Redline 3.5

Administration Guide

Contents

Technical Support
If you have a technical support question, please consult the GWAVA Technical Support section of the website at www.gwava.com. For technical support, call 801-437-5678.

Sales
To contact a GWAVA sales team member, please e-mail info@gwava.com or call Tel: 866-GO-GWAVA (866-464-9282) in North America or +1 514 639 4850.
Suite 500, 100 Alexis Nihon Blvd., Montreal, Quebec, H4M 2P1, Canada

About Redline
Redline is a reporting and monitoring solution for Novell GroupWise® that provides a Dashboard for quick access to the most critical areas of GroupWise®. Redline produces real time alerts, reports for system analysis, capacity planning, and security auditing.

Obtaining Redline
Redline can be downloaded for trial at the main GWAVA website: www.gwava.com
Or the direct link to the download form: http://www.gwava.com/products/dev_downloadform.php

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Minimum System Requirements

Core Requirements:

GroupWise 5.5EP, 6.0, 6.5, 7, and 8 (GW 7 or 8 are recommended for full functionality)
Agent: 10MB Hard Drive Space and 5MB free system memory.
Control Center: Minimum 30 MB Hard Drive Space. DB storage will require additional space, (see specific instructions below).
—There is a bug in GroupWise 6.5 SP2 preventing correct operation of Redline. This version is NOT supported.—

Specific Operating System requirements:

Netware: NW 6.5 with SP 6. (There is a known issue with the Redline Agent and/or Control Center running protected memory with 6.5 SP7 & SP8) --Older NetWare systems which may work but are no longer tested or supported: 5.1 with SP 8; 6.0 with SP5 and the latest FTF LibC update
Linux: SLES 10 all SP on 32/64 bit; SLES 11 32/64 bit; Linux OES2 32/64 bit
Windows Agent: Windows 2000 SP4, 2003, 2008

Servers running the Redline Control center should have free memory based on this calculation:

40MB + 4MB for every agent + largest GWCheck file * 1.5. Example:
A system with 100 GW Agents registered and GWCHeck file with up to 1GB:
40MB + (100 * 4) + (1000 * 1.5) = 1940MB.
Ensure the system has enough disk space for the Control Center database. The DB can grow to several GB depending on how the GroupWise system is used.

Supported internet browser

Linux, Windows or Mac. (IE6 or 7, Firefox, Mozilla suite, Konqueror)

It is recommended, that wherever possible, the Redline Control Center be run from a dedicated server.

The following component integrations are supported

- GroupWise Exchange Gateway
- GroupWise Notes Gateway
- GroupWise API Gateway
- GroupWise Messenger 1.0 SP4 or higher
- GroupWise Messenger Archive Agent 1.0 SP4 or higher
- Guinevere 3 or higher
- GWAVA 3.60 or higher
- GWAVA 4/5
- GWAVA Reveal 1.1
- GWAVA Reload 1.x and 2.x
- GroupWise Domain
- GroupWise Post Office
- GroupWise Internet Agent
- GroupWise WebAccess Agent
- GroupWise Document Viewer Agent
- GroupWise WebAccess Application
- GroupWise Mobile Server 1 and 2 (Windows and Linux)
- GroupWise Async Gateway 2.0
- GWAVA Retain Server and Worker
- GWAVA Vertigo
- Notifylink 4
- BlackBerry Enterprise Server 4.0 SP2 all versions for GroupWise
- Advansys Archive 2 Go
- Linux, NetWare and Windows Host
- Redline Self monitoring including the Redline Database

Understand How Redline Works

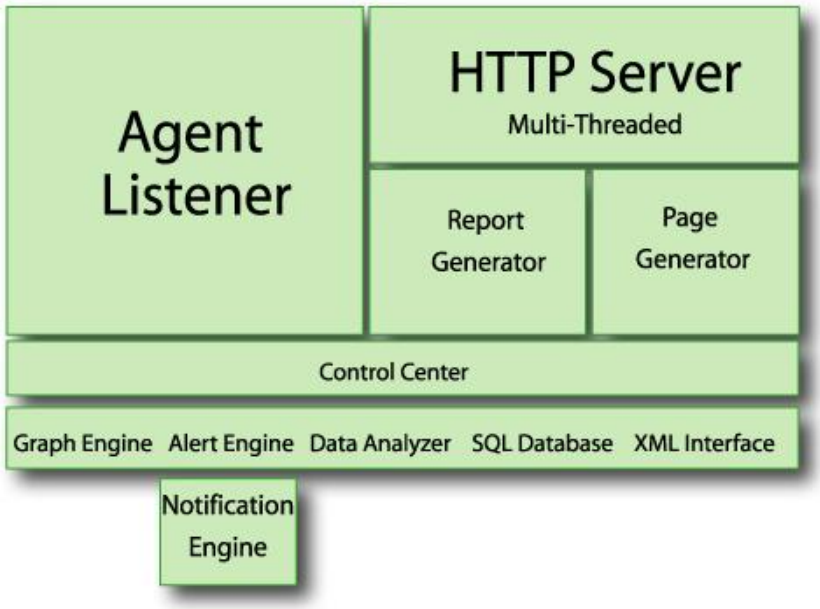
Because each and every component requires specific instructions for integration, it is recommended that administrators read through this manual before installing the Redline Program to avoid frustration and confusion.

Redline provides reliable monitoring, analysis, and audit tools for GroupWise systems of any size. Redline collects information and combines it together in a central location. To collect this information from separate locations of any GroupWise system, Redline is comprised of two separate programs, the Redline Agent and the Redline Control Center.

The **Redline Agent** (also referred to as RLAGENT) connects to the GroupWise agents, and any other supported programs, to gather information regularly. The information is then forwarded to the Redline Control Center. The Redline Agent reads configuration from the configuration file, (RLAGENT.CONF in Linux or NetWare, RLAGWIN.CONF for Windows), which tells the agent how to connect to the Redline Control Center, which holds all configuration for the Agent.

The **Redline Control Center** (also referred to as RLCENTER) takes the information from one or more Redline Agents through the Agent Listener and stores it in SQL database files. The RLCENTER also stores graphs and alerts in the same manner. For easy administration access, the RLCENTER contains an embedded HTTP web server. The RLCENTER also contains a report and page generator that work with an alert engine, a notification engine, and graph generators to analyze and organize the data that is collected.

In all Redline system installations, regardless of how large or small your GroupWise system is, there must be at least one RLAGENT and one RLCENTER. (There are three exceptions: Reveal, Vertigo, and Advansys Archive2Go does not require or use RLAGENT to communicate with RLCENTER. They communicate directly to the Control Center.)



In a typical system, one RLCENTER is installed for a GroupWise system, and every server running a monitored component of the system will have one RLAGENT installed. (While it is possible to have each RLAGENT report to multiple RLCENTERs, it is not recommended or practical in most cases.)

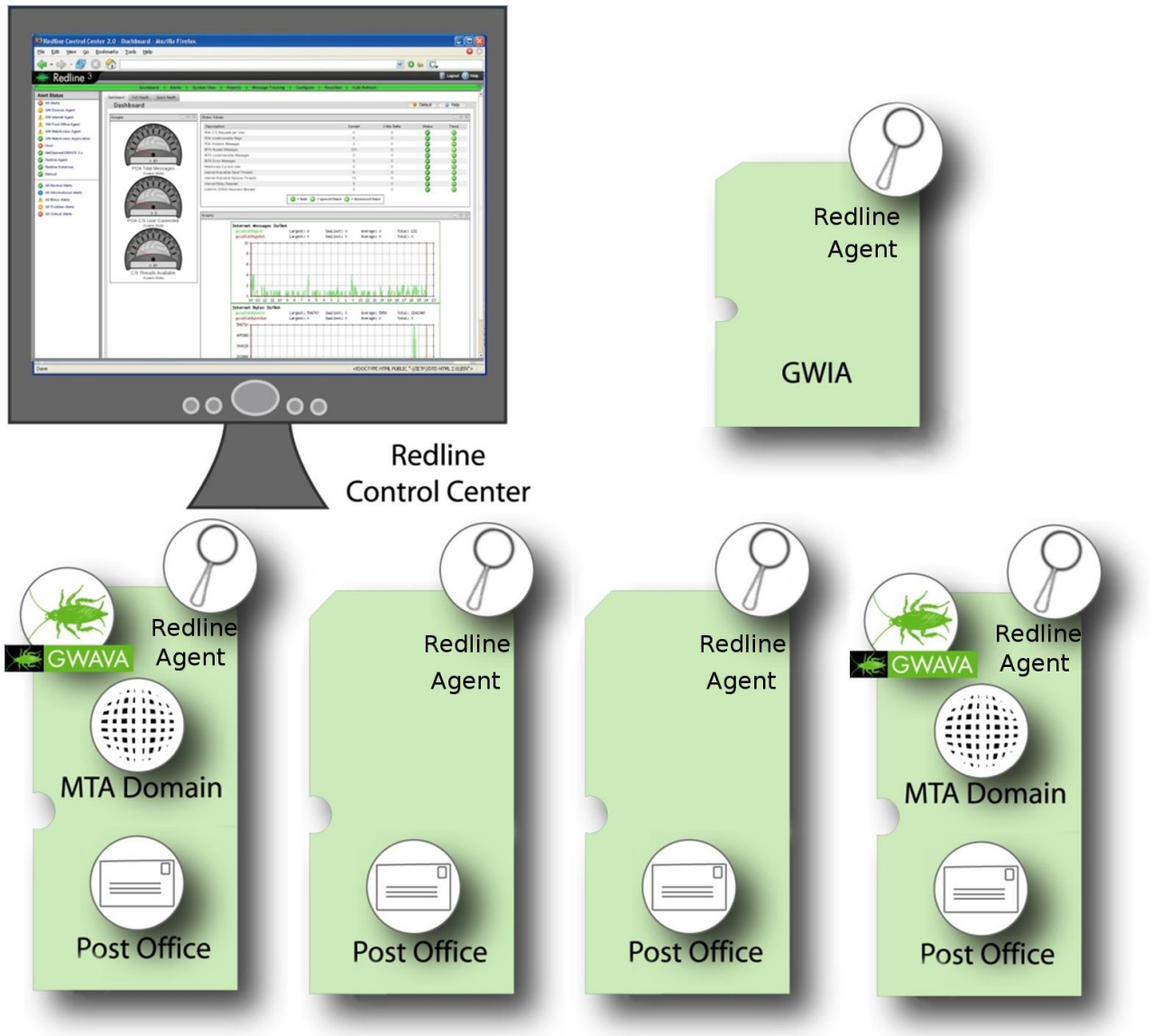
The RLCENTER serves as a central repository for information gathered and for administration. RLAGENT

communicates via TCP/IP to RLCENTER in order to send the collected data. This means that a RLAGENT does not need to be installed on the same machine as an existing RLCENTER.

RLAGENT communicates to the monitored system via both TCP/IP and direct file access, depending on the component integration. While, theoretically, administrators can install RLAGENTs on servers separate from the GroupWise agents and collect some of the information needed, administrators would not be able to generate all of the desired reports. **For all reports, local access is necessary**. The Linux Agent in Redline 3.5 can be used to gather all data remotely, but requires file access through network mount points. (The option is discouraged, but possible.) In that case no agent is required on NetWare or Windows.

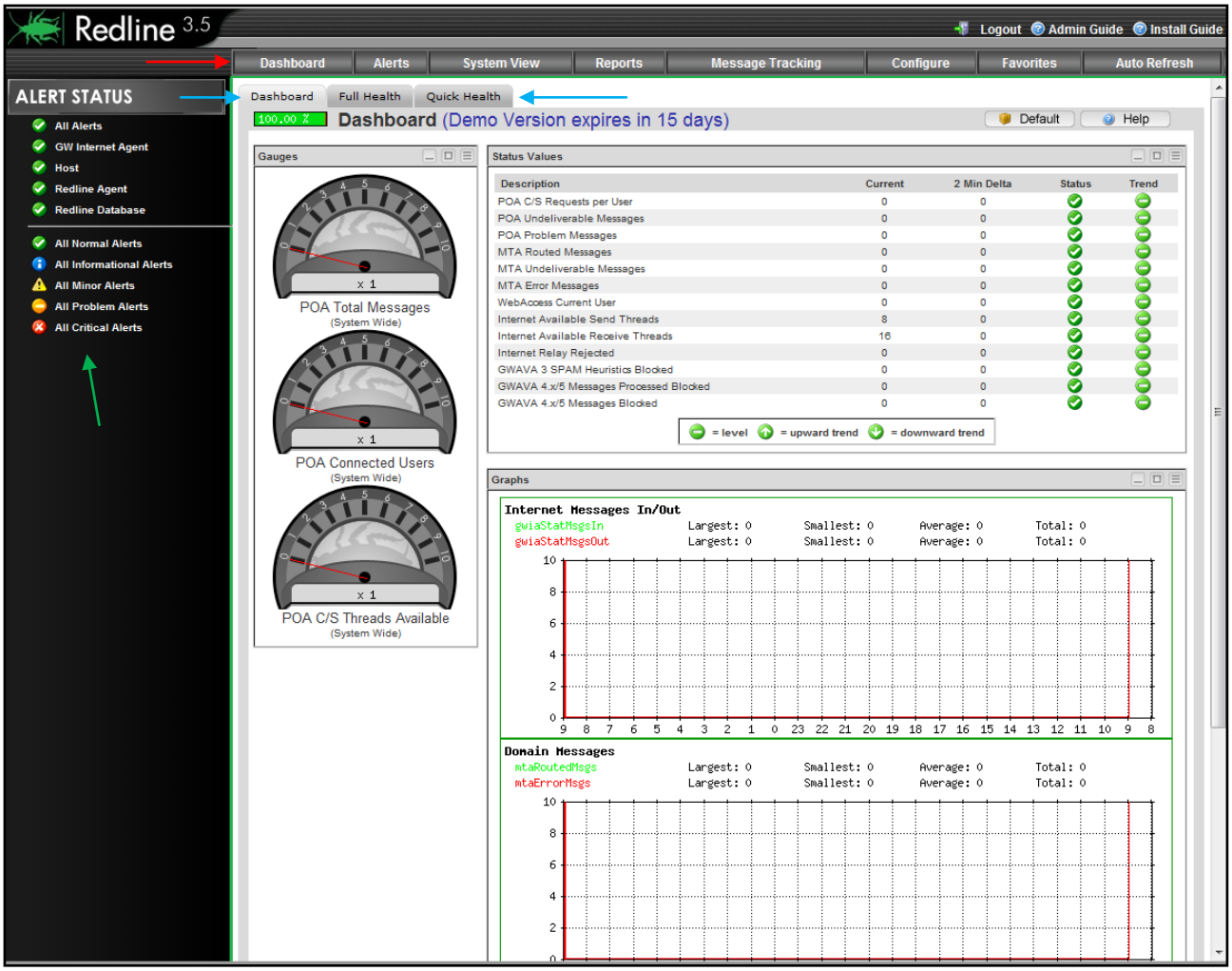
The RLAGENT automatically tries to connect to each of its configured components every two minutes.

The RLCENTER runs only on Netware and Linux, while the RLAGENT runs on Netware, Linux, and Windows. It is recommended to run the Control Center on a dedicated Linux box due to database file size limitations on NetWare. Only extremely small organizations should consider running the Control Center on NetWare.



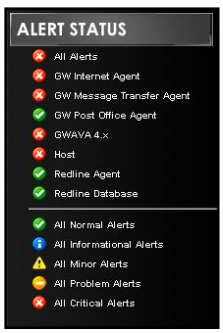
Redline Control Center

The Redline Control Center is the information and management interface for Redline. The Control Center is organized into main sections along the top, tabs under each section, and a system object or information tree window on the left. The main window displays information according to the selected main section and tab.



Through navigation of the main sections, administrators have access to information about their entire GroupWise systems including: alerts, reports, system details (called System View), as well as Redline configuration screens. There are buttons for configuring the automatic refresh rate for the screen, logging out, and a link to the online manual.

The default page of the Redline Control Center displays all major alerts, warnings, and system statistics for a quick general system health overview at a glance.



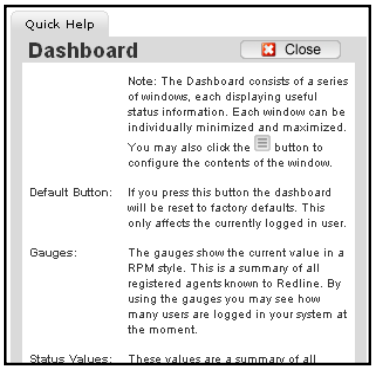
Dashboard

Dashboard is the default section of the Redline Control Center. The Dashboard shows a quick overview of the system, a full system health view, and a quick health view. There is also a total system health bar just below the tabs, showing a percentage health status.

The main dashboard window contains an alert display on the left side of the window, showing the current status of all known agents, both for GroupWise and Redline systems, as well as a legend at the bottom of the window, listing the severity of all alerts and situations.

If the graphs, gauges, or status values have been incorrectly configured, selecting the 'Defaults' button will reset the gauges, graphs, and status values to their default settings.

The ‘Help’ button provides quick access to contextual help for any main section currently displayed. The quick help window opens in the information panel. By clicking on the “Close” button the contextual help window will be closed and the full Dashboard is visible again.



Dashboard

This page is called the Dashboard, because it uses gauges and graphs to display vital system information and health status. The Dashboard tab shows levels of message movement at the GWIA and Domain, open and user thread levels and total system wide messages passing through the Post Office Agent or Agents. By default, the graphs and gauges are updated every 4 minutes.

The Graphs present on the Dashboard, along with all stats, can be configured and changed through Redline Configuration section.

Full Health

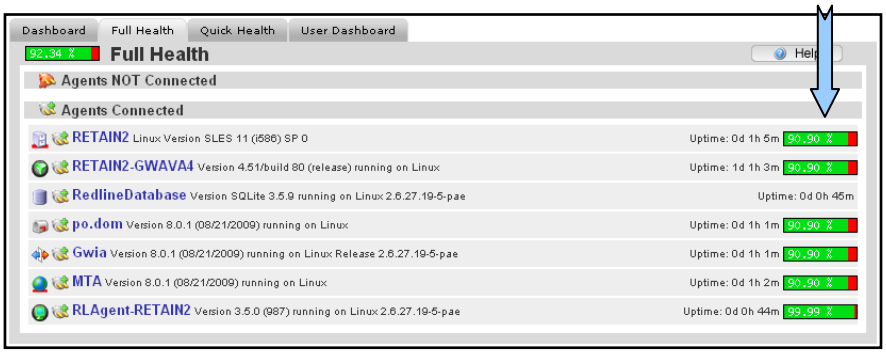
The Full Health Dashboard lists all agents known to Redline, including Uptime, Version and Platform information.
The icons are color-coded on the Health pages as well as the Alerts and Status pages:
Green = Online and Reporting
Orange = Redline Agent is down, status unknown
Red = Offline, mouse over for time of last contact.
Blue = Agent not reporting, but monitored item only reports when used. (Some monitored systems are intermittent use and do not have full uptime or has constant reporting applicable. Ie. Vertigo, Reveal, etc...)

Mousing over the plug icons at any time will display the time data was last received.

Uptime:
Every agent’s uptime (when available) is shown here.

Not Connected:
All agents that are not reporting any data are listed at the top. The “plug” icon turns red in this case. Agents with a blue '+' are also listed here when not reporting to Redline

Connected:
All agents actively sending data are listed in the second table.



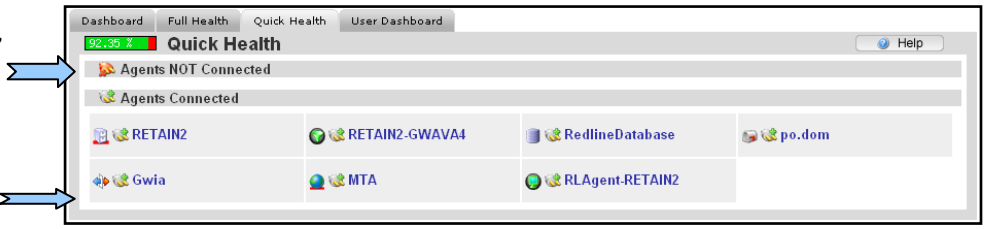
Version and Platform:
The currently installed Version of an agent and the platform where it is running on is listed here. That way you can get a very quick overview if there are agents which need to be updated to the latest version.

If you click on an agent name you will be directed to the System View with all the details of this agent.

Quick Health

The Quick Health Dashboard lists all agents known to Redline in a very compact format. The goal is to list as many agents as possible on one screen.

Not Connected:
All agents that are not reporting any data are listed at the top. The "plug" icon turns red in this case. (Agents with a blue '+' also listed when not reporting)

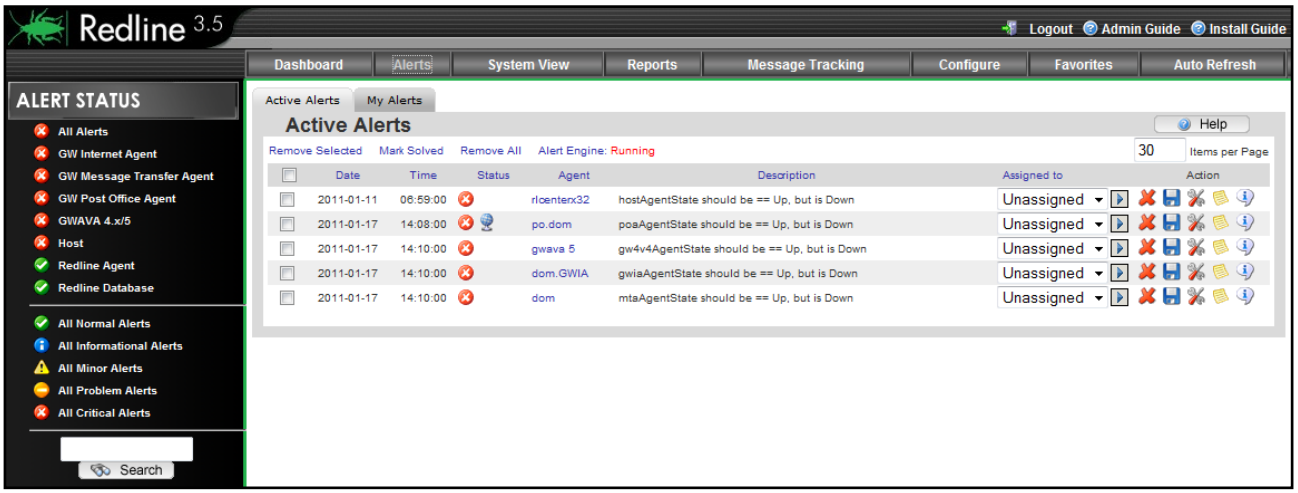


Connected:
All agents actively sending data are listed in the second table.

If you click on an agent name you will be directed to the System View with all the details of this agent.

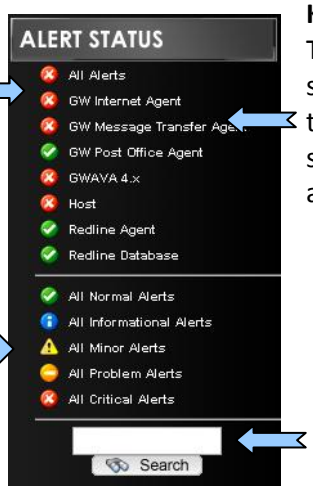
Alerts

All active alerts are listed on the Redline alerts page. Redline allows you to examine these alerts in detail, giving you a rich understanding of what is taking place in your messaging system. The alerts can be filtered by agent type, severity or any free definable search criteria. A built in knowledgebase explains in more detail what an alert could mean.



Alert Status

Status Icons:
The currently highest alert of an agent type is shown here. If you click on a row, you see all alerts of this agent type.



Known Agents:
The Alert Status List is expanded automatically as soon as an agent of a particular type is known to the Control Center. If there is no agent of a specific type known, the line doesn't show up at all.

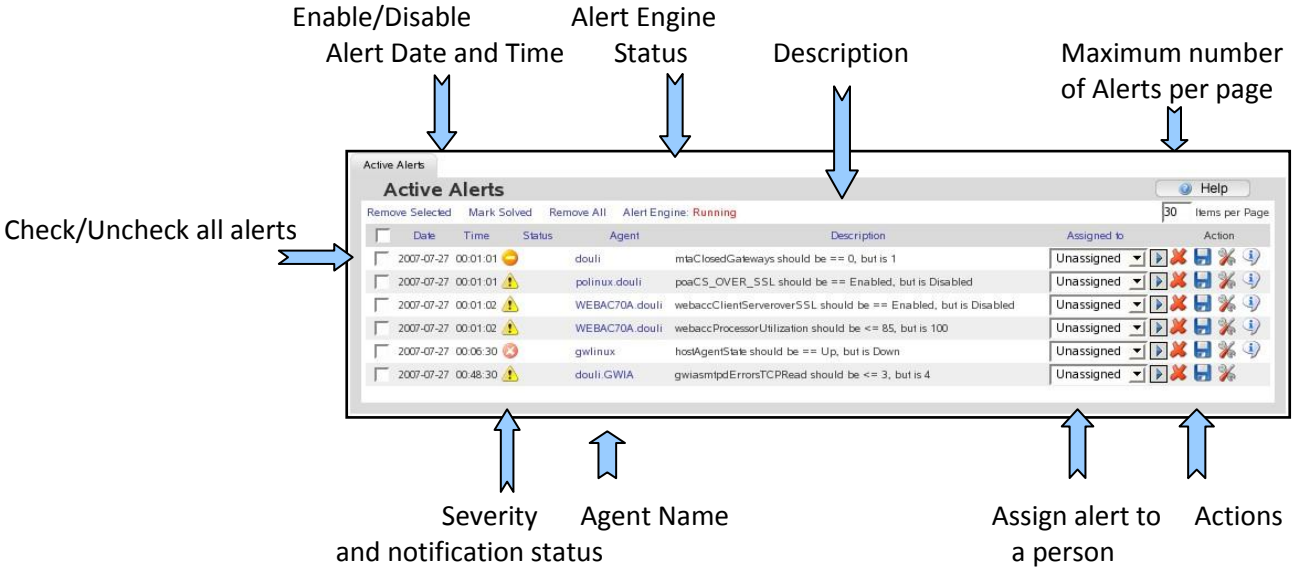
Status Agenda:
All available severities are listed here. If you click on one of these icons, you will see all alerts with the selected severity.

Search Alerts:
All alerts are searchable. Input keywords here, such as the agent name, type, or monitored agent to search for alerts specific to that agent.

The following severities are available in Redline:

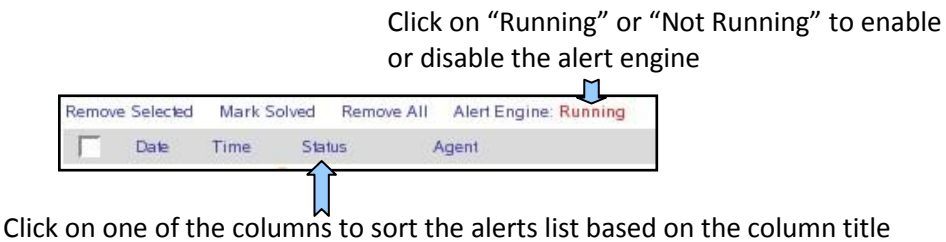
- Normal Alerts
- Informational Alerts
- Minor Alerts
- Problem Alerts
- Critical Alerts

Active Alerts



Actions

It is possible to remove alerts and mark alerts as solved.



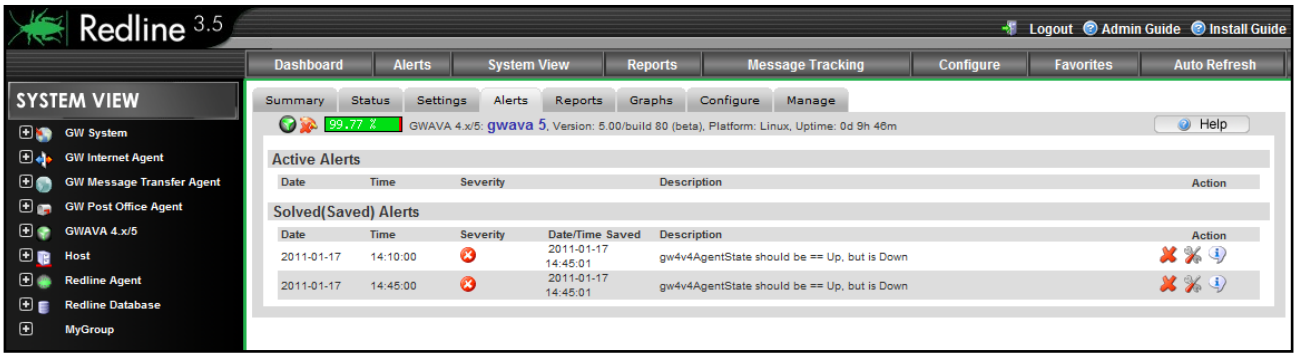
Remove Selected: Remove all selected Alerts from the database.

Mark Solved: Mark all selected alerts as solved. Solved alerts disappear from the list of open alerts

Remove All: This will remove all unsolved alerts from the database

Alert Engine: Enable or Disable the alert engine. If the alert engine is not running, no new alerts and notifications will be generated. This can be helpful when working on a problem that may create alerts due to work being done. Such alerts are not necessary and can be annoying to receive.

All solved alerts can be viewed in the System View on the agent's alerts page. To access this page, select System View, <select desired agent>, and select the 'Alerts' tab.



The Date and Time when the alert was solved is also displayed. All open alerts for the selected agent are also displayed, and can be marked as solved or deleted from the database.

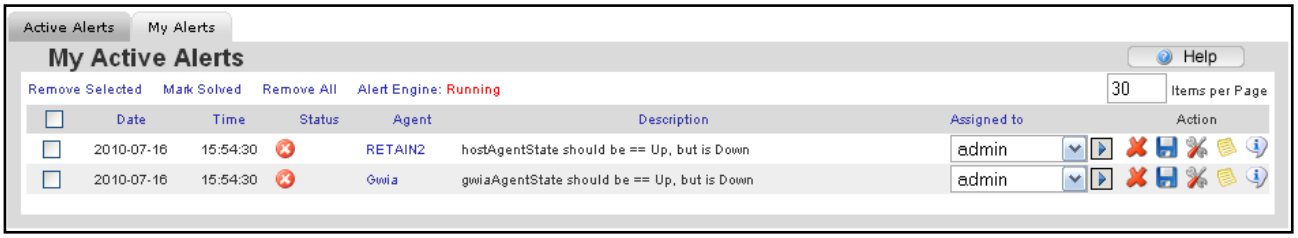
Assign alert: Every alert provides some additional options. You can assign an alert to a user. This avoids potential problems where multiple people are working on the same issue.

Solve Alert: You can mark an alert as solved with a single mouse click.

Configure: If you think that this isn't a valid alert, you can reconfigure your recommendation or threshold from here.

Info: Redline has a built in Knowledgebase with a lot of information about important values in your GroupWise system. Here you can read what Redline has to tell you.

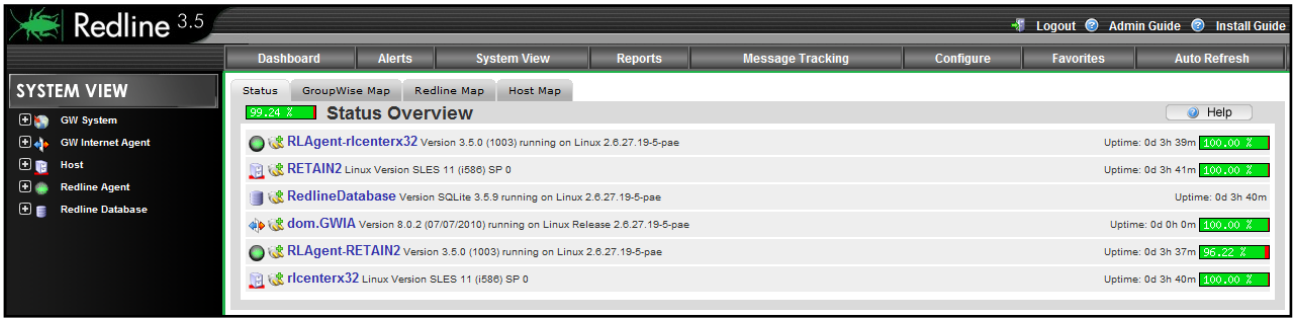
My Alerts



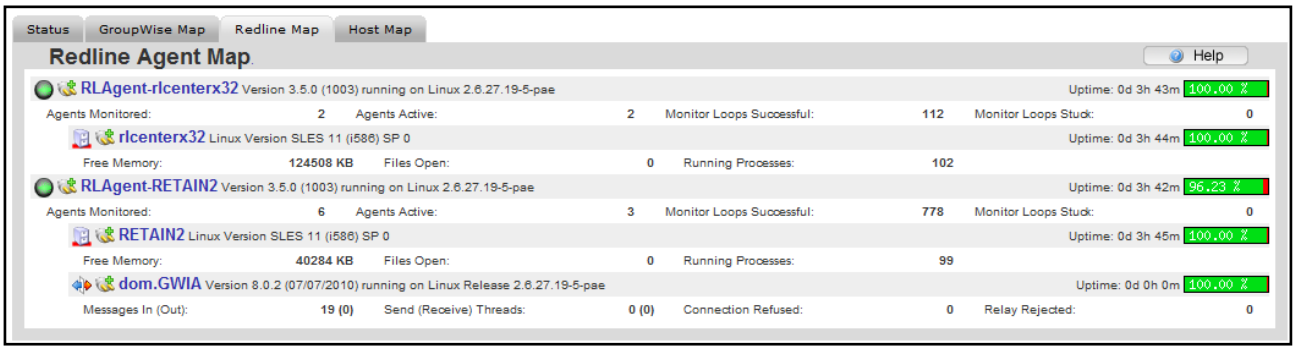
The My Alerts page lists unsolved alerts that have been assigned to the user currently logged in. Alerts assigned here can be reassigned, solved, deleted, or configured.

System View

Redline's System View shows all known agents in your GroupWise environment. On the main System View page, you can see the version, uptime, platform where the agent is running on and a couple of other values. If you click on one of the agents, Redline displays all known settings, status values, graphs, etc. in great detail of this agent.

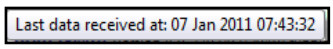


This allows you to see which agents a Redline Agent is monitoring, or which server they are on. These views, particularly the Host Map will not be of large benefit if remote monitoring is being used.



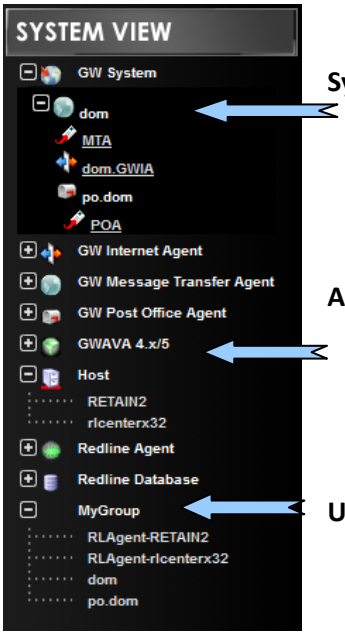
The plug icon indicates if an agent is actively receiving data or not. If you mouse over the plug, a small window appears showing when the agent last received and reported any data.

Wherever you see a "plug" icon in Redline, you can mouse over it, pause a second, and this information is displayed.



Menu

The menu contains the System Tree which looks similar to what you are familiar from ConsoleOne. All agents of a particular type can be listed by clicking on the row with the agent type, and you can define your own groups. In the group only the agents you want will be shown.



