

RES ONE®

Automation

Release Notes

Version 10.2.0.0

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1. What's New in RES ONE Automation 10.2.0.0

1.1 About this Release

This table shows which Datastore revision level applies to RES ONE Automation 10.2.0.0 and in which version it was introduced:

Datastore revision level	Introduced in
70	RES ONE Automation 10.1.0.0

When installing this version, if the Datastore is of a lower revision level, it will automatically be updated.

1.2 Highlighted Features

Management Portal: "Library" node, Building Blocks and new database types available

Besides Job scheduling, also the **Library** node and the Building Blocks are available from the Management Portal.

On the **Library** page, you can manage the following:

- Configure Run Books
- Configure Projects
- Configure Modules
- Configure Resources
- Configure Variables

In line with this functionality, the use of parameters, functions, conditions and evaluators is also supported for advanced configuration.

From the homepage, you can create and import Building Blocks for single and multiple objects.

Also, the Management Portal now supports **Microsoft Azure SQL**, **IBM DB2**, **Oracle**, **MySQL** as database type.

RES ONE Automation AES-256 Conversion Tool now available

With RES ONE Automation version 10.2, we also offer the RES ONE Automation AES-256 Conversion Tool. This tool makes it possible to convert fields and components that need to be secure, from the Proprietary Obfuscation that was used previously, to AES-256 encryption in your existing RES ONE Automation environment (version 10.2 or higher).

The RES ONE Automation AES-256 Conversion Tool can be downloaded from the Success Center, at <http://success.res.com>.

Agents: Support for IPv6 for Agent+ and non-Windows Agents

RES ONE Automation now also supports IPv6 as Internet Protocol for the communication to and from the Agent+ and non-Windows Agents (Unix/Linux and Mac OS X).

This protocol is used in several areas, such as, **Team rules** based on IP address and configuration of the global settings **Wake-on-LAN** and **Send SNMP Trap**.

In addition, the functions @ [GET-IPV6] and @ [GET-IPV6ALL] have been added.

Exceptions

- Legacy Agents: IPv6 is not supported.
- Deployment of Agents: when selecting a target computer, the scanning of computers based on IPv6 addresses is not supported.
- Team rules based on IP address: when basing the IP address on SUBNET (or network prefix), IPv6 is not supported.

Jobs: New option to schedule recurring using 'Cron' expression

At **Jobs > Scheduling**, when scheduling a recurring Job, an option has been added to **Schedule using Cron**. The cron expression makes it possible to use more advanced options, for example: start at '23:45h', every 'first' 'Friday' of every '2' months. This is translated by RES ONE Automation to the cron expression: 0 45 23 ? 1/2 FRI#1 *

1.3 Enhancements and Improvements

Agents: Support for TLS v1.1 and TLS v1.2 on Mac OS X Agents

RES ONE Automation now also supports TLS 1.1 and TLS 1.2 for protocol encryption between Dispatcher and Mac OS X Agents.

Building Blocks: Security enhanced with "Generate passkey"

When creating a Building Block in an AES-256 encrypted environment, a Building Block password is required to secure the data using AES-256 encryption.

In RES ONE Automation version 10.2, when creating a Building Block and entering the Building Block password, the options **Generate passkey** and **Copy to clipboard** have been introduced.

- Use the **Generate passkey** button to randomly generate a unique identifier (GUID) and fill in this passkey. It is no longer possible to fill in a password manually or leave the Building Block password blank.
- Use the **Copy to clipboard** button to save the generated passkey for future reference. This passkey is needed again when importing this Building Block.

This way, the use of generic passwords will be excluded.

Note: when creating a Building Block via the command line, a passkey will be generated automatically and stored as a separate TXT file with the same name as the XBB file, at the same location.

Console: Enhanced security of connection to the Datastore

Security of the connection from the Console to the Datastore has been enhanced.

Global Settings: Snapshot Intelligence now disabled by default

The **Global Setting** for **Snapshot Intelligence** is now disabled by default for new Datastores.

Snapshot Intelligence can be configured at **Setup > Global Settings > Snapshot Intelligence**, with the settings **When use of snapshot is detected** and **When the last change path is reapplied**.

Global Settings: SSL enabled by default when using WebAPI in AES-256 environment

From RES ONE Automation 10.2, when enabling the WebAPI on an AES-256 encrypted Datastore, SSL will be enabled by default.

An **SSL certificate thumbprint** and **SSL certificate store** (containing the certificate) are required. The SSL certificate must be installed on the Dispatcher in the selected store in LocalComputer (not CurrentUser).

The SSL setting is also available on Dispatcher-level.

Installation: Obsolete DLL files removed from installers and upgrade pack

Three obsolete DLL files have been removed from the RES ONE Automation installers and upgrade pack.

RES ONE Automation: Extended support for Microsoft Windows 2016 Active Directory

RES ONE Automation now supports Microsoft Windows 2016 Active Directory at functional level.

RES ONE Automation: Support for Microsoft Azure SQL

RES ONE Automation now supports **Microsoft Azure SQL**.

At **Setup > Database**, you can connect to an existing (empty) Microsoft Azure SQL database, and convert it to a RES ONE Automation Datastore.

Additionally, Microsoft Azure SQL is now available for the Tasks **Execute Database Statement** and **Query Database Statement**.

RES ONE Automation: Support for Microsoft Exchange Server 2016

RES ONE Automation now supports Microsoft Exchange Server 2016.

RES ONE Automation: Updated support for Microsoft Configuration Manager

RES ONE Automation now also supports the Microsoft Configuration Manager 2016 up to v1702.

The Task **Distribute Software with Microsoft Configuration Manager** has been updated to better reflect supported versions.

Task "Install Windows Installer Package": Additional public property LOADCACHEFROMFILE when installing RES ONE Workspace

When you use the Task **Install Windows Installer Package** to install RES ONE Workspace, the public property `LOADCACHEFROMFILE` is now available in the list of **Frequently used Public Properties**.

For more information about the public property `LOADCACHEFROMFILE`, please refer to the RES ONE Workspace Help.

