

# CA Enterprise Log Manager

## Release Notes

Release 12.5.01



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## CA Product References

This document references the following CA products:

- CA Access Control
- CA Audit
- CA ACF2™
- CA Directory
- CA Embedded Entitlements Manager (CA EEM)
- CA Enterprise Log Manager
- CA Identity Manager
- CA IT Process Automation Manager (CA IT PAM)
- CA NSM
- CA Security Command Center (CA SCC)
- CA Service Desk
- CA SiteMinder®
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## Contact CA Support

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- Product and documentation downloads
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## Documentation Changes

The following documentation updates have been made since the last release of this documentation:

- **New and Changed Features in r12.5.01**—This chapter describes integration of CA Enterprise Log Manager with ObservIT, keyed lists, header and footer in report server, datetime format, queries, replacing IP address with a hostname in an event source, AgentDiagnostics utility, considerations for CA Access Control users, CA Enterprise Log Manager as a virtual appliance, and agent support on a Windows 64-bit system.
- The following Known Issues were removed as they were either fixed or no longer apply in this update:
  - Time Fields Treated Differently in Correlation Rule Test
  - view\_incidentevent\_byid Table Does Not Collect Incident Events
  - Custom Gauge Query Shows Zero Events
  - Query Result Contains Garbage Values
  - Query Wizard Simple Filter Fails with Special Characters
  - Queries Show No More Than 100,000 Rows

**More information:**

[New and Changed Features in r12.5.01](#) (see page 37)



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# Chapter 1: Welcome

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Welcome to CA Enterprise Log Manager. This document contains information about operating system support, enhancements, known issues, and information about contacting CA Technical Support.

## Upgrading to CA Enterprise Log Manager Version 12.5 through Subscription

To upgrade CA Enterprise Log Manager to version r12.5, first upgrade to version r12.5 of the Log Manager product, then update all other CA Enterprise Log Manager modules, such as Content, Integration and Agent modules. You perform all upgrade tasks through Subscription.

**Important!** Upgrade the management CA Enterprise Log Manager server before you install any new CA Enterprise Log Manager servers in your network. Doing so allows the new servers to register properly.

### To upgrade to CA Enterprise Log Manager version r12.5

1. Upgrade to Log Manager version r12.5.
  - a. Click the Administration tab, Services subtab, expand Subscription Module, and select your CA Enterprise Log Manager management server. By default, this server is the first you installed in your CA Enterprise Log Manager environment.
  - b. Click the global/local button to switch to local service configuration.
  - c. In the RSS feed URL field, type:  
`http://securityupdates.ca.com/CA-ELM/r12.5/RSSFeed_PreUpgrade.xml`
  - d. In the Modules to Download list, use the arrows to move the Log Manager module from Available to Selected.
  - e. Verify that all other required values are configured for the selected server.
  - f. Click Update Now.

When the update is complete, a self-monitoring event appears, indicating that the Log Manager update has been installed. iGateway automatically restarts and your CA Enterprise Log Manager Log Manager session closes. The iGateway restart takes approximately 5 minutes.

- g. Log in to CA Enterprise Log Manager. In the upper right corner of the Log Manager browser window, click About and confirm that the version number indicates the new version of CA Enterprise Log Manager.

**Note:** The upgraded CA Enterprise Log Manager r12.5 user interface lists both Subscription Module and Subscription Service under the Administration tab, Services subtab. Subscription Module reflects the interface and functionality previous to the r12.5 update, and is present to help ensure proper communication between all CA Enterprise Log Manager servers during the upgrade to r12.5. Once you have upgraded the Log Manager product on a given CA Enterprise Log Manager server to version r12.5, use only Subscription Service to perform all further subscriptions tasks and configuration changes.

- h. In a federated environment, repeat this process for all CA Enterprise Log Manager servers in your environment, in the following order:
      - Upgrade all subscription proxies to the new version of Log Manager
      - Upgrade all subscription clients to the new version of Log Manager

2. Update all other CA Enterprise Log Manager modules.

- a. Click the Administration tab, click the Services subtab, expand Subscription Service, and select your CA Enterprise Log Manager management server. By default, this server is the first you installed in your CA Enterprise Log Manager environment.

**Important!** After you perform Step 1, the upgraded CA Enterprise Log Manager r12.5 user interface lists both Subscription Module and Subscription Service. Use only Subscription Service, and not Subscription Module, to perform all further subscriptions tasks, including the following steps. Subscription Module is present only to help ensure proper communication between all CA Enterprise Log Manager servers during the upgrade to r12.5; do not use it to perform subscription functions post-upgrade.

- b. Click the Administration tab, and click the global/local button to switch to local service configuration.
- c. In the RSS feed URL field, type:  
`http://securityupdates.ca.com/CA-ELM/r12.5/RSSFeed.xml`
- d. Click Browse, select all CA Enterprise Log Manager modules, and click OK. CA Enterprise Log Manager modules can include Content, Integration, Operating System and Agent updates.
- e. Verify that all other required values are configured for the selected server.
- f. Click Update Now.  
  
When update is complete, a self-monitoring event appears, indicating that the selected updates have been installed.
- g. If an Operating System module was among the updates installed, reboot the CA Enterprise Log Manager server.
- h. In a federated environment, repeat this process for all CA Enterprise Log Manager servers in your environment, in the following order:
  - Update all subscription proxies with all current CA Enterprise Log Manager modules
  - Update all subscription clients with all current CA Enterprise Log Manager modules

3. If Agent or Connector modules were among the updates, install updated agents and connectors.
  - a. Click the Administration tab, click the Log Collection subtab, and select Agent Explorer.
  - b. Determine whether to apply subscription updates at the agent explorer level, the agent group level, or the agent level. Select the desired level and click the Subscription button.
  - c. Apply updates to agents.
  - d. Click the Subscription button again.
  - e. Apply updates to connectors.

**Note:** For detailed instructions on installing Agents and Connectors, see the *CA Enterprise Log Manager Administration Guide*.

4. Reregister third-party and other CA products, like CA Access Control, that display CA Enterprise Log Manager reports in their native interfaces using the Open API calls.

Completing this step updates the certificates that changed in this release. See the *CA Enterprise Log Manager API Programming Guide* for more information.

**Note:** Review the Release Notes for any Known Issues related to subscription upgrades. If you are upgrading from a release earlier than 12.5, you may experience issues requiring a [manual installation](#) (see page 85) of the pre-12.5 upgrade package.



## Upgrading to CA Enterprise Log Manager Version 12.5 through Offline Subscription

To upgrade CA Enterprise Log Manager to version r12.5 using offline subscription, you must first download the offline upgrade file package from the CA FTP site and manually copy it to all offline proxies. You can then upgrade all servers to version r12.5 of the Log Manager product. You must then repeat this process to update all other CA Enterprise Log Manager modules, such as Content, Integration and Agent modules as well.

**Note:** The following instructions assume that your entire CA Enterprise Log Manager environment is offline, rather than a mixed environment where some servers are online while others are offline. While it is possible to implement a mixed subscription architecture, it is considered best practice to design either an entirely online or entirely offline subscription architecture.

**Important!** Upgrade the management server before you upgrade or install any new CA Enterprise Log Manager servers in your network. Doing so allows the servers to register properly.

The process to upgrade to CA Enterprise Log Manager Version 12.5 through offline subscription is as follows. For details on each step, see the procedures references in the More Information section.

1. Download and install the pre-12.5 offline upgrade file package from the CA FTP site.
2. Upgrade all subscription proxies to Log Manager version r12.5.
3. Upgrade all subscription clients to Log Manager version r12.5.
4. Download and install the 12.5 offline upgrade file package from the CA FTP site.
5. Update all proxies with all other CA Enterprise Log Manager version r12.5 modules.
6. Update all clients with all other CA Enterprise Log Manager version r12.5 modules.
7. If Agent or Connector modules were among the updates, install updated agents and connectors.

