



Hardware and Software Guidelines for Customer Hosted Systems

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Rapattoni *Magic*-Cloud AMS real estate association management software represents a huge step forward in technology. It operates on Microsoft® server technology and uses Microsoft SQL Server™ (MSSQL) as its underlying database. Rapattoni *Magic*-Cloud AMS opens up a new world of service to your members over the Internet.

Satisfactory performance of Rapattoni *Magic*-Cloud AMS, and all of its functions, may not be achieved if your hardware and software is less than adequate. **These guidelines do not provide complete details; therefore, it is imperative that you consult with a qualified hardware and network technician to ensure third-party software licensing compliance, to obtain the desired functionality, and to achieve optimum performance for the Rapattoni *Magic*-Cloud AMS options you select.**

Technology is changing rapidly, so it is important that you have the latest version of this document. Please visit our website at <http://www.rapattoni.com/technical> to check for the latest version on the Technical Information page.

There are numerous elements to consider when selecting and installing your hardware and network components. Various types of network setups can have a major effect on the type of hardware and software you should purchase. As a courtesy, our technical support department will provide free assistance to you in this selection process. We will provide an initial telephone consultation with you and your network technician to review your proposed system configuration and to discuss the many options. A hardware and software survey will be provided to facilitate this process.

Responsibilities of your Network Technician

The network technician has the primary responsibility for the selection, installation, configuration, maintenance and troubleshooting of all software and hardware components that make up the association's network. It is the network technician's responsibility to:

- Have a clear understanding of all hardware and software components, and how to troubleshoot them
- Understand your current needs and also be able to account for future growth in all recommendations
- Provide training to key staff for day-to-day maintenance and operations, such as performing backups and creating and deleting users
- Be available to you in case of emergency
- Be available during the installation of the Rapattoni software on the network server(s)
- Set up each workstation, including, but not limited to, the Rapattoni *Magic*-Cloud AMS client setup, printer setup, and installation of third-party software products (word processing, accounting, spreadsheet, etc.)

Some Things to Consider

Here are some of the options and opportunities you should consider:

- If you plan to utilize email services, you will need MS Outlook® software with Internet email capabilities.
- If you are going to use Rapattoni's Internet Member Services and/or Internet Store software, you will need a full-time broadband connection to the Internet. You will also need a dedicated Web server.
- For security, a hardware firewall is required.
- If you have branch offices, or remote employees, that need to connect to your network and run all of the Rapattoni *Magic* applications, you will need Microsoft or Citrix® terminal server software running on a separate computer.

Set up each workstation, including, but not limited to, the Rapattoni *Magic*-Cloud AMS client setup, printer setup, and installation of third-party software products (word processing, accounting, spreadsheet, etc.).

NOTE: The information listed in this document only considers the needs for running Rapattoni Magic-Cloud AMS association management software, and does not take into consideration any other applications or hardware and network configurations.

Magic Application Server *(required)*

For network service including all internal application such as Rapattoni *Magic*-Cloud AMS:

Minimum Requirements	
CPU type:	Intel® Multi-Core 2.0 GHz or AMD Opteron™ 2.0 GHz
RAM (Random Access Memory):	8 GB
Hard Drive Capacity:	74 GB
Network Requirements:	100Mb network switch 100Mb NIC (Network Interface Card) TCP/IP set as the primary network protocol
Server Operating System:	Microsoft Windows Server® 2012 R2
Database Software:	Microsoft SQL Server 2012

Recommended (or higher)

CPU type:	Intel® Xeon 2.4 GHz or AMD Opteron™ 2.4 GHz
RAM (Random Access Memory):	16 GB
Hard Drive Capacity:	120 GB or more RAID Configuration
Network Requirements:	1Gb network switch 1Gb NIC (Network Interface Card) TCP/IP set as the primary network protocol
Server Operating System:	Microsoft Windows Server® 2016
Database Software:	Microsoft SQL Server 2016

Storage Requirements:

For new customers: Available for Rapattoni *Magic-Cloud* AMS: 5 GB + 1 GB per 1,000 members. (Note: Document tracking and member photographs will increase storage requirements depending on the extent of their use.)

For existing customers: Total size of \Rap folder plus 20 GB available.

Backup Requirements:

Reliable database backups are a vital tool in protecting your association's data. We strongly recommend that you establish a nightly routine to back up your data to removable media or a cloud storage provider.

NOTE: It is the association's responsibility to ensure backups are run nightly, and are successful.

SQL Licensing Requirements:

For *Magic-Cloud* AMS only: SQL Server and an appropriate number of client access licenses (1 per *Magic* user, plus 1)

For *Magic-Cloud* AMS with Internet Member Services and/or Internet Store: SQL Server and an appropriate number of client access licenses (1 per *Magic* user, plus 1) and/or an appropriate number of processor licenses (1 per network server processor core)

NOTE: Please check with a licensing professional on appropriate license requirements.

NOTE: For updated information on Microsoft's licensing requirements, see their website at <http://www.microsoft.com/sql/prodinfo/previousversions/rs/howtolicensers.msp>.

Dedicated Internet Application Server *(required for Internet Member Services and/or Internet Store)*

To host your Web page and provide Internet Member Services and/or Internet Store:

NOTE: This server must be separate from your main Magic server.