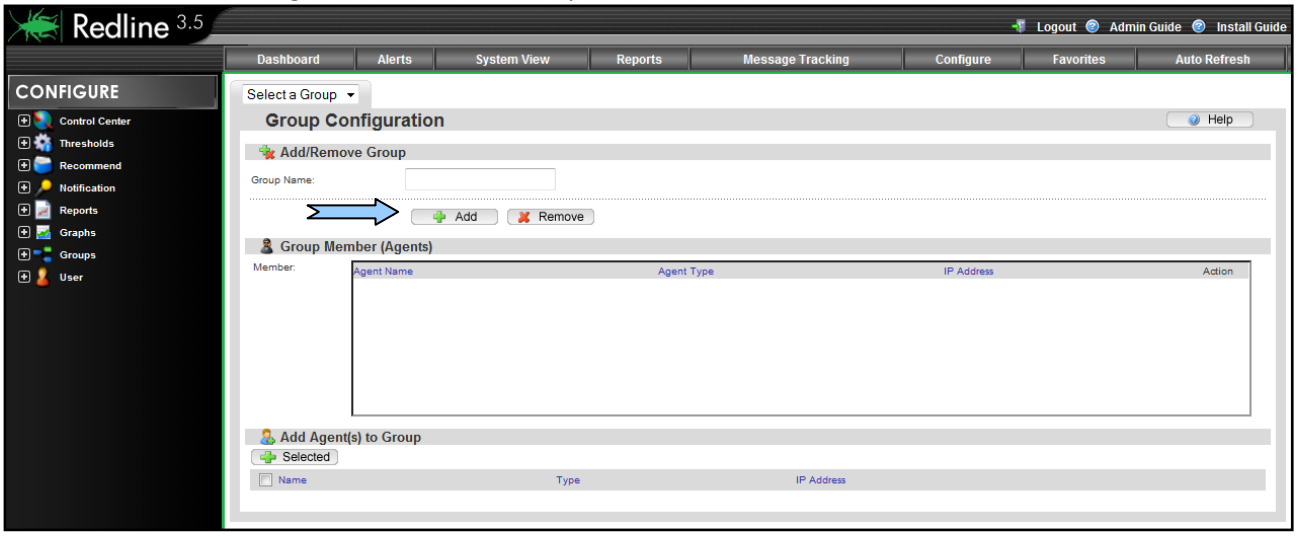
System Tree: Lists all agents similar to what is known from ConsoleOne. If you click on an agent, you can see all the details.

Agent Type Groups: Shows all agents of a specific type. If you click on the icon, all agents of that type will be listed in the tree. If you click on the "Name" of the agent type, the window on the right side shows the status of the agents of that type only.

User defined Group: It is possible to define groups with the agents you want. This can be helpful to group agents of a type or from a physical location.

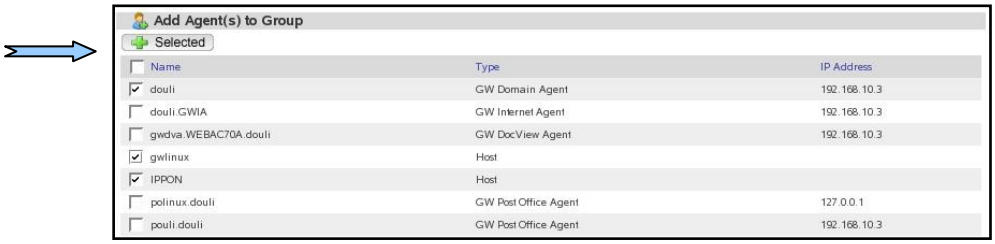
How to define a Group

1. Browse to Configure and click on "Groups"



2. Specify a Group Name and click "Add"

3. Mark the agents you want in this group and click “+ Selected”



4. Browse back to System View
5. Click on the group in the menu

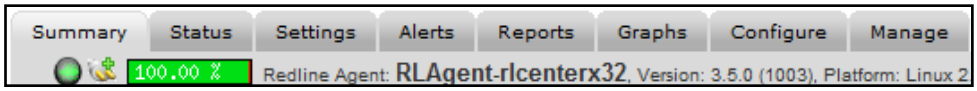
You can add or remove agents to user defined groups at any time.

Viewing an Agent

Everywhere where you click on an Agent Name in Redline you will see the details from the System View. It doesn't matter where you click on the agent name (Dashboard, Alerts List, and System View). Every agent has information on 8 different pages.

- Summary
- Status
- Settings
- Alerts
- Reports
- Graphs
- Configure
- Manage

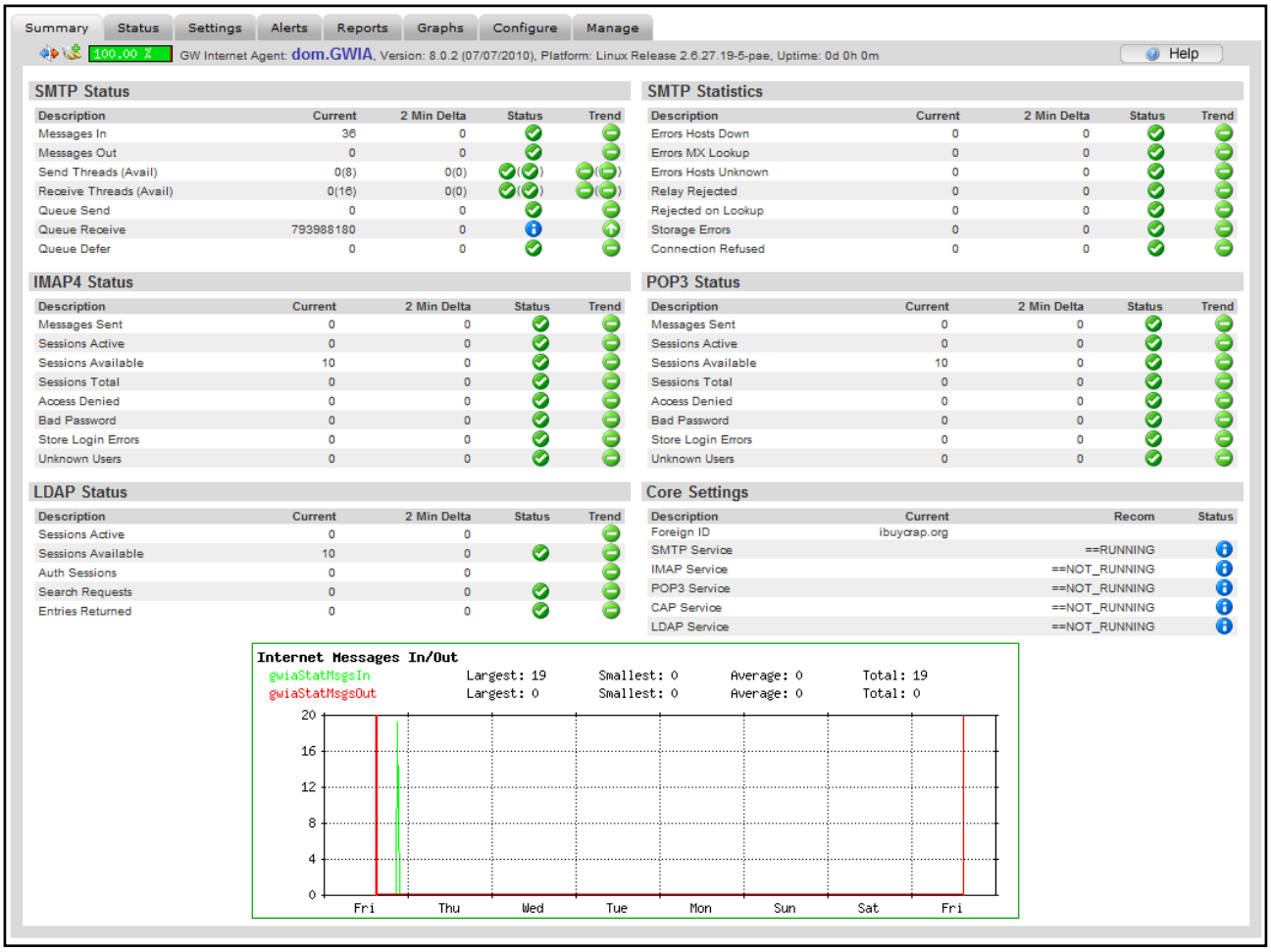
These pages can be accessed from the menu.



In the title of every page the agent name, version, platform and uptime is shown. This is the same for all agents known to Redline. If you mouse over the plug icon, you can see at what time and date the last data for this agent was received.

Summary

The Summary page is unique to every agent in Redline. The summary page is used to display the most important status values and settings for an agent on a single page.

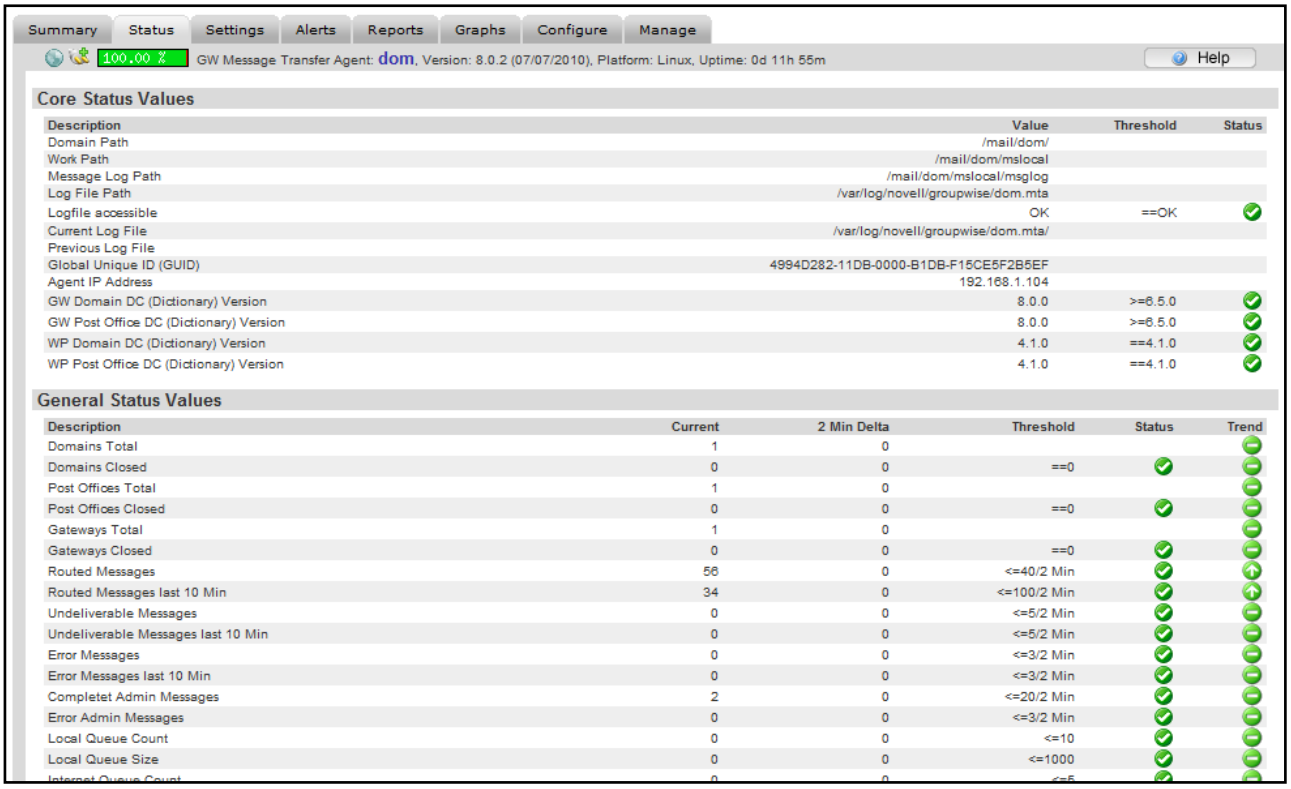


Status: The status icons indicate if a threshold or recommendation is defined for the value and if the value is in the defined range or not. The icon depends on the severity of the defined threshold or recommendation.

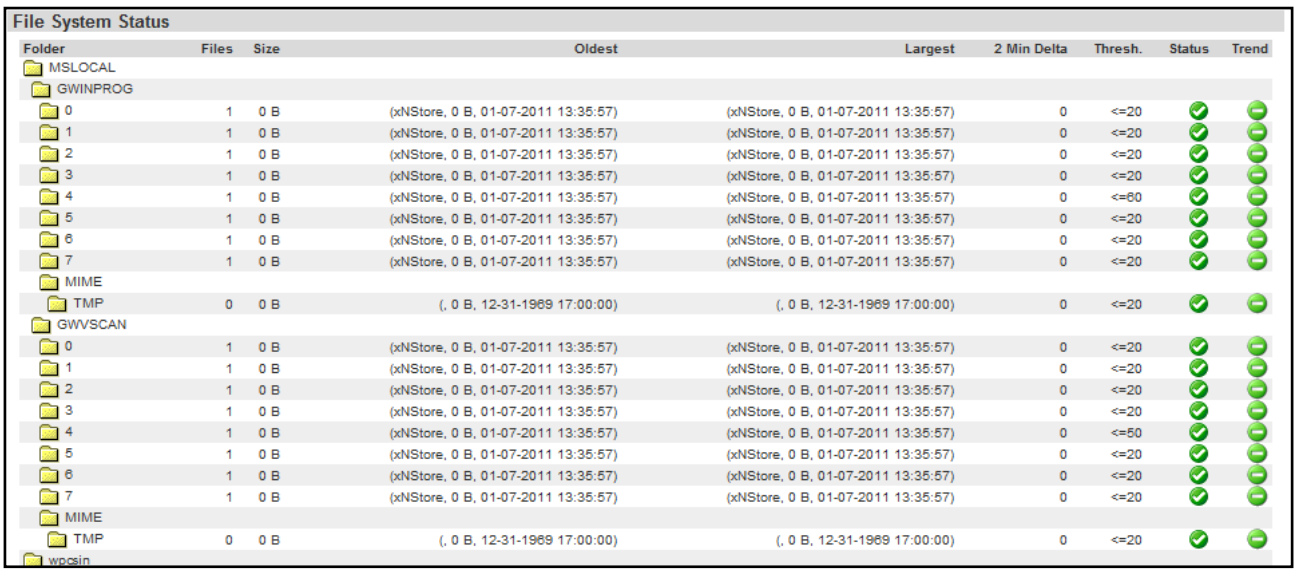
Trend: A trend is indicated if a value is generally going up or down for at least 10 points of measurement, and not simply an indication of a simple change. A single high or low peak is also not enough to force the 'trend' in a direction, instead a generally significant and overall movement in one direction is required to cause a 'trend'.

Status

The status page shows all values which can change during normal operations. Examples are “Users Connected”, “Messages Sent”, “Threads available” etc. Redline collects these values from many different sources and presents them on a single page.



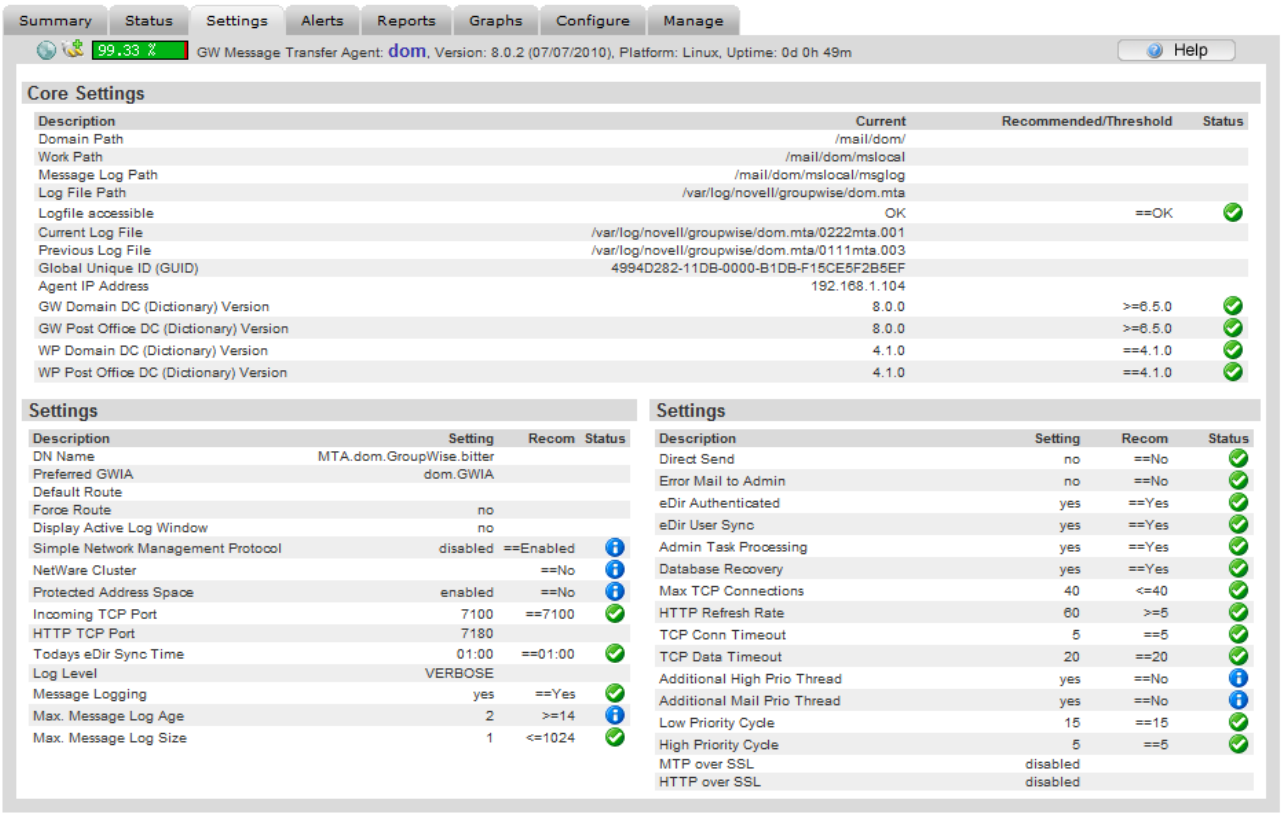
For some agents like the Post Office, Domain or Internet Agent, the file system is monitored, and the number of files, the size of all files, the oldest, and the largest file are presented.



You can define thresholds for the number of files, size of the folder, largest and oldest file. By default thresholds are defined to make sure not too many files are in the folder. If a folder is queuing up, usually a problem exists in your GroupWise system.

Settings

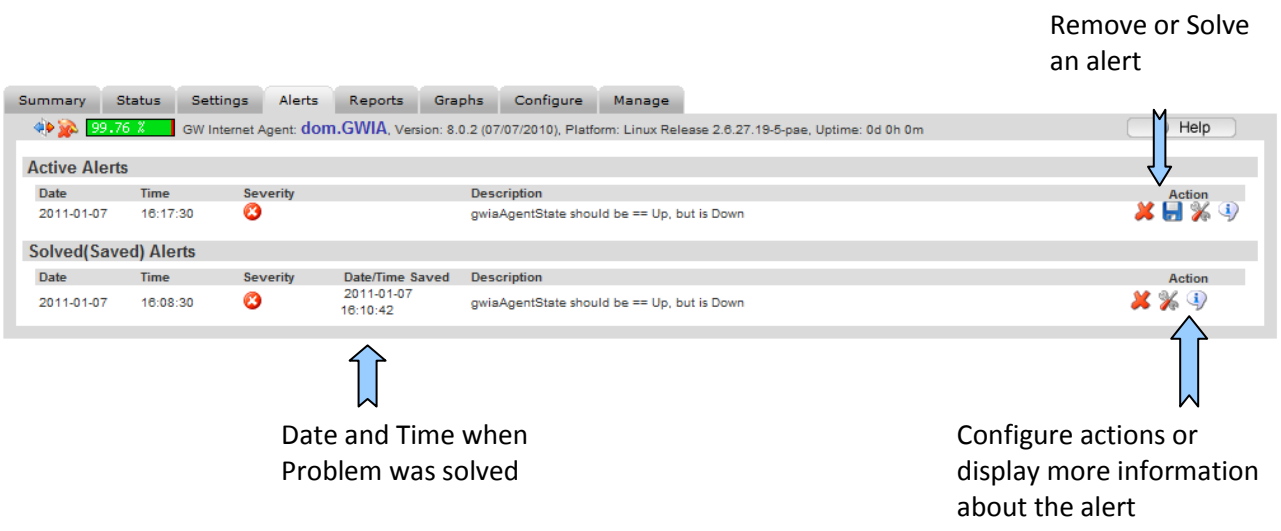
The settings page shows configuration settings appropriate to the monitored agent. The recommendation, threshold and status shown here are based on the current GroupWise best practices and defaults. The recommendations and thresholds can be changed to accommodate your installation. See how to configure a threshold or recommendation to change recommended and threshold values.



Redline and GWAVA Reload agents can be managed in part from this page. Click the 'OK' button to save any changes made. The Agent Actions allow for a seamless way to update the Redline Agent software. (See the Online Update section.) Unloading an agent requires the agent to be started again from the server it resides on. Removing an agent unregisters the selected agent from the Redline Control Center.

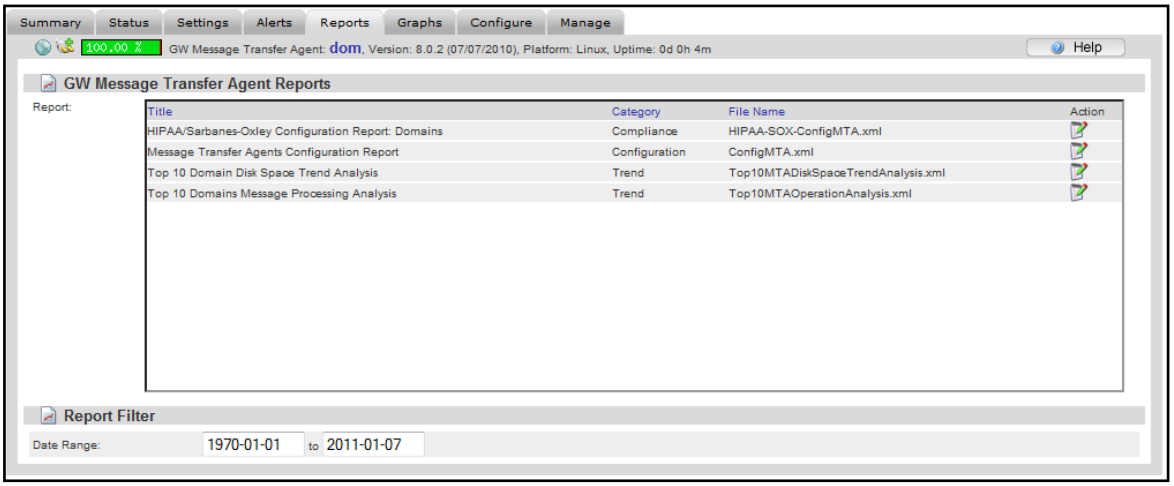
Alerts

On the agent specific alerts page, all alerts for the agent are listed. All solved alerts, including date and time when the problem was solved, are also listed. You can delete and mark alerts as solved from this page.



Reports

All reports which can be run on the selected agent type may be run from this page. If you want to know more about report definitions, designing reports, etc, please refer to the next chapter in this manual.

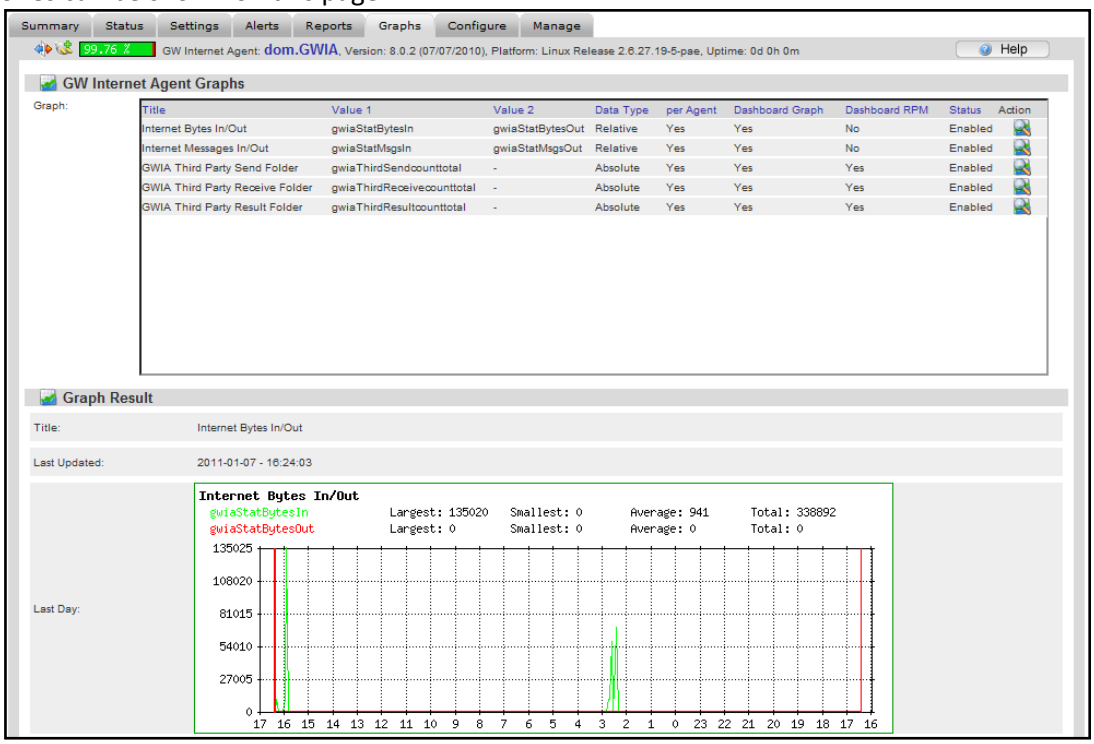


Date Range: For some reports it is possible to specify the date range. Not all reports have this capability because a date range doesn't apply to the report type. For example, a 30 day report does not honor a date range, as it is already implied in the report.

Action Icon: If you click on the Action icon, the report is executed and will be displayed in a new browser window. From there it is easy to print the report.

Graphs

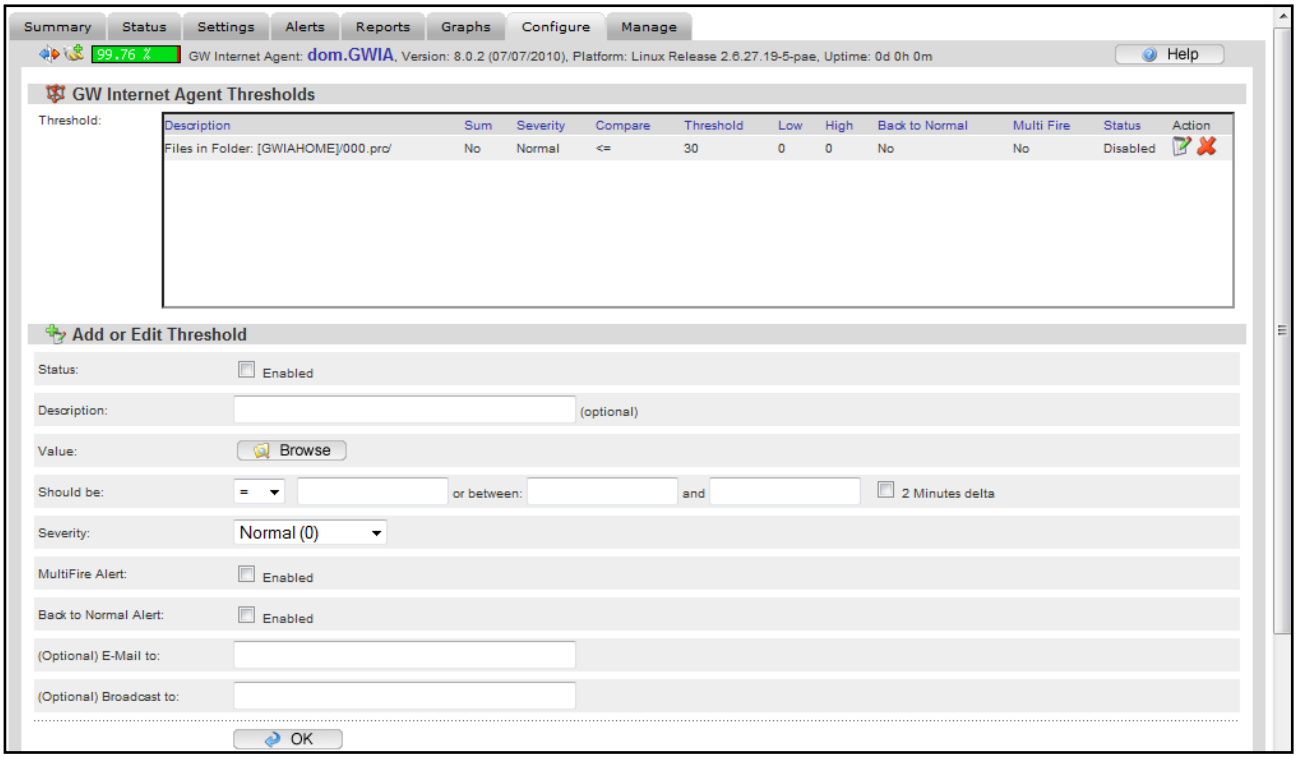
Graphs are a very powerful tool to look at data in a visual way. Think about graphs which show how your disk size get's smaller over time, your memory get's less or if there is an unusually large amount of messages that are coming in from the internet. All these kinds of graphs can be defined and the agent specific ones can be shown on this page.



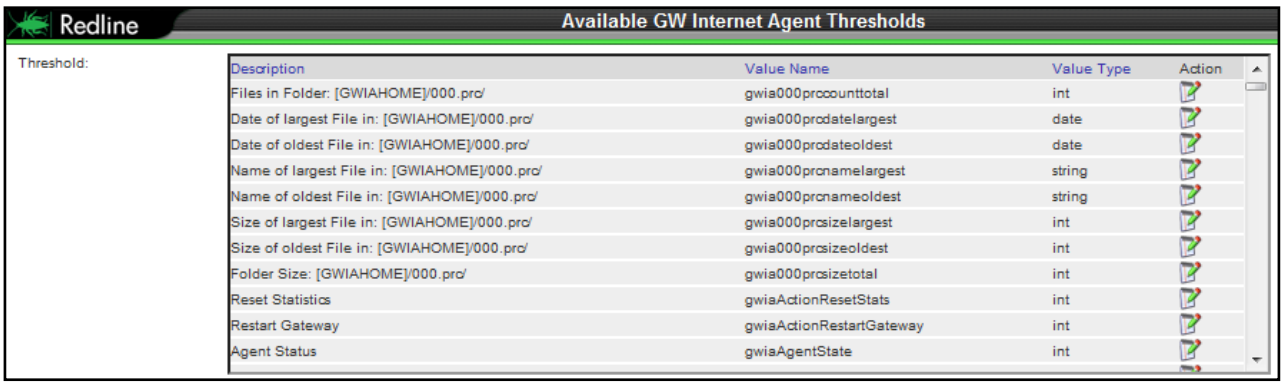
For Graph explanation see the Graphs section.

Configure

It is possible to define thresholds, recommendations and graphs which will be used for only the selected agent. Sometimes it is necessary to have different thresholds and recommendations for some or just one agent. In that case you need to configure the thresholds and recommendations here.



Many values are already defined in the 'browse' button. Name the threshold desired and then select the desired value from the 'browse' menu. To select a value, click on the action icon in the right column.

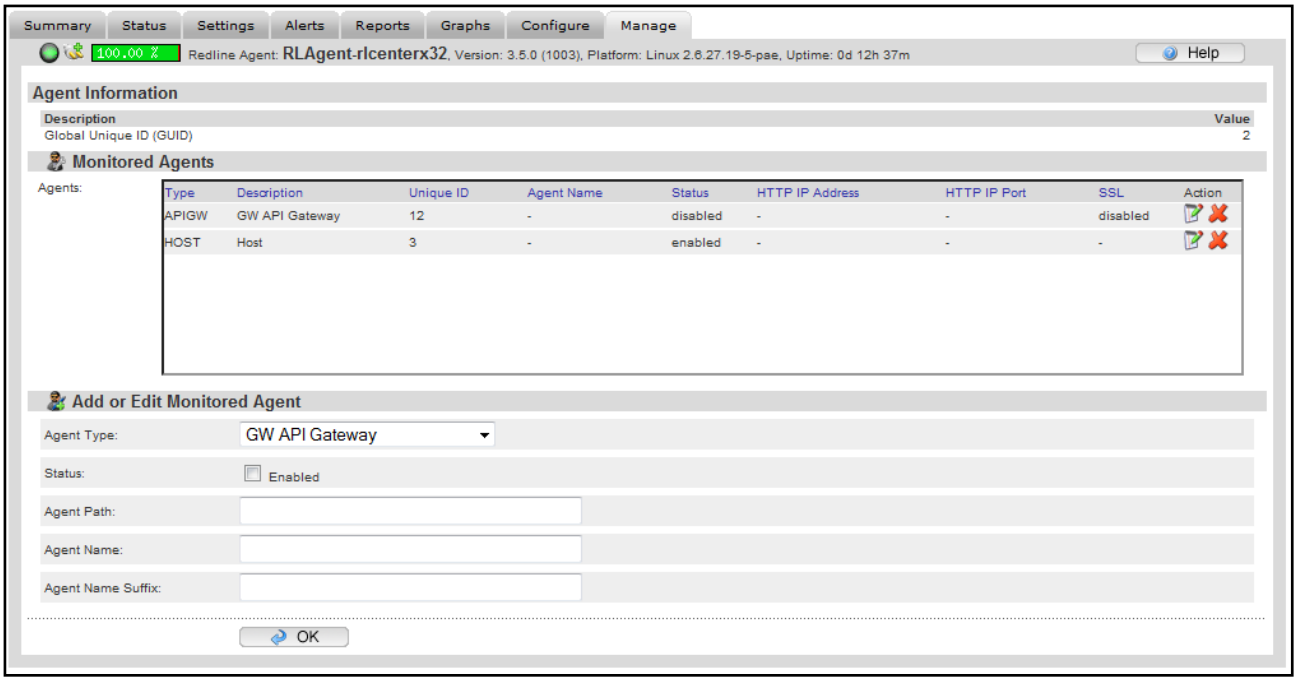


(The value and the name have been set the same for simplicity in the example.)

Specify the desired threshold level and click 'OK' to save the new threshold. **Remember**, a threshold or report will not be active unless it is **enabled**.

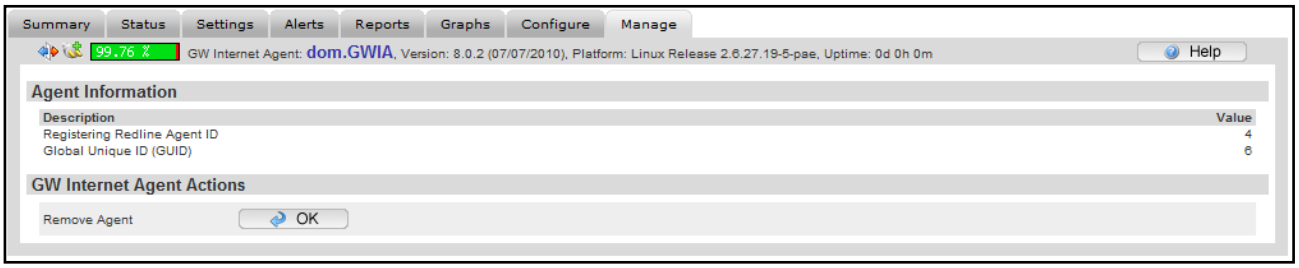
Manage

While every agent has a manage tab, only Redline Agents allow configuration. From the manage tab you can configure all agents monitored by the selected Redline agent or add new agents to be monitored.



