



DATA Act Dashboard

Standard Operating Procedure

October 17, 2018



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Previous Change History

Maintain document history as revisions are made and the final version is agreed upon.

Version	Date	Author	Comment
1	9/28/2018	Deloitte	Initial draft version
2	10/12/2018	Deloitte	Updated the overall document based on TARD comments received on 10/05/2018
3	10/17/2018	Deloitte	Finalized document
4	2/11/2019	Fransi Dunagan	Revised for 508 Compliance and USDA DATA Act Resources site

1. Introduction

The [Digital Accountability and Transparency Act of 2014 \(DATA Act\)](#) Compliance Dashboard (Dashboard) will allow U.S. Department of Agriculture (USDA) agencies to view the state of DATA Act compliance through the identification of key performance metrics, file submission statistics, error reporting and trend analysis. It provides compliance information related to File A, Appropriations Account; File B, Object Class and Program Activity; File C, Award Financial, and the File D2, Award and Awardee Attributes (Financial Assistance). This document, the DATA Act Dashboard Standard Operating Procedure (SOP), is meant to provide the Office of the Chief Financial Officer (OCFO) Financial Management Services (FMS) team with an overview of the system processes and steps that take place before the dashboard can be used. The SOP will act as a guide and manual for how the dashboard data is compiled and processed utilizing USDA specific guidance for the DATA Act.

This is a living document and serves as a reference for the latest reporting requirements to ensure DATA Act compliance for the dashboard for the Files A, B, C, and D2. Any new USDA and/or Federal requirement related changes to the dashboard will be added to this document as they are released. This document includes links to legislative guidance and an appendix, [Appendix A: Dashboard Guidance](#), where referenced links and additional helpful documents can be found. Figure 1 – Dashboard, acts as a reference to various components of dashboard.

