



# CAFM Explorer Quantum

## Service Pack 7.4 Summary Hardware & Software Specifications

### System Requirements

The following specifications are guidelines and are therefore subject to change. If your environment (or proposed environment) does not match the following please ensure you discuss with FMx before proceeding.

### SQL Server Configuration

CAFM Explorer is designed to run on SQL Server for Enterprise solutions or SQL Express for standalone systems.

Please review the separate document titled "SQL Server Database Prerequisites, Setup and Maintenance" for detailed technical information regarding setting up and configuring SQL Server.

### Server Configuration

Full detailed technical information regarding setting up and configuring a Server platform for; Database Server, Application Server, File Server, Web Server, Terminal Server is beyond the scope of this document. However, the servers should be setup to conform to best practices.

### Best Practices Analyzer

In Windows management, *best practices* are guidelines that are considered the ideal way, under typical circumstances, to configure a server as defined by experts. For example, it is considered a best practice for most server technologies to keep open only those ports required for the technologies to communicate with other networked computers, and block unused ports. Although best practice violations, even crucial ones, are not necessarily problematic, they indicate server configurations that can result in poor performance, poor reliability, unexpected conflicts, increased security risks, or other potential problems.

Best Practices Analyzer is a server management tool that can help administrators reduce best practice violations by scanning one or more roles that are installed, and reporting best practice violations to the administrator.

For detailed information on Best Practices Analyzer for Windows Server 2008 R2, please see: <http://technet.microsoft.com/en-us/library/dd759260.aspx>



## Terminal Server

- Review the Microsoft Terminal Server Best practices document: [http://technet.microsoft.com/en-us/library/cc758409\(WS.10\).aspx](http://technet.microsoft.com/en-us/library/cc758409(WS.10).aspx)
- Configure time limits. Setting limits on the duration of client connections can improve server performance. You can set the limits on how long a session lasts, how long a disconnected session is allowed to remain active on the server, and the time allowed for a session to remain connected, yet idle. We recommend that disconnected sessions should be set to “End a disconnected session”. For more information, please read: [http://technet.microsoft.com/en-us/library/cc758177\(WS.10\).aspx](http://technet.microsoft.com/en-us/library/cc758177(WS.10).aspx)

## SQL Server

- Review and keep up to date with the latest SQL Server Best Practices published by Microsoft, found here: <http://msdn.microsoft.com/en-us/sqlserver/bb671432.aspx>
- For SQL Server 2000, run the Best Practices Analyzer tool, found here: <http://www.microsoft.com/downloads/details.aspx?FamilyId=B352EB1F-D3CA-44EE-893E-9E07339C1F22&displaylang=en>
- For SQL Server 2005, run the Best Practices Analyzer tool, found here: <http://www.microsoft.com/downloads/details.aspx?familyid=DA0531E4-E94C-4991-82FA-F0E3FBD05E63&displaylang=en>
- For SQL Server 2008 / 2008 R2, run the Best Practices Analyzer tool, found here: <http://www.microsoft.com/downloads/details.aspx?displaylang=en&FamilyID=0fd439d7-4bff-4df7-a52f-9a1be8725591>

## Enterprise Deployment

The software is made available via 2 separate Easy Install (Install Shield) packages for manual deployment, or automated deployment via an .iss file.

The software is also available via separate MSI packages, which may be used to deploy across the Enterprise via 3<sup>rd</sup> party packages.

FMx do not directly support 3<sup>rd</sup> party deployment software which physically deploys the software remotely to client PCs. FMx will, however, assist and advise any customer regarding appropriate package configuration where appropriate although responsibility remains with the customer. Systems that use virtualisation deployment technologies e.g. APP-v are also not supported.



## Manual Install Requirements

The majority of the target installations mentioned within this document requires the Microsoft .NET Framework version 3.5, the Microsoft Data Access Components (MDAC), and Crystal Reports. If deploying the software via the Easy Install packages then the MDAC and Crystal Reports components are automatically installed if required.

Please Note: The Microsoft .NET Framework 3.5 SP1 is a pre-requisite. When performing the installation, each machine will require;

- A DVD-ROM drive or access to the installation files in a shared location.
- User account with local administrative privileges to install software to the local hard disk for all users and read/write/create permissions on the shared network drive used for CAFM Explorer.
- Access permissions to see the appropriate database(s) through TCP/IP or a named pipes broadcast on the local network segment.
- Internet connection for authorisation process during installation of CAFM Explorer (connectivity can be from a different PC / server / laptop).

