

Royal Mail Mailmark[®]

Mailmark Direct Data

How to download data files

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Summary of changes V1.1 to V1.2 April 2021

1. Renaming of the file from MDD Technical Specification (downloading data)

Summary of changes V1.0 to V1.1 January 2021

2. Addition of a Domain Server Name (DNS)
3. Clarity that dependency on an Internet Protocol (IP) address is not advised
4. Confirmation that the MDD files will be auto deleted on the 8th day

Disclaimer

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1. Introduction

1. Overview

Royal Mail has developed a solution whereby we will provide Mailmark® customers with details of the performance of their mailings through direct data, known as Mailmark Direct Data (MDD) via a secure file transfer.

Customers wishing to integrate this data into their IT systems can securely access item level data sets in a variable length file, in a format known as CSV (Comma-Separated Variable length) with a header record giving a name to each field.

Through the use of software, purchased or developed in-house, this data can be tailored to provide performance detail at item level for all items listed on an eManifest.

2. Purpose

This document is to provide customers and interested parties guidance on:

- requesting Mailmark Direct Data
- accessing data securely
- the CSV data format structure

3. Intended Audience:

- Any customer who requires access to their Mailmark Data.
- Any provider who wishes to develop a software solution to re-purpose the raw data.
- Any Mailmark user.

4. Important clarifications

- This variable length (CSV) file output, with a header record giving a name to each field, replaces current functionality whereby Mailmark users can access 'exception' level data and save, ready to view, using excel, csv or PDF.
- Item data will continue to be accessible at Supply Chain level and will show all items mailed rather than those with potential issues on the 'exception' reports.
- Data will be transferred through automated access via SFTP systems (Secure File Transfer Protocol).

2. Onboarding process

The onboarding process requires the recipient of the Mailmark Direct Data transfer (MDD) to request access from Royal Mail.

The process is as follows:

1. Request Access from Royal Mail

Customer (Mailmark User) contacts mailmark@royalmail.com and provides;

- a. Mailmark Participant ID(s) and Participant Name(s)
- b. Company / Business name
- c. Contact details including name, email address, contact number, job title
- d. Confirmation that the email address provided has been registered on www.royalmail.com as a business user
- e. If in the event of a customer wishing a password free connection, the SSH Public^[1] key must be provided to mailmark@royalmail.com

2. Royal Mail provides access details to Requestor

Royal Mail will action the request and send to the contact provided;

- a. A unique User name.
- b. A unique password which is formatted as: 9 characters long with letters (capital and small caps), numbers and symbols, randomly sequenced.
- c. A unique directory structure where the ZIP files will be available.

The Domain System Name (DNS) is: `ftg.bdtg.royalmailgroup.com`

This directory can only be accessed by the user and the structure is: `/pub/1036/out`.

The ZIP files are found in the folder "out".

Note:

1. The DNS and IP are common across all customers
2. SFTP Password free connection is an option and not mandatory.
3. The set-up process can take 48 hours
4. Customers should only expect to use the DNS and not be reliant on the Internet Protocol (IP) address. This is because Royal Mail will not change the DNS but may change the IP address in future.

^[1] SSH keys are a matching set of cryptographic keys which can be used for authentication. The public key can be shared freely without concern, while a private key is guarded and never exposed to anyone.

3. Accessing Mailmark Direct Data files

The data will be in a variable length file, in a format known as CSV (Comma-Separated Variable length) with a header record giving a name to each field. It will be transmitted via SFTP. The file will need to be retrieved by the user through;

- a. Accessing the SFTP
- b. Retrieving the file from the secure host server
- c. Transferring the selected file(s) to the customer's destination of choice

There are a number of opensource tools which can be used to retrieve the Mailmark Direct Data files from the SFTP server.

Options include WinSCP and FileZilla for which, to support customers accessing MDD we have provided some guidance below.

The MDD files will automatically be permanently deleted from the SFTP server on the 8th day.

Please note: Royal Mail does not recommend one tool over the other and it is your responsibility to ensure the chosen programme meets your company's security policies.

WinSCP

- Establish connection_
https://winscp.net/eng/docs/guide_connect
- Download the file_
https://winscp.net/eng/docs/task_download

FileZilla

- Download the following link_
<https://www.ostraining.com/blog/webdesign/filezilla-beginner/>

PuttyGen

- Download the following link_
<https://www.ssh.com/ssh/putty/windows/puttygen>

7-ZIP

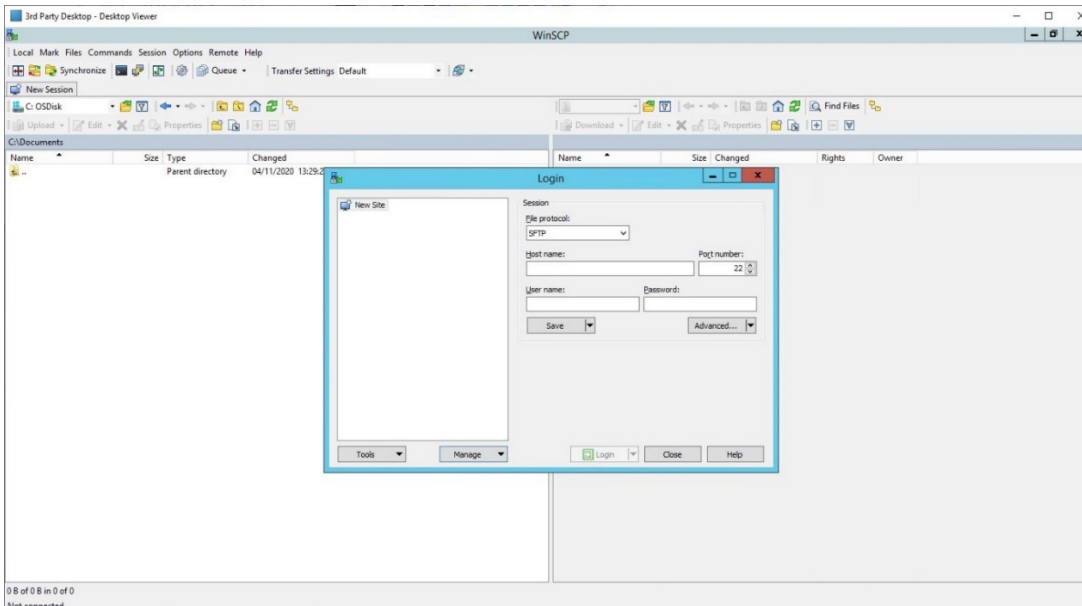
- Download the following link_
<https://www.7-zip.org/>

Detailed guidance on each option follows in the next section.

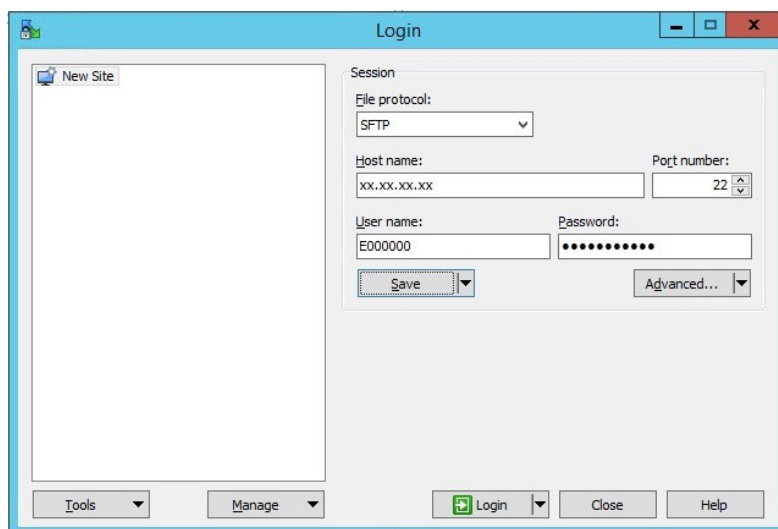


4. Accessing MDD – WinSCP

1. Start WinSCP and the *Login* dialog box appears.

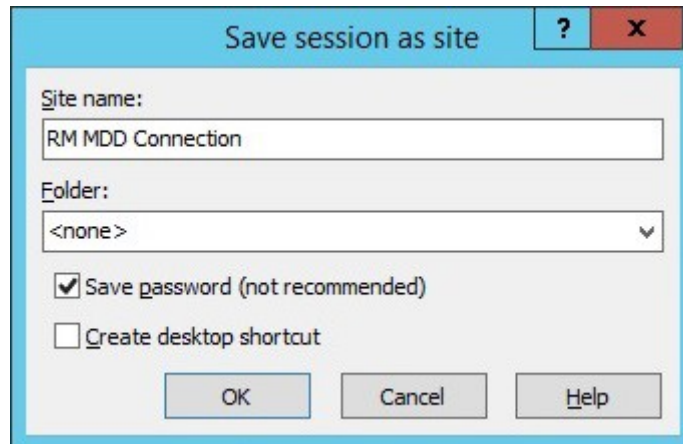


2. Add the connection details in the *Login* dialog box:
 - i. Select **SFTP** in the *File Protocol* field.
 - ii. Type the DNS **ftg.bdtg.royalmailgroup.com** in the *Hostname* field.
 - iii. Select *Port Number*: **22**.
 - iv. Type your customer **E123456** in the *Username* field.
 - v. Type your password in the *Password* field.



3. Click the **Save** button. The *Save session as site* dialog box appears.

4. Type a connection name, for example **RM MDD Connection**.
5. Optionally, navigate to the **/pub/1036/out** folder in the folder field.
6. You then have the option to *Save password*
 - a. Tick if you wish – *(not recommended)* option or,
 - b. Do not tick, if unticked the password will have to be typed every time.



