SFTP Bulk Upload Guide

For All Tax Types

October 2024

Indiana Department of Revenue

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Important Information: Read before proceeding

The Indiana Department of Revenue (DOR) has created this SFTP Bulk Upload guide for business customers that need to submit a file size that exceeds 10 MB. Registering for SFTP can only take place if a file has been rejected by INTIME for exceeding the 10 MB size restriction.

If a file size is under 10 MB, manually enter or upload via INTIME.
When filing securely via INTIME, bulk files do **not require** a file naming convention **or** encryption.

If a file size exceeds 10 MB, continue to use this guide to register for SFTP.
When bulk filing via SFTP, it is **required** to follow the file naming convention and file(s) **must be encrypted**.

Overview of Bulk Upload

Taxpayers who need to submit files that exceed 10 MB can electronically bulk upload these records to the Indiana Department of Revenue (DOR) via Secure File Transfer Protocol (SFTP) for all file types. Bulk upload files are created by the customer and then submitted to DOR for processing. The files are processed sequentially within a couple of hours. During high-volume processing, there can be an increased turnaround time for acknowledgments. When the process is complete, an acknowledgment email is sent to the authorized representative and/or an acknowledgement file is in the OUT folder.

INTIME (Indiana Tax Information Management Engine), DOR's e-services portal, provides an expanded file and is the preferred method for file submissions under 10 MB. File submissions will not be viewable in a customer's INTIME account for at least one full business day.

Additional information and resources for bulk filing Indiana taxes are available.

See Appendix H for more information on tax type and bulk filing methods and options.

Important

Use INTIME to submit files under 10 MB. An INTIME Guide to Filing Withholding Taxes is available.

Taxpayer Registration

Before filing bulk returns, all submitters or customers with files being submitted on their behalf, must be registered with the state of Indiana, and have a valid 10-digit TID number with a three-digit location. If you need to obtain your Indiana Taxpayer Identification Number (TID), you can register at inbiz.in.gov/taxes-fees/tax-registration.

SFTP Registration Steps

Only customers with files that exceed 10 MB in size can register to use SFTP with the following steps:

Step 1: All customers must be registered on INBIZ to receive their 10-digit TID.

Note: A three-digit location number will be provided in a letter from DOR, and then viewable as part of the TID once a customer is logged in to INTIME.

Step 2: All submitters must register or already have an INTIME logon to access SFTP registration.

Note: A vendor code is not required when uploading XML files via INTIME; Leave "Vendor Code" field blank (example: <VendorCode></VendorCode>) or enter all ones (example: <VendorCode>11111</VendorCode>.

Step 3: Before a customer can register for SFTP, a file must first be submitted via INTIME direct upload and be rejected for exceeding the 10 MB size limit. Files must be 10 MB or more to use SFTP for bulk filing.
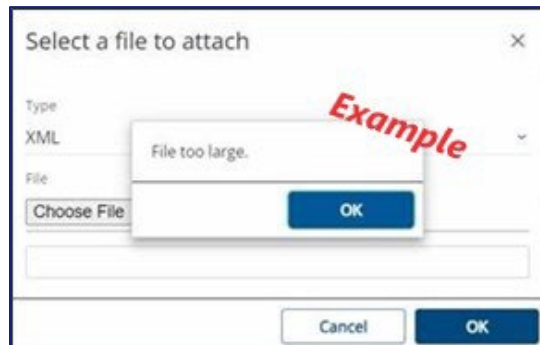
Step 4: To begin the SFTP registration process, log in to INTIME, go to "All Actions" tab, locate the "SFTP Filer registration" panel, then select "New SFTP registration". Note: If you have multiple POAs, you may have to find the "All Actions" tab in the individual account.
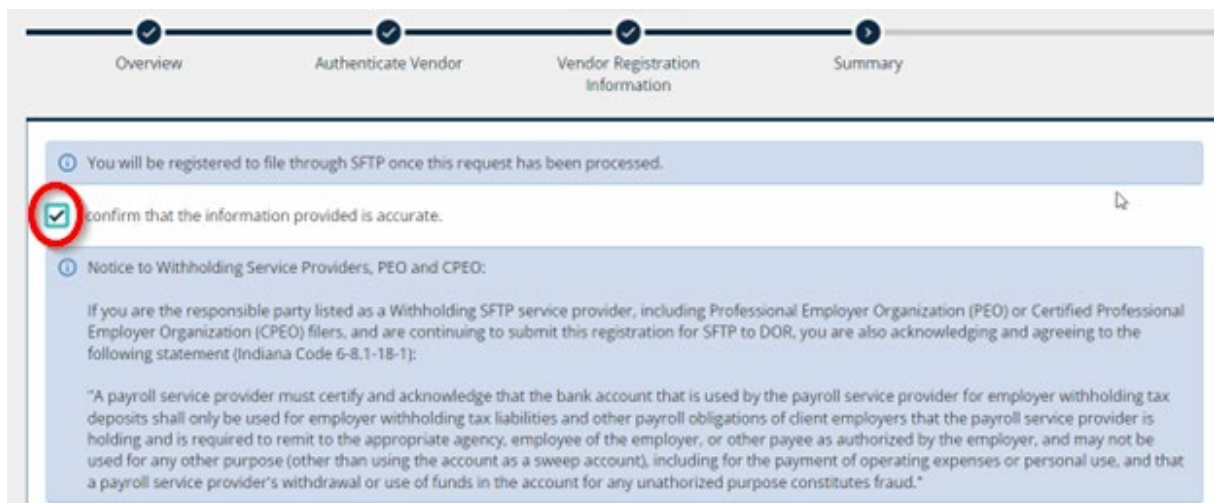
Step 5:   Enter 10-digit TID and click "Next." Using anything other than your TID will result in the registration being rejected during processing.

Tip: TID is displayed in the top-left corner of the screen under the business name when logged in to INTIME.

Step 6:   Enter all required SFTP filer information then click "Next."

Note: In the "Acknowledgment Receipt" dropdown, you can select the option to have a detailed XML attachment sent to your SFTP "OUT" folder in addition to receiving an emailed version.

Step 7:   You must check the box to confirm that the information provided is accurate. If the box is not checked, the SFTP Registration request cannot be submitted.

Step 8:   A confirmation will be provided on screen. Save this confirmation for your records. A printable view option is available and allows the customer to print or save a copy.

Step 9:   Once registration has been completed, DOR will send an email to confirm that you are now registered to upload bulk files via SFTP, along with a unique case-sensitive SFTP username, vendor code, tax codes, and the FTP site name.

Step 10:   Create SSH private and public keys (See Appendix A for instructions), then provide DOR with the public key via email to bulkfiler@dor.in.gov. You will not be able to log in to gasecuremft.in.gov until your public key is received by DOR. It may take one to two business days to receive confirmation from DOR that your SSH public key has been received and stored.

Step 11:   Download and install the client SFTP software (GUI (WinSCP Install). Instructions available in Appendix B.

Step 12:   Files must follow the naming convention when submitting to the SFTP site. The file naming convention is available in this guide. Your file will be rejected if the naming convention is not followed. An email will be sent to you from Bulkfiler@dor.in.gov with information regarding the rejected file name error.

Step 13:   Download and install PGP or GPG software. Instructions for PGP are available in [Appendix D](#) or [Appendix E](#) for GPG. Files must be properly encrypted for SFTP submission. If your file is not encrypted properly, it will be rejected. [Encryption process information is available in this guide](#).

Step 14:   File specifications and schemas are available on [DOR's Resources for Bulk Filing your Indiana Taxes](#) page.