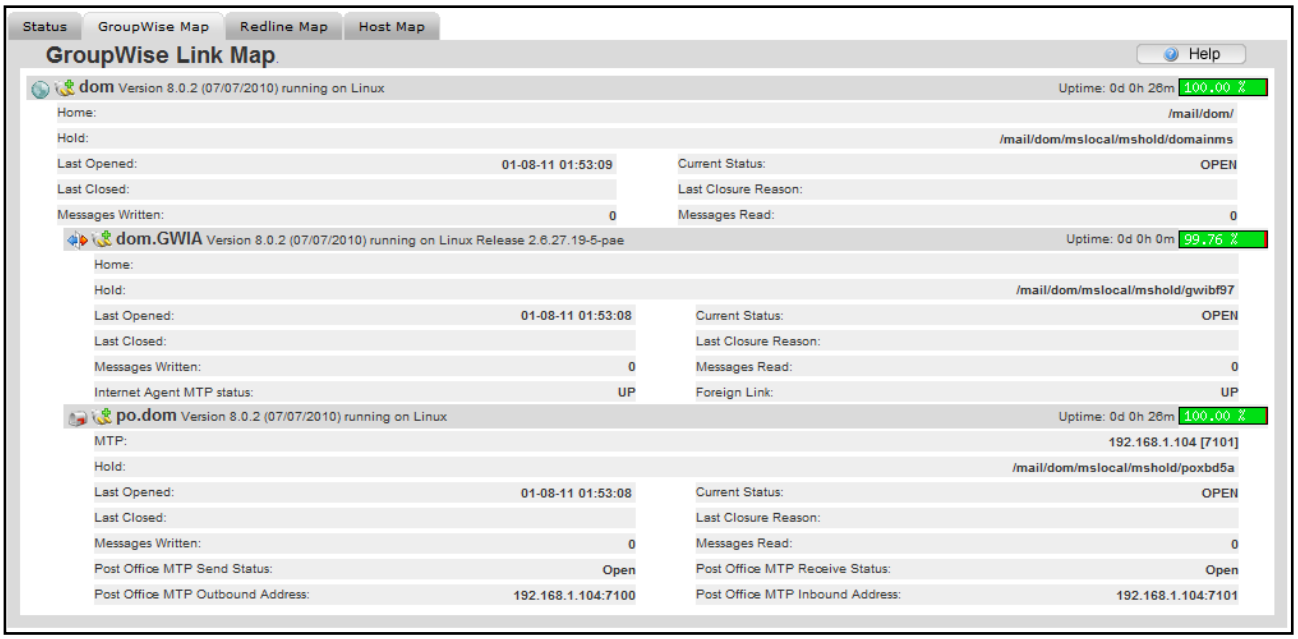
For details about how to manage all the monitoring features, please refer to the Redline Installation Guide.

All other agents, (monitored agents), can be removed from the Redline system from this page.



GroupWise Map

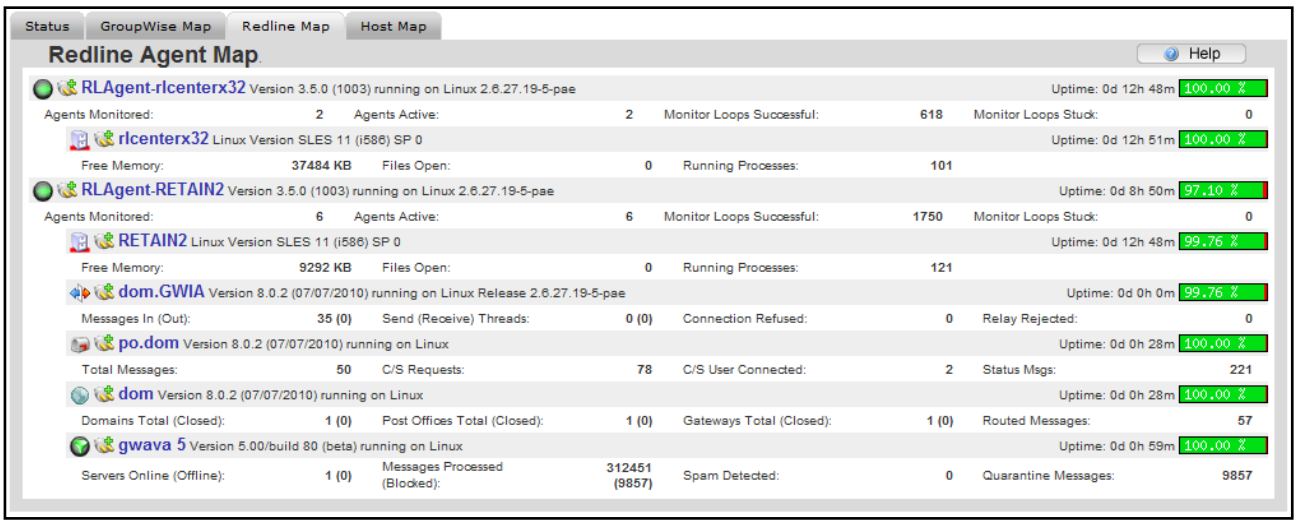
The GroupWise map tab under the System View displays the monitored system in a top-down map showing how components in the GroupWise system are connected and their hierarchy.



The display is informational only, but displays status, uptime, and overall uptime percentage reported to the Redline Control Center.

Redline Map

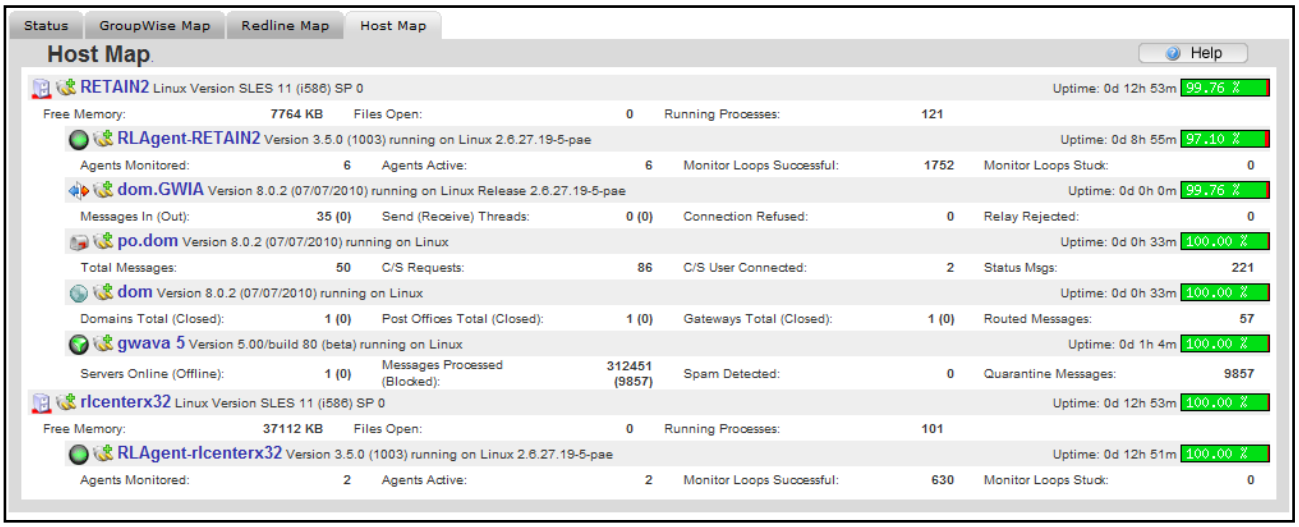
The Redline Map displays all agents in the system that are monitored by a Redline Agent. The monitored agents are displayed beneath their parent Redline Agent.



Uptime, basic vital statistics for each monitored agent, and overall percentage uptime are displayed. The Redline Agent Map is a quick and easy tool to visualize and track down outages in a system.

Host Map

The Host Map displays the different agents and systems, according to which physical systems they are connected to. This page will not work correctly unless all reporting Redline Agents are locally installed on the systems they are monitoring; remote monitoring by agents will not show hosted agents correctly.



Essential statistics for the different physical servers including free memory, system uptime, percentage of total uptime reported, and vital stats for present agents are reported.

Reports

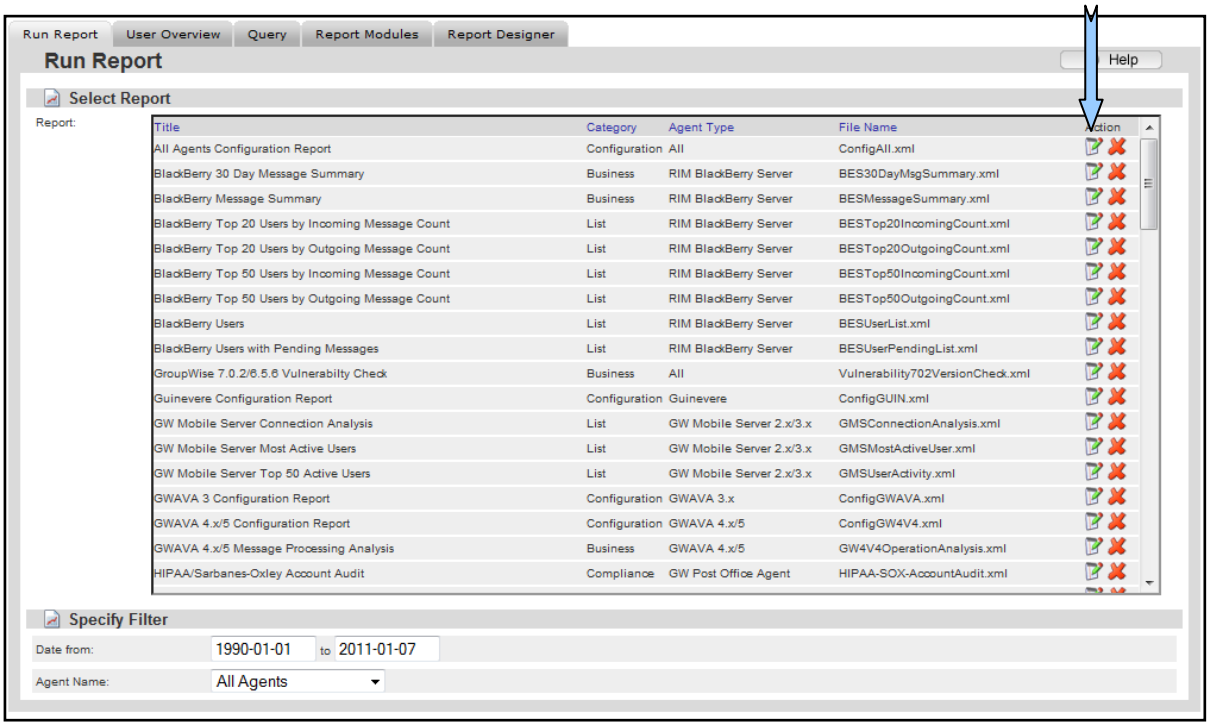
With reports you can get a lot of information out of your GroupWise environment. Redline provides 5 different categories of reports, including direct queries of the database tables, a report designer, report scheduler, and a report API to create specialized reports. To quickly facilitate access to the information that Redline gathers, Redline ships with a large number of predefined reports.

All reports require that the Redline agents must have file access to monitored agents and systems. The reports require access to files, logs, and additional information stored on the host server for each monitored system. It is best to run a Redline agent on each server running a monitored agent to provide accurate results.

Run Reports

The Run Reports tab contains all the pre-defined and configured reports which ship with Redline 3.5. Though these reports come default, any newly defined or user-created and saved reports will be listed here as well. To run a report, select the desired report from the list and click on the action button from the far right column. Take care not to delete a desired report in the haste to run it.

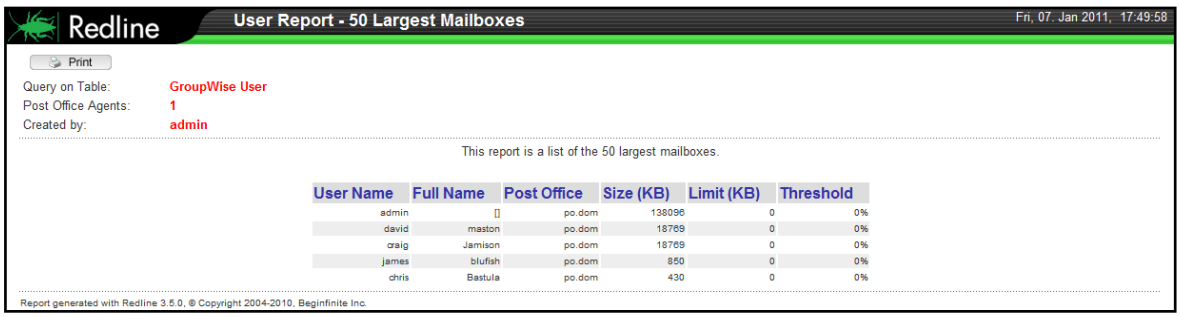
Run report



To restrict a report's information to a specific agent or time period, use the Filter option at the bottom of the window. Specific agents, such as a single bloated post office, may have a report created for just the last week, instead of every post office, or agent in the system.

List Reports

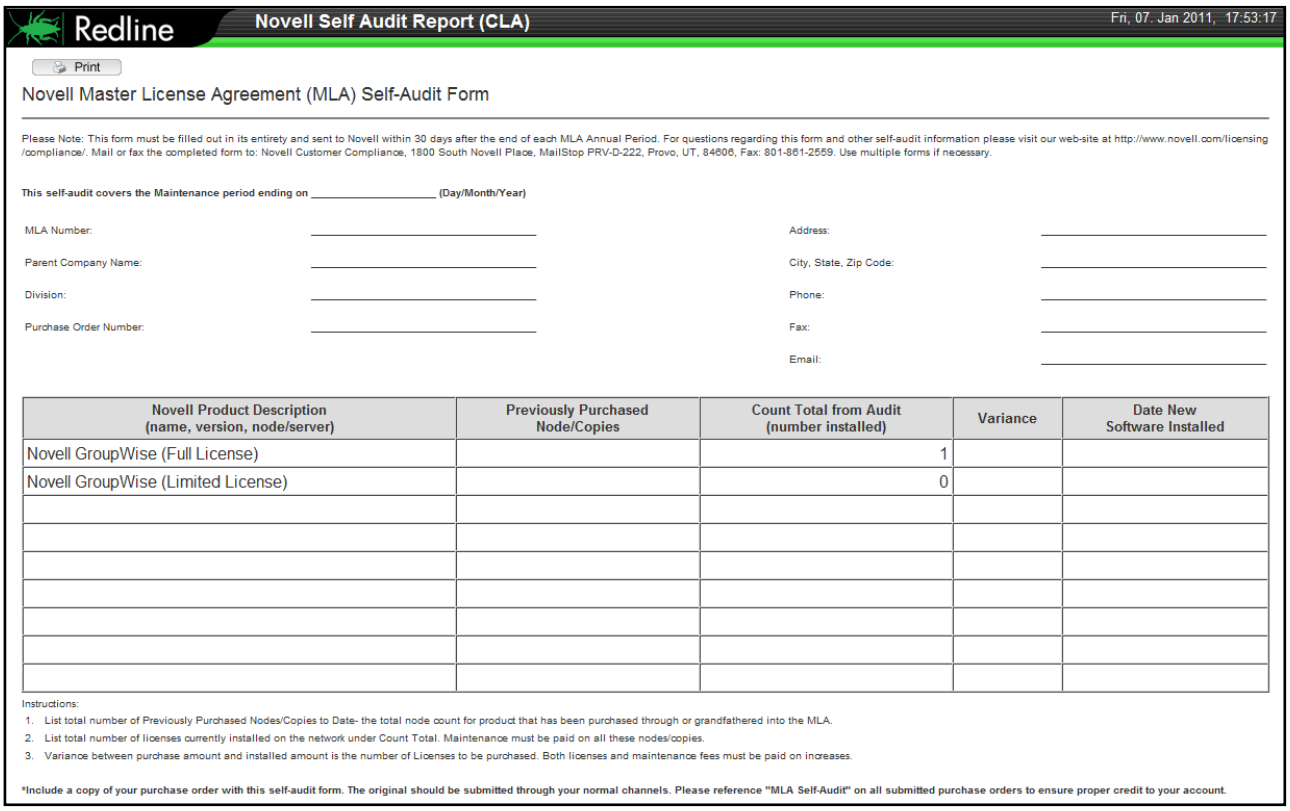
All list reports are predefined database queries, sometimes represented as a graph. Usually they show information from a single database table with some defined filters and sorting. This example lists the largest mailboxes in a GroupWise system.



Some reports support additional filtering based on date and agent.

Compliance Reports

Many countries require regular documentation of their IT infrastructure by regulations like HIPAA or Sarbanes Oxley. Redline provides predefined reports to show all settings of your Post Offices, Domains, Internet Agents, WebAccess etc. These built in reports make it much easier to report on the system.



Redline — Novell Self Audit Report (CLA) — Fri, 07. Jan 2011, 17:53:17

Print

Novell Master License Agreement (MLA) Self-Audit Form

Please Note: This form must be filled out in its entirety and sent to Novell within 30 days after the end of each MLA Annual Period. For questions regarding this form and other self-audit information please visit our web-site at http://www.novell.com/licensing/compliance/. Mail or fax the completed form to: Novell Customer Compliance, 1800 South Novell Place, MailStop PRV-D-222, Provo, UT, 84606, Fax: 801-861-2559. Use multiple forms if necessary.

This self-audit covers the Maintenance period ending on _____ (Day/Month/Year)

MLA Number: _____
Parent Company Name: _____
Division: _____
Purchase Order Number: _____

Address: _____
City, State, Zip Code: _____
Phone: _____
Fax: _____
Email: _____

Novell Product Description (name, version, node/server)	Previously Purchased Node/Copies	Count Total from Audit (number installed)	Variance	Date New Software Installed
Novell GroupWise (Full License)		1		
Novell GroupWise (Limited License)		0		

Instructions:

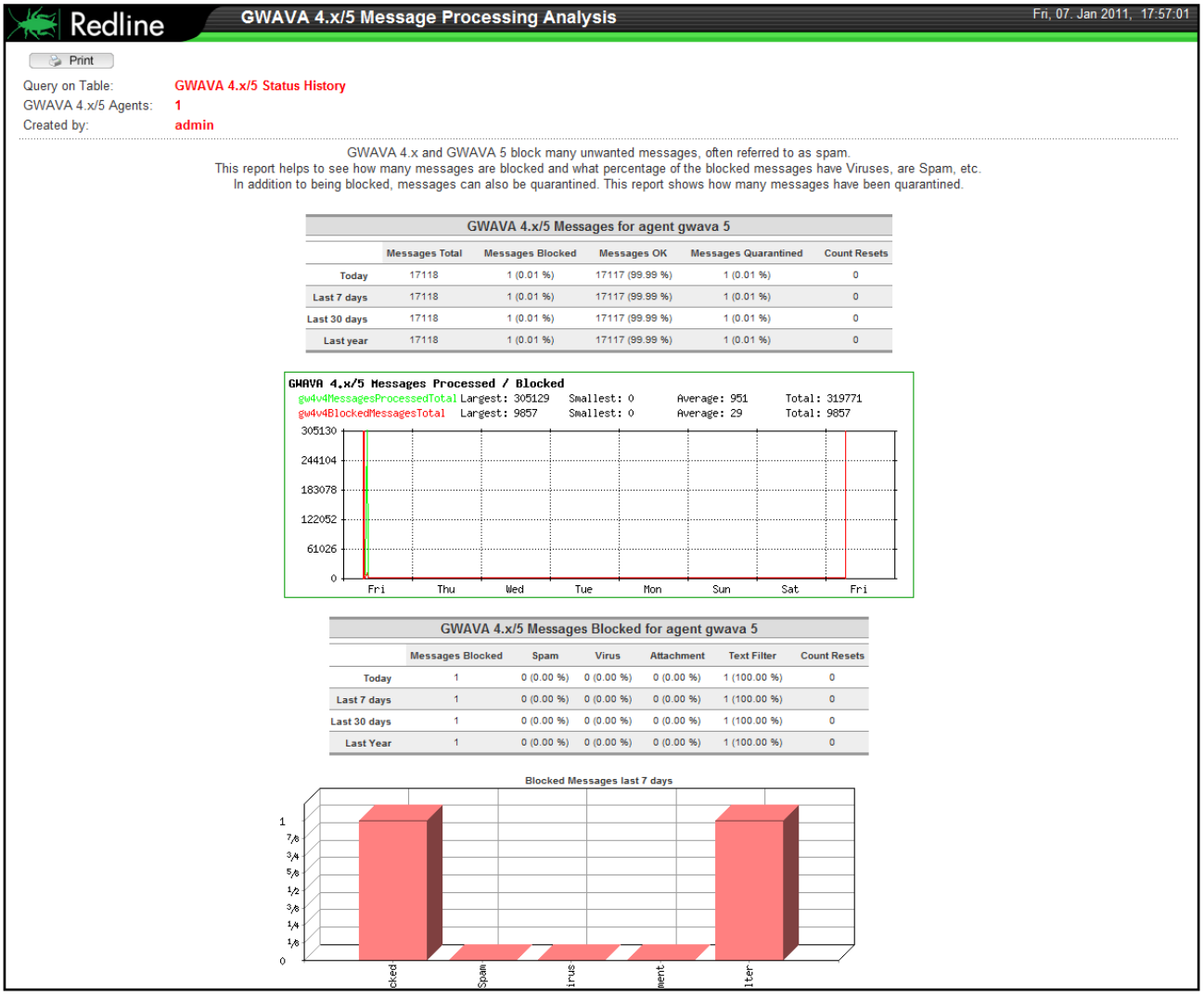
1. List total number of Previously Purchased Nodes/Copies to Date- the total node count for product that has been purchased through or grandfathered into the MLA.
2. List total number of licenses currently installed on the network under Count Total. Maintenance must be paid on all these nodes/copies.
3. Variance between purchase amount and installed amount is the number of Licenses to be purchased. Both licenses and maintenance fees must be paid on increases.

***Include a copy of your purchase order with this self-audit form. The original should be submitted through your normal channels. Please reference "MLA Self-Audit" on all submitted purchase orders to ensure proper credit to your account.**

Another very useful report is the Novell CLA self audit report required by Novell.

Business Reports

More advanced reports with in depth data analysis and data from multiple tables are put together in the Business Reports category.



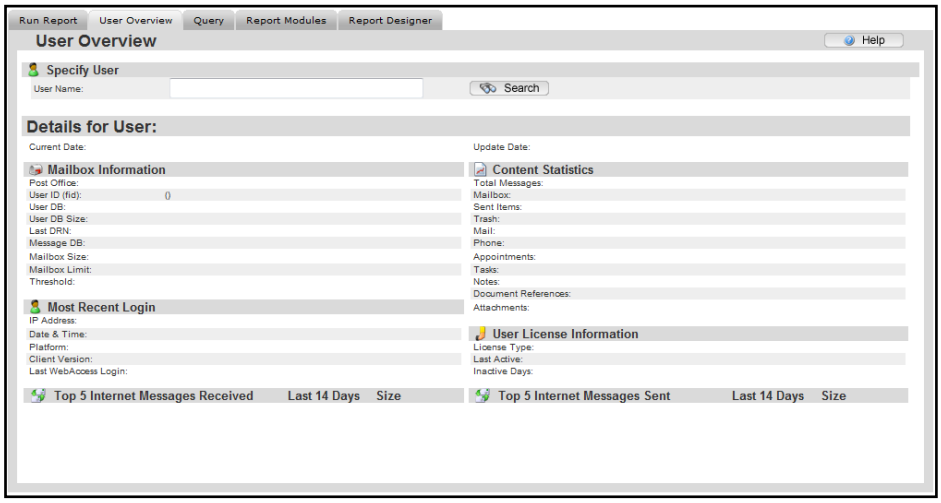
Comparison Reports

The Redline Comparison Report helps evaluate the ongoing return on investment of your existing GroupWise System—as calculated based on information collected by Redline--against another messaging platform. This report incorporates six key areas of analysis that evaluate the ongoing costs of operating your GroupWise system against the costs of migrating to another platform.
There are three informational categories: General Information, Current System, and Alternative System. These are broken down into software and hardware costs, personnel and consulting costs, as well as training and other expenses.

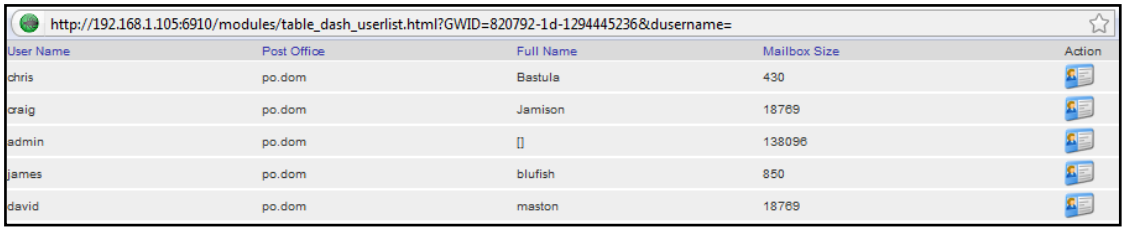
This report performs an ROI Cost comparison analysis based upon the costs to maintain the existing system when compared to the migration and maintenance costs of an alternate system. Based on your existing system, an analysis is performed using comparative data from the software manufacturers and third party data. We have provided recommended values in each field where possible. Please feel free to update this information as appropriate. This analysis is in US dollars and calculates the first year only.

User Overview

The User Overview displays essential information on any selected user. Detailed use and account statistics can be quickly and easily obtained for any user in the system. However, in order for the User overview to display any users the GWcheck files must first be obtained. See the Redline Install Guide section 'Creating the GWCHECK Events'.

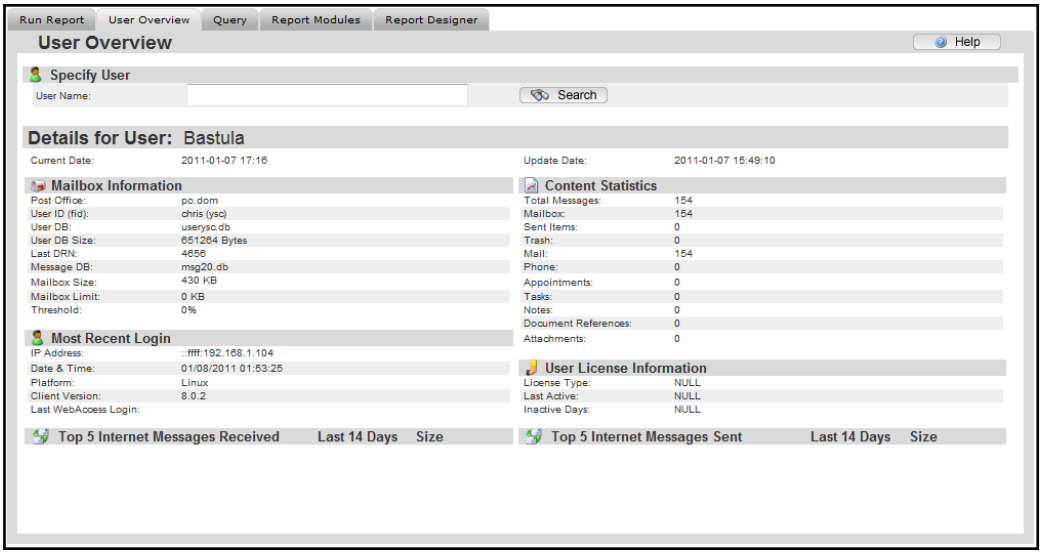


To select a user, place a user name in the user name search box and select 'search'. All users matching the search criteria will be displayed. If the search window is left blank, the system will produce a list of every user account in the system.

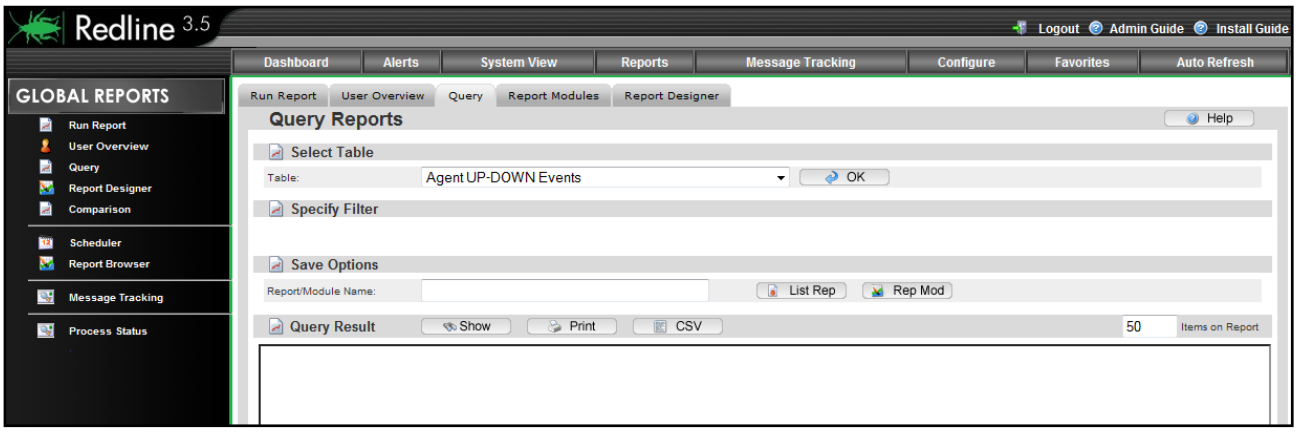


Select the appropriate user from the search results by selecting the 'Show User', or action icon in the far right column for the desired user. (The search results window will not close, but allows for user's to be switched in rapid succession. When finished, close the search results window.)

Once selected the desired user's information will propagate in the User Overview window.



Query



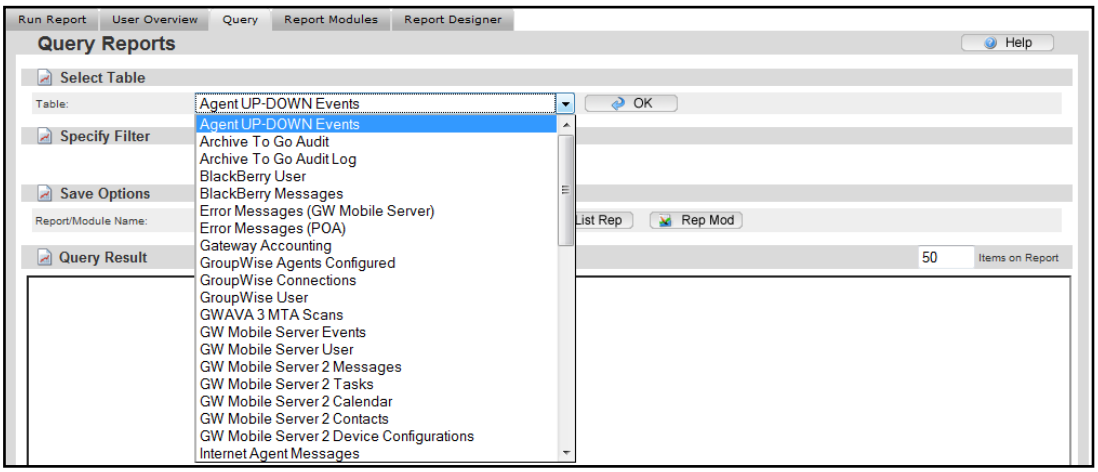
It is possible to query all database tables directly, or run predefined Reports, which are categorized in the following form:

- **List** – Predefined queries with lists like largest Mailboxes or Post Offices, most used Domains etc.
- **Compliance** – Reports required meeting regulations enforced by laws or other rules.
- **Business** – More complex reports which analyze the data in more detail.
- **Comparison** – Compare your environment with alternative messaging systems.

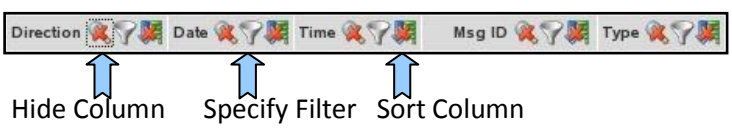
Running the predefined List, Compliance, Business or Comparison reports is very easy, but you need to understand how the query reports work in order to build your own reports.

Query the Redline database

Redline stores its data in multiple databases. With the query interface you can access all database tables without any restriction. The database is defined in the file tables.xml. Every time you start Redline, the database tables are checked based on the information found in tables.xml. If a new table is added to tables.xml, Redline will create this table automatically for you.



After you've selected a table and clicked on 'OK', the table is loaded and filters appear. From the results window header, filters may be specified. You can hide columns, sort the data and specify filter on any column desired. Every column has three icons to do this:



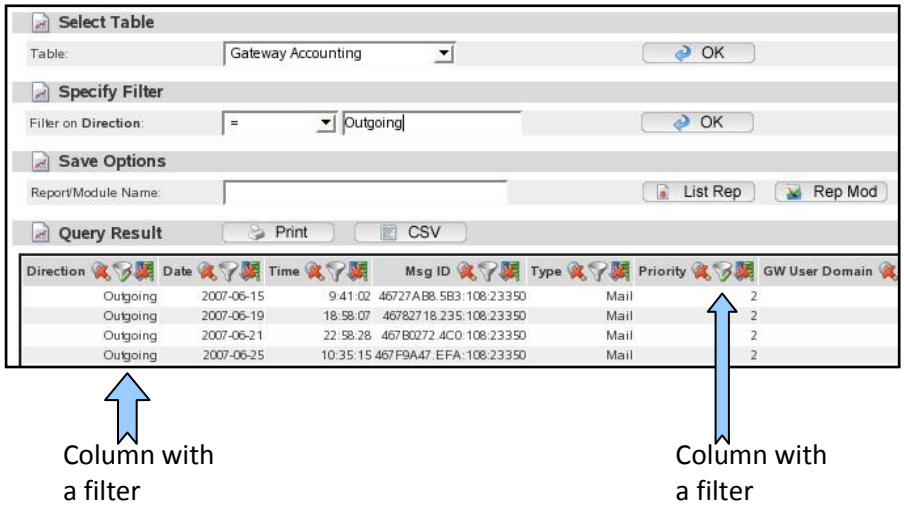
Hide Column: If you hide a column, the icons for the column are still visible on the screen, but the title

and the data is not shown any more. If you print or export the report, these columns are not on the report.

Sort Column: You can sort based on every column you want. If you click the sort button the second time, the sort direction is reversed. A third click disables sorting on this column. If you enable sorting on multiple columns, the order is based on what column was selected first. That way you can sort a table on as many columns as you want.

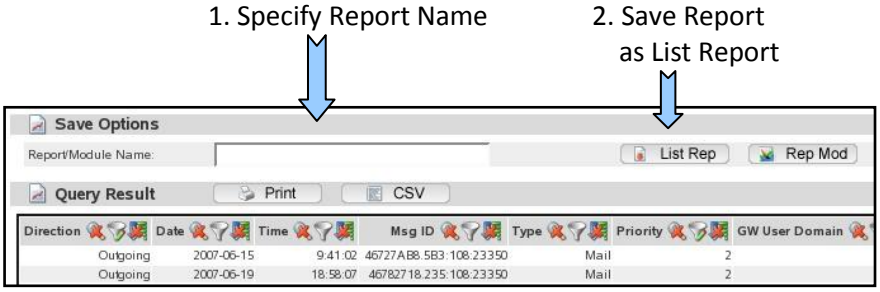
Filter: You can specify a filter on every column, not on just one column. As soon as a filter is specified, the filter icon has a small tool on it.

Specify filter for the selected column



If you need more or less items on the screen, you can specify the number of rows.

When you are happy with the result, you can print the report or export it as a CSV file which can be imported into OpenOffice or Microsoft Excel. If you need this report on a regular basis, you can save it as a List Report. Specify a Name for this Report and click the “List Report” button.



