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1. Contacting Intlock

Web site: <http://www.intlock.com/intlocksite/contactUs.asp>

Contacting Intlock Support

Free support is given during the installation and configuration of CardioLog Lite and the CardioLog 2007 Enterprise Trial. Contact us by either submitting a [support request](#) or scheduling a [support session](#).

For our FREE CardioLog Lite edition, we provide support through e-mail and [forums](#), response time is 48 business hours. [Contact us](#) if you wish to purchase our support services on an hourly basis.

View the [CardioLog Lite User Guide](#) for a detailed description of the product.

2. Introduction

CardioLog Lite for SharePoint 2007 is a FREE web analytics solution for SharePoint 2007. It is delivered with a set of basic SharePoint 2007 usage reports, with optional [SharePoint report bundles](#).

This guide describes the CardioLog Lite maintenance procedures for system administrators:

[CardioLog Lite Overview](#)

- [System Architecture](#)
- [System Requirements](#) – including [payload analysis](#).
- [Basic Usage Reports Overview](#).

[Daily Maintenance Tasks](#)

- [CardioLog Lite Diagnostics](#) - how to detect and correct faults in the CardioLog Lite system components and tracking agent.
- [System Health and Performance Monitoring](#) - infrastructure recommendations for operating system maintenance, database monitoring and backup policy.

[Configuration, Customization and Optimization Tasks](#)

- [Data Collection Filters](#) - how to [configure the tracking agent](#).
- [Fine Tuning](#) - how to ensure qualitative and accurate reporting data using [URL mappings](#).
- [Troubleshooting Empty Usage Reports](#).
- [Data Integrity Tests](#) - how to compare the CardioLog Lite page views and unique users reports with the SharePoint 2007 usage reports.
- [Uninstalling the CardioLog Lite Tracking Agent](#) - how to remove the CardioLog Lite tracking code from the portal.
- [Product License](#) – how to view information about the licensed product components, and install new licenses.

3. CardioLog Lite Overview

CardioLog Lite for SharePoint 2007 is a FREE web analytics solution for SharePoint 2007. It is delivered with a set of basic SharePoint 2007 usage reports.



CardioLog Lite for SharePoint 2007 includes an adaptor for SharePoint 2007 - which uses an advanced JavaScript tracking agent to monitor visitor actions such as item additions and deletions, page and document viewing, search results clicks and other Web 2.0 actions.

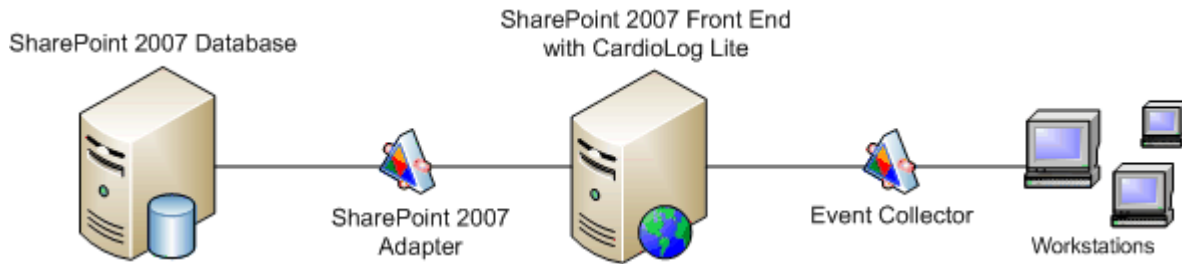
In addition, the adaptor identifies the structure of the SharePoint 2007 portal and enables easy reporting for specific content areas.

Specially built for authenticated environments, CardioLog Lite for SharePoint 2007 provides enhanced visitor segmentation - which is available through seamless integration with the organization's Active Directory.

CardioLog Lite is non intrusive, and has no dependency on any of the SharePoint services. It is a web solution which enables users to view reports in different ways. Reports can be easily integrated into portal pages by exporting them to web parts, or launched directly from the CardioLog Lite web application.

3.1 System Architecture

This is the CardioLog Lite configuration for SharePoint 2007 within the intranet environment:



It is recommended that you install CardioLog Lite on the SharePoint server, to avoid authentication and connectivity issues.

The CardioLog Lite solution includes the following separate components:

1. **CardioLog Lite Database** - A repository for storing all tracking and reporting data. [Contact Intlock](#) for a list of the database tables used in a CardioLog Lite topology.
2. **CardioLog Lite UI** - A web application for configuring and viewing the web analytics reports.
3. **Portal Tree Service** - A web service which provides the structure of the SharePoint 2007 portal.
4. **Tracking Agent** - A JavaScript tag which is included in the portal pages and monitors site usage. CardioLog Lite includes a tracking agent which monitors visitor behavior in SharePoint 2007 (The tracking code is added to your SharePoint 2007 CORE.js file or to common page component such as Master pages).

The tracking agent sends data to the Event Collector web application.

The CardioLogAgent IIS virtual directory (aka, the usage tracking application) requires user authentication, and thus is set to Windows Authentication. Just like any SharePoint page request, a request for a CardioLog Agent resource (including JS files) requires user authentication. Therefore the response includes a WWW-Authenticate header field containing a challenge applicable to the requested resource. The client then repeats the request with a suitable Authorization header field.

5. **Event Collector** - A web service which sends tracking data from the tracking agent to the main CardioLog Lite database.

This web service must have Anonymous Access enabled in order enable the collection of data from various monitored environments.

6. **CardioLog API** - A set of web services provided by CardioLog Lite, which include functionalities such as system health checks.
7. **CardioLog Lite Scheduling Service** - A Windows services which runs scheduled jobs, such as: usage data processing, portal structure updates and Active Directory data updates.

The service login account must have db_owner permissions for the CardioLog Lite database, and read permissions for all SharePoint 2007 configuration and content databases.

The CardioLog Lite Scheduling Service includes the following separate components:

- **Usage Data Processing** - processes incoming tracking data from Event Collector.
 - **Portal Tree Updates** - retrieves the structure of the portal (monitored environment). This is done by creating an XML file which portrays the hierarchal structure of the portal, and then translating the XML data into relational data. This structure is the basis for usage data aggregations.
 - **Active Directory Updates** - CardioLog Lite provides the ability to segment authenticated visitors by their user names and the groups they belong to. The Active Directory Updates service component retrieves the list of users and groups directly from Active Directory.
8. **CardioLog Lite Diagnostics Service** - A Windows service which runs the health checks for the system.

The Data Collection Process

1. The CardioLog Lite JavaScript tracking code is added to SharePoint's CORE.js file and is downloaded with each portal page request.
2. Information about user actions within the portal pages is sent to the CardioLogAgent web application – via asynchronous JavaScript calls (AJAX).
3. The CardioLogAgent application passes on the usage information, via HTTP web requests, to the EventCollector application - which writes the data into the CardioLog Lite database.

3.2 System Requirements

Make sure that your system meets the following minimum hardware and software requirements:

Platform	32-bit or 64-bit
Processors	2
Memory	4GB
Operating System	Windows 2003 Server Windows 2003 Server R2 Windows 2008 Server Windows 2008 Server R2
Database	SQL Server 2005 Standard SQL Server 2008 Standard
Hard Disks	
System Disk	10GB
Page File Disk	10GB
Database Disk	~10GB (depends on the monitored environment)
Transaction Log Disk	Depends on the backup policy
Additional Software & Services	<ul style="list-style-type: none"> • Microsoft .Net Framework 2.0 • IIS 6.0 or IIS 7.0 or IIS 7.5 • Microsoft Internet Explorer 6.0 or higher • SQL Server 2005/2008 Command Line Query Utility • SQL Server 2005 Backward Compatibility Components

The CardioLog Lite Application User Account

It is recommended to create a dedicated user account for the CardioLog Lite application. The CardioLog Lite user account should have the following permissions and roles:

1. db_owner for the CardioLog Lite database
2. processadmin, view server state for the CardioLog Lite SQL server.
3. db_datareader for the SharePoint configuration and content databases
4. Read access for the SharePoint TEMPLATE share.
5. Member of the local IIS_WPG group (for Windows Server 2003 only).
6. Full Control permissions for the CardioLog Lite Installation Folder.
7. Permissions for starting and stopping the CardioLog Lite services.

Note: If the CardioLog Lite user account is used for the installation of the CardioLog Lite application, make sure it is a member of the local Administrators group (on the CardioLog Lite server) and assigned with the create database, alter any login permissions on the CardioLog Lite SQL server.

3.2.1 Portal Page Performance

CardioLog Lite operates in a non-invasive transparent manner and does not affect the monitored portal's overall performance and response time. The product has a marginal footprint on the portal environment and can be turned off instantly should a diagnosis is required.

CardioLog Lite's execution is asynchronous to the monitored portal's execution and users' activity and thus CardioLog Lite has no direct impact on the monitored environment.

Tracking Code - Portal usage tracking is performed by the [CardioLog Agent](#) - which is a 300Kb piece of JavaScript tracking code, added to the portal pages. 270Kb of this code is cached in the client browser.

CardioLog Agent File	Bytes Sent	Bytes Received
/CardioLogAgent/AgentEmbed.aspx	1,111	4,336
/CardioLogAgent/MOSS2007_1.2.js	1,043	211
/CardioLogAgent/agentBaseEmbed.aspx	959	34,092
/CardioLogAgent/tunnel.aspx	1,395	342

The download time for the CardioLog Agent JavaScript code is dependent upon multiple factors - such as network connectivity and band width. Generally, the download time is almost negligible.

The CardioLog Agent JavaScript code is loaded on page-onload, and sends usage data to the CardioLog Lite server - asynchronously. The calls to the CardioLog Lite server **do not** affect the page response time.

In cases where the CardioLog Agent fails to connect to the CardioLog Lite server (the [Event Collector](#) web application), it tries to reconnect after 60 seconds ([configurable](#)), to avoid unwanted overhead.

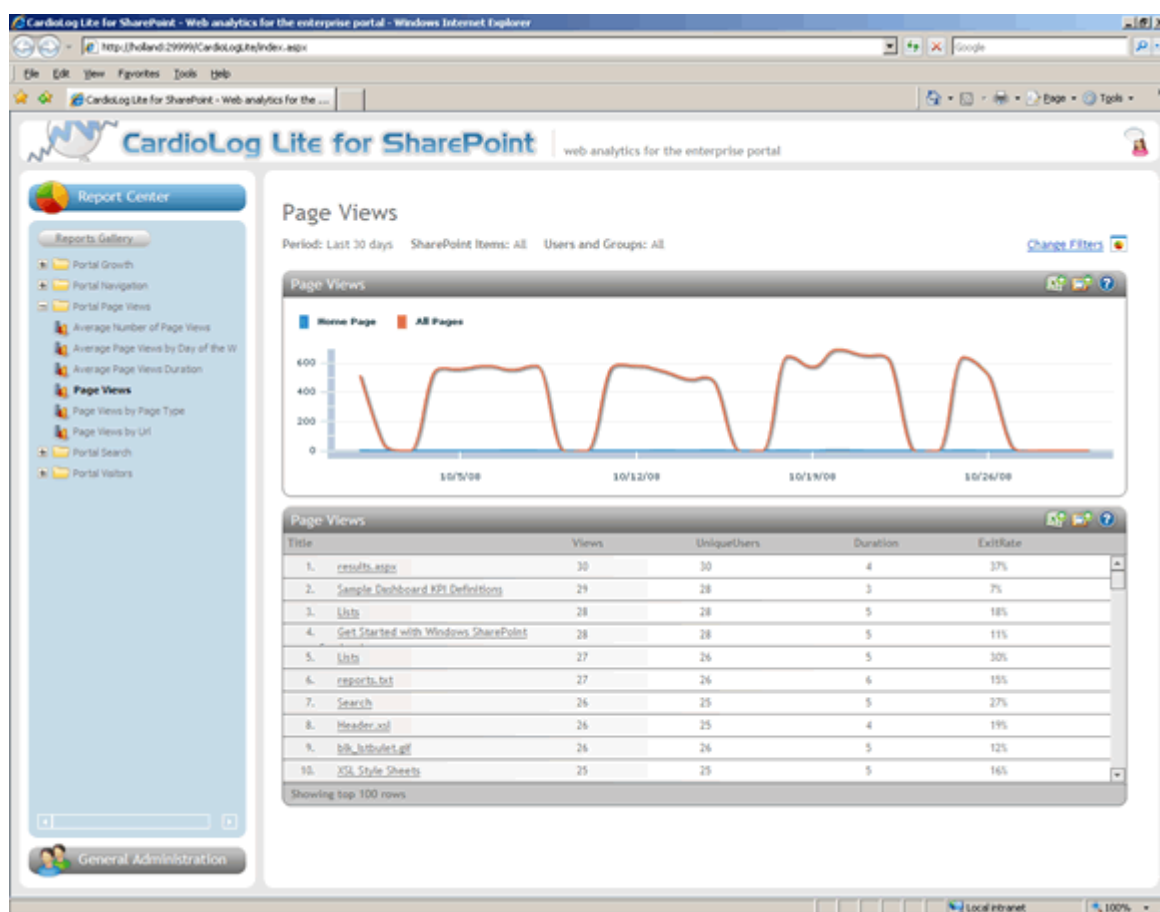
Intlock encourages each customer to perform its own performance tests.

3.3 The Basic Usage Reports

CardioLog Lite for SharePoint 2007 includes a set of 3 basic SharePoint usage reports: Unique Users, Visitors and Page Views. Additional [SharePoint report bundles](#) can be added at any time. All of the reports can be filtered by Time frame, Portal object (such as farm, site collection, site, list, list item, etc.), and Active Directory users and groups.

3.3.1 Basic Reports

Page Views



The Page Views chart displays:

Home Page (Specific) series - number of views on the home page of the web site.

