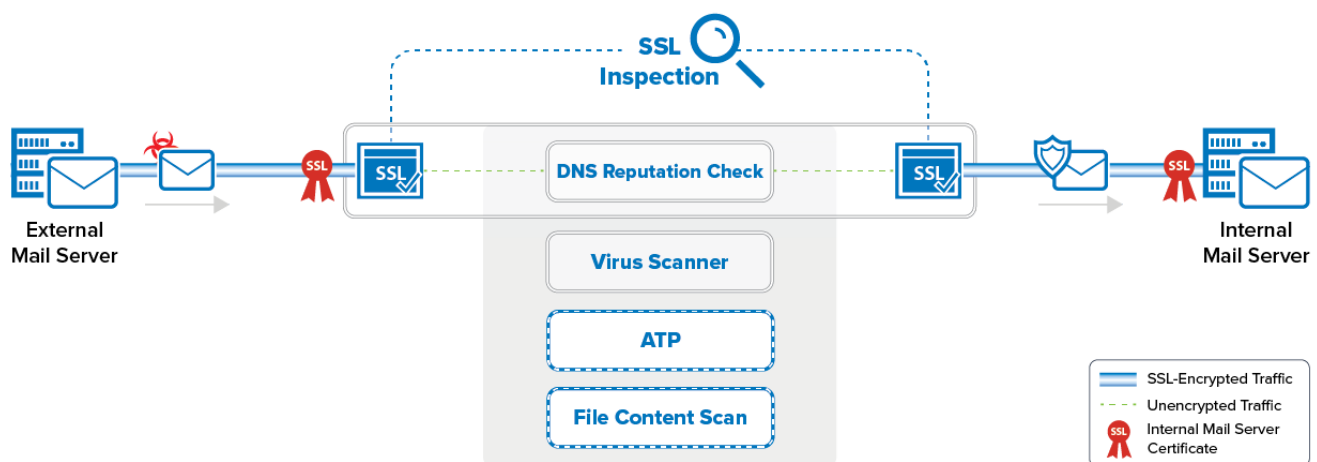


## How to Configure Mail Security in the Firewall

<https://campus.barracuda.com/doc/96026310/>

The Barracuda CloudGen Firewall scans inbound SMTP and POP3 traffic in two steps:

1. SSL Inspection decrypts SMTP and POP3 connections. For incoming connections, your mail server's SSL certificates are used.
2. The DNSBL base is queried via a DNS lookup using the sender's IP address. If the DNS reputation database is not available, the email is not modified. If the domain or IP address is blocklisted, the email's subject line is modified to start with **[SPAM]** and the following non-configurable MIME type headers are set:
  - X-Spam-Prev-Subject: Your email subject without the [SPAM] tag.
  - X-Spam-Flag: YES
  - X-Spam-Status: Yes
  - X-Spam-Level: \*\*\*
3. Email attachments are scanned by the Virus Scanner service on the firewall. If malware is found, the attachment is stripped from the email and replaced by a customizable text informing the user that the malicious attachment has been removed. For firewalls using ATP, the email attachments can also be checked via ATP using the **deliver first, then scan** mode. Scan results must be monitored by the admin because quarantining is not supported for SMTP and POP3.



### Before You Begin

- The **Feature Level** of the Forwarding Firewall must be set to **7.2** or higher.
- Enable Application Control. For more information, see [How to Enable Application Control](#).
- Configure SSL Inspection. For more information, see [How to Configure Inbound SSL Inspection](#) and [How to Configure Outbound SSL Inspection](#).
- Create a Virus Scanner service. For more information, see [Virus Scanner](#).

