



User Manual

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1 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.



2 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>

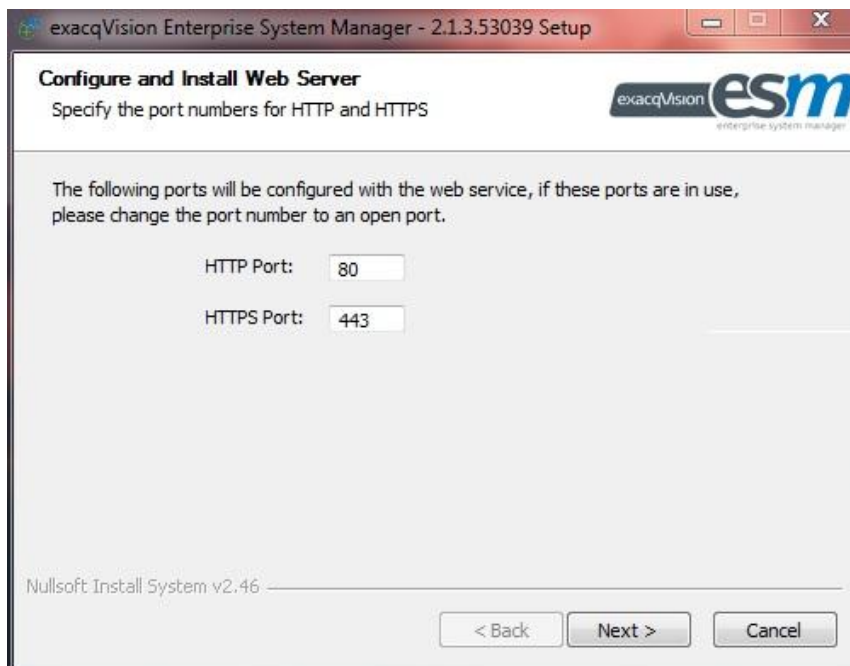
3 Installation

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.
- If you are using an existing external database, you must have network connectivity between the ESM system and the database.
- If you are using the Microsoft SQL Server Windows Authentication method, the user account that runs the installer must also have Windows Authentication access on the external database.
- 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.

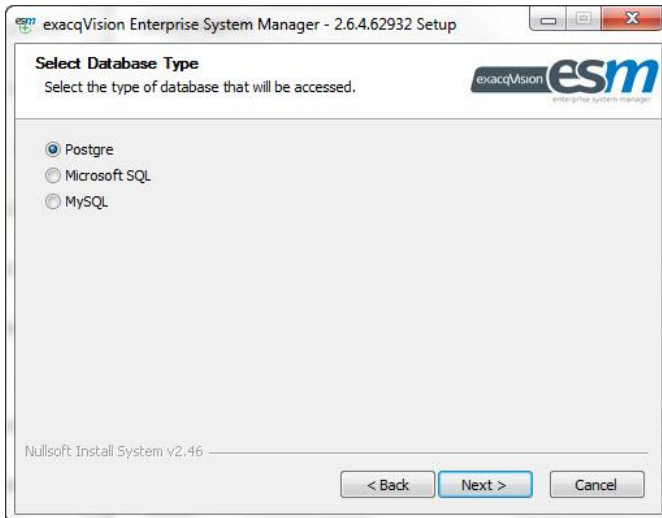
To install Enterprise System Manager, complete the following steps:

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.

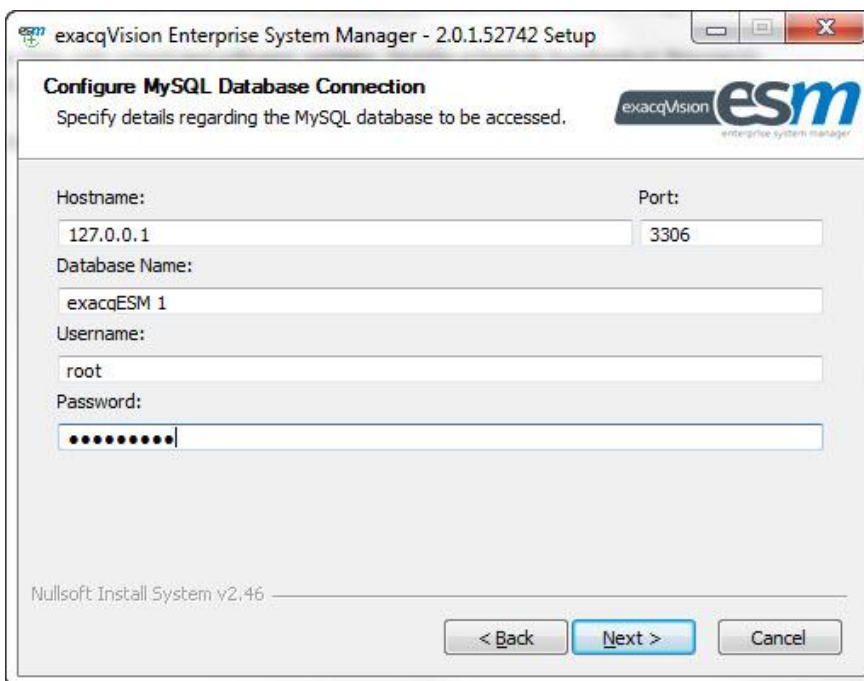


3. When the database types appear, select the type as follows:

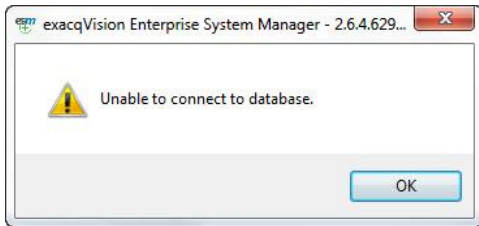
- **Postgre** (most simple choice for those with no existing database or database experience)
- **Microsoft SQL** (to connect to an existing Microsoft SQL database)
- **MySQL** (to connect to an existing MySQL database)



