



Redline 4

Administration Guide

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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.

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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, 8, and 2012 (GW 7 or higher, 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. --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: 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. (IE, Firefox, Safari, Chrome)

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
- GWAVA 4/5/6
- GWAVA Reveal 1.1 +
- GWAVA Reload 1.x and 2.x
- GroupWise Message Transfer Agent
- GroupWise Post Office Agent
- GroupWise Internet Agent
- GroupWise WebAccess Agent
- GroupWise Document Viewer Agent
- GroupWise WebAccess Application
- GroupWise Mobile Server 2 and 3 (Windows and Linux)
- GroupWise Async Gateway 2.0
- GWAVA Retain Server and Worker
- GWAVA Vertigo
- Notifylink 4
- Advansys Archive 2 Go
- Linux, NetWare and Windows Host
- Redline Self-monitoring including the Redline Database

Understand How Redline Works

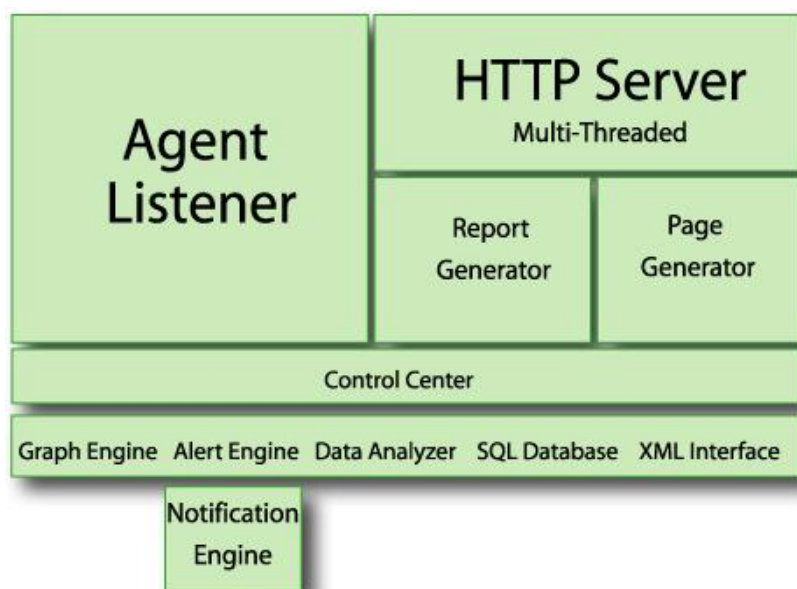
Because each and every component requires specific instructions for integration, it is recommended that administrators read through this manual before installing the Redline Program to avoid frustration and confusion.

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 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.)

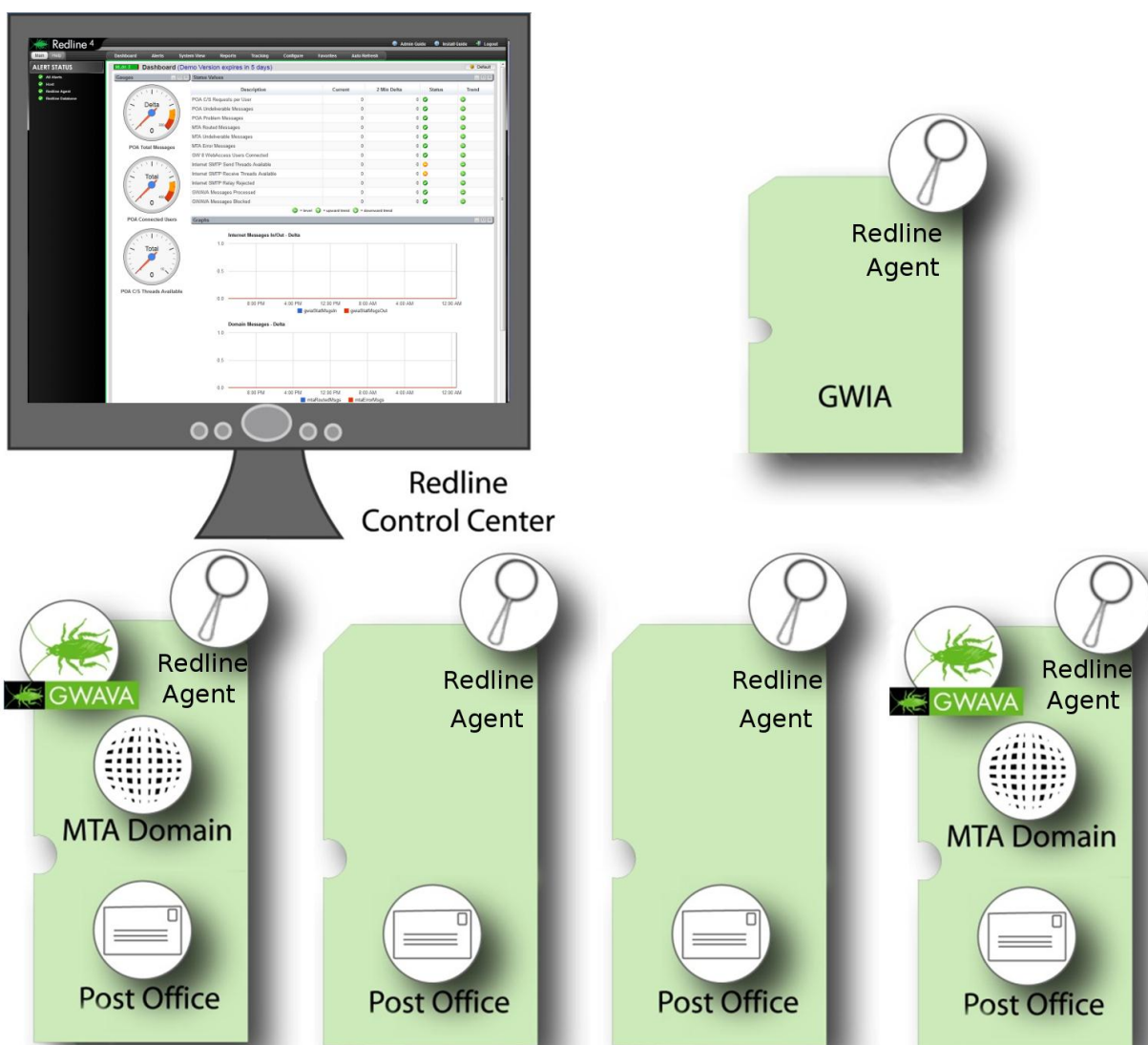
The RLCENTER serves as a central repository for information gathered and for administration. RLAGENT

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

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 4 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.

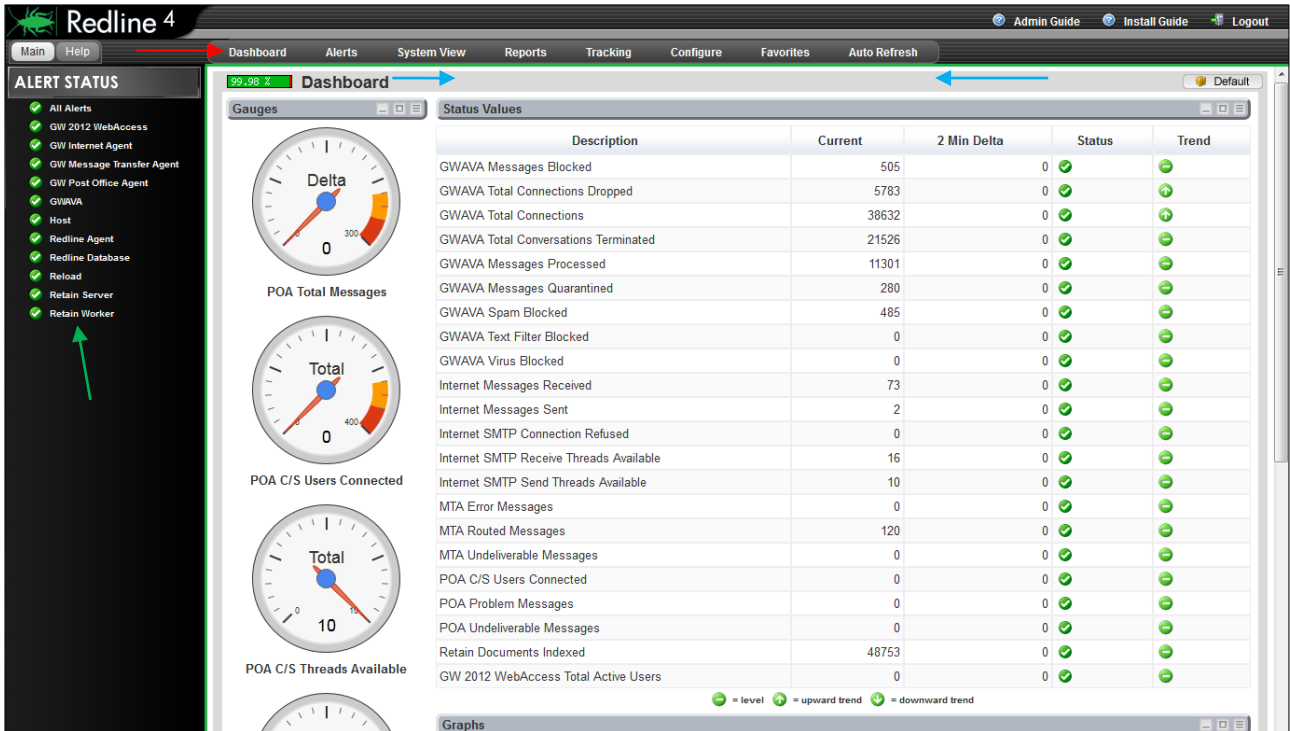
The RAGENT automatically tries to connect to each of its configured components every two minutes.

The RLCCENTER runs only on Linux and Windows, while the RAGENT runs on Netware, Linux, and Windows. It is recommended to run the Control Center on a dedicated server.



Redline Control Center

The Redline Control Center is the information and management interface for Redline. The Control Center is organized into **main sections** in drop-down menus along the top and a **system object** or **information tree** window on the left. The main window displays information according to the selected main section and tab. (**Tabs** also appear directly under the drop-down menus in specific sections, such as the agent screen.)



Through navigation of the main sections, administrators have access to information about their entire GroupWise system 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.

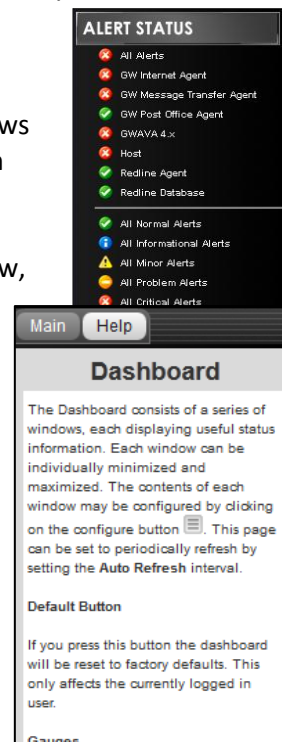
Dashboard

Dashboard is the default section of the Redline Control Center. The Dashboard shows a quick overview of the system 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.

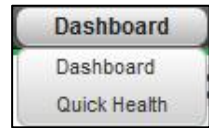
If the graphs, gauges, or status values have been incorrectly configured, selecting the 'Defaults' button will reset the gauges and graphs to their default settings.

The 'Help' tab provides quick access to contextual help for any main section currently displayed. The quick help window opens in the information panel. The Help tab will remain open until the Main tab is again selected.



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.

Quick Health

The Quick Health Dashboard lists all agents known to Redline in a very compact format. The format may be stacked alphabetically, or organized under the monitoring Redline agent, or Host. This page automatically refreshes according to the auto-refresh setting.



Not Connected:

All agents that are not reporting any data are designated by a colored box: yellow and red, depending on how long the agent has not reported and severity.

Connected:

All agents actively sending data are shown with a green, gray, or blue box, depending on the agent type.

If you click on an agent name you will be directed to the agent summary page. If you click on the alert icon, you will be taken to the alert page, 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.



Active Alerts							
Date	Time	Status	Agent	Description	Assigned To	Action	
2011-10-27	05:25:00	✖	RLAgent-SLES11-32	redlineAgentState should be == Up, but is Down	-	[Alert Icon] [Info Icon]	
2011-10-27	05:25:00	✖	RETAIN2	hostAgentState should be == Up, but is Down	-	[Alert Icon] [Info Icon]	
2011-10-27	05:25:00	✖	gwava 5	gw4v4AgentState should be == Up, but is Down	-	[Alert Icon] [Info Icon]	
2011-10-27	05:25:00	✖	po.dom	poaAgentState should be == Up, but is Down	-	[Alert Icon] [Info Icon]	
2011-10-27	05:25:00	✖	dom.GWIA	gwiaAgentState should be == Up, but is Down	-	[Alert Icon] [Info Icon]	
2011-10-27	05:25:00	✖	SLES11-32	hostAgentState should be == Up, but is Down	-	[Alert Icon] [Info Icon]	
2011-10-27	05:25:00	✖	dom	mtaAgentState should be == Up, but is Down	-	[Alert Icon] [Info Icon]	
2011-10-27	05:34:00	✖	RLAgent-RETAIN2	redlineAgentState should be == Up, but is Down	-	[Alert Icon] [Info Icon]	
2011-11-08	06:55:00	✖	rlcenterx32	hostAgentState should be == Up, but is Down	-	[Alert Icon] [Info Icon]	

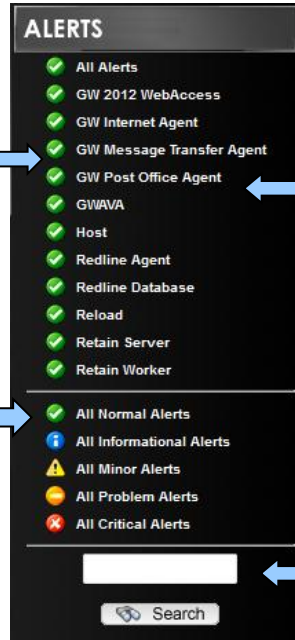
Alert Status

Status Icons:

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

Status Agenda:

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



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.

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

Check/Uncheck selected or all alerts

Date	Time	Status	Agent	Description	Assigned To	Action
2011-10-27	05:25:00	✘	RLAgent-SLES11-32	redlineAgentState should be == Up, but is Down	-	✘ 📄 ⓘ
2011-10-27	05:25:00	✘	RETAIN2	hostAgentState should be == Up, but is Down	-	✘ 📄 ⓘ
2011-10-27	05:25:00	✘	gwava 5	gw4v4AgentState should be == Up, but is Down	-	✘ 📄 ⓘ
2011-10-27	05:25:00	✘ ⓘ	po.dom	poaAgentState should be == Up, but is Down	-	✘ 📄 ⓘ
2011-11-08	06:55:00	✘	rlcenterx32	hostAgentState should be == Up, but is Down	-	✘ 📄 ⓘ

Actions

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

Click on "Running" or "Not Running" to enable or disable the alert engine



Alerts may be solved, assigned, and removed in masse by either selecting all, or selecting multiple alerts at a time through using "Shift-select" or holding down the "Control" key while selecting specific alerts. Alerts may also be sorted by any column variable. Clicking on the column titles will sort the reports accordingly.

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

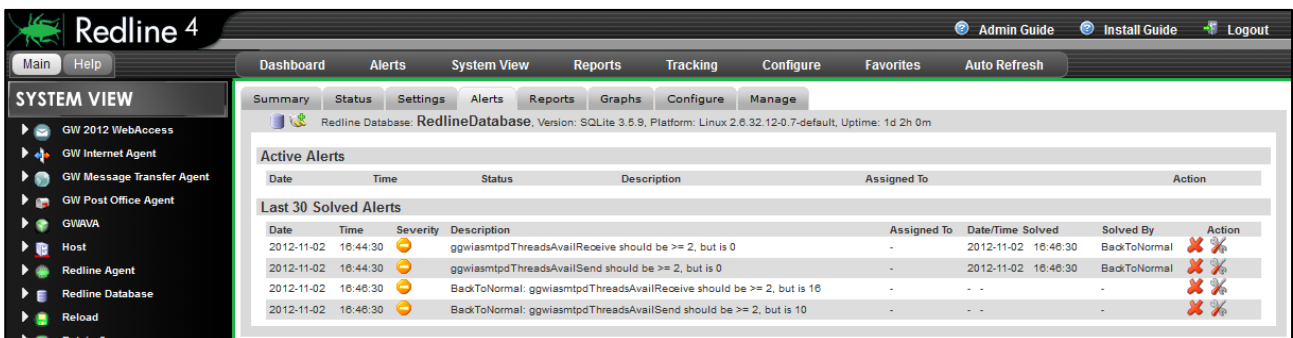
Assign: Assigns the selected alerts to the user selected in the dropdown menu.

Remove: Removes the selected alerts from the database.

Remove All: This will remove all listed 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.

The last 30 solved alerts can be viewed on the agent's alerts page. To access this page, select **System View** | **Redline map**, <select desired agent>, and select the 'Alerts' tab.

A screenshot of the Redline 4 web interface. The 'SYSTEM VIEW' sidebar is on the left, showing a tree of agents. The main content area is titled 'Redline Database: RedlineDatabase' and shows a table of 'Last 30 Solved Alerts'. The table has columns for Date, Time, Severity, Description, Assigned To, Date/Time Solved, Solved By, and Action. The 'Action' column contains icons for solving, deleting, and configuring alerts.

Date	Time	Severity	Description	Assigned To	Date/Time Solved	Solved By	Action
2012-11-02	16:44:30	🟡	ggwiasmtpdThreadsAvailReceive should be >= 2, but is 0	-	2012-11-02 16:48:30	BackToNormal	🗑️ ⚙️
2012-11-02	16:44:30	🟡	ggwiasmtpdThreadsAvailSend should be >= 2, but is 0	-	2012-11-02 16:48:30	BackToNormal	🗑️ ⚙️
2012-11-02	16:48:30	🟡	BackToNormal: ggwiasmtpdThreadsAvailReceive should be >= 2, but is 16	-	-	-	🗑️ ⚙️
2012-11-02	16:48:30	🟡	BackToNormal: ggwiasmtpdThreadsAvailSend should be >= 2, but is 10	-	-	-	🗑️ ⚙️

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

Delete Alert: Alerts may be deleted, and permanently removed from Redline.

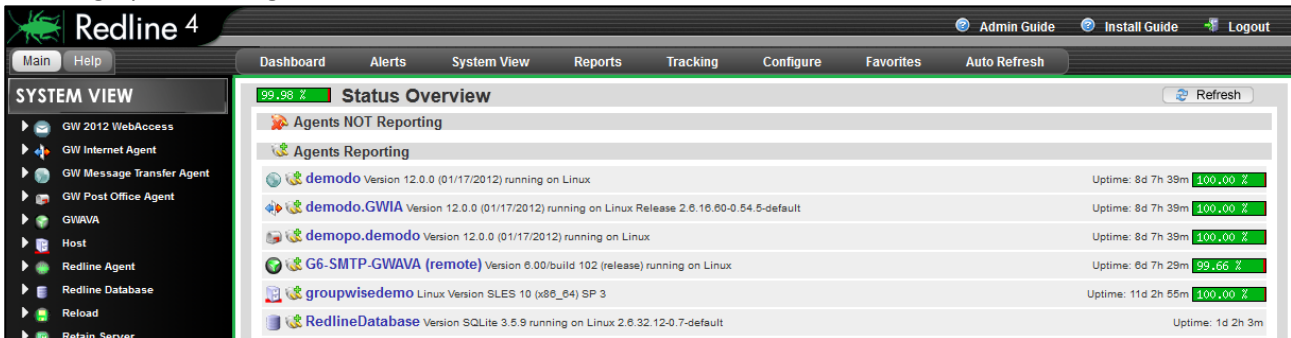
Solve Alert: You can mark an alert as solved with a single mouse click.

