

# **RES ONE**®

## **Automation**

### Upgrade Guide

Version 10.2.0.0

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## Chapter 1: Introduction

This document guides you through the upgrade to RES ONE Automation 10.2. It covers the upgrade procedures for RES Automation Manager 2014 and RES ONE Automation 2015.

- Please contact RES Support if you run an older version.
- This document does not cover the upgrade of Agents for Unix/Linux and Mac OS X. You need to upgrade these Agents separately.
- You can keep your environment up to date by installing Upgrade Packs and Service Releases. This requires Solution Assurance, which is a service that entitles you to technical support, product upgrades, and access to the Knowledge Base. For more information: <http://res.com/support>.

### More information

You can find more information at the RES Success Center, at <http://success.res.com> at the section **Downloads**. Useful reading includes:

- The **Release Notes** provide information on new and changed functionality.
- The **Help** provides user assistance for all RES ONE Automation functionality. It is available in the Console by pressing **F1**, and in the Management Portal by clicking the question mark in the menu bar.
- The **RES ONE Automation Administration Guide** provides in-depth information on RES ONE Automation. This document is available at <http://help.res.com/AutomationAdminGuide10>. Alternatively, you can download a PDF version at the RES Success Center.
- The **Getting Started with RES ONE Automation Agents for Unix and Linux** and **Getting Started with RES ONE Automation Agents for Mac OS X**.

## Chapter 2: Licensing Model

The licensing model below applies to environments using Datacenter Server and/or Desktop licenses. If your environment (also) uses other licenses generated before February 2014, a different licensing model applies. See **Pre-2014 Licensing Model** (on page 2).

### License requirements

Agent type	Number of required licenses
Windows client	0.5 (i.e. 2 Windows clients require 1 license, 3 Windows clients require 2 licenses).
Mac OS X	0.5
Windows server (including terminal servers)	6
Unix/Linux	6

### License distribution

Licenses are distributed based on the deployment date of Agents. When Agents are removed, the spare licenses are redistributed automatically.

## 2.1 Pre-2014 Licensing Model

In the Pre-2014 Licensing Model, the license count for clients and servers is different and connectors are required to execute certain advanced Tasks. Typically, this model applies to environments with licenses generated before February 2014.

Consider the following scenarios:

- If your environment uses only legacy licenses, the Pre-2014 Licensing Model applies.
- If your environment uses a mix of legacy licenses and Datacenter Server and/or Desktop licenses, the Pre-2014 Licensing Model applies. In this scenario, connectors do not require licenses and are freed up.
- If your environment uses only Datacenter Server and/or Desktop licenses, the new Licensing Model applies. See **Licensing Model** (on page 2).

License requirements for Agents (pre-February 2014)

Agent type	Number of required licenses
Windows client	0.5 (i.e. 2 Windows clients require 1 license, 3 Windows clients require 2 licenses).
Mac OS X	0.5
Windows server	4
Windows terminal server	8
Unix/Linux	4
RES HyperDrive Virtual Appliance	0

License requirements for connectors (pre-February 2014)

In the pre-February 2014 Licensing Model, certain Tasks require connectors. These claim additional licenses:

Task type	Required Connector type	Required Connector licenses
Database Statement	Database Server connector	1
Secure Shell Commands	Remote Host connector	1
VMware ESX Virtual Machine	Virtualization Host connector	4
Exchange Mailbox	Mail Server connector	16
Active Directory	Directory Server connector	32
Database Servers, Mail Servers, Directory Servers	Small Business Server connector	33
Web Service	Web Service Hosts connector	1

**Notes**

- If you have an Enterprise Agreement, your license requirements may deviate from the requirements mentioned above. Please contact your reseller for more information.
- When you add a Small Business connector to execute Tasks on a computer, licenses that are claimed by other connectors that execute Tasks on the same computer are not freed up automatically. The Small Business connector needs to be assigned to these Tasks manually, after which you can delete the redundant connectors.

## 2.2 Licensing attention points

### New "RES ONE Automation" licenses when downgrading to version 2014 SR4 and lower

When you import and activate RES ONE Automation licenses in your environment, they are shown as valid in the **License** overview. If you downgrade, these licenses will not be shown and are no longer active, because these licenses are not known to your environment. When you upgrade again, they become available again.

