



Packet Tracer – Exploring File and Data Encryption, Rymbayeva Anelya, 20B030299

Addressing Table

Device	Private IP Address	Public IP Address	Subnet Mask	Site
FTP/Web Server	10.44.1.254	209.165.201.3	255.255.255.0	Metropolis Bank HQ
Mary	10.44.3.101	N/A	255.255.255.0	Healthcare at Home
Bob	10.44.1.3	N/A	255.255.255.0	Metropolis Bank HQ

Objectives

Part 1: Locate the FTP Account Credentials for Mary's Laptop

Part 2: Upload Confidential Data using FTP

Part 3: Locate the FTP Account Credentials for Bob's PC

Part 4: Download Confidential Data using FTP

Part 5: Decrypt the Contents of the clientinfo.txt File

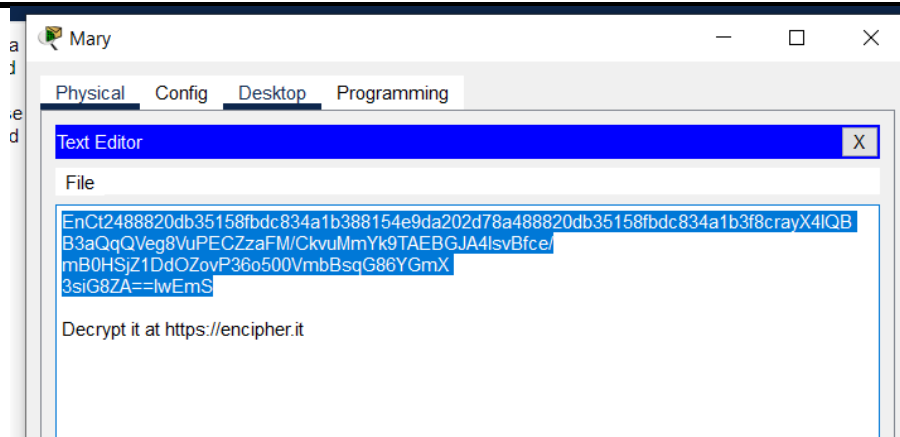
Background

In this activity, you will access the encrypted contents of multiple files and transfer a file across the Internet to a centralized FTP server. Another user will then download the file from the FTP server and decrypt the files' contents. The IP addressing, network configuration, and service configurations are already complete. You will use the client devices in the differing geographic regions to transfer a file with encrypted data to another device.

Part 1: Locate the FTP Account Credentials for Mary's Laptop

Step 1: Access the text document on Mary's laptop.

- Click the **Healthcare at Home** site and then click the laptop **Mary**.
- Click the **Desktop** tab and then click **Text Editor**.
- In the Text Editor window, click **File > Open**.
- Click the document **ftplogin.txt** and click **OK**.

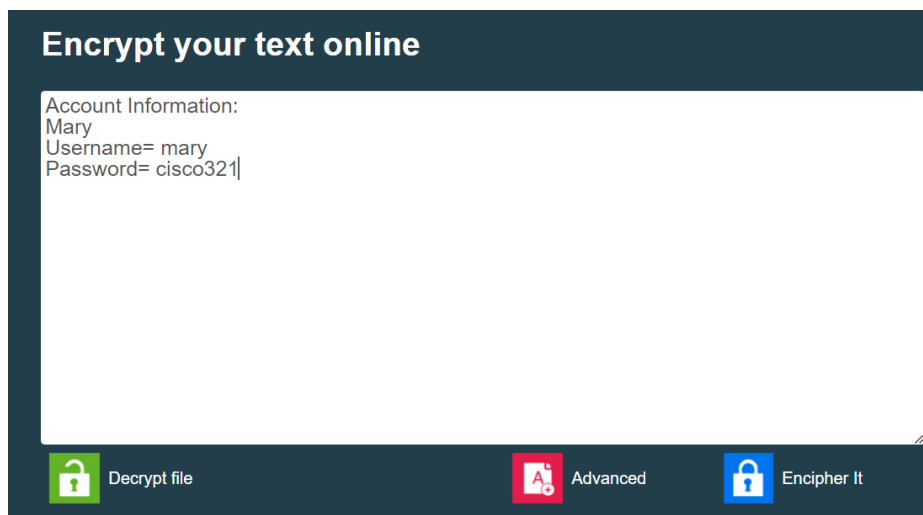


Step 2: Decrypt Mary's FTP account information.