Save session as site

Site name:
RM MDD Connection

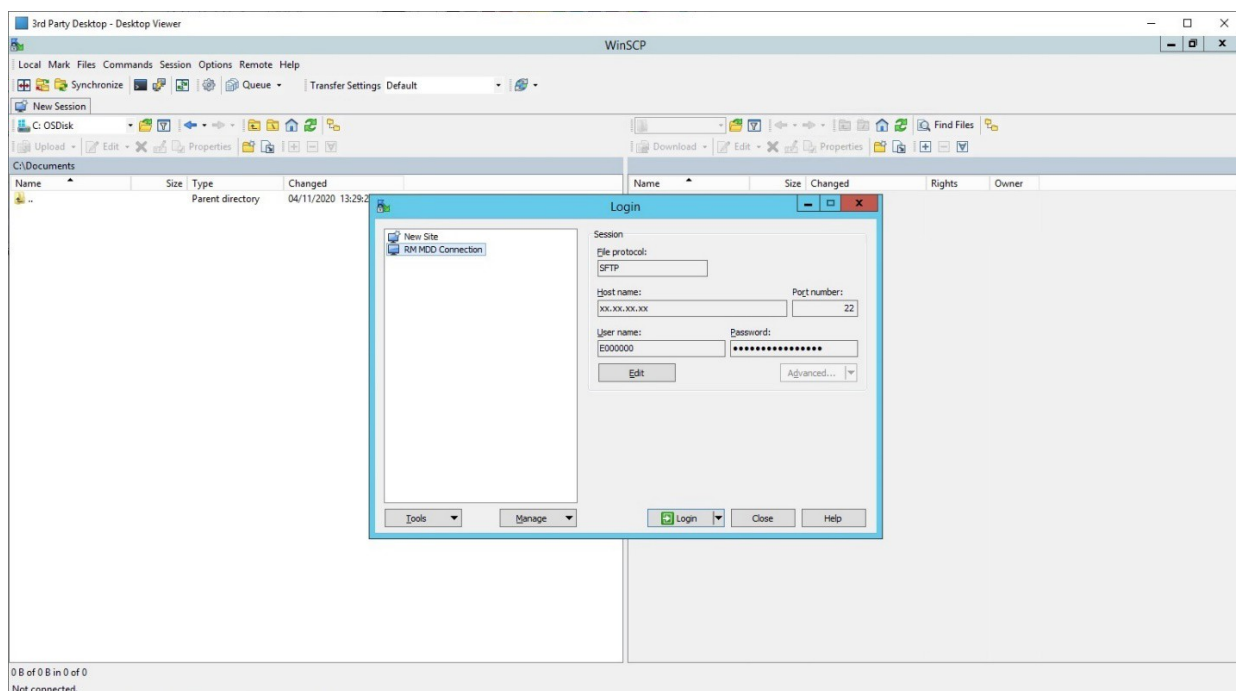
Folder:
<none>

☒ Save password (not recommended)

☐ Create desktop shortcut

OK Cancel Help

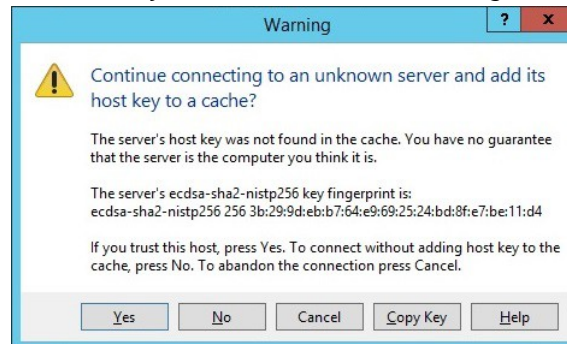
7. Click the **OK** button.
8. The connection details will be saved for future use without needing to repeat step 2.



9. Click the **Login** button.

A warning dialog box appears.

You will be requested to save the host key of the FTG Server during the first connection.



10. You have choice of storing the key

- Click the **Yes** button to accept and store the key, or,
- Click the **No** button to accept without storing the key.

If you select **No**, you will be shown this dialog box every time the connection is established.

An Authentication Banner dialog box appears.



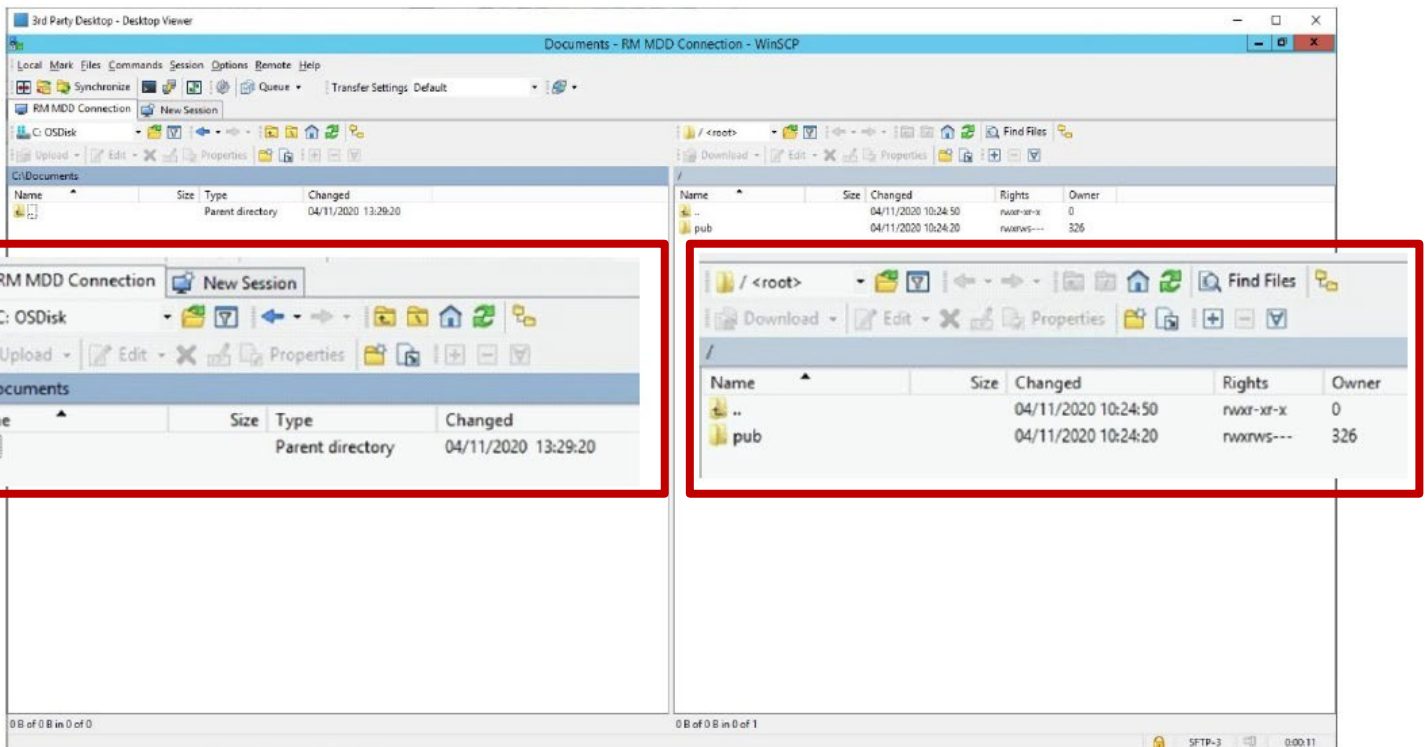
11. Tick the **Never show this banner again** box.

12. Click the **Continue** button.

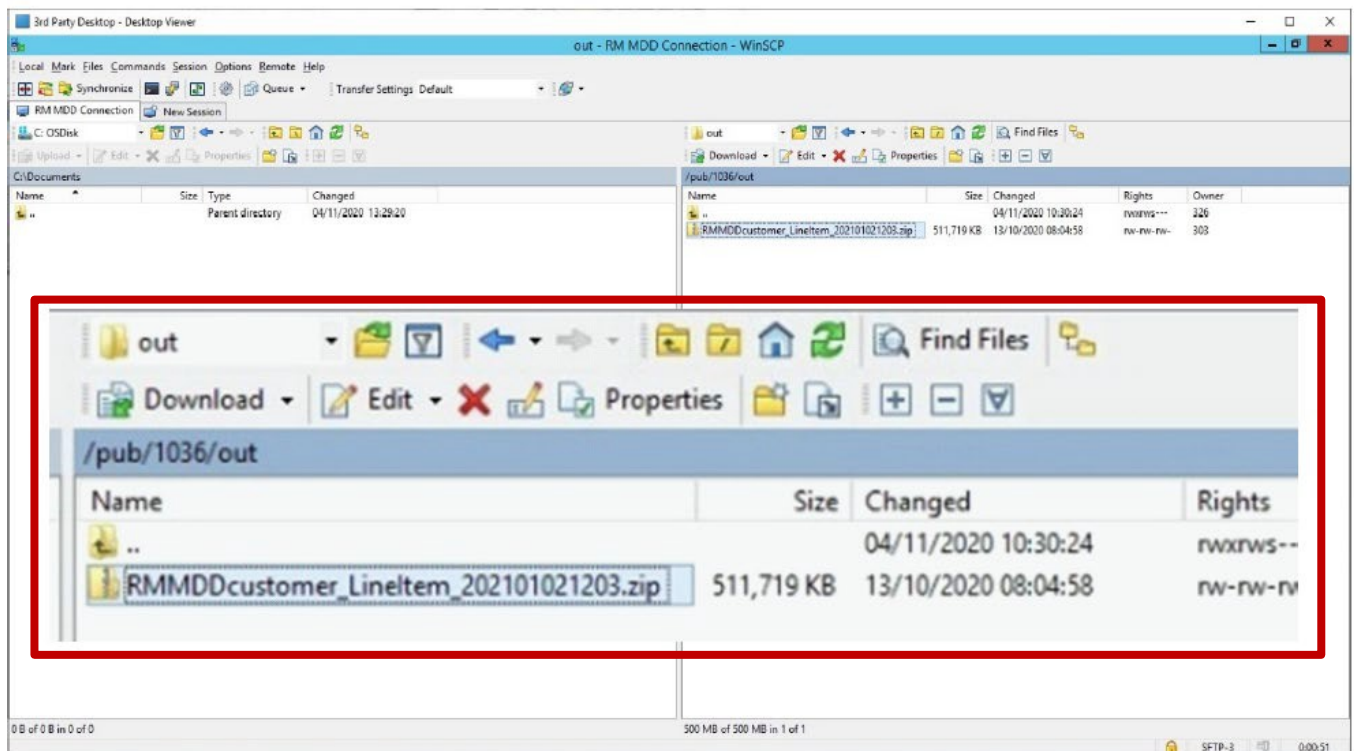
You will then see a main window area split into two sections.

on the right, the server you have connected to;

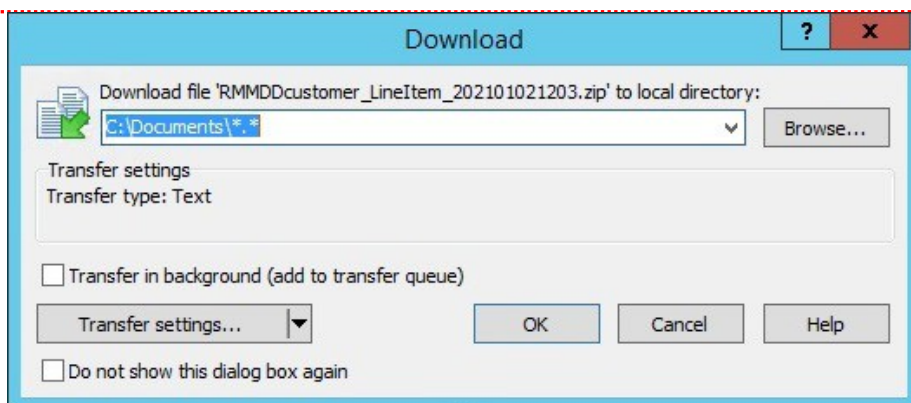
on the left, your own computer's hard drive.



