



**RAYPACK® STUDIO**

# Enterprise Software Packaging

**Release Notes RayPack Studio 7.1**

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## Release Notes RayPack Studio

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# Introduction

RayPack Studio 7.1 is the next iteration of Raynet's framework for the creation and management of software packages. RayPack Studio 7.1 includes powerful tools with new features that automate and accelerate holistic packaging projects.

RayPack Studio covers all the steps: From compatibility checks of software applications and packages to the evaluation to the packaging and the subsequent quality control as well as to the clearly structured workflow management. The perfectly matched software products allow to efficiently pass through the individual phases of a packaging process. At the same time, they enormously accelerate the workflow: the integration of all products into RayFlow enables an extremely comfortable exchange of data and information.



This release contains new features, enhancements, and bug fixes for all these applications: RayPack (PackDesigner, PackRecorder, PackTailor, PackWrapper, PackBot), PackBench, RayQC, RayQC Advanced, RayEval and PackLayering.

Visit [www.raynet.de](http://www.raynet.de) for further information regarding the product and current community incentives.

Raynet is looking forward to receiving your feedback from your RayPack Studio experience. Please contact your Raynet service partner or write an e-mail to [sales@raynet.de](mailto:sales@raynet.de) to add your ideas or requirements to the RayPack Studio development road map!

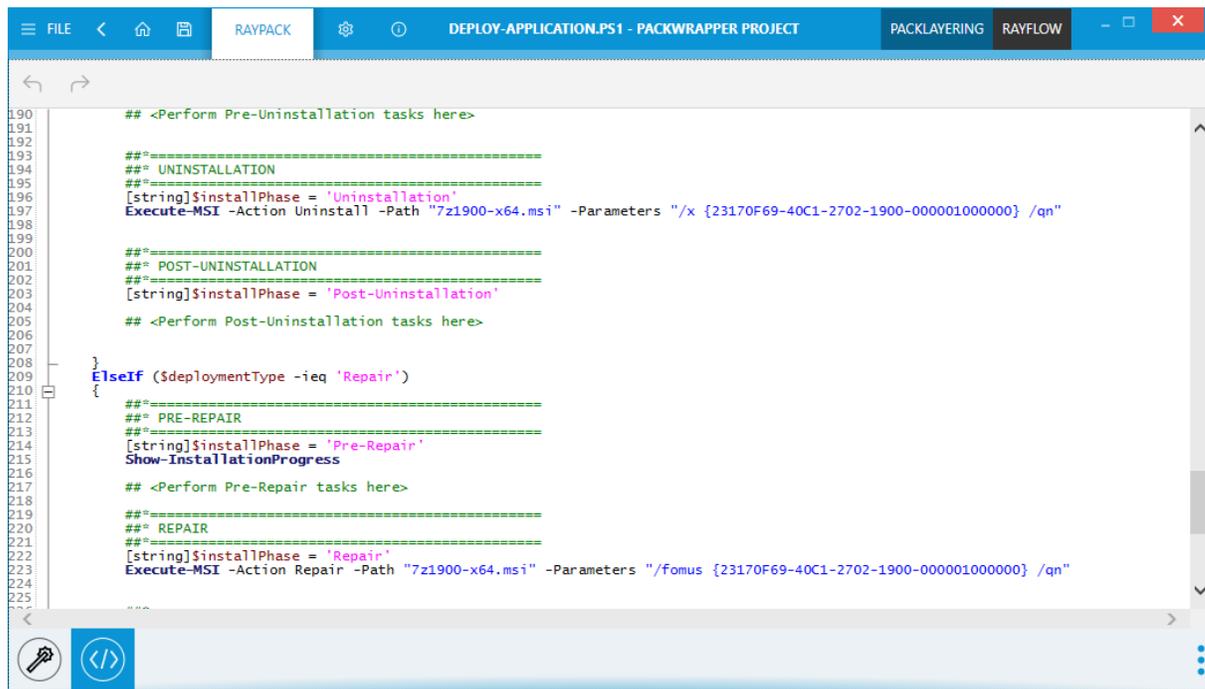
# What's New?

The following chapters contain an overview of the improvements, resolved issues, and the new features that are part of the new release of RayPack Studio 7.1.

## RayPack

### Advanced View for PackWrapper (PSADT) Projects RPK-4160

PowerShell content of each PSADT project can be now edited directly. RayPack keeps track of changes from the UI and updates the script as the changes are made (WYSIWYG). The same happens in the reverse direction: adjusting the script manually is immediately reflected in the UI visuals.



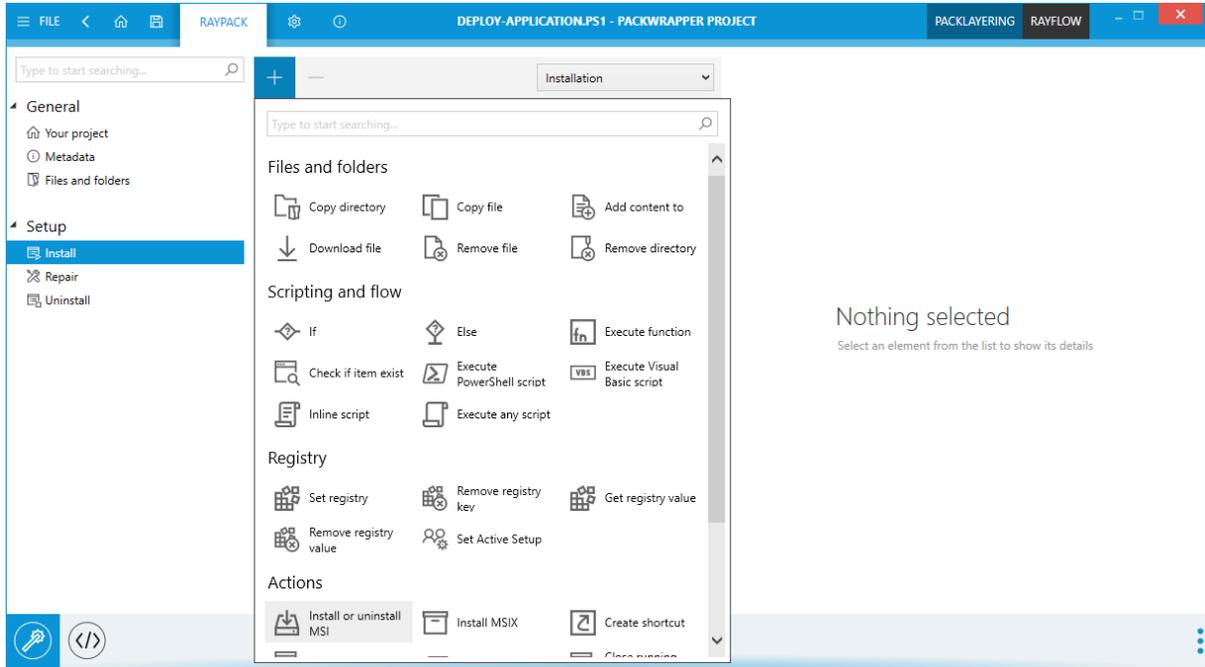
```

190     ## <Perform Pre-Uninstallation tasks here>
191
192     ##*=====
193     ##* UNINSTALLATION
194     ##*=====
195     [string]$installPhase = 'Uninstallation'
196     Execute-MSI -Action Uninstall -Path "7z1900-x64.msi" -Parameters "/x {23170F69-40C1-2702-1900-000001000000} /qn"
197
198     ##*=====
199     ##* POST-UNINSTALLATION
200     ##*=====
201     [string]$installPhase = 'Post-Uninstallation'
202     ## <Perform Post-Uninstallation tasks here>
203
204     }
205
206     ElseIf ($deploymentType -ieq 'Repair')
207     {
208         ##*=====
209         ##* PRE-REPAIR
210         ##*=====
211         [string]$installPhase = 'Pre-Repair'
212         Show-InstallationProgress
213         ## <Perform Pre-Repair tasks here>
214
215         ##*=====
216         ##* REPAIR
217         ##*=====
218         [string]$installPhase = 'Repair'
219         Execute-MSI -Action Repair -Path "7z1900-x64.msi" -Parameters "/fomus {23170F69-40C1-2702-1900-000001000000} /qn"
220
221         ##*=====
222         ##*
223         ##*=====
224
225     }
  
```

With this change, the working environment of PackWrapper (PSADT) projects became similar to the MSI counterpart, where the editors are also organized between two sections: *Visual Designer* and *Advanced View*.