---

## Step 1. Configure the Virus Scanner Engine(s)

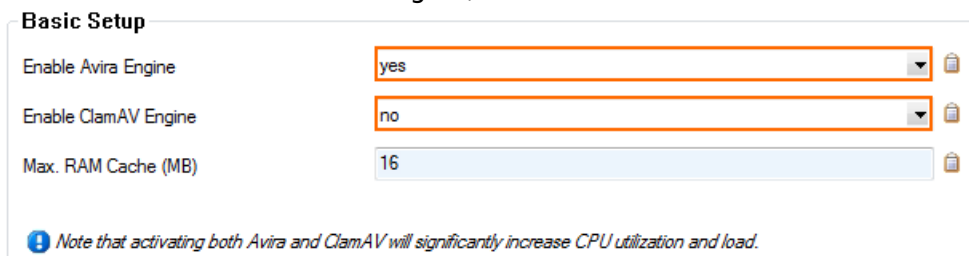
---

Select and configure a virus scanning engine. You can use Avira and ClamAV either separately or together. The CloudGen Firewall F100 and F101 can only use the Avira virus scanning engine.

1. Go to **CONFIGURATION > Configuration Tree > Box > Assigned Services > Virus-Scanner > Virus Scanner Settings**.
2. Click **Lock**.
3. Enable the virus scanner engines of your choice:

Using both virus scanner engines significantly increases CPU utilization and load

- To enable the Avira AV engine, select **Yes** from the **Enable Avira Engine** drop-down list.
- To enable the ClamAV engine, select **Yes** from the **Enable ClamAV** drop-down list.



Basic Setup	
Enable Avira Engine	yes
Enable ClamAV Engine	no
Max. RAM Cache (MB)	16

*Note that activating both Avira and ClamAV will significantly increase CPU utilization and load.*

4. Click **Send Changes** and **Activate**.

---

## Step 2. Configure Inbound SSL Inspection

---

Upload the mail server certificate to the certificate store and configure Inbound SSL Inspection for the mail server. For more information, see [How to Configure Inbound SSL Inspection](#).

---

## Step 3. Enable Virus Scanning

---

The firewall must use your internal mail server's SSL certificate to be able to pass identity checks carried out by some MTAs. You must also enable virus scanning and enter the IP address of the DNSBL server.

1. Go to **CONFIGURATION > Configuration Tree > Box > Assigned Services > Firewall > Security Policy**.
2. Click **Lock**.
3. In the **Virus Scanner Configuration** section, select the check box for **SMTP** and/or **POP3**.

**Virus Scanner Configuration**[Open Virus Scanner Config](#)

Enable Virus Scanning for

☒ HTTP☒ FTP☒ SMTP☒ POP3

4. In the **Scanned MIME types** list, add the MIME types of the files that you want the virus scanner to scan. Default: <factory-default-mime-types> and <no-mime-types> . For more information, see [Virus Scanning and ATP in the Firewall](#).

Scanned MIME Types

<factory-default-mime-types>  
 <no-mime-types>

Action if Virus Scanner is Unavailable Fail Close

5. (optional) Click **Advanced**:

Advanced

**Only files matching a configured MIME type category are scanned for Viruses.**

- **Large File Policy** – The large file policy is set to a sensible value for your appliance. The maximum value is 4096 MB.
- **Data Trickling Settings** – Not applicable for SMTP traffic.

**Virus Scanner Advanced Settings**

☒ Enable Large File Policy: ➔ Allow

Large File Watermark (MB)

Stream Scanning Buffer

**Enable Large File Policy**  
Large File policy determines the action for files exceeding the Large File Watermark.

**Large File Watermark**  
Enter the maximum file size in MB that is scanned. Leave empty to use the unit default. Default: 30 MB except F100/F101: 10 MB Max: 4096 MB

**Stream Scanning Buffer**  
Buffer size for HTTP/HTTPS streaming media using chunked transfer encoding. Use small buffer sizes for faster response times, larger buffer sizes for scanning larger chunks.

---

☒ Activate Data Trickling

Trickle Delay (s)

First Trickle Packet (byte)

Interval (s)

Packet Size (byte)

**Enable data trickling** to prevent the browser connection from timing out by sending small packets of unscanned data to keep the connection open. Files smaller than 10 MB are not trickled. If malware is found, the transfer is stopped.

