

How does the Excalibur Technology SPAM & Virus Protection System work?

All e-mail messages sent to your e-mail address are analyzed by the Excalibur Technology SPAM & Virus Protection System before being delivered to your inbox. There are over eight levels of SPAM filtering performed on each message as well as three virus scans to help ensure that your messages are safe and trustworthy. There are also over 150 tests that a message must pass before it is approved for delivery to your inbox. In general terms, our system looks to see if the message is being sent from a known spammer, checks to see if it contains objectionable text, and looks at the content of the message for tag lines such as "limited time only" or "free offer" and many more.

Based on the number of tests that each message fails, it receives a SPAM score. The higher the score, the more likely the message is SPAM. We have set four threshold levels on our system that direct mail in various ways depending on the score received. We constantly develop new filtering techniques and will continue our vigilance to ensure that you always receive the highest quality of service and the least amount of junk e-mail.

Mail Delivery Score Thresholds

Low Score: Messages that receive a low score are probably sent from reputable sources and are legitimate e-mails that you want. These messages will be delivered to your inbox as normal.

Medium Score: Messages that receive a medium score stand a good chance of being bulk mail, mass mail, or from an unreliable source. These messages will have their subject line modified to include [SPAM?] first in the subject, and will then be delivered to you. Our system does this to ensure that you are not going to miss legitimate e-mail, yet lets you know that this message probably is not worth reading.

High Score: Messages that receive a high score are almost always SPAM and to be disregarded. However, just in case the scanning process detected a wanted email, these messages will be held in "Quarantine" on our servers for you to review and release if you desire. If you have any messages that are quarantined, our system will notify you via email.

Critical Score: Messages that receive a critical score are more than likely blatant SPAM messages, virus infected or dangerous to your system and are discarded by the SPAM firewall. These messages are unrecoverable.

How will you know the system is working? What else do you need to know?

The first day you have quarantined messages, you will receive a message from “Excalibur Technology Spam Firewall” entitled “User Quarantine Account Information.” Open this mail message to receive your username and password to our SPAM server. You may click the link in that email to immediately logon to your personal Quarantine Inbox. Once you logon to the server, you will see a list of quarantined messages. You may choose to delete the messages, deliver the messages or whitelist the messages, meaning that all future messages from that sender will pass through the SPAM filter and receive a Low Score.

Getting Started

Each user of the Excalibur SPAM Firewall is provided a personal SPAM Quarantine Inbox and custom user preferences to help efficiently manage SPAM. The SPAM Firewall interface is web based and can be accessed by using a standards based web browser such as Microsoft Internet Explorer or Mozilla Firefox. Users of protected mailboxes will receive an e-mail message from “Excalibur Technology Spam Firewall” entitled “User Quarantine Account Information” upon the receipt of their first quarantined e-mail message. This message contains a username and password to login to their personal Quarantine Inbox as well as a hyperlink to immediately access it.

Welcome to the Excalibur Technology Spam Firewall 1. This message contains the information you will need to access your Spam Quarantine and Preferences.

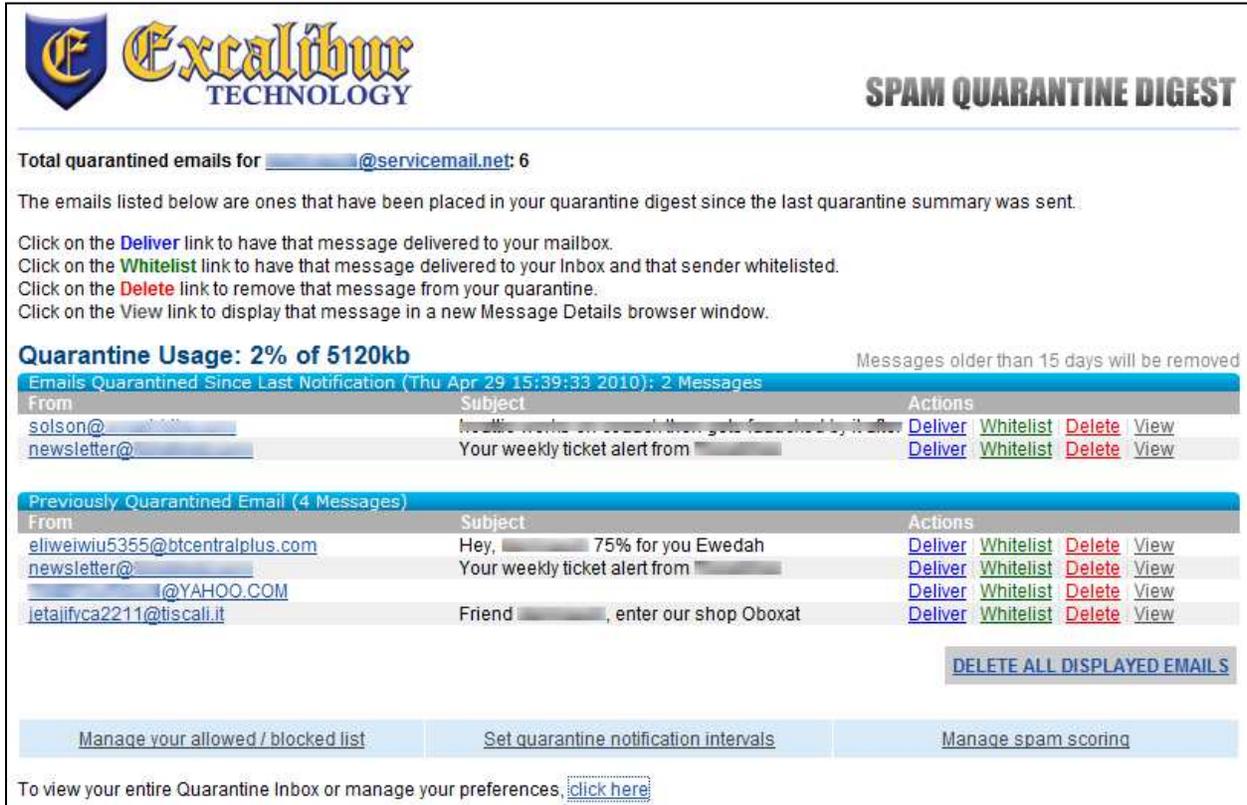
Your account has been set to the following username and password:
Username: [redacted]@servicemail.net
Password: da[redacted]yqt

