

Kofax RPA Upgrade Guide

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Preface

This guide is for system administrators who upgrade the existing installation of Kofax RPA to a newer version in the enterprise environment.

Related Documentation

The documentation set for Kofax RPA is available here:¹

https://docshield.kofax.com/Portal/Products/RPA/11.5.0-nlfihq5gwr/RPA.htm

The documentation set includes the following resources listed in alphabetical order:

Kofax RPA Administrator's Guide

Describes administrative and management tasks in Kofax RPA.

Kofax RPA Best Practices Guide

Offers recommended methods and techniques to help you optimize performance and ensure success while using Robot Lifecycle Management in your Kofax RPA environment.

Kofax RPA Desktop Automation Service Guide

Describes how to configure and manage the Desktop Automation Service required to use Desktop Automation on a remote computer.

Kofax RPA Developer's Guide

Contains programmer user guides for the Java and the .NET APIs used to execute robots on RoboServer. Also, includes information on the Management Console REST services provided with the product.

Kofax RPA Getting Started with Robot Building Guide

Provides a tutorial that walks you through the process of using Kofax RPA to build a robot.

Kofax RPA Getting Started with Document Transformation Guide

Provides a tutorial that explains how to use Document Transformation functionality in a Kofax RPA environment, including OCR, extraction, field formatting, and validation.

¹ You must be connected to the Internet to access the full documentation set online. For access without an Internet connection, see the *Installation Guide*.

Kofax RPA Help

Describes how to use Kofax RPA. The Help is also available in PDF format and known as *Kofax RPA* User's Guide.

Kofax RPA Installation Guide

Contains instructions on installing Kofax RPA and its components in a development environment.

Kofax RPA Java API documentation

Provides access to the Kofax RPA Java API packages and classes for developers to use with Kofax RPA.

• The Kofax RPA APIs include extensive references to RoboSuite, the original product name. The RoboSuite name is preserved in the APIs to ensure backward compatibility. In the context of the API documentation, the term RoboSuite has the same meaning as Kofax RPA.

Kofax RPA Release Notes

Contains late-breaking details and other information that is not available in your other Kofax RPA documentation.

Kofax RPA Technical Specifications

Contains information on supported operating systems and other system requirements.

Kofax RPA Upgrade Guide

Contains instructions on upgrading Kofax RPA and its components to a newer version.

Kofax RPA User's Guide

Contains instructions for using Kofax RPA and its components. Includes the *Kofax RPA Help* topics, plus more in depth coverage not available in the *Help*.

Training

Kofax offers both classroom and computer-based training to help you make the most of your Kofax RPA solution. Visit the Kofax Education Portal at https://learn.kofax.com/ for details about the available training options and schedules.

Also, you can visit the Kofax Intelligent Automation SmartHub at https://smarthub.kofax.com/ to explore additional solutions, robots, connectors, and more.

Getting help with Kofax products

The Kofax Knowledge Portal repository contains articles that are updated on a regular basis to keep you informed about Kofax products. We encourage you to use the Knowledge Portal to obtain answers to your product questions.

To access the Kofax Knowledge Portal, go to https://knowledge.kofax.com.

• The Kofax Knowledge Portal is optimized for use with Google Chrome, Mozilla Firefox, or Microsoft Edge.

The Kofax Knowledge Portal provides:

- Powerful search capabilities to help you quickly locate the information you need. Type your search terms or phrase into the **Search** box, and then click the search icon.
- Product information, configuration details and documentation, including release news. To locate articles, go to the Knowledge Portal home page and select the applicable Solution Family for your product, or click the View All Products button.

From the Knowledge Portal home page, you can:

- Access the Kofax Community (for all customers).
 On the Resources menu, click the **Community** link.
- Access the Kofax Customer Portal (for eligible customers).
 Go to the Support Portal Information page and click Log in to the Customer Portal.
- Access the Kofax Partner Portal (for eligible partners).
 Go to the Support Portal Information page and click Log in to the Partner Portal.
- Access Kofax support commitments, lifecycle policies, electronic fulfillment details, and selfservice tools.

