

RTR-5W 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.

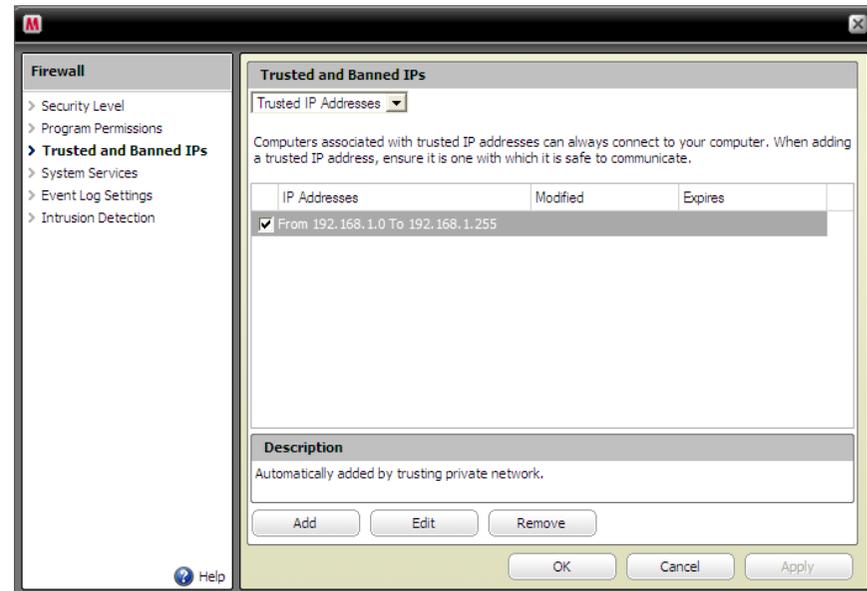
II) Firewall Settings

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 RTR-5W IP Address

I) Initialization

1. Load the RTR-5W Settings Utility software on your PC.

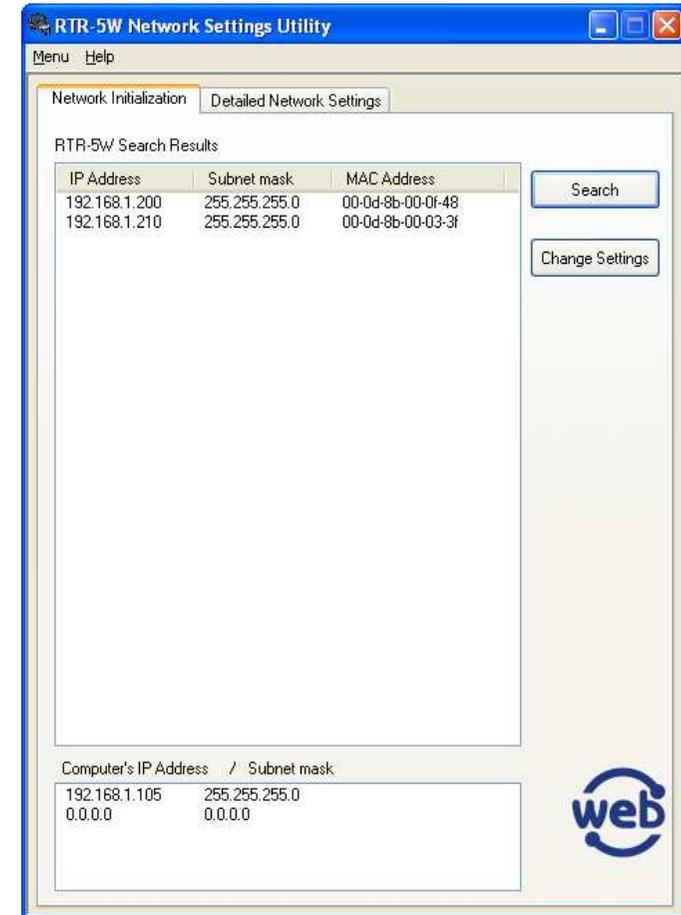
RTR-5W Network Initialization Window

A) LAN Method

1. Connect the RTR-5W to your LAN.
2. Open the RTR-5W Settings Utility software.
3. Select the “Network Initialization” tab.
4. Click on the “Search” button.
5. The search results should show the connected unit.
6. If so, proceed to Detailed Network Settings.
7. 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 RTR-5W to the PC with a “cross connect” cable.
3. Open the RTR-5W 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 RTR-5W. 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.

