

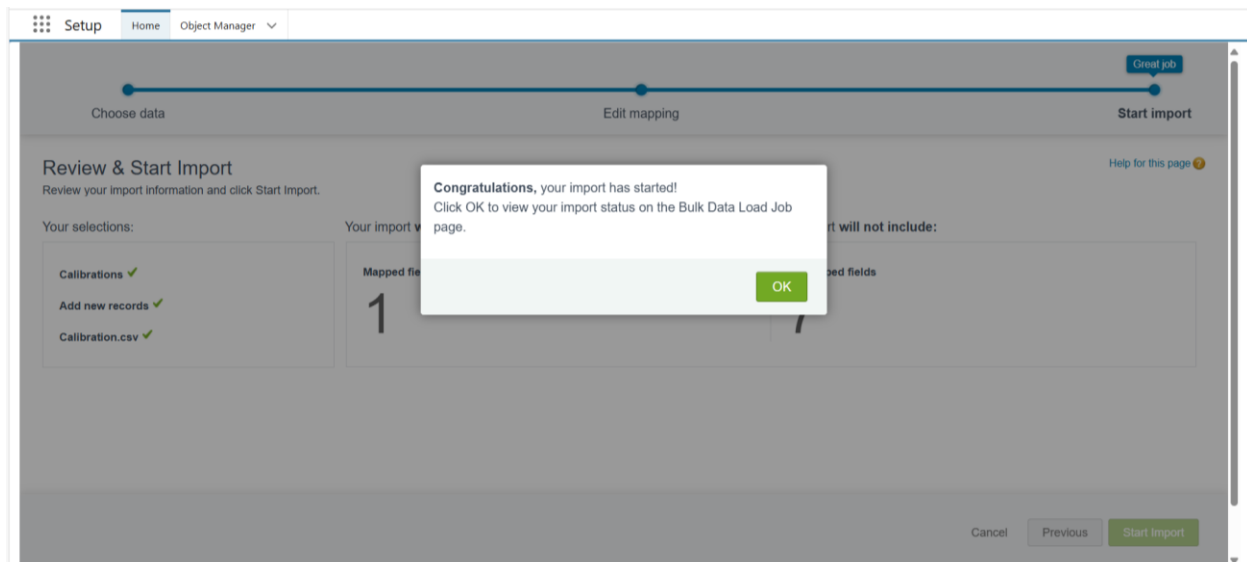
# AeroSense: Phase 8 Documentation

**Phase Title:** Data Management & Deployment

**Objective:** To manage AeroSense data (Sensors, Readings, Alerts) efficiently and establish reliable deployment practices between development, testing, and production orgs.

## 1. Data Import Wizard

- **Path:** App Launcher → Data Import Wizard.
- Supports Accounts, Contacts, Leads, and limited custom objects.
- Use case: Import small sets of **Sensor\_\_c** and **Calibration\_\_c** data.
- Steps:
  1. Select object (Sensor\_\_c).
  2. Upload CSV (columns: Name, Serial Number, Location, Status).
  3. Map fields → Start Import.



**Data Import Wizard** [Help for this page](#)

**Recent Import Jobs**

Status	Object	Records Created	Records Updated	Records Failed	Start Date	Processing Time (ms)
Closed	Calibration	2	0	0	09-24-2025 04:15	164
Closed	Sensor	2	0	0	09-24-2025 04:03	164

[Bulk Api Monitoring](#)

**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.


Import your data in 3 easy steps!








## 2. Data Loader (Optional)


- For bulk data operations (50,000+ records).
- Use case: Import historical **Readings\_\_c** from IoT devices.
- Steps:
  1. Install Salesforce Data Loader.
  2. Login with Salesforce credentials + security token.
  3. Select "Insert" → Object = Reading\_\_c.
  4. Upload CSV (PM2.5, PM10, AQI, Timestamp, SensorId).
  5. Map fields → Run.


## 3. Duplicate Rules

- Path: Setup → Duplicate Rules.
- Example Rule: Prevent duplicate Sensors by Serial Number.
- Condition: If **Device\_Serial\_\_c** = Existing, block insert.