Task "Query Files": Possible to query on "File Version" or "Product Version"

At **Library > Modules**, when configuring the Task **Query Files**, it is now possible to differentiate between **File Version** and **Product Version**. For example, the RES ONE Automation Agent relates to File Version 10.0.6282.20542 and Product Version 10.0.0.0.

The option **Query the version of the following file(s)** has been renamed to represent the **File Version**. A new option has been added to represent the **Product Version**. Furthermore, this distinction is made when configuring a condition or evaluator expression based on **Version**.

Task "Send E-mail": Option to use SSL when sending e-mail message by Agent+

At **Library > Modules**, when configuring the Task **Send E-Mail**, it was already possible to configure the SMTP server that would be sending the e-mail.

An additional option **SSL Enabled** is now available to communicate and send the e-mail over SSL. This option is only available when executing the Task via the Agent+.

In close relation with this Task, the global setting **Send mail message** has also been enhanced with the option to use SSL. When this setting is enabled and the option **SSL Enabled** is selected, the notification e-mail message is sent by the Dispatcher over SSL.

Please note that the communication uses Explicit SSL (not Implicit SSL).

1.4 Resolved Issues

Agents: Agent not removed and error message after "Prepare for Image"

At **Topology > Agents**, when preparing the legacy Agent or Agent+ for imaging, the Agent was not removed from the Agent list in the Console. Also, the following error message for the Dispatcher was shown in the Windows Event Log:

```
"Error: Conversion failed when converting from a character string to uniqueidentifier."
```

This issue was more likely to occur when the Audit Trail contained (for example) more than a million records. This has been resolved.

Agents: "Prepare for Image" of legacy Agent resulted in duplicate Agents

At **Topology > Agents**, when making a **Prepare for Image** of a legacy Agent, it resulted in duplicate Agents in the Console (regardless of which identification method was used). This has been resolved.

Command line: Schedule action with '/scheduleon=job' and '/parameterfile' resulted in execution per Task

When a Job was scheduled via the command line using the parameter `/scheduleon=job` followed by the parameter `/parameterfile`, the Run Book was executed *per Task* instead of Run Book Job.

This has been resolved. Please note that this issue did not occur if the `/scheduleon=job` parameter was placed after the `/parameterfile` parameter in the command line.

Job Scheduling: After forced abort of Job, remaining Tasks were still executed

When a Job was scheduled to an Agent+ and you forced an abort (i.e. double abort), the Job disappeared and the Agent service stopped. However, after restarting the Agent service, the remaining Tasks in the Job were still executed even though the Job was aborted. This has been resolved.

Job Scheduling: Disabled "Timing" option "Use UTC time" still applied when scheduled on Agent+

Consider the following scenario:

1. You configured a Job:
 - In the **When** field, you selected **Scheduled**.
 - In the **Timing** field, you selected **Use UTC time on Datastore**.
2. After that, you changed the schedule to **Immediately** and clicked **OK**. Please note that the **Timing** field was disabled again.
3. You scheduled the Job to an Agent+.

In this scenario, the Job was executed, but the previously specified **Timing** method was still taken into account. This has been resolved.

Job Scheduling: First Job after snapshot creation not reapplied on Agent+ when Snapshot Intelligence was used

Consider the following scenario:

- Snapshot Intelligence was enabled (at **Setup > Global Settings > Snapshot Intelligence**).
- One or more Jobs were scheduled to a machine with the Agent+ installed, after a snapshot for that machine had been created.
 - The machine was reverted to the snapshot.

In this scenario, the first Job that was scheduled after the snapshot was created, was not reapplied. This has been resolved.

Job Scheduling: Skipped Module in Run Book displayed as Scheduled in Activity

If a Module in a Run Book was skipped because a condition was not met, the Module was displayed as **Scheduled** as long as the Run Book was listed at **Jobs > Activity**. After the Run Book completed, the correct status was displayed for the Module. This has been resolved.

Now, in this scenario, the correct status for the Module is also displayed at **Jobs > Activity**.

Parameters: Password value not resolved correctly when column header in CSV file was different than parameter name

When scheduling a Run Book and **using parameter values from a CSV file**, and the Password column header in the CSV file was different than the **Password** parameter name, the Password values were not resolved correctly.

This has been resolved.

Run Books: Second Job in Run Book remained scheduled after previous Job was completed successfully

At **Jobs > Scheduling**, under rare circumstances, the second Job in the Run Book remained scheduled and was not picked up by the Agent. Only after a restart of the Agent service or the machine, the second Job was picked up. This has been resolved.

Task "Apply Registry Settings": Registry value was changed incorrectly when value was filled by Variable or parameter

When configuring the Task **Apply Registry Settings**, you inserted a Variable or parameter that contained `\\` as value data. For example, Variable `^[Softwarelocation]` with value `\\yourserver\somefolder`.

In this scenario, when scheduling the Job, the value data was not changed correctly in the system registry. The example resulted in the registry value `\\yourserver\somefolder`. This has been resolved.

Task "Create Exchange Mailbox": Creating a mailbox in a Mailbox store did not work on Agent+

When configuring the Task **Create Exchange Mailbox**, on the **Mail Properties** tab, you selected a specific Mailbox store and Exchange server on which the mailbox should be created.

In this scenario, when scheduling the Job on the Agent+, it seemed that the Job was completed; however, no mailbox was created on the selected Exchange server. This has been resolved.

Task "Deploy RES ONE Automation Component": Job ran into infinite loop when deploying an Agent using the same Agent

When executing the Task **Deploy RES ONE Automation Component** to deploy an Agent using the same Agent, the Job ran into an infinite loop without any error messaging.

This has been resolved. Now, in this scenario, the following error message will be shown:

```
"Failed Targets: Agent cannot deploy to itself (<Agentname>)".
```

Task "Execute Windows PowerShell Script": Password not decrypted correctly when retrieved with 'Get-RESParam' function on Agent+

If an **Execute Windows PowerShell Script** Task that used the `Get-RESParam` Cmdlet to retrieve a RES ONE Automation **Password** or **Credentials** parameter, was executed on a machine running the Agent+, the password stored in the parameter was not decrypted correctly. This has been resolved.