Access your Spam Quarantine directly using the following link: [https://filter1.excaltech.com:443/cgi-mod/index.cgi?user=\[redacted\]@servicemail.net&password=\[redacted\]f8e139989105a13f5f4&et=1273681651&role=_nodomains](https://filter1.excaltech.com:443/cgi-mod/index.cgi?user=[redacted]@servicemail.net&password=[redacted]f8e139989105a13f5f4&et=1273681651&role=_nodomains)

Figure 1 - Sample "User Quarantine Account Information" E-Mail

By default, users receive a summary message from the Excalibur SPAM Firewall each day. This message includes general statistics of the users Quarantine Inbox and displays the most recent quarantined messages in the Quarantine Inbox at the time it was delivered. Four actions can be performed on quarantined messages directly from the e-mail message by clicking on the action hotlinks listed to the right of each message. These actions, which are described in each summary e-mail received, are Deliver, Whitelist, Delete and View. All messages displayed on this summary can be deleted from the Quarantine by clicking on the ‘Delete All Displayed Mails’ button in the lower left corner of the message. Further actions and the ability to perform any action in bulk against many quarantined messages are available in the full web based SPAM Quarantine interface. This interface can be accessed by clicking the ‘click here’ hyperlink at the bottom of the most recently received ‘SPAM Quarantine Summary’ e-mail. Be aware that this link will expire after 48 hours, delivering you to the logon screen of the SPAM Firewall instead of directly into your Quarantine Inbox. Direct access to allowed/block list, quarantine

notification interval and spam scoring preference panels is also available via links that appear beneath the quarantined message list. These preferences are explained later in this document.



EXCALTECH TECHNOLOGY **SPAM QUARANTINE DIGEST**

Total quarantined emails for [redacted]@servicemail.net: 6

The emails listed below are ones that have been placed in your quarantine digest since the last quarantine summary was sent.

Click on the **Deliver** link to have that message delivered to your mailbox.
Click on the **Whitelist** link to have that message delivered to your Inbox and that sender whitelisted.
Click on the **Delete** link to remove that message from your quarantine.
Click on the **View** link to display that message in a new Message Details browser window.

Quarantine Usage: 2% of 5120kb Messages older than 15 days will be removed

Emails Quarantined Since Last Notification (Thu Apr 29 15:39:33 2010): 2 Messages

From	Subject	Actions
solson@[redacted]	Health works on search than gets forwarded by it's [redacted]	Deliver Whitelist Delete View
newsletter@[redacted]	Your weekly ticket alert from [redacted]	Deliver Whitelist Delete View

Previously Quarantined Email (4 Messages)

From	Subject	Actions
eliweiwu5355@btcentralplus.com	Hey, [redacted] 75% for you Ewedah	Deliver Whitelist Delete View
newsletter@[redacted]	Your weekly ticket alert from [redacted]	Deliver Whitelist Delete View
[redacted]@YAHOO.COM	[redacted]	Deliver Whitelist Delete View
jetaiyfca2211@tiscali.it	Friend [redacted], enter our shop Oboxat	Deliver Whitelist Delete View

[DELETE ALL DISPLAYED EMAILS](#)

[Manage your allowed / blocked list](#)
 [Set quarantine notification intervals](#)
 [Manage spam scoring](#)

To view your entire Quarantine Inbox or manage your preferences, [click here](#)

Figure 2 - Sample "SPAM Quarantine Summary" E-Mail

Users may also log in to their personal SPAM Quarantine Inbox by browsing to <https://filter.excaltech.com> in a standards based web browser such as Microsoft Internet Explorer or Mozilla Firefox. Users can enter the credentials they received in their original welcome message on this webpage. If a user does not know their credentials to login they may enter their full e-mail address in the 'username' field and click on the 'Create New Password' button. This will immediately deliver a "User Quarantine Account Information" e-mail message to the e-mail address entered. This message is identical in content to the message sent upon initial account creation as shown above in Figure 1.

