	Title: **Technical Requirements & Submission Using FTP**			
	Owner: IT Services Author: TSD-MMF	Reviewed by: Approved by:	Project Name: CIC-CIS Rev.: 1.1	Classification: Public

Objective

To provide a quick reference guide for operators of Financial Institutions (FI) who are responsible for credit data submission to Credit Information Corporation (CIC). The document discusses the technical requirements for the preparation and submission of credit data using an FTP client.

Technical Requirements

In order to contribute credit data to CIC, Submitting Entities (SE) should have met or prepared the following technical requirements:

- Internet connection with at least 1MB upstream
- FTP Client software installed with Transport Layer Security (TLS) 1.2 support
- Latest Gpg4Win encryption software installed
- FTP account and server information obtained from CIC
- FTP servers public gpg key obtained from CIC
- Anti-Virus software installed and updated on equipment (where transmission is to originate) to be used
- Registered to CIC all public IP addresses where submission will originate
- Configured corporate firewall to allow connection to CIC servers:
  - Server IP addresses: 202.90.128.58 to 202.90.128.62
  - Service ports (TCP): 21, 443, & 65000-65100
- System should have any of the following supported platforms: Windows 7/8.1/2008/2012, Mac OSX, & RedHat/Ubuntu Linux

FileZilla FTP client is one of the popular free FTP clients. If FileZilla is not yet installed in your system, it can be downloaded from the official FileZilla website (https://filezilla-project.org). Refer to the FileZilla documentation for the installation procedure.

Gpg4Win is a solution for file and email encryption for the Windows environment. It is a free open-source software that implement the latest encryption technologies to secure data and email. Gpg4Win is used by the Anti-Money Laundering Council (AMLC) in the Philippines to encrypt report files from financial institutions. The latest version of Gpg4Win can be downloaded from the official Gpg4Win website (http://www.gpg4win.org). Likewise, you can refer to their documentation for the installation procedure if it is not yet installed in your system.

For organizations with strict policy on egress traffic, you must involve your Firewall Administrator to modify or add rules to your existing firewall policy. As stated above, the equipment from which the submission will originate must be allowed to connect to CIC's servers on the following TCP ports 21, 443, and 65000-65100.

Preparing   file   for   submission

1. Ensure that the submission file is in the correct format. It should be a pipe-delimited text file and encoded in **UTF-8 w/o BOM**. The example uses Sublime text editor.

    *Refer to CIC Submission Manual
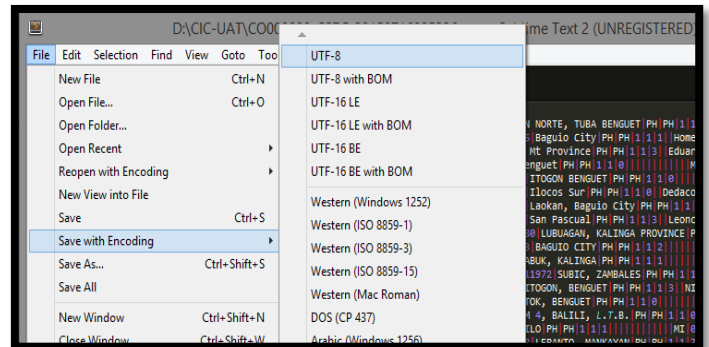
2. Compress the text to conserve bandwidth. In Windows Explorer, right-click the text file, click "Send to", then click "Compressed (Zipped) Folder"; a zipped version of the file will be created and saved with similar name but using a .zip extension.
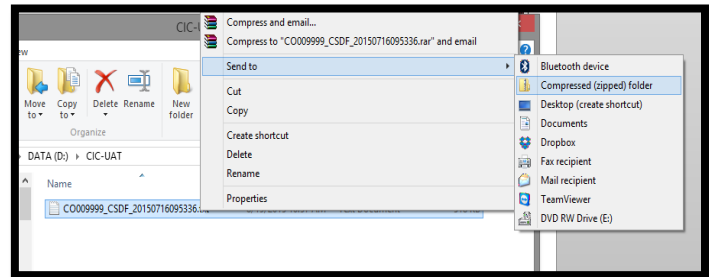
    To display file extension in Windows explorer, enable "File name extensions" in the View properties of Windows Explorer.