Go to the Support Details page and select the appropriate article.

Chapter 1

Kofax RPA Easy Upgrade Essentials

This chapter includes best practices and important information about upgrading to Kofax RPA 11.5.0 from an earlier version of the product.

Kofax RPA Easy Upgrade keeps your RPA installation up-to-date. The newest version of RPA brings in bug fixes, new features, enhancements, and security patches. Upgrading RPA does not interrupt your every day work, and your current robots can run in the latest version of RPA without editing or performing full-regression testing.

To ensure a successful transition to a new version of Kofax RPA, we recommend that you:

- Install it on the same computer alongside your existing version of the product. This approach gives you time to acquaint yourself with the new product features, while continuing to use the earlier version for your daily work.
- Import and run your robots in a new version of the Management Console.
- While using both versions in parallel, open and test the default project from the earlier version in Design Studio 11.5.0.

• Note that if you save a default project in version 11.5.0, it can no longer be opened with the earlier version of Design Studio.

Easy upgrade tasks summary

- **1.** Back up your Management Console configuration.
- **2.** Upgrade the Management Console using new database instances.
- **3.** Restore your Management Console configuration using a backup if necessary and connect your current RoboServers to it.

You may want to acquaint yourself with the new version of Kofax RPA while your robots run on the new version of the Management Console.

- 4. Update the cluster based on your licensing environment.
 - For CRE licensing environments, add the RoboServer for both versions, then using the threshold version, configure which robots execute on each RoboServer, until you update all robots or the threshold changes.
 - For KCU licensing environments, Create a new cluster for KCU for each RoboServer on the new version.
- **5.** Upgrade the RoboServer and other services.
 - For RoboServer on Linux as a service, see Upgrade a RoboServer Service Installation.

- For RoboServer on Linux in headless mode, make sure that the system has all the fonts installed for the Webkit robots to run. See "RoboServer" in Chapter 1 of the *Kofax RPA Administrator's Guide*.
- For RoboServer on Windows, do the following tasks:
 - Create new services for the new RoboServer versions using the commands in "Run RPA Components as services" chapter of the *Kofax RPA Administrator's Guide*.
 - Configure the RoboServer settings using "RoboServer Configuration" in the *Kofax RPA Administrator's Guide*.
- For other services, see Upgrade Document Transformation Service, Automatic Desktop Automation Service upgrade, and Upgrade Kofax Analytics for RPA.
- Start RoboServer by invoking it from the command line. Refer to "Start RoboServer" in the Kofax RPA *Administrators Guide*.
- **6.** Move projects to the upgraded cluster.
 - For CRE licensing environments, when the robots are upgraded to the new version they automatically run on the new version RoboServer. Non-upgraded robots continue to run on the previous version RoboServer.
 - For KCU licensing environments, move projects to the new cluster and verify that the robot works with the new RoboServer.
- 7. Update the database mappings. See "Database mappings" in the *Kofax RPA Help*.
- 8. If you use the API in your Kofax RPA environment, update the Java and .NET files.

• These files must be updated when upgrading Kofax RPA. The new API files are located in the API folder of your Kofax RPA installation folder, such as C:\Program Files\Kofax RPA 11.5.0.0\API.

This chapter consists of the following topics.

General upgrade guidelines

Read the General Upgrade Guidelines topic to learn how to best handle upgrading from one major or minor version to another.

Upgrade a RoboServer service installation

Read the Upgrade a RoboServer Service Installation topic if you are upgrading to a newer version of a RoboServer on Linux as a service.

Upgrade Document Transformation Service

Read the Upgrade Document Transformation Service topic if you are upgrading to a newer version of Document Transformation Service.

Automatic Desktop Automation Service upgrade

Read the Automatic Desktop Automation Service upgrade topic to update the Desktop Automation Sevice.

Upgrade Kofax Analytics for RPA

Read Upgrade Kofax Analytics for RPA if you are upgrading Kofax Analytics for RPA.

Upgrade Process Discovery

Read the Process Discovery Upgrade Notes topic to upgrade your copy of Process Discovery.

