like, SiteId

RAS Powershell

RAS Powershell v18.3.0.22894 (21 December 2021)

- Improved: Pre-logon message length set in PreLogonMessage has been extended to accept up to 500 characters.

RAS Powershell v18.2.0.22861 (3 November 2021)

- New cmdlets to configure preferred routing:

Add-RASPubItemPreferredRoute

Get-RASPubItemPreferredRoute

Set-RASPubItemPreferredRoute

Remove-RASPubItemPreferredRoute

- New cmdlets to configure custom routes:

Get-RASCustomRoute

New-RASCustomRoute

Remove-RASCustomRoute

Set-RASCustomRoute

- New cmdlet to duplicate client policies:

Invoke-RASDuplicateClientPolicy

- Added properties to PubItem, PubFolder, PubRDSApp, PubRDSDesktop, PubVDIApp, PubVDIDesktop:

PreferredRoutes

PreferredRoutingEnabled

- Added property to GW and HALB:

PublicAddress

- Added properties to RAS License:

AlertMessage

NeedsAttention

StatusMessage

- Added property to PubDefaultSettings and PubRDSApp

StartFullscreen

- Improved RAS License activation and PA Promotion

Ability to pass the mac address to bind the license with.

- Improved adding of RAS Administrators

Ability to create an account using AD user SID.

- Improved: Get-RASAdminAccount Added warning when user cannot be resolved.
- Fixed: Invoke-Apply FullSync might time out.
- Fixed: When using Set-RASPubItemUserFilter or Add-RASPubItemUserFilter, Remote PC is unchecked from Published From tab.

RAS Powershell v18.1.0.22707 (14 July 2021)

- New cmdlets to configure HALB Virtual Server and Devices

New-RASHALB

Get-RASHALB

Set-RASHALB

Remove-RASHALB

Add-RASHALBDevice

Get-RASHALBDevice

Set-RASHALBDevicePriority

Remove-RASHALBDevice

Get-RASHALBStatus

- New cmdlets to configure Themes

New-RASTheme

Get-RASTheme

Set-RASTheme

Remove-RASTheme

Add-RASThemeFooterURL

Get-RASThemeFooterURL

Remove-RASThemeFooterURL

Add-RASThemeGroupFilter

Get-RASThemeGroupFilter

Remove-RASThemeGroupFilter

Get-RASThemeImage

- New cmdlets to configure Client Policies

Add-RASClientPolicyUserGroup

Get-RASClientPolicyUserGroup

Remove-RASClientPolicyUserGroup

Set-RASClientPolicyOrder

- New cmdlets to configure Static Remote PCs

Add-RASProviderRemotePCStatic

Get-RASProviderRemotePCStatic

Set-RASProviderRemotePCStatic

Remove-RASProviderRemotePCStatic

Invoke-RASImportProviderRemotePCStatic

- New cmdlet to retrieve the status of a Published resource

Get-RASPubItemStatus

- New cmdlet to retrieve the status of a VDI Template

Get-RASVDITemplateStatus

- The new cmdlet to restart a virtual machine

Restart-RASVM

- New cmdlet to retrieve the diagnostic information on a RAS Agent

Get-RASAgentDiagnostic

- Improved terminology: Changed Master to Primary
- Renamed Invoke-RASPAPromoteToMaster to Invoke-RASPAPromoteToPrimary
- Added File Transfer properties to RDS, GW, GWDefaultSettings, RDSGroup, DefaultSiteSettings
- Added MachineId to: GWSysInfo, RDSSysInfo, PASysInfo, SiteSysInfo, ProviderSysInfo, AgentInfo
- Added Maintaninance properties to Published items
- Added AlternateNames to RASCertificate
- Added properties to ClientPolicy

Logging (AllowViewLog, AllowClearLog, , LoggingEnabled, LoggingDuration, LoggingStartDateTime)

LocalProxy(LocalProxyAddressEnabled, UseLocalHostProxyIP)

ClipboardDirection

OpenBrowserOnLogout

- Added properties to Provider

AuthenticationURL

ResourceURI

ManagementURL

- Added properties to RDSGroup

DrainRemainsBelowSec

MinServersFromTemplate

- Added RestrictionMode property to RAS2FASetting
- Added properties to GW and GWDefaultSettings

CipherPreference

CORS (AllowCORS, AllowedDomainsForCORS)