3. Encrypt the zipped file to ensure data confidentiality; right-click the zipped file, then click Sign and encrypt to initiate the encryption and signing process.
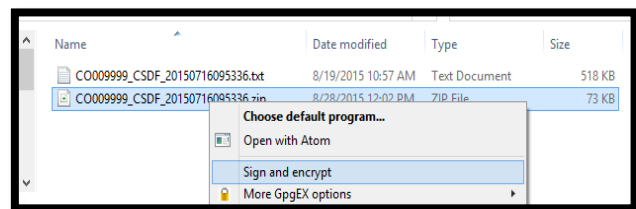
4. On Sign/Encrypt Files window, Select Encrypt, then click Next.
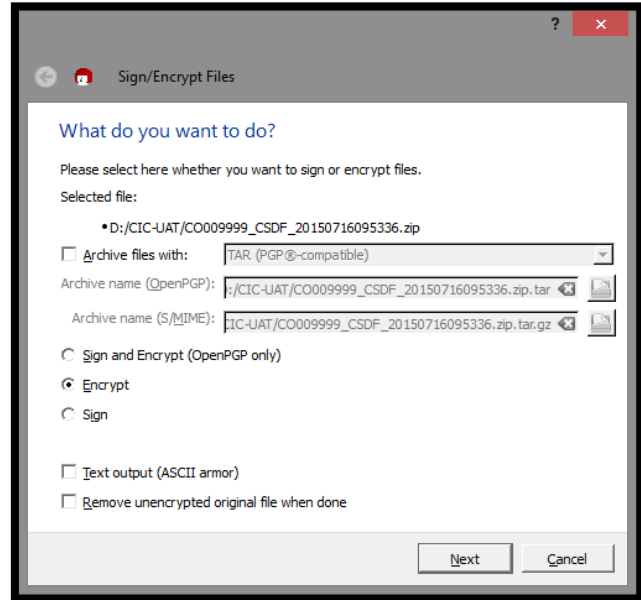
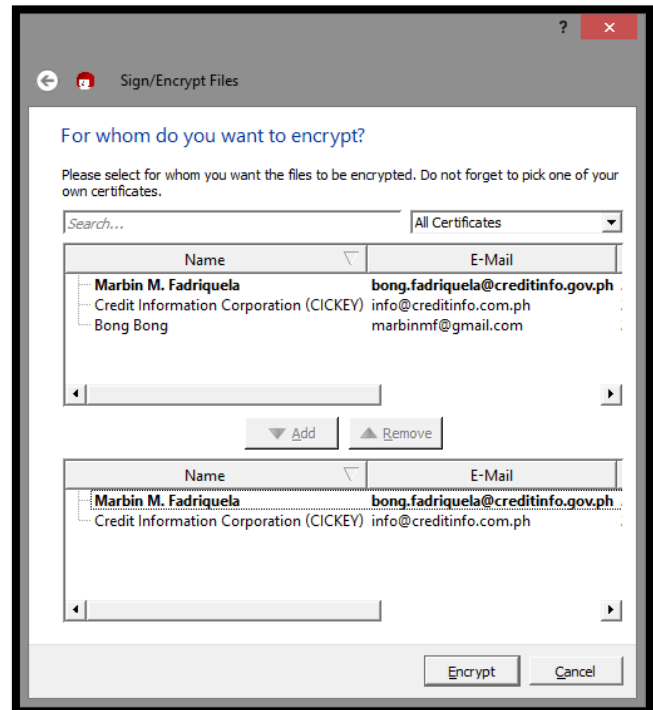5. Select your own certificate and CIC keys, then click Add, then click Encrypt.
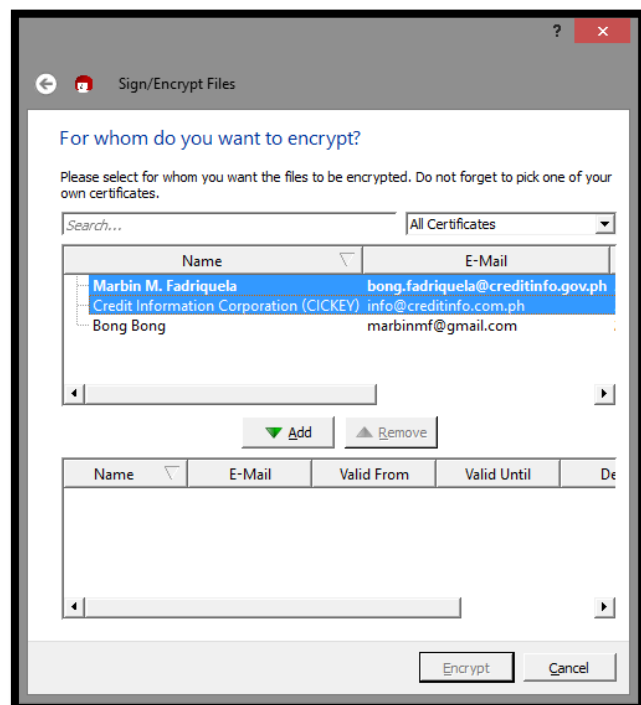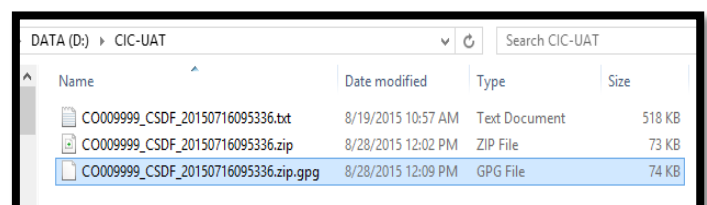
