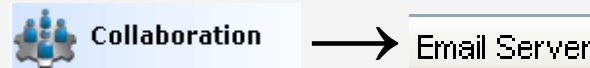




How to Configure edgeBOX as an Email Server



Introduction:

The “Email Server” panel allows the simple configuration edgeBOX as an email (Sendmail) server. edgeBOX uses

Smarthost (Outgoing email is sent from edgeBOX to an intermediate mail server for delivery) and Remote Storage (Incoming email is received via edgeBOX and redirected to another mail server) configurations are also presented.

Examples will demonstrate how mail clients may be configured for use with edgeBOX Mail Server

FAQ's

Can I configure the edgeBOX Mail Server with a Dynamic, rather than a Static public IP address?

You may use a dynamic IP as the WAN IP address and use DynDNS or No-IP to globally register a domain for your chosen Dynamic IP address. However, many email servers will reject emails received from mail servers which do not have a static IP, also your IP address may have previously been used by a server which has previously been designated as a spammer and thus may be blocked from sending emails to other servers.

It is recommended that you use a static, public IP address for your email server.

Can I use my Unix/Outlook mail client to connect to edgeBOX?

You may use any POP3/IMAP mail client with edgeBOX. An Outlook Express example is presented in this "How To".

Is it possible to virus scan emails with edgeBOX?

edgeBOX offers Clamav, which is a free antivirus system. You may also install the Sophos and McAfee commercial packages.

Another possibility is to forward incoming (Remote Storage) and outgoing mail (Smarthost) to another server, which may scan the emails for viruses.

You can also configure Real Time Blacklists (RBL's) to maintain automated spam lists. The system allows a number of options if a mail is deemed to be spam.

DNS Requirements

To configure the email server you need to first register a domain (eg critical-links.com) and reference this domain to the IP address of the edgeBOX WAN.

You may use a dynamic IP address and reference the domain using DynDNS or No-IP, but this is not recommended.

Note: If you do not use a public static IP address, other mail servers may refuse mail which you send to them. This is a policy for some mail servers to prevent spoofed mail.

It is recommended that you allocate a public, static IP to the mail server's WAN NIC and register a domain for this IP.

You basically have three choices on how to host your domain. You can either host your domain:

- With your ISP
 - Advantages: It is being hosted in a datacenter with a highly resilient infrastructure and with detailed knowledge and comprehensively configurable DNS servers.
 - Disadvantages: You are not in control of the DNS server and thus have to make requests to your ISP every time you want a change made, also there may be an additional cost for such changes.
- On the edgeBOX
 - Advantages: Free to host, easy to configure and you are in control, thus changes can be made immediately.
 - Disadvantages: Not in a highly resilient datacenter. You only have one DNS server. Some options (eg some record types are not available via the GUI, Only LAN or ALL query access is allowed)
- On your corporate DNS servers
 - Advantages: Essentially the advantages of both of the above (full control and highly available)
 - Disadvantages: You need to install DNS services on at least 2 servers and manage them.

EdgeBOX Email Configuration

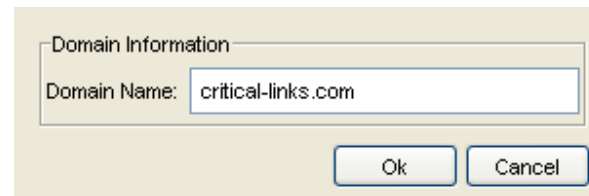
Example 1

Assume we have already registered the critical-links.com domain on the edgeBOX and we have a public IP address for the edgeBOX WAN. Also that we have created a number of accounts on the edgeBOX, one of which is philip.

Thus we would like to configure edgeBOX to receive mail for the philip@critical-links.com account and for this user to be able to send emails.