After completing the upgrade process, reregister third-party and other CA products, like CA Access Control, that display CA Enterprise Log Manager reports in their native interfaces using the Open API calls. Completing this step updates the certificates that changed in this release. See the *CA Enterprise Log Manager API Programming Guide* for more information.

**Note:** Review the *Release Notes* for any Known Issues related to subscription upgrades. If you are upgrading from a release earlier than 12.5., you may experience issues requiring a [manual installation](#) (see page 85) of the pre-12.5 upgrade package.

### More information

[Download and Install the Pre-12.5 Offline Upgrade Package](#) (see page 18)

[Download and Install the 12.5 Offline Upgrade Package](#) (see page 20)

[Update Proxies and Clients With CA Enterprise Log Manager Modules](#) (see page 21)

[Install Updated Agents and Connectors](#) (see page 22)

## Download and Install the Pre-12.5 Offline Upgrade Package

Begin the upgrade by downloading and installing the pre-12.5 offline file package.

### To download and install the pre-12.5 offline upgrade file package from the CA FTP site

1. On a system with Internet or FTP access, navigate to the FTP offline subscription site:

```
ftp://ftp.ca.com/pub/elm/connectors/ftp/outgoing/pub/elm/ELM_Offline_Subscription
```

The directory index displays a folder for each major CA Enterprise Log Manager release.

2. Select the 12.5\_Offline\_Subscription folder, and the Pre\_12.5\_Upgrade folder.
3. Download the pre-12.5 offline subscription update package. The file name follows the following format:

```
subscription_12_5_xx_yy.tar
```

4. Using physical media such as a disk, or using scp, manually copy the .tar file to the following path on your offline proxy:

```
/opt/CA/LogManager/data
```

5. Log into the default subscription proxy through ssh as the caelmadmin user.
6. Switch to root.
7. Navigate to the following path:

```
/opt/CA/LogManager/data
```

8. Stop iGateway.
9. Rename the existing subscription directory under /data to subscription.bak. For example, rename it to mydir/data/subscription.bak.
10. Untar the tar file using the following command:

```
tar -xvf subscription_12_<x_x_x>.tar
```

This creates a subscription folder and extracts the 12.5 upgrade modules. Correct ownership and permissions are automatically set.

11. Restart iGateway.

## Upgrade Log Manager Application on All Proxies and Clients

Upgrade subscription proxies, then subscription clients to CA Enterprise Log Manager r12.5.

### To upgrade subscription proxies and clients to r12.5

1. Upgrade all subscription proxies to Log Manager version r12.5.
  - a. Log in to a system in your CA Enterprise Log Manager environment.
  - b. Click the Administration tab, Services subtab, expand Subscription Module, and select your CA Enterprise Log Manager management server. By default, this is the first server you installed in your CA Enterprise Log Manager environment.
  - c. In the Modules to Download list, use the arrows to move the Log Manager module from Available to Selected. Remove any other modules from the Selected list.
  - d. If Offline Subscription Proxy is cleared, select it.
  - e. Verify that all other required values are configured for the selected server.
  - f. Click Save.
  - g. Click Update Now.

When update is complete, a self-monitoring event appears, indicating that the Log Manager update has been installed. iGateway automatically restarts and your CA Enterprise Log Manager Log Manager session closes.
  - h. Log in to CA Enterprise Log Manager. In the upper right corner of the Log Manager browser window, click About and confirm that the version number indicates the new version of CA Enterprise Log Manager.

**Note:** The upgraded CA Enterprise Log Manager r12.5 user interface lists both Subscription Module and Subscription Service under the Administration tab, Services subtab. Subscription Module reflects the interface and functionality previous to the r12.5 update, and is present to help ensure proper communication between all CA Enterprise Log Manager servers during the upgrade to r12.5. Once you have upgraded the Log Manager product on a given CA Enterprise Log Manager server to version r12.5, use only Subscription Service to perform all further subscriptions tasks and configuration changes.
  - i. In an environment with multiple subscription proxies, copy the offline update .tar file to each proxy in your environment, untar the file according to the instructions in the Download and Install the Pre-12.5 Offline Upgrade Package topic, and repeat this process for all proxies.
2. Upgrade all subscription clients to Log Manager version r12.5.
  - a. Click the Administration tab, Services subtab, expand Subscription Module, and select a subscription client.

**Note:** Offline subscription clients automatically receive all modules that are manually installed on their offline proxy. The contents of the proxy server control which updates the subscription client receives. Modules selected at the local level for an offline client have no effect.

- b. Verify that all other required values are configured for the selected server. If you change any settings, click Save.
- c. Click Update Now.

When update is complete, a self-monitoring event appears, indicating that the Log Manager update has been installed.

- d. Repeat this process for all clients in your environment.

**Note:** Instead of manually updating each client, you can also set a global subscription schedule to begin an update after confirming that all proxies have been upgraded to version r12.5.

## Download and Install the 12.5 Offline Upgrade Package

After upgrading all proxies and clients to Log Manager version 12.5, download and install the 12.5 offline upgrade file package from the CA FTP site.

### To download and install the 12.5 offline upgrade file package

1. On a system with Internet or FTP access, navigate to the FTP offline subscription site:  
  
`ftp://ftp.ca.com/pub/elm/connectors/ftp/outgoing/pub/elm/ELM_Offline_Subscription`  
  
The directory index displays a folder for each major CA Enterprise Log Manager release.
2. Select the 12.5\_Offline\_Subscription folder.
3. Download the offline subscription update package. The file name follows the following format:  
  
`subscription_postupgrade_12_5_xx_yy.zip`
4. Using physical media such as a disk, or using scp, manually copy the .zip file to the following file path on your offline proxy:  
  
`/opt/CA/LogManager/data/subscription/offline`

## Update Proxies and Clients With CA Enterprise Log Manager Modules

After upgrading all servers to Log Manager version 12.5, and installing the 12.5 offline upgrade file package, update subscription proxies, and then subscription clients with all additional CA Enterprise Log Manager modules.

### To update proxies and clients with all additional modules

1. Update all proxies with all other CA Enterprise Log Manager version r12.5 modules.

- a. Log in to a system in your CA Enterprise Log Manager environment.
- b. Click the Administration tab, Services subtab, expand Subscription Service and select your CA Enterprise Log Manager management server.

The Subscription Service Configuration for the selected CA Enterprise Log Manager server appears.

- c. Click the Administration tab.
- d. In the File drop-down, select the offline update .zip file you copied to the server, and click Browse.

The Modules Available for Download dialog appears.

- e. Select the modules you want to download. Modules can include Content, Integration, Operating System and Agent updates.
- f. Click Save.
- g. Click Update Now.

When update is complete, a self-monitoring event appears, indicating that the selected updates have been installed.

- h. In an environment with multiple subscription proxies, copy the offline update .zip file to each proxy in your environment, and repeat this process for all proxies.

2. Update all clients with all other CA Enterprise Log Manager version r12.5 modules.

- a. Click the Administration tab, Services subtab, expand Subscription Module, and select a subscription client.

**Note:** Offline subscription clients automatically receive all modules that are manually installed on their offline proxy. The contents of the proxy server control which updates the subscription client receives. Modules selected at the local level for an offline client have no effect.

- b. Verify that all other required values are configured for the selected server. If you change any settings, click Save.
- c. Click Update Now.

- d. When update is complete, a self-monitoring event appears, indicating that all updates have been installed.
- e. Repeat this process for all clients in your environment.