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

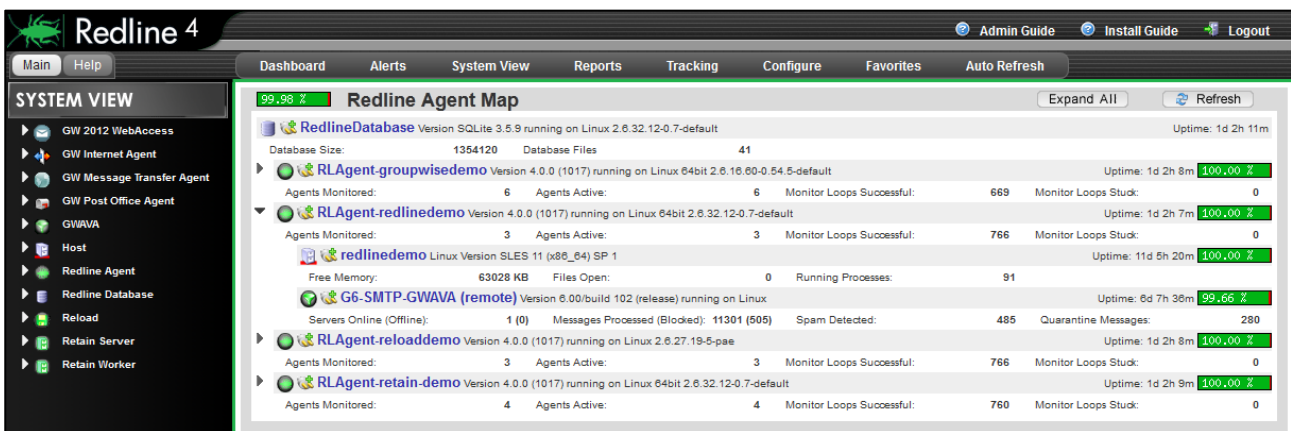
Info: Redline has a built in Knowledgebase with a lot of information about important values in your GroupWise system. Here you can read what Redline has to tell you.

System View

Redline's System View shows all known agents in your GroupWise environment. On the main **Status Overview** 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 you are taken to that agent's page, where Redline displays all known settings, status values, graphs, etc. in great detail.



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

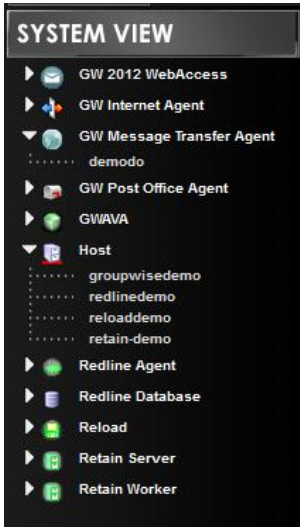


The plug icon indicates if an agent is actively reporting data or not. If you mouse over the plug, a small window appears showing when the agent last reported any data. Wherever you see a "plug" icon in Redline, you can mouse over it, pause a second, and this information is displayed.

Last data received at: 07 Jan 2011 07:43:32

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.



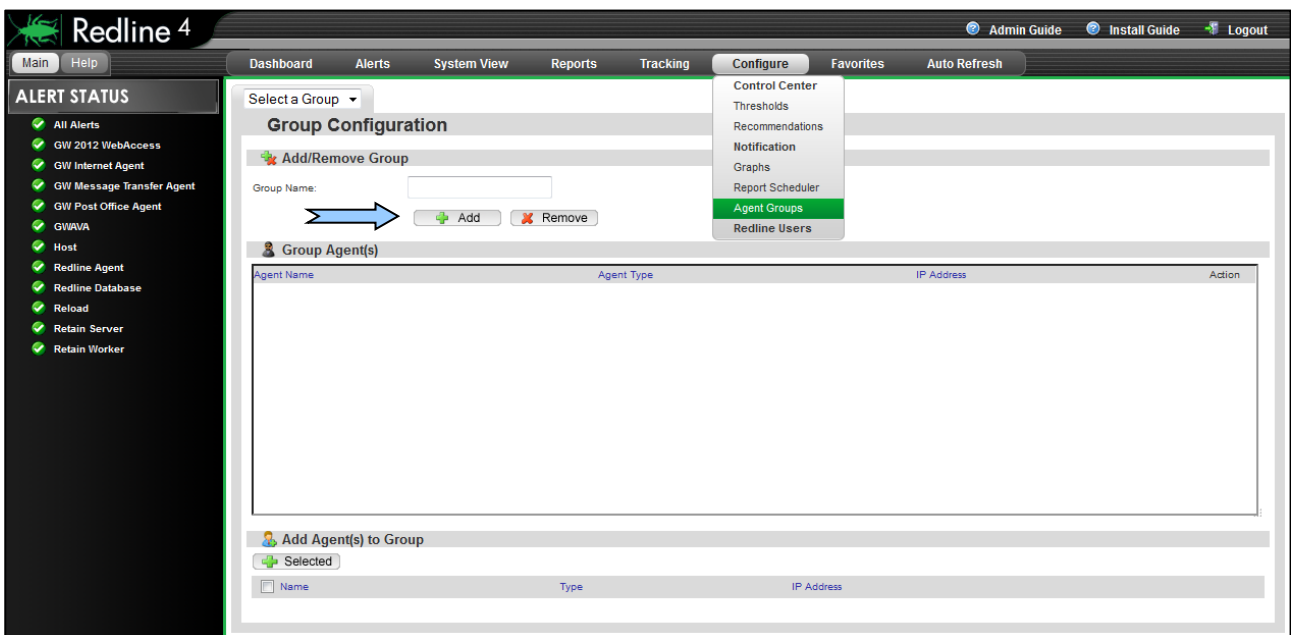
System Tree: Lists all agents similar to what is known from ConsoleOne. If you click on an agent, you can see all the details.

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.

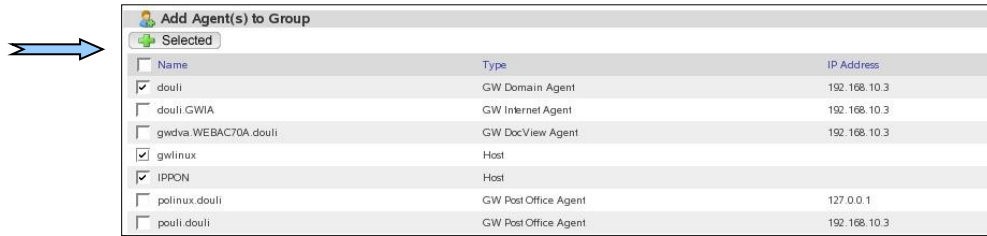
How to define a Group

1. Select **Agent Groups** from the **Configure** drop-down menu.



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

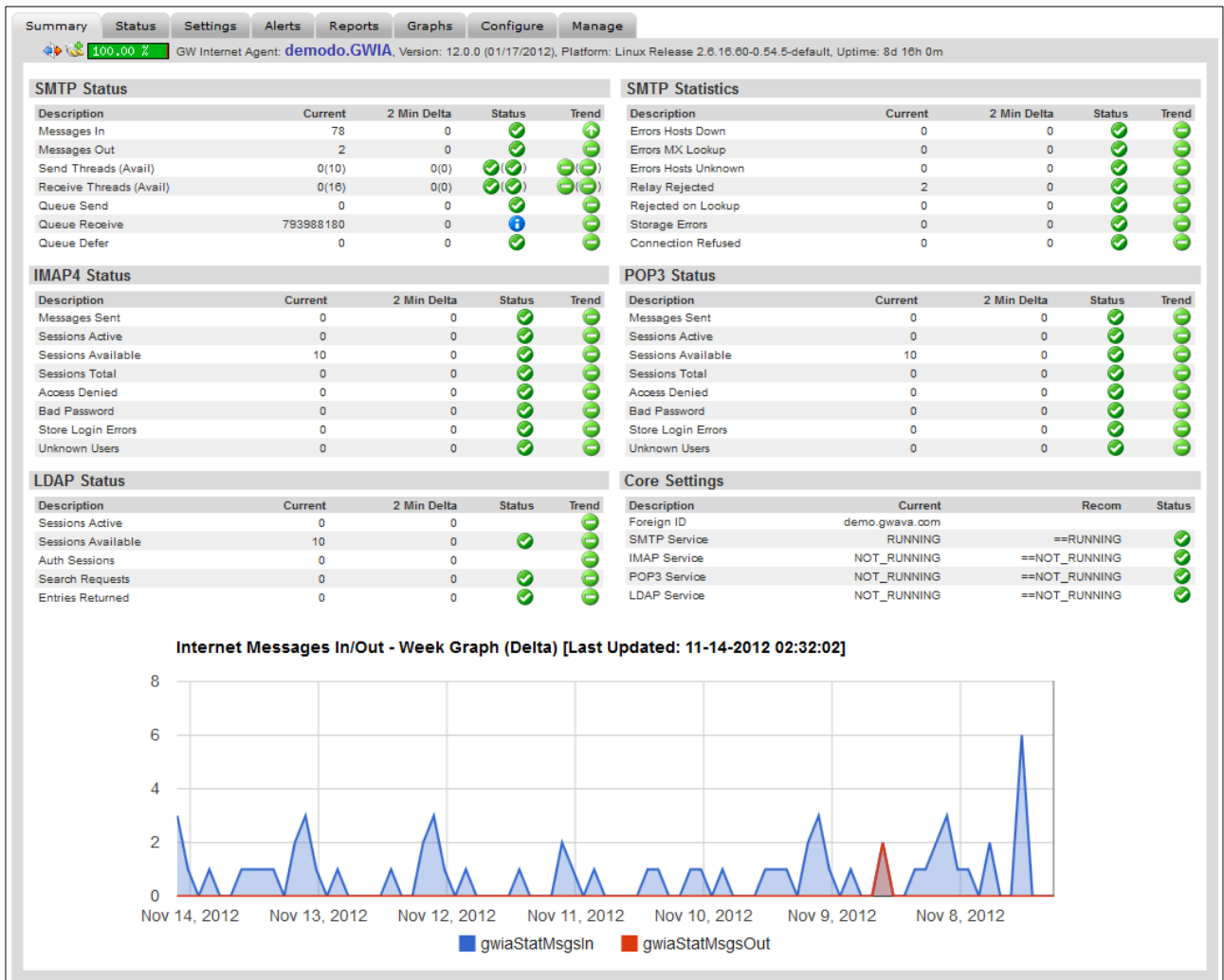
These pages can be accessed from the menu.



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.

Core Status Values			
Description	Value	Threshold	Status
Internet Agent Path	/grpwise/demodo/wpgate/gwia		
Work Path	/grpwise/demodo/wpgate/gwia/000_prd/gwork		
Log File Path	/var/log/novell/groupwise/gwia.demodo		
Current Log File	/var/log/novell/groupwise/gwia.demodo/1114gwia.001		
Previous Log File	/var/log/novell/groupwise/gwia.demodo/1113gwia.001		
Logfile accessible	OK	==OK	✓
Foreign ID	demo.gwava.com		
Time Zone	EST		
GMT Offset	GMT Offset= -5 hours, 0 minutes		
LDAP Context	None specified		
LDAP referral URL	None specified		
GroupWise Link	UP	==UP	✓
SMTP Connection Info	220 demo.gwava.com Ready		
Agent IP Address	192.168.100.102		
GW DC (Dictionary) Version	> 5.0	==> 5.0	✓

General Status Values					
Description	Current	2 Min Delta	Threshold	Status	Trend
Bytes Out	4865	0	<=10000000/2 Min	✓	→
Bytes In	4227441	0	<=10000000/2 Min	✓	→
Messages Out	2	0	<=80/2 Min	✓	→
Messages In	78	0	<=80/2 Min	✓	→
Status Messages Out	0	0	<=80/2 Min	✓	→
Status Messages In	0	0	<=80/2 Min	✓	→
Error Messages Out	0	0	<=3/2 Min	✓	→
Error Messages In	0	0	<=3/2 Min	✓	→
Messages Out (10 Min Delta)	0	0	<=80/2 Min	✓	→
Messages In (10 Min Delta)	0	0	<=80/2 Min	✓	→
Status Messages Out (10 Min Delta)	0	0	<=50/2 Min	✓	→
Status Messages In (10 Min Delta)	0	0	<=50/2 Min	✓	→
Error Messages Out (10 Min Delta)	0	0	<=3/2 Min	✓	→
Error Messages In (10 Min Delta)	0	0	<=3/2 Min	✓	→
Threshold Message Size In	0		<=100000	✓	→

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.

File System Status								
Folder	Files	Size	Oldest	Largest	2 Min Delta	Thresh.	Status	Trend
MSLOCAL								
GWINPROG								
0	1	0 B	(xNStore, 0 B, 01-07-2011 13:35:57)	(xNStore, 0 B, 01-07-2011 13:35:57)	0	<=20	✓	→
1	1	0 B	(xNStore, 0 B, 01-07-2011 13:35:57)	(xNStore, 0 B, 01-07-2011 13:35:57)	0	<=20	✓	→
2	1	0 B	(xNStore, 0 B, 01-07-2011 13:35:57)	(xNStore, 0 B, 01-07-2011 13:35:57)	0	<=20	✓	→
3	1	0 B	(xNStore, 0 B, 01-07-2011 13:35:57)	(xNStore, 0 B, 01-07-2011 13:35:57)	0	<=20	✓	→
4	1	0 B	(xNStore, 0 B, 01-07-2011 13:35:57)	(xNStore, 0 B, 01-07-2011 13:35:57)	0	<=60	✓	→
5	1	0 B	(xNStore, 0 B, 01-07-2011 13:35:57)	(xNStore, 0 B, 01-07-2011 13:35:57)	0	<=20	✓	→
6	1	0 B	(xNStore, 0 B, 01-07-2011 13:35:57)	(xNStore, 0 B, 01-07-2011 13:35:57)	0	<=20	✓	→
7	1	0 B	(xNStore, 0 B, 01-07-2011 13:35:57)	(xNStore, 0 B, 01-07-2011 13:35:57)	0	<=20	✓	→
MIME								
TMP	0	0 B	(, 0 B, 12-31-1969 17:00:00)	(, 0 B, 12-31-1969 17:00:00)	0	<=20	✓	→
GWVSCAN								
0	1	0 B	(xNStore, 0 B, 01-07-2011 13:35:57)	(xNStore, 0 B, 01-07-2011 13:35:57)	0	<=20	✓	→
1	1	0 B	(xNStore, 0 B, 01-07-2011 13:35:57)	(xNStore, 0 B, 01-07-2011 13:35:57)	0	<=20	✓	→
2	1	0 B	(xNStore, 0 B, 01-07-2011 13:35:57)	(xNStore, 0 B, 01-07-2011 13:35:57)	0	<=20	✓	→
3	1	0 B	(xNStore, 0 B, 01-07-2011 13:35:57)	(xNStore, 0 B, 01-07-2011 13:35:57)	0	<=20	✓	→
4	1	0 B	(xNStore, 0 B, 01-07-2011 13:35:57)	(xNStore, 0 B, 01-07-2011 13:35:57)	0	<=50	✓	→
5	1	0 B	(xNStore, 0 B, 01-07-2011 13:35:57)	(xNStore, 0 B, 01-07-2011 13:35:57)	0	<=20	✓	→
6	1	0 B	(xNStore, 0 B, 01-07-2011 13:35:57)	(xNStore, 0 B, 01-07-2011 13:35:57)	0	<=20	✓	→
7	1	0 B	(xNStore, 0 B, 01-07-2011 13:35:57)	(xNStore, 0 B, 01-07-2011 13:35:57)	0	<=20	✓	→
MIME								
TMP	0	0 B	(, 0 B, 12-31-1969 17:00:00)	(, 0 B, 12-31-1969 17:00:00)	0	<=20	✓	→
wpcsin								

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.

The screenshot shows the 'Settings' page for a GWIA agent. The top navigation bar includes Summary, Status, Settings, Alerts, Reports, Graphs, Configure, and Manage. The main content area is divided into four sections:

- Core Settings:** A table with columns for Description, Setting, Recommended, and Status. Items include Internet Agent Path, Work Path, Log File Path, Current Log File, Previous Log File, Logfile accessible, Foreign ID, Time Zone, GMT Offset, LDAP Context, LDAP referral URL, GroupWise Link, SMTP Connection Info, Agent IP Address, and GW DC (Dictionary) Version.
- Settings:** Two tables side-by-side. The left table has columns for Description, Current, Recom, and Status. The right table has columns for Description, Current, Recom, and Status. Items include Directory Synchronization, Directory Exchange, Accounting, Convert Status to Msgs., Outbound Status Level, Recovery Enabled, Retry Count, Retry Interval, Failed Recovery Wait, Network Reattach Command, Message threshold, Send/Receive Cycle, Minimum Run, Idle Sleep Duration, Snap Shot Interval, Logging Level, Max. Log File Age, Max. Log Disk Space, and HTTP Port.
- SMTP Settings:** A table with columns for Description, Current, Recom, and Status. Items include SMTP Service, Use SSL, SMTP Send Threads, SMTP Receive Threads, and DNS 'A' Record.
- Connection Settings:** A table with columns for Description, Current, Recom, and Status. Items include Ignore GW Internet Addressing, Expand Groups, RFC-822 Foreign Domain for Replies, MIME Foreign Domain for Replies, and Timeout Commands.

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.

Remove or Solve an alert

The screenshot shows the 'Alerts' page for a GWIA agent. The top navigation bar includes Summary, Status, Settings, Alerts, Reports, Graphs, Configure, and Manage. The main content area is divided into two sections:

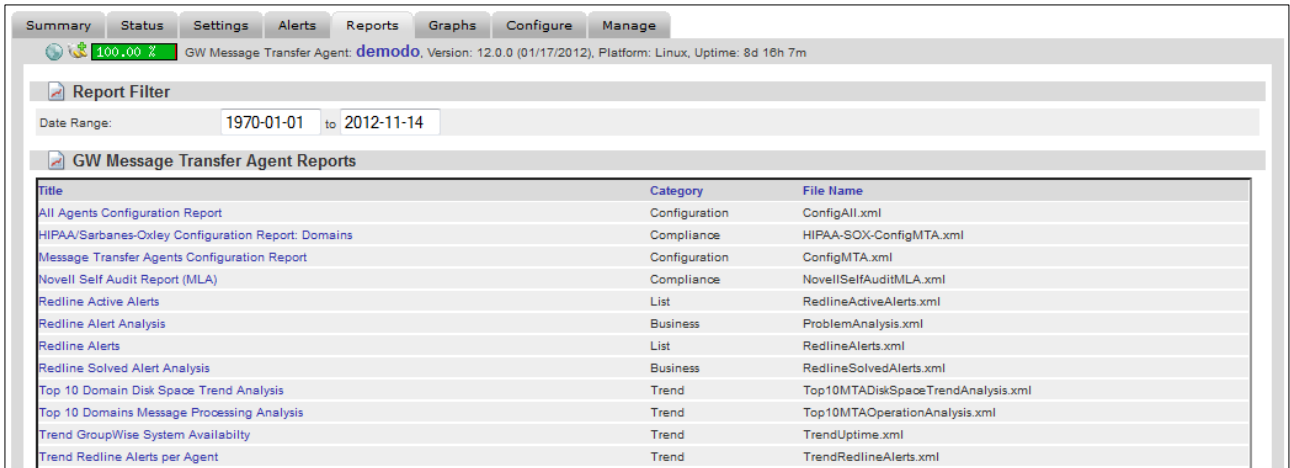
- Active Alerts:** A table with columns for Date, Time, Severity, Description, and Action. One alert is listed with a severity of 'Error' and a description of 'gwiaAgentState should be == Up, but is Down'.
- Solved(Saved) Alerts:** A table with columns for Date, Time, Severity, Date/Time Saved, Description, and Action. One alert is listed with a severity of 'Error' and a description of 'gwiaAgentState should be == Up, but is Down'.

