

UNITED STATES OFFICE OF PERSONNEL MANAGEMENT

Electronic Official Personnel Folder (eOPF) Interface Control Document

Employee Data Feed (EDF)



Change Page

Version	Date	Revision Description
1.0	6/15/2012	This document is one of three separate documents that replaced the Interface Control Document (ICD).
2.0	12/9/2016	This document replaces the Employee Data Feed ICD issued in June 2012. Updates that may require changes by the providers include: • Added Middle Name • Added Agency Sub-Agency – code must be assigned by OPM • Added Source Identifiers • Changed description of Email • Clarified description of Status • Changed POID field length to “4” characters – code must be assigned by OPM • Updated the Field Type to Mandatory for First-Name, Address1, City, and Zip • Updated the edit rules • Clarified supported format for Date • When sending large amounts of data, providers are directed to send multiple files sized at 100 MB or less each and increment the submission indicator in the filename • Added section on Data Quality and Its Impact • Added an XML Declaration requirement • Added description of DOLLAR Amount to Field Formats • Added a statement indicating providers must send a record containing all XML tags as specified even if the tag is null. • Added test responsibilities for agency representatives. • Added a statement indicating “The implementation of the EDF files and transmission of data to eOPF must occur within 45 – 60 days after testing is completed. If it does not, the PMO will not accept any transmissions until a review is completed.” • Updated the Description for Status • Removed references to EHRI and replaced with DWP • Clarified submission indicator format
2.1	1/31/2017	• Updated Field Type to Optional for Middle-Name • Updated the example for the File Name Format • Updated the definitions for the Status values
5.0.4	10/31/2017	• Updated eOPF PMO Contact List • Updated description of Agency Code • Updated description for sending empty files

Version	Date	Revision Description
5.1	8/21/2019	- Updated description and example for ORG-CODE. - Prioritized the order of the Name Segments in the File Name Format. - Added Data Provider Identifier for IBM. - Added data format for percentages. - Added NOTE that email addresses will be updated beginning with eOPF v5.2. - Updated description for ACTIVITY-CODE to indicate special characters cannot be used. - Updated description for AGENCY-SUBAGENCY to indicate Non-Title 5 and non-Federal organizations cannot use the Agency codes assigned to Title 5 organizations and vice versa. Each organization must have a unique code assigned by OPM based on the type of organization and group of individuals serviced by the organization. - Updated description for PO-ID to indicate Non-Title 5 and non-Federal organizations cannot use the POI codes assigned to Title 5 organizations and vice versa. Each organization must have a unique code assigned by OPM based on the type of organization and group of individuals serviced by the organization. - Clarified the need for agencies and data providers to notify DWP eOPF when software changes are made to data or the files submitted to OPM. - Clarified the need for agencies and data providers to test with OPM when software changes are made that affect data or the files submitted to OPM. - Clarified responsibilities for the Data Provider and agencies. - Added responsibilities for eOPF Operations and eOPF Production Support teams. - Added responsibilities for the EOD Providers.
5.2	11/05/2019	- Changed field size for Last Name, First Name and Middle Name to comply with OPM Data Standards and EHRI submissions. - Updated the Description for Last Name, First Name and Middle Name to comply with OPM guidance. - Changed field size for ORG-CODE to comply with the OPM Data Standards and EHRI submissions.
5.2	4/16/2020	Removed default value definition for ACTIVITY-CODE
5.2	12/12/2020	- Removed references to DWP and replaced with eOPF - Removed references to the eOPF Production Support team - Updated eOPF Points of Contact - Removed references to virtual folders other than Permanent, Temporary and Performance - Removed error message -118, All transaction types, eOPF API Environmental Error, Unable to add to Admin CPO ID, Unable to read or insert into SUPER_USER.
5.3	12/6/2021	Corrected file naming definition / example.
5.4	09/24/2025	- Updated references to Connect:Direct to SFTP - Updated POID max data length from 4 to 10
5.5	11/04/2025	- dated transfer protocol language from Connect Direct to SFTP - Updated Table 1. workflow diagram - Updated POID character length and data format XML standard - Updated ZIP code XML standard to mandatory
5.6	06/02/2026	- Updated Employee-ID to no longer request use of SSN in the event that the agency does not use a unique identifier for Employee-ID. - Updated file size limit to 350 MB each and increment the submission indicator in the filename

Contents

1.0	Overview.....	1
1.1	Purpose	1
1.2	Scope	1
1.3	eOPF Points of Contact.....	1
2.0	A Repository of Information.....	2
2.1	Electronic Official Personnel Folder (eOPF).....	2
2.2	Data Provider Interface with eOPF	2
3.0	Roles and Responsibilities	5
4.0	Getting Started	7
4.1	Transmission Protocol.....	7
4.2	Required Documentation.....	7
4.3	Testing and Transmission Schedules.....	7
4.4	Data Quality and its Impact	8
5.0	File Description and Format.....	9
5.1	XML – Supported File Format	9
5.2	XML Declaration Instruction Rules	10
5.3	File Name Format.....	10
5.4	Field or Data Format.....	11
5.5	Truncating and White Space	12
5.6	Record Structure for the File	12
6.0	Reconciliation	20
6.1	Data Accuracy, Completeness, and Correctness.....	20
6.2	Data Provider Transmissions	20
6.3	Reconciliation	20
6.4	Error Codes for EDF Service.....	21
7.0	Test Procedures	34
7.1	Objective and Goals	34
7.2	Scope	34
7.3	Roles and Responsibilities	35
	Appendix A. Testing.....	37
	Appendix B. Acronym List	45

List of Tables

Table 1. eOPF Contact List	1
Table 2. XML Entity Reference.....	9
Table 3. File Naming Convention for Employee Data Files.....	10
Table 4. Field Format	11
Table 5. XML Record Structure for Employee Data	12
Table 6. Edit Rules for Employee Data	18
Table 7. Error Codes for the EDF Service.....	22
Table 8. Test Procedure Roles and Responsibilities.....	35

List of Figures

Figure 1. EDF Ingestion Process.....	3
--------------------------------------	---

1.0 Overview

The electronic Official Personnel Folder (eOPF) solution supports a variety of methods to capture employee data and documents. This document addresses the Employee Data Feed (EDF) service which supports the creation and maintenance of employee eOPF accounts and information. This includes the establishment of the Official Personnel Folder (OPF) within the eOPF solution. The information is used to uniquely identify an individual and contains organizational, contact, and personal data. The data provided via the employee feed are used by eOPF users to search, manage security access, and contact an individual in an eOPF instance.

1.1 Purpose

This document focuses on the eOPF EDF service and the specifications a Data Provider must meet to deliver personnel data into the Office of Personnel Management's (OPM) eOPF solution. It addresses the entire delivery, testing, and reconciliation process. It defines the roles for the Host Provider, Agency and Data Provider to ensure accurate and complete ingestion of data into the eOPF system.

1.2 Scope

The intent of this document is to delineate transaction flow, file naming conventions, file formats, error handling, testing procedures and reconciliation processes needed to exchange data between the Data Provider's system and the OPM eOPF solution. This common framework—used by both the Data Provider and the eOPF Host Provider—ensures data are ingested and reconciled into the OPM eOPF solution.

1.3 eOPF Points of Contact

Please submit a helpdesk request at eopfhelpdesk@eopf.opm.gov

2.0 A Repository of Information

2.1 Electronic Official Personnel Folder (eOPF)

The eOPF is a comprehensive repository for employee and Human Resources (HR) data for the entire life cycle of a federal employee. On March 9, 2009, OPM's Division for Strategic Human Resources Policy (SHRP) formally approved the eOPF solution to house the Official Personnel Folder for federal employees. The eOPF solution contains the official record for an employee.

The purpose of the eOPF is to provide a consolidated image and data view to digitally document the employment actions and history of individuals employed by the federal government. The OPF maintained in eOPF is a digitally imaged version of an employee's paper personnel folder with documents housed on the virtual Permanent (right) and Temporary (left) sides of the eOPF. When the documents in the OPF are digitally imaged, it is critical to preserve the integrity of the signed record just as if it was the OPF filled with paper documents. The OPM Guide to Personnel Recordkeeping (GPR) provides guidance on the forms filed in an employee's OPF on the Permanent and Temporary sides. This guidance and other federal guidance govern the filing of documents in the eOPF system.

2.2 Data Provider Interface with eOPF

Agencies use either a provider that cross-services multiple agencies to provide electronic data to the eOPF system or they provide the data from their own agency system. The process for submitting data to eOPF requires the establishment of an interface between eOPF and the providers to routinely update employee records.

The process for transmitting data from the Data Provider to a Host Provider and staging the data feed files to be processed by the eOPF EDF service is shown in Figure 1.