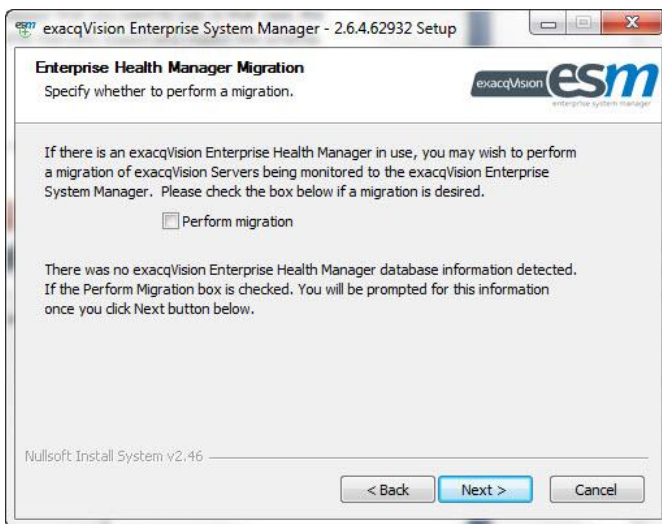
4. Configure the ESM database connection to match your database. If ESM and the database are located on the same server, enter 127.0.0.1 as the hostname, as shown in the following example. You cannot advance past this step without valid credentials.



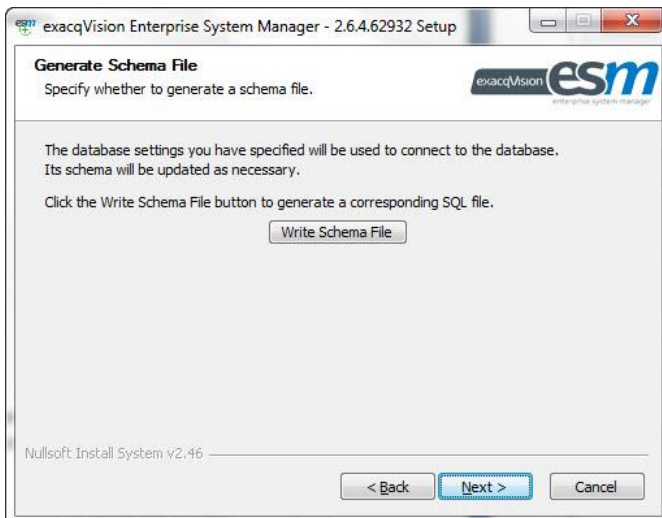
NOTE: If you are unable to connect to the database at this point, ensure the credentials are valid and verify network connectivity to the database.



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. Click Write Schema File to 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 Licensing section of this manual.

4 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 [add] next to Servers.
2. Enter all the information about the video server, including the IP address or hostname, Port number, and user name/password of an administrator account used to connect to the server.
3. If you want to stream video from the server on the camera pages, enter the IP address or hostname of an exacqVision web server associated with the server, along with a username and password used to connect to the web server.
4. Select a server group. Every server must be part of a group, and the default group is shown in the Group drop-down list.
5. Failover allows you to automatically or manually switch recording from one server to a spare if this server fails. You can select a Failover Group, or you can designate this server as a spare. Spare servers cannot be configured for regular recording. For more information, see the "Failover Groups" section of this document.
6. Select Browse to load a picture of the video server for easy identification among many servers in the install location.
7. In the Additional Data field, enter other optional information about the server that can assist an ESM user.
8. Click Save to complete the configuration, or click Save & New to repeat these steps for another server.
9. All cameras and events associated with the added servers are then displayed in the ESM dashboard (not shown; see Dashboard section for details).

The screenshot shows the 'Add Server' configuration page in the exacqVision Enterprise System Manager (ESM) interface. The page is titled 'Add Server' and has two tabs: 'Add One Server' (selected) and 'Bulk Add Servers'. The left sidebar contains a navigation menu with sections: DASHBOARD, REPORTS, SERVERS, CAMERAS, ORGANIZATION, and OPTIONS. The 'SERVERS' section is expanded, showing 'Servers' with an '[add]' button (callout 1), 'Privileges' with an '[add]' button, and 'Schedule Updates'. The main form area contains the following fields and controls:

- Address:** A text field for 'IP address or name e.g. evapi.exacq.com' (callout 2).
- Port:** A text field with '22609' and a dropdown arrow.
- User name:** A text field with 'admin'.
- Password:** A password field with masked characters and a 'Show' button (callout 3).
- Web server address:** A text field for 'IP address or name e.g. evapi.exacq.com'.
- Web server user name:** A text field.
- Web server password:** A password field with masked characters and a 'Show' button (callout 4).
- Group:** A dropdown menu with 'root' selected (callout 5).
- Failover group:** A dropdown menu with '(No Failover Group)' selected (callout 6).
- Designate as a spare:** A dropdown menu with 'No' selected (callout 7).
- Server image:** A 'Browse...' button and a message 'No file selected.' (callout 8).
- Additional data:** A large text area for optional information (callout 9).
- Buttons:** 'Save & New' and 'Save' buttons at the bottom right (callout 10).

The top right corner of the interface shows a welcome message 'Welcome, root user [logout]', 'Server Health' status with 3 red and 3 green icons, and 'Camera Health' status with 1 red and 0 green icons.

To import server lists from exacqVision Client, complete the following steps:

1. Export the list from the Add Systems page in exacqVision Client (not shown).
2. Select [add] next to Servers in ESM
3. Select the Bulk Add Servers page.
4. Click Browse and then locate the exported file from exacqVision Client.
5. Enter the username, password, and server group.
6. Click Add Servers.

When you open a server from the Servers list, you can view all the details about the server and several options:

1. These icons allow you to:



edit the server's configuration

delete the server

manually failover the server for maintenance

2. You can hide or show certain sections of the page by clicking their title buttons.

To create a custom privilege group for a server, complete the following steps:


The screenshot shows the 'Add Server Privilege' form. On the left is a sidebar with categories: DASHBOARD, REPORTS, SERVERS, CAMERAS, ORGANIZATION, and OPTIONS. The 'SERVERS' category is expanded, showing 'Servers', 'Privileges', and 'Schedule Updates'. Callout 1 points to the '[add]' link next to 'Privileges'. Callout 2 points to the 'Name' input field. Callout 3 points to the 'Group' dropdown menu, which currently shows 'root'. Callout 4 points to the 'Allow live viewing' section, which contains several checkboxes. Callout 5 points to the 'Save' button at the bottom right of the form.

