Paperiton DMS

Document Management System

System Requirements

Release: 2012/04

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1. General information

This document describes the technical system requirements for Paperiton DMS Document Management System.

The system requirements may change without a separate notice as new versions and service packs of the platform and Paperiton DMS are made available.

Please do not hesitate to contact Paperiton for an up-to-date version of this document, or visit our website for more information.

The current version of this document is available in:
http://www.paperiton.nl/download/systemrequirements.html

The purpose of this document is to provide a starting point for the estimation what the requirements are for a certain installation. An installation for 20 concurrent users obviously has different requirements than one with 200 concurrent users.
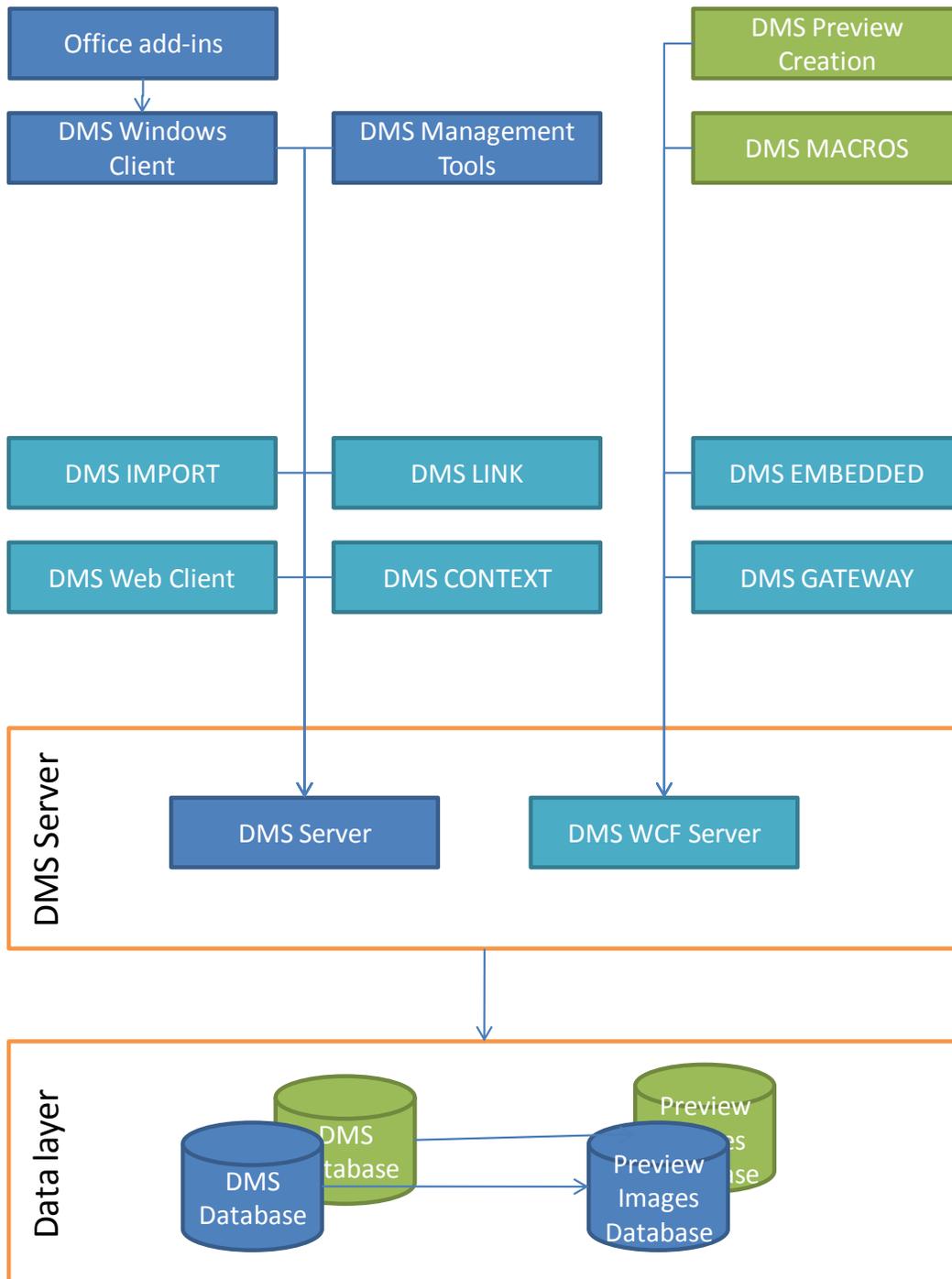
Contact Information

Email: info@paperiton.com

Web: www.paperiton.com

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3. Paperiton DMS System Architecture

4. Paperiton DMS Client

General information

Paperiton DMS Client is the Microsoft Windows client application of Paperiton DMS.