Date and Time when Problem was solved

Configure actions or display more information about the alert

Reports

All reports which can be run on the selected agent type may be run from this page. To learn more about report definitions and designing reports, refer to the next chapter.



Title	Category	File Name
All Agents Configuration Report	Configuration	ConfigAll.xml
HIPAA/Sarbanes-Oxley Configuration Report: Domains	Compliance	HIPAA-SOX-ConfigMTA.xml
Message Transfer Agents Configuration Report	Configuration	ConfigMTA.xml
Novell Self Audit Report (MLA)	Compliance	NovellSelfAuditMLA.xml
Redline Active Alerts	List	RedlineActiveAlerts.xml
Redline Alert Analysis	Business	ProblemAnalysis.xml
Redline Alerts	List	RedlineAlerts.xml
Redline Solved Alert Analysis	Business	RedlineSolvedAlerts.xml
Top 10 Domain Disk Space Trend Analysis	Trend	Top10MTADiskSpaceTrendAnalysis.xml
Top 10 Domains Message Processing Analysis	Trend	Top10MTAOperationAnalysis.xml
Trend GroupWise System Availability	Trend	TrendUptime.xml
Trend Redline Alerts per Agent	Trend	TrendRedlineAlerts.xml

To run a report listed on this page, select the report name. Selecting a report name will open a new window with the selected report generated in the browser page.

Graphs

Graphs are a very powerful tool to look at data in a visual way. Graphs show how disk size grows and shrinks, memory is allocated over time, or an abnormal amount of message traffic. 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. 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.

Redline		Available Redline Agent Thresholds		
Description	Value Name	Value Type	Action	
Agent Status	redlineAgentState	int		
Agents Active	rlagAgentsActive	int		
Agents Monitored	rlagAgentsMonitored	int		
Binary Path	rlagBinPath	string		
Active Control Centers	rlagCCenters	int		
Startup Config File	rlagConfigFile	string		
Data Path	rlagDataPath	string		
Database Schemas	rlagDatabaseSchemas	int		
Loaded Modules	rlagLoadedModules	int		
Monitor Loops Successful	rlagLoopsOK	int		
Monitor Loops Stuck	rlagLoopsStuck	int		
Module Path	rlagModulePath	string		
Software Path	rlagSoftwarePath	string		

(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 recommendation 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.

The screenshot shows the 'Manage' tab of a Redline agent interface. At the top, there are navigation tabs: Summary, Status, Settings, Alerts, Reports, Graphs, Configure, and Manage. The main header displays 'Redline Agent: RLAgent-groupwisedemo, Version: 4.0.0 (1017), Platform: Linux 64bit 2.6.18.60-0.54.5-default, Uptime: 7d 11h 36m'. Below this is the 'Agent Information' section, which includes a 'Description' field with 'Global Unique ID (GUID)' and a 'Value' of 4. The main section is 'Monitored Agents', which contains a table with the following data:

Type	Description	Unique ID	Agent Name	Status	HTTP IP Address	HTTP IP Port	SSL	Action
GWIA	GW Internet Agent	12	-	enabled	192.168.100.102	9850	disabled	
HOST	Host	5	-	enabled	-	-	-	
MTA	GW Message Transfer Agent	10	-	enabled	192.168.100.102	7180	disabled	
POA	GW Post Office Agent	11	-	enabled	192.168.100.102	7181	disabled	
WEBAC2	GW 2012 WebAccess	13	-	enabled	192.168.100.102	80	disabled	

Below the table is the 'Add or Edit Monitored Agent' section, which includes a dropdown menu for 'Agent Type' (set to 'GW 2012 DocView Agent'), a 'Status' checkbox (unchecked), 'HTTP Address', 'HTTP Port', 'HTTP Username' (set to 'admin'), 'HTTP Password' (masked with dots), a 'Use SSL' checkbox (unchecked), 'Agent Name', and 'Agent Name Suffix' fields. An 'OK' button is at the bottom.

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

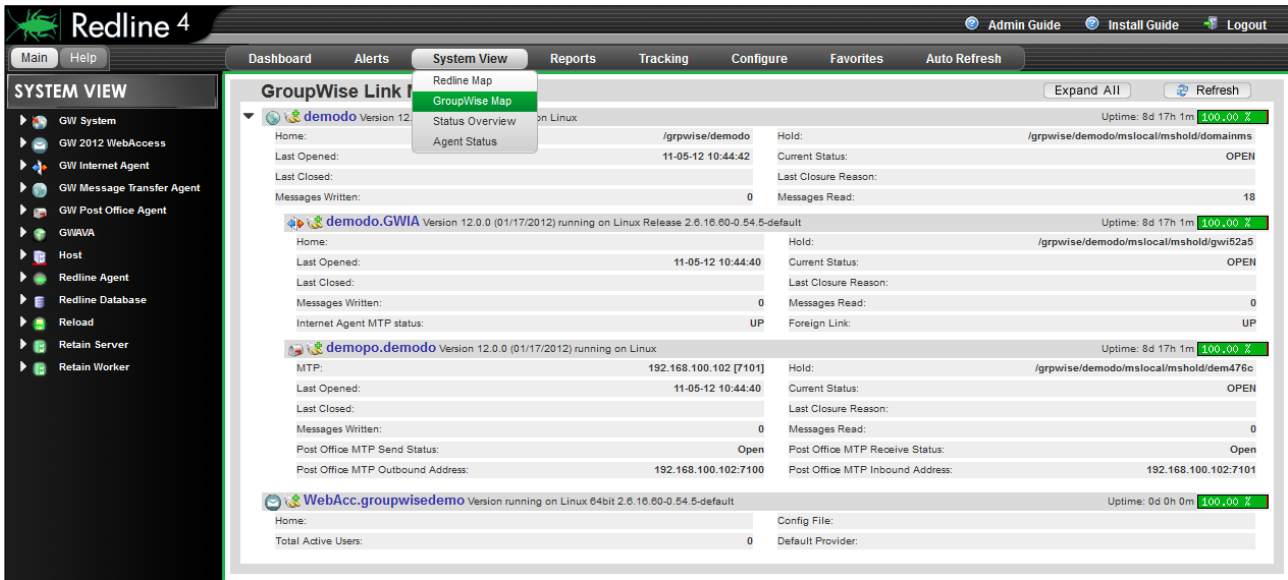
All other agents, (monitored agents), can be removed from the Redline system from this page once they have first been removed from the Redline Agent's page. If they have not been removed from the agent's page first, when the agent again reports the data, the removed item will be re-created and replaced.

The screenshot shows the 'Manage' tab for a specific Redline agent. The main header displays 'GW Internet Agent: dom.GWIA, Version: 8.0.2 (07/07/2010), Platform: Linux Release 2.6.27.19-5-pae, Uptime: 0d 0h 0m'. Below this is the 'Agent Information' section, which includes a 'Description' field with 'Registering Redline Agent ID' and a 'Value' of 4, and another 'Description' field with 'Global Unique ID (GUID)' and a 'Value' of 6. The main section is 'GW Internet Agent Actions', which includes a 'Remove Agent' button with an 'OK' button next to it.

If the displayed agent is a monitoring agent, the value listed on the right side of the page will link directly to the registering agent's page.

GroupWise Map

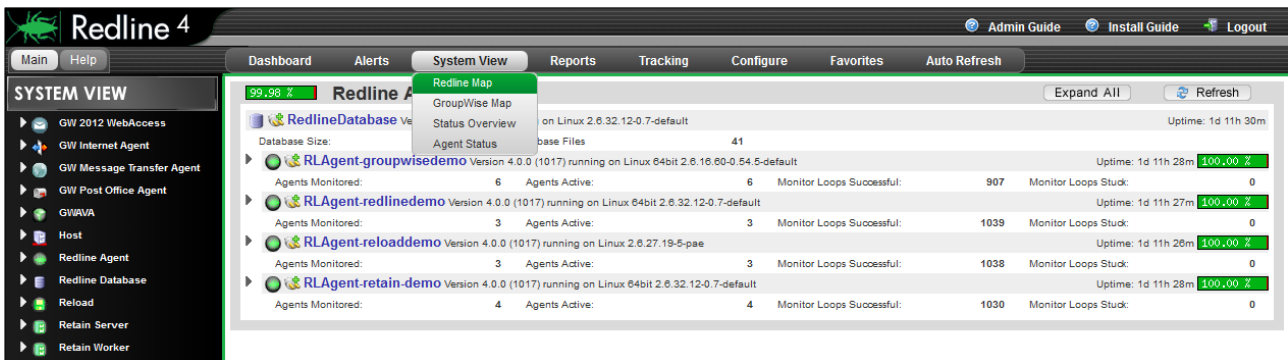
The GroupWise map tab under the System View displays the monitored system in a top-down map showing how components in the GroupWise system are connected and their hierarchy.



Uptime, basic vital statistics for each monitored agent, and overall percentage uptime are displayed.

Redline Map

The Redline Map displays all agents in the system which 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. Select the 'expand all' button to display the Redline agents which are being monitored. How the agents are displayed depends on user configuration. Agents may be organized according to alphabetical, host, redline ui, or agent Grouping

Agent Status

The Agent Status page displays all the different agents and monitoring agents along with their current status. The Agent Status page is intended to create a single display containing the essential information for the entire monitored Redline system.

Agent Name	Version	Uptime	Free Memory	Files Open	Running Processes
demodo	Version 12.0.0	8d 17h 16m	100.00%		
demodo.GWIA	Version 12.0.0 (01/17/2012)	8d 17h 15m	100.00%		
demopo.demodo	Version 12.0.0 (01/17/2012)	8d 17h 16m	100.00%		
G6-SMTP-GWAVA (remote)	Version 6.00/build 102	8d 17h 6m	99.67%		
groupwisedemo	Linux Version SLES 10 (x86_64) SP 3	11d 12h 31m	100.00%		
RedlineDatabase	Version SQLite 3.5.9	1d 11h 42m			
redlinedemo	Linux Version SLES 11 (x86_64) SP 1	11d 14h 51m	100.00%		
RELOADDEMO	Version Reload 3.9 Build (399500)	245d 16h 7m	100.00%		
reloaddemo	Linux Version SLES 11 (586) SP 0	245d 16h 8m	100.00%		
retain-demo	Linux Version SLES 11 (x86_64) SP 1	39d 17h 1m	100.00%		
Retain Server	Version 3.0.0	7d 16h 11m	100.00%		
RLAgent-groupwisedemo	Version 4.0.0 (1017)	1d 11h 38m	100.00%		
RLAgent-redlinedemo	Version 4.0.0 (1017)	1d 11h 38m	100.00%		
RLAgent-reloaddemo	Version 4.0.0 (1017)	1d 11h 38m	100.00%		
RLAgent-retain-demo	Version 4.0.0 (1017)	1d 11h 38m	100.00%		
WebAcc.groupwisedemo	Version running on Linux 64bit 2.6.16.60-0.54.5-default	0d 0h 0m	100.00%		
Worker-retain-demo.site	Version 3.0.0	7d 16h 11m	100.00%		

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

Reports

With reports you can get a lot of information out of your GroupWise environment. Redline provides many preconfigured reports spanning every monitored agent in the system. Custom reports tailored to any specific need or organization also can be created. 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 Report
- Create Report
- Edit Report
- Schedule Report
- Browse Reports
- Queries
- User Overview
- Logfile Processing
- Comparison Reports

Run Reports

The Run Reports page contains all the pre-defined and configured reports which ship with Redline 4. Though these reports are included with Redline, any newly defined or user-created and saved reports will be listed here as well. The displayed reports may be filtered by the desired component or monitored system, selected on the left under 'Global Reports'.

GLOBAL REPORTS

- All Reports
- Archive to Go
- GW 2012 DocView Agent
- GW 2012 WebAccess
- GW 8 Doc Viewer Agent
- GW 8 WebAccess Agent
- GW 8 WebAccess Appl.
- GW API Gateway
- GW Async Gateway
- GW Exchange Gateway
- GW Internet Agent
- GW Message Transfer Agent
- GW Mobile Server 2.x/3.x
- GW Notes Gateway
- GW Post Office Agent
- GWAVA
- Host
- HotLink Server
- Howell Messenger Agent
- Howell Messenger Arch Agent
- RIM BlackBerry Server
- Redline Agent
- Redline Database
- Reload
- Retain Server
- Retain Worker
- Reveal
- TxC Icecore
- Vertigo

Run Report

Specify Filter

Date from: 1990-01-01 to 2012-11-14

Agent Name: (Can select up to 10)

- All Agents
- demodo.GWIA
- demodo
- demopo.demodo
- G6-SMTP-GWAVA (remote)
- groupwisedemo
- RedlineDatabase
- redlinedemo

Select Report

Title	Category	Agent Type	File Name	Action
All Agents Configuration Report	Configuration	All	ConfigAll.xml	✖
BlackBerry 30 Day Message Summary	Business	RIM BlackBerry Server	BES30DayMsgSummary.xml	✖
BlackBerry Message Summary	Business	RIM BlackBerry Server	BESMessageSummary.xml	✖
BlackBerry Top 20 Users by Incoming Message Count	List	RIM BlackBerry Server	BESTop20IncomingCount.xml	✖
BlackBerry Top 20 Users by Outgoing Message Count	List	RIM BlackBerry Server	BESTop20OutgoingCount.xml	✖
BlackBerry Top 50 Users by Incoming Message Count	List	RIM BlackBerry Server	BESTop50IncomingCount.xml	✖
BlackBerry Top 50 Users by Outgoing Message Count	List	RIM BlackBerry Server	BESTop50OutgoingCount.xml	✖
BlackBerry Users	List	RIM BlackBerry Server	BESUserList.xml	✖
BlackBerry Users with Pending Messages	List	RIM BlackBerry Server	BESUserPendingList.xml	✖
Brice	Custom	GW Post Office Agent	Brice.xml	✖
GroupWise 7.0.2/6.5.6 Vulnerability Check	Business	Invalid	Vulnerability702VersionCheck.xml	✖
GroupWise Client Version Analysis	Business	GW Post Office Agent	ClientVersionAnalysis.xml	✖
GW 2012 Document Viewer Agent Configuration Report	Configuration	GW 2012 DocView Agent	ConfigGWDV2.xml	✖
GW 8 Document Viewer Agent Configuration Report	Configuration	GW 8 Doc Viewer Agent	ConfigGWDV4.xml	✖
GW Mobile Server Connection Analysis	List	GW Mobile Server 2.x/3.x	GMSCConnectionAnalysis.xml	✖
GW Mobile Server Most Active Users	List	GW Mobile Server 2.x/3.x	GMSMostActiveUser.xml	✖
GW Mobile Server Top 50 Active Users	List	GW Mobile Server 2.x/3.x	GMSUserActivity.xml	✖
GWAVA Configuration Report	Configuration	GWAVA	ConfigGW4V4.xml	✖
GWAVA Message Processing Analysis	Business	GWAVA	GW4V4OperationAnalysis.xml	✖
HIPAA/Sarbanes-Oxley Account Audit	Compliance	GW Post Office Agent	HIPAA-SOX-AccountAudit.xml	✖
HIPAA/Sarbanes-Oxley Configuration Report: Domains	Compliance	GW Message Transfer Agent	HIPAA-SOX-ConfigMTA.xml	✖
HIPAA/Sarbanes-Oxley Configuration Report: GW 2012 Document Viewer Agent	Compliance	GW 2012 DocView Agent	HIPAA-SOX-ConfigGWDV2.xml	✖
HIPAA/Sarbanes-Oxley Configuration Report: GW 8 Document Viewer Agent	Compliance	GW 8 Doc Viewer Agent	HIPAA-SOX-ConfigGWDV4.xml	✖
HIPAA/Sarbanes-Oxley Configuration Report: GWAVA	Compliance	GWAVA	HIPAA-SOX-ConfigGW4V4.xml	✖

Click on GW Post Office Agent in the list on the left panel. Set the beginning date to last week, select the bloated post office agent in the Agent Name list, and then click on the report name to run the report.

Create Report

Reports can be created and customized to any situation. To create a custom report, first select a table from the left-hand menu. Give the report a title and filename, but do not use spaces. A customized text header should also be added to provide explanation for the report.

The screenshot shows the 'Create Report' window in Redline 4. The left sidebar lists various report categories under 'GLOBAL REPORTS'. The main window has a 'Create Report' title and instructions to select a table and fill in details. The 'Table:' field is empty. The 'Title:' field is empty. The 'Filename:' field is empty with '.xml' as a suffix. The 'Text Header:' field is empty. The 'Chart Setup' section shows 'Chart Type' as 'Table' and 'Size' as 'Medium'. The 'Columns to Display:' list is empty. The 'Group By:' dropdown is empty, and the 'Include count(*)' checkbox is unchecked. The 'Data Column:' dropdown is empty, and the 'Method:' is set to 'Sum'. The 'Sort By:' dropdown is empty, and the 'Sort Order:' is set to 'Descending'. The 'Case Sensitive:' checkbox is unchecked. The 'Query Definition' section has four filter rows, each with a dropdown, 'Operator:' dropdown, and 'Value:' field. Below the filters is an 'AND' dropdown and the text 'the column filters.'. At the bottom, there are 'Items on Report:' (set to 50) and an 'Include Run Report filters' checkbox. At the very bottom are 'Save', 'Preview', and 'Schedule' buttons.

Once the title and text header have been entered, then exactly what data is to be displayed along with how it will be displayed must be selected. The chart type, columns to display in the chart, how the data is grouped, and the specific column utilized as the column to track the changes in as well as how the information should be sorted are all required.

The Query Definition section is used to further filter the data. The four criteria locations can either be left blank, or filled-in as desired. The filters may be created with a logical 'and' or 'or' to truly hone the report to only the desired criteria.

Once finished, a custom report cannot be previewed before it is saved. Select the 'Save' button to allow the 'preview' button to spawn a new window and display the results. Do not close the report creation window, as you may return and modify the report, re-save, and re-preview the report until it meets satisfaction. Ensure that it is saved, then schedule or immediately run the report through the Run Report window.

Edit Report

Existing reports may be edited through the Edit Report page. To edit a report, select the desired report from the list or select an agent type or system to restrict the listed reports to choose from. Simply select the name of the report desired to load it into the editor.

