

Microsoft Power Platform CLI is a simple, one-stop developer CLI that empowers developers and ISVs to perform various operations in Microsoft Power Platform related to environment lifecycle, authentication, and work with Microsoft Dataverse environments, solution packages, portals, code components, and more.

## Install Microsoft Platform CLI

You can install Microsoft Power Platform CLI using either or both of the following: • Install using Power Platform Tools for Visual Studio Code • Install Power Platform CLI for Windows

References: https://learn.microsoft.com/en-us/power-platform/developer/cli/introduction

Export and Import Solution Packages

```
Export as Managed
                                                                                                          Import managed Solution
                      Solution Test1
                                                                               Solution Test1
                      (Unmanaged)
                                                                                 (managed)
                     Development
                                                                                    Test
                      Environment
                                                                                Environment
• pac auth create --url
                                                                                  • pac auth create --url
• pac auth list
                                                                                 pac auth list
• pac auth select --index 1
                                                                                  • pac auth select --index 2
• pac solution export --path --name --managed true --include
                                                                                  • pac solution import --path --activate-plugins true --publish-
 general, customization -ow
                                                                                   changes true -- async true -f
                                                                                  • pac solution import --path --publish-changes true --async true -f
      Note:
      When you customize in the development environment, you're working in the unmanaged layer. Then, when you export
      the unmanaged solution as a managed solution to distribute to another environment, the managed solution is
      imported into the environment in the managed layer.
       • A solution can be up to 32 MB in size.
        • You can't edit components directly within a managed solution.
```

## **Step 1:** Create and store authentication profiles on the computer: pac auth create --url

Steps for exporting/Importing solutions from source to destination:

Create and store authentication profiles on this computer S C:\learning\PL-400\cli> pac auth create --url https://orgdd490ab7.crm8.dynamics.com

 ${f modernsearchtrail}$   ${f @Modernsearchtrail.onmicrosoft.com'}$  authenticated  ${f successfully.}$ 

Validating connection...

Version: 1.20.3+ga66a744

PS C:\learning\PL-400\cli> pac auth list

DATAVERSE

PS C:\learning\PL-400\cli>

PS C:\learning\PL-400\cli>

Index Active Kind

```
onnected to...PLDEMO
          Authentication profile created
             * DATAVERSE
                                                   https://orgdd490ab7.crm8.dynamics.com/ : modernsearchtrail@Modernsearch
           rail.onmicrosoft.com Public
           C:\learning\PL-400\cli>
                                                              Power Apps session details
                  Optional Parameters:
                  --applicationId -id
                  --certificateDiskPath -cdp
                                                               Timestamp: 2022-12-08T06:41:56.379Z
                  --certificatePassword -cp
                                                               Session ID: 5f7ed000-76c3-11ed-a136-6715bc540df0
                  --clientSecret -cs
                                                               Tenant ID: f367aa6c-e34f-45ba-b26a-b7d3d5a98f47
                  --cloud -ci
                                                               Object ID: 2ebc77df-d1bf-4a22-9774-8ac426cc6b6e
                  --deviceCode -dc
                                                               Build name: 0.0.20221203.3-2211.4-prod
                  --environment -env
                                                               Organization ID: b1d03432-8c3c-47cf-aca3-77a3feff5ed3
                                                               Unique name: unqb1d034328c3c47cfaca377a3feff5
                  --name -n
                                                               Instance url: https://org4a8ef4a2.crm8.dynamics.com/
                  --password -p
                                                               Environment ID: Default-f367aa6c-e34f-45ba-b26a-b7d3d5a98f47
                  --tenant -t
                                                               Cluster environment: Prod
                  --url -u
                                                               Cluster category: Prod
                  --username -un
                                                               Cluster geo name: IN
                                                               Cluster URI suffix: in-il101.gateway.prod.island
                                                                                               Copy details
PS C:\learning\PL-400\cli> pac auth create -url https://orgdd490ab7.crm8.dynamics.com
Microsoft PowerPlatform CLI
```

Use the instance url

Cloud

**Step 2:** List and Select the authentication profile that should be active List the authentication profiles stored on this computer

Name Friendly Name Url

PS C:\learning\PL-400\cli> pac auth list

```
Select which authentication profile should be active
PS C:\learning\PL-400\cli> pac auth select --index 1
New default profile:
                                               https://orgdd490ab7.crm8.dynamics.com/ : modernsearchtrail@Modernsearchtrail.onmicrosoft.com Public
   * DATAVERSE
```

https://orgdd490ab7.crm8.dynamics.com/ modernsearchtrail@Modernsearchtrail.onmicrosoft.com Public

```
Index Active Kind
                        Name Friendly Name Url
                                                                                      User
                                        Cloud
                                            https://orgdd490ab7.crm8.dynamics.com/ mode
             DATAVERSE
ail@Modernsearchtrail.onmicrosoft.com Public
PS C:\learning\PL-400\cli> pac auth select --1
Microsoft PowerPlatform CLI
Version: 1.20.3+ga66a744
 Step 3: Export the solution to local path
```