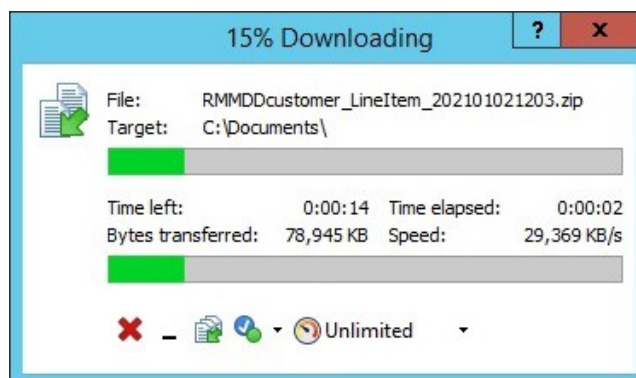
13. Navigate to the folder in your own computer (left pane) where you wish to download the file to.
14. Navigate to **/pub/1036/out** directory on the remote server where the MDD's files are stored. Click on the folder icons.



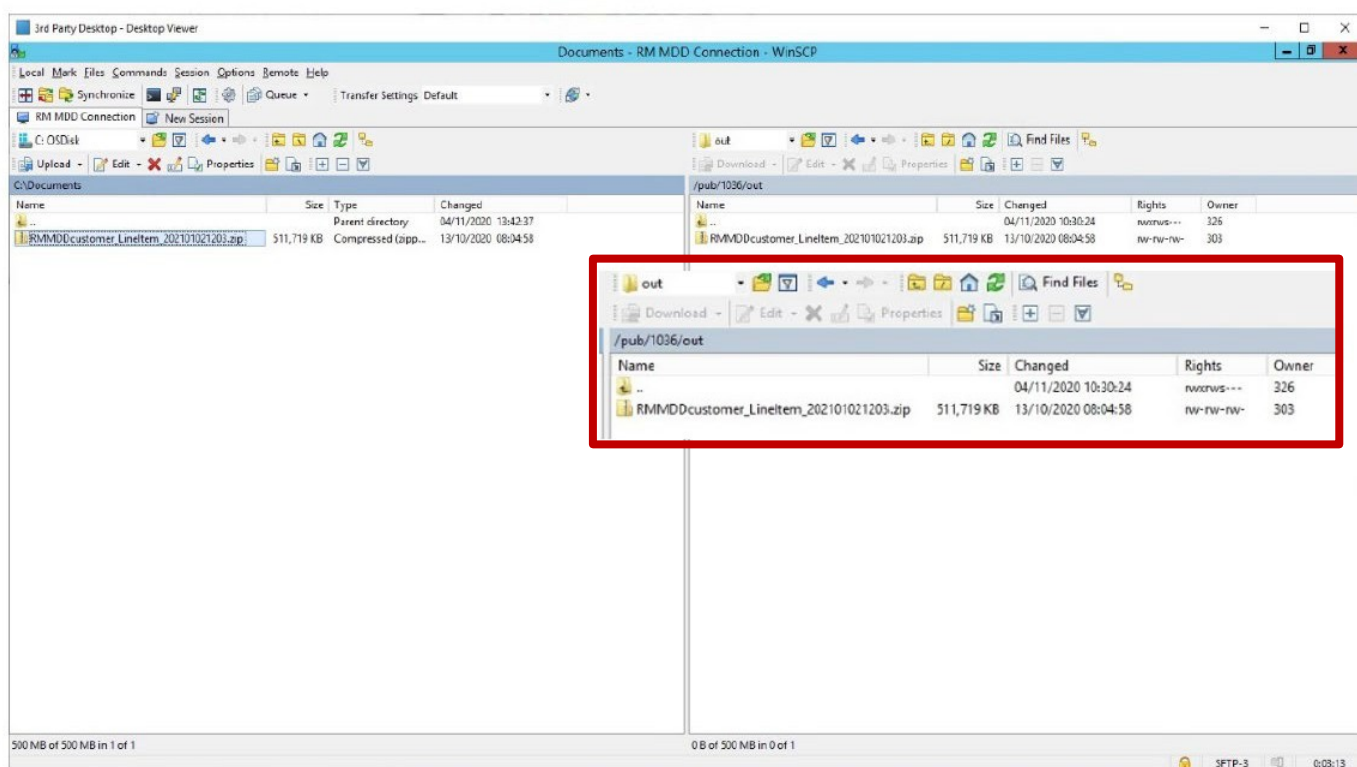
15. Highlight the file(s) to be downloaded.
16. Click the **Download** button. A *Download* dialog box appears.



17. Navigate to/confirm the location in your computer's hard drive where the file will be stored.
18. Click the **OK** button. A *Downloading* dialog box appears; no action is required from you.



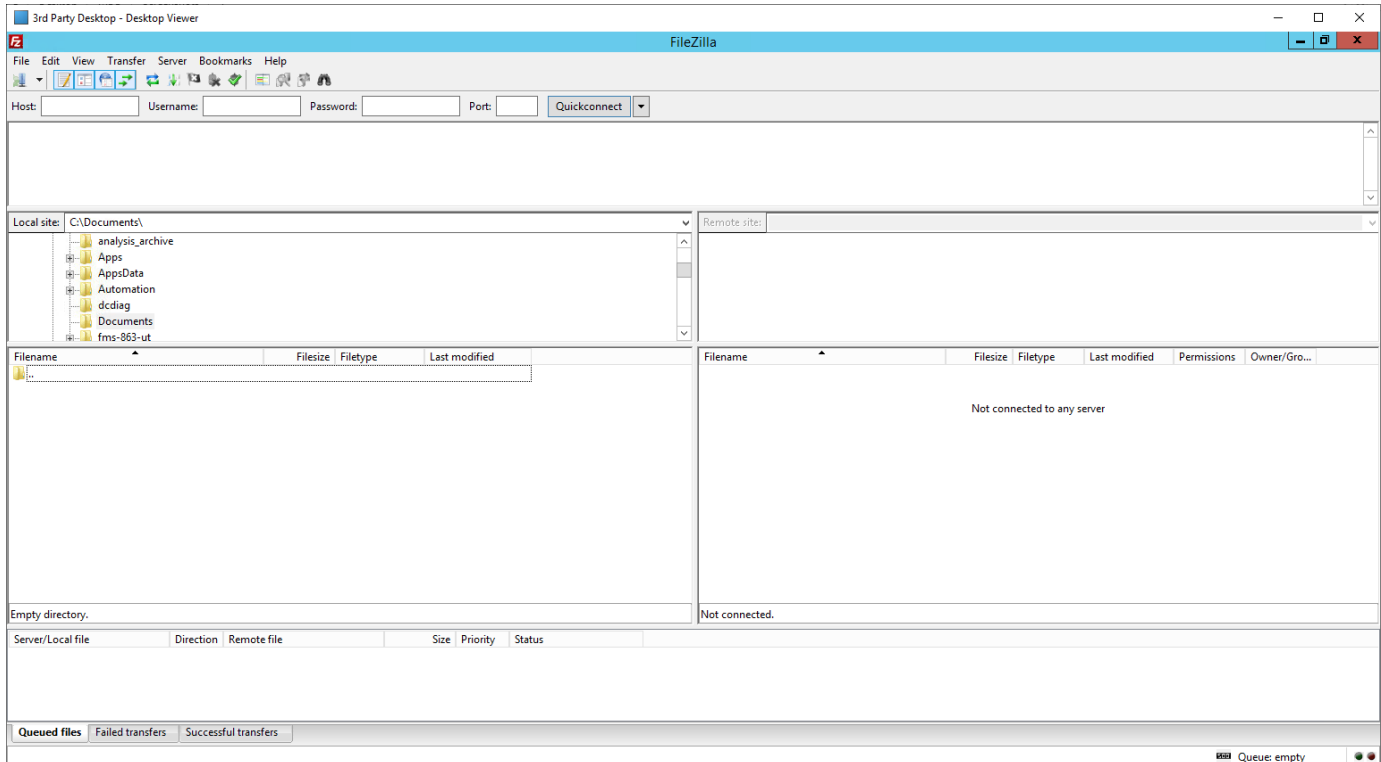
When the file(s) is/are downloaded the file(s) will be visible on the right pane of the screen.




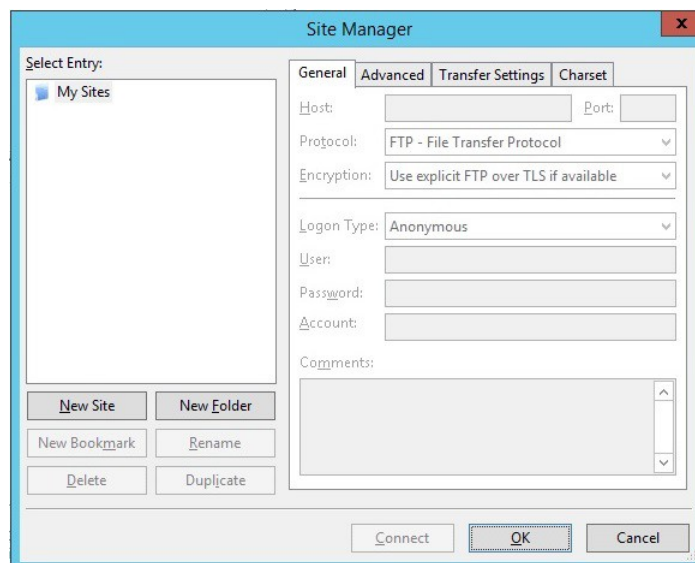
19. The MDD file download is complete.

5. Accessing MDD - FileZilla

1. Start FileZilla.



2. Click the **Site Manager** button . The *Site Manager* dialog box appears. It is necessary to add the connection details.