### Add Datacenter Server and Desktop licenses to an upgraded environment

When you add Datacenter Server and/or Desktop licenses to an environment in which also other license types are used:

- You can activate these licenses as normal.
- The **Pre-2014 Licensing Model** will apply. The licensing model for Datacenter Server and Desktop licenses will not be available until you delete ALL other license types, and your environment only contains Datacenter Server and/or Desktop licenses.
- After you delete the last "pre-2014" license (for example as part of a license swap or re-import process), you can no longer add license types other than Datacenter Server and Desktop licenses.

## Chapter 3: Prerequisites

See the **Compatibility Matrix** (on page 9) for compatible operating systems.

Additionally, the following software is required:

- Microsoft Windows Installer 3.1 and higher.
- Microsoft .NET Framework 4.0 (Full version: Client Profile and Extended) or higher on the machine running the installer.
- Microsoft .NET Framework 4.5.2 (Full version) or higher on the server running the Dispatchers and machines running the Agent+.
- Database driver on each Dispatcher and Console:

Database	Database driver
Microsoft SQL Server	Microsoft SQL Server client (pre-installed with Microsoft Windows)
Microsoft Azure SQL	Microsoft SQL Server Native Client (ODBC driver)
Oracle	Oracle OLEDB provider
IBM DB2	IBM DB2 OLEDB provider
MySQL	MySQL ODBC Driver

### Security Roles

If your RES ONE Automation environment is secured with security roles, you need a valid login account with at least **Modify** permissions on the node **Administration > Components** in the Console.

- Accounts that use **RES ONE Automation Authentication**: You will be prompted to provide credentials during the upgrade.
- Accounts that use **Microsoft Windows Authentication**: The upgrade process will continue automatically.



## Chapter 4: Upgrade from RES ONE Automation 2015

Before you upgrade to RES ONE Automation 10.2, make sure to meet the **prerequisites** (see page 5).

- No database activity will be possible during the upgrade, because all Consoles and Dispatchers will be taken offline until the upgrade has been completed. We recommend to perform the upgrade at a quiet period.
- If you cancel the upgrade process, your environment will remain offline until the upgrade has been completed.
- When you upgrade, existing Add-ons will not be upgraded. They will not be removed, but Help will no longer be available. To upgrade these Add-ons, download the required RES ONE Connectors (formerly known as Automation Packs) from the **RES website**, and install them manually. This requires **Modify** access on the **Add-ons** node in the Console.

### Procedure

1. Run the RES ONE Automation Upgrade Pack (or select **RES ONE Automation Upgrade Pack** from the RES ONE Automation Installer) on the computer from which you want to upgrade. This computer must be running a Console or Dispatcher.
  - If the computers that run the Dispatchers do not have Microsoft .NET Framework 4.5.2 (Full version) or higher and Microsoft Windows 7 or Microsoft Windows Server 2008 R2 or higher installed and you continue the upgrade, the Dispatcher(s) will *not* be able to upgrade and are removed from those computers. To fix this, install the correct framework and deploy the Dispatcher(s) manually. The Upgrade Pack will show a list of Dispatchers that do not meet the requirements and are not be able to upgrade.
  - Each Dispatcher needs to run a database driver that makes it possible to connect to the Datastore. If not, the upgrade will continue, but you will be notified to install the relevant database driver afterwards.
  - Existing Agents will not be converted to Agents+ automatically.
2. Follow the steps of the Wizard.
3. During the upgrade process, all Consoles and Dispatchers will be taken offline. When the upgrade has completed:
  - All Consoles and Dispatchers will come online again and are upgraded immediately.
  - Agents will upgrade automatically when they connect to an upgraded Dispatcher if the **Auto Update Agent** setting is enabled. After that the Agent service will restart. Agents restart in turn, depending on the availability of a Dispatcher.
  - The node **Administration > Components** shows two versions of the Dispatcher and Agent+ MSI file: a 64-bit version and a 32-bit version. When you deploy a new Dispatcher or Agent+, RES ONE Automation will automatically use the correct MSI file, depending on the Operating System of the target computer.

In the Console, you can check the current version of Consoles, Dispatchers and Agents in the **Version** column of the **Consoles**, **Dispatchers** and **Agents** nodes.