1. Click [add] next to Privileges.
2. Enter a name for the custom privilege group.
3. Select the group or subgroup that should used the custom privilege group.
4. Select all the permissions that should be associated with the privilege group.
5. Click Save to complete the configuration, or click Save & New to repeat these steps for another custom privilege group.

The group is then listed on the Privileges page, along with the default privilege groups that are shown here:

The screenshot shows the 'Server Privileges' page. It has a sidebar on the left with 'Privileges' circled in red. The main content area has a tab 'Server Privileges' and a sub-tab 'Unmanaged Server Privileges'. Below is a table with three columns: Name, Group Name, and Actions.

Name	Group Name	Actions
Full Admin	root	
Live + Search	root	
Live Only	root	
Power User	root	
Search Only	root	
Download		Add Server Privilege

NOTE: Unmanaged Server Privileges contain users with multiple different privileges. To synch the user privilege to other servers in ESM, click the link icon  .

5 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.

DASHBOARD

REPORTS

Open Events

Unacknowledged Events

Search Events

SERVICES

Servers [add]

Privileges [add]

Schedule Updates

CAMERAS

ORGANIZATION

Users [add]

Groups [add]

Domain

OPTIONS

Rules

Group List

Group Name	Parent	Total Servers	Total Users
Engineering	root	0	0
Failover Test Servers	root	6	0
Product Management	root	0	0
root	—	8	1

Download

Add Group

Every server is associated with one group. To add a group, complete the following steps:

1. Select [add] next to Groups.
2. Select the Parent group from the drop-down list. By default, root is the top level of the group hierarchy. The new group can be created in root, or it can be created in any groups that have previously been created.
3. Enter a name for the new group.
4. Select a method by which to resolve user and privilege conflicts and synchronize accounts and privileges. The automated options are an easy way to automatically reverse any undesired or unauthorized changes to user accounts and privileges.
5. Select all the types of camera and server events to log.
6. Click Save to complete the group configuration, or Save & New to complete the first group and configure another.


The screenshot shows the 'Add Group' configuration page in a web application. The left sidebar contains a navigation menu with sections: DASHBOARD, REPORTS (with links for Open Events, Unacknowledged Events, and Search Events), SERVERS (with links for Servers [add], Privileges [add], Schedule, and Updates), CAMERAS, ORGANIZATION (with links for Users [add], Groups [add], and Domain), and OPTIONS (with links for Rules, Failover [add], Groups, Licensing, Updatable Server Versions, and Email). The main content area is titled 'Add Group' and contains the following fields and options:

- Parent group:** A dropdown menu currently showing 'root'. Callout 2 points to this field.
- Group name:** An empty text input field. Callout 3 points to this field.
- Synchronization conflict resolution:** A dropdown menu currently showing 'Inherit from parent group'. Callout 4 points to this field.
- Camera events to log to database:** A section with three checkboxes: 'Camera disconnected' (checked), 'Video loss' (checked), and 'Video motion' (unchecked). Callout 5 points to this section.
- Server events to log to database:** A section with 21 checkboxes, all of which are checked: Archive alarm, Archive task alarm, Button press, Content age alarm, Core throttling, DVR board failure, DVR board temperature, Fan alarm, Fanspeed sensor alarm, Input trigger, Login Failure, Network activity timeout, Power supply alarm, Server disconnected, Server license error, Server license warning, Soft trigger, Storage alarm, Storage hardware alarm, Temperature sensor alarm, Update downloading, Update failure, Update installing, Update pending, Update success, and Voltage sensor alarm.
- Buttons:** At the bottom right, there are two buttons: 'Save & New' and 'Save'. Callout 6 points to the 'Save' button.

Callout 1 points to the 'Groups [add]' link in the ORGANIZATION section of the sidebar.

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



When you select a group from the Groups list, you can view details about the group. You can also click the  button to export the server list. This list can be imported on the Add Systems page in exacqVision Client.

DASHBOARD

REPORTS

Open Events

Unacknowledged Events

Search Events

SERVICES

Servers [add]

Privileges [add]

Schedule Updates

CAMERAS

ORGANIZATION

Users [add]

Groups [add]

Domain

OPTIONS


Rules

Failover Groups [add]

Licensing

Updatable Server Versions

Email

root 

Camera logging:

Camera disconnected

Video loss

Server logging:

Archive alarm

Button press

Core throttling

DVR board temperature

Fanspeed sensor alarm

Login Failure

Power supply alarm

Server license error

Soft trigger

Storage hardware alarm

Update downloading

Update installing

Update success

Archive task alarm

Content age alarm

DVR board failure

Fan alarm

Input trigger

Network activity timeout

Server disconnected

Server license warning

Storage alarm

Temperature sensor alarm

Update failure

Update pending

Voltage sensor alarm

Synchronization Conflicts

Resolution: Automatically resolve conflicts

(No Conflicts)


Domain Associations

Sub-Groups

Servers

Users

Privileges

Domain Associations 

(None)

Sub-Groups

- Failover Test Servers
- Product Management
- Engineering

Servers

Users

Servers 1-5 of 8

FailoverTest_Win7_2

root

Disconnected

FailoverTest_Win7_3

Failover Test Servers

Disconnected

10.16.15.151

Failover Test Servers

Locating

FailoverTest_Ubuntu1004_4

Failover Test Servers

Health Warning

FailoverTest_Win7_1

Failover Test Servers

Health Warning

User 1 of 1

root user

Dec. 5, 2014, 5:02 p.m.