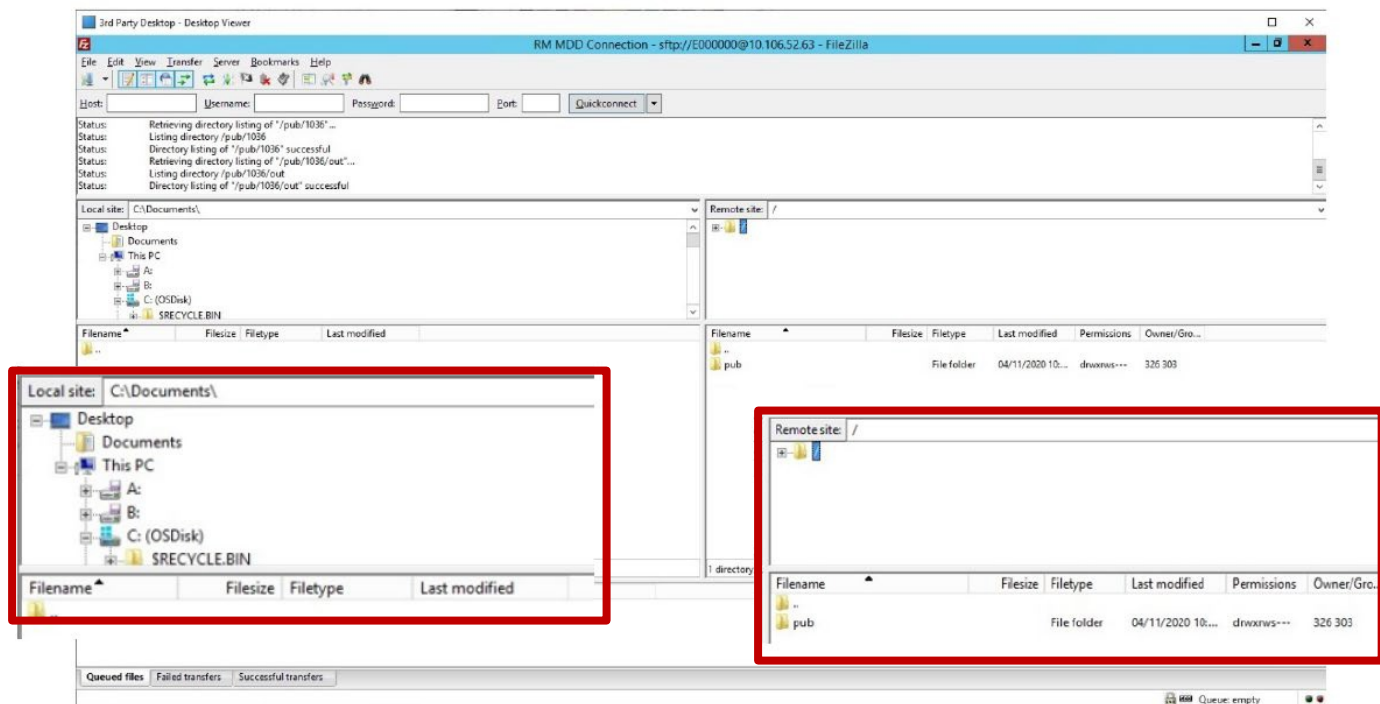
3. Click the **New Site** button.
4. Add the connection details in the Login dialog box:
 - i. On the right pane, Rename the site connection name to **RM MDD Connection**
 - ii. Type DNS **ftg.bdtg.royalmailgroup.com** in the **Host** field.
 - iii. Type **22** in the **Port** field.
 - iv. Select **SFTP – SSH File Transfer protocol** in the **Protocol** field.
 - v. Select the **Normal** option in the **Logon Type** field.
 - vi. Type your customer number, for example **E123456** in the **User** field.
 - vii. Type your Password in the **Password** field.

4. Click the **Connect** button to proceed with the connection.
It will be required to save the host key of the FTG Server during the first connection.
5. You have the option whether or not to trust the host:
 - To trust the host: Tick the **Always trust this host, add this key to the cache** box.
 - If you wish to proceed without storing the key, do not tick the box

6. Click the **OK** button.

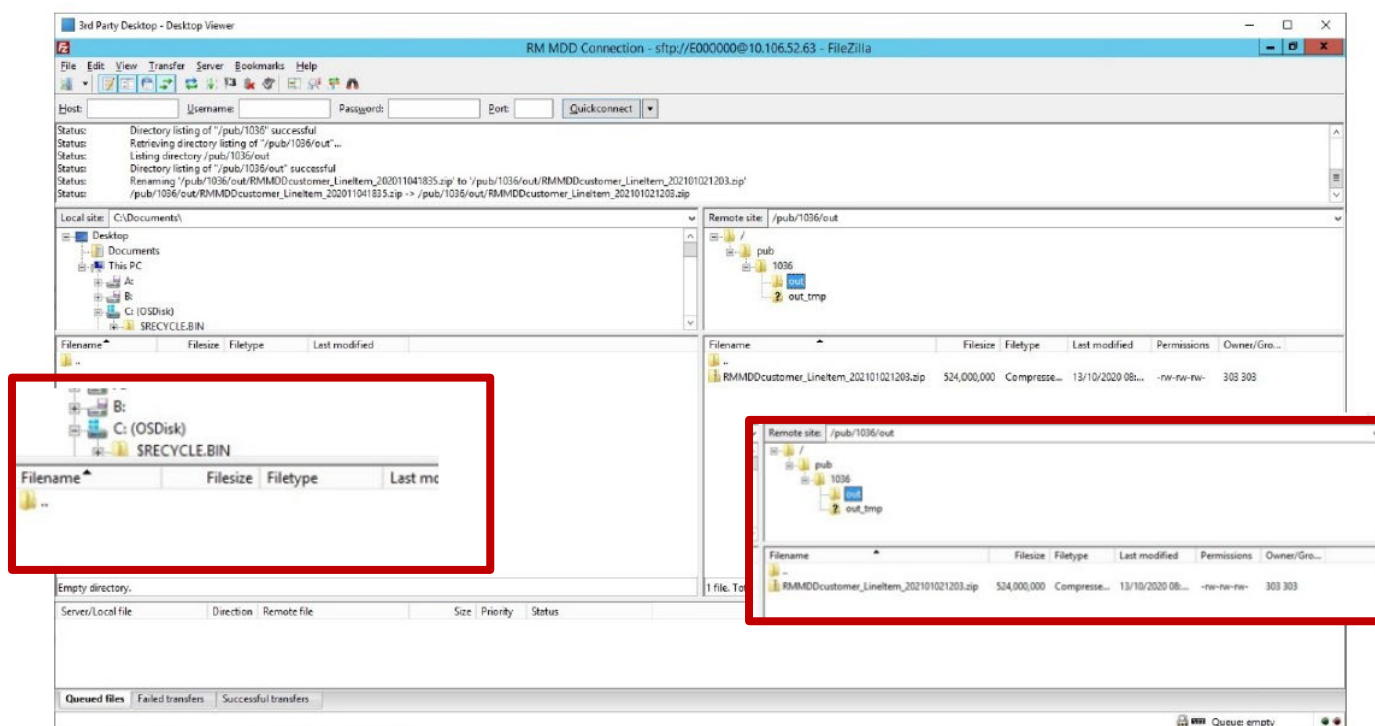
The screenshot below shows the main window area split into two sections.

- on the right, the server you have connect to;
- on the left, your own computer's hard drive.

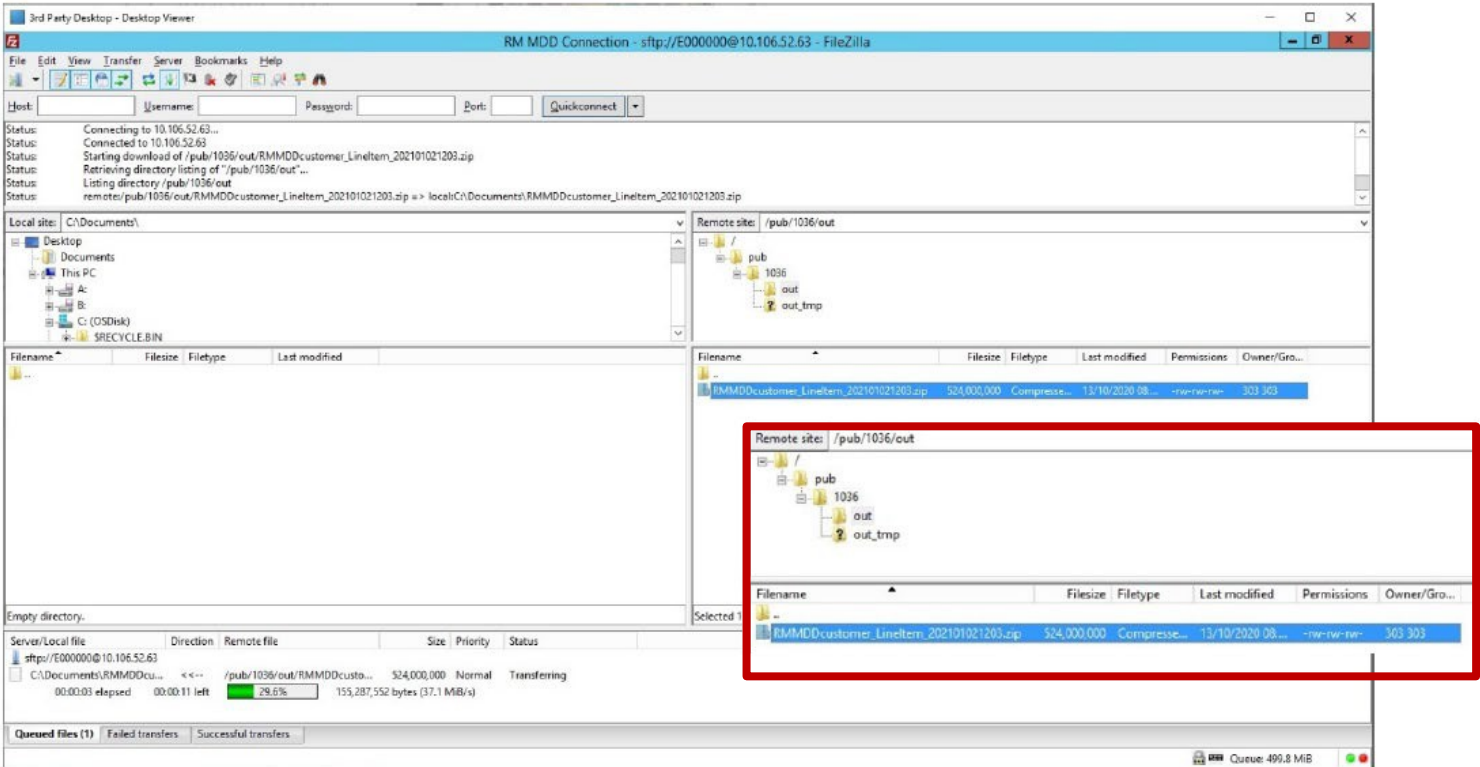


7. Navigate to the folder in your own computer (left pane) where you wish to download the file

8. Navigate to **/pub/1036/out** directory on the remote server where the MDD's files are stored. Click on the folder icons.