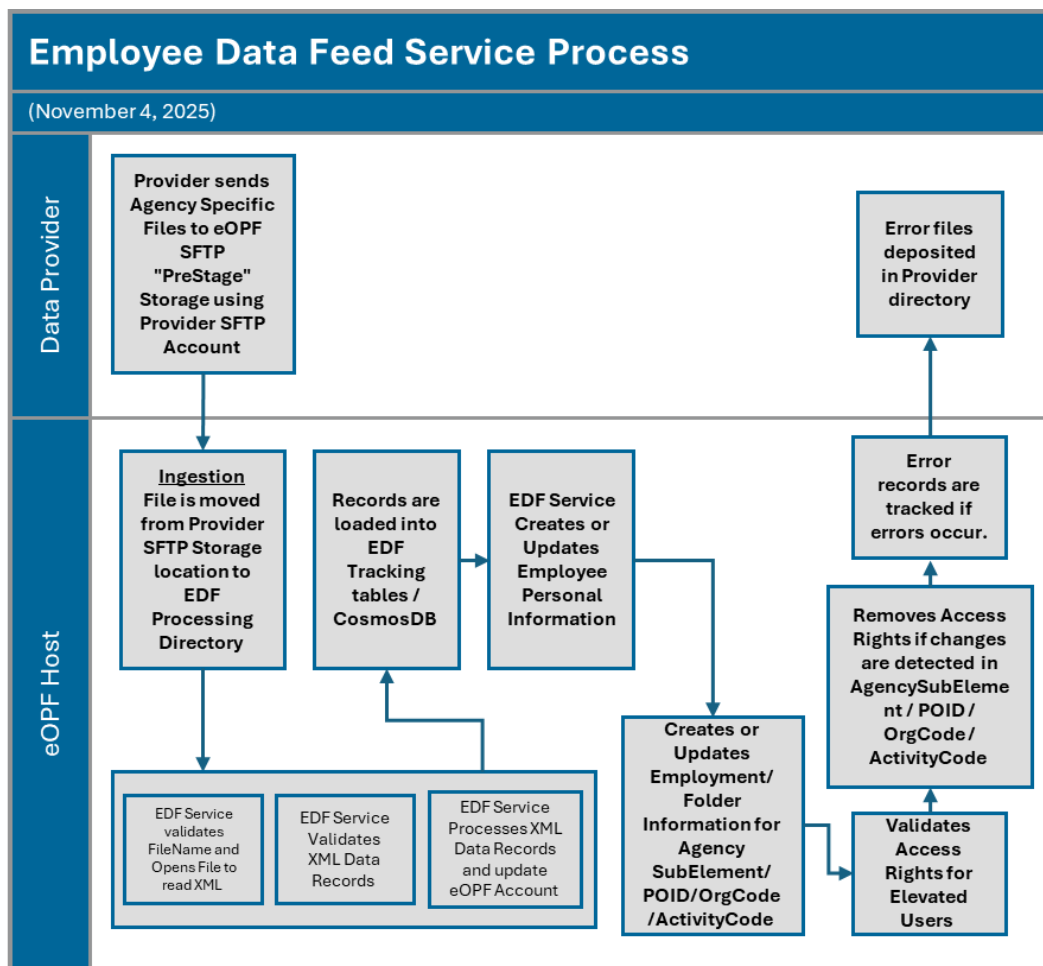


Figure 1. EDF Ingestion Process

The agency Data Provider sends an initial EDF to create all federal employee accounts. This EDF is sent from the Data Provider to the Host Provider. The process begins with receipt of a Data Provider-generated transaction file, i.e., EDF file, to create the OPF in an eOPF instance.

The EDF contains information to trigger the creation of a new employee record in an eOPF instance or update information in an existing federal employee record. After the account is established for a federal employee, the EDF updates:

- Employee organizational information
- Employee contact information (if elected by an agency)
- Employee status when separating from agency

When a Data Provider makes system changes that affect the EDF file and its contents for an agency, the Data Provider and agency must work with the eOPF Operations team to test the changes to ensure the EDF service is configured to process the new data and the file loads.

When an EDF file fails to process by the service, it remains in a staging location for review. When an error occurs, individual records that fail to load are captured, and the error file is written to the Provider's SFTP directory for their review.

3.0 Roles and Responsibilities

The eOPF PMO works with numerous organizations, both government and commercial, to maintain the eOPF application. Throughout this document, the following terms are used to identify the roles of the multiple organizations participating in the transmission of information to eOPF:

- **eOPF PMO** - Provides program management for the eOPF system.
- **eOPF Operations (Ops) team** – Provides technical oversight for the eOPF system including the interfaces with key HR data systems to routinely accept, process and post personnel data received through electronic data feeds.
- **Agency/Subagency** – Obtains approvals for the submission of forms/data; provides requirements to providers; tests, reviews and approves the results of the test file submissions; assures compliance by the provider and agency personnel with the OPM guidance; and focuses on the day-to-day administration of the eOPF functions and the delivery of service and support to their employees. The agency is responsible for the entry and accuracy of data contained on the documents or forms filed in the OPF and must work with the Data Provider to assure eOPF PMO is notified of all software changes that affect data and files submitted to OPM.
- **Data Provider** – Transmits agency information in Extensible Markup Language (XML) format, scanned PDF images, and form data to the eOPF Host Provider. The provider is responsible for:
 - The accuracy and completeness of the transmittal file
 - Ensuring the XML is correctly formatted with NO additional white space in the data element tags
 - Reconciling data
 - Working with the serviced agencies to assure the root causes of data errors are corrected
 - Coordinating with the serviced agencies notifications to eOPF PMO when making software or hardware changes that affect the data and files submitted to OPM

Different types of Data Providers include:

- **Conversion Vendor/Scan Provider** – A scan provider is either a contractor or a federal government agency who works with federal agencies at the direction of the eOPF PMO to manage the process of converting agency documents from paper to electronic format and incorporating the data and images into eOPF. It includes scanning and indexing paper OPFs from back file and day forward conversion to create ZIP files with PDFs.
- **Personnel/Payroll Provider** – This type of Data Provider supplies shared services in the area of payroll/personnel. These organizations transmit the data entered and created in their systems to eOPF. Examples of Personnel/Payroll Providers include the National Finance Center (NFC), Interior Business Center (IBC), the General Services Administration (GSA) and the Defense Manpower Data Center (DMDC).
- **Agency HR Provider** – Some agencies use a shared service payroll provider and process their own HR data. These organizations transmit the HR data entered and created in their systems to eOPF. One example is the Department of Health and Human Services maintains a personnel system and sends data to eOPF and to a payroll provider.

- **Employee Self Service Provider** – Provides self-service benefit elections in an automated system. Examples are Employee Express and the Employee Benefits Information System (EBIS).
- **Entry on Duty (EOD) Provider** – Provides EOD data for a specific agency or for multiple agencies. Example is USA Staffing.
- **Other Providers** – Provides documents for a specific agency or for multiple agencies. An example is one that provides Performance documents.

4.0 Getting Started

As indicated previously, this document focuses on the transmission of data elements necessary for the establishment and maintenance of an employee's OPF within the eOPF system.

4.1 Transmission Protocol

Data Providers use SFTP as the mechanism for transmitting data files to the eOPF Host Provider. All Data Providers are required to submit data in the format specified, to the eOPF hosting site using SFTP.

4.2 Required Documentation

Before data is transmitted, the agency, the Data Provider, and eOPF PMO completes required documentation. After discussing processing schedules and other criteria with the providers, the eOPF PMO instructs the provider to submit all or a combination of the following documents to ensure all parties comply with established conditions:

- **Memorandum of Understanding (MOU)** – A business-level agreement or contract between eOPF PMO and the agency. The MOU specifies the quality of data and requirements for adherence to eOPF standards and guidelines.
- **Interconnection Security Agreement (ISA)** – An agreement between two parties who plan to exchange data. The ISA specifies the technical and security requirements of the interconnection, and the MOU defines the responsibilities of the participating organizations.
- **Authority to Operate (ATO)** – A letter or memorandum from the agency's senior official indicating the successful completion of the Assessment and Authorization process, including a plan to continue to mitigate problems and sustain operations.
- **Test Plan** - The agency and Data Provider must provide an eOPF XML development test plan that meets the approval of eOPF PMO. The plan must include the processing schedule and steps for reconciliation and accuracy analysis with feedback for all the Data Provider's test data submissions.

4.3 Testing and Transmission Schedules

The agency and Data Provider coordinate the testing and transmission of data to eOPF with the eOPF Operations team. Prior to the initial transmission, they must provide the schedule for submitting:

- Test data to establish the initial file transmissions to eOPF
- Production data
- Test data for changes made to the files including the addition of forms or agencies

Each schedule must include the type of data transmitted, agency, start date, and frequency when the agency and its Data Provider plan to transmit data feeds.

The agency and Data Provider must notify eOPF Operations team and coordinate the testing and transmission of data to eOPF when software changes are made that affect the data or files submitted to OPM.

4.4 Data Quality and its Impact

Data is read and stored in eOPF as delivered, including any white space at the beginning or ending of a value. The provider is responsible for providing valid data and eliminating any initial or trailing unwanted characters/white space. Any mandatory/optional date field when populated must contain a real date. The use of 00/00/00 is not a valid date and results in a rejected/error record.

The agency is responsible for the accuracy of data and the Data Provider is responsible for accuracy and completeness of the transmittal file. Both the agency and the Data Provider must work together to ensure compliance with federal regulations and requirements. The Data Provider should validate the contents of the file before transmitting to eOPF. The agency should validate the contents of the folders after the file is processed.

Poor data quality can result in the failure to process a record at best and at worse gets processed, but results in the need to back out the transactions from the eOPF repository. When this occurs, the eOPF PMO works with the provider to determine the best course of corrective action, however, no actions are taken until the Data Provider notifies the customer agencies of the issue and the corrective steps to be taken. Depending on the complexity of the issue caused by improper/incomplete provider data, the eOPF PMO may assess additional charges to an agency to resolve the issues. **If a data provider transmits a data feed file that can only be partially processed, the data provider must be able to resubmit only the portion of the file that needs to be processed.**

5.0 File Description and Format

The EDF file contains the employee attributes associated to the employee records that must be created or updated in an agency's eOPF instance.

5.1 XML – Supported File Format

XML is the standard for the EDF service files. The eOPF EDF file is supported as a single large XML file containing multiple transactions. The XML file must follow the defined layouts.

