

TR-7W Configuration Guide

Before You Start

Take a few moments before you start to make the following simple checks. A few moments spent before you start installing your system can save a lot of time later by avoiding some of the most common problems that users can encounter.

I) Administrator Rights

For installation of TandD software and drivers it is **ABSOLUTELY NECESSARY** that you have complete administrator rights.

Go to Control Panel > User Accounts and confirm that this is the case. If it is not, then stop right here and correct it.

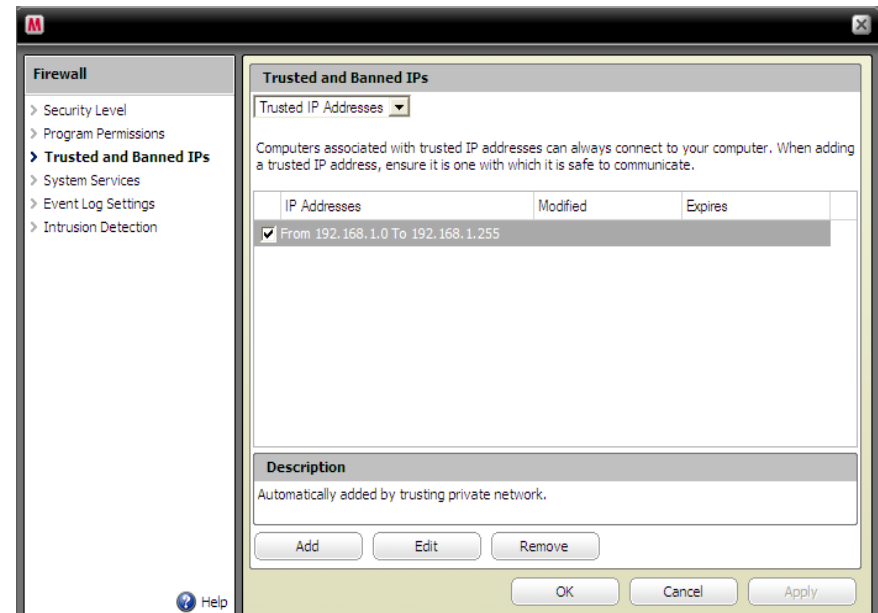
II) Firewall Settings

Make sure that your firewall settings allow communication with both the default IP address that the product ships with (192.168.1.200) and the permanent IP address that you intend to use. If necessary add these to your Trusted Addresses list. Also, check the settings for Windows Firewall, even if you are using a subscription firewall from Norton, McAfee or the like. Windows update can turn on the Windows Firewall without your knowing about it.

III) SPAM Filter Settings

If you are going to be sending warning monitoring emails be sure to set your SPAM filter not to block them.

These are the most common causes of problems encountered by users when setting up their systems.