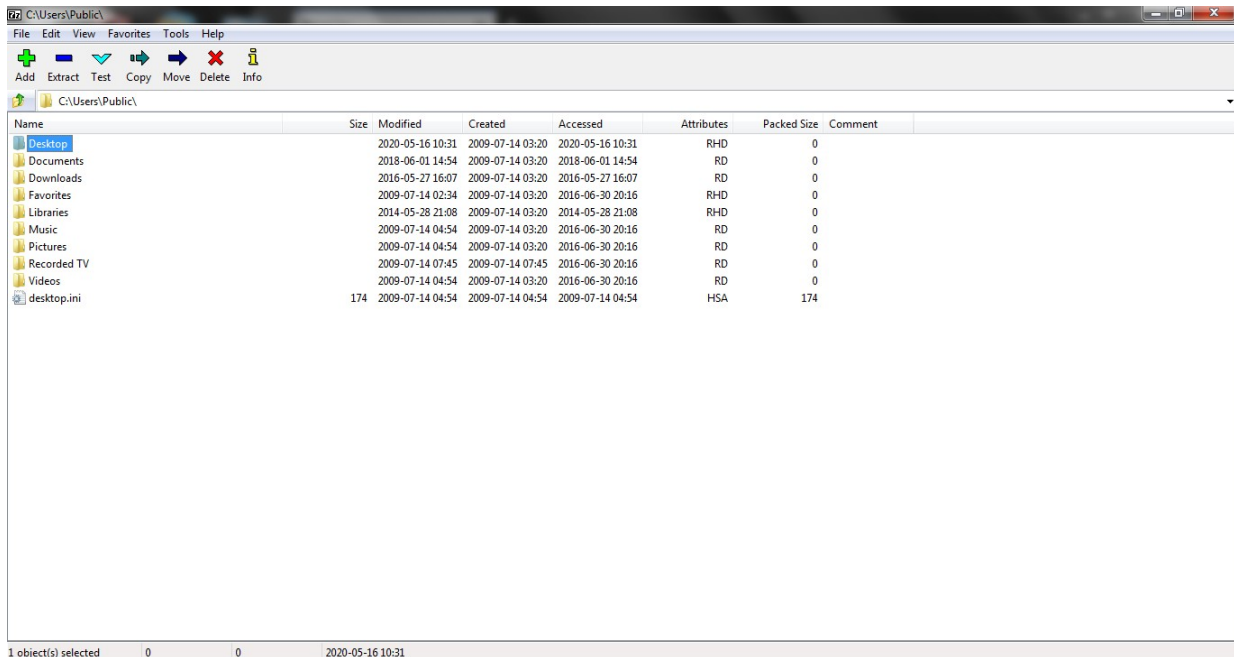
9. Double-click the file(s) to be downloaded. The file transfer process will begin.



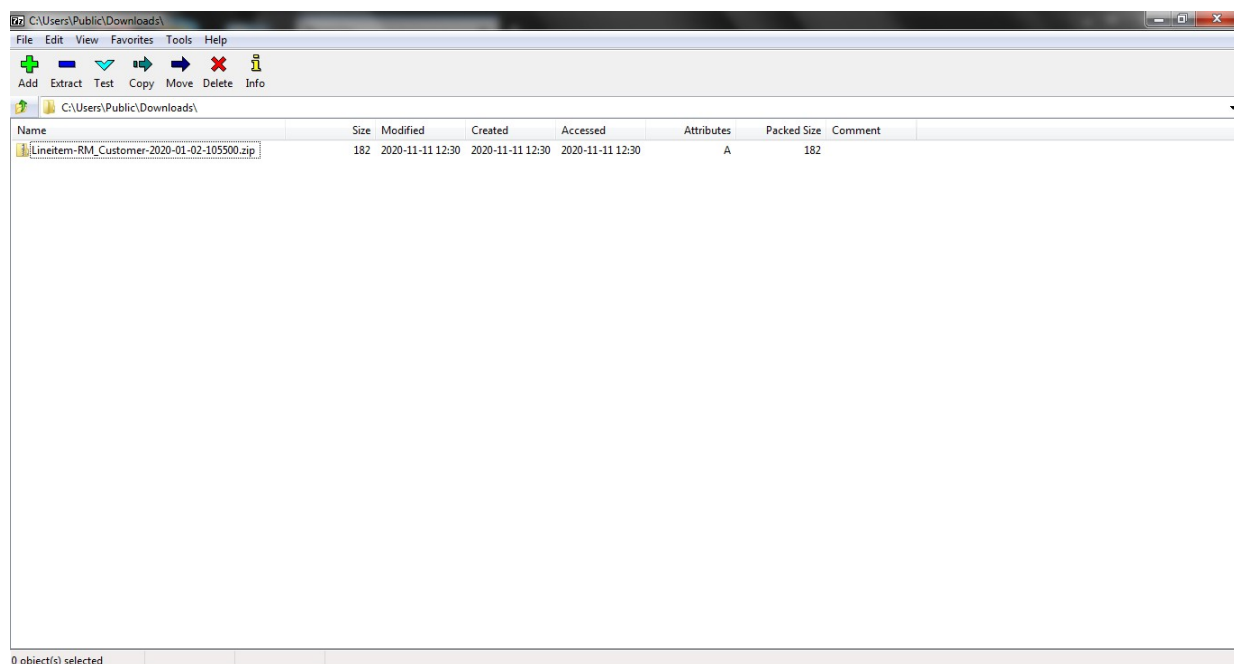
10. When the transfer is completed, the file is available on the local customer hard drive.

6. Unzipping a File

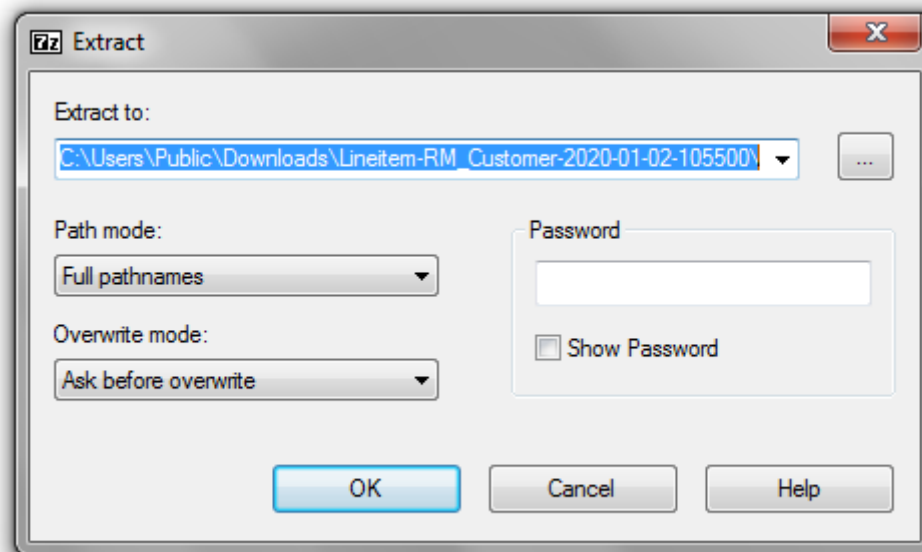
1. Start 7-Zip.



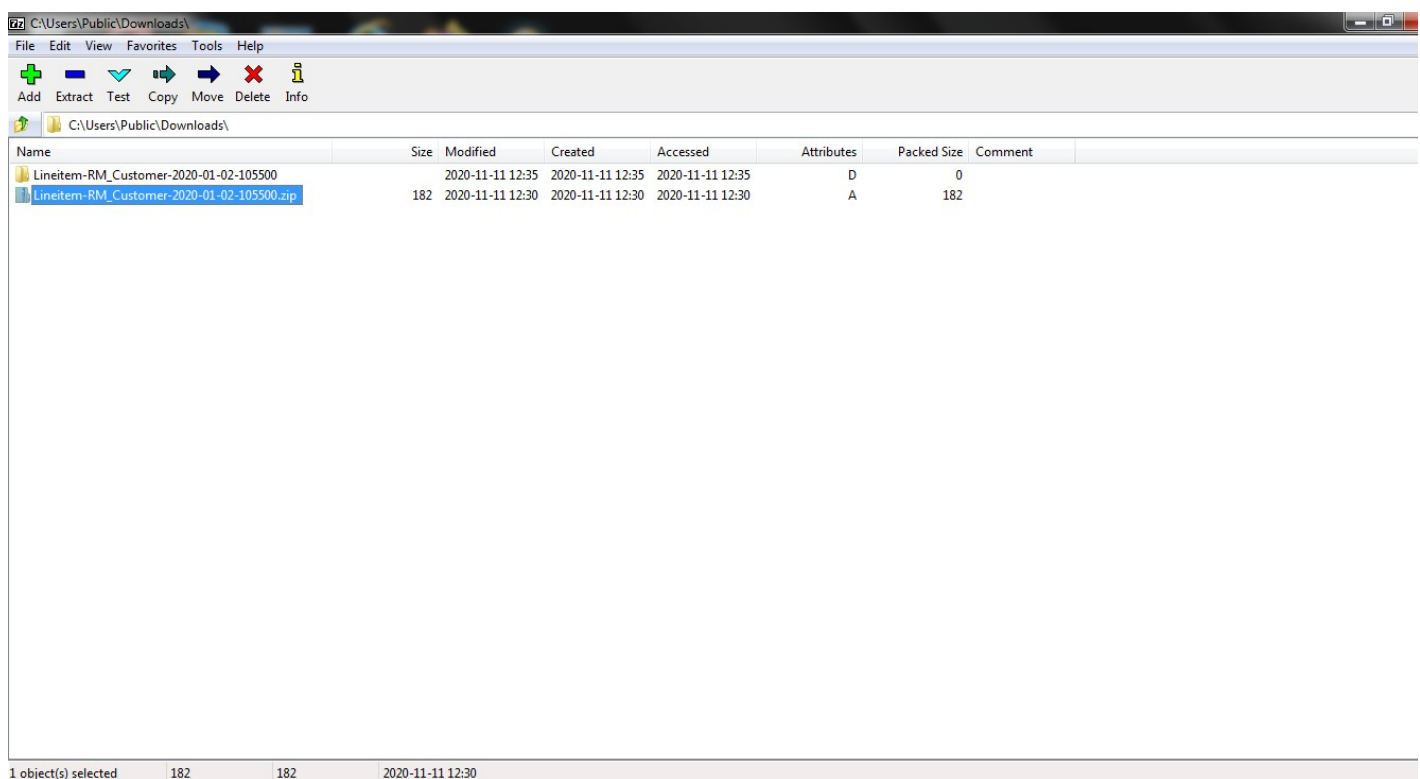
2. Navigate to the folder where you download the file to, in this example C:\user\Public\Downloads.



3. Click the file to extract.
4. Click the **Extract** button. The file will be extracted to the same folder it is currently. The file doesn't have a password, so none is required.