Privileges

Privileges 1-5 of 5

Full Admin

root

Live + Search

root

Live Only

root

Power User

root

Search Only

root

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The Add User page contains the following options:

1. Click [add] next to Users.
2. Enter a user name, password, name, and group information for the new user.
3. Select the server privileges that the user should have. The default list of privileges matches the default user permission levels available on exacqVision systems. Any custom privilege levels that have been created are also listed.
4. Select ESM Access if you want to enable web access to ESM for this user.

NOTE: The following options are enabled only if ESM Access is selected.

5. Select Is Admin to allow the user to 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.
6. Enter the user's first name and last name.
7. If desired, browse to an image that identifies the user.
8. Enter the user's email address.
9. Throttle Email Count allows you to limit the number of emails that can be sent over the period of time entered in Throttle Minutes. This can be used to prevent an extreme number of notifications over a short period of time.
10. Batch Email Frequency allows you to send a single email containing all notifications in increments as short as every 15 minutes. You can also choose to send the batch email even if no qualifying activity has occurred during the selected time period.
11. Click Save to create the user and push it to the selected group and its subgroups, or click Save & New to create the user and configure another.

The Domain Details page allows you view all connection properties of a domain. Click View All Domain Groups to display a list of all domain groups that have been imported from the domain.

exacqMission

esm

enterprise system manager

Welcome, root user [logout]

Server Health: 70% 60% 42%

Camera Health: 241% 0% 430%

DASHBOARD

REPORTS

Open Events

Unacknowledged Events

Search Events

SERVICES

Servers [add]

Privileges [add]

Schedule Updates

CAMERAS

ORGANIZATION

Users [add]

Groups [add]

Domain

OPTIONS

Rules

Licensing

Updatable Server

Versions

Email

cfsad.com

Details:

Binding Username: cn=ad
readonly,ou=fishers,ou=fs,ou=service
accounts,ou=us,ou=cfs
objects,dc=cfsad,dc=com

Port: 389

Security: TLS

Schema: Active Directory (Nested)

Time Between Queries: 5 minutes

Search Criteria:

User Search Base Dn: OU=CFS
Users,DC=cfsad,DC=com

Group Search Base Dn: OU=Fishers,OU=FS,OU=Groups,OU=US,OU=CFS
Objects,DC=cfsad,DC=com

Group Search Filter: (objectClass=group)

Attribute Names:

Attribute Name For Username: samAccountName

Attribute Name For First Name: givenName

Attribute Name For Last Name: sn

Attribute Name For Email Address: mail





Additional Information:

(None)

Group Associations

[view all domain groups]

Synchronized with domain: 2 minutes ago

Domain Group	ESM Group	Server Privilege	ESM Access	Actions
Everyone In Exacq	Demo Servers	(No Server Access)	Yes / Admin	 
SPNA-Exacq_Engineers	root	(No Server Access)	Yes / Admin	 

Add Association

The Group Associations table displays all associations between the domain's groups and the ESM groups. You can add to this list by using the Add Association link, and then selecting a Domain Group and ESM Group and whether the group should be an admin group. Click Associate when finished.

Add Group Associations

Domain: cfsad.com

Domain group: Dynamics GP Users

Server privilege: (No Server Access)





ESM group: root

☒ ESM access

☐ Is admin

Associate

Existing Associations

Domain Group	ESM Group	Server Privilege	ESM Access	Actions
Everyone In Exacq	Demo Servers	(No Server Access)	Yes / Admin	 
SPNA-Exacq_Engineers	root	(No Server Access)	Yes / Admin	 



Click the Edit button on the Domain Details page to edit any of the connection settings. For information about any of the fields available on the domain editing page, click Help On This Page and then Next until you see the applicable information. Click Apply when finished.

Edit cfsad.com

Hostname or IP:

Binding username:

Password:

Show

Port:

Security:

TLS

Schema:

Active Directory (Nested)

Minutes between queries:

Additional data:

Search criteria

User search base DN:

Group search base DN:

Group search filter:

Attribute names

Attribute name for username:

Attribute name for first name:

Attribute name for last name:

Attribute name for email address:

Apply

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.


To open Search and Display Options, click .

Search and Display Options ✕

	Column	Search String
<input checked="" type="checkbox"/>	Health	
<input checked="" type="checkbox"/>	Server name	
<input checked="" type="checkbox"/>	Group name	
<input checked="" type="checkbox"/>	Address	
<input type="checkbox"/>	User name	
<input type="checkbox"/>	Serial	
<input checked="" type="checkbox"/>	Version	
<input checked="" type="checkbox"/>	Status	
<input type="checkbox"/>	Mac	
<input checked="" type="checkbox"/>	Web server address	
<input type="checkbox"/>	Web server user name	
<input type="checkbox"/>	Server model	
<input checked="" type="checkbox"/>	Server platform	
<input type="checkbox"/>	SSA through	
<input type="checkbox"/>	Last status update	
<input type="checkbox"/>	Oldest content	
<input type="checkbox"/>	Desired oldest content	

Results per page:
50 ▼

Search

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.

6 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 applied as updates. Only global administrators and admins not assigned to groups can see this information.

The screenshot shows the 'Updatable Server Versions' page in the Exacq ESM interface. The left sidebar has a navigation menu with categories: DASHBOARD, REPORTS, SERVERS, CAMERAS, ORGANIZATION, and OPTIONS. The 'Updatable Server Versions' option under the OPTIONS category is highlighted with a red circle. The main content area is titled 'Server Versions' and displays a list of available updates for different operating systems and hardware. The list is organized into sections: Linux (5), Windows (4), Edge AXIS ARTPEC3 (0), Edge AXIS ARTPEC4 (0), and Edge AXIS ARM (0). Each section shows a list of version numbers and their counts. For example, under Linux, there are three versions: 6.6.0.71575 (3), 6.5.9000.71536 (1), and 6.4.5.69578 (1). On the right side of the page, there is a 'Update Server Manifest' section with two buttons: 'Refresh From Exacq' and 'Refresh From Zip File'. Below these buttons is a checkbox labeled 'Show All Versions'.