## CAFME Application Requirements

### Desktop CAFME Explorer and CAFME Reports Explorer

#### **Minimum Specification**

- **Processor** Intel Pentium 4, 2.8GHz or equivalent
- **Memory** 1GB RAM (2GB RAM or more recommended, Vista/Windows 7 require 2GB)
- **Free Hard Disk Space** 450 MB (300MB CAFME Explorer, 150 MB CAFME Reports Explorer). Microsoft recommends at least 15% of the hard disk remains free
- **Operating System** Microsoft Windows XP SP3, Vista Business SP1 (32 and 64-bit), Windows 7 Ultimate or Enterprise (32 and 64-bit)
- Please Note: Vista and Windows 7 HOME Editions are not compatible
- **Display** 1024x768 pixels or higher resolution display
- **Framework** Microsoft .NET Framework 3.5 SP1

#### **Recommended Specification**

- **Processor** Intel Core 2 Duo or equivalent
- **Memory** 2GB RAM or more



- **Free Hard Disk Space** Microsoft recommends at least 15% of the hard disk remains free, or 1GB, whichever is greater.
- **Operating System** Microsoft Windows XP SP3, Vista Business SP1 (32 and 64-bit), Windows 7 Ultimate or Enterprise (32 and 64-bit).
- Please Note: Vista and Windows 7 HOME Editions are not compatible.
- **Display** 1280x1024 pixels or higher resolution display
- **Framework** Microsoft .NET Framework 3.5 SP1

### **CAFME CAD**

The requirements listed for CAFME CAD are in addition to the requirements listed from CAFME Explorer.

**Software** CAFME Explorer is compatible with AutoCAD 2007-2010 and ADT 2007-2010

**Additional Hardware** Requires same hardware specification as Autodesk specify for the version of AutoCAD in use.

Please Note:

- LITE editions are not compatible.
- AutoCAD 64-bit is not currently supported.

### **CAFME Data Source Builder**

This application will create or upgrade your CAFME database. Whilst it is possible to run this application from any machine which can see the database over the network it is recommended to run it from the Database Server.

#### **Minimum Specification**

- **Processor** Intel Core 2 Duo or equivalent
- **Memory** 2GB RAM
- **Free Hard Disk Space** Sufficient free disk space for a full database backup, plus 1GB for the application
- **Operating System** Microsoft Windows XP SP3, Vista Business SP1, Windows 7 Ultimate or Enterprise, Windows Server 2000 SP4, Server 2003 SP3, Server 2008 Standard SP2 or Server 2008 R2
- Please Note: Vista and Windows 7 HOME Editions are not compatible
- **Display** 1024x768 pixels or higher resolution display
- **Framework** Microsoft .NET Framework 3.5 SP1



**Services/Rights** User Account with permissions to create a database and SQL login on the destination database server will be required whenever a new database is created. A user account with permission to create / edit tables, views, stored procedures, functions, users etc. will be required whenever an existing CAFM database is being upgraded.

### **CAFME Net**

In order to access the CAFME Net application the end user requires the following software:

- **Software** Adobe Reader 8.0 or later
- **Minimum Browser** Microsoft Internet Explorer 6.0
- **Recommended Browsers** Microsoft Internet Explorer 7.0 or 8.0, Mozilla Firefox 3.6
- **Services/Rights** User Account with permission to access the CAFME Net web server via Windows authentication or with permission to access the CAFME Net application via Forms authentication.

### **CAFME Mobile**

In order to access the CAFME Mobile application the end user requires the following:

- **Mobile Device** Most WAP enabled devices (for recommended devices contact FMx)
- **Minimum Display** 160x100 pixel mobile screen display
- **Recommended Display** 240x160 pixel mobile screen display
- **Services/Rights** User Account with permission to access the CAFME Mobile web server.



## CAFME Server Requirements

### Database Server

A dedicated server is required to run SQL Server, the database behind the application.

The specification guidelines outlined here should be amended or scaled based on the number of users accessing CAFME, the number of reports and services that are configured and the intensity of use of the system.

Please also review the separate document titled "Minimum Customer Database Maintenance" for detailed technical information regarding setting up and configuring SQL Server.

### **Minimum Specification**

- **Processor** Intel Core 2 Duo or equivalent
- **Memory** 4GB RAM
- **Free Hard Disk Space** Sufficient free disk space for database(s), allowing for growth and backups; 1GB – 20GB or more
- **Operating System** Microsoft Windows Server 2000 SP4, Server 2003 SP2, Server 2008 Standard or Server 2008 R2
- **Software** Microsoft SQL Server 2000 SP4, 2005 SP2, 2005 Express SP2, 2008 SP1 or 2008 Express SP1

### **Recommended Specification**

- **Processor** Multiple Intel Xeon Dual / Quad core processors
- **Memory** 8GB+ RAM
- **Free Hard Disk** 2x RAID 1+0 arrays, allowing separation of the Data and Log file onto an array each. A further separate disk volume should be used for Backups.
- **Operating System** Microsoft Windows Server 2008 Standard or Server 2008 R2
- **Software** Microsoft SQL Server 2008 SP1. NB. SQL Server should not be run on the same physical server that is running Terminal Services.