6. Encryption status and progress window appears. Once done, click Finish.
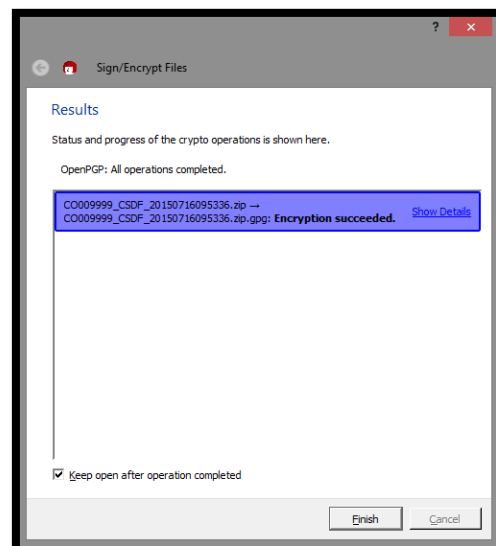
7. This is how your files will look like when preparation process is completed. You'll have three versions of the submission file in different type as indicated by their file extension.
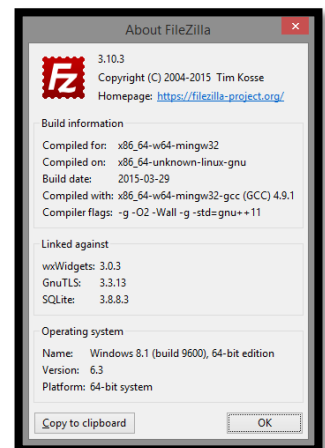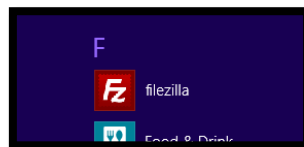
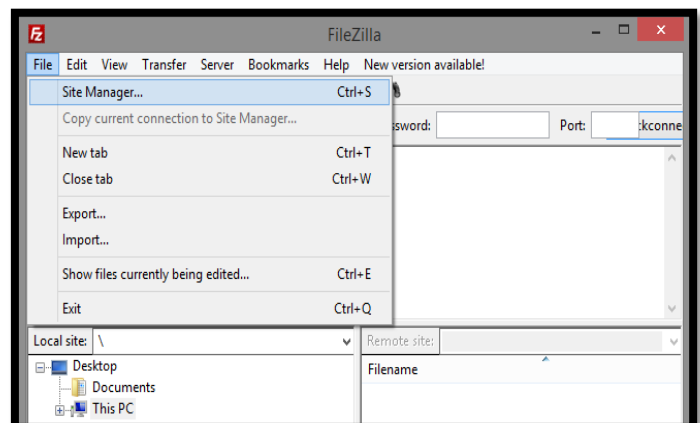**Note: You will only submit the Encrypted file.**

