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POP3- Protocol

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Post Office Protocol

Firstly, Post Office Protocol 3 is a widely used protocol in the world. Unlike IMAP, this one is older. It was designed to be used by only one mail client because it does not have bi-directional synchronization. This means that if you install the same client on several devices, they will not be synchronized! Therefore the "IMAP" protocol is the successor. It does not allow for example to have a synchronous state of the clients using the same email. This makes it less efficient, as today we access our mailbox from several different interfaces, and it is therefore essential to be able to have our mailbox synchronized. Messages received in a client are stored only in that same client software. The strength of "IMAP" is that the mails are stored in the "SMTP" server. Nevertheless, it is a simple and fast protocol.

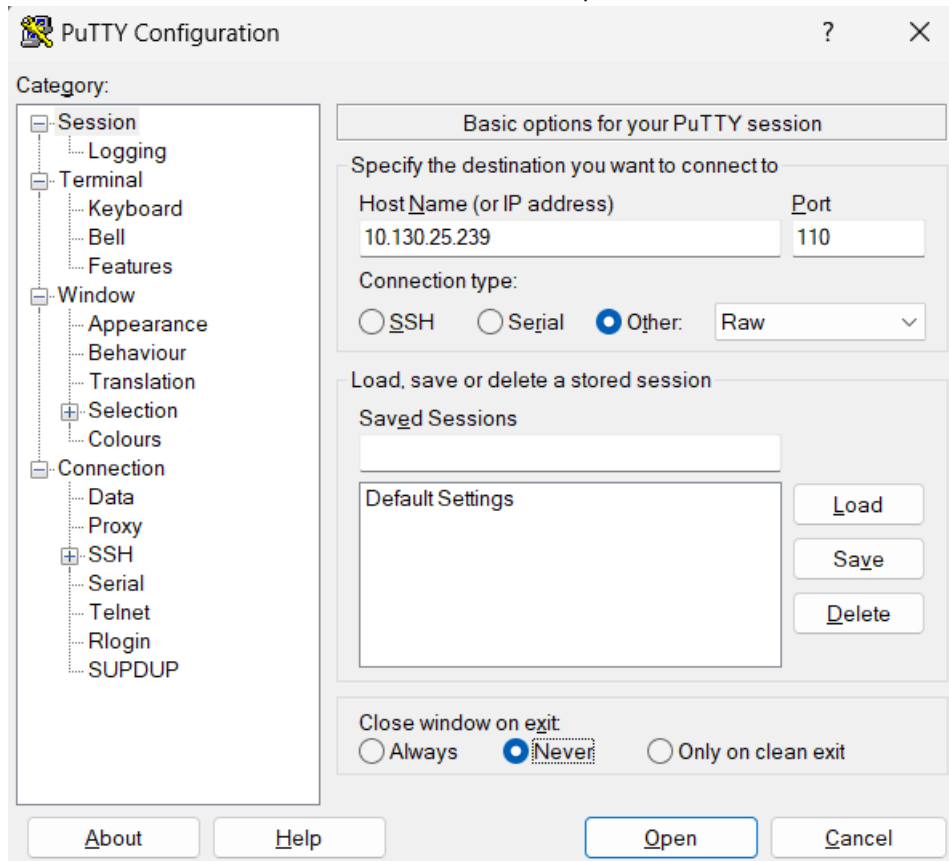
Here are the possible commands to communicate with this protocol:

Command	Description	Example
USER [username]	1st login command	USER Stan +OK Please enter a password
PASS [password]	2nd login command	PASS SeCrEt +OK valid logon
QUIT	Logs out and saves any changes	QUIT +OK Bye-bye.
STAT	Returns total number of messages and total size	STAT +OK 2 320
LIST	Lists all messages	LIST +OK 2 messages (320 octets) 1 120 2 200 ... LIST 2 +OK 2 200
RETR [message]	Retrieves the whole message	RETR 1 +OK 120 octets follow. ***
DELE [message]	Deletes the specified message	DELE 2 +OK message deleted
RSET	Undelete the message if any marked for deletion	RSET +OK maildrop has 2 messages (320 octets)

TOP [message] [number]	Returns the headers and number of lines from the message	TOP 1 10 +OK ***1
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Retrieve a mail