Please notice the separate requirements for integration to different Microsoft Office versions.

Paperiton DMS client installer is a Windows Installer file (MSI), with user interface to choose which parts of the application to be installed. The installer can also be run from a .BAT file in which installer parameters like DMS server URL can be set and components can be pre-selected.

Paperiton DMS Management Tools is packaged in the same installer as an optionally installed component.

Installation

There is a separate Installation Guide available from Paperiton for different Windows versions and Microsoft Office versions.

Microsoft Office 2003 and 2007 add-ins have separate pre-requisites required, as explained in further detail in Installation Guide.

Common Requirements

All supported Microsoft Windows operating system versions require:

- Microsoft .NET 3.5 runtime installed.
- Network access to Paperiton DMS Server (http)

Operating System Version

The following Windows versions are supported:

- Microsoft Windows 7
- Microsoft Windows Vista
- Microsoft Windows XP Professional or Home
- Microsoft Windows Server 2003
- Microsoft Windows Server 2008

Integration to Microsoft Office

Integration to Microsoft Office is optional. There are two types of integration functionality available:

- Integration to Microsoft Office applications as add-ins, giving the user possibility to save documents directly from Office application to Paperiton DMS.
- Using Microsoft Office applications for output of information from Paperiton DMS.

Supported Microsoft Office versions are:

- Microsoft Office 2010 (32-bit/64-bit)
- Microsoft Office 2007 (32-bit)
- Microsoft Office 2003 (32-bit)

Supported Microsoft Office applications are:

- Microsoft Word
- Microsoft Excel
- Microsoft Outlook
- Microsoft PowerPoint
- Microsoft Visio

Please notice that the pre-requisites requirements depend on the Microsoft Office version installed on the target computer.

5. Paperiton DMS Database Server

General information

Paperiton DMS uses a Microsoft SQL Server database for storage of all of its contents, including documents, folder structure, and meta information.

It is recommended to host the DMS database on a dedicated database server. An exception from this principle can be made for pilot/test installations and smaller production environments.

While not recommended, it is feasible to install the database on the same server where Paperiton DMS Server is located.

Disk space requirements for the database depend directly on the amount and average size of the documents stored in the DMS.

Individual DMS users do not need a SQL Server database login. Paperiton DMS Server uses a shadow database login for the database access.

The main DMS database is separated from the document preview images database. The two databases can be installed on same server, or on separate servers.

An installation of Paperiton DMS can have as many DMS databases as needed.

Proper management of database backups is the responsibility of the customer.

Server hardware

Please notice that database server hardware requirements for your installation depend on the type of usage, and especially on the number of concurrent users. If needed, please contact Paperiton for further information.

A fail-safe RAID system specified according to the type of usage of the system is required to ensure safe storage of the documents.[1]

Supported Microsoft SQL Server Versions

Exact edition of the following listed products depends on the customer's requirements.

Supported versions:

- Microsoft SQL Server 2008 R2
- Microsoft SQL Server 2008
- Microsoft SQL Server 2005

Common requirements

- Authentication mode: Preferably "mixed mode", but Integrated is also possible.
- Full-text search installed.
- Fixed IP address is required.

Limitations

- A SQL Server edition without SQL Server Agent is not suitable.

Full-text search support (FTS)

Microsoft SQL Server installation contains filters (IFilter) for the common Office document formats, as well as HTML and TXT.

A 64-bit SQL Server requires 64-bit IFilters.

If 3rd party IFilters is needed, perhaps most commonly for Adobe PDF or Office 2007/2010 file formats, those needs to be installed separately to the database server.

