

RPA Design and Development

v4.0





Lesson 2 | Platform Knowledge

Exam Topics – Platform Knowledge

1. List and describe high level the use of UiPath products (Including Studio Types, Robot Types, Orchestrator, Integration Service)
2. Describe the value of the components of the UiPath Ecosystem (Community, Academy, Forum, Documentation, Marketplace)
3. Explain the difference between Attended and Unattended processes

Studio-Robot-Orchestrator Ecosystem

UiPath Studio



Studio is used to develop automation projects.

Studio:



Visual



Drag-and-drop



Low Code

Provides
solutions for
application
integration and
automation

Automates
applications,
tasks, &
processes

Generates
workflows to be
executed by
Robots

Studio-Robot-Orchestrator Ecosystem

Features of Studio



Productivity

Drag & Drop Activities
Manage
Dependencies



Code Quality

Workflow Analyzer
Create Custom Rules
Validate



Extensibility

Project Template
Browser Extensions



Version Control

Git, TFS, SVN Integration
File Diff and Compare
Changes



Debugging

Breakpoints
Call Stack, immediate,
Locals, Watch
Test Activity and Create Test
Bench



Reusability

Libraries
Custom
Templates

Studio-Robot-Orchestrator Ecosystem



UiPath Studio is an integrated development environment for Automation Developers to design, develop, and debug automation projects.

Studio can be connected to Orchestrator, making it easy to publish automation projects as NuGet packages, via the dedicated feeds. From there, they're distributed to robots to be executed.

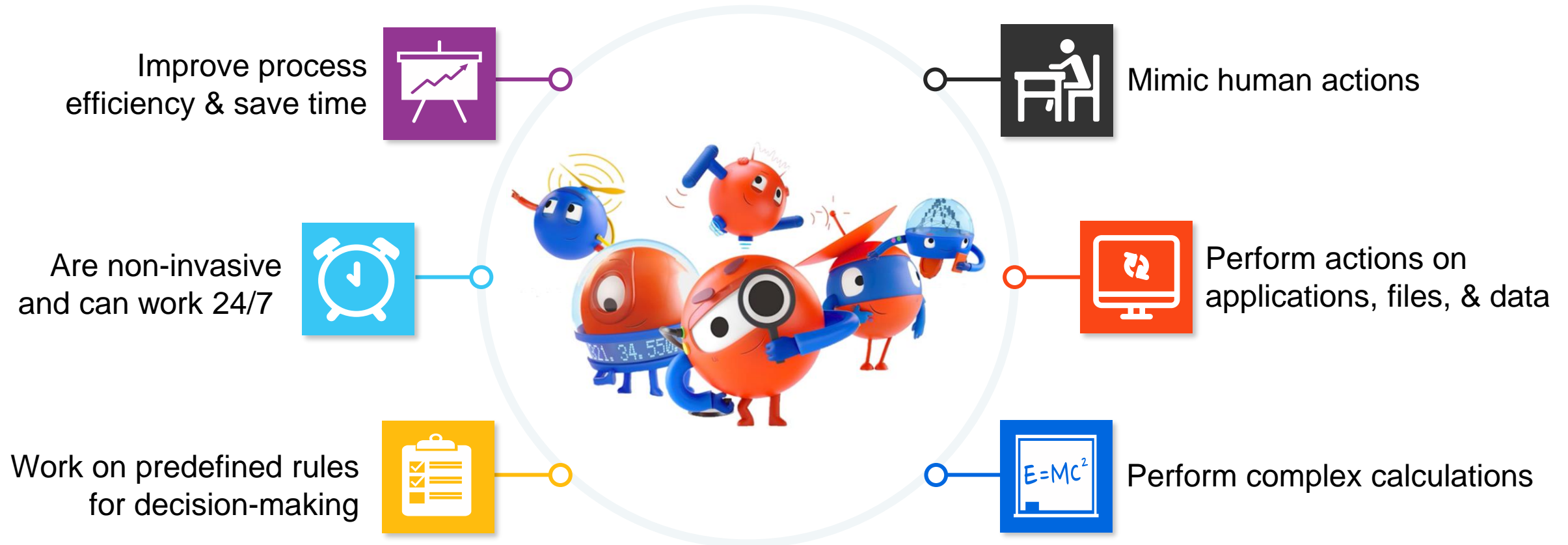
When we say Studio, we can think of two profiles, namely Studio and StudioX. These are meant to match different coding skills that developers may have:

- **StudioX** is meant for business users looking to automate tasks for themselves and their immediate teams
- **Studio** is meant for Automation developers looking to build complex unattended or attended process automations

Depending on the type of Studio license an enterprise may purchase, Studio users can switch between Studio and StudioX profiles as they need.