Setting the TR-7W IP Address

I) Initialization

1. Load the TR-7W Settings Utility software on your PC.

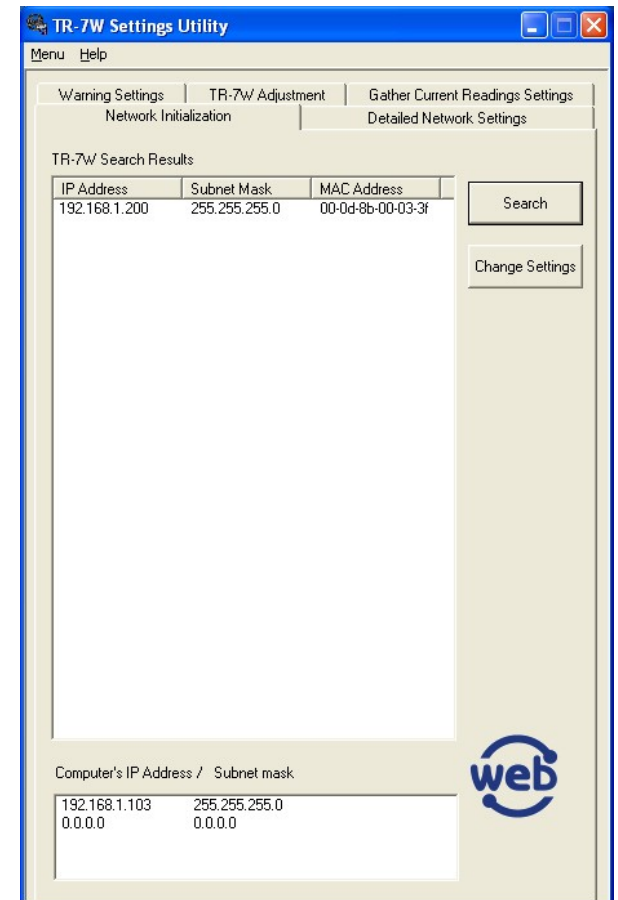
TR-7W Network Initialization Window

A) LAN Method

2. Connect the TR-7W to your LAN.
3. Open the TR-7W Settings Utility software.
4. Select the “Network Initialization” tab.
5. Click on the “Search” button.
6. The search results should show the connected unit.
7. If so, proceed to Detailed Network Settings.
8. If not, the factory preconfigured IP address may not be within the Scope settings of your router; go to PC Direct Method.

B) PC Direct Method

1. Configure your PC's for a fixed IP address for direct connection. Go to:
Control Panel> Network Connections>LAN Connections>Properties
Select: TCP/IP> Properties> IP Address> Enter: 192.168.1.100
2. Connect the TR-7W to the PC with a “cross connect” cable.
3. Open the TR-7W Settings Utility software.
4. Click on the “Search” button.
5. Proceed to Detailed Network Settings. (Make sure to reset the IP address of your PC to the normal setting when finished configuring the TR-7W. This is usually set to obtain an IP address automatically through DHCP.)



II) Detailed Network Settings.

1. Click on the Detailed Network Settings tab.
2. Ensure that the IP address reflects the unit to be configured.
3. Enter the default Login ID and Password, and set the Port to 80.
4. Click on the “Get Settings” button.
5. The unit’s pre-configured settings will populate the window.
6. Click the “Change Settings” button.
7. Enter the new IP address, subnet mask and gateway*.
8. Enter the new Login ID and Password
9. Click the “Send Settings” button.

TR-7W Detailed Settings Window

Setting Item	Settings
IP Address	192.168.1.200
Subnet Mask	255.255.255.0
Gateway Address	192.168.1.1
DHCP Settings	off
DNS Settings	on
DNS Server Address(primary)	24.92.226.9
DNS Server Address(secondary)	
Clock Settings	off
SNTIP Server Address(primary)	
SNTIP Server Address(secondary)	
IP Block	off
Login Permission Address 1	
Login Permission Address 2	
Login Permission Address 3	
Login ID	wsc-user
Login Password	wsc-passwd
SMTP Server Name	smtp.nycap.rr.com
Wireless LAN Settings	on
Wireless LAN ESS-ID	Linksys1
Wireless LAN WEP Key Code	
Wireless LAN WEP Key Type(Hexa)	off
HTTP Port	80
Time Difference	-05:00

III) Confirm Settings

1. Click “Get Settings” button.
2. Confirm data retrieved from unit is correct as entered.

Change Settings Window

IP Address Login ID
 Subnet Mask Login Password
 Gateway Address

ON OFF DNS Settings
 DNS server address(Primary)
 DNS server address(Secondary)

ON OFF SNTIP Settings
 SNTIP server address(Primary)
 SNTIP server address(Secondary)

ON OFF IP Block
 Login Permission address 1
 Login Permission address 2
 Login Permission address 3

HTTP Port Time Difference

Domain Recipient
 IP Address:
 Login ID
 Login Password Port Number

Time Settings

Use of an SNTP server is a very important aspect of your system design. It will reset your clock to the correct time at midnight each night and immediately after a power failure.