To be available for SQL Server 2005, the additional installed IFilters need to be "introduced" to SQL Server with a SQL script available from Paperiton. The FTS catalog needs

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[1] More information about the most suitable RAID type from Microsoft SQL Server documentation: "RAID Levels and SQL Server"
http://msdn2.microsoft.com/en-us/library/aa217083.aspx

to be rebuilt after the information about available IFilters is updated.

6. Paperiton DMS Server

General information

Paperiton DMS Server is an XML Web Service, used by Paperiton DMS Client software and alternative client applications. The XML Web Service is hosted by Microsoft Internet Information Server (IIS), and requires support for ASP.NET.

Paperiton DMS Server and Paperiton DMS Web Client Server can be installed on same machine.

It is possible to install multiple instances of the Paperiton server software on same server.

Paperiton DMS Server can be installed to an IIS website having non-standard port number (80), if necessary. In other words, it is possible to install it to a secondary website on an IIS server.

Paperiton DMS Server can be installed on a virtual server, as long as the regular Windows Server functionality is available.

In order to achieve required availability requirements, having at least one secondary or back-up Paperiton DMS Server should be considered in a production environment.

If Paperiton DMS database is located on a different server, as recommended, a network connection must be made available between Paperiton DMS Server and the database server hosting Paperiton DMS database.

Please notice that server hardware requirements for your installation depend on the type of usage, and especially on the number of concurrent users. If needed, please contact Paperiton for further information.

Common Requirements

These requirements apply to all supported Microsoft Windows versions listed below.

- .NET Runtime 3.5 is required

- IIS (Internet Information Services) is required.
- ASP.NET 3.5 is required.
- Fixed IP address is required.
- Disk space required is 12 MB, excluding required disk space for temporary documents needed for document upload/download.
- Separate IIS Application Pool is usually needed for worker process management.
- Network connection to database server

Microsoft Windows Version

Paperiton DMS Server is supported on a range of different Microsoft Windows operating systems.

- Microsoft Windows Server 2008 R2
- Microsoft Windows Server 2008
- Microsoft Windows Server 2003 R2
- Microsoft Windows Server 2003
- Microsoft Windows 7 Ultimate[2]

7. Paperiton DMS WCF Server

Paperiton DMS WCF Server is a Windows service based on Microsoft Windows Communication Foundation (WCF).

DMS WCF Server is needed for example with Preview Images Creation, DMS EMBEDDED, DMS GATEWAY and DMS MACROS.

General Requirements

- .NET Runtime 3.5 is required, the newest service pack recommended.
- Fixed IP address is required.
- Access to the DMS database server.

Other considerations

The URL and port numbers need to be defined for the two contained WCF services. In other

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[2] Windows 7 Ultimate is suitable for evaluation use as well as a back-up server.

words, the default values need to be checked for possible conflicts of anything else existing on the same server.

8. Paperiton DMS Web Client

Paperiton DMS Web Client is the browser-based client application of Paperiton DMS. The server for that application is an ASP.NET web application running under IIS.

Common Requirements – Server

The server requires the following components installed:

- .NET Runtime 3.5 is required
- IIS (Internet Information Services) is required.
- ASP.NET 2.0 is required.
- Microsoft ASP.NET 2.0 AJAX Extensions 1.0
- Fixed IP address is required.
- Disk space required < 10 MB, excluding required disk space for temporary documents needed for document download.
- Separate IIS Application Pool is usually needed for worker process management.

Requirements – Client

- Cookies allowed for the server is required.
- JavaScript support is required.

Supported browsers

- Microsoft Internet Explorer 8[3], or newer.
- Google Chrome
- Opera 7, or newer
- Firefox

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[3] Paperiton recommends using the current version of Internet Explorer. DMS Web Client also works with older IE versions.

If compliance is required with a certain version of a browser not listed above, please contact Paperiton with your question.

9. Paperiton DMS IMPORT

Paperiton DMS IMPORT is an optional browser-based application, targeted mainly for efficient addition of scanned documents. External data sources can be used to populate DMS document metas. With this tool, the user's role is mainly to monitor the scan quality before document is added to the DMS.

Paperiton DMS IMPORT is an optional module of Paperiton DMS.

DMS IMPORT Server Requirements

These requirements apply to all supported Microsoft Windows versions listed below.