Required Parameter: **Optional Parameter:** 

--async -a (Exports solution asynchronously)

system)

File folder

XML File

XML File

XML File

Type

File folder

File folder

File folder

XML File

≣ All (7)

chatbots (0)

□ Cloud flows (0)

☐ Site maps (1)

■ Tables (0)

Processing asynchronous operation... execution time: 00:00:08 and 0.23% complete

Processing asynchronous operation... execution time: 00:00:12 and 0.35% complete

Processing asynchronous operation... execution time: 00:00:16 and 0.46% complete

Processing asynchronous operation... execution time: 00:00:20 and 0.57% complete

Processing asynchronous operation... execution time: 00:00:24 and 0.69% complete Processing asynchronous operation... execution time: 00:00:29 and 0.81% complete

Processing asynchronous operation... execution time: 00:00:33 and 0.92% complete

Processing asynchronous operation... execution time: 00:00:37 and 1.04% complete

Publishing All Customizations...

11

12

14 15 Asynchronous operation 06c8c7da-4c76-ed11-81ac-002248d5deb0 completed successfully within 00:00:41.3714998

Waiting for asynchronous operation f043abf5-4c76-ed11-81ac-002248d5deb0 to complete with timeout of 01:00:00

■ Component libraries (1)

onshiproles

--name -n

--path -p

will be written.

The name of the solution to be exported

Path where the exported solution zip file

WebResources

[Content\_Types].xml

customizations.xml

solution.xml

Connector

Workflows

[Content\_Types].xml

environmentvariabledefinitions

**Export a solution** 

--include -i (which settings needs to be included in the solution during export)

--managed -m (Whether the solution should be exported as managed solution)

--max-async-wait-time -wt (Max asynchronous wait time in minutes. Default is 60 minutes)

--overwrite -ow (The exported solution file can overwrite the solution zip file on the local file

```
• general
                                                              isvconfig

    marketing

                                                              • outlooksynchronization

    relationshiproles

                                                              • sales
PS C:\learning\PL-400\cli> pac solution export --path c:\\learning\\PL-400\\cli\\solutionexport
\\PLDemoClientSideScript_UnManaged.zip --name PLDemoClientSideScript --managed true --include g
eneral,customization -ow
Connected to...PLDEMO
```

C:\learning\PL-400\cli> pac solution export --path c:\\learning\\PL-400\\cli\\solutionexport\\PLPowerPlatform\_UnManaged.zip --name PLPowerPlatform --managed true --include general,customization,isvconfig,re

Use one or more of these values separated by commas:

• autonumbering

customization

emailtracking

external applications

• calendar

**Exported Solution files in local path** Solution components in PowerApps Name Type + New ∨ □ Add existing ∨ □ Publish all customizations · · · Objects CanvasApps File folder O Search

PLDemoClientSideScript > All

Display name ↑ ∨

formOnLoad

SampleAccounts

SampleAccounts

CommandBarDemoBasic

HideCompositeColumn

PLDemoCommandBarCustomAL :

Type ∨

crfa1\_formOnLoad Web Resource (JScript)

crfa1\_HideComp... Web Resource (JScript)

crfa1\_Command... Web Resource (JScript)

new\_SampleAcc... Model-Driven App

new\_SampleAcc... Site Map

Web Resource (JScript)