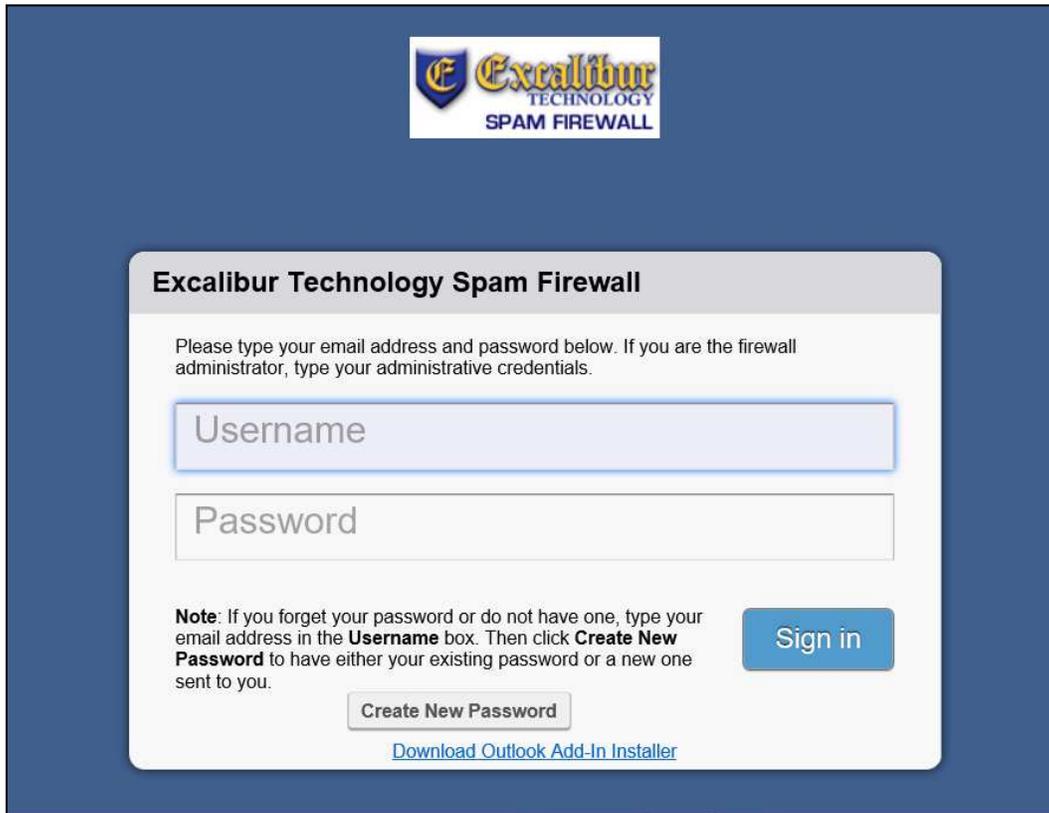
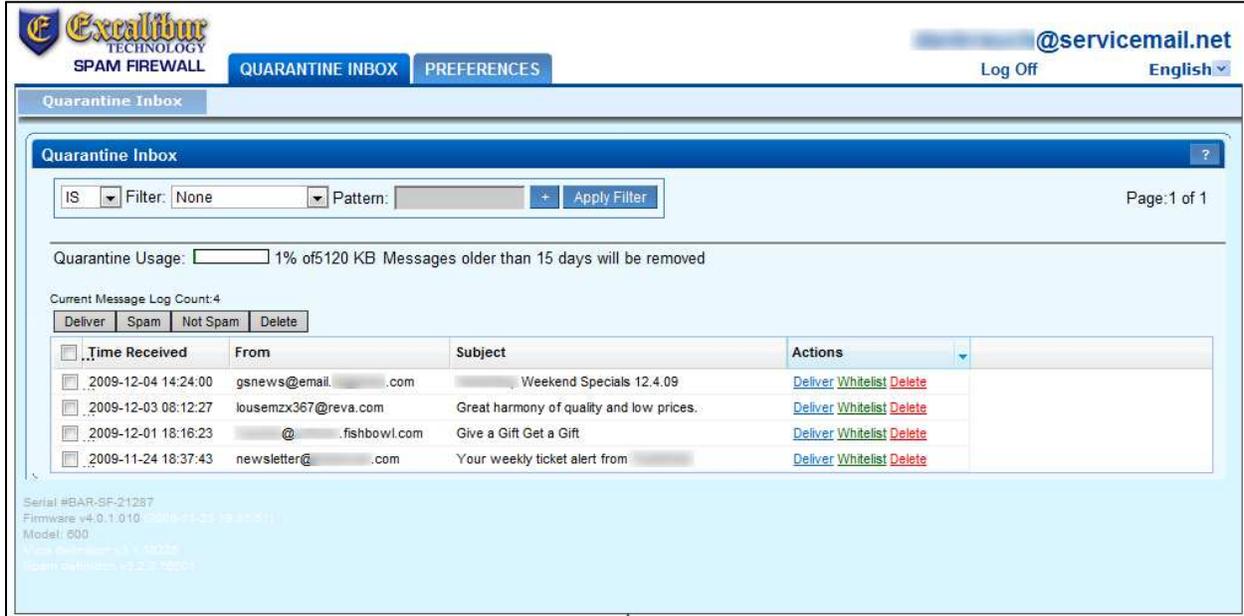


Figure 3 - Excalibur Technology SPAM Firewall Login WebPage

Managing Your Quarantine Inbox



The screenshot displays the 'Quarantine Inbox' interface. At the top, there are tabs for 'QUARANTINE INBOX' and 'PREFERENCES'. The user is logged in as '@servicemail.net'. Below the tabs, there is a search filter section with 'Filter: None' and 'Pattern:'. A 'Quarantine Usage' bar shows 1% of 5120 KB. A table lists four messages with columns for 'Time Received', 'From', 'Subject', and 'Actions'. The 'Actions' column contains links for 'Deliver', 'Whitelist', and 'Delete' for each message.