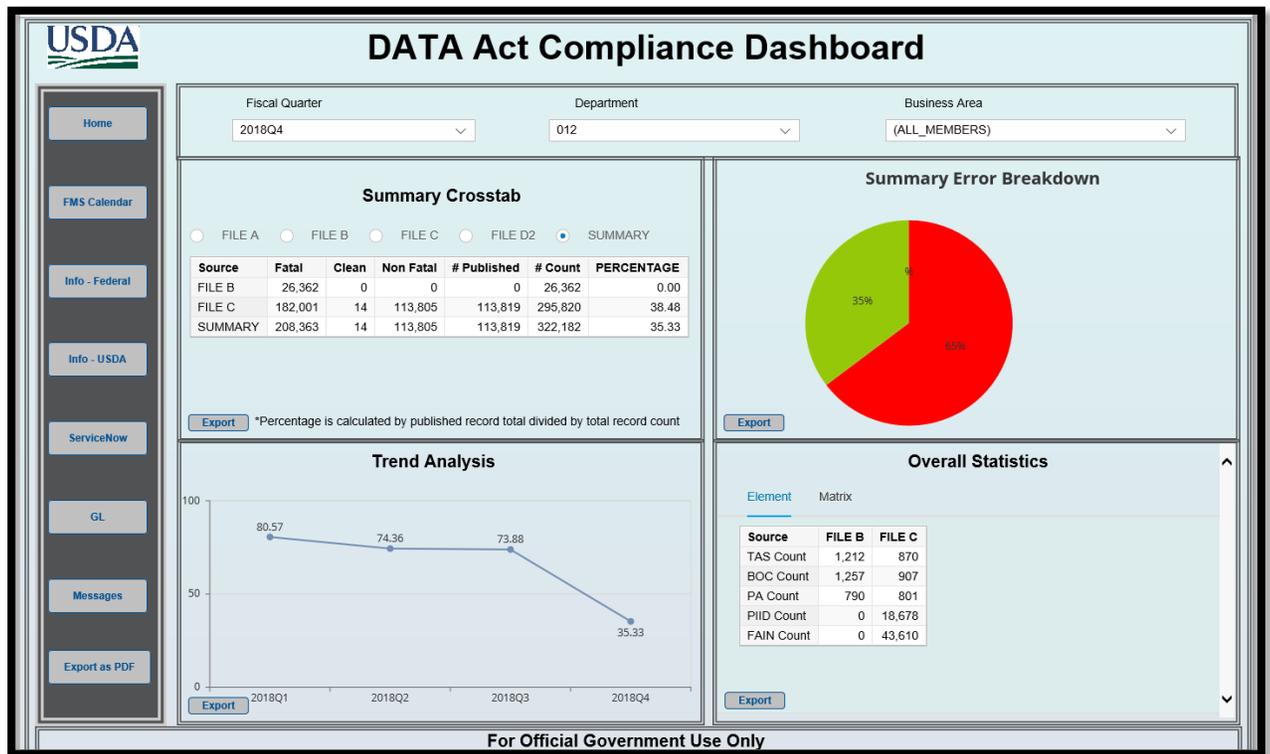


Figure 1: Dashboard

2. Dashboard Requirements

The dashboard is dependent on the successful completion of data collection, validation, and processing of error and certification files for Files A, B, C, and D2 in the USDA DATA Act Repository (SAP HANA) (Repository). Please refer to SOPs for Files A, B, C, and D2 for further details. As a result, any updates made in the source systems or flat file sources, will be reflected in the dashboard only when the data is refreshed in the repository per the DATA Act file processes. All metrics defined in the dashboard are built

on data contained in source tables that can be found in the [DATA Act Dashboard Technical Design Specifications document](#), found in Appendix A.

2.1 Performance

The dashboard runs on demand and the volume of data and the complexity of the query will determine its performance level. The dashboard was designed for optimal performance by pushing down the complex calculations to the database and the dashboard software handling only formatting and visualizations. This design conforms to dashboard best practices with minimal processing happening on the front-end application servers.

2.2 Menu Bar Data Sources

The Menu Bar is a vertical box that contains eight features. These include a “Home” reset button that reloads the dashboard to its default settings. The FMS Calendar contains a URL that brings the user to an FMS website that contains Financial Management Modernization Initiative (FMMI) processing schedule. Similarly, “Info-Federal”, “Info-USDA”, “ServiceNow”, and “General Ledger” contain links to other websites that contain relevant information. The Transparency and Accountability Reporting Division (TARD) team provides the content for each of the menu URL buttons and the FMS Business Intelligence (BI) team uploads the content to the dashboard.