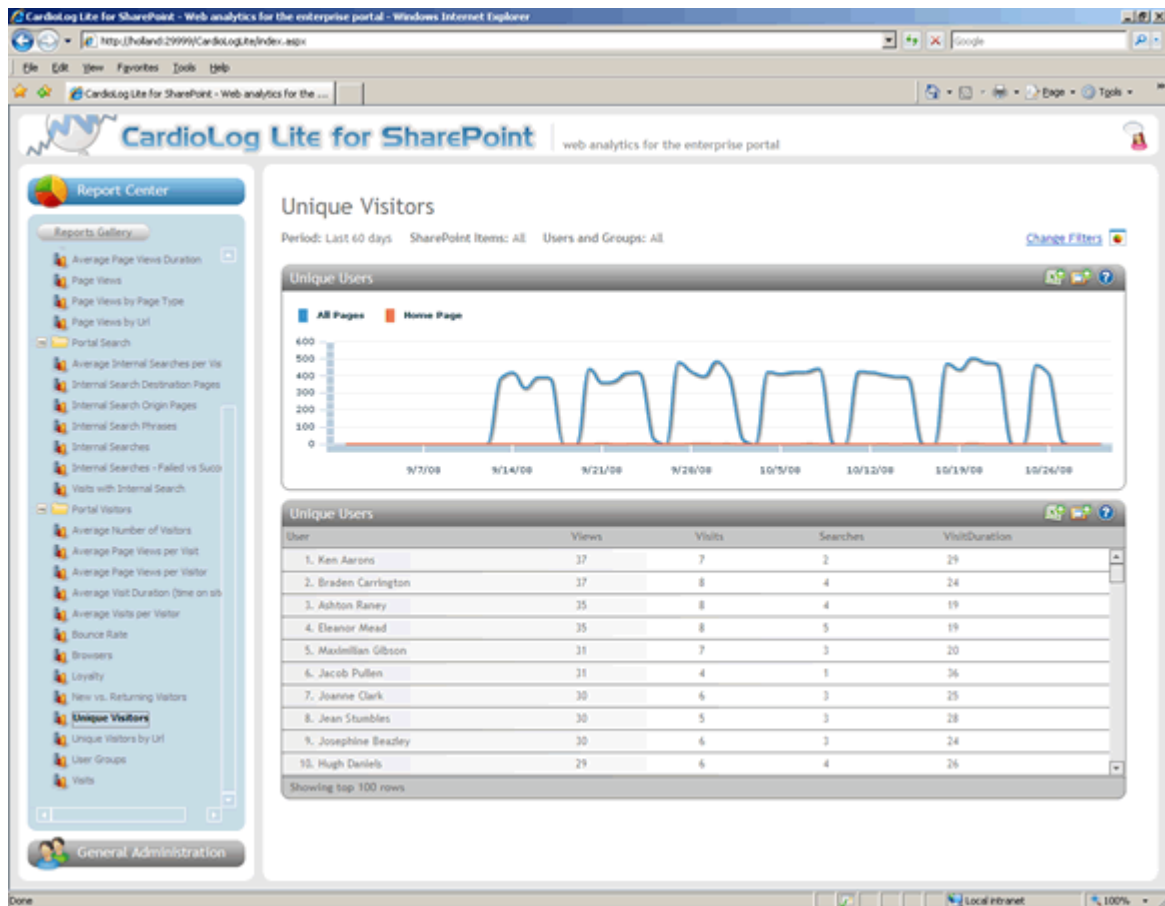
All Pages (Aggregated) series - number of views on all the web site pages.

The Page Views table displays:

- *Display names* of the web site pages.
- *View* is a request for a web page.
- *Unique Users* is the number of individuals (a uniquely identified client) who visited the web page.

- *Visit duration* is the average time (in seconds) spent in a web page.
- *Exit Rate* is the percentage of times a specific web page was last in a visit.

Unique Visitors



The Unique Visitors chart displays:

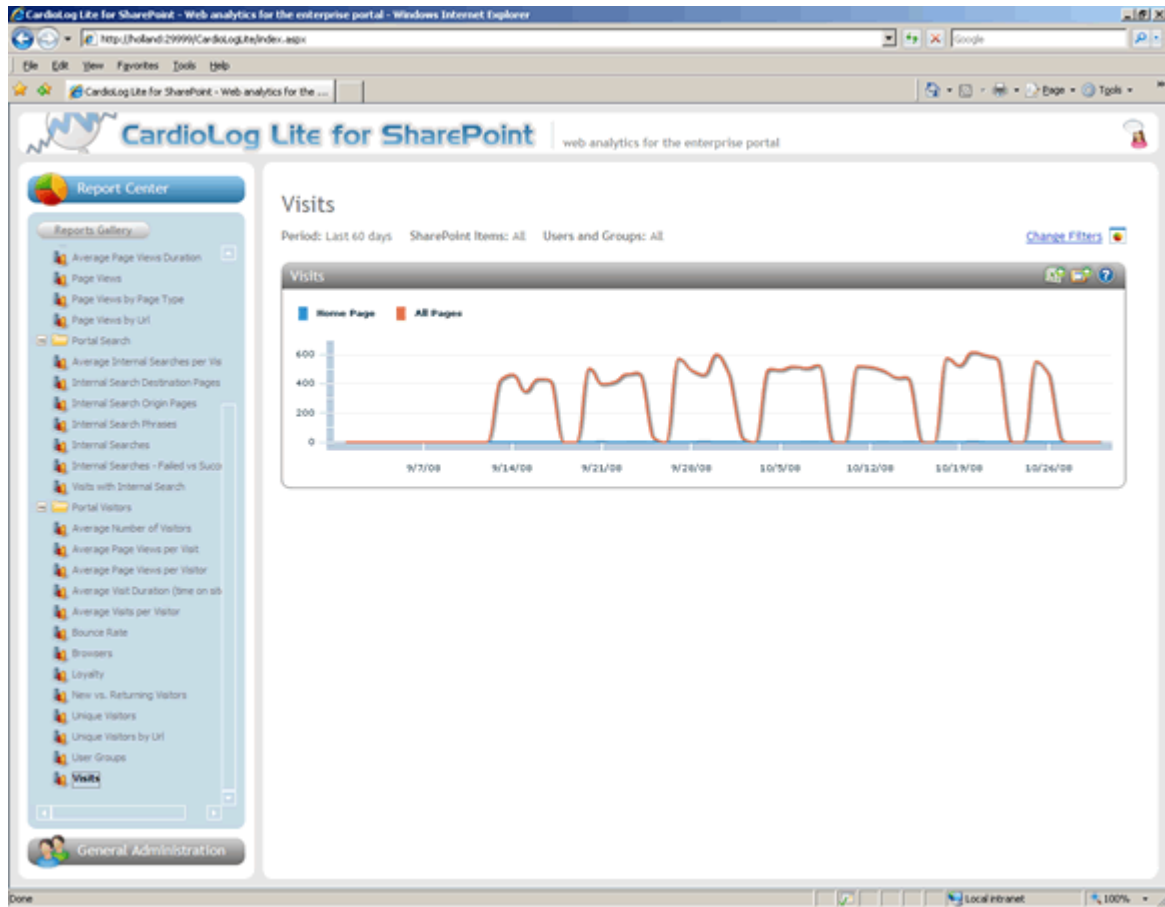
Home Page (Specific) series - number of individuals who visited the home page of the web site.

All Pages (Aggregated) series - number of individuals who visited any of the web site pages.

The Unique Visitors table displays:

- *Display names* of the visitors to the web site.
- *View* (or Page View) is a request for a web page.
- *Visit* is a series of requests from the same unique user within a browser session. The session timeout is 30 minutes. A visit contains multiple page views.
- *Visit duration* is the average time (in seconds) spent in a visit.

Visits



The Visits chart displays:

Home Page (Specific) series - number of visits to the home page of the web site.

All Pages (Aggregated) series - number visits to any of the web site pages.

Visit is a series of requests from the same unique user within a browser session. The session timeout is 30 minutes. A visit contains multiple page views.

3.3.2 Report Operations

When accessing a report from Report Center - you can: edit its data filters (time frame, portal object, users and groups), export to both Microsoft Excel and Microsoft SharePoint Web Parts, and open the report in a new browser window (directly link).

For more details see the [CardioLog Lite User Guide](#).

4. Daily Maintenance Tasks

To best maintain your system, perform the maintenance tasks in this section every day. You can automate these tasks by scheduling them to run on a daily basis:

- [CardioLog Lite Diagnostics](#)
- [System Health and Performance Monitoring](#)

The maintenance tasks should be performed by a user with a local administrator account on the CardioLog Lite server.

4.1 CardioLog Lite Diagnostics

To monitor the CardioLog Lite System components:

1. [Configure the CardioLog Lite services.](#)
2. Detect and handle faults with the [Diagnostics Dashboard](#):
 - [Viewing the current status of the CardioLog Lite Scheduling Service components and tracking agents](#)
 - [Troubleshooting errors in the CardioLog Lite Services.](#)
 - [Troubleshooting errors in the Tracking Agent.](#)
 - [Troubleshooting errors in the CardioLog Lite UI.](#)

4.1.1 Configuring the CardioLog Lite Services

The [CardioLog Lite Diagnostics Service](#) checks the status of the [CardioLog Lite Scheduling Service](#) components and tracking agent, and sends errors alerts via e-mail.

By default, all of the CardioLog Lite Scheduling Service components run every day at 12:00 AM, not including the Usage Data Processing - which runs every hour, and the CardioLog Lite Diagnostics Service - which runs every day at 08:30 AM.

To configure the CardioLog Lite Services:

1. For better resource utilization, [calculate the amount of time needed for each service component to run](#), and [schedule](#) them to run one at a time.
2. [Schedule the CardioLog Lite Diagnostics Service](#) to run after all the CardioLog Lite Scheduling Service components have finished running.
3. The CardioLog Lite Diagnostics Service errors alerts are sent via e-mail. [Configure e-mail alert settings](#) (SMTP server, e-mail recipients).

4. [Define a threshold for the monitored website](#) - to be notified when the event count for the monitored website has not reached a specified minimum count.

4.1.1.1 Scheduling the CardioLog Lite Scheduling Service

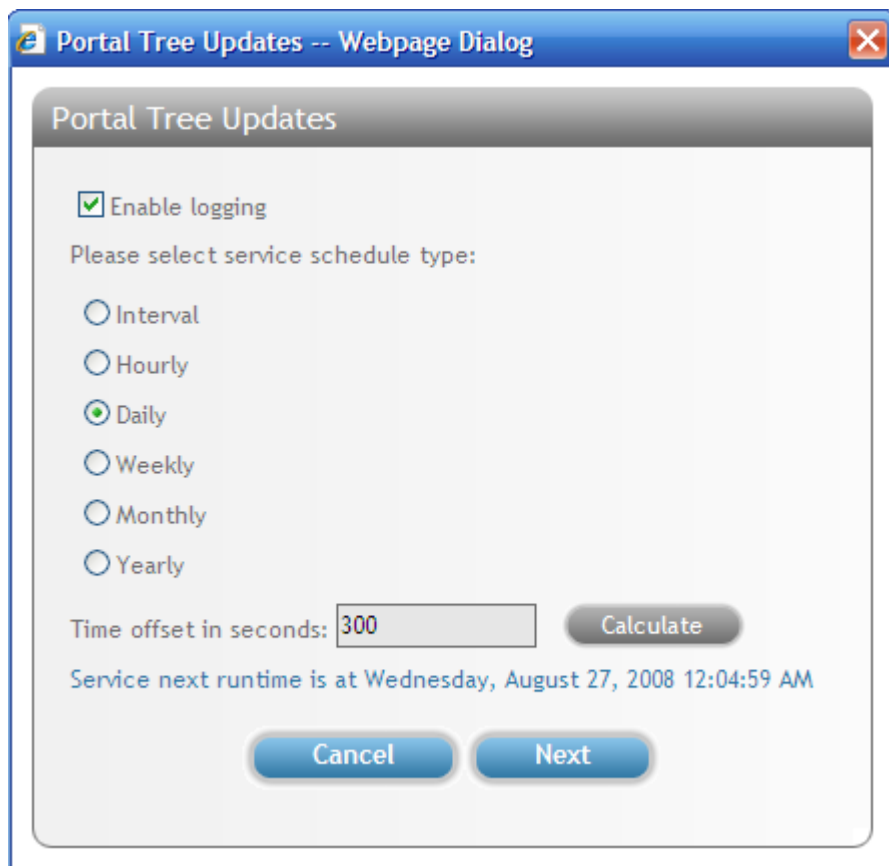
Components

Each service component can be scheduled to run at defined time intervals.

1. In the **General Administration** pane, under **CardioLog Lite Scheduling Service** click the service component.
2. The **Service** dialog includes the following fields:
 - **Enable Logging** - the component's activity is logged. The default log file path is at <CardioLog Lite Installation Directory>\CardiologScheduleServices\Logs
 - **Service Schedule Type** - defines the time interval to run the service component:
 - **Interval** - defined in the **Time offset in seconds** fields
 - **Hourly** - Every hour, on the hour
 - **Daily** - Every day at 12:00 AM
 - **Weekly** - Every Sunday at 12:00 AM
 - **Monthly** - Every month, on the 1st, at 12:00 AM
 - **Yearly** - Every year, on Jan 1st, at 12:00 AM
 - **Time offset in seconds** - time (in seconds) added for the selected schedule type.

Example 1: If the schedule type is Daily, and Time offset in seconds is 3600, then the service component will run every day a 01:00 AM.

Example 2: If the schedule type is Interval and Time offset in seconds is 1800, then the service component will run every 30 minutes.

