Microsoft

Robotic Process Automation in Power Automate: UI flows

April 2020

This brief applies to all Microsoft Licensing programs

Contents

Summary

This brief outlines Microsoft's new Robotic Process Automation (RPA) capability in Power Automate, called UI flows, which is now generally available.

Details

Overview

UI flows is the RPA capability in Power Automate that enables enterprise customers including technical or business end users to automate repetitive tasks across legacy applications — to simplify how they work in a scalable, secure way. Users can streamline how they work by recording step-by-step UI actions—such as mouse clicks, keyboard use, and data entry—and then replay those actions

The RPA feature is offered in both attended (personal automation) and unattended (enterprise automation) options.

- With the attended option, users can create on-demand task automation to drive efficiencies and automate manual, individual tasks across the desktop and web.
- With the unattended option, enterprise users can automate company processes at scale and accelerate the automation of high-volume and tedious tasks—without requiring interaction from a person.

Learn more about the details of attended and unattended features and [licensing options]() later in this document.

Robotic Process Automation in Power Automate: UI flows

Documentation and Resources

- **Pricing and licensing resources:** Visit pricing and review the licensing guide to learn more.
- **Learn** all the details on getting started, requirements, and more in the documentation.
- **Visit** the UI flows landing page and watch the overview video.
- **Watch** the overview video on UI flows with scenarios on how it works in this 90 sec explainer video.
- **Read** more details on Power Automate and partner news in Charles Lamanna's blog post.

Frequently asked questions - Overview

Q1: Why is Power Automate with RPA important?

A: Power Automate provides a single solution for end-to-end automation that spans on-premises systems and the cloud. This approach addresses three primary areas:

- Intelligent understanding of data (AI): Structured and unstructured data from paper-based invoices to images can be easily understood and integrated with other critical business applications. With AI-driven capabilities like forms processing in AI builder, end users can parse data from analog sources.

- Connecting to 300+ modern apps and services (API-automation): It is easy to work with information stored in the cloud or on-premises apps and databases. We offer native connectivity to common apps or a company's APIs with over 300 connectors out-of-the-box and a no-code way to connect to any internal services.

- RPA connects to enterprise applications without APIs(UI-automation): Some applications are too old or expensive to support API connectivity. With RPA, end users can automate their work in these applications by recording manual tasks, such as mouse clicks, keyboard inputs, and data entry, and then automate the replay of these steps to integrate with more complex process automations.

We are completing the automation portfolio with the addition of RPA along with the ability to use AI and API connectors; making Power Automate the most comprehensive automation platform available in the cloud today.

Completing the automation portfolio
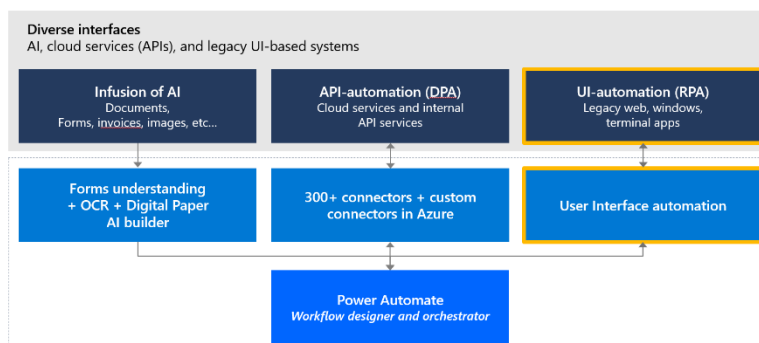
Q2: What are the key benefits of the RPA feature called UI flows?

A: UI flows within Power Automate is Microsoft's RPA capability for UI automation. Before UI flows, Power Automate played primarily in the digital process automation (DPA) space to automate business processes that provided APIs. With UI flows organizations can automate legacy applications that can only be driven from their front end. This allows customers to create complete business process automation. With UI flows, customers can record step-by-step UI actions—such as mouse clicks, keyboard use, and data entry—and then replay those actions.

This enables organizations to:

- Automate in a single platform across apps and services that do not have APIs
- Customize, build, and manage UI flow scripts in a secure cloud environment
- Use a low-code experience with a step-by-step record and play back experience
- Seamlessly integrate UI automation with API-based automation and AI through AI Builder, by combining UI flows with regular flows.

Feature highlights:

- UI automation designer – providing a design time experience optimized for Windows and web application experiences. This includes recording and script editing experiences.
- Orchestrate UI flows with triggers (such as email received or Teams message), scheduled or on demand
- GUI automation runtime – the core engine that connects the actions together passes data between actions and executes them.

