

Email Security for Microsoft Office 365

Deployment and Configuration Guide - Cloudflare Area 1 as MX Record

Cloudflare Area 1 Overview

Phishing is the root cause of upwards of 90% of security breaches that lead to financial loss and brand damage. Cloudflare Area 1 is a cloud-native service that stops phishing attacks, the #1 cybersecurity threat, across all traffic vectors - email, web and network.

With globally distributed sensors and comprehensive attack analytics, Area 1 cloud email security proactively identifies phishing campaigns, attacker infrastructure, and attack delivery mechanisms during the earliest stages of a phishing attack cycle. Using flexible enforcement platforms, Area 1 allows customers to take preemptive action against these targeted phishing attacks across all vectors - email, web and network; either at the edge or in the cloud.

Email Flow

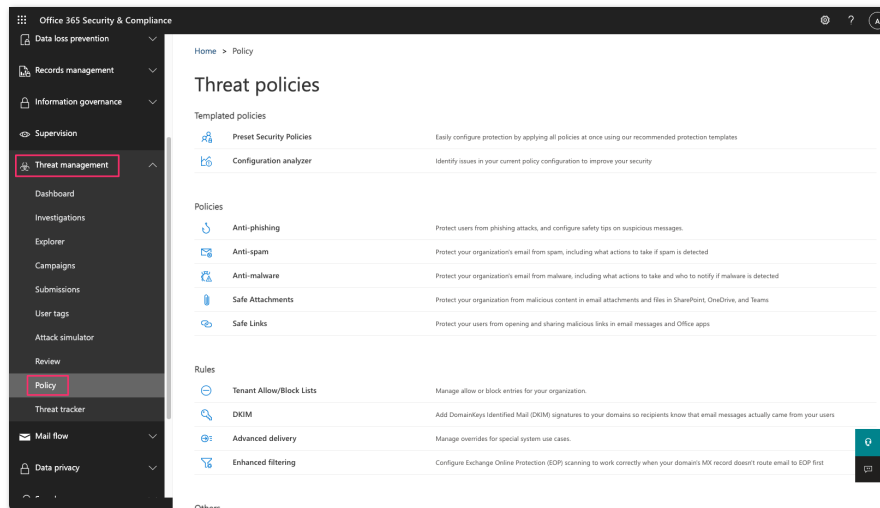


Configuration Steps

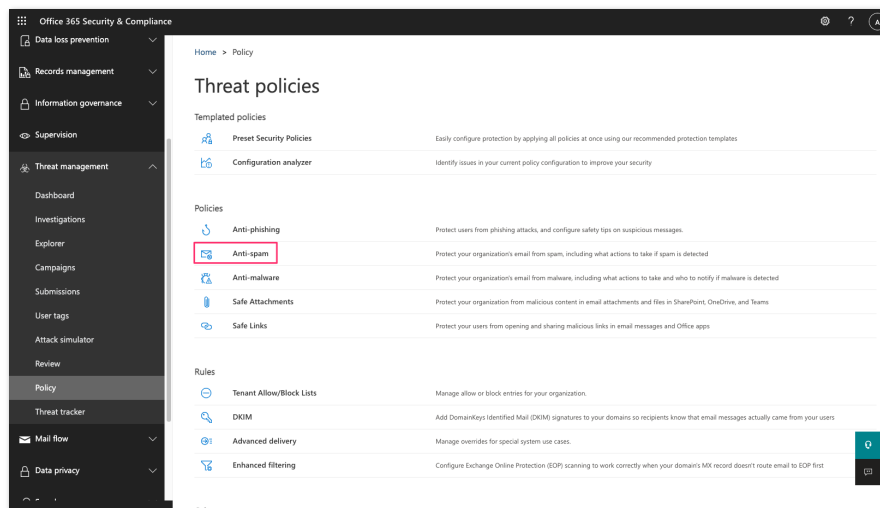
- Step 1: Add Area 1 IP addresses to Allow List
- Step 2: Execute O365 Enable-OrganizationCustomization (if required)
- Step 3: Enhanced Filtering Configuration
- Step 4: Configure Area 1 Quarantine Policies
- Step 5: Update your domain MX Records

Step 1: Add Area 1 IP addresses to Allow List

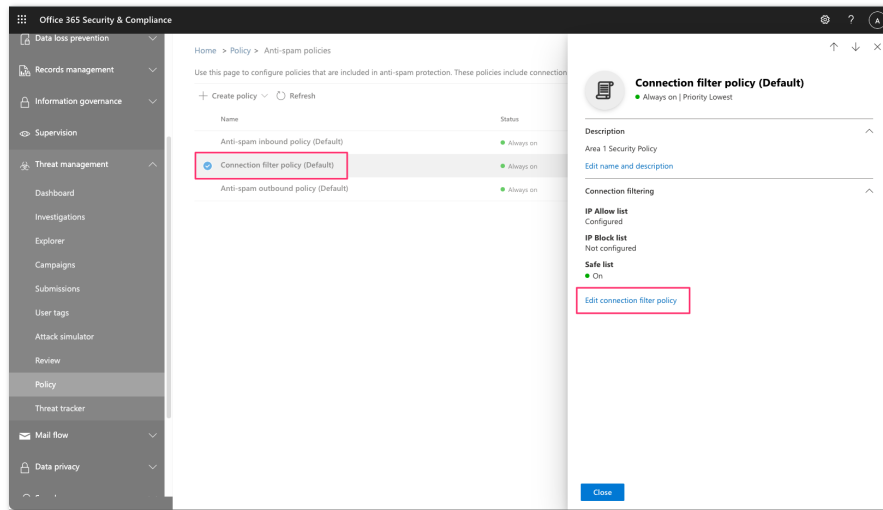
1. From the Microsoft Security admin center (<https://protection.office.com/homepage>), under the Threat management section, select the Policy settings (<https://protection.office.com/threatpolicy>):



