

IMF Tune v8.0 Moderator/Reporting Web Interface

WinDeveloper
IMF Tune

A decorative graphic on the left side of the page, consisting of several overlapping, curved, ribbon-like shapes in shades of blue and white, creating a sense of motion and depth.

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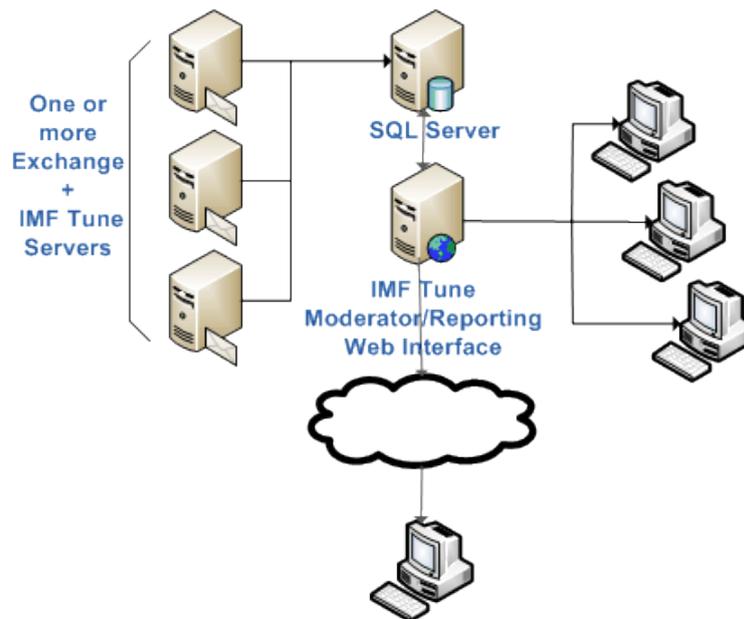
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1. Installing the Moderator/Reporting

The IMF Tune web interface is shipped in an installation package separate from the main IMF Tune server installation. This decoupling gives great deployment flexibility. Indeed it is possible to run the IMF Tune server without the web interface. However, we would be missing all the great reporting and email moderation functionality the web component delivers.

1.1 System Setup

The complete system setup is illustrated in the diagram that follows.



Here we have 3 Exchange servers each running IMF Tune. These publish information on processed emails to the database server. In this manner, spam emails rejected or deleted at the server are available for reviewing.

Depending on the configuration, IMF Tune may also publish accepted emails for reporting purposes. This is discussed in the Configuration sections of this Manual.

From their browser, users logon to the IMF Tune Web interface. Users and Administrators granted the necessary login rights are thus able to review blocked emails, and monitor filtering performance.

Sharing the same database, multiple IMF Tune servers are able to publish the information for all emails in a central location. Thus users have access to all emails from a single interface.

For clarity here we illustrated the system setup on multiple servers. Nevertheless it is also possible to install all components on the same server. This will normally depend on the Organization email load. In general we do recommend putting the database server on a separate machine in order to reduce the load on the Exchange server machine.

1.2 Requirements

1.2.1 IMF Tune Server

The IMF Tune Server requirements include:

1. Platform Support – The IMF Tune server is installed on the Exchange server machine. Exchange versions 2007¹, 2010¹, 2013², 2016² and 2019² are supported.

Supported Windows platforms include Windows Server 2008 R2 up to Windows Server 2019.

¹ IMF Tune must be installed on the Edge or Hub transport server roles. The Exchange Content Filter or Forefront Protection 2010 for Exchange must also be installed.

² IMF Tune must be installed on the Edge or Mailbox server roles. The Exchange Content Filter must also be installed.

2. .NET 2.0 Framework SP2

Note: On Windows 2012 and later, add the **.NET Framework 3.5 Feature** from the Server Manager. This includes .NET Framework 2.0 satisfying this installation requirement.

3. ODBC Driver 13 for SQL Server

These drivers are required for IMF Tune server to connect to the MS SQL Database serving as the Moderator/Reporting backend.

1.2.2 Moderator/Reporting Web Interface

The IMF Tune Moderator/Reporting is an IIS ASP.NET web application. Requirements:

1. Server Platforms: Windows Server 2008 R2 up to Windows Server 2019
2. .NET 2.0 Framework SP2
Note: On Windows 2012 and later, add the **.NET Framework 3.5 Feature** from the Server Manager. This includes .NET Framework 2.0 satisfying this installation requirement.
3. Internet Information Server – Install the IIS server version included with any of the supported server platforms.
4. ASP.NET
Note: On Windows 2012 and later, add the **ASP.NET 3.5 Component** from the Server Manager.
5. Microsoft SQL Server (see Database Server requirements)
6. ODBC Driver 13 for SQL Server
7. Minimum Browser Versions - Internet Explorer 6, Mozilla FireFox 3, Opera 10, Apple Safari 4, Google Chrome 4.

1.2.3 Database Server

1. The database server can be any version from Microsoft SQL version 2008 to 2017. The free MS SQL Express editions are also supported.
2. Must be installed on the same Windows Domain as the IMF Tune Web interface.
3. Must be installed in Mixed Authentication Mode supporting both Windows Integrated Authentication and SQL Authentication.
4. SQL server must allow TCP/IP connectivity. In case of firewalls, some ports may need to be opened to allow SQL TCP/IP connectivity.

For details on how to correctly install and configure MS SQL also check the following video tutorial. This includes many troubleshooting tips that are also relevant to configurations not running a Firewall.

[Running SQL behind a Firewall - IMF Tune Quarantine & Reporting](#)

1.3 Installation Walkthrough

IMF Tune is made up of two installations available for [download from the WinDeveloper website](#):

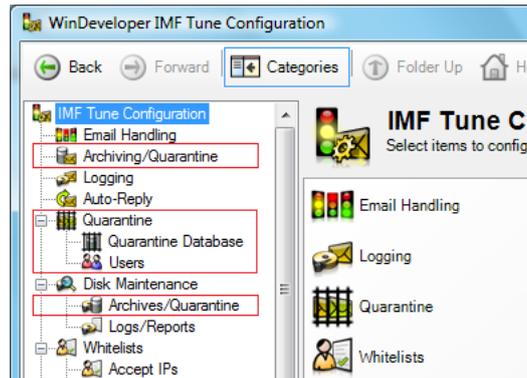
1. IMF Tune Server – Includes the core filtering engine and the logic to publish emails to a database server.
2. IMF Tune Moderator/Reporting – Includes an IIS ASP.NET web application and database initialization wizard.

Most often these are installed in the order shown above. However it is possible to perform the installations in any order since the two are completely independent at installation time. Of course both components have to be in place for us to activate the Quarantine and Reporting features.

1.4 IMF Tune Server Installation

Installing the IMF Tune server cannot be any simpler. Given that the necessary requirements discussed above are satisfied, it is just a matter of clicking Next, Next, Next to complete the installation Wizard.

The IMF Tune server configuration provides the interface for managing the web component. However these configuration categories aren't fully accessible until the IMF Tune Moderator/Reporting component is also installed.



1.5 Moderator/Reporting Web Interface Installation

The IMF Tune Moderator/Reporting installation performs two tasks:

1. Installs the ASP.NET IIS Web Moderator/Reporting interface.
2. Initializes the database server.

The installation will create the new Web application with little need for user input. The second operation, the database initialization, requires us to walk through a wizard that is launched at the end of the installation. The wizard is also included in the Moderator/Reporting application program group. In this manner if anything goes wrong at installation time we can rerun it later.

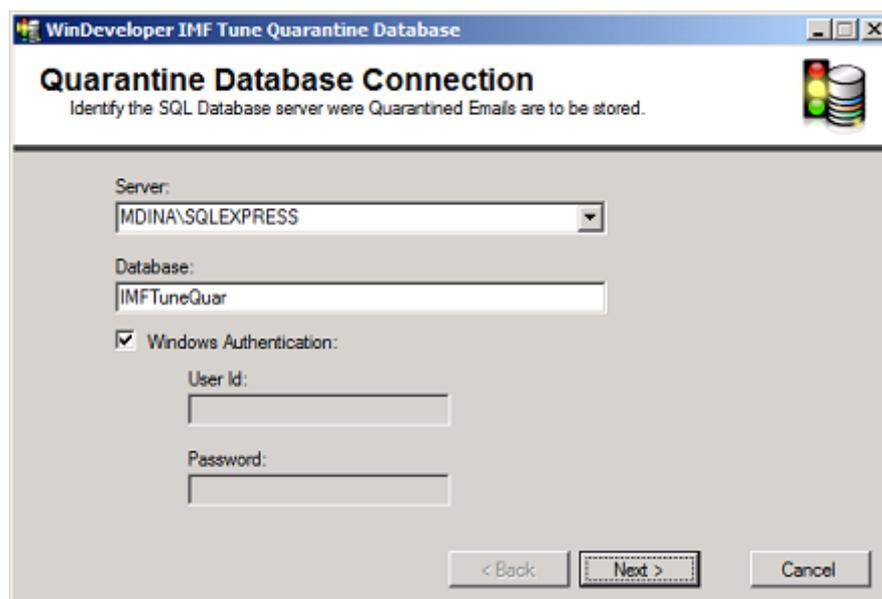
Before proceeding with this installation it is worth deciding how we want to setup the IMF Tune database. When performing a fresh installation we have two options:

1. Manually create a new database instance. The installation Wizard will then create the database schema and setup the necessary database access rights.
2. Let the wizard do everything including the creation of the database instance.

Creating the database instance manually gives more control on the database creation process.

IMPORTANT: If creating the database instance manually it is important to set the database collation using case insensitive collation. The installation uses the following collation type: `SQL_Latin1_General_CP1_CI_AS`

With this point cleared we can proceed with the installation. As discussed the interesting part here concerns the Database Connection Wizard. So we move fast forward to the point when the installation launches the Wizard.



In the first Wizard Step we need to identify the database server. At the server list we can select one of the detected servers. Or else we can type directly the server name.

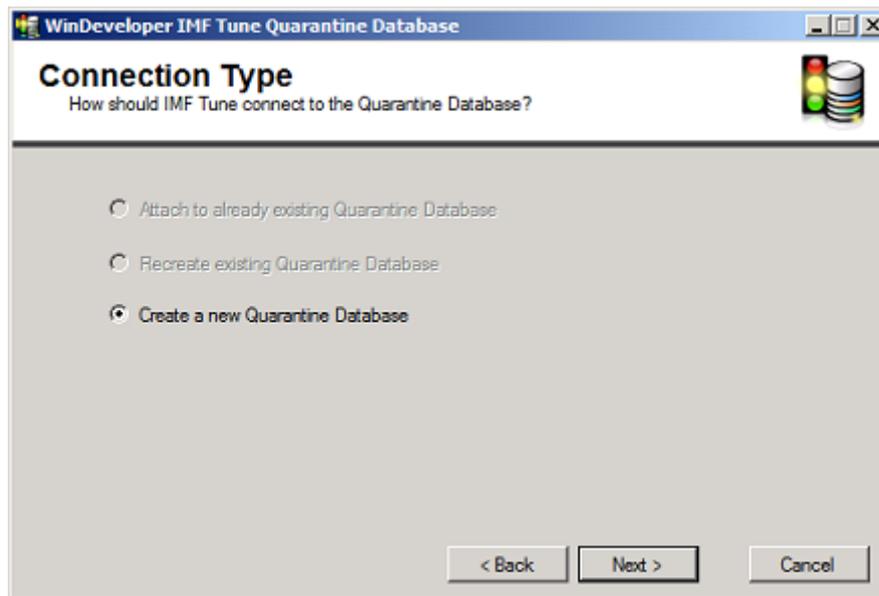
Next specify the Database Instance name.

Lastly we select whether the Wizard is to use Integrated Windows Authentication or SQL Authentication for it to initialize the database. In the latter case we supply the necessary login credentials.

Notes

1. Server – The database server detection is not 100% accurate. It is possible for this list to miss some servers that are actually available. In this case we type the database server name manually.
2. Server – Keep in mind the list of supported database servers and the requirement for the server to support both Windows Authentication and SQL Authentication.
3. Database – If the database instance was created manually, change the name to the one specified on creating the database. Otherwise we can keep the default and let the Wizard create it for us.
4. Login Credentials – Any database login credentials supplied at the wizard are only used for setting up the system. These are not stored anywhere within IMF Tune.
5. Login Credentials – In a fresh installation the Wizard will need to perform a number of operations against the database server that necessitate a high level of access rights. Amongst others it will:
 - Optionally create the database instance from scratch.
 - Create the IMF Tune database schema including tables, indexes, stored procedures etc.
 - Grant login rights to the Windows Network Service account over the IMF Tune database. This is the account used by the Web interface to access the database.

Following the database connection step click Next. The Wizard will now connect to the database server and provides a selection of possible operations:



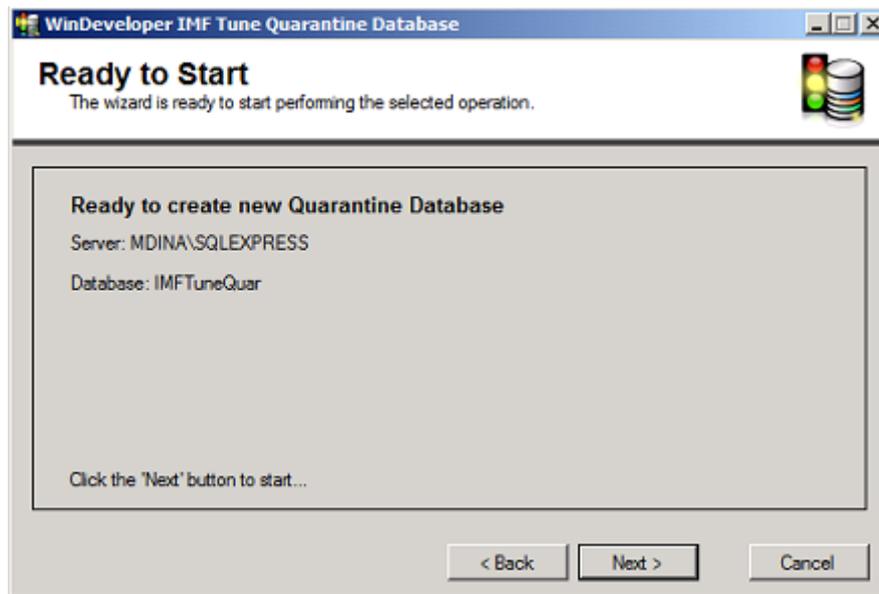
Here we are performing a fresh installation and we will let the Wizard create the database for us from scratch. The Wizard has detected that there is no database instance named 'IMFTuneQuar' at the server. Thus it only provides the option to 'Create a new Quarantine Database'. The three possible operations here are:

Attach to already existing Quarantine Database – This option becomes active if the wizard detects that the IMF Tune database is already in place and correctly initialized. This happens when upgrading the Web interface. In this case the wizard limits itself to making sure that the Web application has the necessary access rights over the database.

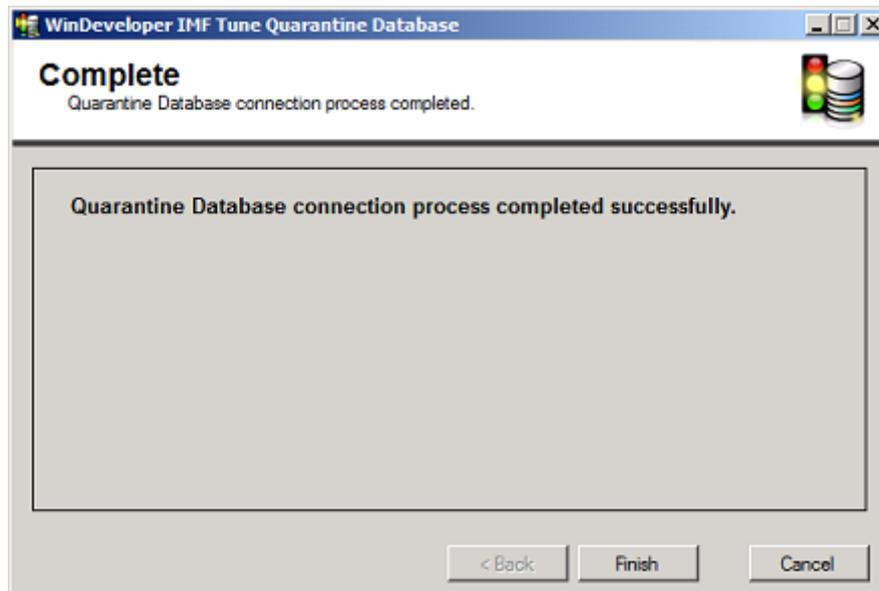
Recreate existing Quarantine Database – This option becomes active if the wizard detects that the database instance name already exists at the database server. This happens if we create the database manually and when performing upgrades. Choosing this option the Wizard would wipe any already existing data, recreate the IMF Tune database schema, and grant the necessary access rights.

Create a new Quarantine Database – This option becomes active if the wizard does not find any database instance matching the supplied name at the server. It instructs the Wizard to perform a complete database initialization.

On selecting the operation type, click Next. The Wizard is now ready to start.



Clicking Next again the Wizard performs the selected operation and reports on the outcome.



In case any errors are reported hit the back button to move to step 1 again. Most errors will be resolvable by correcting the database connection settings. If necessary you can close this wizard and rerun to it from the Program Group created at installation time.