- Highlight all the text from the **ftlogin.txt** file and copy it.
- Open a web browser on your personal computer and browse to the website <https://encipher.it>
- Click the **whitespace on the right of the website and paste in the encrypted text.**

Click the **Decipher It** button and use the decryption password **maryftp123** to decrypt the encrypted text. Click **Decrypt**.

What is the username and password for Mary's FTP account?



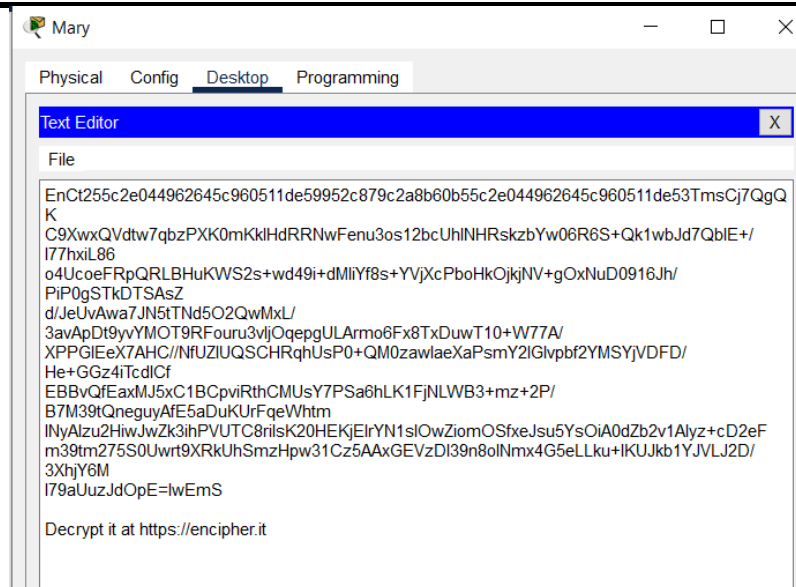
Part 2: Upload Confidential Data using FTP

Step 1: View the confidential document on Mary's Laptop.

- Click the **Healthcare at Home** site and then click the Laptop **Mary**.
- Click the **Desktop** tab and then click **Text Editor**.
- In the Text Editor window, click **File > Open**.
- Click on the document **clientinfo.txt** and click **OK**.

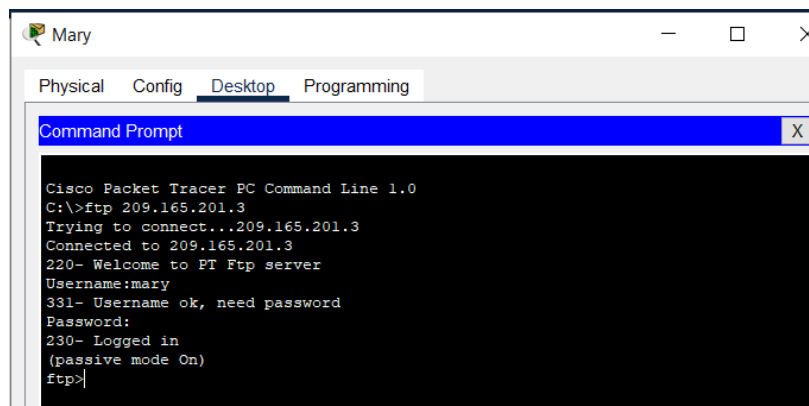
What form is the data in?