### New Toolbar with Predefined Actions RPK-4157

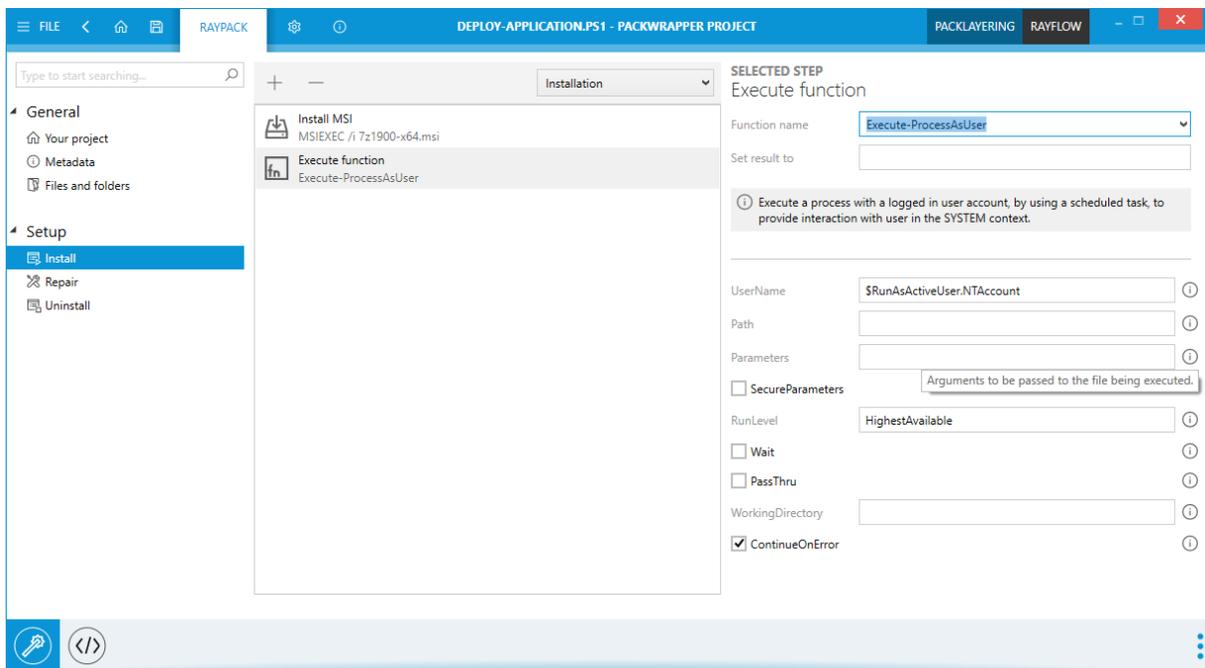
The toolbar representing the available actions has been vastly improved and expanded. It has now a logical grouping of actions (depending on their type and purposes), shows handy icons, and provides basic search capabilities.



Some new predefined actions for shortcuts, compression, downloads, checking the presence of a file/folder/registry etc. have been added.

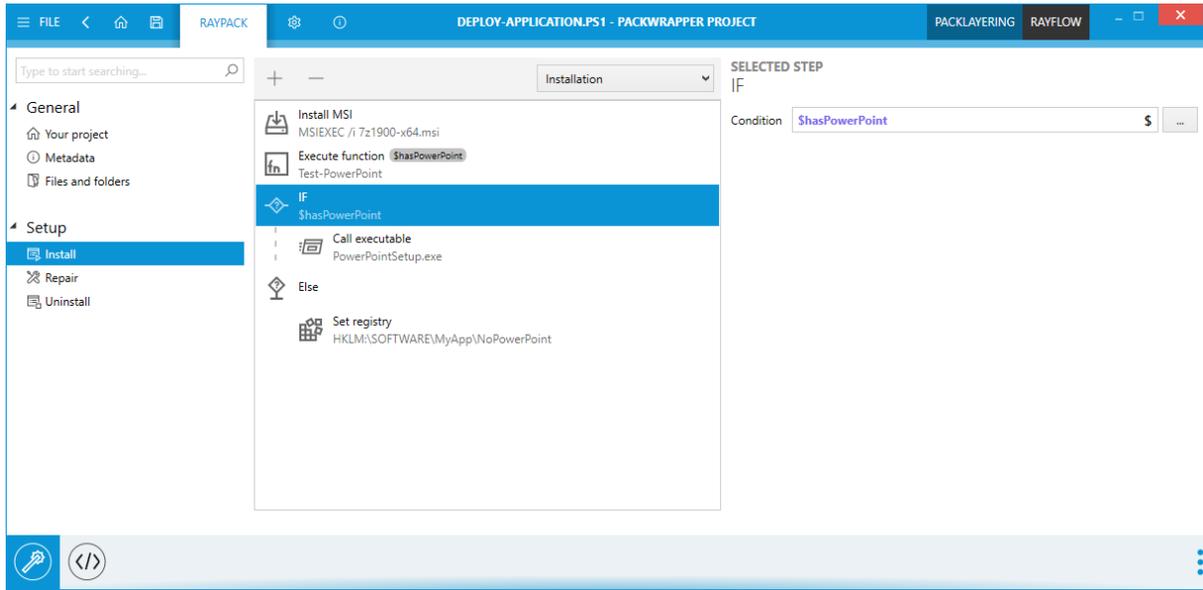
## Visual Editing of All Standard and Custom PSADT Functions [RPK-4221](#)

Any standard or custom-written function can be now invoked via the Execute function action, where the description and purpose of each parameter is shown.



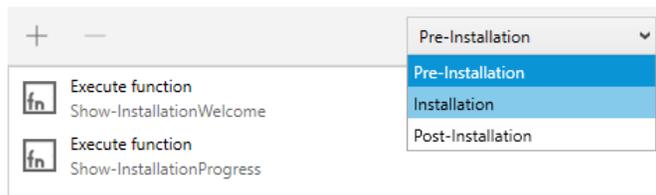
## Support for Logical Branches (If/Else) RPK-4210

Script flow view can now visualize logical conditions and branching. Drag and drop and predefined actions can be used to build even complex installation logic.



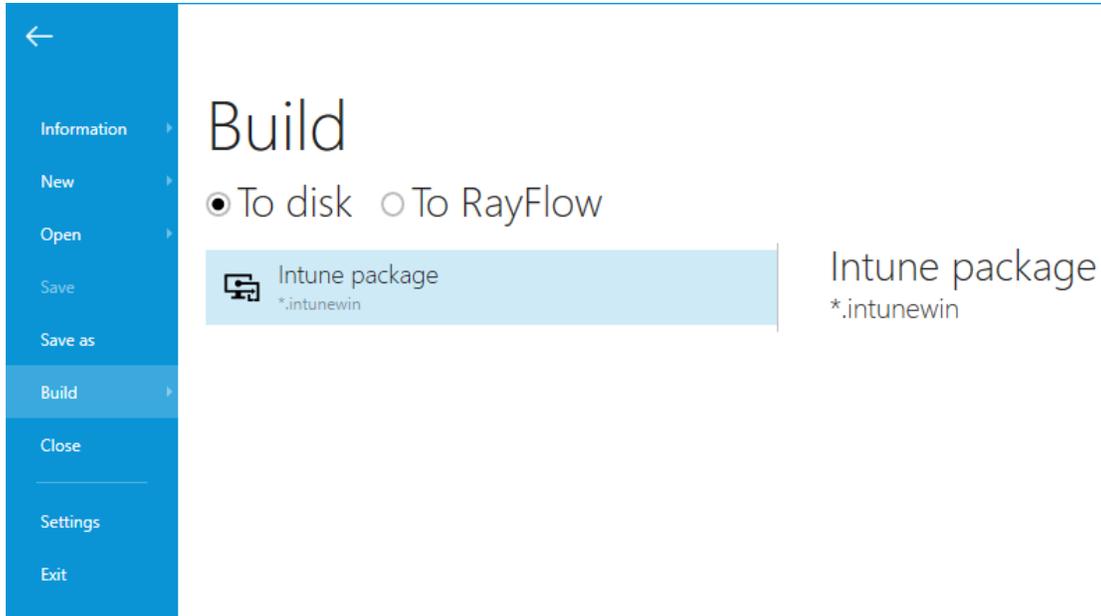
## PSADT Projects Now Support PRE- and POST-Action RPK-4210

Each of three main flows (installation, uninstallation, and repair) now supports PRE- and POST-actions. They can be used to configure various items like UI setup, welcome messages, final clean-up, etc.



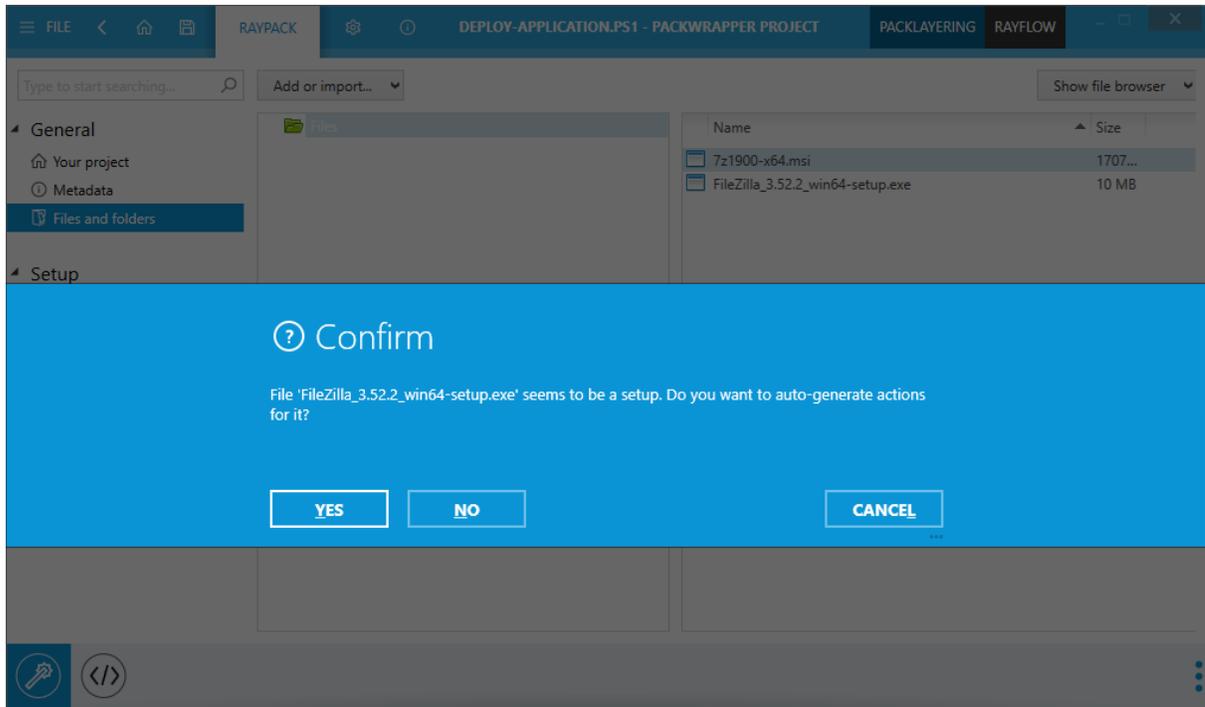
## Building Intune Packages from PSADT Projects RPK-4170

PackWrapper (PSADT) projects can now be built directly into Intune win32 package format (.intunewin). The option is available from the **FILE > Build** menu.