If you have specified some filters etc for a query report, browse to another place in Redline and come back, all filters, sorting, etc. are still present. All defined filters, sorting and hidden columns will be reset every time a new table is selected.

History database tables

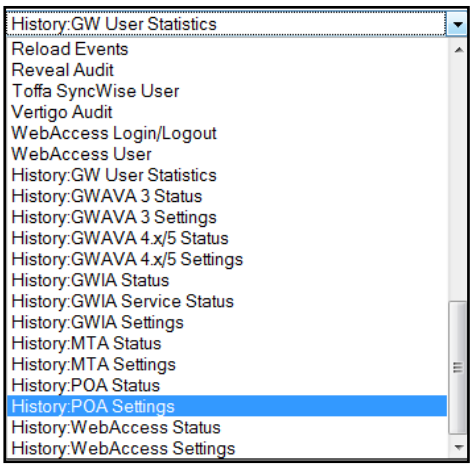
Redline has several database tables which contain snapshots of settings and status values. In the file /opt/beginfinite/redline/conf/database.conf the snapshot intervals are defined. By default, all settings will be stored every day and a snapshot of all status values is taken every hour.

Based on this information it is possible to look back when a setting was changed and what the setting was before the change. Example:

How to check if and when IMAP was enabled on the Post Office:

1. Select the table History:POA Settings.
2. Specify a filter on the column “Post Office Name“ and type the name of the Post Office you want to check.
3. Specify a filter on the column “IMAP Agent“ and type “enabled” as the text to search for.
4. Sort the table based on “date”.
5. Now you see when the IMAP agent was disabled the last time.

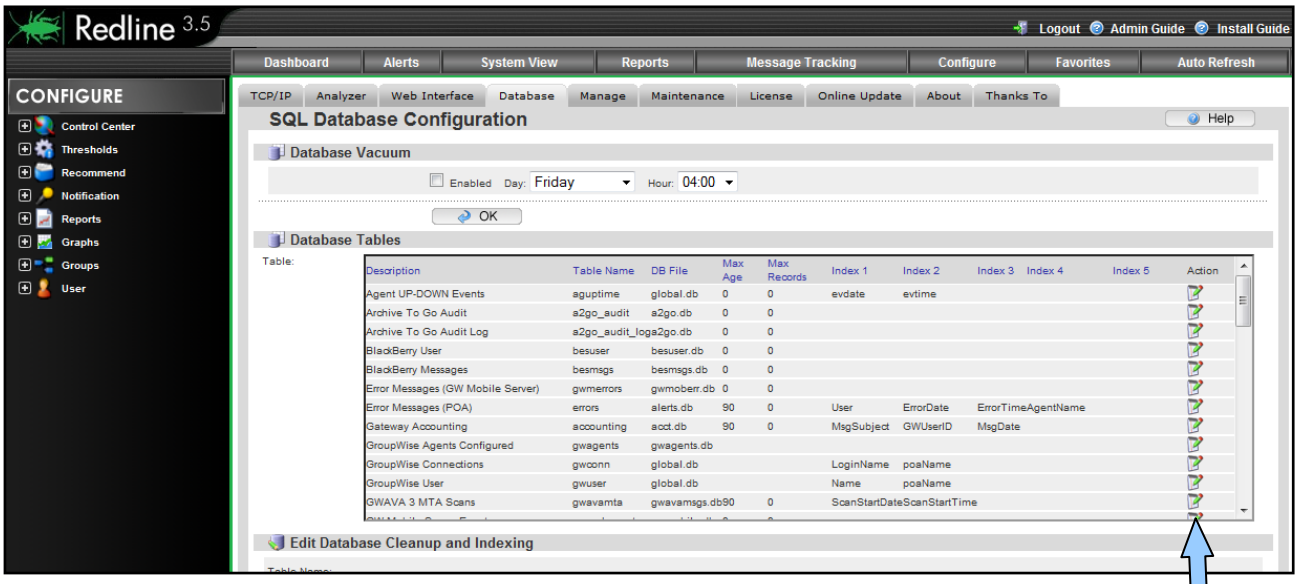
History tables



Index tables

Database index tables are very important to speed up queries and as a result executing the reports is much faster. If you define a filter in a query report and the response after defining the filter is slow, you might need to define a table index on this column.

To access the SQL Database Configuration window, select the 'Configure' section, and then the 'Database' tab.



You can define up to 5 index tables for every table in Redline. Make sure you define index tables for columns where it makes sense only. Index tables which are not needed will slow down report generation.

Click to edit table settings

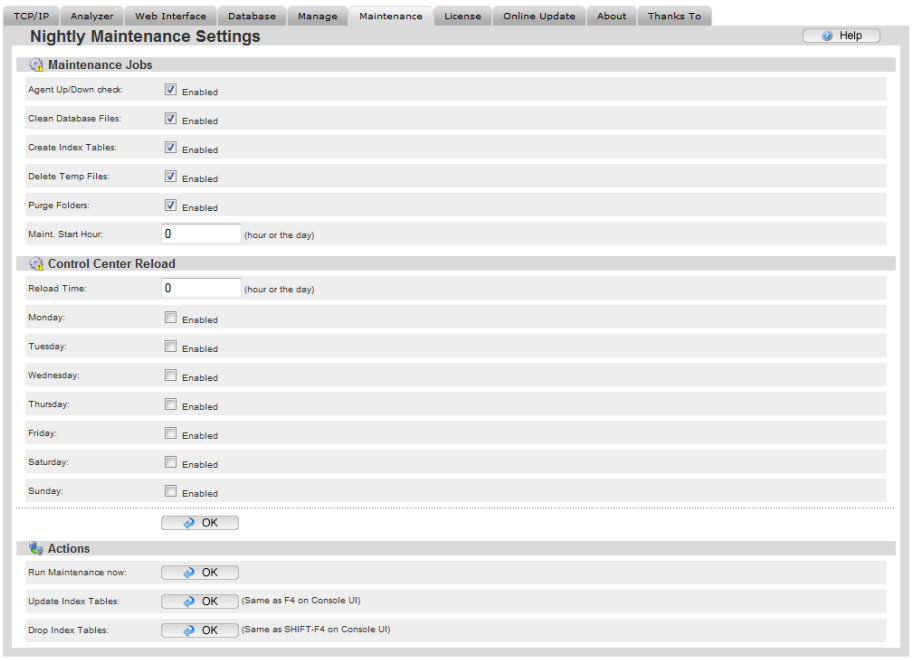
How to define an table index:

1. Assume you need an index on the column “E-Mail” of the table “Blackberry User”
2. Look for the table “Blackberry User” and click on the “Edit” icon
3. Mark the checkbox for “Index 1” and select the column “E-Mail”
4. Click OK

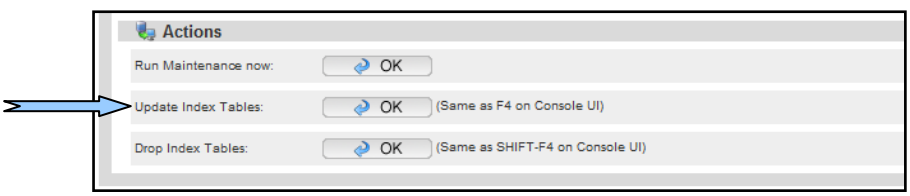
Index tables are not generated immediately after they are defined. Every midnight Redline is doing a database check which includes the creation of missing table indexes. Index tables which are not defined any more will be removed during the nightly database check as well. If you look into the rlcc.log file you can see when and how long the check runs. During that time it is not possible to login to the Web UI of Redline.

```
07-28-2007³00:00:28³Nightly Database Check started.
07-28-2007³00:00:32³Create/Update index tables.
07-28-2007³00:00:33³Create/Update index tables done.
07-28-2007³00:00:33³Delete Redline temp files.
07-28-2007³00:00:33³Delete Redline temp files finished.
07-28-2007³00:00:33³Purge all deleted files...
07-28-2007³00:00:33³Purged 2 items: /mnt/posix/redline/opt/beginfinite/redline/logs
07-28-2007³00:00:33³Purged 0 items: /mnt/posix/redline/opt/beginfinite/redline/imp
07-28-2007³00:01:10³Purged 12642 items: /mnt/posix/redline/opt/beginfinite/redline/db
07-28-2007³00:01:11³Purged 272 items: /mnt/posix/redline/opt/beginfinite/redline/imp/cache
07-28-2007³00:01:11³Purged 1 items: /mnt/posix/redline/opt/beginfinite/redline/imp/acct
07-28-2007³00:01:11³Purged 0 items: /mnt/posix/redline/opt/beginfinite/redline/db/cmd
07-28-2007³00:01:11³Purged 0 items: /mnt/posix/redline/opt/beginfinite/redline/db/graphs
07-28-2007³00:01:11³Purge all deleted files done.
07-28-2007³00:01:11³Nightly Database Check finished.
```

You can force this process if you browse to the “Maintenance” tab in the main configuration area and click on the button “Update Index Tables” from the 'Actions' section at the bottom of the page.



Be aware that this can take some time if a new index needs to be created on a large table.

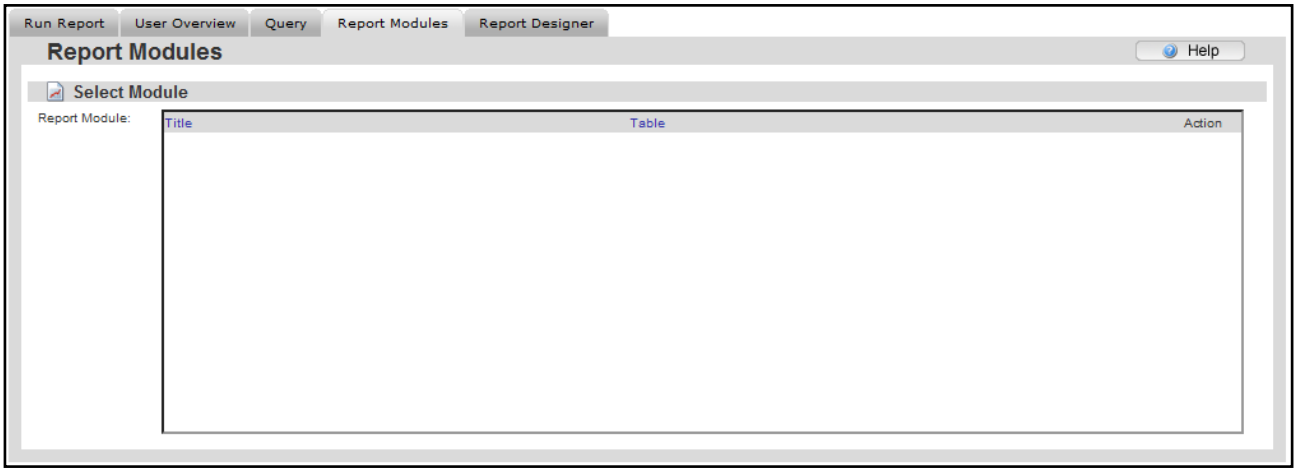


Report Modules

Report Modules are created by the user; Redline does not come with existing modules to use in custom report creation. Existing report modules saved in this list may be edited and combined to use in report creation to meet any specified criteria or demand. Report modules must be first created before they can be used to create an entirely new report in the Report Designer.

Report Modules are made by creating a database query, modifying, honing, or filtering results, then saving the resulting information into a designated format; query, graph, or table.

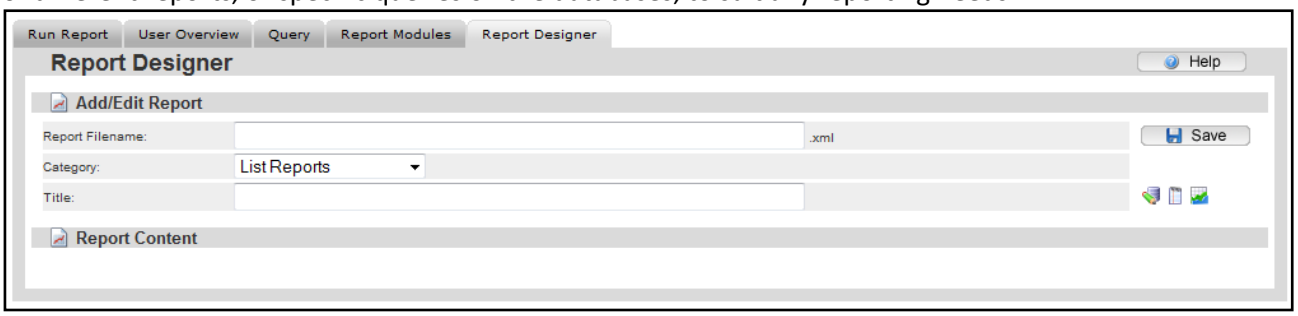
Unless a report module has been saved, this window will remain empty.



Please see the Custom Report Creation section for examples of use.

Report Designer

Redline provides the user with the ability to create custom Reports as desired, in either a hybrid collection of different reports, or specific queries on the databases, to suit any reporting needs.



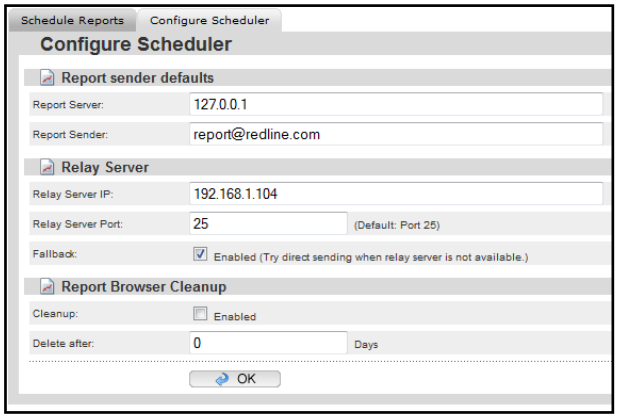
To create a report, a filename and title must be supplied, as well as a category for the designed report: List, Business, Comparison, or Compliance. (The initial information may be changed at any time during report creation.) Each report is a combination of Report Modules placed in a desired order.

To add a saved module to a report, select the appropriate module button. The icons, in order from left to right, are: add text, add table, add chart. Each added field will allow the selection of the appropriate module. If no modules have been saved, no module choices will be offered.

Custom reports are created from a single, or multiple report modules created through the Query process. For more information, examples and specific use, please see the Custom Report Creation section.

Scheduler

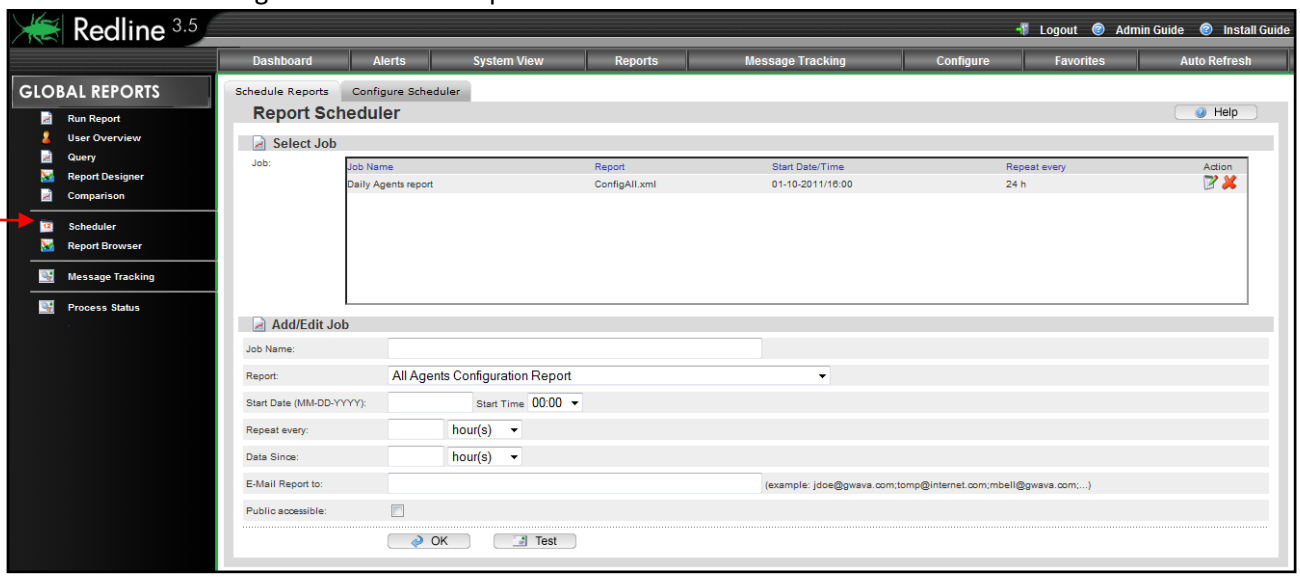
The report Scheduler is accessed through the left-hand navigation pane while the Reports section is selected.



To get a scheduled report run and sent to the desired recipient, the scheduler needs to be configured first. Click on the second tab, the **Configure Scheduler** tab, and input the appropriate information for your system.

The Report sender default is the source server for information loaded in the report, but not sent, in the report email. The default setting is 'home', 127.0.0.1, but for the embedded graphs and tables to work, this section MUST be set to the Redline Control Center's IP address. If it is desirable to relay the reports, specify the relay server's IP address. If left blank, the system will perform an MX lookup. The Fallback option tells Redline to try an MS lookup if there is a problem with the relay. The browser cleanup option removes all saved embedded graphs and information from the Reload server after the specified amount of days. It is not enabled or set by default as saved reports are system specific. For example, if a system has daily reports, it is not recommended to save a full year of reports for the sheer number, yet monthly reports may need to be saved for a year. Select a setting which works best for the system.

After the Scheduler is configured, a regular report job list may be created and scheduled. All List, Compliance and Business reports can be used in the report scheduler. It is possible to schedule a report based on hours, days, weeks and months. If a report supports specifying a date range, it is possible to define what date range the scheduled report should take into account.



Job Name: A unique name for this scheduled report

Report: Select the report from one of the predefined list, compliance or business reports.

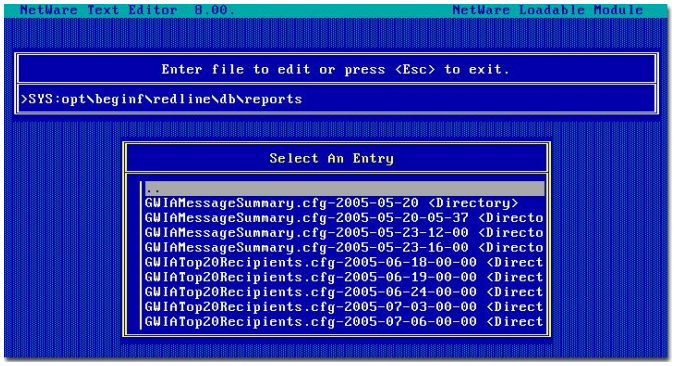
Start Date/Time: The time and date when the report runs the very first time

Repeat every: The interval when the report will be executed.

Data since: The timeframe which will be used for the report to generate tables, graphs etc.

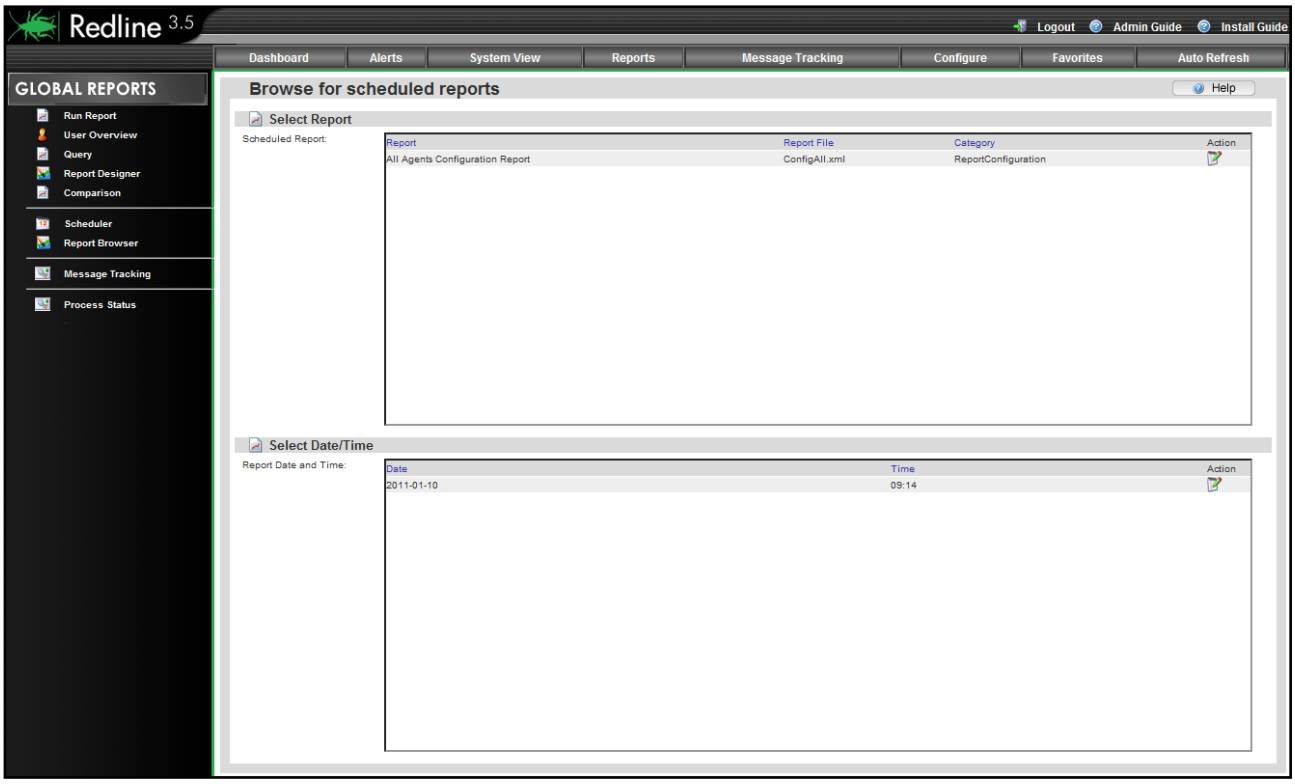
When the scheduler runs, reports are generated automatically then saved to (redline Path)\db\reports directory. I.e.: opt\beginfinite\redline\db\reports.

On NetWare you can browse with the Novell Editor to the report folder. You can view the reports with any html browser like Firefox, Opera, Internet Explorer etc.



Report Browser

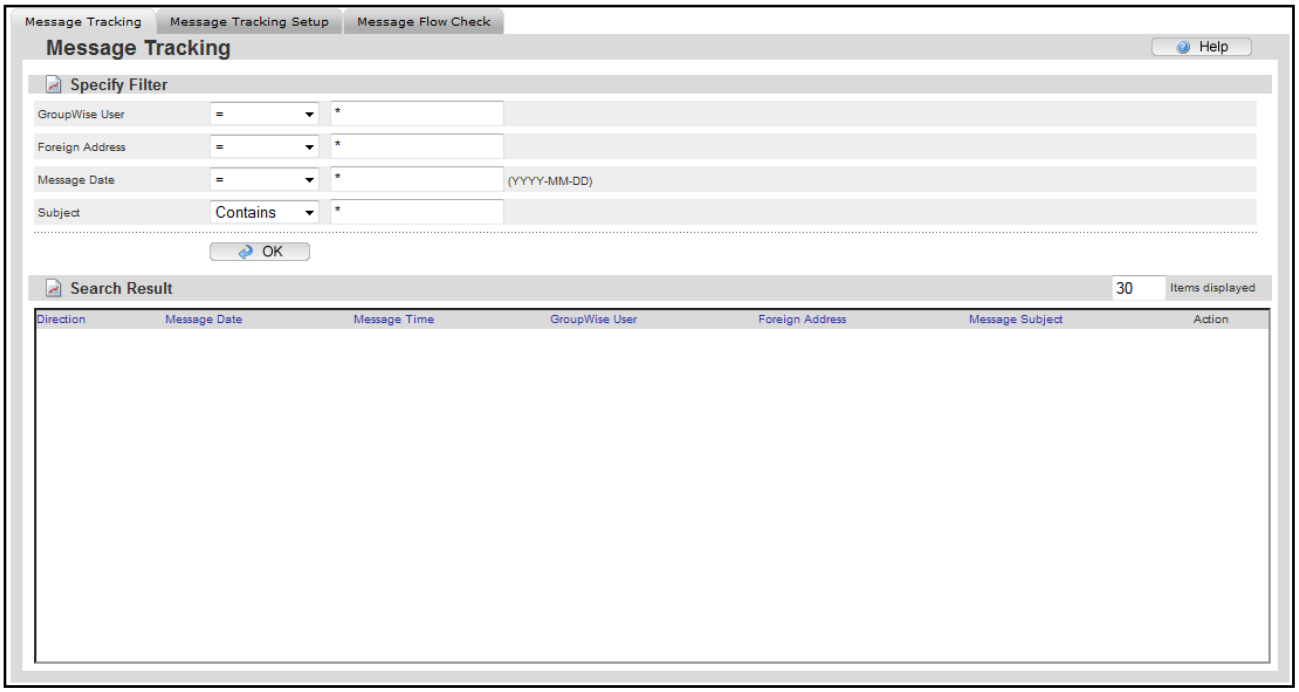
The Report Browser lists the current list of scheduled reports, and allows the viewing of each scheduled and run report. Scheduled reports do not need to be emailed to a recipient in order to be viewed; they may be viewed through the report browser at any time as long as they have been run and generated.



To view a scheduled report, select the desired report from the top selection window by selecting the action icon from the far right then choose the specified generated report by date from the bottom selection window. Clicking on the action icon next to the desired report date opens the specified report for viewing. Reports purged from the system by the report expiry date in the Configure Schedule report tab will no longer be available or listed.

Message Tracking

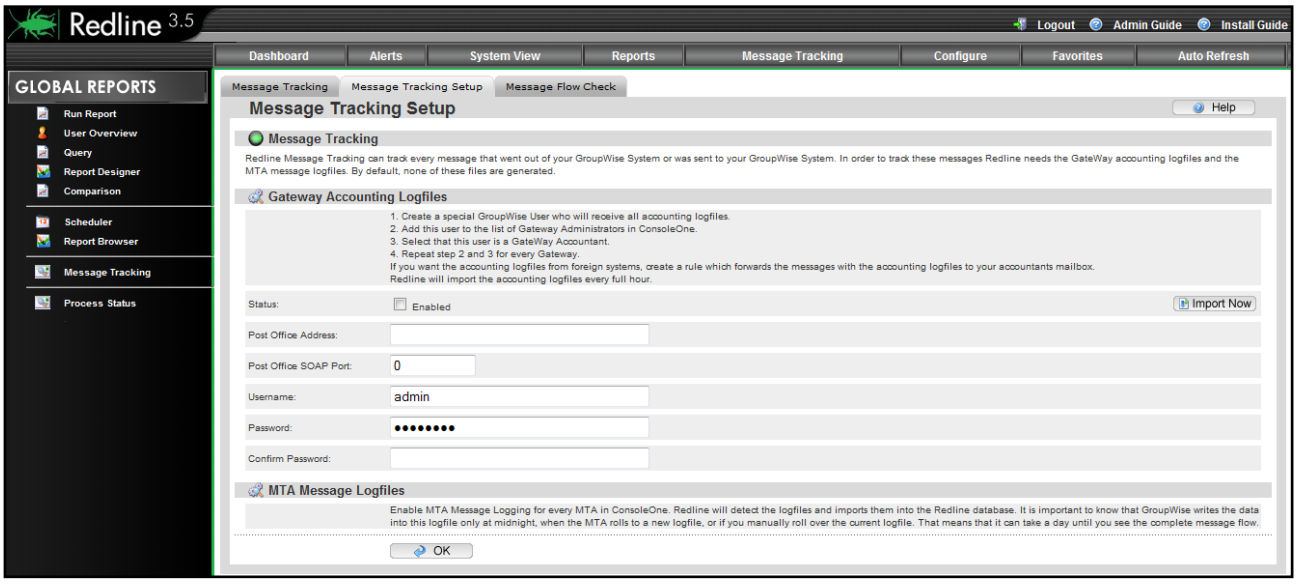
With Redline Message Tracking it is possible to track every message that is coming in to GroupWise or leaving GroupWise through a gateway like the Internet Agent. From there you can see through which domain(s) and at the end to which post office and user the message was delivered to or sent from. Status messages are tracked as well.



Before you can use Message tracking, it is necessary to set up accounting for your gateways and import the accounting log files into Redline.

Message Tracking Setup

Message tracking works by pulling the audit information from the GWIA and MTA. Redline detects and pulls these log files automatically, but they must first be generated by GroupWise. After accounting has been setup in the GWIA, the appropriate information must be provided: POA address, SOAP port, Audit account, and password. Message tracking will not function unless the setup is set to enabled.



How to setup accounting for the GroupWise Internet Agent

1. Select the GWIA where you want to setup accounting
2. Click on the Tab “GroupWise“ and the sub tab “Gateway Administrators“
3. Add a user to the GroupWise Admin
4. Check that this user is an accountant for this gateway

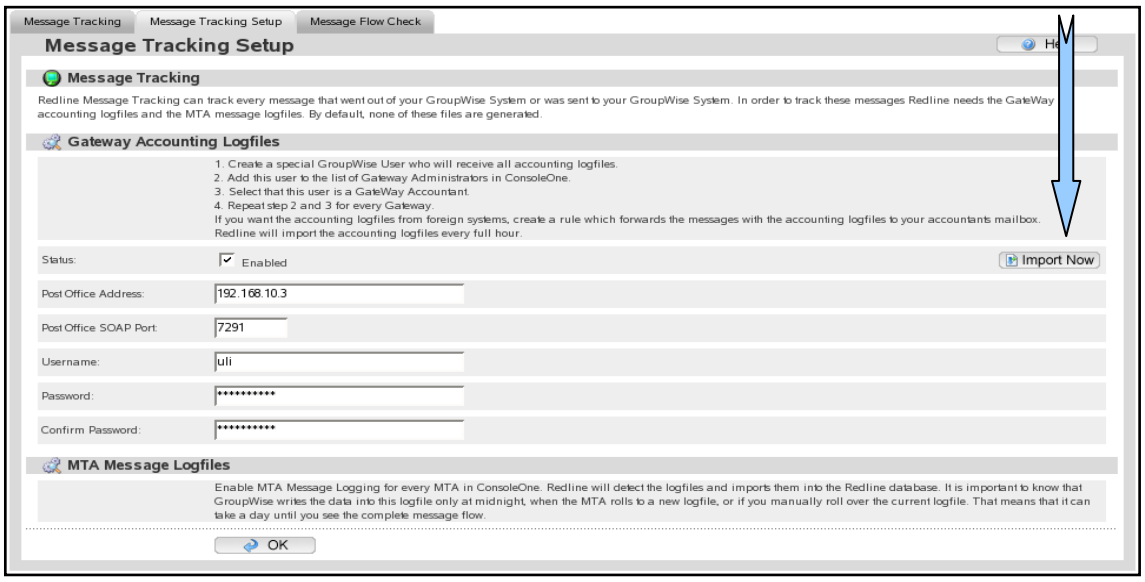
After that GroupWise will send accounting messages to this user. Check how large the attachments of these messages can be. If they are larger than 1MB, for example 6MB, you need to specify the /soapsizelimit=8192 in your Post Office startup file. Possible entries for /soapsizelimit are:

- **4096**
- **8192**
- **16384**
- **32768**
- **65536**

Automatic import of accounting files into Redline

1. Ensure that accounting import is enabled.
2. Specify the IP address of your Post Office.
3. Specify the SOAP Port of the Post Office.
4. Specify the Username and Password of the User assigned as the Gateway Accountant.

Import Accounting files now

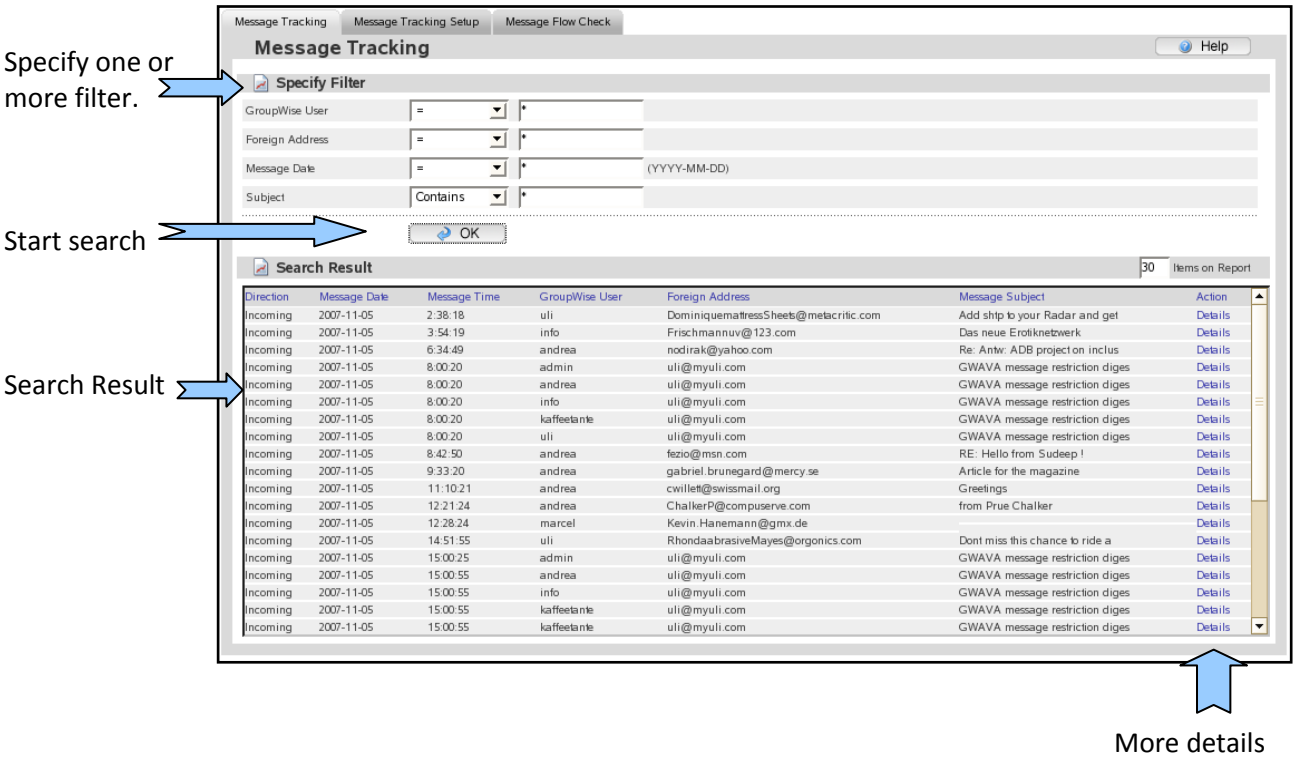


If you want to import all available accounting log files from the specified mailbox, click on the button “Import Now“. After a few moments the log files should be imported.

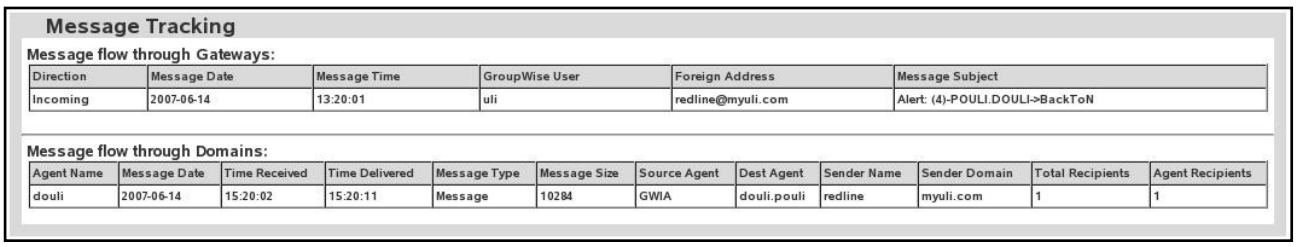
In order to have message tracking through the domains and to the Post Office, you need to enable the MTA Message Log files for every MTA in your environment. Redline will find and read these log files automatically. After that Message Tracking can be used.