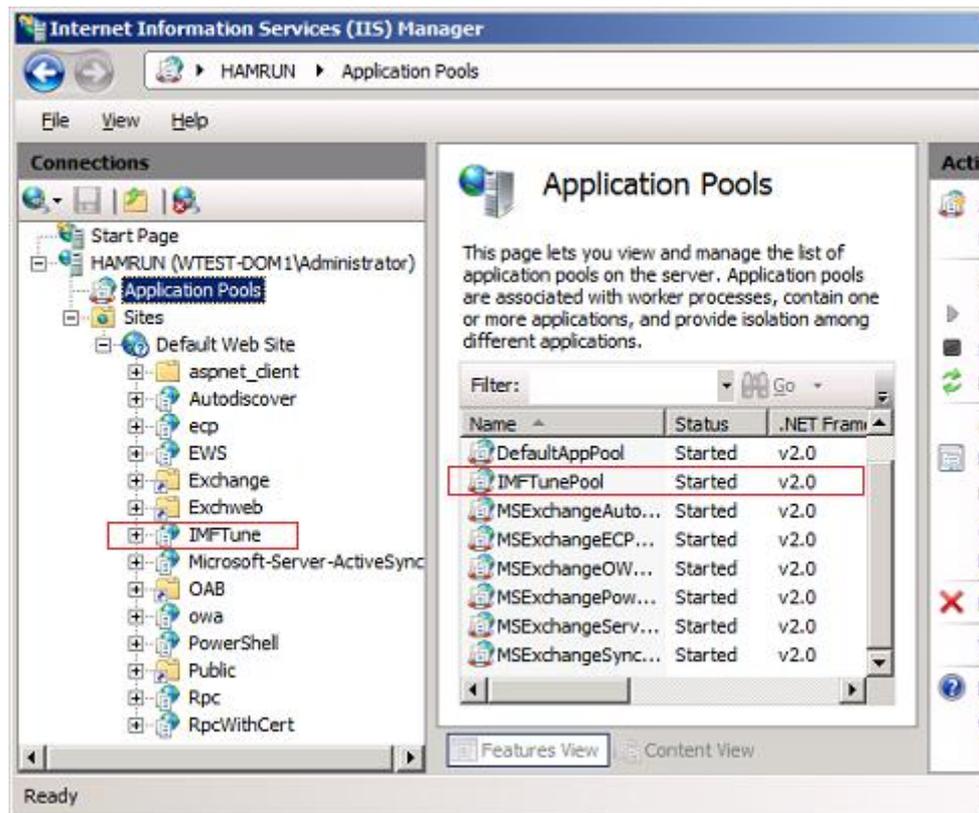
Running the wizard successfully is required for the Moderator/Reporting functionality to work.

1.6 IIS ASP.NET Web Interface

The installation just discussed will create a new IIS ASP.NET application. Under IIS the following new objects are created:

1. An application pool named **IMFTunePool**
2. An application under the Default Web Site named **IMFTune**

Here is how the Windows 2008 R2 IIS7.5 looks like in our case. The image highlights the 2 newly added items.

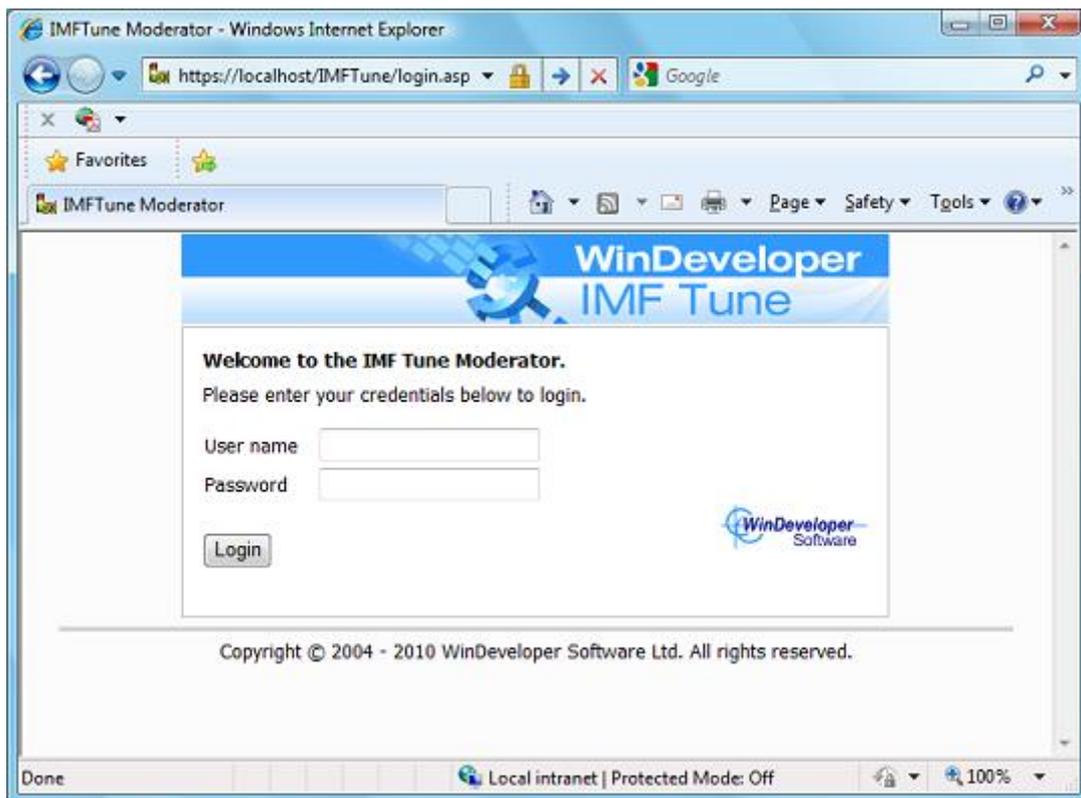


IMF Tune supports all versions from IIS7.5, IIS8, IIS8.5 and IIS10.

To confirm that the Web interface was successfully installed, from the browser enter the application URL:

<http://<server name>/imftune>

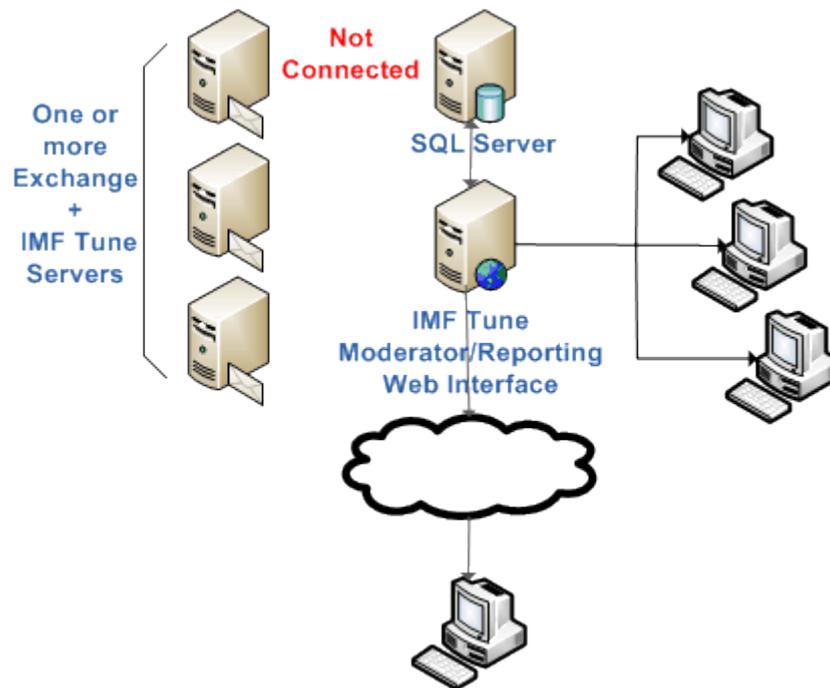
This will present the login screen:



This login screen is a good indication that the Moderator/Reporting installation was successful. At this stage we cannot move further since no user logins have been created. This can be done once we register the IMF Tune servers with the database.

1.7 Registering IMF Tune Servers with the Database Server

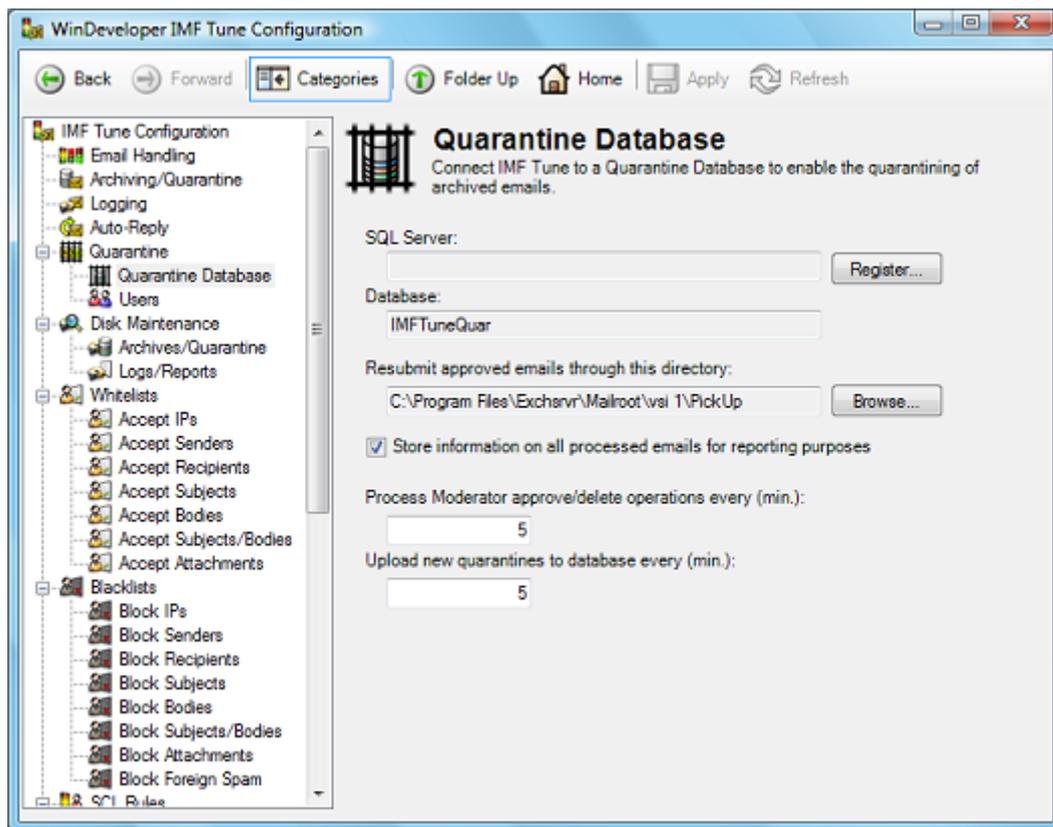
Referring back to our system setup diagram, if you are following this guide in the order presented, this is how far we got:



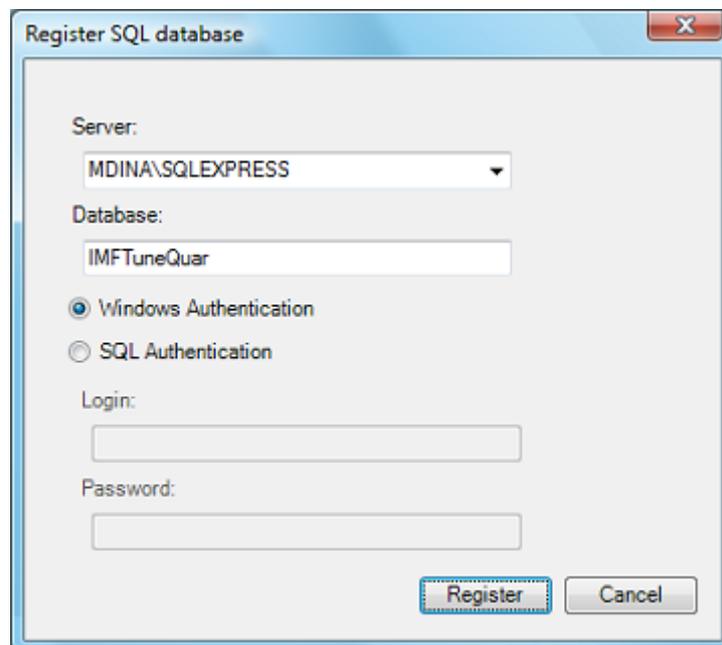
We installed one or more IMF Tune servers and the IMF Tune Moderator/Reporting. Only the Web interface is connected to the database server.

To complete the setup we need to establish a connection between each of the IMF Tune servers and the database. This is done from the IMF Tune server configuration under:

Quarantine | Quarantine Database



From here, clicking on Register opens the database registration dialog:



Here we supply the database server, database instance name and the login credentials. We then click the Register button at the bottom. This may pop a warning alerting us that all configuration changes will have to be committed. Select Yes, and the registration is performed.

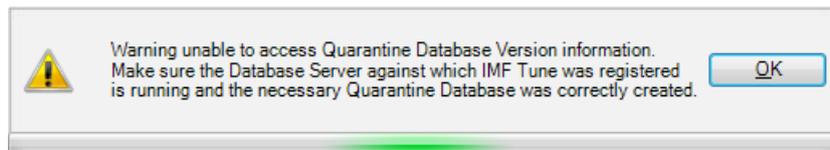
Notes

1. Any credentials supplied at the registration dialog are only used for completing the registration operation. These credentials are not stored anywhere within IMF Tune.
2. The IMF Tune server registration process needs to have the IMF Tune database already in place and initialized. This means that this registration can only take place after the Web component is installed and its connection wizard is successfully completed.
3. In case of multiple IMF Tune servers the registration procedure has to be repeated on each of the servers.

1.8 Enabling SQL Authentication in Microsoft SQL Server

The IMF Tune web interface requires a Microsoft SQL backend database. MS SQL versions 2008 to 2017 are supported, including the free MS SQL Express editions.

For the system to work IMF Tune requires an SQL Server that supports both Windows Authentication and SQL Authentication. This is sometimes referred to as mixed mode authentication. In case SQL Authentication is not enabled, IMF Tune will be unable to upload any emails to the database server. Furthermore on starting up the configuration you will be greeted with a warning alerting you that IMF Tune is unable to connect to the database server.



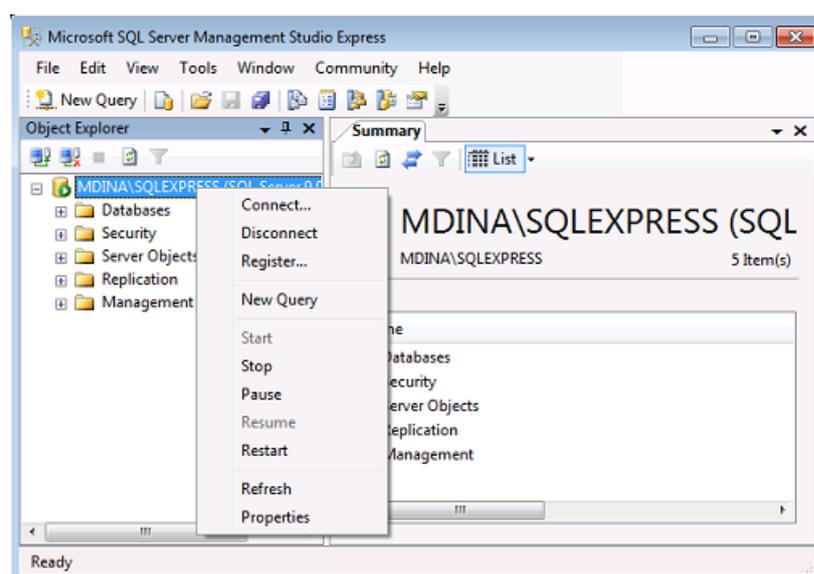
NOTE: Even if SQL Authentication is disabled the registration process initiated from the IMF Tune configuration under *Quarantine / Quarantine Database* may still succeed without error.

In all the supported MS SQL versions, the steps to enable SQL Authentication are very similar. The differences are mostly a matter of variations in the SQL Management User Interface presentation.

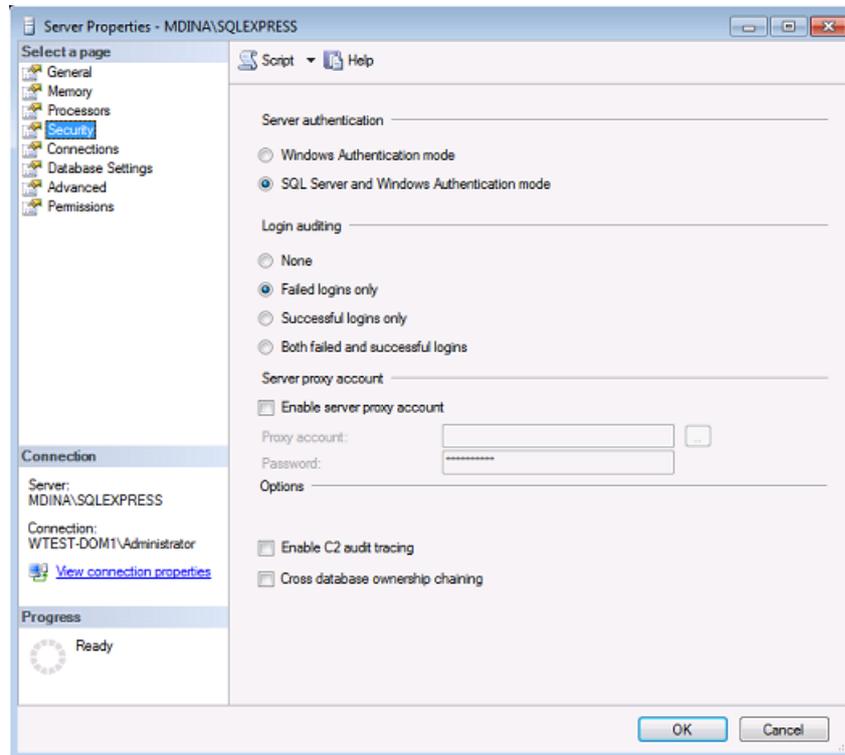
1.8.1 Enable SQL Authentication in MS SQL 2008 and Later

The following is the procedure to enable SQL Authentication in case of MS SQL 2008. Although later versions introduced some UI changes, the same steps can be followed.