Q3: How does Power Automate fit into Microsoft ecosystem?

A: Power Automate combined with Microsoft's cloud-based applications offers a fully integrated automation platform across Azure, Dynamics 365, Microsoft 365 and Microsoft Power Platform. All these apps and services are natively integrated with Power Automate so IT decision makers have the needed controls to ensure data security and app management.

- **Azure Active Directory:** Build in the most secure and integrated cloud service with Azure AD. From citizen developers to professional developers, it's simple for all.
- **Data Loss Prevention (DLP)**: Leverage powerful (DLP) policies that help protect organizational data from unintended exposure. For the process available for administrators to create a DLP policy, see Create a data loss prevention (DLP) policy
- **Microsoft 365:** Streamline business processes by integrating apps and automating workflows across Microsoft 365, including Microsoft Teams, the hub for teamwork. Using Microsoft 365 you can automate routine tasks and processes between your favorite apps, set up custom notifications, synchronize files, collect data, and more.
- **Power Platform:** Power Automate is part of Microsoft Power Platform, which brings together intelligent process automation (Microsoft Power Automate), low-code app

development (Power Apps), and business intelligence (Power BI) and Power Virtual Agents. With these natively integrated capabilities, your organization is well equipped to transform every part of your business.

- **Dynamics 365**: From dispatching field service technicians to invoice processing, Power Automate allows you to automate processes across the entire suite of Dynamics 365 solutions, and optimize your everyday tasks with intelligent workflows.

- **Azure**: Native integration with [Azure API Management](#), [Azure Functions](#), and [Azure Logic Apps](#) to empower more technical developers extend capabilities of Power Automate to more sophisticated and technical applications.

Q4: What is the Power Automate + Power Platform value?

A: [Microsoft Power Platform](#) includes Power BI, Power Apps, Power Automate, and Power Virtual Agents. Power Platform is more than the sum of its parts. Connect all of the products together—and to Office 365, Dynamics 365, Azure, and hundreds of other apps—results in an end-to-end business solution.

- Together with Power Automate anyone create no/low-code custom apps that can share and collect user data with Power Apps; while Power Automate simplifies the creation of automated workflows and enables business logic to simplify app building.

- With Power BI, anyone can automatically refresh and surface business data and send an automated alert with Power Automate and act from the insights.

- And with new Power Virtual Agents, teams can easily create and publish AI-driven chatbot experiences that automate processes and take actions with Power Automate.

- RPA in Power Automate takes this low-code application experience one step further by providing a bridge between older/legacy applications to modern solutions. All these individual products work together to offer an unparalleled service to help your organization scale.

Frequently asked questions - General
Q1: How do UI flows work?

A: Power Automate remains the service for orchestrating automations, serving as the execution environment for API and AI processing, and centralized security and management. Since legacy applications run on-premises, Power Automate enables customers to deploy a runtime agent on the machines where these legacy applications run and provide secure communication between the desktop agent and the Power Automate service. With Power Automate + RPA, you can automate both modern applications with APIs by using the connectors feature, or legacy applications with incomplete or missing APIs by using UI flows. You can even combine legacy apps, modern apps, and manual processes in a UI flow.

Please see UI flows documentation for more details.

Application type	Feature	Benefits
Modern apps and services with APIs	Connectors	High reliability
Legacy apps (no APIs)	UI flows	Easy to create

Two types or modes in RPA with UI flows *attended* and *unattended.*

- Running UI flows in **attended mode** automates your desktop so that you will see the action right in front of you.

- Running UI flows in **unattended mode** automates a desktop that could be physically in a different location, whether a different room, or a virtual desktop in the cloud though Windows Desktop Virtualization service. This option allows UI flows to login to a designated Windows machine, execute desired automation and then logout.

- UI flows can automate two types of applications:

  o **Automate Windows applications:** Record actions on your Windows desktop and turn manual tasks into automated workflows with a step-by-step guided experience. With general availability, automation relies on applications' support for accessibility experiences, with the ability to fallback to coordinate-based playback as an option.

  o **Automate web-based applications:** With UI flows, you can automate web sites with a Selenium IDE experience integrated with Power Automate.

Q2: What are the technical requirements for UI flows?

A: Power Automate is supported on Windows 10 and Windows Server 2019 devices. The recording is expected to be performed on a physical machine, while the playback can occur on physical or virtual machines. Machine configuration requires installation of browser extensions and desktop components for designing automation scripts. Playback requires installation of UI automation runtime, and installation and configuration of an on-premises Data Gateway. The supported browsers are the latest version of Google Chrome and Microsoft Edge (Chromium).