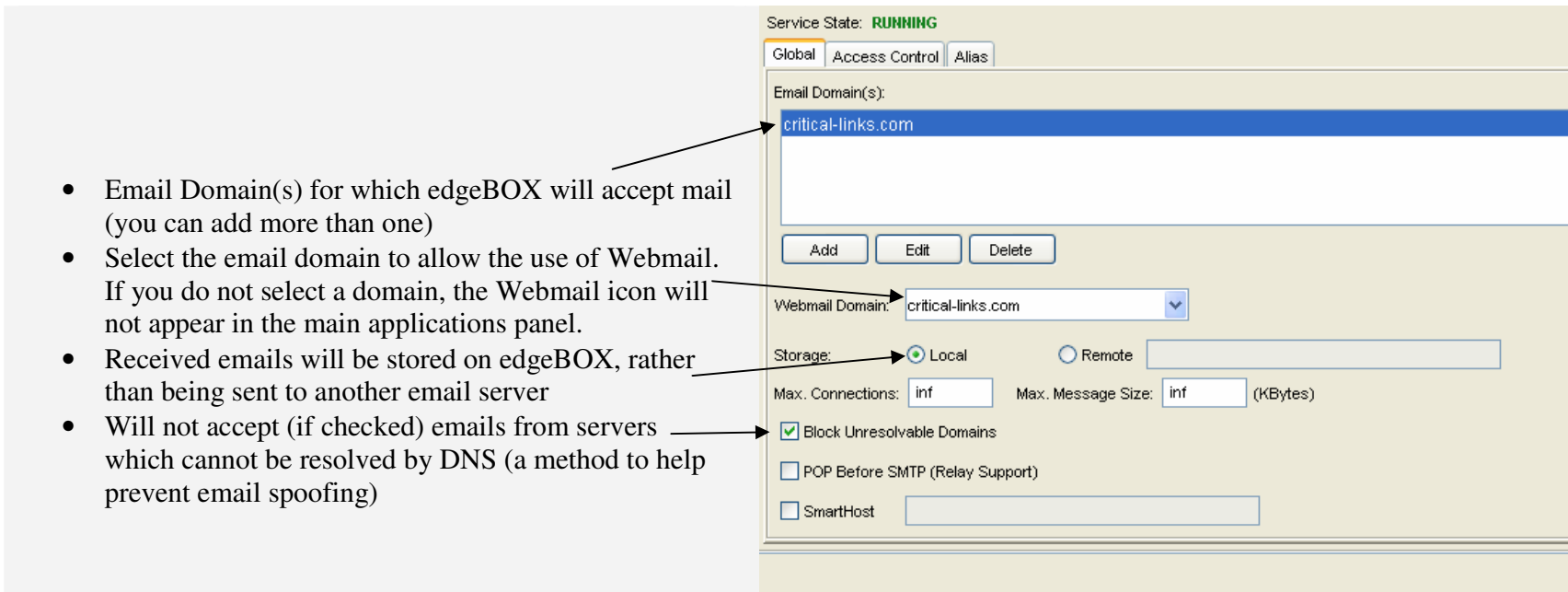
Configuration

1. Go to the “Collaboration” → “Email Server” and Start the mail server (if it is not running)
2. Press the “Add” button to create an email domain and add your domain name, as shown in the image below.



3. Press OK to enter the email domain

Enter the (email) “Domain Name” of critical-links.com and press the OK button. Press the Apply button to apply your changes (Bottom right)



The screenshot shows the configuration interface for email domains in edgeBOX. The service state is 'RUNNING'. The 'Global' tab is selected. Under 'Email Domain(s)', 'critical-links.com' is listed and highlighted. Below this are 'Add', 'Edit', and 'Delete' buttons. The 'Webmail Domain' dropdown is set to 'critical-links.com'. The 'Storage' section has 'Local' selected. 'Max. Connections' and 'Max. Message Size' are both set to 'inf'. The 'Block Unresolvable Domains' checkbox is checked. Other options like 'POP Before SMTP' and 'SmartHost' are unchecked.

- Email Domain(s) for which edgeBOX will accept mail (you can add more than one)
- Select the email domain to allow the use of Webmail. If you do not select a domain, the Webmail icon will not appear in the main applications panel.
- Received emails will be stored on edgeBOX, rather than being sent to another email server
- Will not accept (if checked) emails from servers which cannot be resolved by DNS (a method to help prevent email spoofing)

4. Press the “Apply” button to save your configuration.

You now have a globally registered domain and a fully configured email domain, so you can now send email and receive email? Well not quite!☺

You can now receive email, however there are (typically) two methods (on edgeBOX) used to allow mails to be sent:

- Log onto the edgeBOX directly using Webmail (via the main “Applications” menu)
- Configure an email client, such as Outlook Express or Evolution.

Note: Sendmail (the main server used by edgeBOX) will not allow any IP address to send mail, except for mails originating from the edgeBOX. This is to prevent the server being used as an open mail relay. Thus mail clients (eg Outlook) cannot send mail as their IP addresses are not, by default, allowed to send mail through the edgeBOX mail server.

If you use Webmail, everything will be fine, as it is the edgeBOX server which is sending mail and edgeBOX will allow itself to send mail.

