Exam PL-400: Microsoft Power Platform Developer – Skills Measured

This exam will be updated on June 23, 2021. Following the current exam guide, we have included a version of the exam guide with Track Changes set to “On,” showing the changes that will be made to the exam on that date.

**Audience Profile**

Candidates for this exam design, develop, secure, and troubleshoot Power Platform solutions. Candidates implement components of a solution that include application enhancements, custom user experience, system integrations, data conversions, custom process automation, and custom visualizations.

Candidates must have strong applied knowledge of Power Platform services, including in-depth understanding of capabilities, boundaries, and constraints. Candidates should have a basic understanding of DevOps practices for Power Platform.

Candidates should have development experience that includes Power Platform services, JavaScript, JSON, TypeScript, C#, HTML, .NET, Microsoft Azure, Microsoft 365, RESTful Web Services, ASP.NET, and Power BI.

**Skills Measured**

NOTE: The bullets that appear below each of the skills measured are intended to illustrate how we are assessing that skill. This list is NOT definitive or exhaustive.

NOTE: Most questions cover features that are General Availability (GA). The exam may contain questions on Preview features if those features are commonly used.

**Create a technical design (10-15%)**

**Validate requirements and design technical architecture**

- design and validate the technical architecture for a solution
- design authentication and authorization strategy
- determine whether you can meet requirements with out-of-the-box functionality
- determine when to use Logic Apps versus Power Automate flows
- determine when to use serverless computing, plug-ins, or Power Automate
- determine when to build a virtual entity data source provider and when to use connectors

**Design solution components**
- design a data model
- design Power Apps reusable components
- design custom connectors
- design server-side components

**Describe Power Platform extensibility points**

- describe Power Virtual Agents extensibility points including Bot Framework skills and Power Automate flows
- describe Power BI extensibility points including Power BI APIs, custom visuals, and embedding Power BI apps in websites and other applications
- describe Power Apps portal extensibility points including CRUD APIs and custom styling

**Configure Microsoft Dataverse (15-20%)**

**Configure security to support development**

- troubleshoot operational security issues
- create or update security roles and field-level security profiles
- configure business units and teams

**Implement tables and columns**

- configure tables and table options
- configure columns
- configure relationships and types of behaviors

**Implement application lifecycle management (ALM)**

- create solutions and manage solution components
- import and export solutions
- manage solution dependencies
- create a package for deployment
- automate deployments
- implement source control for projects including solutions and code assets

**Create and configure Power Apps (15-20%)**

**Create model-driven apps**

- configure a model-driven app
- configure forms
- configure columns
- configure visualizations

**Create canvas apps**
• create and configure a canvas app
• implement complex formulas to manage control events and properties
• analyze app usage by using App Insights
• build reusable component libraries
• test an app by using Test Studio
• embed an app in Microsoft Teams

Manage and troubleshoot apps

• troubleshoot app issues by using Monitor and other browser-based debugging tools
• interpret results from App Checker and Solution Checker
• identify and resolve connector and API errors
• optimize app performance including pre-loading data and query delegation

Configure business process automation (5-10%)

Configure Power Automate

• create and configure a flow
• configure steps to use Dataverse connector actions and triggers
• implement complex expressions in flow steps
• implement error handling
• troubleshoot flows by analyzing JSON responses from connectors

Implement processes

• create and configure business process flows
• create and configure business rules
• create, manage, and interact with business process flows by using server-side and client-side code
• troubleshoot processes

Extend the user experience (10-15%)

Apply business logic using client scripting

• create JavaScript or Typescript code that targets the Client API object model
• register an event handler
• create client-side scripts that target the Dataverse Web API

Create a Power Apps Component Framework (PCF) component

• describe the PCF component lifecycle
• initialize a new PCF component
• configure a PCF component manifest
• implement the component interfaces
- package, deploy, and consume the component
- configure and use PCF Device, Utility, and WebAPI features
- test and debug PCF components by using the local test harness

Create a command button function

- create the command function
- design command button rules and actions
- edit the command bar by using the Ribbon Workbench
- manage dependencies between JavaScript libraries

Extend the platform (15-20%)

Create a plug-in

- describe the plug-in execution pipeline
- design and develop a plug-in
- debug and troubleshoot a plug-in
- implement business logic by using pre-images and post-images
- perform operations on data by using the Organization service API
- optimize plug-in performance
- register custom assemblies by using the Plug-in Registration Tool
- develop a plug-in that targets a custom action message

Create custom connectors

- create a definition for the API
- configure API security
- use policy templates to modify connector behavior at runtime
- expose Azure Functions as custom connectors
- create custom connectors for public APIs by using Postman

Use platform APIs

- interact with data and processes by using the Dataverse Web API or the Organization Service
- implement API limit retry policies
- optimize for performance, concurrency, transactions, and batching
- query the Discovery service to discover the URL and other information for an organization
- perform entity metadata operations with the Web API
- perform authentication by using OAuth

Process workloads

- process long-running operations by using Azure Functions
• configure scheduled and event-driven function triggers in Azure Functions
• authenticate to the Power Platform by using managed identities

Develop Integrations (5-10%)

Publish and consume events
• publish an event by using the API
• publish an event by using the Plug-in Registration Tool
• register service endpoints including webhooks, Azure Service Bus, and Azure Event Hub
• implement a Common Data Service listener for an Azure solution
• create an Azure Function that interacts with Power Platform

Implement data synchronization
• configure entity change tracking
• read entity change records by using platform APIs
• create and use alternate keys

The exam guide below shows the changes that will be implemented on June 23, 2021.

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- describe Web Resources and their uses

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