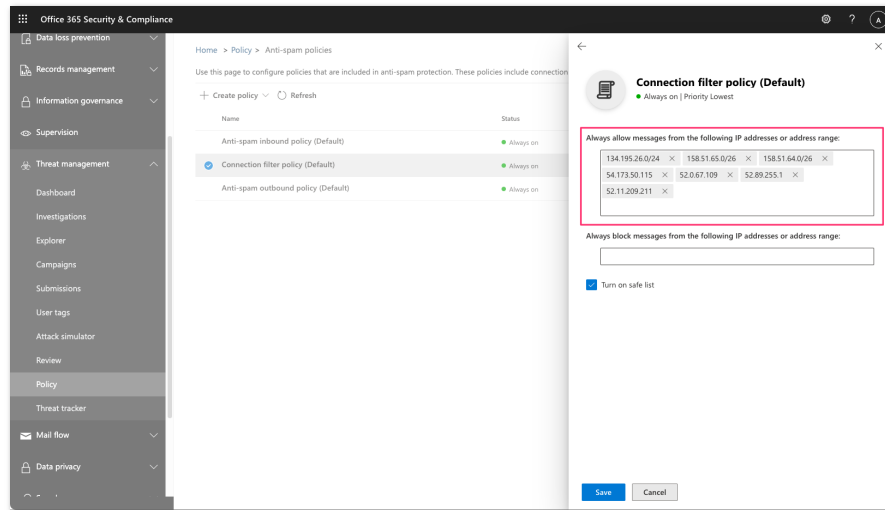
2. On the right configuration pane, select the Anti-spam option (<https://protection.office.com/antispam>):



3. Click the Connection filter policy (Default) to edit the policy, then select the Edit connection filter policy in the drawer window to access the edit dialog:



4. In the Always allow messages from the following IP addresses or address range section, add the following IP addresses and CIDR blocks.



- 52.11.209.211
- 52.89.255.11
- 52.0.67.109
- 54.173.50.115
- 158.51.64.0/26
- 158.51.65.0/26
- 134.195.26.0/24

If you are a European customer, you will need to add the additional IPs of our European datacenter to the exception list:

- 52.58.35.43
- 35.157.195.63

5. Once added, click **save** to save the configuration changes.

Note: Depending on your O365 configuration, you may receive a warning indicating that you need to run the **Enable-OrganizationCustomization** cmdlet before you create or modify objects in your Exchange Online organization. Please follow the next step to enable this cmdlet.

Reference:

<https://docs.microsoft.com/en-us/powershell/module/exchange/enable-organizationcustomization> for details on how to execute this cmdlet.

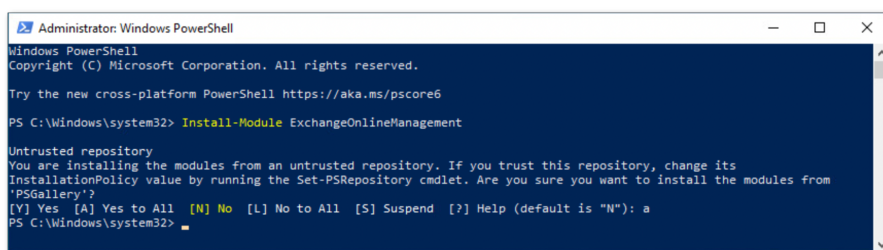
Step 2: Execute Enable-OrganizationCustomization (if required)

The following steps are only required if you have not previously customized your O365 instance. In the previous step, if you received the message to run this cmdlet, you will need to execute it in order to proceed with the configuration.

1. Run PowerShell as administrator, execute the following command

- > **Install-Module ExchangeOnlineManagement**
- > Enter **Y** or **A** to allow the installation of the untrusted module.

Note: This module is a Microsoft module.



```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

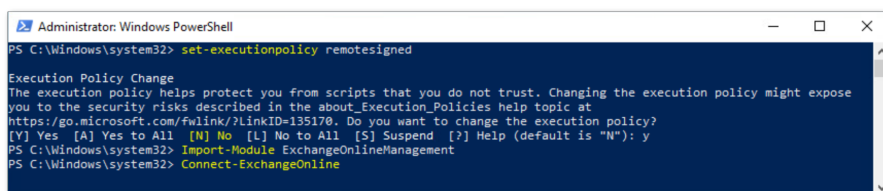
Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Windows\system32> Install-Module ExchangeOnlineManagement

Untrusted repository
You are installing the modules from an untrusted repository. If you trust this repository, change its
InstallationPolicy value by running the Set-PSRepository cmdlet. Are you sure you want to install the modules from
'PSGallery'?
[Y] Yes [A] Yes to All [N] No [L] No to All [S] Suspend [?] Help (default is "N"): a
PS C:\Windows\system32>
```