Step 15:   Drop file(s) onto FTP server, then go to the location where you created your secure PGP/GPG file. Click and drag that file from the left pane and drop it into the IN folder in the right pane. Repeat as needed. When you are done, click the "X" in the upper-right corner to close this screen.

Existing SFTP Registration Steps

A customer will need to follow existing SFTP registration steps if they need to update or add additional contacts, email, phone number(s), and/or additional tax type(s) if appropriate.

Step 1:   To begin the existing SFTP registration process, log in to INTIME, go to "All Actions" tab, then the "SFTP Filer registration" panel to select "Existing SFTP registration" link.

Step 2:   Enter your valid SFTP vendor code.

Step 3:   Enter new information in the fields under the "New vendor contact information (enter only if different from existing)" section. This is where contacts, email address(es), phone number(s) can be updated or added. Additional tax type(s) can be added in the bottom section, if needed.

Step 4: You must check the box to confirm that the information provided is accurate before submitting. If the box is not checked, the SFTP Registration request cannot be submitted. A confirmation number will be displayed once submitted.

Testing your File for Submission

Test files will only be accepted in special circumstances as deemed necessary. Testing is a manual process, and you must contact us via Bulkfiler@dor.in.gov if you are required to submit a test file for processing and feedback. SFTP supported tax types will be processed as a production file **unless** you change the file type to a "T" instead of a "P".

> To submit a test file, you must notify DOR's Electronic Services team or the file will not be processed.

File Validation

XML files have two levels of validation:

1. Schema validations
2. Business rule validations.

Flat files have field value validations (e.g., line lengths, required records).

If either file type fails format validations, no business rule validation will occur because DOR will be unable to read the file.

Acknowledgments

When uploading an encrypted file to the SFTP site, you will receive an acknowledgment email to notify you that your file has been processed. You can also elect to have detailed XML sent to your SFTP "OUT" folder.

The email will indicate the status of the file with one of the following messages:

Accepted: The absence of any error messages or codes indicates that the return processed successfully. The base filename will be the same as that of the file submitted.

Partially Accepted: DOR's system processes accepted returns within the file and rejects the incorrect returns. The XML attachment will provide details of which returns have been accepted, and which have been rejected along with the reason for the rejection. This allows you to correct the rejected returns within that file and resubmit only those that had been rejected.

Rejected: If any of the records submitted in flat file format have invalid or incorrectly formatted data, the entire file is rejected. The error message lists the returns that require correction.

Example of a successfully processed file email message

The Indiana Department of Revenue (DOR) received a bulk file named [*FileName*] from you or on your behalf. The file was fully processed without errors. An XML formatted file detailing the processing results is attached to this email for your records.
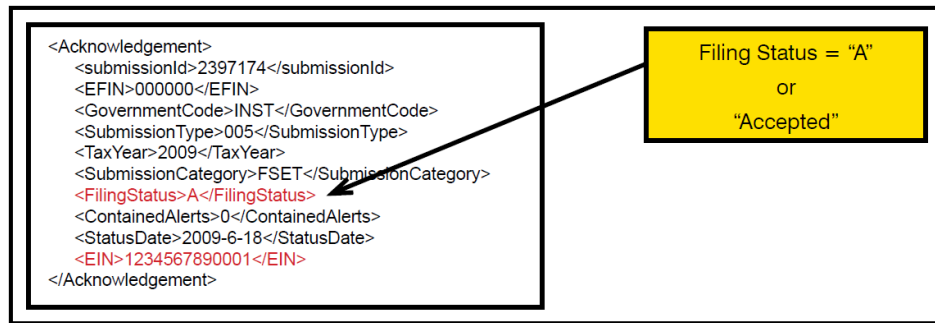
Note: If you do not receive an acknowledgment file, you should **not** assume your file has been received and or accepted. Do not resubmit a file until you receive a message indicating that it has not been received.

If you do not receive an acknowledgment within two hours:

- Verify that the file was named correctly, which includes your accurate Vendor Code as shown in your Certificate of Registration along with the other name parts.
- Verify that file was encrypted using only DOR's public key.
- Reach out to the Electronic Services team at Bulkfiler@dor.in.gov

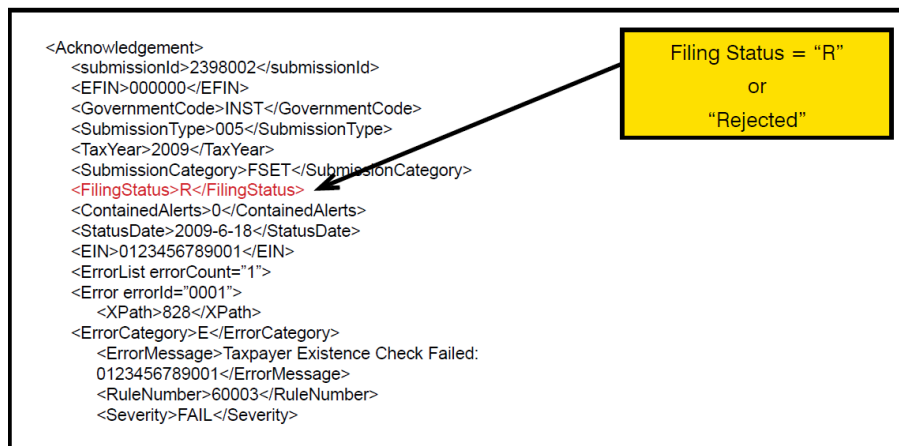If these are correct, email DOR at BulkFiler@dor.IN.gov to verify reception.

This is an example of a return with no errors and indicates the return processed.

```
<Acknowledgement>
    <submissionId>2397174</submissionId>
    <EFIN>000000</EFIN>
    <GovernmentCode>INST</GovernmentCode>
    <SubmissionType>005</SubmissionType>
    <TaxYear>2009</TaxYear>
    <SubmissionCategory>FSET</SubmissionCategory>
    <FilingStatus>A</FilingStatus>
    <ContainedAlerts>0</ContainedAlerts>
    <StatusDate>2009-6-18</StatusDate>
    <EIN>1234567890001</EIN>
</Acknowledgement>
```

Filing Status = "A"
or
"Accepted"

Example of rejected file email message

The Indiana Department of Revenue (DOR) received a bulk file named *[FileName]* from you or on your behalf. The file has been rejected for validation errors. An XML formatted file detailing the errors is attached to this email. Please resubmit a corrected file.

The following example shows a return that was rejected due to an invalid TID and location in the EIN element. When a return is submitted through the bulk upload process, the Indiana ID and location are verified against our main database. If this TID and location do not match any active accounts in our database, the return is rejected. This return should be corrected and resubmitted.

```
<Acknowledgement>
    <submissionId>2398002</submissionId>
    <EFIN>000000</EFIN>
    <GovernmentCode>INST</GovernmentCode>
    <SubmissionType>005</SubmissionType>
    <TaxYear>2009</TaxYear>
    <SubmissionCategory>FSET</SubmissionCategory>
    <FilingStatus>R</FilingStatus>
    <ContainedAlerts>0</ContainedAlerts>
    <StatusDate>2009-6-18</StatusDate>
    <EIN>0123456789001</EIN>
    <ErrorList errorCount="1">
    <Error errorId="0001">
        <XPath>828</XPath>
    <ErrorCategory>E</ErrorCategory>
        <ErrorMessage>Taxpayer Existence Check Failed:
        0123456789001</ErrorMessage>
        <RuleNumber>60003</RuleNumber>
        <Severity>FAIL</Severity>
```

Filing Status = "R"
or
"Rejected"

Example of partially accepted file email message

If there are multiple returns in an XML format file, each return can be accepted or rejected independently of each other. The partially accepted file email message will include an XML attachment that will provide details of which returns have been accepted and which have been rejected along with the reason for the rejection. Once the returns have been corrected, do not resubmit the returns that were originally submitted successfully, only those that were rejected.

