

Image Control

Administrator's Guide Version 5.1

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1. Service overview

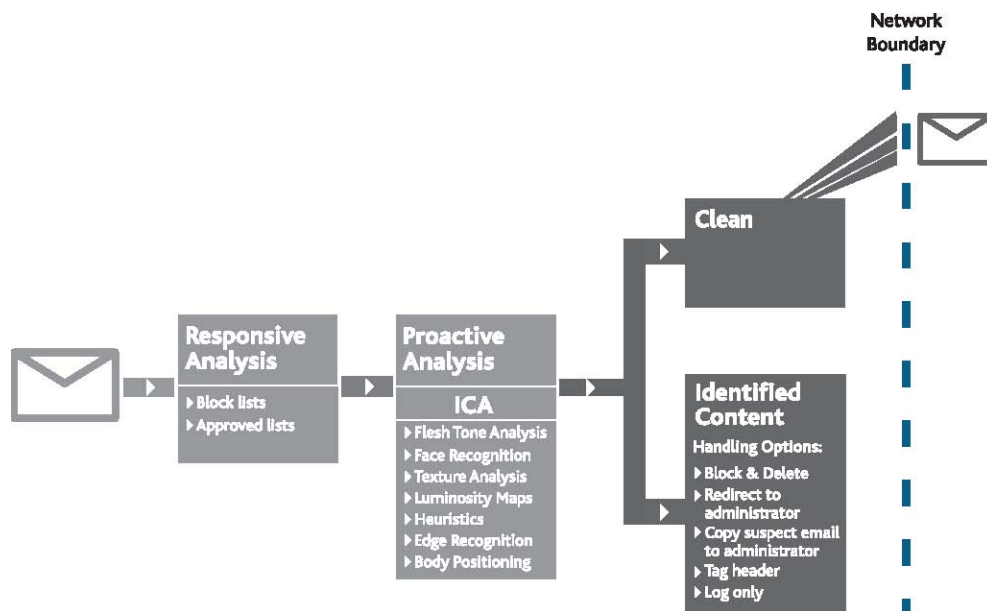
1.1 Welcome

Welcome to the Administrator's Guide for the E-mail Security Image Control Service. The following information provides a walk-through of how to set-up the Image Control Service.

1.2 Image Control features

1. Patented Image Composition Analysis (ICA) technology that uses artificial intelligence to block suspected pornographic email attachments.
2. Option to switch detection on or off via web-based configuration and management.
3. Ability for administrators to specify levels of detection sensitivity based on high, medium and low settings.
4. Ability to control emails containing suspect images which can either be tagged, blocked and deleted, copied or redirected to a nominated system administrator, deleted or logged.

1.3 How does Image Control work?



1.3 Image Control Service overview

Image Control is more sophisticated than conventional image filtering software. Conventional software takes an image or attachment and performs a flesh-tone analysis. This scores each image based on the volume of flesh-tone. The software uses this information to make a decision as to whether the image is pornographic or not. While this technology is effective in

blocking offensive imagery, it is ineffective in that it also blocks harmless imagery. Holiday shots, photographs of babies and children will score highly with flesh-tone analysis.

Image Control takes a more advanced approach. Rather than just measuring flesh-tone, the Image Control Service uses Image Composition Analysis (ICA) technology. This is more specific than the conventional flesh-tone analysis and detects such aspects as suspect poses, facial expressions, clothing and overall image content.

1.4 Image Composition Analysis software (ICA)

ICA uses artificial intelligence to read and analyze image content and intercept suspect material, expanding its own knowledge and understanding of pornographic images with every subsequent scanning. For example, ICA can determine whether or not an image is indoors or outdoors, how many bodies are in the image and where the faces and heads are located. Because ICA has a knowledge of the anatomy, Image Control is able to calculate the position and suspect nature of the bodies in the image.

1.5 Customize to meet your business requirements

Although Image Control is a managed service requiring no additional hardware or software, it can be customized to suit client specific business requirements and company email policy. You can turn the Image Control Service on and off through InSight and you can tune the level of sensitivity using high, medium and low settings. This is useful when controlling inbound and outbound scanning. For example, the administrator may want to set sensitivity levels to high on inbound, and low on all outbound email traffic. Whichever settings you choose, there will be no discernible latency in email transmission.

When an email suspected of containing pornographic content is detected, the administrator can choose whether to have the email tagged, sent or copied to a nominated administrator, or deleted.

2. Configuration of Image Control Service

2.1 Overview

You can configure and apply default Image Control settings to all domains, or you can apply custom settings to individual domains.

2.2 Locating the Image Control configuration screen

The Image Control Service is not automatically enabled when it is purchased. You must activate the different porn detection sensitivity levels and actions.

1. Log in to InSight
2. Select ADMIN from the top-left menu bar
3. Select Domains from the top-right menu bar
4. Select Default Image Control Settings, the following screen will appear:

| Image Control Settings for Insight Demo | |
|---|--|
| Image Control Administrator Mail Address: | Enter one address: <input type="text" value="imagestats@mycompany.com"/> <small>(Leave blank if unknown)</small> |
| Inbound Mail: | <input checked="" type="checkbox"/> Use Image Control for Inbound Mail Sensitivity: <input type="text" value="Low"/> Action Taken: <input type="text" value="Copy suspected mail to the Image Control administrator"/> |
| Outbound Mail: | <input checked="" type="checkbox"/> Use Image Control for Outbound Mail Sensitivity: <input type="text" value="Medium"/> Action Taken: <input type="text" value="Redirect suspected mail to the Image Control administrator"/> |
| Click this button to update these settings: <input type="button" value="Update"/> | |
| Click this button to exit without changes: <input type="button" value="Cancel"/> | |

2.2 Image Control settings

Note: Only one administrator email address can be set up for each domain. This is used for both inbound and outbound email when enabled for that domain.