For more information about the `Get-RESParam` Cmdlet, please refer to the RES ONE Automation Help.

Task "Execute Windows PowerShell Script": Task could be reported as failed if the PowerShell script loaded a snap-in

When an **Execute Windows PowerShell Script** Task that loaded a snap-in was scheduled, the Task was executed successfully, but could be reported as failed after the configured timeout expired. This has been resolved.

Now, in this scenario, the Task is reported as completed shortly after successful execution.

Task "Export Exchange Mailbox": Exporting a mailbox to a PST file did not work on Agent+

When configuring the Task **Export Exchange Mailbox**, on the **Mail Properties** tab, in the **PST file name** field, you selected a location where the PST file should be stored.

In this scenario, when scheduling the Job on the Agent+ and running Microsoft Exchange Server 2010 SP1 or higher, it seemed that the Job was completed. However, in the **Log** tab of the Task the following error was shown:

```
"System.Management.Automation.CommandNotFoundException: The term 'Export-Mailbox' is not recognized as the name of a cmdlet."
```

Also, if you used parameters in the **PST file name**, the parameter values were not resolved correctly. Both issues have been resolved.

Task "Manage Active Directory User": Not able to set parameter for "Country/Region" property

When configuring the Task **Manage Active Directory User**, on the **User Properties** tab, you added the property **Address > Country/Region**. As a value, it was possible to insert a parameter. However, the use of parameters or Variables in this property is not supported.

This has been resolved. Now, the options **Insert Parameters** and **Insert Variables** are no longer available for the value of the user property **Country/Region**.

Task "Reboot Computer": Tasks not executed in right order when scheduled on Agent+

In RES ONE Automation 10, when you scheduled a Job on the Agent+ and the Job contained multiple Tasks including the **Reboot Computer** Task, the Tasks were not executed in the right order. This has been resolved.

Tasks "Active Directory User (Create, Manage, Delete, Query)": 'Error executing query' when data contained a single-quote/apostrophe (')

When executing an **Active Directory User** Task, if the data in Active Directory contained a single quote or apostrophe (for example O'Donnell), the Job failed and the following error message was listed:

```
Error executing query (-2147217900 - One or more errors occurred during processing of command.)
```

This has been resolved.

Tasks "Computer (Reboot, Shutdown)": Option 'Fail shutdown if user is logged on' ignored

If a **Reboot** or **Shutdown Computer** Task was configured with the option **Fail shutdown if user is logged on** selected (on the **Settings** tab of the Task), and the Task was executed on a computer with a logged-on user, the Task did not fail and the computer was shut down or rebooted. This has been resolved.

Variables: Global Variable containing \$ in the Variable name not resolved in Agent+

If a Global Variable contained a \$ sign in the Variable name, for example `^[variable$]`, the Variable was not resolved during execution on a machine running the Agent+. This has been resolved.

Variables: Incorrect error after Enter/Return in "Confirm Password" field of Password/Credentials Variable

At **Library > Variables**, you created a new global Variable of the type **Password** or **Credentials**, and specified the confirmation password and pressed **Enter** or **Return** to save the data (the focus was still on the **Confirm Password** field). In this scenario, an incorrect error message was shown: 'Password does not match'. This has been resolved.

2. RES ONE Automation 10.1.0.0

2.1 About this Release

This table shows which Datastore revision level applies to RES ONE Automation 10.1.0.0 and in which version it was introduced:

Datastore revision level	Introduced in
70	RES ONE Automation 10.1.0.0

When installing this version, if the Datastore is of a lower revision level, it will automatically be updated.

2.2 Enhancements and Improvements

Agents for Unix/Linux: Support for Ubuntu 16.04 (x64)

RES ONE Automation now supports Ubuntu 16.04 (x64) for Agents running on Unix/Linux.

Logging: Agent activity included in Event log for Agent+

In the Event log, which can be viewed in the Microsoft Event Viewer, new actions (or events) for the Agent+ have been added.

The following actions and Event IDs are available for the Agent+:

Event ID	Message	Entry type	Source	Log Name
1000	Logged in to environment id: <GUID>	Information	RESWAS	Application
1001	Failed to login to environment id: <GUID>, failed to validate communication id	Warning	RESWAS	Application
1002	Job started: <Name> JobGUID: <GUID>	Information	RESWAS	Application
1003	Project started: <Name> ProjectGUID: <GUID>	Information	RESWAS	Application
1004	Module started: <Name> ModuleGUID: <GUID>	Information	RESWAS	Application
1005	Job: <Name> JobGUID: <GUID> ended with status: Completed	Information	RESWAS	Application
1006	Job: <Name> JobGUID: <GUID> ended with status: Failed	Warning	RESWAS	Application
1007	Job: <Name> JobGUID: <GUID> ended with status: Cancelled	Information	RESWAS	Application
1009	Agent Full Mode	Information	RESWAS	Application
1010	Connected to Dispatcher: <GUID>	Information	RESWAS	Application
1011	Got changes from dispatcher log: Agent current change guids: <GUID> Response change guids: <GUID>	Information	RESWAS	Application
1012	Update C# Agent: starting updater process: <updater path> with component <agent msi path>	Information	RESWAS	Application
1013	Discovered for environment id: <GUID>: the following dispatchers: <GUID>; <GUID>	Information	RESWAS	Application
1014	Agent logged off	Information	RESWAS	Application
1015	Project ended: <Name> ProjectGUID: <GUID>	Information	RESWAS	Application
1016	Module ended: <Name> ModuleGUID: <GUID>	Information	RESWAS	Application
1017	Job: <Name> JobGUID: <GUID> ended with status: Aborted	Warning	RESWAS	Application
2000	Agent is offline. Could not discover any dispatchers for environment id: <GUID>	Warning	RESWAS	Application
2001	Agent has been offline for 1 hour. Could not discover any dispatchers for environment id: <GUID>	Warning	RESWAS	Application