2. Execute the following commands to execute the policy change and connect to the O365 instance:

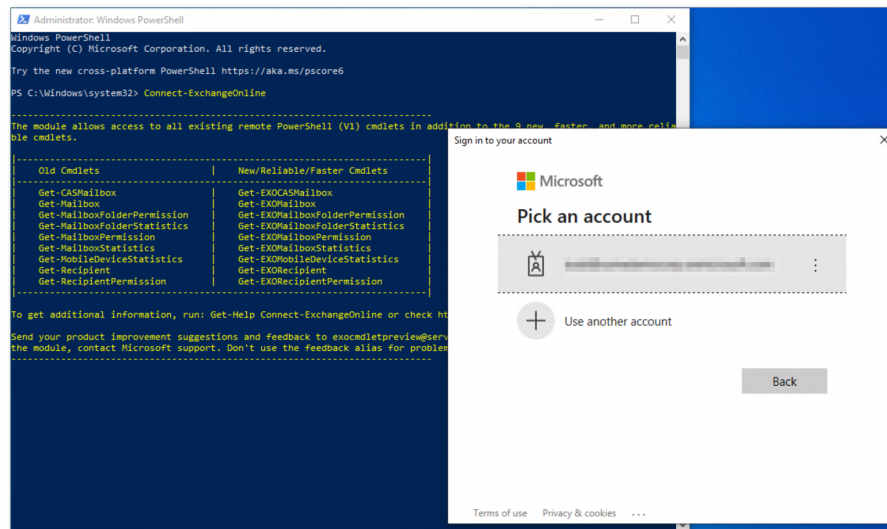
- > **set-executionpolicy remotesigned**
- > Enter **Y** or **A**, to confirm the change
- > **Import-Module ExchangeOnlineManagement**
- > Execute **Connect-ExchangeOnline**, to authenticate against your O365 instance



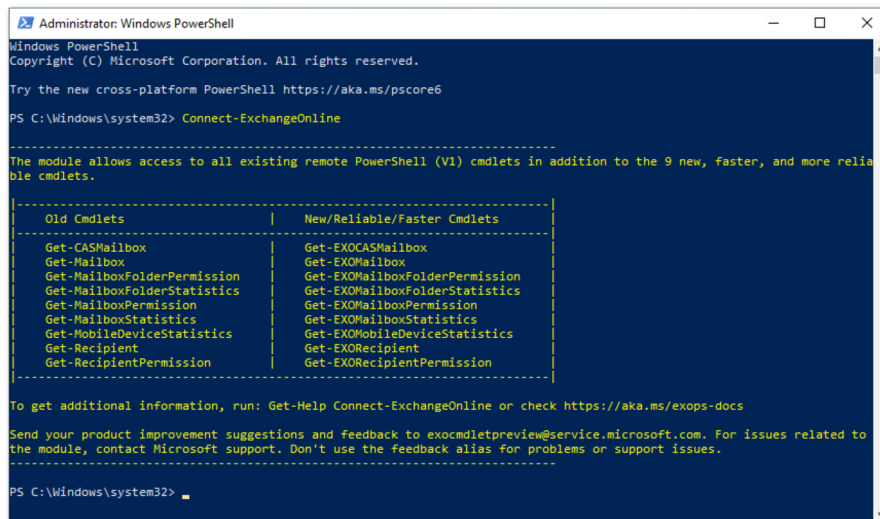
```
Administrator: Windows PowerShell
PS C:\Windows\system32> set-executionpolicy remotesigned

Execution Policy Change
The execution policy helps protect you from scripts that you do not trust. Changing the execution policy might expose
you to the security risks described in the about_ExecutionPolicies help topic at
https://go.microsoft.com/fwlink/?linkID=135170. Do you want to change the execution policy?
[Y] Yes [A] Yes to All [N] No [L] No to All [S] Suspend [?] Help (default is "N"): y
PS C:\Windows\system32> Import-Module ExchangeOnlineManagement
PS C:\Windows\system32> Connect-ExchangeOnline
```

3. The **Connect-ExchangeOnline** cmdlet will prompt you to login. Please login using an O365 administrator account:



Once authenticated, you will be returned to the PowerShell prompt:



4. You can verify that the OrganizationCustomization is enabled by running the command:

> **Get-OrganizationConfig | FL IsDehydrated**

```
Administrator: Windows PowerShell
PS C:\Windows\system32> Get-OrganizationConfig | FL IsDehydrated

IsDehydrated : False

PS C:\Windows\system32>
```

If the result is **false** OrganizationCustomization is already enabled, no further actions are required.

5. If the result is **true**, then you will need to run the following command to enable the OrganizationCustomization:

> **Enable-OrganizationCustomization**

```
Administrator: Windows PowerShell
PS C:\> Enable-OrganizationCustomization

Enable Configuration Customizations For Organization
Creating Exchange configuration objects in Active Directory.
[oooooooooooooooooooooooooooooooooooooooooooooooooooo] ]

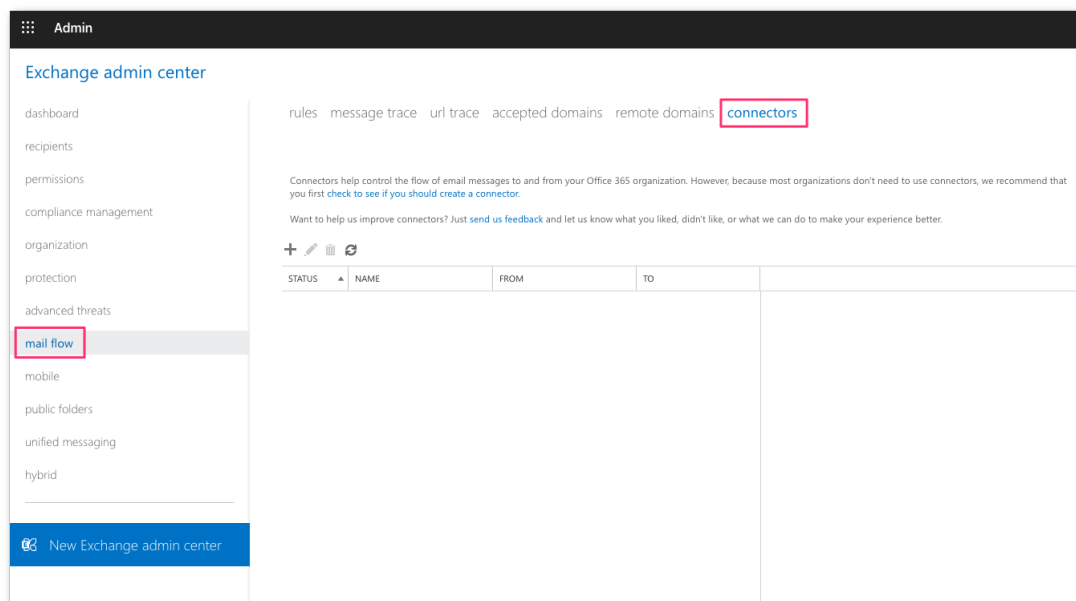
PS C:\>
```


