

Phase 8 – Data Management & Deployment

Flight Reservation & Scheduling System


Salesforce-Based Flight Operations and Scheduling System

Step 1: Import Data with Data Import Wizard


Purpose: Quickly add or update data for standard/custom objects without coding.


How to do it:

1. Go to App Launcher → Data Import Wizard.
2. Select the object you want to import (e.g., Leads, Accounts, Contacts, or your custom object like Flight__c).
3. Click “Launch Wizard”.
4. Upload your CSV file containing records.
5. Map CSV columns to Salesforce fields.
6. Click Start Import.
7. Monitor the progress; Salesforce will show success/error count

 Setup

Home

Object Manager 



Before you import your data...

Clean up your data import file

You'll have fewer errors to resolve if your data file is clean and free of duplicates. [Watch video](#)

Make sure your field names match Salesforce field names

You'll be required to map your data fields to Salesforce data fields. Data in unmapped fields is not imported. [View a list of Salesforce data fields.](#)


Don't import too many records at once

Using the Data Import Wizard, import up to 50,000 records at a time. Importing too many records can slow down your org for all users, especially during periods of peak usage.


[Collapse](#)

Import your data in 3 easy steps!


Launch the Data Import Wizard to import your data.




Pre-step: Prepare your data for import



Choose data to import



Edit field mapping



Review and start import

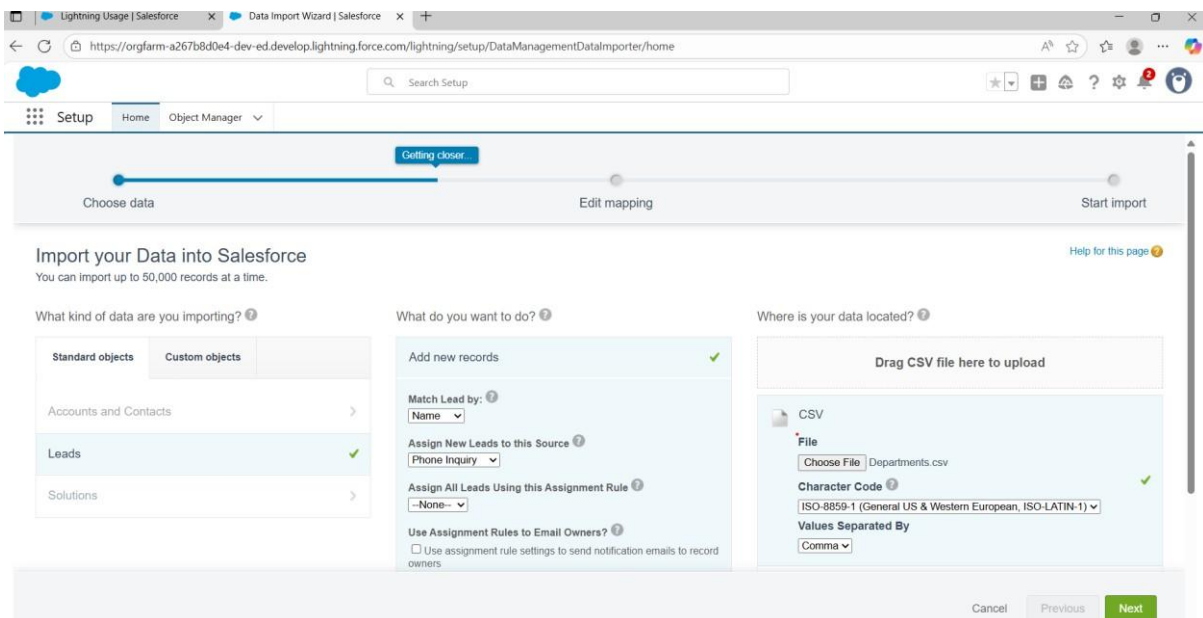
Launch Wizard!

Step 2: Import/Export Large Data with Data Loader

Purpose: Handle large volumes of records (>50k) and perform bulk operations.

How to do it:

1. Go to **Setup** → **Data Loader** → **Download** (install on your machine).
2. Open **Data Loader** and login using **username** + **security token**.
3. Choose operation: **Insert, Update, Upsert, Delete, Export**.
4. Select the object and the CSV file.
5. Map fields (CSV → Salesforce fields).
6. Click **Next** → **Finish** to start operation.
7. Exported files will be saved as CSV.



