

# MS Exchange 5.5 SMTP POP3 and Telnet

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## Introduction

The visual complexity of modern email clients such as Outlook Express hides the simplicity of the underlying protocols that they use. Such clients communicate with compatible servers (which include MS Exchange) using the SMTP and POP3 protocols. These protocols have been around for several decades and if you know a few simple protocol commands it's possible to send and receive emails via an Exchange Server with no GUI client whatsoever, if you have access to a telnet client.

## Telnet

Telnet forms part of the basic TCP/IP protocol suite and is therefore to be found on most machines that have TCP/IP installed. It is a very useful diagnostic tool that we can use to establish a connection to a remote computer (via a particular 'port') issue commands to the remote computer, and see the responses it produces. The syntax used to run the telnet program is; **telnet** , where **computer** is the hostname, or IP address of the remote computer, and **port** is the TCP/IP port number that the service we are using runs on. We'll see how we can use telnet to send and receive emails.

## SMTP

SMTP is the TCP/IP protocol used to send emails via the Internet. It uses port number 25, so in order to use telnet to open an SMTP session with an Exchange server we use the command **telnet 25** . In the example in figure 1, we are using the Windows 98 Run command to open a session with the computer at IP address 192.168.1.2.

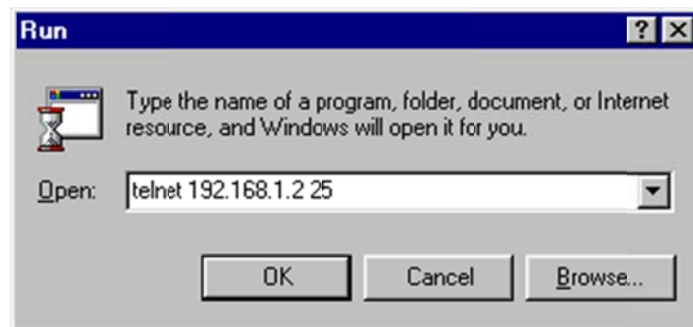
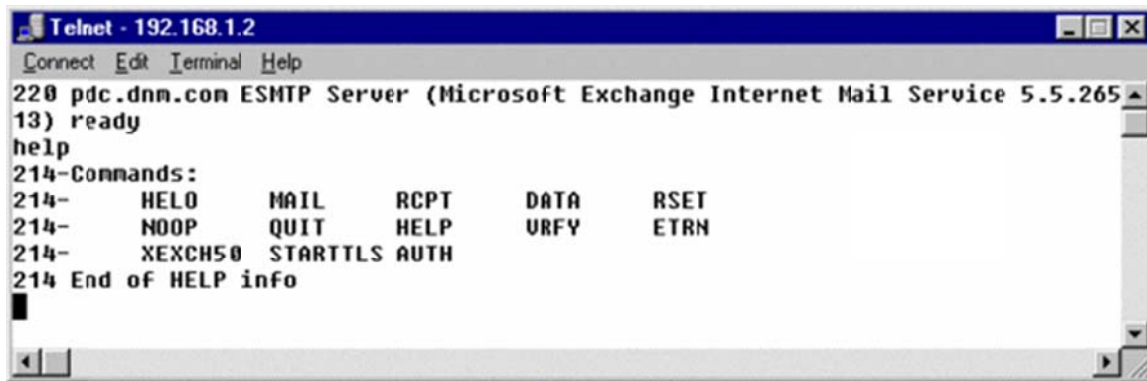


Fig. 1 – Running telnet on Windows 98.

If the connection is successful, we should see a banner and a CLI interface such as that shown in figure 2. The SMTP service has a **help** command that we can use to show the list of commands available.