Time Received	From	Subject	Actions
2009-12-04 14:24:00	gsnews@email.com	Weekend Specials 12.4.09	Deliver Whitelist Delete
2009-12-03 08:12:27	lousemzx367@reva.com	Great harmony of quality and low prices.	Deliver Whitelist Delete
2009-12-01 18:16:23	@.fishbowl.com	Give a Gift Get a Gift	Deliver Whitelist Delete
2009-11-24 18:37:43	newsletter@.com	Your weekly ticket alert from	Deliver Whitelist Delete

Figure 4 - SPAM Quarantine Inbox

After logging into the quarantine interface, select the 'Quarantine Inbox' tab to view a list of your quarantined messages. When you first start using the quarantine interface, you should view this list on a daily basis and classify as many messages as you can. The Excalibur Technology Spam Firewall has a learning engine that learns how to handle future messages based on the ones you classify as being spam or not spam. The learning engine becomes more effective over time as you teach the system how to classify messages and as you set up rules using the whitelist and blacklist functions. Clicking on the subject of an email displays the message. Clicking on an action name will perform that action on the corresponding message immediately. The following describes the actions you can perform from this page.

Deliver: Delivers the selected message to your standard email inbox. Note: If you want to classify a message or add it to your whitelist, make sure to do so before delivering the message to your inbox. Once the Excalibur Technology Spam Firewall delivers a message, it is removed from your quarantine list.

Whitelist: Adds the selected message to your whitelist so all future emails from this sender are not quarantined *unless* the message contains a virus or banned attachment type. The Excalibur Technology Spam Firewall adds the sending email address, exactly as it appears in the message, to your personal whitelist.

Delete: Deletes the selected message from your quarantine list. This aids you in keeping track of which quarantine messages you have reviewed. You cannot recover messages you have deleted. The server will automatically delete messages older than 15 days without user intervention.

Applying Bulk Actions to Messages

Four actions can be performed against a single message or multiple messages simultaneously. To prepare multiple messages to have a single action applied, such as deleting several messages from the quarantine inbox, click on the checkbox to the right of each message you wish to process with the action. Once this has been completed, simply click on the desired action among the buttons above the quarantined message list. To process all messages displayed on the page, click on the checkbox that appears in the title bar above the first message and then select the desired action.

The actions available for bulk application contain two of the actions described above (Deliver and Delete) as well as the following:

Classify as Spam: Classifies the selected message(s) as spam in your personal learning database and then deletes it. Consistent use of this feature will aid the system in reducing the amount of SPAM you receive based on your personal preferences and standards.

Classify as Not Spam: Classifies the selected message(s) as not being spam in your personal learning database and delivers it to your e-mail inbox. Consistent use of this feature will aid the system in delivering desired mail to you based on your personal preferences and standards. Note: Some bulk commercial email may be considered useful by some users and spam by others. Instead of classifying bulk commercial email, it may be more effective to add it to your whitelist (if you wish to receive such messages) or blacklist (if you prefer not to receive them). Directions for how to accomplish this appear below.

Changing your User Preferences

After logging into your quarantine interface, you can select the 'Preferences' tab to change your account password, modify your quarantine and spam settings, and manage your personal whitelist and blacklist.

Changing Your Whitelist/Blacklist Settings

The following describes the options available within the 'Whitelist/Blacklist' configuration page within the 'Preferences' tab.