I) Set the Time Difference

1. Click on the Detailed Network Settings tab.
2. Click on the “Get Settings” button.
3. Click the “Change Settings” button.
4. Select the offset from GMT for your time zone.
5. Click the Send Settings button

NOTE: This step is necessary for the time of logged data to be indicated correctly when downloaded.

II) Setting the SNTP Server

1. Click the On radio button under SNTP Settings.
2. Enter the IP address of the SNTP server you wish to use.
3. Enter a secondary server address if desired.
4. Click the Send Settings button.

HOW TO FIND AN SNTP SERVER: A list of free, public SNTP servers can be found at:

<http://tf.nist.gov/service/time-servers.html>

The screenshot shows the 'Detailed network Settings' window. Key sections include:

- Basic Settings:** IP Address (192.168.1.200), Subnet Mask (255.255.255.0), Gateway Address (192.168.1.1), Login ID (wsc-user), and Login Password (wsc-passwd).
- DNS Settings:** ON/OFF radio buttons, Primary DNS server address (24.92.226.9), and Secondary DNS server address.
- SNTP Settings:** ON/OFF radio buttons, Primary SNTP server address (152.2.21.1), and Secondary SNTP server address.
- Time Difference:** A dropdown menu set to GMT +05:00.
- Warning Report Mail:** SMTP server name (smtp.nycap.rr.com).
- POP Before SMTP:** ON/OFF radio buttons, POP Server Name (pop.nycap.rr.com), User ID (auser@nycap.rr.com), Password (password1), and Port Number (110).
- IP Block:** ON/OFF radio buttons and three Login Permission address fields.
- Wireless LAN Settings:** ON/OFF radio buttons, Wireless LAN ESS-ID (linksys1), Wireless LAN WEP Key Type (Character string), and Wireless LAN WEP Key Code (password2).
- Port Number:** HTTP port set to 80.
- Recipient:** Domain, IP Address (192.168.1.210), Login ID (wsc-user), Login Password (masked), and Port Number (80).

Buttons at the bottom include 'Send Settings', 'Help', 'Re-Activate Communication', and 'Close'.

Configuring Warning E-Mails

Open the TR-7W Settings Utility Software

I) Detailed Settings Window

TR-7W Detailed Settings Window

1. Click on the “Detailed Network Settings” tab.
2. Enter the IP address, Login ID and Password for the unit to be configured.
3. Click on the “Get Settings” button.
4. Click on the “Change Settings” button.
5. Turn “DNS Settings” On.
6. Enter the IP address of your ISP’s DNS server*.
7. Enter the name of the SMTP (outgoing mail) server you will be using.

II) Determine E-Mail Authorization Requirements

The mail (smtp) server you use may or may not require authentication for outgoing e-mail messages. Normally, if you are connected directly to your ISP or have an in-house mail server, you may not need to use authentication of any type. In many cases, however, outgoing mail authentication is necessary. The TR-7W supports two types of mail authentication commonly in use today: “POP before SMTP” and “SMTP Authentication”. If in doubt as to which you should use, check with your ISP or in-house IT support staff. You can also try using Telnet to issue your mail server the “ehlo” command, as described below. Once you have determined that authentication is needed for your server, and which type you should use, proceed to either IIIa or IIIb) below.

Detailed network Settings

IP Address: 192 . 168 . 1 . 210 Login ID: wsc-user
Subnet Mask: 255 . 255 . 255 . 0 Login Password: wsc-passwd
Gateway Address: 192 . 168 . 1 . 1

DNS Settings
 ON OFF
DNS server address(Primary): 24 . 92 . 226 . 9
DNS server address(Secondary): . . .