BrowserCacheTimeInMonths

DisableWyseCertWarn

ClipboardDirection

- Added properties to ClientRules

RembemberLastUsedMethod

RedirectClipboard

RedirectFileTrans

- Added RestrictionMode property to TwoFactorAuthSetting
- Extended RDSession properties with further session details

RAS Powershell 18.0.1.1.22497 (16 March 2021)

- New PowerShell cmdlets to manage TOTP users:

Add-RASTOTPUsers

Reset-RASTOTPUsers

Find-RASTOTPUsers

- Added AdminCreate, AdminLastMod, TimeCreate, and TimeLastMod properties to the following objects:

Admin Account, Client Rules, GW, Notifications Event Notification Resource, Notification Script, PA, Provider, PubFolder, PubRDS Desktops, PubVDI Desktops, PubRDS Apps, PubVDI AppsRASPower Permission, RDS, RDS Groups, RDS, Sched Item, RDS Sched Server Group Disable Item, RDS Sched Server Group Reboot Item, Site, Provider, VDI Template, VDI Provider and VDI Pool.

RAS Powershell 18.0.0.22341 (16 December 2020)

- New Module: RASAdmin supporting version 1.0 and version 2.0
- New cmdlet to manage RDS Servers:
    - Invoke-RASRDSCmd
        - EnableLogons
        - DrainUntilRestart
        - Drain
        - DisableLogonsAndReconnections
        - InstallTSRole
        - Reboot
        - CancelPendingReboot
        - CancelDisabledState
        - Shutdown
- New cmdlet to clear the cached sessions for authenticated RAS Clients:
    - Invoke-RASClearSessionsIDCache
- New cmdlet to retrieve information about the current administration permissions:
    - Get-RASCurrentAdminPermissions
- New cmdlets to manage Performance Monitor Settings:
    - Get-RASPerformanceMonitorSettings
    - Set-RASPerformanceMonitorSettings
- New cmdlets to configure Reporting Settings:
    - Get-RASReportingSettings
    - Set-RASReportingSettings
- New cmdlets to configure client policies:
    - New-RASClientPolicy
    - Get-RASClientPolicy
    - Set-RASClientPolicy
    - Remove-RASClientPolicy
    - Add-RASClientPolicyMAC
    - Remove-RASClientPolicyMAC
    - Add-RASClientPolicyGW
    - Remove-RASClientPolicyGW
    - Get-RASClientPolicyConnection
    - Add-RASClientPolicyConnection
    - Remove-RASClientPolicyConnectionTOTP
    - Invoke-RASImportClientPolicy
    - Invoke-RASExportClientPolicy
- New cmdlets to configure RASFSLogix for RDS & Provider:

    - Get-RASFSLogixSettings
    - Set-RASFSLogixSettings
    - Get-RASFSLogix
    - Get-RASFSLogix
    - Add-RASFSLogixFolder
    - Get-RASFSLogixFolder
    - Set-RASFSLogixFolderExclusion
    - Remove-RASFSLogixFolder
    - Add-RASFSLogixUser
    - Get-RASFSLogixUser
    - Remove-RASFSLogixUser
- New cmdlets to configure CPU Optimization:
    - Get-RASCPUOptimizationSettings
    - Set-RASCPUOptimizationSettings
- New cmdlets to configure RADIUS Automation:
    - Get-RAS2FARadiusAutomation
    - Set-RAS2FARadiusAutomation
    - Addt-RAS2FARadiusAutomation

    - Remove-RAS2FARadiusAutomation

- Improved terminology: Changed VDIHost to Provider
    - Renamed New/Get/Set/Remove-VDIHost to New/Get/Set/Remove-Provider
- Improved cmdlets when adding RAS Components:
    - New-RASSite: Added -NoRestart -NoFireWallRules parameters
    - New-RASGW: Added -NoRestart -NoFireWallRules parameters
    - New-RASPA: Added -NoRestart -NoFireWallRules parameters
    - New-RASRDS: Added -NoFireWallRules -NoDesktopExperiance -NoTerminalServices -AddUsersToRDSUsers parameters
    - New-RASGuest: Added -NoRestart -NoFireWallRules -NoDesktopExperiance -NoTerminalServices -NoAllowRemoteConnections -AddUsersToRDSUsers parameters
    - New-RASProvider: Added -NoRestart -NoFireWallRules parameters

- Improved cmdlets for TOTP Users Management:

    - Add-RASTOTPUsers
    - Reset-RASTOTPUsers
    - Find-RASTOTPUsers

- Improved retrieval of Guests by adding a user filter:
    - Get-RASVDIGuest: Added User Parameter
- Improved Adding of icons with paths that include environment variables.