Introduction to Robots

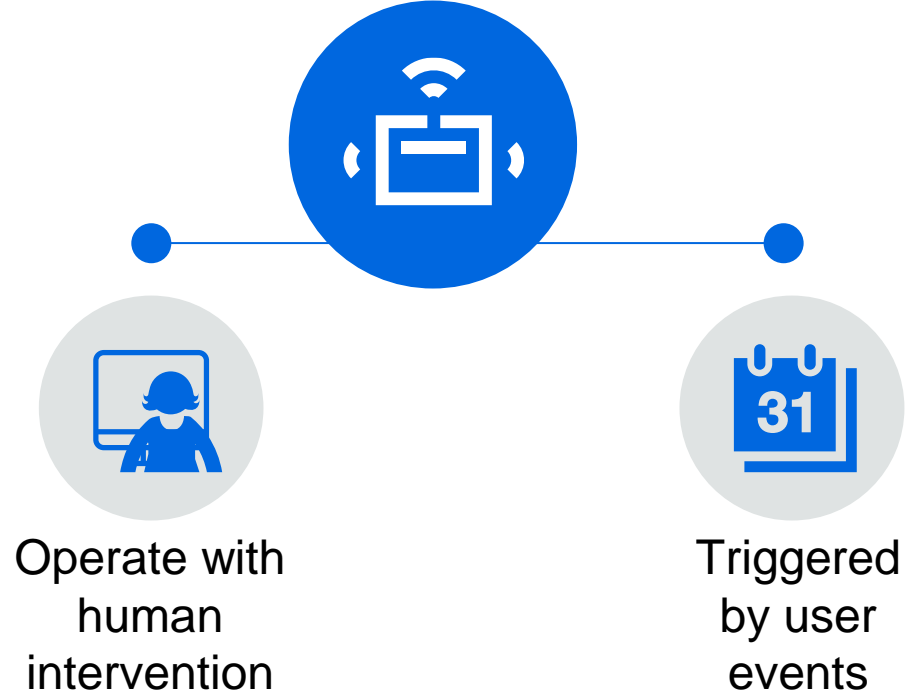
Robots are UiPath's execution agents that enable the user to run processes developed in Studio.



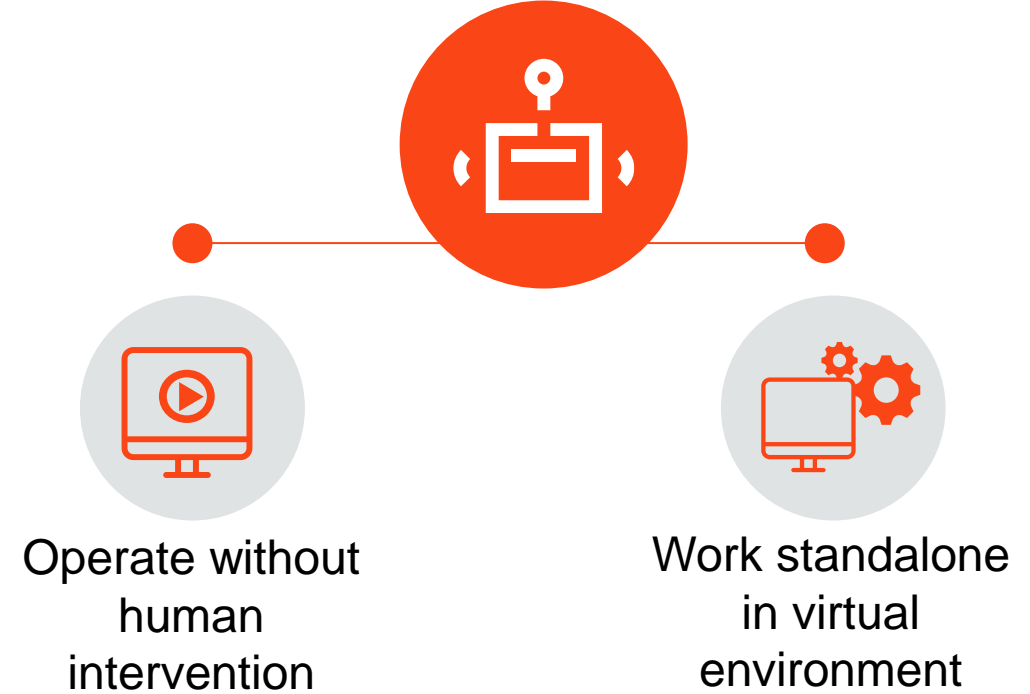
Types of Robots

Robots are of two types:

UiPath™ Attended Robots



UiPath™ Unattended Robots



Attended Robots

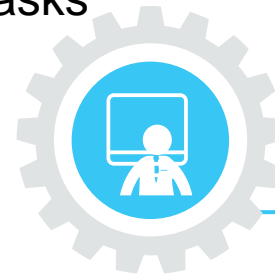
How do they work?

