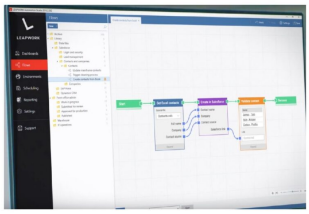

Leapwork RPA Software Robots Machine User Guide

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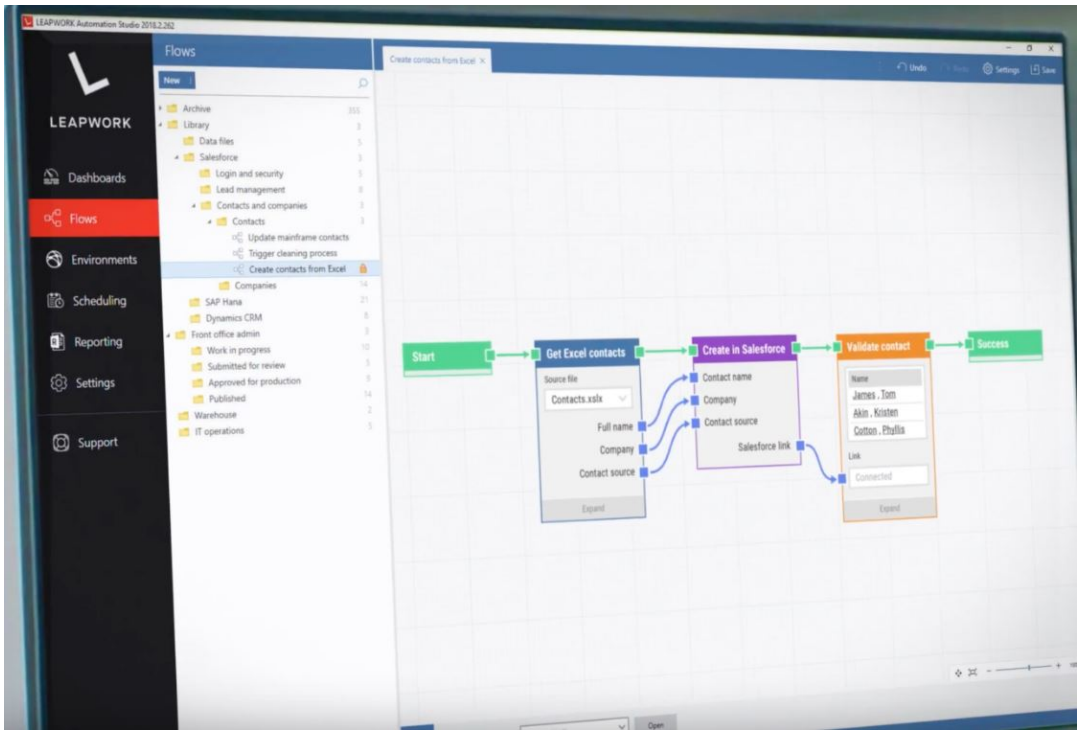
Leapwork RPA Software Robots Machine



Product Information

The product is an eBook that explains the basics of test automation and Robotic Process Automation (RPA) along with their key differences. The eBook provides information about how software robots, machine learning, and AI are taking over repetitive work in the workplace. It also explains how digital transformation is changing the way we work and how enterprises prioritize resources. Test automation and RPA are two common terms within the field of software automation that speed up business processes, ensure high quality, and limit repetitive and error-prone work. The eBook covers ownership, purpose, scope, domain knowledge, programming knowledge, and one tool for test automation and RPA.

Product Usage Instructions

To use the eBook, download it from the provided source and open it on your device. Read through the contents to learn about test automation and RPA basics along with their differences. The eBook provides information on software testing, why manual testing processes fail, and the benefits of test automation. It also explains how RPA works and which processes can be automated. The eBook compares test automation and RPA in terms of ownership, purpose, scope, domain knowledge, and programming knowledge. Finally, it provides information on one tool for both test automation and RPA. Use the eBook to gain knowledge about these two types of software automation and their applications in the workplace.

- Software robots, machine learning, and AI are taking over much of the repetitive work that people encounter at the workplace. This is not only because these technologies perform tasks with higher accuracy and speed than humans but also because they eliminate tedious tasks that would otherwise stop employees from focusing on more inspiring work. Digital transformation is here to change the way we work, and how enterprises prioritize resources.
- Test automation and Robotic Process Automation (RPA) are two common terms within the field of software automation, which are closely related
  to digital transformation. These two types of automation are widely used because they speed up business processes and ensure high quality while limiting repetitive and error-prone work.
- The difference between test automation and RPA can be difficult to grasp – even for people who have been working with software for a long time.