- .NET Runtime 3.5 is required, the newest service pack recommended.
- IIS (Internet Information Services) is required.
- ASP.NET 2.0 is required.
- Fixed IP address is required.
- Disk space required is < 7 Mb, excluding required disk space for the scanned documents storage and optional storage of already added documents and log files.
- It is recommended that the scanned documents directory is located on the server, as an IIS virtual directory is created for each of those.
- Separate IIS Application Pool is recommended for the IIS worker process management.
- A network connection to a Paperiton DMS server is required.
- User authentication performed with Active Directory defined in IIS.

Client Requirements

- Cookies allowed for the server is required.
- JavaScript support is required.

Supported browsers

- Microsoft Internet Explorer 8, or newer
- Firefox
- Google Chrome
- Opera 7, or newer

If compliance is required with a certain version of a browser not listed above, please contact Paperiton with your question.

Other DMS IMPORT considerations

If different types of documents are scanned, which require different rules and mappings when added to the DMS, each of the "processing lines" require one DMS IMPORT web site, with its own configuration and mappings. The configuration and mappings are XML files. Editing those files is easiest with a tool that is able to use the available information and documentation in the XSD files, like Microsoft Visual Studio Express Edition, or similar.

Location of document queues

A DMS IMPORT site has a file system directory configured, where the documents are shown from.

The main consideration for the location of the document queue, aka "source directory", is the access rights. The easiest arrangement is that the source directory is located on the DMS IMPORT server. If the directory is located on a network file server, it may become complicated, although not impossible, to provide necessary access rights for the web application to use those files.

10. Paperiton DMS GATEWAY

Paperiton DMS GATEWAY is an optional Windows service server application, targeted mainly for automated addition of scanned documents.

DMS GATEWAY Server Requirements

- .NET Runtime 3.5 is required, the newest service pack recommended.
- Paperiton DMS WCF Server is required.
- Sufficient disk space for the buffer of the queued documents, later to be added to the DMS.

11. Paperiton DMS CONTEXT

General information

Paperiton DMS CONTEXT is a web application, which can be used with many third-party applications for the presentation of related documents.

The main concept is that the identification of the external data entity is passed to DMS CONTEXT in the URL, and DMS CONTEXT shows the related documents.

Paperiton DMS CONTEXT is an optional module of Paperiton DMS.

DMS CONTEXT Server Requirements

- .NET Runtime 3.5 is required, the newest service pack recommended.
- IIS (Internet Information Services) is required.
- ASP.NET 2.0 is required.
- Fixed IP address is required.
- Disk space required is < 7 Mb, excluding required disk space for the scanned documents storage and optional storage of already added documents and log files.
- It is recommended that the scanned documents directory is located on the server, as an IIS virtual directory is created for each of those.
- Separate IIS Application Pool is recommended for the IIS worker process management.

- A network connection to a Paperiton DMS server is required.
- User authentication performed with Active Directory defined in IIS.

12. Paperiton DMS EMBEDDED

Paperiton DMS is an ASP.NET web site, which is used to view and add related documents within the context of another web application. Typically, DMS EMBEDDED is placed in an IFRAME inside the page of the host web application.

The EMBEDDED web site is a mixture of HTML, JavaScript and Silverlight.

Paperiton DMS EMBEDDED is an optional module of Paperiton DMS.

DMS EMBEDDED Server Requirements

- .NET Runtime 3.5 is required, the newest service pack recommended.
- IIS (Internet Information Services) is required.
- ASP.NET 2.0 is required.
- Fixed IP address is required.
- DMS EMBEDDED requires access to Paperiton DMS WCF Server.
- Network connection to Paperiton DMS WCF Server is required.
- User authentication with Windows or domain.

DMS EMBEDDED Host Application Requirements

In order to show Paperiton DMS EMBEDDED in the host web application, the hosting page needs to be slightly modified.

- An IFRAME needs to be added on the page for Paperiton DMS EMBEDDED
- An URL needs to be defined for the IFRAME. The URL contains the key information of the entity presented by the host web application

DMS EMBEDDED Client Requirements

- Silverlight 4.
- JavaScript enabled.
- IFRAME available and allowed.

13. Paperiton DMS integration to Microsoft Office SharePoint

It is possible to use Paperiton DMS EMBEDDED within a Microsoft Office SharePoint 2007.