Minimum Requirements	
CPU type:	Intel® Multi-Core 2.0 GHz or AMD Opteron™ 2.0 GHz
RAM (Random Access Memory):	8 GB
Hard Drive Capacity:	74 GB
Network Requirements:	100Mb NIC (Network Interface Card) TCP/IP set as the primary network protocol
Server Operating System:	Microsoft Windows Server® 2012 R2 (with IIS 8.0)

Recommended <i>(or higher)</i>	
CPU type:	Intel® Xeon 2.4 GHz or AMD Opteron™ 2.4 GHz
RAM (Random Access Memory):	16 GB
Hard Drive Capacity:	120 GB or more RAID Configuration
Network Requirements:	1Gb NIC (Network Interface Card) TCP/IP set as the primary network protocol
Server Operating System:	Microsoft Windows Server® 2016 (with IIS 10)

Internet Access:

Dedicated broadband Internet connection requirements vary per association size.

A Static IP address will be necessary for the Internet Member Services and/or Internet Store website. This IP address must have a DNS record pointing to ims.yourdomain.com.

Credit Card Processing:

Must enroll in NAR's REALTOR® Electronic Commerce Network, or purchase the Payflow Pro service from PayPal™. Must also obtain a digital website security certificate from a recognized certificate authority such as VeriSign (www.verisign.com) or GoDaddy (www.godaddy.com). This certificate is necessary to allow secure connections using Transport Layer Security (TLS) 1.2.

Additional Software:

Adobe® Acrobat® Writer, or alternatively, Amyuni PDF drivers.

Mail Server

To provide email service for your staff and to allow Rapattoni *Magic-Cloud* AMS to send member notices and confirmations:

- Microsoft Exchange Server, OR
- Simple Mail Transport Protocol (SMTP) Server

Hardware Firewall *(required)*

To provide security, a hardware firewall must be able to provide website support (required) and Network Address Translation (NAT) (recommended).

Terminal Server *(optional)*

Microsoft Windows Terminal Server (additional hardware may be required) to provide remote access for branch offices and/or remote employees. For best performance, use the client-to-server model.

Additional Software:

Adobe® Acrobat® Professional for workstation E-Billing.

Data Exchange Services

- Data Exchange requires the use of a server or workstation with Internet access
- 3rd party connection requirements vary per vendor, based on FTP security requirements, or port restrictions

National REALTOR® Data System (NRDS)

- You need broadband Internet access and an email address in order to send and receive (data and email) to and from NRDS
- NAR Communication protocols require current security standards, such as TLS 1.2

Rapattoni reserves the right to make whatever changes are necessary to the settings of this workstation to ensure its reliable operation while running all components of Rapattoni Magic-Cloud AMS software. This may include but is not limited to: changes to the screen resolution; software updates; software drivers; and network protocol.

Individual PC Workstation Considerations

To meet our minimum requirements for support:

Minimum Requirements	
CPU type:	Intel® Multi-Core Desktop Processor
RAM (Random Access Memory):	8 GB
Hard Drive Capacity:	75 GB or more
Network Requirements:	100Mb NIC (Network Interface Card) TCP/IP set as the primary network protocol
Monitor:	1280 x 1024 pixels
Workstation Operating System:	Microsoft Windows 8.1 or higher
Network Access:	Workstation must have access to the SQL server

Recommended (or higher)	
CPU type:	Intel® Multi-Core Desktop Processor
RAM (Random Access Memory):	16 GB
Hard Drive Capacity:	120 GB or more
Network Requirements:	1Gb NIC (Network Interface Card) TCP/IP set as the primary network protocol
Workstation Operating System:	Microsoft Windows 10
Network Access:	Workstation must have access to the SQL server

Point-of-Sale Workstation and Peripheral Equipment

A point-of-sale workstation used in a REALTOR® store may, optionally, use:

- A cash drawer that opens by either one or two *Ctrl+G* keystrokes (must have a parallel interface attached to LPT1)
- An 80-column receipt printer (must have a parallel interface attached to LPT1)
- A bar code reader (must meet the code 39 standard) connected in series with the keyboard
- A credit card reader (must be able to read tracks 1 and 2 as a continuous line with no carriage return) connected in series with the keyboard

Printers

At least one HP LaserJet capable of HP Adobe PostScript and a minimum of 6 MB of memory is required in order to print laser rosters. Alternately, the use of Adobe Acrobat PDF Writer software will allow for the printing of laser rosters from any laser printer.

Broadcast Email, Fax, and Mail Merge

The selection and installation of an email and fax system are the responsibility of your hardware or network technician. Rapattoni's technical staff is available to assist by telephone. Rapattoni *Magic-Cloud* AMS software outputs text files that can be used with many third-party software products to accomplish broadcast email, broadcast faxing, and mail merging. These text files are used for merging into word processing documents or for importing data into phone book directories of third-party faxing software.

General Ledger Export

The Rapattoni *Magic-Cloud* AMS software provides for accounting journal entry export to a text file formatted for many third-party general ledger accounting software packages. Please consult with Rapattoni prior to the selection and installation of any third-party general ledger accounting software.

Credit Card Verification

The Rapattoni *Magic-Cloud* AMS software integrates with NAR's online credit card processing or PayPal's™ Payflow Pro service.

Caution: If your network technician or staff installs additional software or modifies the network configuration (hardware or software) without consulting with our technical support department, your Rapattoni *Magic-Cloud* AMS software may cease functioning. If you are considering changes to the network (hardware or software), contact the Rapattoni technical support department to ensure compatibility with Rapattoni *Magic-Cloud* AMS.