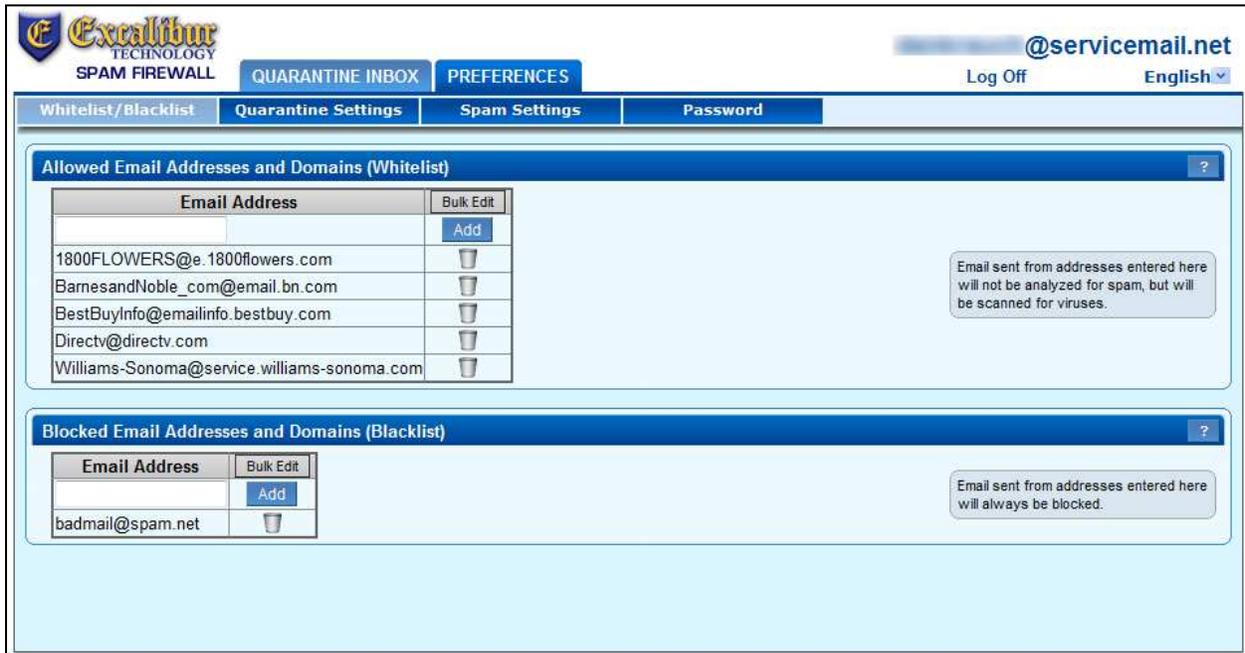


Figure 5 - Whitelist/Blacklist Dialog

Allowed Email Addresses and Domains (Whitelist): This section displays, and allows you to define, e-mail addresses and domains from which messages will be delivered to you without Spam scoring or being quarantined, regardless of content. The only exceptions to this rule are messages containing a virus or disallowed attachment type. The source addresses of messages that have had the 'Whitelist' action applied from the Quarantine Inbox or Quarantine Notification message will appear in this list. To manually add an address to this list, enter it into the box that appears at the top of the 'Email Address' table and click on the 'Add' button. You can also enter a domain, the part of an e-mail address that appears AFTER the @, to ensure mail sent from ALL addresses at that domain are delivered to your e-mail inbox. If you define a domain, all sub domains are also included. As an example, if you entered ExcaliburTechnology.com, e-mail from sub domains support.ExcaliburTechnology.com and web.ExcaliburTechnology.com would also be accepted. To remove entries from the Whitelist-table click on the 'Trash Can' icon displayed to the right of the entry. This action will be applied immediately without confirmation. Advanced users may wish to use the 'Bulk Edit' button which allows editing the list as a single text document to increase the speed of making many additions/removals.

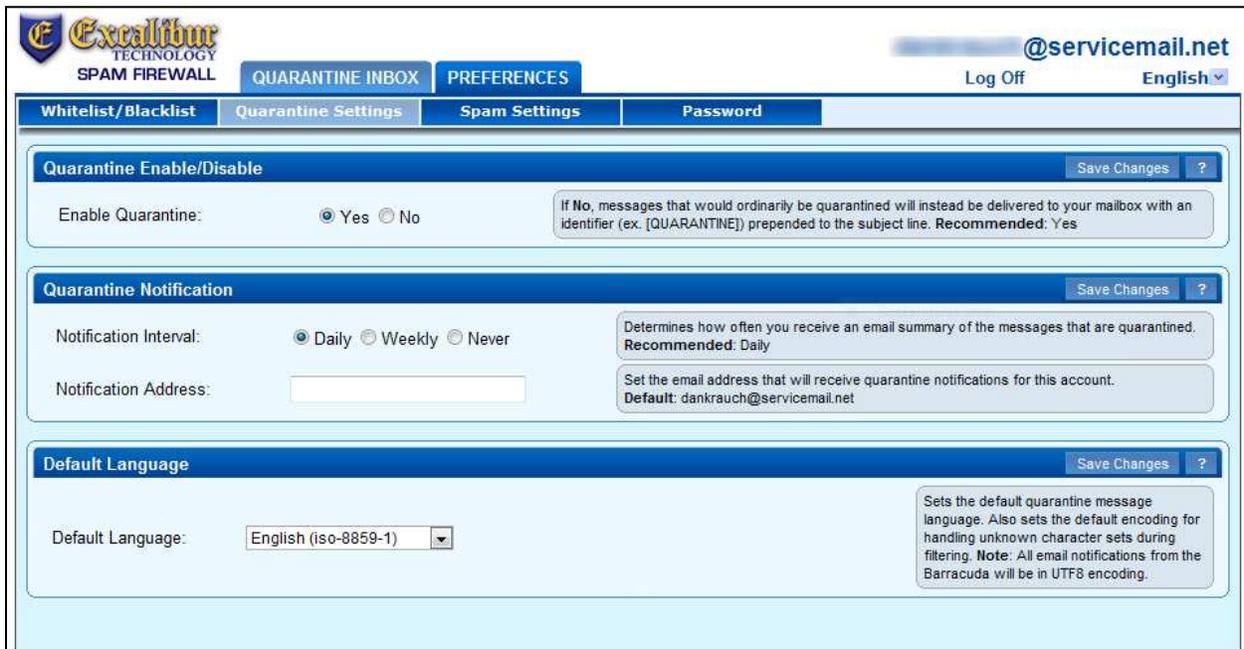
Blocked Email Addresses and Domains (Blacklist): This section displays, and allows you to define, e-mail addresses and domains from which messages will be discarded regardless of content. To add an address to this list, enter it into the box that appears at the top of the 'Email Address' table and click on the 'Add' button. You can also enter a domain, the part of an e-mail address that appears AFTER the @, to ensure mail sent from ALL addresses at that domain are discarded. If you define a domain, all sub domains are also included. As an example, if you entered ExcaliburTechnology.com, e-mail from sub domains support.ExcaliburTechnology.com and web.ExcaliburTechnology.com would also be discarded. To

remove entries from the Blacklist-table click on the 'Trash Can' icon displayed to the right of the entry. This action will be applied immediately without confirmation. Advanced users may wish to use the 'Bulk Edit' button which allows editing the list as a single text document to increase the speed of making many additions/removals.