- In this eBook, the basics of test automation and RPA will be explained along with the key differences.

What is test automation?

- The increasing pace of software development calls for continuous delivery and, thereby, continuous testing. When software delivery cycles are sped up, more and faster testing is needed. This puts a lot of pressure on testers, QA managers, and developers.

Software testing

- The aim of software testing is to check if the software performs as intended and if the expected outcome matches the actual outcome of the performed test. Testing is a complex and time-consuming part of the product development cycle, and test cases tend to pile up when performed manually.

Why do manual testing processes fail?

- Testers know a bug when they see one. But identifying how and why that bug occurs can be challenging. By the time the tester finds the bug, the developer may be far ahead in their software build, making it difficult for them to find the broken piece of code and fix it. For this reason, manual testing processes often become a barrier to fast, continuous delivery.
- If, on the other hand, testers are able to discover the bug faster, the developers would more easily be able to find and fix it because the code was written more recently.

Why automate?

- Test automation is about improving testing processes in terms of planning, execution, and management. Test automation is the use of software (separate from the software under test) to control the execution of tests. It lets software robots, rather than people, perform repetitive tasks and emulate end-user interaction with the system under test, in order to increase the range, depth, and reliability of one’s quality assurance efforts.

What is Robotic Process Automation (RPA)?

- Robotic Process Automation is the use of software to complete processes on a computer that would typically be done manually by a person.
- RPA can be used to complete essentially any task on a computer that is predictable and repetitive. These types of tasks usually end up as a pile of guilt on desks around the office – those things you just have to do but never get to, because they are extremely time-consuming and rarely inspiring.
- The most common type of RPA task is data migration – moving data from A to B. Robots are capable of migrating data more quickly and more accurately than people. And it's a task that most people don't mind letting a robot do.

Which processes can be automated?

- Most enterprises have many processes that can benefit from being fully or partially automated.
- These include invoicing, reporting, onboarding, member management, and registration processes.
- RPA can be used across all industries. Potential automation cases range from simple, department-specific operations to complex organization-wide processes.

These are a few examples:

- Logging into a computer, opening an excel sheet, opening a browser application, logging in to a portal within the application, and then moving data from the excel sheet into the application.
- Logging into a virtual computer, opening an empty contract, opening a browser application on a local computer where the data for the contract is fetched, filling in the fields in the contract, and last, opening an email and sending it with the contract attached to a specified receiver.
- RPA can be used in all industries ranging from industrial and manufacturing to communications and consulting. There is great potential for enterprises to save costs and increase agility by automating core processes.
- Contrary to popular belief, RPA and test automation tools are not here to take over jobs or to deskill people. They are here to work together with humans to make their jobs easier, by taking over tasks that are highly repetitive and predictive.
  With RPA and test automation, there's great potential for businesses to save resources and increase agility across the organization.

The difference between test automation and RPA

- Test automation and RPA are similar in some ways. Both disciplines are about automating processes that are repetitive, costly, time-consuming and error-prone.
  Test automation and RPA have several benefits in common:
- Risk mitigation
- Increased efficiency
- Reduced costs
- Higher job satisfaction

However, there are significant differences between the two.
These fall into five categories:

Ownership

- The first difference between test automation and RPA is which department is in charge of the automation. The ownership of test automation always lies with the software development team and, more specifically, a limited set of users within the quality assurance team. These are the people in charge of running test cases to ensure the quality of software applications and to verify that integrations and processes run as intended.
  RPA ownership lies in the hands of any department that might want to automate a repetitive and error-prone business process. Many organizations do, however, centralize the responsibility of automation, meaning they let the departments contribute to automation, but they put certain measures in place to approve automation before it's released.

Purpose

- Both test automation and RPA are implemented to increase the efficiency and quality of certain interactions between a human and a computer.
- In RPA, you automate sequences of tasks in a clearly defined path to successfully execute a process. This, in turn, will allow you to complete your work faster while reducing human error.

- In test automation, you conduct automated test cases to see where an application fails so that you can assess quality and risk before a release.
- This means that when you create an automation flow in test automation, you expect this flow to either pass or fail. If it fails, you would flag the given flow and move on to the next. In RPA, you create a flow with the expectation that it will pass – or work – and,
- if it doesn't, you should take immediate action to resolve the issue and then carry on.
- Therefore, in test automation, failures provide insight on business risk while in RPA they become an obstacle to successful task completion.