Triggered by users or specific user events



What do they do?

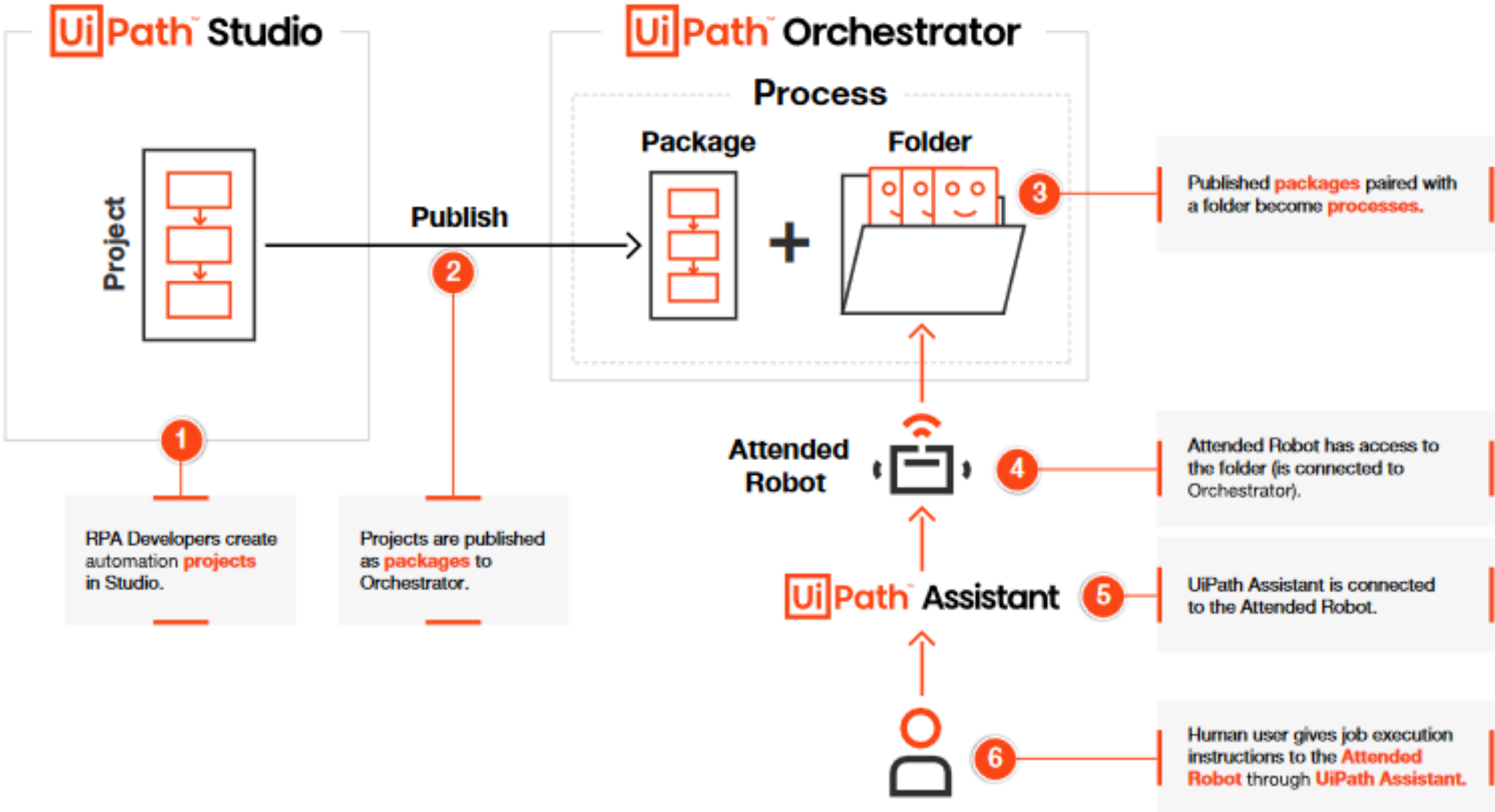
Collaborate with a human worker for small and repetitive tasks



Where do they run?

On the same machine on which the user performs the day-to-day tasks

Attended Robots



Unattended Robots

How do they work?

Controlled through
Orchestrator



What do they do?