SNTP Settings
 ON OFF
SNTP server address(Primary): 192 . 43 . 244 . 18
SNTP server address(Secondary): 132 . 163 . 4 . 101

IP Block
 ON OFF
Login Permission address 1:
Login Permission address 2:
Login Permission address 3:

Port Number
HTTP: 80
SMTP: 25
POP3: 110 POP Before SMTP:

Time Difference
GMT: -04:00

Warning Report Mail
SMTP server name: smtp.gmx.com

Wireless LAN Settings
 ON OFF
Wireless LAN ESS-ID:
Wireless LAN WEP Key Type: Hexadecimal
Wireless LAN WEP Key Code:

POP Before SMTP
 ON OFF
POP Server Name:
User ID:
Password:

SMTP Authentication Settings
Mode: PLAIN CRAM-MD5 OFF
User: user_name@gmx.com
Password: password

Recipient
 Domain:
 IP Address: 192 . 168 . 1 . 210
Login ID: wsc-user
Login Password: ***** Port Number: 80

Send Settings Help
Restart TR-7W Close

IIIa) POP Before SMTP Settings

Some e-mail service providers require that you log onto your POP server with a User ID and Password prior to sending e-mail. This may be the case if the outgoing mail server you are using is not maintained by your local ISP.

- 1) Click the “On” radio button in the POP Before SMTP menu box.
- 2) Enter the name of your POP Server.
- 3) Enter your User ID
- 4) Enter your Password

IIIb) SMTP Authentication Settings

Some e-mail service providers require that each outgoing message be authenticated with a user name and password. If this is the case for the ISP you are using be sure that POP Before SMTP is set to Off..

- 1) Check the Authentication Mode used by your ISP
- 2) Enter the User Name for your e-mail account
- 3) Enter the Password for your e-mail account

A Note about Microsoft Exchange Server: The TR-7W will work with MS Exchange Servers. In order to do so, however, it will be necessary to have the IT Specialist who maintains your server set up an unencrypted Client to Server Connector for the TR-7W on port 587.

The screenshot displays the 'Detailed network Settings' window with the following configurations:

- IP Address:** 192 . 168 . 1 . 210
- Subnet Mask:** 255 . 255 . 255 . 0
- Gateway Address:** 192 . 168 . 1 . 1
- Login ID:** wsc-user
- Login Password:** wsc-passwd
- DNS Settings:** ON (selected), DNS server address(Primary): 24 . 92 . 226 . 9, DNS server address(Secondary):
- SNTP Settings:** ON (selected), SNTP server address(Primary): 192 . 43 . 244 . 18, SNTP server address(Secondary): 132 . 163 . 4 . 101
- IP Block:** OFF (selected), Login Permission address 1, 2, and 3 are empty.
- Port Number:** HTTP: 80, SMTP: 25, POP3: 110, POP Before SMTP: OFF
- Time Difference:** GMT -04:00
- Warning Report Mail:** SMTP server name: smtp.gmx.com
- Wireless LAN Settings:** OFF (selected), Wireless LAN ESS-ID, Wireless LAN WEP Key Type: Hexadecimal, Wireless LAN WEP Key Code
- POP Before SMTP:** OFF (selected), POP Server Name, User ID, Password
- SMTP Authentication Settings:** Mode: PLAIN (selected), CRAM-MD5, OFF; User: user_name@gmx.com; Password: password
- Recipient:** Domain, IP Address (selected): 192 . 168 . 1 . 210, Login ID: wsc-user, Login Password: ***** (masked), Port Number: 80

Buttons at the bottom right include: Send Settings, Help, Restart TR-7W, and Close.