## Automatic Generation of Install, Uninstall and Repair Actions RPK-4230

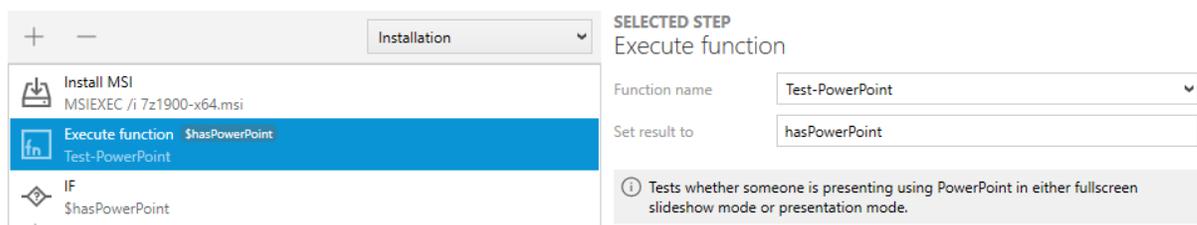
When importing a file, RayPack determines if it is a valid candidate for a setup. In this case, an option is offered to the user, where the installation, uninstallation, and repair commands can be created automatically. For many setups, RayPack also creates an automatic command line to install the wrapped setup silently.



This function kicks in automatically as you import your files and supports both, Windows Installer files (.msi) and executables (.exe).

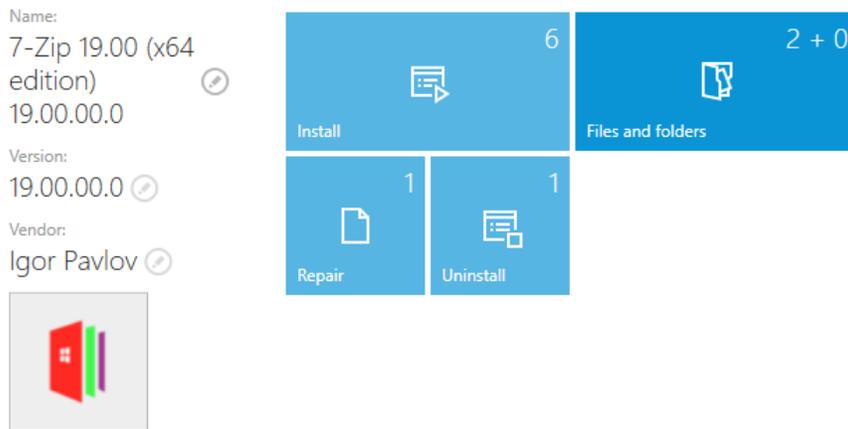
## Support for Variables [RPK-4155](#)

The result of each action can be now assigned to a variable. The variables can then be used in the script, for example to achieve conditional steps or customized elements of the deployment. The variables are also shown in Intellisense dropdowns in the places that support them.



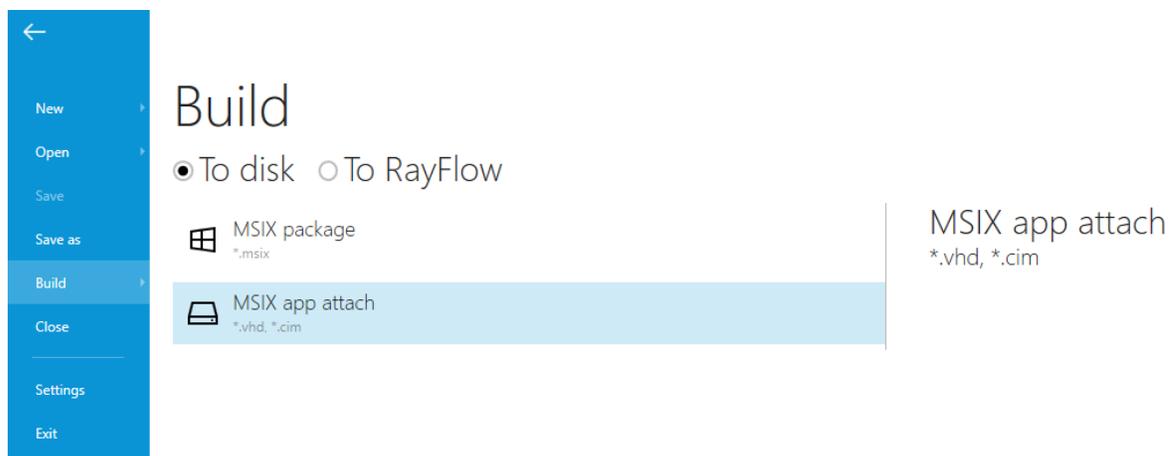
## It is now possible to change PSADT icon [RPK-4253](#)

Icon of each PackWrapper (PSADT) project can be now easily change directly from the UI.



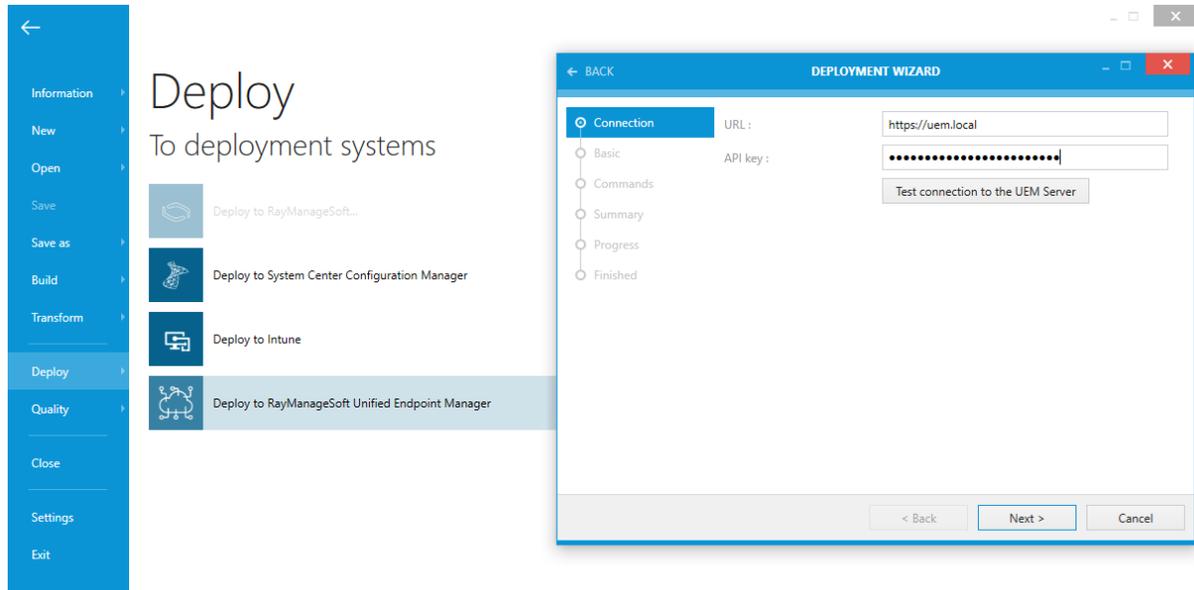
## Support for MSIX App Attach .CIM Format RPK-3950

App attach builder can now create .CIM files next to the already supported .VHD disks.



## Support for Direct Deployment to RayManageSoft Unified Endpoint Manager (RMS UEM) RPK-4192

Windows Installer packages can be now deployed directly to a cloud- or on-premise instance of RayManagesoft Unified Endpoint Manager.