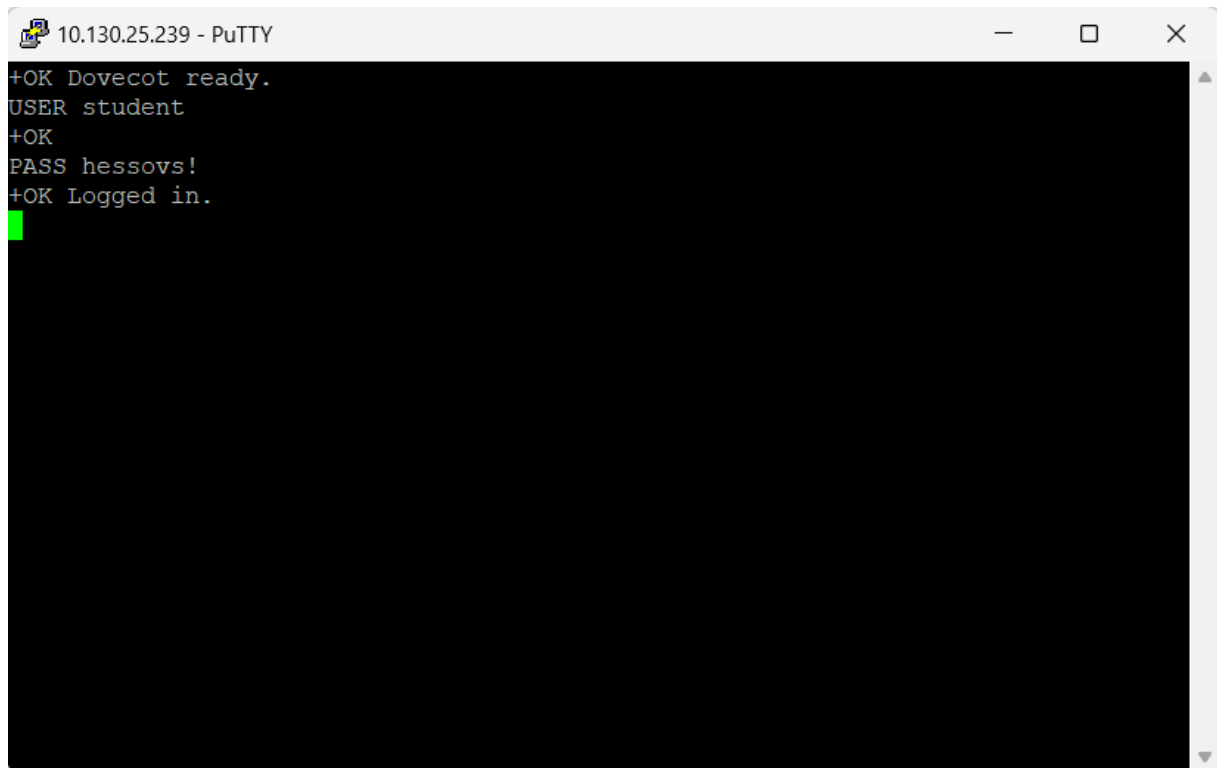
We will launch "PuTTY" and make a connection to port "110" dedicated for "POP3":



¹ Source : <https://www.shellhacks.com/retrieve-email-pop3-server-command-line/>

According to the table above, we will first authenticate to the server to execute the following commands. We will therefore enter these two commands one after the other:

- « USER student »
- « PASS hessovs ! »