**Trickle Delay**  
Number of seconds until the first trickle packet is sent.

**First Trickle Packet**  
Size of the first trickle packet.

**Interval**  
Delay between trickle packets.

**Packet Size**  
Size of trickle packets after the first trickle packet.


6. Click **Send Changes** and **Activate**.

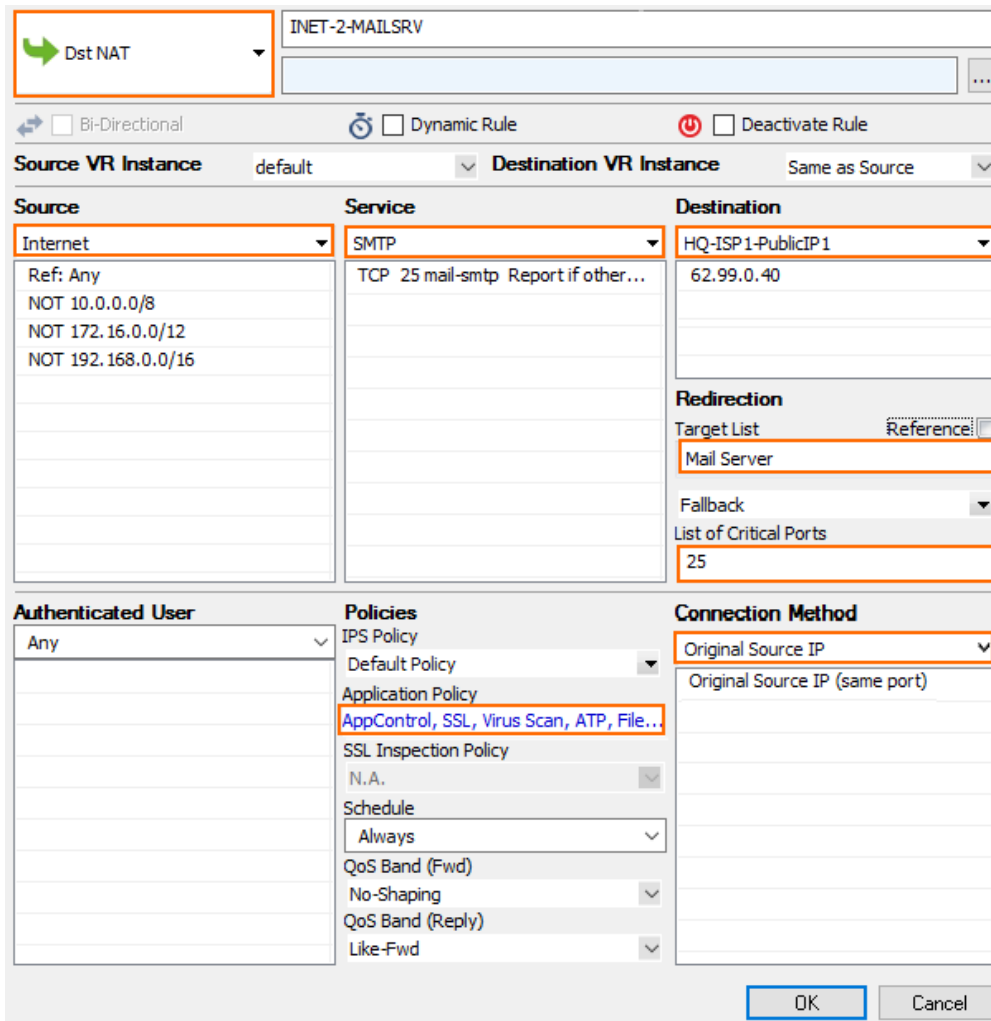
---

## Step 4. Create a Dst NAT Access Rule for Incoming SMTP Traffic

---

Enable Application Control, SSL Inspection, Virus Scanning, ATP (optional), and File Content Scanning (optional) in the access rule.

1. Go to **CONFIGURATION > Configuration Tree > Box > Assigned Services > Firewall > Forwarding Rules**.
2. Click **Lock**.
3. Either click the plus icon (+) at the top right of the ruleset, or right-click the ruleset and select **New > Rule**.  