Each file must comply with the following rules:

- The data feed file must be an ASCII formatted text file.
- The data feed file must be formatted according to the eOPF XML specification provided in this document.
- The data feed file validates successfully against the eOPF XML specification.
- The data feed file type delivered must match the file type setup of the agency's Employee Feed service. At this time, XML is the only acceptable option.
- When sending large amounts of data, providers are directed to send multiple files sized at less than 350 MB each and increment the submission indicator in the filename.
- The data feed file must be a well-formed XML document as defined in the W3C XML Specification 1.0 (Fifth Edition). The XML 1.0 Specification defines an XML document as a text file, which is well-formed; i.e., it satisfies a list of syntax rules provided in the specification. Some key points are:
 - Use character set encoded "ENCODING=ISO-8859-1"
 - XML predefines the following five entity references for special characters that would otherwise be interpreted as part of markup language:

Table 2. XML Entity Reference

Character Name	Entity Reference	Character Reference
Amperсанд	&	&
Left angle bracket	<	<
Right angle bracket	>	>
Straight quotation mark	"	"
Apostrophe	'	'

- The Character References stated above must be substituted with the Entity References accordingly
- The element tags are CamelCase with underscores
- The beginning and end tags must match exactly and the XML must be correctly formatted with NO additional white space in the data element tags
- There is a single "root" element that contains all the other elements
- The file must be an American Standard Code for Information Interchange (ASCII) formatted text file

5.2 XML Declaration Instruction Rules

Providers must include XML declaration instructions in each XML file submission. The XML declaration is a processing instruction that identifies the document as being XML. All XML documents must begin with an XML declaration.

- Declaration must be situated at the first position of the first line in the XML document
- Declaration must contain the version number attribute
- XML declaration must be placed in the order shown below
- The XML declaration must be in lower case (except for the encoding declarations)

eOPF Declaration Requirement:

```
<?xml version="1.0" encoding="ISO-8859-1" standalone="yes" ?>
```

5.3 File Name Format

The file name conforms to the following naming convention. This file name specification is used to identify the purpose of the file and the agency it represents in the transmission, staging, and processing of the employee feed data file.

Convention:

FILETYPE PROVIDERNAME FORMAT YYYYMMDD AGENCY NN.SUFFIX

Example: MIN00EMPLX20190822NN0000.XML

Description: IBC (IN00) as a provider submitted first XML EDF file on AUGUST 22, 2019, containing data for the NASA (NN00).

Each portion of the file name is explained in the following table. Each transmission must include each portion of the file name.

Table 3. File Naming Convention for Employee Data Files

Name Segment	Convention Abbr.	Description	Example or Note
File Type	FILE	Indicates when a file contains more than one record.	For the EDF, file type is a constant value of 'M'.
Data Provider Identifier	PROVIDER	The OPM assigned code for the submitting provider. Contact eOPF PMO when a value is missing from the list.	National Finance Center = AG90 Interior Business Center = IN00 U. S. Department of Energy = DN00 Bonneville Power Administration = DN03 General Services Administration = GS00 U. S. Department of Health and Human Services = HE00 U. S. Courts = JL02 U. S. Department of Veterans Affairs = VA00 Defense Civilian Personnel Advisory Service = DD75 Smithsonian Institution Trust = SI00 IBM = 99IB

Name Segment	Convention Abbr.	Description	Example or Note
Name of Data File	TYPE	The employee data file type.	For the EDF, name of data file is a constant value of EMPL .
File Format	FORMAT	The format of the file.	X for XML files
Century	YYYY	For file "as of" date, indicates century (19 to 20) and year (01 to 99)	2016 = Year
Month	MM	For file "as of" date, indicates month (01 to 12)	02 = Month of February
Day	DD	For file "as of" date, indicates day (01 to 31)	22 = Day 22
Agency Code	AAAA	The agency code followed by 00 for the agency collecting the data.	Assigned by eOPF PMO based on the first two-digits of the Agency/Subagency codes in the Guide to Personnel Data Standards.
Submission Indicator	NN	The first submission for each "as of" date is a numeric zero value When multiple files are submitted for the same "as of" date, the value of N increases by 1	00, 01, 02
.SUFFIX	.SUFFIX	Use the file suffix .XML for XML format files. Mixed case is acceptable. The suffix used by the provider must match the configured service setup for the agency employee feed.	.XML, .xml

5.4 Field or Data Format

The following table lists the various data formats, descriptions and examples for fields transmitted to eOPF.

Table 4. Field Format

Data Format	Description	Example or Note
CHARACTER	One or more alphanumeric and special characters, not including the vertical bar character (' ') that represents a field value.	000456789 125 Main St., S.W. Y OM00
NUMBER	One or more numeric characters that represents a number.	0 180
DECIMAL	One or more numeric characters with up to "n" positions to the right of the decimal point. The decimal point appears in the field value when needed. A decimal point is neither required nor implied, e.g., 400 represents 400 not 4.00.	Format of Decimal(9,2): 0 1500 1234567.89 1234.0 0.75
DATE	Values that contain a precise calendar date. Slashes are required. Format is MM/DD/YYYY.	02/22/2016 Any field with a Date format must contain a valid date. 99/99/9999 and 00/00/0000 are not valid dates.

Data Format	Description	Example or Note
DOLLAR AMOUNT	One or more numeric characters with a \$ sign that represent a monetary value. The \$ sign is optional and the data displays as sent.	\$200.00 200.00
PERCENTAGE	One or more numeric characters with a % sign. The inclusion of the % sign is based on the form. When the % sign is included on the form, do not send it. When the % sign is not included on the form, send it. The data displays as sent.	25% 25

5.5 Truncating and White Space

The Data Provider must truncate any data that exceeds the maximum field size, as specified in this document, before transmitting the data to the Host Provider for ingestion into an eOPF instance. The provider must truncate any beginning or trailing white space on a value contained in an XML element. When a value is processed by eOPF, it reads the value as provided including the white space in the XML element.

5.6 Record Structure for the File

Providers must send a record containing all XML tags as specified in this ICD. The order of the XML elements/tags does not matter; however, all elements/tags must be included with either a value or null.

The following table presents the structure for the EDF files. The transactions are separated by the record tag. The XML record tags are defined below.

The field type indicates if data in a field is mandatory or optional. A mandatory field indicates data must be sent to eOPF. An optional field indicates data may be submitted. An optional field may become mandatory when another related field is populated. For example, when the agency elects to automatically generate Login ID for new employees within eOPF, the Login information is required.

Table 5. XML Record Structure for Employee Data

XML Tag Name	Data Length	Field Type	Description	Data Format	Example or Note
EMPDATA		M	Identifier for the EDF Batch. Mandatory tag that indicates the start and end of an EDF consists of 2 mandatory attributes.	N/A	Complete EMP DATA parent tag: <code><EMPDATA AGENCY="ZZ00" RECORD-COUNT="000002"></code>
	4	M	Identifier for EDF Batch. The mandatory attribute AGENCY="XXXX" is assigned by OPM and used to identify an agency.	Character	AGENCY="ZZ00"
	6	M	Identifier for EDF Batch. The mandatory attribute RECORD-COUNT="XXXXXX" identifies the total number of records contained in the transaction file.	Numeric	000002

XML Tag Name	Data Length	Field Type	Description	Data Format	Example or Note
EMPLOYEE	6	M	Identifier for EDF. Record consisting of a mandatory tag that indicates the start and end of an Employee Record in a Data Feed. The attribute RECORD="XXXXXX" is used to uniquely identify a record in the Data Feed.	Character	000001
LAST-NAME	35	M	Last Name of employee including any Suffix. Do not use abbreviations when entering "no last name" on a personnel document. Name on all forms submitted via FDF and IDF should match the name on the EDF and the employee's PIV or CAC card. Follow guidance provided in the GPPA.	Character	No Last Name Smith Jr
FIRST-NAME	35	M	First Name of employee. Do not use abbreviations when entering "no first name" on a personnel document. Name on all forms submitted via FDF and IDF should match the name on the EDF and the employee's PIV or CAC card. Follow guidance provided in the GPPA.	Character	No First Name
MIDDLE-NAME	35	O	Middle Name of employee. Follow OPM guidance.	Character	Joe
LOGIN	20	O	Login Identifier. A unique user name that either eOPF or the agency associates with a user (eOPF Login Id).	Character	JohnSmith
SSN	11	M	Social Security Number. Format is 000-00-0000.	Character	000-00-0001
EMPLOYEE-ID	20	O	Employee Id. A unique user number that either eOPF or the agency assigns to an employee to identify employee records. Leave this field blank if your agency does not use a unique identifier for Employee-ID.	Character	E123456
PO-ID	10	M	Personnel Office Identifier. A numeric code assigned to each agency by OPM. An agency has at least one PO ID but may have multiple PO IDs assigned to it. NOTE: Non-Title 5 and non-Federal organizations cannot use the POI codes assigned to Title 5 organizations and vice versa.	Character	4002

XML Tag Name	Data Length	Field Type	Description	Data Format	Example or Note
AGENCY-SUBAGENCY	4	M	Agency/Sub-agency. An alpha and/or numeric code assigned by OPM. The agency and, where applicable, the administrative subdivision (i.e., sub-element) in which a person is employed. The first and second positions of the code indicate the agency. The third and fourth positions indicate the administrative subdivision. If no sub-element or sub-agency is assigned to an agency the third and fourth positions are zeros (xx00). For a listing of assigned codes and explanations, see The Guide to Data Standards. Contact eOPF PMO when a value is missing from the list. NOTE: Non-Title 5 and non-Federal organizations cannot use the Agency codes assigned to Title 5 organizations and vice versa. Each organization must have a unique code.	Character	DJ06
ORG-CODE	22	M	Organizational Code. The lowest administrative subdivision of an agency to which an employee is assigned. Name and location shown in "To" position on the last SF 50 processed for the employee. The first four characters of each code are the OPM assigned AGENCY/SUBELEMENT code identified in the OPM Data Standards.	Character	DJ063401000000 Cannot use special characters. NOTE: The ORG CODE in the EDF must match the ORG CODE in the FDF and the ORG CODE in EHRI submissions.
ACTIVITY-CODE	15	M	Activity Code. A code assigned by an agency to the organizational component in which the employee works.	Character	0 Cannot use special characters.
SUPERUSER	1	M	Super User Indicator. Identifies the employee as an eOPF Super User. Value is either 'Y' for YES or any other value considered NO.	Character	N
SUPERVISOR	1	M	Supervisor Indicator. Identifies the employee as an eOPF Supervisor User. Value either 'Y' for YES or any other value considered NO.	Character	N
ADDRESS1	50	M	Address Line 1. Employee's mailing address. PO Box or first line of street address. Use USPS abbreviations.	Character	123 Main St
ADDRESS2	50	O	Address Line 2. Employee's mailing address. Second line of street address. Use USPS abbreviations.	Character	Apt 1