**Note:** Instead of manually updating each client, you can also set a global subscription schedule to begin an update after confirming that all proxies have been updated with the selected r12.5 modules.

## Install Updated Agents and Connectors

If Agent or Connector modules were among the 12.5 update modules, install updated agents and connectors.

### To install updated agents and connectors

1. Click the Administration tab, click the Log Collection subtab, and select Agent Explorer.
2. Determine whether to apply subscription updates at the agent explorer level, the agent group level, or the agent level. Select the desired level and click the Subscription button.
3. Apply updates to agents.
4. Click the Subscription button again.
5. Apply updates to connectors.

**Note:** For detailed instructions on installing Agents and Connectors, see the *CA Enterprise Log Manager Administration Guide*.

# Chapter 2: Operating Environment

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This section contains the following topics:

[Hardware and Software Environments](#) (see page 23)

[Power Setting Prerequisites for Certain HP and IBM Computers](#) (see page 24)

[Monitor Resolution](#) (see page 24)

[CA EEM Server References](#) (see page 25)

## Hardware and Software Environments

CA Enterprise Log Manager installs the Red Hat Enterprise Linux operating system as part of its initial setup.

The [CA Enterprise Log Manager Certification Matrix Index](#) lists the links for all CA Enterprise Log Manager certification matrices, including the following:

- Server hardware and software  
[CA Enterprise Log Manager Server Hardware and Software Certification Matrix](#)
- Agent hardware and software  
[CA Enterprise Log Manager Agent Hardware and Software Certification Matrix](#)
- Log sensors and related operating system support  
[CA Enterprise Log Manager Log Sensor Certification Matrix](#)
- Product integrations  
[CA Enterprise Log Manager Product Integration Matrix](#)
- Certifications with CA Audit iRecorders  
[CA Enterprise Log Manager Audit iRecorder Certification Matrix](#)

You can access CA Enterprise Log Manager with the following browsers and the Adobe Flash 9 or 10 player:

- Internet Explorer 7 or 8 (FIPS or Non-FIPS modes)
- Mozilla Firefox 3.5 or later and 3.6 or later (FIPS and Non-FIPS modes)

**Note:** File exports do not work when you access CA Enterprise Log Manager with a Mozilla Firefox browser.

## Power Setting Prerequisites for Certain HP and IBM Computers

When CA Enterprise Log Manager is installed on HP Proliant DL 380G5 Series servers and IBM X3650 Series servers with default power use settings, iGateway issues may occur, resulting in slow operation, or other interface issues that may require a manual service restart.

To prevent this potential issue, change the settings before you install CA Enterprise Log Manager.

**Note:** If you have already installed CA Enterprise Log Manager, you can stop the computer, change the settings as outlined, and restart the computer.

### To change the power use settings on HP Proliant DL 380G5

1. Access the BIOS Settings menu.
2. Navigate to the power use settings.
3. Select “OS Control Mode” from the available choices.

**Note:** The default setting is “HP Dynamic Power Settings Mode”.

### To change the power use settings on IBM X3650

1. Access the BIOS Settings menu.
2. Navigate to the power use settings.
3. Disable the following parameters:
  - Active Energy Manager
  - Enhanced C1 Power State

## Monitor Resolution

The minimum requirement for monitor resolution is 1024 x 768 pixels. For best viewing, a monitor resolution of 1280 x 1024 is recommended.



## CA EEM Server References

For information about operating system support for an existing CA EEM server, see the *CA Embedded Entitlements Manager Getting Started* guide. This guide is included on the CA Enterprise Log Manager bookshelf.

You can also download this bookshelf from Technical Support. For assistance, contact CA Support at <http://ca.com/support>.



# Chapter 3: Features

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This section contains the following topics:

[Log Collection](#) (see page 27)

[Log Storage](#) (see page 29)

[Standardized Presentation of Logs](#) (see page 30)

[Compliance Reporting](#) (see page 31)

[Policy Violation Alerting](#) (see page 33)

[Role-Based Access](#) (see page 34)

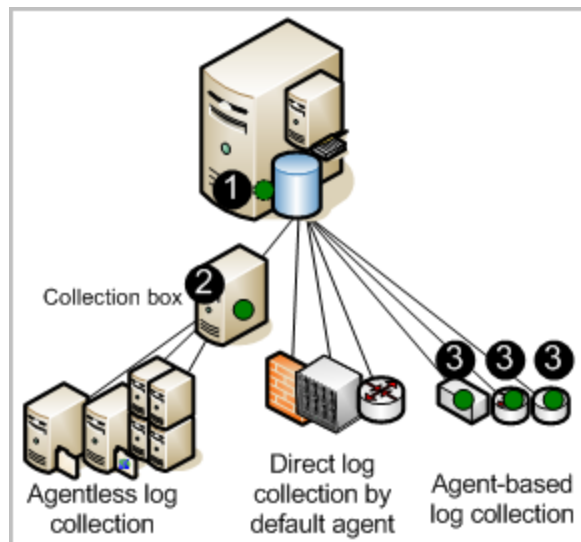
[Subscription Management](#) (see page 35)

[Support for IPv6 IP Addresses](#) (see page 36)

## Log Collection

The CA Enterprise Log Manager server can be set up to collect logs using one or more supported techniques. The techniques differ in the type and location of the component that listens for and collects the logs. These components are configured on agents.

The following illustration depicts a single-server system, where agent locations are indicated with a dark (green) circle.



The numbers on the illustration refer to these steps:

1. Configure the default agent on the CA Enterprise Log Manager to fetch events directly from the syslog sources you specify.
2. Configure the agent installed on a Windows collection point to collect events from the Windows servers you specify and transmit them to the CA Enterprise Log Manager.
3. Configure agents installed on hosts where event sources are running to collect the configured type of events and perform suppression.

**Note:** Traffic from the agent to the destination CA Enterprise Log Manager server is always encrypted.

Consider the following advantages of each log collection technique:

- Direct log collection

With direct log collection, you configure the syslog listener on the default agent to receive events from the trusted sources you specify. You can also configure other connectors to collect events from any event source that is compatible with the soft appliance operating environment.

Advantage: You do not need to install an agent to collect logs from event sources that are in close network proximity to the CA Enterprise Log Manager server.

- Agentless collection

With agentless collection, there is no local agent on the event sources. Rather, an agent is installed on a dedicated collection point. Connectors for each target event source are configured on that agent.

Advantage: You can collect logs from event sources running on servers where you cannot install agents, such as servers where corporate policy prohibits agents. Delivery is guaranteed, for example, when ODBC log collection is configured properly.

- Agent-based collection

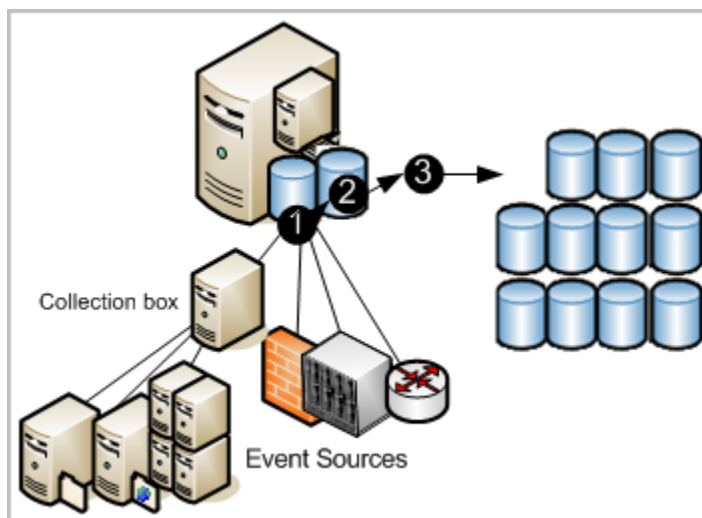
With agent-based collection, an agent is installed where one or more event sources are running and a connector is configured for each event source.