Upgrade from Assisted Entry to Manual Entry

Read the Upgrade From Assisted Entry to Manual Entry topic if you are upgrading from Kofax RPA10.3.0 or earlier and your existing robots use the Call SOAP Web Service step in Assisted Entry mode.

Enable dynamic license distribution mode

In Dynamic license distribution mode, RoboServers receive the licenses from the cluster per request. Read the Enable Dynamic License Distribution Mode topic to switch on the Dynamic license distribution mode.

Upgrade from earlier versions

If you are upgrading from any versions between 10.3 to 10.3.0.9, trigger mappings are not restored with the backup. Use the solution provided at:

https://knowledge.kofax.com/bundle/z-kb-articles-salesforce7/page/22998.html

General Upgrade Guidelines

This section explains how to perform an upgrade from one major or minor product version to another.

Although the examples are based on an upgrade from version 11.0 to 11.1, much of the information applies to an upgrade from any 10.x version to any 11.x version.

Fix packs are accumulative, and typically if you are upgrading within the same major release, for example, from 11.3.1 to 11.3.4, the upgrade is simpler than when you are upgrading from one major release to another, such as from 11.3.0 to 11.4.0.

• The process for adding a service pack or fix pack to your installation may require fewer steps. For more information, refer directly to your service pack or fix pack documentation.

We always recommend testing and validating your business-critical robots when upgrading Kofax RPA. In this topic, we are presenting a method to upgrade your production system when robots are deployed.

Although Kofax is always committed to making Kofax RPA backward compatible with your already defined robots, types, snippets, mappings, and the like, it is always a good practice to validate your robots in a test environment before upgrading your production system. A new version of Kofax RPA may introduce subtle changes to robot language semantics, timing, website, and automation API compatibility. In turn, it could lead to unwanted behavior of your robots. Some changes may be due to third-party library updates required to ensure security, or to software enhancements and revisions.

• Do not reuse Management Console configuration, scheduler, cluster, and log databases from a previous major release of Kofax RPA with a new major release. It may lead to errors. When upgrading within the same major release, reusing databases is acceptable unless otherwise specified in the FixPack Readme.

If you use Oracle database for collecting analytics data in Kofax RPA and specify the same database while upgrading to a new version, you must manually drop and create tables in the database. See the "RoboServer log database" and "Scripts for Creating Database Tables" topics in *Kofax RPA Help* for details on creating database tables.

To mitigate the transition from one version of Kofax RPA to the next, Kofax RPA allows you to run RoboServers for different versions in parallel in the same installation environment for a period of time. That way, you can continue to use the existing version to run robots in a production environment, while validating them in parallel within a test environment. Once you are satisfied and confident with the results in the newer test environment, you can transition to the new version for use in production.

Upgrade the Management Console

Start by upgrading only the Management Console without upgrading the RoboServers. Later with the newest features from the Management Console, you will add RoboServers and Desktop Automation Services with the newest features into clusters.

In our example, we are upgrading from Kofax RPA 11.0 to Kofax RPA 11.1 and have two RoboServers running. In the **Management Console** > **Admin** > **RoboServers** section, notice how the 11.0 RoboServers are successfully connected from the newly upgraded Management Console.

RoboServers

Cluster	Action	Server	Version
^ Production	:	, 	
	:	172.18.71.28:50015	11.0.0.0
	:	172.18.72.27:50000	11.1.0.0

If you look at your Desktop Automation Services in the **Admin** > **Devices** section, you can see how those are seamlessly connected to the 11.1 Management Console.

• If you want to restore your Management Console configuration using a backup, first set up a new version of the Management Console with all new databases and then restore the Management Console configuration from a backup.

If you want to configure the Management Console to run on Tomcat, refer to "Tomcat Management Console" in the *Kofax RPA Administrator's Guide*.

Create a new cluster for KCU

If you are using Kofax RPA in a KCU licensing environment, create a new cluster for running RoboServers and Desktop Automation Services.