File Naming Conventions

Note: File names must be 21 characters in length, not including the file extensions. Incorrectly named files will not be processed or acknowledged.

Position	Numbers of Characters	Values
1	1	File Type Indicator Valid Indicators: P = Production T = Test
2-11	10	Submitter Identifier as assigned through DOR's registration process. Left Zero padding is required.
12-14	3	Tax Form Code 005 = Form WH-1 201 = WH-3 (XML files) and EFW2 Specification (flat files) 202 = 1220 format (include W2Gs and 1099Rs) 027 = MVR-103 See Appendix F for more options.
15	1	File format code that is used to represent the data in the file. This is the file format that was certified. 1 = XML 2 = ASCII or .txt
16-21	6	Sequence Number incremented from 000001 for each transmission of the specified Tax Form Code made by the Submitter in a given tax year.
22-25	4	Extension depending on the file format. File format Extensions: .xml .txt
26-29	4	File Extension after encryption: .pgp .gpg

Note: Duplicate file names in a calendar year will be rejected.

Examples: File name of production file (P), submitter identifier 12345678, tax type WH-1 (005), file type - xml (1), sequence 7,
- **Before Encryption**:
  P00123456780051000007.xml
- **After Encryption**:
  P00123456780051000007.xml.gpg

PGP or GPG Software

Note: Use either PGP **or** GPG, but not both. Using both will encrypt a file twice and cause it to be rejected.

To set up PGP software, see Appendix D.

To set up GPG software, see Appendix E.

Encryption for SFTP Submission

All files **must** be encrypted using PGP **or** GPG (kleopatra) when sent to our secure SFTP site.

Tip: This type of activity might be the responsibility of your IT department.

To encrypt your file with PGP **or** GPG

Step 1.   Create your own public/private key pair using PGP/GPG.

Step 2.   Download and install DOR's public key for file encryption. If your file is not encrypted properly, it be rejected.

Step 3.   Import the DOR's public key into your encryption software for your use.

Step 4.   Encrypt the data using only DOR's public key.

Step 5.   Upload the data to the secure SFTP site.

PGP/GPG encryption works between two parties, each of which has a pair of encryption keys: one of which is public, the other private. The data to be encrypted is encoded using the recipient's public key. The recipient checks the validity of the sender data by checking the encryption against the recipient's private key. If that step passes, the data can be decrypted using the recipient's private key. In this way, the public key can be made public and there is no need for the private key to be sent to the submitter, thus improving security.

Kleopatra Usage

Step 1:   To encrypt a file using GPG and Kleopatra for submission to Indiana via SFTP Bulk File, launch Kleopatra. The Kleopatra startup screen should display your key and our public key (Indiana Department of Revenue ERF) that has been imported. Select "Sign/Encrypt" in the upper-left menu.
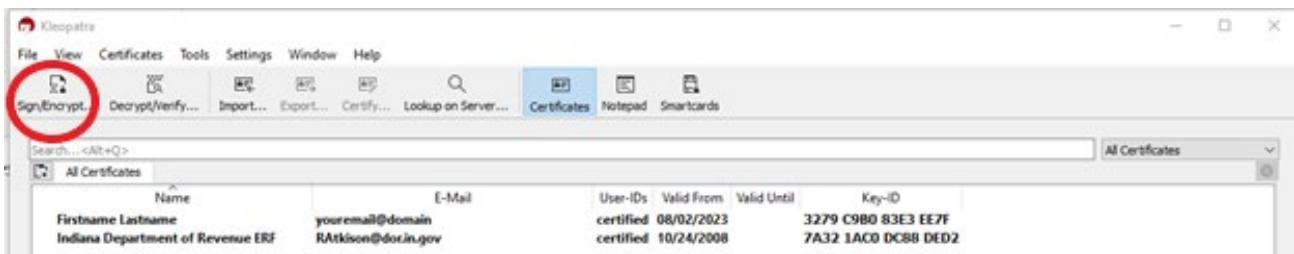
Step 2:   Navigate to your file and select the file to be encrypted. Then select "Open."

Step 3:   When first opened, the "Sign/Encrypt" screen will have all the boxes checked as a default. Deselect "Sign as:" and "Encrypt for me:" so that only "Encrypt for others" is left checked, then click in the "Encrypt for others" field where it says, "Please enter a name or email address...", select the "Indiana Department of Revenue ERF" (associated with RAtkinson email), and then select that key. (See image below.)

Step 4:   Note the filename and extension in the bottom text box that is showing the encrypted file that will be produced. Select the "Encrypt" button.

Step 5:   Once the "Results"/"Encryption succeeded" screen is displayed, click on "Finish".

ACH Debit Payments: Debit Block Option

Customers who use an Automated Clearing House (ACH) debit to make tax payments to DOR will be required to provide their business' bank with the following **Debit Block: 9207000TAX**.

A Debit Block protects your business's bank account from unauthorized electronic charges. This additional safeguard is completely optional and is used by some customers that elect to allow only ACH debits with a matching Debit Block number to draft payments from their bank account. See more information.

If a payroll service provider submits an ACH payment with your business' bank account number and you have an existing debit block on the account, then you DO need to ADD the debit block number with your bank. If the payroll service provider is submitting a payment with their bank account number, then you do NOT need to update the debit block. In this scenario, the service provider will need to update their own debit block number.

Add or Update SSH Keys for SFTP Account

For new or existing SFTP account: For updated SSH keys or multiple keys for additional users, provide DOR with an updated public key via email to bulkfiler@dor.in.gov. You will not be able to log in until your updated public key is received by DOR.

Contact Us

Electronic Services Team
Indiana Department of Revenue
100 North Senate Avenue, IGC N286
Indianapolis, IN 46204-2253
Bulkfiler@dor.IN.gov

APPENDIX A: Generating SSH Keys

Once a new SFTP registration is accepted and processed, follow these instructions to generate SSH (Secure Socket Shell) private and public keys:

Step 1:   Go to dor.in.gov/iot/customer-service/myshareingov/secure-file-transfer-sftp/.

Step 2:   Select "Key Generator (to be used for batch scripting)" to download (puttygen.exe) and install the "Putty Key Generator" on your desktop.

Step 3:   Open "Putty Key Generator".

Step 4:   Select the "SSH-2 RSA" option and change the "Number of bits in a generated key" field to 2048.

Step 5:   Select "Generate," then move your mouse arrow over the blank "key" area to help generate a random key combination.
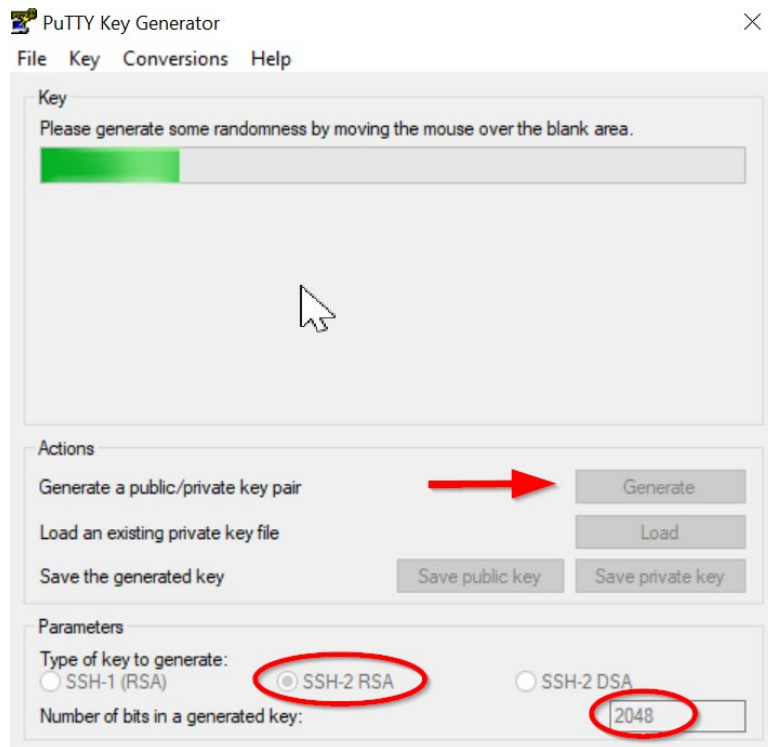
Step 6:   Once the key is generated, it will populate in that space. (See next image.)