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 Setup

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Object Manager 

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▼ Data


▼ Duplicate Management

Duplicate Error Logs

**Duplicate Rules**

Matching Rules



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 SETUP

**Duplicate Rules**


Sensor Duplicate Rule

**Prevent\_Duplicate\_Sensors**


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**Duplicate Rule Detail**


EditDeleteCloneActivate


Rule Name	Prevent_Duplicate_Sensors	Order	1 of 1 [ <a href="#">Reorder</a> ] 
Description	Blocks insertion of sensors with duplicate Serial Numbers		
Object	Sensor		
Record-Level Security	Enforce sharing rules		
Action On Create	Allow	Operations On Create	<input checked="" type="checkbox"/> Alert <input checked="" type="checkbox"/> Report
Action On Edit	Allow	Operations On Edit	<input type="checkbox"/> Alert <input type="checkbox"/> Report
Alert Text	Use one of these records?		
Active	<input type="checkbox"/>		
Conditions	Sensor: Device Serial EQUALS Existing		
Created By	Raksha Kalaskar, 9/24/2025, 9:49 AM	Modified By	Raksha Kalaskar, 9/24/2025, 9:49 AM

EditDeleteCloneActivate







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**Matching Rules**


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**Matching Rules**

Matching Rule

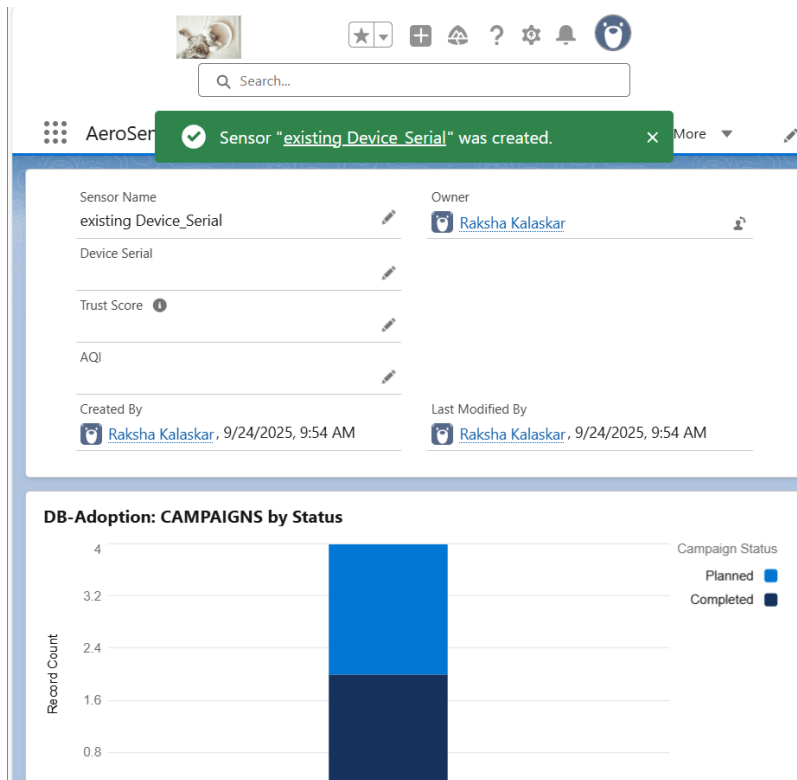
**Device\_Serial**

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**Matching Rule Detail**

DeleteCloneDeactivate

Object	Sensor		
Rule Name	Device_Serial		
Unique Name	Device_Serial		
Description			
Matching Criteria	Sensor: Device_Serial EXACT MatchBlank = TRUE		
Status	Active		
Created By	Raksha Kalaskar, 9/24/2025, 9:51 AM	Modified By	Raksha Kalaskar, 9/24/2025, 9:51 AM



#### 4. Data Export & Backup

- Path: Setup → Data Export → Schedule Weekly Export.
- Export objects: Sensor\_\_c, Reading\_\_c, Alert\_\_c, Calibration\_\_c, DailyAggregate\_\_c.
- Zip file emailed → Download backup.