Step 3: Enhanced Filtering Configuration

To configure the Enhanced Filtering function, this will allow O365 to properly identify the original connecting IP before the message was received by Area 1 to help with the SPF analysis.

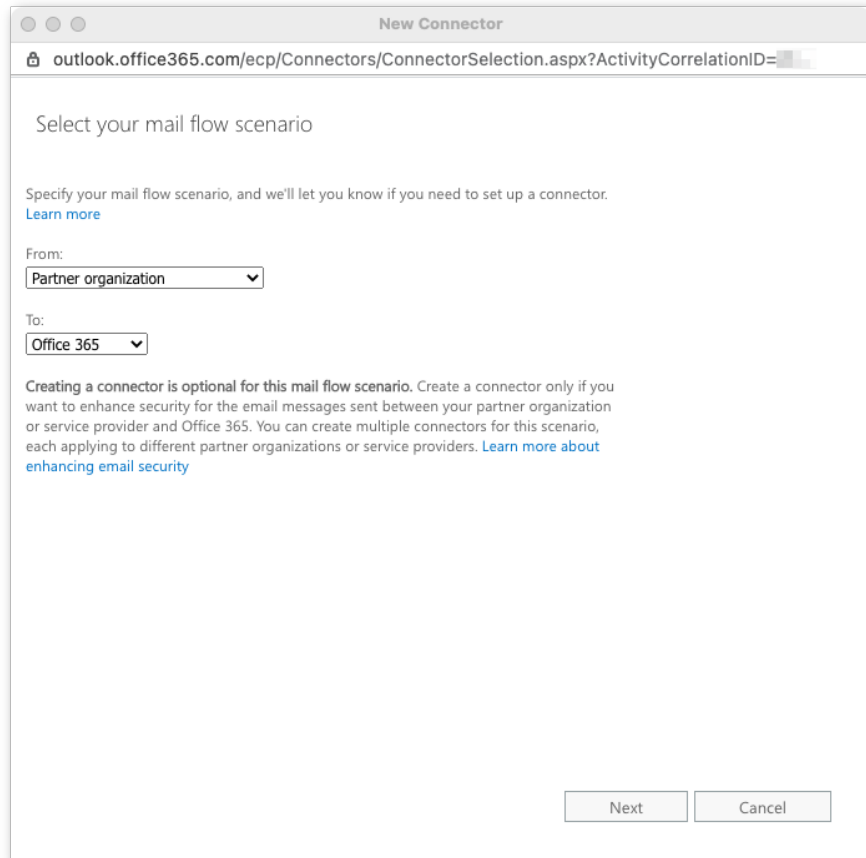
You will first need to create an inbound connector.

1. From the Microsoft **Exchange admin center**, select the **mail flow** configuration pane and navigate to the **connectors** section of the configuration



2. Click the **+** icon to configure a new connector. This will open a dialog to configure the new connector. In the **Select your mail flow scenario** panel, select:

- In the “From” dropdown, select **Partner organization**
- In the “To” dropdown, select **Office 365**



Click the **Next** button to continue the configuration.

3. Provide a **Name** and a **Description** for the new connector. Leave the **Turn it on** checkbox enabled.

New Connector

outlook.office365.com/ecp/Connectors/InboundPartnerConnector.aspx

New connector

This connector enforces routing and security restrictions for email messages sent from your partner organization or service provider to Office 365.

*Name:

Area 1 Connector (MX)

Description:

Area 1 Connector (MX)

Optionally include a description for this connector.

What do you want to do after connector is saved?

Turn it on

Next Cancel

Click the **Next** button to continue the configuration.

4. In the **How do you want to identify the partner organization?** configuration panel, select **Use the sender's IP address**:

New Connector

outlook.office365.com/ecp/Connectors/InboundPartnerConnector.aspx

New connector

How do you want to identify the partner organization?

Specify whether you want to use a domain or IP address to identify the partner organization. [Learn more](#)

Use the sender's domain

Use the sender's IP address

Select this option to apply this connector to email messages that come from your partner's IP addresses.