1. Open the SQL Server Management Studio.
2. Right-click the Server Node and select Properties



3. Select Security and from here, under Server authentication, select 'SQL Server and Windows Authentication mode'.



4. Click OK to save changes.
5. Restart the SQL server by right-clicking the server node again, and select Restart.

1.9 Complete Setup

With the IMF Tune servers registered, the setup is ready. It is now just a matter of configuring the system. Configuration will include:

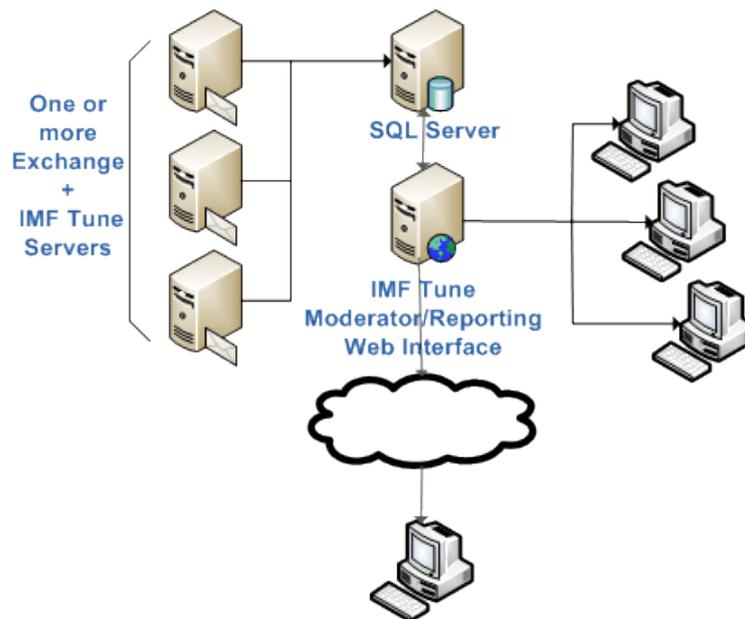
1. Granting user login rights over the Web interface
2. Specifying which emails are to be published.
3. Specifying a maintenance schedule for IMF Tune to control the age of published data.

2. Configuring the Moderator/Reporting

The IMF Tune server configuration includes the necessary interface for administering the Web Moderator/Reporting component. In this section we go through the configuration elements relevant to this component.

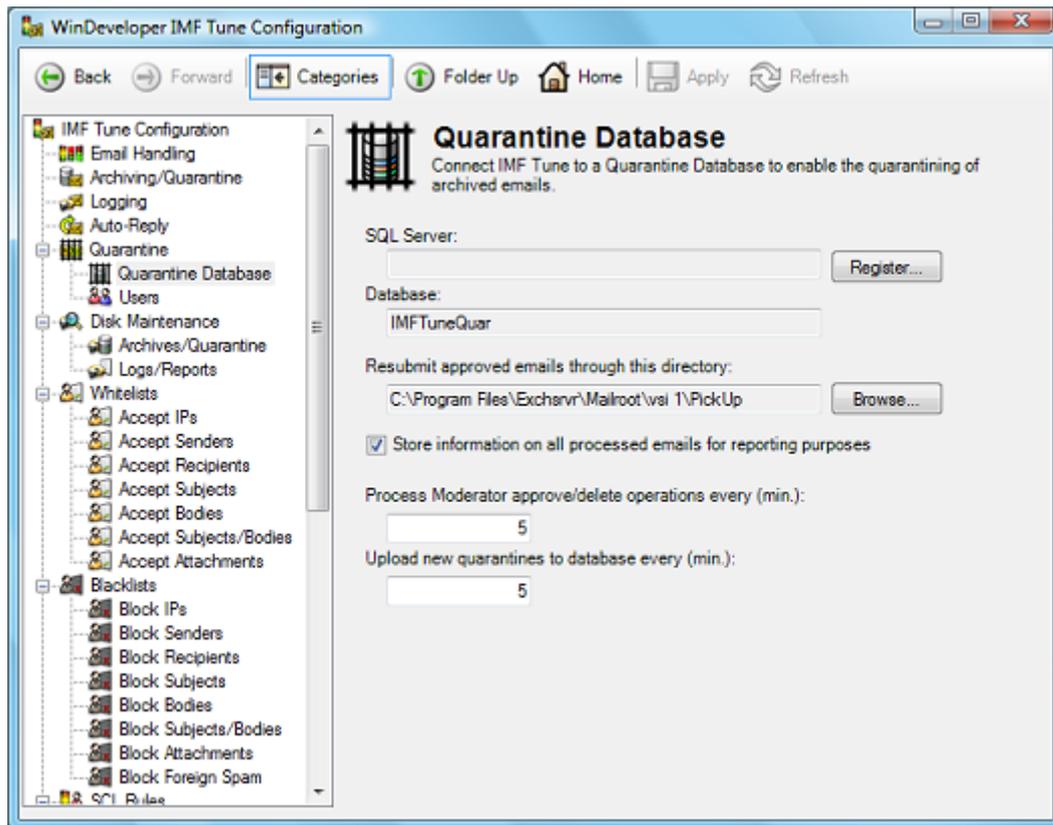
2.1 Initial Setup

In [Installing the Moderator/Reporting](#), we walked through the setup of the Moderation and Reporting functionality. The setup discussed is depicted below:



Once the setup is completed, we can proceed with configuring the IMF Tune server(s) for them to start publishing emails at the database server.

The interaction between an IMF Tune server and the database starts from the registration process. This is done from the Configuration | Quarantine | Quarantine Database category and establishes a connection between an IMF Tune server and a database server.

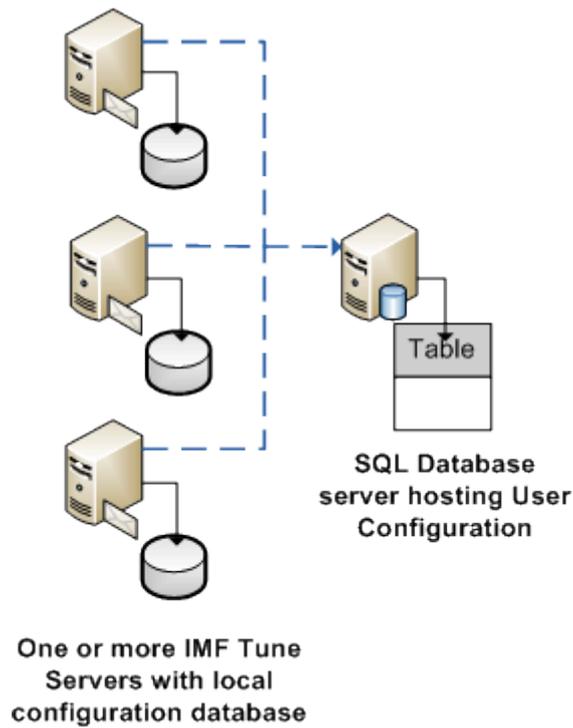


We already discussed the registration process in [Registering IMF Tune Servers with the Database Server](#). So we won't discuss this process any further here.

2.2 Configuration Storage

The web component does not include its own configuration interface. Instead, all settings are available from the IMF Tune server configuration. Thus, even if the IMF Tune server and Web interface are installed on different machines, we are still able to manage everything from a single interface.

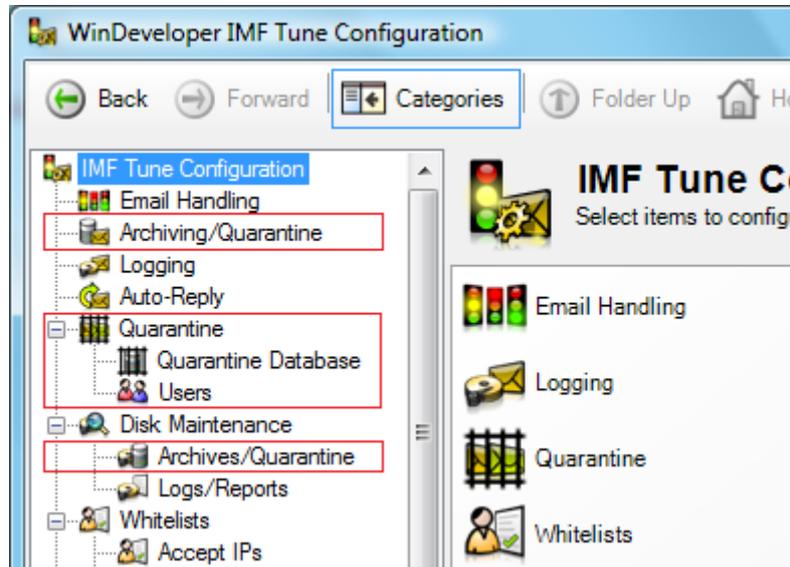
Before delving into the specific configuration options, let's have a look at how configuration settings are being stored.



Each IMF Tune server has its own local database where most settings are stored. At the SQL database server we store the list of Users that are allowed to access the web interface. Being centralized, all IMF Tune servers share the same User configuration.

2.3 IMF Tune Server Configuration

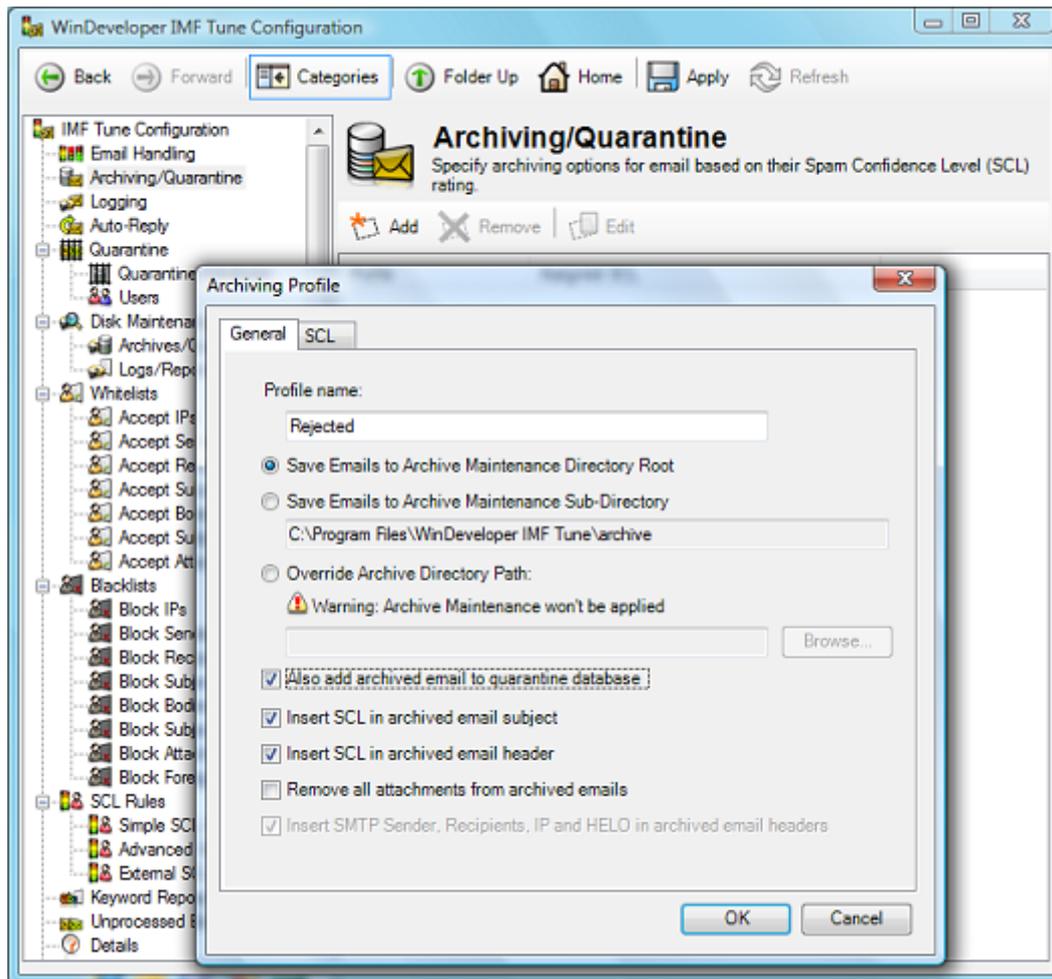
The Moderation/Reporting functionality is controlled from the IMF Tune server configuration interface. We will now go through the various settings relevant to email quarantining and reporting. The following image highlights the categories relevant to our discussion.



2.4 Publishing Emails to the Database Server

As from version 5.5, IMF Tune shifted from email disk archiving to SQL database quarantining. Disk archiving is still available and 100% backwards compatible. We can easily implement archiving exactly in the same manner as we did in earlier releases. However we now have the option to do more by publishing archived emails to a central database server.

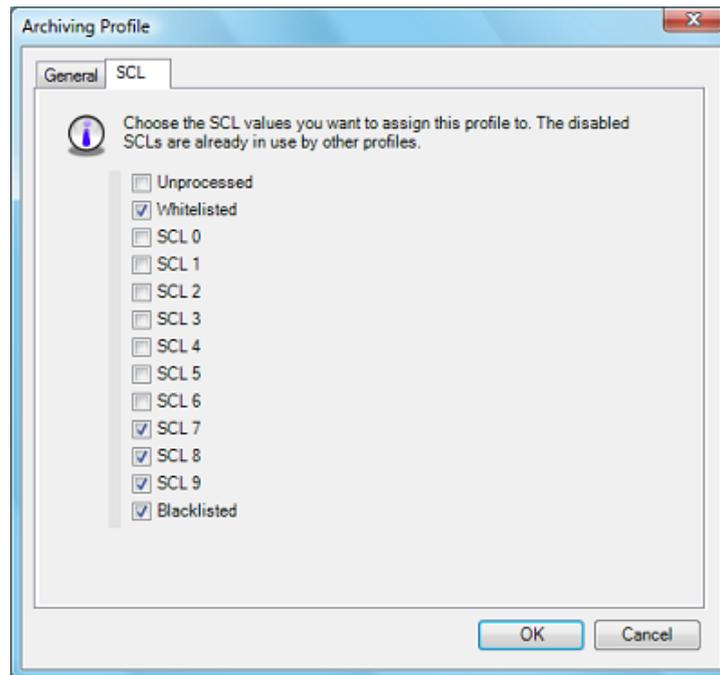
The Archiving/Quarantining category is the place where we identify which emails are to be published to the database server. From here click Add to open a new Archiving Profile.



Here we are especially interested in the checkbox saying 'Also add archived email to quarantine database'.

If we do not set this checkbox, we have the traditional disk archiving where emails are saved to the specified HDD location. On selecting this option, we instruct IMF Tune to also publish emails to the database server.

IMF Tune has always been able to archive all emails, both those blocked as spam and those accepted as legitimate. This feature is now inherited by the database server. At the Archive profile select the SCL configuration page:



Here we select the SCL ratings to which this Archiving profile applies. SCLs 7, 8, 9 and blacklisted are being blocked as spam. Thus we select their checkboxes so that emails with these ratings are published to the database for review.

Similarly, selecting the Whitelisted checkbox, instructs IMF Tune to also publish whitelisted emails. It really is totally up to us. We can choose to only publish emails blocked at the server, but we can also choose to publish emails that were delivered to the user mailboxes.

One reason why we might want to publish accepted emails to the database is to analyze the type of emails being assigned midrange SCL ratings, for example SCL4. It is not unusual for us to receive support questions on how to best handle emails assigned such ratings. By publishing these emails, an administrator may gain better understanding of the type of emails falling in this category and thus choose the most appropriate email handling action.