Step 7:   Format "Key comment" to include your vendor name. Place an underscore (_) in front of your vendor username.
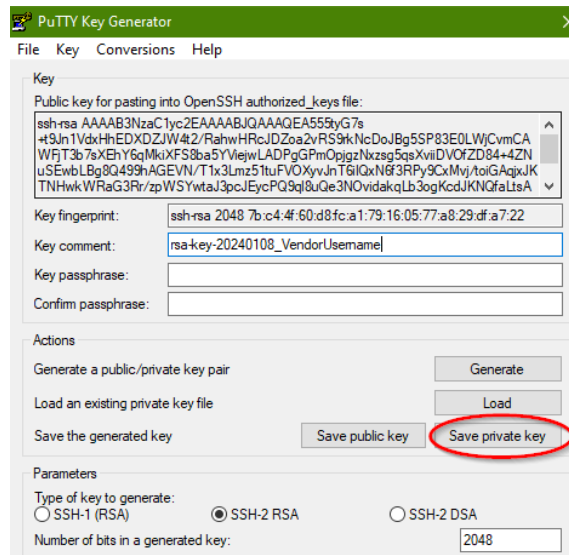
Note: Vendor name is provided in the email you received from DOR regarding registration.
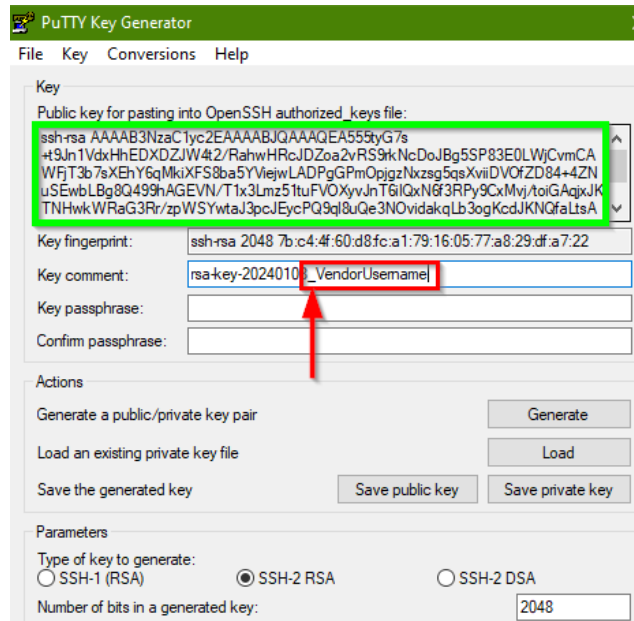
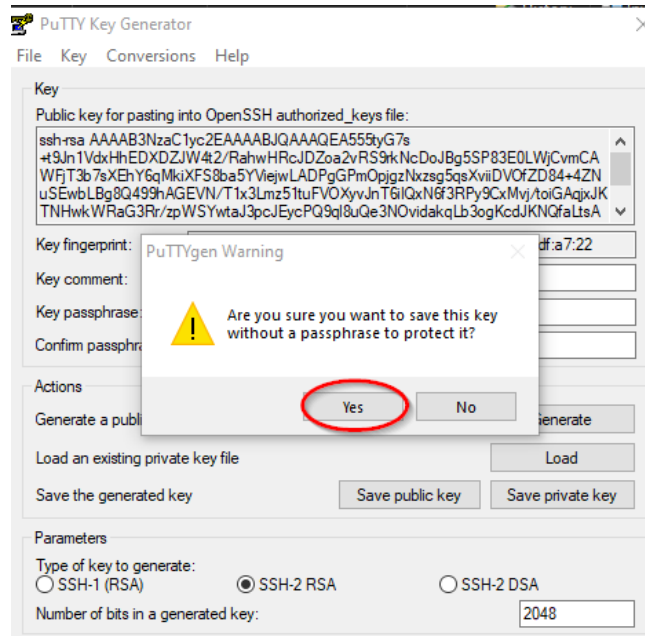<div style="background-color:#e8f0ec; padding:10px;">
Note: When generating SSH keys (private and public), this step is only done once.
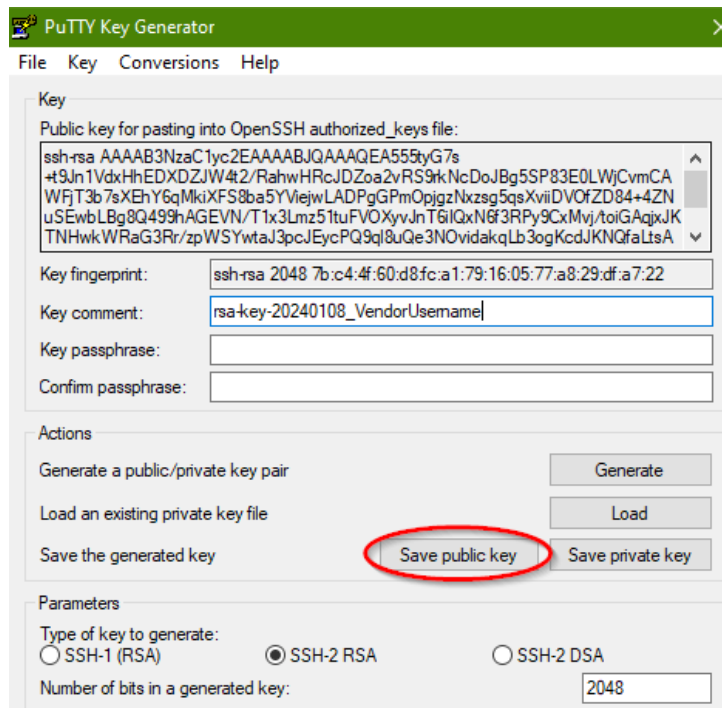</div>

Private Key

Step 8:   Click "Save private key."

Step 9:   When the "PuTTYgen Warning" pops up, select "Yes."

Step 10: Name the private key filename with **vendorusername_year_privatekey** (i.e., 1-DOR-vendorname_2024_privatekey) and save it on your desktop.

Public Key

Step 11: Select "Save public key."

Step 12:   Name the public key filename with **vendorusername_year_publickey** (i.e., 1-DOR-vendorname_2024_publickey) and save it on your desktop. Be sure to save the file in the pub.txt format. The suffix should read pub.txt.

Step 13:   Close PuTTy window.

IMPORTANT

SFTP bulk filers must provide their SSH public key to DOR at bulkfiler@dor.in.gov before production files can be submitted. It may take one to two business days to receive confirmation from DOR that the public key has been received and stored.

Upon receiving confirmation, proceed with the steps in Appendix B.