Back Next Cancel

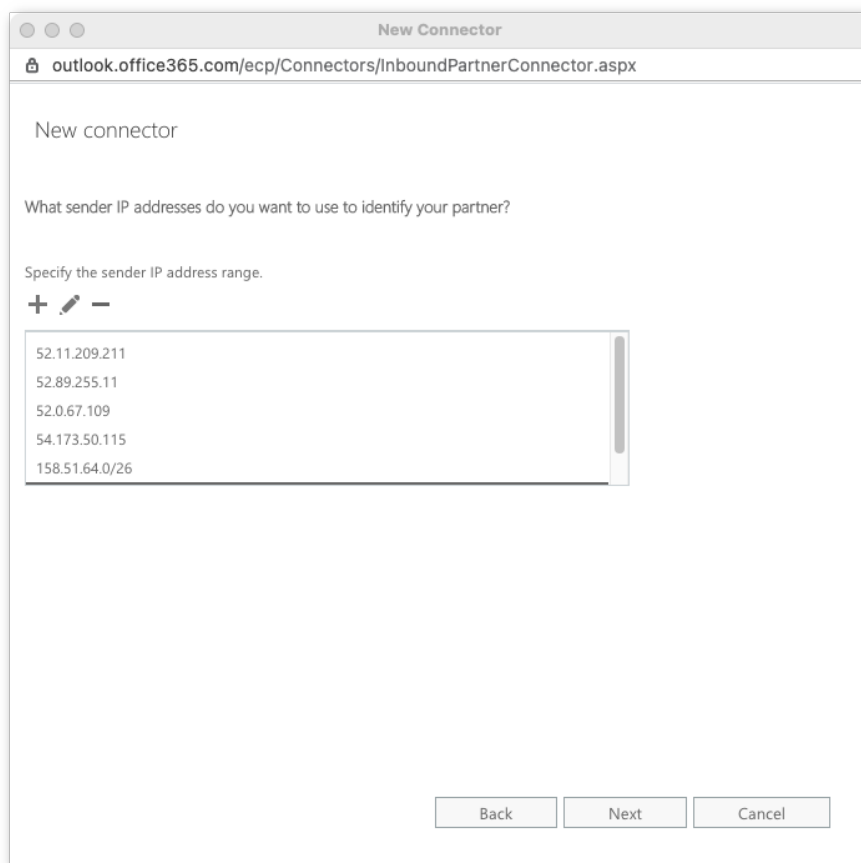
Click the **Next** button to continue the configuration.

5. In the **What sender IP addresses do you want to use to identify your partner?** configuration panel add the following IP addresses and CIDR blocks:

- 52.11.209.211
- 52.89.255.11
- 52.0.67.109
- 54.173.50.115
- 158.51.64.0/26
- 158.51.65.0/26
- 134.195.26.0/24

If you are a European customer, you will need to add the additional IPs of our European datacenter to the exception list:

- 52.58.35.43
- 35.157.195.63



Click the **Next** button to continue the configuration.

6. Keep the default TLS requirements (requiring TLS):

New Connector

outlook.office365.com/ecp/Connectors/InboundPartnerConnector.aspx

New connector

What security restrictions do you want to apply?

Reject email messages if they aren't sent over TLS

And require that the subject name on the certificate that the partner uses to authenticate with Office 365 matches this domain name

Example: contoso.com or *.contoso.com

This option requires that all email messages from the partner organization be sent over Transport Layer Security (TLS), a secure channel. If a message isn't sent over TLS, it will be rejected by Office 365.

Back Next Cancel

Click the **Next** button to continue the configuration.

7. Confirm the connector configuration and click the **Save** button to save the configuration:

New Connector

Confirm your settings
Before saving, make sure these are the settings you want to configure.

Mail flow scenario
From: Partner organization
To: Office 365

Name
Area 1 Connector (MX)

Description
Area 1 Connector (MX)