A Note About Free E-Mail Service: Some of the most popular free e-mail services, such as **Gmail** and **Hotmail**, use SSL encryption, which the TR-7W does not support. Because of this, these services cannot be used to send warning e-mails. There is, however, an excellent free POP3 e-mail service provided by GMX which has been tested to work with the TR-7W. An account for free POP3 e-mail service can be quickly established at www.gmx.com. When setting up the TR-7W for a GMX account use the settings shown here:

Warning Report Mail

SMTP server name

SMTP Authentication Settings

Mode PLAIN CRAM-MD5 OFF

User

Password

III) Warning Settings Window

1. Click on the “Warning Settings” tab.
2. Enter the IP address, Login ID and Password for the unit to be configured.
3. Click the “Get Settings” button.
4. Select the Type of Unit and Degrees C or F.
5. Enter the upper and / or lower limits to trigger warnings.
6. Enter the e-mail addresses (up to 5) for receipt of warning messages.
7. Enter sender's e-mail address (Most e-mail servers will require that this be the address of the account holder).
8. Enter subject of warning message.
9. Enter name of sender (unit originating message).
10. Enter text to be appended to message (if any).
11. Click “Warning Start” button.

The screenshot shows the 'TR-7W Settings Utility' window with the following details:

- Menu:** Help
- Network Initialization:**
 - Warning Settings (selected)
 - TR-7W Adjustment
 - Detailed Network Settings
 - Gather Current Readings Settings
- Type of Unit:** TR71W TR72W
- Monitoring Status:** (empty field)
- Upper and Lower Limits:**
 - Ch1 Upper Limit: 40 °F
 - Ch1 Lower Limit: 34 °F
 - Ch2 Upper Limit: 55 %
 - Ch2 Lower Limit: 49 %
- Recipient Address:** myphone@verizon.net, homepc@bellsouth.net
- Sender Address:** lab@myco.com
- Subject (DK to Omit):** Limit Exceeded (up to 32 letters)
- Sender Name (Abbreviation OK):** Lab Test Chamber (up to 32 letters)
- Body:** After the Sender Name, Ch1 Temp, Ch2 Humidity message, the following lines will be attached. However, when the message is a battery warning, they will not be attached.

This mail was automatically generated because one or more of the above limits has been exceeded (up to 64 letters)
- Settings History:** (dropdown menu)
- Settings Reception:**
 - History: 192.168.1.200
 - Domain: (empty)
 - IP Address: 192 . 168 . 1 . 200
 - Login ID: wsc-user
 - Password: (masked)
 - Port Number: 80
- Buttons:** Warning Start, Warning Stop, Get Settings

Connecting to a Wireless LAN

Connect the TR-7W to a LAN or PC via a wired Ethernet connection.

I) Configure Settings

1. Open the TR-7W Settings Utility software.
2. Click in the “Detailed Network Settings” tab.
3. Enter the IP address, Login ID and Password for the unit to be configured.
4. Click on the “Get Settings” button.
5. Click on the “Change Settings” button.
6. Turn “Wireless LAN Settings” On.
7. Enter the SSID for your wireless LAN router**.
**Note: The TR-7W will not recognize ‘Space’ Characters in the SSID
8. If WEP encryption is used enter the Key Type.
9. Enter the Key Code (leave blank if no encryption is in use).
10. Click the “Send Settings” button.

Make sure that your wireless router is set for ‘Shared Key’ authentication. The TR-7W does not support ‘Open’ authentication.

Note: The TR-7W does not support WPA or WPA2 encryption.

II) Confirm Settings

1. Click “Get Settings” button.
2. Confirm data retrieved from unit is correct as entered.

Disconnect the TR-7W from the wired LAN and remove power. Insert the Wireless 802.11b LAN adapter card in the CF option slot along the top edge of the unit. Reconnect the A/C adapter to the TR-7W. The LED on the CF adapter card will stop blinking when the wireless connection with the router has been established.