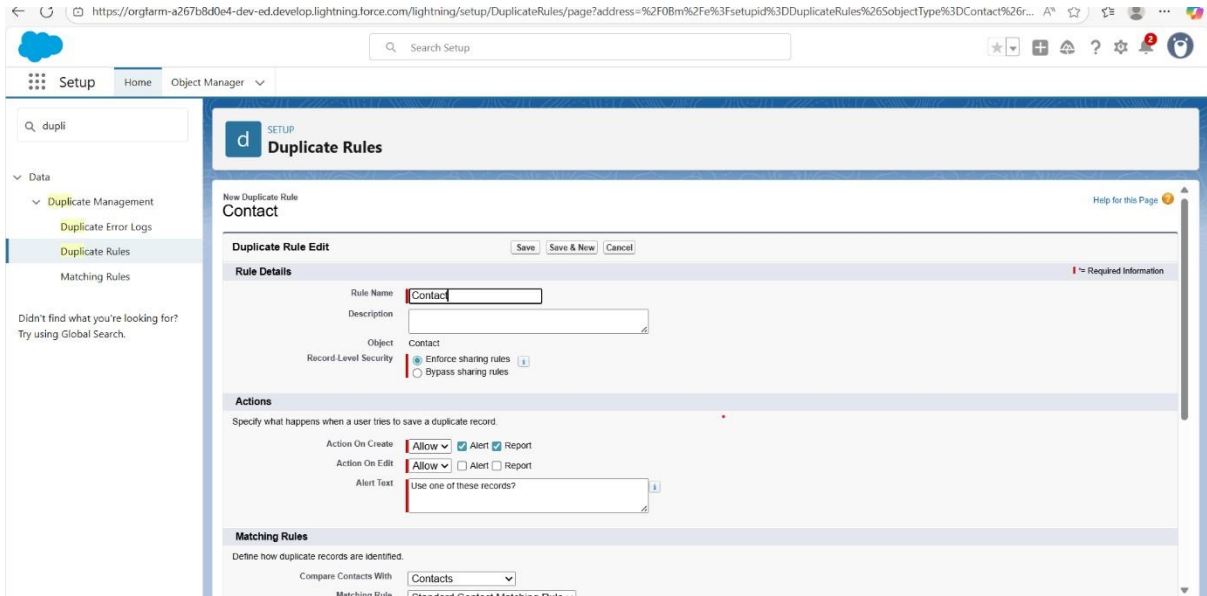
The screenshot shows the Salesforce Data Import Wizard interface. At the top, there's a progress bar with three steps: 'Choose data', 'Edit mapping', and 'Start import'. The 'Choose data' step is currently active. Below the progress bar, the main heading is 'Import your Data into Salesforce' with a subtext 'You can import up to 50,000 records at a time.' and a 'Help for this page' link. The interface is divided into three columns. The first column, 'What kind of data are you importing?', has tabs for 'Standard objects' and 'Custom objects'. Under 'Standard objects', 'Leads' is selected with a green checkmark. The second column, 'What do you want to do?', has a 'Add new records' section with a green checkmark. It includes a 'Match Lead by:' dropdown set to 'Name', an 'Assign New Leads to this Source' dropdown set to 'Phone Inquiry', and an 'Assign All Leads Using this Assignment Rule' dropdown set to 'None'. There's also a checkbox for 'Use Assignment Rules to Email Owners?'. The third column, 'Where is your data located?', has a 'Drag CSV file here to upload' section. Below it, a 'CSV' section shows a 'File' dropdown set to 'Departments.csv', a 'Character Code' dropdown set to 'ISO-8859-1 (General US & Western European, ISO-LATIN-1)', and a 'Values Separated By' dropdown set to 'Comma'. At the bottom right, there are 'Cancel', 'Previous', and 'Next' buttons.

Step 3: Prevent Duplicates (Duplicate Rules)

Purpose: Ensure clean data by blocking or alerting duplicates.

How to do it:

1. Go to **Setup** → **Duplicate Rules** → **New Rule**.
2. Choose the object (e.g., **Contact**).
3. Define **matching criteria** (Email, Phone, Name, etc.).
4. Choose action: **Block** or **Allow but Alert**.
5. Save and **Activate** the rule.
6. Test by creating a record with duplicate values to ensure it works.