Track a Message

Browse to Message Tracking and specify some filter. If you don't specify any filter, all messages will be listed if you click on OK.

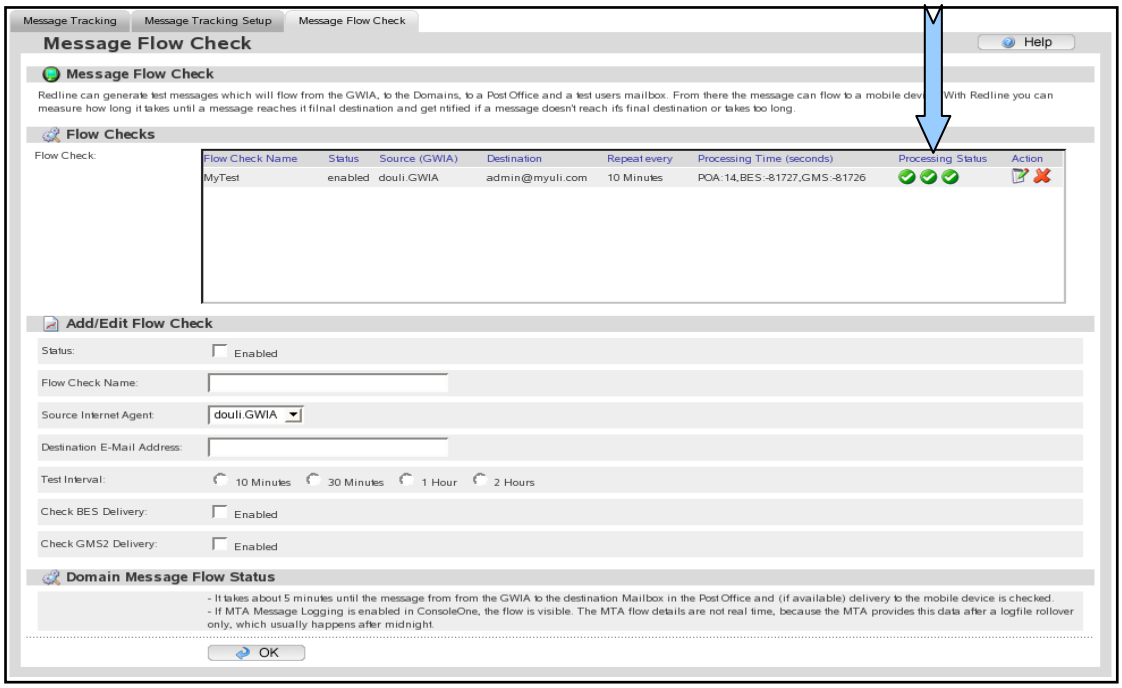


Redline lists 50 messages only, so it is important to specify the correct filter or sorting to find the message you are looking for. If you've found the message, you can click on the “Details” button to see through which Domains the messages was routed and which was the destination or source Post Office and User.



Message Flow Check

Redline monitors message flow by creating a test message and sending it through the system via a relay. The test message never is external to the system. Redline monitors the time that the Message is accepted by the GWIA, by monitoring the GWIA log file, and then checks the time that the message makes it through the POA, by monitoring the POA log file. Through comparison of these two times, Redline will know if the message takes more than the allotted time, (default is 20 seconds), to move through the system, and will generate an alert if the system is slow or unresponsive. The allotted time for this test is specified in the *Post Office Threshold* called *Message Flow Processing Time*. This test is performed according to the interval specified. From the Post Office, the message can flow to a BlackBerry device, with the help of the Blackberry Enterprise Server, or to another mobile device through a GroupWise Mobile Server.



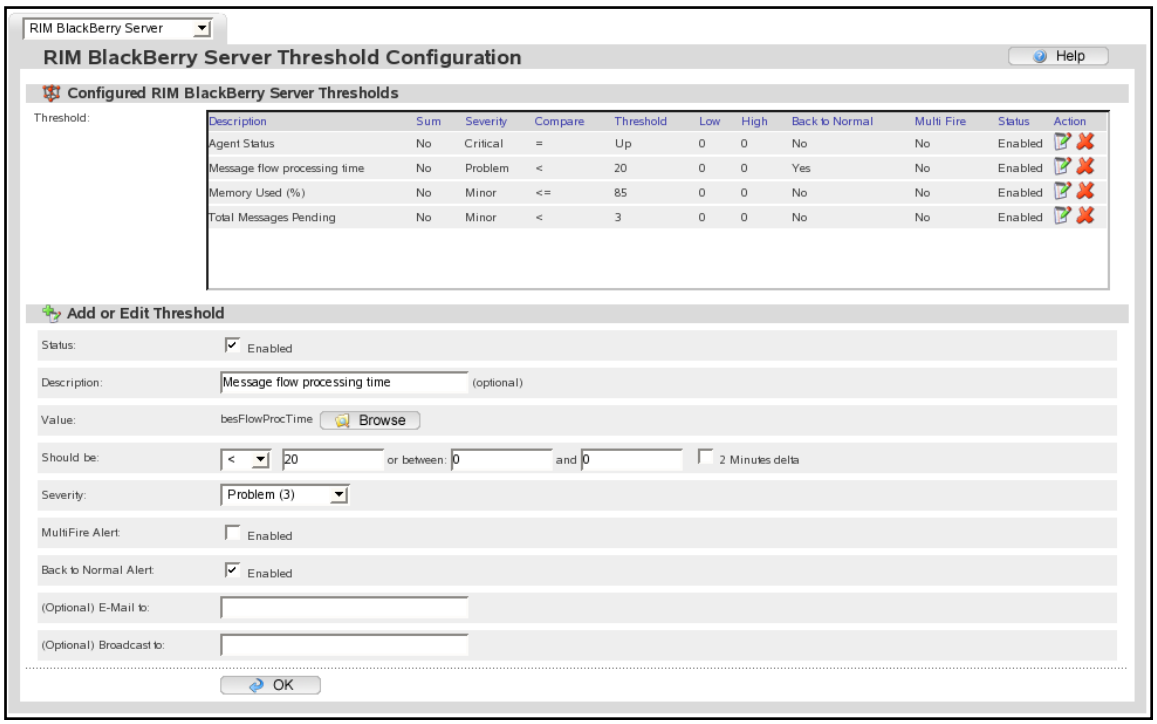
Status of Message Flow

In order to test message delivery to a BlackBerry device, it is possible to set up a virtual device which is connected to the BlackBerry server. The BlackBerry server doesn't see any difference between the virtual device and a real device. For more information about setting up a BlackBerry Enterprise Server and a Virtual Device, check out the Documentation of your BlackBerry Enterprise Server.

How to set up message flow check

1. Specify a Name for the flow check.
2. Select the Internet Agent where the message starts.
3. Specify a username who will receive the message.
4. Specify the interval how often a message will be sent.
5. Check if delivery to a mobile device should be checked.
6. Create a rule in the destination mailbox, that incoming messages will be deleted automatically.

If a message couldn't be delivered in 30 seconds, an alert is generated. The time until a message needs to be delivered can be configured based on a threshold called “Message Flow processing time”. This threshold exists for the Post Office agents and the GroupWise Mobile Server as well. (Found under configured thresholds for each agent. I.e. **System View** | <desired agent> | **Configure** tab, thresholds section.)

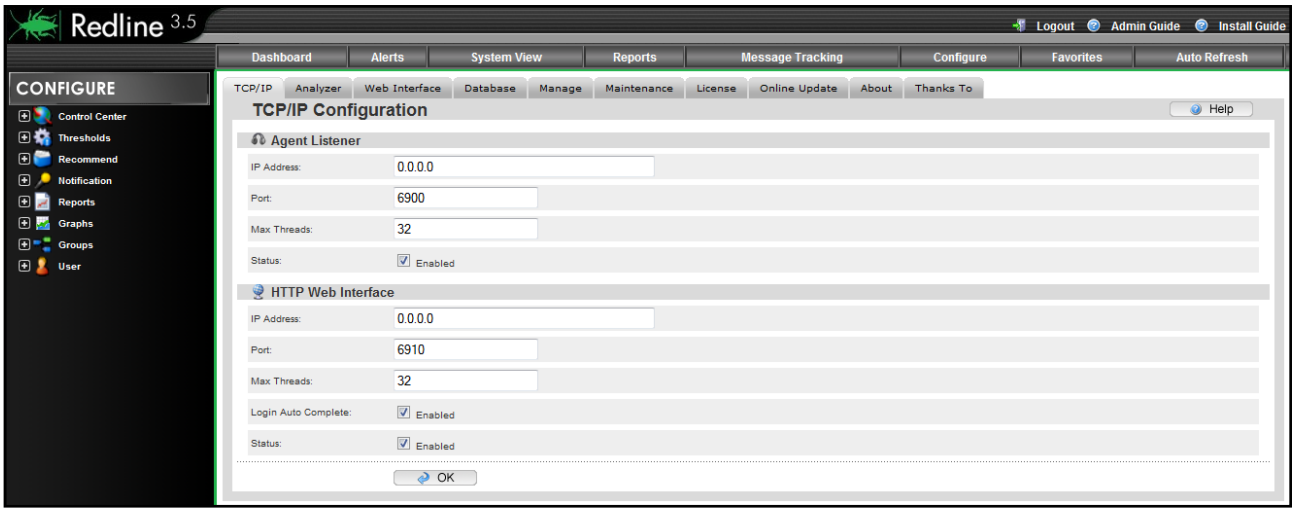


Configure

The Configure section provides base configuration for the entire Redline system. (Configuration of individual agents, graphs, and sections are found in the individual agent's configure tab.) The different tabs listed under configuration deal with system-wide control and general information.

TCP/IP

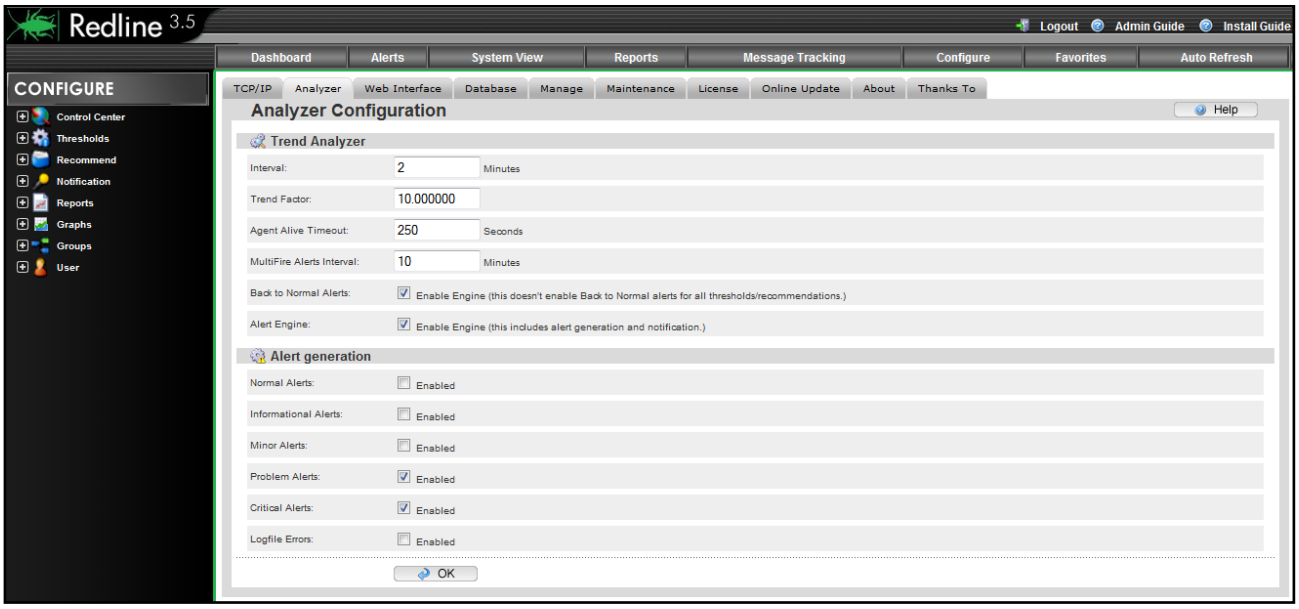
The IP address which the Redline Control Center is bound to, what port it listens on, and how many listening threads is controlled through this tab, for agent and web interface connections. These settings are usually not modified.



By default, the address settings are all 0.0.0.0. If multiple addresses and interfaces are present on the host server and a single address is desired, or perhaps a different port, this is where it is specified. After any changes have been made, clicking 'OK' saves changed settings.

Analyzer

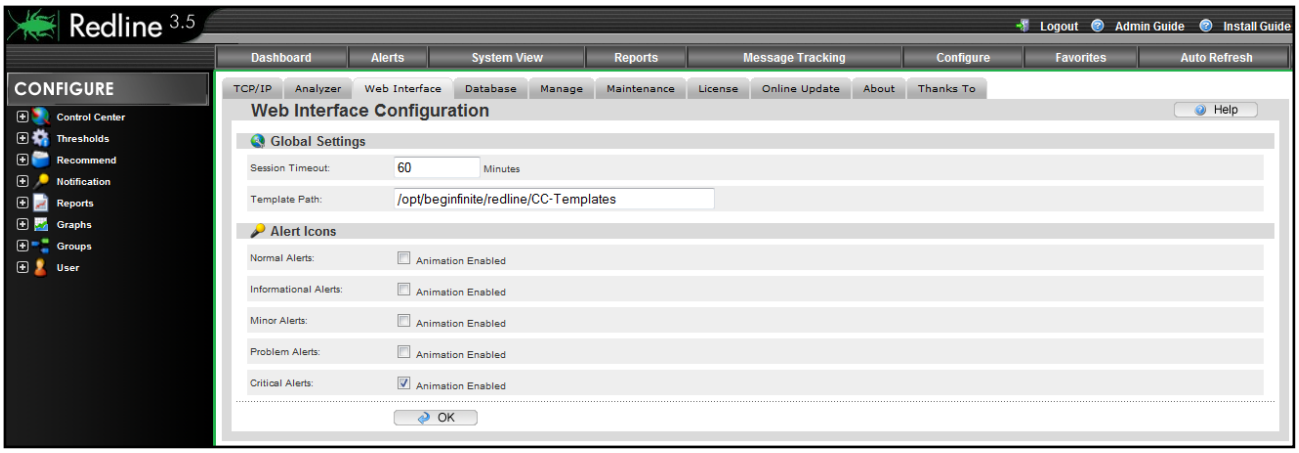
Part of the core of the Redline system is the analyzer. The analyzer settings control the module of Redline which analyzes and interprets the incoming data from registered agents. Changing settings here modifies how notifications and alerts through the system are defined and triggered. For instance, if a lower trend setting is desired in order to notice smaller bumps and dips in traffic, activity, or inactivity.



Select the 'help' informational button for individual breakout and explanation of different settings. Default settings are shown.

Web Interface

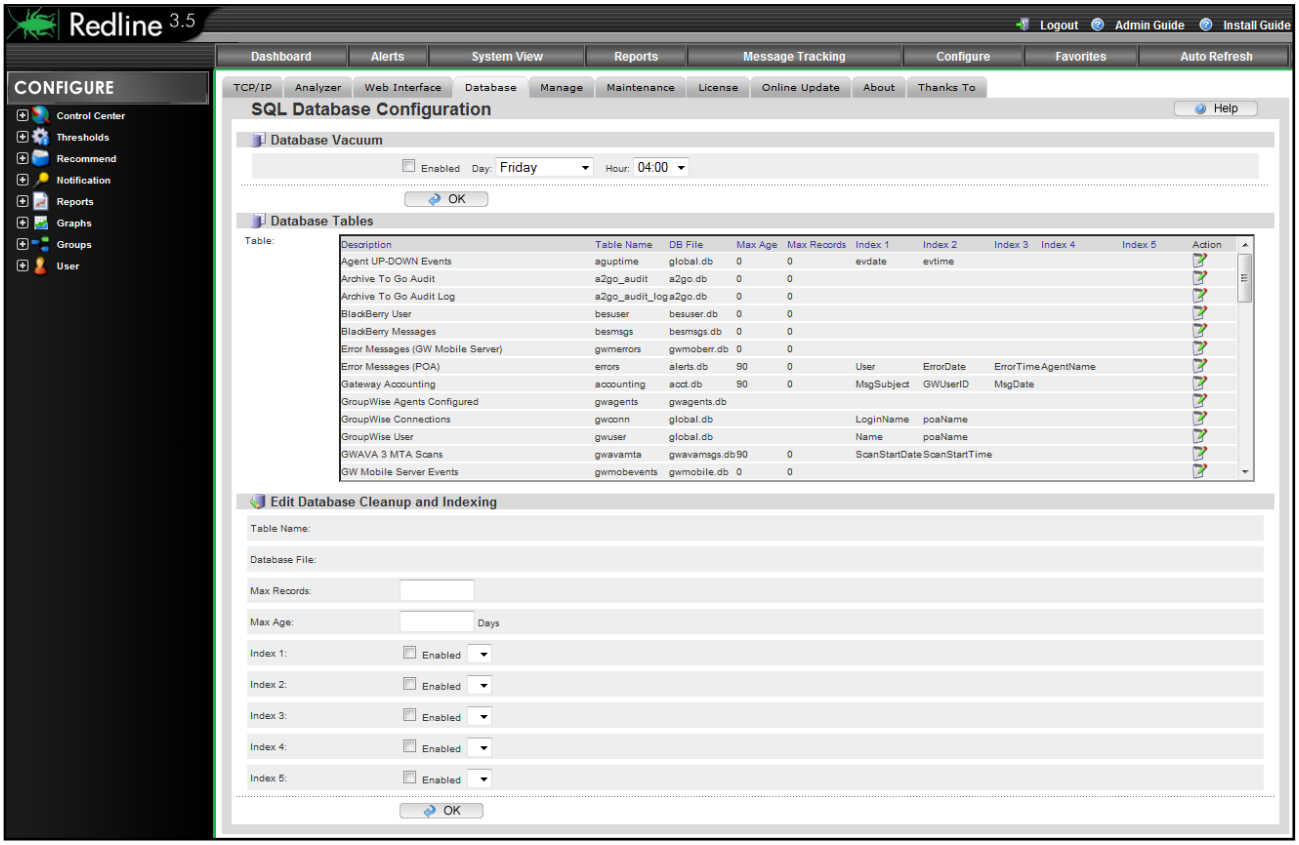
While the TCP/IP tab enabled the web interface and controlled the connection listening address and threads, the Web Interface tab controls the behavior of the web interface itself; session timeout, templates, and the animation of alert icons. The template path is for customizing the web interface, and is usually left at default. Do not change it unless sure of operation.



Database

Access to information about, and cleaning and re-indexing of the Redline database is provided here. In certain large environments, the Redline database may become slow or bogged down when used to generate reports. If a report is taking an inordinately long time in generation, it may be necessary to clean and index the database tables sourced in the report. This does become critical in large systems.

Different tables are listed, and may be sorted simply by clicking on the headings. Sorting the databases by heading may be done in ascending or descending order simply by clicking on the heading name a second time. Once the desired table has been located, it may be selected for cleaning and indexing by clicking on the action icon.

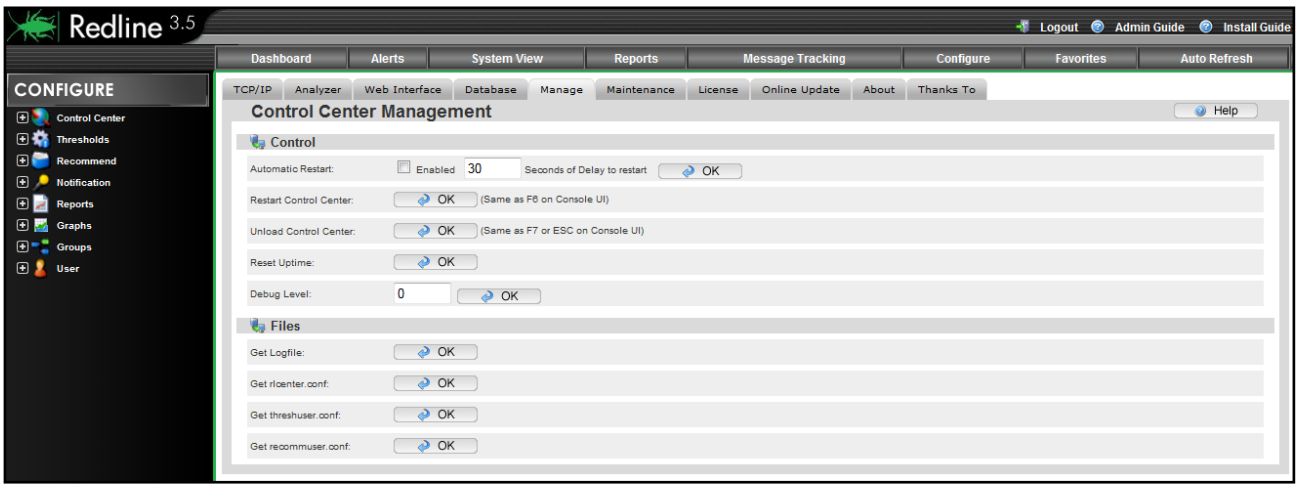


Once selected, a table's information is loaded into the cleanup and indexing section; where default cleaning options are propagated. If further cleaning of additional index tables is desired, enable an open index option and use the dropdown menu to select the desired index to clean. Click 'OK' to begin cleaning.

The cleaning of the database is not needed on a regular basis unless the report generation begins to lag. Standard maintenance will take care of normal or smaller sized systems. See the maintenance section for details.

Manage

Control Center Management shows settings for the log levels, basic control of the Control Center, (loading, reloading, unloading, and automatic reset), and access through the web interface to the configuration files.



Automatic restart of the Control Center should not be used unless in coordination with Support as part of a troubleshooting measure. Restart of the Control Center is helpful if the configuration has changed and a re-load of the Control Center is desired. Unloading the Control Center will shut down Redline.

The Debug Level determines the amount of information in the log file. Acceptable settings are 0 - 6. (Additional levels are available to Support, but should not be attempted without support's instruction.) Default is '2', and all practical use in a production environment are the settings: 0, 2, 6. A setting of '6' is for debugging purposes, '2' is for normal work, and '0' is minimalist. Selecting 'OK' saves changes or begins the indicated action.

Maintenance

The Maintenance tab grants access to the basic cleaning and up-keep operations that maintain the speed and usability of the Redline system and interface. Maintenance runs nightly, and should not need to be triggered manually unless the Redline Control Center was not running at the specified maintenance time.

Most of these settings do not need to be modified from default, but can be adjusted to suit the particular needs of every system.

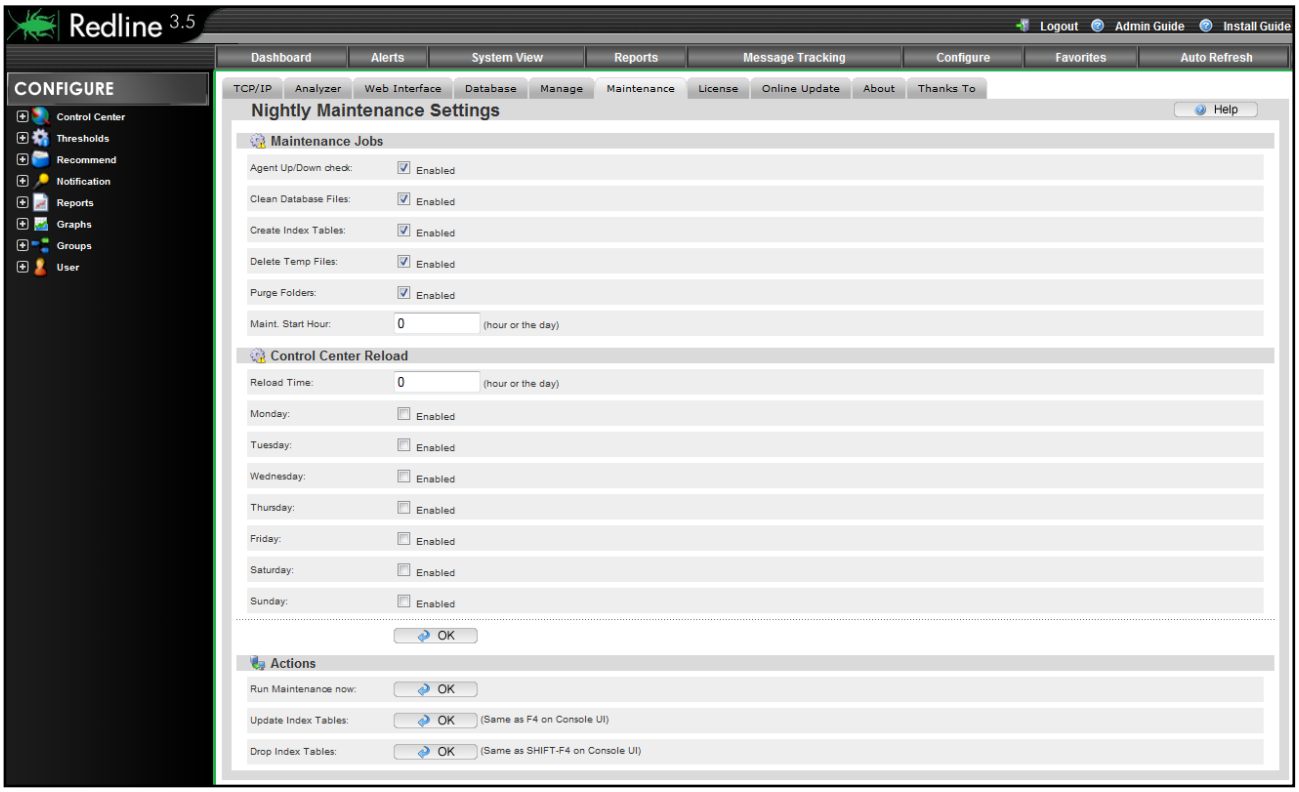
Nightly maintenance jobs include: checking the availability of the agents, cleaning the database files and index tables, deleting temporary files, and purging folders. These steps are usually enough to keep Redline from becoming bloated or bogged-down in all but the largest system implementations. If more than usual maintenance is needed, maintenance can be triggered immediately from this page, or targeted cleaning of specific tables in the database maybe completed through the Manage tab.

Nightly maintenance may be configured to exclude or include specific parts of the default procedures. To enable or disable the procedures, place or remove a check in the appropriate 'Enabled' checkbox for the desired procedure.

The maintenance start time is set in a 24-hour clock, and is a time-sensitive event that does not queue. If the Redline Control Center is not running at the specified maintenance time, the maintenance job will not be run until the next maintenance cycle. If the default time of '0' is not an appropriate time to have the maintenance cycle run, select an appropriate time when system load is low and no reports or other system maintenance which might interfere is scheduled.

Changed settings must be saved **before** maintenance is manually triggered. click the 'OK' button above the Actions menu to save changes before triggering manual maintenance or browsing away from the page, or the changes will not be implemented.

If the host server needs to be shutdown during the set maintenance time, manually triggering a maintenance cycle will become necessary, especially if the shutdown is routine.



The Control Center may be set to automatically reload itself, restart, at a specific hour and day. This is also not a normally necessary procedure, but may be necessary for specific host server needs. It is recommended to only use the Control Center Reload function under instruction from Support.

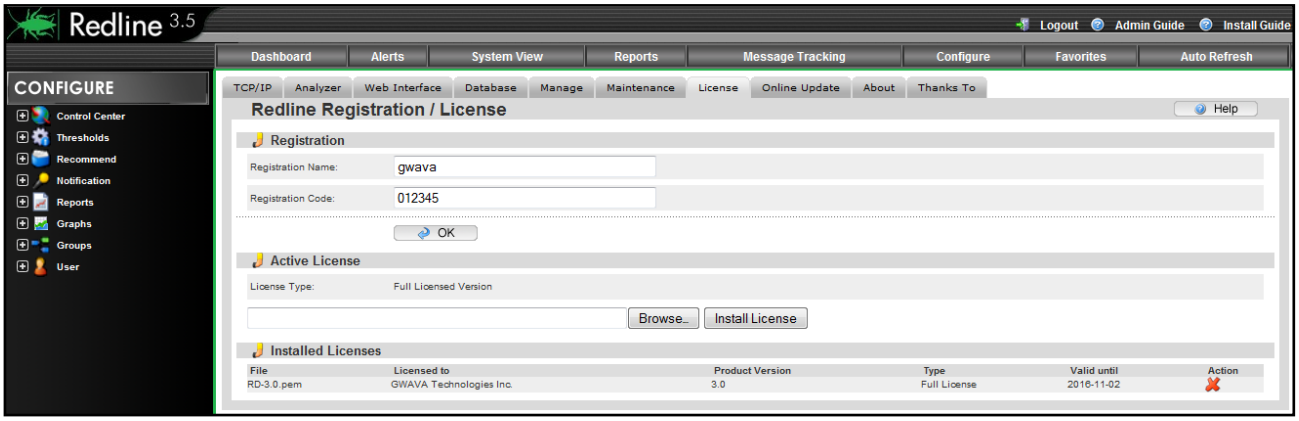
The Actions menu allows for the manual triggering of a maintenance job, as well as specific maintenance jobs not regularly scheduled. Redline can become bogged with information in the database which is no longer current, or pertinent information to the system. Dropping index tables and updating index tables will clean out the system and allow Redline to pull all new information into the system. However; these actions will not be beneficial and may cause harm if the information removed from the system will simply be repopulated back in by monitored agents. This should ONLY be used under the advisement of Support, and if the system becomes bloated or the DB becomes stuck.

License

The Redline registration name, code, and license files are controlled and listed here. The Registration name and code are used for verification and as a data encryption key for communication between Redline Agents and the Control Center. The registration name and code must be manually specified in the configuration file for each Redline Agent. Changing the registration information would prohibit any agent from connecting to the Control Center until each agent's configuration file had been modified to reflect the new information.

After initial setup, do not change the registration code or name unless absolutely necessary to avoid connection problems. If changed, the registration code and name must be manually modified for each Redline Agent.

The registration information does not need to be anything in particular and is not connected to the license file; it may be anything desired. Though the registration code is recommended to be a mixture of numbers and letters, for security reasons.

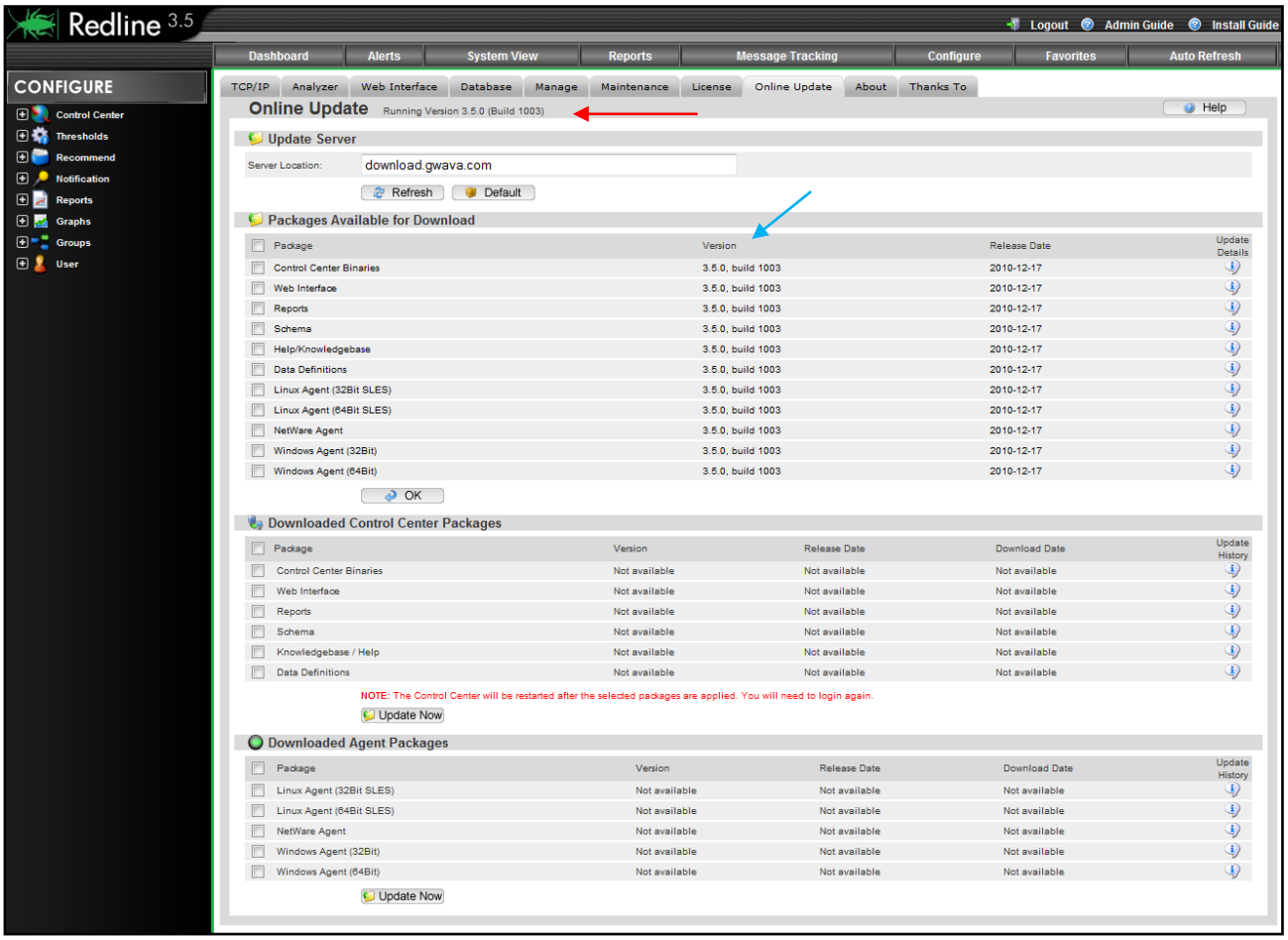


Installed licenses are listed along with their expiration date and type. Licenses may be added or removed from this location.

To obtain a license contact the GWAVA sales representative in your area, or visit https://licenses.gwava.com/ to use a Validation key and claim a license for your system and find contact information for sales representatives in your area.

Online Update

The Online Update system connects to either the GWAVA download server or a specified server and checks for updated software. The current version the system is running and the available versions for download and update are listed. New updates are listed in black while downloaded updates are grayed out.



Before packages can be installed, they must be downloaded from the download server. The default download server points to the official GWAVA download server, and will carry the appropriate available version. If a separate server is required or desired for download, it may be specified in the 'Server Location' option. After specifying the new download server, click 'Refresh' to check for available versions. Clicking the 'Default' button will return the download server to the GWAVA default.