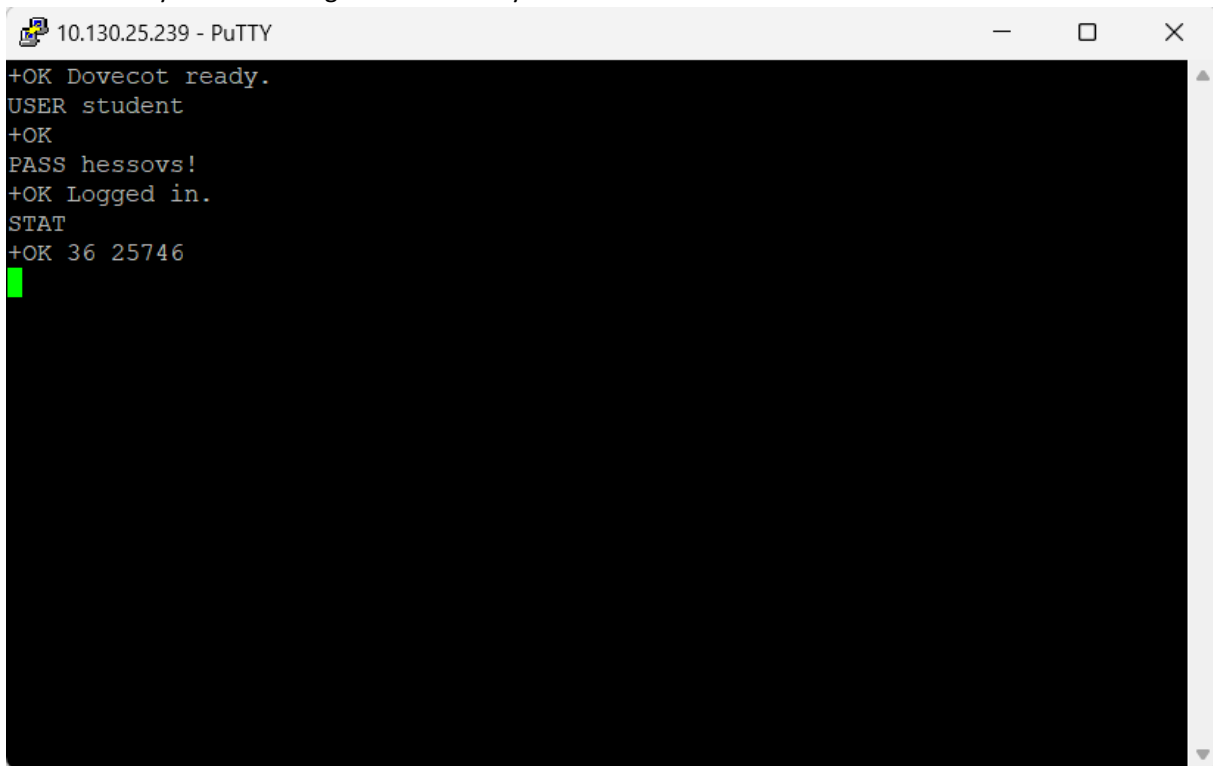


```
10.130.25.239 - PuTTY
+OK Dovecot ready.
USER student
+OK
PASS hessovs!
+OK Logged in.
```

He replies that we are authenticated!

1. HOW MANY MAILS ARE IN THE MAILBOX ?

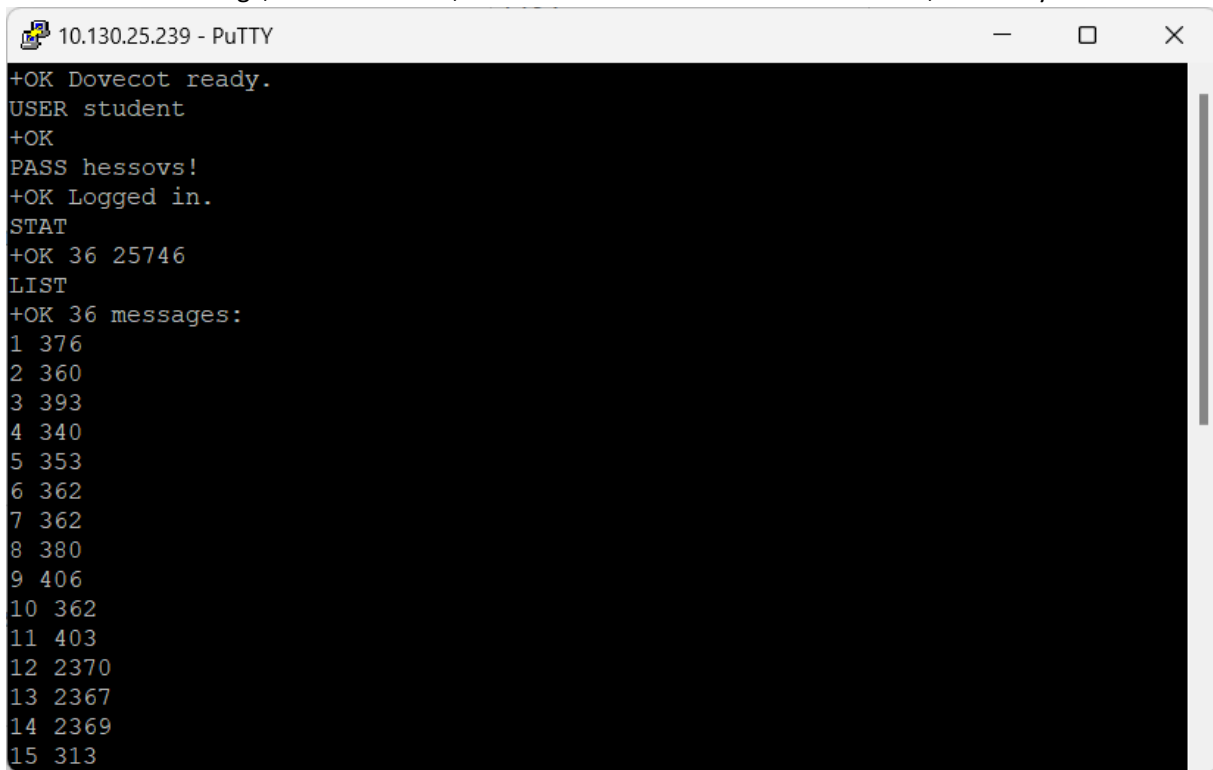
We will use the "STAT" command to bring out the statistics, i.e. the total number of messages and the total size in bytes: 36 messages and 25746 bytes.



```
10.130.25.239 - PuTTY
+OK Dovecot ready.
USER student
+OK
PASS hessovs!
+OK Logged in.
STAT
+OK 36 25746
```