XML Tag Name	Data Length	Field Type	Description	Data Format	Example or Note
CITY	50	M	City. Employee's mailing address. Use USPS abbreviations.	Character	Hometown
STATE	50	M	State. Employee's mailing address. Use USPS abbreviations.	Character	TX
ZIP	10	M	ZIP Code. Employee's mailing address.	Character	99999-9999
COUNTRY	50	O	Country. Required for an international address and is the full Country Name in UPPERCASE. See the list of country codes in the OPM Guide to Data Standards. When the Country is not needed, the field is NULL. Contact eOPF PMO when a value is missing from the list.	Character	EGYPT
PHONE	50	O	Home or work phone number. Employee contact number. Agency determines number to use.	Character	(555) 555-5555
STATUS	25	M	Status of the employee within an organization. Valid values are: - Active – all employees with a current appointment – Title 5 employees with NOA 1XX or 5XX and non-Title 5 employees with equivalent appointments - Retired – Title 5 employees with NOAs 300, 301, 302, 303, 304, 307, 308 and non-Title 5 employees with equivalent separation codes - Terminated – Title 5 employees with 3XX NOAs not designated as Retired and non-Title 5 employees with equivalent separation codes - Inactive – Designation used by providers who do not distinguish separated employees as those who are Retired or Terminated Any other value assigned by the provider is treated as 'Active' by the eOPF EDF service and the employee is considered 'Active' in eOPF.	Character	Active The employee status of 'Active' is one employee attribute considered when determining if an eOPF user account is included in an agency's eOPF License count. If the employee status is 'Active', the employee is included in the count unless other filters that are also used in determining inclusion in the count result in excluding the user account. For example, an OPM Investigator account is 'Active' but excluded. If the employee status on an eOPF user account is 'Retired', 'Terminated' or 'Inactive' the employee is not included in the agency's eOPF License count.
STATUS-DATE	10	O	The Status Date. Required for any non-active Status value. For the "Active" status the Status-Date value is always NULL. Format is MM/DD/YYYY.	Date	02/22/2016 Currently, this value is used as the initial effective date on the employee folder when created. If no date is provided and employee is active, the default is current date. 00/00/0000 and 99/99/9999 are not valid dates.

XML Tag Name	Data Length	Field Type	Description	Data Format	Example or Note
BIRTH-DATE	10	M	Birth Date of the employee. Format is MM/DD/YYYY.	Date	01/27/1948 00/00/0000 and 99/99/9999 are not valid dates.
EMAIL	255	M	Work email address of eOPF User. The official government assigned email address of the employee.	Character	john.doe@agency.gov The email must be a valid email format.
SOURCE-IDENTIFIERS	14	M	Source System Identifiers (SSI). Codes are assigned by the eOPF PMO. Consists of the following three identifiers: • Data Source Identifier (DSI) - The DSI refers to the Agency that collected the information. The DSI is the Agency/Sub-agency code that is assigned by OPM to the agency that is collecting the information. • Data System Source Identifier (DSSI) -- The DSSI refers to the name of the system that collected the information. Valid values are assigned by the PMO. • File Source Identifier (FSI) -- The FSI refers to the agency/provider/vendor that submits the file to OPM or other federal organization. Valid values are assigned by the PMO.	Character	DJ06AG90AG90

5.6.1 SAMPLE XML FOR EMPLOYEE DATA FILE

The following is an example XML EDF file layout, containing two actions. Each action begins and ends with the named element `<EMPLOYEE RECORD>`.

```
<?xml version="1.0" encoding="ISO-8859-1" standalone="yes" ?>
<EMPDATA AGENCY="OM00" RECORD-COUNT="000002">
  <EMPLOYEE RECORD="000001">
    <LAST-NAME>Smith</LAST-NAME>
    <FIRST-NAME>John</FIRST-NAME>
    <MIDDLE-NAME>Joe</MIDDLE-NAME>
    <LOGIN>John J. Smith</LOGIN>
    <SSN>000-00-0001</SSN>
    <EMPLOYEE-ID>John J. Smith</EMPLOYEE-ID>
    <PO-ID>4002</PO-ID>
    <AGENCY-SUBAGENCY>AG01</AGENCY-SUBAGENCY>
    <ORG-CODE>DJ0612000000000000</ORG-CODE>
    <ACTIVITY-CODE>12345</ACTIVITY-CODE>
    <SUPERUSER>N</SUPERUSER>
    <SUPERVISOR>N</SUPERVISOR>
    <ADDRESS1>123 Majestic Ln</ADDRESS1>
    <ADDRESS2>Apt 123</ADDRESS2>
    <CITY>Hometown</CITY>
    <STATE>VA</STATE>
    <ZIP>99999-9999</ZIP>
    <COUNTRY/>
    <PHONE>(555) 555-5555</PHONE>
    <STATUS>ACTIVE</STATUS>
    <STATUS-DATE/>
    <BIRTH-DATE>02/22/1950</BIRTH-DATE>
    <EMAIL>john.smith@agency.gov</EMAIL>
    <SOURCE-IDENTIFIERS>DJ06AG90AG90</SOURCE-IDENTIFIERS>
  </EMPLOYEE>
  <EMPLOYEE RECORD="000002">
    <LAST-NAME>Smith</LAST-NAME>
    <FIRST-NAME>Jane</FIRST-NAME>
    <MIDDLE-NAME>Joe</MIDDLE-NAME>
    <LOGIN>Jane J. Smith</LOGIN>
    <SSN>000-00-0002</SSN>
    <EMPLOYEE-ID>Jane J. Smith</EMPLOYEE-ID>
    <PO-ID>4002</PO-ID>
    <AGENCY-SUBAGENCY>AG01</AGENCY-SUBAGENCY>
    <ORG-CODE>DJ0612000000000000</ORG-CODE>
    <ACTIVITY-CODE>1</ACTIVITY-CODE>
    <SUPERUSER>N</SUPERUSER>
    <SUPERVISOR>N</SUPERVISOR>
    <ADDRESS1>123 Majestic LN</ADDRESS1>
    <ADDRESS2>Apt 123</ADDRESS2>
    <CITY>Hometown</CITY>
    <STATE>VA</STATE>
    <ZIP>99999-9999</ZIP>
    <COUNTRY/>
    <PHONE>(555) 555-5555</PHONE>
    <STATUS>INACTIVE</STATUS>
    <STATUS-DATE>01/01/2015</STATUS-DATE>
    <BIRTH-DATE>10/22/1953</BIRTH-DATE>
    <EMAIL>jane.smith@agency.gov</EMAIL>
    <SOURCE-IDENTIFIERS>DJ06AG90AG90</SOURCE-IDENTIFIERS>
  </EMPLOYEE>
</EMPDATA>
```

5.6.2 EDIT RULES EMPLOYEE DATA

Table 6. Edit Rules for Employee Data

The following validations are performed on employee data transmitted to eOPF.

Field Name	Edit Rule	Action Taken If Edit Rule Fails
Last Name	Does value exist?	Error Log entry = 'Last Name is NULL' and record is skipped.
	Does provided value exceed max length?	Error Log entry = 'Last Name is greater than max length' and record is skipped.
First Name	Does value exist?	Error Log entry = 'First Name is NULL' and record is skipped.
	Does provided value exceed max length?	Error Log entry = 'First Name is greater than max length' and record is skipped.
Middle Name	Does provided value exceed max length?	Error Log entry = 'Middle Name is greater than max length' and record is skipped.
Login ID	Is value unique in eOPF agency instance?	Assign new.
	Does Value Exist if configured to be agency provided?	Error Log entry = 'Login ID is NULL' and record is skipped.
	Does provided value exceed max length?	Error Log entry = 'Login ID is greater than max length' and record is skipped.
Social Security Number	Does SSN exist in eOPF?	Create Folder for SSN that is valid.
	Is SSN formatted as: ###-##-####?	Skip record for invalid SSN.
Employee ID	Does provided value exceed max length?	Error Log entry = 'Employee ID is greater than max length' and record is skipped.
POID	Does value exist?	Error Log entry = 'PO ID is NULL' and record is skipped.
Agency Subagency	Does value exist?	Error Log entry = 'Agency Subagency is NULL' and record is skipped.
	Does provided value match the values in The Guide to Data Standards?	Error Log entry = 'Agency Subagency does not match' and record is skipped.
	Does provided value exceed max length?	Error Log entry = 'Agency Subagency is greater than max length' and record is skipped.
Org Code	Does value exist?	Error Log entry = 'Org Code is NULL' and record is skipped.
	Does provided value exceed max length?	Error Log entry = 'Org Code is greater than max length' and record is skipped.
Activity Code	Does value exist?	Error Log entry = 'Activity Code is NULL' and record is skipped.
	Does provided value exceed max length?	Error Log entry = 'Activity Code is greater than max length' and record is skipped.
	Does provided value contain special characters?	Error Log entry = 'Activity Code is invalid' and record is skipped