Packet Tracer – Exploring File and Data Encryption



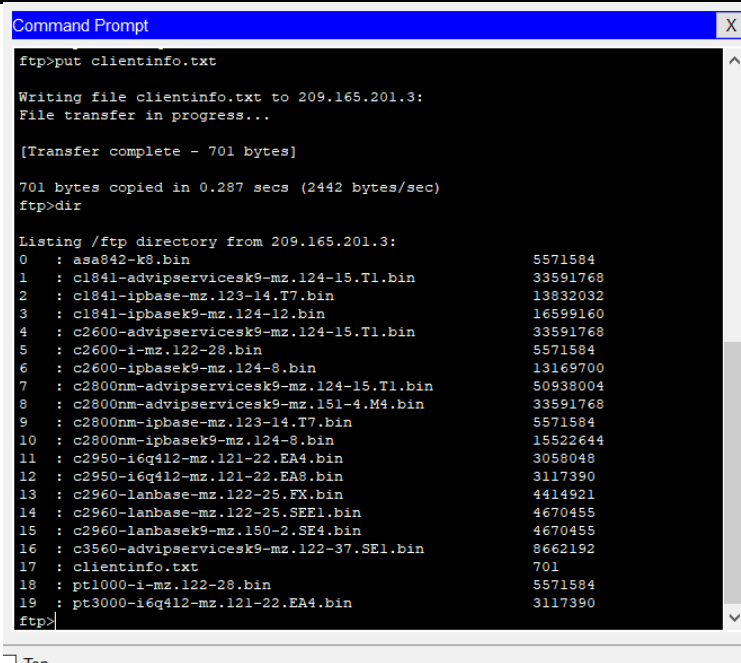
Step 2: Remotely connect to the FTP server.

- Within the **Healthcare at Home** site, click the Laptop **Mary**.
- Click the **Desktop** tab and then click **Command Prompt**.
- Connect to the **FTP/Web** server at **Metropolis Bank HQ** by entering **ftp 209.165.201.3** in the command prompt.
- Enter the username/password credentials located in Part 1 Step 2



Step 3: Upload a file to the FTP server.

- At the **ftp>** prompt, enter the command **dir** to view the current files stored on the remote FTP server.
- Mary has a file containing encrypted healthcare client information. Upload the **clientinfo.txt** file to the FTP server by entering the command **put clientinfo.txt**.
- At the **ftp>** prompt, enter the command **dir** and verify the **clientinfo.txt** file is now on the FTP server.



```
Command Prompt
ftp>put clientinfo.txt

Writing file clientinfo.txt to 209.165.201.3:
File transfer in progress...

[Transfer complete - 701 bytes]

701 bytes copied in 0.287 secs (2442 bytes/sec)
ftp>dir

Listing /ftp directory from 209.165.201.3:
 0  : asa842-k8.bin                               5571584
 1  : c1841-advipservicesk9-mz.124-15.T1.bin      33591768
 2  : c1841-ipbase-mz.123-14.T7.bin               13832032
 3  : c1841-ipbasek9-mz.124-12.bin                16599160
 4  : c2600-advipservicesk9-mz.124-15.T1.bin      33591768
 5  : c2600-i-mz.122-28.bin                       5571584
 6  : c2600-ipbasek9-mz.124-8.bin                 13169700
 7  : c2800nm-advipservicesk9-mz.124-15.T1.bin     50938004
 8  : c2800nm-advipservicesk9-mz.151-4.M4.bin      33591768
 9  : c2800nm-ipbase-mz.123-14.T7.bin             5571584
10  : c2800nm-ipbasek9-mz.124-8.bin               15522644
11  : c2950-i6q412-mz.121-22.EA4.bin             3058048
12  : c2950-i6q412-mz.121-22.EA8.bin             3117390
13  : c2960-lanbase-mz.122-25.FX.bin              4414921
14  : c2960-lanbase-mz.122-25.SEE1.bin            4670455
15  : c2960-lanbasek9-mz.150-2.SE4.bin            4670455
16  : c3560-advipservicesk9-mz.122-37.SEE1.bin    8662192
17  : clientinfo.txt                             701
18  : pt1000-i-mz.122-28.bin                      5571584
19  : pt3000-i6q412-mz.121-22.EA4.bin            3117390
ftp>
```

