

Technical Specifications

The CDM is operational “out of the box.” Once you install the software and set up your web server and database server, you can access the front-end GUI administrative suite, which enables you to optimize settings without any need to modify the source code. If you wish to modify the source code, please refer to the Development Platform section below.

Hosting Requirements

Server Software

The CDM is built on Microsoft .NET Framework version 2.0 with a database backend stored in Microsoft SQL Server.

- Microsoft Windows 2000 or 2003 Server operating system
- Microsoft Internet Information Server 5 or Microsoft Internet Information Server 6
Note: these components are included with Microsoft server operating systems but must be installed and configured separately.
- .NET Framework version 2.0
- Microsoft SQL Server 2005 or 2008

Server Hardware

Web Server

- Intel Pentium 3 or Intel Pentium 4 operating at 2 GHz or better, or AMD Athlon XP or AMD Athlon 64 operating at 1.8 GHz or better
- 512 MB RAM or better
- Website files are approximately 50 MB. There are items that can make this grow. For example, users are able to upload participant documents to the CDM. Those files exist on the server with references to them in the database.

Database Server

- Intel Pentium 3 or Intel Pentium 4 operating at 2 GHz or better, or AMD Athlon XP or AMD Athlon 64 operating at 1.8 GHz or better
- 512 MB RAM or better (1 GB recommended)
- 40 GB hard drive – This is a high estimate for space required. Actual space needed depends on number of participants, users, and files uploaded into the documents, forms, and participant files. As a rough estimate, a program of 1,000 participants would result in a database of approximately 200 MB in two years.

Development Platform

These are the software requirements for modifying or enhancing the source code.

- **.NET Framework 2.0** – Provides the managed code runtime and development platform.
- **ASP.NET** – Feature rich web application platform built in to .NET 2.0.
- **AJAX** – Extension 1.0 for ASP.NET 2.0
- **Visual Studio 2005 for ASP.NET 2.0** – Advanced developer toolset for building rich applications rapidly and with high quality. For programs that wish to upgrade to VS2008 and ASP.NET 3.5, we tested the upgrade using the Visual Studio conversion tool and did not encounter any issues. The conversion tool will launch automatically if you open the CDM application in VS2008.
- **Object Persistence Layer** – Decouples application from database storage. Developers develop using objects and this layer handles the O/R (object-relational) mapping of objects to the database, as well as the implementation details of specific databases. Provides for rapid application development and ease of maintenance. The open source Gentle.net object persistence layer .dlls are included in the CDM source code, so no further downloads are necessary.
- **SQL Server 2005 or 2008** – Advanced relational database management system provides high performance storage, processing, and retrieval of complex business information.
- **Crystal Reports XI** – Reporting Software. End users can view reports from within the CDM browser window and export them to as documents (PDF, Word or rich text), Excel spreadsheets (.xls and .csv), or Crystal Reports (.rpt). Users can download a free Crystal Report viewer from SAP's website. You do not need to purchase any software to host or use the CDM, but if you want to develop or modify Crystal Reports source code, you will need to purchase the appropriate tools.

Software Requirements for CDM End Users

These are the requirements for using the CDM.

- Internet browser – we recommend using the following browsers:
 - Internet Explorer version 7 or higher
 - Firefox version 3 or higher
 - Safari version 3 or higher
- Microsoft Office Excel 2003 – for downloading/uploading spending plan and expenditure data. Excel 2007 can be used, but users must save in .xls (NOT .xlsx) format.
- Screen resolution – we recommend 1024 x 768.