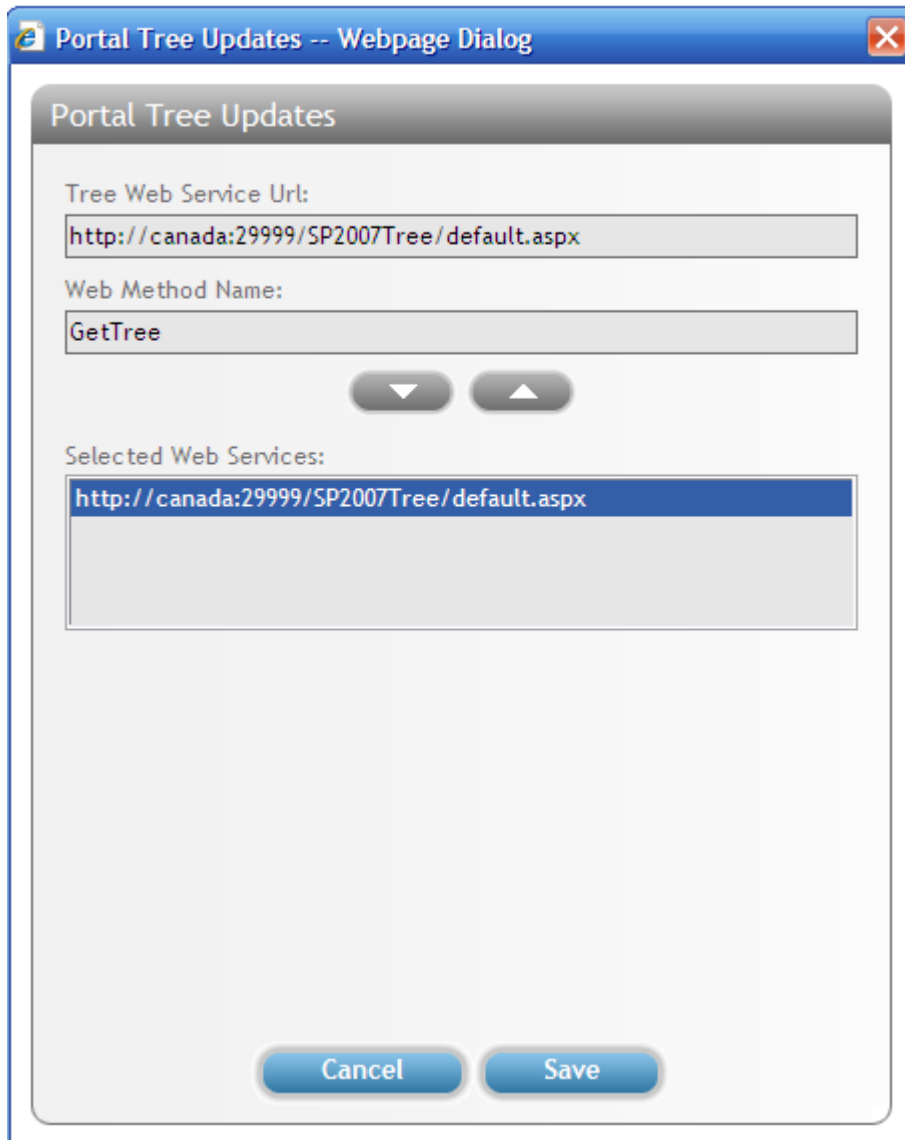


Portal Tree Updates Service dialog

Note: In order for changes in the service components to take place, you must restart the 'CardioLog Lite Scheduling Service' service.

4.1.1.2 Configuring the Service Components Parameters

- **Portal Tree Updates** - The Portal Tree Updates service component retrieves the structure of the portal (monitored environments). This is done by creating an XML file which portrays the hierarchal structure of the portal, and then translating the XML data into relational data. This structure is the basis for data aggregations.
 1. In the **General Administration** pane, under **CardioLog Scheduling Service** click **Portal Tree Updates**.
 2. Set the schedule type and then click **Next**.
 3. In the **Service Parameters** dialog, enter a URL for your Portal Tree Web Service. By default, the web service is the SharePoint 2007 Tree web service.
 4. Click the down arrow to add the Portal Tree Web Service to the selected web services.
 5. Click **Save**, and restart 'CardioLog Lite Scheduling Service'.



Portal Tree Updates - Service Parameters dialog

Transferring the portal structure through file system

By default, the SP2007Tree application exposes the portal hierarchal structure through an HTTP web service. For large portals, where the resources allocated for the web request (2 GB of memory) are insufficient for holding the structure of the portal, CardioLog can transfer the portal structure via the file system. To do so, add the following parameters to the Tree Web Service Url field:

```
http://<CardioLogServer>:<port>/SP2007Tree/default.aspx?output=file&logFilePath=[CardioLog  
Installation Folder]\CardioLogScheduleServices\Logs
```

- **Active Directory Updates** - CardioLog Lite provides the ability to segment authenticated visitors by their user names and the groups they belong to. The Active Directory Updates service component retrieves the list of users and groups directly from Active Directory.
 - In the **General Administration** pane, expand **CardioLog Scheduling Service**.
 - Click **Active Directory Updates**.
 - Set the schedule type and then click **Next**.
 - In the **Edit Service Parameters** dialog, fill out the following fields:
 - **Active Directory Connection String** - A full DNS name for the Active Directory Server. *Example: "mycompany.com"*
 - **Load Users From Specified Organizational Units** - A list of semicolon-separated organizational units. *Example: "OU1;OU2"*
By default the Active Directory Updates service component loads users from the entire Active Directory.
 - **Load from external Web service URL** - this is an optional field, for loading users from an Active Directory which is located in DMZ (using a designated web service).
 - **Active Directory Credentials** - this is an optional field. If the CardioLog Scheduling Service account is a member of your domain, there is no need to supply credentials.
 - Click the down arrow to add the Active Directory to the selected Active Directories.
 - Select the Active Directory domain in the selected Active Directories box and click **Test** to test the connection to your domain.
 - Click **Save**, and restart **CardioLog Lite Scheduling Service**.
 -

-- Web Page Dialog

Active Directory Updates

Active Directory connection string (full DNS name, ex: mycompany.com):
win2003.intlock

Load users from specific organizational units (ex: OU1;OU2):

Load users from web service url:
http://brazil:29999/ADTree/default.aspx

Active Directory User Credentials:

Domain Name:

User Name:

Password:

Confirm Password:

Selected Active Directories:
win2003.intlock

Cancel Test Save

Active Directory Updates Service Parameter dialog

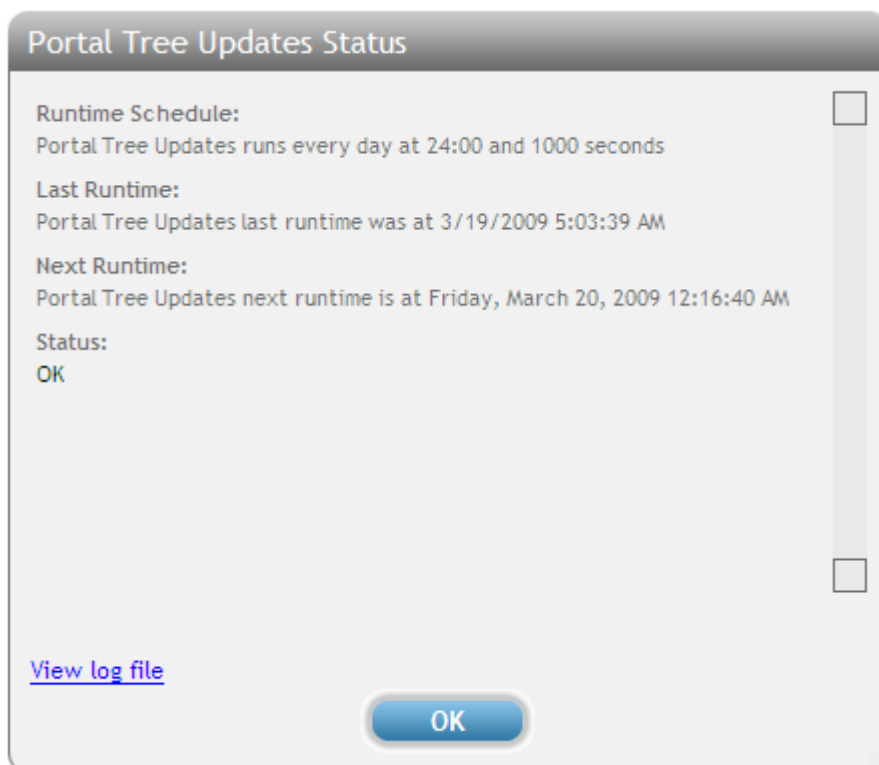
4.1.1.3 Calculating the Service Component Runtime

You can calculate the amount of time needed for each service component to run via the service component status window in the Diagnostics Dashboard:

1. In the **General Administration** pane, expand **System Diagnostics**.
2. Click on **Diagnostics Dashboard** and select the service component.
3. The start time is the **Runtime Schedule** and the end time is the **Last Runtime**.

For example, **Portal Tree Updates** runs 5 hours for a tree with 2,000,000 objects.

It starts every day at 12:00 + 1000 seconds (12:16 A.M) and finishes at 05:03 A.M, thus the total runtime is 5 hours.



Service component status window

4.1.1.4 Scheduling the CardioLog Lite Diagnostics Service

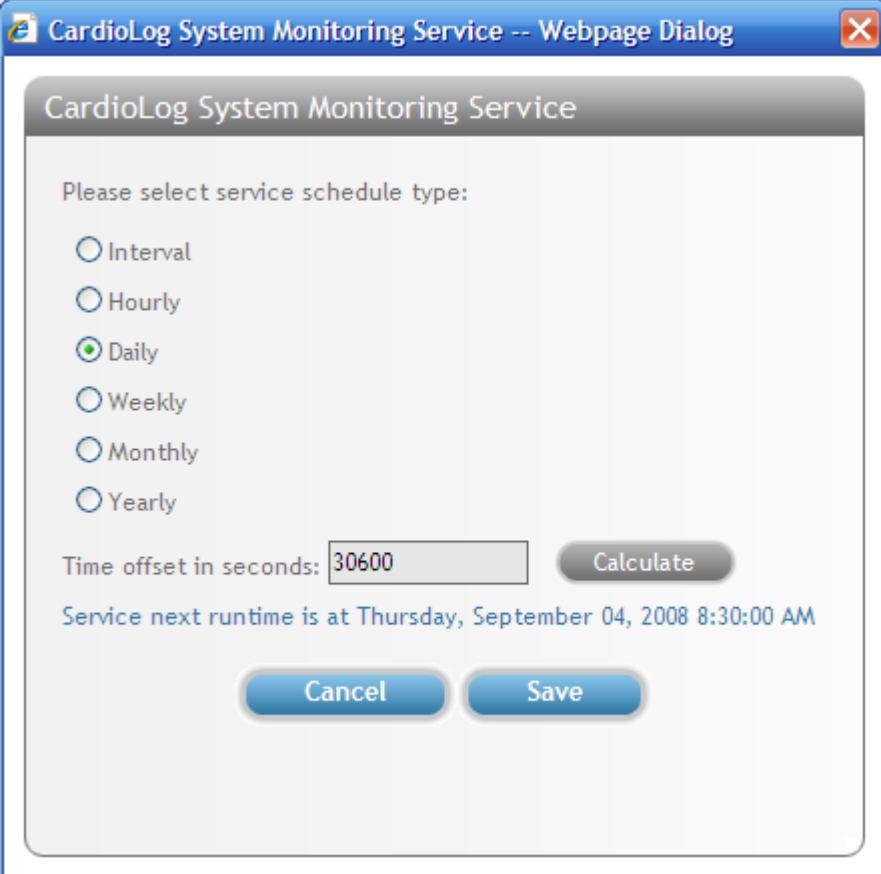
Schedule the CardioLog Lite Diagnostics Service to run after the CardioLog Lite Scheduling Service components have finished running. By default, the CardioLog Lite Diagnostics Service runs every day at 08:30 AM.

1. In the **General Administration** pane, under **System Monitoring** click on **CardioLog Lite Diagnostics Service**.
2. The **CardioLog Lite Diagnostics Service** dialog includes the following fields:
 - **Service Schedule Type** - defines the time interval to run the service component:
 - **Interval** - defined in the **Time offset in seconds** fields
 - **Hourly** - Every hour, on the hour
 - **Daily** - Every day at 12:00 AM
 - **Weekly** - Every Sunday at 12:00 AM
 - **Monthly** - Every month, on the 1st, at 12:00 AM
 - **Yearly** - Every year, on Jan 1st, at 12:00 AM

- **Time offset in seconds** – time (in seconds) added for the selected schedule type.

Example 1: If the schedule type is Daily, and Time offset in seconds is 3600, then the service component will run every day a 01:00 AM.

Example 2: If the schedule type is Interval and Time offset in seconds is 1800, then the service component will run every 30 minutes.

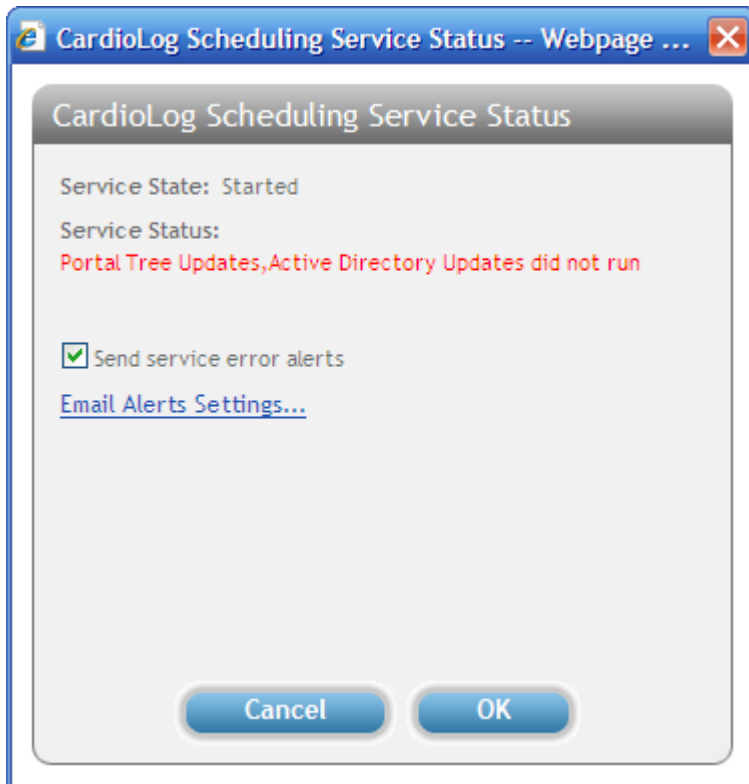


CardioLog Lite Diagnostics Service dialog

3. In order to commit changes, you must restart the 'CardioLog Lite Diagnostics Service' service. Click on **Start** > **Run** > services.msc
4. Right click on **CardioLog Lite Diagnostics Service** and select **Restart**.