Uploading   Submission   File   via   FTPS   (FileZilla)

1. Launch FileZilla FTP Client; on Windows 8 Start menu, locate FileZilla and double-click.

    This guide uses FileZilla client v.3.10.3

2. Click File > Site Manage or Press Ctrl+S to open Site Manager window box.

3. On the Site Manager window, click New Site, and name it FTP-TEST.CIC;
4. Enter ftp-test.creditinfo.com.ph in the Host textbox;
5. Set Protocol to "FTP – File Transfer Protocol;"
6. Set Encryption to "Use explicit FTP over TLS if available."
7. Set Logon Type to "Account"
8. Enter your Username;
9. Enter your password;
10. Use your username for the Account;
11. Click Connect;

12. You can also set the log message pane to display detailed log messages by right-clicking on the pane, then selecting "Show detailed log;"
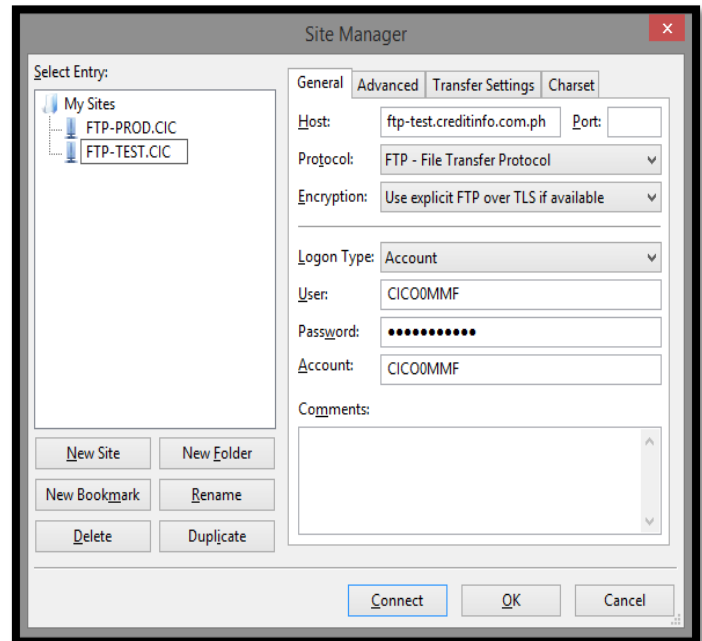
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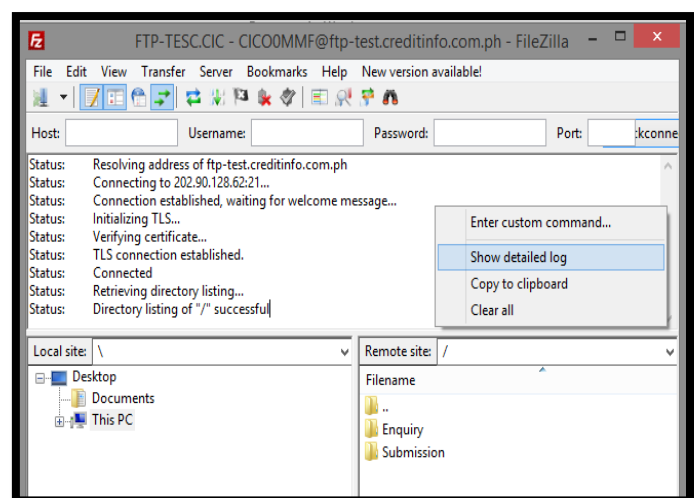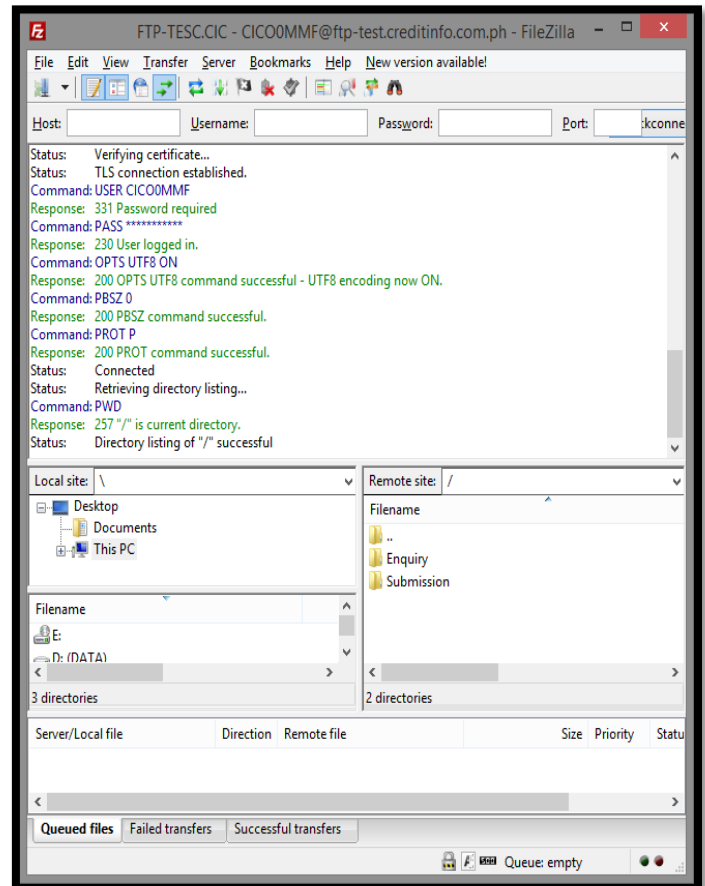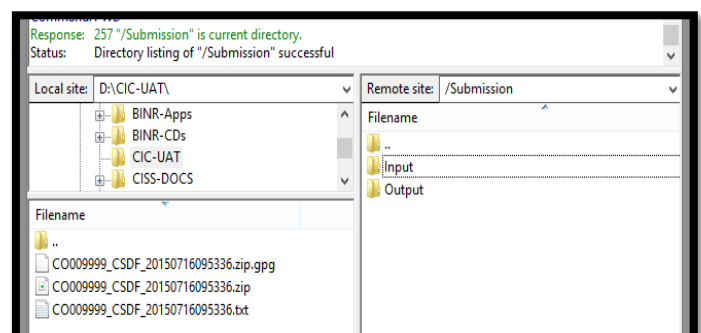| Owner: IT Services Author: TSD-MMF	Reviewed by: Approved by:	Project Name: CIC-CIS Rev.: 1.1	Classification: Public

