

National Data Exchange (N-DEx) System

Data Participation Requirements

1. Network and Connection Requirements

- **Secure File Transfer Protocol (SFTP)**

N-DEx uses Criminal Justice Information Services (CJIS) Enterprise File Transfer Service (EFTS).

Data Security Requirements

Below are CJIS Security requirements for establishing an SFTP connection:

- Ciphers set for encryption are aes-256-ctr or aes128-cbc
- Hash for key pair are HMAC-SHA2-512 or HMAC-SHA2-256
- Authentication will be public/private key pair – Key type must be SSH-2 RSA and bit length must be 4096

Limitations

- Single file size transfer to EFTS of 13 GB, Law Enforcement Enterprise Portal's 3.0 GB.
- Will not receive files larger than 5 GB.
- This is not conducive to retrieving initial test data.
- Agencies that provide large attachments (photos) may need to contact the N-DEx helpdesk at ndex@leo.gov.
- Data retention policy of 14 days.

- **Web Services**

Web Services must submit test data through the selected submission channels by using *.test* as the extension.

Data Security Requirements

Below are the CJIS Security requirements for establishing a Web Services connection:

- Encryption level must be TLSv1.2
- Authentication will be trusted, security certificates

2. Data Integration Requirements

New N-DEx data integration participants must provide the following information to begin a data integration project:

- XML schema/database schema export
- Comprehensive sample dataset for each record type (Log Dataset/Images)
- Code tables (Code value, Descriptions)
- Data dictionary (Define/describe elements, data types, etc.)

- Data relationship diagrams (Entity Relationship diagram [ERD], Unified Modeling Language [UML])

3. Data Submission Requirements

- **Data File Names must adhere to the following naming convention:**

AAAAAAAAA_YYYYMMDD_HHMM_NNNN.XML, where AAAAAAAAAA is the Data Submitter Agency's Originating Agency Identifier (ORI), YYYYMMDD is the 4-digit year, 2-digit month, and 2-digit day, HHMM is the 2-digit hour (24 hour clock) and 2-digit minute, and NNNN is a 4-digit sequence number. The date and time in the file name should be the creation date and time of the XML file. The sequence number is used to guarantee unique file names. The Law Enforcement Agency System is responsible for making sure the files are named uniquely. A sample filename for second file created by a Data Submitter Agency with ORI 'ORIPD0001' at 1:02 pm on March 9, 2007 is 'ORIPD0001_20070309_1302_0002.XML'.

- **Data File Size Requirements**

NOTE: .XML file = XML Document Instance

XML Document sizing recommendations:

- 8 MB maximum file size for a single XML Document Instance, excluding attachments

- **Zip file sizes for batch ingest Requirements**

- 8 MB maximum file size for a single XML Document Instance, excluding attachments
- Maximum of 10,000 .xml files in a single .zip file.
- 2 GB maximum file size for a single .zip file. Recommend making smaller file size for lower bandwidth agencies.

- **Other Data Submission Requirement:**

An N-DEx data owner or data-submitting agency must complete an N-DEx Data Sharing Form.

4. Data Validation and Verification (V&V) Requirements

- Prior to all test data submissions, the agency must use the FBI's XCOTA validation tool, freely available at <https://datastandards.cjis.gov/> to validate that the submission complies with the chosen N-DEx IEPD.
- Agency must resolve any validation errors reported by XCOTA before submitting the test data, or provide a justification for the error if it is unable to be fixed. For support, agencies may contact the N-DEx helpdesk at ndex@leo.gov for assistance with data validation errors.