The screenshot displays the Redline 4 web interface. On the left is a sidebar with 'GLOBAL REPORTS' and a list of agents. The main area is titled 'Edit Report'. At the top, there's a table 'All Agent Types Reports' with columns: Title, Category, File Name, and Action. Below this is the 'Edit Report' form with the following fields:

- Template Filename:
- Category:
- Title:
- API Module: (Optional)

Below the form is an 'HTML Template' editor. It features a toolbar with icons for Bold (B), Italic (I), Underline (U), Text Color (A), Background Color (A), Bulleted List (List), Numbered List (List), Indent (List), Outdent (List), Link (A), Unlink (A), and Table (Table). Below the toolbar is a large empty text area for editing the report's HTML. At the bottom left of the editor is a 'View Source' checkbox, and at the bottom center is an 'OK' button.

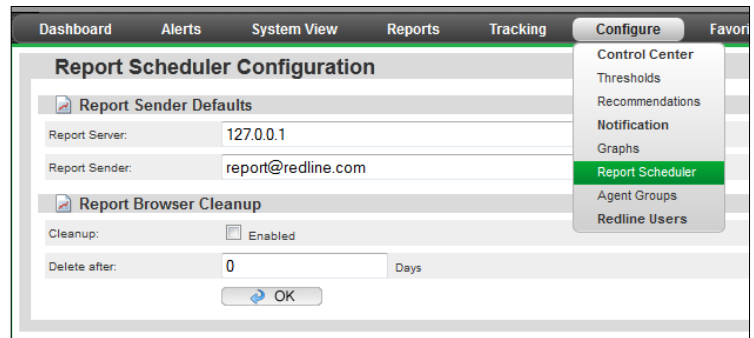
Once loaded, the report then can be edited directly in the HTML Template window. If editing a report that came with Redline, it is recommended to give it a custom file name as well as template name, to avoid overwriting the original report. Select 'OK' when complete to save the edited report.

Schedule Reports

The report Scheduler is accessed through the **Configure | Report Scheduler** drop down menu.

To get a scheduled report run and sent to the desired recipient, the scheduler needs to be configured first.

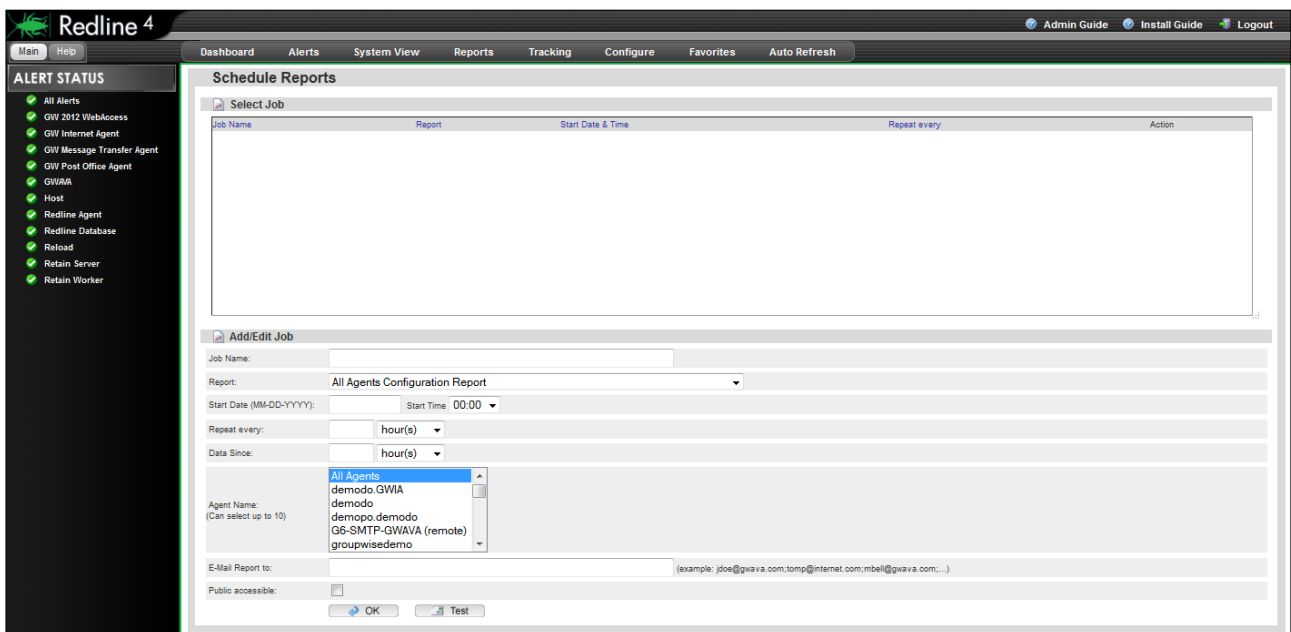
The Report sender default is the source server for information loaded in the report, but not sent, in the report email. The default setting is 'home', 127.0.0.1, but for the embedded graphs and tables to work, this section **MUST** be set to the Redline Control Center's IP address



In order to view reports from outside the network, the IP/DNS address must be a publicly accessible, and port 6910 needs to be forwarded to the Redline Control Center server.

The browser cleanup option removes all saved embedded graphs and information from the Redline 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 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 the agent name or a date range, it is possible to define what date range or specific agent 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 by the database query.

Agent Name: The agent(s) the report is to be run against. This may be applied to all agents, or select up to ten agents to include in the report.

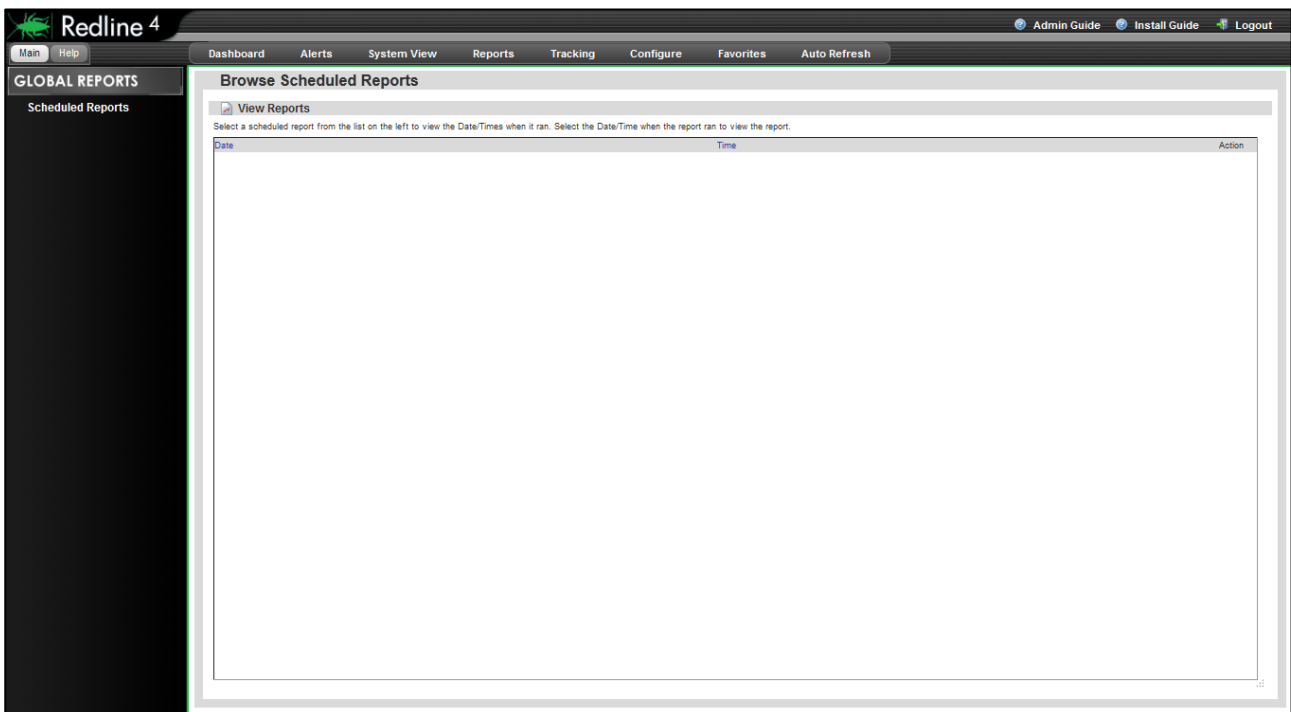
E-Mail Report to: Redline may send a report through email to a desired recipient upon completion.

Public Accessible: As there may be other users besides the administrator accounts created in Redline, this will make the report accessible to non-admin accounts.

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

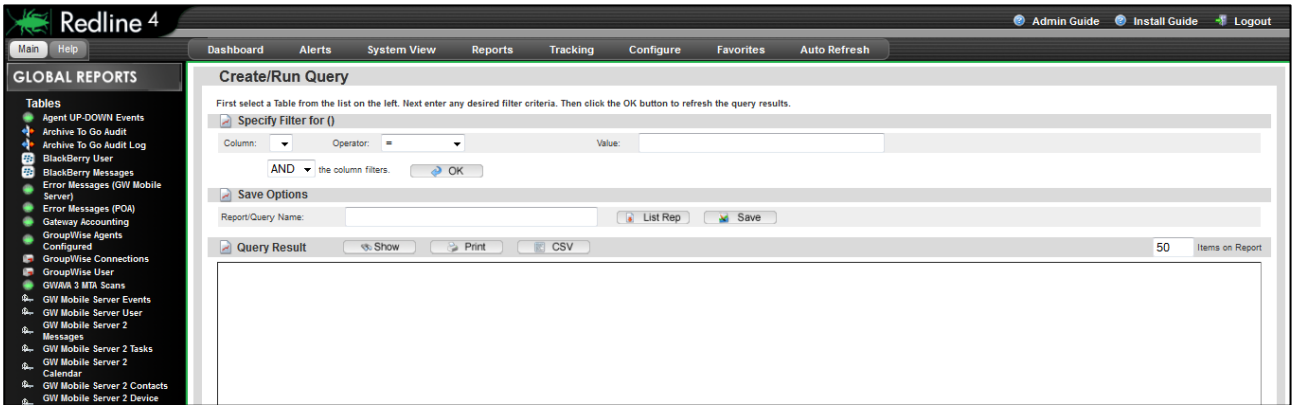
Report Browser

The Report Browser lists the current list of scheduled reports which have run. You may also view the various reports that have been generated by clicking on them. 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. If a scheduled report not been run, it will not appear in this list. On initial install, the list will appear very empty. Once reports have been scheduled and run, the saved report data will appear in this dialog window for access and viewing.



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 generated report by date from the 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.

Query



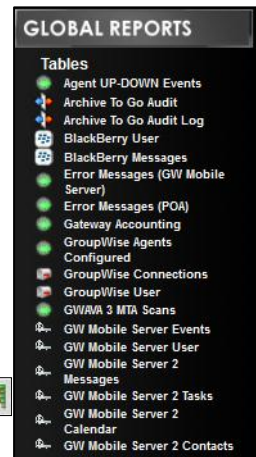
It is possible to query all database tables directly, or run predefined queries. Queries are mainly used to view data from the Redline database, but may be utilized to create a list report.

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

Query Redline databases

Redline stores its data in multiple databases. With the query interface you can access all database tables without any restriction.

After you've selected a table, the table is loaded and filters appear. You can hide columns, sort the data and specify filter on any column desired. Every column has three icons to do this:

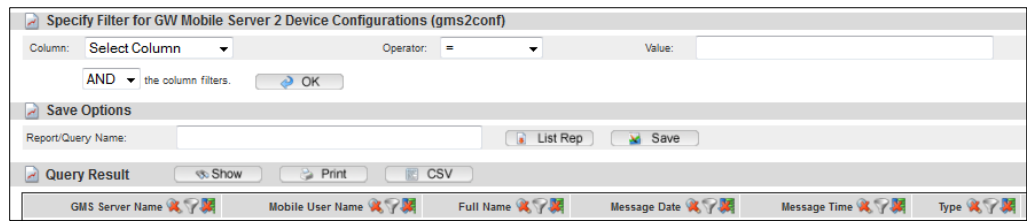


Hide Column: If you hide a column, the icons for the column are still visible on the screen, but the title and the data is not shown any more. If you print or export the report, these columns are not on the report.

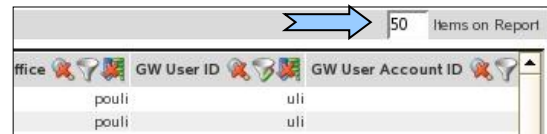
Sort Column: You can sort based on every column you want. If you click the sort button the second time, the sort direction is reversed. A third click disables sorting on this column. If you enable sorting on multiple columns, the order is based on what column was selected first. That way you can sort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

Redline can utilize AND and OR operations to apply filters and search criteria to simplify the search records.

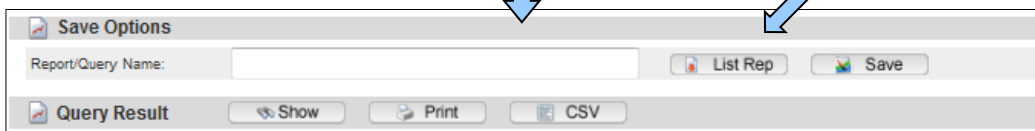


If you need more or less items on the screen, you can specify the number of rows.



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.

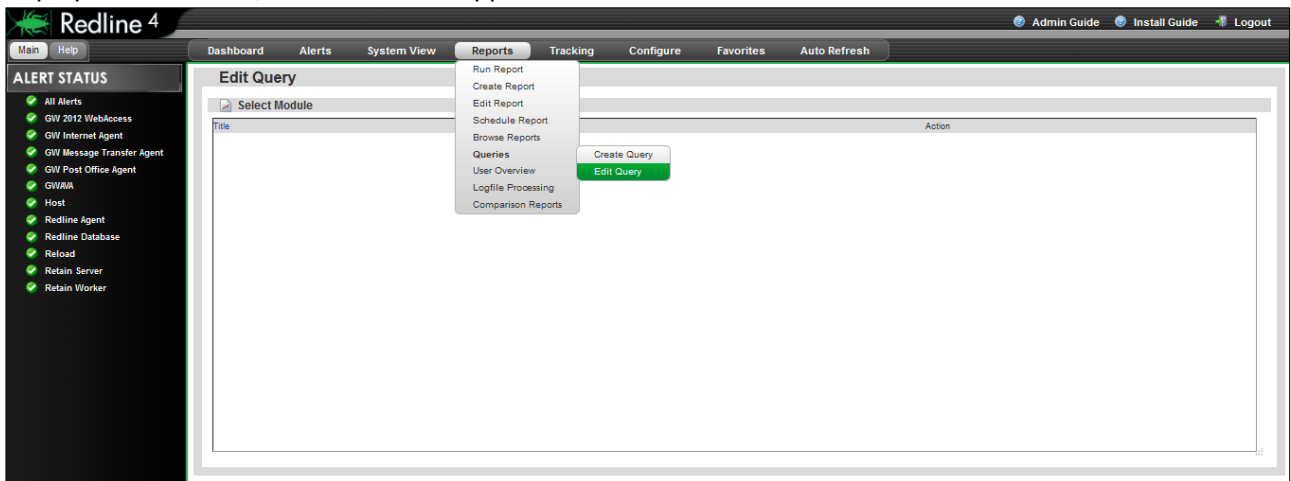
1. Specify Report Name
2. Save Report as List Report



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.

Edit Queries

Once queries have been created and saved, then queries will display here in the same manner as a report is displayed. On install, this section will appear blank.



To edit a query, click on the query title. Once loaded, modify the settings as desired.

Table Indexes

Database table indexes 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.

The SQL Database Configuration page is found under the **Configure | Control Center | Database** drop down menu.

Description	Table Name	DB File	Max Age	Max Records	Index 1	Index 2	Index 3	Index 4	Index 5
Agent UP-DOWN Events	aguptime	global.db	0	0	evdate	evtime			
Archive To Go Audit	a2go_audit	a2go.db	0	0					
Archive To Go Audit Log	a2go_audit_log	a2go.db	0	0					
BlackBerry User	besuser	besuser.db	0	0					
BlackBerry Messages	besmsgs	besmsgs.db	0	0					
Error Messages (GW Mobile Server)	gwmerrors	gwmoberr.db	0	0					
Error Messages (POA)	errors	alerts.db	90	0	User	ErrorDate	ErrorTime	AgentName	
Gateway Accounting	accounting	acct.db	90	0	MsgSubject	GWUserID	MsgDate		
GroupWise Agents Configured	gwagents	gwagents.db							
GroupWise Connections	gwconn	global.db			LoginName	posName			
GroupWise User	gwuser	global.db			Name	posName			
GWAVA 3 MTA Scans	gwavamta	gwavamags.db	90	0	ScanStartDate	ScanStartTime			
GW Mobile Server Events	gwmobevents	gwmobile.db	0	0					
GW Mobile Server User	gwmobuser	gwmobusr.db	0	0					
GW Mobile Server 2 Messages	gms2msgs	gwmob2m.db							
GW Mobile Server 2 Tasks	gms2task	gwmob2t.db							

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

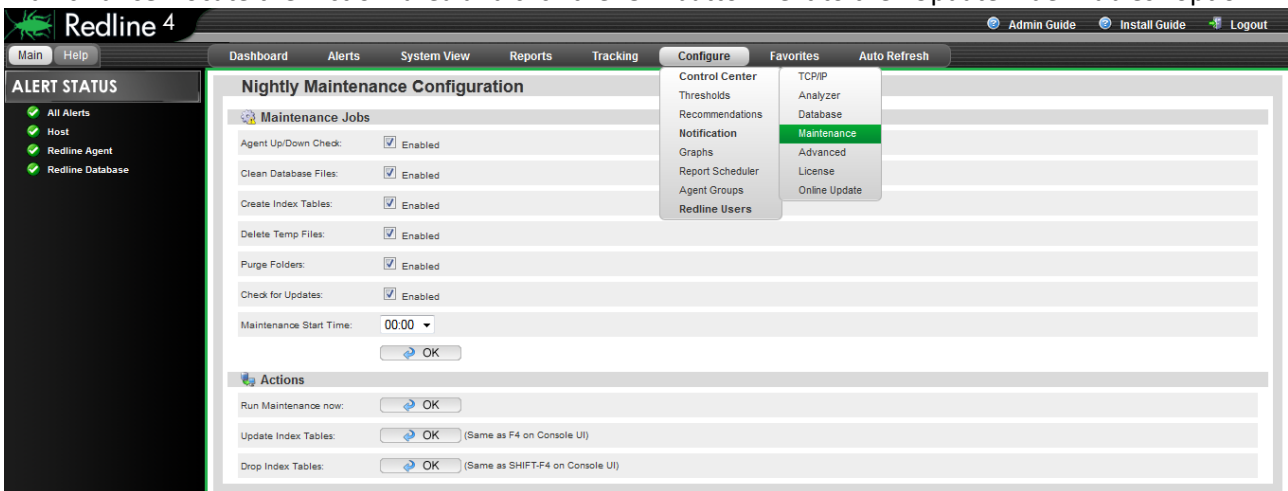
How to define a table index:

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 it
3. Mark the checkbox for "Index 1" and select the column "E-Mail"
4. Click OK

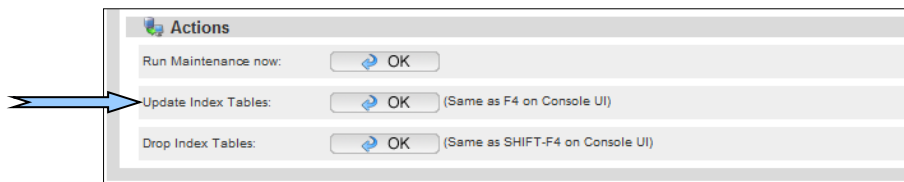
Table indexes are not generated immediately after they are defined. Every midnight Redline is doing a database check which includes the creation of missing table indexes. Table indexes which are not defined any more will be removed during the nightly database check as well. If you look into the rlcc.log 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” section under **Configure | Control Center | Maintenance**. Locate the ‘Action’ area and click the ‘OK’ button next to the “Update Index Tables” option.