Event ID	Message	Entry type	Source	Log Name
2002	Agent has been offline for 2 hours. Could not discover any dispatchers for environment id: <GUID>	Warning	RESWAS	Application
2004	Agent has been offline for 4 hours. Could not discover any dispatchers for environment id: <GUID>	Warning	RESWAS	Application
2008	Agent has been offline for 8 hours. Could not discover any dispatchers for environment id: <GUID>	Warning	RESWAS	Application
2024	Agent has been offline for 24 hours. Could not discover any dispatchers for environment id: <GUID>	Warning	RESWAS	Application
2048	Agent has been offline for 48 hours. Could not discover any dispatchers for environment id: <GUID>	Warning	RESWAS	Application

Furthermore, all existing Dispatcher logs have been updated with new Event IDs. The complete list of Event logs is provided in the **RES ONE Automation Administration Guide**.

Resources: Improved handling by Agent+ of Resources located on network share

Several improvements have been made in the way the Agent+ handles Resources located on a network share.

Security: Use of AES-256 encryption in RES ONE Automation

RES ONE Automation now uses AES-256 encryption to protect the security sensitive data when installing a new Datastore. The use of AES-256 encryption is only available for new RES ONE Automation Datastores and all Dispatchers, Consoles and Agents must be running on RES ONE Automation version 10.1.

Create new Datastore

At **Setup > Datastore**, create a new Datastore. The AES-256 encryption is automatically being used for the relevant areas (for example, **Password/Credentials** parameters and **Security context**).

After creation of the Datastore, at **Administration > Information** and at **Setup > Database**, the type of encryption is displayed: 'This database is configured to use AES-256 encryption'.

Attention points

In an AES-256 environment, the communication between Dispatchers and Agent is automatically secured by protocol encryption (SSL). The global setting **Protocol Encryption Dispatcher** is not available in such an environment.

If you have created a new Datastore with AES-256 encryption (version 10.1), downgrading to RES ONE Automation version 10 or lower is not supported. Also, (re)connecting a legacy Console (version 10 or lower) to an AES-256 encrypted environment is not supported.

In migration scenarios, it is possible to import Building Blocks to fill your Datastore. With Building Blocks, keep the following in mind:

Create Building Blocks:

- In an AES-256 encrypted RES ONE Automation environment, you can only create Building Blocks using AES-256 encryption.
- When creating a new Building Block, you need to specify a password to secure the Building Block. This password needs to be specified again when importing the Building Block.
- In these Building Blocks, all credentials and passwords (and parameters or Variables based on this type) used in Modules, Projects, Run Books and Resources are encrypted and decrypted with AES-256. You can identify the used encryption method by the *m=aes256* label in the XML file.

Import Building Blocks:

- In an AES-256 encrypted RES ONE Automation environment, you can also import legacy Building Blocks.
- Although RES does not recommend it, it is possible to import Building Blocks created from an AES-256 encrypted Datastore into RES ONE Automation version 10 or lower. However, the following needs to be considered: since the legacy Datastore is not aware of AES-256 encryption, you will need to re-enter all password (parameter) values used in Modules, Projects and Run Books.
- When importing a new Building Block, you need to specify the required Building Block password again.
- When importing a new Building Block via the command line, use the parameter `/BBpassword` to specify the Building Block password.



Note

Optionally, you can leave the Building Block password blank. A default password for the AES-256 encryption will be used. Please be aware that everyone is able to import the Building Block into another RES ONE Automation environment (version 10.1 or higher).

Known Issues and Limitations

Agents for Unix/Linux:

AES-256 encryption is not supported for Agents running on the following platforms:

- Red Hat Enterprise Linux 4.5 (x86/x64)
- Sun Solaris 10 for SPARC
- Sun Solaris 10 for Intel

Scheduling: Parallel processing for Agent+

With the Agent+, you are able to run multiple Jobs simultaneously. This parallel processing makes it possible to start another Job on the same machine without waiting for the previous Job to finish. This could be useful if you, for instance, want to back up the Oracle database (Job 1) and back up the security event log (Job 2) on Server A. Both Jobs could run in parallel.

This feature is only applicable when scheduled to an Agent+. The legacy Agent and Agents for Unix/Linux and Mac OS X do not support parallel processing.

At **Jobs > Scheduling**, when configuring a new Job, you can select the option **Schedule in parallel with other jobs** to allow this Job to be scheduled in parallel instead of serialized (default).

At **Jobs > Scheduling, Activity** and **Job History**, the column **Parallel** has been added to view whether the Job has run in parallel or not. It is also possible to schedule the Job in parallel via the command line option `/parallel`.

Keep in mind that:

- The Tasks in the Module, Project or Run Book will always run serialized in the order as configured in that Job.
- When multiple Jobs are scheduled, in parallel *and* serialized, the following applies:
 - When a serialized Job is scheduled to run on an Agent+, the Agent+ will wait for all other running Jobs (parallel or serialized) to finish before starting the serialized Job.
 - When a serialized Job is started on an Agent+, no other Jobs (parallel or serialized) will be started on that Agent until the serialized Job has finished.
 - For example, if you schedule a serialized Job at 9 AM, and two parallel Jobs at 10 AM, the parallel Jobs will only start when the serialized Job has finished.
- Certain Tasks can interfere with other Tasks when running in parallel due to operational limitations on the machine. For example, Tasks that request some types of Resources (registry keys/values, files, folders, shares, etc.) from the same fileshare. This could result in a different outcome than expected.
- The following Tasks are excluded, by default, from parallel processing:
 - Task **Install Windows Package**
 - Task **Reboot Computer**
 - Task **Shutdown Computer**

Task "Execute Windows PowerShell Script": Default value 'Output width' increased

At **Library**, when configuring the Task **Execute Windows PowerShell Script**, the default value of the field **Set width of Windows PowerShell console output at** has been increased from 80 to 16386 Bytes (16KB).