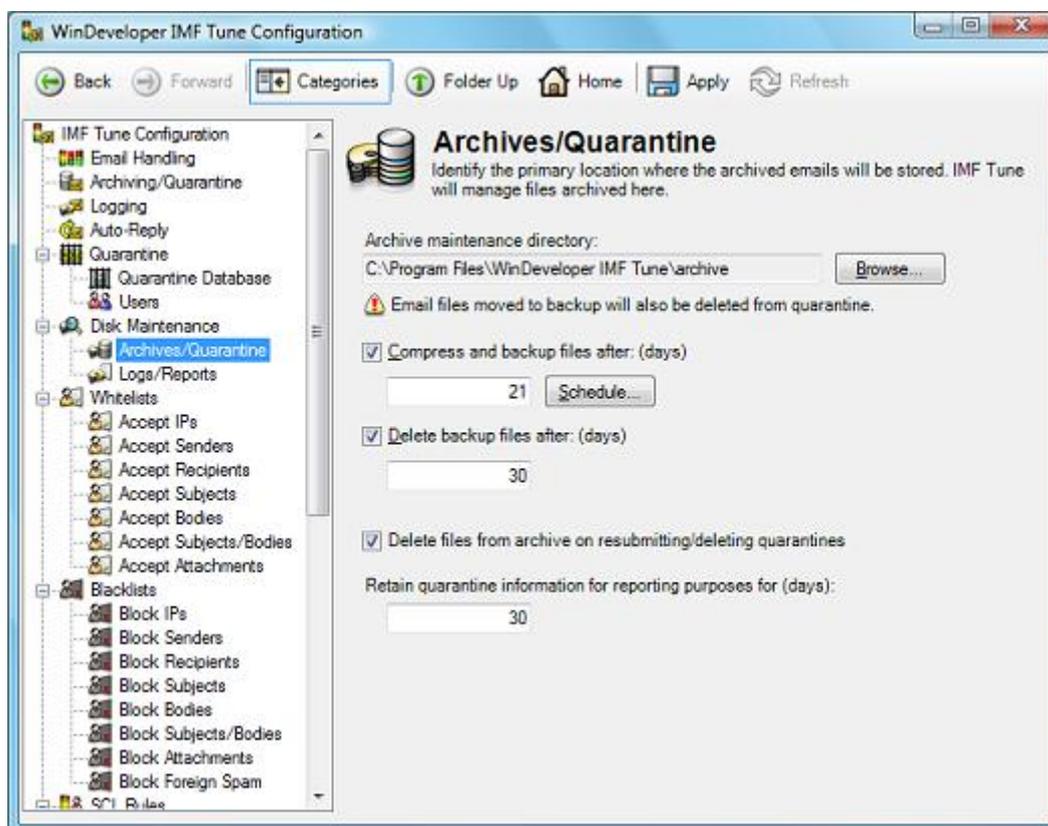
The Archiving interface should immediately highlight the tight coupling that exists between disk archiving and the database server. Indeed **for an email to be published to the database a copy must also be archived to disk.**

The database server is not fed with a full copy of the email. Most notably the database is only supplied with up to 32Kb of body text, no html body content and no file attachments. These potentially large pieces of data are kept at the disk archive.

Let's see what happens when a user, through the IMF Tune Web interface, releases a quarantined email for delivery. In this case, the IMF Tune server fulfills the request by fetching the email from the disk archive (not from the database) and submits this email copy for delivery.

2.5 Archive/Quarantine Maintenance

Furthering the twinning between disk archiving and the database server we now look at the settings under the Maintenance | Archives/Quarantine category.



2.5.1 Email files moved to backup will also be deleted from quarantine

At the top of Maintenance | Archives/Quarantine we find a Warning saying:

Email files moved to backup will also be deleted from quarantine.

If the Archive Maintenance option 'Compress and backup files after' is enabled, emails at the disk archive reaching the specified age limit are moved to backup. At this point, the email may no longer be resubmitted for delivery from the Web Moderator. Thus IMF Tune also deletes the emails from the database server.

2.5.2 Delete files from archive on resubmitting/deleting quarantines

At the bottom of Maintenance | Archives/Quarantine category we have the checkbox:

Delete files from archive on resubmitting/deleting quarantines

This option determines whether archived emails should be immediately deleted from disk as soon as these are moderated from the Web interface. Consider a user resubmitting and deleting emails at the moderator. IMF Tune on fulfilling these operations removes the emails from the database. In addition it checks this setting to determine whether or not a copy of the email should be retained on disk.

Retaining emails on disk is useful in a multi-layer backup system where a predictable audit trail is required. You can choose to keep all emails on disk until the archives are backed up and later purged by disk maintenance. This renders the availability of emails archived to disk predictable. If we need to go back and dig some old email from the disk archive, it will still be available.

2.5.3 Retain quarantine information for reporting purposes for (days)

The last option at the bottom of Maintenance | Archives/Quarantine category is:

Retain quarantine information for reporting purposes for (days)

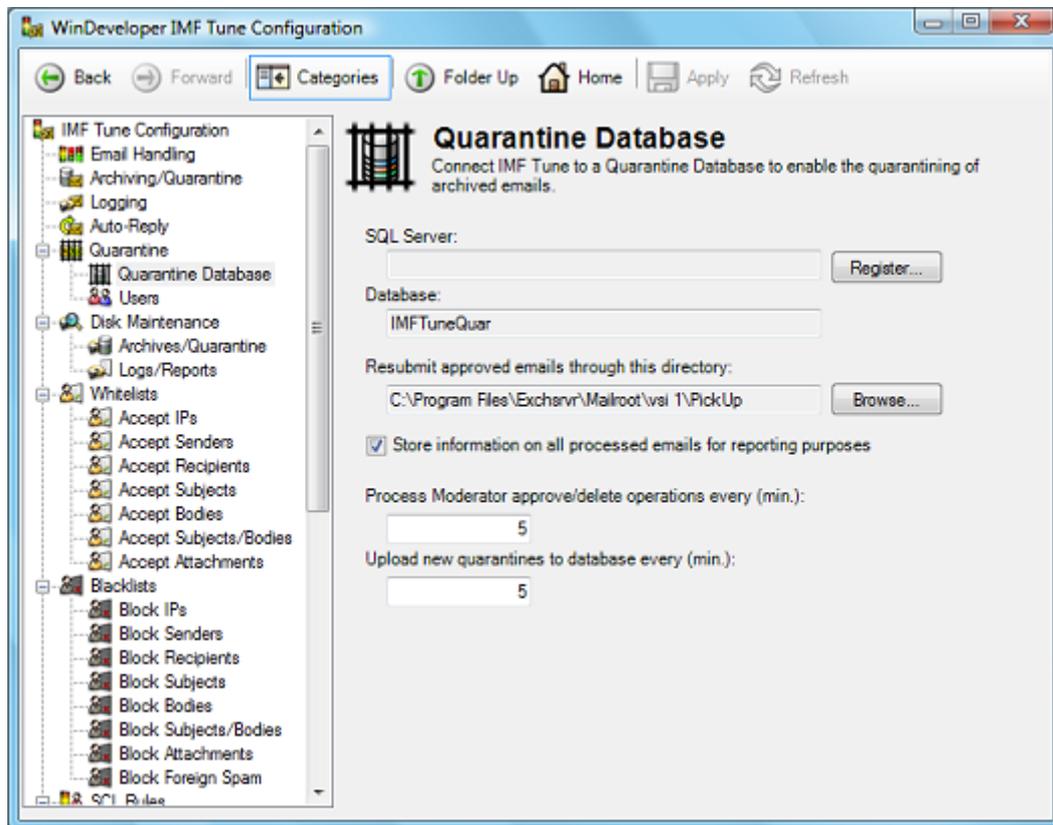
This is the age limit for email retention at the database server. Emails reaching this limit are purged completely. Note how there is no way to disable this purging and the maximum value here is 999 days.

Some might be tempted to employ the IMF Tune database as some kind of permanent email archive. However the Quarantine functionality has not been designed for this purpose. Thus we discourage employing the system in this manner.

The option reads 'Retain quarantine information for reporting purposes' because this age limit determines the number of days reporting information is retained within the database. In other words the number of days configured here will determine the span of time covered by all reports. As an example let's say we set this to 30 days. The bar chart showing the number of accepted, rerouted, rejected and deleted emails will show the totals for the last 30 days.

2.6 The Quarantine Database Configuration Node

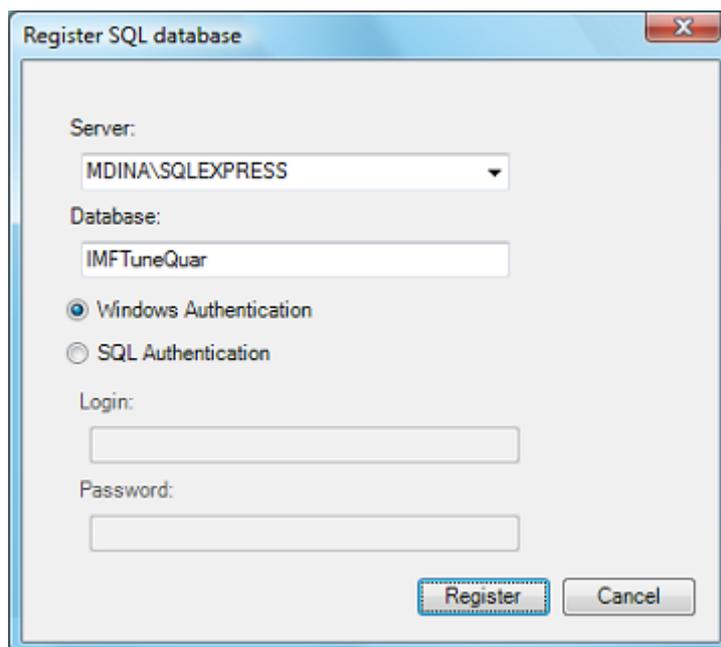
We now move to the Quarantine configuration nodes starting from the Quarantine Database category.



2.6.1 IMF Tune Server Registration/Un-Registration

The top most configuration elements are all related to the IMF Tune server registration/un-registration process. This is the process that connects/disconnects an IMF Tune server to/from the database.

At the top we have two read-only fields, SQL Server and Database. These identify the database against which IMF Tune is currently registered or was last registered with. On the right we have a button that will read 'Register' or 'Unregister' depending on the current IMF Tune server state. If the server is currently not registered the button will read 'Register' and vice versa. Here is the dialog that pops on clicking the button.



The registration process is discussed in detail in [Registering IMF Tune Servers with the Database Server](#). The un-registration dialog is identical, but performs a clean disconnection from the database server.

2.6.2 Resubmit approved emails through this directory

The *'Resubmit approved emails through this directory'* field at the Quarantine Database category identifies the Exchange directory path to which emails are copied for SMTP delivery. This path is automatically initialized at installation time. However if the Exchange transport is reconfigured following the installation of IMF Tune we may need to update this field.

In Exchange 2007 and later, IMF Tune is installed on the server running the Hub or Edge Transport. As from Exchange 2013, the Hub Transport is no longer a distinct server role. Instead Exchange 2013 and later includes the Hub Transport with the Mailbox Server role.

In these Exchange versions we set the path to the transport replay directory:

<Exchange Server>\TransportRoles\Replay

2.6.3 Store information on all processed emails for reporting purposes

The *'Store information on all processed emails for reporting purposes'* checkbox instructs IMF Tune to publish at the database information on each processed email. This information is only used to generate reports. If we want to use the web interface for its reporting capabilities this checkbox has to be set. On activating this functionality IMF Tune immediately starts collecting information for real-time reporting.

In case we are only interested in using the Web interface as an email moderation tool, it is a good idea to disable this functionality by clearing the checkbox. IMF Tune will still generate reports however these will only take into consideration the set of emails published to the database through the Archiving profiles configured under the Archiving/Quarantining category. Thus the reports won't

include the complete set of processed emails. Disabling this functionality will reduce the amount of data we load to the database server, hence reducing resource consumption.

Emails loaded to the database exclusively for reporting, will not be visible at the Web Moderator interface. This information is retained at the database until it reaches the age specified at: *Maintenance | Archives/Quarantine | Retain quarantine information for reporting purposes for (days)*

On reaching the age limit the information is purged from the database.

2.6.4 Process Moderator approve/delete operations every (min.)

The Moderator Web interface allows users to Approve (resubmit) and Delete quarantined emails permanently. These tasks are fulfilled by the IMF Tune server that was responsible for publishing the email at the database. For the best performance, this processing is done in batches.

The *'Process Moderator approve/delete operations every (min.)'* field specifies how often this operation is performed. Hence this determines the maximum time it will take for an email to be resubmitted and reach the user's mailbox.

2.6.5 Upload new quarantines to database every (min.)

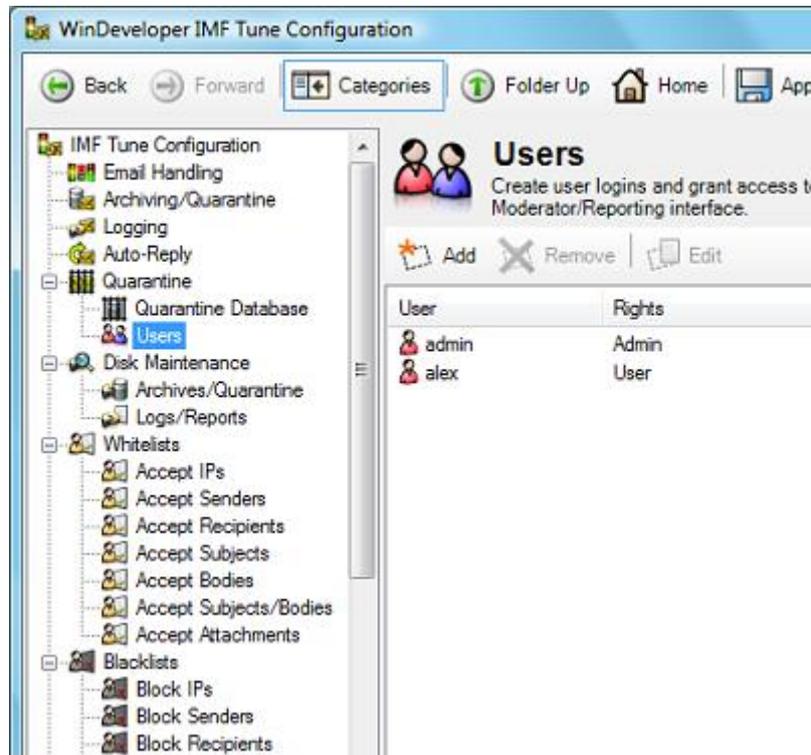
The publishing of new email information at the database server is also done in batches. The volume of information uploaded, depends on the Exchange server email load. If we enable [Store information on all processed emails for reporting purposes](#), IMF Tune collects information on each processed email. So the volume also depends on the configuration settings.

'Upload new quarantines to database every (min.)' determines the maximum time that may elapse until an email is published at the database server.

2.7 Quarantine Users

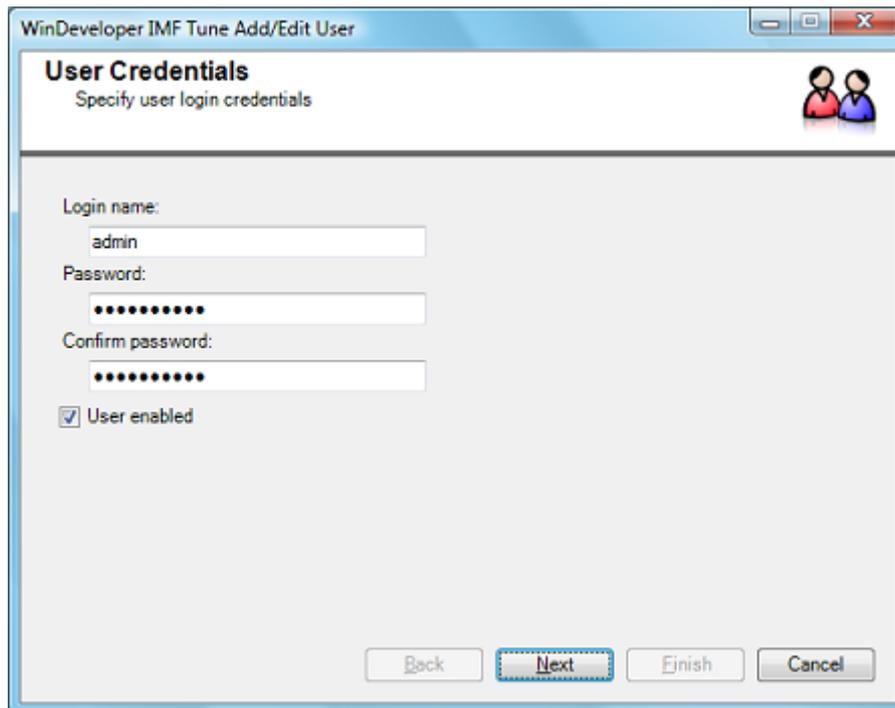
The settings discussed so far control the interaction between an IMF Tune server and the database server. These are stored locally at the IMF Tune server machine. Installations running multiple IMF Tune servers will thus have a set of settings for each server.

We now take a look at the User configuration, a list of users stored at the database server.



Being stored at the database, this list only becomes accessible once IMF Tune is registered with the database server as discussed in [Registering IMF Tune Servers with the Database Server](#).

Here users are granted access rights over the Web interface. To create a new user, click on Add.