## Other Improvements

- When looking for a text with the **Find and Replace** dialog, the matches are now highlighted for a better recognition. [RPK-401](#)
- It is now possible to ignore a warning about missing files during conversion from the RCP format. [RPK-779](#)
- PackTailor now shows a warning if the output MST file would result in overwriting an already existing file. [RPK-847](#)
- Fix-up files are now automatically removed if the corresponding fix-up is removed from MSIX/RPPX project. [RPK-3312](#)
- In case of a failed action in PackBot, it is now possible to go back and change the settings instead of restarting the wizard. [RPK-3450](#)
- When adding a Custom Action to an empty project, an initial feature and component are now created automatically to ensure the product is installable. [RPK-3880](#)
- Added a hotkey support for renaming of folders (**F2**) in MSIX projects. [RPK-4106](#)
- Improved conversion of COM registration from RCP to MSI/MSIX. [RPK-4114](#) [RPK-4147](#)
- Minor fixes and adjustments of the default PSADT template. [RPK-4125](#)
- It is now possible to import an icon directly during the creation of shortcut. [RPK-4135](#)
- Improved conversion of services from RCP to MSI/RPP. [RPK-4142](#)
- Folder identifiers are now changed when renaming a newly created folder. [RPK-4150](#)
- A checkbox to open the target folder is now present in the **FILE > BUILD** menu for RPPX/MSIX projects. [RPK-4159](#)

- Canceling of builds from MSI to other formats should be faster and give a better feedback. [RPK-4166](#) [RPK-4167](#) [RPK-4168](#)
- The **Files and folders** view now has a different set of icons for linked folders (with dynamic content) that are at the same time special folders (INSTALLDIR, ProgramFilesFolder etc.). [RPK-4176](#)
- In the **Custom Action Edit** Dialog, drop-down options now show only technically valid scopes for sequencing. [RPK-4177](#)
- When adding a file to an empty component, RayPack now offers automatic renaming of the component. [RPK-4182](#)
- Improved windows size management when starting RayPack on low-resolution screens. [RPK-4185](#)
- It is now possible to sort files by their size in PackWrapper (PSADT) projects. [RPK-4187](#)
- Improved conversion from RCP to App-V 5.x. [RPK-4197](#)
- Improved Open File Dialog, which now keeps track of the previous location instead of always reverting to the standard project location. [RPK-4203](#)
- Some minor UI/UX improvements in the **Edit Feature** dialog. [RPK-4240](#)
- In the PackDesigner **Custom Action** edit dialog, when using a custom action name from an installed file, the dropdown options are now human-friendly names and not their identifiers. [RPK-4243](#)
- It is now possible to open invalid `.PS1` files. In this case, the visual editing will be blocked until the errors are fixed. [RPK-4245](#)
- Improved default exclusion lists of resources for Windows 10 and Windows 11. [RPK-4259](#)
- Created Citrix App Packaging layers have now a default priority set. [RPK-4278](#)
- Updated information and download links to the `.NET` Framework packages. [RPK-4292](#)
- Windows 11 builds are now possible to target in various places in PackDesigner for MSIX. [RSC-690](#)
- Improved default exclusion mechanism, ensuring that the irrelevant resources are automatically excluded when snapshotting. [RVL-668](#)

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## Resolved Issues

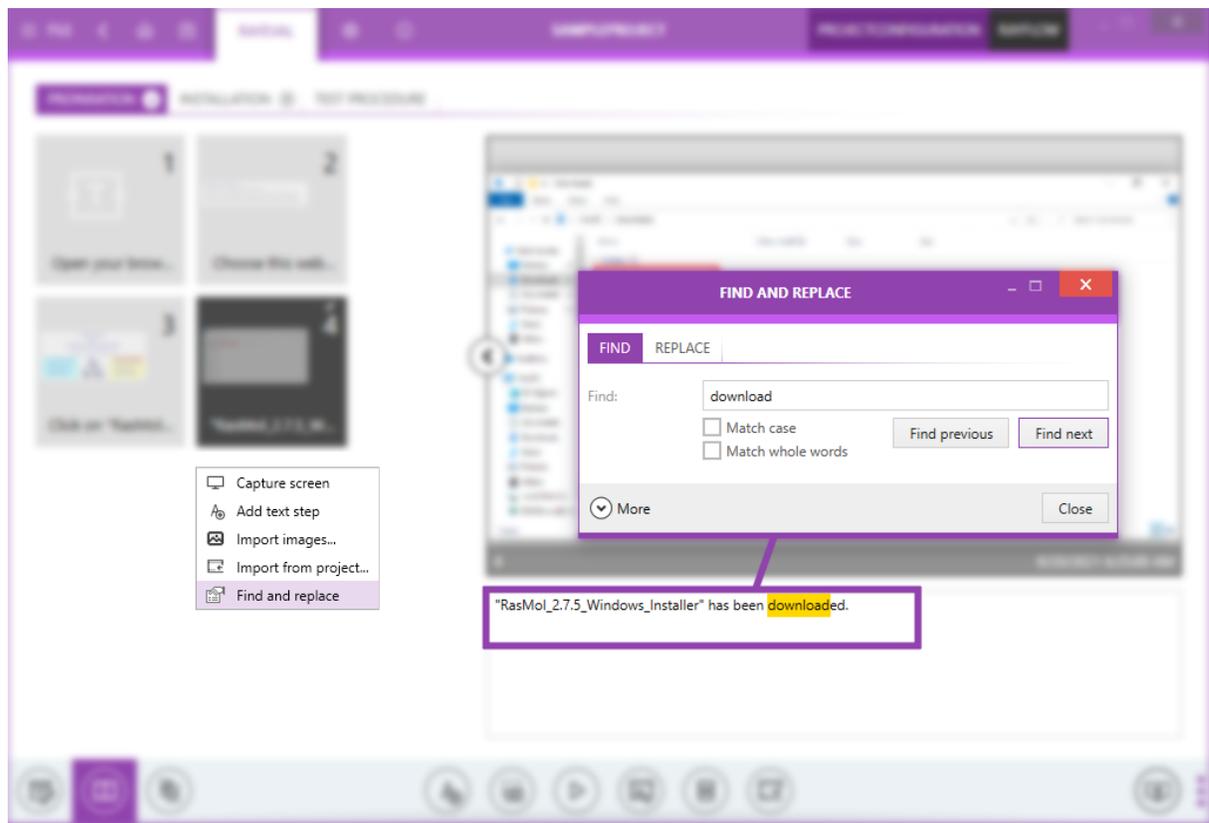
- Fixed an issue with the import of large INI files, where the operation could freeze the UI for a moment. [RPK-324](#)
- Fixed a problem where the output of a repackaged application by PackBot would contain too many files. [RPK-3482](#)
- Fixed an issue with the SCCM deployment wizard, where deploying packages could finish with the error '*Value cannot be null.*' [RPK-3885](#)
- Fixed an issue with generation of language identifiers for MSIX resources, where only language code was created without the region code. [RPK-4116](#)
- Fixed an issue, where the name of virtual machine could be invisible. [RPK-4127](#)
- Fixed an issue with the **Text changes** editor, where non-English characters were not properly supported. [RPK-4132](#)
- Fixed invalid attribute set for DLL Custom Actions. [RPK-4148](#)
- Fixed an issue with handling of Hyper-V machines, where all VM operations were failing if the machine name contained square brackets. [RPK-4151](#)
- Fixed rare issues where the detection of the `ShellHWDetection` service status was crashing the app attach generator. [RPK-4153](#)
- Fixed a rare issue where the comparison of snapshots could not be finished, caused by the detection method of Windows Defender firewall status. [RPK-4171](#)
- Fixed an issue with the **Find & Replace** dialog, which was visible even after the user closed the previous project. [RPK-4172](#)
- Fixed an issue where it was not possible to reset the parent feature to an empty value. [RPK-4175](#)
- Fixed an issue with the capturing of registry values with unsupported target types. [RPK-4216](#)
- Fixed an issue with the building of CAB files containing files with invalid access or modified date. [RPK-4218](#)
- Fixed an issue with opening of some older, invalid `.msi` files created by Wise Package Studio. [RPK-4224](#)
- Fixed an issue with missing properties, when an interactive repackaging is started from the command line. [RPK-4251](#)
- Fixed an issue when creating a PowerShell PSADT wrapper and PackPoint on a read-only share would crash. [RPK-4265](#)
- Fixed rare issues where upgrade from RayPack 7.0 and older to a newer version would fail on PackPoint migration. [RPK-4280](#)
- Fixed an issue, when going back to the first page of the repackaging wizard was rereading the package properties and overwriting any custom inputs. [RPK-4289](#)

- Fixed an issue with the conversion from RCP to MSI, where the CAB compression layout was not respected. RPK-4317
- General stability and performance improvements.

## RayEval

### Find and Replace Text [RVL-595](#)

By pressing **CTRL+F** or choosing the option **Find and replace** from RayEval context menu, it is possible to search for strings and replace them. This way it is much easier to locate the interesting content, and make bulk changes in many steps at once.



### Choosing Custom Image Editor [RVL-675](#)

In program settings, a new option has been added to define a custom editor for images.

## Editor

Change default editor



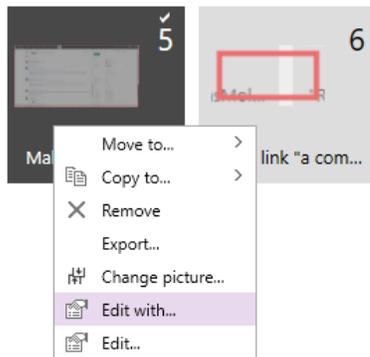
You can choose what type of editor you want to use to edit pictures. By default it is RayEval editor.



Select editor...

Remove selected editor...