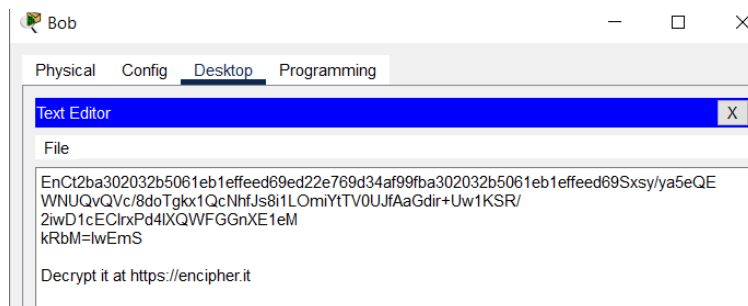
- d. If cyber criminals were to capture the file transfer crossing the Internet, what would be in clear text?

For the FTP connection are in clear text, but the contents of the document are encrypted.

Part 3: Locate the FTP Account Credentials for Bob's PC

Step 1: Access the text document on Bob's PC.

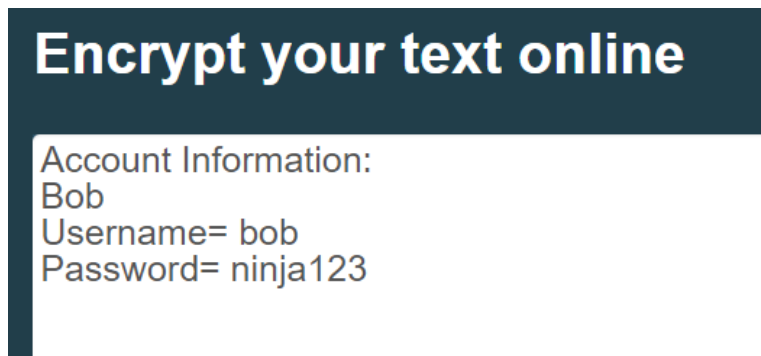
- Click the **Metropolis Bank HQ** site and then click the PC **Bob**.
- Click the **Desktop** tab and then click **Text Editor**.
- In the Text Editor window, click **File > Open**.
- Click the document **ftplogin.txt** and click **OK**.



Step 2: Decrypt Bob's FTP account information.

- Highlight all the text from **ftplogin.txt** file and copy it.
- Open a web browser on your personal computer and browse to the website <https://encipher.it>
- Click the **whitespace on the right of the website** and **paste in the encrypted text**.
- Click **Decipher It** button and use the decryption password **bobftp123** to decrypt the encrypted text. Click **Decrypt**.

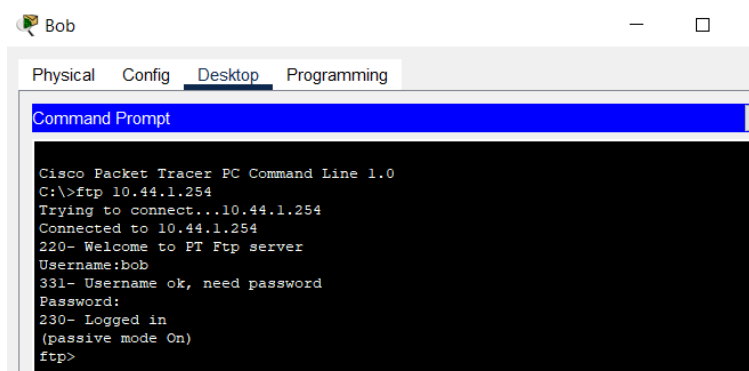
What is the username and password for Bob's FTP account?



Part 4: Download Confidential Data using FTP

Step 1: Remotely connect to the FTP server.