• If you set up a newer version environment and want to run older robots that use KCU licensing in a newer RoboServer (for example, you want to add a 10.3.2.2 RoboServer to a Management Console 11.2 environment), create a new cluster in the new Management Console and place the older RoboServer node into that cluster. See "Configure cluster settings" in the *Kofax RPA Help*.

If you upgrade to a newer version of Kofax RPA using a backup, the RoboServer threshold version is not updated automatically. To ensure the robots can run, navigate to **Cluster settings** > **General** > **Threshold version** and manually specify the RoboServer threshold version.

Move projects to the upgraded cluster

When a project has been validated to work on the newest version, it can be moved to the new cluster. This action requires changing the cluster related to schedules in the project as in the following screen shot.

Schedules

In the validated project, navigate to **Schedules** and click **Edit** from the : context menu for schedules. On the **Basic** tab, scroll down to the **Run on cluster** setting.

Schedu		
	Basic	Advanced
	Jobs priority *	
	Jobs timeout * 10	
	Pre processing robo	t
	Post processing robo	ot
	Run on cluster * Production110	

Services

Moving to a new cluster also requires changing the service cluster for REST and SOAP services. Navigate to **Admin** > **Projects**, click **Edit** from the : context menu for your project, and then select the **Services** tab. On the **Service Cluster** list, select the new cluster.

Production110							
Use only service cluster in project							
Authenticate REST/SOAP requests							
Access-Control-Allow Origin							

Remove the old cluster

When all your projects have been validated to run on the newest version and all RoboServers and Desktop Automation Services have been upgraded and placed into the new cluster, you can now delete the old cluster.

Important notice about Design Studio

While a project is running on a cluster with RoboServers from a previous version, your robots can only be edited with the previous version of Design Studio. As soon as a robot is opened and saved with a newer version of Design Studio, it is migrated to the format of the newest version (you can see the version/format of a robot by looking at it in the repository of your Management Console).

Rok	oots
-----	------

		Folder	Name ^	Туре	Project name	Version	
	:		[TrainingSchedule]	robot	My Validated Project	11.0.0.0	

A robot in the repository reveals its version.

If a robot has been edited with the newest version of Design Studio, you can no longer run the robot with previous versions of the RoboServer. So, if you want to change the robot, you need to either edit it with the older version of Design Studio or validate it (and other robots in the same project) to work on the newest RoboServer and bump the entire project to the upgraded cluster.

Also, if you attempt to mix RoboServers from different versions into the same cluster, the robots may switch from one version to another when they are run.

Keep your projects small

For this method of upgrading to work more efficiently, always try to keep your projects small.

Upgrade a RoboServer Service Installation

This section provides details about how to upgrade a RoboServer running on Linux as a service.

Perform the following steps to upgrade your Linux installation of Kofax RPA.

- 1. Stop the RoboServer manually and wait for robots to finish executing (optional).
- **2.** Update the packages.
- 3. Change the configuration in the new roboserver.settings file (optional).
- 4. Restart the computer or use RoboServerService start command to restart the RoboServer.

Note the following when upgrading Kofax RPA on Linux:

- Upgrading a package replaces all the files in the /opt/Kofax RPA/ directory.
- When you start the upgrade procedure, the init.d service is stopped and replaced with a new version. The service is stopped immediately without waiting for robots to finish executing. If you do not want to interrupt the execution of the robots, stop the RoboServer manually before upgrading.
- A new roboserver.settings file is created for the new service. The new file is created in / home/Kofax RPA/.Kofax RPA/<release_version>/Configuration/ similarly to the old one. That means a new directory is created for the new release so that the old configuration file remains intact in the folder with the older release name. The link to the configuration file in / etc/opt/Kofax RPA/RoboServer.conf points to the settings file in the last installed release.
- The configuration from the old <code>roboserver.settings</code> file is not transferred to the new one, this must be done manually.

In our example, after we created a new cluster named Production110, we upgraded one of the RoboServers, then placed it in this cluster. (See Create a new cluster for KCU.)

RoboServers

Cluster	Action Server		Version	
∧ Production	:			
	:	172.18.72.27:50000	11.0.0.0	
A Production110	:			
	:	172.18.72.07:50000	11.1.0.0	

Likewise, we will upgrade one of the Desktop Automation Services to match the RoboServer version and place it into this cluster. See Automatic Desktop Automation Service upgrade.