If you use a PC client, the edgeBOX considers the PC as the source of the email, which is problematic because the IP address of the PC is not yet allowed to send mail (see above note)

The mail server needs to be informed which clients are allowed to send mail from the edgeBOX mail server. There are two methods to instruct the mail server as to which IP's are to be trusted for mail relay:

- Add their IP's to the allowed list
 - Simple, but you cannot do a reverse lookup.
- Add a range of IP's by specifying a domain – **Recommended method**
 - This is achieved by creating a DHCP “Prefix”, whereby all the IP's in the DHCP range can be allowed to relay (send) mail.

Note: You may use both of the above methods. You could for example, add a number of machines via the DHCP prefix and also add some machines by adding their IP addresses.

Note: Whilst the domain method requires you to set the domain via DHCP settings, you do not need to actually run DHCP on the edgeBOX for this method to be used. You can simply set the prefix and turn off DHCP.

Allowing clients to send Email

DHCP Method

There are three steps to allow your LAN based PC's to send mail.

The first stage is to allow users to access the edgeBOX mail services; the second stage is to configure DHCP and DNS.

STEP 1

- 1 Go to Security → Firewall, General tab

Check the smtp, imap and pop3 access that you wish to allow (eg LAN and/or WAN and/or DMZ access).

Services			
Service	Internal	External	DMZ
flashoperator	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
dns	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
smtp	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
ssh	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
imap	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
ftp	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
http	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
pop3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

- 2 Confirm in the NAC → “Access Policies” menu, that the user’s profile(s), allows access to SMTP/POP3. You can confirm this by editing the user profile(s) for which access is to be allowed.

Internet Access Service Access DMZ Access Options

Service Access

Allow Service Access

Time Period

Start: Hours: 0 Minutes: 0

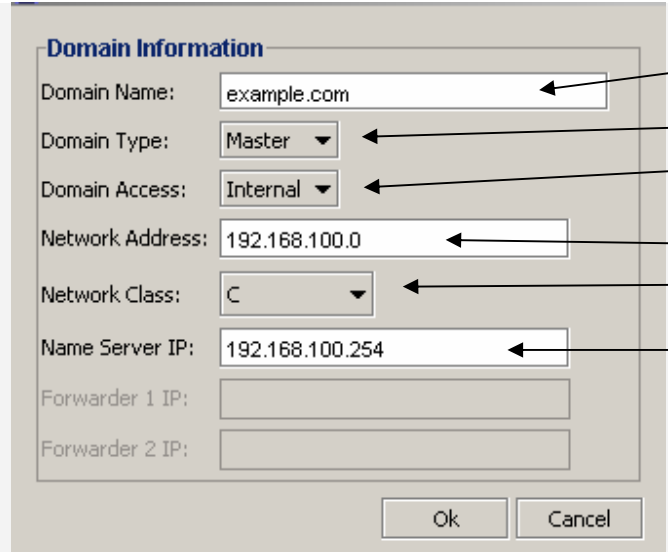
Stop: Hours: 23 Minutes: 59

Services

Name	Allow/Disallow
flashoperator	<input checked="" type="checkbox"/>
smtp	<input checked="" type="checkbox"/>
ssh	<input checked="" type="checkbox"/>
imap	<input checked="" type="checkbox"/>
ftp	<input checked="" type="checkbox"/>
http	<input checked="" type="checkbox"/>
pop3	<input checked="" type="checkbox"/>

STEP 2

- 3 We now need to create an internal domain for the DHCP users.
Go to Router → DNS menu and select the “New” button.



- The “Domain Name” must match the domain name of your system (Router → Interfaces, “Hostname and Domain”, “Domain” entry). This is a requirement to set a prefix for a DHCP range
- Select Master as we are to be authoritative for this domain
- Select Internal, as we will allow only LAN IP addresses to query the DNS server
- LAN network address
- LAN netmask (Can be A (255.0.0.0), B (255.255.0.0) or C (255.255.255.0))
- IP address of nameserver (usually the LAN IP address of the edgeBOX)

STEP 3

- 4 Set a Prefix for the DHCP (Router → DHCP menu) range. In this example, pc-\$, so you would enter “**pc**”, not pc-\$).
- 5 **Confirm your entry is visible after you Apply changes.**

Service State: **RUNNING**

Domain Name:

Max Lease Time: Default Lease Time:

Ranges

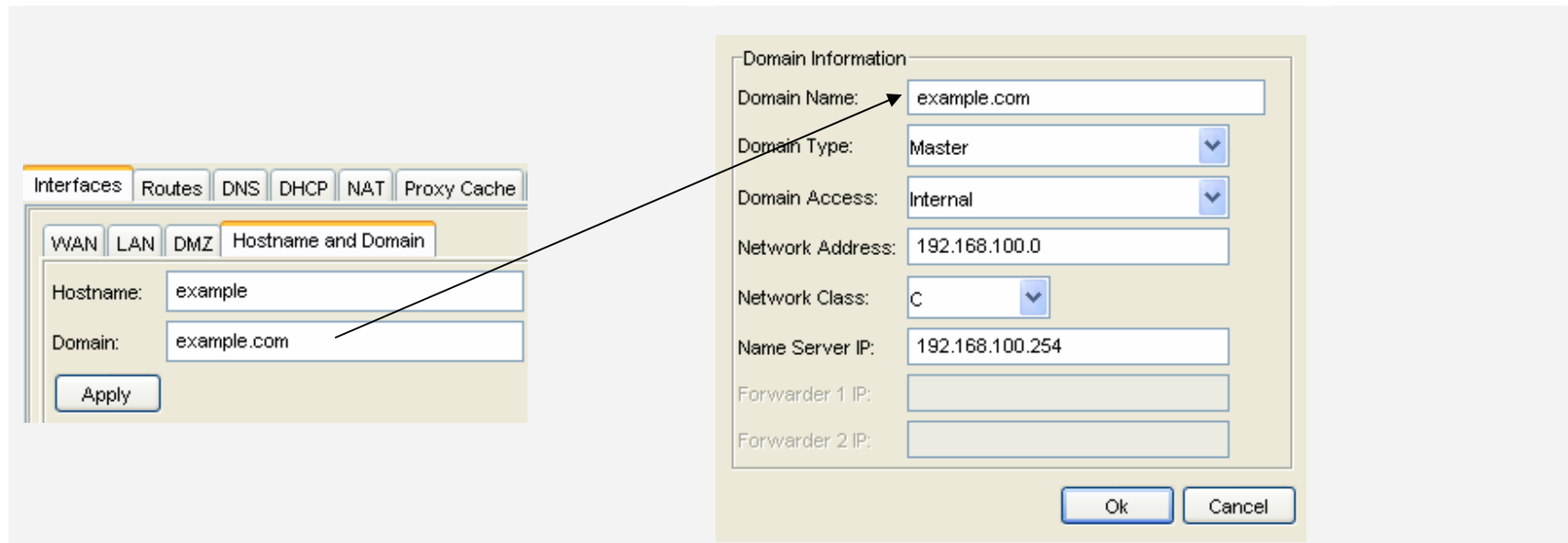
Start IP	End IP	Prefix
192.168.100.100	192.168.100.200	pc-\$

Note: If you are using another DHCP server (eg a Windows DHCP server), the easiest method to allow your LAN PC's to mail, is to follow the above steps, but turn the edgeBOX DHCP server off.

The appropriate entries will still be made in the appropriate (DNS) files to allow mail relaying for IP's in the DHCP as defined on the edgeBOX.

You may be thinking that there are a lot of domains involved in this configuration. You would be correct! To help clarify the situation:

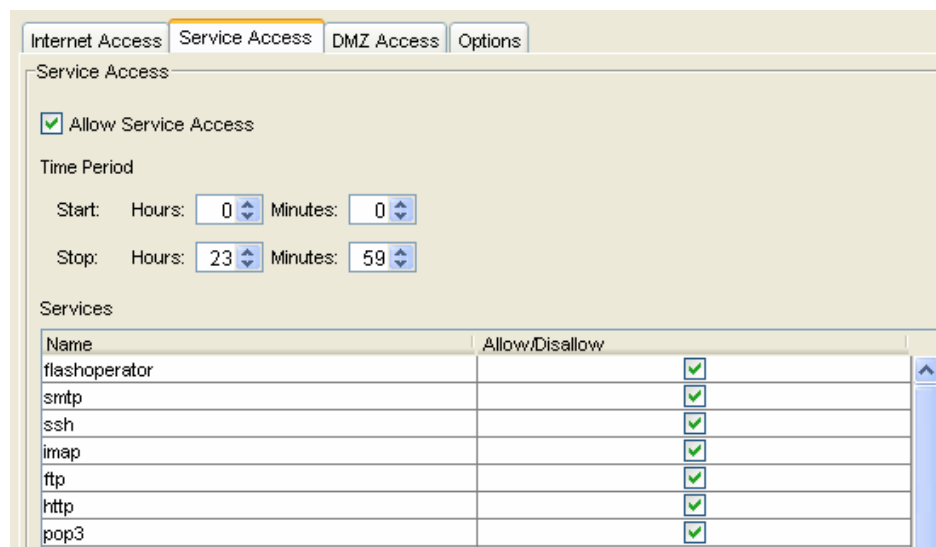
- **When generating a DHCP prefix, you have must use an internal DNS domain which matches the domain of your edgeBOX.**