## Chapter 5: Upgrade from RES Automation Manager 2014

When you upgrade from RES Automation Manager 2014, follow the same procedure as an upgrade from RES ONE Automation 2015. In addition, keep the following in mind:

- When you upgrade from RES Automation Manager 2014 SR4 Revision 2 and the global setting **Auto Update Agent** is set to **Disabled entirely**, the Agents are not updated automatically. Some Tasks running on the "old" Agents still require connectors and will fail. You must upgrade the Agents before running these Tasks. To do so, run the Task **Update RES ONE Automation Component** on the specific Agents to force the upgrade or do a repair on the specific Agents.
- The upgrade process takes longer than previously, because it includes several database changes. For example, since RES ONE Automation 2015 all Job History is stored in a different database table. This database change is irreversible: if you downgrade again, the Job History of Jobs that ran before the upgrade will no longer be available. Please consider exporting the Job History prior to the upgrade.

## Chapter 6: Implementing AES-256 encryption

In RES ONE Automation version 10.1.0.0, AES-256 encryption was introduced for the Datastore. This type of encryption was applied automatically for new Datastores. To apply AES-256 encryption to existing environments, a new Datastore had to be created and filled using a Building Block from the legacy environment.

The RES ONE Automation AES-256 Conversion Tool simplifies this by performing an in-place conversion of fields and components that need to be secure, from the Proprietary Obfuscation that was used previously, to AES-256 encryption in the existing Datastore.

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

## Chapter 7: Downgrade to a previous version

Should you wish to downgrade again, just run the Upgrade Pack/Service Pack of the RES ONE Automation version to which you want to downgrade and follow the steps of the Wizard.

If you have created a new Datastore with AES-256 encryption in RES ONE Automation version 10.1, downgrading to RES ONE Automation version 10 or lower is not supported. The legacy Datastores are not aware of the new encryption type in use, therefore the security sensitive data will be rendered unreadable. Also, (re)connecting a legacy Console (version 10 or lower) to an AES-256 encrypted environment is not supported.

### Downgrade to RES ONE Automation 2015 SR5 or lower

If you downgrade to an earlier version than RES ONE Automation version 10, the Agent+ is not supported. If you perform a repair of Agents+ after you downgraded, they will be removed from the Datastore and re-installed as an Agent. However, the Agents+ will not be removed from the **Installed Programs**.

### Downgrade to RES ONE Automation 2015 SR2 or lower

If you have **Modify** access to the **Add-ons** node and you downgrade to RES ONE Automation 2015 SR2 or lower, your access rights will persist, but cannot be changed because the node is no longer available. You will still be able to install Add-ons.

### Downgrade to RES Automation Manager 2014 SR4 or lower

- If you have put the setting **Auto Update Agent** to **Disabled entirely** on global, Agent or Team level, first switch this setting to **Disabled until Agent restart** or **Enabled** before you downgrade, because previous versions do not support this setting. To fix this after the downgrade, switch the setting to a known setting in the version that you downgraded to. Run the Task **Update RES ONE Automation Component** on the specific Agents to force the downgrade or perform a repair of these Agents.
- Since RES ONE Automation 2015, all Job History is stored in a different database table than in RES Automation Manager 2014 SR4 or lower. This database change is irreversible: if you downgrade again, the Job History will no longer be available. Job History of Jobs that ran after the downgrade will be available as usual. Please consider exporting the Job History prior to the downgrade:
  - Snapshot Intelligence change paths made in RES ONE Automation 2015 (or higher) will become useless.
  - When you upgrade again, the entire Job History will become available again, and Snapshot Intelligence change paths can be used again.

## Chapter 8: Compatibility Matrix

Irrespective of this compatibility matrix, RES does not support versions of products for which End of Life (EOL) has been declared by their respective vendors.