4. Select **Pass** as the action.
5. Enter a **Name** for the rule.
6. Specify the following settings to match your incoming SMTP traffic:
  - **Action** – Select **Dst NAT**.
  - **Source** – Select **Internet**.
  - **Destination** – Enter the public IP address that your mail server domain's MX record resolves to.
  - **Service** – Select **SMTP** or **POP3**.
  - **Connection Method** – Select **Original Source IP**.



**Rule Name:** INET-2-MAILSRV

**Direction:** Dst NAT

**Source VR Instance:** default **Destination VR Instance:** Same as Source

**Source:** Internet  
 Ref: Any  
 NOT 10.0.0.0/8  
 NOT 172.16.0.0/12  
 NOT 192.168.0.0/16

**Service:** SMTP  
 TCP 25 mail-smtp Report if other...

**Destination:** HQ-ISP1-PublicIP1  
 62.99.0.40

**Redirection:**  
 Target List: Mail Server  
 Reference: ☐  
 Fallback:   
 List of Critical Ports: 25

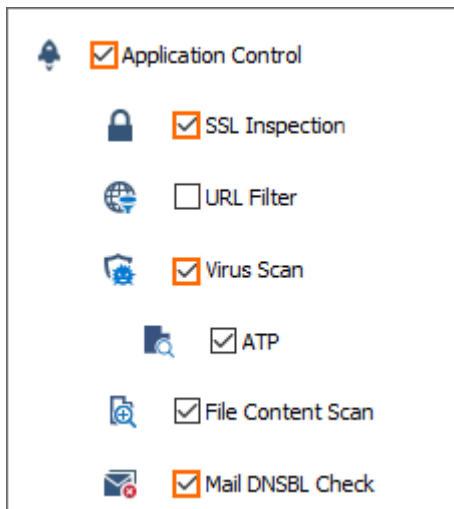
**Authenticated User:** Any

**Policies:**  
 IPS Policy: Default Policy  
 Application Policy: AppControl, SSL, Virus Scan, ATP, File...  
 SSL Inspection Policy: N.A.  
 Schedule: Always  
 QoS Band (Fwd): No-Shaping  
 QoS Band (Reply): Like-Fwd

**Connection Method:** Original Source IP  
 Original Source IP (same port)

**Buttons:** OK, Cancel


7. Click on the **Application Policy** link and select:
- **Application Control** – required.
  - **SSL Inspection** – required.
  - **Virus Scan** – required.
  - **ATP** – optional.
  - **File Content Scan** – optional. For more information, see [File Content Filtering in the Firewall](#).
  - **Mail DNSBL Check** – Select to enable DNSBL check.