Advantage: You can gather logs from a source where the network bandwidth between that source and the CA Enterprise Log Manager is not good enough to support direct log collection. You can use the agent to filter the events and reduce the traffic sent across the network. Event delivery is guaranteed.

**Note:** See the *Administration Guide* for details on agent configuration.

## Log Storage

CA Enterprise Log Manager provides managed embedded log storage for recently archived databases. Events collected by agents from event sources go through a storage lifecycle as illustrated by the following diagram.



The numbers on the illustration refer to these steps:

1. New events collected by any technique are sent to the CA Enterprise Log Manager. The state of incoming events depends on the technique used to collect them. Incoming events must be refined before being inserted into the database.
2. When the database of refined records reaches the configured size, all records are compressed into a database and saved with a unique name. Compressing log data reduces the cost of moving it and reduces the cost of storage. The compressed database can either be moved automatically based on auto-archive configuration or you can back it up and move it manually before it reaches the age configured for deletion. (Auto-archived databases are deleted from the source as soon as they are moved.)
3. If you configure auto-archive to move the compressed databases to a remote server on a daily basis, you can move these backup to off-site long-term log storage at your convenience. Retaining backups of logs enables you to comply with the regulations that state that logs must be securely collected, centrally stored for a certain number of years, and available for review. (You can restore database from long-term storage at any time.)

**Note:** See the *Implementation Guide* for details on configuring the event log store, including how to set up auto-archiving. See the *Administration Guide* for details on restoring the backups for investigation and reporting.

## Standardized Presentation of Logs

Logs generated by applications, operating systems, and devices all use their own formats. CA Enterprise Log Manager refines the collected logs to standardize the way the data is reported. The standard format makes it easier for auditors and upper management to compare data collected from different sources. Technically, the CA Common Event Grammar (CEG) helps implement event normalization and classification.

The CEG provides several fields which are used to normalize various aspects of the event, including the following:

- Ideal Model (Class of technologies such as antivirus, DBMS, and firewall)
- Category (Examples include Identity Management and Network Security)
- Class (Examples include Account Management and Group Management)
- Action (Examples include Account Creation and Group Creation)
- Results (Examples include Success and Failure)

**Note:** See the *CA Enterprise Log Manager Administration Guide* for details on the rules and files used in event refinement. See the section on Common Event Grammar in the online help for details on the normalizing and categorizing events.

## Compliance Reporting

CA Enterprise Log Manager lets you gather and process security-relevant data and turn it into reports suitable for internal or external auditors. You can interact with queries and reports for investigations. You can automate the reporting process by scheduling report jobs.

The system provides:

- Easy to use query capability with tags
- Near-real time reporting
- Centrally searchable, distributed archives of critical logs

Its focus is on compliance reporting rather than real-time correlation of events and alerts. Regulations demand reporting that demonstrates compliance with industry-related controls. CA Enterprise Log Manager provides reports with the following tags for easy identification:

- Basel II
- COBIT
- COSO
- EU Directive - Data Protection
- FISMA
- GLBA
- HIPAA
- ISO\IEC 27001\2
- JPIPA
- JSOX
- NERC
- NISPOM
- PCI
- SAS 70
- SOX

You can review predefined log reports or perform searches based on criteria you specify. New reports are provided with subscription updates.

Log view capabilities are supported by the following:

- On demand query capability with predefined or user-defined queries, where results can include up to 5000 records

- Quick search, through Prompts, for a specified host name, IP address, port number, or user name
- Scheduled and on demand reporting with out-of-the-box reporting content
- Scheduled query and alerting
- Basic reports with trending information
- Interactive, graphical event viewers
- Automated reporting with email attachment
- Automated report retention policies

**Note:** For details on using predefined queries and reports or creating your own, see the *CA Enterprise Log Manager Administration Guide*.



## Policy Violation Alerting

CA Enterprise Log Manager lets you automate the sending of an alert when an event occurs that requires near-term attention. You can also monitor action alerts from CA Enterprise Log Manager at any time by specifying a time interval, such as from the last five minutes to the last 30 days. Alerts are automatically sent to an RSS feed that can be accessed from a web browser. Optionally, you can specify other destinations, including email addresses, a CA IT PAM process such as one that generates help desk tickets, and one or more SNMP trap destination IP addresses.

To help you get started, many predefined queries are available for scheduling as action alerts, as is. Examples include:

- Excessive user activity
- High CPU utilization average
- Low available disk space
- Security event log cleared in last 24 hours
- Windows audit policy changed in last 24 hours

Some queries use keyed lists, where you supply the values used in the query. Some keyed lists include predefined values that you can supplement. Examples include default accounts and privileged groups. Other keyed lists, such as that for business critical resources, have no default values. After you configure them, alerts can be scheduled for predefined queries such as:

- Group membership addition or removal by privileged groups
- Successful login by default account
- No events received by business critical sources

Keyed lists can be updated manually, by importing a file, or by running a CA IT PAM dynamic values process.

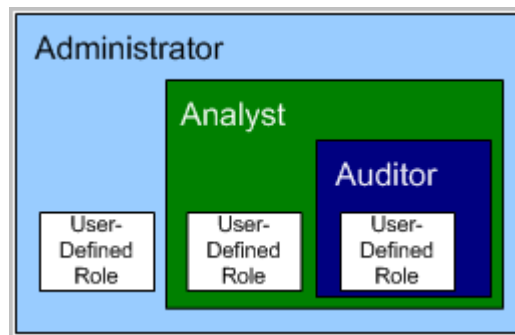
**Note:** See the *CA Enterprise Log Manager Administration Guide* for details on action alerts.

## Role-Based Access

CA Enterprise Log Manager provides three predefined application groups or roles. Administrators assign the following roles to users to specify their access rights to CA Enterprise Log Manager features:

- Administrator
- Analyst
- Auditor

The Auditor has access to few features. The Analyst has access to all Auditor features plus more. The Administrator has access to all features. You can define a custom role with associated policies that limit user access to resources in the way that suits your business needs.



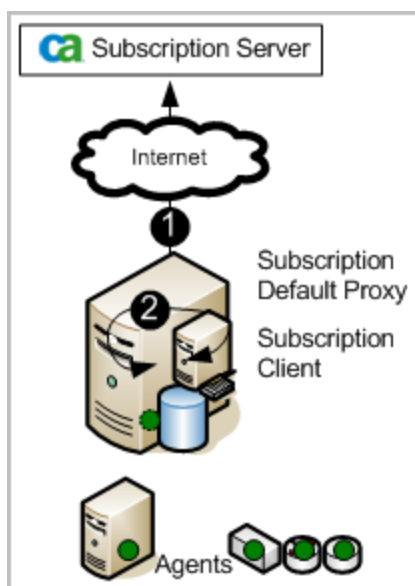
Administrators can customize access to any resource by creating a custom application group with associated policies and assigning that application group, or role, to user accounts.

**Note:** See the *CA Enterprise Log Manager Administration Guide* for details on planning and creating custom roles, custom policies, and access filters.

## Subscription Management

The subscription module is the service that enables subscription updates from the CA Subscription Server to be automatically downloaded on a scheduled basis and distributed to CA Enterprise Log Manager servers. When a subscription update includes the module for agents, users initiate the deployment of these updates to agents. *Subscription updates* are updates to CA Enterprise Log Manager software components and operating system updates, patches, and content updates such as reports.