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



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'.

User Overview

Select User

Name:

Name	Post Office	Last Active	Total Messages	Total Bytes
taylor	demopo.demodo	cochrane [Indian Affairs]	11/09/12 04:02	10
Colin	demopo.demodo	Colin Bretagne	11/19/12 04:02	54330
control	demopo.demodo	Control User [Technical]	not available	0
blavin	demopo.demodo	Cooke [Indian Affairs]	10/24/11 15:50	959
Gerald	demopo.demodo	Gerald Lamare	11/09/12 04:02	1111
guest	demopo.demodo	guest	09/17/12 21:03	43
GWAVA	demopo.demodo	Gwava [Indian Affairs]	11/20/12 00:05	37763
demopo-GWIA	demopo.demodo	GWIA Login Test	11/02/12 16:57	0
ron	demopo.demodo	Ron gardens [Technical]	11/08/12 13:50	960
sales	demopo.demodo	Sales User [Indian Affairs]	02/28/12 01:46	1042
sms	demopo.demodo	sms [Technical]	not available	0
demopo-SOAP	demopo.demodo	SOAP Login Test	11/02/12 16:58	0
Stephen	demopo.demodo	Stephen Cohen	11/09/12 04:02	487

Details for User:

Update Date: Current Server Time:

Mailbox Information

Post Office:

User ID (fid):

User DB:

User DB Size:

Last DRN:

Message DB:

Mailbox Size:

Mailbox Limit:

Threshold:

Content Statistics

Total Messages:

Mailbox:

Sent Items:

Trash:

Mail:

Phone:

Appointments:

Tasks:

Notes:

Document References:

Attachments:

Most Recent Login

IP Address:

Date & Time:

Platform:

Client Version:

Last WebAccess Login:

User License Information

License Type:

Last Active:

Inactive Days:

Top 5 Internet Messages Received

	Last 14 Days	Total Bytes
1. ngw-request@ngwlist.com	14	705408
2. ngw-bounces+2077e99d1fc931db5aa5abfafdf094cc1e26bd90@ngwlist.co	1	38904

Top 5 Internet Messages Sent

	Last 14 Days	Total Bytes
1. ngw-request@ngwlist.com	14	705408
2. ngw-bounces+2077e99d1fc931db5aa5abfafdf094cc1e26bd90@ngwlist.co	1	38904

To search for a user, place a user name in the user name box and hit 'enter'. All users matching the search criteria will be displayed. To display users, select the post office from the 'User Overview' menu on the left.

Select the appropriate user from the search results by selecting the username. Once selected the desired user's information will propagate in the User Overview window.

Details for User: Colin Bretagne

Update Date: 2012-11-20 00:34:23 Current Server Time: 2012-11-20 05:46

Mailbox Information

Post Office: demopo.demodo

User ID (fid): Colin (o21)

User DB: usero21.db

User DB Size: 14855488 Bytes

Last DRN: 8197

Message DB: msg07.db

Mailbox Size: 54330 KB

Mailbox Limit: 0 KB

Threshold: 0%

Content Statistics

Total Messages: 1055

Mailbox: 819

Sent Items: 8

Trash: 228

Mail: 1052

Phone: 0

Appointments: 0

Tasks: 0

Notes: 3

Document References: 0

Attachments: 0

Most Recent Login

IP Address:

Date & Time:

Platform:

Client Version:

Last WebAccess Login:

User License Information

License Type: Limited client license

Last Active: 11/19/12 04:02

Inactive Days: 0

Top 5 Internet Messages Received

	Last 14 Days	Total Bytes
1. ngw-request@ngwlist.com	14	705408
2. ngw-bounces+2077e99d1fc931db5aa5abfafdf094cc1e26bd90@ngwlist.co	1	38904

Top 5 Internet Messages Sent

	Last 14 Days	Total Bytes
1. ngw-request@ngwlist.com	14	705408
2. ngw-bounces+2077e99d1fc931db5aa5abfafdf094cc1e26bd90@ngwlist.co	1	38904

Logfile Processing

The Logfile Processing page displays the relevant path and status information of how Redline is processing log files for the different monitored agents connected to the system. (These numbers reset when the Redline Control Center is started.)

The screenshot shows the Redline 4 web interface. The top navigation bar includes 'Main', 'Help', 'Dashboard', 'Alerts', 'System View', 'Reports', 'Tracking', 'Configure', 'Favorites', and 'Auto Refresh'. The left sidebar shows 'ALERT STATUS' with a list of checked items: All Alerts, GW 2012 WebAccess, GW Internet Agent, GW Message Transfer Agent, GW Post Office Agent, GWAVA, Host, Redline Agent, Redline Database, Reload, Retain Server, and Retain Worker. The main content area is titled 'Logfile Processing' and contains the following sections:

- Information:** Redline processes logfiles in 4 different processes:
 - Regular logfiles in the 250 cache subfolders
 - Gateway accounting logfiles
 - GWCheck logfiles
 - MTA message logfilesIn order to guarantee data processing, a monitor threads checks how long it takes to process a logfile. If it takes too long, the process will be informed in order to restart the process.
- Logfile Processing Report:** A table showing processing statistics for Regular, MTA Message, GWCheck, and Accounting files.
- Control Center Logfile:** A section with the path '/opt/beginfinite/redline/logs' and an 'OK' button to download the logfile.

The only item on this page which is not informational is the Control Center Logfile, which can be downloaded by clicking the OK button.

Comparison Reports

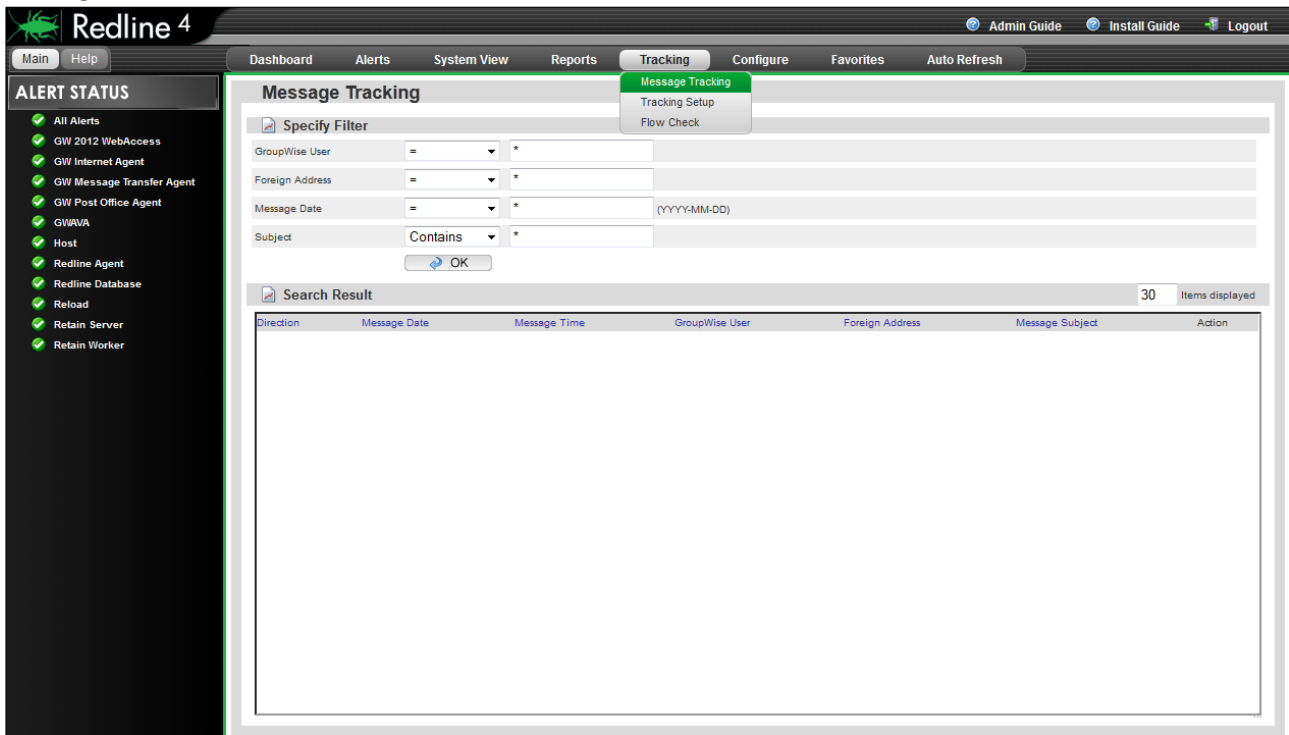
The Redline Comparison Report helps evaluate the ongoing return on investment of your existing GroupWise System—as calculated based on information collected by Redline—against another messaging platform. This report incorporates six key areas of analysis that evaluate the ongoing costs of operating your 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.

Message Tracking

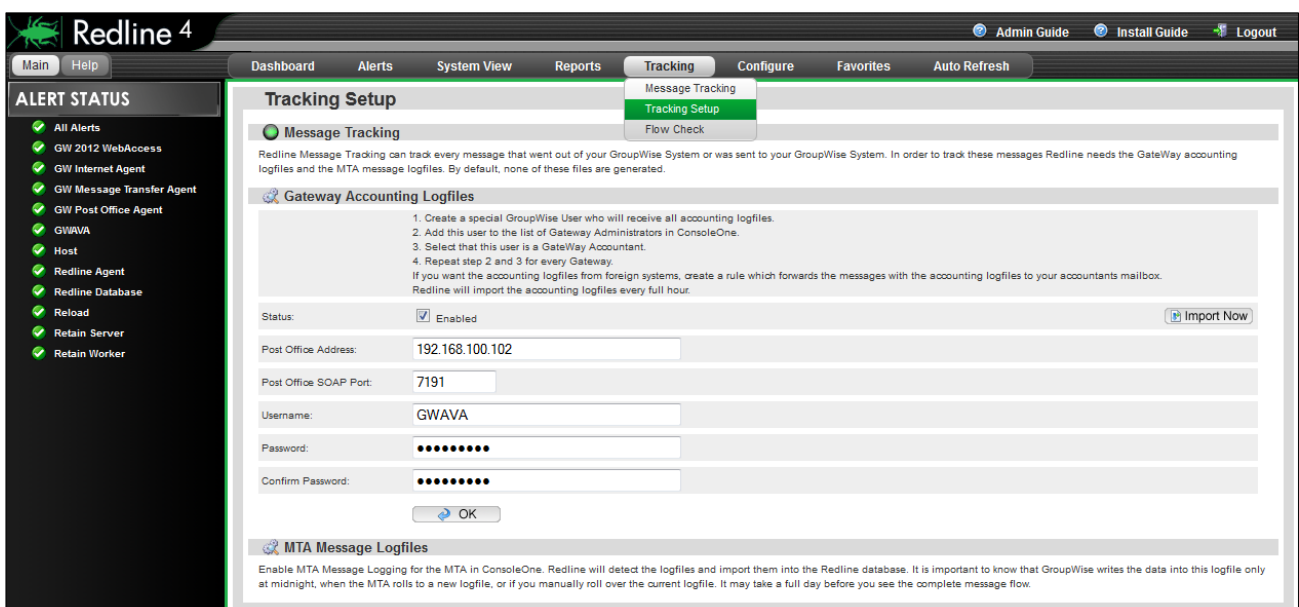
With Redline Message Tracking it is possible to track every message that is coming in to GroupWise or leaving GroupWise through a gateway like the Internet Agent. From there you can see through which domain(s) and at the end to which post office and user the message was delivered to or sent from. Status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

The screenshot shows the Redline 4 web interface. The main content area is titled "Tracking Setup" and contains the "Gateway Accounting Logfiles" configuration section. The status is set to "Enabled". The configuration fields are: Post Office Address: 192.168.100.102, Post Office SOAP Port: 7191, Username: GWAVA, Password: [masked], and Confirm Password: [masked]. An "Import Now" button is visible. A blue arrow points from the text "Import Accounting files now" to the "Import Now" button.

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.

Specify one or more filter.

Start search

Search Result

More details

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 were the destination or source Post Office and User.

Message Tracking					
Message flow through Gateways:					
Direction	Message Date	Message Time	GroupWise User	Foreign Address	Message Subject
Incoming	2012-11-03	5:38:21	GWAVA	gwava@demo.gwava.com	GWAVASMTPEMO (Win32) Report: D

Message flow through Domains:											
Agent Name	Message Date	Time Received	Time Delivered	Message Type	Message Size	Source Agent	Dest Agent	Sender Name	Sender Domain	Total Recipients	Agent Recipients

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

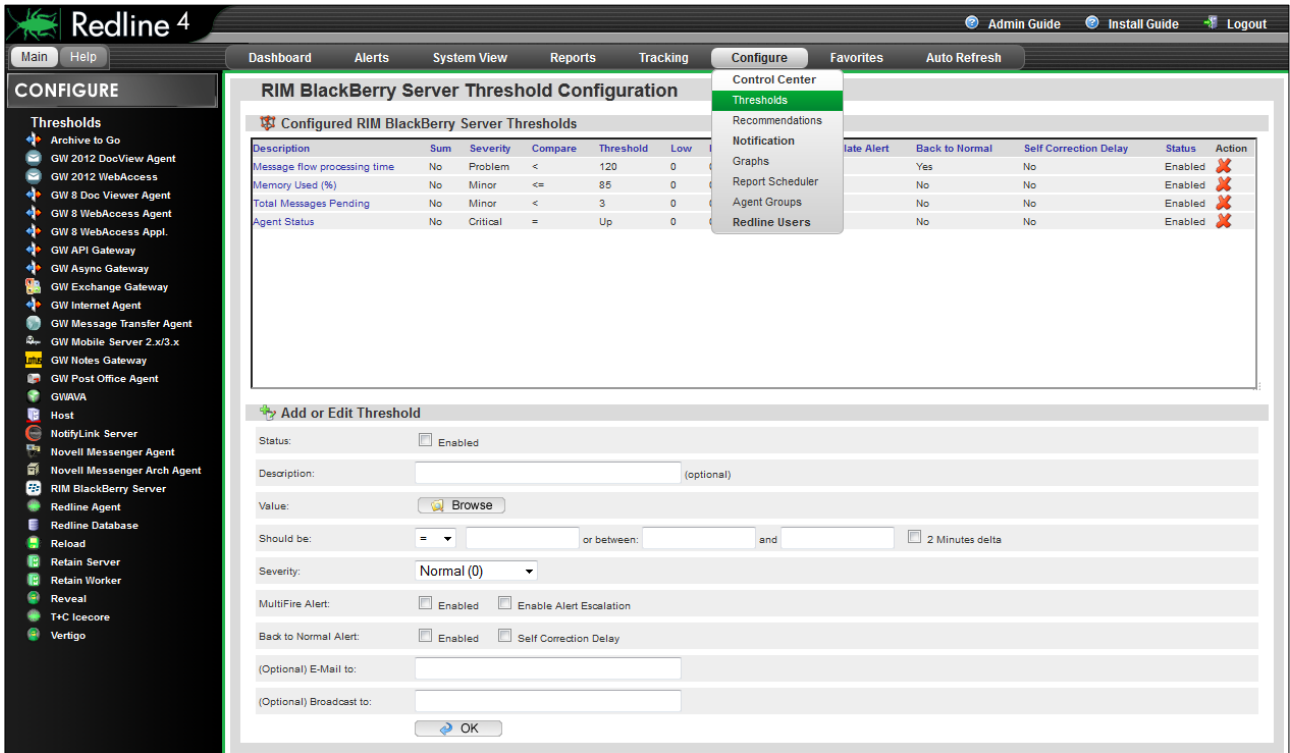
The screenshot displays the 'Message Flow Check' configuration window. At the top, a blue arrow points to the 'Processing Status' column of a table. The table lists a single flow check named 'MyTest' with a status of 'enabled', source 'doulj.GWIA', and destination 'admin@myuli.com'. Below the table is the 'Add/Edit Flow Check' form, which includes fields for 'Status' (checked), 'Flow Check Name', 'Source Internet Agent' (set to 'doulj.GWIA'), 'Destination E-Mail Address', 'Test Interval' (set to '10 Minutes'), 'Check BES Delivery' (checked), and 'Check GMS2 Delivery' (checked). At the bottom, there is a 'Domain Message Flow Status' section with explanatory text and an 'OK' button.

Flow Check Name	Status	Source (GWIA)	Destination	Repeat every	Processing Time (seconds)	Processing Status	Action
MyTest	enabled	doulj.GWIA	admin@myuli.com	10 Minutes	POA: 14,BES -81727,GMS -81726	✓✓✓	✕

How to set up message flow check

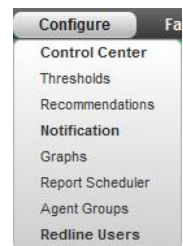
1. Specify a Name for the flow check.
2. Select the Internet Agent where the message starts.
3. Specify a username who will receive the message.
4. Specify the interval how often a message will be sent.
5. Check if delivery to a mobile device should be checked.
6. Create a rule in the destination mailbox, 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. Threshold settings are found under the **Configure | Thresholds** dropdown menu, with specific modules on the left-hand side.



Configure

The Configure menu 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.



Control Center

The Control Center submenu contains configuration for the Redline Control Center, connection, database, maintenance, updating, licensing are contained here.



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.

The screenshot shows the 'TCP/IP Configuration' page in the Redline 4 interface. On the left is an 'ALERT STATUS' sidebar with four green checkmarks: 'All Alerts', 'Host', 'Redline Agent', and 'Redline Database'. The main content area has a top navigation bar with 'Main' and 'Help' buttons, and a menu with 'Dashboard', 'Alerts', 'System View', 'Reports', 'Tracking', 'Configure', 'Favorites', and 'Auto Refresh'. The 'TCP/IP Configuration' section is titled and contains three sub-sections: 'Agent Listener' (IP: 0.0.0.0, Port: 6900, Max Threads: 32, Status: Enabled), 'HTTP Web Interface' (IP: 0.0.0.0, Port: 6910, Max Threads: 32, Login Auto Complete: Enabled, Session Timeout: 10 Minutes, Template Path: /opt/beginfinite/redline/CC-Templates, Status: Enabled), and 'Email Relay Server' (IP: empty, Port: empty (Default: Port 25), Fallback: Disabled). An 'OK' button is at the bottom.

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. The E-mail alert server is utilized if Redline is to email reports to a recipient. The server must have all the required information to function. See the help section for more detail.

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.

The screenshot shows the 'Analyzer Configuration' page in the Redline 4 interface. It follows the same layout as the previous screenshot. The 'Analyzer Configuration' section is titled and contains three sub-sections: 'Trend Analyzer' (Trend Factor: 10.000000, Analyzer Interval: 2 Minutes), 'Alert Analyzer' (Agent Alive Timeout: 250 Seconds, Alert Engine: Enabled, MultiFire Alerts Interval: 10 Minutes, Back to Normal Alerts: Enabled, Self Correction Delay: 2 Minutes), and 'Alert Generation' (Normal Alerts: Enabled, Informational Alerts: Enabled, Minor Alerts: Enabled, Problem Alerts: Enabled, Critical Alerts: Enabled, Logfile Errors: Enabled). Each alert type also has an 'Animate Icons' checkbox. An 'OK' button is at the bottom.

