

# **CardioLog 2011**

## **System Requirements and**

## **Architecture**

**Version: 2.0.3.0**

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## System Requirements

To ensure optimal operation, it is recommended to install the CardioLog application and database on dedicated servers\*\*\*.

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

	<b>Professional Edition</b>	<b>Enterprise Edition</b>
<b>Platform</b>	64-bit	64-bit
<b>Operating System</b>	Windows 2003/2008 Server or Windows 2003 R2/2008 R2 Server Standard Edition (fully patched)	Dedicated Windows Server: 2003/2008 or 2003 R2/2008 R2 Standard Edition (fully patched)
<b>Application Memory*</b>	8 GB	Minimum** - 16GB Recommended - 32 GB
<b>Processors*</b>	2xQUAD	Minimum** - 2xQUAD Recommended - 4xQUAD
<b>SQL Edition</b>	Microsoft SQL Server 2005/2008 Standard Edition (fully patched)	Minimum** - Dedicated Microsoft SQL Server 2005/2008 Standard Edition (fully patched)  Recommended - Dedicated Microsoft SQL Server 2005/2008 Enterprise Edition (fully patched)
<b>SQL Memory</b>	4 GB	Minimum 16 GB
<b>SQL Processors</b>	2xQUAD	Minimum** - 2xQUAD Recommended - 4xQUAD
<b>SQL Storage</b>		
<b>System Disk</b>	10 GB	10 GB
<b>Page File Disk</b>	10 GB	10 GB
<b>Database Disk</b>	~150 GB (depending on the monitored environment)	~150 GB (depending on the monitored environment)
<b>Transaction Log Disk</b>	According to the backup policy	According to the backup policy
<b>RAID</b>	Raid 5/10 or similar	Raid 5/10 or similar

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**Additional Software & Services**

- Microsoft .NET Framework 3.5 Service Pack 1
  - Microsoft Chart Controls for Microsoft .NET Framework 3.5
  - IIS 6.0, IIS 7.0 or IIS 7.5
  - Microsoft Internet Explorer 7.0 or higher
- Microsoft .NET Framework 3.5 Service Pack 1
  - Microsoft Chart Controls for Microsoft .NET Framework 3.5
  - IIS 6.0, IIS 7.0 or IIS 7.5
  - Microsoft Internet Explorer 7.0 or higher
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\* This refers to hardware allocated for the CardioLog application pool and services (and not for the CardioLog SQL server)

\*\* For up to 2,000,000 page views per month

\*\*\* The CardioLog application and database servers can be installed on virtual machines (which meet the above minimum hardware and software requirements)

## CardioLog 2011 Architecture

The CardioLog 2011 solution includes the following separate components:

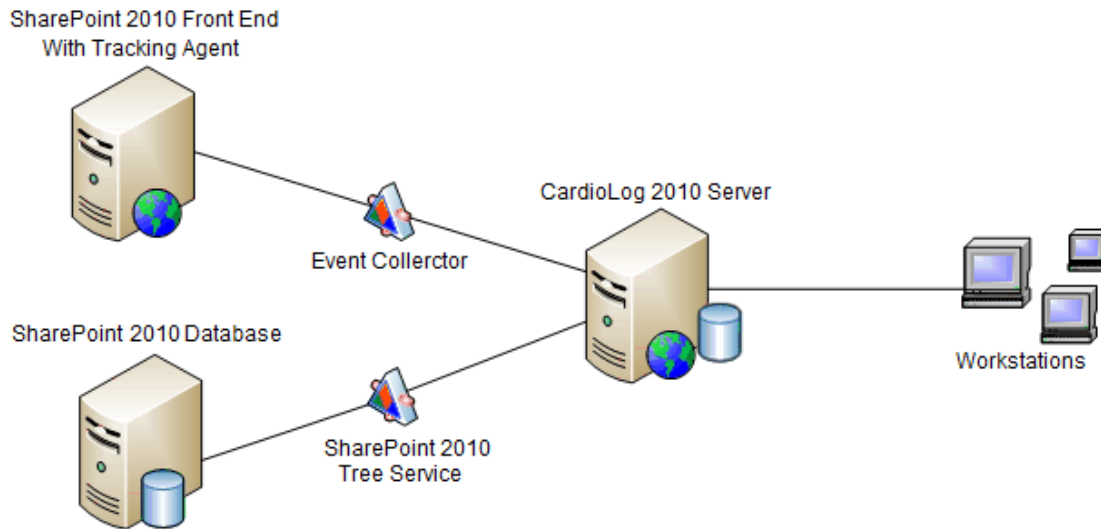
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<b>UI</b>	A web application for configuring and viewing the web analytic reports. Hosted on the CardioLog 2011 server.
<b>Database</b>	A repository for storing all tracking and reporting data. Hosted on the CardioLog 2011 server.
<b>Portal Tree Service</b>	A web service which provides the structure of the monitored environment. CardioLog 2011 includes several off-the-shelf portal tree services, such as the SharePoint 2010 Tree Service.
<b>Tracking Agent</b>	A JavaScript tag which is included in the portal pages and which captures site usage. CardioLog 2011 includes several off-the-shelf tracking agents, such as the SharePoint 2010 Agent.
<b>Event Collector</b>	A web service which sends tracking data from the tracking agent to the main CardioLog 2011 database.
<b>Offsite Application</b>	A web application which sends tracking data captured by tracking agents in DMZ - to the Offsite database.
<b>Offsite Database</b>	A repository of tracking data in DMZ.
<b>User Categorization Service</b>	A web service which provides custom visitor data.

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## Sample Configuration

This is a basic CardioLog 2011 configuration for an intranet-based SharePoint 2010 environment:



For performance reasons, it is recommended to separate CardioLog 2011 from the monitored environment and install it on a designated server.

## SQL Database Sizing

Hard disk allocation depends on the size of the monitored environment and the level of activity taking place in the portal. Additional factors that should be considered are the backup and clean-up policies and the amount of data accumulated over time. For example, an installation with 270MB of monitored data per day requires a total disk space of about 100GB - for a single year of data.

In practice, the estimated database size depends on the size of the CardioLog 2011 event tables. The following formula depicts the sizing calculation for the database:

$$\mathbf{Sd = (Srd + Sri) \times Nu \times (Ns + Nsr + (Ne \times 2)) \times P}$$

Where:

**Sd** = estimated size of the database

**Srd** = average size of data per event (0.806 KB)

**Sri** = average size of index per event (0.666 KB)

**Nu** = number of users in the monitored environment

**Ns** = average number of search operations per day per user (each search operation generates 1 event)

**Nsr** = average number of search results clicks per day per user (each search results click generates 1 event)

**Ne** = average number of non-search operations (views, duration) per day per user (each non-search operation generates 2 events by default)

**P** = length of the monitoring period – in days