Telemetry: Monitoring usage to help improve RES product

From RES ONE Automation 10.2.0.0, RES is monitoring the functionality that is used within the product. This allows us to prioritize the areas that we focus our development efforts on. That way, we have:

- More visibility on how the product is used amongst the different customers
- Better grip on deployment of new Agents, and used operating system versions
- More accurate information on systems used by our customers to make informed decisions about the deprecation of features or functionality
- Steady adoption rate of the Management Portal

At **Topology > Dispatchers**, the setting **Telemetry** has been added to assign the **Telemetry** role to one or more Dispatchers, so you will have control on which Dispatcher the telemetry tasks will be executed. Only one Dispatcher will be responsible for running the telemetry tasks at one time. For performance reasons, it is advised to choose a Dispatcher near the Datastore. The Dispatcher needs Internet access to communicate with the telemetry web server.

Telemetry tasks include:

- Collect and report back on:
 - How many Agents and Agents+ are deployed
 - Which Tasks are executed and how many times

Please refer to the **RES ONE Automation Administration Guide** for a complete list of collected data and an illustration of the data provided to RES.

Important: The Telemetry functionality enables software and hardware information related to the RES product and/or the environment in which the product is utilized, to be collected and provided to the RES Research and Development team. This information may contain aggregate or statistical information about the use of the RES product and the type of system(s) and related database(s) in which the RES product is deployed. This data contains no information that could reasonably be used by RES to directly identify a person. Installing this version of RES ONE Automation that includes the Telemetry functionality means that you allow RES to receive and use this information for research, analytics and improvement of its products. The information provided to RES is considered non-confidential.

Configuration

At **Topology > Dispatchers**, on the **Settings** tab of the Dispatcher's properties, you enable the setting **Telemetry** to assign the **Telemetry** role to the selected Dispatcher. To enable the setting for multiple Dispatchers, you can also use the option **Change settings of selected Dispatchers** from the context menu or settings overview. The same procedure applies to disable the **Telemetry** role.

Perform telemetry tasks

After installing RES ONE Automation 10.2.0.0, once every 30 days, one Dispatcher will automatically do the collection just before sending the usage data. If no communication is possible (for example, due to no Internet access), the telemetry task will not be executed. After a restart of the Dispatcher, it will try to make another attempt. The telemetry action is logged in the **Audit Trail**.

2.3 Resolved Issues

Agents: Account used in Security Context might be locked out after use on Agent+

Consider the following scenario:

- At **Library > Resources**, you configured a Resource for a file located on a fileshare.
 - On the **Resource** tab of the Resource, **Security Context** was specified.
- You executed a Job that used the Resource on a machine that was running the Agent+.

In this scenario, depending on Microsoft Windows settings for Account Lockout, the account used as **Security Context** might be locked out. This has been resolved.

Agents: Agent property type did not show 'Terminal Server' for Agent+

After installing the Agent+ on a Terminal Server, the Agent type was not detected correctly. At **Topology > Agents**, the **Type** property showed 'Windows Server' instead of 'Terminal Server'. This has been resolved.

Agents: Connection made to fileshare was not removed by Agent+ when Task was finished

When executing a Task that contained a Resource located on a fileshare, the Agent+ created a connection to that fileshare to access the Resource. When the Task was finished, the connection to the fileshare remained open. This could affect the execution of the next Task connecting to the fileshare. This has been resolved.

Agents: Stack trace error when scheduled Job was canceled on Agent+

In some cases, when a Job was scheduled to an Agent+ and the Job was canceled (for instance when the launch timeout was expired), the following error message with stack trace was shown in the Event Log:

```
"Error: Wrong communication id when getting job details. Unable to execute job."
```

This has been resolved. Now, the stack trace message isn't shown anymore.

Agents: Using Credentials global variables on Agent+ could give error "Logon failure"

On machines running the Agent+, if a Job was executed that used a global variable of type **Credentials**, resolving the name of the variable was case sensitive.

Example:

```
^[MyCredentials] as Security Context in a Module, Project, Run Book or Resource did not resolve to the values of Global Variable ^[mycredentials].
```

In this scenario, the following error occurred:

```
Logon Failure - Unknown Username or Password
```

This has been resolved.

Building Blocks: Error message when creating a Building Block with changed Variable on Team-level

Consider the following scenario:

1. You created a global Variable.
2. You changed the value of the Variable on Team-level.
3. You deleted the global Variable.

In this scenario, when creating a Building Block of the Team, the following error message was shown:

```
"ERROR 91 - object variable or with block variable not set."
```

This has been resolved.

Conditions: Registry key or value with '/' (slash) or '\' (backslash) not evaluated correctly by Agent+

If you configured a condition based on the existence of a registry key or value that contained a '/' (slash) or '\' (backslash), the Agent+ evaluated the condition incorrectly as false.

This has been resolved. When selecting the registry setting in the browse tree, this will now work correctly. Please note that typing the key or value with a slash or backslash will not work on Agent+ and legacy Agent.

Conditions: 'Skip this tasks and all remaining tasks in this module' not executed correctly by Agent+

Consider the following scenario:

- At **Library > Modules**, a Module was configured that contained multiple Tasks.
 - On one of the Tasks, a condition was set.
 - **Skip this tasks and all remaining tasks in this Module** was selected, for example for the option **If condition is TRUE then**.
- A machine running the Agent+ executed the Module.

In this scenario, if the condition was true, the remaining Tasks were not skipped. Instead, the Tasks remained scheduled and were executed after the next boot of the machine. Also, at **Jobs > Activity**, when viewing the Job details, the status of the skipped Tasks remained **Scheduled** (instead of **Skipped**).

This has been resolved.

This issue has also been resolved for similar configurations of Projects and Run Books.

Conditions: Value name missing in Job results when condition expression was based on registry setting

At **Library > Modules**, when configuring a Module, you added a condition expression based on **Registry Setting**. You selected a registry key in the **Operand** field via the **browse** button.