- Fixed: Guest VM state when adding by calling New-VDIGuest
- Fixed: Guest VM action Restart renamed to Reset

Management Portal

Management Portal v18.2.0.22861 (3 November 2021)

- New: Monitoring category in RAS Management Console is opened in kiosk mode and uses a matching theme color.
- New: Session counters threshold management (monitoring settings).
- New: Support for FSLogix version 2105.

- Improved: List objects State indicator improved with better color coding and text to describe the state.

Management Portal v18.1.0.22707 (14 July 2021)

- New: Web Administration Server is installed by default as part of RAS main installer.
- New: Support for running on a separate management server other then the Publishing Agent server.
- New: Dedicated Management Portal configuration page.
- New: UX Evaluator and advanced session metrics.
- New: Resources sub category providing the ability to view any running published resources.
- New: Recreate VDI Guest VM action.
- New: Check agent and Update agent actions.

- Fixed: Client IP address mismatch between the RAS Console and the Management Portal

Management Portal v18.0.0.22341 (16 December 2020)

- New: Web-based Management Portal as an evolution from the Helpdesk Management Tool, including additional support and configuration for the following components:

Farm Settings, Site Settings and Site Defaults

Publishing Agent

Secure Client Gateways

SSL Certificate Manager

RD Session Hosts

Publishing resources from RD Session Hosts

Universal Printing and Scanning

Connection Settings

Active Directory Authentication

Multi-Factor Authentication

Licensing

Help and Support

HTML5 Gateway

HTML5 Gateway v18.3.1.22908 (16 February 2022)

- New: Pen and touch input redirection with RAS policy support.

HTML5 Gateway v18.3.0.22894 (21 December 2021)

- Fixed: [RAS-53876] - Remote audio recording is not allowed when RAS policy "Enable recording (if applicable)" is enabled.

HTML5 Gateway v18.2.0.22861 (3 November 2021)

- New: Option to always ask for credentials when starting applications. Option can be managed by RAS policies.
- New: RAS policy support for RAS Universal Printing-related settings.
- New: Preferred routing support.

- Improved: Improve disconnect error messages.
- Improved: Improve clipboard by allowing Ctrl+C, Ctrl+V or direct input.

- Fixed: HTML5 client does not work access to the internet is restricted on HTML5Gateway component.
- Fixed: CVE2020-29227 - php attack could be reported although php is not used.
- Fixed: Printing might fail if print job has a large number of pages.

HTML5 Gateway v18.1.0.22724 (23 August 2021)

- Fixed: Security improvements.

HTML5 Gateway v18.1.0.22715 (28 July 2021)

- Fixed: RAS Secure Client Gateway may fail to connect to the HTML5 service, following an upgrade from version 18.0 to version 18.1.

HTML5 Gateway v18.1.0.22707 (14 July 2021)

- New: Ability to launch Azure Virtual Desktop resources from the Parallels HTML5 client portal using the Parallels Client for Windows.

- Improved: Security improvements.
- Improved: When using SAML SSO, log out capability added which enables use of multiple user connections from the same device.

- Fixed: Redirected URLs are cut off when using published applications.
- Fixed: Print preview opens in a new browser tab.
- Fixed: Printing does not work when using Mozilla Firefox version 86.
- Fixed: When trying to open a published desktop using the HTML5 Client API, the Login dialog window is shown with the username field disabled.
- Fixed: Display is not shown correctly when using full screen mode for Windows desktop launched through published Remote Desktop client.

HTML5 Gateway v18.0.1.1.22497 (16 March 2021)

- Improved: Reduced the size of JSON files storing all configured Themes.

- Fixed: Security vulnerability issue, CVE-2020-35710, disclosed in Parallels KB article https://kb.parallels.com/125322
- Fixed: In some scenarios, black artifacts are displayed when using HTML5 Client.
- Fixed: Secure Client Gateways may drop HTML5 client initiated sessions.
- Fixed: A remote application window cannot be restored after it's minimized.

HTML5 Gateway v18.0.0.22341 (16 December 2020)

- New: UX Evaluator and advanced session metrics.
- New: Custom Security Verification methods when using RADIUS as MFA provider.
- New: Auto Login when using chromium-based browsers such as Google Chrome and Microsoft Edge.
- New: Show applied RAS policy name and version.
- New: Ability to launch a specific published resource using "appid" as a new parameter used for bookmarks or launching resources from any third-party portal.
- New: Added support to configure login and password hints.
- New: Support for Dutch language.
- New: Added HTTP Security Headers: Feature Policy and Content Security Policy.
- New: Added support for RDP Network characteristics detection.
- New: Added optional cookie consent and EULA presentation.

- Improved: User Experience with the added support for RDP Graphics Pipeline Extension, ClearCodec, RemoteFX Progressive Codec, and Planar Codec.
- Improved: Use of a single tab in case of session takeover.

- Fixed: Issues caused due to empty clipboard redirection.
- Fixed: Disconnections when connecting through Microsoft RD Session Broker.

Parallels Client (Windows)

Parallels Client (Windows) v18.3.2.22916 (9 August 2022)

- Fixed: Using 2XRemoteExec with an AVD session in standard mode freezes the session.

Parallels Client (Windows) v18.3.1.2.22909 (21 April 2022)

- Fixed: In rare scenarios, Windows client may experience crashes when printing.

Parallels Client (Windows) v18.3.1.22907 (16 February 2022)

- Fixed: Possible error during Azure Virtual Desktop client authorization when using Azure AD DS.
- Fixed: Possible margin errors when printing from Microsoft Word 2019.

Parallels Client (Windows) v18.3.0.22893 (21 December 2021)

- New: Support for Microsoft Teams optimization for Azure Virtual Desktop resources using standard client feature set.
- New: Option to exclude user credentials when exporting Parallels Client settings.

- Improved: Support for High DPI monitors.

- Fixed: Parallels Client (Basic) does not create a desktop shortcut and start menu icon.
- Fixed: In rare scenarios, Parallels Client might crash while attempting to print.
- Fixed: Importing connection settings may not work for Parallels Client on Windows 7 .

Parallels Client (Windows) v18.2.0.22862 (3 November 2021)

- New: Support for Windows 11.
- New: Preferred routing support.
- New: Option to create shortcut on Desktop, Start Menu and Autostart folder in the installer.
- New: Allow redirection of video capture devices that are plugged in during an active session.
- New: Connection configurations now use a persistent registry key and allow any name.

- Improved: Disconnect error messages.
- Improved: Opening files whose extension is associated with a remote application fails when authenticating using SAML.

- Fixed: During update of the Microsoft Azure Virtual Desktop client, the download process might fail with error "Failed to download the Microsoft Windows Virtual Desktop client".
- Fixed: Zoom plugin not loaded when using Parallels Client.
- Fixed: Azure Virtual Desktop resources might close with error "The connection to the remote server has been closed unexpectedly".
- Fixed: Specific USB devices might fail to be redirected.
- Fixed: Upgrading Parallels Client using argument OVERRIDEUSERSETTINGS=1 IGNORESETTCREDS=0 might result in deleting existing connections.

Parallels Client (Windows) v18.1.0.1.22712 (28 July 2021)

- Fixed: Parallels Client fails to connect to a RAS Farm when a post-logon message is configured.

Parallels Client (Windows) v18.1.0.22707 (14 July 2021)

- New: Dynamic session resolution update.
- New: Yubico - Yubikey (PIV) support for Parallels Client for Windows.

