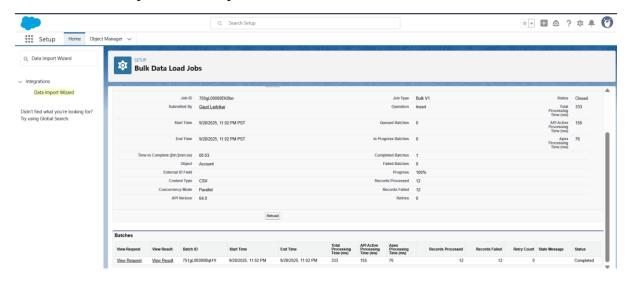
Phase 8 — Data Management & Deployment (step-by-step)

1. Data Import Wizard — simple imports (UI)

When to use: small imports (up to 50,000 rows), quick mapping for standard/custom objects. Step-by-step:

- 1. Setup \rightarrow Data Import Wizard \rightarrow Launch Wizard.
- 2. Choose the object (Account, Contact, or custom object like Shipment c).
- 3. Upload CSV (max ~50,000 rows / file). Include header row.
- 4. Map CSV columns to Salesforce fields (use exact API names if possible).
- 5. Select operation: Insert / Update / Upsert (pick External ID if upsert).
- 6. Run import on the small test file first. Review success/error files and correct CSV or mappings.
- 7. Run full import once test passes.



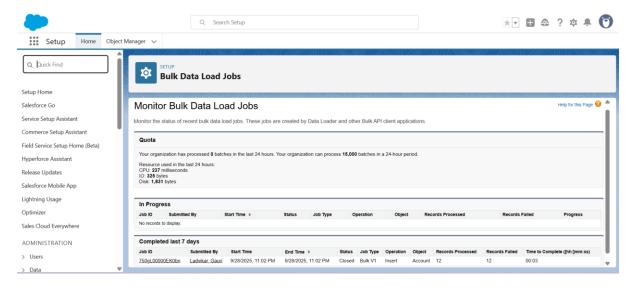
2. Data Loader — bulk & reliable loads (UI + CLI)

When to use: large volumes, scheduled/automated loads, export large datasets. Data Loader is designed for bulk operations and supports large imports.

Step-by-step (UI):

- 1. Install Data Loader (Windows / Mac) from Salesforce.
- 2. Open Data Loader → Login (username/password + security token or OAuth).
- 3. Choose action: Insert / Update / Upsert / Delete / Export.

- 4. Select object (e.g., Shipment c) and point to CSV.
- 5. Click Create or Edit a Map map CSV columns → Salesforce fields (save the mapping file).
- 6. Configure settings: use Bulk API for large loads; set batch size (default 200).
- 7. Run on a small test CSV → check success.csv and error.csv. Fix failures and re-run if needed.
- 8. Run full load. Save success/error files for audit.