The right side of the page allows you to do the following:

- **Refresh From Exacq.** If the system is connected to the Internet, use this option to obtain a list of available software releases.
- **Refresh from 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. Click Schedule Updates.
2. 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.
3. 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.**
4. Select the date and time for the update from the drop-down list.
5. Click Add to Scheduled Updates.
6. Verify that the servers are now listed in the Scheduled Updates table. To remove a server from the list, click Unschedule.

The screenshot shows the 'Schedule Server Updates' interface. On the left is a sidebar with navigation links: DASHBOARD, REPORTS (Open Events, Unacknowledged Events, Search Events), SERVERS (Servers [add], Privileges [add], Schedule Updates), CAMERAS, ORGANIZATION (Users [add], Groups [add], Domain), and OPTIONS (Rules, Licensing, Updatable Server, Versions, Email). The main area is titled 'Schedule Server Updates' and contains three sections: 'Servers to Update', 'Update Parameters', and 'Scheduled Updates'. Callout 1 points to the 'Schedule Updates' link in the sidebar. Callout 2 points to the 'Servers to Update' section, which includes a '[filter options]' link and a table of servers. The table has columns for server ID, OS, and version. Callout 3 points to the 'Version to be installed' dropdown menu, which currently shows '6.4.5.69578'. Callout 4 points to the 'Date and time of install' dropdown menu, which currently shows '2014-12-05T14:59'. Callout 5 points to the 'Add to Scheduled Updates' button. Callout 6 points to the 'Scheduled Updates' section, which currently displays 'No currently scheduled updates'.

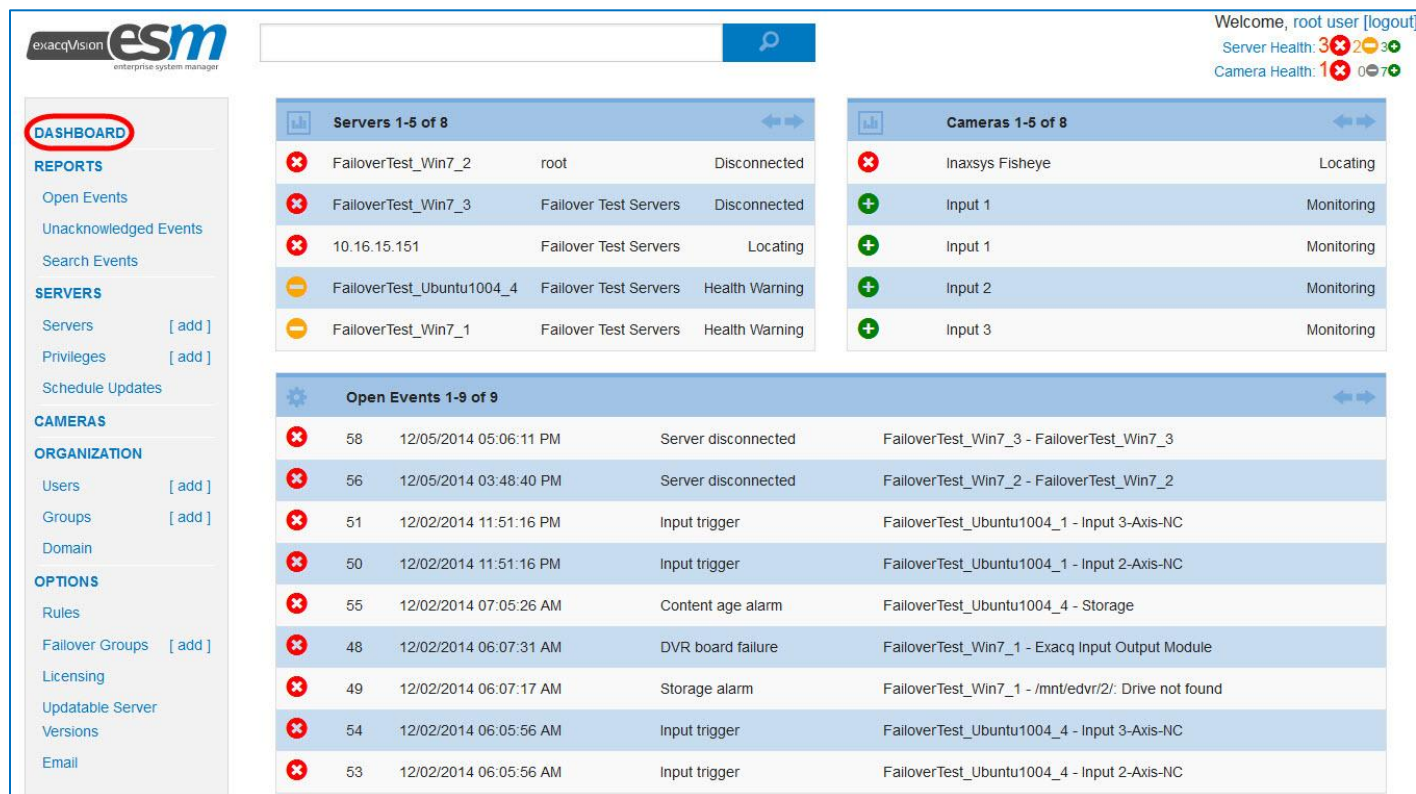
Server ID	OS	Version
2ULinux3216T-KVM:7	Linux	6.4.5.69578
2UZH1606TLinux-KVM_B	Linux	6.4.2.67554
2UZH1606TWin-KVM:A	Windows	6.4.5.69578
D525-7008_KVM-1204:D	Linux	6.4.2.67554
D525-7016_KVM:C	Linux	6.4.2.67554

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:

	Server or camera not detected Event occurring and unacknowledged
	Health warning on server (such as temperature, storage alarm, archive alarm, CPU fan) Server license subscription expiring soon Event unacknowledged but open Event unacknowledged but closed
	Server or camera connected and operating Event acknowledged and closed