Scope

- Another key difference between test automation and RPA is the System Under Automation (SUA). For a company that delivers software, the SUA would typically be a single application, and the focus of the test cases would be to test features and functionality of that particular application. For a company that delivers a wider service that involves multiple underlying applications, the scope may be wider, involving end-to-end tests that run across these, but the test case should ideally still only test one process or functionality at a time.
- When it comes to RPA, the scope is almost always broad, running across multiple applications simultaneously, and sometimes performing multiple actions in the same flow.
- Moreover, RPA is usually implemented in applications that rarely change while test automation is used in applications that are typically incomplete or evolving. Therefore, test automation delivers coverage while RPA focuses on doing the same sequence over and over again.

Domain knowledge

- In conventional test automation, the tester or QA analyst must have thorough domain knowledge of the functionality of the application under test. This knowledge is needed in order to define test scenarios that will then serve as the basis for automation.
- In RPA, users must have strong knowledge of the process to be automated. However, they do not need in-depth knowledge of the inner workings of the applications that will be used to complete that process.

Programming knowledge

- The last main difference between test automation and RPA is the amount of programming skill required – at least it has traditionally been a key difference.
- Test automation tools have for a long time been code-based and required strong programming skills to use. In recent years, more low-code solutions have emerged on the market.
- These tools require you to understand some programming language, but remove some of the complexity and replace it with more easily accessible user interfaces.
- RPA tools are by nature easier to use, because their audiences have typically been business users across departments, rather than technical experts in the IT department.
- Both types of tools benefit from being low-code, or even no-code, where zero coding capabilities are required, because it makes test automation and RPA easier and quicker to set up and maintain.

- This doesn’t remove the need for developers with coding skills, it just means that testers or business experts can contribute to automation to a much larger degree, and that developers can instead focus on development and innovation.

Test automation and RPA: one tool

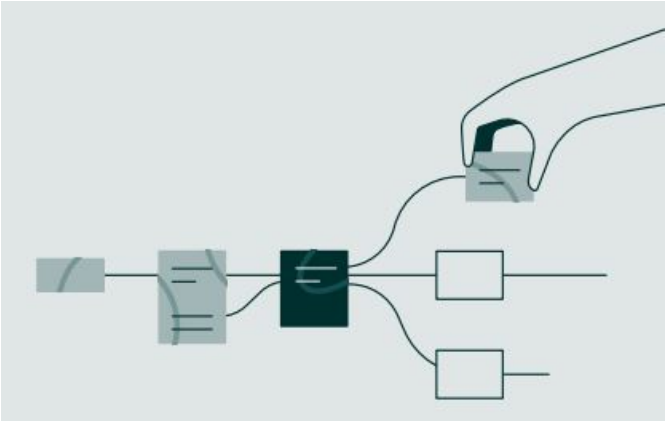
- Digital transformation has become a key priority for companies worldwide. To successfully transform a business, the right set of tools is required.

What does the market have to offer?

- Finding the right tools can be a challenge. Many tools are limited to certain technologies or use cases. Furthermore, most tools require coding, which means developer dependency, even for simple business process automation.
- This leads to several challenges.
- If you invest in a tool that is limited in capabilities and can only access certain technologies, the scope of automation will naturally be limited, and the return on investment will be smaller, and perhaps nonexistent. To scale automation and increase coverage, you would have to invest in multiple tools, which not only makes the investment larger, it also makes the technological environment more complex.
  If you invest in a tool that requires coding, you will need developers to create and scale automation. And you’ll also need them to maintain it. This will inevitably create bottlenecks in the team and cost unnecessary resources. Even though it can work
  on a small scale, teams will find that it becomes impossible to scale, and hence get a return on investment on, down the line.

Leapwork: codeless, cross-tech test automation

- Leapwork is a no-code test automation platform with cross-technology functionality. Leapwork has created the world’s most accessible automation platform. Through a visual, no-code approach, Leapwork makes it easy for business and IT users to automate repetitive processes, so enterprises can adopt and scale automation faster.
- Leapwork is built for enterprises, and is used by more than 400 global businesses across all industries, from banks and insurance companies to life science, government and aerospace.



- **Start a Leapwork trial to see what you can achieve**
- **Start trial**

Documents / Resources

	Leapwork RPA Software Robots Machine [pdf] User Guide RPA, RPA Software Robots Machine, Software Robots Machine, Robots Machine, Machine

References

- User Manual