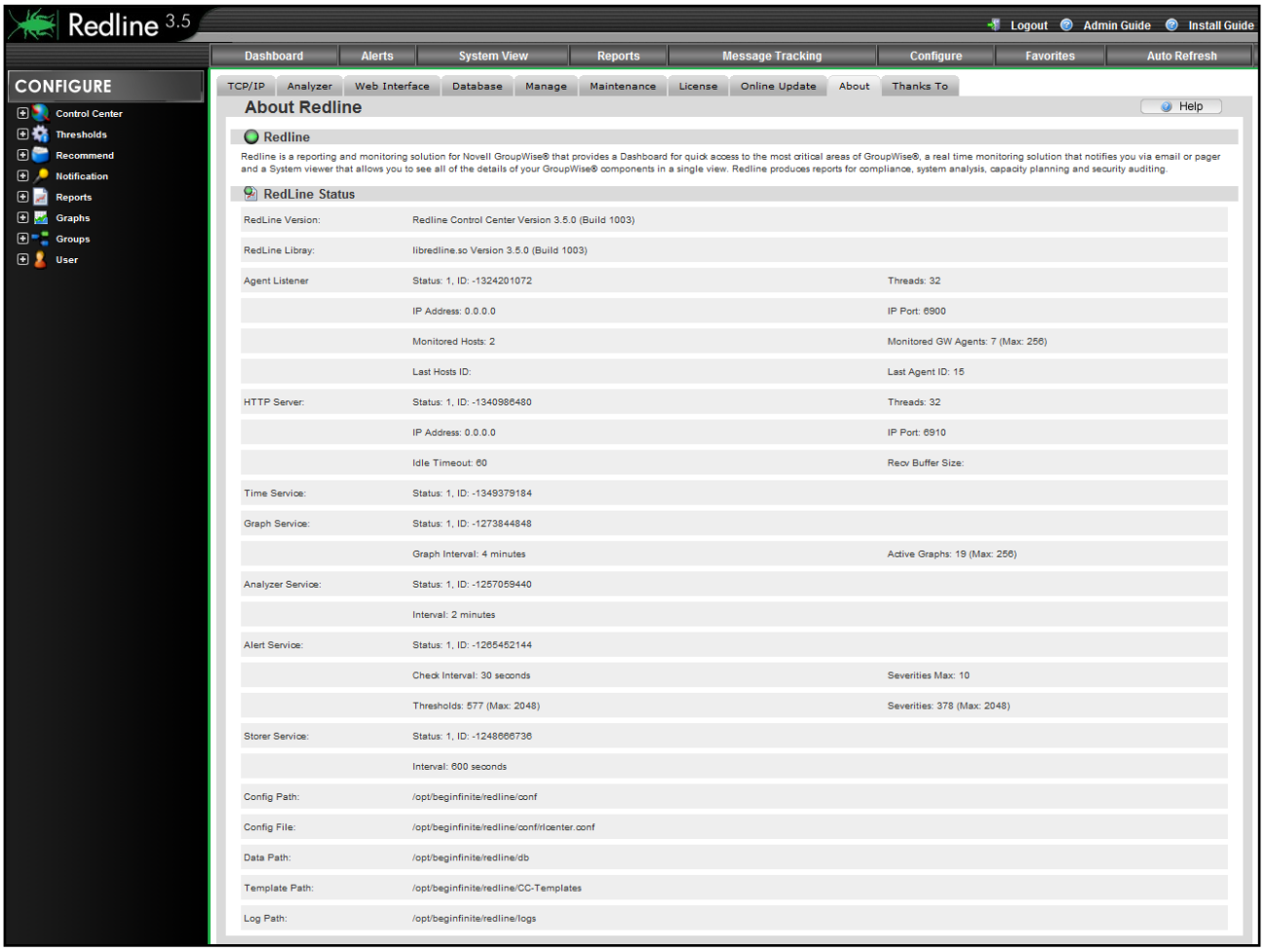
The Control Center must always be updated first. Select the appropriate, desired, or globally select the packages for download from the top, packages available, section, then select 'OK' to have the system automatically connect and download the specified version. After the packages have been downloaded to the Control Center, they are then available to be installed by the system. Select, either globally or separately, the desired systems to update, and then click on the 'Update Now' button to update the specified modules. Any update to the Control Center requires the Control Center to restart. After clicking the 'Update Now' button, allow sufficient time for the system to restart before attempting to login.

For Agents, the update is a little different, as the agents must connect to the Control Center and copy the appropriate binary package for each platform. Agents do not maintain constant contact with the Control Center, and as such, the update may not be immediate. The default contact cycle for the Agents is every 2 minutes, and as such, several minutes may pass before the system is updated. Agents copy the new binary down, install it, and then restart and reconnect with the Control Center.

The update history information icon will provide further details about the updates offered.

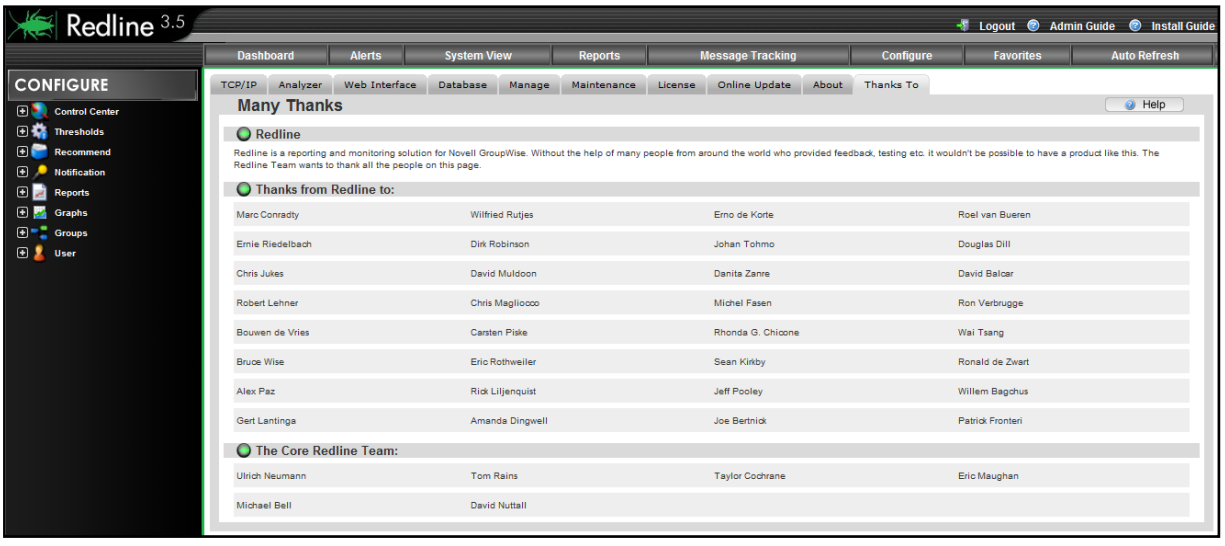
About

The 'About' page contains information on the running versions, server contact information analyzer information, working threads, etc... Because of the wealth of information on the server displayed on this page, the About page is an excellent quick-glance to find configuration information on multiple systems at a glance. The About page is purely informational and each system is configured through its respective page.



Thanks To

Acknowledgments page.

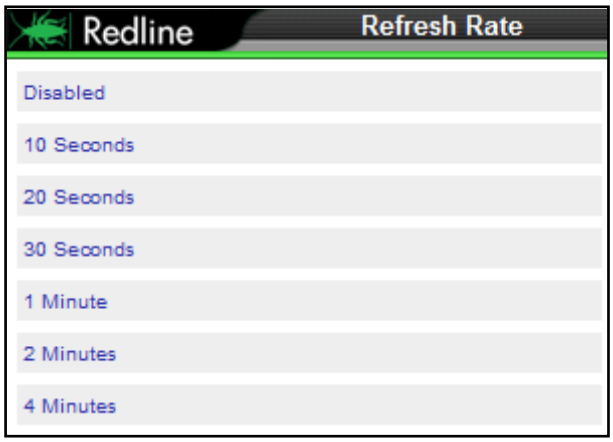


Favorites

The Favorites menu button provides quick links to access the most frequently visited pages in the system. It is provided as a convenience. Redline maintains a separate favorites page for each individual user.

Auto Refresh

Redline can automatically refresh the main page for status and general update of system information on the selected interval. This allows the Dashboard to be left up on the desktop and maintain updated information on the system statistics and trends. As each agent updates every 2 minutes by default, the '2 minutes' option makes the most sense, yet agents may be set for higher refresh rates.



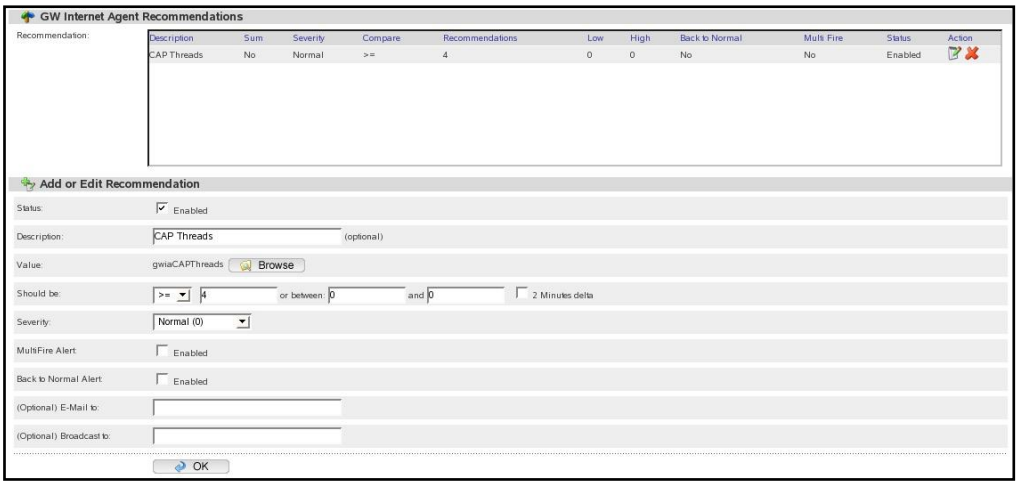
Application

How to configure Agents and Agent settings

How to configure a new agent specific threshold or recommendation

1. We want to make sure that for one Internet Agent the number of items in the GWHOLD queue doesn't exceed more than 30 items.
2. Browse to System View and select an Internet Agent of your choice.
3. Click on the “Configure” tab.
4. Select the value “GWHOLD Queue”.
5. Click the status enabled checkbox
6. Specify the threshold “Should be” “<=” “30”.
7. Set the severity to Minor
8. We want the alert to solve itself as soon as the hold queue has less or equal 30 items.. Check “Back to Normal Alert”.
9. Click OK to save the new threshold.

Recommendations are defined in the exact same way as thresholds, and located on the same page, directly below the threshold configuration area.



Defining agent specific graphs is very helpful in large environments. It avoids the generation of many unnecessary images, if a graph is only needed for one specific agent. Other than being agent specific, defining an agent specific graph is exactly the same as the global graph configuration.

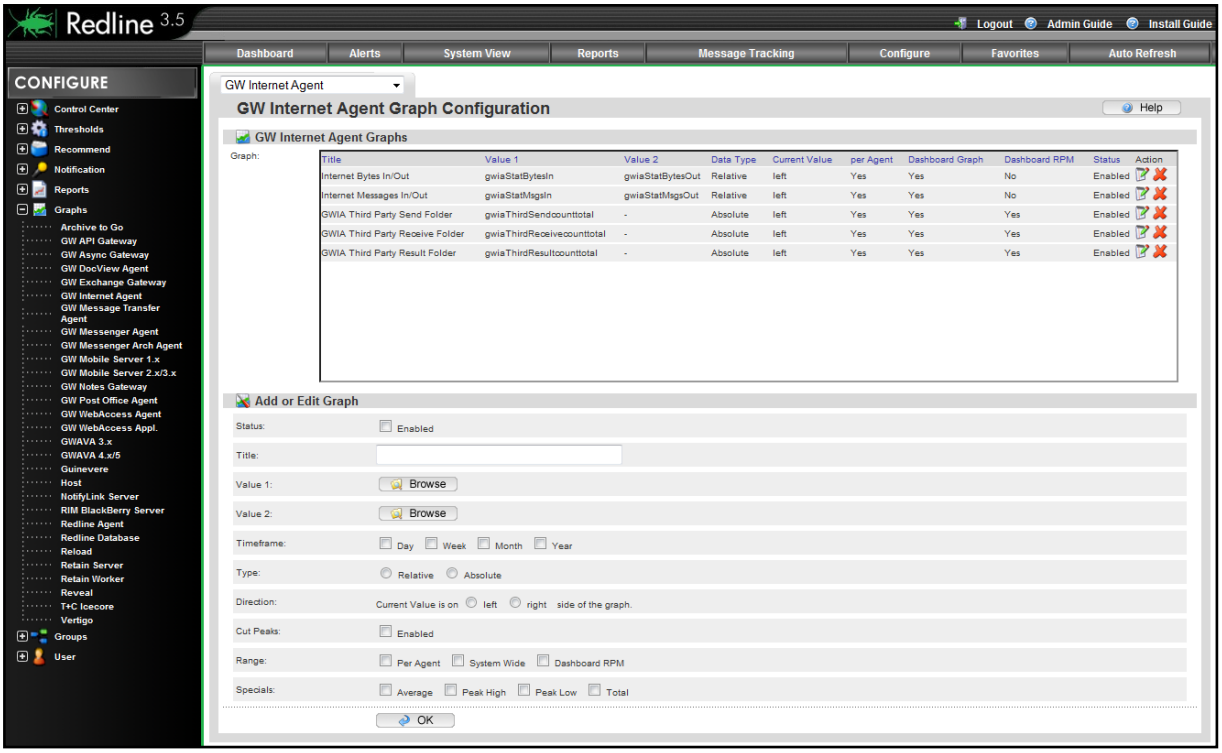
Sometimes it is necessary to remove an agent from Redline. At the bottom of the manage page for each agent is a button which will remove that agent from the list of active monitored components.

The agent will no longer show up on Dashboard, Alerts List or System View, however, all data about this agent will stay in the database for reporting. It is important to keep this data for tools like Message Tracking, message analysis reports, etc.

Items in the system tree navigation pane

Configure graphs

The Configure main toolbar selection brings up a 'Configure' section in the left hand navigation pane. The items here allow for global configuration not set for particular agents. Individual graphing or other options, such as Reports, Notifications, Thresholds, and Recommended settings, have their corresponding configuration listed underneath each specific agent. The Configure menu and page shown below is a global configuration for the entire Redline system.



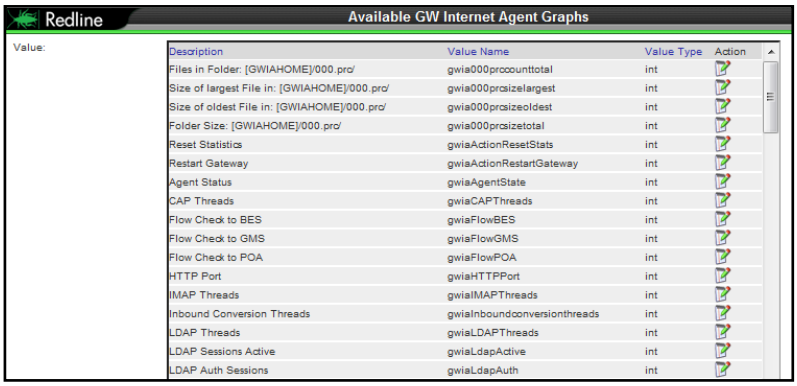
Every value that Redline monitors can be used to generate graphs. Configuring graphs can be done in two places: Configuration, for global settings, and in the System View for separate, individual agents. If you define a graph in the Configuration area and not in the System View on the agent, you can generate graphs for every agent by configuring one graph setting. The disadvantage is that all the graphs are stored on the disk drive. If the system has many agents, global graph creation can create a lot of files.
Elements that can be customized in graphs include:

- Status: Enabled/Disabled
- Title: A human readable name for the graph
- Value 1: Any value that Redline can monitor
- Value 2: Any value that Redline can monitor
- Timescale; Day, Week, Month, Year
- Type: Relative or Absolute
- Direction: Current value is on the left or right side.
- Range: Per Agent, System Wide, Dashboard RPM.
- Specials: Average, Peak High, Peak Low, Total.

Status
Instead of removing a graph configuration it is possible to disable a graph. That way you can enable the graph later.

Title
The title is a human readable description which will show up as the title in the charts. This can be any text you want.

Value 1/Value 2
You can browse for all available values. The window lists all values including description, value name defined by GroupWise and value type. The available values are defined with the Redline schema files.



Timeframe

Graphs can be generated for different timeframes. For every timeframe a separate image will be generated. Available timeframes are:

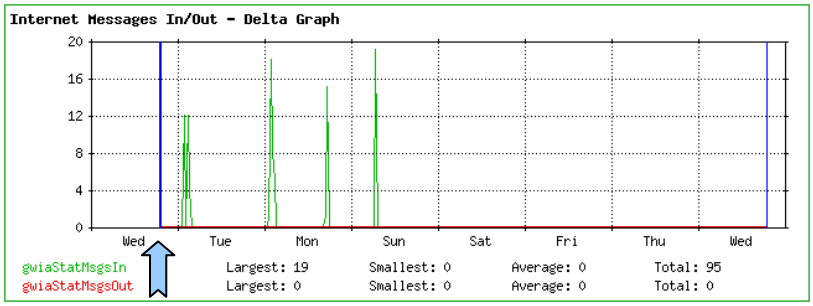
- Last day
- Last week
- Last month (Last 4 weeks)
- Last year

Type (Relative and Absolute)

Relative values are used for counters that rise while absolute values are used for values which show a current state (for example users connected). Relative values can be used to draw charts with counting values, like the total number of messages processed. Relative values draw the difference between the values. Think about Messages Received from the internet. Redline reads this value every 2 minutes, and it could look like this: 120, 150, 180, 200, and 220. If you would draw the chart with absolute values, it would just go from the bottom left to the top right corner. A relative graph draws a line which shows that in 2 minute intervals 30, 30, 20, 20 messages have been received, which is more useful.

Direction

The current value in a graph can be on the left or the right side of a graph. There are two blue lines which show the timeframe specified. The thick blue line indicates where the current value is.



Thick Blue line

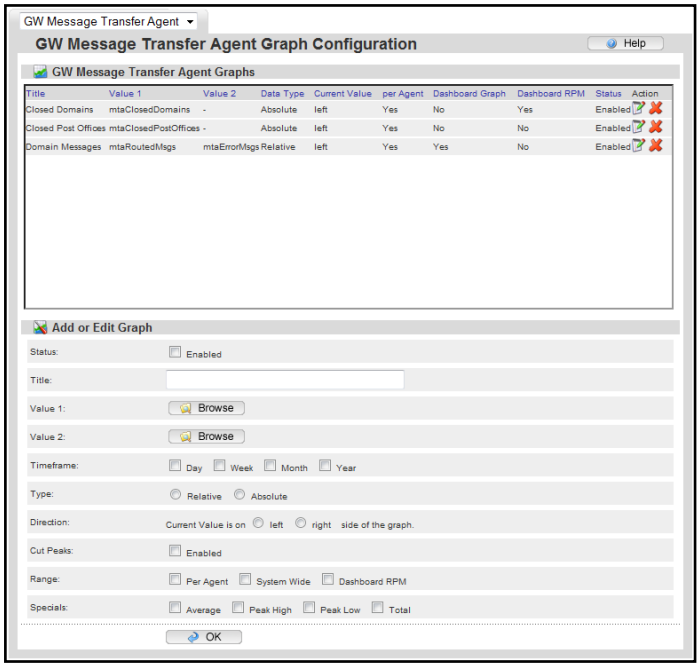
Range

The range of collected data can be set for each graph.

- **Per agent** – A separate graph is generated for every agent.
- **System Wide** - Adds all values of the agent types into one graph, and this graph will be selectable on the Dashboard.
- **Dashboard RPM** – If selected the summary of the value of all agents of the same type will be drawn in a RPM graph which can be selected on the dashboard.

Other selectable characteristics include **Average, Peak High, Peak Low** and **Total**.

How to create a new graph with two values



Assume we need a Dashboard graph with the MTA values “Routed Messages“ and “Error Messages“.

1. Click Configure / Graphs / GW MTA.
2. Check the Status Enabled checkbox.
3. Give the new graph a name, for example: Domain Messages.
4. Click on the “Browse” button for the first value and click on the column title “Description” to sort the table based on that column.
5. Click on the icon for “Routed Messages”.
6. Close the Window with all the available values.
7. Click on the “Browse” button for the second value and click on the column title “Description” to sort the table based on that column.
8. Click on the icon for “Error Messages”.
9. Check the checkbox for the timeframe “Day”, “Week”, and “Month”.
10. Select Type “relative“, because the values count messages.
11. Select Direction “Current value on the left side”.
12. Check the checkbox for “per Agent” in order to have a graph available in the System View.
13. Check all checkboxes for the 4 special values.
14. Click “OK” to save the settings.
15. Go to the System View and select a Domain.
16. Go to the “Graphs” tab and select the new graph.

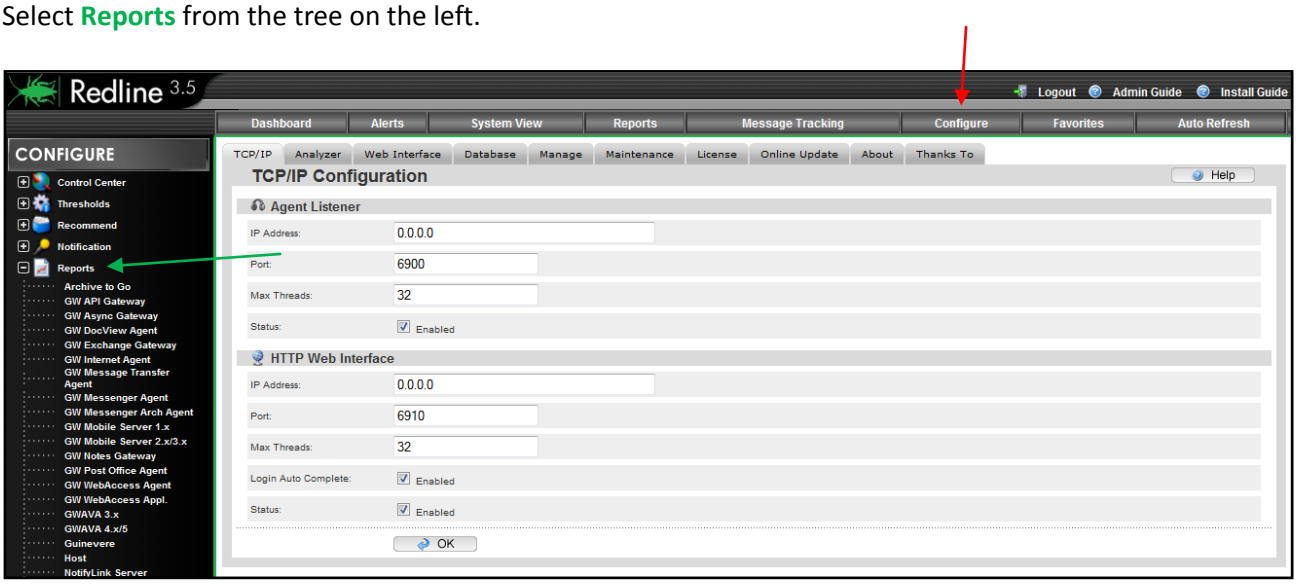
It is possible to configure a graph for this agent only, if you define the graph on the agent’s configuration page.

Report Generation and Custom Reports

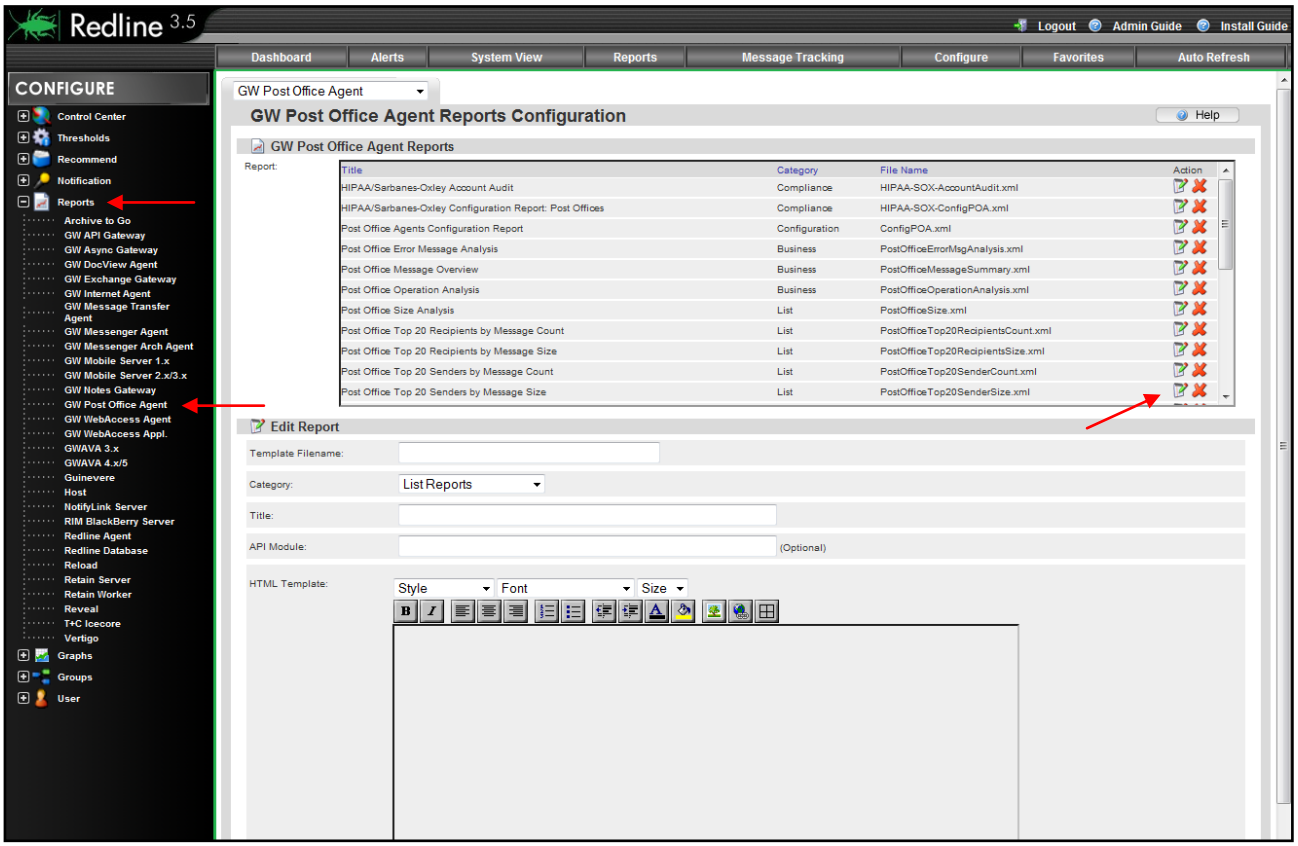
Modifying Reports

Select **Configure** from the top toolbar

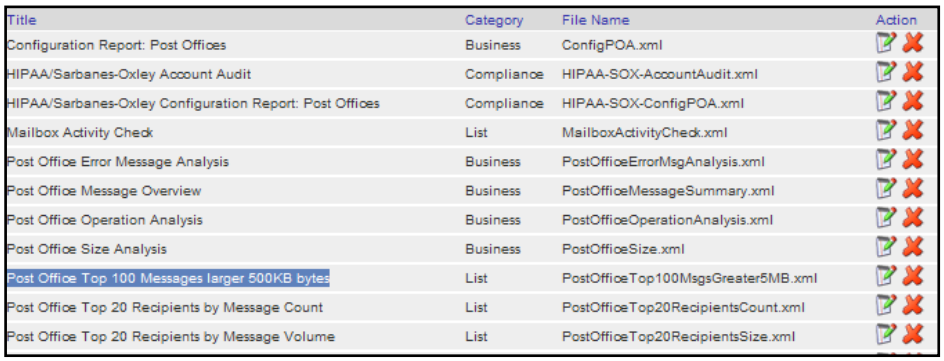
Select **Reports** from the tree on the left.



To edit a report you need to first select it. You can either select the report from the drop down menu in the Configure page, or you can expand and select the desired report by clicking on **Reports** from the tree on the left and selecting the object and agent with the desired report source.

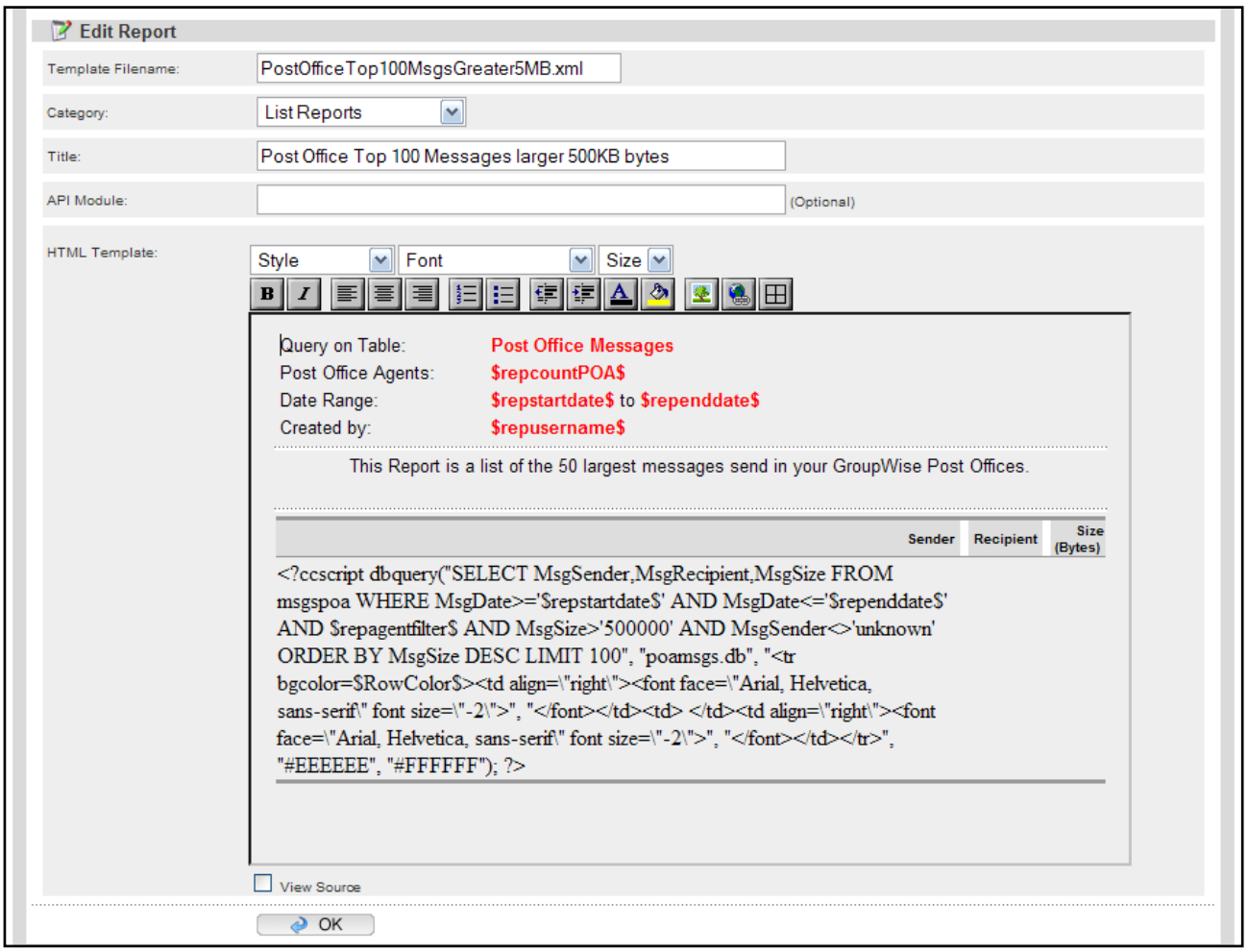


For our purposes, we will be creating a new report on the top 100 messages over 5 MB. From a very similar report: top 100 messages over 500Kb. This report is generated at the Post Office level.

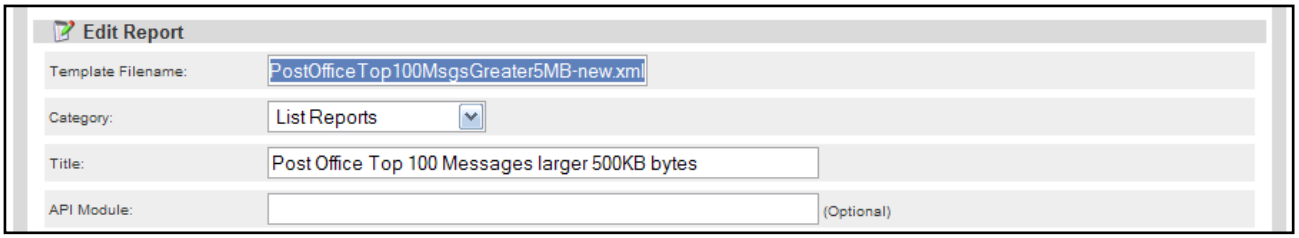


Locate the report you wish to use as the source for your custom report, and click on the Notepad, the **edit** option, to open the report for editing.

The Report will be opened below for editing.

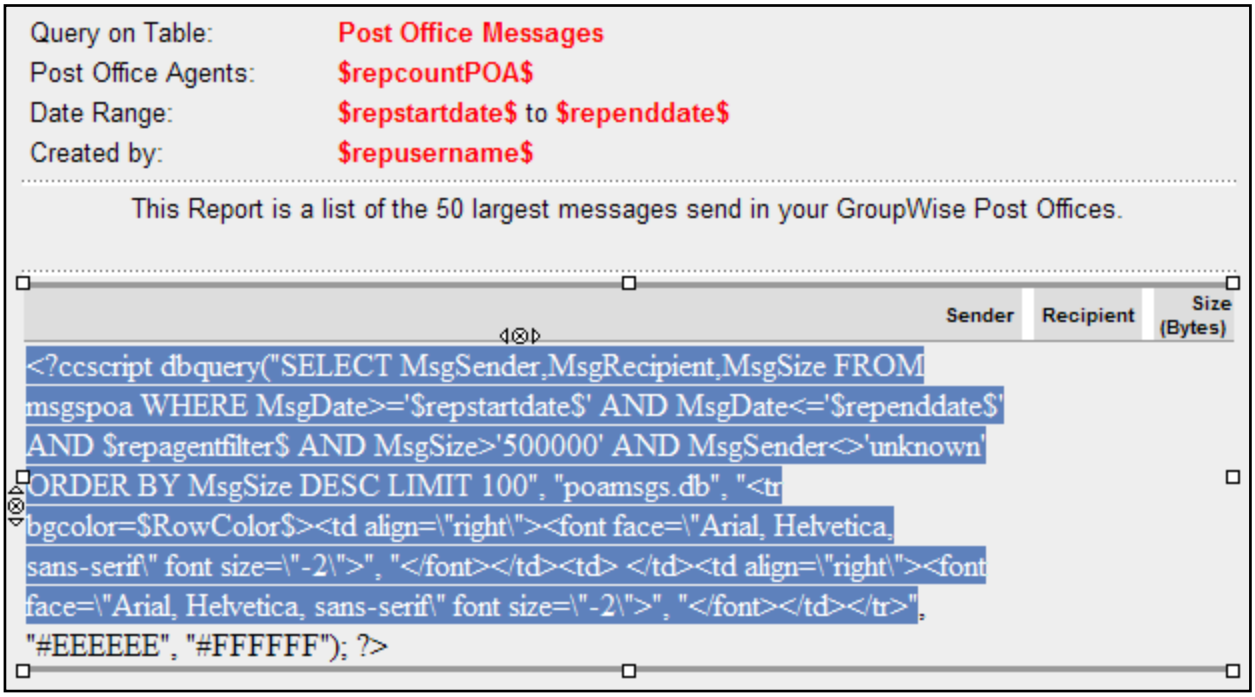


The Report is comprised of more than is listed here, but the database query is all that needs to be edited as it is the part of the report that grabs the data.