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



exacqVision **esm**
enterprise system manager

Welcome, root user [logout]
Server Health: 3  2  3 
Camera Health: 1  0  7 

DASHBOARD

REPORTS

- Open Events
- Unacknowledged Events
- Search Events

SERVERS

- Servers [add]
- Privileges [add]
- Schedule Updates

CAMERAS






ORGANIZATION

- Users [add]
- Groups [add]
- Domain






OPTIONS

- Rules
- Failover Groups [add]
- Licensing
- Updatable Server
- Versions
- Email










Servers 1-5 of 8


	FailoverTest_Win7_2	root	Disconnected
	FailoverTest_Win7_3	Failover Test Servers	Disconnected
	10.16.15.151	Failover Test Servers	Locating
	FailoverTest_Ubuntu1004_4	Failover Test Servers	Health Warning
	FailoverTest_Win7_1	Failover Test Servers	Health Warning

Cameras 1-5 of 8

	Inaxsys Fisheye	Locating
	Input 1	Monitoring
	Input 1	Monitoring
	Input 2	Monitoring
	Input 3	Monitoring

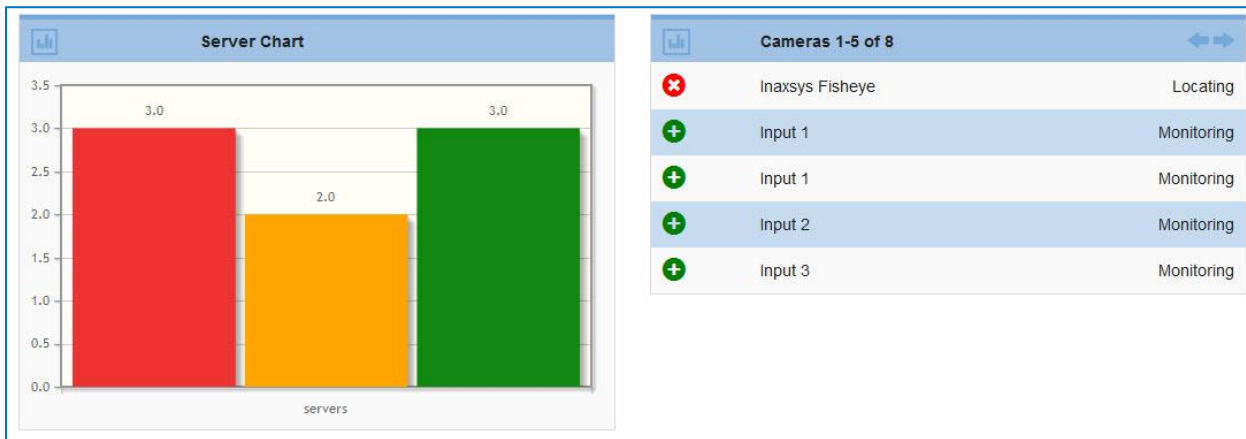
Open Events 1-9 of 9

	58	12/05/2014 05:06:11 PM	Server disconnected	FailoverTest_Win7_3 - FailoverTest_Win7_3
	56	12/05/2014 03:48:40 PM	Server disconnected	FailoverTest_Win7_2 - FailoverTest_Win7_2
	51	12/02/2014 11:51:16 PM	Input trigger	FailoverTest_Ubuntu1004_1 - Input 3-Axis-NC
	50	12/02/2014 11:51:16 PM	Input trigger	FailoverTest_Ubuntu1004_1 - Input 2-Axis-NC
	55	12/02/2014 07:05:26 AM	Content age alarm	FailoverTest_Ubuntu1004_4 - Storage
	48	12/02/2014 06:07:31 AM	DVR board failure	FailoverTest_Win7_1 - Exacq Input Output Module
	49	12/02/2014 06:07:17 AM	Storage alarm	FailoverTest_Win7_1 - /mnt/edvr/2/: Drive not found
	54	12/02/2014 06:05:56 AM	Input trigger	FailoverTest_Ubuntu1004_4 - Input 3-Axis-NC
	53	12/02/2014 06:05:56 AM	Input trigger	FailoverTest_Ubuntu1004_4 - Input 2-Axis-NC

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



This example shows the servers in chart format and the cameras in list format:



- For events, you can view either a list or a chart, and you can also select whether to display open events or unacknowledged events. Click the gear icon to view these options:



This example shows unacknowledged events in list format:

The screenshot shows a settings menu for 'Open Events 1-9 of 9'. The menu has two sections: 'LIST' and 'CHART'. Under 'LIST', 'Open Events' is selected and 'Unacknowledged Events' is highlighted with a mouse cursor. Under 'CHART', 'Open Events' and 'Unacknowledged Events' are listed. Below the menu, a table of unacknowledged events is displayed.

Event ID	Timestamp	Event Description	Location/Device
55	12/02/2014 07:05:26 AM	Content age alarm	FailoverTest_Ubuntu1004_4 - Storage
48	12/02/2014 06:07:31 AM	DVR board failure	FailoverTest_Win7_1 - Exacq Input Output Module
49	12/02/2014 06:07:17 AM	Storage alarm	FailoverTest_Win7_1 - /mnt/edvr/2/: Drive not found
54	12/02/2014 06:05:56 AM	Input trigger	FailoverTest_Ubuntu1004_4 - Input 3-Axis-NC
53	12/02/2014 06:05:56 AM	Input trigger	FailoverTest_Ubuntu1004_4 - Input 2-Axis-NC

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

8 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.

DASHBOARD	Unacknowledged Event List ▼				
REPORTS					
Open Events					
Unacknowledged Events					
Search Events					
SERVERS					
Servers	[add]				
Privileges	[add]				
Schedule Updates					
CAMERAS					
ORGANIZATION					
Users	[add]				
Groups	[add]				
Domain					
OPTIONS					
Rules					
Licensing					
Updatable Server Versions					
Email					

ID	Start Time	Event Type	Event Target	Server Name
18813545	12/05/2014 03:18:07 PM	Video loss	Input 5	1320-7008_KVM.E
18813540	12/05/2014 03:17:58 PM	Video loss	Input 5	1320-7008_KVM.E
18813533	12/05/2014 03:17:50 PM	Video loss	Input 5	1320-7008_KVM.E
18813530	12/05/2014 03:17:42 PM	Video loss	Input 5	1320-7008_KVM.E
18813528	12/05/2014 03:17:35 PM	Video loss	Input 5	1320-7008_KVM.E
18813517	12/05/2014 03:17:30 PM	Video loss	Input 5	1320-7008_KVM.E
18813518	12/05/2014 03:17:30 PM	Video loss	Input 5	1320-7008_KVM.E
18813514	12/05/2014 03:17:28 PM	Video loss	Input 5	1320-7008_KVM.E
18813513	12/05/2014 03:17:26 PM	Video loss	Input 5	1320-7008_KVM.E
18813512	12/05/2014 03:17:24 PM	Video loss	Input 5	1320-7008_KVM.E

Download Previous 1 2 3 ... 19821 Next »

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.