4.1.1.5 Configuring E-mail Alert Settings

1. In the **General Administration** pane, under **System Diagnostics** click on **Diagnostics Dashboard**.
2. In the **Services** table, click on **CardioLog Lite Scheduling Service** in order to view the status of the service.



Diagnostics Service Status dialog

3. In the **CardioLog Lite Scheduling Service Status** dialog, check the **Send service error alerts** checkbox.
4. Click on **Email Alerts Settings** to configure the e-mail settings.
5. In the **Configure Email Settings** dialog, fill out the following fields:
 - **SMTP Mail Server** - A full DNS name for the SMTP Server. *Example:* "mycompany.com"
 - **SMTP User Name, SMTP Password** - these are optional fields, for supplying credentials.
 - **System Administrator e-mail address** - recipients list for service error alerts. Click on the right arrow to select Email addresses.
6. Click the down arrow to add the e-mail address to the selected recipients list.
7. Click **Save**, and restart **CardioLog Lite Scheduling Service**.

Configure Email Settings -- Webpage Dialog

Configure Email Settings

SMTP Mail Server:
mycompany.com

SMTP User Name:

SMTP Password:

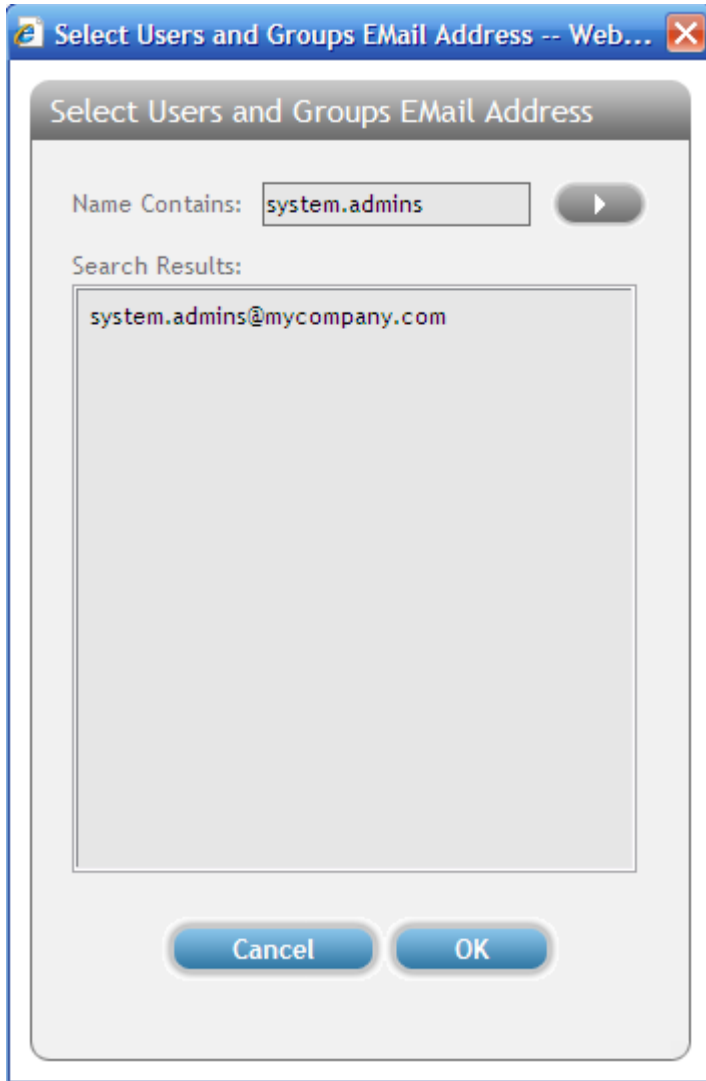
System administrator e-mail address:
▶

▼ ▲

system.admins@mycompany.com

Cancel Save

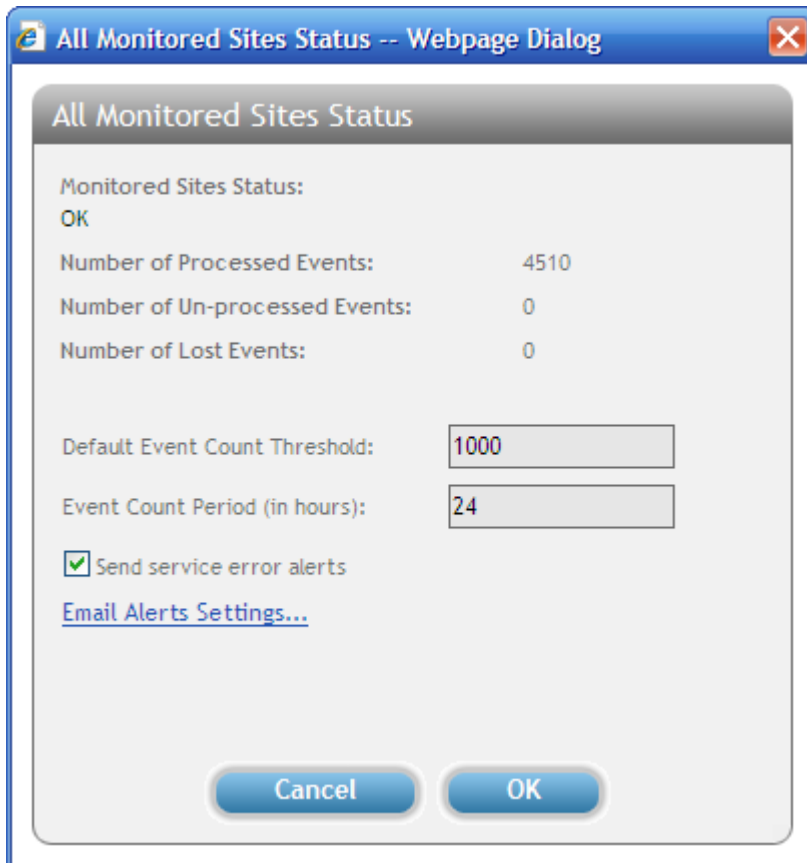
Configure Email Settings dialog



Select Users and Groups E-mail Address dialog

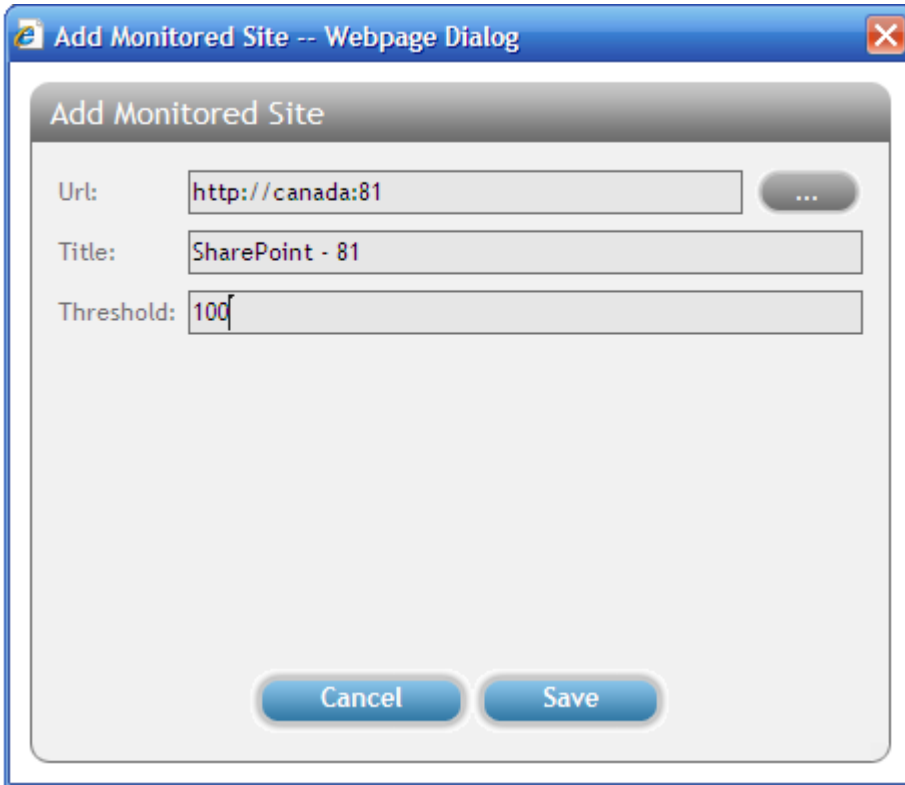
4.1.1.6 Defining a threshold for each monitored web site

1. In the **General Administration** pane, under **System Diagnostics** click on **Diagnostics Dashboard**.
2. In the **Tracking Agents** table, click on **All Monitored Sites Status** dialog to define the **Default Event Count Threshold** and the **Event Count Period (in hours)** for all web sites.



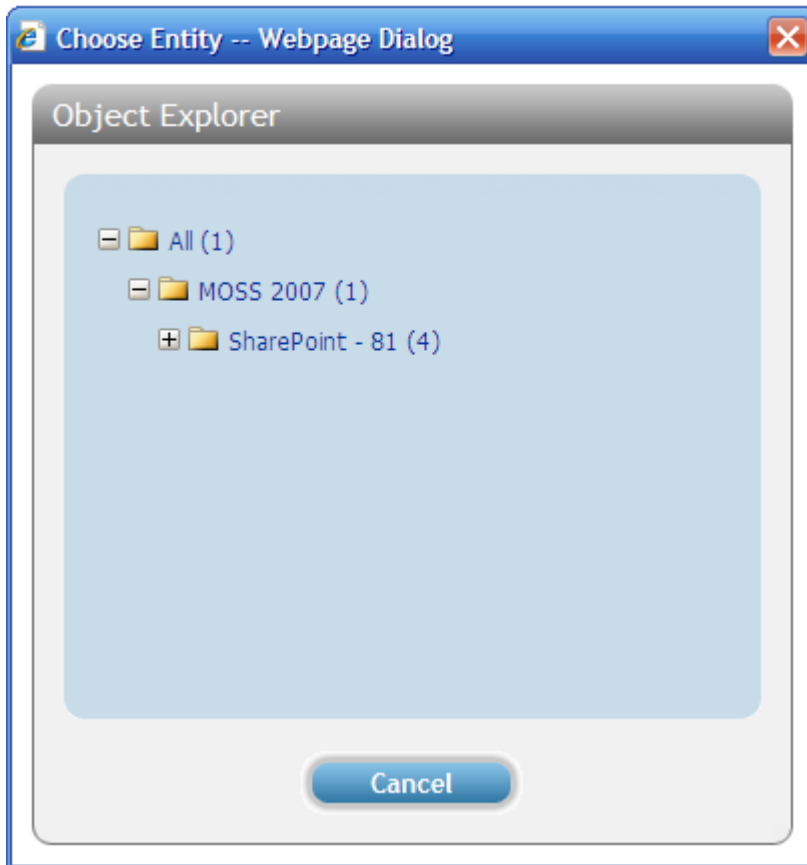
All Monitored Sites Status dialog

3. In the **All Monitored Sites Status** dialog, select the **Send service error alerts** in order to get service error alerts via e-mail. These alerts are sent when the event count for all monitored sites is under the threshold.
4. Click on **Email Alerts Settings** to configure the e-mail settings.
5. In the **Tracking Agents** table, click on **Add a Monitored Site**.



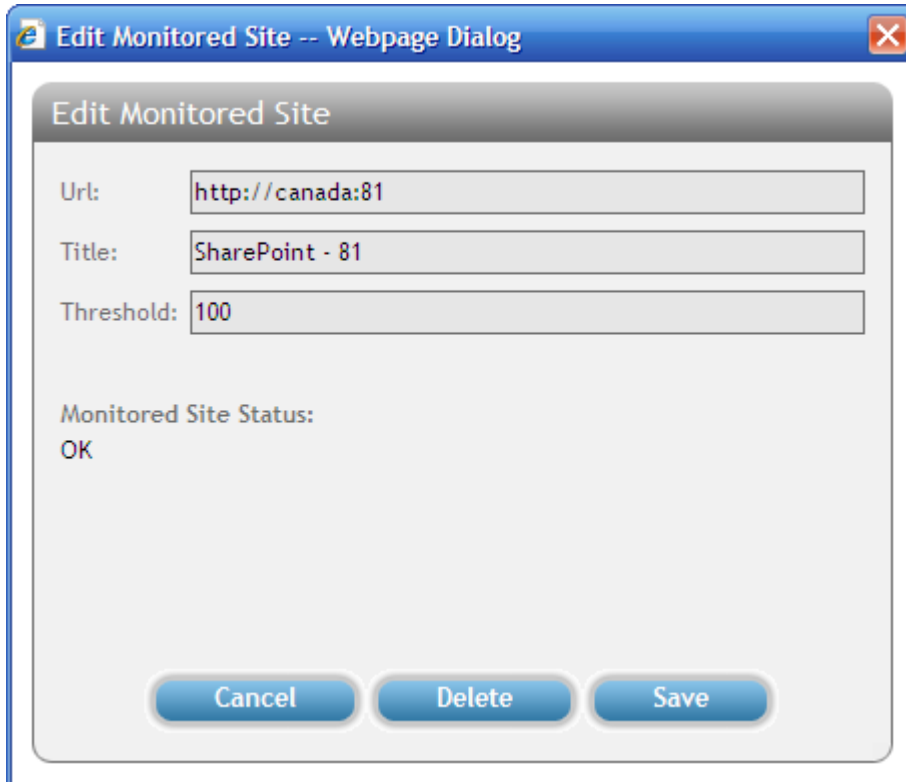
Add Monitored Site dialog

6. In the **Add Monitored Site** dialog, click on Browse (...) in order to select a site from Object Explorer. Enter the default event count threshold for this site in the **Threshold** field.