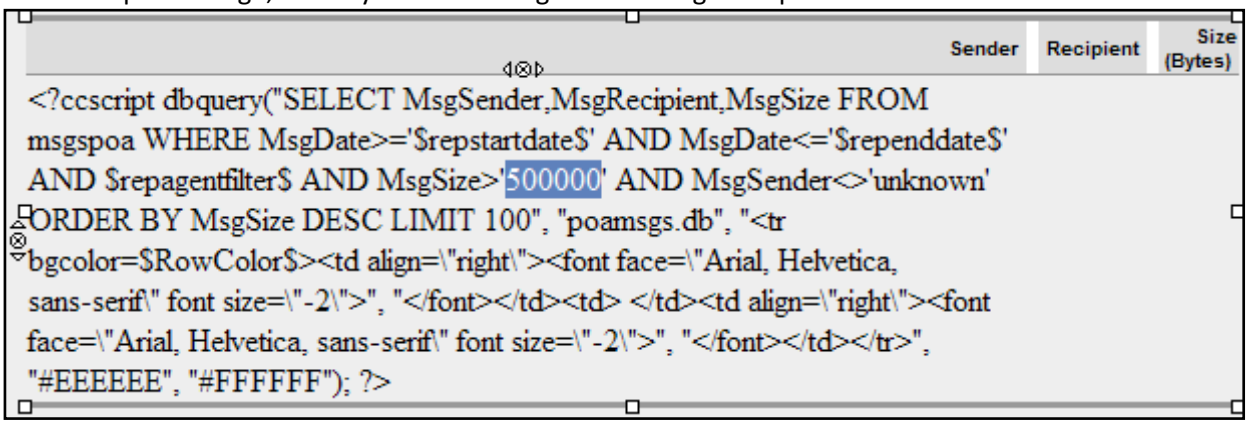


BEFORE YOU EDIT OR SAVE CHANGES IN THIS REPORT, YOU MUST CHANGE **TEMPLATE FILE NAME**, OR YOU WILL OVERWRITE OR CORRUPT THE EXISTING REPORT. It is also a good practice to change the report title to match your new template name to simplify finding the report, and to have a correct title to your generated report. This is not required, and may be anything you wish.

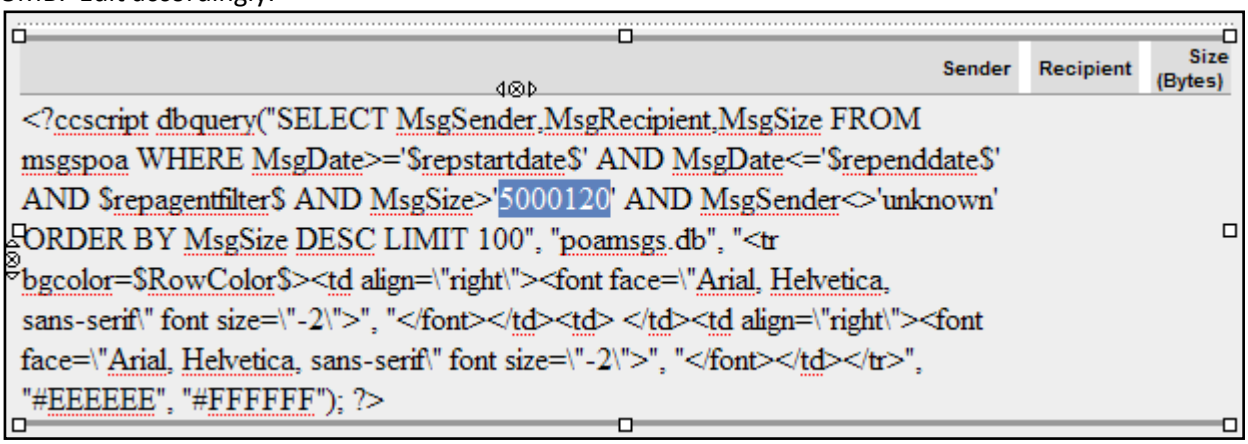
Locate the sql query in the report field. This usually starts with “ccscript dbquery”. Edit the sql query to provide the desired effect.



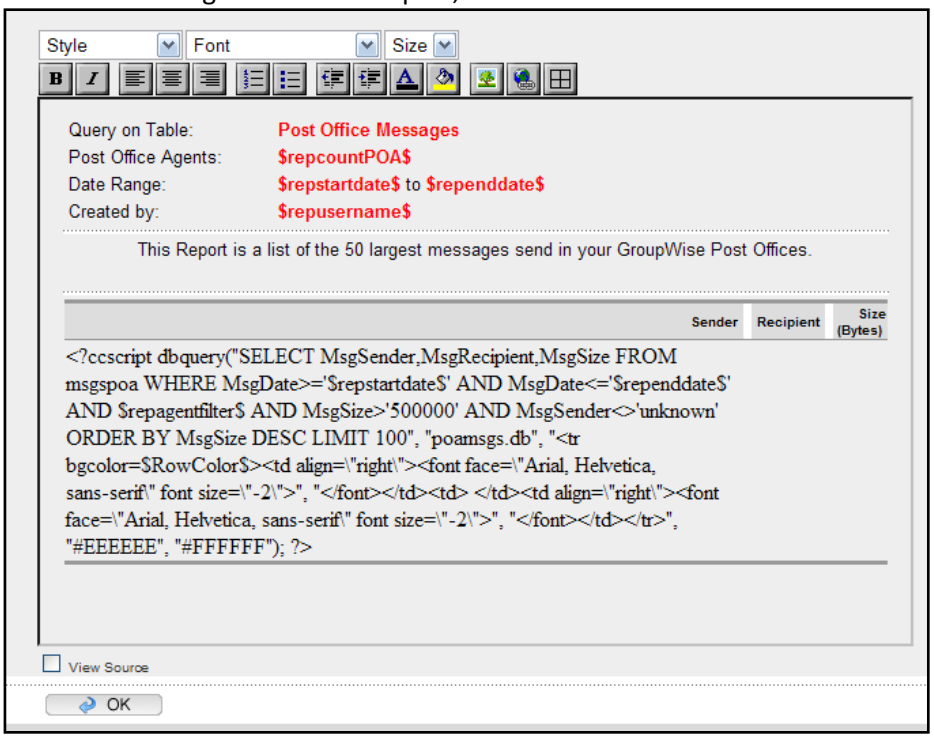
For this report change, we only want to change the message size parameter.



The size limit is listed in bytes, (500000 = 500KB). We wish to generate a report that shows messages over 5MB. Edit accordingly.

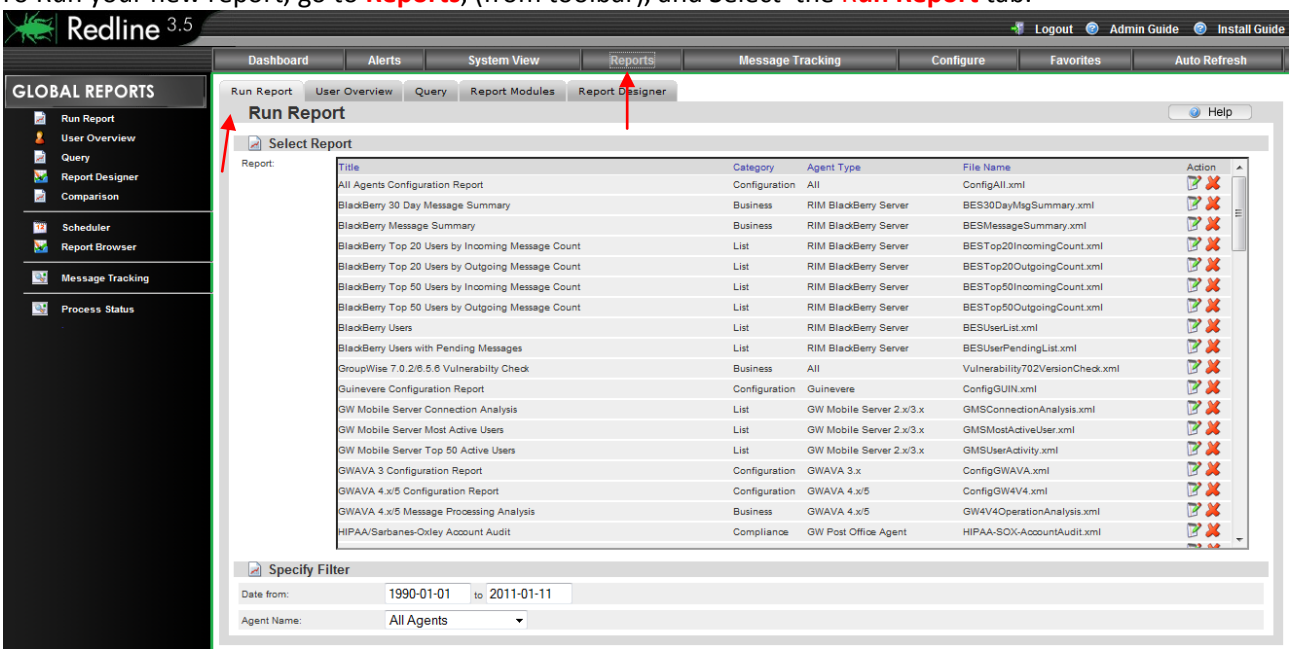


To save the change and list the report, click the OK button at the bottom of the screen.



Your new report is saved and will be listed with the rest of the reports.

To Run your new report, go to **Reports**, (from toolbar), and Select the **Run Report** tab.

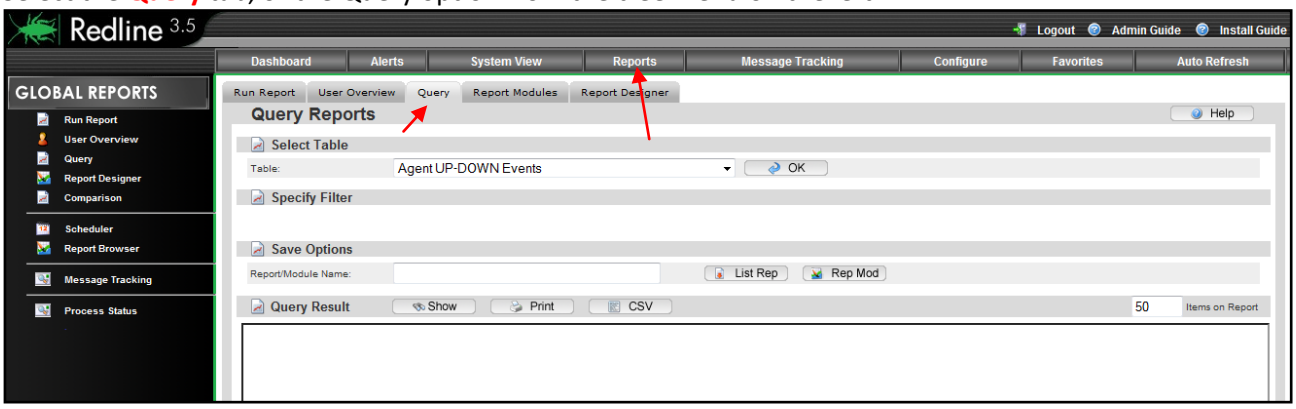


Locate your new report from the report list. The list is alphabetical, according to the report title. If you didn't change or specify a new title name but did change the template filename, then there will be two listed.

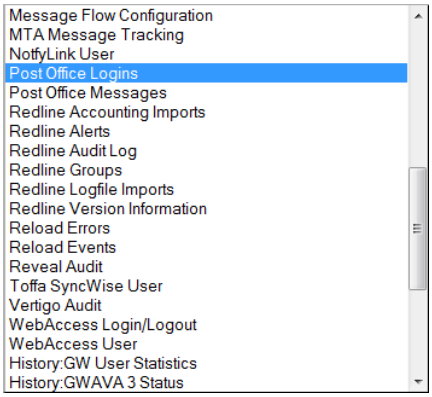
Select report and run report by clicking on the **notepad** action icon**,** (run report), to the right of report name to complete operation.

Custom Report Creation

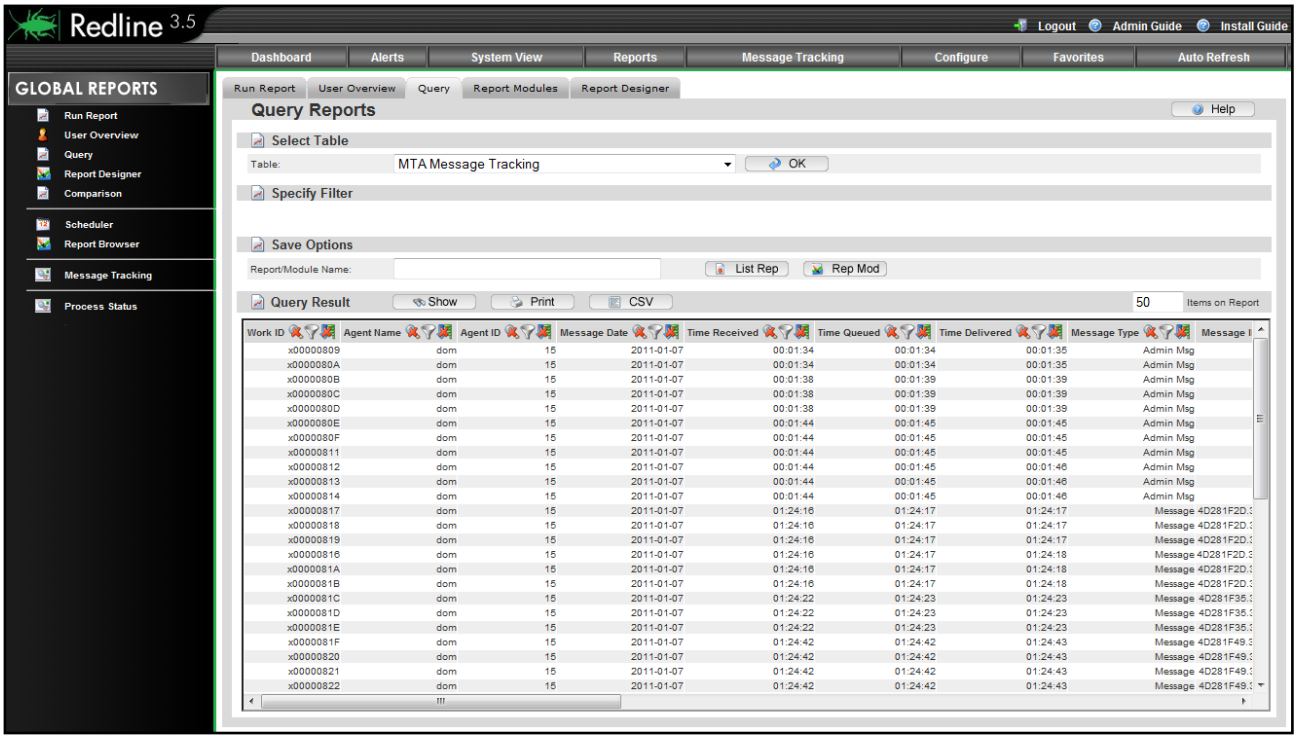
To create a new or custom report without modifying an existing report, Select **Reports** from the top toolbar. We need to create a data module for this report. To do this, we start with a query.
Select the **Query** tab, or the Query option from the tree menu on the left.



Select the table you wish to run a query on from the **Select Table** drop down menu. Select **OK**.



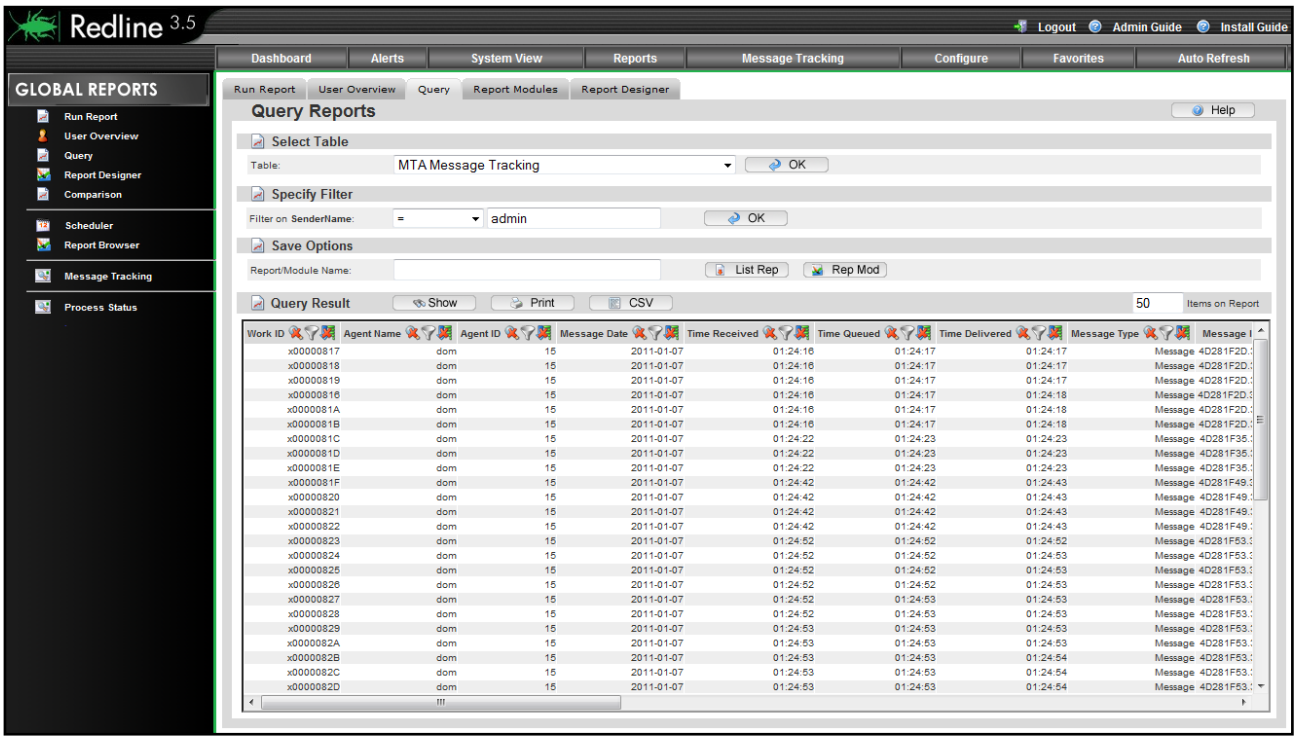
The results will be displayed in the **Query Result** window.



You may wish to limit the output of this report to tune the results. To do this, use the filter option. To set a filter, chose a column header and click on the cone icon.

A new field will appear, named Specify Filter, which allows you to specify the filter parameter. The drop down tab allows several options to manipulate the filters.

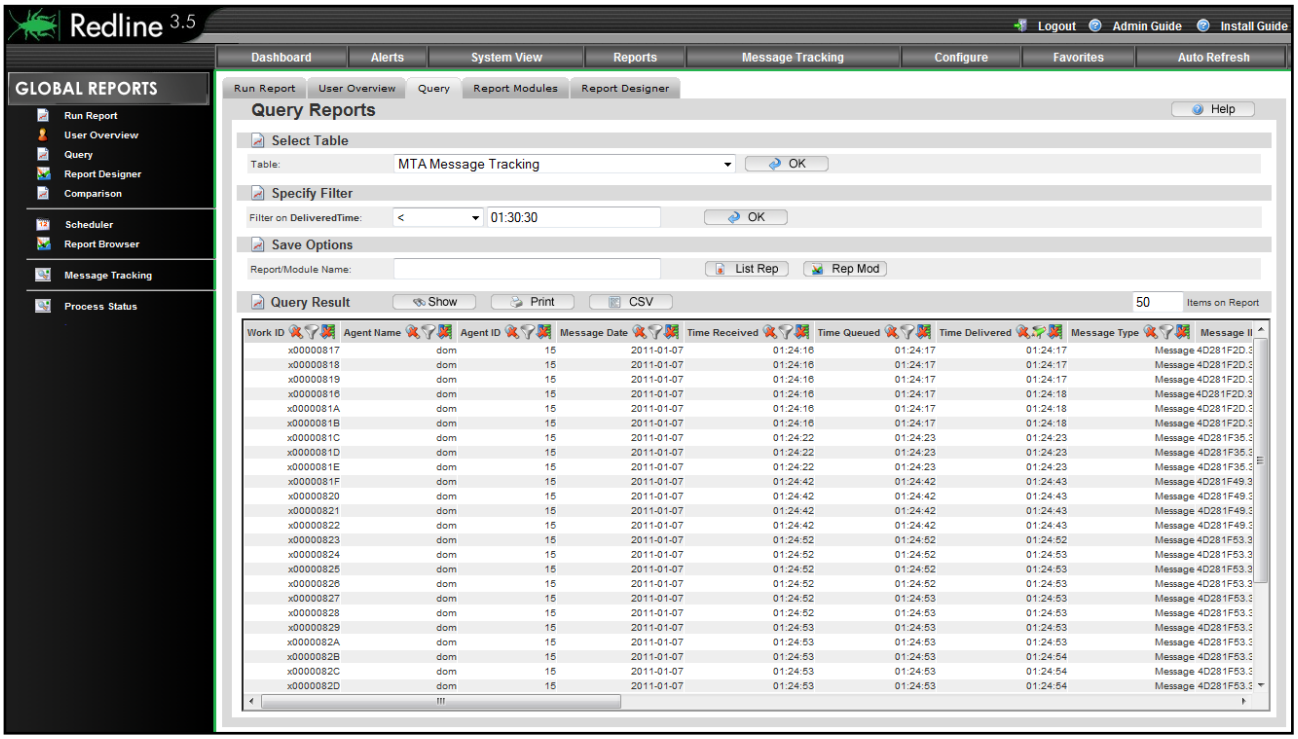
NOTE: The filter parameter is CASE SENSITIVE and DOES NOT allow wildcards. To effectively specify a working filter, you need to be able to see the query results, so you can specify a filter *exactly* as the result is seen by Redline. A typo will cause the filter to exclude all results.



The filter becomes active when you select the OK button and the query results are loaded. A column with an active filter is noted by a pencil on the cone, shown in the column header.

To clear any filter, select the active filter cone in the column header and clear the parameter specified in the Specify filter field, then click OK and the results will reload without the filter.

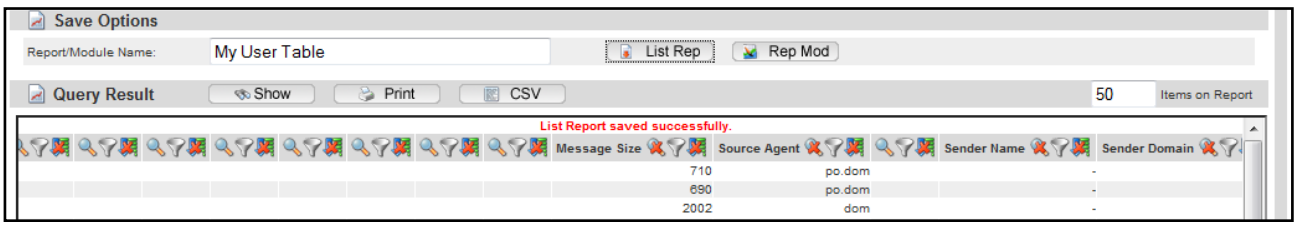
There may be several filters active at the same time. When several filters are active, the Specify Filter field will still only show one entry.



In this screenshot, both the *Sender Name* and the *Time delivered* columns have filters active on them, but the Specify Filter option only shows one active filter. Active filters are indicated by a green pencil over the cone icon for the active column.

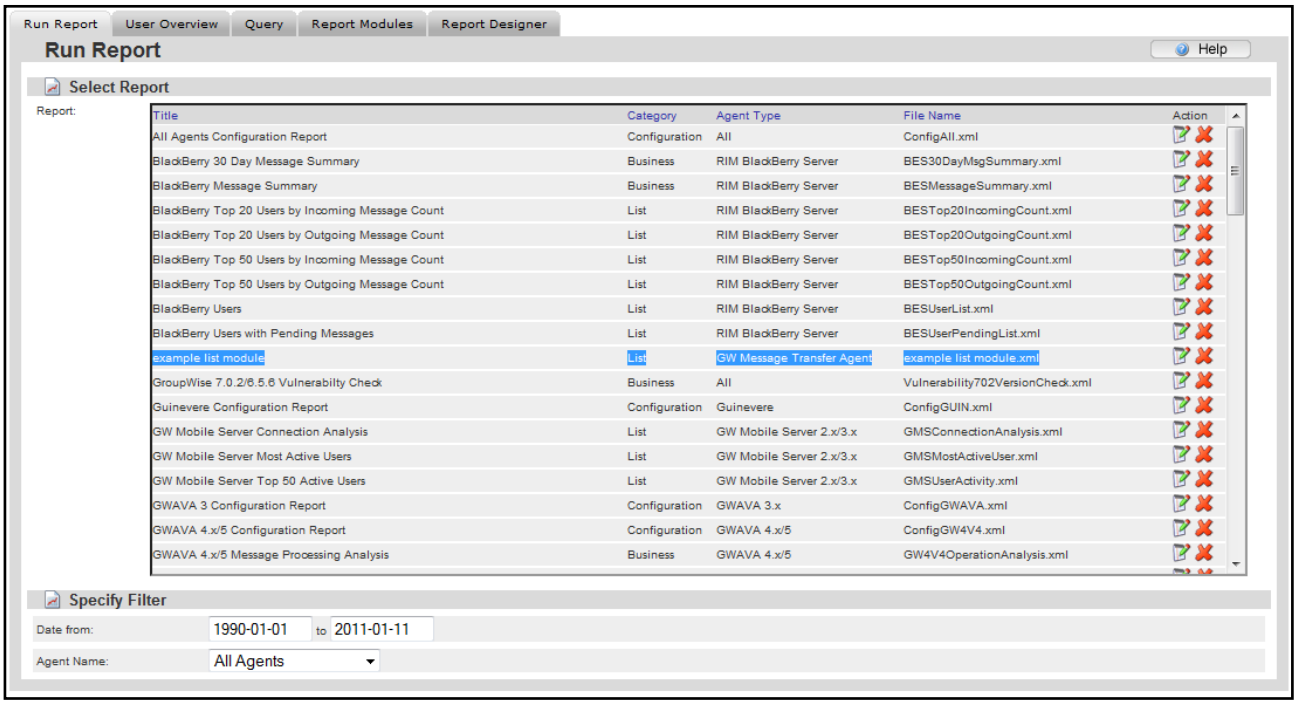
To remove these filters, select the filter cone from the active filtered headers and clear the filter parameter by selecting 'OK' without specifying any parameters. Repeat for as many filters you wish to remove, in the order you wish to remove them.

To save your query results as a module, specify a Report or a Module name, and select the **List Rep**, or **Rep Mod** buttons. (If you select the **Rep Mod** button, your query will be saved as a Module which can be used to build a custom report with multiple queries, graphs, or tables. The **List Rep** button simply saves the query as a full report which can be run later. See the Report Designer section.)

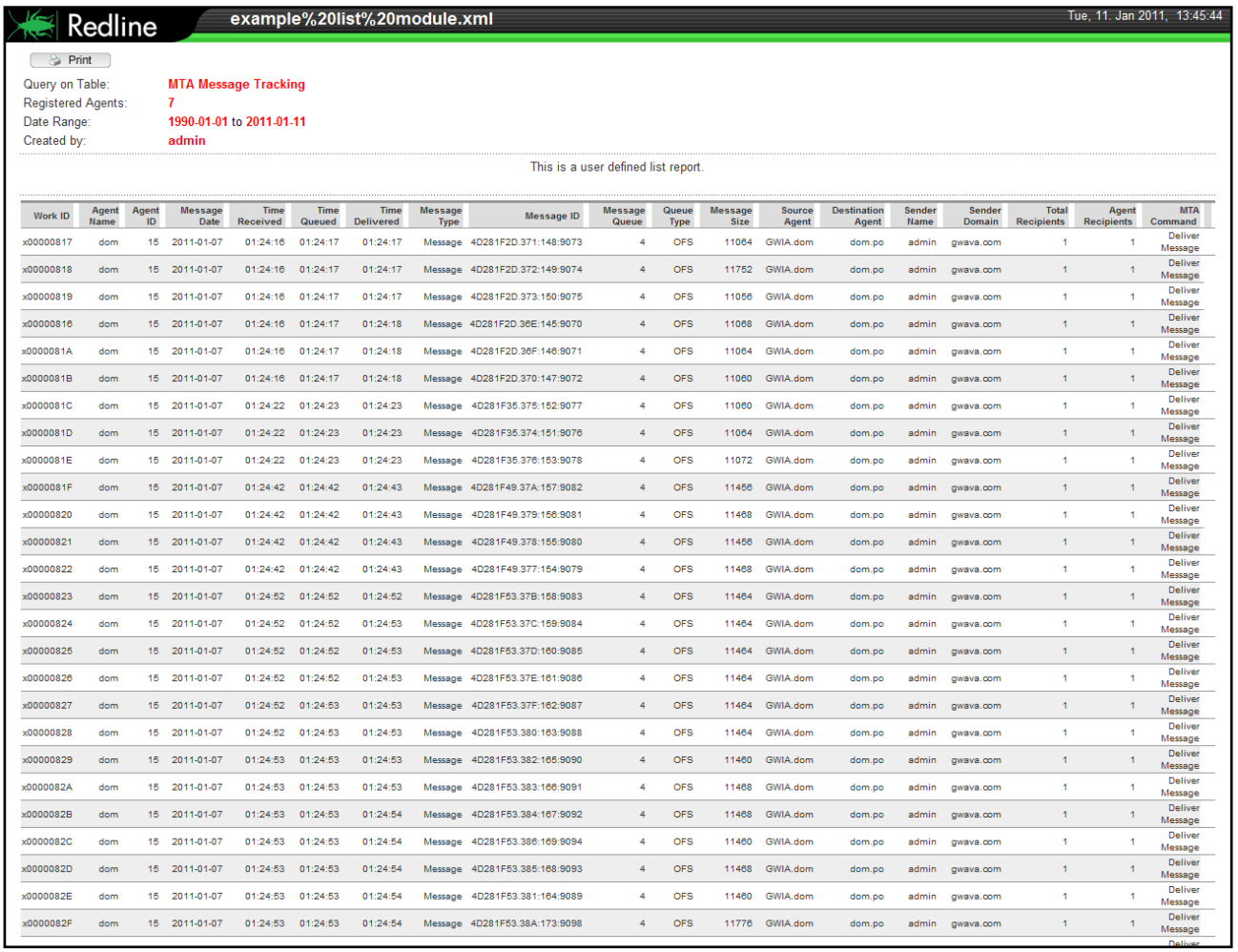


The query has been successfully saved when the red notification appears.

Saved queries can be accessed, run, or modified just as the other reports. The saved query is also listed with the rest of the reports or modules under the report or module name you specified.

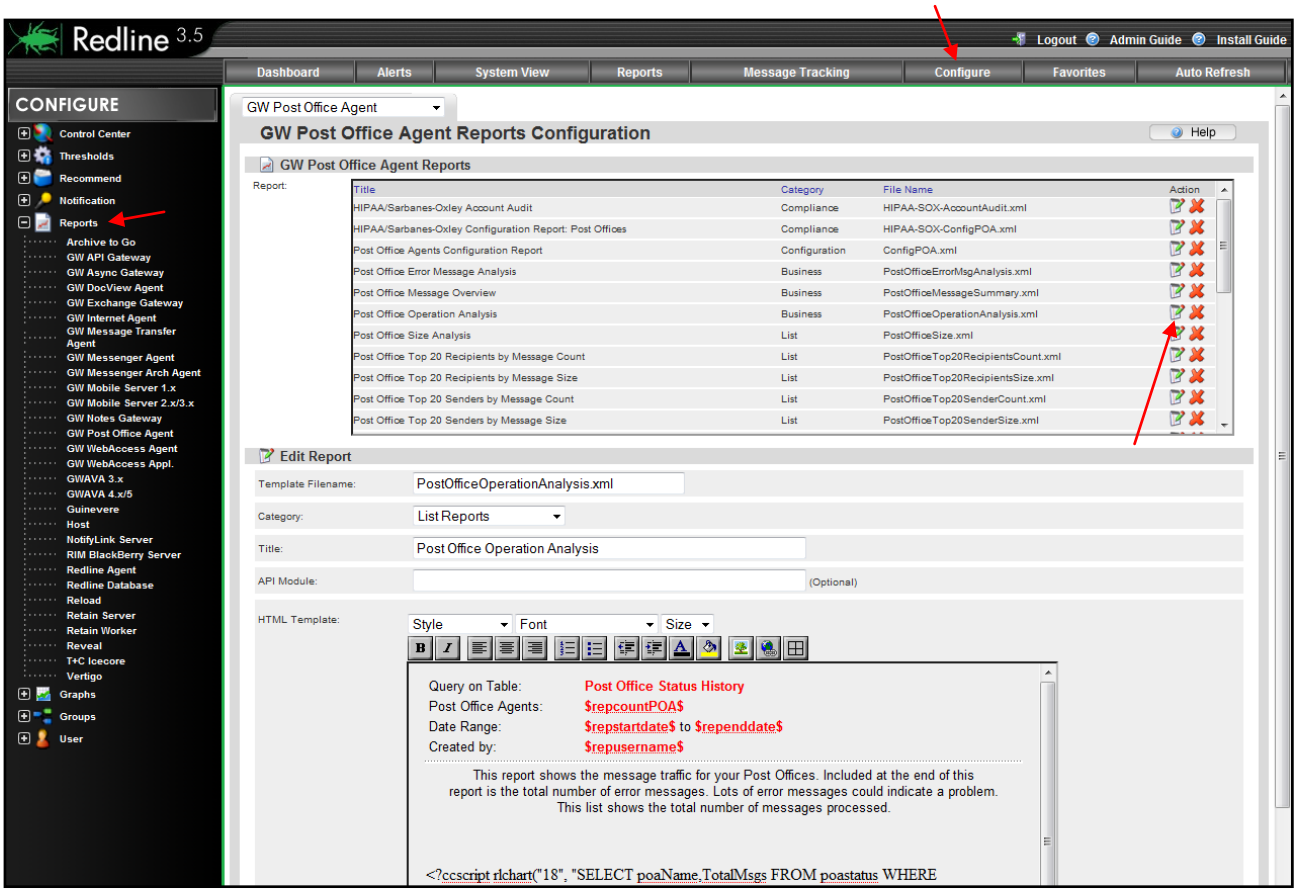


To run your custom report, select the notepad to the far right of the report name in the list. The report will be generated and displayed.



Report Editor

Redline provides several ways to create new reports. The easiest way to create reports is to save them as list reports from the database query page, as described above. There also is a Report Designer and a Report Editor available in Redline. The Report Editor is an html editor you can use to add text, images, commands, etc to any report you want. Browse to **Configure** | **Reports** and select an agent type you want. You can also modify and delete reports.