The following illustration depicts the simplest direct Internet connection scenario:



The numbers on the illustration refer to these steps:

1. The CA Enterprise Log Manager server, as the default subscription server, contacts the CA Subscription server for updates and downloads any new available updates. The CA Enterprise Log Manager server creates a backup, then pushes content updates to the embedded component of the management server that stores content updates for all other CA Enterprise Log Managers.
2. The CA Enterprise Log Manager server, as a subscription client, self-installs the product and operating system updates it needs.

**Note:** See the *Implementation Guide* for details on planning and configuring subscription. See the *Administration Guide* for details on refining and modifying the subscription configuration and for applying updates to agents.

## Support for IPv6 IP Addresses

Previously, specification of IP Addresses was limited to IPv4 dotted decimal notation. With the current release, you can now specify IPv6 addresses in any IP Address field. IPv6 uses 128-bit IP addresses instead of the 32-bit addresses used by IPv4. Any policies that are based on the IP address version support IPv6 and IPv4.

You can use IPv4-mapped IPv6 addresses or the traditional IPv6 format. The IPv4-mapped IPv6 address format allows the IPv4 address of an IPv4 node to be represented as an IPv6 address as follows:

- The preferred IPv6 form is written as eight groups of four hexadecimal digits (x:x:x:x:x:x:x:x). Each x is one to four hexadecimal digits of the eight 16-bit pieces of the address.
- The IPv4-mapped IPv6 address, convenient in a mixed environment of IPv4 and IPv6 nodes is 0:0:0:0:FFFF:d.d.d.d, where each d is a decimal value of the address (IPv4 dotted decimal notation).

**Important!** IPv4-compatible IPv6 addresses in the format 0:0:0:0:0:d.d.d.d are now deprecated, according to RFC 4291, because the current IPv6 transition mechanisms no longer use these addresses.

The following is a valid IPv6 address written in traditional format.

2001:0db8:85a3:08d3:1319:8a2e:0370:7334

If one or more four-digit groups are 0000, the zeros can be omitted and replaced with two colons(::). Leading zeros in a group can also be omitted. The following example IP addresses are equivalent:

- 2001:0db8:0000:0000:0000:0000:1428:57ab
- 2001:0db8::1428:57ab
- 2001:db8:0:0:0:0:1428:57ab
- 2001:db8::1428:57ab

If you are replacing IPv4 addresses with IPv4-mapped addresses, use the following examples as guidelines:

- 0:0:0:0:FFFF:192.168.2.128
- 0:0:0:0:FFFF:172.16.2.128

Alternatively, you can use the following compressed form:

- ::FFFF:192.168.2.128
- ::FFFF:172.16.2.128

# Chapter 4: New and Changed Features in r12.5.01

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This section contains the following topics:

[Integration with ObserveIT](#) (see page 37)

[Keyed Lists](#) (see page 37)

[Header and Footer in Reports](#) (see page 38)

[Datetime Format](#) (see page 38)

[View Query](#) (see page 38)

[Replace IP Address of an Event Source with Hostname](#) (see page 38)

[Agent Diagnostic File](#) (see page 39)

[Considerations for CA Access Control Users](#) (see page 39)

[CA Enterprise Log Manager as a Virtual Appliance](#) (see page 39)

[Agent Support on Microsoft Windows 64-bit Systems](#) (see page 39)

## Integration with ObserveIT

You can integrate CA Enterprise Log Manager with ObserveIT v5.2.50 to investigate user session recordings. CA Enterprise Log Manager provides you the option to monitor configuration activities of a user by viewing user session recordings, and generate reports.

For information about the integration of CA Enterprise Log Manager with ObserveIT, see the *CA Enterprise Log Manager Administration Guide* and *CA Enterprise Log Manager Online Help*.

## Keyed Lists

This updated feature enhances the performance of keyed lists. With this feature, you can schedule keyed list updates using IT PAM dynamic value process. The IT PAM dynamic values process periodically updates the specified Users list with the latest values.

Information about the enhanced keyed lists is available in the *CA Enterprise Log Manager Administration Guide* and *Online Help*.

## Header and Footer in Reports

The Report Server is updated to include a header and footer in PDFs. You can configure the Report Server to generate a header and footer, and related attributes.

Information about the Report Server is available in the *CA Enterprise Log Manager Administration Guide* and *Online Help*.

## Datetime Format

You can use the CA Enterprise Log Manager locale properties files to change the default datetime format to a datetime format of your choice. The configured datetime format is displayed on the UI, query and report results.

Information about the datetime formats is available in the *CA Enterprise Log Manager Administration Guide* and *Online Help*.

## View Query

The updated Query Cursor feature enhances the appearance of the query results. The most recent results appear first in the results table. To view additional results, you must click the arrow keys or select a range of rows from the list. If the query results are not grouped, the list displays the row ranges you have viewed, and the next sequential range available. If the query results have been grouped, the list displays all rows ranges available in the entire results set.

Information about queries is available in the *CA Enterprise Log Manager Administration Guide* and *Online Help*.

## Replace IP Address of an Event Source with Hostname

This new feature lets the agent to replace the IP address of an event source with the hostname of the event source. All the connectors within the agent inherit this feature. If you want to enable the feature for all the agents in your environment, configure each agent separately.

Information about the updated agent feature is available in the *CA Enterprise Log Manager Administration Guide* and *Online Help*.

## Agent Diagnostic File

You can review the log files and configuration files of a selected CA Enterprise Log Manager agent using CA Enterprise Log Manager AgentDiagnostics utility. The utility packages system information and log files into a compressed .tar file for transmission to CA Technologies Support personnel. You can transfer this file using FTP or another file transfer method.

Information about the AgentDiagnostics utility is available in the *CA Enterprise Log Manager Administration Guide* and *Online Help*.

## Considerations for CA Access Control Users

The updated Considerations for CA Access Control users contains information about securing CA Enterprise Log Manager using CA Access Control, and an updated reference to the Connector Guide for CA Access Control required to integrate CA Enterprise Log Manager with CA Access Control.

Information about the considerations for CA Access Control users is available in the *CA Enterprise Log Manager Implementation Guide*.

## CA Enterprise Log Manager as a Virtual Appliance

The updated OVF template contains a new parameter, NTP Server Location.

Information about the updated OVF template is available in the *CA Enterprise Log Manager Implementation Guide*.

## Agent Support on Microsoft Windows 64-bit Systems

You can install the CA Enterprise Log Manager agent on a Microsoft Windows 64-bit system.

Information about installing the agent is available in the *CA Enterprise Log Manager Agent Installation Guide*.





# Chapter 5: New and Changed Features in r12.5

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This section contains the following topics:

- [Event Correlation](#) (see page 41)
- [Incident Management](#) (see page 42)
- [Compliance Dashboards](#) (see page 42)
- [Data Integrity Checking](#) (see page 42)
- [Improved Subscription Monitoring](#) (see page 43)
- [Nested Category Tags](#) (see page 43)
- [CA Access Control PUPM](#) (see page 44)
- [Large Query Support](#) (see page 44)
- [CA Enterprise Log Manager Sizing Calculator](#) (see page 45)

## Event Correlation

You can use event correlation rules to detect complex patterns of events that are associated with unusual or dangerous states, or with suspicious activity. CA Enterprise Log Manager provides numerous predefined correlation rules, and the ability to create custom rules or modify predefined ones.

You could deploy a predefined correlation rule to detect suspicious activity after a specified number of failed logins. For example you could use the "5 Failed Logins by a single account followed by excessive configuration management activity" rule. In this case, you could also customize the number of failed logins, or the definition of excessive activity.