Choose a site from the Object Explorer dialog

7. In the **Tracking Agents** table, click on each **Monitored Site** in order to edit or delete it.



Edit Monitored Site dialog

4.1.2 Diagnostics Dashboard

The Diagnostics Dashboard enables the detection and correction of faults in the CardioLog Lite Scheduling Service components and tracking agents.

1. [Viewing the current status of the CardioLog Lite Scheduling Service components and tracking agent](#)
2. [Troubleshooting errors in the CardioLog Lite Services](#)
3. [Troubleshooting errors in the Tracking Agent](#)

4.1.2.1 Viewing the status of the CardioLog Lite Scheduling Service components

1. In the **General Administration** pane, under **System Diagnostics** click on **Diagnostics Dashboard**.

The screenshot displays the 'Diagnostics Dashboard' interface. On the left, the 'General Administration' pane is active, showing a tree view with 'Diagnostics Dashboard' selected. The main content area is titled 'Diagnostics Dashboard' and contains two sections: 'Services' and 'Tracking Agents'.

Services Section:




Service Name	Status
CardioLog Diagnostics Service	Stopped
CardioLog Scheduling Service	Started
Usage Data Processing	Warning
Portal Tree Updates	Warning
Active Directory Updates	Warning

Tracking Agents Section:

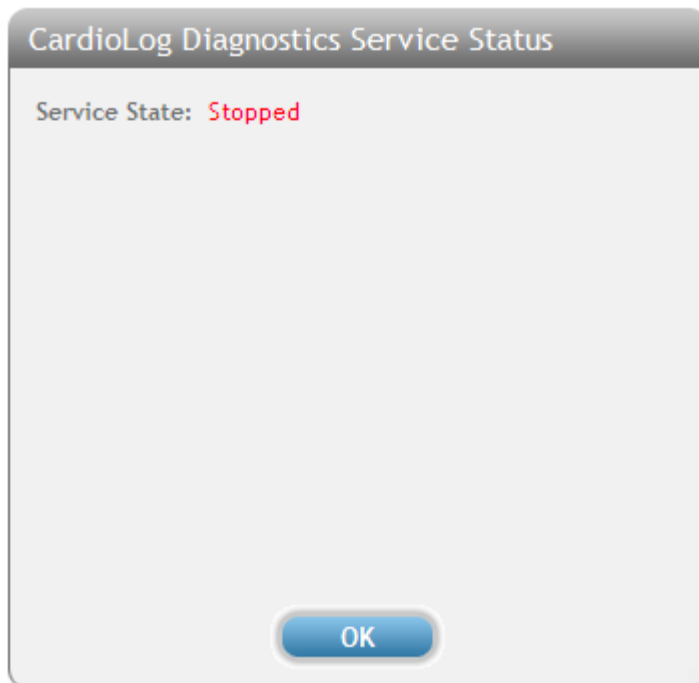
Site URL	Site Title	Threshold	Status
All Monitored Sites			
http://holland:94/Pages/Default.aspx	My SharePoint 2007 Portal	1000	Warning

Diagnostics Dashboard dialog

2. In the **Services** table, click on **CardioLog Diagnostics Service** in order to view the status of the service.

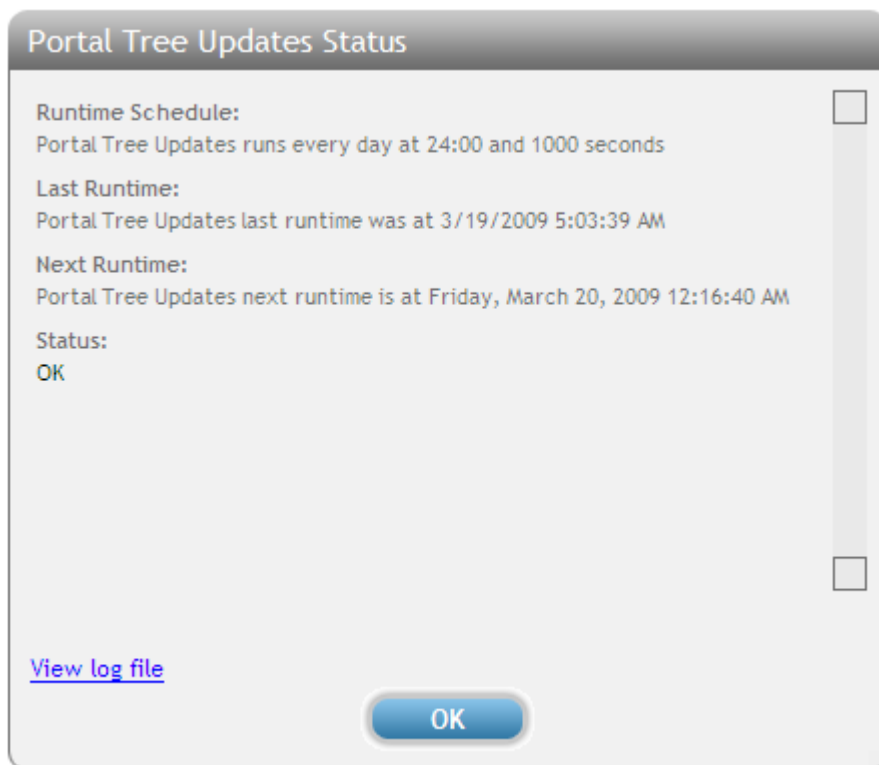
Services	
CardioLog Diagnostics Service	Stopped
CardioLog Scheduling Service	Started
Usage Data Processing	
Portal Tree Updates	
Active Directory Updates	
View in XML Format...	

CardioLog Services Diagnostics Dashboard



Diagnostics Service Status dialog

- In the **Services** table, click on each service component to view its status.



Portal Tree Updates dialog

- In the **Service Component** dialog, click on **View log file** to view the service component log file.
- In the **Services** table, click on **View in XML Format** to view the status of all service components - in a single XML web page. This web page can be used by other monitoring systems in your organization as well.

4.1.2.2 How to view the status of the monitored websites

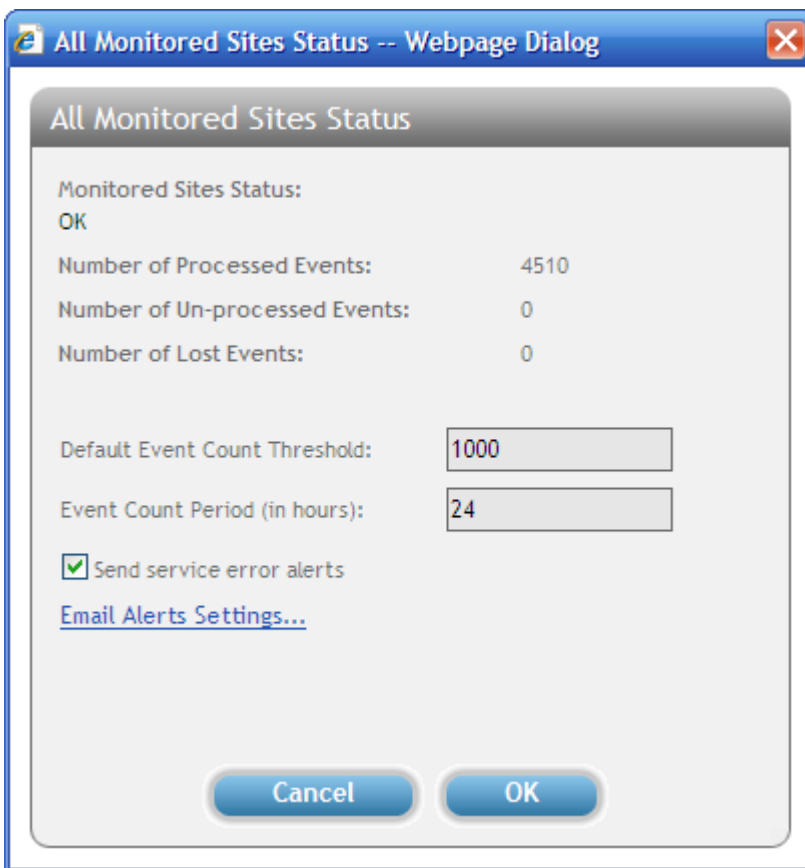
By default, alerts are sent via e-mail when the event count for all monitored websites is under the defined threshold. It is recommended to [define a threshold for each monitored website](#) - to better isolate usage tracking issues.

1. In the **General Administration** pane, under **System Diagnostics** click on **Diagnostics Dashboard**.
2. In the **Tracking Agents** table, click on **All Monitored Sites** to view the status of all of the monitored websites.

Site URL	Site Title	Threshold	Status
<u>All Monitored Sites</u>			
http://canada:82	SharePoint - 82	100	Warning

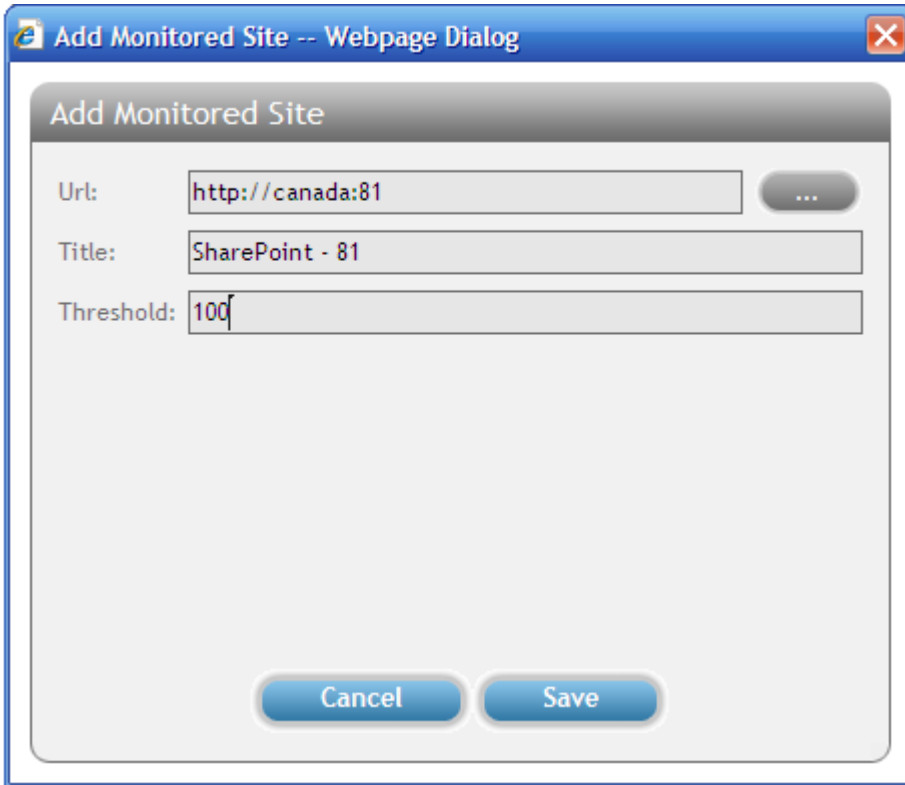
Add a Monitored Site...

CardioLog Tracking Agents Diagnostics Dashboard



All Monitored Sites Status dialog

3. In the **Tracking Agents** table, click on each of the **Monitored Sites** to view its status.



Monitored Site Status dialog

4.1.2.3 Troubleshooting Errors in the CardioLog Lite Services

Both the [CardioLog Lite Scheduling Service](#) and the [CardioLog Lite Diagnostics Service](#) write messages to log files. You can view the log files:

- Locally on the CardioLog Lite server in the service logs file path.
- Remotely from the [Diagnostics Dashboard](#).

Viewing logs can be performed by a user with a local administrator account on the CardioLog server.