Upgrade Document Transformation Service

To upgrade the Document Transformation Service, you need to perform the following actions:

- Upgrade the program files and installed IIS services (Kofax RPA Document Transformation Service and Kofax RPA Document Transformation Client). Upgrading the program files is only required if they reside on the same computer where the Document Transformation Service is running. By default, the program files are located in C:\Program Files\Kofax DTS.
- Move created data such as projects, custom configurations, and so on.

Before upgrading, create a backup of your Document Transformation folder, including projects, Online Learning files, and any custom configuration such as adjustments to Web.config files. By default, the folder is located on the C drive (C: \Document Transformation). When upgrading, it is important that you consider the following details:

- Existing batches that are waiting for validation may not work with the newer version. Finish processing all existing batches before you start the upgrade. Otherwise, batches waiting for validation may not be processed successfully after the upgrade.
- Remove the existing program files and IIS services. To remove the program files, uninstall Kofax RPA Document Transformation through the Windows Control Panel. If the EnableDocumentTransformationWindows scripts were used to create the IIS services, remove the created IIS Application Pools, websites, and the installed Document Transformation Service folder.

Uninstalling may fail to stop the Document Transformation Service Scheduler. Manually stop the Scheduler before uninstalling Kofax RPA Document Transformation.

After removing the program files and services, you can use the Document Transformation Service installer for the newer version. Afterward, use the applicable EnableDocumentTransformationWindows script to install the new services.

- Manually reapply any custom configuration to the services. Do not copy and paste the older configuration files as they may not be compatible with the services.
- Manually reapply any custom configuration to the built-in standard projects. Otherwise, you can give the older projects new names to continue using them in the newer version.

Automatic Desktop Automation Service upgrade

Starting from version 10.7, new Desktop Automation Service version packages are installed automatically if the **Lock package** option is not selected on the **Windows** tab of the Desktop Automation Service window. The first time a newer version Management Console (or Design Studio if a direct connection is used) tries to connect to the Desktop Automation Service, a new service version package is installed. The packages in ZIP files are installed to C:\ProgramData\Kofax RPA on the automated computer. The appropriate package is selected automatically depending on the Kofax RPA component version. For details, see "Windows tab options" in the "Configure Desktop Automation Service" topic in *Kofax RPA Help* or in the *Desktop Automation Service Guide*.

Automatic Desktop Automation Service upgrade is supported by Kofax RPA version 10.2 and later. Version 10.7 and later support this mode immediately after installation. To use automatic service upgrade in versions 10.2 to 10.6, update your copy of Kofax RPA to at least one of the following versions:

10.2.0.8 10.3.0.9 10.3.1.2 10.3.2.6 10.4.0.4 10.5.0.2 10.6.0.3

Upgrade Kofax Analytics for RPA

Kofax Analytics for RPA 2.7 is designed to use Kofax Insight 6.5. The RPA views in the Kofax Analytics for RPA 2.7 have changed, but you can use the analytics and log databases from the previous version of Kofax RPA.

The Process Discovery views have changed and can only work with the data collected and analyzed by the Process Discovery in Kofax RPA 11.5.0.

For Kofax Insight upgrade, see the "Upgrade Insight" chapter in the *Kofax Insight Installation Guide*. You can also consult Kofax support before performing an upgrade.

Process Discovery Upgrade Notes

Note the following when upgrading to the latest version of Process Discovery.

General Process Discovery upgrade notes

- Agents and Analyzer of the previous version are removed when you upgrade to a new version of Process Discovery.
- After upgrading to a new version of Process Discovery, Agent and Analyzer configuration is overwritten.
- For mass agent upgrade, use silent installation of Process Discovery Agents, as described in the Deploy Process Discovery Agents section of the *Kofax RPA Administrator's Guide*.
- You can restore Process Discovery Group configuration using Management Console backup. See Back Up Management Console in the Kofax RPA Help.