A Note Regarding Mass Mailings: Mass mailings often come from domains that do not resemble the organizations website name. For example, you may want to receive mailings from historybookclub.com, but you will find that this site sends out its mailing from the domain hbcfyi.com. Examine the "From:" address of an actual message that you are trying to whitelist or blacklist to determine the appropriate domain name to enter.

Changing Your Quarantine Settings

The following describes the options available within the 'Quarantine Settings' configuration page within the 'Preferences' tab.



The screenshot shows the 'Quarantine Settings' dialog box. At the top, there is a navigation bar with 'Whitelist/Blacklist', 'Quarantine Settings', 'Spam Settings', and 'Password'. The 'Quarantine Settings' section is active. It contains three sub-sections: 'Quarantine Enable/Disable', 'Quarantine Notification', and 'Default Language'. Each sub-section has a 'Save Changes' button and a help icon. The 'Quarantine Enable/Disable' section has radio buttons for 'Yes' (selected) and 'No'. The 'Quarantine Notification' section has radio buttons for 'Daily' (selected), 'Weekly', and 'Never', and a text input field for 'Notification Address'. The 'Default Language' section has a dropdown menu set to 'English (iso-8859-1)'. The background shows the 'Excalibur Technology SPAM FIREWALL' logo and the user's email address '@servicemail.net'.

Figure 5 - Quarantine Settings Dialog

Quarantine Enable/Disable: This setting determines whether the Excalibur Technology Spam Firewall quarantines your messages. If set to 'Yes', the Excalibur Technology Spam Firewall does not deliver messages scored for high enough to quarantine to your general email inbox, but you can view these messages from the quarantine interface and quarantine summary reports as described earlier in this document. If set to 'No', all messages that would have been quarantined for you are delivered to your

general email inbox with the subject line prefixed with '[QUAR]:.' Select the desired behavior and click on the 'Save Changes' button in the section title bar to change these settings.

Quarantine Notification: The 'Notification Interval' sets the frequency with which Excalibur Technology Spam Firewall sends you quarantine summary reports. [See Figure 2 above for a sample Quarantine Summary Report.] The default setting is daily. Please note that *the Excalibur Technology Spam Firewall only sends a daily quarantine summary report when one or more of your emails have been quarantined on that day.* If you select Never, you can still view your quarantined messages from the quarantine interface, but you will not receive quarantine summary reports in your e-mail inbox.

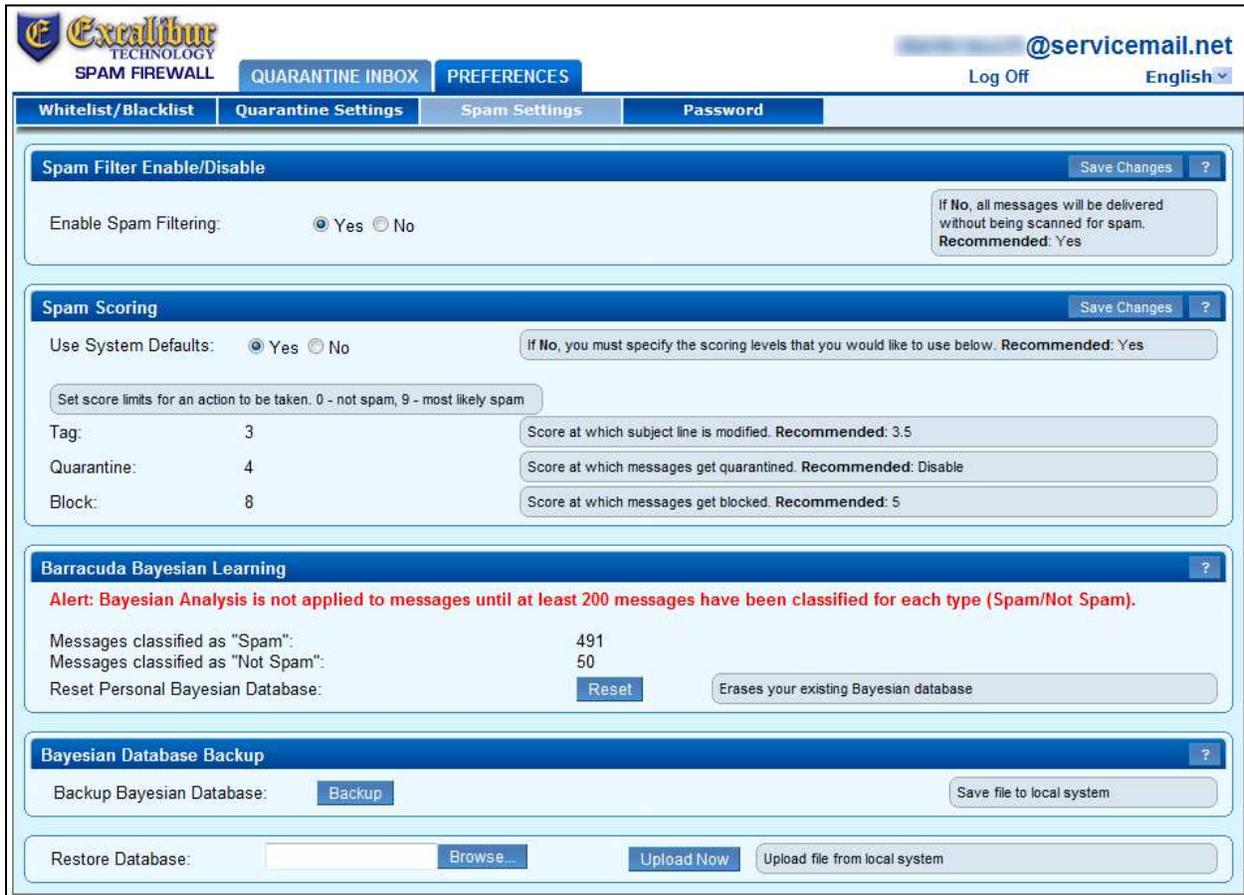
Notification Address: The email address the Excalibur Technology Spam Firewall should use to deliver your quarantine summary report.

