Project Title: Pet Adoption Tracker

Phase 8: Data Management & Deployment Documentation

Objective

Phase 8 validates the operational readiness of the Pet Adoption Tracker. This includes establishing procedures for data quality, data backup, and the secure, systematic deployment of all developed metadata (Apex, LWC, Custom Objects) from the development environment to a production environment using industry-standard tools.
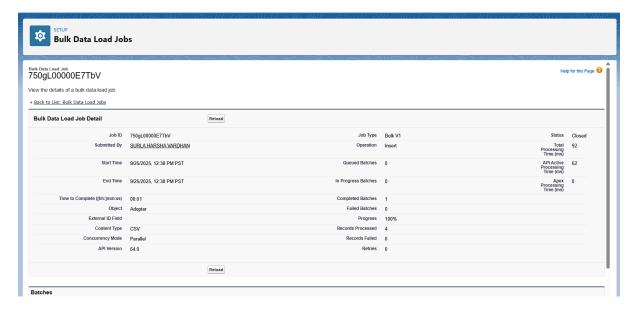

A. Data Management & Quality Control

1. Data Loader Usage

Purpose: Data Loader is essential for handling large-volume data imports/exports and managing complex record relationships, which is required for loading initial Pet__c data (linked to Shelter__c Accounts) and for performing regular data backups.

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2. Data Import Wizard Application
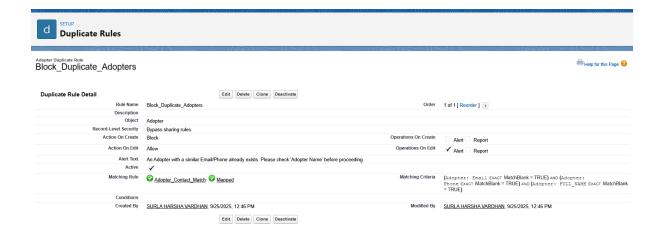
Purpose: Document the use of the simpler Data Import Wizard for non-complex objects, like loading initial lists of Volunteers or Adopters who do not have complex initial relationships.
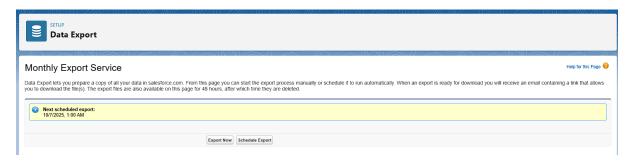

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3. Duplicate Rules Enforcement

Purpose: To enforce data hygiene on the critical Adopter__c object, preventing staff from creating redundant records based on contact information.

Adopter Duplicate Rule
Block_Duplicate_Adopters

Duplicate Rule Detail

Edit | Delete | Clone | Deactivate

Rule Name	Block_Duplicate_Adopters	Order	1 of 1 [Reorder]
Description			
Object	Adopter		
Record-Level Security	Bypass sharing rules		
Action On Create	Block	Operations On Create	☐ Alert ☐ Report
Action On Edit	Allow	Operations On Edit	✔ Alert ☐ Report
Alert Text	An Adopter with a similar Email/Phone already exists. Please check 'Adopter Name' before proceeding		
Active	✔		
Matching Rule	✅ Adopter_Contact_Match ✅ Mapped	Matching Criteria	(Adopter: Email EXACT MatchBlank = TRUE) AND (Adopter: Phone EXACT MatchBlank = TRUE) AND (Adopter: FULL_NAME EXACT MatchBlank = TRUE)
Conditions			
Created By	SURLA HARSHA VARDHAN, 9/25/2025, 12:46 PM	Modified By	SURLA HARSHA VARDHAN, 9/25/2025, 12:46 PM

Edit | Delete | Clone | Deactivate

4. Data Export & Backup Strategy

Purpose: To demonstrate a plan for disaster recovery by scheduling automated backups of transactional data

Monthly Export Service

Data Export lets you prepare a copy of all your data in salesforce.com. From this page you can start the export process manually or schedule it to run automatically. When an export is ready for download you will receive an email containing a link that allows you to download the file(s). The export files are also available on this page for 48 hours, after which time they are deleted.

> ℹ **Next scheduled export:**
> 10/7/2025, 1:00 AM

Export Now | Schedule Export

5. VS Code & SFDX (Primary Deployment)

Purpose: To confirm that all programmatic assets (Apex classes, Triggers, LWCs) are managed as source code and deployed using the professional Salesforce Developer Experience (SFDX).

```
00:54:20.310 Starting SFDX: Deploy This Source to Org

=== Deployed Source
STATE      FULL NAME        TYPE        PROJECT PATH

Changed    KpiController    ApexClass   force-app\main\default\classes\KpiController.cls
Changed    KpiController    ApexClass   force-app\main\default\classes\KpiController.cls-meta.xml
```

6. Unmanaged vs Managed Packages

Purpose: To articulate how the solution could be packaged for distribution or transfer, demonstrating an understanding of packaging differences.

Unmanaged Package Rationale - State that the project will be delivered as an **Unmanaged Package** for the final capstone review, allowing reviewers/recipients to examine and modify all components.

Managed Package Rationale -State that if the app were to be commercialized or placed on the AppExchange, it would be converted to a **Managed Package** to protect the intellectual property (Apex/LWC code) and facilitate future upgrades

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7. ANT Migration Tool (Alternative Method)

Purpose: To show awareness of an alternative, script-based deployment tool, often used for continuous integration.

ANT Tool Rationale - Explain that while SFDX was the primary tool, the ANT Migration Tool remains an option for highly automated, XML-based deployments and integration with legacy CI/CD systems, providing a complete picture of available deployment methods.