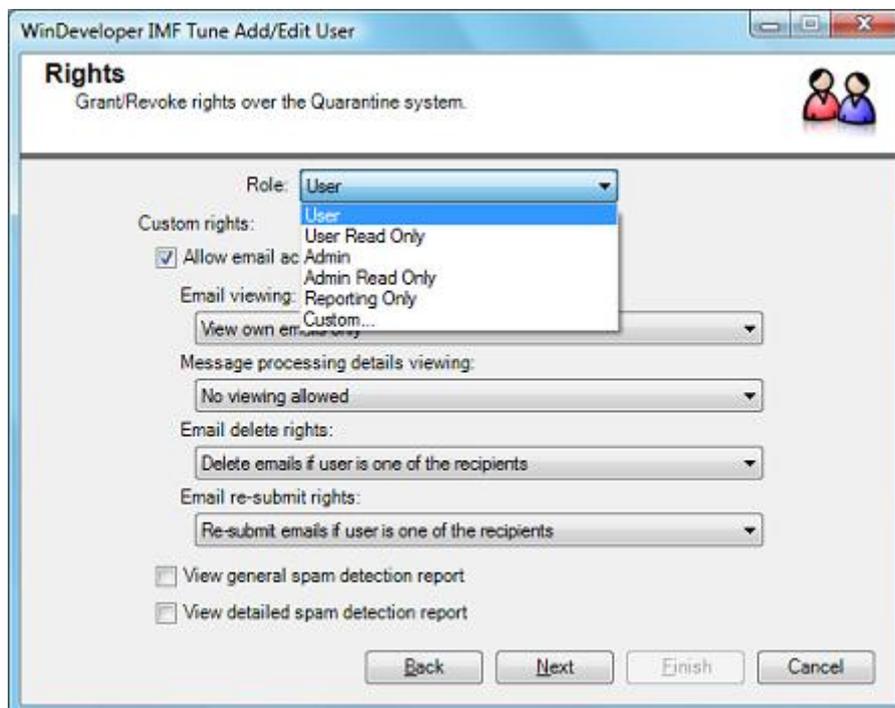
The screenshot shows the 'User Credentials' step of the 'WinDeveloper IMF Tune Add/Edit User' wizard. The window title is 'WinDeveloper IMF Tune Add/Edit User'. The main heading is 'User Credentials' with the subtitle 'Specify user login credentials'. There is a small icon of two people in the top right corner. The form contains the following fields and controls:

- Login name:** A text box containing 'admin'.
- Password:** A password field with 10 dots.
- Confirm password:** A password field with 10 dots.
- User enabled**

At the bottom, there are four buttons: 'Back', 'Next' (highlighted with a blue border), 'Finish', and 'Cancel'.

This opens the Add/Edit User wizard. In the first step we specify the login credentials and the initial enablement status for the new user. If enabled, the user is allowed to login to the Web interface. Otherwise, it is blocked as if the user did not exist.

Clicking Next we move to the Rights assignment step.



The screenshot shows the 'Rights' step of the 'WinDeveloper IMF Tune Add/Edit User' wizard. The window title is 'WinDeveloper IMF Tune Add/Edit User'. The main heading is 'Rights' with the subtitle 'Grant/Revoke rights over the Quarantine system'. There is a small icon of two people in the top right corner. The form contains the following fields and controls:

- Role:** A dropdown menu set to 'User'.
- Custom rights:** A dropdown menu with 'User' selected, showing a list of options: 'User', 'User Read Only', 'Admin', 'Admin Read Only', 'Reporting Only', and 'Custom...'. The 'User' option is highlighted.
- Allow email ac:** Admin
- Email viewing:** Reporting Only
- Message processing details viewing:** No viewing allowed
- Email delete rights:** Delete emails if user is one of the recipients
- Email re-submit rights:** Re-submit emails if user is one of the recipients
- View general spam detection report**
- View detailed spam detection report**

At the bottom, there are four buttons: 'Back', 'Next', 'Finish', and 'Cancel'.

IMF Tune includes a set of predefined Roles available from the top most combo box list. A role is simply a set of rights that you will most often want to assign:

Role | User

- Allowed viewing of emails addressed to him
- Allowed Delete and Resubmit rights over emails addressed to him
- Denied report access

Role | User Read Only

- Allowed viewing of emails addressed to him
- Denied Delete and Resubmit rights
- Denied report access

Role | Admin (full access rights)

- Allowed viewing of all emails
- Allowed Delete and Resubmit rights over all emails
- Allowed access to all reports

Role | Admin Read Only

- Allowed viewing of all emails
- Denied Delete and Resubmit rights
- Allowed access to all reports

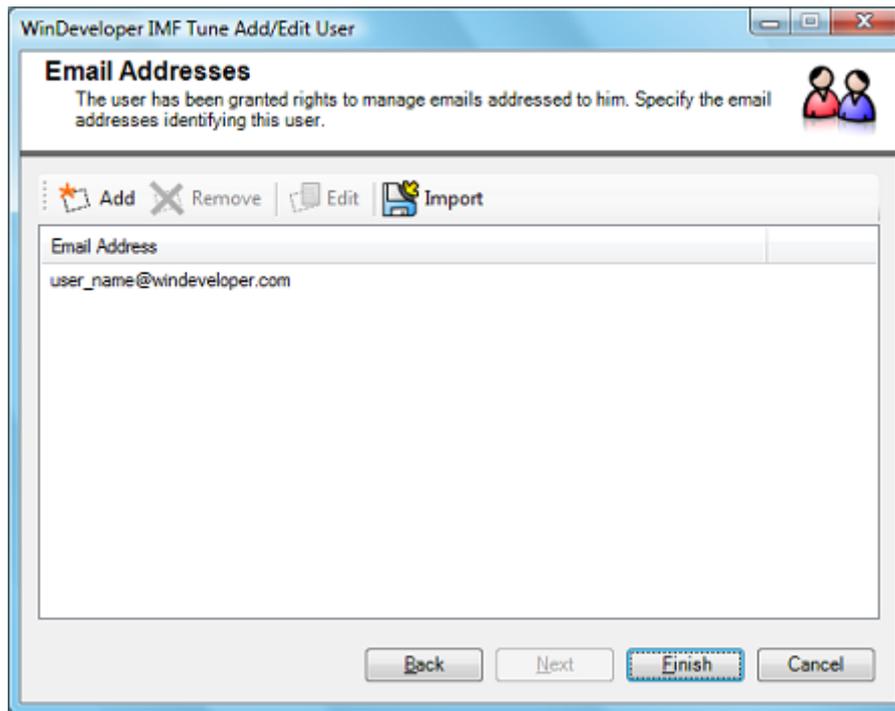
Reporting Only

- Denied viewing of emails
- Denied Delete and Resubmit rights
- Allowed access to all reports

Apart for the fixed Roles, it is also possible to assign a custom set of rights. To do this, from the roles list select Custom. This will enable all the other UI elements in this step, giving us full control on the rights assignments. Custom rights are discussed in detail in the section that follows.

Depending on the assigned rights, the Wizard may require us to go through another step. For example if we allow a user to only see emails addressed to him, then we need to identify the user's email addresses. On the other hand this is not necessary for an Administrator who is allowed to see all emails.

So in the former case the Next button will be enabled, leading us to the Email Addresses step:



Here we click Add for us to manually enter the user's addresses. We can enter multiple addresses separated by carriage returns. Otherwise, we can click on Import and select the user Active Directory object to import the address from there.

It is good to appreciate that by adding addresses we are granting the user rights over those emails where the address appears in the recipient list. If we wanted, we could allow a user to manage emails for other users. All we have to do is to include the addresses for the other users here as well.

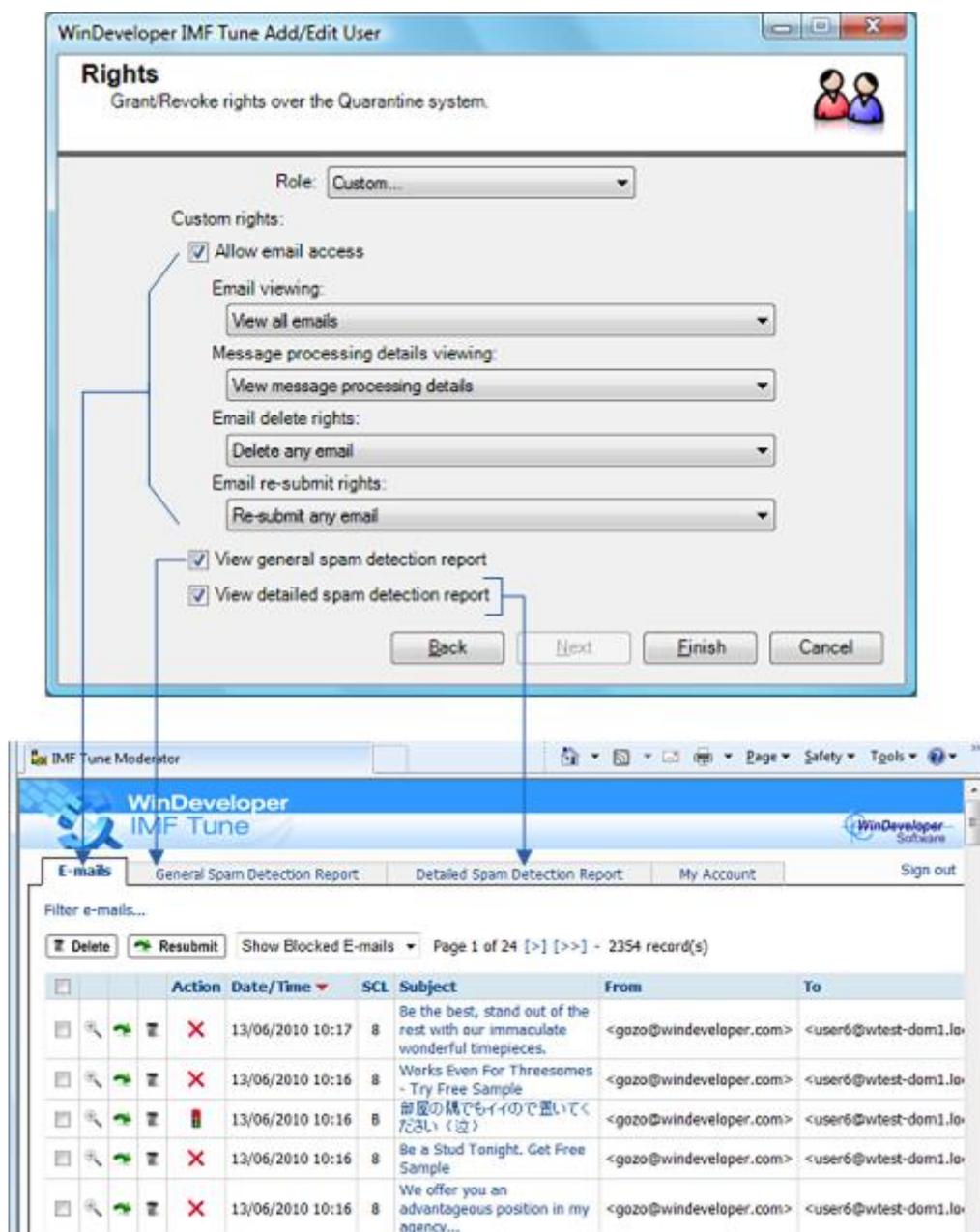
This completes the wizard. Just click Finish for the new user to be added to the list.

If we need to change any settings, including resetting the password, click edit to launch the wizard again.

Once ready, click Apply at the top of the Configuration for all settings to be persisted. At this point the IMF Tune configuration will connect to the database server and save all changes in the user list.

2.8 User Custom Access Control Rights

As discussed in the *Quarantine Users* section of this document, on configuring users, it is possible to assign a custom set of rights instead of the predefined roles. We now take a closer look at the options we have when assigning custom rights.



The above image shows side-by-side the user rights selection and the web interface. The top most set of rights, controls access to the Web Moderator email list. The last two checkboxes control access to the General Spam Detection Report and the Detailed Spam Detection Report.

2.8.1 Email Access Rights

Email Viewing | View all emails – The user is granted the right to view all emails published at the database. We have to be careful with this right, especially when publishing emails having low SCL ratings, Whitelisted or Unprocessed. Quite obviously this right can easily grant access to confidential emails.

Email Viewing | View own emails only – The user is only allowed to see emails addressed to him. This right is combined with the list of email addresses configured on creating the User. The addresses will identify the emails owned by the user.

Message processing details viewing | View message processing details – For each published email, IMF Tune includes a lot of additional information. As an example here is an email as displayed at the moderator:



The email information is organized into a number of pages. The *View message processing details* right, grants access to the *Keywords Report* and *IMF Tune Processing* pages shown above. It also allows viewing the full recipients list under the *SMTP Protocol* page, including any BCC recipients.

Email delete rights – This set of rights controls the ability to delete emails from the Moderator. Here we have four options:

- **Delete not allowed** – Block user from deleting any emails. We may want to centralize the deletion of quarantined items, leaving it up to the Administrator. Users would then be granted read-only rights.
- **Delete any email** – Allow user to delete any email over which he has viewing rights as discussed in *View all emails* and *View own emails only*.
- **Delete email if user is the only recipient** – An email may of course have been sent to multiple recipients. In this case the Moderator only holds one copy. If deleted, it would be deleted for all recipients. With this right, a user is only allowed to delete if he is the only recipient.
- **Delete email if user is one of the recipients** – This right allows the user to delete emails that include multiple recipients as long as he is in the recipient list.

Note how it is also possible to grant a user the right to view all emails (with *Email Viewing | View all emails*) but only allow him to delete his own emails.

Email re-submit rights – the set of rights available to control resubmitting emails, is identical to that discussed in *Email delete rights*. However here we are controlling the ability to have an email delivered to the original set of recipients. Note that, when resubmitting an email, this is delivered to all addresses in the original email recipient list.

2.8.2 Reporting

Access to reporting is controlled by granting/denying the rights:

View general spam detection report

View detailed spam detection report

The general report includes a set of graphs showing the current filtering performance. Being generic, this information is usually not considered to be very sensitive. However this type of reporting is not very relevant to the casual user.

The detailed report includes lists of email addresses, IPs and other more specific information on the email traffic flowing through the server. The information here is more sensitive.

2.9 Changing the Moderator/Reporting Date and Time formats

The IMF Tune Moderator/Reporting Web Component displays date and time information in various parts of the interface. Different countries have differing methods for formatting such information. For example in US the short date format used is M/d/yyyy. In the UK the format dd/MM/yyyy is used instead.

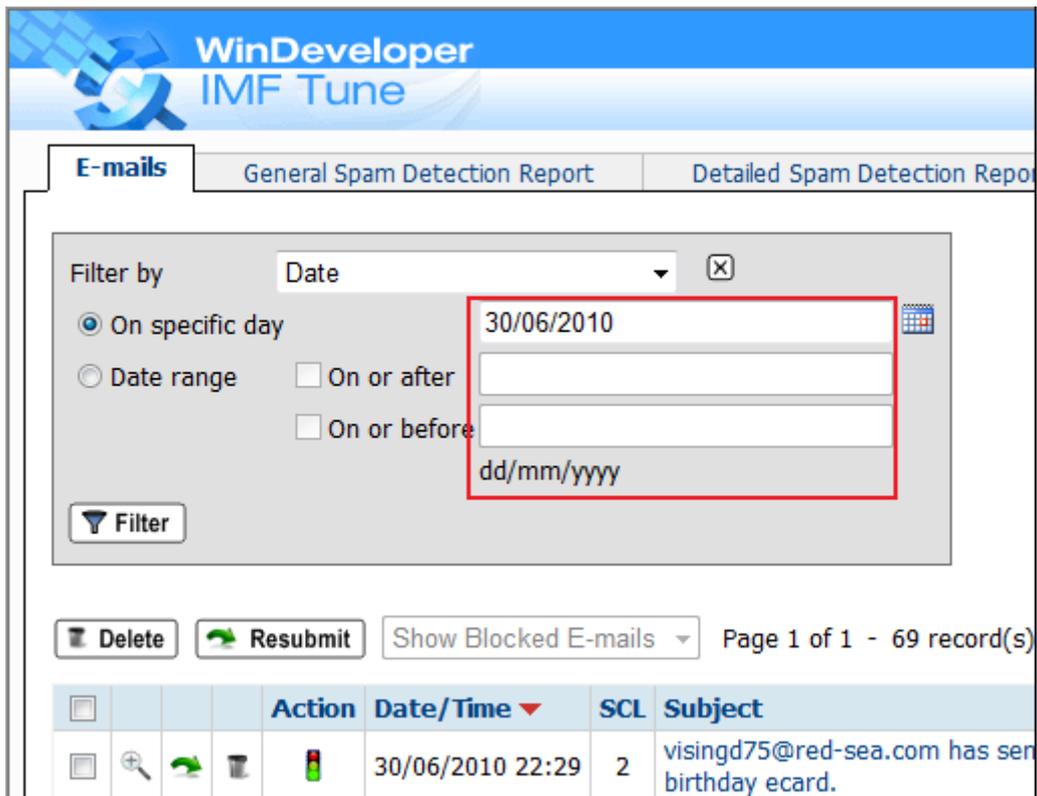
The Web Component fixes the format to be used for displaying time information at installation time. This format may not be the one in use in your region. In that case, follow the procedure presented here to change it.

2.9.1 Moderator/Reporting Date and Time Information

The Web Interface displays time information in various locations. In one occasion, Filtering of Emails by date, it also requires the input of dates for identifying the set of emails to display. Here are some screenshots showing a few examples:

The screenshot shows the WinDeveloper IMF Tune web interface. The main content area displays a list of emails with the following columns: Action, Date/Time, SCL, and Subject. The 'Date/Time' column is highlighted with a red box. The interface also includes a 'Filter e-mails...' section with 'Delete' and 'Resubmit' buttons, and a 'Show Blocked E-mails' dropdown menu. The page number 'Page 1 of 5' is visible at the bottom right of the email list.