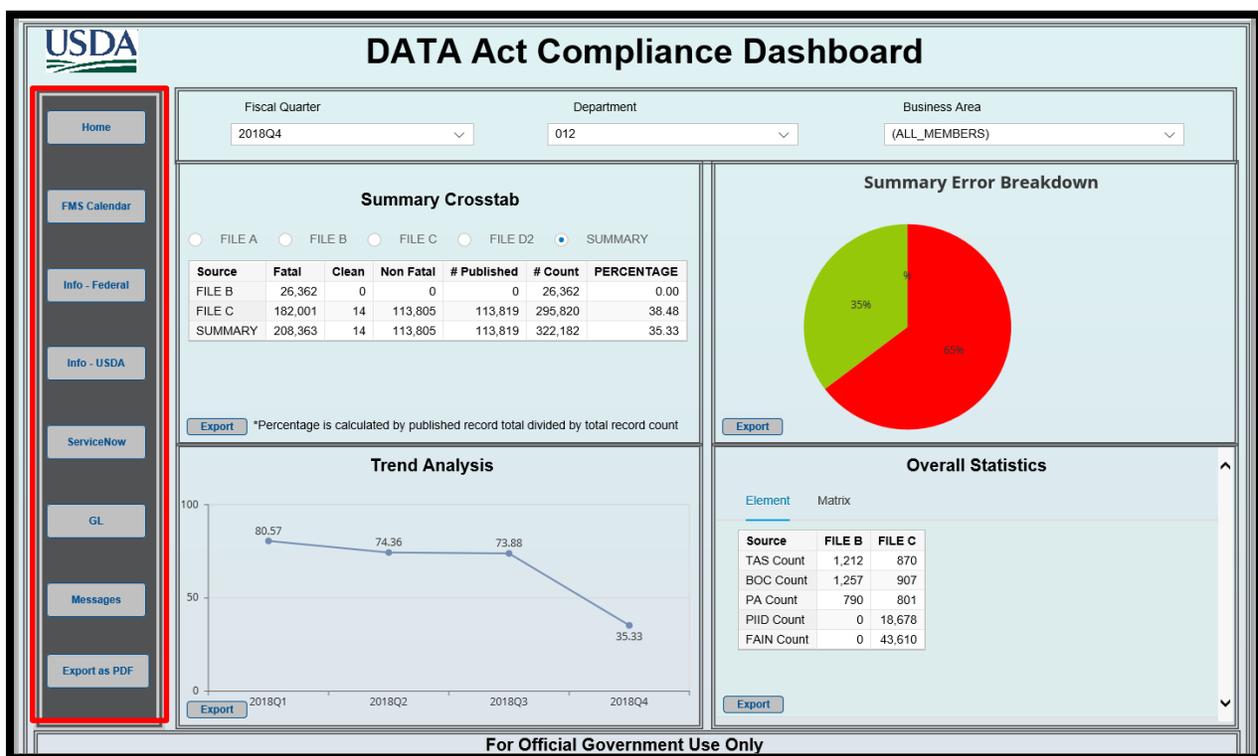


Figure 2: Menu Bar

3. Dashboard Process

Per the dashboard business requirements, all data that is displayed on the dashboard originates from the repository. The following provides a high-level description of the data process flow, beginning from the source financial systems and ending into the repository which is stored in FMFI BI/HANA system. The source of DATA Act data is:

- FMMI USDA Data – For agencies that reside in FMMI, the process extracts the data from SAP FMMI (ECC) and ezFedGrants (CRM)
- Non FMMI USDA Data – For agencies that do not reside in SAP FMMI and ezFedGrants, the data is sent by the agencies via flat files to the drop box
- Federal Shared Service Partner (FSSP) Data – This data is sent via flat file to USDA drop box
- Reference master data – This data is sourced from multiple sources, as defined by the Department of the Treasury (Treasury) and is used for data validation purpose. This also includes procurement data from the Federal Procurement Data System – Next Generation (FPDS-NG).

The data is extracted, cleaned, validated and stored in the repository. As part of data validation process, the rules defined in DATA Act Information Model Schema (DAIMS) along with other data cleansing rules are applied to the data. Any data field or combination of data fields that fails a validation rule is tagged with an error code. As a result, a record can contain one or more fatal or non-fatal errors. When a record contains one or more fatal errors it is not accepted by the Treasury Broker. The records that contain fatal error codes are stored in the repository until they are corrected by the agency, either by resubmission via flat file or by fixing the transactions in the source financial system (SAP FMMI, ezFedGrants). Once the fatal error is resolved, the record is included in the next Treasury submission. The repository provides data to produce Error and Certification reports.

- Error Reports: The error reports contain fatal and non-fatal errors which is used by the agencies to fix errors and resubmit corrected data where applicable
- Certification Reports: The Certification reports contains error free data and is used by the agencies and FSSP customers to certify the results before their data is submitted to the broker site

The dashboard contains metrics on fatal, non-fatal and clean record counts.

The repository supports the generation of the following DATA Act files:

- File A - Appropriation Account Detail: File A contains data such as Treasury Account Symbol (TAS) components, USSGL Accounts 4XXX – Budget Authority, Obligations and Outlays, Active and Expired Accounts and balances with SF-133 for the TAS. File A is reported quarterly.
- File B - Object Class Program Activity Detail: File B total must match the total of File A with TAS components, program activity, Object Class, Obligations and Outlays. File B is reported quarterly.
- File C - Award-level Financial Detail: File C contains data from reporting of obligations and disbursements related to financial assistance and procurement awards. The procurement awards are validated against FPDS-NG data. File C is reported to Treasury on a quarterly basis however, it may be processed on a monthly basis for internal tracking purposes. The dashboard reflects File C data in a quarterly view. Previous monthly data for the same quarter should be deleted.
- File D2 - Financial Assistance Award Detail: This contains data related to financial assistance awards and is reported twice per month to the Treasury Broker via Federal Assistance Broker Submission (FABS) portal.