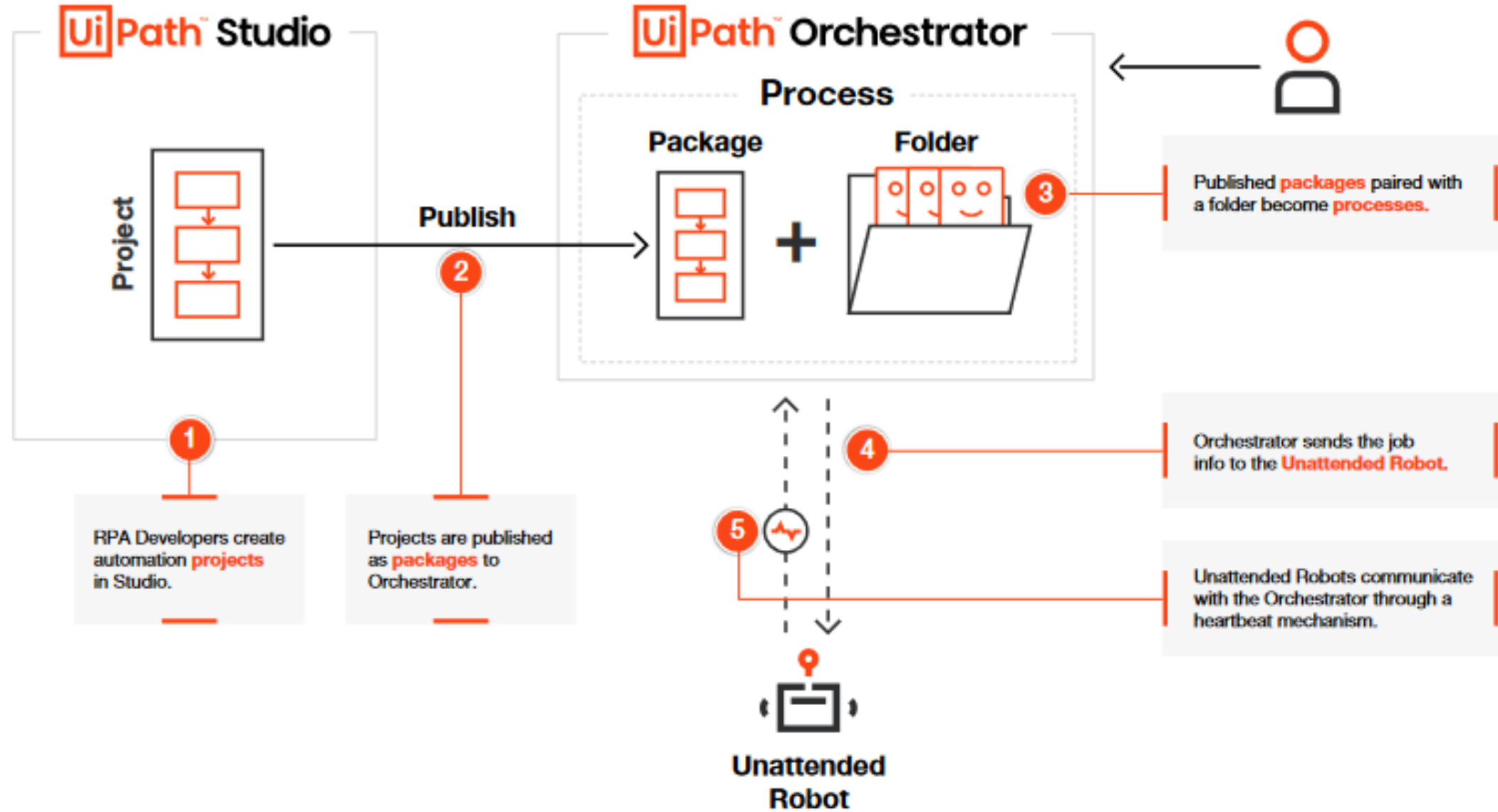
Run long processes or automations
without human interaction



Where do they run?

On any machine connected
to Orchestrator

Unattended Robots



UiPath™ Robots - Automation Cloud Robots

Automation Cloud Robots (ACRs) are SaaS robots hosted in the UiPath Automation Cloud that let you quickly run automations without building or managing your own unattended Robot infrastructure.

They come in two flavors:

- **VM Automation Cloud Robots** (Windows based)
- **Serverless Automation Cloud Robots** (Linux based cloud robots)

Robots - Test Robots

These robots can be deployed to execute tests on-demand, continuously, and at scale.

Here are some of the characteristics of a test robot:

- Purpose built for testing workflows, activities, and applications
- Provides flexibility in managing and reusing test cases across projects
- Enables activity level unit testing out-of-the-box