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

settings are shown.

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 description column.

The screenshot displays the Redline 4 application interface. The top navigation bar includes 'Main', 'Help', 'Dashboard', 'Alerts', 'System View', 'Reports', 'Tracking', 'Configure', 'Favorites', and 'Auto Refresh'. The 'Configure' tab is active, showing the 'SQL Database Configuration' section. On the left, the 'ALERT STATUS' sidebar shows 'All Alerts', 'Host', 'Redline Agent', and 'Redline Database' all checked. The main content area features a table of database tables:

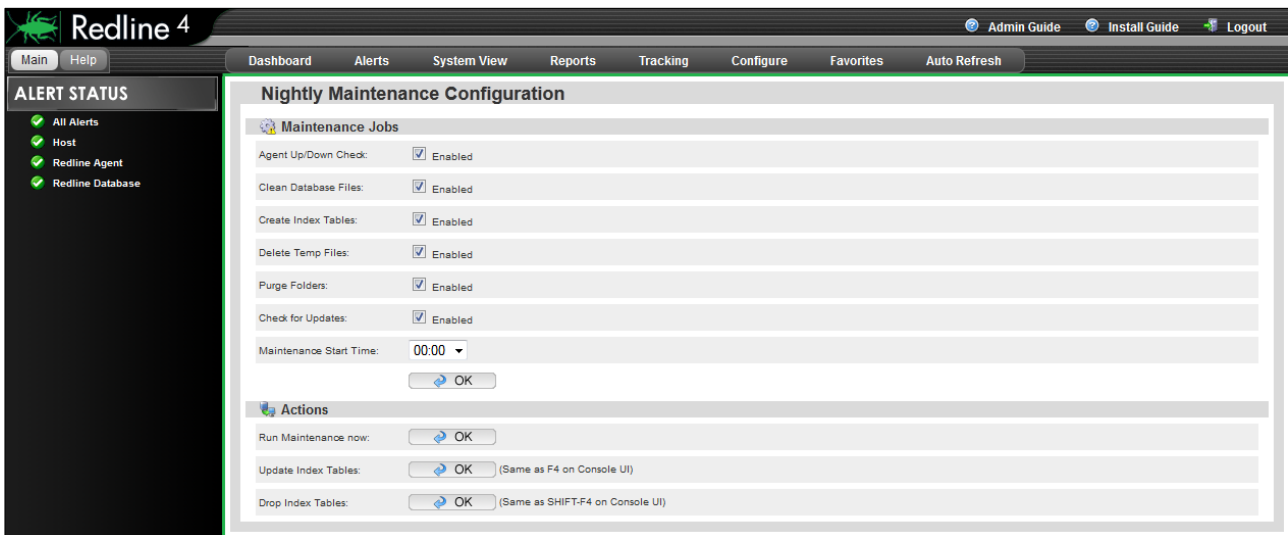
Description	Table Name	DB File	Max Age	Max Records	Index 1	Index 2	Index 3	Index 4	Index 5
Agent UP-DOWN Events	aguptime	global.db	0	0	evdate	evtime			
Archive To Go Audit	a2go_audit	a2go.db	0	0					
Archive To Go Audit Log	a2go_audit_log	a2go.db	0	0					
BlackBerry User	besuser	besuser.db	0	0					
BlackBerry Messages	besmsgs	besmsgs.db	0	0					
Error Messages (GW Mobile Server)	gwmerrors	gwmoberr.db	0	0					
Error Messages (POA)	errors	alerts.db	90	0	User	ErrorDate	ErrorTime	AgentName	
Gateway Accounting	accounting	acct.db	90	0	MsgSubject	GWUserID	MsgDate		
GroupWise Agents Configured	gwagents	gwagents.db							
GroupWise Connections	gwconn	global.db			LoginName	poaName			
GroupWise User	gwuser	global.db			Name	poaName			
GWAVA 3 MTA Scans	gwavamta	gwavamsgs.db	90	0	ScanStartDate	ScanStartTime			
GW Mobile Server Events	gwmobevents	gwmobile.db	0	0					
GW Mobile Server User	gwmobuser	gwmobusr.db	0	0					
GW Mobile Server 2 Messages	gms2msgs	gwmob2m.db							

Below the table is the 'Edit Database Cleanup and Indexing' section, which includes fields for 'Table Name', 'Database File', 'Max Records', 'Max Age' (with a 'Days' unit), and checkboxes for 'Index 1' through 'Index 5', each with a dropdown menu set to 'Enabled'. An 'OK' button is located at the bottom of this section.

Once selected, a table's information is loaded into the cleanup and indexing section; where default cleaning options are propagated

Maintenance

The Maintenance page 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: generating table indexes and, 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.

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.

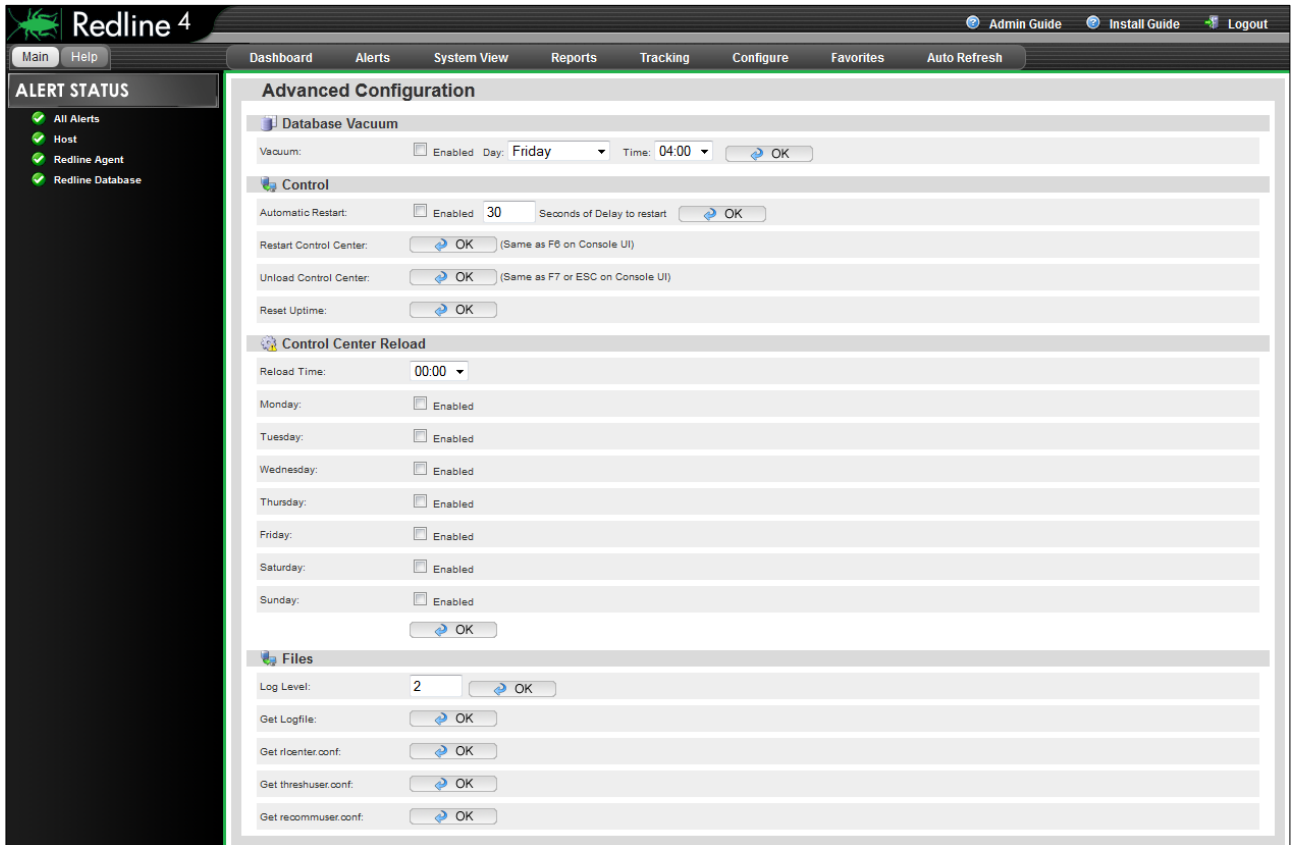
If the host server needs to be shut down during the set maintenance time, manually triggering a maintenance cycle will become necessary, especially if the shutdown is routine.

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

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 table indexes and updating table indexes will clean out the system and allow Redline to pull all new information. 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.

Advanced



The Advanced page contains a database vacuum, which can be set to clean through the database on a recurring schedule, as well as automatic restarting and log level settings.

By default, there is no need to utilize the database vacuum unless the Redline system is monitoring a large system, or you are instructed to activate the database vacuum by Support.

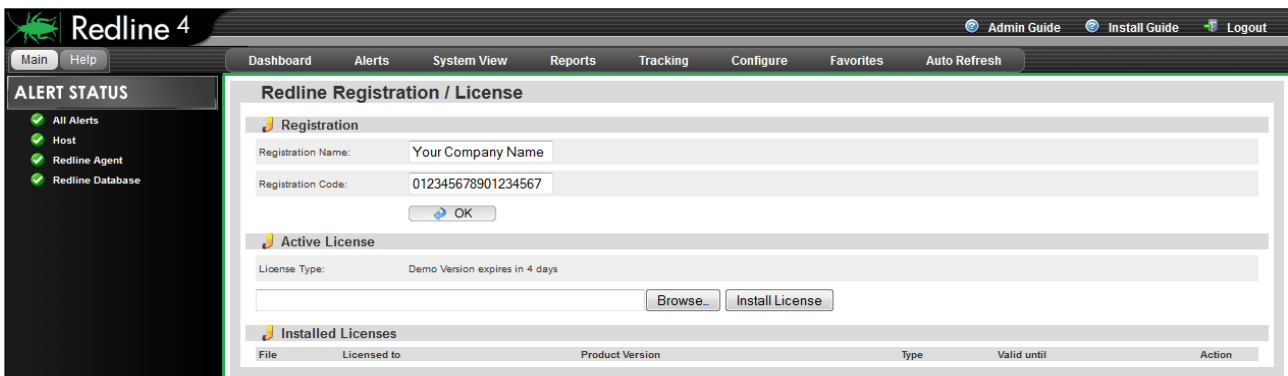
Automatic restart of the Control Center should not be used unless in coordination with Support as part of a troubleshooting measure. Restart of the Control Center is helpful if the configuration has changed and a re-load of the Control Center is desired. Unloading the Control Center will shut down Redline.

The Log 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.

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.

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.

The screenshot displays the Redline 4 Online Update interface. At the top, the current version is shown as "Running Version 4.0.0 (Build 1017)". Below this, the "Update Server" section shows the "Server Location" as "beta.gwava.com" and the "Version" as "4.0". There are buttons for "Refresh", "Default", and "Beta".

The "Packages Available for Download" section contains a table with the following data:

Package	Version	Release Date	Update Details
Control Center Binaries	4.0.0, build 1017 Beta	2012-11-12	[i]
Web Interface	4.0.0, build 1017 Beta	2012-11-12	[i]
Reports	4.0.0, build 1017 Beta	2012-11-12	[i]
Schema	4.0.0, build 1017 Beta	2012-11-12	[i]
Help/Knowledgebase	4.0.0, build 1017 Beta	2012-11-12	[i]
Data Definitions	4.0.0, build 1017 Beta	2012-11-12	[i]
Linux Agent (32Bit SLES)	4.0.0, build 1017 Beta	2012-11-12	[i]
Linux Agent (64Bit SLES)	4.0.0, build 1017 Beta	2012-11-12	[i]
NetWare Agent	4.0.0, build 1017 Beta	2012-11-12	[i]
Windows Agent (32Bit)	4.0.0, build 1017 Beta	2012-11-12	[i]
Windows Agent (64Bit)	4.0.0, build 1017 Beta	2012-11-12	[i]

Below this table is an "OK" button. The "Downloaded Control Center Packages" section shows a table with the following data:

Package	Version	Release Date	Download Date	Update History
Control Center Binaries	4.0.0, build 1017 Beta	2012-11-12	2012-11-05, 02:59:59	[i]
Web Interface	4.0.0, build 1017 Beta	2012-11-12	2012-11-05, 03:00:01	[i]
Reports	4.0.0, build 1017 Beta	2012-11-12	2012-11-05, 03:00:02	[i]
Schema	4.0.0, build 1017 Beta	2012-11-12	2012-11-05, 03:00:02	[i]
Help/Knowledgebase	4.0.0, build 1017 Beta	2012-11-12	2012-11-05, 03:00:02	[i]
Data Definitions	4.0.0, build 1017 Beta	2012-11-12	2012-11-05, 03:00:02	[i]

A note below this table states: "NOTE: The Control Center will be shut down and then restarted after the selected packages have been applied. You will need to login again." Below the note is an "Apply" button.

The "Downloaded Agent Packages" section shows a table with the following data:

Package	Version	Release Date	Download Date	Update History
Linux Agent (32Bit SLES)	4.0.0, build 1017 Beta	2012-11-12	2012-11-05 03:00:03	[i]
Linux Agent (64Bit SLES)	4.0.0, build 1017 Beta	2012-11-12	2012-11-05 03:00:04	[i]
NetWare Agent	4.0.0, build 1017 Beta	2012-11-12	2012-11-05 03:00:04	[i]
Windows Agent (32Bit)	4.0.0, build 1017 Beta	2012-11-12	2012-11-05 03:00:05	[i]
Windows Agent (64Bit)	4.0.0, build 1017 Beta	2012-11-12	2012-11-05 03:00:05	[i]

Below this table is an "Apply" button.

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.

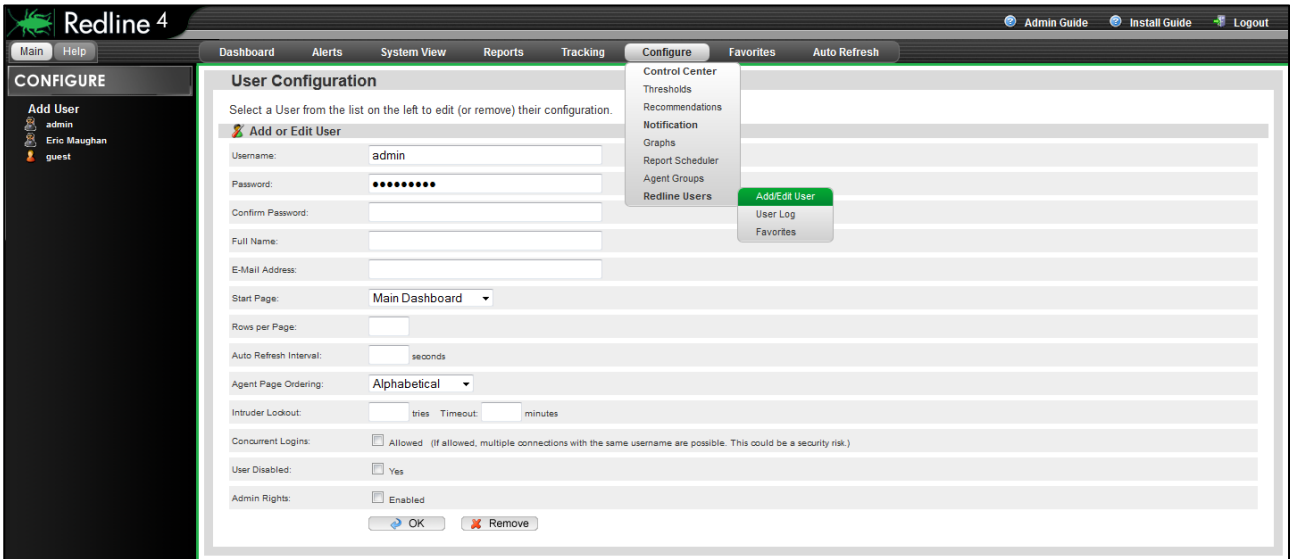
The Control Center must always be updated first. Select the appropriate, desired, or globally select the packages for download from the top, packages available, section, then select 'OK' to have the system automatically connect and download the specified version. After the packages have been downloaded 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 'Apply' 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.

User Configuration

The User Configuration page allows administrators to add extra accounts to the Redline system. Basic information is required along with contact information for reports and notifications. Each user can set their own start page, manage their password, set their refresh interval, and manage their favorites. Users granted administrator rights in this dialog will have rights to modify and view everything in the Redline system.



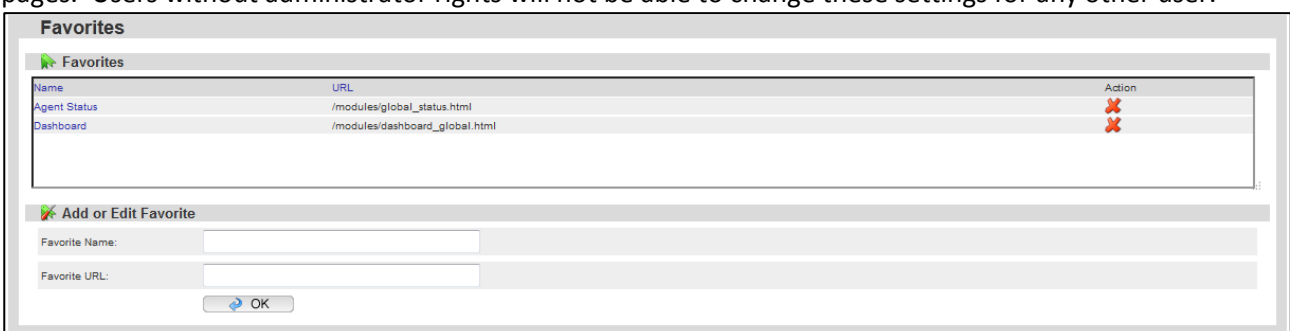
User Log

The User Log is a listing of the top 500 actions of any selected user in the system. User selection is accomplished through clicking on one of the users listed in the left-hand menu. Once selected, the user log will be displayed.

Date	Time	User	IP Address	Event
2012-11-19	13:50:11	guest	216.83.139.1	Timeout
2012-11-19	13:31:56	guest	216.83.139.1	Login
2012-11-19	12:19:00	guest	216.83.139.1	Timeout
2012-11-19	12:15:59	guest	74.191.71.16	Timeout
2012-11-19	11:57:36	guest	74.191.71.16	Login
2012-11-19	11:47:08	guest	216.83.139.1	Login
2012-11-19	11:36:17	guest	74.191.71.16	Timeout
2012-11-19	11:35:17	guest	216.83.139.1	Timeout
2012-11-19	11:24:03	guest	74.191.71.16	Login
2012-11-19	11:06:10	guest	77.115.31.146	Timeout
2012-11-19	10:57:02	guest	74.191.71.16	Timeout
2012-11-19	10:53:45	guest	77.115.31.146	Login
2012-11-19	10:47:47	guest	216.83.139.1	Login
2012-11-19	10:41:59	guest	74.191.71.16	Login
2012-11-19	10:06:50	guest	74.191.71.16	Timeout

User Favorites

It is through the user favorites menu that the user is able to specify their favorites list, adding and removing pages. Users without administrator rights will not be able to change these settings for any other user.





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. To add to the menu, users should go to the **Configarea | Redline Users | Add / Edit Favorites** page. Each user can manage their favorites page.

Auto Refresh

Redline can automatically refresh the Dashboard, or 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.