Notes on upgrading Process Discovery Analyzer

- Agent database must match the version of the Analyzer.
- Analyzer database must match the version of the Analyzer.

Upgrade From Assisted Entry to Manual Entry

Since version 10.3.0.1 the Call SOAP Web Service step does not support Assisted Entry mode. If you are upgrading from an earlier version of Kofax RPA, update the step as described below.

- 1. Open the robot in an earlier version of Design Studio, for example 10.3.0.0. Create a copy of the robot to ensure that you have a backup and because it is easier to upgrade. In the following steps we will update the step in the copy of the original robot.
- 2. Open the copy of the robot in Design Studio, execute it to the **Call SOAP Web Service** step, and change the entry mode to **Manual Entry**.
- **3.** Switch to the original robot. Execute to the **Call SOAP Web Service** step. Open the **Browser Tracer** from the **Tools** menu or by pressing F12. In the **Browser Tracer** click the red button to start trace recording.
- 4. Execute the Call SOAP Web Service step by clicking the step after it.
- **5.** If the original step has a specified **Web Service URL**, copy it from the step in the original robot to the step in the updated robot. Otherwise, select the original robot in the editor to ensure that what you see in the Browser Tracer is for that robot. In the Browser Tracer, click the single HTTP event entry, copy the URL, and paste to the **Web Service URL** property of the updated step.
- **6.** In the Browser Tracer, click the single HTTP event entry and find the header property called **SOAPAction** on the Request tab. The Browser Tracer should look similar to the following example:

rowser Trace	er				
e <u>H</u> elp					
aScript					
me	Load Time	Method		URL	Status
25 17:14:32	205	GET	http://kapowsoftware.com/tutorial/news-magazine/index.html		301
25 17:14:33	189	GET	http://kapow-tutorials.kofax.com/tutorial/news-magazine		301
25 17:14:33	4097	GET	http://kapow-tutorials.kofax.com/tutorial/news-magazine/		200
25 17:14:37	176	GET	http://kapow-tutorials.kofax.com/tutorial/news-magazine/styles/layo	utcss	200 (cached)
25 17:14:37	146	GET	http://kapow-tutorials.kofax.com/tutorial/news-magazine/styles/navi	csa	200 (cached)
25 17:14:37	193	GET	http://kapow-tutorials.kofax.com/tutorial/news-magazine/styles/form	15. CS5	200 (cached)
25 17:14:37	186	GET	http://kapow-tutorials.kofax.com/tutorial/news-magazine/styles/table	15.055	200 (cached)
25 17:14:38	190	GET	http://kapow-tutorials.kofax.com/tutorial/news-magazine/styles/featu	ured_slide.css	200 (cached)
5 17-14-38	4135	GET	http://kanow-tutorials.kofav.com/tutorial/news-manazine/most-recen	it blood	200
Request Data	Response	Response	Data		
2020-08-25	17:14:37				
146 ms					
GET					
http://kapo	w-tutorials.kofa	ax.com/tutor	ial/news-magazine/styles/navi.css		
			Name	Value	н
Accept				text/cs,*/*(q=0.1	^
Accept-Enc	oding			gzip, deflate	
Accept-Lan	guage			en-us.*	
Connection				keep-alive	
Cookie			PHPSESSID=9pmnrjuqbnht290j70sfn8fe83		
Host			kapow-tutorials.kofax.com		
If-Modified-	Since			Fri, 19 Jun 2015 10:32:39 GMT	
If-None-Mat	ch			"c9419447baad01:0"	
Referer				http://kapow-tutorials.kofax.com/tutorial/news-magazine/	
User-Agent				Mozilla/5.0 (Windows NT 6.1) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/43.0.2357.134 Safari/537.36	
Warning				113	
					~
	rowser Trace a Leep ascript me to J2 J24.32 to J214.33 to J2	rowser Tracer ascript me Lead Time 15 17:44:3 205 15 17:44:3 109 15 17:44:3 109 16 17 109 16 17 109 16 m 2020-01-25 17:14:37 146 ms 2020-01-25 17:14:37 147 ms 2020-01-25 17:14:37 1	rowser, Tracer rowser, Tracer ascript ascript Laad Time Method St 71,4132 St 71,4132 St 71,4132 St 71,4137 St 71,4137	Storage Lead Time Method ascript 200 Storage Method 1 100 100 Method 1 100 100 Method 1 100 Communication of the provide state of the provide stat	

Copy the value of the **SOAPAction** header, switch to the updated robot and paste it to the property called **SOAP Action**. To copy the value, double-click the header in the list and copy its value from the **Show HTTP Header** dialog box.