--force-overwrite -f --import-as-holding -h

--publish-changes -pc

--path -p

--settings-file

--max-async-wait-time -wt

--skip-dependency-check -s

Name V

crfa1\_ButtonPress

```
customizations.xml
                          XML File
                                                                                   SampleAccounts_DefaultComma crfa1_sampleacc... Component Library
solution.xml
                          XML File
                                                                                  Solution components in PowerAutomate
                                            CustomConnectorSolution > All
                                                  E Display name ↑ ✓
                                                                                           Name \( \times \)
                                                                                          cr225_FlowHost... Environment Variable
                                                       FlowHostURL
                                                                                           GetAl I FlowCust... Cloud Flow
                                                       {\sf GetALLFlowCustomConnector}
                                                                                           GetAllFlows
                                                       GetAllFlows CustomConnectorSolution-
                                                                                          cr225_sharedget... Connection Referen...
Step 4: Import the solution packages to destination
            Import the solution
PS C:\learning\PL-400\cli> pac solution import --path c:\\learning\\PL-400\\cli\\solutionexport\\PLCustomConnector_UnManaged.zip
 -publish-changes true --async true -f --settings-file C:\\learning\\PL-400\\cli\\SampleDeploymentSettingsDev.json
Connected to...PLDEMO
Solution Importing...
                                                                                                                             Optional Parameters:
Waiting for asynchronous operation 06c8c7da-4c76-ed11-81ac-002248d5deb0 to complete with timeout of 01:00:00
                                                                                                                             --activate-flows -af
Processing asynchronous operation... execution time: 00:00:00 and 0.00% complete
                                                                                                                             --activate-plugins -ap
Processing asynchronous operation... execution time: 00:00:04 and 0.12% complete
                                                                                                                             --async -a
                                                                                                                             --convert-to-managed -cm
```

```
Processing asynchronous operation... execution time: 00:00:00 and 0.00% complete
    Processing asynchronous operation... execution time: 00:00:04 and 0.13% complete
    Processing asynchronous operation... execution time: 00:00:08 and 0.24% complete
    Processing asynchronous operation... execution time: 00:00:12 and 0.36% complete
    Processing asynchronous operation... execution time: 00:00:17 and 0.47% complete
    Processing asynchronous operation... execution time: 00:00:21 and 0.59% complete
    Processing asynchronous operation... execution time: 00:00:25 and 0.71% complete
    Asynchronous operation f043abf5-4c76-ed11-81ac-002248d5deb0 completed successfully within 00:00:29.5863936
PS C:\learning\PL-400\cli> pac solution import --path c:\\learning\\PL-400\\cli\\solutionexport
\\PLCustomConnector_UnManaged.zip --publish-changes true --async true -f --settings-file C:\\le
arning\\PL-400\\cli\\SampleDeploymentSettingsDev.json
Connected to...PLDEMO
                                                                                Environmental variables key and value will be declared here.
                           Sample Deployment Settings Dev. json
         "EnvironmentVariables": [
              "SchemaName": "cr225 FlowHostURL",
              "Value": "api.flow.microsoft.com"
         "ConnectionReferences": [
              "LogicalName": "cr225_sharedgetallflows5f0ce1f241ef06e9f35fdee42c6afb8ef514_ee098",
              "ConnectionId": "30745038-7ae4-4104-a1a9-81e643566c47",
              "ConnectorId": "/providers/Microsoft.PowerApps/apis/shared getallflows-5f0ce1f241ef06e9f3-5fdee42c6afb8ef514"
```

Connection references will be declared here. in the above sample custom connnector

This command will generate a JSON file. In the JSON file, few values are empty in the ConnectionReferences section. These values need to

connection id are updated in the file.

pac solution create-settings --solution-zip <solution\_zip\_file\_path> --settings-file <settings\_file\_name>

Generate the deployment settings file using power platform cli

be gathered after creating them in the target environment.

pac solution

pac telemetry

pac connector

```
Common Commands
Command
                                    Description
                                    Commands for environment lifecycle
pac admin
                                    features.
                                    Commands to connect to your
pac auth
                                    environment.
                                    Commands to install AppSource
                                    applications that are pre-requisites
pac application
                                    for the solution work in the target
                                    environment (Preview).
                                    Commands for working with canvas
pac canvas
                                    app source files (Preview).
                                    Commands for working with
pac org
                                    Dataverse environments.
                                    Commands for working with solution
pac package
                                    packages.
                                    Commands for working with Portals
                                    support for Microsoft Power Platform
pac paportal
                                    CLI.
                                    Commands for working with Power
pac pcf
                                    Apps component framework.
                                    Command to create a plug-in
pac plugin
                                    Commands for working with
```

```
version 2.0 of Power Platform Build Tools is Power Platform CLI based.
```

```
PowerPlatform-Tools
         7
                                                                                                                                              Tasks
                                                                                                                                               power platform
               # Start with a minimal pipeline that you can customize to build and deploy your code.
              #-Add-steps-that-build, run-tests, deploy, and more:
              # https://aka.ms/yaml
                                                                                                                                                   Power Platform Apply Solution Upgrade
              trigger:
               - master
                                                                                                                                                   Power Platform Apply Solution Upgrade [B.
               -- vmImage: -ubuntu-latest
                                                                                                                                                   Power Platform Backup Environment
         13
              - script: echo Hello, world!
               - displayName: 'Run a one-line script'
                                                                                                                                                   Power Platform Backup Environment [BETA]
                 echo Add other tasks to build, test, and deploy your project.
                                                                                                                                                   Power Platform Checker
                  echo See https://aka.ms/yaml
                                                                                                                                                   Analyze solutions using Power Apps Checker end.
                -displayName: 'Run a multi-line script'
                                                                                                                                                   Power Platform Checker [BETA]
P
                                                                                                                                                   Power Platform Copy Environment
```

Dataverse solution projects.

Manages the telemetry settings.

(Preview) Commands for working

with Power Platform Connectors

Power Platform Build Tools is now Power Platform CLI based

For previous versions of Power Platform Build Tools, we will do critical security updates as needed. Microsoft highly recommends that customers move to Power Platform Build Tools version 2.0 at their earliest. \* You cannot mix and match task versions for Power Platform Build Tools in your build pipeline. \* The Power Platform CLI tasks are multi-platform with great flexibility including running on Linux runners. These are

\* Going forward Power Platform Build Tools 2.0 is the version that will be serviced and newer features added.

the same tasks that are available with Power Platform Actions for GitHub. You now have a consistent experience between Azure DevOps and GitHub.