The images can be edited by using the context menu item:



## Other Improvements

- RayEval context menus now have icons. [RVL-479](#)
- Improved default exclusion mechanism, ensuring that the irrelevant resources are automatically excluded when snapshotting. [RVL-668](#)
- Command line generator of reports can now accept output paths (parameter `-pa`) as both file paths or directory path. In the latter case, automatically generated file name will be used. [RVL-670](#)
- Importing of multiple images at once should be much faster now. [RVL-672](#)
- Improved screenshot capturing with multi-monitor configurations, where at least one monitor would have a different DPI than the others. [RVL-674](#)
- Default templates received a visual refresh, consistent with product branding. [RVL-681](#)
- Windows 11 and Windows Server 2022 can now be detected when starting a new project. [RVL-690](#)

## Resolved Issues

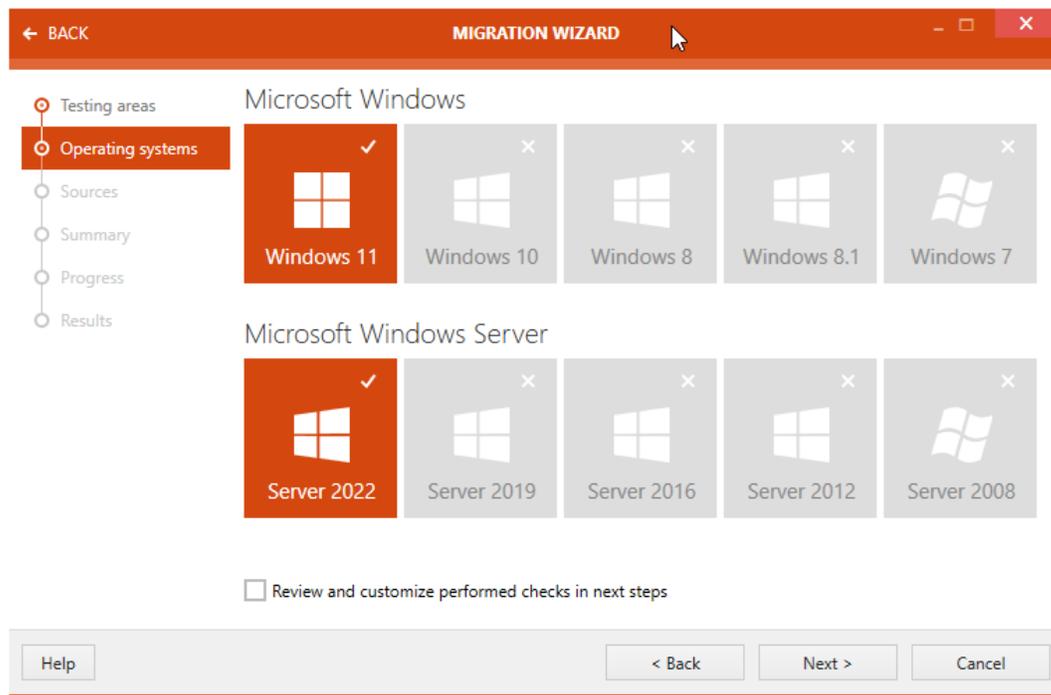
- Fixed an issue where pinning and unpinning of items in the Dashboard would not work. [RVL-673](#)

- General stability and performance improvements.

# RayQC Advanced

## Test Compatibility with Windows 11 / Windows Server 2022 RTS-2424

New rulesets for Windows 11 and Windows Server 2022 were added in this release. Both can be combined with other rulesets, and also consumed by automation apps.



The updated set of supported operating systems also affects the App-V compatibility rulesets.

## Other Improvements

- Migration wizard received a visual refresh. RTS-2428

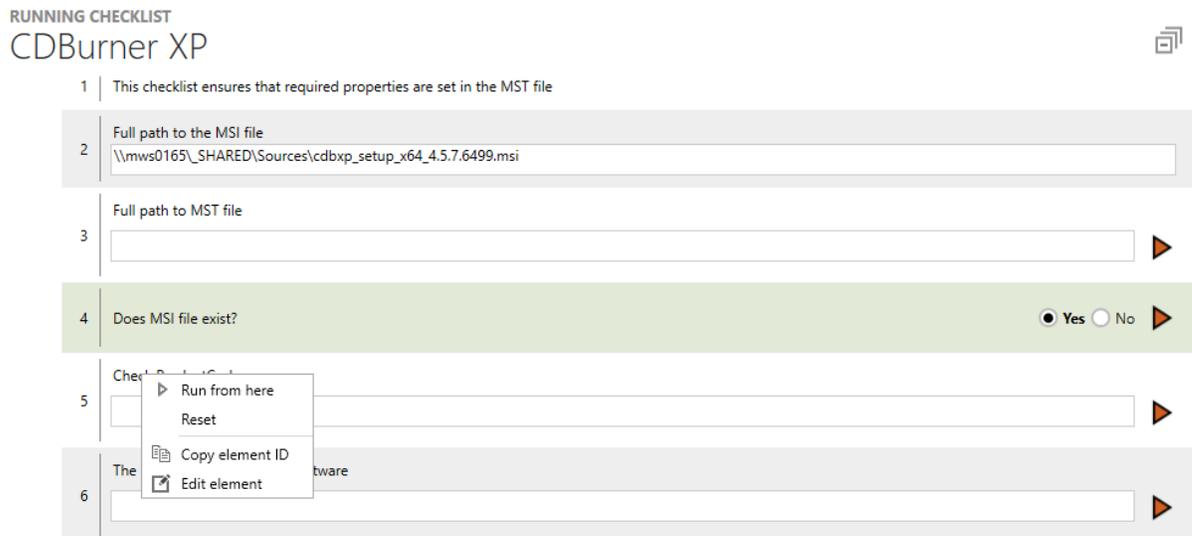
## Resolved Issues

- Fixed an issue, where the name of virtual machine could be invisible. RPK-4127
- Fixed issues, which could affect various aspects of RayFlow connectivity. RTS-2418 RTS-2430
- Fixed an issue, where temporary resources were not properly cleaned-up after finishing the testing. RTS-2425
- General stability and performance improvements.

# RayQC

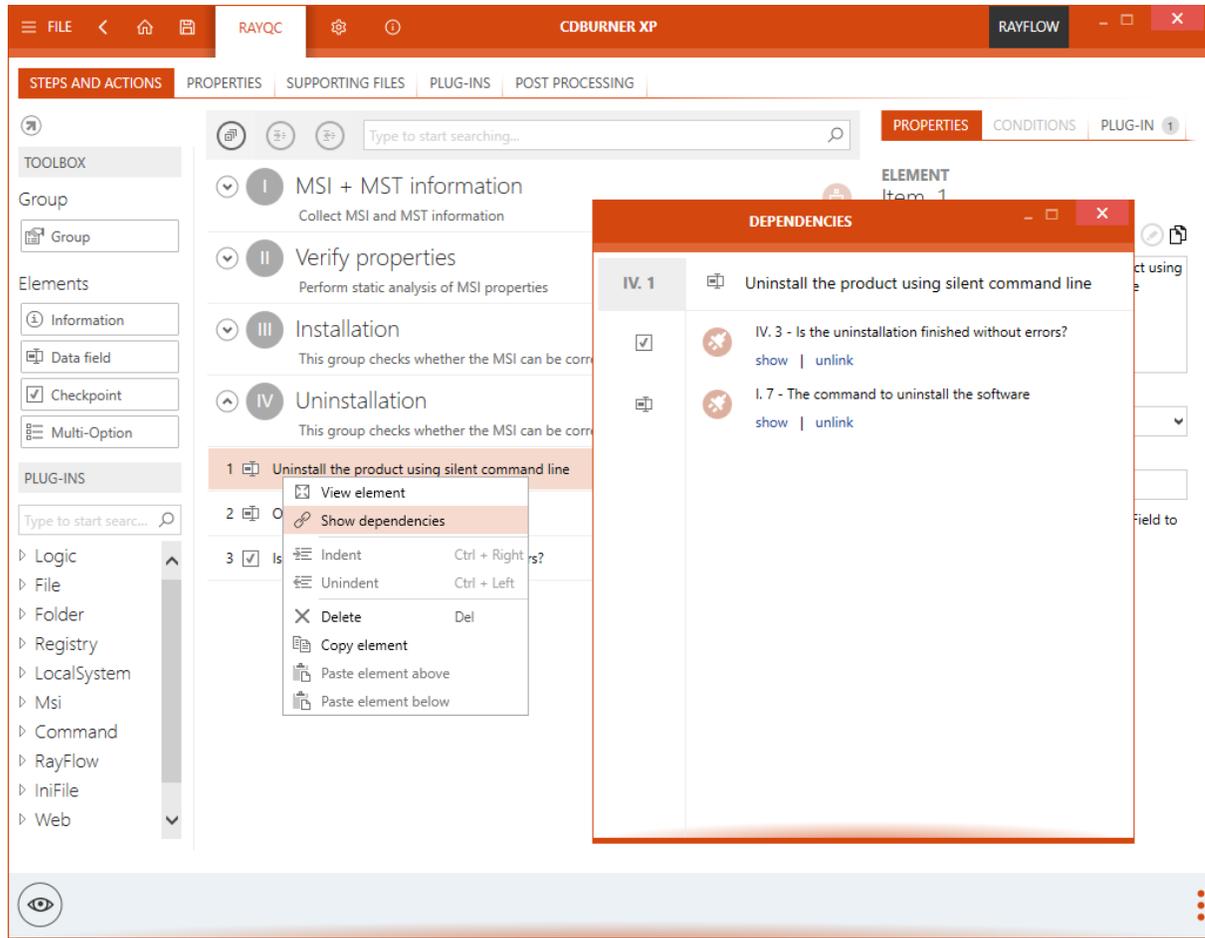
## Ability to Run a Checklist Starting from a Specific Element RSC-683

It is possible to execute all elements from a specific element. This is a useful feature, which allows the user to resume testing from a given check that failed or delivered unexpected result. In previous versions of RayQC, only a complete checklist or a group could be started at once, potentially overriding previously finished elements.