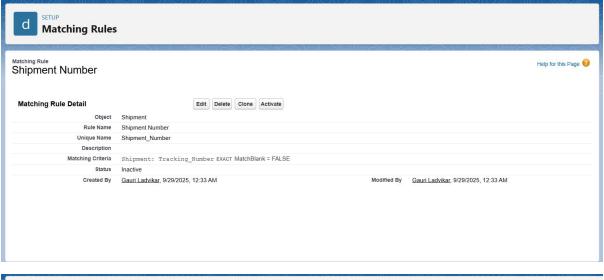


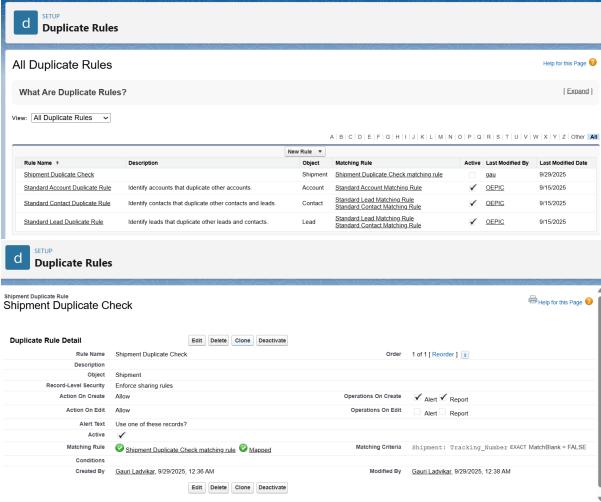
3. Duplicate Rules & Matching Rules — prevent duplicates

Why: avoid duplicate Accounts/Contacts/Shipments and maintain data quality.

Step-by-step:

- 1. Setup \rightarrow Duplicate Rules \rightarrow click New Rule (choose the object).
- 2. Create or reuse a Matching Rule (Setup → Matching Rules) that defines match logic (Exact / Fuzzy).
- 3. In Duplicate Rule: pick action when duplicate found (Block or Allow with Alert), and set when to run (Create / Edit / API).
- 4. Save and Activate the matching rule first, then activate the duplicate rule.
- 5. Test: create records that should match and verify the rule behavior.



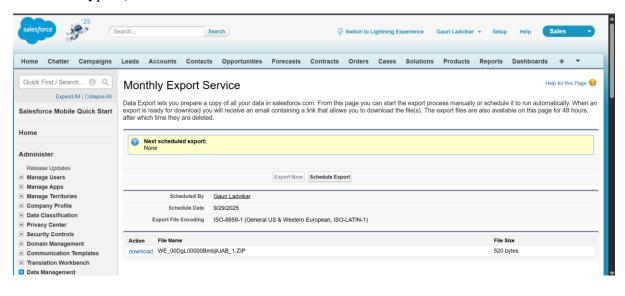


4. Data Export & Backup

Why: keep regular backups before major changes; Salesforce's Data Export is the built-in option.

Step-by-step (manual export):

- 1. Setup \rightarrow Data Export \rightarrow Export Now or Schedule Export.
- 2. Choose objects (select Shipment c and related objects).
- 3. Run export; download the ZIP files and store them securely (cloud storage, encrypted).



5. Unmanaged vs Managed Packages — distribution options

Short differences & steps:

- Unmanaged package: good for transferring editable code/templates; not upgradable.
 Create in Setup → Packages → New → Add components → create package → distribute.
- Managed package (recommended for productization): supports versioning, licensing, and upgrades; requires a packaging org/Dev Hub and packaging steps (create package, create version). Use second-generation packaging (2GP) via SFDX for modern workflows.

6. VS Code & SFDX (Salesforce CLI) — modern developer workflow

Why: recommended toolchain for source tracking, scratch orgs, CI/CD and automated deployments. Use VS Code with Salesforce extensions and SFDX CLI.

Step-by-step:

- 1. Install VS Code. Install the Salesforce Extension Pack.
- 2. Install Salesforce CLI (sf / sfdx).
- 3. Authorize your org:
 - Scratch org/dev hub (for DX):
 - o sfdx auth:web:login -d -a DevHub

- o Sandbox/Production:
- o sfdx auth:web:login -a MySandbox

4. Pull or retrieve source:

- o For source format: sfdx force:source:retrieve -m "ApexClass:MyClass" or use project-based commands.
- For metadata API: sfdx force:mdapi:retrieve ... / sfdx force:mdapi:deploy ...
 (Use sf project deploy / sfdx force:source:deploy depending on your project type).
- 5. Deploy to target org (example):
- 6. sfdx force:source:deploy -p force-app/main/default -u MySandbox
- 7. For packaging (2GP) & releases, use:
- 8. sfdx force:package:create -n "ShipmentTrack" -t Unlocked -r force-app
- 9. sfdx force:package:version:create -p "ShipmentTrack" -d force-app -k <password> -w 10