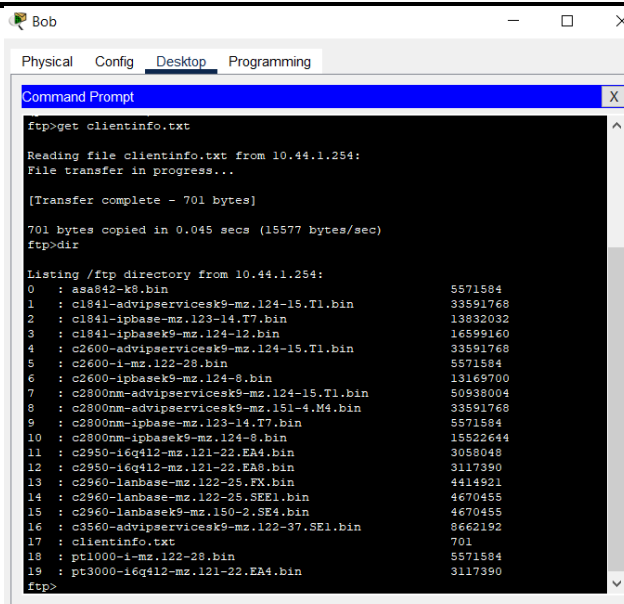
- Within the **Metropolis Bank HQ** site, click the PC **Bob**.
- Click the **Desktop** tab and then click **Command Prompt**.
- Connect to the **FTP/Web** server within the **Metropolis Bank HQ** by entering **ftp 10.44.1.254** in the command prompt.
- Enter the username/password credentials located in Part 3 Step 2



Step 2: Download the file to Bob's PC.

- At the **ftp>** prompt, enter the command **dir** to view the current files stored on the remote FTP server.
- Mary had uploaded the **clientinfo.txt** file containing encrypted healthcare client information. Download the **clientinfo.txt** file to Bob's PC by entering the command **get clientinfo.txt**.
- At the **ftp>** prompt, enter the command **quit**.
- At the **PC>** prompt, enter the command **dir** and verify the **clientinfo.txt** file is now Bob's PC.

Packet Tracer – Exploring File and Data Encryption



```
Bob
Physical Config Desktop Programming
Command Prompt
ftp>get clientinfo.txt
Reading file clientinfo.txt from 10.44.1.254:
File transfer in progress...
[Transfer complete - 701 bytes]
701 bytes copied in 0.045 secs (15577 bytes/sec)
ftp>dir
Listing /ftp directory from 10.44.1.254:
 0 : asa842-k8.bin                               5571584
 1 : c1841-advipservicesk9-mz.124-15.T1.bin      33591768
 2 : c1841-ipbase-mz.123-14.T7.bin               13832032
 3 : c1841-ipbasek9-mz.124-12.bin                16599160
 4 : c2600-advipservicesk9-mz.124-15.T1.bin      33591768
 5 : c2600-i-mz.122-28.bin                       5571584
 6 : c2600-ipbasek9-mz.124-8.bin                 13169700
 7 : c2800nm-advipservicesk9-mz.124-15.T1.bin    50938004
 8 : c2800nm-advipservicesk9-mz.151-4.M4.bin     33591768
 9 : c2800nm-ipbase-mz.123-14.T7.bin             5571584
10 : c2800nm-ipbasek9-mz.124-8.bin               13522644
11 : c2950-16q412-mz.121-22.EA4.bin            3058048
12 : c2950-16q412-mz.121-22.EA8.bin            3117390
13 : c2960-lanbase-mz.122-25.FX.bin             4414921
14 : c2960-lanbase-mz.122-25.SE1.bin            4670455
15 : c2960-lanbasek9-mz.150-2.SE4.bin            4670455
16 : c3560-advipservicesk9-mz.122-37.SE1.bin     8662192
17 : clientinfo.txt                             701
18 : pt1000-i-mz.122-28.bin                     5571584
19 : pt3000-16q412-mz.121-22.EA4.bin            3117390
ftp>
```