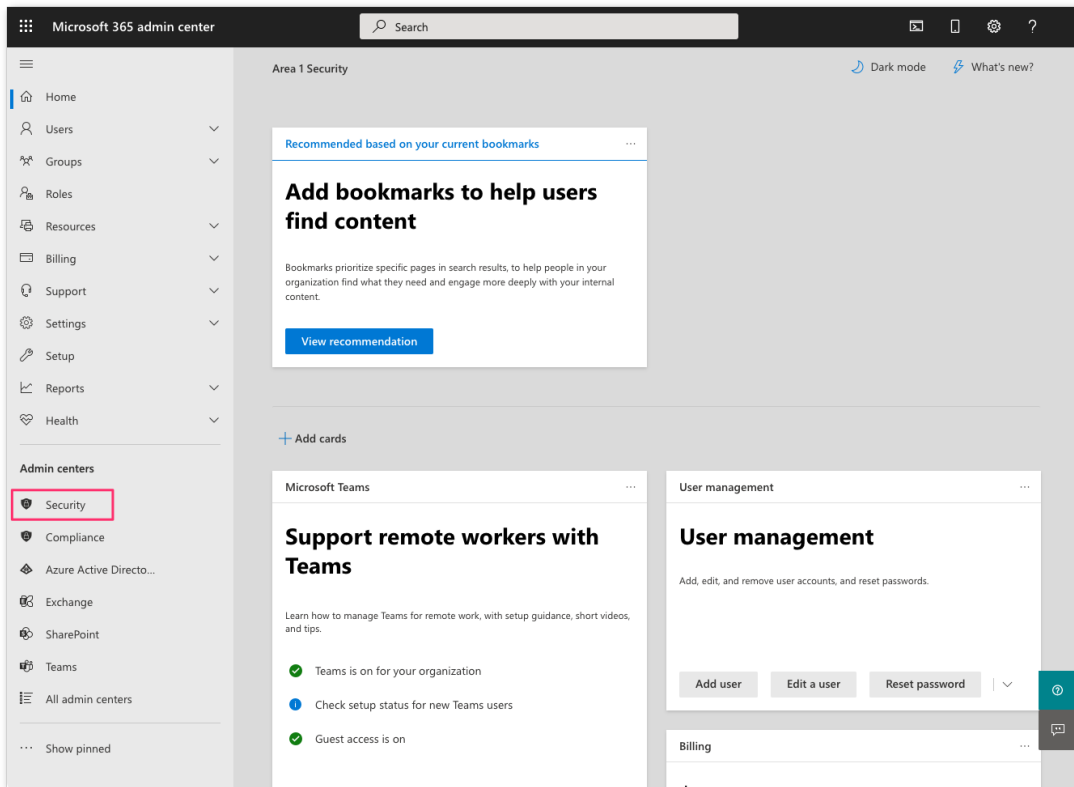
Status
Turn it on after saving

How to identify your partner organization
Identify the partner organization by verifying that messages are coming from these IP address ranges:
158.51.65.0/26,158.51.64.0/26,54.173.50.115,52.0.67.109,52.89.255.11,52.11.209.211,134.195.26.0/24

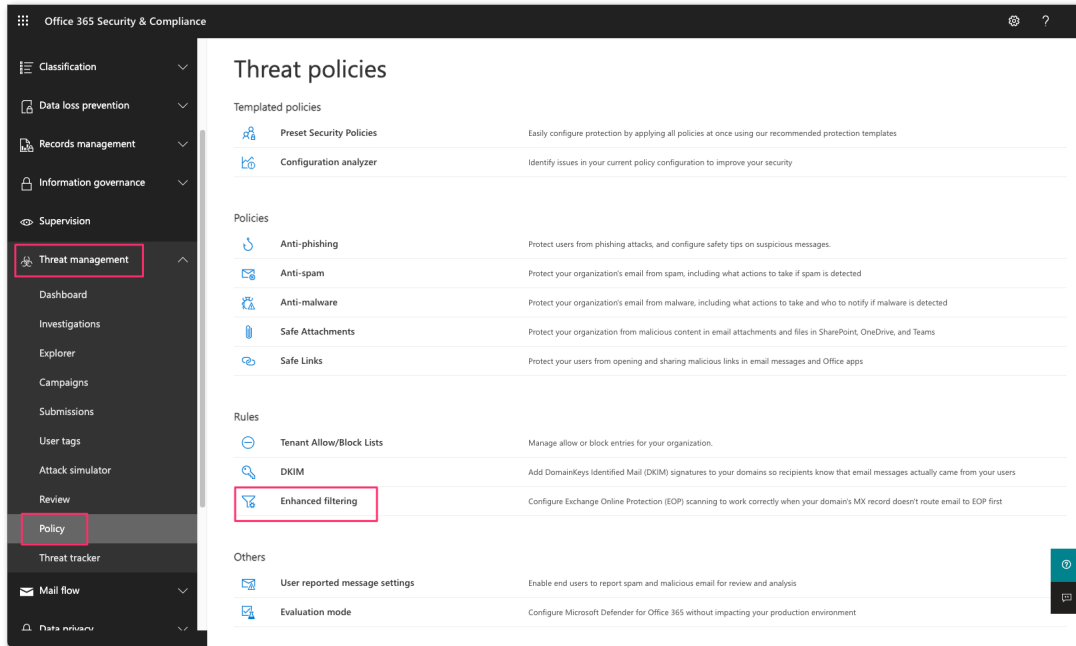
Security restrictions
Reject messages if they aren't encrypted using Transport Layer Security (TLS).

Back Save Cancel

Now that the Inbound connector has been configured, you will need to enable the enhanced filtering configuration of the connector. Exit the **Exchange Admin** console and return to the main O365 Administration Console (<https://admin.microsoft.com>) and select the **Security admin** console (<https://protection.office.com/homepage>):

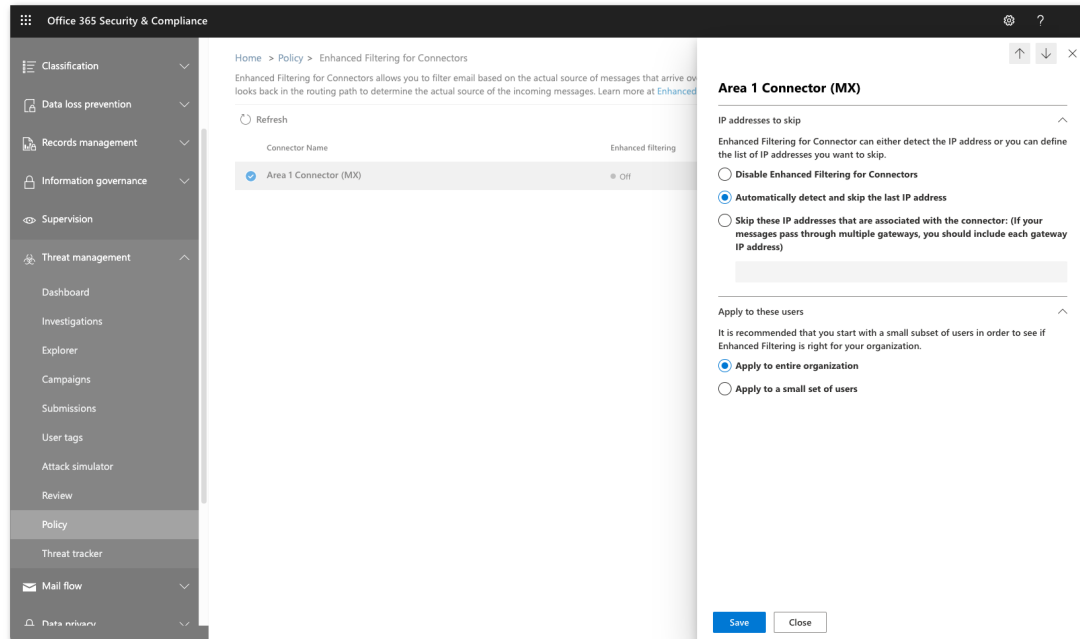


1. In the **Security Admin** console (<https://protection.office.com/homepage>), navigate to the **Threat Management** section and select the **Policy** option, then select the **Enhanced filtering** option:



2. In the **Enhanced Filtering for Connectors** configuration panel, you will find the connector that was previously configured. Double click the connector to edit its configuration parameters.