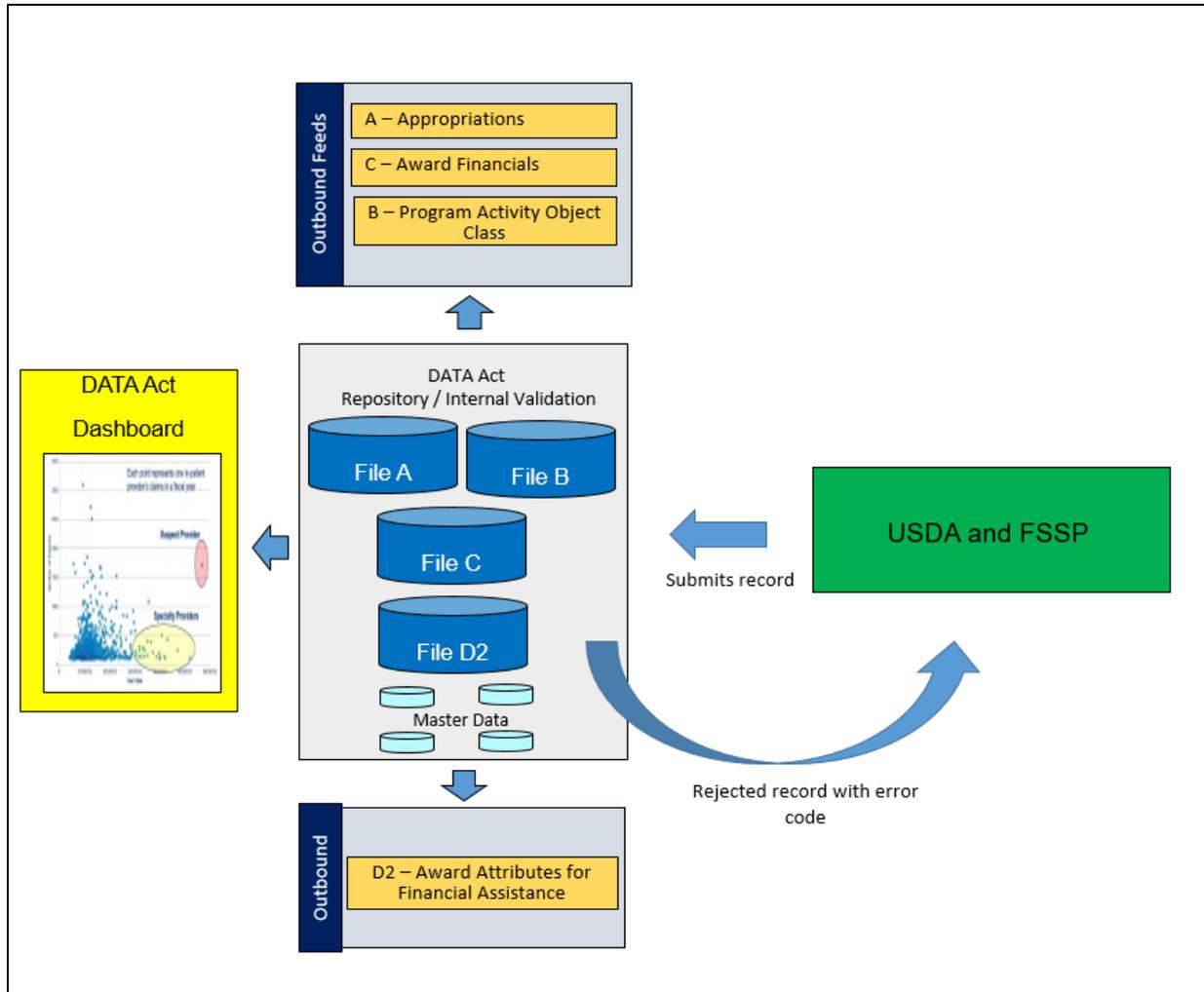


Figure 3: Dashboard Process Flow

3.1 Dashboard Jobs

Upon successful completion of data collection, validation, and processing of error and certification files for Files A, B, C, and D2 in the repository, the following jobs are executed manually by the FMS BI team after a period is refreshed in the repository:

1. Procedure DA_LOAD_FILEA_AGING: This stored procedure resides in HANA under the USDA schema and collects aging information for File A data. It takes three parameters: fiscal period, error code and error message. The procedure is stored in the database schema "USDA". The procedure is executed in HANA Studio and the execution syntax is called "USDA"."DA_LOAD_FILEA_AGING"('2018012', ?, ?); where the '?' represents the return code and the error message. Upon successful execution of this job the necessary tables will be updated with the aging information and the aging details will be available on the dashboard. If errors are found, troubleshooting will need to be completed based on the type of error.

*QE1 - SQL Console 6		
QE1 (F0005325) 10.55.56.20 00		
SQL	Result	Result
<code>call "USDA"."DA_LOAD_FILEA_AGING"('2018012', ?, ?)</code>		
	Out(1)	Out(2)
1	0	?

Figure 4: File A Job Procedure

2. Procedure DA_LOAD_FILEB_AGING: This stored procedure resides in HANA under the USDA schema and collects aging information for File B data. It takes three parameters fiscal period, error code and error message. The procedure is stored in database schema “USDA”. The procedure is executed in HANA Studio and the execution syntax is called "USDA"."DA_LOAD_FILEB_AGING"('2018012', ?, ?); where the symbol “?” represents the return code and the error message. Upon successful execution of this job the necessary tables will be updated with the aging information and the aging details will be available on the dashboard. If errors are found, troubleshooting will need to be completed based on the type of error.