Server disconnected: FailoverTest_Win7_2	
 Unacknowledged and Open	Comments
Acknowledge Event	<input type="text" value="enter new comment here..."/>
Details:	Add Comment
Server: FailoverTest_Win7_2	
Event Type: Server disconnected	
Start Time: Dec. 05, 2014, 03:48:40 p.m.	
Event History	
o Viewed by root user - Dec. 5, 2014, 10:04 p.m.	
o Server disconnected Started - Dec. 5, 2014, 3:48 p.m.	

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.

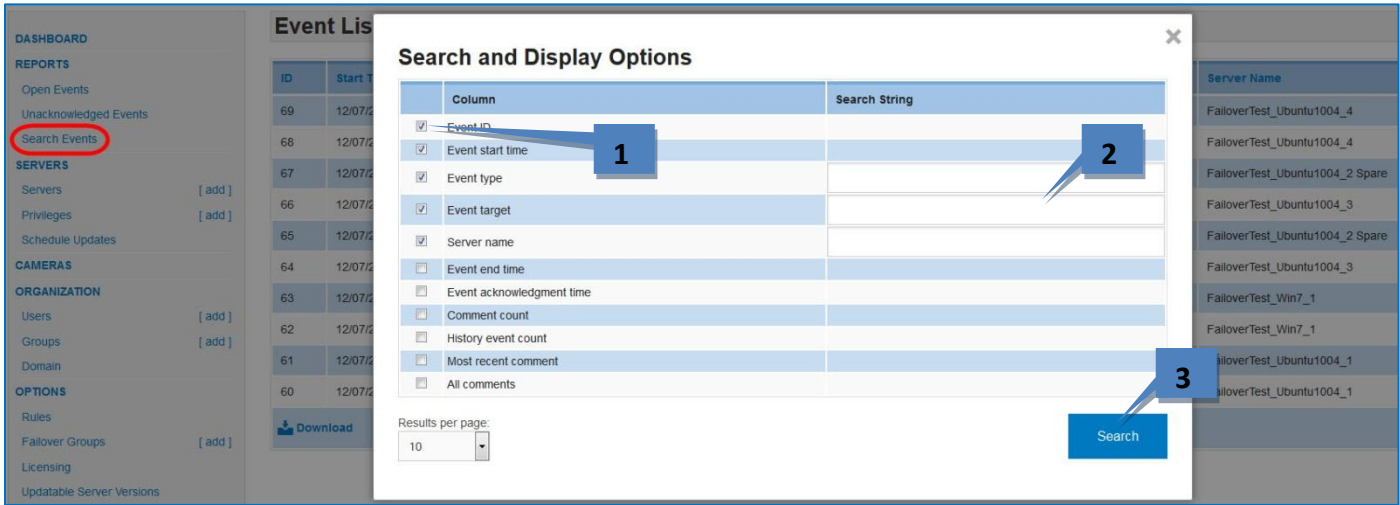
Server Events	Definition
Archive Alarm	Failure on archiving target, such as bad mount point.
Archive Task Alarm	Archive task failed.
Button Press	Button input on server pressed.
Content Age Alarm*	Video deleted before configured retention period. For example, the server is configured to retain video 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.
Power Supply Alarm	Alarm on a server with redundant power supply.
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.

Click the  icon to open the Search and Display Options window, and then complete the following steps:



1. Select the types of events you want to search for
2. If you selected Event Type, Event Target, or Server Name, enter any text strings associated with those options.
3. Click Search.

9 Rules

The Rules page allows you to configure email notifications based on a wide variety of situations. To create a rule, complete the following steps:

The screenshot shows the 'Add Rule' interface in the Exacq system. On the left is a sidebar menu with categories: DASHBOARD, REPORTS (Open Events, Unacknowledged Events, Search Events), SERVERS (Servers, Privileges, Schedule Updates), CAMERAS, ORGANIZATION (Users, Groups, Domain), and OPTIONS (Rules, Failover Groups, Licensing, Updatable Server Versions, Email). The 'Rules' option under 'OPTIONS' is highlighted with a blue box and a callout labeled '1'. The main area is titled 'Add Rule' and contains two rows of configuration. The 'if' row has dropdowns for 'any', 'event', 'starts', 'in', 'any group', 'on', 'any server', and 'for', followed by 'any camera'. The 'then' row has dropdowns for 'send email', 'immediately', and 'to', followed by 'root user'. A blue 'Add Rule' button is on the right, with a callout labeled '4'. Below the 'Add Rule' section is a 'Current Rules' section showing a single rule: 'if any event starts in any group on any server for any camera then send email immediately to me'. This rule has 'edit' and 'delete' links on the right. A callout labeled '5' points to this rule. A callout labeled '2' points to the 'if' row, and a callout labeled '3' points to the 'then' row.

1. Select Rules.
2. Use the drop-down lists in the If row to select any combination of options that will generate an email notification.
3. Use the drop-down lists in the Then row to select the timing and user to receive the notification.
4. Click Add Rule to save the rule.
5. View the Current Rules section to verify that the rule was created as desired. You can edit or delete it if necessary.

Repeat this procedure to create as many rules as needed to cover all situations that require an email notification.