III) Confirm Settings

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

Change Settings Window

Detailed Network Settings

IP Address: 192 . 168 . 1 . 200 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):

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

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

Warning Report Mail
 SMTP server name: smtp.nycap.rr.com

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

Port Number
 HTTP: 80 FTP server: 21 Time Difference: GMT -04:00
 DTP server: 20

Recipient
 Domain:
 IP Address: 192 . 168 . 1 . 200
 Login ID: wsc-user HTTP Port Number:
 Login Password:

Buttons: PDP before SMTP Settings, Send Settings, Help, Re-Activate Communication, Close

RTR-5W Detailed Settings Window

RTR-5W Network Settings Utility

Menu Help

Network Initialization Detailed Network Settings

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 Setting	on
SNTP server address (primary)	192.43.244.18
SNTP server address (secondary)	132.163.4.101
IP Block	off
Login permission address1	
Login permission address2	
Login permission address3	
Login ID	wsc-user
Login Password	wsc-passwd
SMTP server name	smtp.nycap.rr.com
Wireless LAN Settings	off
Wireless LAN ESS-ID	
Wireless LAN WEP Key Code	
Wireless LAN WEP Key Type (hexadecimal)	off
FTP server port	21
DTP server port	20

Settings History:
 Settings:
 History: 192.168.1.200
 Domain
 IP Address: 192 . 168 . 1 . 200
 Login ID: wsc-user
 Password:
 Port Number: 80

Buttons: Get Settings, Change Settings

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 for your Location

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.

Detailed Network Settings

IP Address: 192 . 168 . 1 . 200 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:

Warning Report Mail: SMTP server name: smtp.nycap.rr.com

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

Port Number: HTTP: 80 FTP server: 21 DTP server: 20
Time Difference: GMT -04:00

Recipient: Domain IP Address: 192 . 168 . 1 . 200
Login ID: wsc-user HTTP Port Number: 80
Login Password:

Buttons: POP before SMTP Settings, Send Settings, Help, Re-Activate Communication, Close

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>

Configuring Warning E-Mails

Open the RTR-5W Settings Utility Software

I) 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 RTR-5W 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, click on the “Mail Auth Settings” button and then proceed to either IIIa or IIIb) below.

RTR-5W Detailed Settings Window

The screenshot shows the 'Detailed Network Settings' window with the following configuration:

- Basic Settings:** IP Address: 192.168.1.220, Subnet Mask: 255.255.255.0, Gateway Address: 192.168.1.1, Login ID: wsc-user, Login Password: wsc-passwd.
- DNS Settings:** ON, DNS server address (Primary): 24.92.226.9, DNS server address (Secondary):
- SNTP Settings:** ON, SNTP server address (Primary): 192.43.244.18, SNTP server address (Secondary): 132.163.4.101.
- IP Block:** OFF, Login permission address 1, 2, and 3: empty.
- Warning Report Mail:** SMTP server name: smtp.nycap.rr.com.
- Wireless LAN Settings:** OFF, Wireless LAN ESS-ID: empty, Wireless LAN WEP Key Type: character string, Wireless LAN WEP Key Code: empty.
- Port Number:** HTTP: 80, FTP server: 21, DTP server: 20.
- Time Difference:** GMT: -04:00.
- Recipient:** Domain: empty, IP Address: 192.168.1.220, Login ID: wsc-user, Login Password: masked, HTTP Port Number: 80.