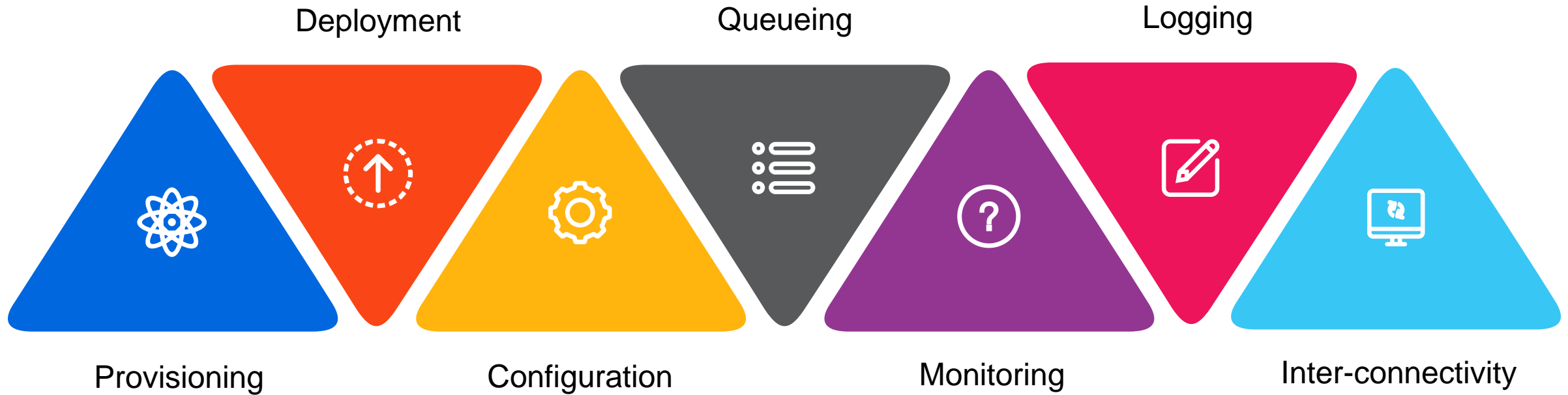
Introduction to Orchestrator

Orchestrator is used to manage the creation, monitoring, and deployment of resources in an environment. It is a web application that:

- Controls and monitors the productivity of robots
- Deploys the workflows to the robots
- Manages the robots by scheduling them at any time

Orchestrator Capabilities

The important capabilities of Orchestrator are:

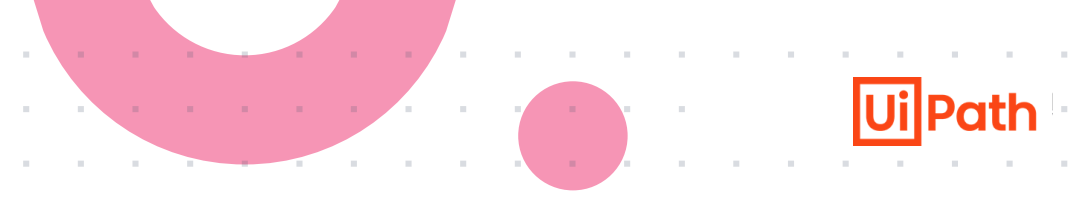


Orchestrator Overview

- Orchestrator is the component of the UiPath Platform for managing automations, robots, and the related entities
- Although it comes with different cloud and on-premises delivery options, including persistence, high availability, and disaster recovery, users can access it through a simple web interface
- Orchestrator offers role-based access control and a structure of tenants and folders to replicate organizational structures
- Users can run the automation workflows developed in Studio and published to Orchestrator using the unattended robot workforce.
- Orchestrator is used to manage and distribute licenses, as well as to store automation resources