Authentication Issues

If you have authentication turned on (Security → Firewall, “Require Users to Login” checked), users cannot access resources on the edgeBOX, or internet, before they authenticate.

This means that they will not be able to use their email client on their PC (eg Outlook) until they have authenticated (you need to make sure that the user’s profiles (NAC → “Access Policies, “Service Access”) allow access to smtp and pop3/imap.



It is quite likely that you would want users to be able to send and receive emails without the requirement to have authenticated. This may be facilitated by creating a profile called **default**.

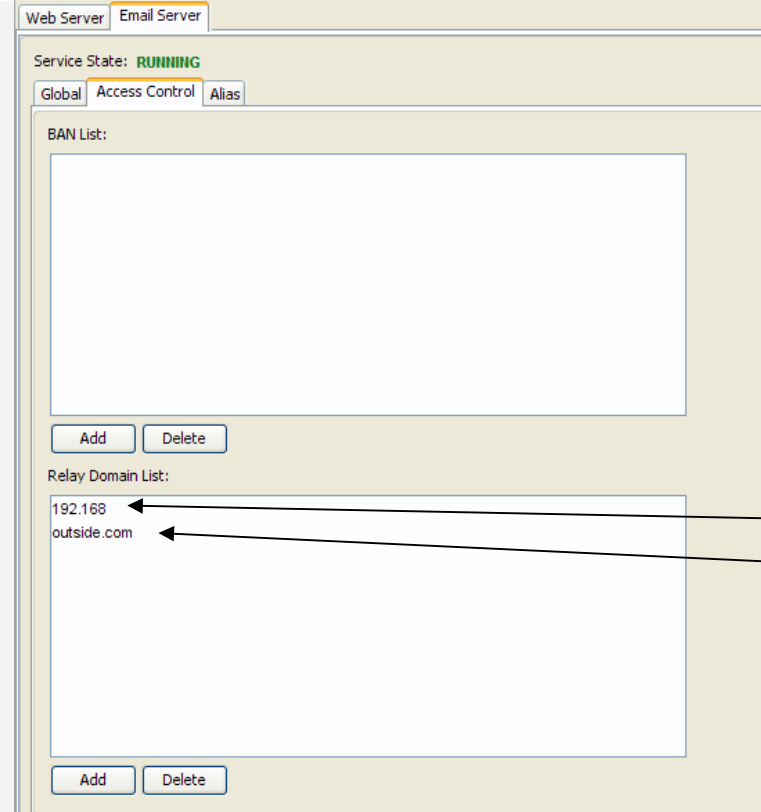
The default profile (if it exists) is the profile that ALL users have, BEFORE they authenticate. Thus setting smtp, pop3 (and usually voip) as checked, allows all unauthenticated users to use these services. If their profiles also allow this access, users can access these services before and after they authenticate.

Access Control Panel Method

A second (less elegant) method for allowing LAN based PC's to send mail, is to use the Access Control Panel (You also need to allow the users access to mail services if authentication is turned on – see “Authentication Issues” section, above)

To use this method, go to the “Collaboration” → “Email Server”, “Access Control” panel

You can now add specific IP addresses or blocks of IP addresses.



The screenshot shows the "Access Control" panel in the edgeBOX interface. The "Service State" is "RUNNING". The "Access Control" tab is selected. The "BAN List" is empty. The "Relay Domain List" contains two entries: "192.168" and "outside.com". Arrows point from these entries to a list of bullet points on the right.