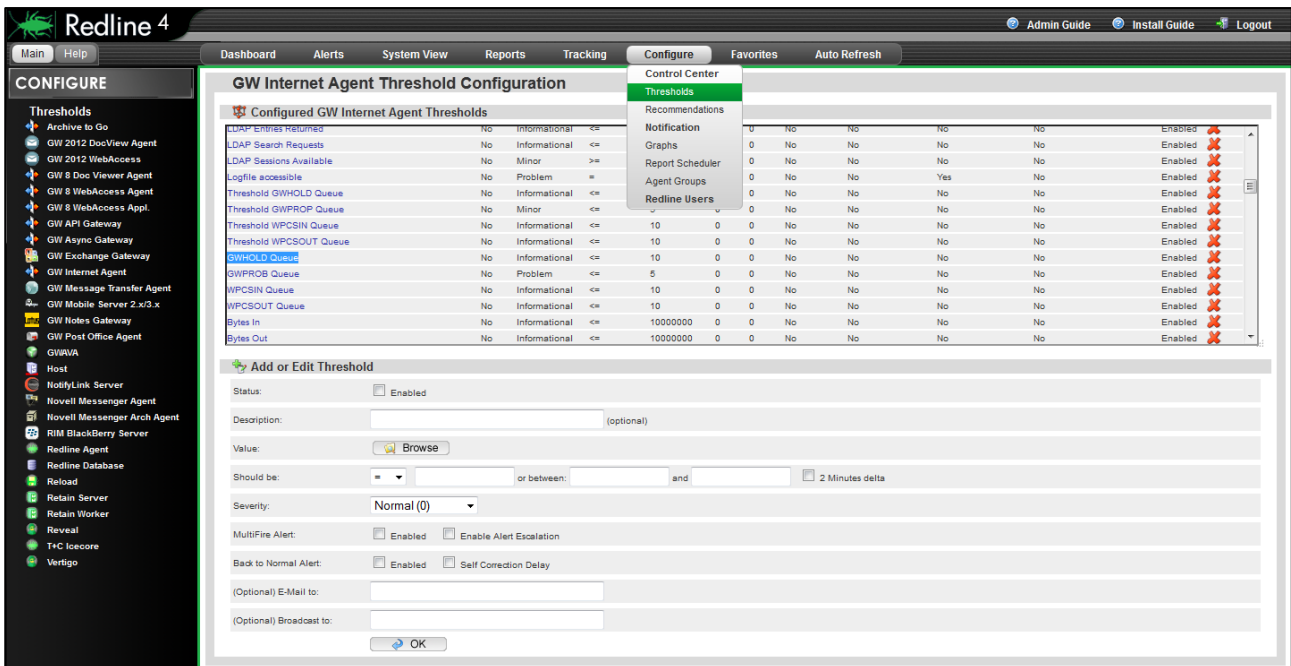
Application

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 all Internet Agents, the number of items in the GWHOLD queue doesn't exceed more than 30 items.
2. Click on the "Configure" drop down menu and select 'Recommendations'.
3. From the left hand menu, select the GroupWise Internet Agent.
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.

Removing Agents

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.

Configure graphs

The **Configure | Graph** page contains configuration for graphs on the different agents in the system. Individual graphing has several different options for each agent, and each graph type has its corresponding configuration listed with each specific agent. To select a new agent, locate it in the left-hand menu window.

The screenshot shows the Redline 4 web interface. The top navigation bar includes 'Main', 'Help', 'Dashboard', 'Alerts', 'System View', 'Reports', 'Tracking', 'Configure', 'Favorites', and 'Auto Refresh'. The left-hand menu is titled 'CONFIGURE' and lists various agents under 'Graphs'. The main content area is titled 'GW Internet Agent Graph Configuration' and contains a table of existing graphs and a form to 'Add or Edit Graph'.

Title	Value 1	Value 2	Data Type	Current Value	per Agent	Dashboard Graph	Dashboard RPM	Status	Action
Internet Bytes In/Out	gwiaStatBytesIn	gwiaStatBytesOut	Relative	left	Yes	Yes	No	Enabled	✖
Internet Messages In/Out	gwiaStatMsgIn	gwiaStatMsgsOut	Relative	left	Yes	Yes	No	Enabled	✖
GWIA Third Party Send Folder	gwiaThirdSendcounttotal	-	Absolute	left	Yes	Yes	Yes	Enabled	✖
GWIA Third Party Receive Folder	gwiaThirdReceivecounttotal	-	Absolute	left	Yes	Yes	Yes	Enabled	✖
GWIA Third Party Result Folder	gwiaThirdResultcounttotal	-	Absolute	left	Yes	Yes	Yes	Enabled	✖

The 'Add or Edit Graph' form includes the following fields and options:

- Status: Enabled
- Title:
- Value 1:
- Value 2:
- Timeframe: Day Week Month Year
- Type: Relative Absolute
- Direction: Current Value is on left right side of the graph.
- Cut Peaks: Enabled
- Range: Per Agent System Wide Dashboard RPM
- Specials: Average Peak High Peak Low Total
-

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.

Description	Value Name	Value Type	Action
Files in Folder: [GWIAHOME]\000.prc\	gwia000prcoounttotal	int	
Size of largest File in: [GWIAHOME]\000.prc\	gwia000prsize-largest	int	
Size of oldest File in: [GWIAHOME]\000.prc\	gwia000prsize-oldest	int	
Folder Size: [GWIAHOME]\000.prc\	gwia000prsize-total	int	
Reset Statistics	gwiaActionResetStats	int	
Restart Gateway	gwiaActionRestartGateway	int	
Agent Status	gwiaAgentState	int	
CAP Threads	gwiaCAPThreads	int	
Flow Check to BES	gwiaFlowBES	int	
Flow Check to GMS	gwiaFlowGMS	int	
Flow Check to POA	gwiaFlowPOA	int	
HTTP Port	gwiaHTTPPort	int	
IMAP Threads	gwiaIMAPThreads	int	
Inbound Conversion Threads	gwiaInboundconversionthreads	int	
LDAP Threads	gwiaLDAPThreads	int	
LDAP Sessions Active	gwiaLdapActive	int	
LDAP Auth Sessions	gwiaLdapAuth	int	
LDAP Entries Returned	gwiaLdapReturnedItems	int	
LDAP Search Requests	gwiaLdapSearchReq	int	

Timeframe

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

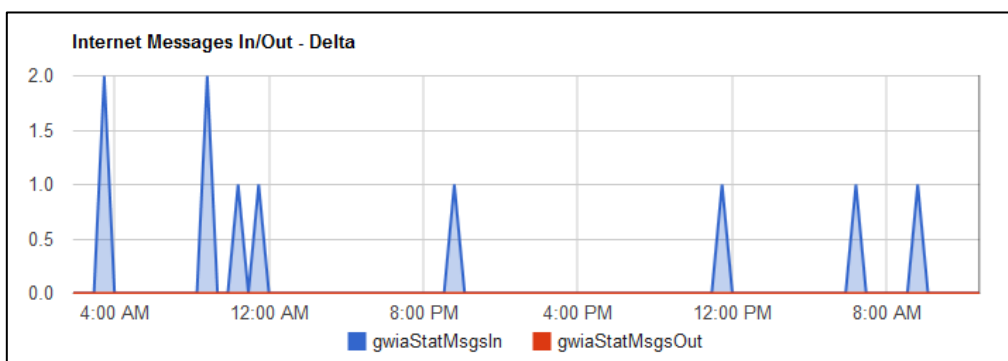
- Last day
- Last week
- Last month (Last 4 weeks)
- Last year

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 discovered due to the time stamps along the bottom, and should indicate the displayed time.



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.

The screenshot shows the 'GW Message Transfer Agent Graph Configuration' window. It contains a table of existing graphs and a configuration form for a new graph.

Title	Value 1	Value 2	Data Type	Current Value	per Agent	Dashboard Graph	Dashboard RPM	Status	Action
Closed Domains	mtaClosedDomains	-	Absolute	left	Yes	No	Yes	Enabled	
Closed Post Offices	mtaClosedPostOffices	-	Absolute	left	Yes	No	No	Enabled	
Domain Messages	mtaRoutedMsgs	mtaErrorMsgs	Relative	left	Yes	Yes	No	Enabled	

Below the table is the 'Add or Edit Graph' configuration form:

- Status: Enabled
- Title:
- Value 1:
- Value 2:
- Timeframe: Day Week Month Year
- Type: Relative Absolute
- Direction: Current Value is on left right side of the graph.
- Cut Peaks: Enabled
- Range: Per Agent System Wide Dashboard RPM
- Specials: Average Peak High Peak Low Total
- OK

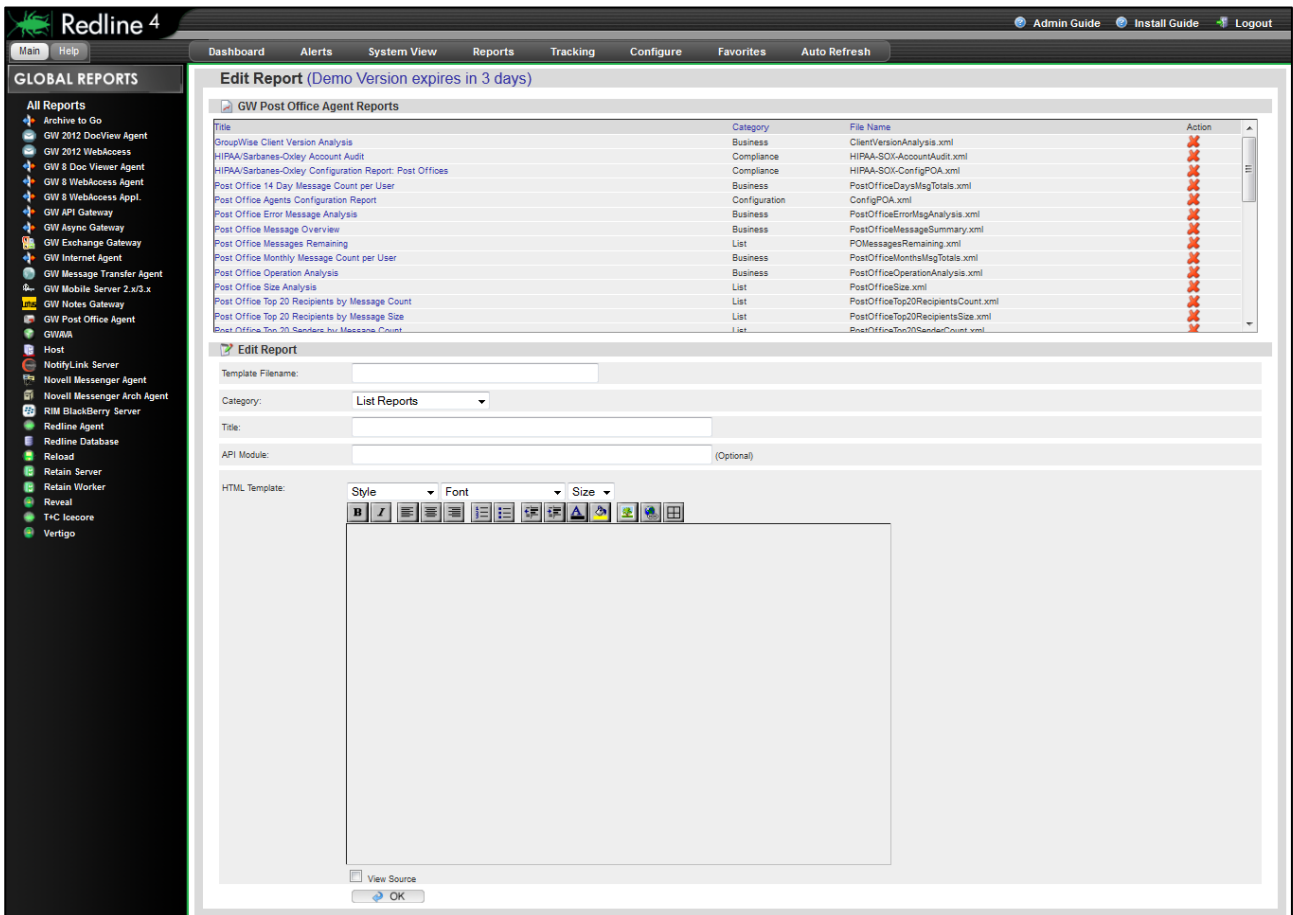
It is possible to configure a graph for this agent only, if you define the graph on the agent’s configuration page.

Report Generation and Custom Reports

Modifying Reports

Browse to the Reports | **Edit Report** page from the dropdown menu.

To edit a report you need to first select it. Find the desired report agent type from the left hand menu and then browse through the reports listed for that agent and select the desired report by clicking on the name.

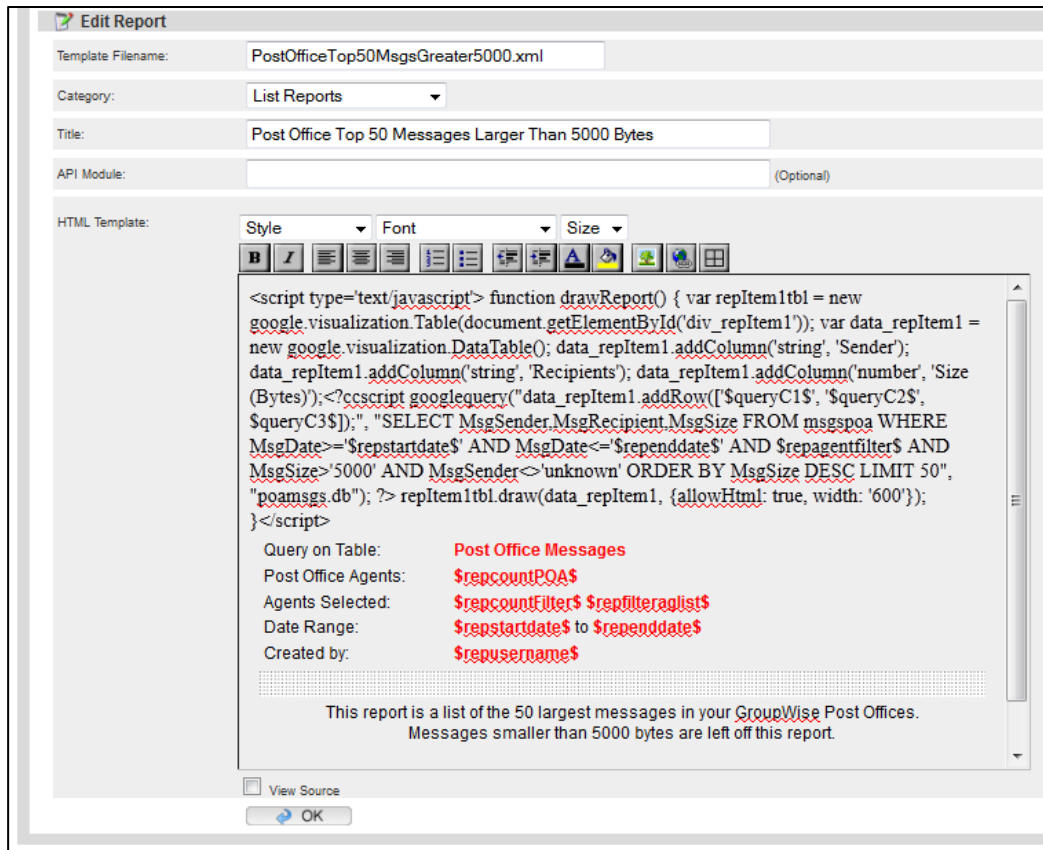


For our purposes, we will be creating a new report on the top 100 messages over 5 MB. From a very similar report: top 50 messages over 500Kb. This report is generated at the Post Office level.

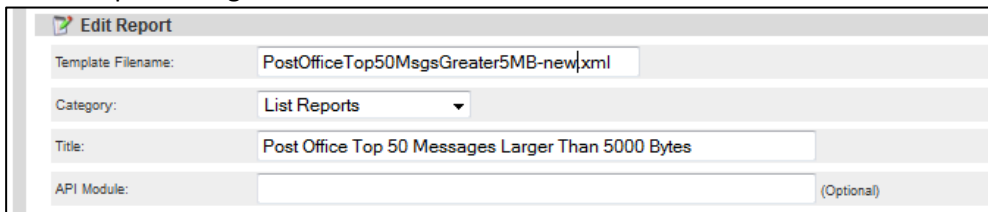
Post Office Top 20 Recipients by Message Count	List	PostOfficeTop20RecipientsCount.xml	X
Post Office Top 20 Recipients by Message Size	List	PostOfficeTop20RecipientsSize.xml	X
Post Office Top 20 Senders by Message Count	List	PostOfficeTop20SenderCount.xml	X
Post Office Top 20 Senders by Message Size	List	PostOfficeTop20SenderSize.xml	X
Post Office Top 50 Messages Larger Than 5000 Bytes	List	PostOfficeTop50MsgsGreater5000.xml	X
Post Office Top 50 Recipients by Message Count	List	PostOfficeTop50RecipientsCount.xml	X
Post Office Top 50 Senders by Message Count	List	PostOfficeTop50SenderCount.xml	X
Top 10 Largest Post Offices	Trend	Top10POADatabaseSizeAnalysis.xml	X
Trend Messages / Mailbox Size per User	Trend	TrendMBSsizeHistory.xml	X
Trend Post Office Logins/Usage	Trend	TrendPOALogins.xml	X
User Expired Messages	List	UserExpiredMessages.xml	X
User License Analysis	List	UserLicenseAnalysis.xml	X
User Mailbox Analysis	List	UserMailboxAnalysis.xml	X
User Message Totals	List	UserMessageTotals.xml	X
User Message Type Totals	List	UserMessageTypeTotals.xml	X

Locate the report you wish to use as the source for your custom report, and select the report by clicking on the name 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.

Query on Table: **Post Office Messages**
 Post Office Agents: **\$repcountPOA\$**
 Date Range: **\$repstartdate\$ to \$rependdate\$**
 Created by: **\$repusername\$**

This Report is a list of the 50 largest messages send in your GroupWise Post Offices.

	Sender	Recipient	Size (Bytes)
<pre><?ccscript dbquery("SELECT MsgSender,MsgRecipient,MsgSize FROM msgspoa WHERE MsgDate>='\$repstartdate\$' AND MsgDate<='\$rependdate\$' AND \$repagentfilter\$ AND MsgSize>'500000' AND MsgSender<>'unknown' ORDER BY MsgSize DESC LIMIT 100", "poamsgs.db", "<tr bgcolor=\$RowColor\$<td align="right">,"</td><td align="right">,"</td></tr>","#EEEEEE", "#FFFFFF"); ?></pre>			

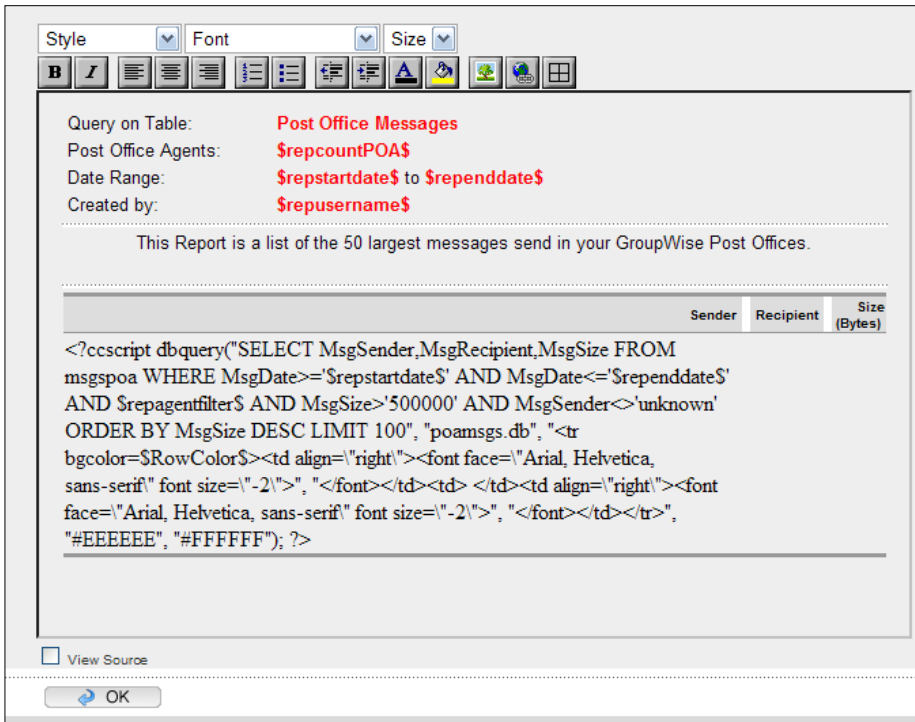
For this report change, we only want to change the message size parameter.