Select the desired options and click on the 'Save Changes' button in the section title bar to change these settings.

Default Language: This setting defines the language in which you want to receive your quarantine notifications. This setting also sets the default encoding for handling unknown character sets during filtering. All email notifications from the Excalibur Technology Spam Firewall are in UTF8 encoding.

Changing Your Spam Settings

The following describes the options available within the 'Spam Settings' configuration page within the 'Preferences' tab.



The screenshot shows the 'Spam Settings' configuration page within the 'Preferences' tab of the Excalibur Technology Spam Firewall interface. The page is for user '@servicemail.net' and includes a 'Log Off' button and a language dropdown set to 'English'. The main navigation tabs are 'Whitelist/Blacklist', 'Quarantine Settings', 'Spam Settings', and 'Password'. The 'Spam Settings' section is active and contains several sub-sections:

- Spam Filter Enable/Disable:** A radio button selection for 'Enable Spam Filtering' with 'Yes' selected. A 'Save Changes' button and a help icon are present. A note states: 'If No, all messages will be delivered without being scanned for spam. Recommended: Yes'.
- Spam Scoring:** A radio button selection for 'Use System Defaults' with 'Yes' selected. A 'Save Changes' button and a help icon are present. A note states: 'If No, you must specify the scoring levels that you would like to use below. Recommended: Yes'. Below this are input fields for 'Tag' (3), 'Quarantine' (4), and 'Block' (8), each with a 'Recommended' value: 3.5, 'Disable', and 5 respectively.
- Barracuda Bayesian Learning:** A red alert message: 'Alert: Bayesian Analysis is not applied to messages until at least 200 messages have been classified for each type (Spam/Not Spam)'. It shows 'Messages classified as "Spam": 491' and 'Messages classified as "Not Spam": 50'. A 'Reset' button is available with the note: 'Erases your existing Bayesian database'.
- Bayesian Database Backup:** A 'Backup' button and a 'Save file to local system' button.
- Restore Database:** A 'Browse...' button and an 'Upload Now' button with the note: 'Upload file from local system'.

Figure 6 - Spam Settings Dialog

Spam Filter Enable/Disable: - This setting determines whether the Excalibur Technology Spam Firewall scans your messages for Spam. If set to 'Yes', the Excalibur Technology Spam Firewall will scan your messages for Spam, applying scoring and taking action as defined in the 'Spam Scoring' section of this screen. If set to 'No', all messages sent to your e-mail address will be forwarded to your e-mail inbox without being scanned for spam. Select the desired options and click on the 'Save Changes' button in the section title bar to change these settings.

Spam Scoring: From this page you can also change the default spam scoring levels that determine when your emails are tagged, quarantined or blocked. When the Excalibur Technology Spam Firewall receives an email for you, it scores the message for its spam probability. This score ranges from 0 (definitely not

spam) to 10 or higher (definitely spam). Based on this score, the Excalibur Technology Spam Firewall either allows, quarantines, or blocks the message. *A setting of 10 for any setting disables that option.*

The 'Use System Defaults' option defines if you wish to use the Excalibur Technology selected default scoring defaults against inbound messages. These have been selected to attempt to provide the greatest effective reduction of spam while keeping false positives to an absolute minimum. Select 'Yes' to use the default scoring levels. To configure the scoring levels yourself, select 'No' and make the desired changes in the Spam Scoring Levels section described below by typing the desired value into each scoring threshold box. Once the desired options have been selected click on the 'Save Changes' button in the section title bar to apply the settings.

The first scoring threshold is 'Tag' and it carries a default value of 3. Messages with a score equal to or above this threshold, but below the defined 'Quarantine' threshold, are delivered to you with the word [SPAM] inserted into the beginning of the subject line. Any message with a score below this setting is delivered to your e-mail inbox immediately with no other actions taken. The second scoring threshold is 'Quarantine' and it carries a default value of 3.5. Messages with a score equal to or above this threshold, but below the defined 'Block' threshold, are delivered to your 'Quarantine Inbox' to allow you to take further action as described in the 'Managing Your Quarantine Inbox' section above. The third scoring threshold is 'Block' and it carries a default value of 5. Messages with a score equal to or above this threshold are discarded and are unable to be retrieved. They are neither delivered to your Spam Quarantine or your e-mail inbox.

Bayesian Learning: This section displays statistics of your personal Bayesian Learning database. This is a database that aides in classifying messages as being spam based on your personal preferences. It is populated when you classify messages as Spam, or Not Spam, as described in the 'Applying Bulk Actions to Messages' section above. This section also reminds you that the database will not be used to aid in Spam detection if either category has fewer than 200 messages defined.