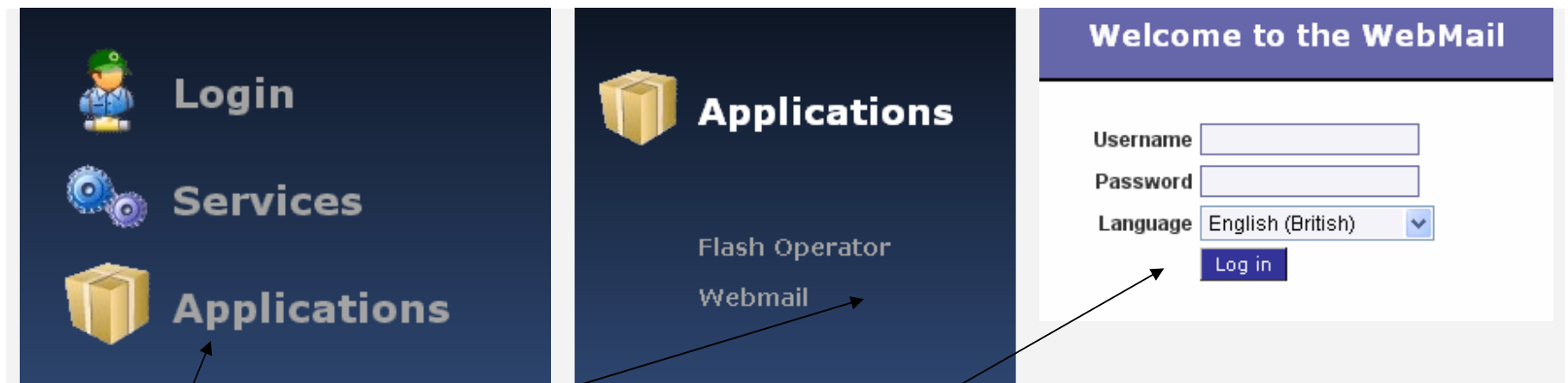
- Allows all IP's in the 192.168.0.0 network to relay mail
- Allows the domain outside.com to relay mail

WebMail

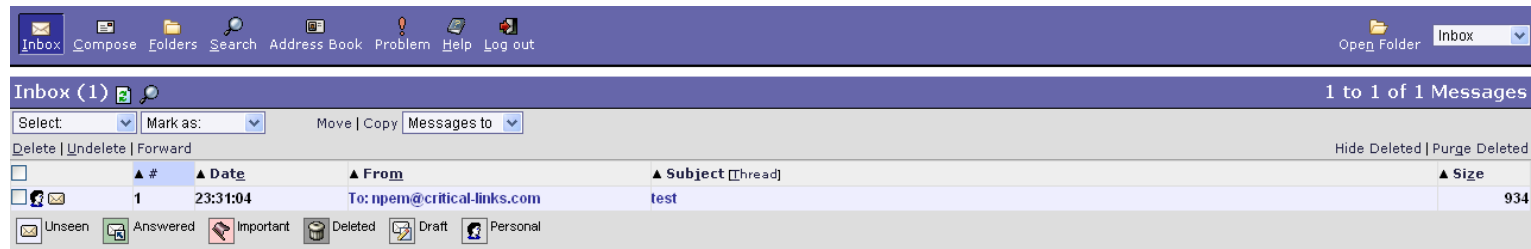
To use edgeBOX mail services, you can configure Outlook Express or another email client application. However, edgeBOX also comes with an email client. This is accessed via a browser and entering the appropriate URL (https://edgeBOX_IP_address:8011). You can also access the edgeBOX URL (from the LAN) via:

<https://myedgebox.com:8011>

This results in the following login screen (column 1):



Select Applications, then Webmail and login with your edgeBOX username and password.