13. Same as above but with detailed log displayed. (Similar to item #12, but with detailed log displayed

    Below the log messages pane are the Local site & Remote site panes. Local site pane displays your local folders and files, while the remote site pane displays your FTP folder and files at the CIC FTP server.

    The home folder assigned to your institution has two sub-folders, viz. Enquiry and Submission. Each contains Input and Output sub-folders;

14. Upload your submission file in Submission/Input folder;

Uploading Submission File via FTPS (WinSCP)

1. Launch WinSCP application.

   This guide uses WinSCP v. 5.7.2

1. Click New Site and complete the setting as shown in the screenshot. Then click Save.

   Note: Don't save password. It will be prompted during connection.

2. Click Login. Enter password when prompted.

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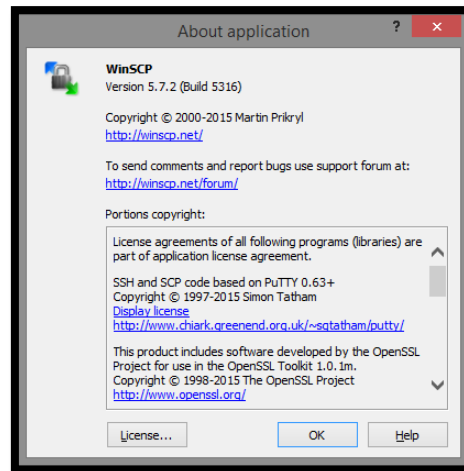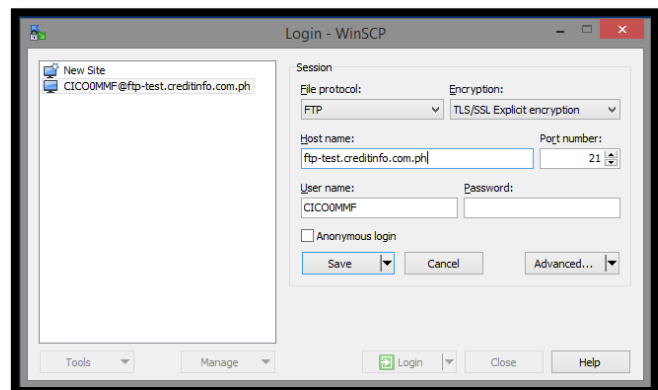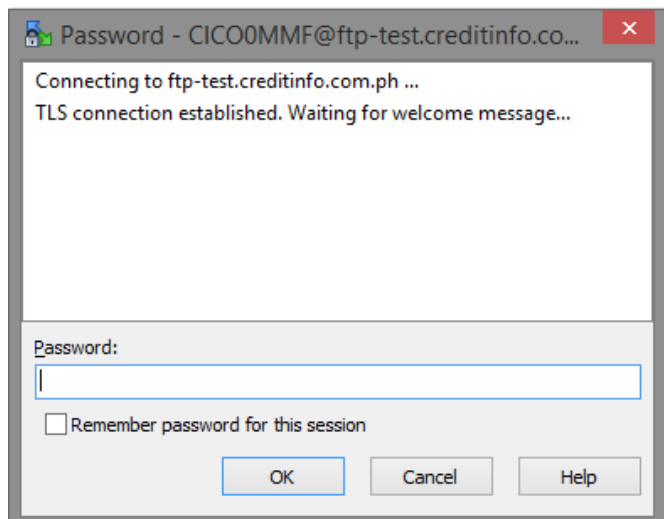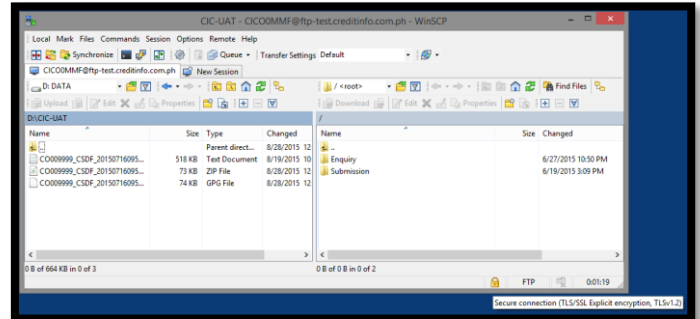| Owner: IT Services Author: TSD-MMF	Reviewed by: Approved by:	Project Name: CIC-CIS Rev.: 1.1	Classification: Public

3. When authenticated, this is how WinSCP appears. Left pane is your local site, right pane is your folder at CIC's ftp server. You can simply drag the submission file to Submission/Input folder.

4. Structure of your Submission folder. Upload submission data in Input folder. Monitor sys-out report in Output folder.
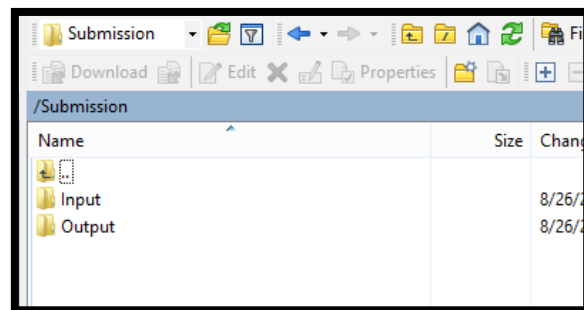
Troubleshooting

1. Connection failed, ftp client software's error message "***Can't resolve hostname***."
Client computer was not able to find host name of the server. Conduct a ping through other Internet host like google (8.8.8.8) and test-ftp IP (202.90.128.62). A request timed-out indicates the computer has network error or connection is being blocked by a firewall.

2. Cannot connect to server. The server's response is :
A."***534 Policy requires SSL***."
The FTP client being used does not support SSL or is not set to connect using SSL. If using a FileZilla FTP client, go to connection properties and set Encryption option to "Use explicit FTP over TLS if available."

B. "***Connection attempt failed with "ECONNREFUSED - Connection refused by server"***"
FTPS use two channels for connection, viz. command and data channels. CIC's FTPS (CIC's FTP's server OR CIC's FTP servers) server expect connection on TCP port 21 for the command, and TCP ports 65000-65100 for the data. These ports must be allowed to egress the firewall (both local & perimeter) in order for the ftp client to successfully connect to the server. Check also the antivirus installed in the computer. Kaspersky AV is known for blocking data channel ports.