Super User Indicator	Does value exist?	Error Log entry = 'SuperUser Indicator is NULL' and record is skipped.
	Y or YES or Yes N or No or NO	Any other value is considered a NO.
Supervisor	Does value exist?	Error Log entry = 'Supervisor Indicator is NULL' and record is skipped.
	Y or YES or Yes N or No or NO	Any other value is considered a NO.
Address1	None	N/A
Address2	None	N/A
City	Does value exist?	Error Log entry = 'City is NULL' and record is skipped.
State	Does value exist?	Error Log entry = 'City is NULL' and record is skipped.
ZIP	None	N/A
COUNTRY	XML File only. Upper Case	See list of valid countries in the OPM Guide to Data Standards. Invalid country value causes program to skip the record.
Phone #	None	N/A
Status	Is the Status one of the following values: Active, Inactive, Retired, or Terminated?	Any other value is treated as Active.
Status Date	Is the date in a valid date MM/DD/YYYY format?	Record is skipped when date is not a valid date or status is Active.
	Is the status non-Active? If yes, is a valid date present?	If the status is non-Active the Employment is end-dated.
Birth Date	Does value exist?	Error Log entry = 'Birth Date is NULL' and record is skipped.
	A valid date in MM/DD/YYYY format is required for employee birth date	Record is skipped when date is not a valid date.
Email	None at this time	N/A
Source Identifiers	Does value exist?	Error Log entry = 'Source Identifiers is NULL' and record is skipped.
	Does provided value match the values in the Source Identifier (SSI) table?	Error Log entry = 'SSI does not match' and record is skipped.

6.0 Reconciliation

6.1 Data Accuracy, Completeness, and Correctness

The integrity of data transmitted into eOPF, including the accuracy, completeness, and correctness of the data, is the responsibility of the Data Provider, not the Host Provider and eOPF solution, as defined below:

- Accuracy = Data matches Source System Values
- Completeness = Data contains all characters found in the source system that can be accepted in eOPF
- Correctness = Data values are appropriate for the record being sent

When any error results in a file partially processing, the data provider must be able to resubmit only the portion of the file that needs to be processed.

6.2 Data Provider Transmissions

Data providers send EDF files based on an agreed upon frequency. When there is no data to report, the provider may elect to either not send a file, or send a file indicating that there is no data to be sent. This would look as follow:

```
<?xml version="1.0" encoding="ISO-8859-1" standalone="yes" ?><EMPDATA RECORD-COUNT="000000"
Agency="AgencyCode">

</EMPDATA>
```

This indicates the file intentionally contains no employee records.

6.3 Reconciliation

The Data Provider must track and maintain a record of all EDF files sent to the Host Provider so reconciliation can be accomplished at any time. The retention of all data feed files transmitted to eOPF is critical to the reconciliation process when needed. The record count value submitted in the feed is intended to validate that the number of records submitted matches the number of records processed.

6.3.1 STEPS FOR HANDLING ERROR RECORDS

The eOPF EDF service loads the employee file into the agency's process tables. Any errors encountered are stored in the **EmployeeLoadDetails** table for a given agency. The eOPF Operations team verifies daily that employee feed files process and have not failed due to an environmental error within the processing environment. In addition, agencies review/spot check and verify documents loaded to folders after the EDF files process to locate issues as quickly as possible. The earlier an issue is located the easier it is to correct. The agency notifies the eOPF Help Desk when it is determined there is missing information. When an error occurs, it is researched and reported to the appropriate party which may be Data Provider, Agency and/or Host Provider for correction and/or resubmission. Only records in error should be retransmitted.

The eOPF EDF service processes the Data Provider's corrected data feed file submission until all agency waiting files are completed.

6.3.2 TRANSMISSION/ENVIRONMENT ERRORS

Events that occur outside the control of the EDF service may cause an error. Typical environmental errors occur when the agency eOPF instance is unavailable, connectivity is lost during transmission, or the data feed files to be loaded are inaccessible. For example, an EDF file may fail delivery because of an issue with SFTP. This is

considered an environmental error. When these conditions occur, the eOPF Operations team contacts the Data Provider point of contact (as needed) to remediate the situation. The Data Provider and eOPF Operations team determine the appropriate resolution, which may include retransmission with increased monitoring to ensure successful transmission, staging and ingestion by the agency's EDF service.

6.4 Error Codes for EDF Service

When an EDF file is processed by the eOPF EDF service, the data feed file goes through a series of validations. There are two general validation levels: non-conforming XML and field level validation. A non-conforming XML data feed file level error(s) is severe and results in no processing of records from the XML-based EDF file into the eOPF instance. When the file level validation is successful, each record contained in the data feed file is processed. Records that pass the field level validations are ingested into the eOPF instance. Records that do not pass field level validation are stored in the EDF process record table and/or written to a log file.

The following Table 7. lists the error codes generated by the eOPF EDF service, shows the data feed file format that produces the error (e.g., environment) and provides a possible resolution to the error.

Table 7. Error Codes for the EDF Service

*** Denotes error logged in Employee Service error process table with no Error Code value**

Error Code	Transaction Type	Description	eOPF Error Condition (as it appears in the code)	Resolution
		ENVIRONMENTAL ERROR CODES		

Error Code	Transaction Type	Description	eOPF Error Condition (as it appears in the code)	Resolution
*	All transaction types	Database error written to the error log file. Environmental error.... An agency, a data provider, or the eOPF Operations team identifies that a data feed file did not load.	Employee Data Feed Exception Occurred...ORA-28000: the account is locked.	The eOPF Operations team researches. The eOPF Operations team works with the data provider to determine the appropriate resolution, which may include retransmission with increased monitoring to ensure successful transmission, staging and ingestion by the agency's EDF service.

Error Code	Transaction Type	Description	eOPF Error Condition (as it appears in the code)	Resolution
*	All transaction types	Environmental error written to the service log table. Environmental error.... An agency, a data provider or the eOPF Operations team identifies that a data feed file did not load.	Could not find a part of the path.	The eOPF Operations team researches. The eOPF Operations team works with the data provider to determine the appropriate resolution, which may include retransmission with increased monitoring to ensure successful transmission, staging and ingestion by the agency's EDF service.

Error Code	Transaction Type	Description	eOPF Error Condition (as it appears in the code)	Resolution
*	All transaction types	This is the error when no connection could be established with DB. Environmental error.... An agency, a data provider, or the eOPF Operations team identifies that a data feed file did not load.	Employee Data Feed Exception Occurred...EOPF.EmployeeData.Process	The eOPF Operations team researches. The eOPF Operations team works with the data provider to determine the appropriate resolution, which may include retransmission with increased monitoring to ensure successful transmission, staging and ingestion by the agency's EDF service.
*	All transaction types	Error occurs when the xml for the configuration tool is not configured correctly. Environmental error.... An agency, a data provider or the eOPF Operations team identifies that a data feed file did not load.	Failed to load configuration: TNS protocol adapter error.	The eOPF Operations team researches. The eOPF Operations team works with the data provider to determine the appropriate resolution, which may include retransmission with increased monitoring to ensure successful transmission, staging and ingestion by the agency's EDF service.

Error Code	Transaction Type	Description	eOPF Error Condition (as it appears in the code)	Resolution
-108	All transaction types	eOPF API Error Environmental error.... An agency, a data provider or the eOPF Operations team identifies that a data feed file did not load.	Failed to create employee. Unable to check if the eOPF User ID already allocated.	The eOPF Operations team verifies the LoginID format. The eOPF Operations team works with the data provider to determine the appropriate resolution, which may include retransmission with increased monitoring to ensure successful transmission, staging and ingestion by the agency's EDF service.
-109	All transaction types	eOPF API Error Environmental error.... An agency, a data provider, or the eOPF Operations team identifies that a data feed file did not load.	Failed to create employee. Unable to check if account exists. Unable to read from EOPF_USER_INFO and USER_INFO.	The eOPF Operations team checks to determine if unique constraints and primary key constraints exist on the Ui_id and ui_user columns. The eOPF Operations team works with the data provider to determine the appropriate resolution, which may include retransmission with increased monitoring to ensure successful transmission, staging and ingestion by the agency's EDF service.
-110	All transaction types	eOPF API Error Environmental error.... An agency, a data provider or the eOPF Operations team identifies that a data feed file did not load.	Failed to create employee. Unable to insert into EOPF_USER_INFO.	The eOPF Operations team checks to determine if unique constraints and primary key constraints exist on the Ui_id and ui_user columns and verifies the sequence that generates the ui_id nextval. The eOPF Operations team works with the Data Provider to determine the appropriate resolution, which may include retransmission with increased monitoring to ensure successful transmission, staging and ingestion by the agency's EDF service.
-111	All transaction types	eOPF API Error Environmental error.... An agency, a data provider or the eOPF Operations team identifies that a data feed file did not load.	Failed to create employee. Unable to insert into USER_INFO.	The eOPF Operations team checks to determine if unique constraints and primary key constraints exist on the Ui_id and ui_user columns and verifies the sequence that generates the ui_id nextval. The eOPF Operations team works with the Data Provider to determine the appropriate resolution, which may include retransmission with increased monitoring to ensure successful transmission, staging and ingestion by the agency's EDF service.