# APPENDIX B: WinSCP Installation and Setup Instructions

The following instructions will guide you through the process on how to install and set up the software to send DOR your files.

Step 1.   Go to the SFTP website.
Step 2.   Select GUI and download WinSCP.
Step 3.   After installing, run WinSCP by double-clicking the desktop icon.

APPENDIX C: Logging Into WinSCP

These instructions provide guidance on how to log into WinSCP, store your private key, and transmit files to DOR.

Step 1:   Select "new site" tab.

Step 2:   Enter Host name as: gasecuremft.in.gov

Step 3:   Locate vendor username in SFTP registration email received from DOR.
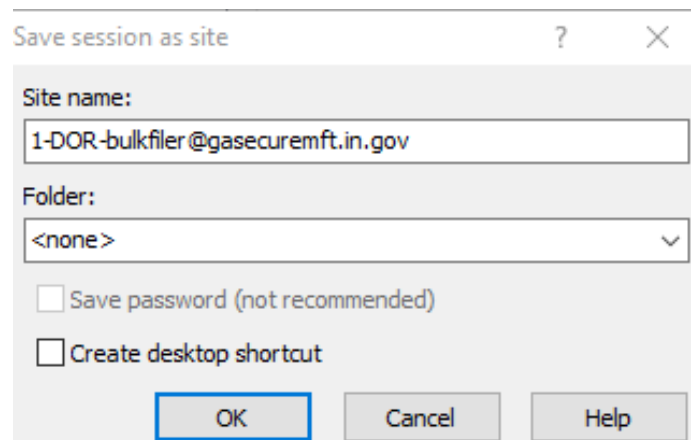
Step 4:   Click "Advanced" to proceed to next step.
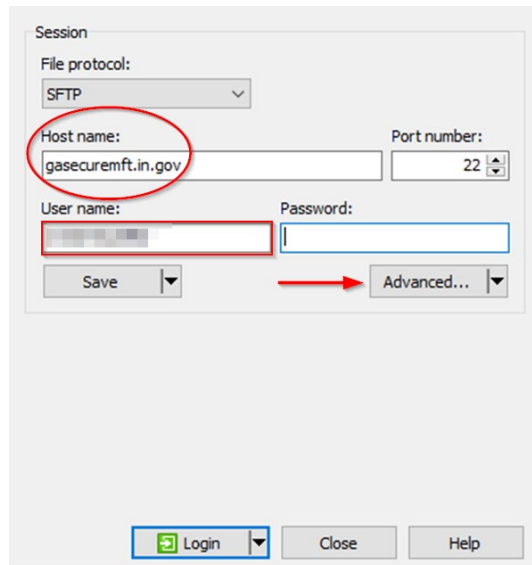
Step 5:   Select "Authentication" and then click the three dots to choose private key. (Note that file extension .ppk indicates private key.) Once private key is selected, click "Open," and select "Ok."
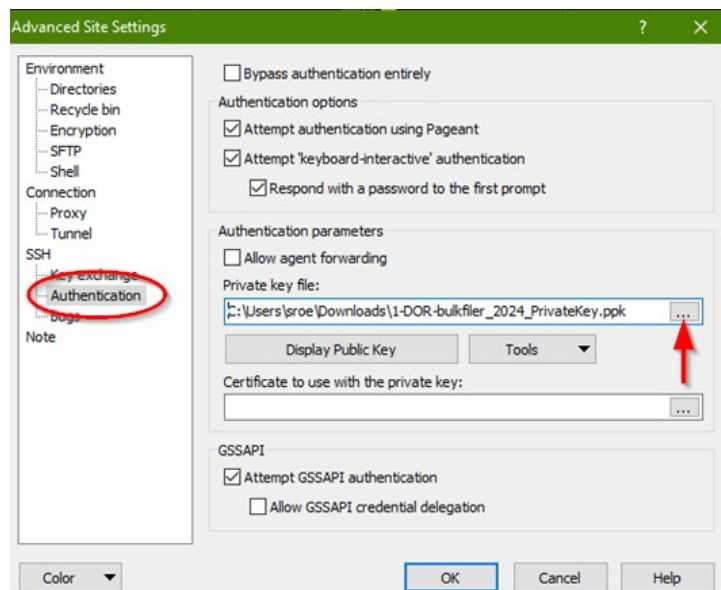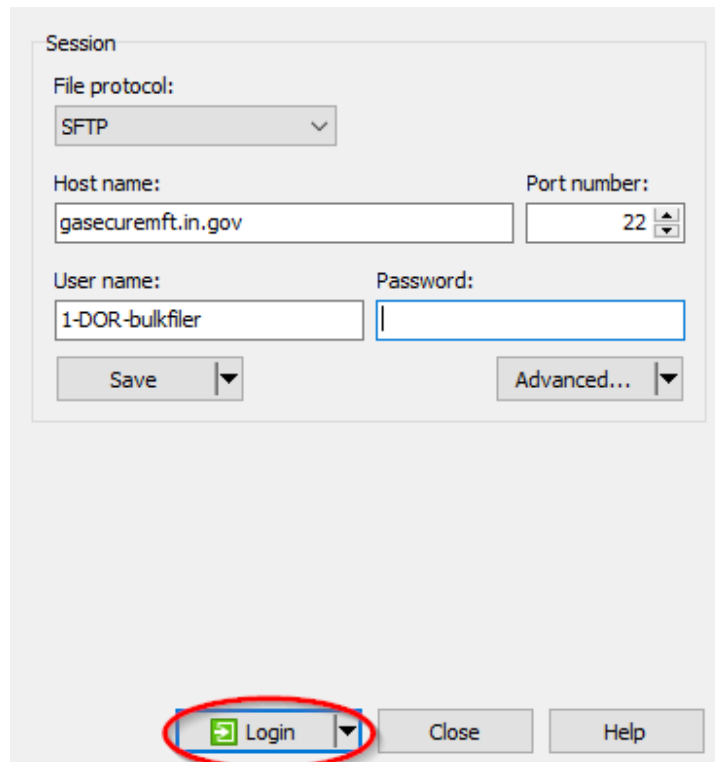
Step 6:   Select "Save."

Step 7:   When the "Save session as site" pop-up window appears, select "Ok."

Save session as site   ?   ✕

Site name:
1-DOR-bulkfiler@gasecuremft.in.gov

Folder:
<none>   ⌄

☐ Save password (not recommended)
☐ Create desktop shortcut

            OK   Cancel   Help

Step 8:   Log in to SFTP and select "Continue."