TR-7W Change Settings Window

The screenshot shows the 'Detailed network Settings' window for the TR-7W. It is divided into several sections:

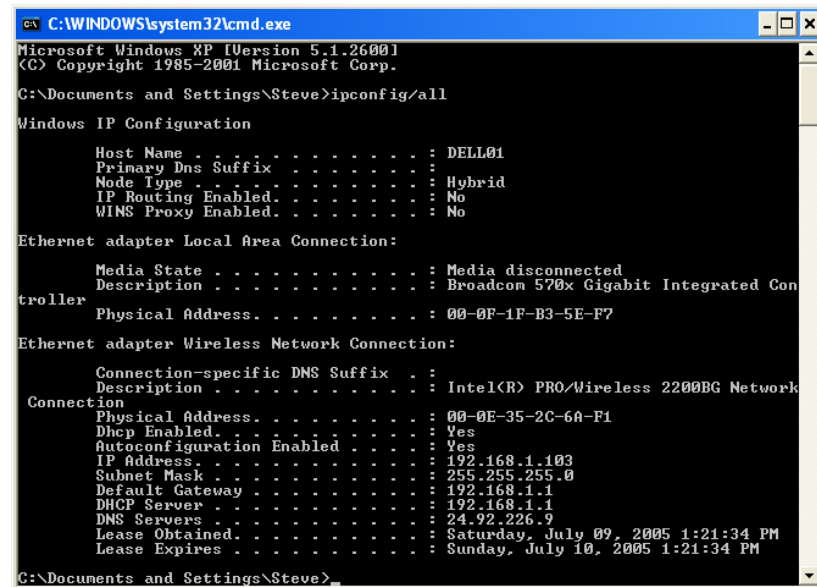
- Basic Network Settings:** IP Address (192.168.1.200), Subnet Mask (255.255.255.0), Gateway Address (192.168.1.1), Login ID (wsc-user), and Login Password (wsc-passwd).
- DNS Settings:** DNS server address (Primary: 24.92.226.9, Secondary: blank), with ON/OFF radio buttons.
- SNTP Settings:** SNTP server address (Primary/Secondary), with ON/OFF radio buttons.
- IP Block:** IP Block ON/OFF radio buttons and three Login Permission address fields.
- Warning Report Mail:** SMTP server name (smtp.nycap.rr.com).
- Wireless LAN Settings:** Wireless LAN ON/OFF radio buttons, Wireless LAN ESS-ID (Linksys1), Wireless LAN WEP Key Type (Character string), and Wireless LAN WEP Key Code.
- Port Number and Time Difference:** Port Number (HTTP: 80) and Time Difference (GMT: -05:00).
- Recipient:** Recipient ON/OFF radio buttons, IP Address (192.168.1.200), Login ID (wsc-user), Login Password (*****), and Port Number (80).

Buttons at the bottom include 'Send Settings', 'Help', 'Re-Activate Communication', and 'Close'.

*Determining Router & Server IP Addresses

Key addresses for your router and ISP server can be obtained from your computer. In order to display this information use the following procedure:

1. Connect your PC to the LAN to which your TR-7xW will be attached.
2. Go to the Start menu and click on Run.
3. Enter "Cmd".
4. In the DOS prompt window enter "ipconfig/all".
5. In the "Connection" Section find:
 - The IP address of the PC
(as assigned by the router)
 - The assigned subnet mask
 - The router's default gateway address
 - The IP address of your ISP's DNS server



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.26001
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\Steve>ipconfig/all

Windows IP Configuration

    Host Name . . . . . : DELL01
    Primary Dns Suffix . . . . . :
    Node Type . . . . . : Hybrid
    IP Routing Enabled. . . . . : No
    WINS Proxy Enabled. . . . . : No

Ethernet adapter Local Area Connection:

    Media State . . . . . : Media disconnected
    Description . . . . . : Broadcom 570x Gigabit Integrated Con
troller
    Physical Address. . . . . : 00-0F-1F-B3-5E-F7

Ethernet adapter Wireless Network Connection:

    Connection-specific DNS Suffix . :
    Description . . . . . : Intel(R) PRO/Wireless 2200BG Network
Connection
    Physical Address. . . . . : 00-0E-35-2C-6A-F1
    Dhcp Enabled. . . . . : Yes
    Autoconfiguration Enabled . . . . : Yes
    IP Address. . . . . : 192.168.1.103
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.1.1
    DHCP Server . . . . . : 192.168.1.1
    DNS Servers . . . . . : 24.92.226.9
    Lease Obtained. . . . . : Saturday, July 09, 2005 1:21:34 PM
    Lease Expires . . . . . : Sunday, July 10, 2005 1:21:34 PM

C:\Documents and Settings\Steve>
```

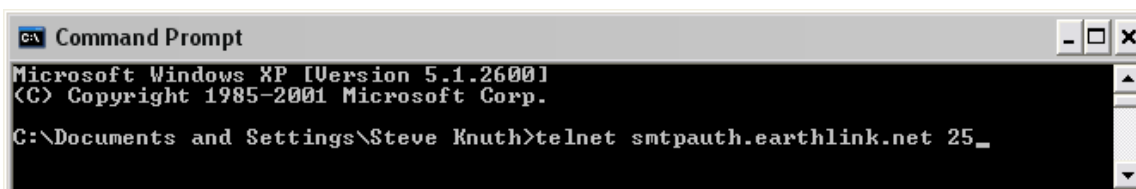
DOS Prompt Window

*Determining E-Mail Authentication Type

This procedure can be used with many E-Mail servers to determine the authentication type(s) that is required.

1) Open the Cmd prompt. Then type:

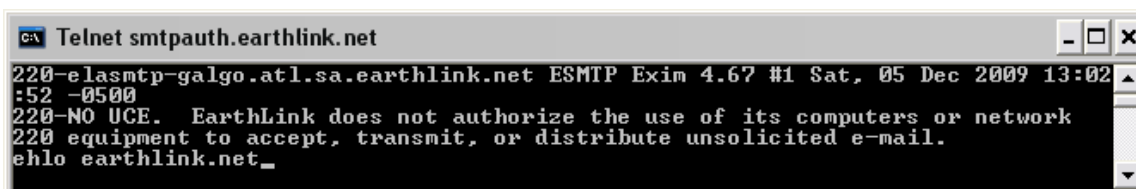
```
telnet <server_name>  
<smtp_port_no> (return)
```



```
Command Prompt  
Microsoft Windows XP [Version 5.1.2600]  
(C) Copyright 1985-2001 Microsoft Corp.  
C:\Documents and Settings\Steve Knuth>telnet smtpauth.earthlink.net 25_
```

2) After server response, Type:

```
ehlo <your_domain_name> (return)
```



```
Telnet smtpauth.earthlink.net  
220-elasmtp-galgo.atl.sa.earthlink.net ESMTP Exim 4.67 #1 Sat, 05 Dec 2009 13:02  
:52 -0500  
220-NO UCE. EarthLink does not authorize the use of its computers or network  
220 equipment to accept, transmit, or distribute unsolicited e-mail.  
ehlo earthlink.net_
```

3) The server will respond something like the following:

In this case you can see that Earthlink accepts both PLAIN and CRAM-MD5 smtp authentication (both of which are supported by TandD), as well as LOGIN (which TandD does not support).



```
Telnet smtpauth.earthlink.net  
220-elasmtp-galgo.atl.sa.earthlink.net ESMTP Exim 4.67 #1 Sat, 05 Dec 2009 13:02  
:52 -0500  
220-NO UCE. EarthLink does not authorize the use of its computers or network  
220 equipment to accept, transmit, or distribute unsolicited e-mail.  
ehlo earthlink.net  
250-elasmtp-galgo.atl.sa.earthlink.net Hello earthlink.net [69.204.176.177]  
250-SIZE 14680064  
250-PIPELINING  
250-AUTH PLAIN LOGIN CRAM-MD5  
250-STARTTLS  
250 HELP
```