**Test Plan – DTN ADMLOD Export Prototype**

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**1. ✅ Test Objectives**

* **Validate that the prototype meets all business, functional, and technical requirements.**
* **Confirm that ADMLOD export files are generated from repository-backed mock data.**
* **Verify FTP upload simulation and dynamic DTN response generation.**
* **Ensure error scenarios are handled and logged correctly.**
* **Confirm CLI options and logging functionality.**

**2. ✅ Test Scope**

**In Scope**

* **CLI export operation**
* **ADMLOD file generation**
* **FTP upload simulation**
* **Dynamic DTN response generation and parsing**
* **Error scenario simulation (missing fields, FTP failure, invalid command)**
* **Logging to console and file**
* **Configuration via appsettings.json**

**Out of Scope**

* **Real FTP or DTN integration**
* **Import, add, modify, or delete operations**
* **UI/web interface**

**3. ✅ Test Environment**

* **OS: Windows 10/11, Linux, or Mac**
* **.NET SDK: 6.0 or later**
* **Local file system access for reading/writing mock files**
* **JSON-based mock data and configuration**

**4. ✅ Test Cases**

| **Test Case ID** | **Description** | **Steps** | **Expected Result** |
| --- | --- | --- | --- |
| **TC-01** | **CLI Export Success** | **Run dotnet run export --success** | **Export file generated, FTP upload logged, dynamic response shows all success** |
| **TC-02** | **CLI Export Error (DTN Response)** | **Run dotnet run export --error** | **Export file generated, FTP upload logged, dynamic response shows errors** |
| **TC-03** | **CLI Export Error (FTP Failure)** | **Run with FTP error simulation** | **FTP upload fails, error logged, response parsing skipped** |
| **TC-04** | **Missing Required Field** | **Modify mock data to omit field** | **Response shows error for affected command, error logged** |
| **TC-05** | **Invalid Command Format** | **Generate malformed export line** | **Response shows error, error logged** |
| **TC-06** | **Logging to File** | **Run with --logfile test.log** | **All actions/errors logged to file and console** |
| **TC-07** | **CLI Option Handling** | **Run with invalid/missing flags** | **Help message or error shown** |
| **TC-08** | **Review Output Files** | **Inspect export and response files** | **Files match ADMLOD format, responses reflect command validity** |

**5. ✅ Test Data**

**Mock Products and Product Groups**

* **At least 2 valid products and 2 valid product groups**
* **At least 1 product/group with missing required field**

**Dynamic Response Generator**

* **MockResponseGenerator.cs simulates success and error feedback based on command validation**

**6. ✅ Responsibilities**

| **Role** | **Responsibility** |
| --- | --- |
| **Developer** | **Provide build/run/test instructions, support defect resolution** |
| **QA/Tester** | **Execute test cases, log defects, verify fixes** |
| **Stakeholder** | **Review test results and outputs** |

**7. ✅ Acceptance Criteria**

* **All test cases pass as described**
* **All error scenarios are handled and logged**
* **CLI options and logging work as intended**
* **Output files and logs are available for review**

**8. ✅ Defect Management**

* **Defects logged with reproduction steps, expected vs actual results**
* **Prioritized and resolved before final acceptance**

**9. ✅ Sign-Off**

* **Test plan and results reviewed and approved by stakeholders**