Session

File protocol:
SFTP   ⌄

Host name: Port number:
gasecuremft.in.gov   22 ⬍

User name: Password:
1-DOR-bulkfiler |

    Save   ▼   Advanced... ▼

            ⮕ Login ▼   Close   Help

Note: Cache key only populates on the first login (see image below). Select "Yes"
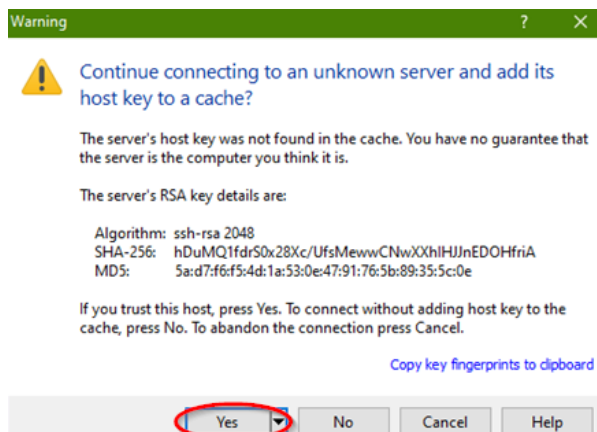
Step 9: The program window will display and split the local directory and the remote directory as two side-by-side panes.
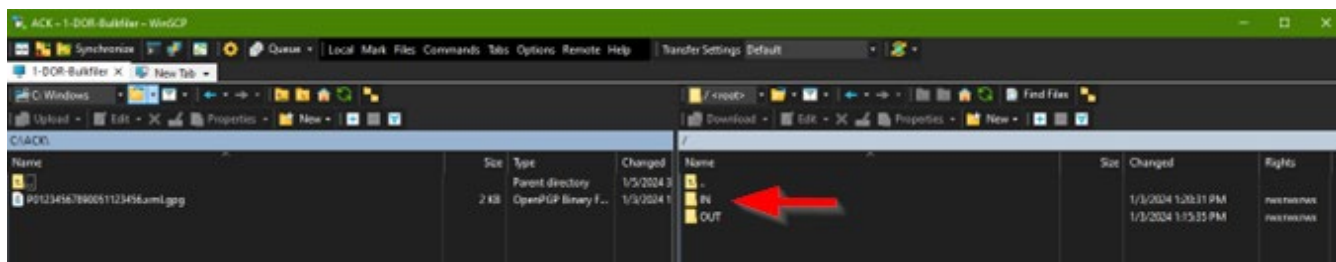
Note: Proceed with SFTP Registration steps 12 to 15 for direction on file naming conventions and encrypting a file before proceeding.

Step 10: Using the left pane, go to the location where you created your secure PGP/GPG file. Click and drag that file from the left pane and drop it into the IN folder in the right pane. Repeat as needed. When you are done, click the "X" in the upper-right corner to close this screen.

Step 11: An acknowledgment email will be sent to notify you that your file has been accepted, rejected, or partially accepted. A detailed XML attachment will be placed in your "OUT" folder only if that option was selected during registration.

Note: If you do not receive an acknowledgment email within one to two business days, it is likely that the file was not named correctly. Files not adhering to the naming convention will NOT be acknowledged or processed. If you do NOT receive an acknowledgment email, contact DOR at bulkfiler@dor.in.gov before resending any files.

APPENDIX D: PGP Setup and Use

PGP (pretty good privacy) is a software package used for encryption of files and emails. PGP, owned by Symantec, is available for a license fee and may be downloaded and purchased at https://www.symantec.com/products/information-protection/encryption/command-line.

All of the commands in this document were executed in a Command (DOS) window. These commands can also be executed in a Powershell Window. All commands are shown in Courier New font. Answers to prompts are highlighted in bold red as shown in the example below:

```
C:\>pgp --gen-key "Your key Name" --key-type "RSA" --encryption-bits 2048
--passphrase "Your passphrase" --signing-bits 2048
Your key Name:generate key (2078:non-standard user ID)
Acquiring entropy from system state....done Generating key Your key
Name progress.....******* ...........................******* done
0x7CC44594:generate key (0:key successfully generated)
Acquiring entropy from system state....done Generating subkey
progress...........................................****** **
...........................
...............................
.......******* done
0xEF5C71EE:generate key (0:subkey successfully generated)
```

The use of encryption requires a key. Keys are composed of a private and a public part. When encrypting a file for submission to DOR, a public key is used; when decrypting, the private key is used. Commands for generating a key are provided below.

Conventions used in this tutorial:

- Commands are shown in Courier New type in black.
- Answers to prompts are shown in bold red type.
- Substitutions are shown in bold blue type.

Install PGP

Purchase, download, and follow the installation instructions from Broadcom.

Note: Use either PGP or GPG, but not both. Using both will encrypt a file twice and cause it to be rejected.

Generate a key

Generating keys is an interactive process.
Note: You need to remember the passphrase for your key!
Execute the following command:

```
C:\> pgp --gen-key "your key name" --key-type "RSA" --encryption-bits 2048
--passphrase "your passphrase for this key" --signing-bits 2048
```
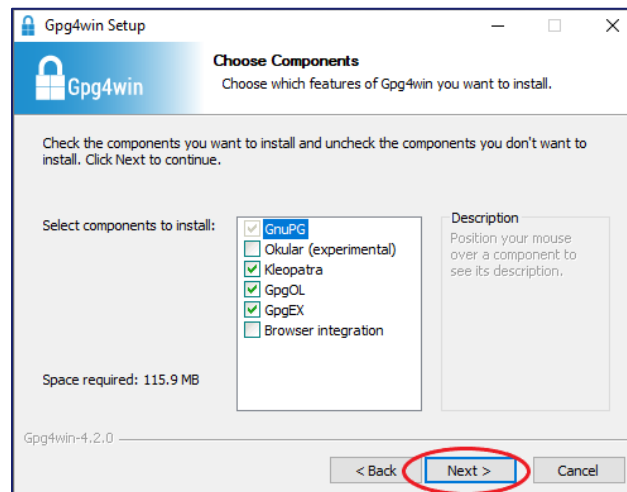
APPENDIX E : GPG Kleopatra Install and Key Generation

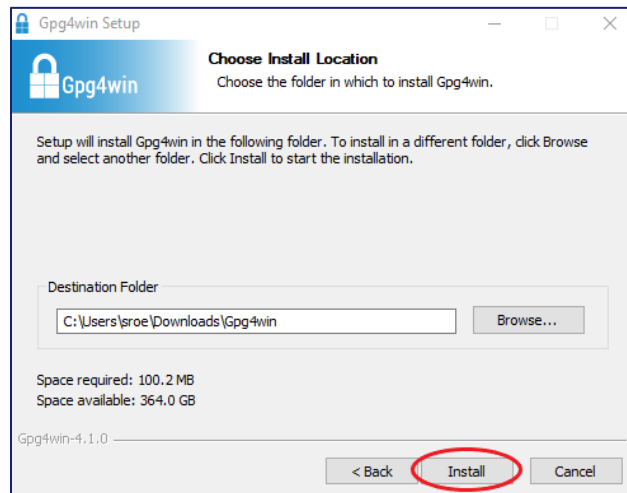Step 1:   [Download GPG / Kleopatra](). Install the downloaded gpg4win.exe to install GPG / Kleopatra.
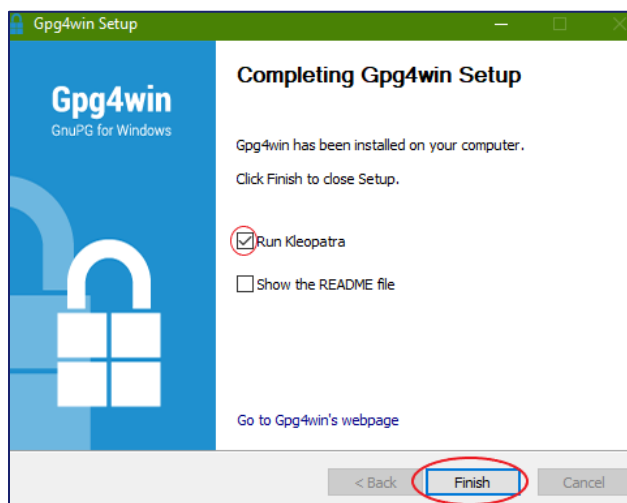
Note: Select the option "Kleopatra" when installing Gpg4win.
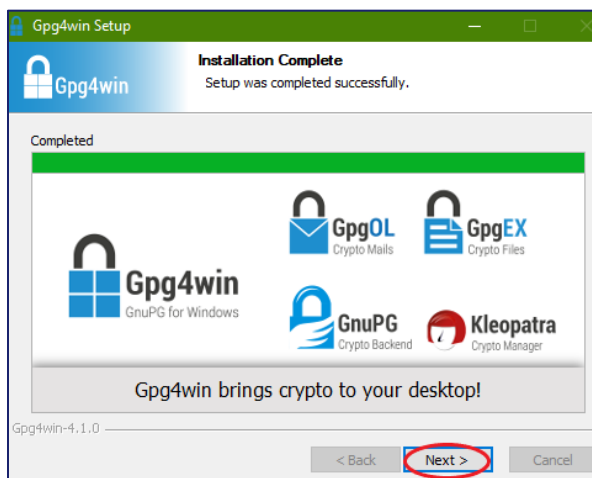