4.1.2.3.1 CardioLog Lite Scheduling Service

Log File - CardioLogServices.log:

```
// Service started successfully
Time   : 27/01/2009 08:29:49
Message : Started

// Service stopped successfully
Time   : 27/01/2009 08:39:27
Message : Stopped
```

Possible Faults

Starting the service may fail due to:

- Database connection problem - verify that the CardioLog Lite Scheduling Service login account can connect to the CardioLog Lite database.

```
Error : Could not load HandlersInstances: An error has occurred while establishing a connection to the server.
When connecting to SQL Server 2005, this failure may be caused by the fact that under the default settings
SQL Server does not allow remote connections. (provider: Named Pipes Provider, error: 40 - Could not open a
connection to SQL Server)
```

4.1.2.3.2 CardioLog Lite Diagnostics Service

Log File - CardioLogSystemMonitoringServices.log:

```
// Service started successfully
Time   : 27/01/2009 08:29:49
Message : Started
```

```
// Service stopped successfully
```

```
Time : 27/01/2009 08:39:27
```

```
Message : Stopped
```

Possible Faults

Starting the service can fail due to:

- Internal diagnostics web service error – verify that the diagnostics web service is available by browsing to the following Url:

http://<cardiologliteserver>:<port>/CardioLogAPI/Monitor/Logs/Monitor.aspx

Contact Intlock if you receive an error message.

```
Error : Internal error in the CardioLog Monitoring Service. (Exception: The remote server returned an error: (500) Internal Server Error.)
```

- SMTP not configured - [Configure the e-mail alert settings](#).

```
Error : CardioLog Diagnostics Service failed to start. (Exception: SMTP mail server is not configured)
```

Sending e-mail alerts can fail due to:

- SMTP connection problem - verify that the CardioLog Lite Scheduling Service login account can connect to the SMTP services.

```
Error : Failed to send an email alert to the system administrator. (Exception: System.ApplicationException: Send Mail Exception: Failed to connect to SMTP mail server at CardioLog.API.Util.SendMail(String SMTPMailServer, String SMTPUser, String SMTPPassword, String from, String to, String subject, String body, MessageType type) at CardioLog.Services.CardioLogMonitoringServices.OnStart(String[] args))
```

4.1.2.3.3 Active Directory Updates

Log File - ADAgent.log:

```
// Loading users and groups from Active Directory
```

```
Time : 6/19/2008 12:00:07 AM
```

```
Message : Loading directory: corp.compay.com
```

```
// Loading users and groups from CardioLog database
```

```
Time : 6/19/2008 12:25:38 AM
```

```
Message : Loading db groups, users and flyweights
```

// Comparing both repositories and updating CardioLog database

Time : 6/19/2008 12:25:50 AM

Message : processing

Time : 6/19/2008 12:28:02 AM

Message : Cleanup

// Updating service last run time in CardioLog database

Time : 6/19/2008 12:28:02 AM

Message : Updating last run global setting

// Service finished successfully

Time : 6/19/2008 12:28:02 AM

Message : Done

Possible Faults

Loading from Active Directory can fail due to:

- Invalid parameters - verify that the Active Directory connection string is in a FQDN format (corp.mycompany.com). If you have defined specific organizational units to load from, verify that they exist.

```
Error : Exception: There is no such object on the server.  
, Stack Trace: at System.DirectoryServices.DirectoryEntry.Bind(Boolean throwIfFail)  
at System.DirectoryServices.DirectoryEntry.Bind()  
at System.DirectoryServices.DirectoryEntry.get_AdsObject()  
at System.DirectoryServices.DirectorySearcher.FindAll(Boolean findMoreThanOne)  
at System.DirectoryServices.DirectorySearcher.FindAll()  
at CardioLog.API.DirectoryServices.DirectoryServices.LoadUsers(String userAlias, Boolean verbose)  
at CardioLog.API.DirectoryServices.DirectoryServices.Load(String DN, String userAlias, Boolean verbose)  
at CardioLog.Services.SystemServices.ADAgent.ActivateService()
```

- Insufficient permissions - verify that the CardioLog Lite Scheduling Service login account has read access to Active Directory. If you have supplied credentials, verify that they are valid (if the CardioLog Lite Scheduling Service login account is in the same domain, there is no need to supply credentials).

```
Error : Exception: Logon failure: unknown user name or bad password.  
, Stack Trace: at System.DirectoryServices.DirectoryEntry.Bind(Boolean throwIfFail)  
at System.DirectoryServices.DirectoryEntry.Bind()  
at System.DirectoryServices.DirectoryEntry.get_AdsObject()  
at System.DirectoryServices.DirectorySearcher.FindAll(Boolean findMoreThanOne)  
at System.DirectoryServices.DirectorySearcher.FindAll()  
at CardioLog.API.DirectoryServices.DirectoryServices.LoadUsers(String userAlias, Boolean verbose)  
at CardioLog.API.DirectoryServices.DirectoryServices.Load(String DN, String userAlias, Boolean verbose)
```

```
at CardioLog.Services.SystemServices.ADAgent.ActivateService()
```

- Timeout caused by a slow network - increase the tree web service timeout.
The AD tree web service timeout can be configured in the **Web.config** file:
In [CardioLog Installation Folder]\ADTree\Web.config, edit the <httpRuntime>
element in the <system.web>section:
ExecutionTimeout property - indicates the maximum number of seconds a
request is allowed to execute before being automatically shut down by ASP.NET.
The default timeout is 90 seconds.

```
<system.web>  
  <httpRuntime executionTimeout="7200" maxRequestLength="2000000"/>  
</system.web >
```

```
Error : Exception: The operation has timed out, Stack Trace: at  
System.Net.HttpWebRequest.GetResponse()  
at CardioLog.Services.SystemServices.ADAgent.ActivateService() in  
C:\Data\Development\CardioLogSolution\SystemServices\ADAgent.cs:line 113
```

- Network errors - make sure the FQDN name you defined exists in the DNS. You
also need to make sure that TCP port 389 is open to the DC, as your traffic might
be getting blocked by the firewall.

```
Error : Exception: The server is not operational.  
, Stack Trace: at System.DirectoryServices.DirectoryEntry.Bind(Boolean throwIfFail)  
at System.DirectoryServices.DirectoryEntry.Bind()  
at System.DirectoryServices.DirectoryEntry.get_AdsObject()  
at System.DirectoryServices.PropertyValueCollection.PopulateList()  
at System.DirectoryServices.PropertyValueCollection..ctor(DirectoryEntry entry, String propertyName)  
at System.DirectoryServices.PropertyCollection.get_Item(String propertyName)  
at CardioLog.API.DirectoryServices.DirectoryServices.LoadUsers(String userAlias, Boolean verbose)  
at CardioLog.API.DirectoryServices.DirectoryServices.Load(String DN, String userAlias, Boolean verbose)  
at CardioLog.Services.SystemServices.ADAgent.ActivateService()
```

Reading and writing to the CardioLog Lite database can fail due to:

- Insufficient permissions - verify that the CardioLog Lite Scheduling Service login
account is assigned a db_owner role for the CardioLog Lite database.
- Insufficient resources - verify that your system has enough resources according
to [system requirements](#).
- Internal service error - [contact Intlock](#)

```
Error : Exception: Loadind directory failed with error:Validating AD xml failed with error:The 'log' element is  
not declared., Stack Trace: at CardioLog.API.DirectoryServices.DirectoryServices.Load(String xml) in  
C:\Data\Development\CardioLogSolution\API\DirectoryServices\DirectoryServices.cs:line 713  
at CardioLog.Services.SystemServices.ADAgent.ActivateService() in  
C:\Data\Development\CardioLogSolution\SystemServices\ADAgent.cs:line 119
```

4.1.2.3.4 Portal Tree Updates

Log File - OMAgent.log

// Loading SharePoint 2007 tree (to SP2007Tree.xml)

Time : 11/26/2008 12:18:25 AM

Message : Loading from: http://CardioLogServer/SP2007Tree/default.aspx

// Loading trees xml (OMTree.xml) to a temporary table (tab_sharepoint_tree_load) in CardioLog database

Time : 11/26/2008 12:46:42 AM

Message : Loading Xml to DB...

Time : 26/11/2008 02:32:48

Message : Load Xml to DB: Success

// Checking for duplicate URLs in tree in CardioLog database (the URL is the unique identifier for tree objects)

Time : 26/11/2008 02:32:48

Message : No Duplicate Urls.

// Shrinking SQL log file

Time : 26/11/2008 02:32:48

Message : Shrinking SQL Log File...

Time : 26/11/2008 02:32:48

Message : Shrink Log File: Success

// Updating the old tree (located in the tab_sharepoint_tree table) after comparing it with the new tree (located in the tab_sharepoint_tree_load table) in CardioLog database

Time : 26/11/2008 02:32:48

Message : Refreshing OM Tree...

Time : 26/11/2008 04:13:28

Message : Refresh OM Tree: Success

// Updating inventory count for tree item types

Time : 26/11/2008 04:13:28

Message : Counting Inventory

// Fixing lost events (events that are not associated with tree items)

Time : 26/11/2008 04:13:43

Message : Fixing lost events and cached data...

Time : 26/11/2008 04:14:56

Message : Fix lost events: Success

// Updating service last run time in CardioLog Lite database

Time : 26/11/2008 04:14:56

Message : Updating last run global settings.

Time : 26/11/2008 04:14:56

Message : Service run complete.

// Checking if tree structure is valid (lost branch - a tree item with no parent item)

Time : 26/11/2008 04:14:56

Message : Finding lost branches

Time : 26/11/2008 04:15:19

Message : No lost branches found.

// Delete Analysis Center html tree cache

Time : 26/11/2008 04:15:26

Message : Clean CardioLog tree cache

// Service finished successfully

Time : 26/11/2008 04:15:26

Message : OMAgent run complete.

Possible Faults

Loading from the SharePoint 2007 tree web service can fail due to: (For more details view the SP2007Tree web application log file - SP2007Tree.log)

- Insufficient permissions - verify that the CardioLog Lite Scheduling Service login account has read access to all the admin and content SharePoint databases, and read access to the SharePoint TEMPLATE path:

\\sharepointserver\C\$\Program Files\Common Files\Microsoft Shared\web server extensions\12\TEMPLATE

```
Error : Exception: An error has occurred while establishing a connection to the server. When connecting to SQL Server 2005, this failure may be caused by the fact that under the default settings SQL Server does not allow remote connections. (provider: Named Pipes Provider, error: 40 - Could not open a connection to SQL Server), Stack Trace: at System.Data.ProviderBase.DbConnectionPool.GetConnection(DbConnection owningObject) at System.Data.ProviderBase.DbConnectionFactory.GetConnection(DbConnection owningConnection) at System.Data.ProviderBase.DbConnectionClosed.OpenConnection(DbConnection outerConnection, DbConnectionFactory connectionFactory) at System.Data.SqlClient.SqlConnection.Open() at Microsoft.ApplicationBlocks.Data.SqlHelper.ExecuteReader(String connectionString, CommandType commandType, String commandText, SqlParameter[] commandParameters) at CardioLog.API.GlobalSettings.Load(String category, String name) at CardioLog.API.GlobalSettings..ctor(String category, String name) at CardioLog.Services.SystemServices.OMAgent.GetXml() at CardioLog.Services.SystemServices.OMAgent.ActivateService()
```

- Timeout caused by a slow network - increase the tree web service timeout. The tree web service timeout can be configured in the **Web.config** file: In [CardioLog Installation Folder]\SP2007Tree\Web.config, edit the <httpRuntime> element in the <system.web>section: ExecutionTimeout property - indicates the maximum number of seconds a request is allowed to execute before being automatically shut down by ASP.NET. The default timeout is 90 seconds.

```
<system.web>  
  <httpRuntime executionTimeout="7200" maxRequestLength="2000000"/>  
</ system.web >
```

```
Error : Exception: The operation has timed out, Stack Trace: at System.Web.Services.Protocols.WebClientProtocol.GetWebResponse(WebRequest request) at System.Web.Services.Protocols.HttpWebClientProtocol.GetWebResponse(WebRequest request) at System.Web.Services.Protocols.SoapHttpClientProtocol.Invoke(String methodName, Object[] parameters) at TreeWS.InvalidDate() at CardioLog.Services.SystemServices.OMAgent.ActivateService()
```

- Insufficient resources - verify that your system has enough resources according to [system requirements](#).

```
Error : Exception: There is insufficient system memory to run this query.  
Warning! The maximum key length is 900 bytes. The index 'IDX_SHAREPOINT_TREE_LOAD_LOCATION' has maximum length of 1000 bytes. For some combination of large values, the insert/update operation will fail.
```

Warning! The maximum key length is 900 bytes. The index 'IDX_SHAREPOINT_TREE_LOAD_URL' has maximum length of 2000 bytes. For some combination of large values, the insert/update operation will fail. The statement has been terminated., Stack Trace: at CardioLog.API.OMLoader.LoadXmlToDB()
at CardioLog.Services.SystemServices.OMAgent.ActivateService()

- Network errors

Error : Exception: A transport-level error has occurred when sending the request to the server. (provider: Shared Memory Provider, error: 0 - No process is on the other end of the pipe.), Stack Trace: at CardioLog.API.OMLoader.LoadXmlToDB()
at CardioLog.Services.SystemServices.OMAgent.ActivateService()

- Internal web service error - [contact Intlock](#)

Reading and writing to the CardioLog Lite database can fail due to:

- Insufficient permissions - verify that the CardioLog Lite Scheduling Service login account has a db_owner role on the CardioLog Lite database.
- Insufficient resources - verify that your system has enough resources according to the [system requirements](#).
- Internal service error - [contact Intlock](#)

Delete html tree cache can fail due to:

- Clean tree cache web service URL is unavailable - verify you can browse to *http://CardioLogServer/CardioLog/Tree/TreeWS.asmx*

Error : Failed to clean CardioLog tree cache, check cache directory path

Extended Logging for the SP2007Tree web application

Turn on message logging in order to trace the SP2007Tree web application:

Add the "Message" switch in [CardioLog Lite Installation Folder]\SP2007Tree\Web.config:

```
<add key="logType" value="Message,Warning,Error" />
```

4.1.2.3.5 Usage Data Processing

Log File - Maintenance.log:

```
// Executing the usage data processing procedure (stp_eventlog_migrate), including the  
black list filters (which data not to collect), on CardioLog database
```

Time : 29/01/2009 13:01:00

Message : Starting

// Archiving history events and verifying events quota (according to product edition license)

Time : 29/01/2009 13:01:00

Message : Archiving events...

Time : 29/01/2009 13:01:03

Message : Archiving successful.

Time : 29/01/2009 13:01:03

Message : Verifying page views monthly quota...

// Updating service last run time in CardioLog database

Time : 29/01/2009 13:01:03

Message : Updating last run global setting

// Service finished successfully

Time : 29/01/2009 13:01:04

Message : Finished

Possible Faults

Execution of the Usage Data Processing procedure the CardioLog Lite database can fail due to:

- Insufficient permissions - verify that the CardioLog Lite Scheduling Service login account is assigned a db_owner role for the CardioLog Lite database.
- Internal service error - [contact Intlock](#)

Error : Failed to migrate temp EventLog items: A severe error occurred on the current command. The results, if any, should be discarded.