The screenshot shows the Salesforce Setup interface. The left sidebar contains the navigation menu with "Setup" selected. The main content area is titled "Data Export" and contains the "Schedule Data Export" configuration page.

**Schedule Data Export**

Export File Encoding: ISO-8859-1 (General US & Western European, ISO-LATIN-1)

Include images, documents, and attachments: ☐

Include Salesforce Files and Salesforce CRM Content document versions: ☐

Replace carriage returns with spaces: ☒

Frequency: ☐ On day 1 of every month ☒ On the 1st Sunday of every month

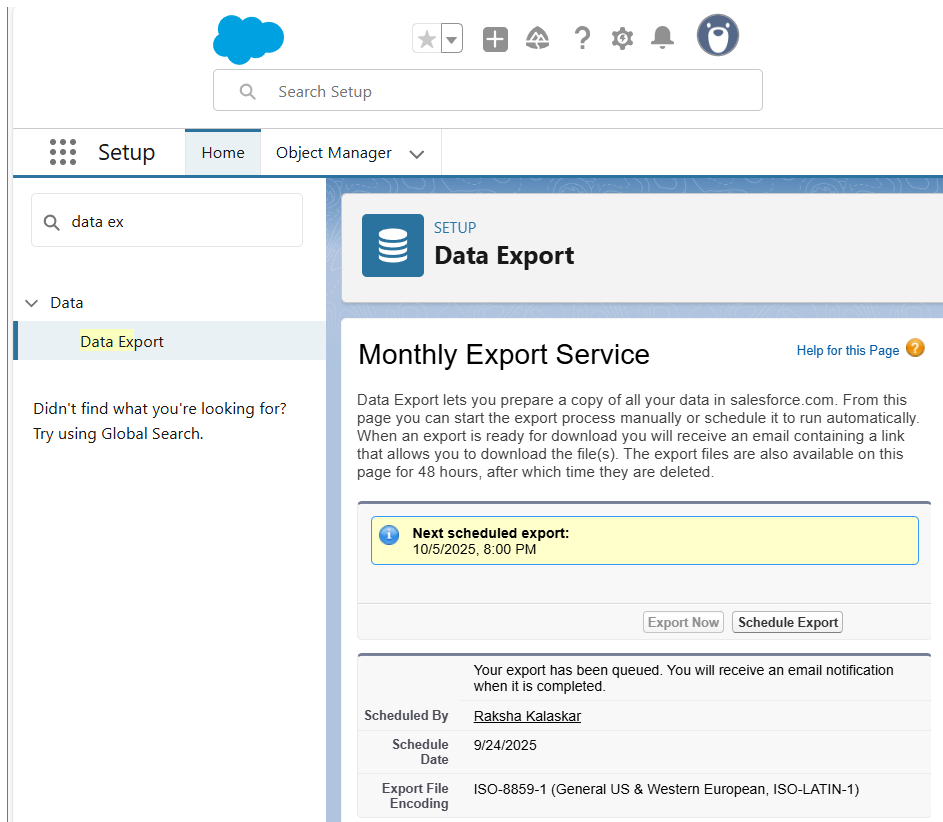
Start: 9/24/2025 [ 9/24/2025 ]

End: 10/24/2025 [ 9/24/2025 ]

Preferred Start Time: 8:00 PM

Exact start time will depend on job queue activity.

Exported Data: Select what type of information you would like to include in the export. The data types listed below use the Apex API names. If you are not familiar with these names, select include all data for your export.

