# Phase 10: Deployment & Change Management

This phase explains how deployment was performed using Salesforce CLI (VS Code) instead of Outbound Change Sets, since Developer Edition does not support Change Sets fully. The deployment involved moving metadata from local development to a Salesforce org using the Salesforce CLI commands.

## Objective

To deploy Salesforce metadata (Apex Classes, Triggers, Objects, Flows, Reports) from the local development environment to a Salesforce org using Salesforce CLI (sf) and Visual Studio Code.

## Step 1 – Setup Salesforce CLI and VS Code

1. Installed Visual Studio Code.  
2. Installed the Salesforce Extension Pack from VS Code marketplace.  
3. Installed Salesforce CLI (sf) on the local system.  
4. Verified installation using command:  
 sf --version  
5. Created a new Salesforce DX project in VS Code using:  
 sf project generate --name EmployeeRecognitionProject

## Step 2 – Authorize Developer Org

To connect your Salesforce org with VS Code:  
 sf org login web -a DevOrg  
  
This opens the Salesforce login page. After successful login, an alias 'DevOrg' is stored for future commands.

## Step 3 – Retrieve Metadata from Salesforce Org

To pull all the existing project components from the org into your VS Code workspace:  
  
 sf project retrieve start --manifest manifest/package.xml --target-org DevOrg  
  
📘 Note: The manifest/package.xml file defines what metadata (Apex classes, triggers, flows, etc.) to retrieve.

## Step 4 – Verify Retrieved Metadata

In VS Code file explorer, verify structure:  
force-app/  
 └── main/  
 └── default/  
 ├── classes/  
 ├── triggers/  
 ├── objects/  
 ├── flows/  
 ├── lwc/  
 ├── reports/  
 └── email/  
  
✅ This confirms that the metadata was retrieved successfully.

## Step 5 – Deploy Metadata to Another Org (Optional)

If deploying to another sandbox or production org:  
  
1. Authorize the target org:  
 sf org login web -a ProdOrg  
  
2. Deploy the metadata:  
 sf project deploy start --manifest manifest/package.xml --target-org ProdOrg

## Step 6 – Validate Deployment

1. Log in to the destination org.  
2. Open Setup → Apex Classes / Objects / Flows / Reports.  
3. Confirm that all components are visible and active.  
  
✅ Deployment is complete and verified.

## Phase 10 Summary

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| Step | Task | Tool | Outcome |
| 1 | Setup Salesforce CLI & VS Code | VS Code | Environment ready |
| 2 | Authorize Developer Org | CLI | Connected Dev Org |
| 3 | Retrieve Metadata | CLI | Metadata retrieved |
| 4 | Verify Source Files | VS Code | Confirmed structure |
| 5 | Deploy Metadata | CLI | Deployed to target org |
| 6 | Validate Deployment | Salesforce UI | Success confirmation |

## Files Created

- manifest/package.xml  
- Project files under force-app/main/default/  
- Apex Classes, Triggers, Flows, Reports, and Objects