## Dependency Viewer RQC-958

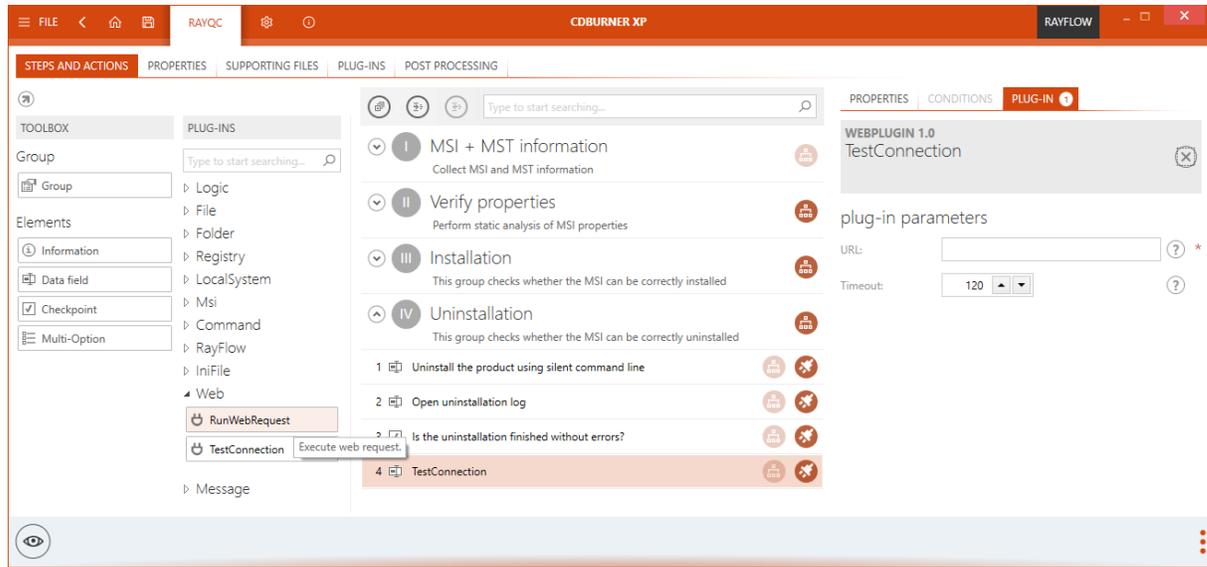
When editing a checklist, it is possible to visualize all dependencies a given element has. This way it is much easier to understand relations between elements, jump between them, or unlink the items in order to simplify the checklist.



## New Plugins for Testing Connections and Executing Web Requests

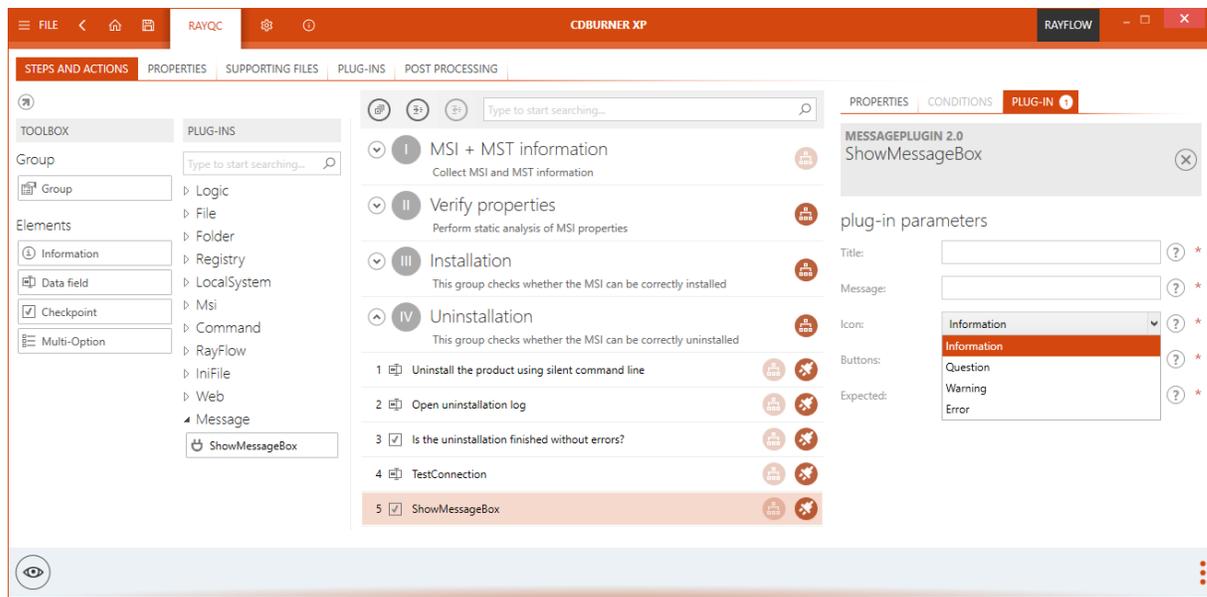
RQC-990

Two new plugins were added to execute popular tasks: verifying whether a connection to a specific URL works and to invoke web requests (for example calling REST APIs). Both can be found in the newly created group **Web**.



## New Plugin for User Interaction (Message Boxes) RQC-991

Although many checklists are created for fully unattended scenarios, there are use cases in which user interaction is needed. Typical operations are to show a prompt or a message box. In this version, there is a new plug-in which can be used to achieve both.



## Setting Default Values Through Automation RQC-1000

A new command line parameter (`/setDefault` or in shorter form `/sd`) was added to RayQC CLI tool. When used, all fields (other than specified by the user or overridden by plugin automation)

will be automatically set to their default values.

## Other Improvements

- Improved performance and visual feedback when executing lengthy operations on a virtual machine. [RQC-995](#)
- When saving a project for the first time, RayQC will now show an initial suggestion for its file name. [RQC-998](#)

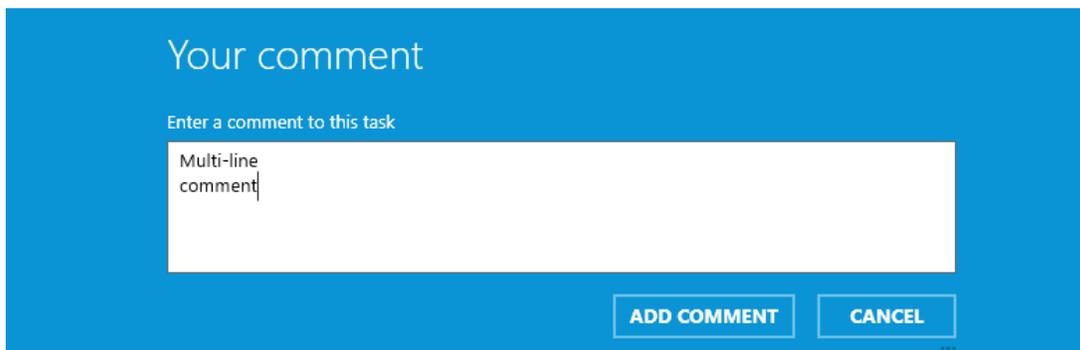
## Resolved Issues

- Fixed issues which could affect various aspects of RayFlow connectivity. [RQC-848](#)
- Fixed an issue when a warning about untrusted certificate was not shown when opening a checklist via a shell extension. [RQC-967](#)
- Fixed an issue with copying elements having non-ASCII characters. [RQC-993](#)
- Fixed an issue when pasting a copied group would not copy the conditions. [RQC-994](#)
- Fixed an issue where temporary resources were not properly cleaned-up after finishing the executing a checklist. [RQC-1002](#)
- General stability and performance improvements.