- Fixed: Parallels Client may experience crashes while printing from a published resource.
- Fixed: After upgrade to version 18.0.1.1, RAW printing stopped working.
- Fixed: Unable to use saved password longer than 62 characters.
- Fixed: Pressing Alt+PrtScrn while the published application is in focus takes a print screen of the whole local desktop instead of the published application only.
- Fixed: RAS Client opens the RDP-UDP tunnel using the direct address configured in the settings, even when the client is connecting in Gateway mode.
- Fixed: Unable to reauthenticate successfully after the client connection is dropped.
- Fixed: In some cases, depending on specific fonts, PDF documents may print with blank pages or with incorrect fonts.
- Fixed: Print job fails if '%TEMP%\2XClientSpool' is not available.
- Fixed: "Session Information" window displays IP address of the RD Session Host instead of its DNS or FQDN.
- Fixed: Published PowerShell applications with a GUI appear as a grey window if focus is switched to any other application during the starting of the published application.
- Fixed: Update window does not show full update information.
- Fixed: Published applications may show as distorted when used in a multi-monitors environment with different scaling configuration.
- Fixed: In case when password has expired and using â€œAlways ask for credentials when launching applicationsâ€ the connection configuration is not updated with the new password entered.
- Fixed: Inconsistent view between Parallels Client session information and RAS Console session information.
- Fixed: When minimizing a published application, the window border remains visible.
- Fixed: Sessions launched from the Parallels HTML5 Client portal use credentials saved in the Parallels Client for Windows.
- Fixed: The AltGr button doesn't work locally when running a published Remote Desktop in full screen mode.

Parallels Client (Windows) v18.0.1.5.22546 (21 April 2021)

- Fixed: When using RAS Universal Printing, print job fails if the spooling folder "2XClientSpool" is removed.

Parallels Client (Windows) v18.0.1.3.22541 (29 March 2021)

- Fixed: When using Universal Printing for RAW format printing, print job may not be spooled.
- Fixed: Published application may appear distorted after user drags application window in a multi-monitor with different display scaling configuration.

Parallels Client (Windows) v18.0.1.1.22490 (16 March 2021)

- Fixed: When using web authentication.SAML) and network disruptions occur, users are not able to reconnect to their sessions.

Parallels Client (Windows) v18.0.1.22479 (4 March 2021)

- Fixed: In case of prolonged communication issues on UDP port 20009, a managed device exits Kiosk mode.
- Fixed: In some cases, when connection banner is set to Taskbar Toast Window, clients generate the "Attempted an unsupported operation" error.

Parallels Client (Windows) v18.0.0.22341 (16 December 2020)

- New: Support for enumerating and launching Windows Virtual Desktop resources.
- New: SAML authentication initiated via RAS Client.
- New: UX Evaluator and advanced session metrics.
- New: Custom Security Verification methods when using RADIUS as MFA provider.

- New: Show applied RAS Policy name and version.
- New: Support for high-level camera redirection.
- New: Support for touch pointer device redirection.
- New: Support for Dutch language.

- Improved: Upgraded to OpenSSL 1.0.2u.
- Improved: Updated SQLite to v4.
- Improved: Request Domain when user is forced to change password.
- Improved: Experience while dragging a published application.

- Fixed: Client requesting One-Time Password (OTP) every hour.
- Fixed: Alt+Space redirection to open a window menu.
- Fixed: RAS Client Downloader causes SmartScreen warning.
- Fixed: In some cases, a white screen is shown while re-connecting.
- Fixed: Display spanning in multi-monitor scenarios.
- Fixed: Session connection after resetting of password.
- Fixed: Redirection of left-handed mouse setting.
- Fixed: RAS policy enforcement on RAS Basic Client.
- Fixed: Updating of RAS Basic Client.

Parallels Client (Mac)

Parallels Client (Mac) v18.3.1.22907 (16 February 2022)

- Fixed: Printing PDF may fail with error code 0x00000003.

Parallels Client (Mac) v18.3.0.22893 (21 December 2021)

- Fixed: In rare scenarios, Parallels Client might crash while attempting to print.
- Fixed: Printing margin issues when using Parallels RAS Universal Printing.

Parallels Client (Mac) v18.2.0.22861 (3 November 2021)

- New: Support for macOS 12 Monterey.
- New: Preferred routing support.

- Improved: Disconnect error messages.
- Improved: Overall stability by correcting possible crashes.

- Fixed: Initial window of a published application might not appear.
- Fixed: Switching to published application might bring the Parallels Client main window to the front.
- Fixed: Starting a published desktop in full screen enables Do Not Disturb mode automatically.
- Fixed: Parallels Client crashes when shortcuts are enabled but not configured.

Parallels Client (Mac) v18.1.0.1.22712 (28 July 2021)

- Fixed: Parallels Client fails to connect to a RAS Farm when a post-logon message is configured.

Parallels Client (Mac) v18.1.0.22708 (14 July 2021)

- New: Ability to switch between published applications using a keyboard shortcut.
- New: Bidirectional clipboard control with ability to enable or disable clipboard redirection for Client to Server or vice versa.
- New: Added support for RAS policy to set client-side logging configuration including log level, start and duration for logging, view and clear of log.