Error Code	Transaction Type	Description	eOPF Error Condition (as it appears in the code)	Resolution
-112	All transaction types	eOPF API Error Environmental error.... An agency, a data provider, or the eOPF Operations team identifies that a data feed file did not load.	Failed to create employee. Unable to check Super User status from EOPF_USER_INFO.	The eOPF Operations team verifies USER_INFO and EOPF_USER_INFO tables have the expected data structure. The eOPF Operations team works with the data provider determine the appropriate resolution, which may include retransmission with increased monitoring to ensure successful transmission, staging and ingestion by the agency's EDF service.
-113	All transaction types	eOPF API Error Environmental error.... An agency, a data provider or the eOPF Operations team identifies that a data feed file did not load.	Failed to create employee. Unable to insert into USER_GROUP.	The eOPF Operations team determines if the USER_GROUP table has duplicate data. The eOPF Operations team works with the data provider to determine the appropriate resolution, which may include retransmission with increased monitoring to ensure successful transmission, staging and ingestion by the agency's EDF service.
-114	All transaction types	eOPF API Error Environmental error.... An agency, a data provider or the eOPF Operations team identifies that a data feed file did not load.	Failed to create employee. Could not find entry 'EOPF HRO' in INI_CONFIG_SETTINGS.	The eOPF Operations team verifies 'EOPF HRO' exists in the initialization and ini_config_settings table. The eOPF Operations team works with the data provider to determine the appropriate resolution, which may include retransmission with increased monitoring to ensure successful transmission, staging and ingestion by the agency's EDF service.
-115	All transaction types	eOPF API Error Environmental error.... An agency, a data provider or the eOPF Operations team identifies that a data feed file did not load.	Failed to create employee. Unable to add user to HR Admin group. Unable to insert into USER_GROUP.	The eOPF Operations team determines if the USER_GROUP table has duplicate data. The eOPF Operations team works with the data provider to determine the appropriate resolution, which may include retransmission with increased monitoring to ensure successful transmission, staging and ingestion by the agency's EDF service.

Error Code	Transaction Type	Description	eOPF Error Condition (as it appears in the code)	Resolution
-116	All transaction types	eOPF API Error Environmental error.... An agency, a data provider or the eOPF Operations team identifies that a data feed file did not load.	Failed to create employee. Unable to create Workflow node. Unable to insert into NODE.	The eOPF Operations team verifies the Node table exists with the expected data structure. The eOPF Operations team works with the data provider to determine the appropriate resolution, which may include retransmission with increased monitoring to ensure successful transmission, staging and ingestion by the agency's EDF service.
-117	All transaction types	eOPF API Error Environmental error.... An agency, a data provider or the eOPF Operations team identifies that a data feed file did not load.	Failed to create employee. Unable to add to Super Users. Unable to insert into SUPER_USER.	The eOPF Operations team verifies the EOPF_SUPER_USER table exists with the expected data structure. The eOPF Operations team works with the data provider to determine the appropriate resolution, which may include retransmission with increased monitoring to ensure successful transmission, staging and ingestion by the agency's EDF service.
-119	All transaction types	eOPF API Error Environmental error.... An agency, a data provider or the eOPF Operations team identifies that a data feed file did not load.	Failed to create employee. Unable to insert into EOPF_ORGANIZATION.	The eOPF Operations team verifies EOPF_Organization table exists with the expected data structure and checks to ensure all expected constraints are in place. The eOPF Operations team works with the data provider to determine the appropriate resolution, which may include retransmission with increased monitoring to ensure successful transmission, staging and ingestion by the agency's EDF service.
		EMPLOYEE RECORD ERROR CODES		
*	All transaction types	Country - Country associated with employee's foreign address. Mandatory field if foreign address. If not a foreign address, the field value must be Null.	Unable to Validate Country	Verify the country code exists in the country code table and the value is in UPPER CASE. When data is incorrect or missing in the provider system, the agency corrects the data in the provider system. When data in file is incorrect due to technical issues, the data provider corrects the errors. The data provider retransmits the record.

Error Code	Transaction Type	Description	eOPF Error Condition (as it appears in the code)	Resolution
*	All transaction types	Country - Country associated with employee's foreign address. Mandatory field if foreign address. If not a foreign address, the field value must be Null.	Country Does Not Exist	Verify the country code exists in the country code table and the value is in UPPER CASE. When data in incorrect or missing in the provider system, the agency corrects the data in the provider system. When data in file is incorrect due to technical issues, the data provider corrects the errors. The data provider retransmits the record.
*	All transaction types	BirthDate - Birth Date of Employee. Mandatory field. The field must contain a valid date value in the mm/dd/yyyy format.	Birth Date is Null	When data in incorrect or missing in the provider system, the agency corrects the data in the provider system. When data in file is incorrect due to technical issues, the data provider corrects the errors. The data provider retransmits the record.
*	All transaction types	Supervisor - Identifies the employee as an eOPF Supervisor User. Mandatory field. Default to 'N' when not used by the agency.	Supervisor Indicator. The valid value of 'Y' denotes YES. Any other value is considered NO.	When data in incorrect or missing in the provider system, the agency corrects the data in the provider system. When data in file is incorrect due to technical issues, the data provider corrects the errors. The data provider retransmits the record.
*	All transaction types	SuperUser - Identifies the employee as an eOPF Super User. Mandatory field. Default to 'N' when not used by the agency.	SuperUser Indicator is Null. The valid value of 'Y' denotes YES. Any other value is equal to NO.	When data in incorrect or missing in the provider system, the agency corrects the data in the provider system. When data in file is incorrect due to technical issues, the data provider corrects the errors. The data provider retransmits the record.
*	All transaction types	Activity Code - Agency code of the activity to which the employee is assigned, Mandatory field. Default to '1' when not used by the agency. Cannot exceed 15 characters. Cannot use special characters.	Activity Code is greater than max length	When data in incorrect or missing in the provider system, the agency corrects the data in the provider system. When data in file is incorrect due to technical issues, the data provider corrects the errors. The data provider retransmits the record.

Error Code	Transaction Type	Description	eOPF Error Condition (as it appears in the code)	Resolution
*	All transaction types	Activity Code - Agency code of the activity to which the employee is assigned, Mandatory field. Default to '1' when not used by the agency. Cannot exceed 15 characters. Cannot use special characters.	Activity Code is Null	When data is incorrect or missing in the provider system, the agency corrects the data in the provider system. When data in file is incorrect due to technical issues, the data provider corrects the errors. The data provider retransmits the record.
*	All transaction types	Organizational Code - Agency organizational code of the component to which the employee is assigned. Mandatory field. Cannot be Null. Cannot exceed 50 characters. Cannot use special characters.	Org Code is greater than max length	When data is incorrect or missing in the provider system, the agency corrects the data in the provider system. When data in file is incorrect due to technical issues, the data provider corrects the errors. The data provider retransmits the record.
*	All transaction types	Organizational Code - Agency organizational code of the component to which the employee is assigned. Mandatory field. Cannot be null. Cannot use special characters.	Org Code is Null	When data is incorrect or missing in the provider system, the agency corrects the data in the provider system. When data in file is incorrect due to technical issues, the data provider corrects the errors. The data provider retransmits the record.
*	All transaction types	PO-ID - Personnel Office Identifier. Agency HR servicing office. Mandatory field. Cannot exceed four characters. Must match agency assigned codes in OPM data standards.	PO ID is greater than max length	When data is incorrect or missing in the provider system, the agency corrects the data in the provider system. When data in file is incorrect due to technical issues, the data provider corrects the errors. The data provider retransmits the record.
*	All transaction types	PO-ID - Personnel Office Identifier. Agency HR servicing office. Mandatory field. Cannot exceed four characters. Must match agency assigned codes in OPM data standards.	PO ID is Null.	When data is incorrect or missing in the provider system, the agency corrects the data in the provider system. When data in file is incorrect due to technical issues, the data provider corrects the errors. The data provider retransmits the record.
*	All transaction types	Login Id – eOPF User Account Login Id value. Cannot exceed 20 characters.	Login Id is greater than max length.	The data provider retransmits the record with a shorter Login Id.

Error Code	Transaction Type	Description	eOPF Error Condition (as it appears in the code)	Resolution
*	All transaction types	Login Id – eOPF User Account Login Id value. When the EDF service is configured to expect Login Id in the EDF file, this error occurs when the Login Id is missing from the provided record.	Login Id value does not exist.	The data provider retransmits the record with a Login Id.
*	All transaction types	Login Id – eOPF User Account Login Id value.	Login Id is not unique to eOPF instance.	Check for Login Id uniqueness in eOPF agency instance. If not unique then create a new Login Id for user and update record in the EDF file.
*	All transaction types	Employee ID – An agency provided employee identifier.	Employee Id is greater than max length.	Cannot exceed 20 characters. Leave this field blank if your agency does not use a unique identifier for Employee-ID.
*	All transaction types	SSN - Social Security Number of the employee record.	Unable to Validate SSN.	Check if SSN is formatted as: ###-##-####. Mandatory field.
*	All transaction types	Last Name – Last name of the employee.	Last Name is greater than max length.	Cannot exceed 40 characters. Mandatory field.
*	All transaction types	First Name – First name of the employee.	First Name is greater than max length.	Cannot exceed 40 characters. Mandatory field.
*	All transaction types	Last Name – Last name of the employee.	Last Name is Null.	Cannot be Null. Mandatory field.
*	All transaction types	Middle Name – Middle name of the employee.	Middle Name is greater than max length.	Cannot exceed 35 characters.
*	All transaction types	Agency SubAgency – Agency Subagency of the employee.	Agency Subagency is greater than max length.	Cannot exceed 4 characters. Mandatory Field.
*	All transaction types	Agency SubAgency – Agency Subagency of the employee.	Agency Subagency not found in the lookup table.	Agency/SubAgency must be valid in the lookup table
*	All transaction types	Source Identifiers – Identifies Data Source/Provider of the employee.	Source Identifiers is Null	Cannot be Null. Mandatory field.
*	All transaction types	Source Identifiers – Identifies Data Source/Provider of the employee.	Source Identifiers is greater than max length	Cannot exceed 14 characters. Mandatory Field.
*	All transaction types	POID and Agency SubAgency – POID and Agency Subagency of the employee.	POID and Agency-SubAgency combination not found in the lookup table.	POID and Agency/SubAgency must be a valid combination in the lookup table
-101	All transaction types	eOPF API Error	Failed to create employee. No SSN."	Ensure record has a properly formatted SSN value. Format is: ###-##-####.