*QE1 - SQL Console 6		
QE1 (F0005325) 10.55.56.20 00		
SQL	Result	Result
<code>call "USDA"."DA_LOAD_FILEB_AGING"('2018012', ?, ?)</code>		
	Out(1)	Out(2)
1	0	?

Figure 5: File B Job Procedure

3. Procedure DA_LOAD_FILEC_AGING: This stored procedure resides in HANA under the USDA schema and collects aging information for File C data. It takes three parameters fiscal period, error code and error message. The procedure is stored in database schema “USDA”. The procedure is executed in HANA Studio and the execution syntax is call "USDA"."DA_LOAD_FILEC_AGING"('2018012', ?, ?); where the symbol “?” represent the return code and the error message. Upon successful execution of this job the necessary tables will be updated with the aging information and the aging details will be available on the dashboard. If errors are found, troubleshooting will need to be completed based on the type of error.

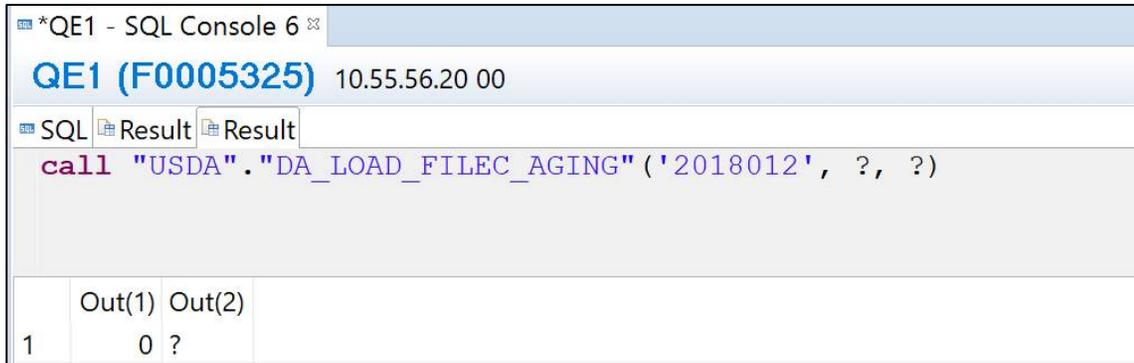


Figure 6: File C Job Procedure

- File D2 data is processed twice a month and after each extraction and load cycle the following procedure is executed DA_LOAD_FILED2_SNAPSHOT. This procedure stages D2 data in a HANA tables and collects information regarding errors, other key metrics like FAIN and ages the error data. This procedure is executed after each processing cycle. It takes three parameters (fiscal period, error code and error description). The procedure is stored in database schema "USDA". The procedure is executed in HANA Studio and the execution syntax is call "USDA"."DA_LOAD_FILED2_SNAPSHOT"('2018012', ?, ?); where the two "?" represent the return code and error message. Upon successful execution of this job the necessary tables will be updated with the aging information and the aging details will be available on the dashboard. If errors are found, troubleshooting will need to be completed based on the type of error.

Screenshot of File A Job Procedure

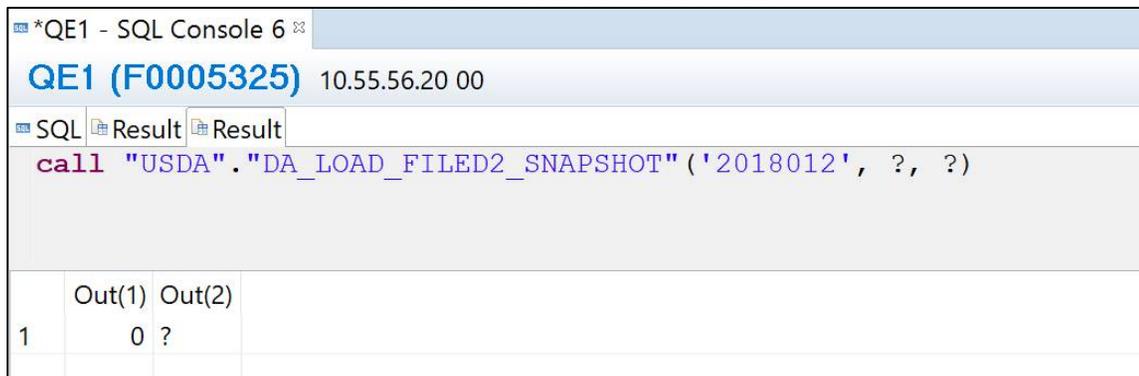


Figure 7: File D2 Job Procedure

3.2 Security

In order for a user to retain access to the dashboard, the user must first be a valid FMMI user and have access to the FMMI portal. On the FMMI portal, the dashboard is located under General Ledger -> HANA General Ledger tab. To access reports under this tab users should have access to FMMI General Ledger reporting.