Step 2:

Step 3:

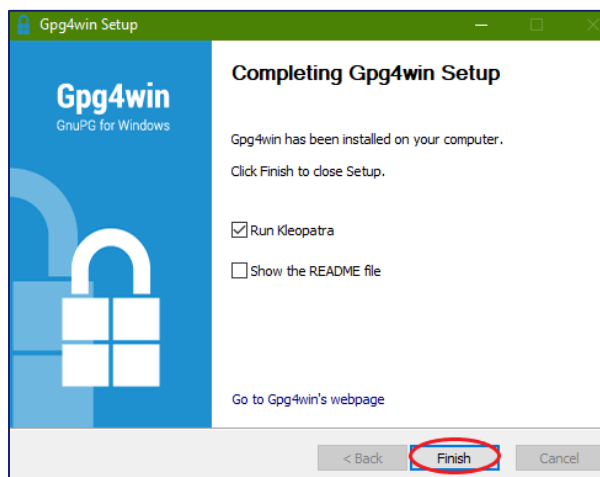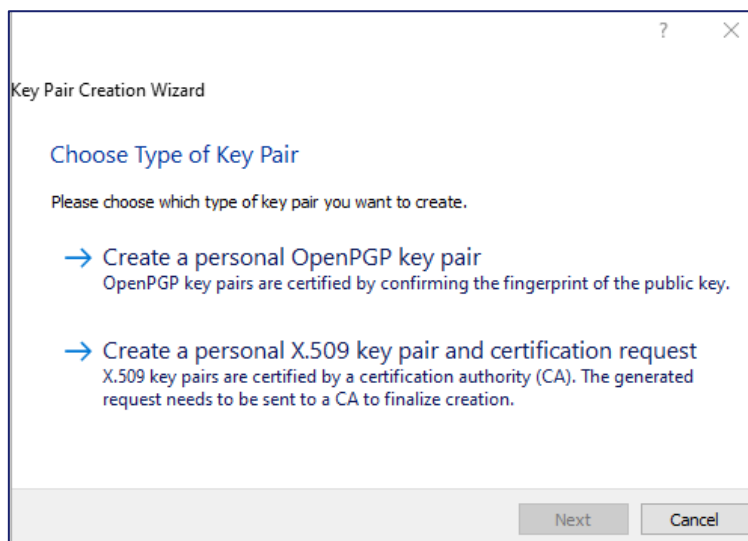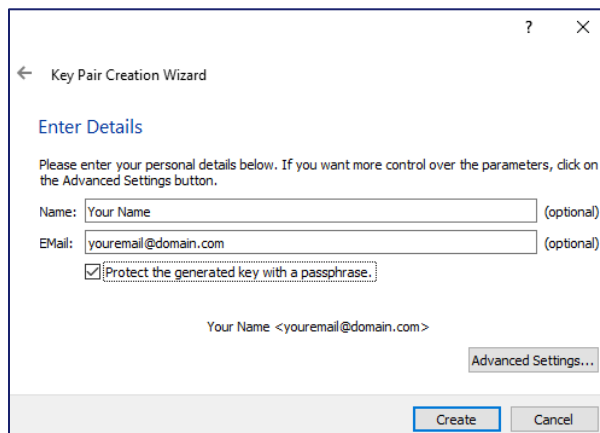Step 4:

Step 5:

Step 6:

Step 7:   Once installed, run Kleopatra then select "Create a personal OpenPGP key pair."
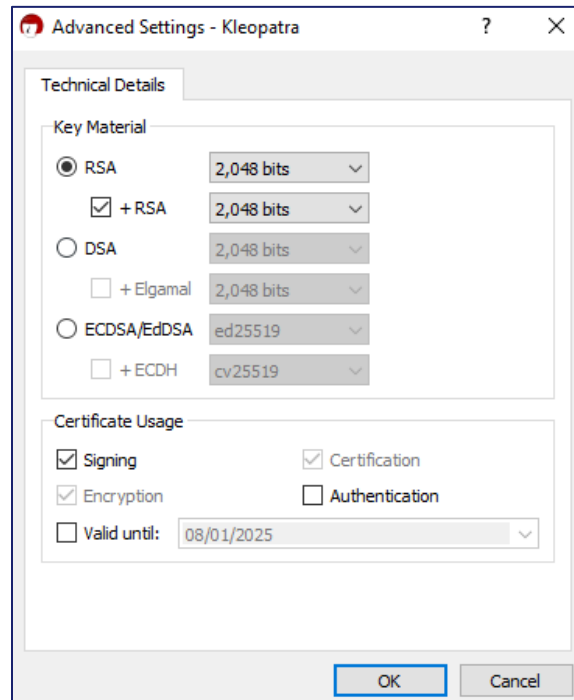

Step 8:   Verify your name and email address, then click on "Advance Settings."

Step 9:   Make your screen match the following settings. Click "ok" to return to the previous screen, and then click "Create."

Note: RSA bit size is the minimum that should be used.

Step 10:   When prompted for a passphrase for your keys, provide something that you will remember. You will need this passphrase when adding other keys to your key ring.

Note: Create a passphrase that is at least 14 characters, and uses at least one upper case, one lower case, and one number.
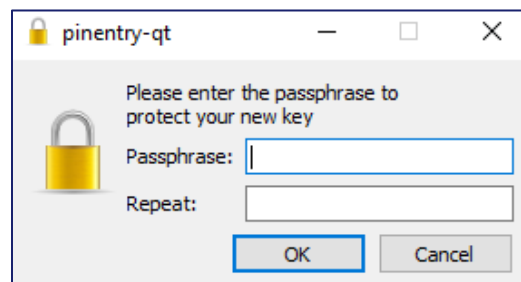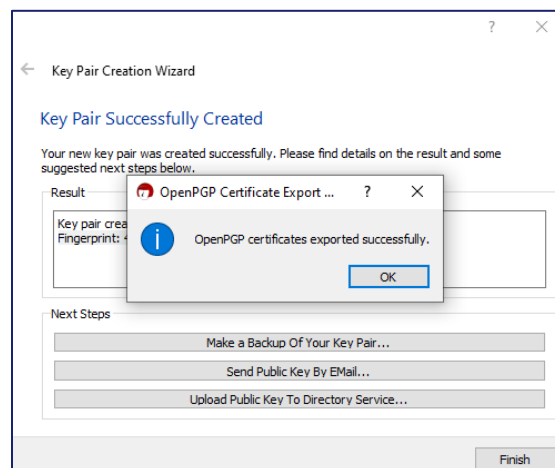
Step 11:   Your new key pair has been created.
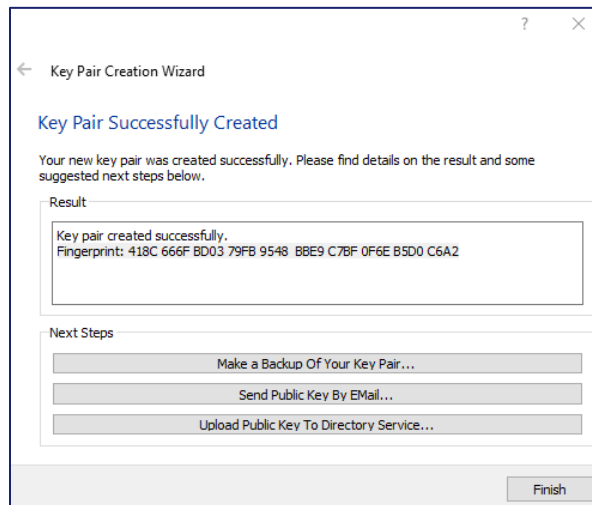
> **IMPORTANT:** Make a backup of your key pair and keep it safe.
> If you lose access to your computer, you can reimport your key pair.