- New: Added support for H.264/AVC 444 mode.

- Fixed: Periodically, user may get the error "The user name or password is incorrect" while trying to access a published application using web authentication (SAML).
- Fixed: Ctrl + Tab shortcut is not redirected from the local device to the user session.
- Fixed: Some published applications may show incorrect time after switching to daylight saving time.
- Fixed: Starting a published desktop in full screen on macOS 11.2.3 enables Do Not Disturb mode automatically.
- Fixed: When using DYMO LabelWriter Wireless label printer, incorrect page margins are noticed.
- Fixed: Printers are not redirected in case there is a large number of printers on the client.
- Fixed: Switching between published and local applications on macOS 10.15.7 sometimes brings the main Parallels Client window in focus.
- Fixed: Japanese keyboard binding issues.

Parallels Client (Mac) v18.0.1.1.22496 (16 March 2021)

- Fixed: Parallels Client fails to log in using web authentication (SAML) in a multi-domain environment.
- Fixed: When using web authentication (SAML) and network disruptions occur, users are not able to reconnect to their sessions.

Parallels Client (Mac) v18.0.1.22478 (4 March 2021)

- Improved: Performance and stability.

- Fixed: Incorrect cursor position in the remote session when "Use available area" is set in display settings for that connection.
- Fixed: Remote session screen is not drawn correctly on older macOS versions (10.13 and below).
- Fixed: In some cases, printing to PDF fails with Print job failed error.
- Fixed: Multi-monitor settings specified for a published item or pushed via policy were not applied.

Parallels Client (Mac) v18.0.0.22344 (16 December 2020)

- New: SAML authentication initiated via RAS HTML5 Client Portal and directly from RAS Client.
- New: UX Evaluator and advanced session metrics.
- New: Custom Security Verification methods when using RADIUS as MFA provider.
- New: Show applied RAS policy name and version.
- New: Session pre-launch. A session is prepared ahead of time when the user is expected to start working.
- New: Added support for MacOS Big Sur on Intel and Apple M1 chips (through Rosetta).
- New: Support for Dutch language.

- Improved: User Experience with the added support for Planar codec when using RDP8 graphics.
- Improved: Remote session screen rendering performance on large resolutions.
- Improved: Multi-monitor remote sessions handling.
- Improved: Request Domain when user is forced to change password.

- Fixed: Server-side RAS policy handling to prohibit users from saving connection password.
- Fixed: Printout might be incorrect when the custom paper size is used for label printers.
- Fixed: Published resources do not launch via URL schema commands.
- Fixed: RAS Client might crash if a remote session is disconnected.
- Fixed: An empty folder appears in a remote session even if drives redirection is disabled by the RAS Client.

Parallels Client (Linux)

Parallels Client (Linux) v18.3.1.22907 (16 February 2022)

- Fixed: Unable to open a published application on multiple monitors.
- Fixed: "Use all monitors for Desktop session" option does not work.
- Fixed: Device redirection settings are not saved.
- Fixed: Universal Printing can fail with error "Print job failed 0x00000003".

Parallels Client (Linux) v18.2.0.22861 (3 November 2021)

- New: Preferred routing support.

- Improved: Disconnect error messages.

- Fixed: Launching applications from Web portal authenticated via SAML can override a saved connection password.
- Fixed: Publishing item listing does not work if using multi-tenant RAS farm in case using Igel OS.
- Fixed: Parallels Client SSO installation breaks MkHomeDir PAM Module.
- Fixed: ALT key remains in pressed mode when switching between remote and local applications.
- Fixed: Session might hang when using ALSA hardware.

Parallels Client (Linux) v18.1.0.1.22712 (28 July 2021)

- Fixed: Parallels Client fails to connect to a RAS Farm when a post-logon message is configured.

Parallels Client (Linux) v18.1.0.22710 (14 July 2021)

- New: Added ability to report Parallels UX Evaluator and advanced session metrics to the Parallels RAS Farm.
- New: Support for HTML5 initiated SAML SSO authentication.
- New: Custom Security Verification methods when using RADIUS as MFA provider.
- New: Bidirectional clipboard control with ability to enable or disable clipboard redirection for Client to Server or vice versa.
- New: Added support for H.264/AVC 444 mode.