### 8.1 Supported Microsoft Windows operating systems

Windows Server version	Edition
Windows Server 2016	Server 2016 Datacenter
	Server 2016 Standard
	Server 2016 Essentials
Windows Server 2012 R2	Server 2012 R2 Datacenter
	Server 2012 R2 Standard
	Server 2012 R2 Essentials
	Server 2012 R2 Foundation
Windows Server 2012	Server 2012 Datacenter
	Server 2012 Standard
	Server 2012 Essentials
	Server 2012 Foundation
Windows Server 2008 R2	Server 2008 R2 Datacenter
	Server 2008 R2 Enterprise
	Server 2008 R2 Standard
	Server 2008 R2 Web Edition
Windows Server 2008	(not supported by Agent+, Dispatcher and Management Portal)
Windows Server 2003 R2	(not supported by Agent+, Dispatcher and Management Portal)
Windows Server 2003	(not supported by Agent+, Dispatcher and Management Portal)

<b>Windows version</b>	<b>Edition</b>
Windows 10	Windows 10 Enterprise
	Windows 10 Enterprise LTSC
	Windows 10 Pro
	Windows 10 Education
Windows 8.1	Windows 8.1 Enterprise
	Windows 8.1 Pro
Windows 8	Windows 8 Enterprise
	Windows 8 Pro
Windows 7	Windows 7 Enterprise
	Windows 7 Professional
	Windows 7 Ultimate
	Windows 7 Home Premium
	Windows 7 Home Basic
	Windows 7 Starter
Windows Vista	(not supported by Agent+, Dispatcher and Management Portal)
Windows XP	(not supported by Agent+, Dispatcher and Management Portal)

## 8.2 Supported Unix/Linux operating systems

Unix/Linux	Version
Red Hat Enterprise Linux	7
	6
	5.3 and higher
	4.5 and higher
SUSE Linux Enterprise Server	12
	11: SP1 and higher
	10: SP3 and higher
IBM AIX	Version 7.1: Technical level 01 and higher (PPC)
	Version 6.1: Technical level 7 and higher (PPC)
	5L Version 5.3: Technical level 4 and higher (PPC)
Ubuntu	16.04
	12.04
Oracle (Sun) Solaris	11 <ul style="list-style-type: none"> <li>for SPARC: update 1 and higher</li> <li>for Intel: update 3 and higher</li> </ul>
	10 <ul style="list-style-type: none"> <li>for SPARC: update 6 and higher</li> <li>for Intel: update 11 and higher</li> </ul>

Apple	Version
Apple Mac OS X	10.10 Yosemite
	10.9 Mavericks
	10.8 Mountain Lion

## 8.3 Supported Directory Services

Directory Service	Version
Microsoft Windows Active Directory	Functional level: 2016
	Functional level: 2012 R2
	Functional level: 2012
	Functional level: 2008 R2
	Functional level: 2008
	Functional level: 2003

## 8.4 Supported Database systems

Database type	Version
Microsoft SQL Server	2016
	2014
	2012
	2008 R2
	2008
	2005
Microsoft Azure SQL	
IBM DB2	10.5
	9.8
	9.7
	9.5
MySQL	5.6
	5.0
Oracle	12c
	11.2
	11.1

## 8.5 Supported Mail Servers

Mail Server	Version
Microsoft Exchange Server	2016
	2013
	2010 SP1
	2010
	2007 (not supported by Agent+)
	2003 (not supported by Agent+)

## 8.6 Supported Application Virtualization

Application Virtualization	Version
Microsoft App-V	4.6
	4.5

## 8.7 Supported Hypervisors

Hypervisor	Version
Microsoft Hyper-V	2012 R2
	2012
	2008 R2
Citrix XenServer	6.5
	6.2

## 8.8 Supported Provisioning Services

Provisioning Service	Version
Microsoft System Center Configuration Manager	2016 (up to v1702)
	2012 R2
	2012 SP1
	2012
	2007
LANDesk	9.5 SP2
	9.5 SP1
	9.5
Citrix Workflow	2.5

## 8.9 Supported Microsoft Windows PowerShell Scripting

Microsoft Scripting	Version
Windows PowerShell	1.0
Windows PowerShell	2.0
Windows PowerShell	3.0
Windows PowerShell	4.0
Windows PowerShell	5.0



## 8.10 Supported Citrix "Ready" products

Citrix product	Version
XenApp	7.6
	7.5
	6.5
	6.0
XenDesktop	7.6
	7.5
	7.0
	5.6
	5.5
	5.0
XenServer	6.1
	6.0

## 8.11 Supported RES products

RES product	Version
RES Workspace Manager	2012 and higher
RES Workspace Manager Relay Server	2012 and higher, as support in Task <b>Install Windows Installer Package</b>
RES IT Store (also known as RES ONE Service Store, RES ONE Identity Director)	2014 and higher