Orchestrator Main Capabilities

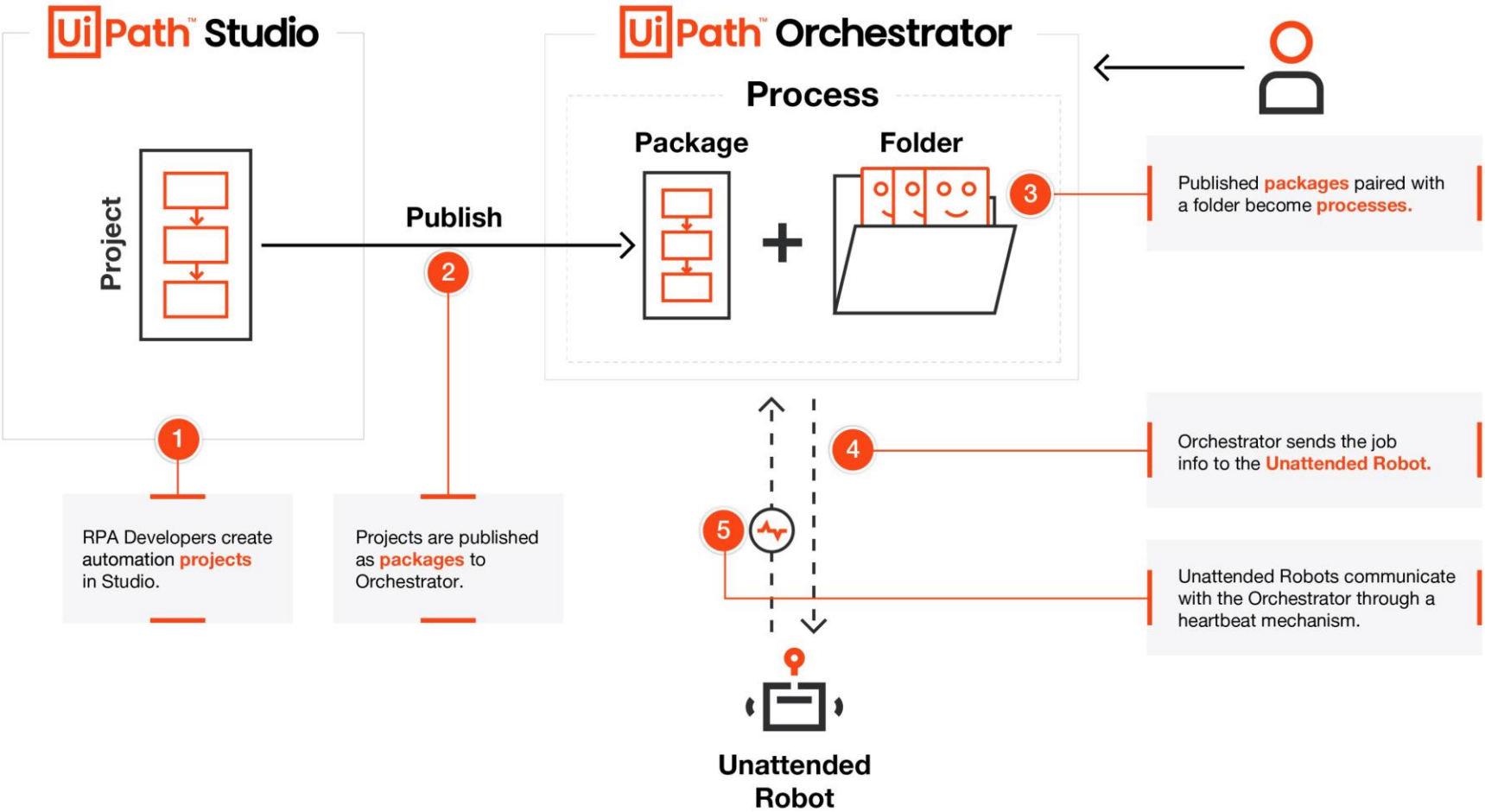
- Orchestrator creates and maintains the connection with robots and attended users
- Control and license distribution: Orchestrator also enables the creation, assignment, and maintenance of licenses, roles, permissions, groups, and folder hierarchies
- Running automation jobs in unattended mode: as presented earlier, it enables the creation and distribution of automation jobs in various ways, including through queues and triggers



- Automation storage and distribution: Orchestrator is the environment enabling the controlled storage and distribution of automation projects, assets, and credentials, as well as large files used in automations
- Monitoring: with Orchestrator, admins are able to monitor jobs and robots. It also stores logs for auditing and analytics
- Inter-connectivity: Orchestrator acts as the centralized point of communication for third-party solutions or applications.

Orchestrator Overview

Core Components: **Unattended Robots**



Studio-Robot-Orchestrator Ecosystem

UiPath™ Integration Service

UiPath Integration Service is the component of the UiPath Platform that makes the automation of third-party applications much easier by standardizing authorization and authentication, helping you manage API connections and also allowing faster integration into SaaS platforms.

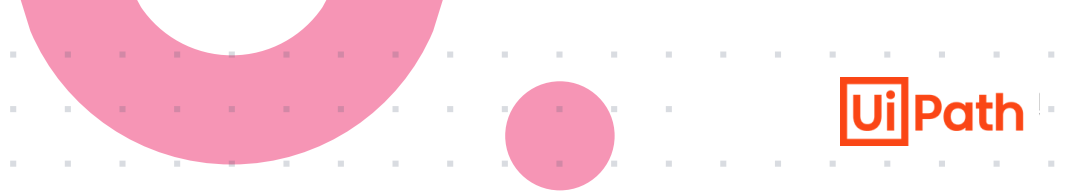
- Allows organizations to centralize their API automation capabilities
- Is designed to simplify and enhance the automation of third-party applications
- Allows faster integration into SaaS platforms
- Enables automation with an out-of-the-box library of connectors
- Helps setting up and managing connections easily with standardized authentication
- Enables kicking off automations with server-side triggers or events
- Provides curated activities and events (with additional data filters) for ease of use
- Simplifies automation design by providing a uniform experience across all Studio designers

Integration Service

The three components of Integration Service are:

- Connectors
- Connections
- Triggers

Resources



About UiPath Studio	https://www.uipath.com/product/studio
About UiPath StudioX	https://www.uipath.com/product/studiox
About UiPath Robots	https://www.uipath.com/product/robots
About UiPath Assistant	https://www.uipath.com/product/software-robot-assistant
About UiPath Orchestrator	https://www.uipath.com/product/orchestrator

Chapter 1:

UiPath Introduction for Automation Developers

Core Components



Resources

Ready-to-go automations for UiPath Assistant	https://marketplace.uipath.com/collections/a-robot-for-every-person
About Publishing Automation Projects	https://docs.uipath.com/studio/standalone/2022.10/user-guide/about-publishing-automation-projects
About the Modern Experience	https://docs.uipath.com/studio/standalone/2022.10/user-guide/modern-design-experience
About UiPath Assistant	https://docs.uipath.com/robot/standalone/2022.10/user-guide/about-uipath-assistant
About Orchestrator	https://docs.uipath.com/orchestrator/automation-cloud/latest

UiPath Community Ecosystem

When starting out with UiPath, there's more than training to help you thrive in the world of automation.

UiPath believe that collaboration is the best way to learn, so they have designed an entire ecosystem to support your journey.

The UiPath community ecosystem helps you connect with an ever-expanding group of automation developers and companies to

- **share knowledge**
- **share opportunities**
- **share components**

UiPath Community Ecosystem

Marketplace

UiPath Marketplace is a web library that contains over **1500 secure and ready-to-use automations**.

By leveraging the automations available on Marketplace, **users can optimize and scale their automation journey** without having to build everything from scratch repeatedly.

These pre-built automations can be easily integrated into UiPath workflows, **saving time and effort** in development and implementation.

Currently, Marketplace hosts automations that work with Studio, StudioX, UiPath Assistant, Apps, Integration Service, Process Mining and AI Center.

They're created by UiPath, as well as by third-party contributors, such as UiPath partners, customers, and community contributors.

Thus, making the Marketplace a diverse and comprehensive repository of automations that span across various industries and sectors.

<https://bit.ly/41FS76H>

UiPath Community Ecosystem



UiPath Academy provides all necessary training for free to help you prepare and successfully achieve UiPath Certification.

- Learn UiPath skills
- Earn credentials
- Hundreds of Courses
- Thousands of Hours

<https://academy.uipath.com>

UiPath Community Ecosystem

UiPath™ Community

Main hub from where you can participate in

- local and global events
- Hackathons
- user groups with other peers in automation

<https://community.uipath.com/events/#/list>

 **Path Community**

UiPath Community Ecosystem

Forum

From where you get all the support that you need, find out the latest product developments and where you can actively engage and get help from the community.

You can also share your feedback for the UiPath products, bugs, and road map development.

<https://forum.uipath.com/>

UiPath Community Ecosystem



PathTM Documentation

The home of all our valuable information.

Find here everything you need to guide you in your automation journey in the UiPath ecosystem, from complex installation guides to quick tutorials, to practical business examples and automation best practices

<https://docs.uipath.com/>

Resources

The UiPath Business Automation Platform	https://www.uipath.com/product
About UiPath Studio	https://www.uipath.com/product/studio
About UiPath StudioX	https://www.uipath.com/product/studiox
About UiPath Robots	https://www.uipath.com/product/robots
About UiPath Assistant	https://www.uipath.com/product/software-robot-assistant
About Publishing Automation Projects	https://docs.uipath.com/studio/standalone/2022.10/user-guide/about-publishing-automation-projects
About the Modern Experience	https://docs.uipath.com/studio/standalone/2022.10/user-guide/modern-design-experience
About UiPath Assistant	https://docs.uipath.com/robot/standalone/2022.10/user-guide/about-uipath-assistant
About Orchestrator	https://docs.uipath.com/orchestrator/automation-cloud/latest

Resources

Ready-to-go automations for UiPath Assistant

Drive faster automation impact with ready-to-go automations.

<https://marketplace.uipath.com/collections/a-robot-for-every-person>

UiPath Community Blog

Read the latest news, updates, and tutorials for our Community.

<https://www.uipath.com/community/rpa-community-blog>

UiPath Newsletter

Keep yourself up to date with our newsletter by connection with the automation world.

<https://community.uipath.com/newsletter/>

UiPath Use Cases

Contribute to the growth of the community by sharing your knowledge through submitting your use cases, and support others seeking hands-on experience by joining challenges where you can earn rewards.