- Improved: Request Domain when user is forced to change password.

- Fixed: Parallels Client crashes when using redirected webcams.
- Fixed: Mouse pointer may disappear or behave erratically.
- Fixed: Published resources are not listed when using Igel OS connecting to a Parallels RAS Tenant Broker in a multi-tenant environment.

Parallels Client (iOS)

Parallels Client (iOS) v18.3.1.22885 (7 April 2022)

- Fix: Characters may be displayed incorrectly when using specific languages, such as the Thai language.

- Improvement: Reduce selection delay when using a Bluetooth mouse.

Parallels Client (iOS) v18.2.0.22862 (3 November 2021)

- New: Support for iOS and iPadOS 15.
- New: Preferred routing support.

- Improved: Disconnect error messages.

- Fixed: Dragging with some mouse devices does not work.
- Fixed: Parallels Client would not respect the "Allowed devices mode" option and fails to start published applications with insufficient permissions error.

Parallels Client (iOS) v18.1.0.1.22697 (28 July 2021)

- Fixed: Parallels Client fails to connect to a RAS Farm when a post-logon message is configured.

Parallels Client (iOS) v18.1.0.22694 (14 July 2021)

- New: SAML authentication initiated directly from RAS Client.
- New: Bidirectional clipboard control with ability to enable or disable clipboard redirection for Client to Server or vice versa.
- New: Added support for RAS policy to set client-side logging configuration including log level, start and duration for logging
- New: Added support for H.264/AVC 444 mode.

- Improved: Performance and stability.

- Fixed: Client may experience a crash after reopening and getting list of published resources.
- Fixed: Trackpad mode does not work.

Parallels Client (iOS) v18.0.0.22344 (21 January 2021)

- New: SAML authentication initiated via RAS HTML5 Client Portal.
- New: Session pre-launch. A session is prepared ahead of time when the user is expected to start working.
- New: Support for Bluetooth mouse and trackpad on iPads (requires iPadOS 13.4+).
- New: UX Evaluator and advanced session metrics.
- New: Custom Security Verification methods when using RADIUS as MFA provider.
- New: Show the applied RAS policy name and version.
- New: Support custom resolution configuration for published applications.
- New: Support for Dutch language.

- Improved: Show the authentication domain configured in the RAS Console when user changes password.
- Improved: Japanese input when using external and software keyboards.
- Improved: Performance and stability.

- Fixed: Client version is shown incorrectly in Device Manager in the RAS Console.
- Fixed: Long delay after tapping the screen in touch or Dumbo mouse mode when using RDP connection.
- Fixed: Deleted connections might still appear in Spotlight search.
- Fixed: Password expiration reminder still appears after it's disabled from the RAS Console.
- Fixed: Password expiration reminder might show an incorrect number of days left until password expiration.
- Fixed: Published applications might not launch via URL schema with command line arguments containing certain symbols (e.g. "%", "+").
- Fixed: On-screen keyboard might stay visible after hardware keyboard is attached to the device.

Parallels Client (Android)

Parallels Client (Android) v18.2.0.22862 (3 November 2021)

- New: Preferred routing support.

- Improved: Disconnect error messages.

- Fixed: Parallels Client would not respect the "Allowed devices mode" option and fails to start published applications with insufficient permissions error.

Parallels Client (Android) v18.1.0.1.22697 (28 July 2021)

- Fixed: Parallels Client fails to connect to a RAS Farm when a post-logon message is configured.

Parallels Client (Android) v18.1.0.22694 (14 July 2021)

- New: SAML authentication initiated directly from RAS Client.
- New: Bidirectional clipboard control with ability to enable or disable clipboard redirection for Client to Server or vice versa.
- New: Added support for RAS policy to set client-side logging configuration including log level, start and duration for logging.
- New: Added support for H.264/AVC 444 mode.

- Improved: Performance and stability.

Parallels Client (Android) v18.0.0.22344 (21 January 2021)

- New: System Requirements Updates: Minimum supported version of Android has been raised to 5.0.
- New: SAML authentication initiated via RAS HTML5 Client Portal.
- New: Session pre-launch. A session is prepared ahead of time when the user is expected to start working.
- New: System shortcuts (e.g. Alt+Tab) support when working in a remote session in Samsung DeX mode.
- New: UX Evaluator and advanced session metrics.
- New: Custom Security Verification methods when using RADIUS as MFA provider.
- New: Show the applied RAS policy name and version.
- New: Support custom resolution configuration for published applications.
- New: Support for Dutch language.