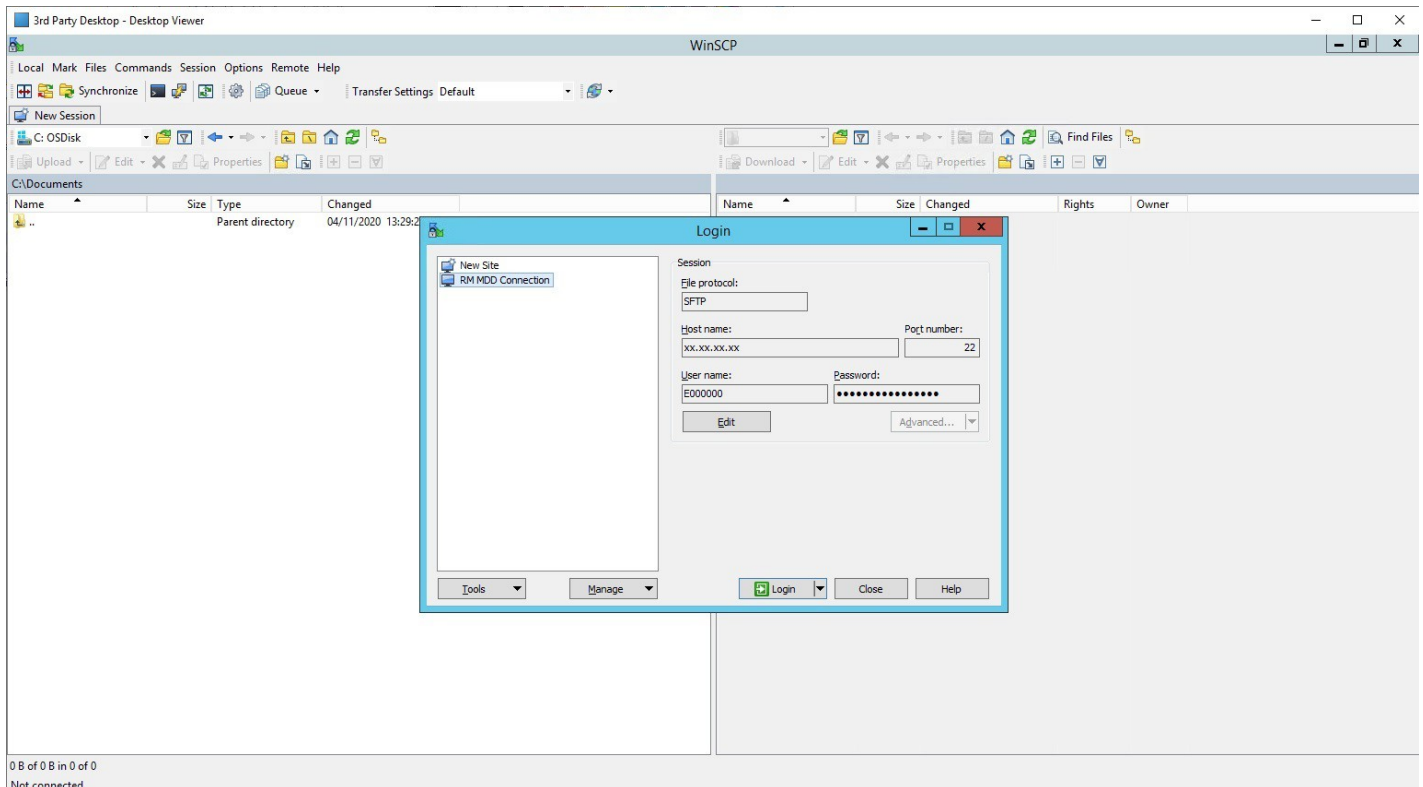
5. Navigate to a new folder location if you wish to; or alternatively
6. Click the **OK** button to extract the csv file. The file is extract into a new folder with the same file as the file.



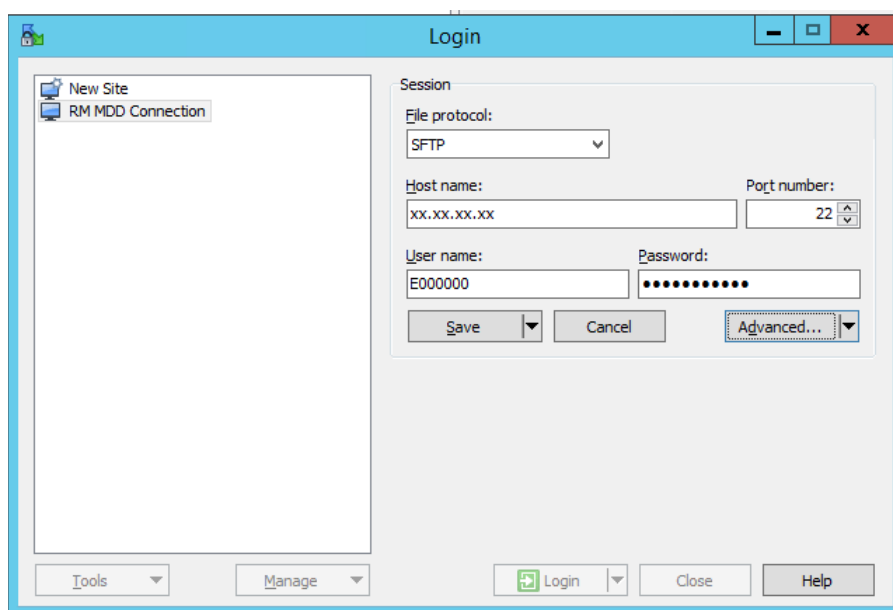
The file is now ready to be processed.

7. Adding Public Key – WinSCP

1. Start WinSCP and the *Login* dialog box appears.



2. Highlight the *RM MDD Connection* on the left pane.
3. Click the **Edit** button. The *advance* button is now activated.



4. Click the **Advance** button. The *Advance Site Settings* dialog box appears.

The screenshot shows the 'Advanced Site Settings' dialog box with the 'Environment' tab selected in the left pane. The right pane contains the following settings:

- Server environment**
 - End-of-line characters (if not indicated by server): **LF** (dropdown)
 - UTF-8 encoding for filenames: **Auto** (dropdown)
 - Time zone offset: **0** hours, **0** minutes (spinners)
 - ☒ Detect automatically
 - ☐ Trim VMS version numbers
- Daylight saving time**
 - ☒ Adjust remote timestamp to local conventions
 - ☐ Adjust remote timestamp with DST
 - ☐ Preserve remote timestamp

At the bottom of the dialog are buttons for 'Color' (dropdown), 'OK', 'Cancel', and 'Help'.

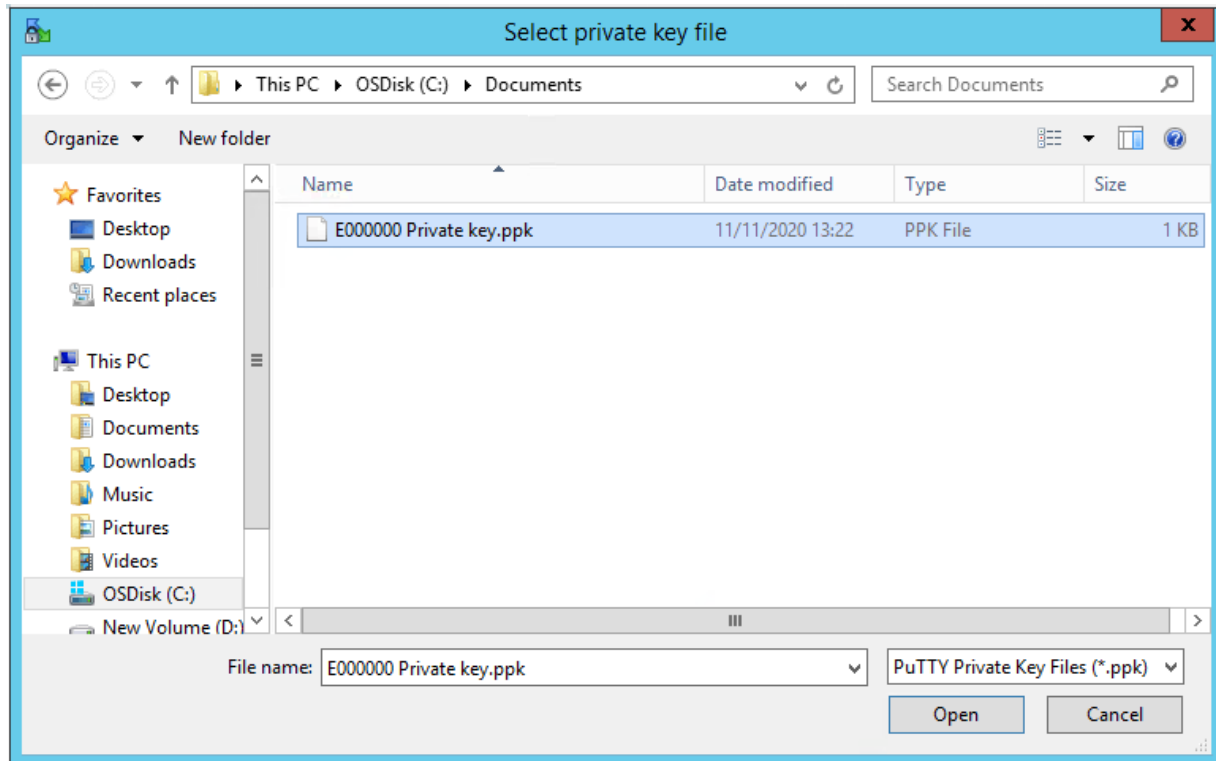
5. Click the **Authentication** option on the left pane.
The list of settings on the right side of the dialog box will change.

The screenshot shows the 'Advanced Site Settings' dialog box with the 'Authentication' tab selected in the left pane. The right pane contains the following settings:

- ☐ Bypass authentication entirely
- Authentication options**
 - ☒ Attempt authentication using Pageant
 - ☒ Attempt 'keyboard-interactive' authentication
 - ☒ Respond with password to the first prompt
 - ☐ Attempt TIS or CryptoCard authentication (SSH-1)
- Authentication parameters**
 - ☐ Allow agent forwarding
 - Private key file: (with browse button)
- GSSAPI**
 - ☐ Attempt GSSAPI authentication
 - ☐ Allow GSSAPI credential delegation