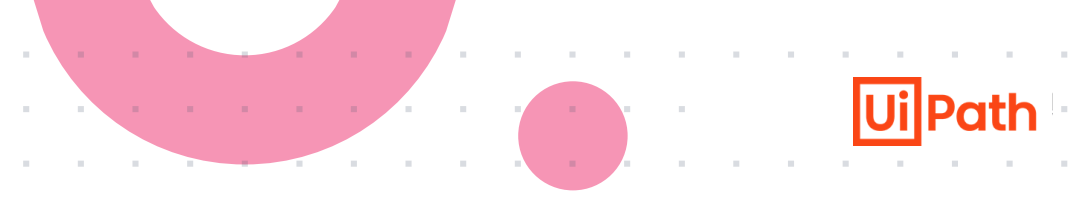
<https://forum.uipath.com/c/members-only/use-cases/206>

UiPath Community

Participate in events that help you learn together with our community.

<https://community.uipath.com/events/#/list>

Terms and abbreviations:



Studio

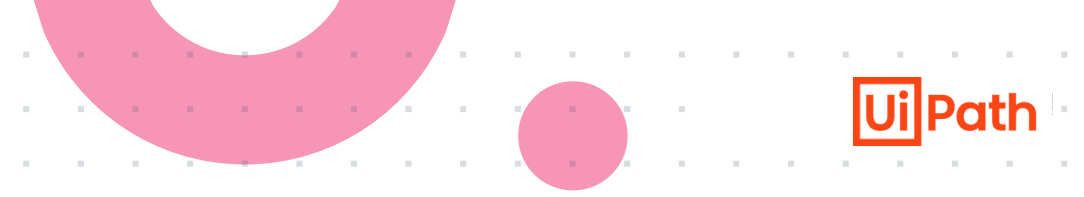
The component of the UiPath RPA Platform for developing Robotic Process Automation projects.

Studio Family

The component of the UiPath Business Automation Platform for developing Robotic Process Automation projects. It encompasses three products:

- Studio Web
- StudioX
- Studio

Terms and abbreviations: Robots



Robot

The Robot is UiPath's execution agent installed on a machine and enabling you to run automation jobs based on processes developed in Studio.

Addended Robot

A type of robot working on the same machines as the humans, during the same hours.

They are triggered directly by humans (usually through UiPath Assistant) or by an event related to what the human user does.

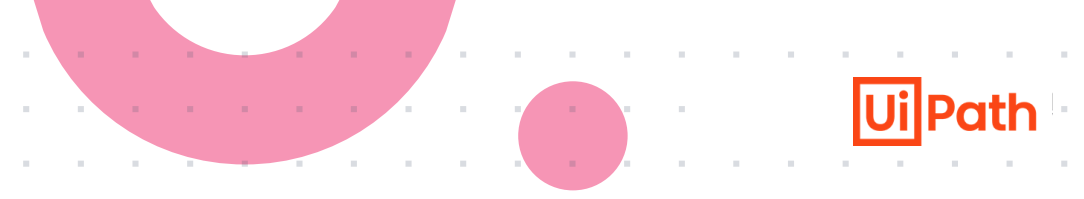
Unattended Robot

A robot typically deployed on a separate machine than any human user.

Their jobs are triggered exclusively from Orchestrator.

Since robots do not exist as separate entities in Orchestrator, a more technical definition would position unattended robots as execution slots - a user logged in on a machine, executing an automation job, as instructed by Orchestrator.

Terms and abbreviations:



Orchestrator

The component of the UiPath RPA Platform in charge of the management of automations, users and robots, as well as the management of the assets used in development or in running automations. .

Automation Cloud

The cloud platform of UiPath, the single place for managing users and services, such as cloud Orchestrator, cloud AI Fabric, cloud Data Service, and so on.

Automation Project

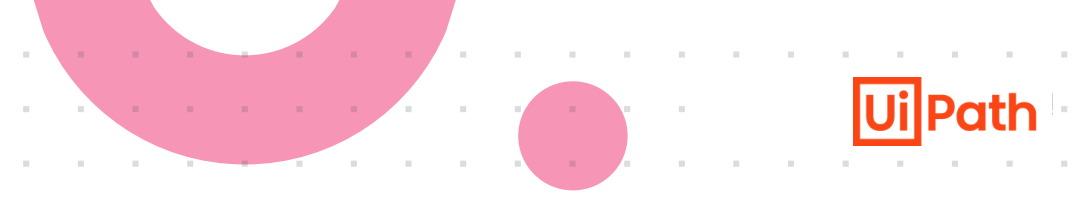
A business process or task automated with Studio family.

Depending on the complexity and development approach, an automation project may consist of one or several workflows.

A workflow is a set of actions following a given logic set by the developer, having an input and an output.

Workflows are typically linked in the same automation project through input and output arguments.

Terms and abbreviations:



Package

An automation project published as a NuGet package from the Studio family to Orchestrator or locally.

Process

A package in Orchestrator linked to an Orchestrator folder where human users or robots have access. If stored locally, packages can be used as processes when they are run by attended robots.

Job

A single execution of an automation process by an attended or unattended robot. If the robots are connected to Orchestrator, both attended and unattended jobs appear there.