A severe error occurred on the current command. The results, if any, should be discarded.

step #1

step #2

step #3

4.1.2.4 Troubleshooting Errors in the Tracking Agent

If [e-mail alerts](#) are configured and [threshold for monitored websites](#) are defined, alerts will be sent via e-mail when the event count for a monitored websites is under the threshold.

Test the Tracking Agent

To test the Tracking Agent, go to a page which includes the tracking agent code. Press Ctrl+F12 (or Alt+F12). The Tracking Agent Console should pop-up, displaying the ID number for the most recent monitored action (event). To close the console, press Ctrl+F12 (or Alt+F12).

Do you see the SharePoint 2007 Agent Console pop-up?

1. Yes
2. [Yes, But the 'Last Event #' is 'None'](#)
3. [No](#)



The 'Last Event #' is 'None'

1. Verify that the [Event Collector](#) web application directory security allows Anonymous Access:
Go to IIS Manager > Web Sites > CardioLog Lite > EventCollector > Properties > Directory Security > Edit > Check 'Enable anonymous access'
2. If this did not solve the problem, then go to a portal page which includes the tracking agent code, press Ctrl+F10, copy the script prompt text and send it to [Intlock Support](#).

What happens when you press Ctrl+F12?

1. [Nothing happens - no pop-up appears](#)
2. [I get a login box](#)
3. [I get a JavaScript error on the page](#)
4. [I get a browser security message - because my SharePoint portal runs on SSL](#)

Nothing happens when I click Ctrl+F12. No pop-up appears.

1. Delete your Internet Explorer Temporary Internet Files:
In Internet Explorer, click Tools > Internet Options > Delete.
2. If this is a SharePoint 2007 portal, verify that you have added the tracking agent code to all of the SharePoint 2007 front-ends in your farm. For each front-end -

browse to the CORE.js file [http://SharePointServer/_layouts/1033/Core.js] and verify that the Intlock tracking code has been added to the end of the file.

3. If you have copied the tracking code on your own - to a common .js file, verify that you have removed the opening and closing <script> tags.
4. If this is a non-SharePoint website, verify that you have added the tracking agent code to a common .js file, and that you have removed the opening and closing <script> tags.

I get a login box.

1. The monitored website and the CardioLog Lite tracking module are two separate web applications, residing in different sub-domains, therefore they require two separate authentication procedures. IE handles this in a transparent way (if not, click Tools > Internet Options > Security > Custom Level > User Authentication > Logon > 'Choose Automatic logon with user name and password'), while FireFox, by default prompts for credentials. To resolve the Firefox prompt, either set Firefox preferences, through group policy, to avoid being prompted for logon (network.automatic-ntlm-auth.trusted-uris), or place the CardioLogAgent virtual directory under the monitored website (see section 5).
2. Verify that all portal users, including the CardioLogLiteApplicationPool account, have Read permissions for the CardioLogAgent directory files (under the CardioLog Lite Installation Directory).
3. Verify that the CardioLogLite website authentication provider is set to "NTLM":
Run the following from Command Line to get the website authentication type -
C:\Inetpub\AdminScripts>cscript adsutil.vbs get w3svc/[website ID]/Root/NTAuthenticationProviders
Replace [website ID] with the CardioLogLite website ID as it appears in IIS Manager.
4. If the authentication type is not set to "NTLM", run the following from Command Line:
C:\Inetpub\AdminScripts>cscript adsutil.vbs set w3svc/[website id]/Root/NTAuthenticationProviders "NTLM"
Replace [website ID] with the CardioLog website ID as it appears in IIS Manager).
5. If you still get a login box, place the CardioLogAgent web application on the SharePoint machine – (This procedure does not require a full CardioLog Lite installation, it involves the creation of a CardioLogAgent virtual directory on the SharePoint server):
 - Create a new CardioLogAgent virtual directory on the SharePoint machine. Set the following properties for the new virtual directory - *ASP.NET 2.0, Inetgrated Windows Authentication (un-check anonymous)*

- Copy the files from [CardioLog Lite Installation Directory]\CardioLogAgent to the new virtual directory.
- If the SharePoint web sites or site collections have multiple host headers, place the CardioLogAgent virtual directory under the “/_layouts” share, to ensure that the tracking agent’s domain is identical to the calling SharePoint web site domain.
- Modify the CardioLog Lite tracking code: in your SharePoint Core.js file (or in your website master page), change the domain and port to the new CardioLogAgent location:

```
script.src =  
"http://server:port/CardioLogAgent/AgentEmbed.aspx?env=MOSS2007&r="+Math.random()*100000;
```

- In the new CardioLogAgent directory, open the AgentEmbed.aspx file and change the domain and port:-

```
element.TunnelPath = 'http://server:port/CardioLogAgent/tunnel.aspx';  
element.AgentDirectory = 'http://server:port/CardioLogAgent';  
element.AgentBaseLocation = 'http://server:port/CardioLogAgent/agentBaseEmbed.aspx';
```

I get a JavaScript error on the page.

1. Send the JavaScript error message to [Intlock Support](#).
2. [Remove the tracking code from your SharePoint portal](#).

I get a browser security message.

The CardioLog Lite tracking agent can be easily configured to work with SSL. Do the following:

1. Configure the CardioLog Lite web site to enable both http and https calls (set an SSL port and add a server certificate).
2. Change the URL protocol and port in the following locations:

SharePoint CORE.js file (on all web-fronts) -

```
script.src =  
"https://server:port/CardioLogAgent/AgentEmbed.aspx?env=MOSS2007&r="+Math.random()*100000  
;
```

[CardioLog installation directory]\CardioLogAgent\AgentEmbed.aspx -

```
element.TunnelPath = 'https://server:port/CardioLogAgent/tunnel.aspx';  
element.AgentDirectory = 'https://server:port/CardioLogAgent';  
element.AgentBaseLocation = 'https://server:port/CardioLogAgent/agentBaseEmbed.aspx';
```

4.2 Server Health and Performance Monitoring

It is the organization's responsibility to maintain the CardioLog Lite server health and performance, including software and hardware upgrades.

To assure optimal operation, make sure you follow these procedures:

4.2.1 Monitoring the Operating System and Database

1. Monitor the IIS service and the CardioLog Lite services ([CardioLog Lite Scheduling Service](#) and [CardioLog Lite Diagnostics Service](#)).
2. Monitor the server performance (CPU and memory usage).
3. Monitor the Logs directory size (log files growth is restricted to 8MB each).
4. Monitor the database size - a very rough growth estimation is 1.5GB of storage per 1,000,000 page views.
5. Monitor the SQL database services.

4.2.2 Backup Policy

1. Set the database recovery model to Simple and shrink the database log file.
2. Backup the CardioLog Lite database daily (Full backup).
3. Backup the CardioLog Lite installation directory after every software update.

5. Configuration, Customization and Optimization Tasks

There are some maintenance tasks which are associated with specific events. Depending on the results of the tasks, you might need to perform additional tasks in order to make adjustments and handle problems.

For example, adding a new monitored environment is an event that might require you to run the fine tuning process and define data collection filters.

This section describes events and the tasks needed to be performed when these events occur:

- [Data Collection Filters](#) - how to [configure the tracking agent](#).
- [Fine Tuning](#) - how to ensure qualitative and accurate reporting data using [URL mappings](#).
- [Troubleshooting Empty Usage Reports](#)
- [Data Integrity Tests](#) - how to compare the CardioLog Lite page views and unique users reports with the SharePoint 2007 usage reports.
- [Uninstalling the CardioLog Lite Tracking Agent](#) - how to remove the CardioLog Lite tracking code from the portal.
- [Product License](#) - how to view information about the licensed product components, and install new licenses.

5.1 Data Collection Filters

Out of the box, CardioLog Lite collects all types of usage data (views, visits, duration, search, actions etc.) from the monitored environments. You can define which data should not be collected from the monitored environments by [configuring the tracking agents](#).

5.1.1 Tracking Agent Configuration

5.1.1.1 Enable/Disable Data Collection by Event Type

To configure which data should not be collected by the tracking agent, set the appropriate parameters to "false" in the following file:

[CardioLog installation directory]\CardioLogAgent\AgentEmbed.aspx

```
element.Event_Visit = true; // Views events
element.Event_Leave = true; // Duration events
element.Event_Search = true; // Search events
element.Event_SearchResultItem = true; // Search Results Items events
element.Event_SearchResultClick = true; // Search Results Clicks events
element.HandleFileExtension = true; // Documents usage
```

5.1.1.2 Enable/Disable Data Collection for Anonymous Users

To configure data collection for anonymous users:

1. Set the "SupportAnonymousUsers" parameter to "true" in the following file:

[CardioLog installation directory]\CardioLogAgent\AgentEmbed.aspx

```
element.SupportAnonymousUsers = true;
```

2. Verify that the CardioLogAgent directory security allows access for anonymous users:

Go to CardioLogAgent > Properties > Security > Add > Add the ANONYMOUS LOGON user.

3. Verify that the CardioLogAgent web application directory security allows Anonymous Access:
Go to IIS Manager > CardioLogAgent > Properties > Directory Security > Edit > Check 'Enable anonymous access'.
4. Set the "overwriteConnectedUser" parameter to "true" in the following file:
[CardioLog installation directory]\CardioLogAgent\Web.config

```
<appSettings>  
    <add key="overwriteConnectedUser" value="true" />  
</appSettings>
```

5.1.2.3 Configuring timeout for the CardioLogAgent web application

To configure the timeout settings for the CardioLogAgent (when the EventCollector web application is not available) edit the following keys in [CardioLog Lite Installation Folder]\CardioLogAgent\Web.config (values are in milliseconds):

```
<!-- Timeout in case the EventCollector web application is not available  
(the default is 10 seconds).-->  
<add key="requestTimeOut" value="10000" />  
<!-- How long to wait before trying again to access the EventCollector web  
application (the default is one minute).-->  
<add key="serverResponseTimeOut" value="60000" />
```

5.2 Fine Tuning

The fine tuning process is primarily a matter of resource management and adjusting system settings. This process is essential to ensure qualitative and accurate data, and to save a significant amount of disk space for maintaining database health.

CardioLog Lite collects usage data for the following 'events': views, visits, duration, search, actions (add/remove/modify) etc. The Usage Data Processing service component matches events to their corresponding SharePoint tree item. An event which's URL does not match any tree item (for instance, a URL address which includes a list of parameters, or a URL which is not part of the monitored environments) is called a "Lost Events".

Tuning the data and the system for efficient resource use includes of [Identifying Lost Events](#) and [defining URL address modifications](#).

This section provides detailed instructions on how to perform the fine tuning process. It is recommended to perform this process 1 month after the initial installation on the production environment, or after adding a new monitored environment to CardioLog.

Fine tuning should be performed by a user with a local administrator account on the CardioLog Lite server.

5.2.1 Lost Events

Run the following procedures:

5.2.1.1 Backuping the Database

Make sure that there is a full backup of the CardioLog Lite database and create a copy of the events table before you continue to the next step.

```
USE [CardioLogLite]
GO
select * into tab_event_log_backup from tab_event_log
```

5.2.1.2 Identifying Lost Events

1. Get a list of the monitored environments distinct URLs:

```
select distinct(case when (charindex('/', url, 9) > 0) then
                substring(url, 0, charindex('/', url, 9))
                else URL
                end) as env
from tab_sharepoint_tree
where len(location) <= 18
and URL not like 'http://root/'
and URL not like 'http://moss2007%'
order by env
```

Query Results Example:

```
http://Portal
```

2. Get a list of the lost events URLs. This can be done for a specific period (edit the timestamp in the SQL query) and for each monitored environment separately (uncomment and edit the URL in the SQL query):

```
select url, count(url)
from tab_event_log
  where timestamp >= '2008-01-01 00:00:00' /* Edit Date */
  and entityid = '00000000-0000-0000-0000-000000000000'
  --and URL like 'http://Portal/%' /* Uncomment and edit URL for a
specific monitored environment */
group by url
order by count(url) desc
```

Query Results Example:

```
/* Example #1: URL with parameters */
http://portal/C1/shortcuts bar/default.aspx?pagemode=personalize

/* Example #2: Custom View */
http://portal/C1/Image Library/Forms/User View.aspx

/* Example #3: Administration Page */
http://portal/_layouts/viewlsts.aspx

/* Example #4: Access from the internal server */
http://websrv/Pages/default.aspx

/* Example #5: Access from an insecure channel (for SSL monitored
environments) */
http://biz/

/* Example #6: External events (non-monitored environments) */
http://www.ynet.co.il
```

3. Check if the URL does not match a SharePoint tree item and identify the reason for the missing URL:


```
select * from tab_sharepoint_tree
where URL like 'https://worldwide%'

/* Example #6: URL from a non-monitored environment - http://www.ynet.co.il
*/

-- Step 1 - URL as is
select * from tab_sharepoint_tree
where URL like 'http://www.ynet.co.il%'
```

5.2.1.3 Creating URL Mappings

The URL Mappings list defines the modifications that should be done to URL address while collecting data from the monitored environment. For instance, views for a page whose URL address includes a list of parameters – will be written (after mapping) to the system without the URL parameters.

CardioLog Lite ships with a list of default URL mappings (grayed out) for Microsoft SharePoint 2007.

The screenshot shows the CardioLog Lite for SharePoint web interface in Microsoft Internet Explorer. The browser address bar shows the URL: http://holland:29999/CardioLogLite/index.aspx. The page title is "CardioLog Lite for SharePoint" with the subtitle "web analytics for the enterprise portal".