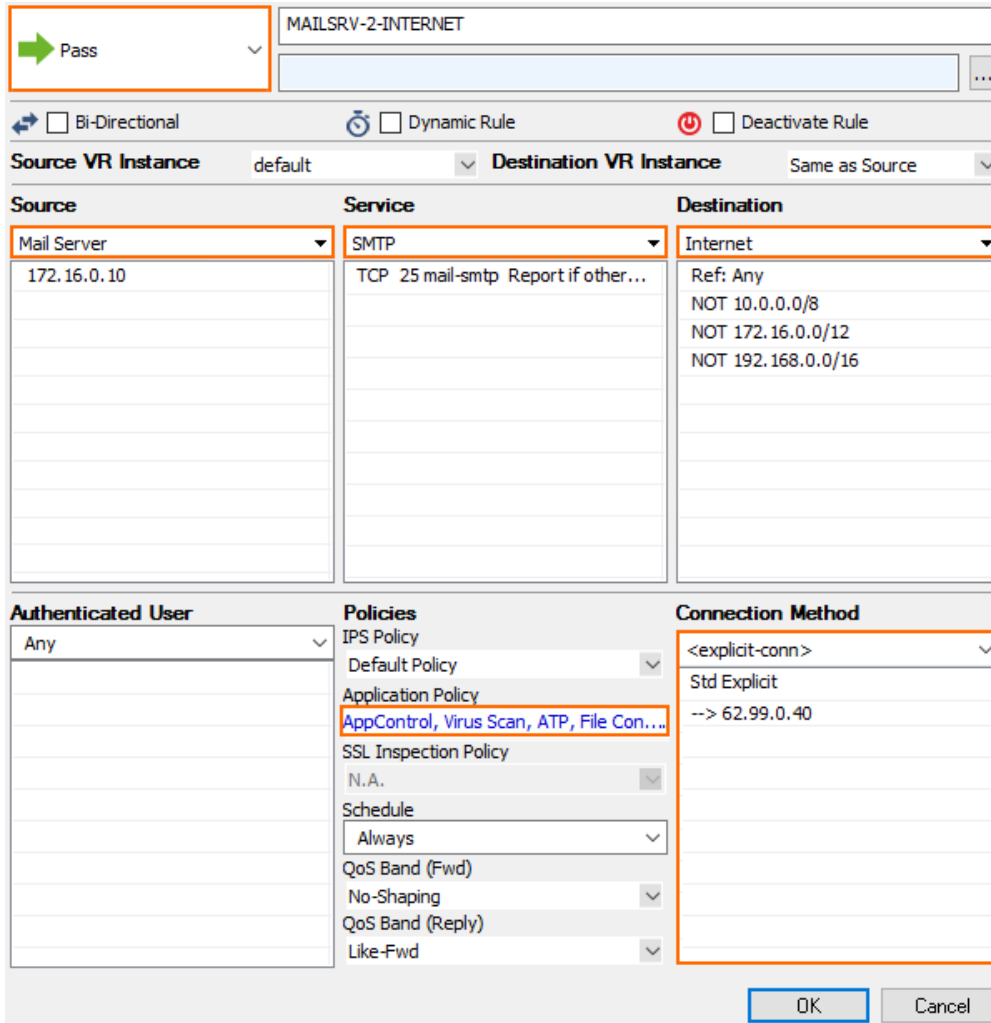


8. Select a policy from the **SSL Inspection Policy** drop-down list. For more information, see [How to Configure Inbound SSL Inspection](#).
9. Click **OK**.
10. Click **Send Changes** and **Activate**.

### Step 5. (optional) Create a Pass Access Rule for Outgoing SMTP Connections

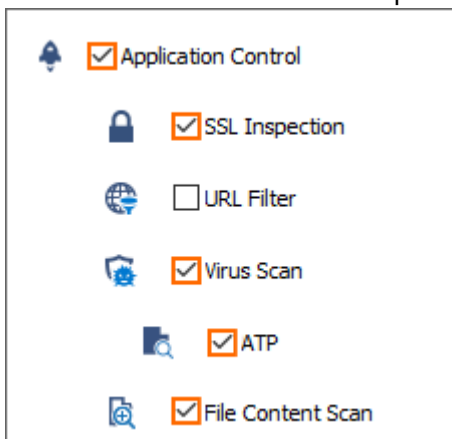
To also scan outgoing SMTP traffic from your internal mail server or mail clients for malware, create a PASS access rule.

1. Go to **CONFIGURATION > Configuration Tree > Box > Assigned Services > Firewall > Forwarding Rules**.
2. Click **Lock**.
3. Either click the plus icon (+) at the top right of the ruleset, or right-click the ruleset and select **New > Rule**.  

4. Select **Pass** as the action.
5. Enter a **Name** for the rule.
6. Specify the following settings to match your incoming SMTP traffic:
  - **Action** – Select **PASS**.
  - **Source** – Select the network object containing your mail server IP addresses, or for SMTP client connections the network containing the SMTP clients.
  - **Destination** – Select **Internet**.
  - **Service** – Select **SMTP** or **POP3** for outgoing mail server traffic. You can also create a service object for TCP port 587 (SMTP) or 110 (POP3) for outgoing mail client traffic. For more information, see [How to Create Service Objects](#).
  - **Connection Method** – If used for an internal mail server, select a connection object using the public IP address that your mail server's MX record resolves to as the source IP address. If this rule applies to SMTP clients, select **Dynamic NAT**.