Error Code	Transaction Type	Description	eOPF Error Condition (as it appears in the code)	Resolution
-102	All transaction types	eOPF API Error	Failed to create employee. No First Name.	Cannot be Null. Mandatory field.
-103	All transaction types	eOPF API Error	Failed to create employee. No Last Name.	Cannot be Null. Mandatory field.
-104	All transaction types	eOPF API Error	Failed to create employee. No Login ID.	Login ID must be supplied if the "Generate Login ID" option is not enabled.
-105	All transaction types	eOPF API Error	Failed to create employee. No Activity Code.	Default to '1' if not used by Agency. Mandatory field.
-106	All transaction types	eOPF API Error	Failed to create employee. No CPO ID.	Agency dependent. Cannot be Null. Cannot use special characters. Mandatory field. Default to '1' if not used by Agency.
-107	All transaction types	eOPF API Error	Failed to create employee. No Organizational Code.	Agency dependent. Cannot be Null. Cannot use special characters. Mandatory field. Default to '1' if not used by Agency.

7.0 Test Procedures

This section describes the eOPF EDF service functional test procedures and their use. The test procedures provide detailed instruction for the execution of test cases. The test cases are created to test Data Provider employee files prior to any production ingestion of data. These tests are completed within a test environment prior to the Data Provider's transmission being processed in a production environment. The testing process validates the connectivity between Data Provider and Host Provider, educates responsible parties of the activities involved for a successful employee feed, and verifies all steps of the ingestion process work smoothly.

After an agency provider establishes a file which is tested and in production, the provider cannot deviate from the configured and tested format. When a provider changes the file or the contents of the file for an agency, the provider must work with the eOPF Operations team to test the changes to ensure the service is configured to process the new/updated feed and loads.

Appendix A of this document provides a variety of test scenarios that must be completed to ensure the Data Provider is producing EDF files that load into eOPF and prove the provider can resolve error conditions.

7.1 Objective and Goals

The objective of testing is to ensure the successful processing of a Data Provider's employee file by the eOPF EDF service and to ensure the Data Provider can reconcile the employee files being sent. The Data Provider must comply with the eOPF PMO's specifications for the eOPF EDF service employee files.

These are the goals for the test process:

- Communications between the agency, Data Provider and Host Provider are working
- All environmental configuration settings are correct
- Agency has established processes for validating data after the EDF files process
- Data Provider can generate XML file formats
- Data Provider understands errors can occur and must be resolved with the assistance of the serviced agencies
- Data Provider understands the required formatting for data feeds
- Data Provider can support reconciliation of employee files
- Data Provider sends complete files and they comply with the ICD guidance so that data is not missing or truncated erroneously
- Agency validation and approval of test results

7.2 Scope

The agency and Data Provider develop a test plan for review and approval by the eOPF PMO for all applicable employee feed files that need to comply with the specifications in this document.

Deliverables include:

- Agency and Data Provider's eOPF development test plan

- Agency and Data Provider's test data submissions
- Agency test results summary that includes test scenarios and test results
- Test environment with valid test accounts

7.3 Roles and Responsibilities

The roles and responsibilities are detailed here.

Table 8. Test Procedure Roles and Responsibilities

Role	Responsibilities
eOPF PMO	• Review and approve Data Provider's test plan • Direct Host Provider to create the necessary file agent scripts for purposes of testing • Provide troubleshooting to resolve issues • Provide management oversight of testing process • Establish the test date(s) with the Data Provider and Host Provider • Ensure appropriate agency personnel (e.g., HR specialists) have sufficient training and access to testing facility to participate in validation steps of the testing procedure • Provide Test Environment – All environmental settings are correctly configured. • Assist with the testing criteria • Coordinate receiving the test data with the Data Provider • Provide feedback and analyze results during test runs
Agency	• Submit approved test plan to eOPF PMO • Assure security and reliability of the Data Provider's electronic approval process is equivalent to or greater than a wet signature • Assure Data Provider is only submitting forms under his/her purview: e.g., an EOD provider can only submit EOD forms; payroll/personnel provider can only submit documents in the database of record, only employee self-service systems transmit/load employee created records, etc. • Validate agency specific requirements or custom specifications • Validate the eOPF accounts are updated accurately - Does the data in eOPF match the data in the file transmitted by the Data Provider? Does the data match the OPM guidance? • Approve test results
Data Provider	• Provide SFTP connectivity which requires a license and must be configured, tested and verified by the Data Provider, agency and OPM • Only submit data under his/her purview. For instance, an EOD provider can only submit EOD forms; a payroll/personnel provider can only submit documents in the database of record, etc. • Review every file for accuracy and completeness of the transmittal file • Assure files delivered to the correct instance/directory • Reconcile files to assure the data loaded into an agency's eOPF instance matches the sent data • Assure delivery of a data feed file and content that matches the specifications found in the ICDs • Demonstrate ability to correct a corrupt data feed file • Demonstrate ability to retrieve the confirmation and error receipts, analyze the data and take appropriate action to resolve any errors or issues for each submitted file • Deliver complete builds of test data feed files that meet test criteria • Document test results and obtain agency approval of results

Appendix A. Testing

A.1 Test Design

The agency and the Data Provider work with eOPF PMO to test the data feed file transmission to the Host Provider's environment and ensure it is delivered to the correct agency's staging directory. The test data feed file(s) are validated against the eOPF EDF service in the Host Provider's test environment. Some of the feed files must contain errors that are used to validate the Data Providers ability to handle an error condition. This testing is an opportunity for the agency, Data Provider, Host Provider, and eOPF PMO to become familiar with the EDF service processes.

A.2 Test Plan

The agency works with the Data Provider to develop a test plan and submits the test plan to the eOPF PMO. Each data feed is unique to a Data Provider and is used for reconciliation by the agency to assure the data loaded into an agency's eOPF instance matches the data that was sent. The test plan must include the following:

- Overview
 - Agency and Data Provider Information
 - Transmission Overview
 - Proposed Schedule for Test Transmissions to eOPF
 - Type of Data
 - Frequency of Transmissions
- Test Items
 - Test Rounds
 - What To Test
 - What Not To Test
- Test Strategy/Approach
 - Types of Testing
 - Test Techniques
 - Test Environment Pass/Fail Criteria
 - Stress Testing
 - Any special tests based on custom agency requirements
- Validation Criteria and Process
- Resolution of Defects, Variances, and Incidents

A.3 Test Data

Test data submitted during this effort consists of EDF files in correct file formats.

Prerequisite:

- All tests either create or update test employees in the agency's eOPF test instance
- Test data must be agreed upon by all parties involved in the testing
- Some data feed files contain errors and others contain no errors and update the employee data

- Test files must be created and submitted using the information in this guidance which includes following the XML format defined in this document
- Agencies must have a means to validate the data in the test files matches the data in the test database after the files process

A.4 Test Rounds

The test rounds are described in the following table. Each round must be completed.

Round #	Test Description	Scenarios
1	Demonstrates Data Provider can construct a valid employee data file in XML format	Create, process and ingest file
2	Demonstrates Data Provider can update the employee's status and can send modifications to existing employee accounts	1. Send record with a change in the address, personnel office identifier, and organization code 2. Send record with a change in the status, street address, last name 3. Send record with a change in the email address
3	Demonstrates Data Provider is able to correct previously sent invalid data	1. Send record with a country code in lower case 2. Send record with a country code that is not in the table 3. Send record with a null value in the Birth Date field 4. Send record with a null value in the Supervisor field 5. Send record with a null value in the SuperUser field 6. Send record with a null value in the Activity Code field 7. Send record with a value that exceeds 15 characters in the Activity Code field 8. Send record with a null value in the Organizational Code field 9. Send record with a value that exceeds 50 characters in the Organizational Code field 10. Send record with a special character value in the Organizational Code field 11. Send record with a null value in the POID field 12. Send record with a value that exceeds 9 characters in the POID field 13. Send record with a null value in the Login ID field – disable "Generate Login ID" configuration setting 14. Send record with a value that exceeds 20 characters in the Login Id field 15. Send record with a value that exceeds 20 characters in the Employee ID field 16. Send record with a null value in the SSN field 17. Send record with a null value in the Last Name field 18. Send record with a value that exceeds 40 characters in the first name field 19. Send record with a null value in the Middle Name field
4	Test Agency Custom Specifications	

A.4.1 ROUND 1

A.4.1.1 Scenario

- The test data provider creates one EDF file containing at least four employee records
- The data provider transmits the employee file
- The EDF service ingests the four records into the eOPF test instance
- The agency validates the four employee accounts and folders

- If any step fails, the problem is reviewed, solved and data is rolled back for another attempt
- The employee file is resent until complete ingestion is successful and the employee accounts are viewable by the agency

A.4.1.2 Data

This initial test round is conducted using error-free data.

A.4.1.3 Expected Results

- The employee file uses the correct file naming convention and conforming file structure.
- The file contains values that match the employee feed service configuration settings. For example, if the service is configured to auto-generate the eOPF User Account Login ID then the records should not contain a Login ID value.
- SFTP software connection works between the data provider and the Host Provider.
- The Host Provider can route the file to the agency's EDF service for processing.
- The employee accounts and folders are established and can be viewed in the agency's test environment by the agency representative.
- The agency can confirm data in the file/established eOPF matches the data in the provider's database.