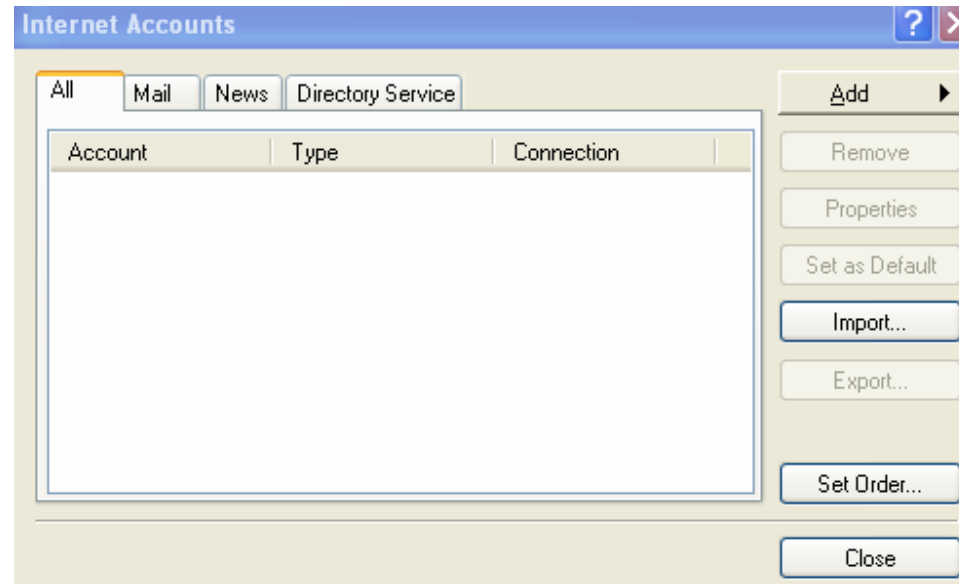


You can use this application to send and receive emails and also as a diagnostic aid if client applications such as Outlook cannot send mail.

Note: Webmail is authorized to send mail as the mail is sent from edgeBOX, rather than from your PC IP address.

Outlook Express Configuration

- Start Outlook Express
- Go to Tools and then Accounts



- Select Add and Select Mail
- Add an appropriate name for yourself in the Display Name Box (e.g. Anita De Silva).
- Select 'Next'.
- Enter your email address (asilva@example.com) in the Email address box. This must be your actual email address that the edgeBOX will know you by. This means that the email domain (example.com) must be correct and the prefix (asilva) must be an account that is set up on the edgeBOX.
- Select 'Next'.

You will be presented with the following menu.

- Enter the IP address of the WAN interface of the edgeBOX
- Typically you will select POP3 as the server type.
- Select the Next button after filling in the form details.

- Select POP (or IMAP)

- Enter the IP address (or FQDN) of the POP3/IMAP server. This is usually the LAN IP address, but may be the WAN IP address of edgeBOX

- Enter the IP or FQDN of the mail server. This is usually the same as the entry in the first field, but may be a different server.

- Select Next after completing the form

E-mail Server Names

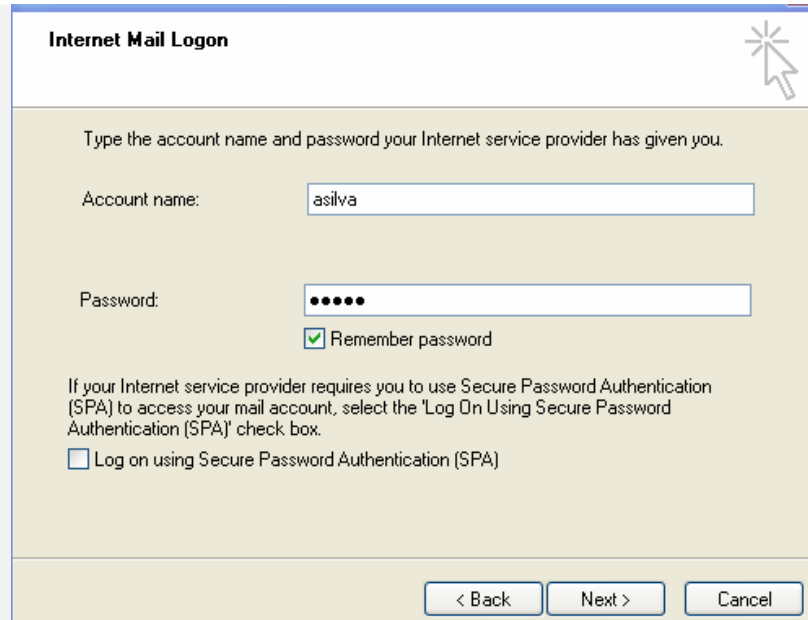
My incoming mail server is a **POP3** server.

Incoming mail (POP3, IMAP or HTTP) server:
192.168.90.193

An SMTP server is the server that is used for your outgoing e-mail.

Outgoing mail (SMTP) server:
192.168.90.193

< Back Next > Cancel



- Enter the Username and Password **as they are in the edgeBOX user account configuration.**
- Select “Next”, then ”Finish”, then “Close”

The User can now receive and send mail.

This can be tested by sending a mail message to their own mail account (asilva@example.com).

Outlook Configuration

Start Outlook.