7. Click on the **Application Policy** link and select:

- **Application Control** – Required.
- **SSL Inspection** – Required.
- **Virus Scan** – Required.
- **ATP** – optional.
- **File Content Scan** – optional.

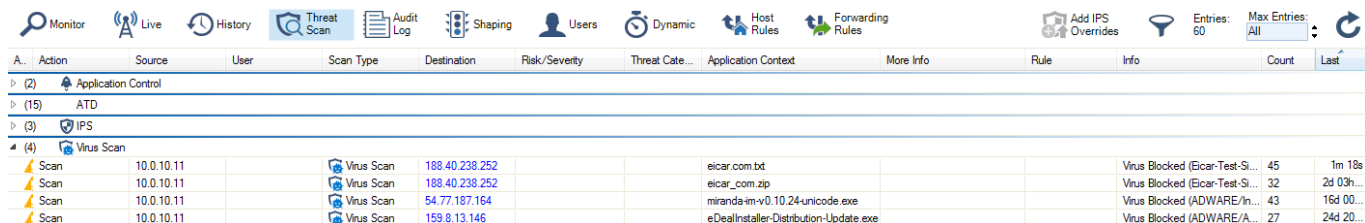


8. Select a policy from the **SSL Inspection Policy** drop-down list. For more information, see [How to Configure Outbound SSL Inspection](#).

9. Click **OK**.
10. Click **Send Changes** and **Activate**.

## Monitoring and Testing

- Test the virus scan setup by sending EICAR test files from <http://www.eicar.com> via email to a mail server located behind the firewall.
- All information about mail scanning in the firewall is logged to the **/firewall/virusscan.log** log file.
- To monitor detected viruses and malware, go to the **FIREWALL > Threat Scan** page.



A..	Action	Source	User	Scan Type	Destination	Risk/Severity	Threat Category	Application Context	More Info	Rule	Info	Count	Last
> (2)	Application Control												
> (15)	ATD												
> (3)	IPS												
▲ (4)	Virus Scan												
▲	Scan	10.0.10.11		Virus Scan	188.40.238.252			eicar.com.bdt			Virus Blocked (Eicar-Test-S...	45	1m 18s
▲	Scan	10.0.10.11		Virus Scan	188.40.238.252			eicar_com.zip			Virus Blocked (Eicar-Test-S...	32	2d 03h...
▲	Scan	10.0.10.11		Virus Scan	54.77.187.164			miranda-im-v0.10.24-unicode.exe			Virus Blocked (ADWARE/In...	43	16d 00...
▲	Scan	10.0.10.11		Virus Scan	159.8.13.146			eDealInstaller-Distribution-Update.exe			Virus Blocked (ADWARE/A...	27	24d 20...

## Next Steps

- Customize the text used to replace removed email attachments. For more information, see [How to Configure Custom Block Pages and Texts](#).
- To combine ATP with Mail Security in the Firewall, see [Advanced Threat Protection \(ATP\)](#).



## Figures

1. virus\_scan\_mail\_traffic\_atp\_01.png
2. AV\_SMTP\_01.png
3. AV\_SMTP\_08.png
4. AV\_SMTP\_09.png
5. AV\_SMTP\_02.png
6. FW\_virus\_scanning\_advanced.png
7. FW\_Rule\_Add01.png
8. AV\_SMTP\_04.png
9. file\_content\_fw\_02.png
10. FW\_Rule\_Add01.png
11. AV\_SMTP\_07.png
12. AV\_SMTP\_12.png
13. avScanning02.png

© Barracuda Networks Inc., 2024 The information contained within this document is confidential and proprietary to Barracuda Networks Inc. No portion of this document may be copied, distributed, publicized or used for other than internal documentary purposes without the written consent of an official representative of Barracuda Networks Inc. All specifications are subject to change without notice. Barracuda Networks Inc. assumes no responsibility for any inaccuracies in this document. Barracuda Networks Inc. reserves the right to change, modify, transfer, or otherwise revise this publication without notice.