### Application Server

To host CAFME Services including SMTP Mail Server, MAPI Mail Service, Fax Maker Service, Report Runner Service, Room Booking Reminder Service, People Import Service, Work Order Completion Service.

### **Minimum Specification**

- **Processor** Intel Core 2 Duo or equivalent



- **Memory** 2GB RAM
- **Free Hard Disk Space** Microsoft recommends at least 15% of the hard disk remains free, or 1GB, whichever is greater.
- **Operating System** Microsoft Windows Server 2003 SP3, Server 2008 Standard SP2 or Server 2008 R2
- **Framework** Microsoft .NET Framework 3.5 SP1

### Recommended Specification

- **Processor** Intel Xeon Dual core processor
- **Memory** 4GB RAM
- **Free Hard Disk Space** Microsoft recommends at least 15% of the hard disk remains free, or 1GB, whichever is greater.
- **Operating System** Microsoft Windows Server 2003 SP2, Server 2008 Standard SP2 or Server 2008 R2
- **Framework** Microsoft .NET Framework 3.5 SP1

### File Server

To host the template, report, help, tutorial and document cabinet file centrally.

### Minimum Specification

- **Processor** Intel Core 2 Duo or equivalent
- **Memory** 2GB+ RAM
- **Free Hard Disk Space** Microsoft recommends at least 15% of the hard disk remains free, or 1GB, whichever is greater.

In addition, the following disk space may be required:

- 200MB for template and report files
- 1-20GB for document cabinet files
- 1-5GB for scheduled reports
- **Operating System** Microsoft Windows Server 2000 SP4, 2003 SP2, 2008 SP2 and 2008 R2

### Web Server

To host the CAFM Net and CAFM Mobile applications, typically CAFM Net and CAFM Mobile are installed on the same server, however this is not a requirement. The exact server setup and security settings are determined by the client requirement and enterprise policy.

### Minimum Specification

- **Processor** Intel Core 2 Duo or equivalent



- **Memory** 2GB+ RAM
- **Free Hard Disk Space** Microsoft recommends at least 15% of the hard disk remains free, or 1GB, whichever is greater.
- **Operating System** Microsoft Windows Server 2003 SP3 and 2008 SP2, with IIS installed.
- Please Note: Microsoft Windows Server 2008 R2 will require additional support from FMx.
- **Framework** Microsoft .NET Framework 3.5 SP1

### **Software**

- Microsoft Internet Information Services (IIS) 6.0, 7.0 and 7.5
- ASP.NET enabled
- Microsoft Component Services
- Correctly configured Firewall
- SSL certificate is recommended for users accessing the site via the Internet

Please Note: Microsoft Internet Information Services 7.5 will require additional support from FMx.

### **Services/Rights**

A user account with administrative privileges to administer IIS and the folder/file permissions on the CAFM Net installation. When using IIS 7.0 or 7.5 it is recommended to install CAFM Net into a separate Application Pool and configure the web site or virtual application to run under a separate, dedicated service account.

The dedicated service account requires file permissions to access the central database server and also access the shared file server.

### **Windows Terminal Server**

CAFM Explorer and CAFM Report Explorer can be setup and centrally managed via Windows Terminal Services.

The specification guidelines outlined here should be amended or scaled based on the number of users accessing CAFM and the intensity of use of the system.

### **Minimum Specification**

- **Processor** Twice core Intel Xeon 3000 or greater
- **Memory** 2GB for Windows plus 512MB per active session
- **Free Hard Disk Space** Microsoft recommends at least 15% of the hard disk remains free, or 1GB, whichever is greater.
- **Operating System** Microsoft Windows Server 2003 Enterprise SP3, Server 2003 Datacenter SP3, Server 2008 Enterprise SP2, Server 2008 Datacenter SP2
- **Framework** Microsoft .NET Framework 3.5 SP1

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### Recommended Specification

- **Processor** Multiple Intel Xeon Dual / Quad core processors, or equivalent
- **Memory** 4GB for Windows plus 512MB – 1GB per active session
- **Free Hard Disk Space** Microsoft recommends at least 15% of the hard disk remains free, or 1GB, whichever is greater.
- **Operating System** Microsoft Windows Server 2003 Enterprise SP3, Server 2003 Datacenter SP3, Server 2008 Enterprise SP2, Server 2008 Datacenter SP2
- **Framework** Microsoft .NET Framework 3.5 SP1
- **Software** SQL Server should not be run on the same physical server that is running Terminal Services.