# PackBench

## Support for Multi-line Comments [BEN-362](#)

Line breaks are now fully supported when adding or editing comments:



Your comment

Enter a comment to this task

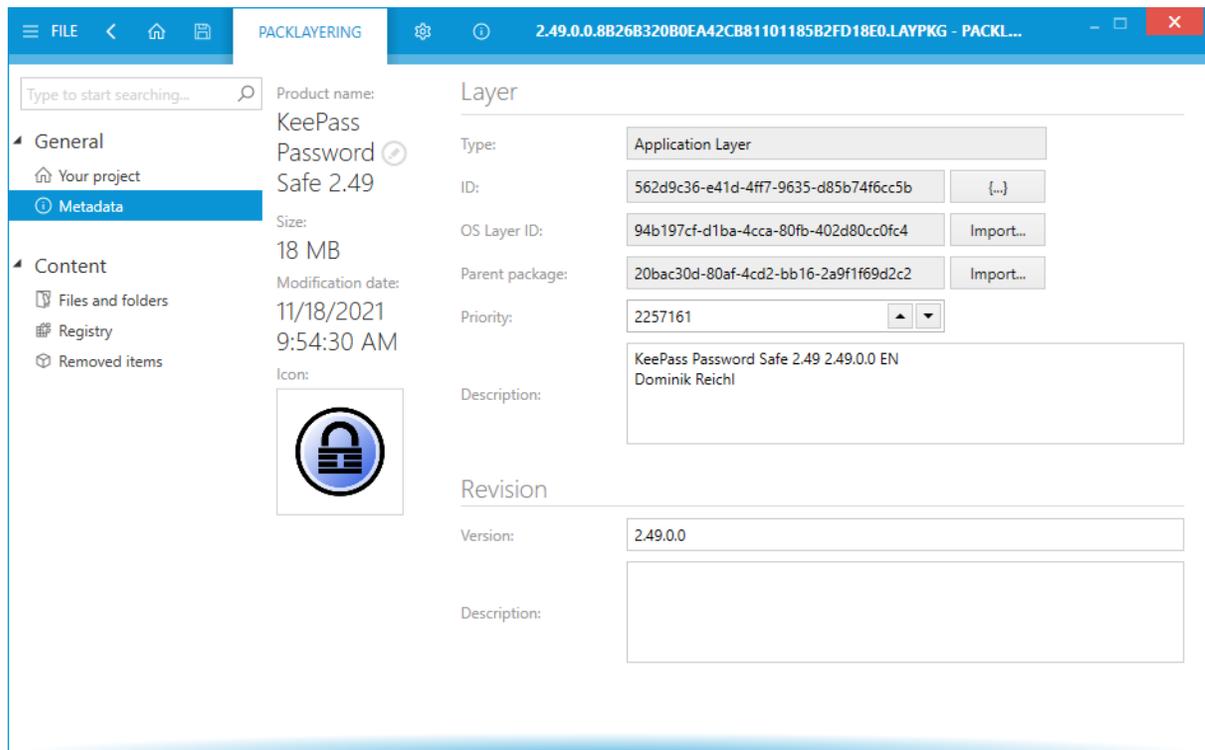
Multi-line  
comment

ADD COMMENT CANCEL

# PackLayering

## Ability to edit layer priority [CIT-254](#)

In the **Metadata** screen, a new field **Priority** can be used to change the internal value of the layer's priority (a number).



## Other Improvements

- It is now possible to save the current layer by pressing **CTRL+S** combination. [CIT-257](#)
- A confirmation is now shown before removing files and folders. [CIT-259](#)

## Resolved Issues

- Fixed an issue where the application name was not properly validated. [CIT-131](#)
- Fixed an issue where repeated deletion of registry keys from bottom-to-the-top could crash the application. [CIT-254](#)

# Migration and Breaking Changes

In this release, all products and components have been migrated to .NET Framework 4.7.2, which is now a prerequisite for RayPack Studio.

## RayPack

### Upgrading RayPack

#### General Upgrade Preparations

RayPack 7.1 is delivered as part of the RayPack Studio Installer. To install it safely execute the following steps:

1. Download the RayPack Studio Installer 7.1 from the Raynet resource repository (If you have not already received the credentials, please contact the Raynet support team via the [Raynet support portal](#) to receive them using the ticket system)
2. Copy all files that need to be kept for later use or look-up (such as resources of global external plugins, logs, settings, config files, the \*.*rs1* file, etc.) to a temporary transfer directory outside of the RayPack Studio application directory (where they usually reside)
3. Execute the RayPack Studio Installer and work through the setup routine. The installation of RayPack 7.1 using the RayPack Studio Installer is described in the *RayPack Studio Installer User Guide*

## Migration from RayPack 7.0

### PackPoint and User Files Upgrade

- It is recommended to perform a PackPoint upgrade during the installation (MSI). The upgrade is done automatically when starting the RayPack Studio Installer. If no update could be performed, it can be done manually by using the command-line tools (see Product User Guide for details on the `rpcmd.exe`)
- Certain PackPoint resources (profiles, templates) are not automatically updated for users who worked with previous versions of RayPack. Increase the PackPoint version to force an update or have them started using the `rpcmd.exe` with command-line switches to perform the upgrade manually (see Product User Guide for more information)

## Migration from Older Versions

Refer to the *Release Notes* of previous version of RayPack Studio to determine which breaking changes are affecting your upgrade.

## Troubleshooting

If you experience abnormal symptoms (like the program not starting, missing features, etc.) after the upgrade, we highly recommend performing a clean installation of RayPack / PackBench 7.1. To do that, please perform the following steps:

- 1) Locate your product order number. If you cannot find it, contact our support.
- 2) Make a backup of your license file (by default installed to `<ProgramData>\Raynet\Licenses\*.rsl`).
- 3) Uninstall the previous version of RayPack.
- 4) Delete the content of the installation folder (by default `C:\Program Files (x86)\RayPackStudio\RayPack`).
- 5) Install RayPack 7.1.
- 6) Start the main application (`raypack.exe`) to reactivate RayPack.

If the issues are not resolved after performing the steps described above, the following steps will revert the profile to the original state:

- 7) Close RayPack.
- 8) Backup and then remove the content of the following folder:
  - `%AppData%\RayPack`
  - Optionally, you can also revert the `<%PACKPOINT%>` to the default state by removing the `<%PACKPOINT%>` folder (standard installation path is `C:\RayPack\<%PACKPOINT%>`).
- 9) Start RayPack again.

If the procedures given above do not resolve the issue, please contact our support.

## PackBench

### Upgrading PackBench

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## General Upgrade Preparations

PackBench 7.1 is delivered as part of the RayPack Studio Installer. In order to install it safely:

1. Download the RayPack Studio Installer 7.1 from the Raynet resource repository. (If you have not already received the credentials, please contact the Raynet support team via the [Raynet support portal](#) to receive them using the ticket system).
2. Copy all files that need to be kept for later reuse or look-up (such as resources of global external plugins, logs, settings, config files, the \*.rs1 file, etc.) to a temporary transfer directory outside of the RayPack Studio application directory (where they usually reside).
3. Make a backup of the SQL Server database which is used by PackBench.
4. Execute the RayPack Studio Installer and work through the setup routine. The installation of PackBench 7.1 using the RayPack Studio Installer is described in the *RayPack Studio Installer User Guide*.



### Note:

Ensure that a **running** SQL server is available before starting the migration / installation.

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## Migration from PackBench 7.0

There are no breaking changes.

## Migration from Older Versions

Refer to *Release Notes* of previous version of RayPack Studio to determine which breaking changes are affecting your upgrade.

## Troubleshooting

If you experience abnormal symptoms (like program not starting, missing features, etc.) after the upgrade, we highly recommend performing a clean installation of PackBench 7.1. To do that, please perform the following steps:

- 1) Locate your product order number. If you cannot find it, contact our support.
- 2) Make a backup of your license file (by default installed to `<ProgramData>\Raynet`

`\Licenses\*.rsl).`

3) Uninstall the previous version of PackBench.

4) Delete the content of the installation folder (by default `C:\Program Files (x86)\RayPackStudio\RayPack\PackBench`).

5) Install PackBench 7.1.

6) Start the main application (`packbench.exe`) to reactivate PackBench again.

If the issues are not resolved after performing the steps described above, the following steps will revert the profile to the original state:

7) Close PackBench.

8) Backup and then remove the content of the following folder:

- `%AppData%\RayBench` and `%ProgramData%\RayBench`
- You may try to install a new database with sample data to see if the problem persists.

9) Start PackBench again.

If the procedures given above did not resolve the issue, please contact our support.

## RayQC

### Upgrading RayQC

#### General Upgrade Preparations

RayQC 7.1 is delivered as part of the RayPack Studio Installer. In order to install it safely:

1. Download the RayPack Studio Installer 7.1 from the Raynet resource repository. (If you have not already received the credentials, please contact the Raynet support team via the [Raynet support portal](#) to receive them using the ticket system).
2. Copy all files that need to be kept for later reuse or look-up (such as resources of global external plugins, logs, settings, config files, the `*.rsl` file, etc.) to a temporary transfer directory outside of the RayPack Studio application directory (where they usually reside).
3. Execute the RayPack Studio Installer and work through the setup routine. The installation of RayQC 7.1 using the RayPack Studio Installer is described in the *RayPack Studio Installer User Guide*.

### Migration from RayQC 7.0

There are no breaking changes.

## Migration from Older Versions

Refer to *Release Notes* of previous version of RayPack Studio to determine which breaking changes are affecting your upgrade.

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# RayQC Advanced

## Upgrading RayQC Advanced

### General Upgrade Preparations

RayQC Advanced 7.1 is delivered as part of the RayPack Studio Installer. In order to install it safely:

1. Download the RayPack Studio Installer 7.1 from the Raynet resource repository. (If you have not already received the credentials, please contact the Raynet support team via the [Raynet support portal](#) to receive them using the ticket system).
2. Copy all files that need to be kept for later reuse or look-up (such as resources of global external plugins, logs, settings, config files, the \*.rs1 file, etc.) to a temporary transfer directory outside of the RayPack Studio application directory (where they usually reside).
3. Make a backup of the SQL Server database which is used by RayQC Advanced.
4. Execute the RayPack Studio Installer and work through the setup routine. The installation of RayQC Advanced 7.1 using the RayPack Studio Installer is described in the *RayPack Studio Installer User Guide*.



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**Note:**

Ensure that a **running** SQL server is available before starting the migration / installation.

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## Migration from RayQC Advanced 7.0

There are no breaking changes.

## Migration from Older Versions

Refer to *Release Notes* of previous version of RayPack Studio to determine which breaking changes are affecting your upgrade.