- Data level security: The dashboard restricts data by Business Area. A user can have access to one or more business areas. A new security authority object (Z_BUSAREA) and roles are defined in ECC. Table 1 shows a sample list of roles defined in ECC.

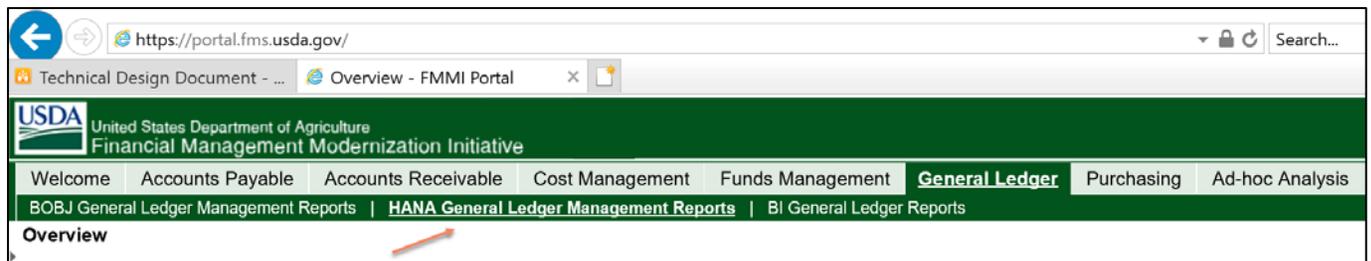
Table 1: ECC Roles

ROLE NAME	AUTHORIZATIONS
Z0000DDDDAD:ES_DATAACT_DASH	All Business Area Access
ZAM00DDDDAD:ES_DATAACT_DASH	For access to AMS agency
ZFS00DDDDAD:ES_DATAACT_DASH	For access to Forest Service Agency

The security role references the security authority object to restrict the data to one or more business areas. A custom Advanced Business Application Programming (ABAP) program translates the business area stored in the security role assigned to a user to a custom table (ZHANA_AUTH_USER). This table is used to apply a business area restriction in SAP Business Objects universe (DATA ACT Compliance.unx). This restriction will allow a user to see data for a business area for which they have access.

The solution leverages an existing HANA security model that is used for reporting. Currently this is based on Fund and Fund Center Security. Since these data elements do not exist in the repository, an attempt will be made to roll-up this information to a USDA Business Area level. This security will only apply where Business Area exists and where these Business Areas are maintained in SAP ECC for HANA reporting. In applying this data-level security, Business Area restrictions will apply for File B, File C, and File D2. File A has aggregated data by departments and all USDA business areas are aggregated into one business area value. Only users with access to all business areas, who then filter by the business area, "USDA" will be able to view File A data.

Figure 8: FMMI Authentication



Appendix A: Dashboard Guidance

Guidance	URL or File
Digital Accountability Digital Accountability and Transparency Act of 2014 (DATA Act)	https://www.gpo.gov/fdsys/pkg/PLAW-113publ101/pdf/PLAW-113publ101.pdf
DATA Act Documents and Resources web site	https://nfc.usda.gov/FSS/ClientServices/FMS/DATA_Act/index.php

Appendix B: Acronym List

ABAP: Advanced Business Application Programming

DAIMS: DATA Act Information Model Schema

DATA Act: Digital Accountability and Transparency Act of 2014

FABS: Financial Assistance Broker Submission

FFATA: Federal Funding Accountability and Transparency Act

FMMI: Financial Management Modernization Initiative

FMS: Financial Management Services

FPDS-NG: Federal Procurement Data System – Next Generation

FSSP: Federal Shared Service Provider

OCFO: Office of the Chief Financial Officer

Repository: USDA DATA Act Repository (SAP HANA)

SOP: Standard Operating Procedure

USDA: U.S. Department of Agriculture

TAS: Treasury Account Symbol

Treasury: U.S. Department of the Treasury