- Improved: Show the authentication domain configured in the RAS Console when user changes password.
- Improved: Password complexity requirements check when changing domain password.
- Improved: Performance and stability.

- Fixed: Long delay after tapping the screen in touch or Dumbo mouse mode when using RDP connection.
- Fixed: Published applications might not launch via URL schema with command line arguments containing certain symbols (e.g. "%", "+").
- Fixed: The "=" key on hardware keyboards might work incorrectly in a remote session.
- Fixed: An on-screen keyboard might not be shown when "Text to send" field is activated to send text into a remote session.
- Fixed: Session information in the RAS Console shows wrong Gateway address information if Client is connected via secondary RAS connection.
- Fixed: Clipboard redirection might fail to work accidentally.
- Fixed: Unexpected error is shown when session is remotely logged off from a server.

Parallels Client (Chrome App)

Parallels Client (Chrome App) v18.2.0.22861 (3 November 2021)

- New: EULA notification.

- Fixed: Failed to start applications or desktops if the authentication token has expired.
- Fixed: Mouse scroll action might not work.

- Fixed: Shift key might get stuck.

Parallels Client (Chrome App) v18.1.0.22707 (14 July 2021)

- Improved: Performance and stability.

RAS Reporting

Reporting v18.3.2.22916 (9 August 2022)

- Fixed: Installation might fail on operating systems with languages other than English.

Reporting v18.3.0.22893 (21 December 2021)

- Improved: Stability and performance improvements.

Reporting v18.2.0.22861 (3 November 2021)

- New: Report showing the activity for specific application(s).

- Improved: Users activity report show the last know IP of each user's device.
- Improved: Moved "SaveCounter:: Delta value in server is not working" log message from error level to extended level.

- Fixed: Azure Virtual Desktop reports not showing correct session information.

Reporting v18.1.0.22707 (14 July 2021)

- Fixed: Some statistical information is not captured in the reporting database.

Reporting v18.0.1.22479 (4 March 2021)

- Fixed: Data retention settings are not followed causing unexpected storage consumption.

Reporting v18.0.0.22341 (16 December 2020)

- Fixed: Issue with report retrieval when testing the connection.

RAS Performance Monitor

Parallels RAS Performance Monitor version 18.3.3.22939 (28 November 2022)

- Improved: Grafana updated to version 9.0.3.

Parallels RAS Performance Monitor version 18.3.0.22893 (21 December 2021)

- Improved: Stability and performance improvements.

Parallels RAS Performance Monitor version 18.2.0.22861 (3 November 2021)

- Improved: General improvements.

Parallels RAS Performance Monitor v18.1.0.22707 (14 July 2021)

- Improved: Security and stability.
- Improved: Updated Grafana to v7.0.2.

Parallels RAS Performance Monitor v18.0.0.22341 (16 December 2020)

- Improved: Updated Grafana to v6.7.1.

RAS Browser Plugin

RAS Browser Plugin 18.0.0.125 (16 December 2020)

- First Release

HALB

Parallels RAS HALB Version 18.3.0.22893 (21 December 2021)

- Improved: Stability and performance improvements.

Parallels RAS HALB Version 18.2.0.22861 (3 November 2021)

- Improved: Stability and performance improvements.

Parallels RAS HALB Version 18.1.0.22707 (14 July 2021)

- Fixed: Unable to reset HALB configuration.

Parallels RAS HALB Version 18.0.1.22542 (5 April 2021)

- New: Updated HALB appliance OS to TurnKey Linux 16.0 - Debian Linux 10 (Buster).

- Fixed: HALB may crash if invalid data is sent and RDP UDP tunneling is enabled.

Parallels RAS HALB Version 18.0.0.22341 (16 December 2020)

- New: Added support for multiple HALB Virtual Servers in the same RAS Site.
- New: Added HALB device's advanced setting management in the RAS Console.

Known issues

To access information on known issues and their resolutions, please refer to the article: Parallels Remote Application Server v18 Known Issues

For any assistance or direct support inquiries, please reach out to our support team by visiting Support | Parallels RAS

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