A.4.2 ROUND 2

A.4.2.1 Scenario

- The test data provider creates EDF files using the provided test accounts with changes to the fields listed in Table 6.
- The data provider transmits the employee file.
- The EDF service ingests the records into the eOPF test instance.
- The agency validates the employee accounts and folders.
- The test data provider creates various EDF files using the provided test accounts with a change in the "Service Setting" options agreed to by the agency and data provider and configured in the agency's Employee Feed service. Files should include a change in:
 - Login ID
 - Employee status -- include at least one employee with an "Inactive" employee status and another employee with a "Retired" employee status; both must have valid status dates
 - SuperUser flag for an existing employee
 - Supervisor flag for an existing employee
- The data provider transmits the employee file.
- The EDF service ingests the records into the eOPF test instance.
- The agency validates the employee accounts and folders.
- The test data provider creates an EDF file using the provided test accounts. The file contains the data appropriate for testing the "Employee Email Address Setting" options on the EDF configuration screens.

- Employee file with populated email addresses to test “Do Not Update Email Address” OR
 - Employee file with populated email addresses to test “Update Email Address” OR
 - Employee file with some populated email addresses and some Null email addresses to test “Update Email Address if Feed Value is Not Null”
- The data provider transmits the employee file.
- The EDF service ingests the records into the eOPF test instance.
- The Agency validates the employee accounts and folders.
- If any step fails, the problem is reviewed, solved and only the failed records are resent.
- The employee file is resent until complete ingestion is successful and the changes are viewable.

A.4.2.2 Data

This test round is conducted using error free data except for the testing of the email address configurations and changes. The test accounts are supplied by the eOPF Operations team and must exist in the eOPF test instance.

A.4.2.3 Expected Results

- The employee file uses the correct file naming convention and conforming file structure.
- The file contains values that match the employee feed service configuration settings. For example, if the service is configured to auto-generate the eOPF User Account Login ID then the records should not contain a Login Id value.
- The files are properly staged (using SFTP File Agent Scripts) and ingested by the eOPF EDF service into the eOPF test instance.
- The agency can confirm:
 - The EDF service successfully ingests all records into the eOPF test instance.
 - The Employee Accounts for retired and inactive employees are set to “Inactive” after one day.
 - The SuperUser flag is changed.
 - The Supervisor flag is changed.
 - Email addresses are/are not updated as appropriate.

A.4.3 ROUND 3

A.4.3.1 Scenario

- The test data provider creates EDF files containing test data that rejects based on the edit rules. One employee record per edit rule.

Error submissions include:

Send record with a valid country code in lower case.	Only upper case values are accepted.
Send record with a country code value not in the table.	Only values in the Country Code table are allowed.
Send record with a null value in the Birth Date field.	Birth Date is a mandatory field.
Send record with a null value in the Supervisor field.	Supervisor is a mandatory field.
Send record with a null value in the SuperUser field.	SuperUser is a mandatory field.
Send record with a null value in the Activity Code field.	Mandatory field.
Send record with a value that exceeds 15 characters in the Activity Code field.	Cannot exceed 15 characters. Mandatory field.

Send record with a valid country code in lower case.	Only upper case values are accepted.
Send record with a null value in the Organizational Code field.	Cannot be null. Mandatory field.
Send record with a value that exceeds 50 characters in the Organizational Code field.	Cannot exceed 50 characters. Mandatory field
Send record with a special character value in the Organizational Code field.	The XML file will not process into the error record tables. Cannot use special characters. Mandatory field.
Send record with a null value in the PO ID field.	Cannot be null. Mandatory field
Send record with a value that exceeds 4 characters in the PO ID field.	Cannot exceed 4 characters. Mandatory field
Send record with a null value in the Login ID field. Disable "Generate Login ID" configuration setting.	Disable "Generate Login ID" configuration setting.
Send record with a value that exceeds 20 characters in the Login Id field.	Disable "Generate Login ID" configuration setting to test this scenario if agency is having provider send the Login Id. Cannot exceed 20 characters.
Send record with a value that exceeds 20 characters in the Employee ID field.	Cannot exceed 20 characters
Send record with a null value in the SSN field.	Must be numeric. Mandatory field
Send record with a null value in the Last Name field.	Cannot be null.
Send record with a null value in the First Name field.	Cannot be null.
Send record with a value that exceeds 40 characters in the Last Name field.	Cannot exceed 40 characters.
Send record with a value that exceeds 40 characters in the First Name field.	Cannot exceed 40 characters.
Send record with a value that exceeds 35 characters in the Middle Name field.	Cannot exceed 35 characters.
Send record with a value that exceeds 4 characters in the Agency SubAgency field.	Cannot exceed 4 characters.
Send record with a value that exceeds 4 characters in the Source Identifiers field.	Cannot exceed 14 characters.
Send record with a null value in the Middle Name field.	Cannot be null. Mandatory field
Send record with a null value in the Agency-SubAgency field.	Cannot be null. Mandatory field
Send record with a null value in the Source-Identifiers field.	Cannot be null. Mandatory field

- The Data Provider transmits the employee file.
- The EDF service ingests the records into the eOPF test instance.
- The eOPF Operations team provides the data provider and agency with information on the rejected records.
- The Data Provider and agency review the errors.
- The Data Provider creates a new employee data feed file containing only the rejected records that were corrected.
- The Data Provider transmits the employee file.
- The EDF service ingests the records into the eOPF test instance.

- This process is repeated until all edit rules are tested, complete ingestion is successful and the employee accounts are viewable by the agency.

A.4.3.2 Data

This initial test round is conducted using data containing errors. This round must be coordinated with the eOPF Operations team so the generated errors can be communicated to the data provider and agency for modifications and resubmission.

A.4.3.3 Expected Results

- The employee file uses the correct file naming convention and conforming file structure.
- The file contains values that match the employee feed service configuration settings. For example, if the service is configured to auto-generate the eOPF User Account Login ID then the records should not contain a Login Id value.
- The Data Provider corrects the erroneous data.
- The agency validates the data is corrected in the agency test environment.

A.4.4 ROUND 4

A.4.4.1 Scenario

- The test data provider creates EDF files containing data that meets the agency specific requirements.
- The Data Provider transmits the employee file.
- The EDF service ingests the four records into the eOPF test instance.
- The agency validates the four employee accounts and folders.
- If any step fails, the problem is reviewed, solved and data is rolled back for another attempt.
- The employee file is resent until complete ingestion is successful.

A.4.4.2 Data

This initial test round is conducted using error-free data.

A.4.4.3 Expected Results

- The employee file uses the correct file naming convention and conforming file structure.
- The file contains values that match the employee feed service configuration settings. For example, if the service is configured to auto-generate the eOPF User Account Login ID then the records should not contain a Login Id value.
- The Host Provider can route the file to the agency's EDF service for processing.
- The employee accounts and folders are established, updated and can be viewed in the agency's test environment by the agency representative.

A.5 Test Completion

The completion date for testing and approving the Data Provider's test submissions is determined by the eOPF PMO. The PMO has final determination on the success and completion of the testing.

The implementation of the EDF files and transmission of data to eOPF must occur within 45 – 60 days after testing is completed and approval received. If it does not, the PMO will not accept any transmissions until a review is completed.

Appendix B. Acronym List

Acronym	Definition
API	Application Programming Interface
ASCII	American Standard Code for Information Interchange
ATO	Authority to Operate
BAL	Benefits Administration Letter
C&A	Certification and Accreditation
CWISR	Center for Workforce Information and Systems Requirements
DCPDS	Defense Consolidated Personnel Data System replaced by DMDC
DHS	Department of Homeland Security
DMDC	Defense Manpower Data Center
DOB	Date of Birth
DocGUID	Document's Globally Unique Identifier
DOE	Department of Energy
EDF	Employee Data Feed
EEOC	Equal Employment Opportunity Commission
EHRI	Enterprise Human Resources Integration
EOD	Entrance On Duty
eOPF	Electronic Official Personnel Folder
FEHB	Federal Employee Health Benefits
FIPS	Federal Information Processing Standards
FISD	Federal Investigative Services Division
FISMA	Federal Information Security Management Act
FMS	Financial Management Services
GDS	Guide to Personnel Data Standards
GHRR	Guide to Human Resources Reporting
GPEA	Government Paperwork Elimination Act
GPPA	Guide to Processing Personnel Actions
GPR	Guide to Personnel Recordkeeping
GSA	General Services Administration
GUID	Globally Unique Identifier
HR	Human Resources
HRIS	HR Information System
IBC	Interior Business Center
ICD	Interface Control Document
IRS	Internal Revenue Service
ISA	Interconnection Security Agreement
MOU	Memorandum of Understanding
NARA	National Archives and Records Administration
NBC	National Business Center replaced by IBC
NFC	National Finance Center
NIST	National Institute of Standards and Technology

Acronym	Definition
OMB	Office of Management and Budget
OPF	Official Personnel Folder
OPM	Office of Personnel Management
PDF	Portable Document Format
PMO	Program Management Office
POC	Point of Contact
POID	Personnel Office Identifier
SBU	Sensitive But Unclassified
SDD	System Design Document
SFTP	Secure File Transfer Protocol
SHRP	Strategic Human Resources Policy
SSI	Source System Identifier
SSN	Social Security Number
TLS	Transport Layer Security
TOR	Terms Of Reference
TSP	Thrift Savings Plan
TSPB	Thrift Savings Plan Board
UUID	Universal Unique Identifier
VPN	Virtual Private Network
W3C	World Wide Web Consortium
XML	Extensible Markup Language



**U.S. Office of Personnel Management
1900 E Street, NW
Washington, DC 20415-1000**