Study guide for Exam PL-500: Microsoft Power Automate RPA Developer

Purpose of this document

This study guide should help you understand what to expect on the exam and includes a summary of the topics the exam might cover and links to additional resources. The information and materials in this document should help you focus your studies as you prepare for the exam.

Useful links	Description
Review the skills measured as of December 20, 2022	This list represents the skills measured AFTER the date provided. Study this list if you plan to take the exam AFTER that date.
Review the skills measured prior to December 20, 2022	Study this list of skills if you take your exam PRIOR to the date provided.
Change log	You can go directly to the change log if you want to see the changes that will be made on the date provided.
How to earn the certification	Some certifications only require passing one exam, while others require passing multiple exams.
Certification renewal	Microsoft associate, expert, and specialty certifications expire annually. You can renew by passing a **free** online assessment on Microsoft Learn.
Your Microsoft Learn profile	Connecting your certification profile to Learn allows you to schedule and renew exams and share and print certificates.
Passing score	A score of 700 or greater is required to pass.
Exam sandbox	You can explore the exam environment by visiting our exam sandbox.
Request accommodations	If you use assistive devices, require extra time, or need modification to any part of the exam experience, you can request an accommodation.

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Useful links	Description
Take a practice test	Are you ready to take the exam or do you need to study a bit more?

Updates to the exam

Our exams are updated periodically to reflect skills that are required to perform a role. We have included two versions of the Skills Measured objectives depending on when you are taking the exam.

We always update the English language version of the exam first. Some exams are localized into other languages, and those are updated approximately eight weeks after the English version is updated. Other available languages are listed in the **Schedule Exam** section of the **Exam Details** webpage. If the exam isn't available in your preferred language, you can request an additional 30 minutes to complete the exam.

Note

The bullets that follow each of the skills measured are intended to illustrate how we are assessing that skill. Related topics may be covered in the exam.

Note

Most questions cover features that are general availability (GA). The exam may contain questions on Preview features if those features are commonly used.

Skills measured as of December 20, 2022

Audience profile

Candidates for this exam automate time-consuming and repetitive tasks by using Microsoft Power Automate. They review solution requirements, create process documentation, and design, develop, troubleshoot, and evaluate solutions.

Candidates work with business stakeholders to improve and automate business workflows. They collaborate with administrators to deploy solutions to production environments, and they support solutions.

Additionally, candidates should have experience with JSON, cloud flows and desktop flows, integrating solutions with REST and SOAP services, analyzing data by using Microsoft Excel, VBScript, Visual Basic for Applications (VBA), HTML, JavaScript, one or more programming languages, monitoring and understanding the health of flows, and the Microsoft Power Platform suite of tools (process advisor, AI Builder, Power Apps, Dataverse, and Power Virtual Agents).

- Design solutions (25–30%)
- Develop solutions (40–45%)
- Deploy and manage solutions (30–35%)

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Design solutions (25–30%)

Determine how to interact with an application targeted for automation

- Evaluate whether a target application can be automated
- Choose which automation technology to use to interact with a target application, including using selectors and user interface element inspection
- Plan connection, payload, and other relevant information for required APIs
- Verify access to target applications

Determine which types of Power Automate flows to implement

- Differentiate cloud flows and desktop flows
- Select which logical components are required for a solution, including flows, trigger connectors, canvas apps, and model-driven apps
- Develop a strategy for running flows, including running flows serially or in parallel
- Choose connectors for a solution, including custom connectors

Design the solution

- Design an automation model that includes required flow types and automation methods
- Select the types of triggers to use to meet specific business requirements
- Choose whether to run a desktop flow attended versus unattended
- Develop fault tolerance requirements for the solution
- Design required user interface elements for a solution
- Design retry and exception handling logic
- Design a strategy for scaling a solution and reusing solution components
- Design required variables and variable types

Develop solutions (40–45%)

Create core solution components

- Create custom connectors
- Create components to launch, connect to, and authenticate with target applications
- Create components to perform business logic and process transactional work
- Create components to safely exit from and close target applications
- Create components that perform actions by calling external APIs
- Implement actions to perform application integration tasks
- Implement system actions to run custom scripts and change target screen resolution
- Implement Power Automate actions to run Office Scripts
- Create flows by using Microsoft Visio, the mobile app for Power Automate, and other tools