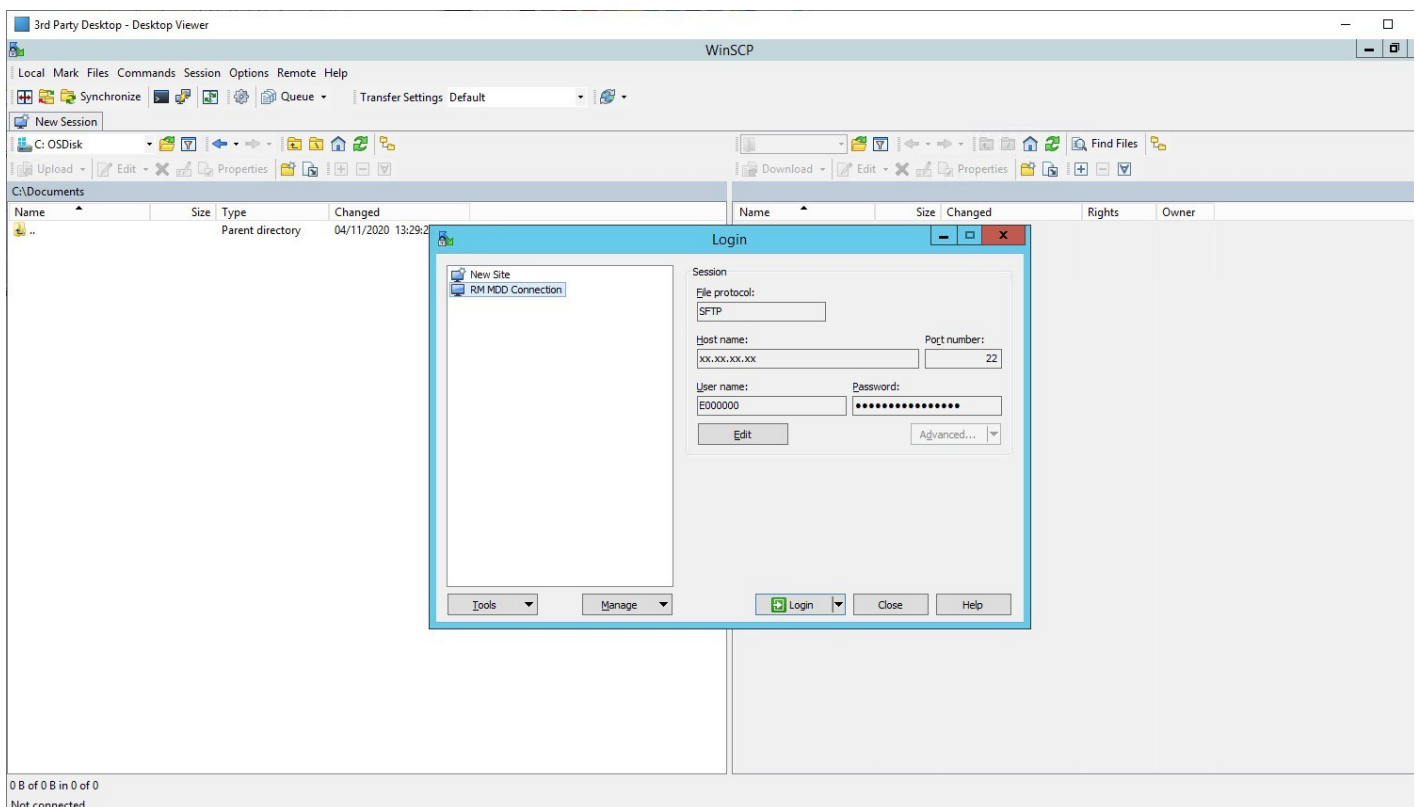
At the bottom of the dialog are buttons for 'Color' (dropdown), 'OK', 'Cancel', and 'Help'.

6. Click the **Browse** button. The *Select private key file* dialog box appears.



7. Highlight the public Key file. See how to generate a Public Key section.

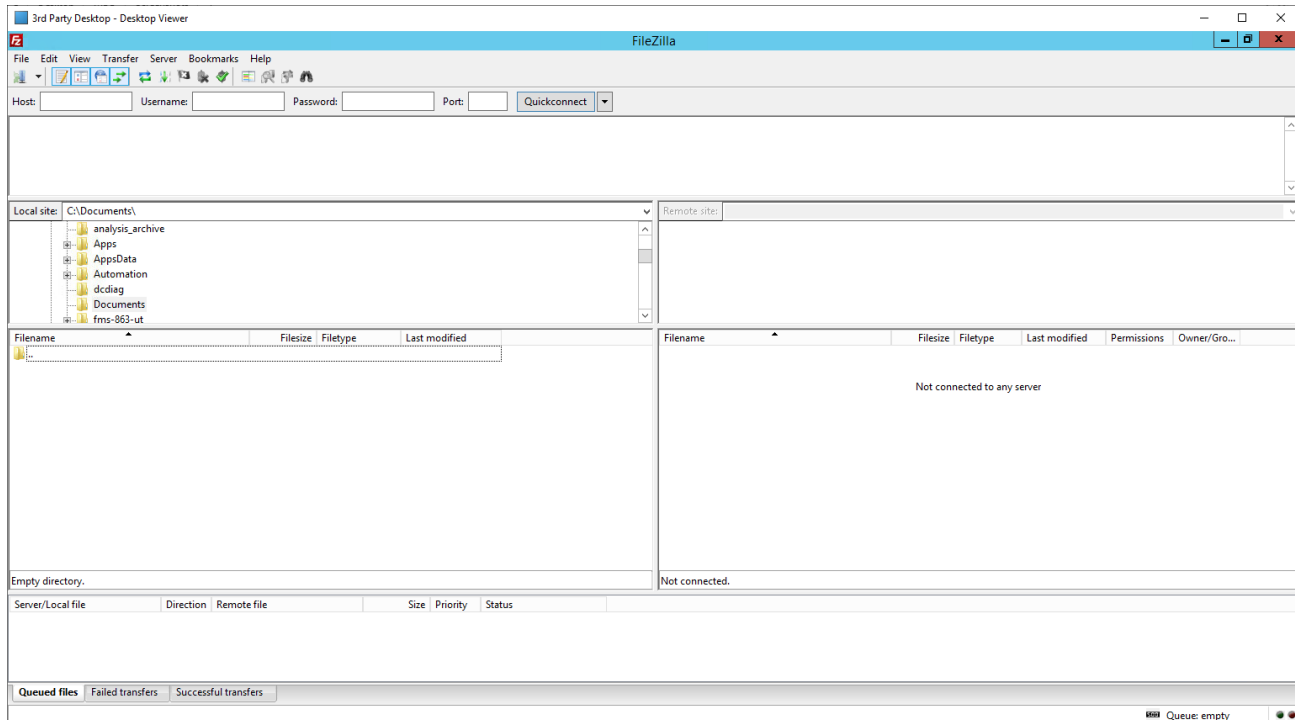
8. Click the **Open** button. The *Select private key file* dialog box closes.



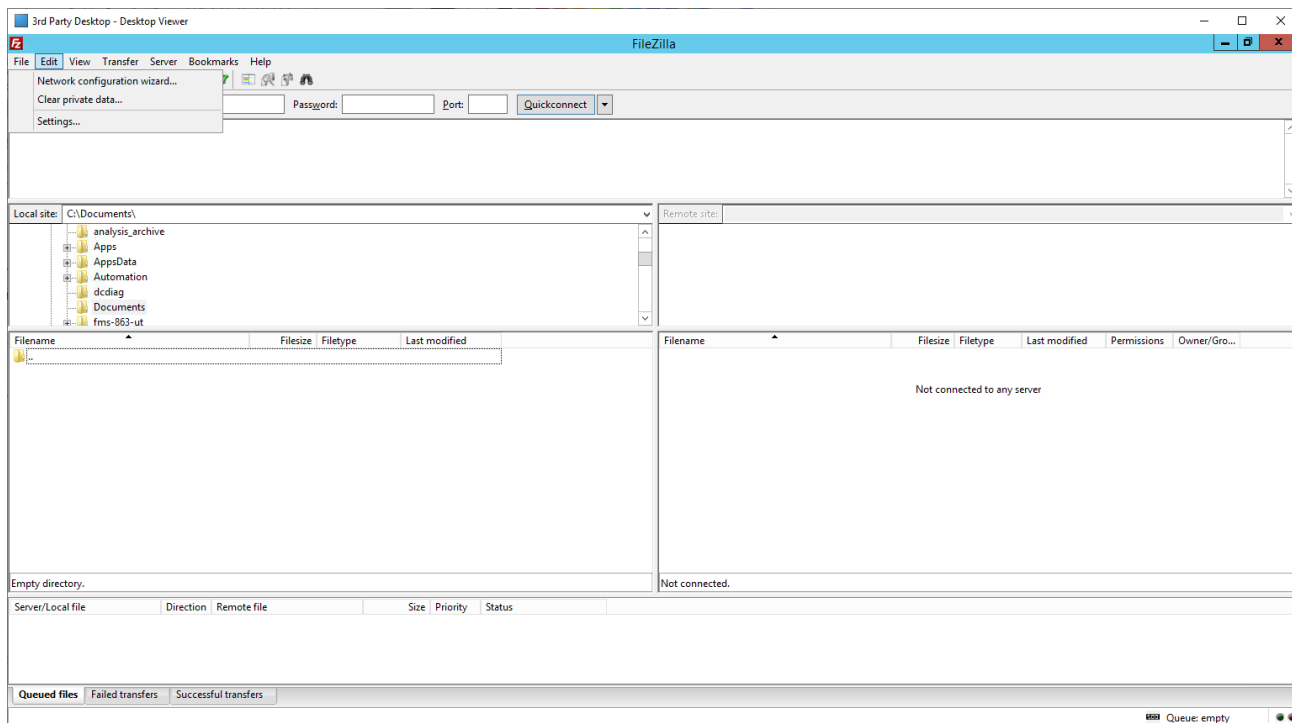
9. Click the **Login** button, to proceed with the connection.

8. Adding a Public Key - FileZilla

1. Start FileZilla.



2. Click the Edit Menu.



- Click the **Settings** option from the drop-down menu. The *Settings* dialog box appears.