Step 12:   Once the key pair has been created, select "Export'" and then "Upload Public Key to Directory Service."


Step 13:   Once you have created your key pair, Kleopatra shows the contents of your key ring as shown below: Select the "Import" button and select the Indiana State public key (Indiana Department of Revenue ERF.asc).
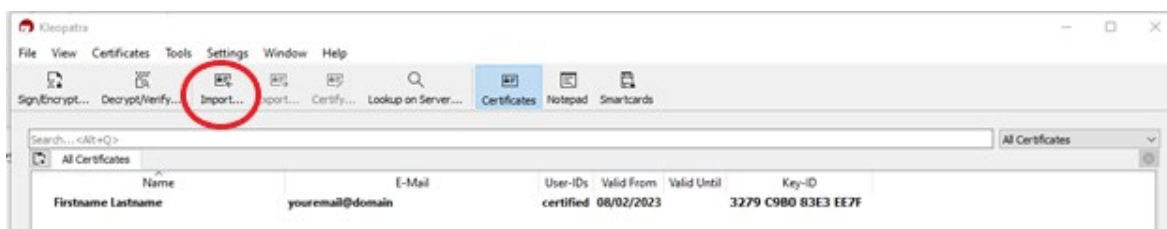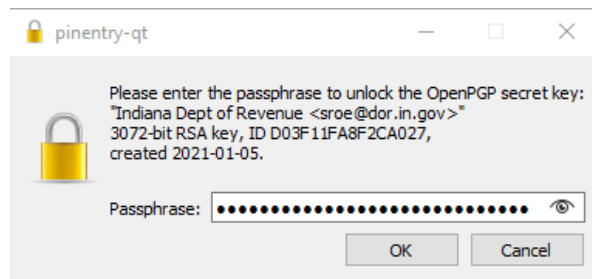
Step 14: After importing the state public key, you will be prompted to verify its validity, select "Yes."
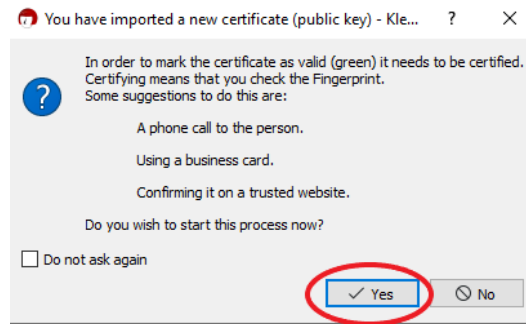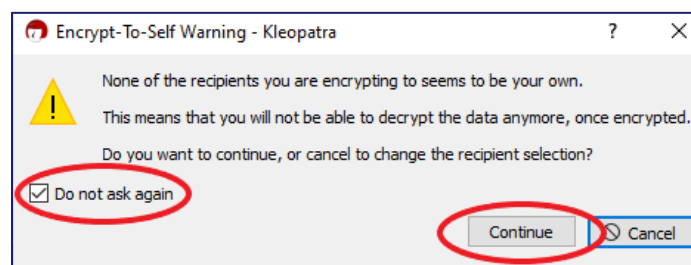

Step 15: When prompted to certify this new key, select "Certify."
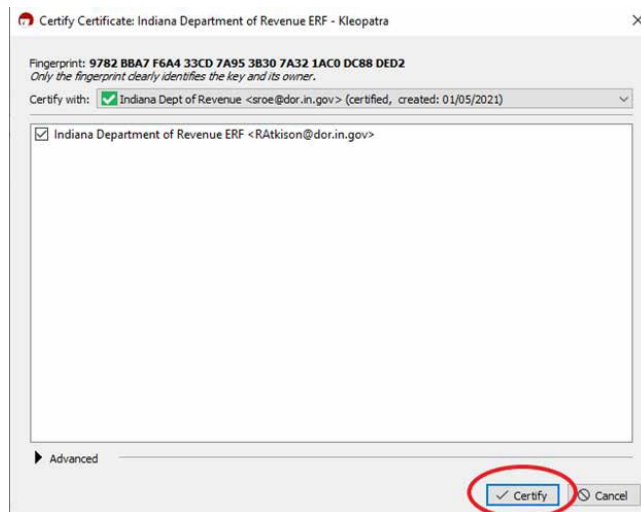
Step 16: You will be prompted for the passphrase of your key pair.

Step 17: When importing the state key, you will be prompted to verify. Select "Continue."

APPENDIX F: Common Errors

Error	Description
I did not receive an acknowledgment email.	File was not named correctly. Files not adhering to the naming convention will NOT be acknowledged or processed. If you do NOT receive an acknowledgment email, contact DOR at bulkfiler@dor.in.gov before resending any files.
"File not Found"	File was not encrypted using the department key. See Appendix A for instructions.
"Duplication filename this calendar year"	Each file submission must have a unique filename within a calendar year. If your file is rejected for "Bad Filename" error, resubmit your file using a new file name and an alteration inside the file such as the "transmissionid" node or "timestamp" node. This will avoid a duplicate file being submitted.
I do not know the passphrase for PGP.	The passphrase is the phrase you entered when creating your private key. DOR does not retain this information for your security. If you do not remember your passphrase, you can delete your private key and create a new one.
I cannot log in to the SFTP server.	If you unsuccessfully attempt to log in to gasecuremft.in.gov, check that your firewall allows outbound traffic to host address "gasecuremft.in.gov."
Indiana Department of Revenue key is disabled.	Bring up Symantec Encryption Desktop by clicking your start icon in Windows and clicking All Programs>Symantec Encryption>Symantec Encryption Desktop. Then click the view tab at the top. Then click PGP Keys. Find Indiana Department of Revenue ERF and right click it. Then select Enable. This should enable you to use the key.
Errors in acknowledgments	The three most common file errors are: • Special characters in text fields (e.g., comma (,), period (.), semicolon (;), colon (:), ampersand (&), apostrophe ('), number (#)) • Putting decimals into fields that require whole numbers • Space at end of text field

APPENDIX G: Common Acronyms

Acronym	Description
ACH	Automated Clearing House
DOR	Indiana Department of Revenue
EIN	Employee Identification Number
ERF	Electronic Return Filing
GPG	GNU Privacy Guard (encryption technology)
INTIME	Indiana Taxpayer Information Management Engine (DOR's e-services portal)
ITS	Indiana Tax System (DOR's Tax Processing System)
MEF	Modernized E-File
MVR	Motor Vehicle Rental
PGP	Pretty Good Privacy (encryption technology)
SFTP	Secure File Transfer Portal
TID	Taxpayer State Identifier
WTH	Withholding

APPENDIX H: Form Types, Bulk Filing Methods, and Options

A chart of all the tax form types and the various bulk filing methods and options available for each is available at dor.in.gov/files/dor-efile-methods-bulk.pdf