



National Data Exchange



Data Submission Guide For Criminal Justice Agencies

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N-DEx Program Office

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Change History Section

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V2.0	22-Jun-2010	Incorporated RFC 829.	Cole Garrett	6/28/10
V3.0	07-Jul-2010	Incorporated word choice corrections and spacing corrections. Incorporated RFC 841.	Cole Garrett	7/26/10

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1 Document Purpose

The purpose of this document is to provide Criminal Justice Agencies (CJAs) with an informational overview on submitting data to the N-DEx system. This document is intended to supplement guidance through your regional coordinator, serving as a roadmap for contributing data to N-DEx. The intended audience for this document is agency officials and their technical personnel.

2 Data Submission

2.1 Prerequisites for Data Submission

1. The following prerequisites must be in place in order for N-DEx to accept your data: Data files have passed a structural verification and content review.
2. File Names adhere to the following naming convention:
 - a. AAAAAAAAAA_YYYYMMDD_HHMM_NNNN.xml, where AAAAAAAAAA is the Data Submitter Agency 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 CJA 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'.

3. File Size

NOTE: .XML file = Xml Document Instance

XML Document sizing for web service submissions

- A single XML Document Instance containing one package.
- 12 Total attachments inside a single XML Document Instance

XML Document sizing recommendations for batch submissions

- 2000 package maximum in a single XML Document Instance (for i.e. WVNDX0000_20080130_1201_0001.xml)
- 70 MB maximum file size for a single XML Document Instance
- 12 Total attachments inside a single XML Document Instance (for i.e. if I have an .xml file, with 1 or 1000 packages, I can only have a maximum of 12 attachments in the file)

Zip file sizes for batch ingest

- see prerequisite XML Document Instance constraints above
 - Maximum of 20,000 .xml files in a single .zip file. Each XML Document Instance (file) would only have a single message and package
 - 2 GB maximum file size for a single .zip file
4. ORI for the data submitter and all ORIs for data owners under the submitter must be provided to the Regional Coordinator
 5. A sharing policy must be determined before submission of the data. The sharing policy choices are “Agency Supplied” or “N-DEx Assigned”. Please contact your N-DEx Liaison Specialist for more information concerning sharing policies

2.2 Submission Methods

N-DEx supports four separate mechanisms for transferring data from its partnering agencies to the N-DEx system. Once an agency’s initial dataset has been submitted to N-DEx and processed by the system, data submissions can be transferred to the N-DEx system via Manual Submission, SFTP, Web Services, or via typing a report into the N-DEx portal. The following paragraphs will discuss each of these transfer mechanisms in more detail.

2.2.1 Batch Submission Process

Batch submission refers to the data submission process an CJA uses to SFTP data to N-DEx. The CJA must have connectivity to N-DEx in order to use the batch submission process. The following provides step-by-step instructions for the CJA to adopt this method of data submission.

The batch submission process will start when an agency decides that they want to move their properly formatted data over to the N-DEx system via an SFTP process. Once the agency decides that they would like to send N-DEx data via this mechanism, and connectivity has been established to the N-DEx system, the following steps must occur.

1. The regional coordinator emails the agency’s data administrator instructions on how to create public / private keys for connection to the N-DEx SFTP servers. The basic information is as follows.
 - a. If the agency uses Unix or Linux
 - i. Open the command prompt on the data submission server and type the following
 - ii. `ssh-keygen -t rsa -b 2048`
 - b. If the agency uses Windows
 - i. Utilize putty to generate a public private key pair

Note: The keys generated are specific to an individual data submission server. If more than one server is going to be submitting data, a key will need to be generated and exchanged for that server.