	Sender	Recipient	Size (Bytes)
<pre><?ccscript dbquery("SELECT MsgSender,MsgRecipient,MsgSize FROM msgspoa WHERE MsgDate>='\$repstartdate\$' AND MsgDate<='\$rependdate\$' AND \$repagentfilter\$ AND MsgSize>'500000' AND MsgSender<>'unknown' ORDER BY MsgSize DESC LIMIT 100", "poamsgs.db", "<tr bgcolor=\$RowColor\$<td align="right">,"</td><td align="right">,"</td></tr>","#EEEEEE", "#FFFFFF"); ?></pre>			

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

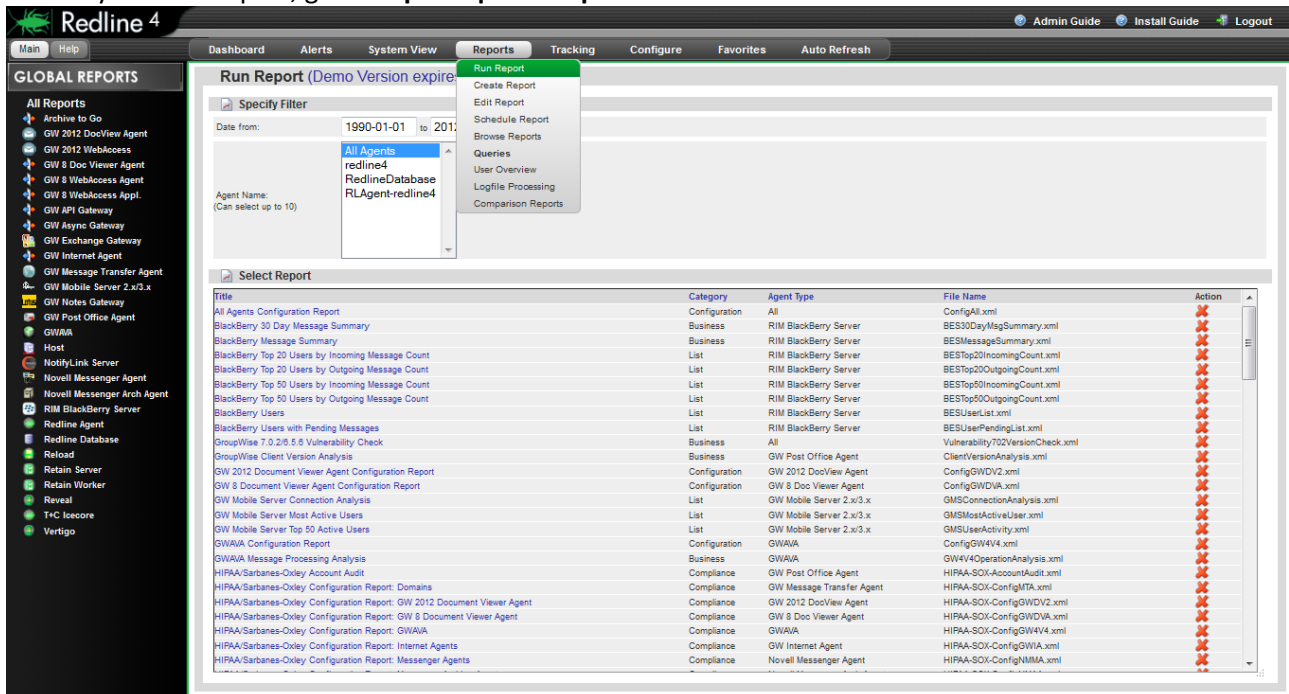
	Sender	Recipient	Size (Bytes)
<pre><?ccscript dbquery("SELECT MsgSender,MsgRecipient,MsgSize FROM msgspoa WHERE MsgDate>='\$repstartdate\$' AND MsgDate<='\$rependdate\$' AND \$repagentfilter\$ AND MsgSize>'5000120' AND MsgSender<>'unknown' ORDER BY MsgSize DESC LIMIT 100", "poamsgs.db", "<tr bgcolor=\$RowColor\$<td align="right">,"</td><td align="right">,"</td></tr>","#EEEEEE", "#FFFFFF"); ?></pre>			

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 | Run Report**.



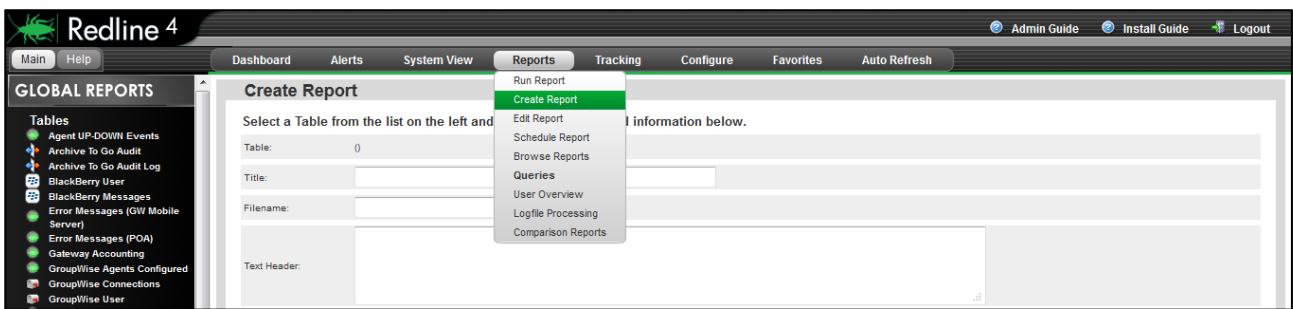
Locate your new report from the report list. The list is alphabetical, according to the report title. If you didn't change or specify a new title name but did change the template filename, then there will be two listed.



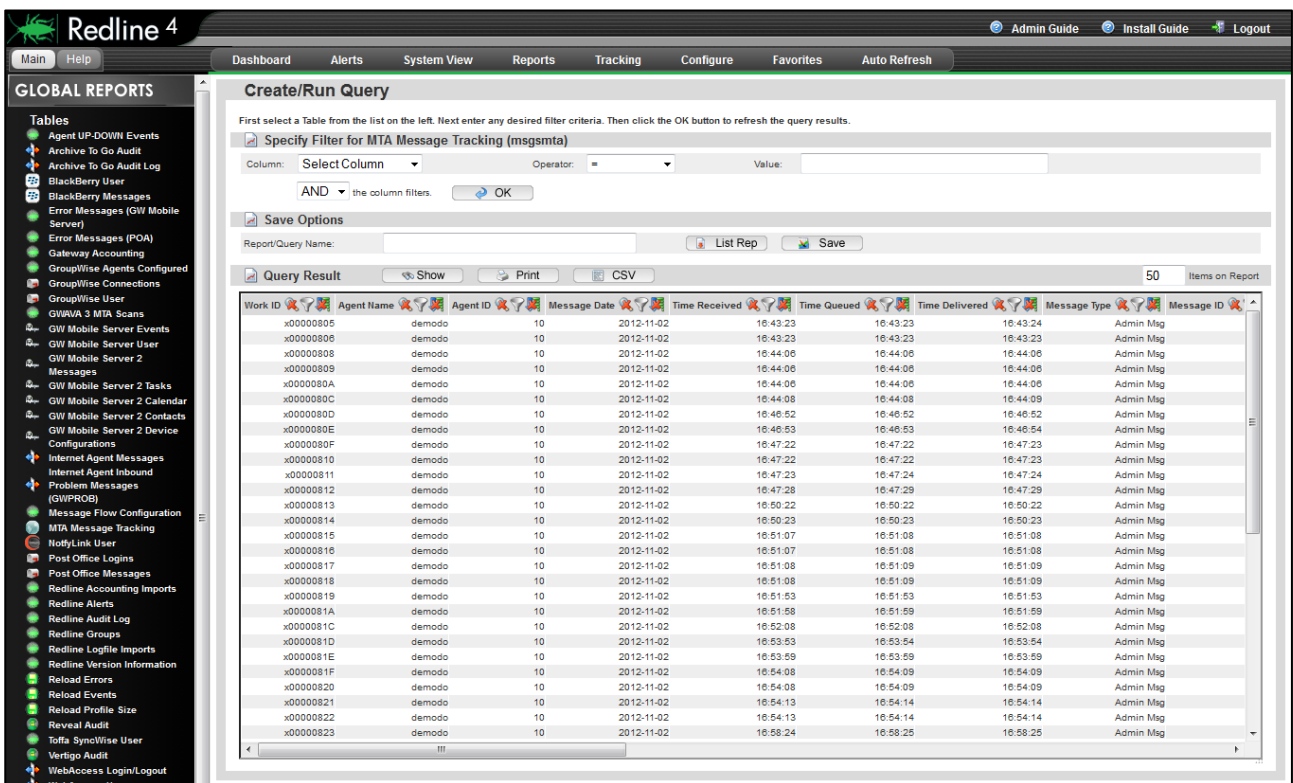
Select and run the report by clicking on the **report name** to complete operation. Make sure you select the report that was modified instead of the original.

Query Creation

Select the **Create Query** page from the **Reports | Query** menu.



Select the table you wish to run a query on from the **Tables** menu on the left. This loads the different tables for any selected object. The results will be displayed in the **Query Result** window.



The Specify Filter option near the top will filter the results to what is desired. Use the same format for the filters as is displayed in the results window. For example, a date should be entered as 2012-11-02, as is displayed in the results window. Multiple filters may be used in conjunction with either the 'AND' or 'OR' operators.

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 screenshot shows the Redline 4 interface with the 'Create/Run Query' window open. The window title is 'Create/Run Query'. Below the title bar, there are navigation tabs: Main, Help, Dashboard, Alerts, System View, Reports, Tracking, Configure, Favorites, and Auto Refresh. The left sidebar is titled 'GLOBAL REPORTS' and lists various tables and reports. The main area of the window is divided into sections: 'Specify Filter for MTA Message Tracking (msgsmta)', 'Save Options', and 'Query Result'. The 'Specify Filter' section shows a filter for 'Message Date' with the value '2012-11-02'. The 'Save Options' section has a 'Report/Query Name' field and 'List Rep' and 'Save' buttons. The 'Query Result' section shows a table with 50 items on report. The table has the following columns: Work ID, Agent Name, Agent ID, Message Date, Time Received, Time Queued, Time Delivered, Message Type, and Message ID. The data in the table is as follows:

Work ID	Agent Name	Agent ID	Message Date	Time Received	Time Queued	Time Delivered	Message Type	Message ID
x0000805	demo	10	2012-11-02	16:43:23	16:43:23	16:43:24	Admin Msg	
x0000806	demo	10	2012-11-02	16:43:23	16:43:23	16:43:23	Admin Msg	
x0000808	demo	10	2012-11-02	16:44:06	16:44:06	16:44:06	Admin Msg	
x0000809	demo	10	2012-11-02	16:44:06	16:44:06	16:44:06	Admin Msg	
x0000809A	demo	10	2012-11-02	16:44:06	16:44:06	16:44:06	Admin Msg	
x000080C	demo	10	2012-11-02	16:44:08	16:44:08	16:44:09	Admin Msg	
x000080D	demo	10	2012-11-02	16:46:52	16:46:52	16:46:52	Admin Msg	
x000080E	demo	10	2012-11-02	16:46:53	16:46:53	16:46:54	Admin Msg	
x000080F	demo	10	2012-11-02	16:47:22	16:47:22	16:47:23	Admin Msg	
x0000810	demo	10	2012-11-02	16:47:22	16:47:22	16:47:23	Admin Msg	
x0000811	demo	10	2012-11-02	16:47:23	16:47:24	16:47:24	Admin Msg	
x0000812	demo	10	2012-11-02	16:47:28	16:47:29	16:47:29	Admin Msg	
x0000813	demo	10	2012-11-02	16:50:22	16:50:22	16:50:22	Admin Msg	
x0000814	demo	10	2012-11-02	16:50:23	16:50:23	16:50:23	Admin Msg	
x0000815	demo	10	2012-11-02	16:51:07	16:51:08	16:51:08	Admin Msg	
x0000816	demo	10	2012-11-02	16:51:07	16:51:08	16:51:08	Admin Msg	
x0000817	demo	10	2012-11-02	16:51:08	16:51:09	16:51:09	Admin Msg	
x0000818	demo	10	2012-11-02	16:51:08	16:51:09	16:51:09	Admin Msg	
x0000819	demo	10	2012-11-02	16:51:53	16:51:53	16:51:53	Admin Msg	
x000081A	demo	10	2012-11-02	16:51:58	16:51:59	16:51:59	Admin Msg	
x000081C	demo	10	2012-11-02	16:52:08	16:52:08	16:52:08	Admin Msg	
x000081D	demo	10	2012-11-02	16:53:53	16:53:54	16:53:54	Admin Msg	
x000081E	demo	10	2012-11-02	16:53:59	16:53:59	16:53:59	Admin Msg	
x000081F	demo	10	2012-11-02	16:54:08	16:54:09	16:54:09	Admin Msg	
x0000820	demo	10	2012-11-02	16:54:08	16:54:09	16:54:09	Admin Msg	
x0000821	demo	10	2012-11-02	16:54:13	16:54:14	16:54:14	Admin Msg	
x0000822	demo	10	2012-11-02	16:54:13	16:54:14	16:54:14	Admin Msg	
x0000823	demo	10	2012-11-02	16:58:24	16:58:25	16:58:25	Admin Msg	

The filter becomes active when you select the OK button and the query results are loaded.

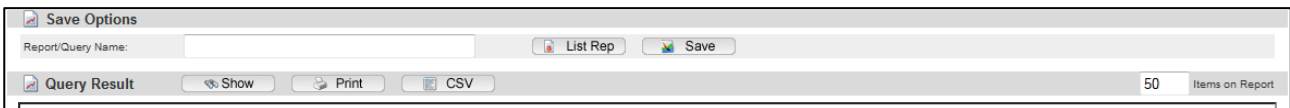
To clear any filter, select the active filter cone in the column header and clear the parameter specified in the Specify filter field, then click OK and the results will reload without the filter.

There may be several filters active at the same time. As a new filter is added, an additional empty field will be automatically added to the interface.

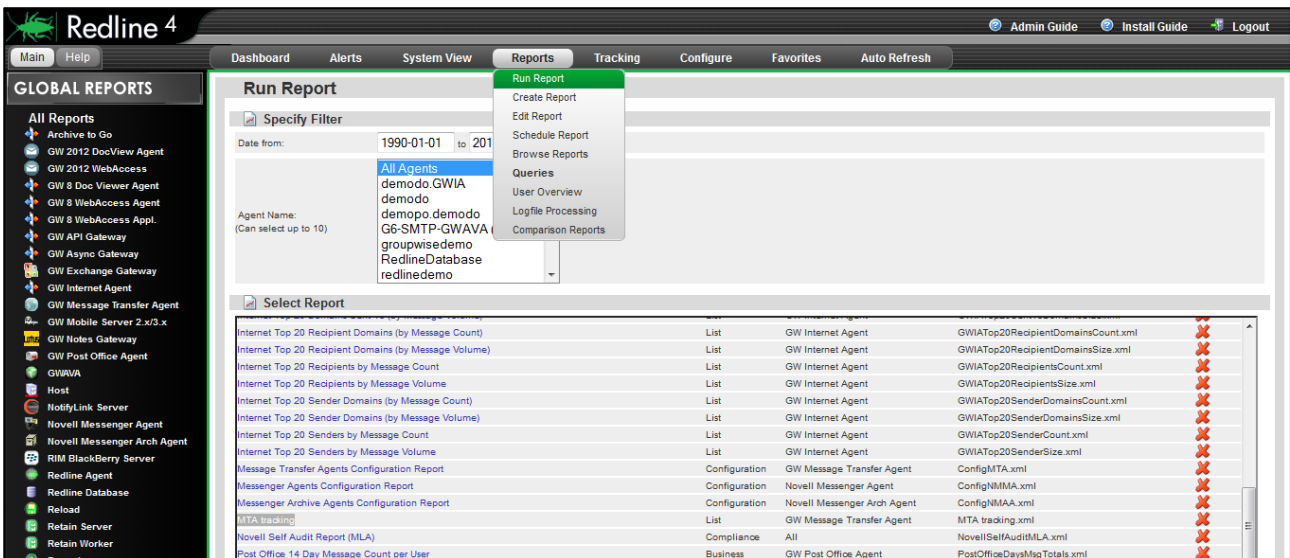


To remove these filters, open the 'Column' drop down menu and return it to the 'Select Column' option. Repeat for as many filters you wish to remove, in the order you wish to remove them.

To save your query results as a module, specify a Report or a Module name, and select the **List Rep** button. (If you select the 'Save' button, your query will be saved. The **List Rep** button simply saves the query as a full report which can be run later.)



Queries saved as list reports 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 report name from the list. The report will be generated and displayed.

Manual 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 MJBSEVER, 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\pathstab, 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	GWIA Top100RecipientsCount.xml	acct.db	GWIA Logfiles
Internet Top 100 Recipients by Message Count	GWIA Top100SenderCount.xml	acct.db	GWIA Logfiles
Internet Top 20 Recipient Domains by Message Count	GWIA Top20RecipientDomainsCount.xml	gwiamsgs.db	GWIA Logfiles

Internet Top 20 Recipient Domains by Message Volume	GWITop20RecipientDomainsSize.xml	gwiamsgs.db	GWIA Logfiles
Internet Top 20 Recipient Domains by Message Volume	GWITop20RecipientsCount.xml	acct.db	GWIA Logfiles
Internet Top 20 Recipients by Message Volume	GWITop20RecipientsSize.xml	acct.db	GWIA Logfiles
Internet Top 20 Sender by Message Volume	GWITop20SenderCount.xml	acct.db	GWIA Logfiles
Internet Top 20 Sender Domains by Message Count	GWITop20SenderDomainsCount.xml	gwiamsgs.db	GWIA Logfiles
Internet Top 20 Sender Domains by Message Volume	GWITop20SenderDomainsSize.xml	gwiamsgs.db	GWIA Logfiles
Internet Top 20 Sender by Message Volume	GWITop20SenderSize.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	poalgin.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