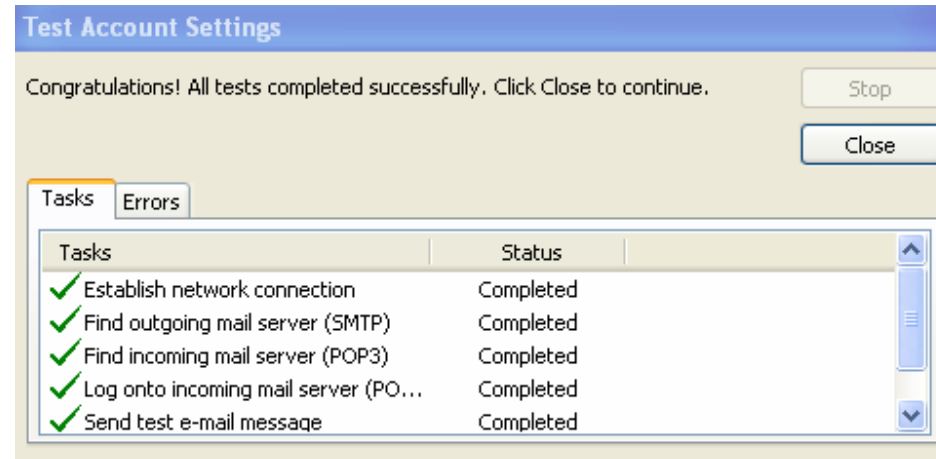
- Go to Tools and then Email Accounts
- Select Add a New Email Account and then Select the Next button
- Select POP3 (or IMAP) and then the Next button

You will now be presented with the following form:

- Add an appropriate name for yourself
- Enter your edgeBOX username (or edgeBOX mail alias) followed by the correct mail domain
- Login name, as setup when the user was added to the edgeBOX.
- Password of the User, as setup when the user was added to the edgeBOX
- Enter the IP address (or FQDN) of the POP3/IMAP server. This is usually the LAN IP address, but may be the WAN IP address of edgeBOX
- Enter the IP or FQDN of the mail server. This is usually the same as the entry in the first field, but may be a different server.

- Press “Next” and then “Finish” to complete the configuration.

- Select the Test Account Settings button.
You should see the following output.
If you encounter errors, check the information you entered in the main form.



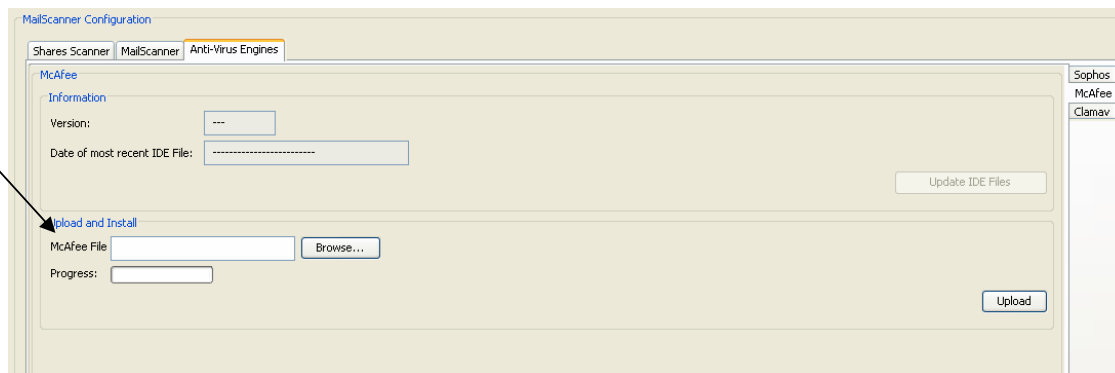
- You can now send yourself an email as a final test.

Mail Scanner

Email is an application which automatically allows **anyone** to upload data to your email server and probably your PC. As such, it has inherent dangers. To mitigate these dangers, you should use a virus scanner. EdgeBOX allows you to use the following antivirus software applications:

- Sophos (<http://www.sophos.com/>) – You need to purchase and install this.
- McAfee (<http://www.mcafee.com/>) – You need to purchase and install this.
- Clamav – Free and included as part of the core edgeBOX installation.

Both Sophos and McAfee are commercial antivirus products and need to be purchased and installed on edgeBOX, via the GUI Interface below (Security → “Anti-Virus” → “Anti-Virus Engines” panel)



Clamav is a free antivirus engine, which is preinstalled on edgeBOX. To activate it, go to the “Security” → “Anti-Virus”, “MailScanner” tab.

Select the scanner you wish to use and check the “Virus Scanning” checkbox. Press the Apply button (Bottom Right).