

# Deploying Databricks Asset Bundles with Azure DevOps Pipelines

2025-07-06T11:43:12+02:00

## Contents

<b>Objectives</b>	<b>1</b>
<b>Configuring Azure DevOps</b>	<b>1</b>
Cloning the Azure DevOps Git repository in Databricks . . . . .	1
Azure DevOps Pipeline . . . . .	2
<b>Databricks Asset Bundle (DAB)</b>	<b>2</b>
Databricks Asset Bundle file . . . . .	2
Deploying the DAB . . . . .	4
Running the workflow . . . . .	4

## Objectives

- Learn how to write DABs
- Pass parameters from AzureDevops to Databricks resources
- Learn how to use the Databricks CLI
- Pass parameter to Databricks Notebook via text widget

## Configuring Azure DevOps

### Cloning the Azure DevOps Git repository in Databricks

Databricks needs to authenticate with Azure DevOps to clone the Git repository in the workspace. This requires creating a Personal Access Token (PAT) in Azure DevOps. In Azure DevOps, navigate to “user settings” in the top-right corner (next to your account profile picture). Click on “Personal access tokens”. Create a new token with read/write access for your organization or project. Copy the value.

In Databricks, click on your account profile picture in the top-right corner. Go to “Settings” and to “Linked accounts”. Click on “Add Git credential”. Fill out the fields (picture below) and paste the PAT value copied in earlier.

Now you can clone your Azure DevOps repository in your Databricks workspace.

## Azure DevOps Pipeline

## Databricks Asset Bundle (DAB)

### Databricks Asset Bundle file

```
bundle:
  name: "DAB-Demo"
  uuid: "05622722-fb3a-4a17-8f1f-c3c1d37ecec"

variables:
  git_branch:
    description: "Git branch to use for job source code"
  demo_parameter_value:
    description: "Text value to pass as a Databricks notebook parameter"

presets:
  tags:
    application: "Demo Notebook"

targets:
  free:
    mode: development
    workspace:
      host: https://dbc-e667f434-e97e.cloud.databricks.com
    variables:
      git_branch: main
      demo_parameter_value: "Hello, World!"

resources:
  jobs:
    run_demo_notebook:
      name: run_demo_notebook_job
      tasks:
        - task_key: run_demo_notebook_task
          notebook_task:
            notebook_path: demo_notebook
            base_parameters:
```

```

        demo_parameter: ${var.demo_parameter_value}
        source: GIT
    git_source:
        git_url: https://gontcharovd@dev.azure.com/gontcharovd/databricks-dab-demo/_git/data
        git_provider: azureDevOpsServices
        git_branch: ${var.git_branch}
    schedule:
        quartz_cron_expression: "0 0 7 * * ?" # Daily at 7:00 AM UTC
        timezone_id: "UTC"
bundle:
    name: "DAB-Demo"
    uuid: "05622722-fb3a-4a17-8f1f-c3c1d37ecec8"

variables:
    git_branch:
        description: "Git branch to use for job source code"
    demo_parameter_value:
        description: "Text value to pass as a Databricks notebook parameter"

presets:
    tags:
        application: "Demo Notebook"

targets:
    free:
        mode: development
        workspace:
            host: https://dbc-e667f434-e97e.cloud.databricks.com
        variables:
            git_branch: main
            demo_parameter_value: "Hello, World!"

resources:
    jobs:
        run_demo_notebook:
            name: run_demo_notebook_job
            tasks:
                - task_key: run_demo_notebook_task
                  notebook_task:
                      notebook_path: demo_notebook
                      base_parameters:
                          demo_parameter: ${var.demo_parameter_value}
                      source: GIT
            git_source:
                git_url: https://gontcharovd@dev.azure.com/gontcharovd/databricks-dab-demo/_git/data
                git_provider: azureDevOpsServices

```

```
git_branch: ${var.git_branch}
schedule:
  quartz_cron_expression: "0 0 7 * * ?" # Daily at 7:00 AM UTC
  timezone_id: "UTC"
```

## Deploying the DAB

`databricks auth login --profile free`. Config: `host=https://dbc-e667f434-e97e.cloud.databricks.com`

Let's validate the bundle:

```
databricks bundle validate -t free
```

Output:

Name: DAB-Demo

Target: free

Workspace:

Host: `https://dbc-e667f434-e97e.cloud.databricks.com`

User: `denis@gontcharov.eu`

Path: `/Workspace/Users/denis@gontcharov.eu/.bundle/DAB-Demo/free`

Validation OK!

Deploy the bundle:

```
databricks bundle deploy -t free
```

Output:

Uploading bundle files to `/Workspace/Users/denis@gontcharov.eu/.bundle/DAB-Demo/free/files.`

Deploying resources...

Updating deployment state...

Deployment complete!

## Running the workflow

We can see the final workflow in the Jobs & Pipelines view:

Click on the “Play” button to execute the job: