**Databricks Deployment Workflow - Step-by-Step Lab Guide**

**Prerequisites**

* Access to Databricks workspace.
* GitHub repository connected to Databricks.
* Installed Databricks CLI and Git.
* Appropriate workspace permissions.

**Step 1: Create bundle.yml with Environment Blocks**

1. In your repo root, create bundle.yml.
2. Define dev and prod environments:

environments:

dev:

workspace:

host: https://dev.databricks.com

variables:

cluster\_id: abc123

prod:

workspace:

host: https://prod.databricks.com

variables:

cluster\_id: xyz456

1. Commit and push to GitHub.

**Checkpoint**: Run databricks bundle validate to ensure syntax correctness.

**Step 2: Test Deploy vs Sync**

1. Use **Sync**:

databricks bundle sync --environment dev

Make changes locally and verify they appear in Databricks.  
2. Use **Deploy**:

databricks bundle deploy --environment prod

Confirm that changes are applied in production.

**Step 3: Create a Secret Scope**

1. In Databricks workspace, create a Databricks-backed secret scope:

databricks secrets create-scope --scope my-scope

1. Add a secret:

databricks secrets put --scope my-scope --key my-key

1. Retrieve it in a notebook:

my\_secret = dbutils.secrets.get(scope="my-scope", key="my-key")

**Step 4: Validate & Tag**

1. Run lint and unit tests:

pytest tests/

1. Validate bundle:

databricks bundle validate

1. Tag release in Git:

git tag -a v1.0.0 -m "Release v1.0.0"

git push origin v1.0.0

**Step 5: Rollback**

1. Identify stable tag:

git tag

1. Checkout and redeploy:

git checkout v0.9.0

databricks bundle deploy --environment prod

1. Verify rollback in Databricks.

**Step 6: Promote to Test**

1. Deploy from dev branch to test environment:

databricks bundle deploy --environment test

1. Run integration tests in Databricks.
2. Verify cluster and DBFS paths are isolated.

**Step 7: Auto Release Notes**

1. Add .github/release-drafter.yml with configuration.
2. Add workflow:

- name: Generate Release Notes

uses: release-drafter/release-drafter@v5

1. Commit and push.
2. Create a PR and check that release notes are auto-generated.