

User Manual

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Introduction

Enterprise System Manager allows you to:

- Maximize uptime of your exacqVision Enterprise servers with constant server health monitoring. Receive email
 notifications or use ESM's browser-based dashboard to receive immediate notification of system errors and
 warnings.
- Instantly assess all exacqVision Enterprise servers from anywhere using the intuitive dashboard to visually confirm their health from a PC browser, tablet or smart phone.
- Automatically send highly flexible email notifications regarding errors and warnings such as VMS recorder
 offline, storage warnings, drive failures, temperature alarms, or disconnected cameras. Allow individual users or
 groups of users to be e-mailed real-time or periodically for over 25 user-selectable errors and warnings.
- Reduce software maintenance time with scheduled software updates. Quickly schedule hundreds or thousands of servers to receive the latest exacqVision features.
- Monitor camera health and events to confirm camera uptime and proper positioning.







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Hardware/Software Requirements

MINIMUM SERVER REQUIREMENTS (less than 50 servers, up to five simultaneous client connections)

Processor: Intel i3-4100 or better

RAM: 8GB

Hard drive: 100GB SSD

Network: 25 Kbps per server, plus 512 Kbps per simultaneous client connection

Operating system: Windows Server 2008 R2 or Windows 7

RECOMMENDED SERVER REQUIREMENTS (500 or more servers, up to 25 simultaneous client connections)

Processor: Intel E3-1275 Xeon or better **RAM:** 16GB (32GB for over 1,000 servers)

Hard drive: 250GB SSD

Network: 50 Kbps average, 1 Mbps peak per video **Operating system:** Windows Server 2012 or Windows 8

Email host: SMTP email server

PC CLIENT MINIMUM REQUIREMENTS

Processor: Intel Atom Z3470 or better

RAM: 1GB

Network: 512 Kbps

Browser: Internet Explorer 9, Chrome 31, Safari 7, Mozilla Firefox 25

PORTS

Connection to exacqVision servers: port 22609*
Web Service running on exacqVision servers: port 80*

*RELATED KNOWLEDGE BASE ARTICLES:

How do I change the listen port for exacqVision Server in Windows 7?

https://exacq.com/kb/?kbid=32907

How do I change the listen port for exacqVision Server in Ubuntu Linux?

https://exacq.com/kb/?kbid=59098

How do I change the port of my Web Server in Windows 7?

https://exacq.com/kb/?kbid=56365

How do I change the port of my Web Server in Ubuntu Linux?

https://exacq.com/kb/?kbid=50095





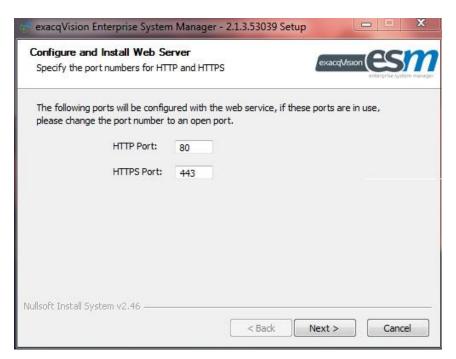
3 Installation

PRE-INSTALLATION NOTES:

- ESM can be installed on a Linux or Windows platform.
- You must have administrator privileges for Windows installation, or root access for Linux installations.
- Several steps require several minutes for the installation package to complete. This is a normal part of the process.
- Select the default database option unless you have an existing database that you want to use. In that case, the installer will use the credentials for the database; you do not need to manually export and import the schema.

To install Enterprise System Manager, complete the following steps:

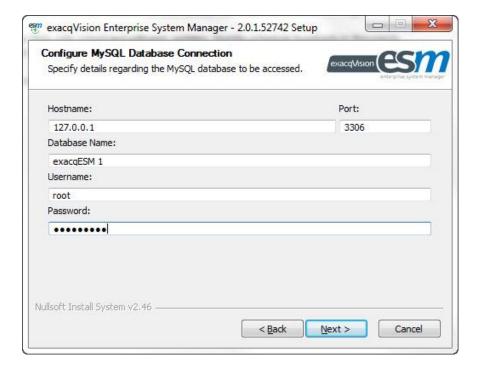
- 1. Run the EXE file and follow the onscreen prompts.
- 2. Enter an HTTP and HTTPS port. If a selected port is in use, you must select an unused port before you are allowed to continue.







- 3. When the database types appear, select the type as follows:
 - Postgre (most simple choice for those with no existing database or database experience)
 - Microsoft SQL (to connect to an existing Microsoft SQL database)
 - MySQL (to connect to an existing MySQL database)
- 4. Configure the ESM database connection to match your database. If ESM and the database are located on the same server, enter 127.0.0.1 as the hostname, as shown in the following example. You cannot advance past this step without valid credentials.



- 5. Select Perform Migration only if updating from a legacy version (ExacqVision Enterprise Health Manager). ESM will migrate the servers monitored by the legacy software, and it will not prompt for legacy database credentials if the ESM installation is on the same computer as the legacy installation.
- 6. Save the SQL file of the database if desired.
- 7. Complete the installation process to launch a browser and connect to ESM.





POST-INSTALLATION NOTES:

- If you connect to ESM from a browser on a separate computer, you must use the IP address of the computer on which you installed ESM.
- The default admin username and password are admin and admin256. It is highly recommended that you change the admin password.
- To license the ESM installation, see the Options section of this manual.



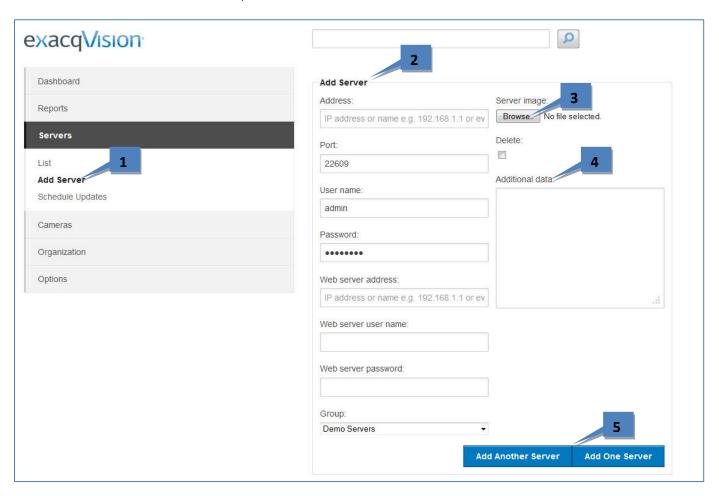


Add a Server

To add an exacqVision server for ESM to monitor, complete the following steps:

NOTE: An exacqVision Server must have a valid and current Enterprise license to be monitored by ESM. You can find an exacqVision system's license information by opening its System page on the Config (Setup) page.

- 1. Select Servers from the menu and then Add Server from the sub-menu.
- 2. Enter all the information about the video server. Every server must be part of a group; the default group is shown in the Group drop-down list.
- 3. Select Browse to load a picture of the video server for easy identification among many servers in the install
- 4. In the Additional Data field, enter other optional information about the server that can assist an ESM user.
- 5. Click Add One Server to complete the configuration, or click Add Another Server to repeat these steps for
- 6. All cameras and events associated with the added servers are then displayed in the ESM dashboard (not shown; see Dashboard section for details).

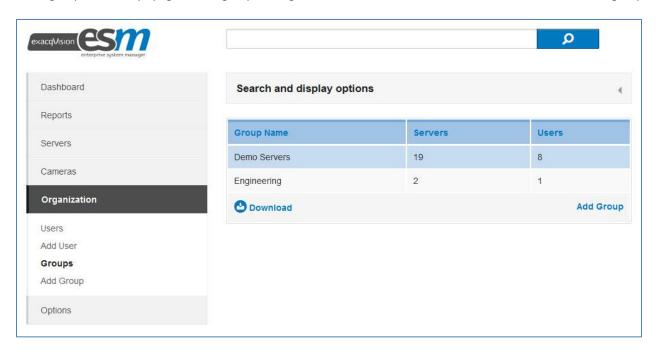






Organization

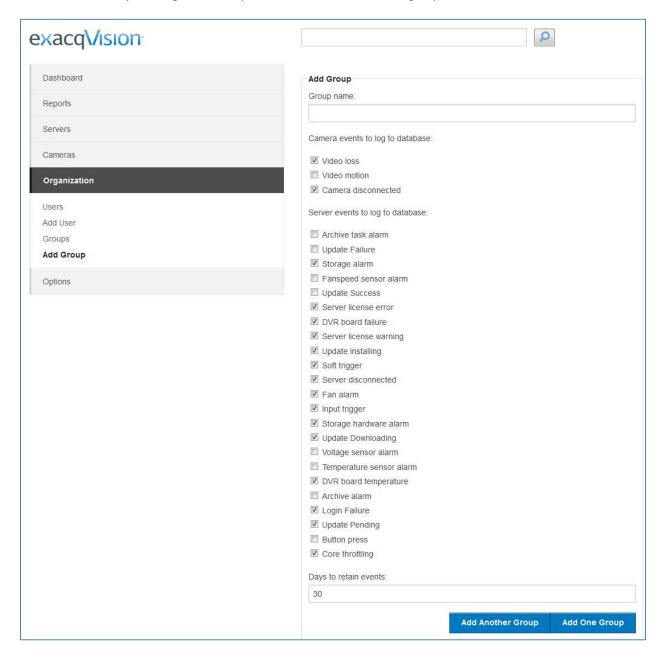
The Organization menu allows you to configure users and server groups, which consist of monitored systems with identical settings of monitored features. All servers must be part of a group, and all monitored events apply to all servers in the group. The Groups page lists all groups, along with the number of servers and users associated with the groups.







To add a group, select all the types of camera and server events to log, along with the number of days to store the events before automatically deleting them. Every server is associated with one group.



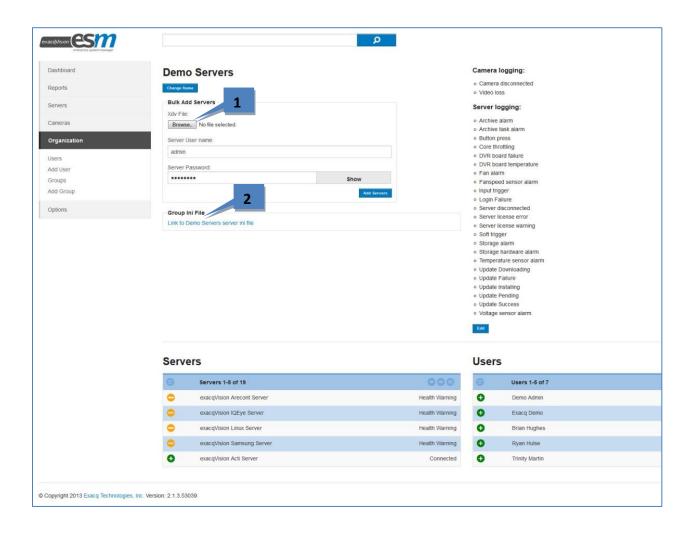
NOTE: For information about each type of monitored event, see the Reports section of this manual.





Select a group to view details and perform the following actions:

- 1. **Import server lists from exacqVision Client.** Export the list from the Add Systems page in exacqVision Client and then import it into ESM by clicking Browse in the Bulk Add Servers section.
- 2. **Export the group server list to exacqVision Client.** Click the link under Group INI File to save a file that can be imported on the Add Systems page in exacqVision Client.

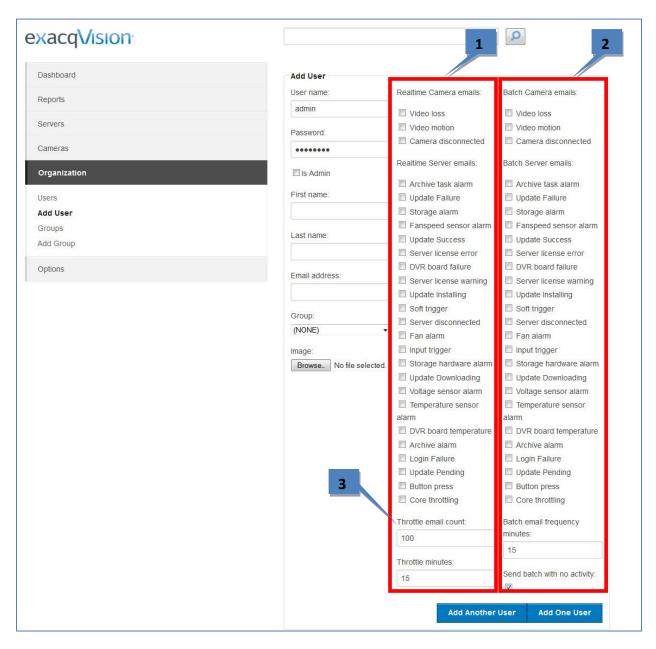






To add a user, enter the credentials and select all the types of notifications that the user should be able to view. The Add User page contains the following options:

- 1. Realtime emails are sent as soon as an event starts.
- 2. Batch emails are summarized lists of events that occurred since the previous batch email was sent.
- 3. The throttling features allow you to limit the number of emails that can be sent over a certain period of time in order to prevent an extreme number of notifications.
- 4. Admin users can add servers, add users, and schedule updates. A global admin (an admin without a group) can also see the Options menu and Add Group menu item; a user assigned to a group can schedule updates and add servers only for that group. For example, a global admin can create multiple groups, one for each group administrator. The global admin could manage which server updates are available to the group admin, and the group admin could add servers, schedule updates, and add users to their group.

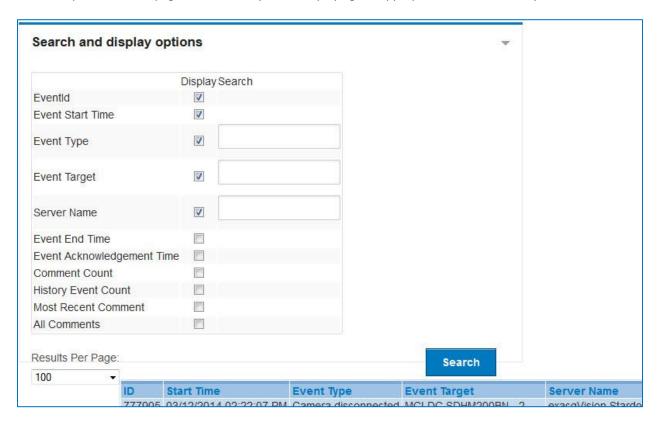






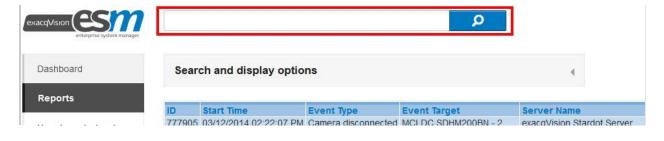
ESM NAVIGATION TIPS

Many ESM pages, including Users, Groups, Cameras, Servers (List), and Reports, contain Search and Display Options, which allows you to select all the information columns displayed on a page. Not all columns are displayed by default, so view the options on each page to make sure you are displaying the appropriate information for your situation.



Many columns can be sorted by clicking the column name. Status columns can be sorted by clicking

To quickly find devices, servers, and other information on any page, type a word or phrase in the search box on any page and press Enter. Results can take up to 30 seconds to appear.



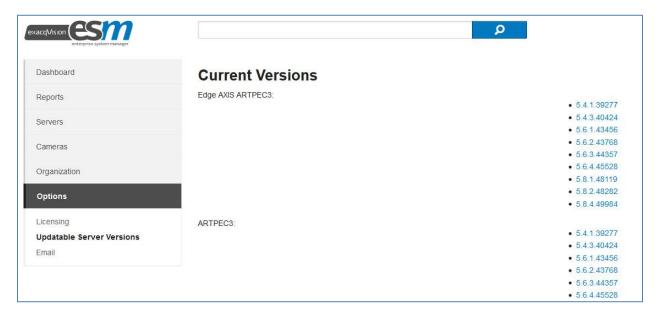




Schedule Updates

Select Schedule Updates to install new exacqVision Server software to the servers at a specific time. If there is no connection the Internet, you can manually download software updates to a portable drive, load it to the ESM server, and then have the video servers obtain it directly from the ESM server.

The Updatable Server Versions page shows all the server versions available to be applies as updates. Only global administrators and admins not assigned to groups can see this information.







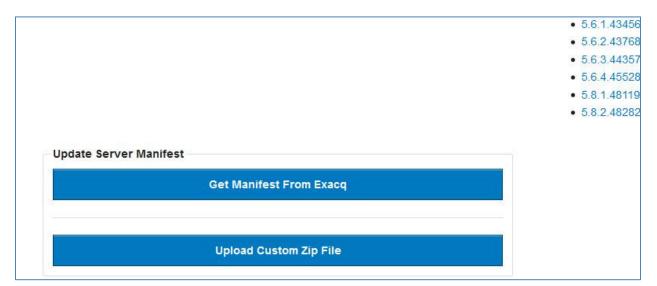
The bottom of the page allows you to do the following:

- **Get Manifest From Exacq.** If the system is connected to the Internet, use this option to obtain a list of available software releases.
- Upload Custom ZIP File. If the system is not connected to the Internet, complete the following steps.
 - 1. On an Internet-connected computer other than the ESM server, obtain a ZIP file from the Software Updates Packaging Utility at the following location:

https://www.exacq.com/support/downloads.php?type=softwareUpdatesPackagingUtil

- 2. Connect to the network on which the ESM server is located.
- 3. Open the ESM interface and select the Upload Custom ZIP File button.
- 4. Browse to the ZIP file and upload it to the ESM server.

After you select either option, a list of available versions and installers are displayed. On the update page, select the versions that you want to update the servers to.







To schedule updates, complete the following steps:

- 1. If you don't want all servers to be updated on the same schedule, select Filter Options. Enter all applicable information to identify the servers for which you want to schedule updates.
- 2. Select the software version from the drop-down list. Select the software version with the highest version number unless specifically instructed by Exacq Technical Support.
- 3. Select the date and time for the update from the drop-down list.
- Click Add to Scheduled Updates.
- 5. Verify that the servers are now listed in the Scheduled Updates table. To remove a server from the list, click Unschedule.

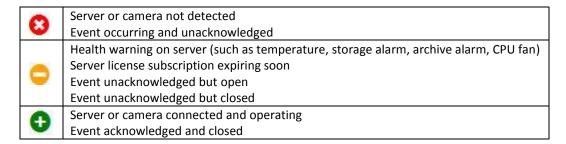




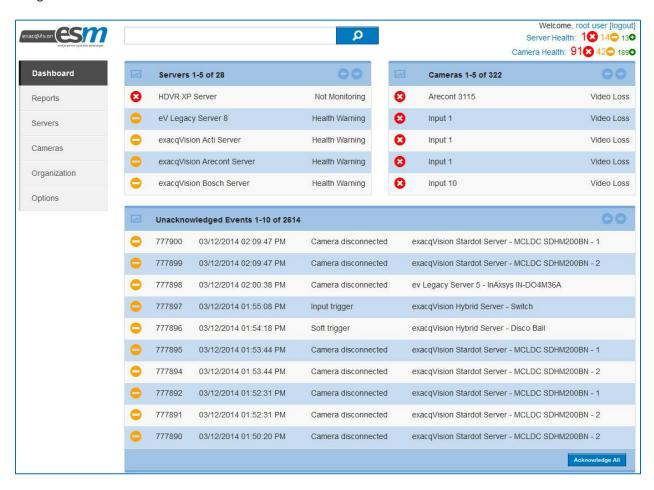


7 Dashboard

The ESM Dashboard displays lists of added servers, all cameras associated with the servers, and unacknowledged events on the servers. The color-coded indicators display the following information:



The indicators at the top-right corner of the screen indicate the total number of servers and cameras in each of those categories.







- allow you to scroll through additional pages of servers, cameras, and events. The right and left arrows
- You can alternate between list and chart views by clicking the chart icon in each table. This is what the chart view looks like:



For information on event definitions and acknowledging events, see the Reports section of this manual.

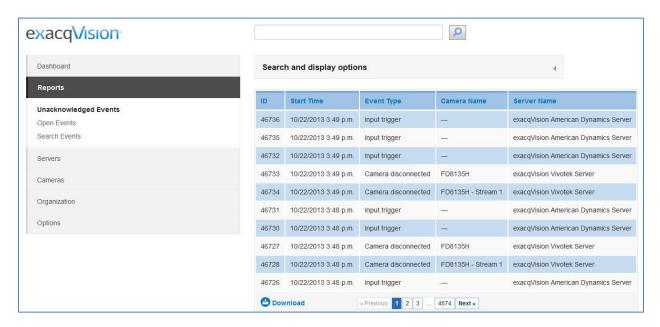




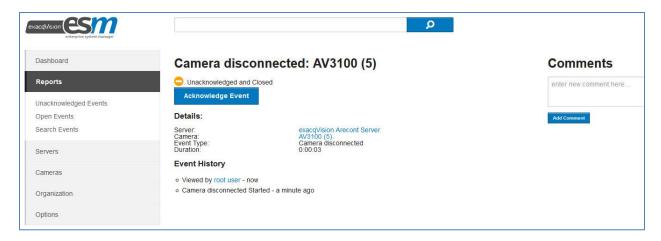
Reports

Reports allows you to

- view and manage a list of unacknowledged events.
- view a list of open events.
- search for specific events based on various criteria.



To acknowledge an event, click its entry to open a page containing detailed information about the event. (You can also open this page from the event list on the Dashboard.) Enter any applicable comments and click Add Comment. Then click Acknowledge Event.



You can also acknowledge all open events simultaneously using the Acknowledge All button near the bottom of the Dashboard.







The following events can be monitored. For information about selecting which events to monitor, see the "Organization" section of this manual.

Camera Events	Definition
Video Loss	Analog or IP video signal lost.
Video Motion	Camera has detected motion.
Camera Disconnected	Network cannot connect to analog or IP camera.

Server Events	Definition
Archive Alarm	Failure on archiving target, such as bad mount point.
Archive Task Alarm	Archive task failed.
Button Press	Button input on server pressed.
Content Age Alarm*	Video deleted before configured retention period. For example, the server is configured to retain video for 30 days, but the server does not have enough space to store that much video.*
Core Throttling	Server load requires that video frames be discarded to compensate.
DVR Board Failure	Capture card malfunctioned.
DVR Board Temperature	Capture card temperature not within recommended range.
Fan Alarm	Fan has failed on capture board
Fanspeed sensor alarm	System fan not operating at recommended speed.
Input Trigger	Discrete input on a hybrid server (or IP camera with alarm input) activated.
Login Failure	Login attempt failed on server.
Server Disconnected	Connection to server lost.
Server License Error	Invalid license on server.
Server License Warning	License will expire in less than 30 days.
Soft Trigger	Signal sent from Client to server.
Storage Alarm	Drive capacity threshold reached.
Storage Hardware Alarm	Server storage malfunctioned.
Temperature Sensor Alarm	System temperature not within recommended range.
Update Downloading	Software update download in progress.
Update Failure	Server software update failed.
Update Installing	Server software update installing.
Update Pending	Server restarting after software update.
Update Success	Server software update completed.
Voltage Sensor Alarm	System voltage not in recommended range.

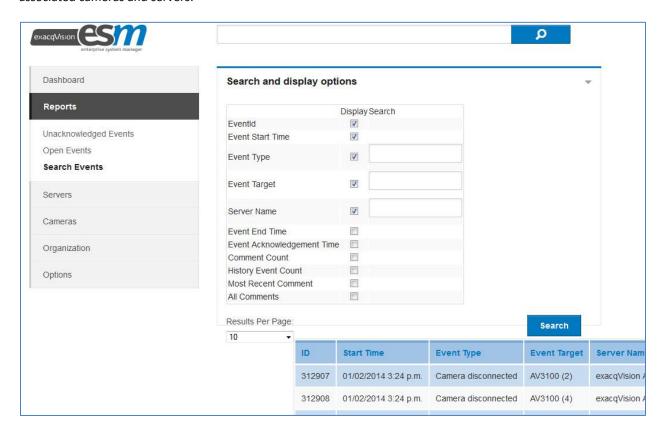
^{*}When a new system starts recording video for the first time, a content age alarm will not be triggered even though the age of the oldest recorded video is lower than the desired oldest content. This event cannot be triggered until the system automatically deletes data when the storage capacity is filled earlier than desired.

For information about troubleshooting Content Age Alarm events, see https://crm.exacq.com/kb/?kbid=64975.





The Search Events page allows you to find events based on various criteria, including event time, event type, and associated cameras and servers:





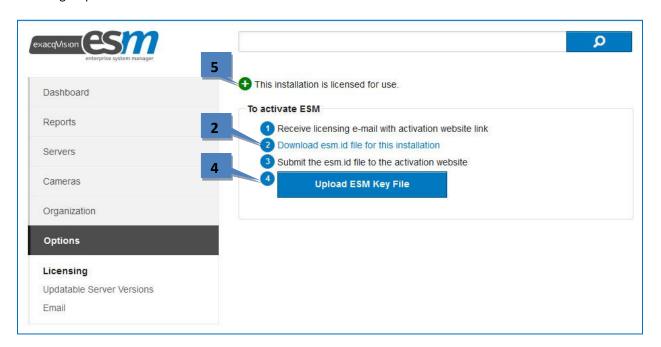


Options

Options displays information about licensing, available server versions, and the email notification server.

NOTE: For information about the Updatable Server Versions page, see the Schedule Updates section of this manual.

The Licensing page allows you to update the licenses of your servers. To obtain or update a license, complete the following steps:



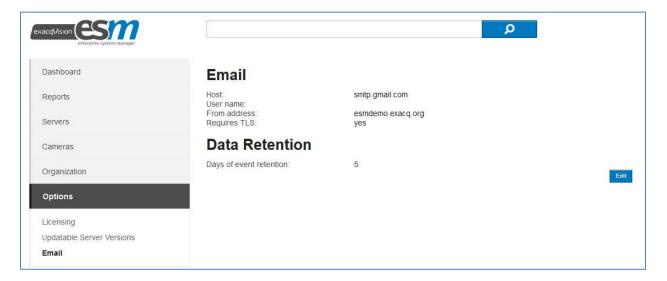
- 1. You should receive a licensing email that includes a link to the activation web site and licensing instructions (not shown here).
- 2. To download the ESM.ID file, click Download ESM.ID File For This Activation on the Licensing page. If the system is not connected to the Internet, save the file to a portable storage device.
- 3. Submit the ESM.ID file on the activation web site (not shown here). Obtain an ESM key file and save it to the system, or to a portable storage device if the system isn't connected to the Internet.
- 4. Apply the ESM key file by clicking Upload ESM Key File on the Licensing page and then browsing to the file's location.
- 5. After uploading the license file, ESM displays "This Installation is Licensed for Use" at the top of the Licensing page.





The Email page allows you to configure the email server used by ESM. Click Edit to enter or modify the email server information.

The Email page also contains a data retention setting, which allows you to automatically delete monitoring data after a certain number of days. Click Edit to change any email server or data retention settings.







Appendix A: SSL Certification for Apache

To configure and enable SSL certification for Apache in ESM, complete the following steps:

- 1. Obtain a signed certificate from an authority such as VeriSign.
- 2. Rename the artifacts before the extension to "server" (server.crt, for example).
- 3. Save the artifacts to the following directory:

Linux: /usr/local/exacq/esm/apache_solr/apache2/conf/ **Windows:** \exacqVisionESM\apache solr\apache2\conf\

- 4. To force any user of ESM to redirect to https, open the httpd.conf file (found in the location from the previous step. (at the above location)
- 5. In that opened file, remove the pound sign (#) from the following lines:

```
#RewriteCond %{SERVER PORT} !^443$
#RewriteRule ^/(.*) https://%{HTTP HOST}/$1 [NC,R=301,L]
```