				Action	Date/Time	SCL	Subject
<input type="checkbox"/>				✗	12/07/2010 18:09	B	76% off. Affordable Watches
<input type="checkbox"/>				✗	12/07/2010 18:09	B	76% off. High-end Watches
<input type="checkbox"/>				✗	12/07/2010 18:09	8	amazing watches@super prices
<input type="checkbox"/>				✗	12/07/2010 18:09	B	66% off. Fantastic watches
<input type="checkbox"/>				✗	12/07/2010 18:09	B	76% off. Affordable Watches
<input type="checkbox"/>				✗	12/07/2010 17:54	8	Genuine Class-Beautiful Watches Discounts



WinDeveloper IMF Tune

E-mails | General Spam Detection Report | Detailed Spam Detection Report

Filter by: Date [X]

On specific day: 30/06/2010

Date range:

 On or after:

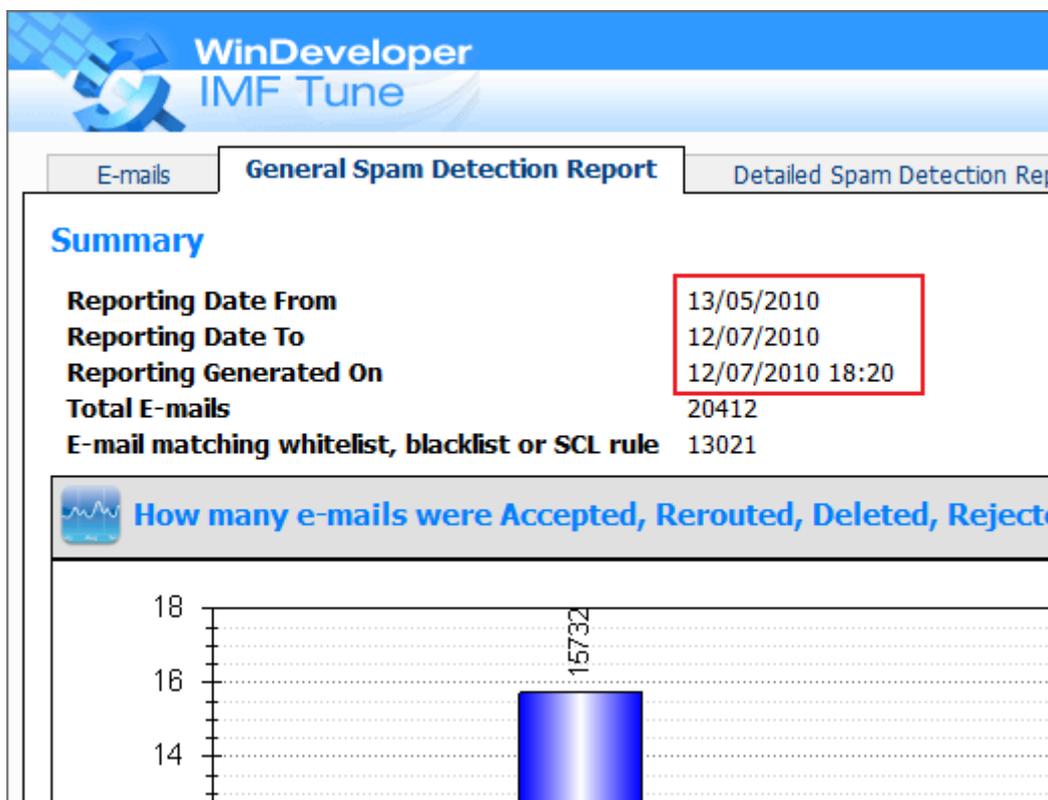
 On or before:

 dd/mm/yyyy

[Filter]

[Delete] [Resubmit] [Show Blocked E-mails] Page 1 of 1 - 69 record(s)

	Action	Date/Time	SCL	Subject
[Icons]	[Icon]	30/06/2010 22:29	2	visingd75@red-sea.com has sent birthday ecard.



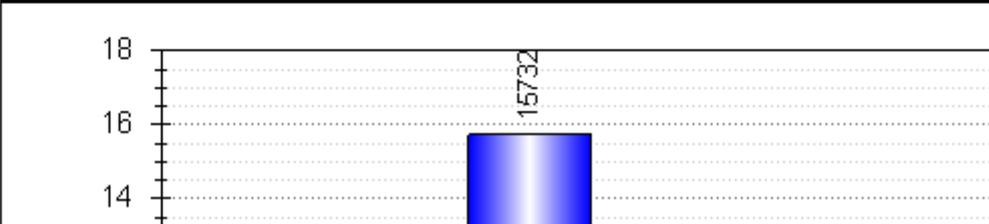
WinDeveloper IMF Tune

E-mails | **General Spam Detection Report** | Detailed Spam Detection Report

Summary

Reporting Date From: 13/05/2010
Reporting Date To: 12/07/2010
Reporting Generated On: 12/07/2010 18:20
Total E-mails: 20412
E-mail matching whitelist, blacklist or SCL rule: 13021

How many e-mails were Accepted, Rerouted, Deleted, Rejected



A bar chart with a vertical axis ranging from 14 to 18. A single blue bar is shown with the value 15732 written vertically above it.

2.9.2 Changing the Date/Time Format

WARNING: The following procedure requires you to edit an XML configuration file. This should be carried out by an administrator having the necessary expertise. Carrying out the procedure incorrectly may cause the Web Component to stop functioning.

To begin we first need to identify the culture id that best represents our region. Please refer to the table that follows. For example the code for US is **en-US** and is shown here listed as English - United States. Copy the culture id code exactly as shown. We will need this when completing the configuration procedure.

Language-Country/Region	Culture Name
Afrikaans - South Africa	af-ZA
Albanian - Albania	sq-AL
Arabic - Algeria	ar-DZ
Arabic - Bahrain	ar-BH
Arabic - Egypt	ar-EG
Arabic - Iraq	ar-IQ
Arabic - Jordan	ar-JO
Arabic - Kuwait	ar-KW
Arabic - Lebanon	ar-LB
Arabic - Libya	ar-LY
Arabic - Morocco	ar-MA
Arabic - Oman	ar-OM
Arabic - Qatar	ar-QA
Arabic - Saudi Arabia	ar-SA
Arabic - Syria	ar-SY
Arabic - Tunisia	ar-TN
Arabic - United Arab Emirates	ar-AE
Arabic - Yemen	ar-YE
Armenian - Armenia	hy-AM
Basque - Basque	eu-ES
Belarusian - Belarus	be-BY
Bulgarian - Bulgaria	bg-BG
Catalan - Catalan	ca-ES
Chinese - Hong Kong SAR	zh-HK
Chinese - Macau SAR	zh-MO
Chinese - China	zh-CN

Chinese - Singapore	zh-SG
Chinese - Taiwan	zh-TW
Croatian - Croatia	hr-HR
Czech - Czech Republic	cs-CZ
Danish - Denmark	da-DK
Dutch - Belgium	nl-BE
Dutch - The Netherlands	nl-NL
English - Australia	en-AU
English - Belize	en-BZ
English - Canada	en-CA
English - Caribbean	en-CB
English - Ireland	en-IE
English - Jamaica	en-JM
English - New Zealand	en-NZ
English - Philippines	en-PH
English - South Africa	en-ZA
English - Trinidad and Tobago	en-TT
English - United Kingdom	en-GB
English - United States	en-US
English - Zimbabwe	en-ZW
Estonian - Estonia	et-EE
Faroese - Faroe Islands	fo-FO
Farsi – Iran	fa-IR
Finnish - Finland	fi-FI
French - Belgium	fr-BE
French - Canada	fr-CA
French - France	fr-FR
French - Luxembourg	fr-LU
French - Monaco	fr-MC
French - Switzerland	fr-CH
Galician - Galician	gl-ES
Georgian - Georgia	ka-GE
German - Austria	de-AT
German - Germany	de-DE
German - Liechtenstein	de-LI

German - Luxembourg	de-LU
German - Switzerland	de-CH
Greek - Greece	el-GR
Gujarati - India	gu-IN
Hebrew - Israel	he-IL
Hindi - India	hi-IN
Hungarian - Hungary	hu-HU
Icelandic - Iceland	is-IS
Indonesian - Indonesia	id-ID
Italian - Italy	it-IT
Italian - Switzerland	it-CH
Japanese - Japan	ja-JP
Kannada - India	kn-IN
Kazakh - Kazakhstan	kk-KZ
Korean - Korea	ko-KR
Kyrgyz - Kazakhstan	ky-KZ
Latvian - Latvia	lv-LV
Lithuanian - Lithuania	lt-LT
Macedonian - FYROM	mk-MK
Malay - Brunei	ms-BN
Malay - Malaysia	ms-MY
Marathi - India	mr-IN
Mongolian - Mongolia	mn-MN
Norwegian (Bokml) - Norway	nb-NO
Norwegian (Nynorsk) - Norway	nn-NO
Polish - Poland	pl-PL
Portuguese - Brazil	pt-BR
Portuguese - Portugal	pt-PT
Punjabi - India	pa-IN
Romanian - Romania	ro-RO
Russian - Russia	ru-RU
Sanskrit - India	sa-IN
Slovak - Slovakia	sk-SK
Slovenian - Slovenia	sl-SI
Spanish - Argentina	es-AR

Spanish - Bolivia	es-BO
Spanish - Chile	es-CL
Spanish - Colombia	es-CO
Spanish - Costa Rica	es-CR
Spanish - Dominican Republic	es-DO
Spanish - Ecuador	es-EC
Spanish - El Salvador	es-SV
Spanish - Guatemala	es-GT
Spanish - Honduras	es-HN
Spanish - Mexico	es-MX
Spanish - Nicaragua	es-NI
Spanish - Panama	es-PA
Spanish - Paraguay	es-PY
Spanish - Peru	es-PE
Spanish - Puerto Rico	es-PR
Spanish - Spain	es-ES
Spanish - Uruguay	es-UY
Spanish - Venezuela	es-VE
Swahili - Kenya	sw-KE
Swedish - Finland	sv-FI
Swedish - Sweden	sv-SE
Tamil - India	ta-IN
Tatar - Russia	tt-RU
Telugu - India	te-IN
Thai - Thailand	th-TH
Turkish - Turkey	tr-TR
Ukrainian - Ukraine	uk-UA
Urdu - Pakistan	ur-PK
Vietnamese - Vietnam	vi-VN

Once we identify the appropriate country code we can proceed with the configuration procedure:

1. Browse to the following directory under the IMF Tune Moderator/Reporting installation directory:

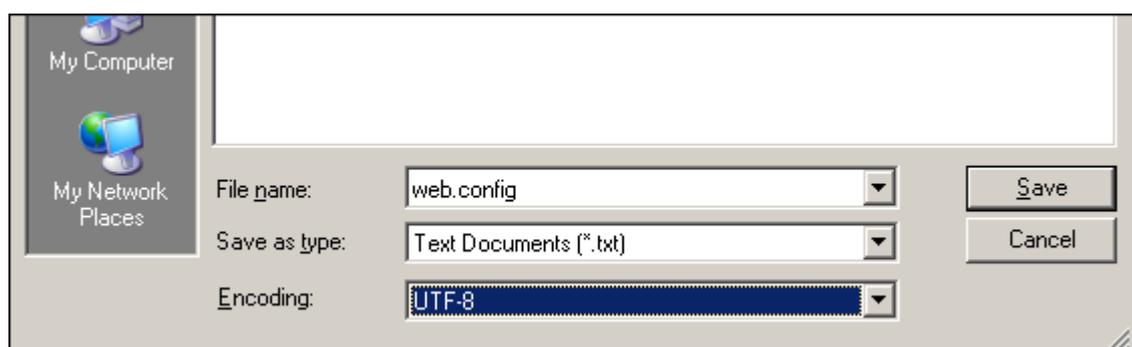
<Program Files>\WinDeveloper IMF Tune Moderator\www

2. Locate the XML configuration file named **web.config**
3. Make a backup copy of this file so as to be able to restore the original in case of problems.
4. Open web.config in notepad or even better in an XML editor.
5. Locate the **globalization** XML element shown boxed in red. Here we need to edit the culture attribute value. Below, this is shown with a yellow underline: ***culture="en-GB"***.

```
Version=2.0.0.0, Culture=neutral,
PublicKeyToken=B77A5C561934E089" />
<add assembly="System.Design, Version=2.0.0.0,
Culture=neutral,
PublicKeyToken=B03F5F7F11D50A3A" />
<add assembly="System.Web.Extensions,
Version=1.0.61025.0, Culture=neutral,
PublicKeyToken=31BF3856AD364E35" />
<add assembly="System.Web.Extensions.Design,
Version=1.0.61025.0, Culture=neutral,
PublicKeyToken=31BF3856AD364E35" />
</assemblies>
</compilation>
<globalization enableClientBasedCulture="false" culture="en-GB"
uiCulture="en-GB" />
<!-- The <authentication> section enables
configuration
of the security authentication mode used by
ASP.NET to identify an incoming user.
-->
<!-- <authentication mode="Windows"/> -->
- <authentication mode="Forms">
  <forms loginUrl="login.aspx" protection="All" timeout="15"
slidingExpiration="true" path="/" />
</authentication>
```

6. We now have to replace the attribute value to the one identifying our country/region. So in case of US we would change this to ***culture="en-US"***.
7. Save changes.

IMPORTANT: It is important to save the file in UTF-8 so as to retain the original file encoding. In notepad you can select the encoding format at the bottom of the "Save As..." dialog.



8. If you are currently logged on to the Moderator/Reporting interface, logout and close the browser. Re-open the browser and logon to the Web interface again. All date/time information should now be shown in the format defined for your region.

NOTE: In case the moderator fails immediately on entering the login URL, it is very likely that the web.config file was not correctly edited. In that case restore the original web.config using the backup created in step 3. You may then retry the procedure.

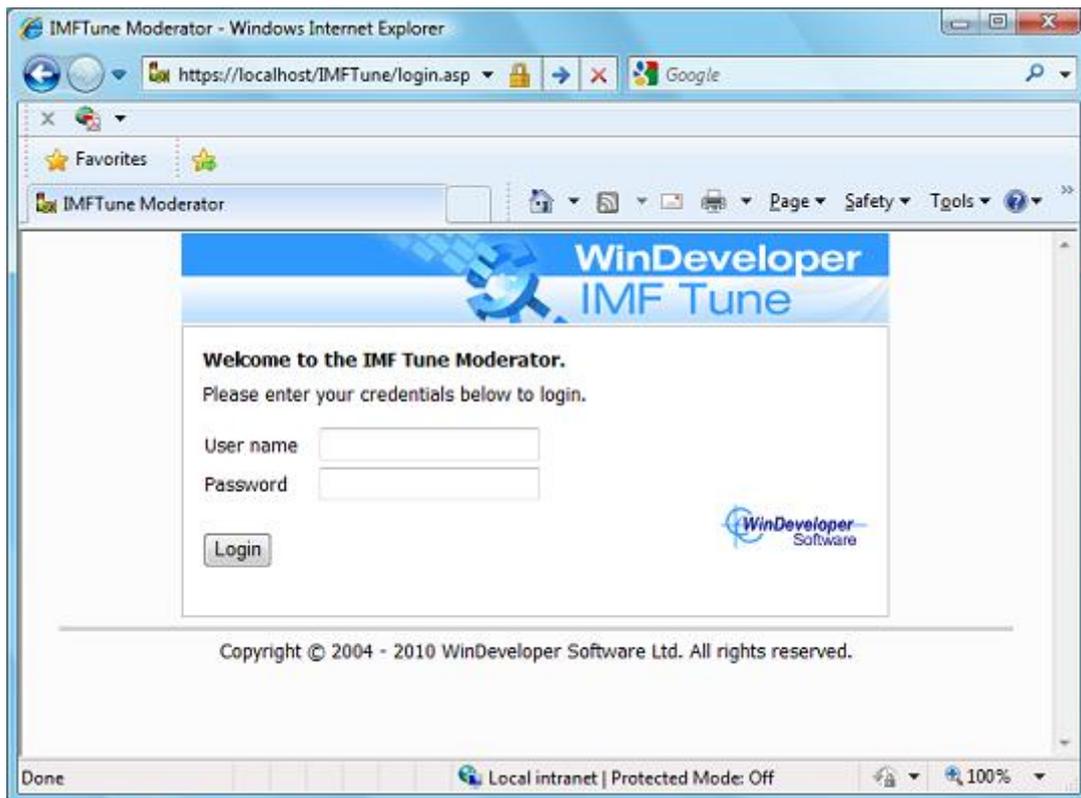
3. Working with the Moderator/Reporting Interface

The IMF Tune Web interface provides a mix of email moderation and reporting functionality. In this section we take a closer look at how to use this interface.

To begin let's start the browser and enter the application URL:

http://<server name>/imftune

Here the server name identifies the machine where the web component is installed. This opens the application login screen:



In [Quarantine Users](#) we walked through the creation of new users, granting them access rights over the web interface functionality. These are the credentials that have to be entered at the browser login.