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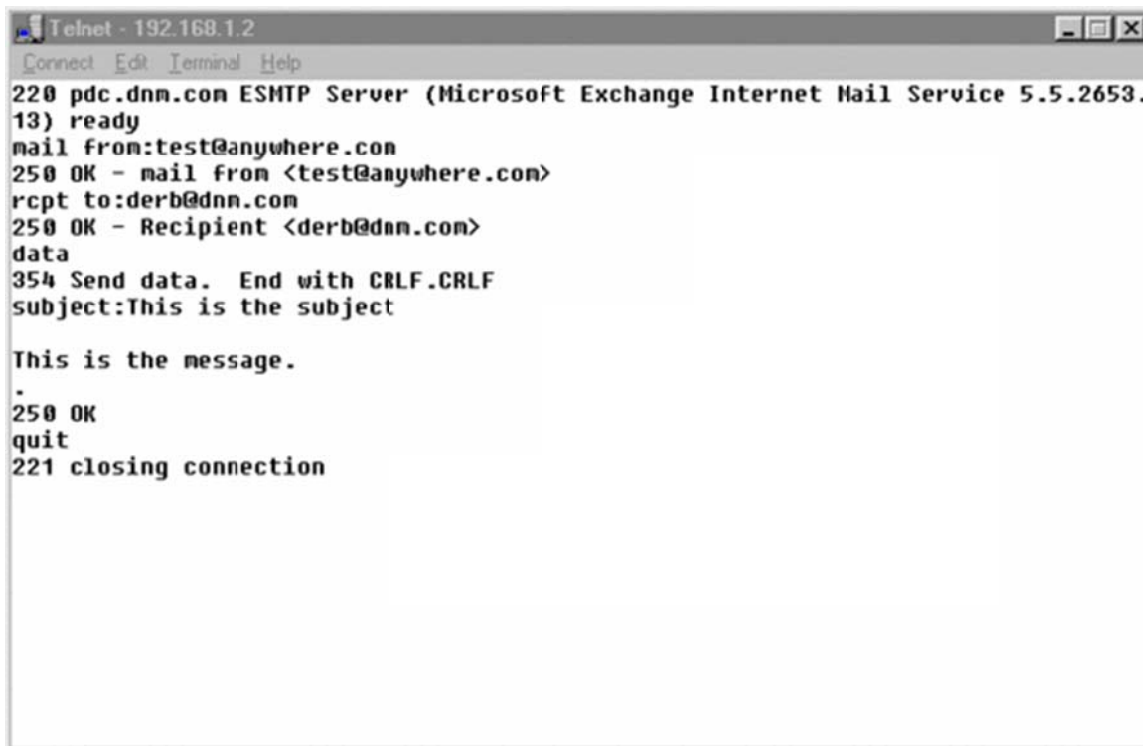
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```
Telnet - 192.168.1.2
Connect Edit Terminal Help
220 pdc.dnn.com ESMTTP Server (Microsoft Exchange Internet Mail Service 5.5.265
13) ready
help
214-Commands:
214-   HELO   MAIL   RCPT   DATA   RSET
214-   NOOP  QUIT  HELP  URIFY  ETRN
214-   XEXCH50 STARTTLS AUTH
214 End of HELP info
```

Fig. 2 – The SMTP HELP command.

The commands used to send a message using SMTP are; **mail from:** , which is used to identify the sender; **rcpt to:** , which identifies the destination address; and **data** , which is where we can type in the message body. If we type in 'subject:' followed by a blank line in the data part, we can supply a subject line for the message. The data part is terminated by a CRLF.CRLF sequence, in other words; we type in a carriage return, a full stop and another carriage return. The **quit** command is used to close the session. A typical SMTP dialogue is shown in figure 3:



```
Telnet - 192.168.1.2
Connect Edit Terminal Help
220 pdc.dnn.com ESMTTP Server (Microsoft Exchange Internet Mail Service 5.5.2653.
13) ready
mail from:test@anywhere.com
250 OK - mail from <test@anywhere.com>
rcpt to:derb@dnn.com
250 OK - Recipient <derb@dnn.com>
data
354 Send data. End with CRLF.CRLF
subject:This is the subject