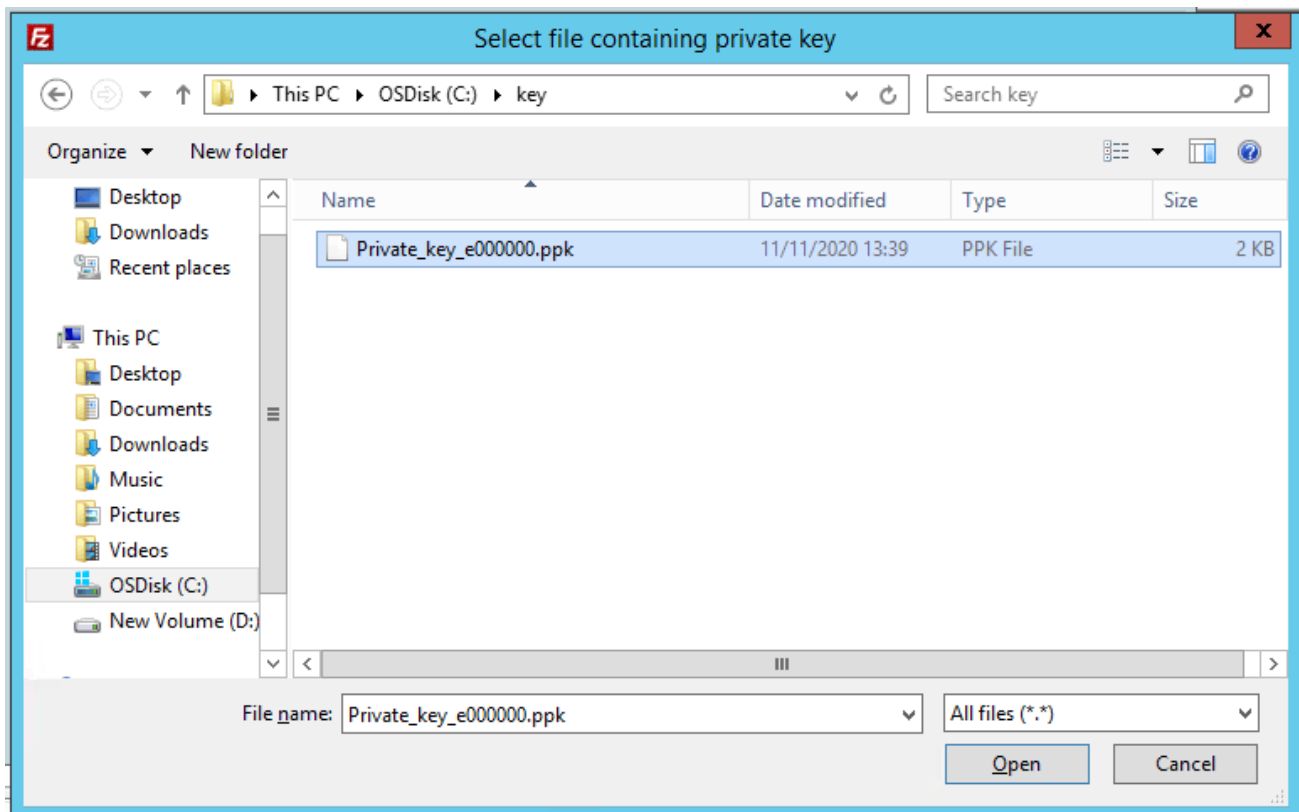
The screenshot shows the FileZilla Settings dialog box with the 'Connection' tab selected. The left pane shows a tree view with 'Connection' expanded, and 'SFTP' selected. The right pane shows the 'Overview' section with a 'Run configuration wizard now...' button. Below this is the 'Timeout' section with a 'Timeout in seconds' field set to 20. Further down is the 'Reconnection settings' section with 'Maximum number of retries' set to 2 and 'Delay between failed login attempts' set to 5. At the bottom are 'OK' and 'Cancel' buttons.

- Select the **SFTP** option in the left pane. The options on the right pane change.

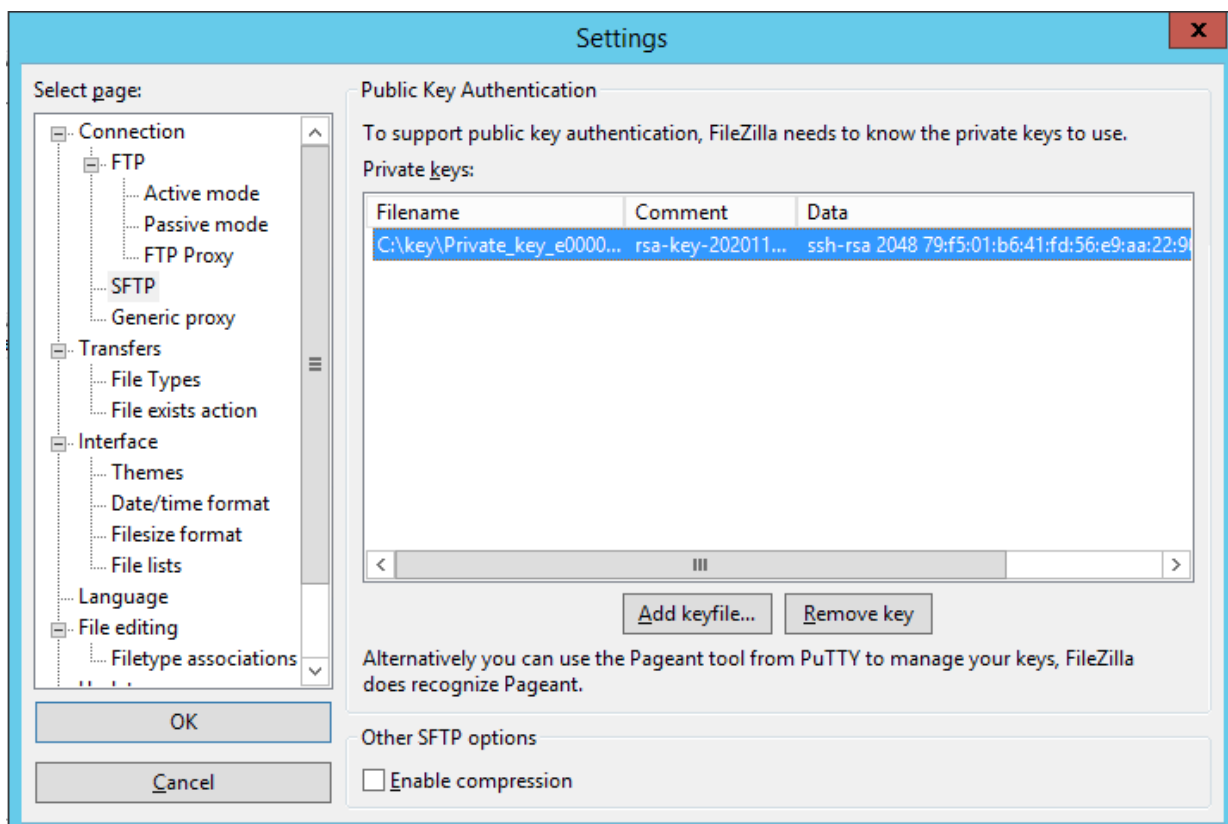
The screenshot shows the FileZilla Settings dialog box with the 'SFTP' tab selected. The left pane shows 'SFTP' selected under the 'Connection' category. The right pane shows the 'Public Key Authentication' section with a table for 'Private keys'. The table has three columns: 'Filename', 'Comment', and 'Data'. Below the table are 'Add keyfile...' and 'Remove key' buttons. At the bottom is the 'Other SFTP options' section with an 'Enable compression' checkbox. At the very bottom are 'OK' and 'Cancel' buttons.

Filename	Comment	Data

5. Click the **Add keyfile** button. The option on the right pane changes.



9. Highlight the public Key file. See how to generate a Public Key section.
10. Click the **Open** button. The *Settings* dialog box now lists the added public key.

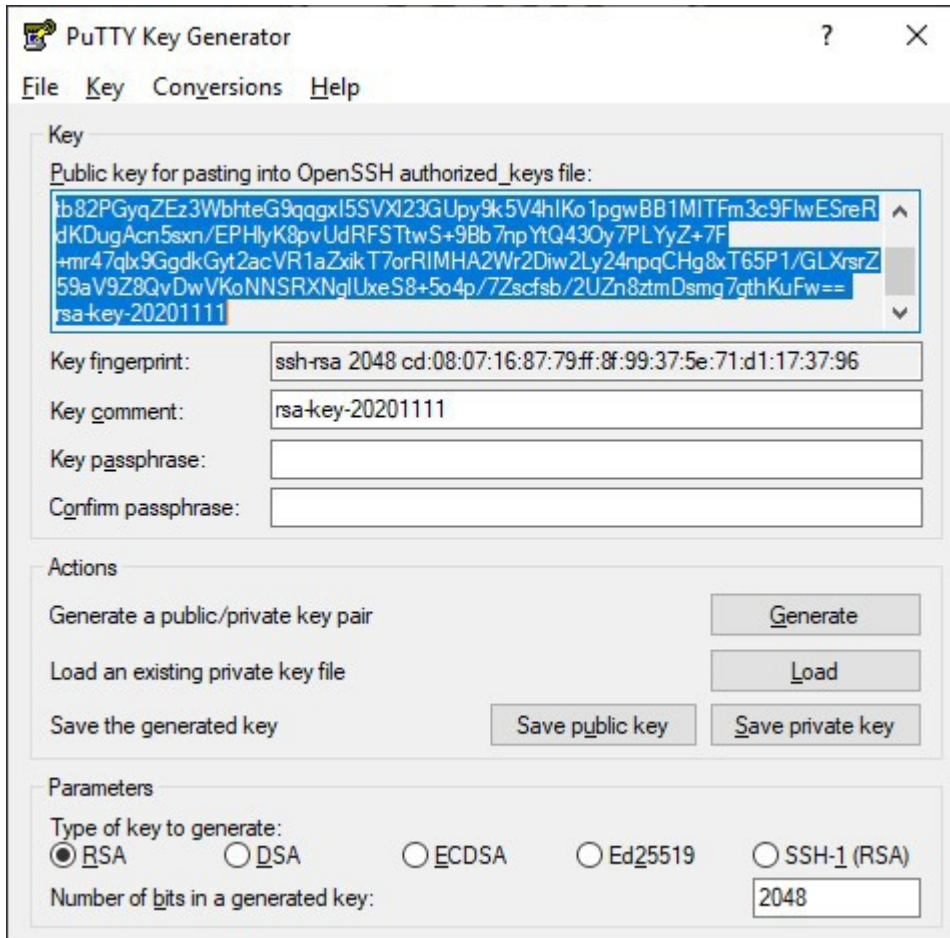


11. Click the **OK** button. The *Settings* dialog box closes and the key is saved.

9. Generating a Public Key

We strongly advise you to contact your system administrator or IT support to complete this task.

1. Start **PuttyGen**.
2. Click the **Generate** button.



The screenshot shows the PuTTY Key Generator window. The 'Key' tab is selected. The 'Public key for pasting into OpenSSH authorized_keys file:' text area contains the following text:

```

b82PGyqZEz3WbhteG9qqgXl5SVXl23GUpY9k5V4hIKo1pgwBB1MITFm3c9FlwESreR
dKDugAcn5sxn/EPHlyK8pvUdRFSstwS+9Bb7npYtQ43Oy7PLYyZ+7F
+mr47qlx9GgdkGyt2acVR1aZxikT7orRIMHA2Wr2Diw2Ly24npqCHg8xT65P1/GLXrsrZ
59aV9Z8QvDwVKoNNSRXNglUxeS8+5o4p/7Zscfsb/2UZn8ztmDsmg7qthKuFw==
rsa-key-20201111
    
```

The 'Key fingerprint:' field shows 'ssh-rsa 2048 cd:08:07:16:87:79:ff:8f:99:37:5e:71:d1:17:37:96'. The 'Key comment:' field contains 'rsa-key-20201111'. The 'Key passphrase:' and 'Confirm passphrase:' fields are empty. In the 'Actions' section, the 'Generate' button is highlighted. The 'Parameters' section shows 'Type of key to generate:' with 'RSA' selected, and 'Number of bits in a generated key:' set to '2048'.

3. Click the **Save private key** button. Navigate to where you would like to save the public key.
This key is not to be provided to anyone else.
4. Click the **Save public key** button. Navigate to where you would like to save the public key..
This key needs to be given to Royal Mail.
5. Send by email the public key to mailmark@royalmail.com