3.1 Main Email List

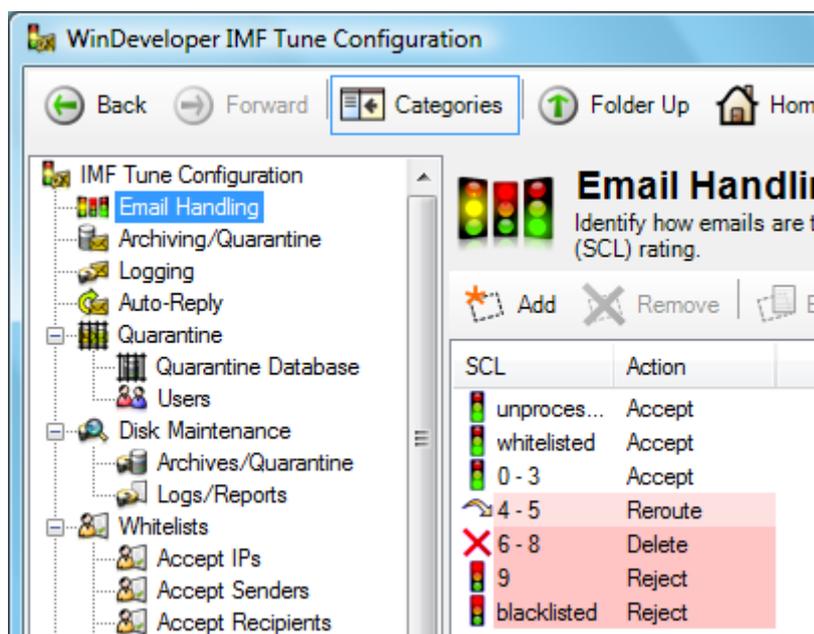
Assuming we have been granted *View all emails* or *View own emails only* rights, the Web interface will look something like this:



	Action	Date/Time	SCL	Subject	From	To
<input type="checkbox"/>		09/06/2010 07:06	8	Resolve to Red More Clicks in 2010? Get Free trial	<batman@windeveloper.com>	<user4@vtest-dom1.local>
<input type="checkbox"/>		09/06/2010 07:06	8	Score Like Tiger Woods with Free Trial	<batman@windeveloper.com>	<user4@vtest-dom1.local>
<input type="checkbox"/>		09/06/2010 07:06	8	郵便の購でもイので悪いてください (泣)	<batman@windeveloper.com>	<user4@vtest-dom1.local>
<input type="checkbox"/>		09/06/2010 07:06	8	女性用指輪で驚きませんか? 女性に贈える10万円で最高時給2万円保障!	<batman@windeveloper.com>	<user4@vtest-dom1.local>
<input type="checkbox"/>		09/06/2010 07:06	5	Hi	<batman@windeveloper.com>	<user4@vtest-dom1.local>
<input type="checkbox"/>		09/06/2010 07:06	5	スーパーコピーの最高品質バッグ	<batman@windeveloper.com>	<user4@vtest-dom1.local>
<input type="checkbox"/>		09/06/2010 07:06	9	We offer you an interesting position in my corporation...	<batman@windeveloper.com>	<user4@vtest-dom1.local>
<input type="checkbox"/>		09/06/2010 07:06	8	I have 87 vacancies in your city, and I want to invite you to become one of these selected few.	<batman@windeveloper.com>	<user4@vtest-dom1.local>

This is the main moderator page, with the email list taking center stage. It includes the basic information; Date/Time, SCL, Subject, From and To headers.

Next to Date/Time we have the Action column showing how emails were handled. The action icons match those used at the IMF Tune server configuration Email Handling category. In this manner we visually link the actions configured with the actions actually applied.

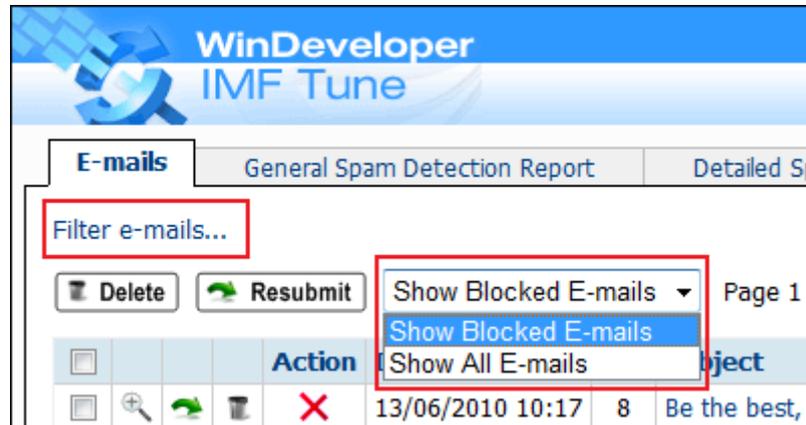


SCL	Action
	unproces...
	whitelisted
	0 - 3
	4 - 5
	6 - 8
	9
	blacklisted

The right most columns include a checkbox for selecting emails, and small buttons to View, Delete and Resubmit emails.

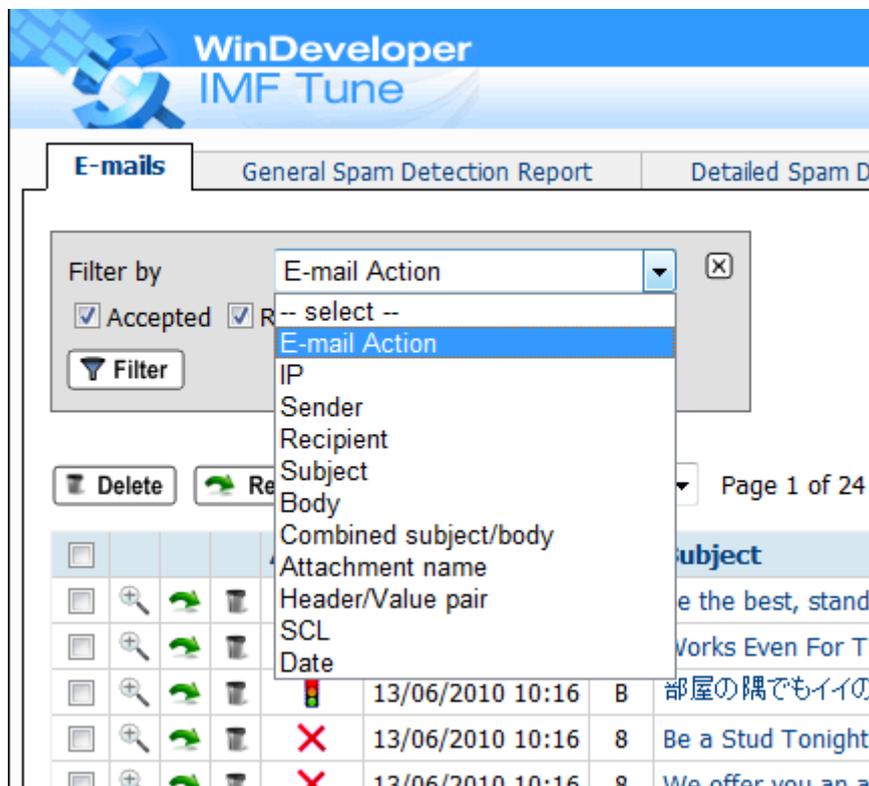
3.2 Email Filtering

The interface provides two filtering methods. At the top-left corner we have the *'Filter e-mails'* link, giving access to the main filtering interface. Right next to the Delete and Resubmit buttons we also have a simple switch enabling us to choose between *Show Blocked E-mails* and *Show All E-mails*.



IMF Tune gives us the opportunity to publish any email at the Moderator, even those accepted and delivered to user mailboxes. This point is discussed in [Publishing Emails to the Database Server](#). However by default the *'Show Blocked E-mails'* is selected, hiding accepted emails. To view these, change the selection to *'Show All -Emails'*.

We now turn our attention to the *'Filter-emails...'* link. Clicking this, a box offering various filtering criteria opens:

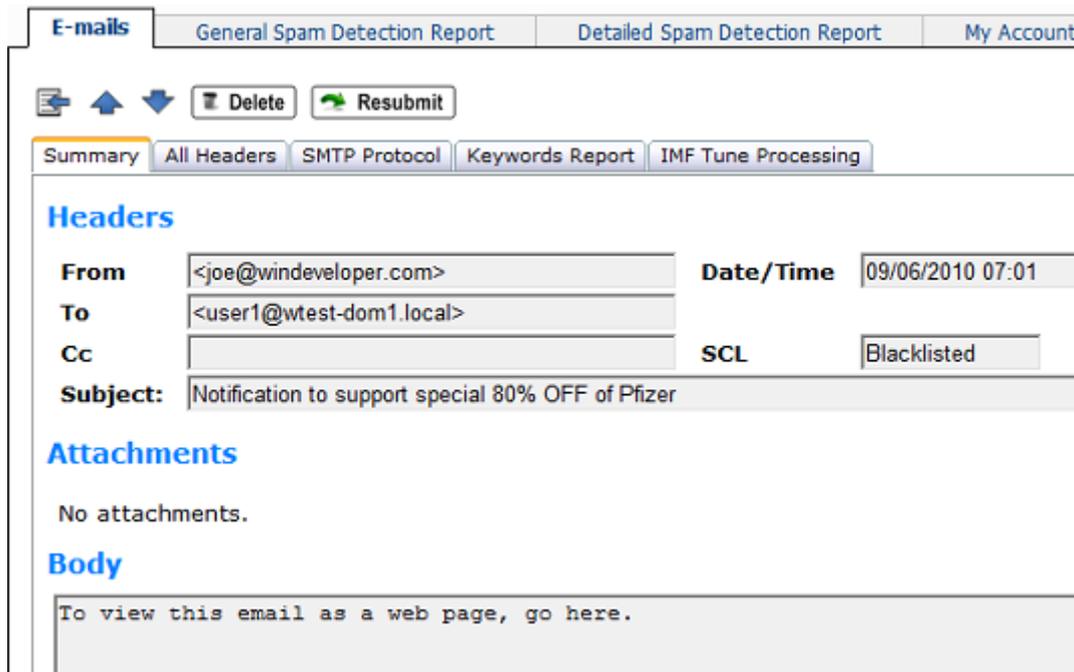


Here we can choose to filter emails by E-mail Action, IP, Sender, Recipient, Subject, Body, Combined subject/body, Attachment name, Header values, SCL, or Date Range. Each filter presents a set of

relevant options. For example when filtering by Sender or Recipient we can enter either the full email address or *@domain. The Header/Value filter allows us to enter a header name plus a phrase to be matched against emails containing that header.

3.3 Viewing Emails

From the list view, clicking the Subject or the small lens button on the right opens the email.



Here we have the full email except for the HTML body and attachment content. The body is limited to 32Kb of text. Larger bodies are truncated. As for attachments we provide the name, size and MIME media type. Even though the Moderator lacks access to this information, in case we resubmit an email, IMF Tune is still able to retrieve the original from the disk archive. Thus resubmitted emails include everything.

The Summary page shown above presents an interface typical of a regular email client. Moving to the second page, we find the full list of headers:

All Headers	
content-class	urn:content-classes:message
content-transfer-encoding	7bit
content-type	text/html; charset="ISO-8859-1"
date	Wed, 9 Jun 2010 07:01:30 +0200
importance	normal
mime-version	1.0
priority	normal
subject	Notification to support special 80% OFF of Pfizer
thread-index	AcshkNLKxuZjg5QETVOGrLJAKNOzA==
to	<user1@wtest-dom1.local>
x-createdby	MSEExchange12
x-mailer	Microsoft CDO for Exchange 2000

The next page shows the SMTP protocol data:

SMTP Protocol Details			
IP	1.1.1.1	HELO/EHLO	spammer.domain.
Mail From	joe@windeveloper.com		
Recipients			
RCPT TO	user1@wtest-dom1.local		

This is the envelope information extracted from the SMTP session. Note that the Recipients section here shows the full list of addresses to which the email was sent, including any BCCs. BCCs are normally considered to be confidential. Thus it may be preferable for regular users not to have access to this information. This is why the recipient list is only visible if the user is assigned the [View message processing details right](#).

The next two property pages may also be considered to contain confidential information. Thus these also require the user to have the *View message processing details* right.

The screenshot shows the 'E-mails' interface with the 'Keywords Report' tab selected. The page displays the following information:

Keyword Reporting

From: <joe@windeveloper.com> **Date/Time:** 09/06/2010 07:01
To: <user1@wtest-dom1.local>
Subject: Notification to support special 80% OFF of Pfizer
Initial SCL: 8
Final SCL: Blacklisted
Matches: 1

Header	Expression	Source
subject	OFF PFIZER	...rt special 80% OFF of Pfizer
Operation set SCL to Blacklisted		

The Keyword Reporting page will be familiar with all those using the IMF Tune server Keyword Reporting feature. Here we show the Keyword Report snippet that is relevant to the current email. The report contains information on any Whitelists, Backlists, DNS Lists and Rules matching the email. In this manner we see exactly all matches and hence why the IMF Tune server changed the original SCL rating.

The last set of properties is grouped under the IMF Tune Processing page.

The screenshot shows the 'E-mails' interface with the 'IMF Tune Processing' tab selected. The page displays the following information:

IMF Tune Processing

Handling Action: Rejected
Archiving: c:\program files\windeveloper\imf tune\archive\imfeml_block\imfarc_20100609_0701_0012197b.eml
Logging: c:\program files\windeveloper\imf tune\logs\imfrpt_20100609_0000_block.log
Keyword Reporting: c:\program files\windeveloper\imf tune\logs\imfrpt_20100609_0000_keywords.htm
Auto-Reply:

This page shows any additional IMF Tune server processing. This includes Archiving, Logging, server-side Keyword Reporting and Auto-Replies.

The Archiving field gives us the full path to the email file saved at the disk archive. An administrator could use this to open the file directly. Of course the path is located on the IMF Tune server that published the email. This may not be the same machine where the Web interface is running.

Likewise the Logging and Keyword Reporting fields show the file paths for CSV logging and HTML reporting where the email was recorded. Lastly Auto-Reply shows whether any reply was sent by IMF Tune in response to this email.

3.4 Resubmitting/Deleting Emails

Quite obviously the moderator allows us to Resubmit and Delete emails. Access to these actions is granted by the [E-mail delete and E-mail re-submit rights](#).

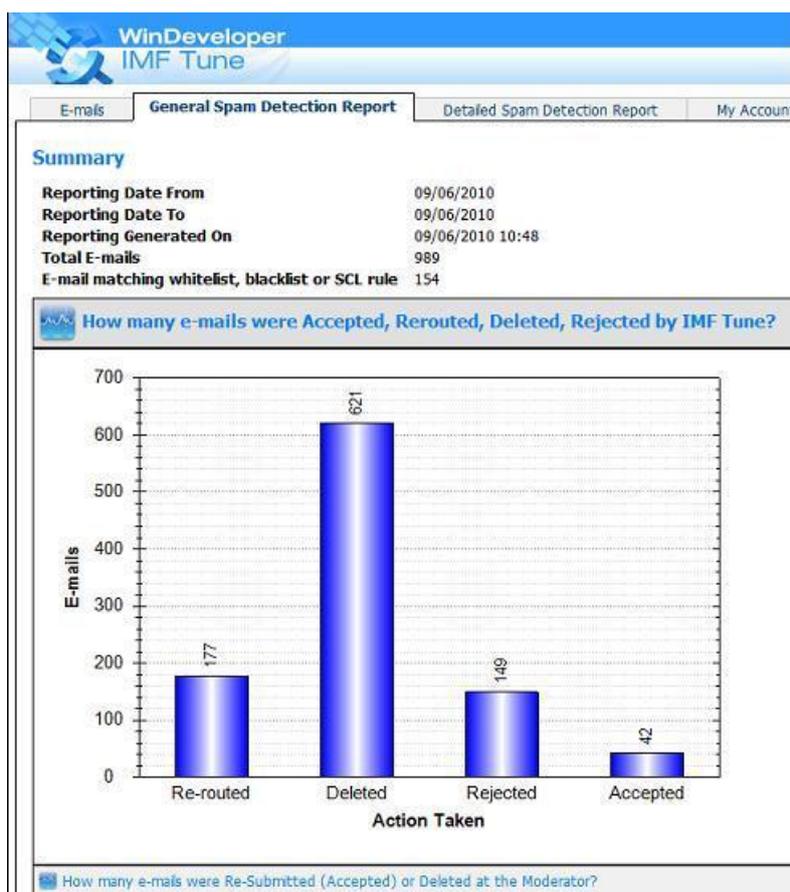
When a user selects to Delete or Resubmit, the Moderator simply flags the email for processing. The actual operations are fulfilled by the IMF Tune server that originally quarantined the email. Deleting an email is straight forward since it is only a matter of removing data. Resubmitting involves seeking the email from the disk archive and delivering it to the original recipients.

Note: IMF Tune only stores a single copy of the email even in case this was addressed to multiple recipients. A resubmitted email is thus delivered to all its original recipients. Likewise, if deleted, the email is removed and none of the recipients gets a copy.

3.5 General Spam Detection Report

Important Note: The reports shown at the Web interface only includes those emails published to the database by the IMF Tune server(s). In order for reporting to account for all processed emails, the configuration option [Store information on all processed emails for reporting purposes](#) should be selected.

The General Spam Detection Report provides a collection of bar charts and line graphs describing the overall filter performance in real time. Access to this report is only granted if the user is assigned the [View general spam detection report](#) right.



The report header gives us some general information including:

Reporting Date From and Reporting Date To – These two dates will show the time range covered by the report. The number of days is controlled from the IMF Tune server configuration setting [Retain quarantine information for reporting purposes for \(days\)](#).

Report Generated On – Shows the time when the Report was last generated. Reports are cached for 5 minutes. If multiple users are accessing the interface at the same time the same report is presented to them until the cache data expires.