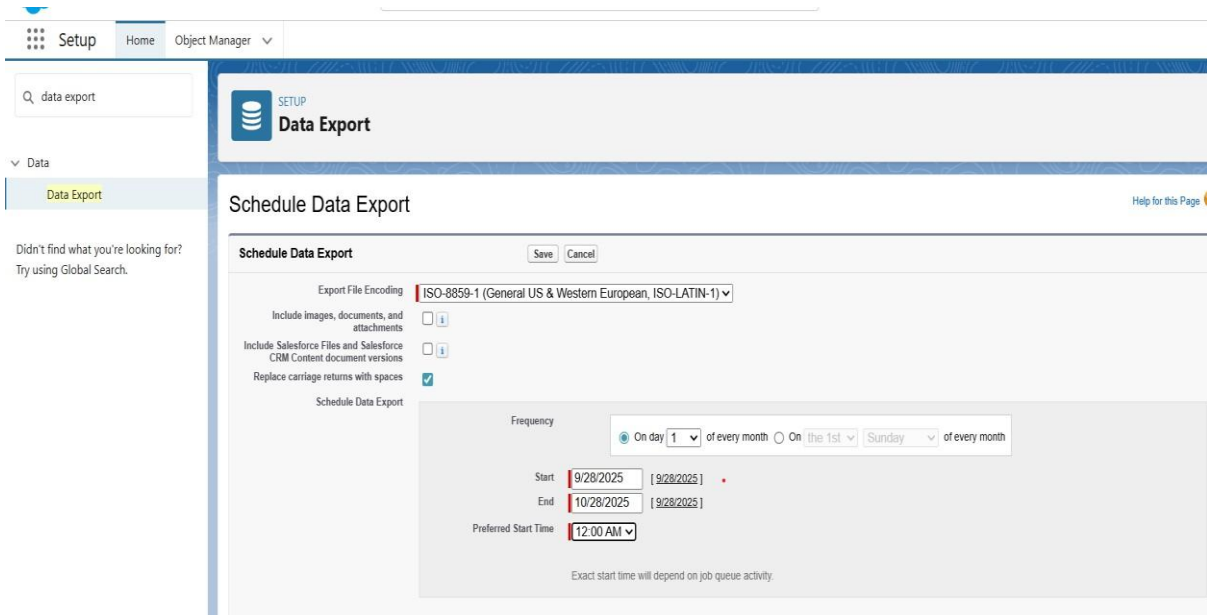


Step 4: Schedule Data Export / Backup

Purpose: Create regular backups of your Salesforce data.

How to do it:

1. Go to **Setup** → **Data Export** → **Schedule Export**.
2. Choose **frequency** (Weekly or Monthly).
3. Select objects to backup (e.g., **Flight__c**, **Booking__c**, **Passenger__c**).
4. Click **Start Export**.
5. Salesforce will generate a **.zip file** with CSVs for download.



Step 5: Move Metadata with Change Sets

Purpose: Deploy customizations (Apex, LWCs, Objects) between orgs.

How to do it:

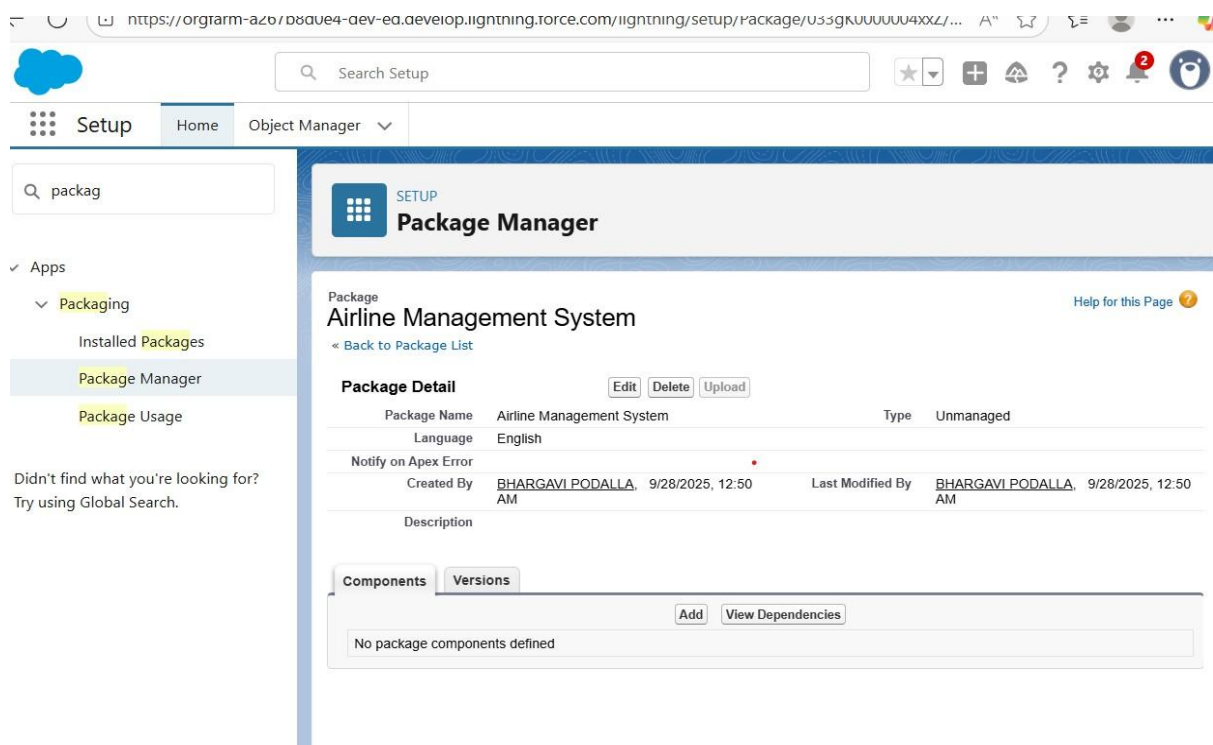
1. In source org → **Setup** → **Outbound Change Sets** → **New**.
2. Add components (e.g., Apex Classes, Lightning Web Components, Custom Objects).
3. Upload the Change Set to the target org (Sandbox → Production).
4. In target org → **Inbound Change Sets** → **Deploy**.
5. Run tests if required.

Step 6: Use Packages

Purpose: Package your components for reuse or AppExchange distribution.

How to do it:

1. Go to **Setup** → **Package Manager** → **New Package**.
2. Add components (Apex, Objects, Flows, LWCs).
3. Choose type:
 - **Unmanaged:** Editable, for training/demo.
 - **Managed:** Locked, for AppExchange apps.
4. Upload package → Install in target org.



Step 7: Use ANT Migration Tool (Optional for CI/CD)

Purpose: Automate deployments via command-line.

How to do it:

1. Download **Salesforce ANT Migration Tool**.
2. Configure **build.properties** with username, password, and token.
3. Create **build.xml** to define deployment commands:

```
<sf:deploy username="${sf.username}" password="${sf.password}"  
serverurl="https://login.salesforce.com" deployRoot="src"/>
```

4. Run in command line: `ant deployCode`

Step 8: Use VS Code & SFDX for Deployment

Purpose: Modern development and deployment workflow.

How to do it:

1. Open **SFDX project** in VS Code.
2. Authorize org:

```
sfdx force:auth:web:login -a DevOrg
```

3. Deploy source:

```
sfdx force:source:deploy -p force-app/main/default -u DevOrg
```

4. Retrieve components:

```
sfdx force:source:retrieve -m ApexClass:FlightController
```

Step 9: Version Control with GitHub

Purpose: Track changes and collaborate with team.

How to do it:

1. Initialize repository: `git init`
2. Add files: `git add .`
3. Commit: `git commit -m "Phase 8 - Deployment setup"`
4. Push to GitHub: `git push -u origin main`

Step 10: Validate Deployment

Purpose: Ensure everything works in the target org.

How to do it:

1. Run **Apex Tests** ($\geq 75\%$ coverage).

2. Check **Lightning Pages, LWCs, Integrations**.
3. Verify **duplicate rules, data imports, backups**.

Phase 8 focuses on ensuring that the **Airline Management System's data and metadata are accurately managed, securely transferred, and effectively deployed** across Salesforce environments. By using tools such as the **Data Import Wizard, Data Loader, Change Sets, VS Code & SFDX, and version control with GitHub**, the project ensures both data integrity and seamless deployment.