You can use the Report Editor as a simple way to copy a report for modification:

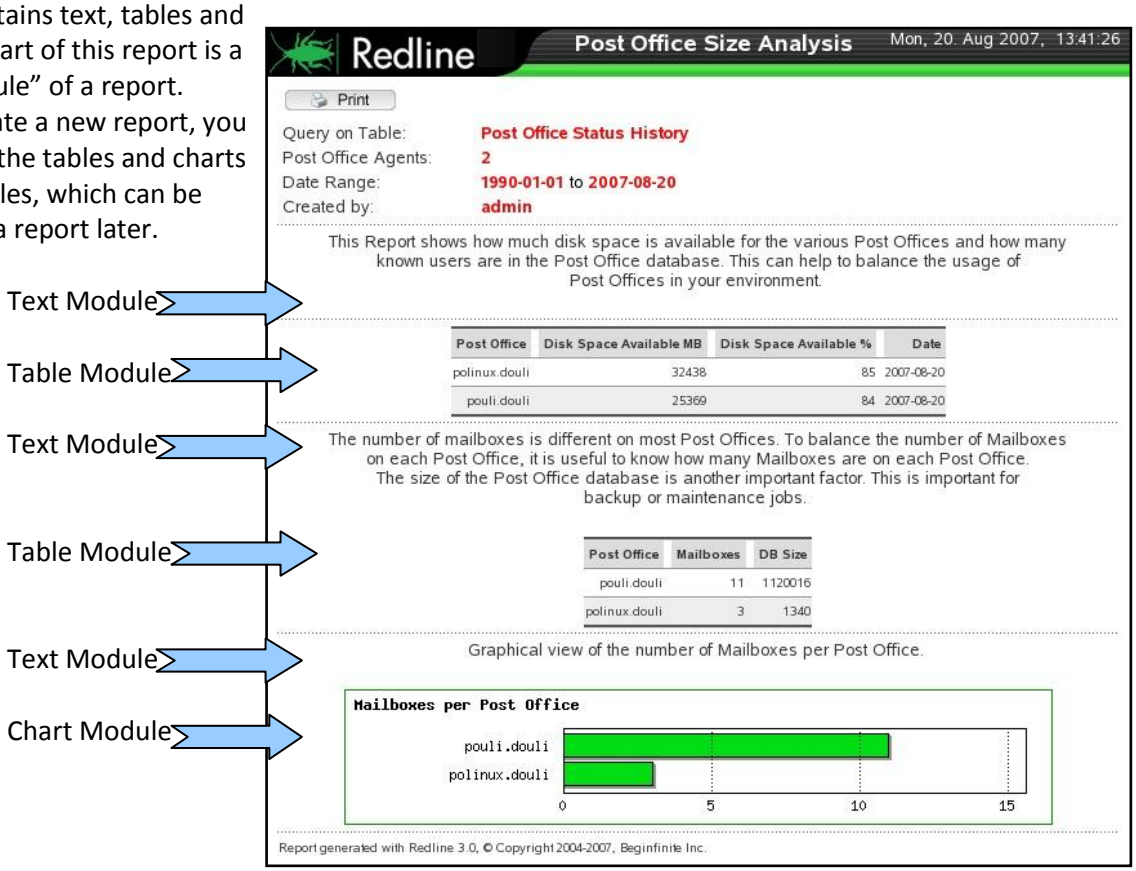
1. Select a report which is similar to what you need
2. Click on the “Edit” icon
3. Specify a new Template Filename and a new Title
4. Click “OK” to save the report.

Instead of creating all reports with the Report Editor you can use the Report Designer. With the Report Designer it is not necessary to know about all variables and commands you can use in a Report. You don't need to know about any SQL statements as well.

Report Designer

The Redline Report Designer helps to create new reports with tables, graphs, text and other elements and it is not necessary to know anything about XML, HTML, SQL or other languages. Before you start with the first report, you need to understand the concept of how to build reports out of Report Modules. A typical report can look like this:

This report contains text, tables and a chart. Every part of this report is a different "module" of a report. Before you create a new report, you need to create the tables and charts as report modules, which can be used to create a report later.

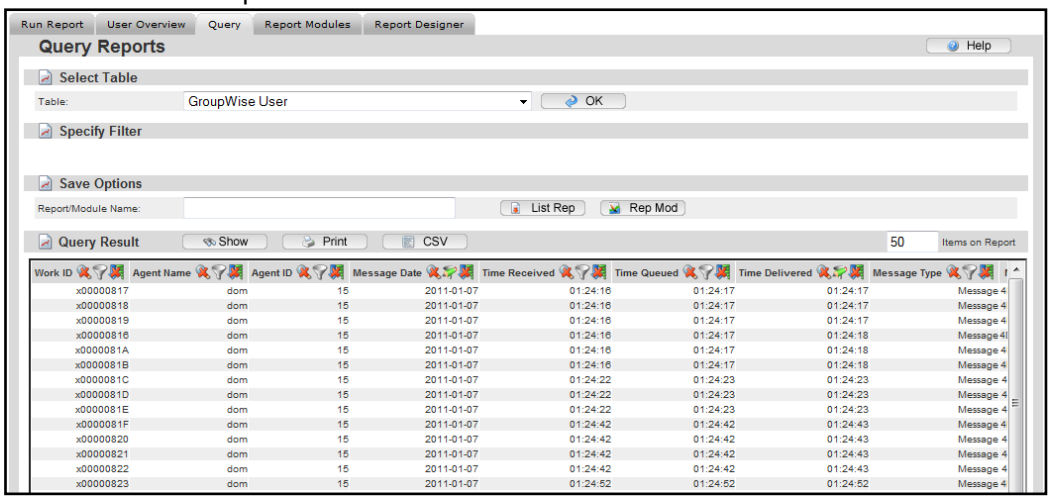


Before you start with a new report, it can help to draw concept of the report on a piece of paper. Once the concept is drawn, it is much easier to create the tables you need. Every chart is a table as well, but a table with 2 columns only: description and value. The above chart is from a table with the first column as the Post Office Name and the second table as Number of Mailboxes.

Make sure you understand the concept of Report Modules, before you continue to read.

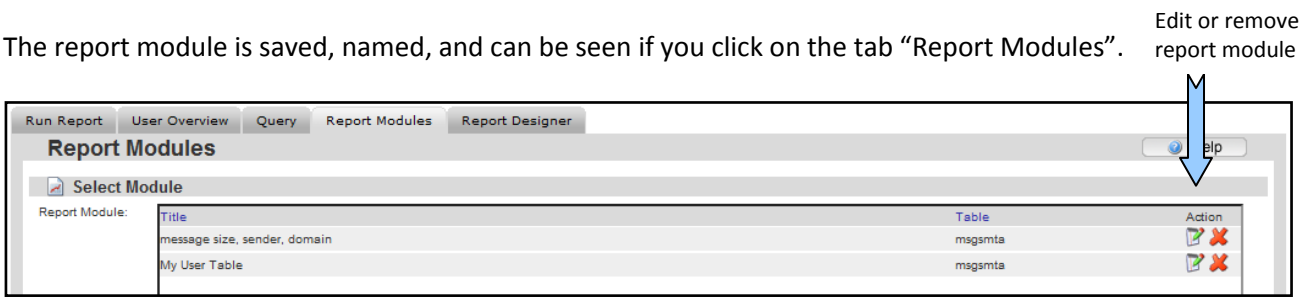
How to create a Report Module for a table

1. Assume we want a table with Username, number of messages in the mailbox, mailbox size, last access date.
2. Browse to **Reports | Query**.
3. Select the table “GroupWise User” and click OK.



4. Hide all columns except Name, Last Active, Msgs Total, and Mailbox Size by clicking on the magnifying glass in the column header.
5. Specify a module name in the field “Report/Module Name” and click on Rep Mod. In our case we use “My User Table”.

The report module is saved, named, and can be seen if you click on the tab “Report Modules”.

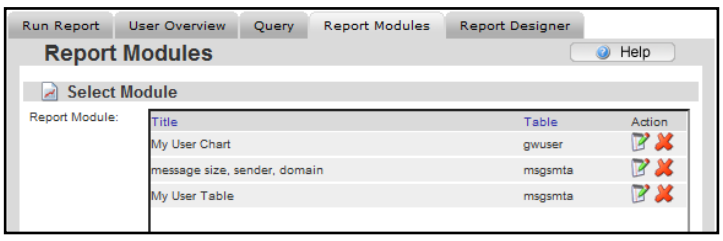


If you have specified some filters etc for a Report Module, browse to another place in Redline and come back. All filters, sorting etc. are still present. All defined filters, sorting and hidden columns will be reset every time a new table is selected. If you click on the edit icon in the Report Modules list, you can modify the Module at any time you want. It is important to know that this DOES NOT change fully designed reports which use this module. They use a copy of the Report Module from the time when the Report was designed.

How to create a Report Module for a chart

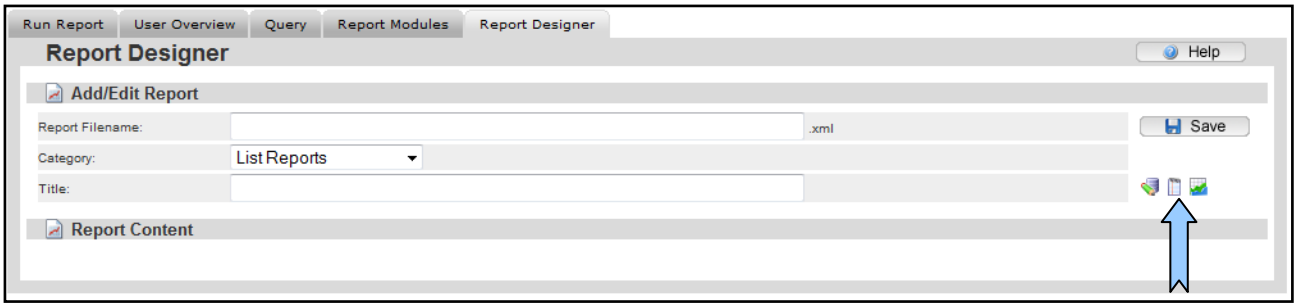
1. Assume we want a chart with Username as the description and the number of messages.
2. Browse to **Reports | Query**.
3. Select the table “GroupWise User” and click “OK”.
4. Hide all columns except “Name“ and “Msgs Total”
5. Specify a module name in the field “Report / Module Name” and click on Rep Mod. In our case we use “My User Chart”.

The Report Module for the Chart is done now.



Build the Report

Now that all required modules have been created, it is possible to design the final report with the report designer. Browse to Reports and click on Report Designer.

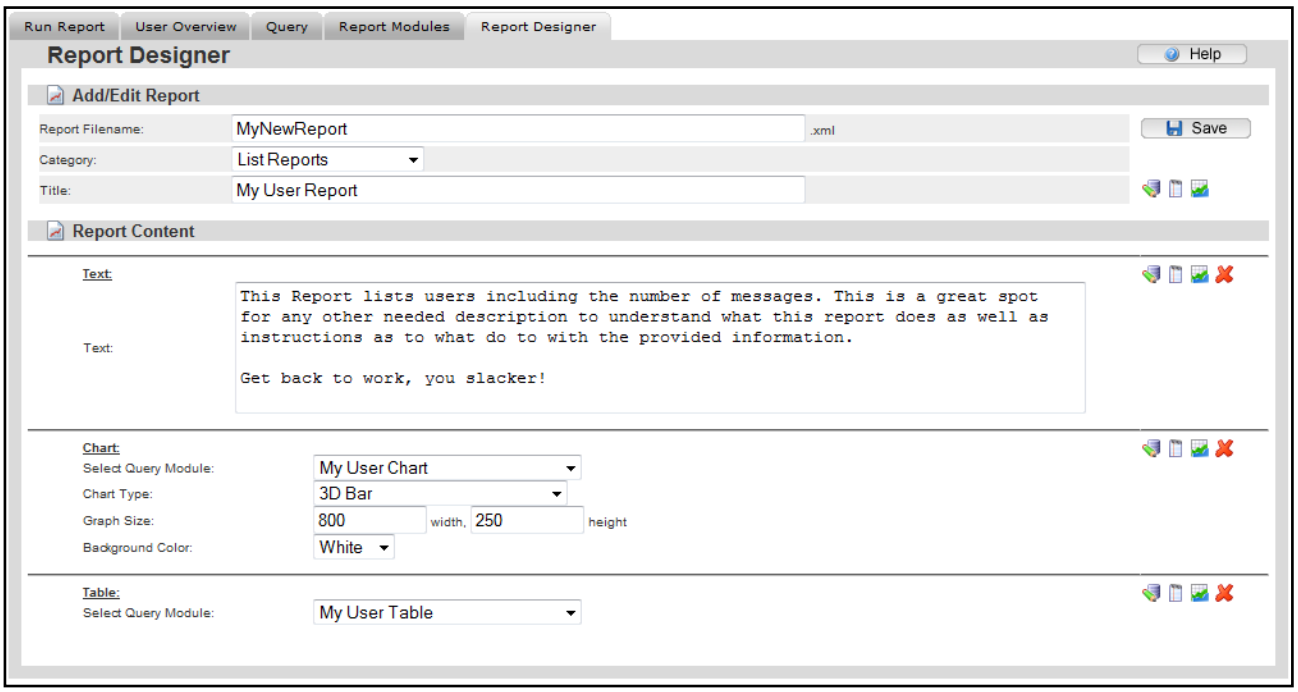


Add Text, Table, or Chart

Every report is stored as a XML file in the folder /opt/beginfinite/redline/conf/reports. Avoid special characters like .,=,!,ö,a,ü etc. for the Report Filename. This can cause problems.

How to create a new report with the two Report Modules we've created

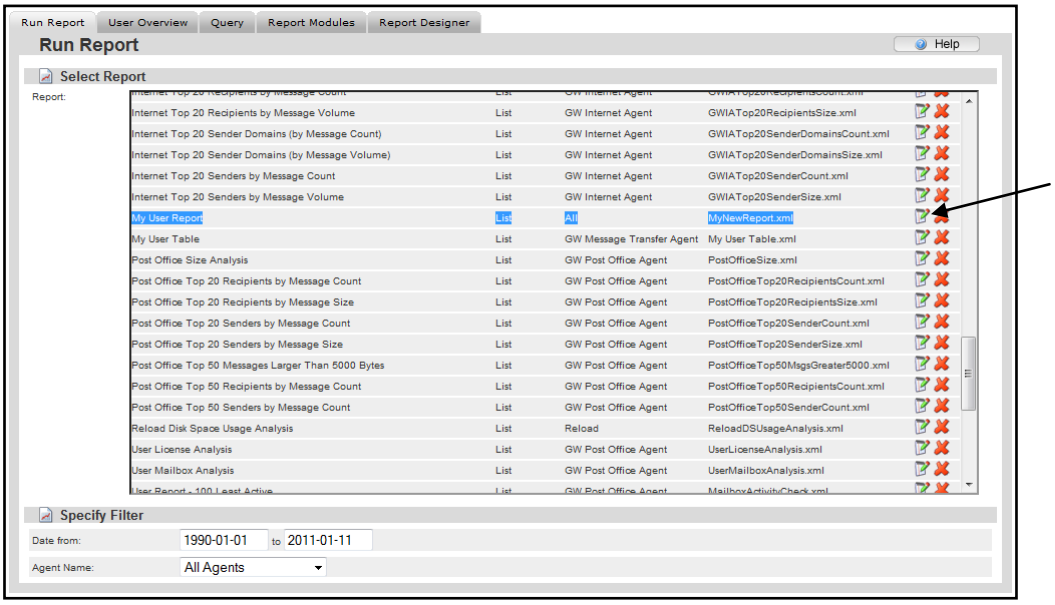
1. Specify a report filename; in our case we use MyNewReport.
2. Specify a category. Our Report is just a list of users with some numbers, so we choose “List Reports“.
3. Specify a title, for example “My new user report”.
4. Click on the Icon for “Add Table” and select the Report Module “My User Table”.
5. Click on the icon for “Add Chart” and select the Report Module “My User Chart”.
6. Click on the Icon for “Add Text” and write some lines of what the report will show.
7. Select a chart type, for example “3D Bar”.
8. Click on “Save” to save the new report.

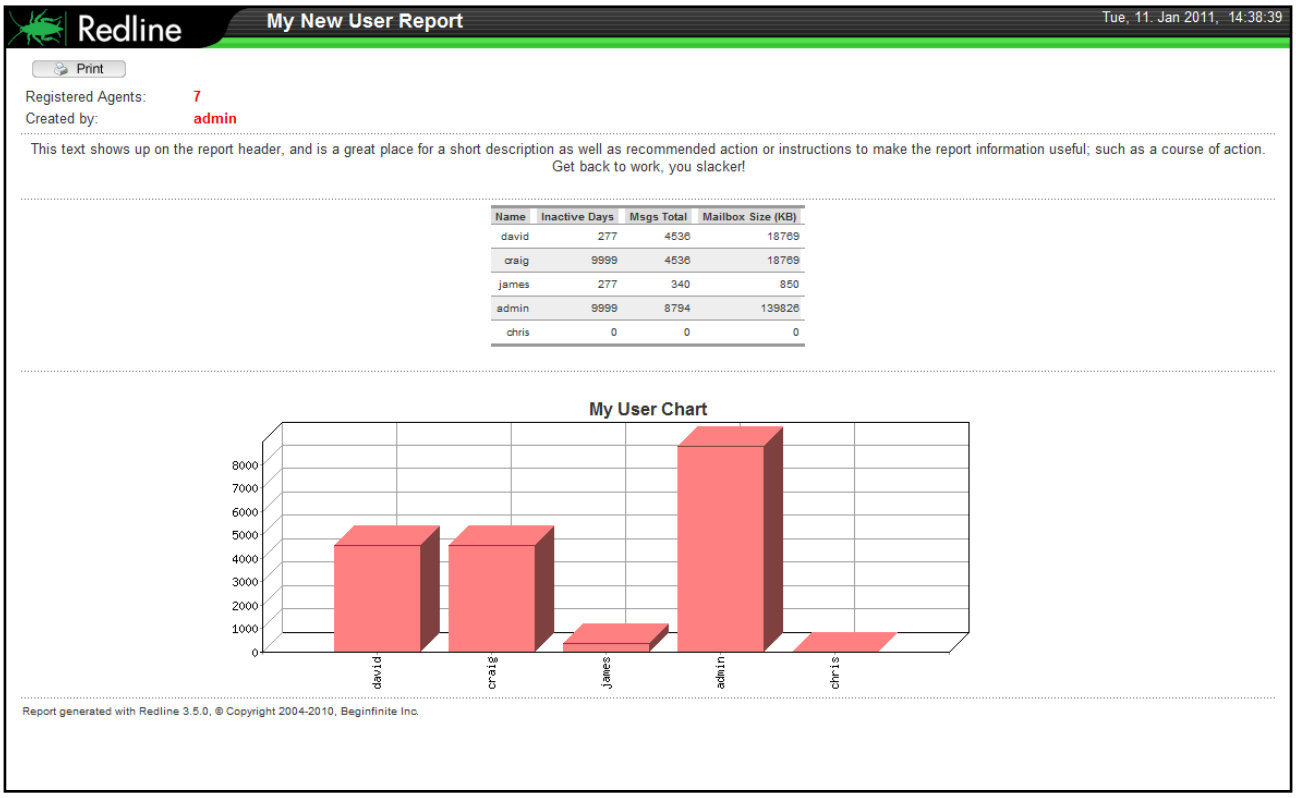


Reports will appear in the order that their modules do in this list. Newly added modules are added to the top of the list. Plan your report appropriately; if the text is desired to be on the top of the report, add it last.

Execute the new report

Now you can browse to **Reports|Run Report** and look for the new report “My new user Report”. If you click on the action icon, the report is shown and can be printed.





It is possible to add as many tables, charts and text modules in any order into a report. If needed, the report can be modified with the Report Editor later on, to put in special SQL statements etc.

If all this is not enough to create the report you need, Redline provides an API for Reports, which can be used to create very specific reports, but requires some programming skills and detailed knowledge of SQL.

Log file Import

Many reports in Redline are based on data in the Redline database. Usually Redline is installed in existing GroupWise environments where lots of old log files exist. It is possible to import these log files into the Redline database. On the Server where the Control Center is running the folders:

/opt/beginfinite/redline/imp
/opt/beginfinite/redline/imp/acct

…are checked every minute if there are files that can be imported. Some log files have enough data to detect to which agent they belong to, some don't. The following table shows what is necessary to import the different log files.

API Gateway log files	-> Copy the file into the imp folder
Blackberry Enterprise log files	-> Copy the file into the imp folder
Gateway accounting log files	-> Copy the file into the imp/acct folder
GWAVA 3 log files	-> Copy the file into the imp folder
GW Mobile Server 1 log files	-> Rename the file to SERVERNAME_logfilename and copy it into the imp folder
GWIA log files	-> Copy the file into the imp folder
MTA log files	-> Copy the file into the imp folder
MTA Message log files	-> Rename the file to DOMAINNAME_logfilename and copy it into the imp folder
Post Office log files	-> Copy the file into the imp folder
Post Office GWCheck log files	-> Copy the file into the imp folder
WebAccess log files	-> Copy the file into the imp folder

Appendix

POSIX, UNC, and NetWare Paths

There are four common file path formats that Redline uses.

- UNC (Universal Naming Convention) is used commonly on Windows and occasionally on NetWare. An Example of UNC is \\servername\volumename\path
- Mapped Drive format is used exclusively on Windows. An example is driveletter:\path1\path2
- NetWare path format is used exclusively on NetWare. An Example is volumename:\path1\path2, or server/volume:\path1\path2
- POSIX is used on Linux, but also is used on NetWare by Redline. A POSIX example is /path1/path2

Although Redline gathers the majority of its information via HTTP (and thus is file system independent), there are several circumstances when file paths must be specified (and hence the specific format used is important):

- The RLAGENT and RLCENTER configuration files specify directory paths for internal Redline directories such as the Database or Reports locations.
- The RLAGENT file may contain PATH specifications for integrated components such as BES, Guinevere, and the API Gateway that do not have HTTP servers.
- Behind the scenes, Redline gathers log file information from many agents. These log files must be located in an accessible location.

On Linux and Windows systems, the rules are fairly straight forward:

- For Linux boxes, all paths must be POSIX format. UNC, mapped drive, or NetWare paths will not function. When first installed, all your paths will be in POSIX, and you must keep them that way.
- For Windows, you may use either mapped drive or UNC format. POSIX, NetWare paths will not function correctly. When first installed, all your paths will be in mapped drive format, and you may alter them between mapped drive and UNC as desired.

On NetWare the situation is a bit more complicated. As long as Redline is installed in its default location, and all of the component agents are on the SYS volume, all should work perfectly. Otherwise:

- Regarding issue 1, if you actually need to change these paths (and in normal operation, even when moving Redline to another volume, this is not needed), POSIX format is required. See below for the POSIX and NetWare path discussion
- Regarding issue 2: POSIX, NetWare, and UNC paths are all accepted in the PATH section. Hence, it is recommended that you use NetWare or UNC paths, and avoid the POSIX path issues described below
- Regarding issue 3: Redline will automatically deal with NetWare Log File paths read from the HTTP server and convert them to POSIX format internally, creating mount points as needed (under sys:\mnt\posix\volumename). So, no extra configuration is normally needed. If you wish to understand more about mount points, read on.

NetWare and POSIX Path Conversion

Consider a standard Netware server, named MJBSERVER, with 2 volumes, SYS and DATA1. Now let's take the example of GroupWise being installed on this server, first on the SYS volume and then the DATA1 volume. For simplicity, we'll assume the GroupWise agents are all installed under a directory right off the root of the volume named GRPWISE.

Start with the GRPWISE directory on SYS, the Netware path is volume:\path, so in this case it is the straight forward SYS:\GRPWISE. POSIX format is /path1/path2. In this case it is simply /grpwise. The only change is to eliminate the volume name and change to forward slashes.

Other examples of path conversions on SYS would be SYS:\system vs. /system, or SYS:\novell\webacc vs.

/novell/webacc. It may be clear that an issue will arise, namely, that POSIX paths don't include volume names.

Let us move the GroupWise system to the volume DATA1

The NetWare path will still be straight forward. It will be DATA1:\grpwise. But what is the POSIX path? The way that Novell solved this problem was to allow users and programs to provide a "mapping" between POSIX paths and Netware volumes. More specifically, there is a file (which doesn't exist by default) in SYS:\ETC called PATHTAB which contains entries such as: POSIXPath<space>NetwarePath
You may specify as many as you wish, using any text editor you please. So the first thing an administrator might do is create an entry like this: /mygw<space>DATA:\

One might then expect that I could use /mygw/grpwise to refer in POSIX format to DATA1:\grpwise. Similarly, if another directory was off the root of DATA1 called EXAMPLE, I could refer to it in NetWare format as DATA1:\example and in POSIX as /mygw/example .

There is one complication, that isn't so obvious: NetWare is really using a "mount point" to represent the NetWare volume. **The "mount point" must always exist on SYS**, and can be more or less arbitrarily named, (but shouldn't collide with other directories on SYS). This is a roundabout way of saying that whatever POSIX path specified in PATHTAB must have a corresponding directory structure on SYS. Let's take another step-by-step example.

- Create a POSIX path, and I have a directory named ANOTHEREXAMPLE off my GOOGLE volume. The NetWare path would be GOOGLE:\ANOTHEREXAMPLE .
- Open SYS:\etc\pathtab, and add a mount point. Remember that I can name it how I want. In this case I'm going to decide that I want a POSIX path of /mnt/myothervol/anotherexample in the end.
- Add: /mnt/myothervol<space>GOOGLE:\
- I'll save PATHTAB, and then I will create off SYS the following: SYS:\mnt, SYS:\mnt\myothervol. The directory with which you are mapping to must be blank with no files in it. A POSIX compliant program should now be able to use /mnt/myothervol/example and be redirected to GOOGLE:\anotherexample.

How is this relevant to Redline?

- If you must change the internal configuration paths of Redline, they must be valid POSIX paths, constructed as above.
- If you have integrations that use the PATH entry in RLAGENT.CONF, and for some reason WANT to use POSIX, you can, but you must follow these guidelines.
- Redline handles the issue of log files transparently. All it does is create mount points named sys:\mnt\posix\volume name and create a PATHTAB entry for you. This is done behind the scenes, so normally you don't need to worry about it.

Report generation table

Redline Reports are generated from information that the Agents gather from your different system components. This information can be stored inside Redline databases found at *../redline/db*, and referenced by redline reports found at *../redline/conf/reports*. To aid in custom report generation, the information sources are detailed below with their companion reports and files.

Report Name source	Report File Name	File or Database	Information
GroupWise / Exchange Comparison	**CompareExchange.xml**	**-**	**Redline Internal**
Configuration Report: All Agents	**ConfigAll.xml**	**reports_object_content.html**	**Various Sources, Config files, HTTP/XML data, logfiles...**
Configuration Report: Guinevere	**ConfigGUIN.xml**	**reports_object_content.html**	**Guinevers settings.ini**
Configuration Report: GWAVA 4	**ConfigGW4V4.xml**	**reports_object_content.html**	**HTTP/XML data**
Configuration Report: GWAVA 3	**ConfigGWAVA.xml**	**reports_object_content.html**	**Various Sources, Config files, HTTP/XML data, logfiles...**
Configuration Report: Internet Agents	**ConfigGWIA.xml**	**reports_object_content.html**	**Various Sources, Config files, HTTP/XML data, logfiles...**
Configuration Report: Domains	**ConfigMTA.xml**	**reports_object_content.html**	**Various Sources, Config files, HTTP/XML data, logfiles...**
Configuration Report: Messenger Archive Agents	**ConfigNMAA.xml**	**reports_object_content.html**	**Various Sources, Config files, HTTP/XML data, logfiles...**
Configuration Report: Messenger Agents	**ConfigNMMA.xml**	**reports_object_content.html**	**Various Sources, Config files, HTTP/XML data, logfiles...**
Configuration Report: Post Offices	**ConfigPOA.xml**	**reports_object_content.html**	**Various Sources, Config files, HTTP/XML data, logfiles...**

Configuration Report: WebAccess	**ConfigWEBACC.xml**	**reports_object_content.html**	**Various Sources, Config files, HTTP/XML data, logfiles...**
GW Mobile Server Connection Analysis	**GMSConnectionAnalysis.xml**	**gwmobile.db**	**HTTP/XML data**
GW Mobile Server most active User	**GMSMostActiveUser.xml**	**gwmob2ca.db gwmob2m.db**	**HTTP/XML data**
Top 50 GMS User Activity	**GMSUserActivity.xml**	**gwmobile.db**	**HTTP/XML data**
GWAVA 4 Message Processing Analysis	**GW4V4OperationAnalysis.xml**	**gwava4.db**	**HTTP/XML data**
System Wide Current User List	**GWCurrFullUserList.xml**	**global.db**	**GWCheck files**
System Wide Current User List	**GWFullUserList.xml**	**global.db**	**GWCheck files**
Internet Agent/Gateway Data Transfer during last 4 days	**GWIAData.xml**	**gwiamsgs.db**	**GWIA Logfiles and History tables**
Internet Agent Message Summary	**GWIAMessageSummary.xml**	**gwiamsgs.db**	**GWIA Logfiles**
Internet Top 100 Recipients by Message Count	**GWIATop100RecipientsCount.xml**	**acct.db**	**GWIA Logfiles**
Internet Top 100 Recipients by Message Count	**GWIATop100SenderCount.xml**	**acct.db**	**GWIA Logfiles**
Internet Top 20 Recipient Domains by Message Count	**GWIATop20RecipientDomainsCount.xml**	**gwiamsgs.db**	**GWIA Logfiles**

Internet Top 20 Recipient Domains by Message Volume	**GWIATop20RecipientDomainsSize.xml**	**gwiamsgs.db**	**GWIA Logfiles**
Internet Top 20 Recipient Domains by Message Volume	**GWIATop20RecipientsCount.xml**	**acct.db**	**GWIA Logfiles**
Internet Top 20 Recipients by Message Volume	**GWIATop20RecipientsSize.xml**	**acct.db**	**GWIA Logfiles**
Internet Top 20 Sender by Message Volume	**GWIATop20SenderCount.xml**	**acct.db**	**GWIA Logfiles**
Internet Top 20 Sender Domains by Message Count	**GWIATop20SenderDomainsCount.xml**	**gwiamsgs.db**	**GWIA Logfiles**
Internet Top 20 Sender Domains by Message Volume	**GWIATop20SenderDomainsSize.xml**	**gwiamsgs.db**	**GWIA Logfiles**
Internet Top 20 Sender by Message Volume	**GWIATop20SenderSize.xml**	**acct.db**	**GWIA Logfiles**
Internet Agent/Gateway Messages count per User	**GWIAUser.xml**	**acct.db**	**GWIA Logfiles**
HIPAA/Sarbanes-Oxley Account Audit	**HIPAA-SOX-AccountAudit.xml**	**global.db**	**GWCheck files**
HIPAA/Sarbanes-Oxley Configuration Report: Guinevere	**HIPAA-SOX-ConfigGUIN.xml**	**reports_object_content.html**	**Guinevers settings.ini**
HIPAA/Sarbanes-Oxley Configuration Report: GWAVA 4	**HIPAA-SOX-ConfigGW4V4.xml**	**reports_object_content.html**	**HTTP/XML data,**
HIPAA/Sarbanes-Oxley Configuration Report: GWAVA 3	**HIPAA-SOX-ConfigGWAVA.xml**	**reports_object_content.html**	**Various Sources, Config files, HTTP/XML data, logfiles...**

HIPAA/Sarbanes-Oxley Configuration Report: Internet Agents	HIPAA-SOX-ConfigGWIA.xml	reports_object_content.html	Various Sources, Config files, DC files, HTTP/XML data, logfiles...
HIPAA/Sarbanes-Oxley Configuration Report: Domains	HIPAA-SOX-ConfigMTA.xml	reports_object_content.html	Various Sources, Config files, DC files, HTTP/XML data, logfiles...
HIPAA/Sarbanes-Oxley Configuration Report: Messenger Archive Agents	HIPAA-SOX-ConfigNMAA.xml	reports_object_content.html	Various Sources, Config files, DC files, HTTP/XML data, logfiles...
HIPAA/Sarbanes-Oxley Configuration Report: Messenger Agent	HIPAA-SOX-ConfigNMMA.xml	reports_object_content.html	Various Sources, Config files, DC files, HTTP/XML data, logfiles...
HIPAA/Sarbanes-Oxley Configuration Report: Post Offices	HIPAA-SOX-ConfigPOA.xml	reports_object_content.html	Various Sources, Config files, DC files, HTTP/XML data, logfiles...
HIPAA/Sarbanes-Oxley Configuration Report: WebAccess	HIPAA-SOX-ConfigWEBACC.xml	reports_object_content.html	Various Sources, Config files, DC files, HTTP/XML data, logfiles...
Mailbox Activity Check	MailboxActifityCheck.xml	global.db	
Novell Self Audit Report (CLA)	NovellSelfAuditMLA.xml	global.db	GWCheck logfiles
Post Office Error Message Analysis	PostOfficeErrorMsgAnalysis.xml	alerts.db	Post Office Logfiles
Post Office Message Overview	PostOfficeMessageSummary.xml	poamsgs.db	Post Office Logfiles
Post Office Operation Analysis	PostOfficeOperationalAnalysis.xml	poa.db	Post Office Logfiles, data in History tables and recalculated

Post Office Size Analysis	**PostOfficeSize.xml**	**poa.db global.db**	**Redline Internal**
Post Office Top 20 Recipients by Message Count	**PostOfficeTop20RecipientsCount.xml**	**poamsgs.db**	**Post Office Logfiles**
Post Office Top 20 Recipients by Message Volume	**PostOfficeTop20RecipientsSize.xml**	**poamsgs.db**	**Post Office Logfiles**
Post Office Top 20 Sender by Message Count	**PostOfficeTop20SenderCount.xml**	**poamsgs.db**	**Post Office Logfiles**
Post Office Top 20 Sender by Message Volume	**PostOfficeTop20SenderSize.xml**	**poamsgs.db**	**Post Office Logfiles**
Post Office Top 50 Messages larger 5000 bytes	**PostOfficeTop50MsgsGreater5000.xml**	**poamsgs.db**	**Post Office Logfiles**
Post Office Top 50 Recipients by Message Count	**PostOfficeTop50RecipientsCount.xml**	**poamsgs.db**	**Post Office Logfiles**
Post Office Top 50 Sender by Message Count	**PostOfficeTop50SenderCount.xml**	**poamsgs.db**	**Post Office Logfiles**
Problem Analysis	**ProblemAnalysis.xml**	**alerts.db**	**Alerts fired in Redline**
Redline Table Query Report	**QueryDBTable.xml**	**-**	**This is just a help file for the Query Reports**
Redline Query Report	**QueryReport.xml**	**-**	**This is just a help file for the Query Reports**
Reveal Usage Analysis	**RevealUsageAnalysis.xml**	**reveal.db**	**Reveal database populated with data send directly from Reveal**

Top 10 Domain Disk Space Trend Analysis	**Top10MTADiskSpaceTrendAnalysis.xml**	**mta.db**	**Redline internal**
Top 10 Domain Message Processing Analysis	**Top10MTAOperationAnalysis.xml**	**mta.db**	
Top 10 Largest Post Office Database	**Top10POADatabaseSizeAnalysis.xml**	**poa.db**	**Redline internal**
Top 20 Largest Mailboxes	**Top20MailboxSize.xml**	**global.db**	**GWIA Logfiles**
Top 50 Largest Mailboxes	**Top50MailboxSize.xml**	**global.db**	**GWIA Logfiles**
Trend Mobile Server Data Transfer/Duration	**TrendGMSMsg.xml**	**gwmobile.db**	**GWIA Logfiles, POA Logfiles, GMS2 Logfiles**
Trend Internet Messages	**TrendGWIAMsgs.xml**	**gwiamsgs.db**	**GWIA logfiles and History tables**
Trend Messages / Mailbox Size per User	**TrendMBSizeHistory.xml**	**global.db gwustats.db**	**GWCheck and History tables**
Trend Post Office Logins/Usage	**TrendPOALogins.xml**	**poalogin.db**	**Post Office logfiles**
Trend System Uptime	**TrendUptime.xml**	**global.db**	**Redline internal**
User Mailbox Analysis	**UserMailboxAnalysis.xml**	**global.db**	
GroupWise 7.0.2/6.5.6 Vulnerability Check	**Vulnerability702VersionCheck.xml**	**-**	**POA HTTP/XML interface**

WebAccess User Login Analysis	**WebAccUserLoginAnalysis.xml**	**webacc.db**	**WebAccess logfiles**