Total E-mails – The total number of emails recorded at the database. These are the emails from which the report information is generated. This total will normally be greater than the number of emails available for moderation at the email list view. For details on what this total includes, check

the description for the bar chart titled *How many e-mails were Re-Submitted (Accepted) or Deleted at the Moderator?*

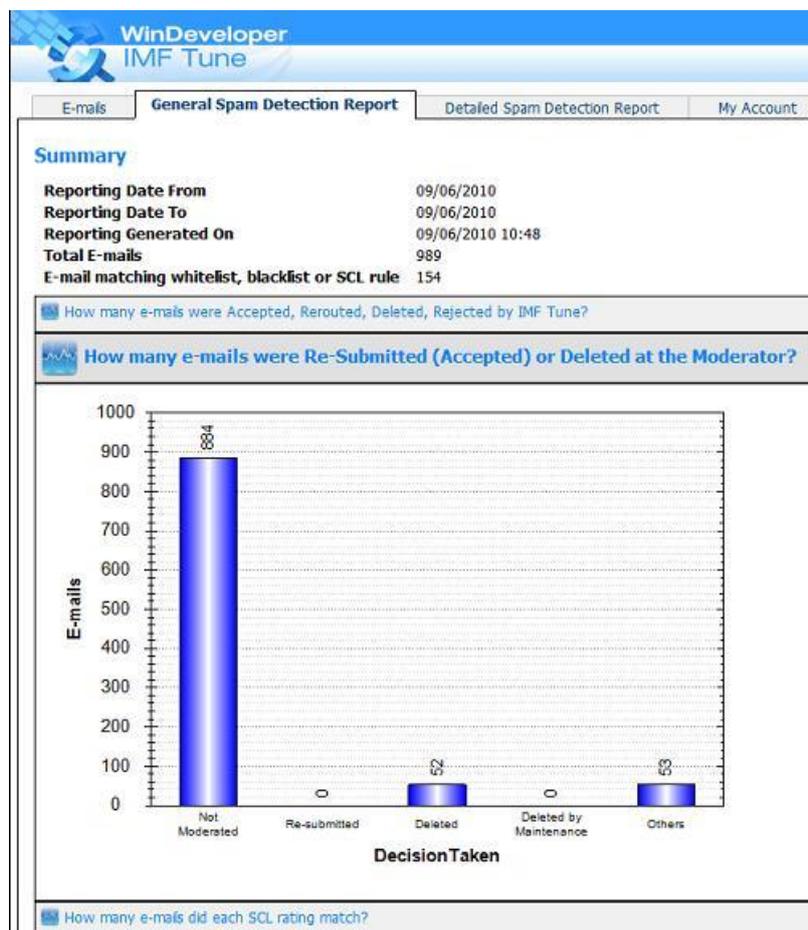
E-mail matching whitelist, blacklist or SCL rule – Shows the total number of emails hitting at least one whitelist, blacklist, DNS list or an SCL Rule.

Following the header area we have a set of bar charts and line graphs with the headings:

- How many e-mails were Accepted, Rerouted, Deleted, Rejected by IMF Tune?
- How many e-mails were Re-Submitted (Accepted) or Deleted at the Moderator?
- How many e-mails did each SCL rating match?
- Daily e-mail load/spam
- Daily SCL ratings
- Day of week e-mail load/spam
- Hour of the day e-mail load/spam
- Last 5 hours e-mail load/spam per minute

The previous screenshot showed what the first chart looks like (How many e-mails were Accepted, Rerouted, Deleted, Rejected by IMF Tune?).

The second chart (How many e-mails were Re-Submitted (Accepted) or Deleted at the Moderator?) needs a little more explaining:



This chart is really showing a breakdown of the Total E-mails value shown at the report header:

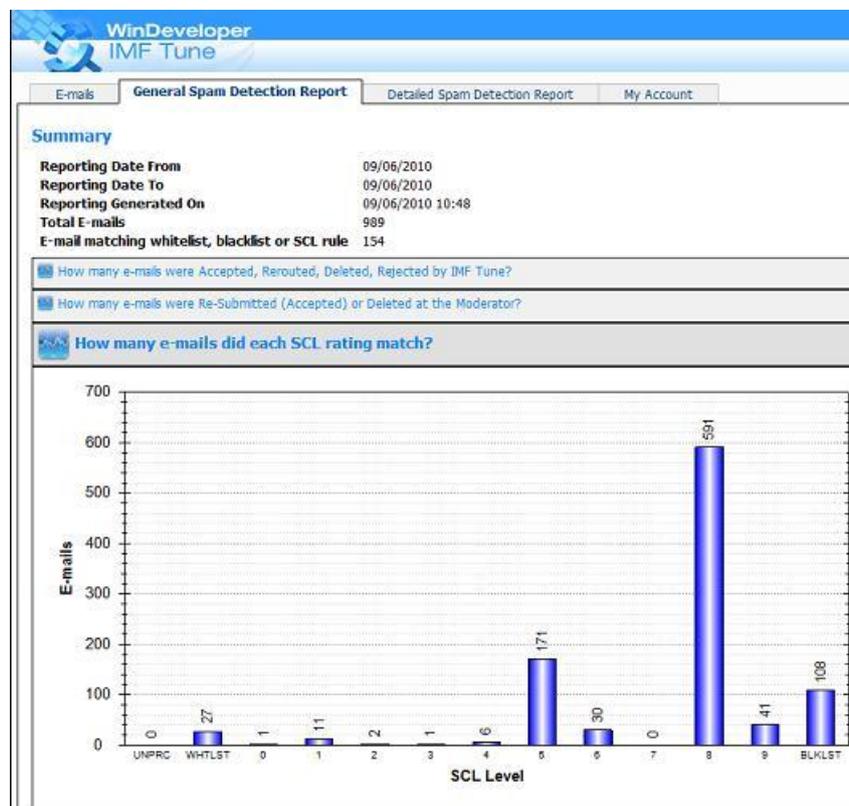
Not Moderated – Emails shown at the Moderator list.

Re-Submitted/Deleted – Emails that were re-submitted or deleted from the moderator interface.

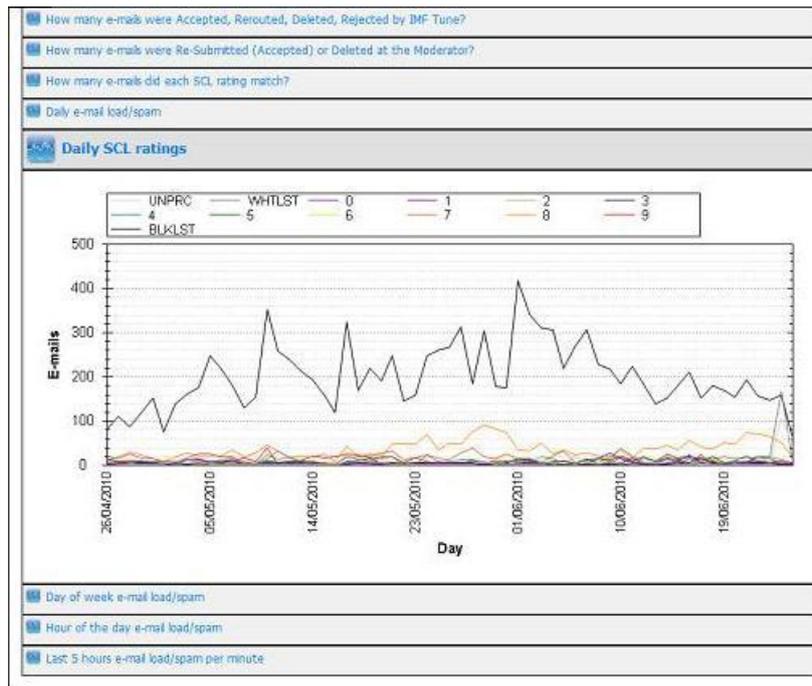
Deleted by Maintenance – Emails that have been automatically deleted because of the Disk Maintenance Backup operation as discussed in [Email files moved to backup will also be deleted from quarantine.](#)

Others – Emails published exclusively for reporting purposes. This feature may be enabled at the IMF Tune server configuration using the [Store information on all processed emails for reporting purposes](#) option.

All the other bar charts and line graphs are well described by their heading. Here is the chart showing the total number of emails matching each SCL rating.



And the following plots the SCL ratings for each day covered by the report.



All this information can be very useful in maintaining the best filtering performance. For example, consider the case where by mistake we configure a whitelist that ends up matching a large number of spam emails. In that case we would see a sharp rise in the line for the whitelisted rating. That would already be a good warning signal. Combining that, with the information at the detailed spam detection report we should be able to pinpoint the problem.

3.6 Detailed Spam Detection Report

Important Note: The reports shown at the Web interface only includes those emails published to the database by the IMF Tune server(s). In order for reporting to account for all processed emails, the configuration option [Store information on all processed emails for reporting purposes](#) should be selected.

The detailed report highlights specific patterns of processed emails. Access to this report is only granted if the user is assigned the [View detailed spam detection report](#) right.

The report headings here read:

- How are individual keywords performing?
- Which are the recipients getting most e-mails?
- Which are the recipients getting most spam?
- Where are the e-mails coming from (by IP)?
- Where is the spam coming from (by IP)?
- Who are the top e-mail senders?
- Who are the top spam senders?
- Which are the last 100 emails received?

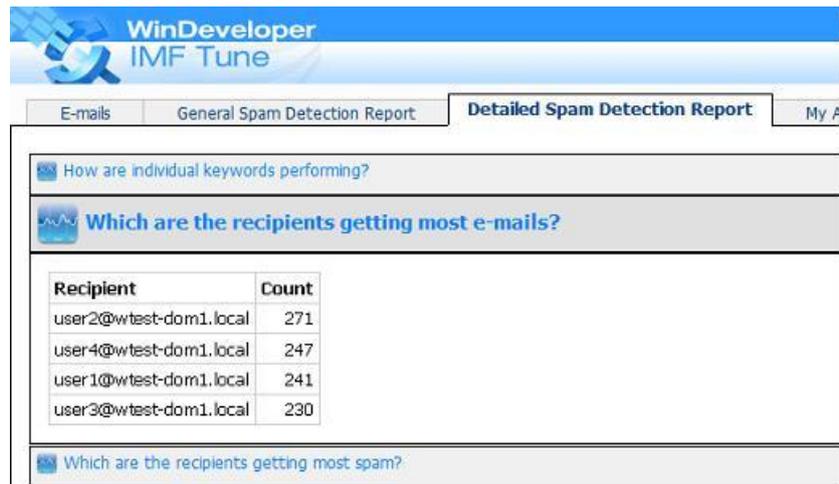
These headings give a good description of what the reports are about. Here are some screenshots. These were taken from a test environment with a very basic setup and just a few mailboxes. In practice the reports will normally contain a lot more entries than what is shown here:

The screenshot shows the WinDeveloper IMF Tune web interface. The main navigation tabs are 'E-mails', 'General Spam Detection Report', 'Detailed Spam Detection Report', and 'My A'. The current report is titled 'How are individual keywords performing?' and displays a table with the following data:

Header	Expression	Count
Email Character Set	" iso-2022-jp "	83
subject	VIAGRA FREE	27
subject	OFF PFIZER	25
Email Character Set	" shift_jis "	24
subject	"70% off"	18
Sender	*@windeveloper.com	18
Body Content Media Type	image/jpeg	1
Has HTML Body	true	1
Has NO Body Text	true	1
Email Size	Value is between 51200 and 66560	1

Below the table, the following report headings are visible:

- Which are the recipients getting most e-mails?
- Which are the recipients getting most spam?
- Where are the e-mails coming from (by IP)?
- Where is the spam coming from (by IP)?
- Who are the top e-mail senders?
- Who are the top spam senders?
- Which are the last 100 emails received?



WinDeveloper
IMF Tune

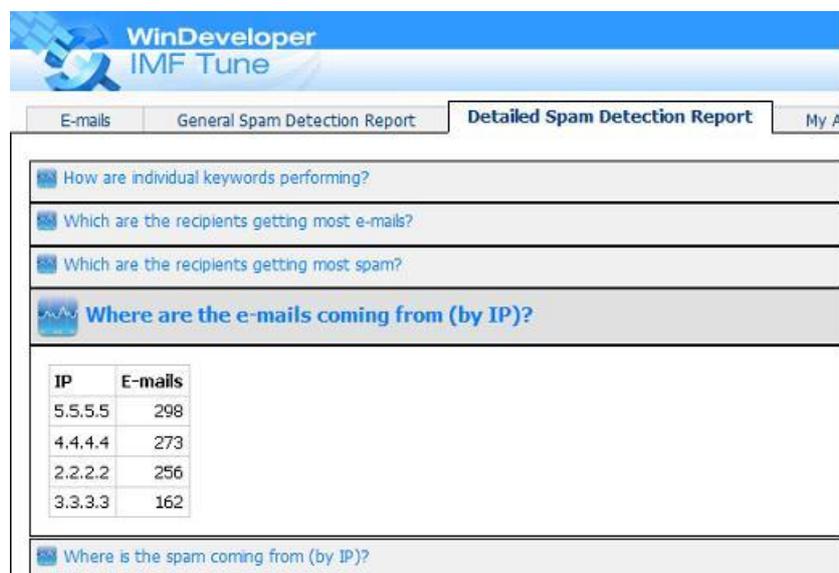
E-mails General Spam Detection Report **Detailed Spam Detection Report** My A

How are individual keywords performing?

Which are the recipients getting most e-mails?

Recipient	Count
user2@wtest-dom1.local	271
user4@wtest-dom1.local	247
user1@wtest-dom1.local	241
user3@wtest-dom1.local	230

Which are the recipients getting most spam?



WinDeveloper
IMF Tune

E-mails General Spam Detection Report **Detailed Spam Detection Report** My A

How are individual keywords performing?

Which are the recipients getting most e-mails?

Which are the recipients getting most spam?

Where are the e-mails coming from (by IP)?

IP	E-mails
5.5.5.5	298
4.4.4.4	273
2.2.2.2	256
3.3.3.3	162

Where is the spam coming from (by IP)?

Where are the e-mails coming from (by IP)?			
Where is the spam coming from (by IP)?			
Who are the top e-mail senders?			
Who are the top spam senders?			
Which are the last 100 emails received?			
IP	Date/Time	SCL	Subject
3.3.3.3	09/06/2010 07:06	8	User support Great Offer, 84% off
5.5.5.5	09/06/2010 07:06	8	Resolve to Bed More Chicks in 2010? Get Free trial
4.4.4.4	09/06/2010 07:06	8	Score Like Tiger Woods with Free Trial
5.5.5.5	09/06/2010 07:06	B	部屋の隅でもイイので置いてください (泣)
3.3.3.3	09/06/2010 07:06	5	support Sale Day, save 80%!
4.4.4.4	09/06/2010 07:06	8	User feedback Great Offer, 84% off
2.2.2.2	09/06/2010 07:06	B	女性用風俗で稼ごませんか? 女性に甘えるだけで最低時給 2 万円保証
4.4.4.4	09/06/2010 07:06	5	Hi
2.2.2.2	09/06/2010 07:06	5	スーパーコピーの超高品質バッグ
5.5.5.5	09/06/2010 07:06	9	We offer you an interesting position in my corporation...
4.4.4.4	09/06/2010 07:06	8	User Steph Great Offer, 84% off
2.2.2.2	09/06/2010 07:06	8	I have 87 vacancies in your city, and I want to invite you to become
3.3.3.3	09/06/2010 07:06	8	Made from high quality materials so it not only look, but feels like g
4.4.4.4	09/06/2010 07:06	8	Grow your manhood with Free trial
4.4.4.4	09/06/2010 07:06	8	.75% Off on Gucci, Rolex, And Louis Vuitton Handbags and Various c
2.2.2.2	09/06/2010 07:06	8	Viagra to your doorstep every month

The first report (How are individual keywords performing?) is one of the most interesting in this category. It shows exactly how often each keyword/phrase entered at the configuration is matching an email. Following that we have six reports highlighting the top 100 recipients, senders and IPs receiving most emails/spam. Lastly we have a report that simply lists the last 100 emails processed by IMF Tune.

3.7 User Account Settings

The last page shown at the main Web interface view is the `My Account` page.

The screenshot shows the 'My Account' page in the WinDeveloper IMF Tune interface. The page has a blue header with the WinDeveloper logo and 'IMF Tune' text. Below the header is a navigation bar with tabs for 'E-mails', 'General Spam Detection Report', 'Detailed Spam Detection Report', and 'My Account'. The 'My Account' tab is active. The main content area is divided into sections: 'My User Name' (displaying 'admin'), 'My Rights' (a list of checkboxes for various permissions), 'My E-mail addresses' (an empty text input field), and 'My Password' (a 'Change Password' button).

This shows the settings for the currently logged in user. The interface is different from that of the IMF Tune Server user configuration. However the same set of settings is displayed. Most notably the user rights are presented as a flat list of flags. These are [organized differently at the IMF Tune configuration](#).

At the My E-mail addresses section, we have the list of addresses “owned” by the user. These are only relevant in case the user is assigned rights such as ‘View own emails only’, ‘Delete emails if user is the only recipient’ etc. These rights grant access to emails whose recipient list matches one of the user addresses.

At the bottom we have the Change Password button. This is the only actionable option available here. Clicking this, the user is prompted to supply his current password and the new password.