This is the message.
.
250 OK
quit
221 closing connection
```

Fig 3 . – A typical SMTP dialogue.

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### POP3

POP3 is the TCP/IP protocol that is used to retrieve Internet mail from a server. It uses port number 110, so to open a POP session with our Exchange server we use the command **telnet 110** as shown in figure 4:

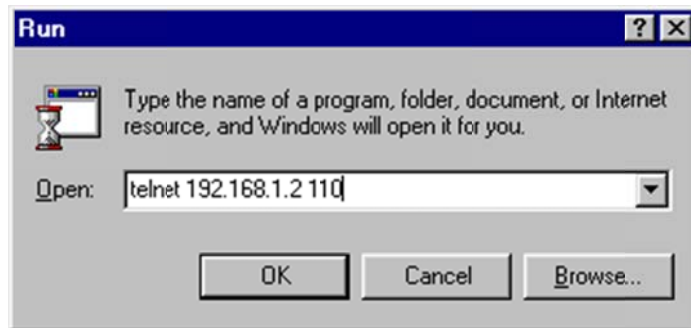


Fig. 4 – Opening a POP3 telnet session.

The commands used to retrieve email using POP3 are; **user** , which identifies the mailbox we want to open; **pass** , which we use to supply the password for the mailbox; **list** , which shows us a list of available messages and their size; and **retr** , which displays the numbered message on the telnet console. Other useful commands are; **dele** , which deletes a numbered message from the server, and **top** , which will display the first n lines of the numbered message. We close the session with **quit** as before. A typical POP3 dialogue is shown in figure 5. Note that MS Exchange expects the user name to be supplied in a particular, non-standard format; // .

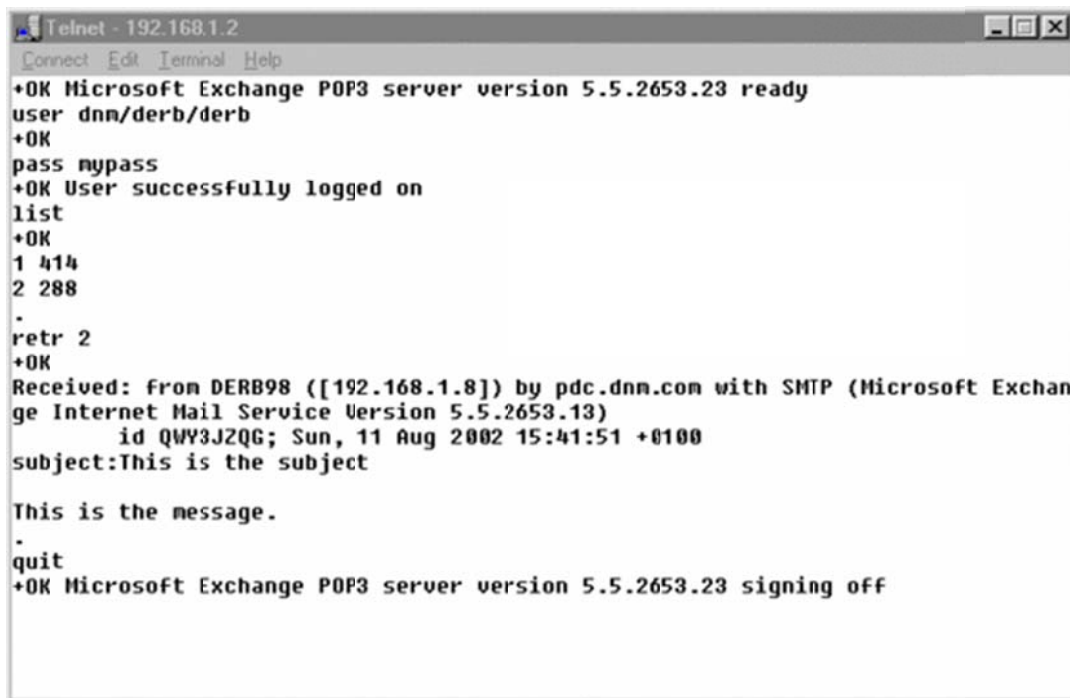


Fig. 5 – A typical POP3 dialogue.

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Here we can see the message we submitted earlier using SMTP. Figure 6 shows the same message opened in MS Outlook. Note the presence of the subject line and the absence of a date/time-sent field. This can be specified in a similar way to the subject: field by using 'date:' within the data part of a message.

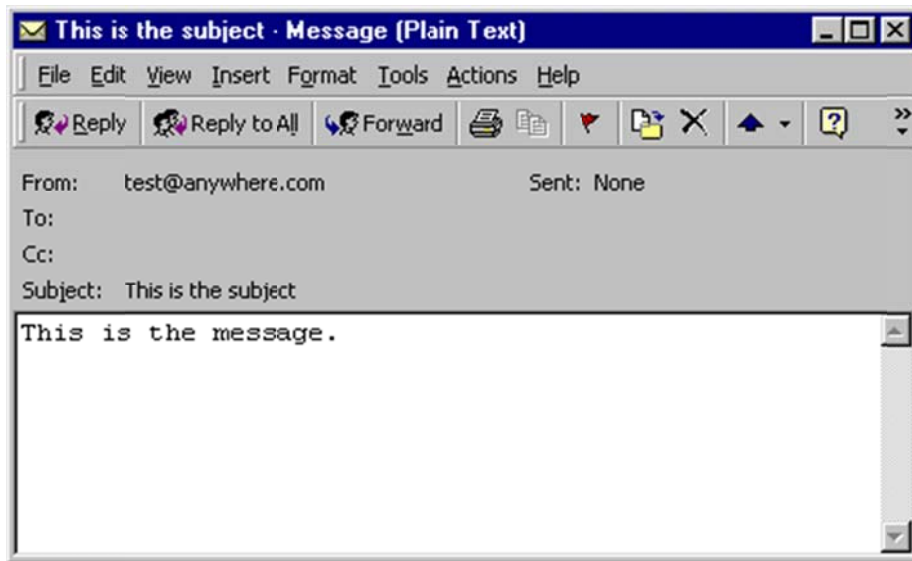


Fig. 6 – The SMTP message in MS Outlook.