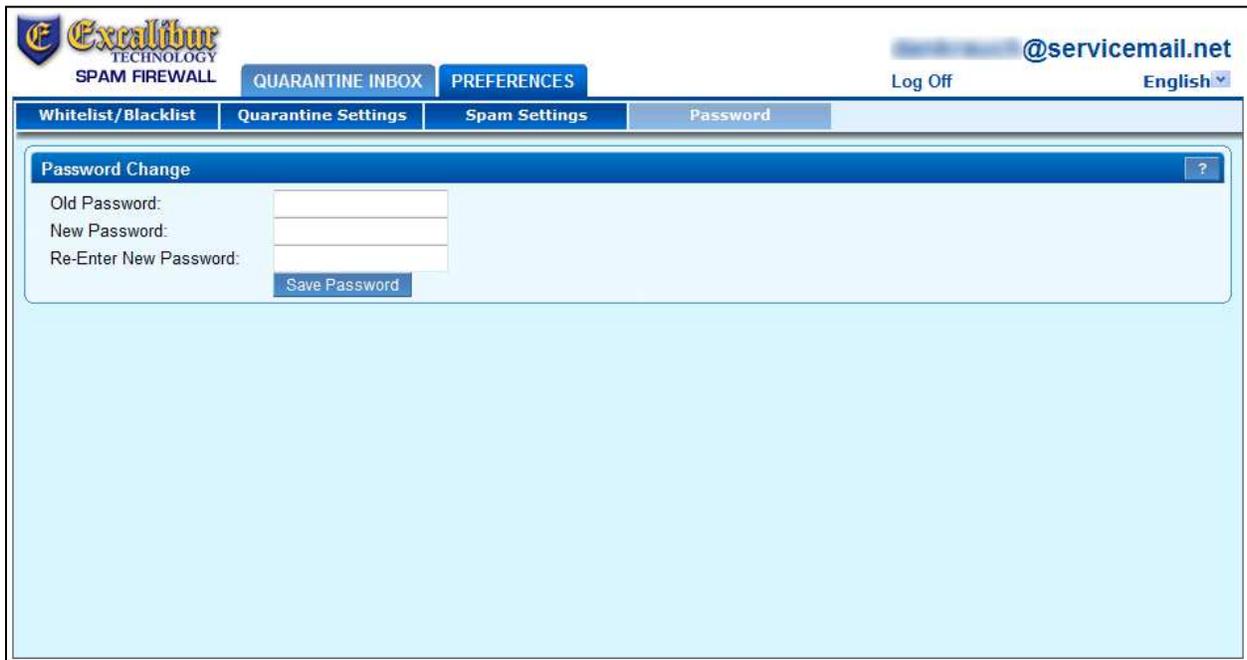
This section also allows you to Reset your personal Bayesian Learning database by pressing the 'Reset' button. This will reset the counters to zero and the effects of all messages classified as Spam, or Not Spam, will be lost. Use this with care and ONLY if you are certain you wish to take this action. This CANNOT be undone unless you have taken a backup as described in the next section.

Bayesian Database Backup: To back up your personal Bayesian Database, Click the 'Backup' button in this section to download a copy of your personal Bayesian Database to your local system. This backup copy can then be uploaded to any Excalibur Technology Spam Firewall, including this one, in the case of a corrupt Bayesian installation or to repopulate your Database after a reset as described in the previous section. To perform a restore of the database, simply click on the 'Browse' button in this section, select the local backup copy in the resulting dialog, and then click on the 'Upload Now' button. The backup

database file used to restore does not have to originate from this Excalibur Technology Spam Firewall, nor does it have to originate from your user account.

Changing Your Password

The following describes how to change your password using the 'Password' configuration page within the 'Preferences' tab. Instructions for recovering a lost password are also included.



The screenshot shows the Excalibur Technology Spam Firewall interface. The top navigation bar includes 'QUARANTINE INBOX' and 'PREFERENCES'. Under 'PREFERENCES', the 'Password' tab is selected. The 'Password Change' dialog box contains three input fields: 'Old Password:', 'New Password:', and 'Re-Enter New Password:'. A 'Save Password' button is located below the 'Re-Enter New Password' field. The user's email address '@servicemail.net' is visible in the top right corner.

Figure 8 - Password Preferences Dialog

Changing a Password: After logging into your quarantine interface, select the PREFERENCES tab and then click on the 'Password' button. In the provided fields, enter your existing password in the first field and your desired password in both remaining fields. Click the 'Save Password' button when finished.

Retrieving a Lost/Forgotten Password: On the quarantine interface login page, displayed above in Figure 3, enter your full e-mail address in the username field and click the 'Create New Password' button. This will deliver a welcome message identical to that described in the 'Getting Started' section and displayed in Figure 1 above. Your password will be displayed in this message.

A Note About Password Changes: Changing your password breaks the links in your existing quarantine summary reports so you cannot delete, deliver, or whitelist messages from those reports. New quarantine summary reports will contain updated links that you can use the same as before.



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Global Settings

Changing the Language of the Quarantine Interface: You can change the language of your Quarantine interface at any time by selecting your desired language from the dropdown menu in the upper right corner of the web interface. Supported languages include Chinese, Japanese, Spanish, French, and many others. The language you select is only applied to your individual quarantine interface. No other user's interface is affected.