Configure solution components

- Select an environment for the solution, and configure environment details

- Map target application accounts to environments and other solution components
- Configure connection features, and manage references to connections
- Configure flow queues, triggers, and schedules

Enhance solution components

- Create exception handling blocks to manage business and system exceptions
- Create routines to handle and log errors and business exceptions
- Create routines to manipulate Power Automate data objects, including JSON objects
- Configure role-based security
- Configure security for sensitive data

Integrate AI Builder and Azure Cognitive Services with solutions

- Describe use cases for and capabilities of AI Builder
- Describe the Bring your own AI model feature
- Differentiate between prebuilt and custom-trained AI Builder models
- Select the appropriate AI Builder model for a solution

Finalize development and test solutions

- Differentiate between features and behaviors of debug and compiled solutions
- Create and implement a test plan
- Perform unit testing, and resolve identified issues
- Configure and run attended and unattended desktop flows
- Debug solutions by using Power Automate debugging features, including Run from here and breakpoints
- Identify machine-level differences and dependencies
- Prepare and deploy solutions to a user acceptance testing (UAT) environment

Deploy and manage solutions (30–35%)

Configure solution infrastructure

- Configure machine management options, including machine registration and machine groups
- Implement queue management to distribute workloads
- Implement logging and alerts
- Implement role-based access control (RBAC)
- Manage credentials by using Azure Key Vault
- Determine whether to implement data loss prevention (DLP) policies at the tenant level or the environment level
- Implement Data Loss Prevention (DLP) policies and other options to help prevent exposure of sensitive and confidential data
- Connect to on-premises data sources by using an on-premises data gateway

Microsoft

Prepare solutions for deployment to production

- Create and manage environment variables and solution configuration files
- Select a package type, and prepare a solution package
- Configure priority for flows
- Configure machines and machine groups
- Configure child flows

Deploy and manage solutions

- Replicate settings from development and user acceptance testing (UAT) environments to production
- Deploy a solution to a production environment
- Describe use cases for and capabilities of process advisor
- Monitor solutions by using process advisor
- Upgrade and update solutions

Share solutions and collaborate with others

- Describe the process for sharing solutions
- Create a copy of a cloud flow, and send the flow to other users
- Share a cloud flow with a user as a co-owner or run-only user
- Share a desktop flow
- Share machines and machine groups

Study resources

We recommend that you train and get hands-on experience before you take the exam. We offer self-study options and classroom training as well as links to documentation, community sites, and videos.

Study resources	Links to learning and documentation
Get trained	Choose from self-paced learning paths and modules or take an instructor led course
Find documentation	Microsoft Power Platform documentation Power Automate documentation
Ask a question	Microsoft Q&A | Microsoft Docs
Get community support	Power Platform Community (microsoft.com)
Follow Microsoft Learn	Microsoft Learn - Microsoft Tech Community

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Study resources	Links to learning and documentation
Find a video	Exam Readiness Zone
	#LessCodeMorePower | Shows

Change log

Skill area prior to December 20, 2022	Skill area as of December 20, 2022	Change
Audience profile		Minor
Design solutions	**Design solutions**	No change
Determine how to interact with an application targeted for automation	Determine how to interact with an application targeted for automation	No change
Determine which types of Power Automate flows to implement	Determine which types of Power Automate flows to implement	Minor
Design the solution	Design the solution	Minor
Develop solutions	**Develop solutions**	No change
Create core solution components	Create core solution components	Minor
Configure solution components	Configure solution components	No change
Enhance solution components	Enhance solution components	No change
Integrate AI Builder and Azure Cognitive Services with solutions	Integrate AI Builder and Azure Cognitive Services with solutions	No change
Finalize development and test solutions	Finalize development and test solutions	No change
Deploy and manage solutions	**Deploy and manage solutions**	No change
Configure solution infrastructure	Configure solution infrastructure	Minor
Prepare solutions for deployment to production	Prepare solutions for deployment to production	Minor
Deploy and manage solutions	Deploy and manage solutions	Minor
Share solutions and collaborate with others	Share solutions and collaborate with others	No change

Skills measured prior to December 20, 2022

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- Develop solutions (40–45%)

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- Deploy and manage solutions (30–35%)

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- Connect to on-premises data by using a data gateway

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