# RayEval

## Upgrading RayEval

### General Upgrade Preparations

RayEval 7.1 is delivered as an MSI software package. In order to install it safely:

1. Download the MSI package for RayEval 7.1 from the Raynet resource repositories. (If you have not already received credentials, please contact the Raynet support team via our [Support Panel](#)).
2. Copy all files that need to be kept for later reuse or look-up to a temporary transfer directory outside of the RayEval application directory (where they usually reside). This is important for all files that have been customized like the project configuration file (`Projectconfiguration.xml`), the export plugins configuration file (`PluginTemplates.xml`), and the folder which contains all the template documents (`<INSTALLDIR>\Plugins\Templates\`).
3. Execute the RayEval 7.1 MSI package and work yourself through the setup routine. The installation of RayEval 7.1 is described in the *RayEval 7.1 User Guide*.
4. After the installation has been finished, copy the files that have been backed-up to their previous locations.

## Migration from RayEval 7.0

There are no breaking changes.

## Migration from Older Versions

Refer to *Release Notes* of previous version of RayPack Studio to determine which breaking changes are affecting your upgrade.

## Known issues

- It is not recommended to install RayPack from both MSIX and MSI on the same machine. In some cases, this configuration may cause issues with handling of RayPack user profile. We recommend to stick to either an MSI or MSIX installation.

# System Requirements

## Hardware Requirements

### Minimal

- CPU: Intel Core i5
- Screen resolution: 1024 x 768 pixels
- RAM: 4GB
- Disk space: 10GB

### Recommended

- CPU: Intel Core i7
- Screen resolution: 1280 x 1024 pixels
- RAM: 16GB or higher
- Disk space: 100GB or more

**Note:**

The installation of the RayPack Studio framework itself requires about 600MB of disk space. The amount of additional space needed depends on the volume of your packaging material and the location of the data store.

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## Supported OS

The following operating systems are supported for the installation and running of RayPack Studio at the time of release.

- Windows 7 SP1
- Windows 8
- Windows 8.1
- Windows 10
- Windows 11
- Windows Server 2008 R2
- Windows Server 2008 SP1
- Windows Server 2012
- Windows Server 2012 R2
- Windows Server 2016
- Windows Server 2019
- Windows Server 2022



**Note:**

Packages generated with RayPack Studio have their own, individual set of target OS. The list above is not designed to display which target OS are reachable by RayPack Studio packages.

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# Prerequisite Software

## General

- Microsoft .NET Framework 4.7.2

## General Requirements

To use RayFlow functionality directly from RayPack Studio components, a running RayFlow server must be accessible.

To use *RayManageSoft* integration, *Management Console* must be installed on the machine on which RayPack is running.

## RayPack

### Virtualization

- To create SWV packages, the Symantec Workspace Virtualization Agent 7.5 must be installed on the packaging machine
- To create Thin-App packages, the VMware ThinApp must be installed on the packaging machine

### Compatibility and Quality Control

To use Quality features (checklists, compatibility, virtualization, and conflict testing) RayQC and / or RayQC Advanced must be installed on the local machine.

### Generation of MSIX Files

If using Windows 8.1 or Windows Server 2012 R2 or an older version of Windows or Windows Server, an update for the CRT in Windows is needed to be able to generate MSIX files.

More information on the CRT update can be found here: <https://support.microsoft.com/en-us/help/2999226/update-for-universal-c-runtime-in-windows>.

## PackBench

Depending on the configuration of RayPack Studio, additional tools and/or components of RaySuite may be required. To get more information about the command line usage of these tools refer to the respective *User Guides* of these products.

For PackBench: SQL Server, version 2012 or higher. Express editions are also supported.

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## RayQC

To install and use the product, PowerShell 3.0 or newer must be installed.

## RayQC Advanced

To install and use the product, SQL Server version 2012 or higher. Express editions are also supported.

## Virtual Machines

### Sequencing to App-V 4.6 / App-V 5.x Using PackBot

In order to sequence legacy setups to Microsoft App-V 4.6 / 5.x format using a virtual machine, the virtual machine must have Microsoft App-V Sequencer installed. Additional requirements for specific Operating System version/platform may be required by Microsoft Sequencer tools.



**Note:**

There is a difference between "Sequencing" and "Converting" as denoted in the PackBot configuration. The latter one uses a native converter and does not require Sequencer at all.

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### Converting to Thin-App Using PackBot

To convert legacy setups to Thin-App, Thin-App converter must be installed either on host or on the virtual machine.

### Hyper-V Integration

- Both host and guest machine must have PowerShell 3.0 or newer installed.
- Windows Remote Management
- RayPack Studio Tools for Hyper-V need to be installed on the guest machine.

The tools can be installed from a Windows Installer package that is present in the RayPack Studio subfolder `Tools\HyperVTools\Packaging Suite Tools for Hyper-V.msi`.

The installation of the tools is required, so that the user can see interactive prompts and windows on Hyper-V machines. It is recommended to install the tools as a part of the base snapshot.

## VMware Workstation / ESXi5.5 - 6.0

RayPack Studio supports the following products:

- VMware vSphere 5.5-6.0
- VMware Workstation 10 and newer
- VMware Workstation 7, 8, 9 and for VMware vSphere 4.x, 5 and 5.1 are experimentally supported.

To use any of VMware Workstation / ESXi machines, one of the following must be installed in an appropriate version:

- VMware Workstation
- VMware VIX API (<https://my.vmware.com/web/vmware/details?productId=26&downloadGroup=VIX-API-162>)
- vSphere

The required VIX API version depends on the systems that it needs to connect to. The below table presents the supported versions of VMware products depending on the installed VIX API version.

VIX API Version	VMware Platform Products	Library Location
1.11	Workstation 8 or earlier	Workstation-8.0.0-and-vSphere-5.0.0
1.12	Workstation 9 or earlier	Workstation-9.0.0-and-vSphere-5.1.0
1.13	Workstation 10 or earlier	Workstation-10.0.0-and-vSphere-5.5.0
1.14	Workstation 11 or earlier	Workstation-11.0.0
1.15.0	Workstation 14 or earlier	Workstation-12.0.0 Workstation-14.0.0

## ESXi 6.5 and Newer

To make use of ESXi 6.5+ servers, the following prerequisites must be met:

- PowerShell 3.0
- PowerShell Execution Policy set to Unrestricted or RemoteSigned

- PowerCLI installer (<https://www.powershellgallery.com/packages/VMware.PowerCLI/11.2.0.12483598>)
- VMware Tools installed on the VM
- **Guest operations** and **System** permissions granted to the user executing the product.

Combination of supported versions is presented in the following table:

	VMware PowerCLI															
	12.00	11.50	11.40	11.30	11.20	11.10	11.00	10.20	10.11	10.10	10.00	6.54	6.53	6.52	6.51	6.50
▼ VMware vSphere Hypervisor (ESXi)																
7.0	✓	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6.7 U3	✓	✓	✓	✓	—	—	—	—	—	—	—	—	—	—	—	—
6.7 U2	✓	✓	✓	✓	✓	—	—	—	—	—	—	—	—	—	—	—
6.7 U1	✓	✓	✓	✓	✓	✓	✓	—	—	—	—	—	—	—	—	—
6.7.0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—	—	—	—	—	—
6.5 U3	✓	✓	✓	✓	—	—	—	—	—	—	—	—	—	—	—	—
6.5 U2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—	—	—	—	—	—
6.5 U1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—	—
6.5.0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6.0 U3	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6.0.0 U2	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6.0.0 U1	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6.0.0	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5.5 U3	—	—	—	—	—	—	—	✓	✓	✓	✓	✓	✓	✓	✓	✓
5.5 U2	—	—	—	—	—	—	—	✓	✓	✓	✓	✓	✓	✓	✓	✓
5.5 U1	—	—	—	—	—	—	—	✓	✓	✓	✓	✓	✓	✓	✓	✓
5.5	—	—	—	—	—	—	—	✓	✓	✓	✓	✓	✓	✓	✓	✓

More information about PowerCLI:

- <https://pubs.vmware.com/vsphere-51/index.jsp?topic=%2Fcom.vmware.powercli.cmdletref.doc%2FGet-VMGuest.html>
- <https://pubs.vmware.com/vsphere-51/topic/com.vmware.powercli.cmdletref.doc/Invoke-VMScript.html>
- [https://pubs.vmware.com/vsphere-50/index.jsp?topic=%2Fcom.vmware.wssdk.pg.doc\\_50%2FPG\\_ChD\\_Privileges\\_Reference.22.3.html](https://pubs.vmware.com/vsphere-50/index.jsp?topic=%2Fcom.vmware.wssdk.pg.doc_50%2FPG_ChD_Privileges_Reference.22.3.html)

## Additional Information

Visit [www.raynet.de](http://www.raynet.de) for further information regarding the product and current community incentives. It is also recommended to take a look at additional resources available at the Knowledge Base for Raynet products:  
<https://raynetgmbh.zendesk.com/hc/en-us>.

Raynet is looking forward to receiving your feedback from your RayPack Studio experience. Please contact your Raynet service partner or write an e-mail to [sales@raynet.de](mailto:sales@raynet.de) to add your ideas or requirements to the RayPack Studio development roadmap!

Our Raynet support team gladly assists you on any question or issue you encounter regarding RayPack Studio. Feel free to sign in and open incidents via our [Raynet Support Panel](#).



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