When you executed the Module on a legacy Agent, the condition was evaluated correctly. However, when you viewed the (satisfied) condition in the Job results, the registry value name in the operand field was missing. This has been resolved.

Dispatchers: Parameter values were not set when scheduling a Job via the Dispatcher WebAPI

When scheduling a Job via the Dispatcher WebAPI, the Job was executed by the Agent but the parameter values were not set. This has been resolved.

Evaluators: Query Tasks with evaluator to "Set parameter" did not resolve parameter correctly

Consider the following scenarios:

Scenario 1

- You scheduled a **Query Task** with an evaluator to set a parameter.
 - This parameter was used in a different parameter.
- The Job was executed on an Agent+.

In this scenario, the parameter value was not set correctly.

Scenario 2

- You scheduled the Task **Query Parameters** with an evaluator to set a parameter.
- The Job was executed on an Agent+.

In this scenario, the parameter value was set to the name of the evaluated parameter. If the evaluator returned no data, the following error message (with stack trace) could be shown in the **Event Log**: "Error: Index was out of range. Must be non-negative and less than the size of the collection. Parameter name: index."

Both issues have been resolved.

Functions: @[SUBSTRING] on Agent+ returned function if <LENGTH> exceeded length of <VALUE>

Consider the following scenario:

- You configured an @[SUBSTRING(<VALUE>, <START>, <LENGTH>)] function, where the <LENGTH> parameter exceeded the length of the <VALUE> parameter.
Example: @[SUBSTRING(RES, 1, 8)]
- You scheduled a Job containing the function to a machine running the Agent+.

In this scenario, the Agent+ returned the function (@[SUBSTRING(RES, 1, 8)]). This has been resolved.

Now, in this scenario, both the Agent+ and the legacy Agent return the full value (RES).

Job History: Error message when exporting Job results and log file contained less than 3 bytes

At **Jobs > Job History**, when you used the option **Export Job Results** and the log file contained less than 3 bytes, the following error message was shown:

```
"Error in sharedFileOperations. CheckFileUTF8BOM: 9 - Subscript out of range."
```

This has been resolved.

Jobs: Error message after "Reload Resulting Tasks" for scheduled Job with "After new agent registered"

This issue applies to IBM DB2 databases only.

Consider the following scenario:

1. You scheduled a Project and in the **When** field you selected the option **After new Agent registered**.
2. You made changes to the content of the Project. For example, you disabled a Module.
3. You reopened the scheduled Job and on the **Resulting Tasks** tab you clicked **Reload Resulting Tasks**.

In the scenario, after reloading the tasks, an error message was shown and the scheduled Job did not reflect the changes made. This has been resolved.

Jobs: Parameters from CSV file with double quotes (") in pathname were not filled at execution

At **Jobs > Scheduling**, you configured a Job with Job parameters using the option **Use parameter values from file**.

In this scenario, if double quotes were used in the pathname of the CSV file, for instance "C:\temp\parameters.csv", the parameter values were not filled at execution. This has been resolved.

Linux Agents: Job not completed if StandardOut parameter contained control characters

Consider the following scenario:

- You configured an **Execute Unix/Linux Command Task** with the following settings:
 - On the **Settings** tab of the Task, you selected the options **Execute command using /bin/sh** and **Redirect standard output and standard error to logfiles**.
 - On the **Module Parameters** tab of the Task, you created a parameter for `StandardOut`, for example using **AutoCreate**.
- The Task was part of a Run Book.
- The Run Book was executed and the standard output contained control characters ('CO control codes').

In this scenario, at **Jobs > History**, the Task was still displayed as **Active** when it had actually completed, and execution of the Run Book could not progress. This has been resolved. Now, in this scenario, the Task will be **Completed** and the Run Book will continue as expected.

Management Portal: Job parameters - Module parameters linked to Run Book parameters still shown on "Job Parameters" tab

In the Management Portal, you scheduled a Job with a Run Book that contained Run Book parameters with:

- Links set to the Module parameters

In this scenario, when viewing the Job results, the **Job Parameters** tab was shown including the linked Module parameters even though this should not be the case.

This has been resolved. In this case, the **Job Parameters** tab will not be shown.

Management Portal: Job parameters - Parameter with "Hide parameter if not used" still shown in Job results on "Job Parameters" tab

In the Management Portal, you scheduled a Run Book that contained a parameter with:

- Input option **Hide parameter if not used** enabled
- Input options **Request input confirmation** and **Parameter value is required** disabled

In this scenario, when viewing the Job results of the Run Book, on the **Job Parameters** tab, the parameter was still shown.

This has been resolved. In this case, the option **Only show parameters that were prompted during scheduling** will be selected by default and no parameters are shown.

Management Portal: Jobs - Changes in "Who" field of scheduled Job not saved

In the Management Portal, when you changed the Agent or Team in the **Who** field of an *already* scheduled Job, and you clicked **Schedule** again, the changes were not saved. This has been resolved.

Management Portal: Jobs - Disabling the option "Scheduled" of scheduled Job resulted in "Unknown" in "When" column

In the Management Portal, when you disabled the option **Scheduled** of an *already* scheduled Job, and you clicked **Schedule** again, the change was not saved. In case of a scheduled *recurring* Job, the **When** column showed **Unknown** after saving the change.

This has been resolved.

Management Portal: Reschedule - Changes in Task selection are not saved when rescheduling

In the Management Portal, when you rescheduled a Job and you selected a new subset of Tasks, the changes in the Task selection were not saved; all Tasks from the original Job were executed.

This has been resolved.

Management Portal: Scheduling - Option "Schedule offline agents for next boot" did not work correctly

In the Management Portal, when you scheduled a new Job using the option **Schedule offline agents for next boot** enabled, the separate Job for any offline Agents was not created. The Job for *all* (online and offline) Agents was executed immediately and returned an error message. This has been resolved.

Parameters: Credentials parameter with Credentials-based Variable not resolved correctly

When scheduling a Module with a **Credentials** parameter that was based on a **Credentials** Variable, the value of the parameter was not resolved correctly and resulted in an error. This has been resolved.