The interface features a navigation pane on the left with the following sections:

- Report Center
- General Administration
- Black List
- CardioLog Scheduling Service
- Usage Data Processing
- Portal Tree Updates
- Active Directory Updates
- Product License
- System Configuration
- SharePoint 2007 Config Wizard
- Reporting Data
- System Diagnostics
- Diagnostics Service
- Diagnostics Dashboard
- URL Mappings** (highlighted)

The main content area is titled "Url Mappings" and contains a table with the following data:

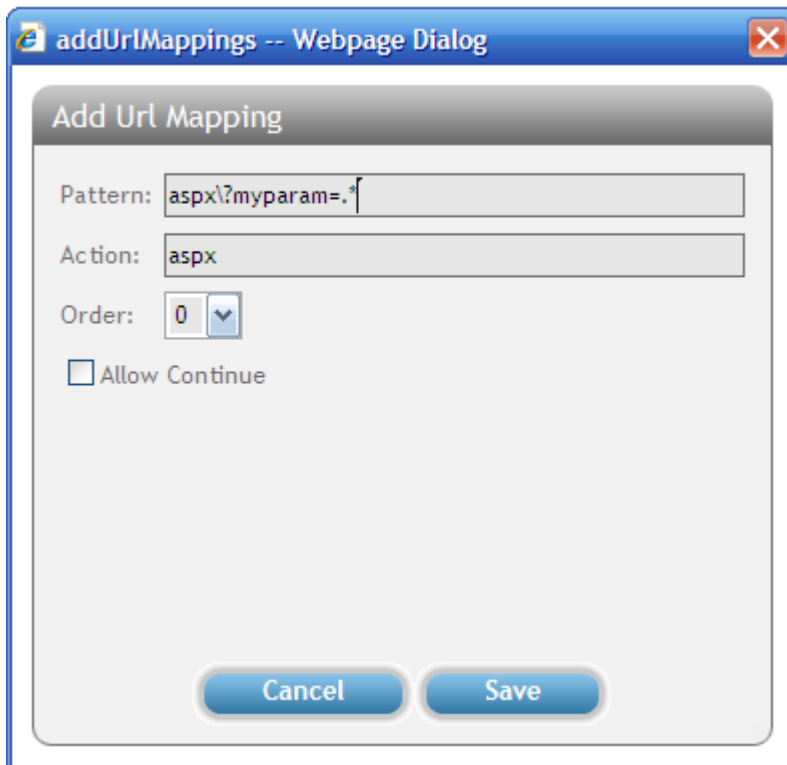
Pattern	Action	Continue	Order
<input type="checkbox"/> aspx\?PageView=Personal	aspx	1	9
<input type="checkbox"/> aspx\?PageView=Shared	aspx	1	9
<input type="checkbox"/> aspx\?ShowInGrid=,*	aspx	1	0
<input type="checkbox"/> aspx\?Type=,*	aspx	1	0
<input type="checkbox"/> aspx\?View=,*	aspx	1	0
<input type="checkbox"/> ByAuthor.aspx	AllItems.aspx	1	0
<input type="checkbox"/> ByEditor.aspx	AllPages.aspx	1	0
<input type="checkbox"/> byowner.aspx	AllItems.aspx	1	0
<input type="checkbox"/> calendar.aspx	AllItems.aspx	1	0
<input type="checkbox"/> Categories/MyCategories.aspx	Categories/AllCategories.aspx	1	0

Below the table are two buttons: "Remove" and "Add".

The URL Mappings Central Area

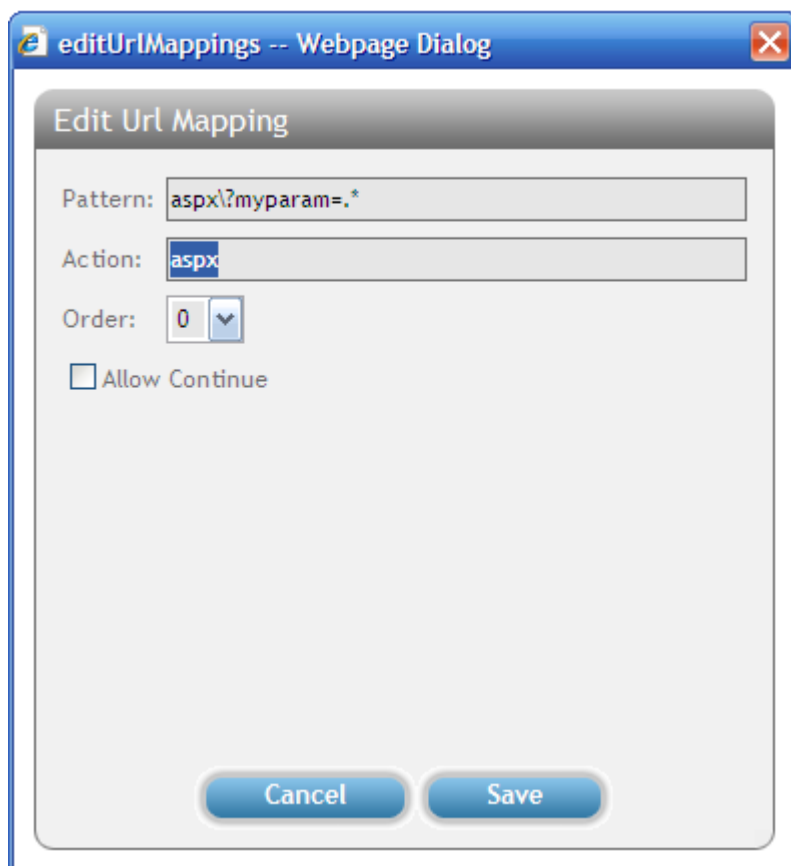
1. In the **General Administration** pane, click **URL Mappings**.

2. In the bottom of the Central Area, click **Add**.
3. In the Add URL Mapping dialog, in the **Pattern** text box, enter the string to replace. Use a regular expression format.
4. In the **Action** text box, enter the replacement string.
5. You can set the order of mappings in the **Order** drop down list, and whether to continue with additional mappings - in **Allow Continue**.
6. Click **Save**.



Add URL Mapping dialog

7. To immediately apply the URL mapping, restart IIS on the CardioLog Lite Server.
8. To edit a mapping, in the Central Area - click the mapping, then enter the fields in the Edit URL dialog, and then click **Save**.
9. To delete a mapping, in the Central Area - select the mapping, then click **Remove** in the bottom of the Central Area.



Editing a URL mapping

Examples:

1. URL with parameters:
"aspx\?pagemode =.*" > "aspx"
2. URL for a custom view of a page:
"http://portal/C1/Image Library/Forms/User View.aspx" >
"http://portal/C1/Image Library/Forms/AllItems.aspx"
3. URL for an administration page: Add the administration portal to your monitored environments or use "By URL" reports.
4. URL with an internal server name (instead of FQDN):
"http://websrv/" > "http://central/"
5. URL with a non-secure channel (instead of a secure channel and vice-versa):
"http://biz/" > "https://worldwide/"
6. URL for a non monitored environment: Add the portal to your monitored environments (if possible) or use "By URL" reports.

5.2.1.4 Fixing Lost Events

1. Fix events according to the URL Mappings:

```
/* Fix events according to the URL Mappings */

/* Example #1: Remove parameters from URL - http://portal/C1/shortcuts
bar/default.aspx?pagemode=personalize */
begin tran
UPDATE tab_event_log
SET URL = left([Url], (charindex('?', [Url])-1))
WHERE URL like 'http://portal/%.aspx?pagemode=%'
      and timestamp >= '2008-01-01 00:00:00' /* Edit Date */
commit

/* Example #2: Replace the custom view page with the default view page -
http://portal/C1/Image Library/Forms/User View.aspx */
begin tran
UPDATE tab_event_log
SET URL = replace(Url, 'User View.aspx', 'AllItems.aspx')
WHERE URL like 'http://portal/C1/Image Library/Forms/User View.aspx'
      and timestamp >= '2008-01-01 00:00:00' /* Edit Date */
commit

/* Example #3: URL of an administration page -
http://portal/_layouts/viewlsts.aspx */
/* For usage data on administration pages, add the administration portal to
your monitored environments or use "by URL" reports */

/* Example #4: Replace the internal server name to the portal name -
http://websrv/Pages/default.aspx */
begin tran
update tab_event_log
set URL = replace(url, 'http://websrv/', 'http://central/')
where URL like 'http://websrv/%'
      and timestamp >= '2008-01-01 00:00:00' /* Edit Date */
commit

/* Example #5: Replace the URL with the non-secure channel to a secure
channel - http://biz/ */
begin tran
update tab_event_log
set URL = replace(url, 'http://biz/', 'https://worldwide/')
where URL like 'http://biz/%'
      and timestamp >= '2008-01-01 00:00:00' /* Edit Date */
commit

/* Example #6: URL from a non-monitored environment - http://www.ynet.co.il
*/
/* For usage data on a non-monitored environment, add it to your monitored
environments (if possible) or use "by URL" reports */
```

2. Migrate the Lost Events: This can be done for a specific period (edit the timestamp in the SQL query) and for each monitored environment separately (uncomment and edit the URL in the SQL query):

```
begin tran
update LG
```

```
set LG.entityid = TR.id, LG.splocation = TR.location
from
  tab_event_log LG
  join
  tab_sharepoint_tree TR on LG.url = TR.url
  and LG.entityid = '00000000-0000-0000-0000-000000000000'
  and (LG.eventtype not between 6 and 9)
  and LG.timestamp >= '2008-01-01 00:00:00' /* Edit Date */
  --and LG.url like 'http://Portal/%' /* Uncomment and edit URL
for a specific monitored environment */
  and TR.isdeleted = 0
commit
```

5.2.1.5 Refreshing the Report's Data

For the sake of improved performance, CardioLog Lite caches the results for each reporting query - in accordance with the specific report filters used. In the Cache Configuration page, you can define for how long each query is cached for, and clear the entire reporting cache.

1. In the **General Administration** pane, under **System Configuration** click on **Reporting**.
2. Check **Enable Reporting Data Caching** to enable report caching.
3. Fill out a value for the **Cache life time in days** field.
4. Click **Save**
5. Click **Clear Cache** if you wish to clear the entire reporting cache.

OR:

```
delete from tab_controls_cache
```

5.3 Troubleshooting Empty Reports

Follow this check list for troubleshooting reports:

1. **Report Cached Data** -

- Browse to the CardioLog Lite Report Center and view the report. For enhanced performance and quick loading, reports are displayed in cached mode. If you cannot see data in the report, [refresh the report data](#).

2. **Report Web Site (Source Filter)** -

- Make sure that the web site on which the report is based, has not been changed (deleted or updated, or its URL changed).

3. **Web Site Tracking Agent** -

- [Test the tracking agent](#). If you cannot see the agent console popup, make sure the CardioLogAgent web application is installed and enabled on your web site.

5.4 Data Integrity Tests

CardioLog Lite reports may show different numbers for page views and unique users - in comparison with the SharePoint 2007 usage reports. The reasons for this discrepancy are outlined here:

Technology used for Data Collection

With SharePoint 2007, usage data is collected by the web server - which creates an entry in a SharePoint log file. CardioLog Lite, on the other hand, uses client side JavaScript code to capture usage data and send it to the CardioLog Lite server. These two technologies have different data capturing behavior in the following areas:

- **Cached web pages** - usage data for web pages which are either cached at the proxy servers or at the web browser - is only logged by CardioLog Lite.
- **Partially loaded pages** - usage data is collected by CardioLog Lite only for pages which were fully loaded to the browser. This behavior is by design, to filter out very short visits (~1-2 seconds).
- **Requests** - SharePoint 2007 occasionally logs images and other page components - as hit counts. This is not done by CardioLog Lite.

Usage Analysis Calculations

Some of the differences in usage data are due to the unique way by which each tool defines and calculates the usage metrics:

- **Data aggregation** - In a Site Usage Report, SharePoint 2007 does not include data for all sub sites, while CardioLog Lite includes aggregated data for all sub sites.
- **Page refresh** - CardioLog Lite treats consecutive views of a single page - as a single page view (by design) - while SharePoint logs this behavior as multiple views.

5.5 Uninstalling the CardioLog Lite Tracking Agent

In order to stop data collection, uninstall the CardioLog Lite Tracking Agent. By default, the CardioLog Lite Tracking Agent for SharePoint is installed as Java Script code in SharePoint's main JS file (suggested) - CORE.js (SharePoint 2007).

To uninstall the Tracking Agent and stop data collection, replace the CORE.js file with the CORE.js_YYYYMMDDT000000 backup file.

The file is usually located at:

SharePoint 2007 - C:\Program Files\Common Files\Microsoft Shared\web server extensions\12\templates\layouts\[lang code] (1033 is for English)

It is also possible to locate and remove the tracking code from within the JavaScript file: Starts with "//Intlock tracking code start" and ends with "//Intlock tracking code end".

For either method, make sure that you uninstall the tracking code on all SharePoint front-ends.

To verify that the code is uninstalled, browse to the portal and click Ctrl+F12/Alt+F12. You should not see the Agent pop-up console.

5.6 Product License

The Product License page provides information about the licensed product components, and enables the installation of new licenses - such as trial or purchased reports.

CardioLog Lite includes the Basic Analytics report bundle. You can purchase additional report bundles, or download trial reports - from the [Intlock Website](#).

5.6.1 Product Features

1. In the **General Administration** pane, click **Product License**.
2. The product features for CardioLog Lite are listed in the **Product Features** table:
 - **Page Views – 100,000** – Page views are limited to 100,000 per month. Exceeding events are quarantined.
 - **MOSS 2007 Adaptor** – Monitored environments are limited to one SharePoint 2007 portal.
 - **WFE – 1** - The number of web front ends (WFE) which run the CardioLog tracking code is limited to 1.
 - **History – 30 days** – History data is limited to 30 days. Older data is archived.