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 is usually the case if your outgoing mail server you are using is not maintained by your local ISP. If this is the case for your service click the “POP before SMTP Settings” radio button.

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 and Password.
4. Change the Port Number if required by your system.

The screenshot shows the 'Mail Authentication Settings' dialog box. The 'POP before SMTP Settings' section is active, with the 'ON' radio button selected. The fields are filled with: POP Server Name: pop.earthlink.net, POP Account: user@earthlink.net, POP Password: password, and POP Port Number: 110 (default is 110). The 'SMTP Authentication Settings' section is inactive, with 'OFF' selected for the mode, and empty fields for the user and password, and a port number of 25 (default is 25). Buttons for OK, Cancel, and Help are visible.

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 click the “SMTP Authentication Settings” radio button.

1. Click the “On” radio button in the SMTP Authentication menu box.
2. Check the Authentication Mode used by your ISP
3. Enter the User Name for your e-mail account
4. Enter the Password for your e-mail account

The screenshot shows the 'Mail Authentication Settings' dialog box. The 'SMTP Authentication Settings' section is active, with the 'ON' radio button selected. The 'POP before SMTP Settings' section is inactive. The 'SMTP Authentication Mode' is set to 'CRAM-MD5'. The fields are filled with: SMTP Authentication User: user@earthlink.net, SMTP Authentication Password: password, and SMTP Port Number: 25 (default is 25). Buttons for OK, Cancel, and Help are visible.

A Note about Microsoft Exchange Server: The RTR-5W 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 RTR-5W on port 587.

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 RTR-5W 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 RTR-5W. An account for free POP3 e-mail service can be quickly established at www.gmx.com. When setting up the RTR-5W for a GMX account use the settings shown here:

Warning Report Mail

SMTP server name

SMTP Authentication Settings

SMTP Authentication Mode OFF PLAIN CRAM-MD5

SMTP Authentication User

SMTP Authentication Password

SMTP Port Number (default is 25)

IV) Senders E-Mail Address

One thing to be aware of is that smtp servers frequently require the Senders E-Mail address be the same as the account holder's User ID. For example, if your account ID with GMX is username@gmx.com, then it is necessary to use this as the senders e-mail address in the Warning Settings Window, as shown here.

Sender address

Connecting to a Wireless LAN

Connect the RTR-5W to a LAN or PC via a wired Ethernet connection.

I) Configure Settings

1. Open the RTR-5W 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.
 (“Space” characters are not allowed 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.

II) Confirm Settings

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

RTR-5W Change Settings Window

The screenshot shows the 'Detailed Network Settings' window for the RTR-5W. It is divided into several sections:

- 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:** Radio buttons for ON (selected) and OFF. DNS server address (Primary) is 24.92.226.9. DNS server address (Secondary) is blank.
- SNTP Settings:** Radio buttons for ON (selected) and OFF. SNTP server address (Primary) is 192.43.244.18. SNTP server address (Secondary) is 132.163.4.101.
- IP Block:** Radio buttons for ON and OFF (selected). Three login permission address fields are present and empty.
- Warning Report Mail:** SMTP server name is smtp.nycap.rr.com.
- Wireless LAN Settings:** Radio buttons for ON (selected) and OFF. Wireless LAN ESS-ID is linksys. Wireless LAN WEP Key Type is character string. Wireless LAN WEP Key Code is password.
- Port Number:** HTTP 80, FTP server 21, DTP server 20. Time Difference is GMT -04:00.
- Recipient:** Radio buttons for Domain and IP Address (selected). IP Address is 192.168.1.200. Login ID is wsc-user. Login Password is masked with dots. HTTP Port Number is 80.

Buttons at the bottom include: PDP before SMTP Settings, Send Settings, Help, Re-Activate Communication, and Close.