10 Licensing

The Licensing page allows you to update the ESM license. To obtain or update a license, complete the following steps:


The screenshot shows the ESM web interface. On the left is a sidebar menu with categories: DASHBOARD, REPORTS (Open Events, Unacknowledged Events, Search Events), SERVERS (Servers, Privileges, Schedule Updates), CAMERAS, ORGANIZATION (Users, Groups, Domain), and OPTIONS (Rules, Failover Groups, Licensing, Updatable Server Versions, Email). The 'Licensing' option in the OPTIONS section is highlighted with a blue box and the number 2. The main content area is titled 'Licensing' and shows a status message 'This installation is licensed for use.' with a green plus icon, highlighted with a blue box and the number 6. Below this is a section 'To activate ESM' with three bullet points: 'Receive licensing e-mail with activation website link', 'Download esm.id file for this installation' (highlighted with a blue box and the number 3), and 'Submit the esm.id file to the activation website'. At the bottom of this section is a blue button labeled 'Upload ESM Key File'.

1. You should receive a licensing email that includes a link to the activation web site and licensing instructions (not shown here).
2. Select Licensing.
3. 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.
4. 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.
5. Apply the ESM key file by clicking Upload ESM Key File on the Licensing page and then browsing to the file's location.
6. After uploading the license file, ESM displays "This Installation is Licensed for Use" at the top of the Licensing page.

11 Email Options

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 the Edit button  to change any email server or data retention settings.

DASHBOARD

REPORTS

Open Events

Unacknowledged Events

Search Events

SERVERS

Servers [add]

Privileges [add]

Schedule Updates

CAMERAS

ORGANIZATION

Users [add]

Groups [add]

Domain


OPTIONS

Rules

Licensing

Updatable Server Versions

Email

Email 

Details:

Host: 10.16.21.23

Requires Tls: no

Esm Url: esmdemo.exacq.org

From Address: EsmDemo@exacq.org

Anonymous: yes

Data Retention:

Days Of Event Retention: 5

12 Failover Groups

Failover groups consist of associated protected servers and spare servers. If a protected server experiences hardware failure and cannot record video, ESM automatically fails over the recording configuration to a spare server. When the protected server is restored, recording switches back from the spare server to the protected server. You can also manually failover to a spare server if you need to perform maintenance on a protected server.

The following configurations are included in failover:

- Cameras
- Recording schedules
- Users
- Event Linking
- Saved layouts, views, groups, and maps
- Serial profiles
- Archiving
- Notification rules
- Auto Export rules

The following configurations are **not** included in failover:

- System IP address
- Storage (recorded video remains on the system where it was recorded)
- Analog cameras
- Camera licenses and software agreements

Each protected and spare server can be included in only one failover group, and each failover group must contain at least one protected server and one spare server. If multiple spare servers are available and a protected server fails, ESM selects the available spare server that is most compatible with the protected server. The Failover Group List shows the number of spares and protected servers in each failover group:

Name	Spare Servers	Protected Servers
Failover Group	2	6

To add a Failover Group, complete the following steps:

The screenshot shows the 'Add Failover Group' form in a web application. The left sidebar contains a navigation menu with sections: DASHBOARD, REPORTS (Open Events, Unacknowledged Events, Search Events), SERVERS (Servers [add], Privileges [add], Schedule Updates), CAMERAS, ORGANIZATION (Users [add], Groups [add], Domain), and OPTIONS (Rules, Failover Groups [add], Licensing, Updatable Server Versions, Email). The main form area is titled 'Add Failover Group' and contains the following fields and controls:

- 1**: Points to the '[add]' link next to 'Failover Groups' in the left sidebar.
- 2**: Points to the 'Name:' text input field, which contains 'Failover Group'.
- 3**: Points to the 'Spare Servers:' dropdown menu, which shows 'FailoverTest_Ubuntu1004_2 Spare, FailoverTest_Win7_2'.
- 4**: Points to the 'Protected Servers:' dropdown menu, which shows '6 selected'.
- 5**: Points to the 'Timeout prior to auto failover (in seconds):' text input field, which contains '30'.
- 6**: Points to the 'Apply' button.

1. Select [add] next to Failover Groups (or click Add Failover Group from the Failover Group List).
2. Enter a name for the Failover Group.
3. Select one or more spare servers. Servers are designated as spares on the server configuration page (see the "Add A Server" section of this document for more information). Any designated spare server that has not been associated with another failover group can be selected.
4. Select one or more protected servers. Cameras connected to these protected servers will be automatically recorded on a spare server if the protected server fails.
5. Select a timeout value, which is the number of seconds the protected servers must fail to record before the automatic failover begins.
6. Click Apply to add the failover group to the Failover Group List, as shown on the previous page.

When you select a Failover Group from the Failover Group List, information about the group is displayed:

DASHBOARD

REPORTS

SERVERS

CAMERAS

ORGANIZATION

OPTIONS

Open Events

Unacknowledged Events

Search Events

Servers [add]

Privileges [add]

Schedule Updates

Users [add]

Groups [add]

Domain

Rules

Failover Groups [add]

Failover Group

Details:

Failover Compatibility Issues:

Timeout before automatic failover: 30 seconds

(No Compatibility Issues)

Spare Servers

Protected Servers

Spares 1-2 of 2

✖

FailoverTest_Win7_2

Unknown

+

FailoverTest_Ubuntu1004_2 Spare

Spare Standby

Protected Server

✖

FailoverTest_Win7_3

✖

10.16.15.151

⚠

FailoverTest_Ubuntu1004_4

⚠

FailoverTest_Win7_1

+

FailoverTest_Ubuntu1004_1

Note the Failover Compatibility Issues section. Protected servers and spare servers in the same failover group do not need to be identical, but certain differences could be important. For example:

- If a spare server is licensed for 16 cameras and a protected server is licensed for 32 cameras, only the first 16 cameras that connect to the spare server after a failover are recorded.
- If a spare server has less memory or hard drive space, recording performance could be reduced compared to the performance on the protected server.
- Servers with previous versions that do not support failover, or certain types of servers such as exacqVision Edge servers, will be listed as Not Supported.

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]
```