7. In the Browser Tracer, find the event again, click the Request Data tab, copy the entire text of the request, and paste it to the **SOAP Request** property of the updated step.

- 8. Ensure that the updated step uses the correct SOAP version by looking at the WSDL file used by the original step. If this WSDL file uses the namespace http://schemas.xmlsoap.org/ wsdl/soap/, the version is 1.1. If it uses the namespace http://schemas.xmlsoap.org/ wsdl/soap12/, the version is 1.2.
- **9.** Make sure that **Output**, **Options**, and other properties on the updated step have the same value as on the original one.
- **10.** Test the updated robot, save it. Open it in Kofax RPA 10.4.0 and test it.
- **11.** All the previous steps assumed that parameter values in the step are static, that is, do not depend on variables. If parameter values in your step are taken from variables, create the value of the **SOAP Request** property using an expression instead of a static value.

Start by taking a copy of the request. Change the option from **XML** to **XML from Expression** and paste the request into the **Expression** text field. This will produce an expression with an error. You fix this by surrounding it with >> and <<.

Dynamic property values

All the previous steps assumed that parameter values in the step are static, which means they are hardcoded and do not change during the execution of the robot. If parameter values in your step are taken from variables, create a value of the **SOAP Request** property using an expression instead of a static value.

Start by making a copy of the request. Change the option from **XML** to **XML from Expression** and paste the request into the **Expression** text field. This should produce an expression with an error. Fix it by surrounding the request with double greater than and less than signs (>> <<).

For instance, if the value of the parameter <code>zipCodeList</code> is taken from a variable that is also called <code>zipCodeList</code>, the SOAP Request surrounded by >> << should look as follows (some details are left out).

The value of the <code>zipCodeList</code> parameter in the example is static and equals <code>90210</code>. To use the value of the <code>zipCodeList</code> variable instead of the hardcoded value, replace the actual value of the parameter with the variable name in the following format:

```
<< + zipCodeList + >>
```

The code example looks like the following:

```
>><?xml version="1.0" encoding="UTF-8"?>
<soapenv:Envelope ...>
<soapenv:Body>
<nsl:LatLonListZipCode ...>
<zipCodeList xsi:type="xsd:string"><< + zipCodeList + >></zipCodeList>
</nsl:LatLonListZipCode>
</soapenv:Body>
</soapenv:Envelope><<</pre>
```

Continue this process to replace all parameters with variables.

If a parameter depends on an expression and not just a variable, use that expression instead of the variable. For example, if a parameter depends on the expression x+1, replace the value with:

<< + (x+1) + >>

Enable Dynamic License Distribution Mode

In the Dynamic license distribution mode, RoboServers receive the license units from the cluster per request. A RoboServer can get as many license units as it requests if they are available. In this mode, RoboServers communicate only with the Management Console and block other requests, such as API calls.

i In the Dynamic license distribution mode, license units are distributed automatically. This overrides the licenseLimit parameter.

Dynamic license distribution mode is supported by Kofax RPA version 10.3 and later. Version 10.7 and later support this mode immediately after installation. To use dynamic license distribution, in versions 10.3 to 10.6, update your copy of Kofax RPA to at least one of the following versions:

10.2.0.8 10.3.0.9 10.3.1.2 10.3.2.6 10.4.0.4 10.5.0.2 10.6.0.3

• If you change the license distribution mode from Static to Dynamic for RoboServers that do not support this mode, those RoboServers disappear from the RoboServers section in the Management Console. To see the missing RoboServers in the Management Console, change the mode to Static and restart the Management Console.