For more information about Event Correlation, see the *CA Enterprise Log Manager Implementation Guide* and *CA Enterprise Log Manager Online Help*.

## Incident Management

You can view and respond to incidents generated by CA Enterprise Log Manager event correlation using the Incident Management system. You can investigate the events that make up an incident, routing incident notifications, or triggering automatic workflows.

For example, you can view current incidents in your environment. You could sort them by severity to see the most severe first, and view each in turn checking to see that the assigned severity is appropriate. You can then downgrade incidents not worthy of immediate attention, and assign any incidents to an appropriate resource, or view comments attached to that incident.

For more information about Incident Management, see the *CA Enterprise Log Manager Administration Guide* and *CA Enterprise Log Manager Online Help*.

## Compliance Dashboards

Compliance Dashboards let you quickly check the status of your environment with respect to specified states or regulations.

For example, you can open CA Enterprise Log Manager and view the PCI Incidents Dashboard. The dashboard shows you various high-level status displays, including:

- A summary of all PCI-standard related events found in your environment.
- A trending panel tracking PCI events over the recent past.
- A meter showing green/red/yellow overall status based on the number of events.

## Data Integrity Checking

You can check archived or recataloged data for tampering, helping to secure your archived data, and meet regulatory requirements. CA Enterprise Log Manager uses digital signatures to validate the databases. If the database is corrupted or if its signature is missing or corrupted, the data integrity check considers the database tampered.

You can schedule daily data integrity checks to occur at set times and on selected CA Enterprise Log Manager servers. Any tampered databases detected by a scheduled integrity check are automatically quarantined. You can view quarantined databases and decide whether to regenerate keys to make them queryable.

For more information about Data Integrity Checking, see the *CA Enterprise Log Manager Online Help*.

## Improved Subscription Monitoring

You can view the current subscription status of your global CA Enterprise Log Manager environment through the Subscription Dashboard. The Subscription Dashboard displays the progress of any updates currently being downloaded or installed by any CA Enterprise Log Manager server. For example, during a scheduled update to your global CA Enterprise Log Manager environment, you can use the Subscription Dashboard to monitor the update progress of each CA Enterprise Log Manager server, including which modules are currently downloading or installing, and the current state of the server. From the Subscription Dashboard, you can also see the state of any content updates currently in progress, as well as a list of all content updates previously installed.

You can view the current subscription status of a specific CA Enterprise Log Manager server through the global Subscription Dashboard, or through the server's local State window.

For more information about Improved Subscription Monitoring, see the *Subscription* section of the *CA Enterprise Log Manager Administration Guide*.

## Nested Category Tags

You can create custom nested category tags for queries and reports. Nested tags let you organize reports and queries into detailed subcategories.

For example, CA Enterprise Log Manager provides a report category tag named Event Categories. You could add custom tags based on event categories in your environment.

For more information about nested category tags, see the *CA Enterprise Log Manager Online Help*.

## CA Access Control PUPM

CA Enterprise Log Manager supports CA Access Control privileged user password management (PUPM). CA Access Control PUPM events include a check-out and check-in time, recording when a password is in use. These times are mapped to `event_start_time_gmt` and `event_end_time_gmt` in the updated CEG schema for this release.

You can use advanced drilldown to investigate user activity by choosing the new fields as advanced filters in your queries. For example, you could right-click on a user in a CA Access Control report panel, and apply a filter like the following to the report you drilling down into:

```
(event_time_gmt >= event_start_time_gmt) AND (event_time_gmt <= event_end_time_gmt)
```

This filter displays the check-out and check-in time from the selected user event.

For more information about drilldowns and filtering for CA Access events see the *CA Enterprise Log Manager Online Help*.

## Large Query Support

You can set a query to search more than 5,000 event database rows, letting you make broader searches. In previous releases, the maximum number of events a query could return was 5,000.

When creating or editing a query, you can set a higher limit from the Result Conditions step of the query design wizard in either of the following ways:

- Setting the Row Limit value in the results area to a number higher than 5,000.
- Selecting the No Limit button in the results area.

**Note:** If a scheduled report includes a large query, you cannot publish it to PDF due to a limitation of the format.

For more information about large queries see the *CA Enterprise Log Manager Online Help*.

## CA Enterprise Log Manager Sizing Calculator

The current release includes a sizing calculator which can help provide guidance for the number of CA Enterprise Log Manager servers required to meet the needs of your environment. You can input your hardware details, the various types of event sources you want to monitor, how long you must retain event data, and receive a suggested number of CA Enterprise Log Manager servers.

The calculator also includes expected event-per-second rates for all listed event sources. You can accept or adjust these default values.

The installation package includes the sizing calculator, which must be installed on Windows.



# Chapter 6: New and Changed Features in r12.1 SP3

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The CA Enterprise Log Manager r12.1 SP3 release contains bug fixes of CA Enterprise Log Manager r12.1 SP2.





# Chapter 7: New and Changed Features in r12.1 SP2

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This section contains the following topics:

[CA Enterprise Log Manager as a Virtual Appliance](#) (see page 49)

[Simplified Agent Administration](#) (see page 49)

[Role-Based Access Control in API Login Calls](#) (see page 50)

[LogSensor Help Files](#) (see page 50)

[Retain a Report Configuration](#) (see page 50)

## CA Enterprise Log Manager as a Virtual Appliance

You can deploy CA Enterprise Log Manager as a virtual appliance in the Open Virtualization Format (OVF). The virtual appliance requires less time to provision than the time required to provision a CA Enterprise Log Manager server on a virtual machine.

OVF is an open standard for packaging and distributing virtual appliances. CA Enterprise Log Manager uses the Virtual Machine Disk (VMDK) file format based on OVF.

Information about deploying CA Enterprise Log Manager as a virtual appliance is available in the *Implementation Guide*.

## Simplified Agent Administration

This updated feature simplifies provisioning of a new CA Enterprise Log Manager server. With this feature, you can:

- Update a list of CA Enterprise Log Manager servers at the Agent Explorer level or an individual agent group level.
- Add a new server to an existing server list, and CA Enterprise Log Manager updates the server list in each agent.

Information about this simplified agent administration is available in the *Administration Guide* and *Online Help*.

## Role-Based Access Control in API Login Calls

You can perform role-based access control on a user logged on to CA Enterprise Log Manager through API. You can define the data access filters applied to the query, in XML format. You could use this specification to filter a query or report result according to your role when you use the certificate name and password authentication.

Information about the access filter XML is available in the *API Programming Guide*.

## LogSensor Help Files

A LogSensor Guide for each logsensor is provided with this release. You can access a LogSensor Guide from the Integration Wizard of the UI.

## Retain a Report Configuration

You can retain the configuration of a report by selecting the Retain after Expiry option in the Schedule Report wizard. After the report is generated, you can modify the report configuration and reschedule the report. This feature is valid for both the run-once and run-now reports.

Information about this simplified agent administration is available in the *Administration Guide* and *Online Help*.

# Chapter 8: New and Changed Features in r12.1 SP1

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This section contains the following topics:

[FIPS 140-2 Compliance Overview](#) (see page 51)

[Operating Modes](#) (see page 52)

[Encryption Libraries](#) (see page 52)

[About Certificates and Key Files](#) (see page 54)

[FIPS Support Limitations](#) (see page 55)

[Configure Microsoft Internet Explorer to Access CA Enterprise Log Manager in FIPS Mode](#) (see page 56)

[Configure Mozilla Firefox to Access CA Enterprise Log Manager in FIPS Mode](#) (see page 57)

[ISO Image for New Installations](#) (see page 58)

## FIPS 140-2 Compliance Overview

The Federal Information Processing Standards (FIPS) 140-2 publication is a security standard for the cryptographic libraries and algorithms a product should use for encryption. FIPS 140-2 encryption affects the communication of all sensitive data between components of CA products and between CA products and third-party products. FIPS 140-2 specifies the requirements for using cryptographic algorithms within a security system protecting sensitive, unclassified data.

CA Enterprise Log Manager offers FIPS compatibility with event traffic secured using FIPS-compliant algorithms when operating in FIPS mode. CA Enterprise Log Manager also offers a default, non-FIPS mode in which event traffic is *not* secured with FIPS-compliant algorithms. CA Enterprise Log Manager servers in a federated network cannot mix the two operating modes. This means that a server running in non-FIPS mode cannot share query and report data with a server that is running in FIPS mode.

Information about enabling and disabling FIPS mode is available in the *Implementation Guide* section on installing CA Enterprise Log Manager, and in the online help for the System Status service.

**More information:**

[Operating Modes](#) (see page 52)

[Encryption Libraries](#) (see page 52)

[Algorithms Used](#) (see page 53)

[About Certificates and Key Files](#) (see page 54)

[FIPS Support Limitations](#) (see page 55)

[Configure Mozilla Firefox to Access CA Enterprise Log Manager in FIPS Mode](#) (see page 57)

## Operating Modes

CA Enterprise Log Manager can operate in two modes, FIPS mode or non-FIPS mode. The cryptographic boundaries are the same in both modes, but the algorithms are different. By default, CA Enterprise Log Manager servers operate in non-FIPS mode. Users with the Administrator role can enable FIPS mode operation.

**non-FIPS mode**

This mode uses a mix of encryption algorithms for event transport and other communications between the CA Enterprise Log Manager and CA EEM server that do not necessarily meet FIPS 140-2 standards.

**FIPS mode**

This mode uses FIPS-certified encryption algorithms for event transport and other communications between the CA Enterprise Log Manager and CA EEM server.

Administrator-level users can review agent operating modes from the Agent Explorer node on the Administration tab, Log Collection subtab.

For more information about switching between FIPS and non-FIPS modes, refer to the online help for System Status Tasks, or the *Implementation Guide* section on configuring services.

**More information:**

[Algorithms Used](#) (see page 53)

[FIPS Support Limitations](#) (see page 55)

## Encryption Libraries

The Federal Information Processing Standards (FIPS) 140-2 publication specifies the requirements for using cryptographic algorithms within a security system protecting sensitive, unclassified data.

CA Enterprise Log Manager also embeds the Crypto-C Micro Edition (ME) v2.1.0.2 cryptographic library from RSA, which has been validated as meeting the FIPS 140-2 *Security Requirements for Cryptographic Modules*. The validation certificate number for this module is 865.

## Algorithms Used

Computer products that use FIPS 140-2 certified cryptographic modules in FIPS mode can use only FIPS-approved security functions. These include AES (Advanced Encryption Algorithm), SHA-1 (Secure Hash Algorithm), and higher level protocols such as TLS v1.0 as explicitly allowed in the FIPS 140-2 standard and implementation guides.

In non-FIPS mode, CA Enterprise Log Manager uses the following algorithms:

- AES 128
- Triple DES (3DES)
- SHA-1
- MD5
- SSL v3

In FIPS mode, CA Enterprise Log Manager uses the following algorithms:

- AES 128
- Triple DES (3DES)
- SHA-1
- TLS v1

CA Enterprise Log Manager uses SHA-1 as the default digest algorithm to encrypt passwords and sign server requests.

CA Enterprise Log Manager uses TLS v1.0 for communications with external LDAP directories if the LDAP connection uses TLS, communications between iTechnology components, the agent to iGateway service communication in FIPS mode, and the event channel between an agent and the logDepot service.

### **More information:**

[FIPS Support Limitations](#) (see page 55)

## About Certificates and Key Files

For FIPS 140-2 support, the upgrade to CA Enterprise Log Manager r12.1 SP1 converts existing P12 format certificates to PEM format certificates. This conversion results in the generation of the following files:

- Certificate file with a .cer extension
- Key file with a .key extension

Key files are not encrypted, and it is up to the user to secure them from unauthorized access on both server and agent hosts. The CA Enterprise Log Manager soft-appliance uses various operating system hardening techniques to protect keys and certificates stored in the file system. CA Enterprise Log Manager does not support the use of external key storage devices.

CA Enterprise Log Manager uses the following certificates and key files:

Certificate/Key File Name	Location	Description
CAELMCert	/opt/CA/SharedComponents/iTechnology  (You can refer to this directory using the shorter variable name, \$IGW_LOC.)	All CA Enterprise Log Manager services use this certificate for communications between CA Enterprise Log Manager servers, and between CA Enterprise Log Manager servers and the CA EEM server. An entry for this certificate, and its corresponding key file, exists in the main configuration file, CALM.cnf. The tag pairs begin <Certificate> and <KeyFile> respectively.
CAELM_AgentCert	\$IGW_LOC on the agent host server	Agents use this certificate to communicate with any CA Enterprise Log Manager server. The CA Enterprise Log Manager Management server provides this certificate to the agent. The certificate is valid for any CA Enterprise Log Manager server within a given application instance.
itpamcert	IT PAM server	This certificate is used for communications with IT PAM. See the CA IT PAM documentation for additional information.
rootcert	\$IGW_LOC	This certificate is a self-signed, root certificate signed by iGateway during installation.

Certificate/Key File Name	Location	Description
iPozDsa	\$IGW_LOC	The CA EEM server, both local and remote, uses this certificate. See the CA EEM documentation for additional information.
iPozRouterDsa	\$IGW_LOC	The CA EEM server, both local and remote, uses this certificate. See the CA EEM documentation for additional information.
iTechPoz-trusted	/opt/CA/Directory/dxserver/config/ssld	CA Directory uses this certificate.
iTechPoz-<hostname>-Router	/opt/CA/Directory/dxserver/config/ssld	CA Directory uses this certificate.

## FIPS Support Limitations

The following CA Enterprise Log Manager features and product interoperations do not support FIPS mode operations:

### ODBC and JDBC Access to the Event Log Store

ODBC and JDBC in CA Enterprise Log Manager relies on an underlying SDK that does not support FIPS mode operations. Administrators of federated networks that require FIPS operations must manually disable the ODBC service on each CA Enterprise Log Manager server. See the section in the *Implementation Guide* about disabling ODBC and JDBC access to the event log store.

### Sharing a CA EEM Server

CA Enterprise Log Manager r12.1 SP1 uses CA EEM r8.4 SP3, which is FIPS compatible. Enabling FIPS mode on the CA Enterprise Log Manager server disables the communication between the shared CA EEM and any product that does not support CA EEM r8.4 SP3.

For example, CA IT PAM is not FIPS compatible. If you upgrade your CA Enterprise Log Manager server to FIPS mode, the intergration with CA IT PAM fails.

You can share a CA EEM server between CA Enterprise Log Manager r12.1 SP1 and CA IT PAM r2.1 SP2 and r2.1 SP3 in non-FIPS mode only.

If your CA IT PAM installation is not sharing the same CA EEM server, CA Enterprise Log Manager r12.1 SP1 can run in FIPS mode and it can communicate with CA IT PAM; however, those communication channels are not FIPS compatible.

### LDAP Bind Requires Match of Operating Modes

Successful communication with an external user store depends on the following:

- The CA Enterprise Log Manager servers and their managing CA EEM server must be in the same FIPS mode, and
- The CA EEM server must be in the same FIPS mode as a FIPS-enabled external user store when using TLS v 1.0 for the connection.

**Note:** FIPS-compatibility is not available when using unencrypted communications between the CA EEM server and the external user store, or when the CA EEM server and user store are in different FIPS modes.

