

Phase 8: Data Management & Deployment

In this phase, we ensured smooth data handling (import/export), duplicate prevention, and safe deployment of changes from development to production environments. This was critical to maintain data quality, backup strategies, and a reliable deployment pipeline.

1) Data Import Wizard

Use: For small volumes & standard objects (Leads, Contacts).

Steps:

- Setup → Quick Find → Data Import Wizard → Launch.
- Choose Object (Lead).
- Upload CSV file.
- Map CSV columns → Salesforce fields (FirstName, LastName, Email, Preferred_Course__c).
- Start Import.

Result: Easy UI-based import with success/failure CSV provided.

2) Data Loader

Use: For bulk imports, updates, or when lookup fields need to be populated.

Steps:

- Install Data Loader (from Setup → Data Loader).
- Login with Salesforce credentials.
- Choose Insert / Upsert.
- Select Object (Lead, Course__c, Enrollment__c).
- Upload CSV → Map fields (API names).
- Run job.

Result: Large datasets imported (with support for lookup IDs or External IDs).

3) Duplicate Rules

Use: Prevent duplicate Leads & Contacts.

Steps:

- Setup → Duplicate Management → Matching Rules → New.
- Lead Matching Rule: Match on Email.
- Create Duplicate Rule: Object = Lead → Action = Block or Alert.
- Repeat for Contacts.

Result: System blocks or warns when duplicate records are created.

4) Data Export & Backup

Use: Always backup before large imports or deployments.

Steps:

- Setup → Data Export → Export Now.
- Choose objects (Lead, Contact, Course__c, Batch__c, Enrollment__c).
- Download ZIP with CSV files.
- Alternative: Data Loader → Export → Save CSV.

Result: Local backup available for recovery.

5) Deployment Options

A. Change Sets (Admin-Friendly)

- Setup → Outbound Change Sets → New.
- Add components (objects, flows, Apex classes, LWC).
- Upload to target org (sandbox → production).
- Result: Easy point-and-click deployment.

B. VS Code + SFDX (Developer Approach)

- sf project retrieve → pull metadata.
- sf project deploy start → deploy metadata.
- Supports version control (Git).
- Result: Modern, scriptable deployments.

C. ANT Migration Tool (Legacy)

- Command-line Java tool.
- Good for scripted CI/CD pipelines (but SFDX preferred).

6) Unmanaged vs Managed Packages

- Unmanaged Package: For open projects, editable after install (good for dev/demo).
- Managed Package: Locked, versioned, for AppExchange distribution.

Our Project: Works fine as Unmanaged (since it requires customization).

7) API Limits & Best Practices

- Bulkify imports (use Data Loader for >50k records).
- Backup before import.
- Always run test deployment in sandbox before production.
- Monitor deployment in Deployment Status.

✓ Outcome

Phase 8 ensured smooth data management and deployment. Leads, Courses, Batches, and Enrollments were successfully imported. Duplicate prevention rules were enabled, backup strategy was established, and a deployment pipeline was built with VS Code + SFDX. The Salesforce CRM is now production-ready with safe migration practices.