Resources: Unicode files converted to UTF-8 files when parsed for parameters on Agent+

Consider the following scenario:

- At **Library > Resources**, you configured a Resource for a Unicode file.
 - On the **Properties** tab of the Resource, at **Special actions**, you selected the option **Parse variables, parameters and functions in contents of this file**.
- You scheduled a Job using the Resource to a machine running the Agent+.

In this scenario, after the file had been parsed, the resulting file was saved as an (invalid) UTF-8 file. This has been resolved.

Please note, that for binary files, the option **Parse variables, parameters and functions in contents of this file** must not be selected if the Resource will be used on machines running the Agent+. Selecting the option will result in a truncated file.

Run Books: Unattended scheduling of Run Books might not work if "RunBookWho" parameter was used

Consider the following scenario:

- You created a Run Book containing a Job.
 - On the **Properties** tab of the **Edit Run Book Job** window, for **Who** you selected the following options:
 - **Run on one of the specified Agents**
 - **Use Run Book Parameter $\$ [RunBookWho]$ to select Agents on computer name**
- You scheduled the Run Book unattended, using the `wmc.exe` command-line options, and provided the Run Book GUID, parameterfile, user and password.

In this scenario, after the command to schedule the Run Book was executed, the Run Book was not scheduled. This has been resolved.

For more information about unattended scheduling, please refer to the RES ONE Automation Help.

Task "Computer Inventory": Task failed when evaluator returned no data

When configuring the Task **Computer Inventory**, an evaluator can be used to determine whether a specific value is true or not.

In case the evaluator returned no data, the Task always failed even if the value **If evaluator returns NO data then** was set to **Continue**. This has been resolved.

Task "Discover RES ONE Automation Dispatchers": Using current Agent settings did not give a result on Agent+

When executing the Task **Discover RES ONE Automation Dispatchers** with the option **Use the current Agent settings** on the Agent+, no Job results were returned. This has been resolved.

Task "Execute Unix/Linux Command": Set parameters with "AutoCreate" were not filled at execution

When configuring the Task **Execute Unix/Linux Command** with the option **Set parameter with exit code** or the option **Set parameter with standard output** enabled, you used the function **AutoCreate parameter** to create the parameters.

In this scenario, when executing the Job, the parameter values were not filled. This has been resolved.

Task "Execute Windows PowerShell Script": In some cases Task failed and error message was shown

In some circumstances, when executing the Task **Execute Windows PowerShell Script**, the Agent service blocked the wisstub file (kept the file open). Therefore, the Task would fail and the wisstub returned the following error message in the Event Log:

```
"General exception occurred on wisstub file, please check your account access. (Exitcode: 1)".
```

This exception has been resolved. The error could still occur when a third-party application holds the wisstub file.

Task "Postpone Job": Time unit for 'Automatically continue Job after' in minutes instead of seconds on Agent+

Consider the following scenario:

- You had configured the Task **Postpone Job** in RES Automation Manager 2011 (or lower).
- You selected the option **Automatically continue Job after** and used *seconds* as time unit.
- You upgraded to RES ONE Automation version 10 and the Task had not been edited since.

In this scenario, when executing this Task on an Agent+, the time unit of *seconds* was interpreted as *minutes*. This could result, for instance, in the Job to continue after 60 minutes instead of 60 seconds. This has been resolved.

Task "Printer Driver (Add, Remove)": Tabs "Module parameters" and "Condition" were not shown by default

When configuring the Task **Add Printer Driver** or **Remove Printer Driver**, the **Module parameters** tab and the **Condition** tab were not shown by default. This has been resolved.

Task "Query Active Directory User": Evaluator failed when expressions returned no data

On the **Evaluator** tab of a **Query Active Directory User** Task, if the evaluator returned no data, the actions configured at **If evaluator returns NO data then** were not executed. This has been resolved.

Task "Query Exchange Mailbox": Incorrect data returned by Agent+ if filters were applied

On the **Settings** tab of a **Query Exchange Mailbox** Task, if a filter was applied, the Task returned incorrect data when executed by the Agent+, This has been resolved.

Task "Query Share": Parameters functionality partially missing

The **Query Share** Task was missing parts of the parameters functionality. When configuring the Task:

- the **Parameters** tab was not displayed.
- **Module Parameters** could not be added using **Insert Parameters** from the context menu.

This has been resolved.

Task "Query Unix/Linux/Mac OS X Parameters": Incorrect Conditions listed

When configuring **Conditions** for a **Query Unix/Linux Parameters** or **Query Mac OS X Parameters** Task, the list of possible conditions contained Microsoft Windows related conditions. This has been resolved.

Task "Reboot Computer": Timeout of 60 seconds when disabling the option "Show shutdown dialog box message on console"

When configuring the Task **Reboot Computer**, you disabled the option **Show shutdown dialog box message on console**.

In this scenario, when executing the Job on a legacy Agent, the reboot only started after a timeout of 60 seconds. This has been resolved.

Task "Show Message Box": Ampersand (&) not displayed on Agent+

If you configured a **Show Message Box** Task that contained an ampersand (&) in the **Message**, this symbol was not displayed on machines running the Agent+. This has been resolved.

Task "Write Event Logs": Changed settings not saved in duplicate Task

If you duplicated a **Write Event Logs** Task and changed settings in the new Task, these settings were not saved. This has been resolved.

Tasks "Active Directory User (Manage, Query)": No error message when unable to add or view advanced properties of a domain

When configuring the Task **Query Active Directory User** or **Manage Active Directory User**, you clicked **Add** on the **User Properties** tab. In the **Select properties** window, you enabled the **Show Advanced Properties** option. When trying to view the advanced properties of a previously configured domain using the provided credentials, and the Console failed to connect to that domain, the loading of the advanced properties failed. However, no error message was shown and the option was automatically cleared.

This has been resolved. A relevant error message will now be shown to explain why the loading failed and the option was cleared.

Tasks "Active Directory User (Manage, Query)": No values returned for TS properties when using FQDN in "Domain controller" field

When configuring the Task **Query Active Directory User**, you selected Terminal Services (TS) properties (such as `TSHomeDir` or `TSProfileDir`) for the query and you specified an FQDN in the **Domain controller** field.

In this scenario, when scheduling the Job, no values were returned for the TS properties in the Job results.

The same applied when setting the TS properties using the Task **Manage Active Directory User**. In that case, the following error message was shown in the Job results: "87 - The parameter is incorrect."

This has been resolved.

Teams: Jobs scheduled continuously when new Agent was added to a nested Team

Consider the following scenario:

- Team1 is member of Team2
- Team2 is member of Team3
- Team3 is member of Team1
- All Teams will execute a Job, when a new member is added to that Team based on a Team rule.

In this scenario, when a new Agent was added to Team1, the Dispatcher continuously scheduled the Jobs from each Team to this new Agent. This was not correct and has been resolved.

Upgrade/Install: In some cases Upgrade Pack resulted in errors when creating a new Datastore

When installing a new environment and creating a new Datastore, in some circumstances the database creation process stopped and incorrect error messages were shown. This could be the case, for example, when you created a new database connection on a 64-bit machine with only a 32-bit Oracle client installed.

This has been resolved. The Upgrade Pack has been improved to make it more robust.

2.4 Known Issues and Limitations

Management Portal: Job parameters - `$(RunBookWho)` parameter not processed correctly

Consider the following scenario:

- In the Console, at **Library > Run Books**, you configure a Run Book and on Job level you use the Run Book parameter `$(RunBookWho)` in the **Who** section.
- In the Management Portal, at **Jobs**, you schedule the Job and you specify the parameter `$(RunBookWho)` with the relevant Agent.

In this scenario, when processing this Job, the Job is immediately moved to the **Job History** with status **Aborted**. When you view the Job History details, on the **Jobs** tab, the status **Canceled (no agents)** is shown.

As a workaround, when configuring the Run Book, you need to manually enable the input option **When scheduling Job** for the Run Book parameter `$(RunBookWho)`. This issue will be resolved in the coming release.

3. RES ONE Automation 10.0.100.0

3.1 About this Release

This table shows which Datastore revision level applies to RES ONE Automation 10.0.100.0 and in which version it was introduced:

Datastore revision level	Introduced in
69	RES ONE Automation 10.0.0.0

When installing this version, if the Datastore is of a lower revision level, it will automatically be updated.

3.2 Resolved Issues

Agents: Agent+ not working if default system language was not English

Consider the following scenario:

- The Agent+ was installed on a machine where the Microsoft Windows default system language was:
 - set to a language other than English.
 - set to English during installation of the Agent+, but was later changed, followed by a reboot.

In this scenario, the Agent+ appeared to be online but did not process scheduled Jobs. This has been resolved.

Conditions: 'EXIST' not evaluated correctly for registry keys by Agent+

If you configured a condition based on the existence of a registry key, the condition was not evaluated correctly by the Agent+. This has been resolved.

Conditions: 'Skip this tasks and all remaining tasks in this module' not executed correctly by Agent+

Consider the following scenario:

- At **Library > Modules**, a Module was configured that contained multiple Tasks.
 - On one of the Tasks, a condition was set.
 - **Skip this tasks and all remaining tasks in this Module** was selected, for example for the option **If condition is TRUE then**.
- A machine running the Agent+ executed the Module.

In this scenario, if the condition was true, the remaining Tasks were not skipped. Instead, the Tasks remained scheduled and were executed after the next boot of the machine. This has been resolved.

This issue has also been resolved for similar configurations of Projects and Run Books.

Conditions: 'Status of previously executed Task' not evaluated correctly by Agent+ if previous Task was skipped

If you configured a condition as **Status of previously executed Task = Completed** and the previous Task was skipped, the Agent+ evaluated the condition as not true. The legacy Agent evaluates this condition as true. This has been resolved.

Now, both the Agent+ and the legacy Agent evaluate any status that is not **Failed** as **Completed**.

Management Portal: Error 'Request too long' if multiple Portals were installed on same machine using RES Identity Broker authentication

If two or more RES ONE Management Portals and/or the RES ONE Identity Director Web Portal were installed on the same machine, all using RES Identity Broker for authentication, users who signed in to a Management Portal or the RES ONE Identity Director Web Portal, could receive a browser error "Request too long". This error occurred because the cookies for the Management Portals were set on the website's root path (<https://host.domain.com/>) instead of on the application's root path (for example: <https://host.domain.com/Automation>). This has been resolved.

Management Portal: Installer - Error 'Site path not found' when running the installer with no IIS preconfigured

When you ran the Management Portal installer on a machine with no Internet Information Services (IIS) Manager preconfigured, and you opened IIS to view the **Sites > RES** folder after the installation was finished, the following error was shown:

```
Could not find a part of the path 'C:\Program Files\RES\Automation\IISWWWRootFolder'.
```

This has been resolved.

Resources: Agent+ not downloading Resources if no 'Security context' was specified

At **Library > Resources**, on the **Resource** tab of a Resource, if no **Security context** was specified, the Agent+ did not download the Resource. This has been resolved.

Resources: Using a Variable for 'Security Context Password' not working on Agent+

At **Library > Resources**, on the **Resource** tab of a Resource, if the **Password** in the **Security context** was specified as a Variable (for example `^[Password]`), the Resource was not downloaded by the Agent+. This has been resolved.

Task "Execute Windows PowerShell Script": Task not executed by Agent+ if no Timeout was set

If the field **Timeout Windows PowerShell execution after** was empty for a Task **Execute Windows PowerShell Script**, the Task was not executed on machines running the Agent+. This has been resolved.

Task "Shutdown Computer": Job remained active when executed by Agent+

When you executed a **Shutdown Computer** Task on a machine running the Agent+, the Job that contained the Task remained **Active** in the Console and Management Portal after the machine had shutdown. This has been resolved.

Now, the Job will be reported as **Completed** if the initiation of the shutdown is successful.