PaperitonContent Web Part is used to incorporate document content from Paperiton DMS into a SharePoint site.

The Web Part creates an iFrame HTML element on the page and sets its source address to point to Paperiton web application server. The latter produces the content into the iFrame inside the web part. The web part connects Paperiton documents to SharePoint using a simple configuration setting.

Server Requirements

- Microsoft .NET Framework 3.5 SP 1 installed (used to develop the web part)
- Authenticated users need permission to read Paperiton settings registry key, from which connection parameters are read from.

- DMS user accounts need to be linked to Windows or domain accounts within Paperiton DMS Management Tools.

Client Requirements

- Microsoft Internet Explorer 8 or newer.
- Silverlight 4.
- HTTP connection to Paperiton DMS EMBEDDED web site.

Installation

Paperiton will provide the customer with the installation media and instructions how to install and configure the web part within SharePoint.

Due to the nature of SharePoint, it is strongly recommended that the installation is well planned and prepared in advance with the customer's SharePoint administrator.

14. Paperiton DMS LINK

General information

Paperiton DMS LINK is an optional server component of Paperiton DMS.

Paperiton DMS LINK makes it possible to create a link from for instance Microsoft Excel document to other Excel documents located inside Paperiton DMS. Usage of Paperiton DMS LINK is obviously not limited to Excel.

One Paperiton DMS LINK server can access one predefined DMS database.

Requirements

These requirements apply to all supported Microsoft Windows versions listed below.

- .NET Runtime 3.5 is required
- IIS (Internet Information Services) is required.
- ASP.NET 2.0 is required.
- Fixed IP address is required.
- Disk space required is less than 3 Mb, excluding required disk space for

temporary documents needed for document download.
- Separate IIS Application Pool is usually needed for worker process management.
- Network access to an instance of Paperiton DMS Server is required, not necessarily on the same machine. (http)

Supported Operating System Versions

The following Windows versions are supported:

- Microsoft Windows Server 2008 R2
- Microsoft Windows Server 2008
- Microsoft Windows Server 2003 R2
- Microsoft Windows Server 2003
- Microsoft Windows 7 Ultimate

Access Rights

Paperiton DMS user accounts can be linked to Active Directory/domain user accounts. Paperiton DMS LINK Server is configured to be accessible to named Active Directory/domain groups.

When user attempts to use the LINK server, authentication is arranged against the Active Directory/domain with the means available from IIS. User groups are checked against the group memberships to access the LINK server.

For the contents of the DMS database, same access rights apply as using any other client application.

15. Paperiton DMS MACROS

General information

Paperiton DMS MACROS is an optional client component of Paperiton DMS.

Paperiton DMS MACROS is an environment where repetitive tasks can be automated.

The macros are defined in XML files, and executed against a Paperiton DMS WCF Server.

Requirements

- .NET Runtime 3.5 is required.
- Paperiton DMS WCF Server is required.

16. Document Preview Images Creation

General information

Paperiton DMS supports document preview images creation for almost 200 different document types.

Preview image creation is a separate process from document addition, and the creation can be arranged in two different ways:

- Automatically with a Windows Service
- With the executable DMSPI.EXE that can be scripted in a BAT file and run as preferred.

Several configuration files define how different document types are handled in order to create the different sizes of preview images for the pages of a document.

Preview creation requires Paperiton DMS WCF Server for database access.

Preview creation workstation

Creating preview images is hard work for a computer. Therefore Paperiton strongly recommends dedicating one or more separate workstations for the task.

A virtual machine is typically not a good idea for this purpose, as CPU and memory usage could be high for long periods of times.

Certain document types, like Microsoft Office documents, require the installation of Office 2007 or Office 2010 to the preview creation workstation.

The workstation should have rather more than less memory, and have also a fast enough CPU to be able to handle new preview creation tasks in a reasonable time.

One Paperiton DMS installation may have more than one preview creation workstations. Especially when a large number of previews need to be created at once, more than one computer should be considered for the task.

Additional pre-requisites

The following applications are always needed for the preview creation process:

- ImageMagick[4]
- Ghostscript[5]

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[4] http://www.imagemagick.org

[5] http://ghostscript.com/