- Select **Automatically detect and skip the last IP address** option
- Select **Apply to entire organization** option



- Click the **Save** button to activate the enhanced configuration

Step 4: Configure Area 1 Quarantine Policies

Selecting the disposition that you want to quarantine:

- Quarantining messages is a per domain configuration. To modify which domains will have their message quarantines. Access the domain configuration located under **Settings** > **Domains** and select the ... icon on the right of the domain you'd like to modify.

Note: When Area 1 is deployed as the MX record and protecting Office 365, Malicious and Spam detections will automatically be quarantined. This behavior cannot be modified.

- If you'd like to quarantine additional dispositions, simply select the desired dispositions.

Edit Domain [Close]

DOMAIN examplecorporation.com

CONFIGURED AS MX Records Hops 1

FORWARDING TO examplecorporation-com.mail.protection.outlook.com

IP RESTRICTIONS

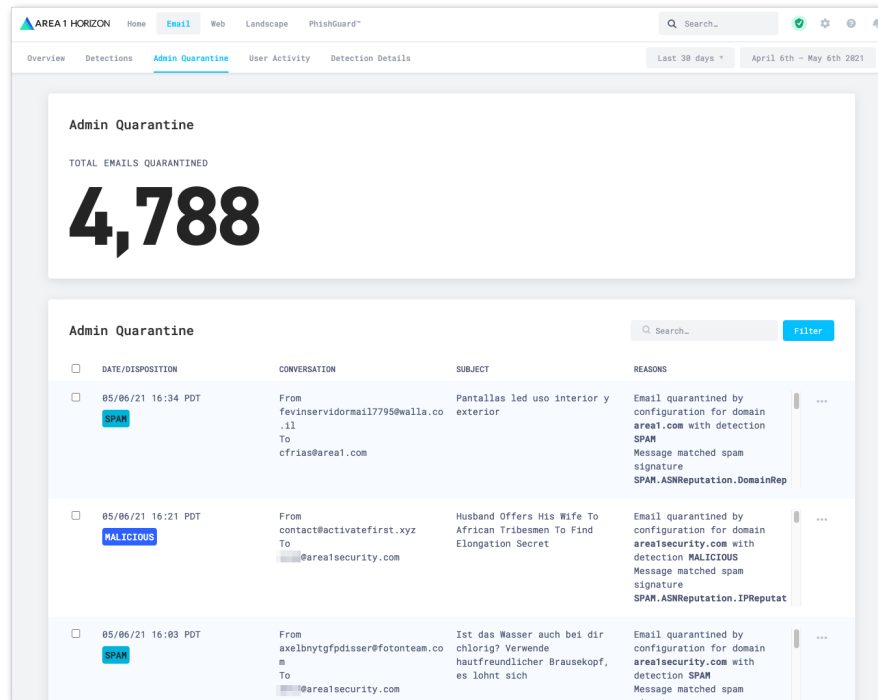
OUTBOUND TLS Forward all messages over TLS (REQUIRED FOR GMAIL) Forward all messages using opportunistic TLS

QUARANTINE POLICY Malicious ⓘ Spam ⓘ Bulk ⓘ Suspicious ⓘ Spoof ⓘ

Update Domain

Managing the Admin Quarantine:

- To manage the quarantine, navigate to the Admin quarantine console, located under **Email > Admin Quarantine**.
- By clicking the ... icon on the right of the messages, you'll be able to preview, download, or release the quarantined message.

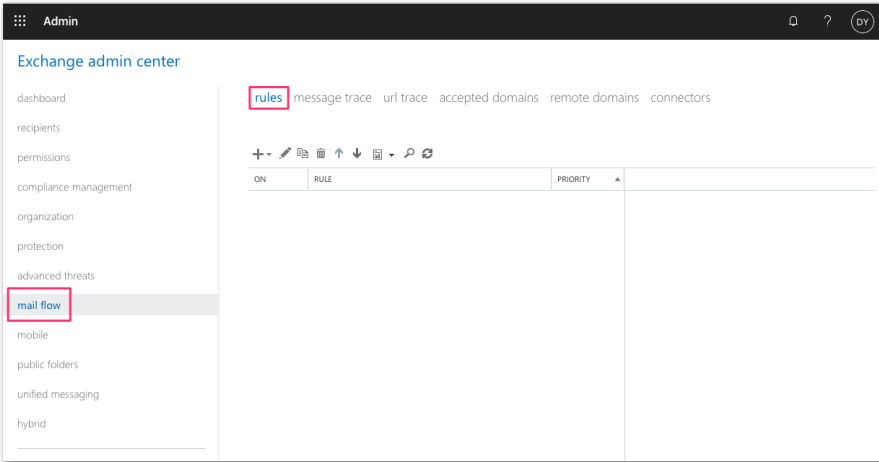


Optional - Quarantining using the Microsoft Hosted Quarantine:

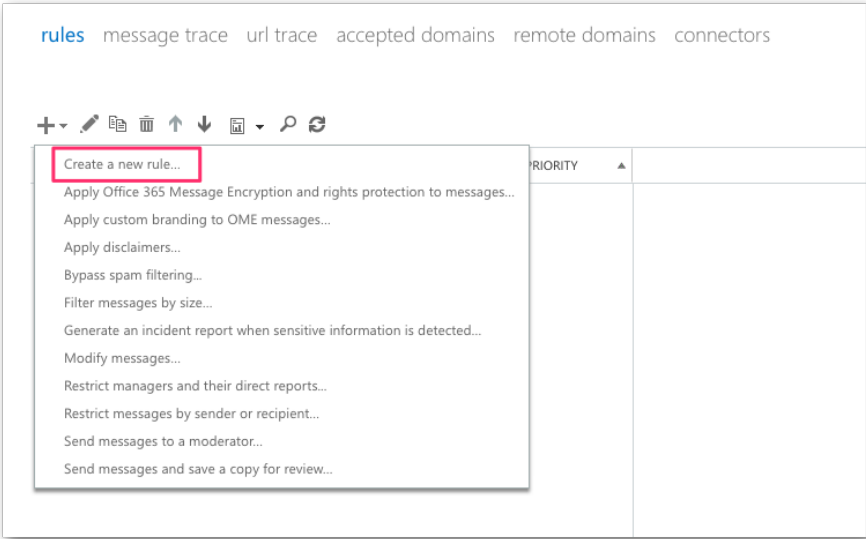
As previously noted, malicious and spam detections are automatically quarantined in Area 1's quarantine (this behavior cannot be modified). However, for the suspicious and spoof dispositions, you may prefer to apply a different behavior, where these messages can be quarantined into the Microsoft Hosted Quarantine or sent to the user's junk folder.

For this alternate behavior, you will need to configure a **transport rule** in Office 365:

- 1. From the **Exchange administrator** console, select the **rules** configuration in the **mail flow** configuration pane



- 2. Click the **+** button and select create a new rule



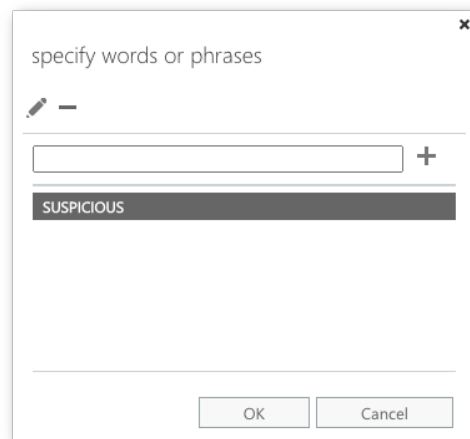
3. In the new rule dialog, click the **More options...** link at the bottom of the dialog box to get the advanced version of the rule creator. Set the following conditions and actions:

- Name: **Quarantine Area 1 Suspicious Messages**
- Configure the first condition, select **A message header ...** → **includes any of these words:**

Enter text: **X-Area1Security-Disposition**

Enter words:

SUSPICIOUS



Note: If you also want to quarantine the spoof detections, add the string SPOOF to the list of words.

- Click the **add** condition button to add a second condition.

In the new condition, select **The sender...** → **IP address is in any of these ranges or exactly matches**.

If you are a US customer, enter the following four (6) IP addresses:

- 52.11.209.211
- 52.89.255.11
- 52.0.67.109
- 54.173.50.115
- 158.51.64.0/26
- 158.51.65.0/26
- 134.195.26.0/24

If you are a European customer, you will need to add the additional IPs of our European datacenter to the list:

- 52.58.35.43
- 35.157.195.63

- In the **Do the following...** section, select **Redirect the message to ...** → **hosted quarantine.**

new rule

Name:

*Apply this rule if...

A message header matches...

and

Sender's IP address is in the range...

*Do the following...

Except if...

Properties of this rule:

Audit this rule with severity level:

Choose a mode for this rule:

Enforce
 Test with Policy Tips
 Test without Policy Tips

Activate this rule on the following date:

Deactivate this rule on the following date:

Stop processing more rules

Defer the message if rule processing doesn't complete

Match sender address in message:

Comments:

[i](#) Rights Management Services (RMS) is a premium feature that requires an Enterprise Client Access License (CAL) or a RMS Online license for each user mailbox. [Learn more](#)

Note: If you prefer to send the message to the Junk folder, In the **Do the following...** section, select **Modify the message properties ...** → **set the spam confidence level (SCL)**

Select the SCL value that will send the message to the junk folder, this behavior is dependent on the configured spam filter policies (spam and bulk actions).

- Click **Save** to save the new rule.

Step 5: Update your domain MX records

Instructions to update your MX records will depend on the DNS provider you are using. You will want to update and replace your existing MX record with the Area 1 hosts.

Updated your domain MX records using Area 1:

MX Priority	Host
10	mailstream-east.mxrecord.io
10	mailstream-west.mxrecord.io
20	mailstream-central.mxrecord.mx

When configuring the Area 1 MX records, it's important to configure both hosts with the same MX priority, this will allow mail flows to load balance between the hosts.

Once the MX change has been updated, the DNS updates may take up to 36 hours to fully propagate around the Internet. Some of the faster DNS providers will start to update records within minutes. DNS will reach the major DNS servers in about an hour.