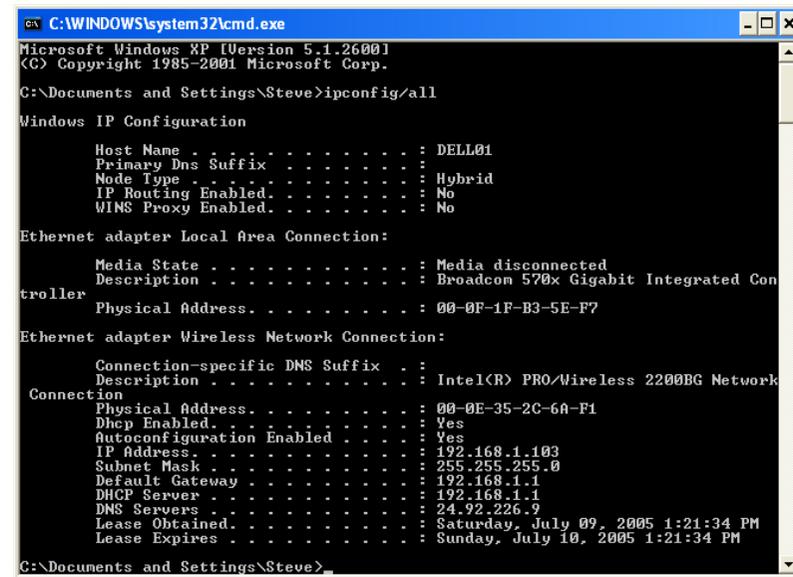
Disconnect the RTR-5W from the wired LAN and remove power. Insert the Wireless 802.11b LAN adapter card in the CF option slot along the top edge of the unit. Reconnect the A/C adapter to the RTR-5W. The LED on the CF adapter card will stop blinking when the wireless connection with the router has been established.

Please note that the wireless router must be set for “shared key” authentication. The RTR-5W is not compatible with “open” authentication networks.

*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 that the RTR-5W will reside on.
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 5.1.2600]
(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 . . . . . : 24.72.226.9
    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:

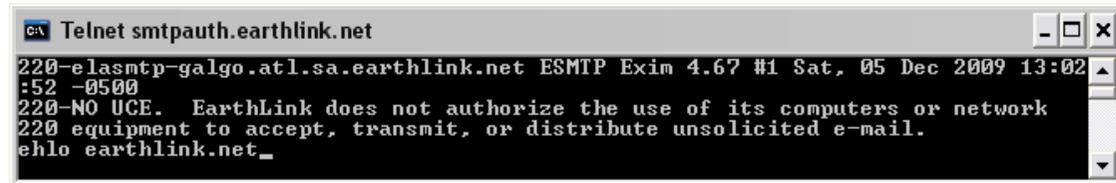
```
telnet <server_name>  
<smtp_port_no> (return)
```



```
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:

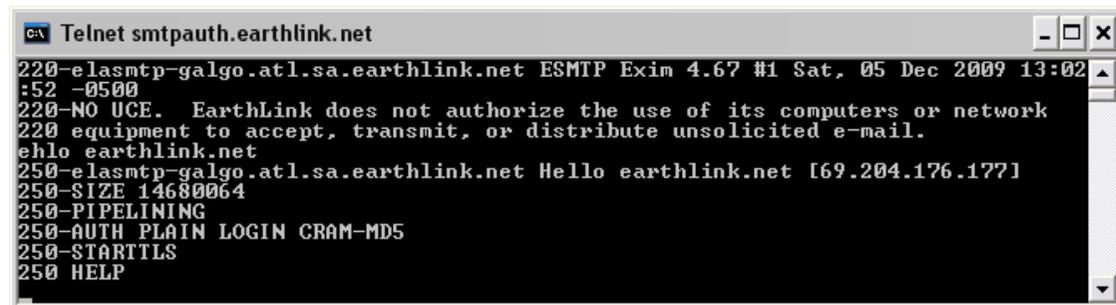
```
ehlo <your_domain_name> (return)
```



```
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
```