Q3: How many UI flow operations can be run on a single VM?

A: Only one automation at a time can be run on each computer. However, you can configure one computer to run multiple automations sequentially.

Q4: Which regions and languages are supported for GA?

A: All commercial cloud regions are supported (North America, Europe, APAC, South America, Canada, Japan, Australia, UK and India regions). The software is available in 43 languages supported by CDS except RTL languages (Arabic and Hebrew).

Q5: Will the customers using Preview lose the UI flows data they created as the service transitions to be generally available?

A: There are no known issues with the generally available product supporting artifacts created in the preview offering.

Frequently asked questions – Licensing and Pricing

Q1: How is RPA licensed within Power Automate?

A: Attended and unattended RPA are licensed via two new Power Automate offers:

- **Power Automate per user with attended RPA plan** provides the ability for users to run an attended RPA bot on their workstation. The plan is optimized to span legacy and modern **applications** by enabling users to combine UI with API-based automation based on their unique needs.
- **Power Automate Unattended RPA add-on**. Eligible base offers include the Power Automate per user with attended RPA plan and Power Automate per flow plans. Organizations can choose to scale the number of bots running autonomously as needed.

Q2: Does the unattended RPA add-on get assigned to a user?

A: No – the unattended RPA add-on is assigned to an Operating System Environment (OSE)

Q3: What entitlements are included with the RPA offers?

A: Please reference the product page here and the and licensing guide for detailed information.

Q4: Are there any additional service limits specific to RPA being introduced to Power Automate?

A: No – the primary service limits and entitlements remain consistent per table above.

Q5: Many RPA vendors licensing bot authoring/process recording, orchestration, management, and other related components separately – are these functions included in the RPA offers?

A: Yes – UI flow authoring, bot orchestration and management are included with both the per user with attended RPA plan and unattended RPA add-on.

Q6: Is there licensing associated with development and testing of bots in production/non-production environments?

> **A:** A bot represents execution of a GUI-based process on a machine, so what matters is the dev/test/prod of the flow that exists in Power Automate today. UI flows will be solution-aware so that these UI flows can be edited. Bots are not something that need to be created or managed.

Q7: What about the infrastructure needed to run an unattended bot in a virtual machine? Is that included in the unattended RPA add-on?

> **A:** No – running the unattended RPA bot in a VM requires the separate purchase of any necessary compute resources.

Q8: Do Dynamics 365 and Office 365 customers have access to the RPA capabilities as part of the seeded Power Automate capabilities available in D365/O365 licenses?

> **A:** No – accessing RPA capabilities requires either the per user with attended RPA and/or the unattended RPA add-on license.

Q9: How is a "bot" defined? What is the difference between a bot and UI flow?

> **A:** A "bot" is a GUI-based process running on a physical or virtual desktop environment.

> **A**: UI flow is a capability in Power Automate targeting the RPA market by enabling legacy apps to be automated via GUI vs API. Processes executed via UI flows can be contained within a broader API-based automation scenario or exist as standalone.

Q10: What are the restrictions on how bots can run in attended and unattended scenarios?

> **A: Attended bots** are triggered by an explicit user action on their local and/or remote workstation, and they must operate concurrently with the user on the same workstation. A bot can run more than one discrete process, but each process must be serialized to run sequentially.

> **Unattended bots** run autonomously without requiring user actuation. They can be deployed on local and/or remote workstations. And like attended bots, unattended bots can also run more than one discrete process, but each process must also be serialized to run sequentially. Concurrent instances of a singular process require an additional unattended bot for each instance.

Q11: Is there any limit to the number of processes with UI flows that a user can author?

> **A:** No – however, both attended and unattended bots are only able to run one process at a time. Running multiple processes with the same bot requires the processed to be serialized, that is, run sequentially.

Q12: Will users be able to access an RPA trial?

> **A:** Yes – users signing up for a Power Automate trial will have access to RPA capabilities. Visit <u>UI flows</u> and <u>Try preview</u> to get started.

Q13: What is the Microsoft 365 E3 – Unattended License? How will a customer identify when this license is needed in addition to the Power Automate RPA plans?

> **A:** The Microsoft 365 E3 – Unattended License allows the use of the M365 E3 suite in only a single physical or virtual OSE for Robotic Process Automation. This license is required if the bot is accessing or utilizing any M365 E3 applications and is running as an Unattended bot.