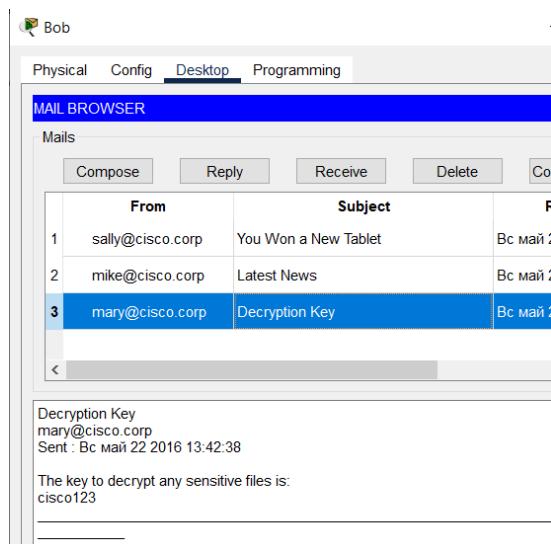
If cyber criminals were to capture the file transfer crossing the Internet, what would be in clear text?
For the FTP connection are in clear text, but the contents of the document are encrypted.

Part 5: Decrypt the Contents of the clientinfo.txt File

Step 1: Receive the decryption key from Mary.

- Within the **Metropolis Bank HQ** site, click the PC **Bob**.
- Click the **Desktop** tab and then click **Email**.
- In the Email window, click **Receive**.
- Click on the Email with the subject “Decryption Key” and record the decryption key below.

What is the decryption key to access the confidential information in the clientinfo.txt file?



Step 2: Decrypt the contents of the clientinfo.txt file.

- Within the **Metropolis Bank HQ** site, click the PC **Bob**.

Packet Tracer – Exploring File and Data Encryption

- Click the **Desktop** tab and then click **Text Editor**.
- In the Text Editor window, click **File > Open**.
- Click the document **clientinfo.txt** and click **OK**.
- Highlight all the text from the **clientinfo.txt** file and copy it.
- Open a web browser on your personal computer and browse to the website <https://encipher.it>
- Click the **whitespace on the right of the website and paste in the encrypted text**.

Click **Decipher It** button and use the decryption password from Mary's email to decrypt the encrypted text. Click **Decrypt**.

What is the first account name in the clientinfo.txt file?

Encrypt your text online

Name|Zip Code|Credit Card

Plato X. Riggs|2769|5537342697671706
 Drew N. Stark|40008|532605 072104 7364
 Laith Wilkerson|21800|516234 6483327961
 Drew A. Dennis|33024|4716904313886
 Genevieve Robertson|25498|491 65497 20952 457
 Paki Parsons|419043|492954 7171363013
 Teagan N. Avery|64416|4485 5676 5330 3713
 Joy B. Goodman|6048TB|419978 0389706805
 Orla L. Rowe|93081|520 88110 11661 765
 Wynter English|1396|534047 781153 0565

Suggested Scoring Rubric

Activity Results

Time Elapsed: 00:24:21

Congratulations Anelya! You completed the activity.

Overall Feedback Assessment Items Connectivity Tests

Expand/Collapse All Show Incorrect Items

Assessment Items	Status	Points	Component(s)	Feedback
Network		0	Other	
Bob		0	Other	
Files		0	lp	
C Directory		0	lp	
clientinfo.txt	Correct	43	lp	
FTPWeb		0	Other	
FTP Server		0	Other	
Server Files		0	lp	
clientinfo.txt	Correct	43	lp	

Score : 86/86
Item Count : 2/2

Component Items/Total Score
lp 2/2 86/86

Activity Section	Question Location	Possible Points	Earned Points
Part 1: Locate the FTP account credentials for Mary's laptop	Step 2	2	
Part 2: Upload confidential data using FTP	Step 1	2	
	Step 3	2	
Part 3: Locate the FTP account credentials for Bob's PC	Step 2	2	
Part 4: Download confidential data using FTP	Step 2	2	
Part 5: Decrypt the contents of the clientinfo.txt file	Step 1	2	
	Step 2	2	
Questions		14	
Packet Tracer Score		86	

Packet Tracer – Exploring File and Data Encryption

Total Score	100	
-------------	-----	--