Technical Overview

Version 4
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1. Introduction

This guide provides a technical overview to the Magique Galileo for ASP.NET Version 4 software designed for where customers are hosting the system. It contains a general description of the system while separate documents provide a step-by-step guide to installing it on the Windows and SQL Servers depending on the versions being used. Where Magique Galileo hosts the system we will ensure correct versions of server software and appropriate servers are used. The section on Client Devices is still relevant to customers where Magique Galileo is hosting the system.

Magique is a flexible risk and control management system to record, track and evaluate risks and controls within an organisation. A variety of risk evaluation methods are supported together with supporting controls, indicators, actions and events. It includes a Questionnaire system which can be used to gain feedback or full self-assessment of the relevant controls together with an Action tracking system to record and follow up issues, tasks and matters which require dealing with.

Galileo is a modular Audit Automation System designed for Internal Audit Departments. It is a tool designed to help manage the audit cycle, from strategic and resource planning to staff bookings, audit tracking, online timesheets and through to audit working papers and the creation and tracking of audit recommendations and reports.

The 2 systems are integrated and share a common database but users will only be presented with the information they have been configured to see.

The ASP.NET version of Magique Galileo is a web browser based application. It has been developed using Visual Studio.NET and includes technologies such as VB.NET, JavaScript and Cascading Style Sheets, HTML5 and ASP.NET AJAX.

A Windows Server system running Internet Information Services (IIS) is needed to host Magique Galileo while client devices would access Magique Galileo using a browser such as Internet Explorer, Chrome, Safari or Firefox. A Microsoft SQL Server database is used to store the data. The SQL Server can be installed on the same server that is running IIS or on a separate server or commonly on virtual servers. Multiple versions of Magique Galileo can be hosted on the same IIS and SQL Servers.
2. Architecture

Magique Galileo has the following architecture:

Magique Galileo uses a logical, 3-tier architecture. The Magique Galileo web pages draw data from, and submit data to, a SQL server.

Client devices (whether desktops, laptops, tablets, smart phones or other devices) require a browser and Microsoft Office or a reader for Microsoft Office documents.
3. Requirements

3.1 Servers
Windows Server (Internet Information Services, ASP.NET and .NET Framework 4.5)
- Windows Server 2008 R2
- Windows Server 2012
- Windows Server 2012 R2
- Windows Server 2016

SQL Database Server
- SQL Server 2008 R2
- SQL Server 2012
- SQL Server 2014
- SQL Server 2016

The servers can be virtual machines (using VMWare or Hyper-V), the same machine or separate machines.

3.2 Hardware Requirements
The following memory and processor requirements apply to the web (IIS) and database (SQL) server.

Processor. Processor performance depends not only on the clock frequency of the processor, but also on the number of processor cores and the size of the processor cache. The following are the processor requirements:
- Minimum: 1.6 GHz (Xeon E3 processor or equivalent)
- Recommended: 2.3 GHz or faster (Xeon E5 processor or equivalent)

RAM. The following are the RAM requirements:
- Minimum: 2 GB (IIS) and 4GB (SQL)
- Recommended: 4 GB or more (IIS), 8 GB or more (SQL),

More memory is required for the database (SQL) server as database size increases to ensure optimal performance.

Disk space requirements. The following are the approximate disk space requirements for the Magique Galileo, in addition to the system requirements:
- IIS: 1 GB (IIS)
- SQL Server 2 GB initially.

The size of the database depends on the number of users and the length of history with the major factor being the number and size of attachments. Our largest clients have reached over 50GB but 5GB to 10GB is more usual.

Please note that the servers on which the Magique Galileo application and database are installed must conform to the system requirements for Microsoft Windows web (IIS) server and SQL Server.

The server recommendations assume exclusive use of Magique Galileo software. If the server is used for other purposes, the requirements should be altered accordingly.
The required disk space for are for a typical usage scenario, if large numbers of documents will be uploaded to Magique Galileo, then the disk requirement should be altered accordingly.

3.3 Client Devices
A client device must have a modern browser with support for HTML5 with a minimum screen resolution of 1024 x 768 pixels and a recommended resolution of 1280 x 1024 or 1280 x 800 pixels

Windows PC
- Windows 7, 8.x, 10
- Internet Explorer 11
- Microsoft Edge, Chrome and Firefox (latest release recommended)

Apple Mac
- OS X 10.11.x, OS X 10.12.x
- Safari 9.x

Tablets may also be used to access the Magique Galileo software, depending on the screen resolution and browser support for HTML5 of the individual device.

For each device (e.g. PC) that will access Magique Galileo, a Client Access License (CAL) may be required, depending on the Microsoft licensing scheme at your organisation.

In addition to the browser, a client device should also have ability to view PDF, Microsoft Office file format documents and Office Open XML format documents. Some specific reports will need the ability to run Office document macros.

3.4 Bandwidth
We recommend a minimum bandwidth of 10 Mbps for a typical user. However the bandwidth depends on the volume of data a user would be accessing and the nature of the enquiries. Pages in the system can vary in size and if a user has low bandwidth then unnecessary information for that user can be excluded to maintain an acceptable response time.
4. Installation

The Installation is in two parts, one for the web server (Windows Server/IIS) and the other on the database server (SQL Server). However, depending on the exact scenario it may be necessary for a Windows Domain Administrator to create an Active Directory account for use with the installation. Please review all documents before starting the install.

The process is as follows;

1. Create an Active Directory user account using the name Magique.Galileo (optional). This account will be used to run the Application on the web server and access the database. Alternatively, use an existing domain account or system account.
2. Install the database on the SQL Server. Provide db owner access to the account create in (1) if necessary or create a SQL Server login with db owner access privilege. The database can be a new database using a script or a restore from a SQL Server backup.
3. Install the web files on the web server and create the relevant application with a new application pool to run the application.
4. Modify the configuration file (web.config) file to allow the web application to access the database.
5. Test the installation.

Detail document are available for each server type. They assume that server have already been setup correctly according system document and will only describe the installation of the Magique Galileo software.

Please note that we are not able offer user support for problems pertaining to operating systems, installation of the Windows web (IIS) server, ASP.NET and SQL Server.
5.  **Technical Support**

Technical hot-line and on-site support is available together with training courses, help system and guides. Answers to common questions are provided on the web site.

**Magique Galileo Contact Details**

**United Kingdom (and Regions not listed)**
Magique Galileo Software Limited
Birchin Court
20 Birchin Lane
London, EC3V 9DU

Tel:  + 44 (0) 20 3713 4590
Email:  info@magiquegalileo.com
www.magiquegalileo.com

**Americas**
Magique Galileo Software LLC
One World Trade Center
Suite 8500
New York, NY 10007
United States of America

Tel:  +1 212 220 6709
Email:  info@magiquegalileo.com
www.magiquegalileo.com

The Magique Galileo web site provides technical information, frequently asked questions (FAQ’s), tips and hints and details of Magique Galileo events.