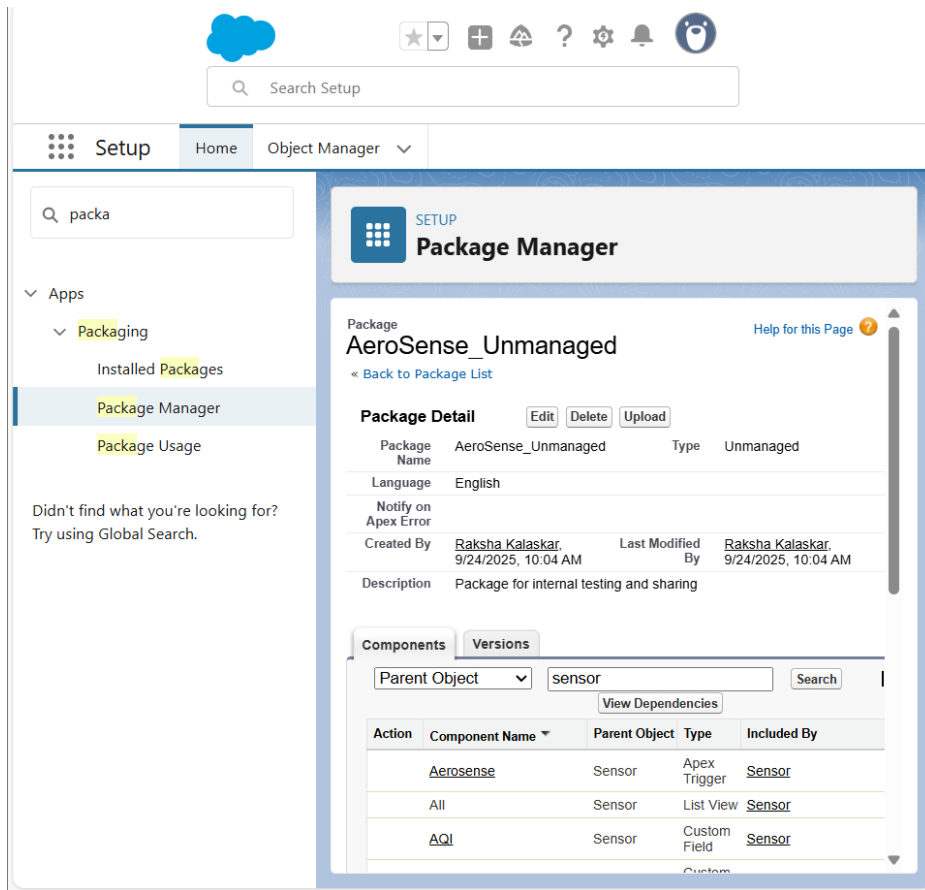


## 5. Change Sets (Admin Deployment) (optional)

- For declarative deployments.
- Example: Deploy new **Validation Rule** or **Flow**.
- Steps:
  1. In **Source Org (Sandbox)** → Outbound Change Sets → Add Components.
  2. Select objects, fields, flows, reports.
  3. Upload to target org.
  4. In **Target Org (Production)** → Inbound Change Sets → Deploy.

## 6. Unmanaged vs Managed Packages

- **Unmanaged Package:** For internal testing/sharing with dev orgs.
- **Managed Package:** For AppExchange distribution (future AeroSense productization).



## 7. ANT Migration Tool (For Developers)(optional)

- CLI-based deployment method.
- Steps:
  1. Install Apache ANT.
  2. Configure build.xml with Salesforce credentials.
  3. Run:
    - ant retrieve
    - ant deploy
    - Use case: Move **Apex Classes, Triggers, LWCs** from Dev to QA org.

## 8. VS Code & SFDX (Modern DevOps)

- Install **Salesforce Extensions Pack** in VS Code.
- Authorize org:
- `sfdx auth:web:login -d -a AeroSenseDev`
- Retrieve metadata:
- `sfdx force:source:retrieve -m ApexClass,CustomObject`
- Deploy to target org:
- `sfdx force:source:deploy -u AeroSenseProd -p force-app/main/default`
- Benefit: Version control with GitHub + CI/CD automation.

## 9. Example Deployment Workflow (Best Practice)

1. **Dev Org** → Build new feature (e.g., Alert Flow).
2. **Sandbox QA** → Deploy via Change Set → Test with test data.
3. **Staging Org** → Load near-production data via Data Loader.
4. **Production Org** → Final deploy using SFDX.
5. **Backup** → Export Data before deployment.

## 10. Real-Time Example in AeroSense

- Import **1000 historical readings** via Data Loader.
- Weekly Data Export backs up all sensor data.
- Change Set moves new **DailyAggregate flow** to production.
- Developers use **SFDX** for Apex/LWC deployment.