2. The agency must send the public key that was generated from the above step to the regional coordinator using a secure method (ex. LEO email). The filename will be [CJA Name]_rsa.pub.
3. The N-DEx regional coordinator gives the public key to the N-DEx system administrator for installation onto the N-DEx SFTP servers.
4. The N-DEx system administrator provides the login credentials for that agency to the regional coordinator.
5. The regional coordinator gives the CJA data administrator the login credentials for the N-DEx SFTP servers.
6. The CJA data administrator verifies connectivity by executing the following command.
 - a. sftp username@153.31.167.7
7. The CJA data administrator verifies that their files adhere to the N-DEx file size specifications.
8. The CJA data administrator then executes the following command:
 - a. Put <filename>
9. The CJA data administrator then looks into the directory where the file has been put to verify the existence of the file that has just been copied.
10. The CJA data administrator then has to terminate the SFTP session

2.2.2 Web Services Submission Process

N-DEx offers a submissions web service for those submitting agencies that wish to have their system send single documents to N-DEx on a more frequent basis. In order to submit data in this fashion the partnering agency will have to create a web services client and invoke the N-DEx ingest web service. The following paragraphs will discuss each of these steps in more detail.

The first step in submitting data via the ingest web services is to create a web service client for the ingest web service. To create the client, the submitting agency will be sent the Web Services Description Language (WSDL) file from the Operational N-DEx system. This WSDL will be sent to the CJA via email or shipped on CD to the CJA. The CJA will then create a web services client based off of the information in the WSDL.

Once the CJA has created the client, data submission via web services can occur.

- Execute a web browser application
- Type https://153.31.167.6/AI_W_WebService?wsdl in the web browser address area
- Submit data via the Web Service

2.2.3 Submission via N-DEx Portal

Some agencies with a respectively lower number of incident reports may wish to log into N-DEx and type information into an online form provided by the N-DEx portal. Detailed information regarding data submission via the N-DEx portal can be found in the N-DEx users' manual.

2.2.4 Manual Submission

The manual data submission process is used when the CJA does not have a means to electronically submit data to N-DEx. The CJA can send the data on an external media device. All data on the external media device must be encrypted before being sent to CJIS. The method for decryption must be discussed with the CJIS technical staff during the technical teleconference. Manual submission data must be sent using a secure method (i.e. Federal Express). The following steps provide greater detail for manually submitting data.

1. It is assumed the CJA has already mapped their data to the N-DEx Information Exchange Package Documentation (IEPD). It is also assumed the agency has conducted XML structural verification checks as per the National Information Exchange Model (NIEM), the Logical Entity eXchange Specification (LEXS), and the N-DEx IEPD conformance.
 - a. The N-DEx IEPD is located online: <http://it.ojp.gov/framesets/iepd-clearinghouse-noClose.htm> Click **Find IEPD Information**. Enter 'ndex' in the "Search by Keyword" field. Click **Search**. Select the appropriate N-DEx IEPD for information and download.
 - b. A conformance tool, Conformance Testing Assistance (ConTesA), is available to implementing agencies for structural review of their submissions. ConTesA is located at: <https://contesa.itl.gtri.org>. The CJA registers for access to ConTesA through the ConTesa web site.
2. Compress (zip) the files.
3. The CJA copies their files onto external media.
4. The CJA encrypts the data on the external media device
5. The CJA submits their data to CJIS:
 - a. Electronically by email to the LS assigned to the CJA's territory. Files cannot be larger than 7 megabytes in size when submitting to a LEO email address. If you are submitting your data via LEO, work closely with your Regional Coordinator to achieve successful handoff.
 - b. By Fed-Ex to address:
FBI CJIS Division

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Attention: N-DEx Data Submissions
Module B-3
1000 Custer Hollow Road
Clarksburg, WV 26306

6. Once the data is received by the N-DEx Program Office, the data will be ingested into the N-DEx system. After the data has been ingested into N-DEx, an email will be sent back to the CJA stating that the data has been processed.

3 Initial Legacy Data Submission

N-DEx is gathering historical data from partnering agencies in order to correlate and resolve information from incident reports in this timeframe. Due to its large nature, your initial dataset should be loaded onto an external media device (CD, DVD, external hard drive, or thumb drive) for manual submission to N-DEx. The external media device should be sent via Federal Express to your N-DEx regional coordinator.

Once your initial legacy data set has been ingested into the N-DEx system, routine data submissions can be sent to N-DEx via electronic transfer.

Note: This is a living document and will be updated when changes are warranted.