2. HOW LONG IS THE MAIL N°1 ?

To know the size of each message present in the server we will use the command "LIST", it will return the index of each message, their identifiers, and the size of each of them. In this case, "1 376 bytes".

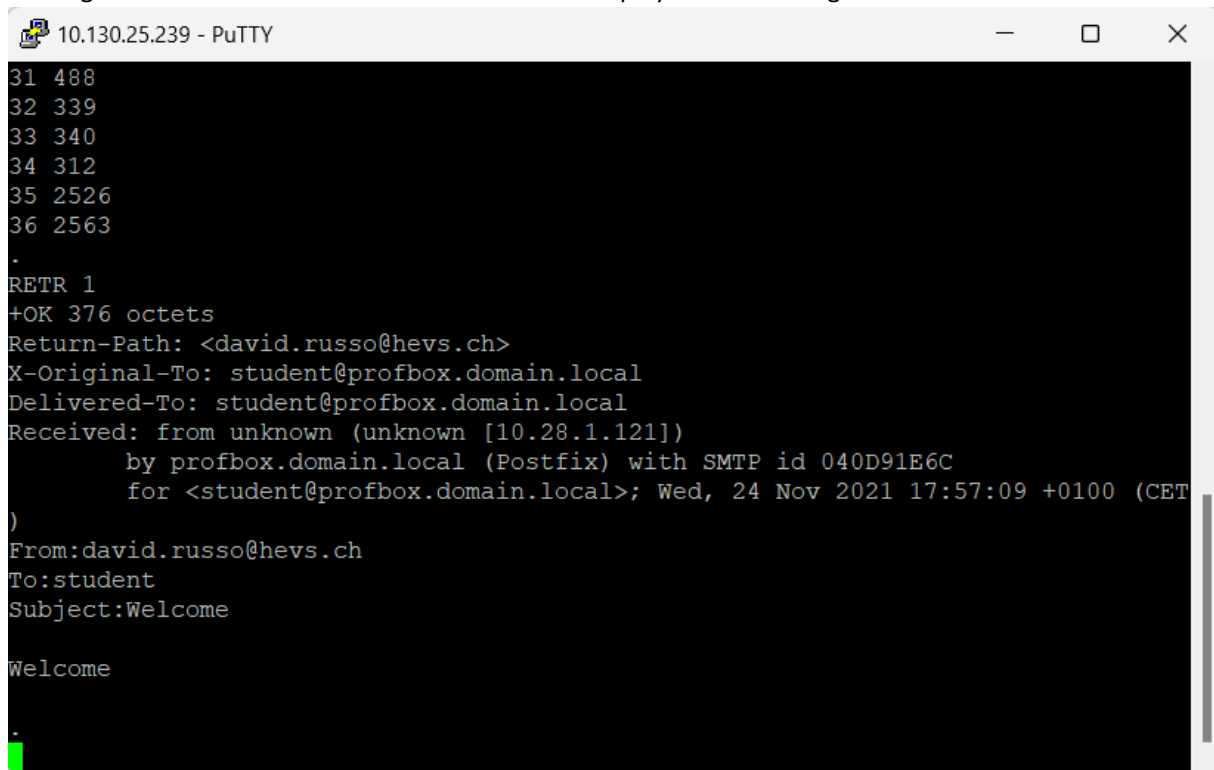


The screenshot shows a PuTTY terminal window titled "10.130.25.239 - PuTTY". The terminal output is as follows:

```
+OK Dovecot ready.  
USER student  
+OK  
PASS hessovs!  
+OK Logged in.  
STAT  
+OK 36 25746  
LIST  
+OK 36 messages:  
1 376  
2 360  
3 393  
4 340  
5 353  
6 362  
7 362  
8 380  
9 406  
10 362  
11 403  
12 2370  
13 2367  
14 2369  
15 313
```

3. READ THE MAIL N°1

To be able to read a message it is necessary to pass the command "RETR" with the identifier of the message which follows that makes "RETR 1" and it displays us its heading and its contents:

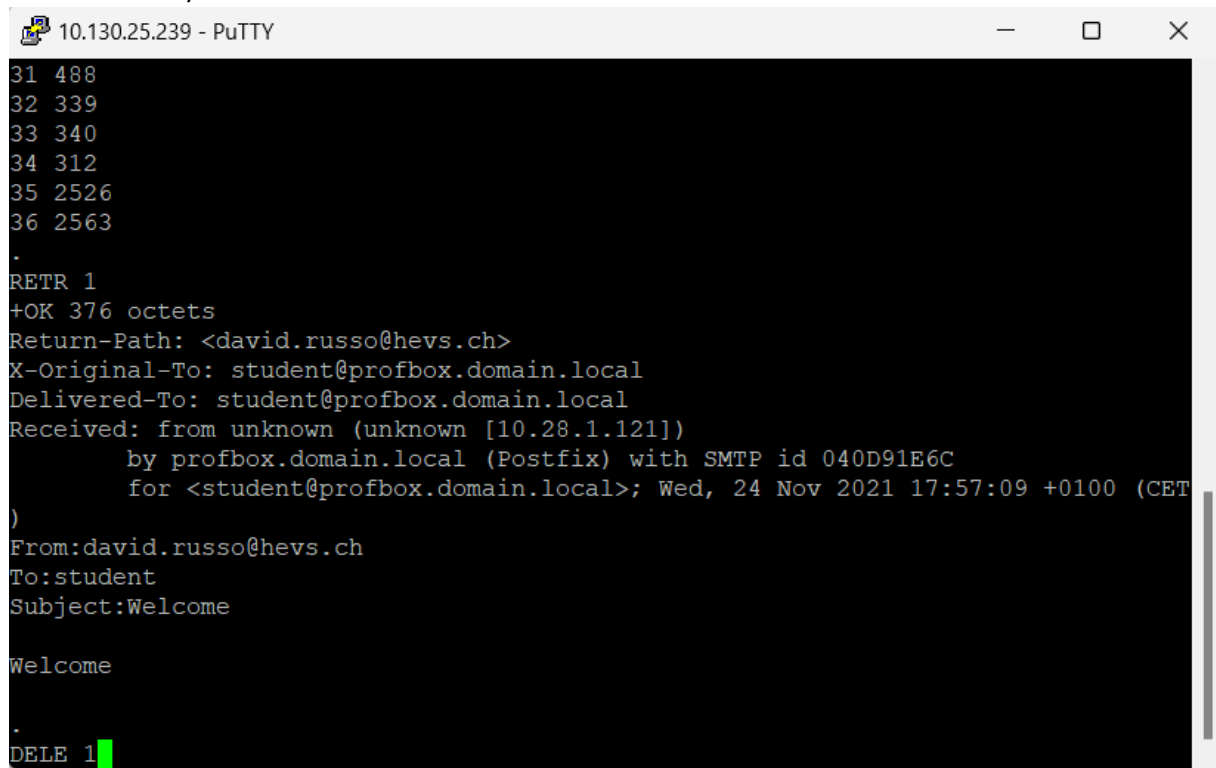


```
10.130.25.239 - PuTTY
31 488
32 339
33 340
34 312
35 2526
36 2563
.
RETR 1
+OK 376 octets
Return-Path: <david.russo@hevs.ch>
X-Original-To: student@profbox.domain.local
Delivered-To: student@profbox.domain.local
Received: from unknown (unknown [10.28.1.121])
        by profbox.domain.local (Postfix) with SMTP id 040D91E6C
        for <student@profbox.domain.local>; Wed, 24 Nov 2021 17:57:09 +0100 (CET
)
From: david.russo@hevs.ch
To: student
Subject: Welcome

Welcome
.
```


4. WHICH COMMAND SHOULD BE USED TO DELETE AN EMAIL?

To delete a mail, use the command "DELE" followed by the message ID: "DELE 1". Attention as required in the instruction you must not execute this command!



```
10.130.25.239 - PuTTY
31 488
32 339
33 340
34 312
35 2526
36 2563
.
RETR 1
+OK 376 octets
Return-Path: <david.russo@hevs.ch>
X-Original-To: student@profbox.domain.local
Delivered-To: student@profbox.domain.local
Received: from unknown (unknown [10.28.1.121])
        by profbox.domain.local (Postfix) with SMTP id 040D91E6C
        for <student@profbox.domain.local>; Wed, 24 Nov 2021 17:57:09 +0100 (CET
)
From: david.russo@hevs.ch
To: student
Subject: Welcome

Welcome
.
DELE 1
```