2.3 Action options

You have the following options for dealing with inbound email suspected of containing pornographic images. You can choose to:

- Block and delete suspected inbound email
- Redirect suspected email to the Image Control administrator
- Copy suspected email to the Image Control administrator
- Tag suspected email within the header
- Log only.

You have the following options for dealing with outbound email suspected of containing pornographic images. You can choose to:

- Block and delete suspected outbound email
- Redirect suspected email to the Image Control administrator
- Copy suspected email to the Image Control administrator
- Log Only.

When dealing with inbound and outbound emails, you can set the sensitivity of the service to:

- Low
- Medium
- High.

3. Image Control notification messages

3.1 Overview

There are three types of Image Control Notification messages:

1. Notification to Administrator – sent when a suspect email inbound or outbound to a client domain is blocked
2. Notification to Sender – sent to the sender of suspected inbound or outbound email, when the email is blocked, or redirected to the administrator
3. Notification to Recipient – sent to the intended recipient of the suspected inbound email if the email has been blocked, or routed to the administrator.

Notifications are turned on when the service is activated for inbound and/or outbound

email.

Note: the content of Porn Filter notification messages is currently not configurable.

4. Image Control sensitivity and action taken

4.1 Overview

This section describes the Image Control sensitivity settings and how they should be used for detection of pornographic images.

There are 3 possible levels of sensitivity that you can set:

- Low
- Medium
- High.

These settings adjust the threshold at which pornography is detected.

Image Composition Analysis uses many scanning algorithms to judge an image against specific criteria; these include:

- Body fill
- Body position
- Facial expressions
- Ambient lighting
- Image background.

The outputs of these algorithms combine to provide a composite score for an image.

By adjusting the sensitivity setting, you would in effect adjust the tolerance threshold at which an image would be declared as being pornographic, i.e. a low sensitivity setting would trap fewer images than a high sensitivity setting.

In our classification:

- The low sensitivity will capture those images that are clearly pornographic
- Medium and high settings would capture a greater range of images based on the results of the ICA algorithms.

Pornography is a very subjective topic, which makes it difficult to declare absolute threshold values for what does and does not constitute pornography. For example,

images perceived to be pornographic material by one person, may be viewed as art or fashion by another.

Also, the use of email within an organization and the culture of that organization will have a bearing on how the sensitivity should be set. A marketing business may be more likely to email greater quantities and a wider range of image files than the manufacturing business.

With Image Control the marketing business can use a lower sensitivity setting than the manufacturing business to minimize disruption to normal business email while still picking up pornographic material.

Image Control has been designed to allow flexible classification and action on detection in line with your business requirements and policies.

An organization can arrive at its optimum sensitivity setting by adjusting the sensitivity settings and observing the results.

Note also that conditions such as poor lighting or image clarity may cause images to fall outside a given sensitivity band.

4.2 Stealth mode

Given the tuning required to select the optimum sensitivity fit, we recommend that on initial configuration Image Control is set to tag headers while sensitivity is adjusted. This will allow images to be received as normal, while the InSight statistics and reports allow an administrator to observe activity in stealth mode. This enables effective tuning of the sensitivity setting and action taken settings.

4.3 False-Positives and False-Negatives

False-Positives are images that are actually non-pornographic but identified as pornographic by the Image Control Service.

False-Negatives are images that are actually pornographic which bypass the system without detection. These will not be visible from the system statistics. Tests indicate that a very low percentage of images will bypass the scan in this way.

If you experience consistent False-Negatives or False-Positives then you should contact your client services representative.

5. Image Control statistics

5.1 Overview

The Image Control statistics page displays the volumes of suspected porn detected broken

down by email address:

The screenshot shows a web browser window titled "Insight Account Management - Microsoft Internet Explorer". The interface includes a top navigation bar with links for STATUS, STATISTICS, ADMIN, and LOG OFF. Below this is a secondary navigation bar with tabs for Email, Virus, Spam, Image, and Content. The main content area displays "Viewing Image Control statistics for the past 4 weeks." and a table with the following data:

| Email Address | Number Sent | Number Received |
|--|-----------------------------|-----------------------------------|
| pfletcher@radio0.messagelabs.com | 0 | 2 |
| Total messages: 28093425 messages | 613368 messages sent | 27480057 messages received |
| Total images: 2 intercepted | 0 sent | 2 received |

At the bottom of the page, it says "Powered by MessageLabs".

5.1 Image Control statistics page

5.2 Viewing Image Control statistics

1. Log in to InSight
2. Select STATISTICS from the top-left menu bar
3. Select Image from the top-right menu bar
4. Select the period for which you want statistics i.e. Day, Week, Month or Year.

5.3 Detailed breakdown for individual email addresses

Select an email address listed within the Image Control statistics screen to display a detailed list of the emails detected by the service for both inbound and outbound mail. Details provided are:

- Date Detected

- Sent or Received
- Subject
- Filename.

6. Image Control reports

6.1 Overview

Image Control reports can be sent on a weekly and/or monthly basis. You can configure the recipient email addresses to send the reports to and the frequency at which reports are sent.

The report contains the following information:

- Total number of emails detected by domain and email address
- Details on time and date detection made.

6.2 Configuring Image Control reports

1. Select ADMIN from the top-left menu bar
2. Select Image Control Statistics
3. Specify the recipient email addresses and frequency at which reports should be sent.
4. Click on Update Settings.