### SNMP Traps

You can send SNMP events using either SNMP V2 or SNMP V3. Both are supported in non-FIPS mode.

If the SNMP Trap Destination server is FIPS enabled you must choose V3 Security and then choose SHA as the authentication protocol and AES as the encryption protocol. You make these choices on the Destination page of the Schedule Action Alerts wizard.

## Configure Microsoft Internet Explorer to Access CA Enterprise Log Manager in FIPS Mode

Your browser may require some additional configuration before it can display the CA Enterprise Log Manager server user interface when running in FIPS mode. Use the following procedure to set the required options to access CA Enterprise Log Manager in Microsoft Internet Explorer 7 or 8.

### To configure Microsoft Internet Explorer 7 or 8

1. Open the browser and select the Tools, Internet Options.
2. Select the Advanced tab and scroll down to the Security section.
3. Select each of the following options:
  - Use SSL 2.0
  - Use SSL 3.0
  - Use TLS 1.0
4. Click OK.



## Configure Mozilla Firefox to Access CA Enterprise Log Manager in FIPS Mode

Your browser may require some additional configuration before it can display the CA Enterprise Log Manager server user interface when running in FIPS mode. Use the following procedure to set the required options in Mozilla Firefox 3.5.8 or later browser to access a CA Enterprise Log Manager server running in FIPS mode.

**Note:** Access to CA Enterprise Log Manager requires installation of the Mozilla Firefox plug-in for Adobe Flash 9 or 10.

### To configure Mozilla Firefox

1. Open the browser and select Tools, Options.
2. Click the Advanced tab and then click the Encryption subtab.
3. Select both of the following options:
  - Use SSL 3.0
  - Use TLS 1.0.
4. Select the Security subtab, and then select the option to use a Master Password.
5. Click Change Master Password... and provide a suitable password when the window appears, then click OK.
6. Select the Advanced subtab.
7. Click Security Devices.

The Device Manager window appears.
8. Select the NSS Internal PKCS #11 Module in the left pane.

This action populates the right pane.
9. Select the line, Module NSS Internal FIPS PKCS #11 Module, and click Enable FIPS.
10. Type the Master Password you created in a previous step when prompted, and then click OK.
11. Click OK in the Device Manager window.
12. Click OK in the Options window.
13. Restart the browser.

## ISO Image for New Installations

To help you quickly deploy CA Enterprise Log Manager or to add a new CA Enterprise Log Manager server to an existing deployment, we are providing an ISO image for the service pack. The ISO image is available from the Downloads area on Support Online.

We recommend that you use the most recent ISO image in the following cases:

- Deploying CA Enterprise Log Manager. Installing from the latest ISO image minimizes the number of required subscription upgrades you must apply and speeds your deployment.
- Adding a new CA Enterprise Log Manager server after you have upgraded the servers in your existing deployment. First establish that the servers and agents in your current deployment are successfully upgraded and receiving events. Then install new servers using the ISO image to add more capacity and minimize the number of subscription updates to apply.

**Note:** The installation procedure has changed. A new prompt asks whether you want to install with FIPS mode enabled. When adding a new CA Enterprise Log Manager server to an existing FIPS deployment (the CA Enterprise Log Manager management server or remote CA EEM server are in FIPS mode), enable FIPS mode during the installation. Otherwise the new server cannot register and you must reinstall. See the *Implementation Guide* for more information about FIPS mode.

# Chapter 9: New and Changed Features in r12.1

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This section contains the following topics:

[Open API Access](#) (see page 59)

[Actionable Alerts: CA IT PAM Integration](#) (see page 60)

[Actionable Alerts: SNMP Integration with NSM Products](#) (see page 60)

[ODBC and JDBC Access](#) (see page 60)

[Identity and Asset Relevance: CA IT PAM Integration](#) (see page 61)

[Extended Direct Log Collection by Default Agent](#) (see page 61)

[Automated Update Schedules for Subscription Clients](#) (see page 62)

## Open API Access

CA Enterprise Log Manager allows you to use API calls to access data from the event repository using the query and report mechanism, and display it in a web browser. You can also use the API to embed CA Enterprise Log Manager queries or reports in a CA or third-party product interface.

CA Enterprise Log Manager API features include:

- Authenticated, secure APIs
- Product registration for single sign-on (SSO)
- Retrieval of a query or report list, filtered by tag
- Display of a query or report in the interactive CA Enterprise Log Manager interface, allowing filtering, and embedding in a user interface

You can find more information about the API in the *API Programming Guide* and online help.

## Actionable Alerts: CA IT PAM Integration

Through scheduled alerts that query volumes of log records, CA Enterprise Log Manager detects potential control violations and suspicious IT activity. CA Enterprise Log Manager notifies the IT security staff who investigates each alert to determine whether remediation action is required. Typical investigation activities are often routine and well-suited for automation. Through a tight integration between CA Enterprise Log Manager and CA IT PAM, these routine response actions can be performed automatically. IT security staff are free from repetitious tasks to focus on only the most important issues.

CA IT PAM integration lets you create requests in CA Service Desk by running a predefined CA IT PAM event/alert output process from alerts. You can also run custom IT PAM event/alert output processes from CA Enterprise Log Manager that automate other responses to suspicious events.

For details, see the "Working with CA IT PAM Event/Alert Processes" section in the Action Alerts chapter of the CA Enterprise Log Manager *Administration Guide*.

## Actionable Alerts: SNMP Integration with NSM Products

Alerts are generated when scheduled queries retrieve events indicating suspicious activity. You can automate the sending of such alerts as SNMP traps to network security monitoring (NSM) products such as CA Spectrum or CA NSM. You prepare the destination products to receive and interpret SNMP traps from CA Enterprise Log Manager, configure the destination locations, then specify the event information to send.

For details, see the "Working with SNMP Traps" section in the Action Alerts chapter of the CA Enterprise Log Manager *Administration Guide*.

## ODBC and JDBC Access

CA Enterprise Log Manager allows read-only access to collected event log information using ODBC and JDBC. You can use this access to do things like the following:

- Create customer reports using tools like BusinessObjects Crystal Reports
- Retrieve selected log information for use with a correlation engine
- Examine logs for intrusion or malware detection

The ODBC and JDBC access features use a client that you install on an appropriate server in your network. The CA Enterprise Log Manager server automatically installs its server-side components during subscription update and installation processing.

You can find installation information in the *Implementation Guide*. You can find configuration information and examples in the *Administration Guide*.

## Identity and Asset Relevance: CA IT PAM Integration

CA IT PAM integration lets you maintain updated values for a given key by running a CA IT PAM dynamic values process. A dynamic values process is one that retrieves the current values from repositories that store current data. If you create a process that retrieves values for critical assets from your assets file or database, you can update the Critical\_Assets key in predefined reports and queries with the click of a button.

For details, see the "Enabling Dynamic Values Import" section in the Queries and Reports chapter of the CA Enterprise Log Manager *Administration Guide*.

## Extended Direct Log Collection by Default Agent

At the CA Enterprise Log Manager installation, the Syslog listener, named Syslog\_Connector, is deployed on the default agent to enable the collection of syslog events. The Linux\_localsyslog integration, with the associated connector, Linux\_localsyslog\_Connector, is also available to collect syslog events.

The default agent can now directly collect more than syslog events. Using the WinRm connector, the default agent can collect events from products running on Microsoft Windows platforms, such as Active Directory Certificate Services and Microsoft Office Communication Server. Using the ODBC connector, the default agent can collect events from multiple databases such as Oracle9i and SQL Server 2005, and applications that store their events in these databases.

## Automated Update Schedules for Subscription Clients

When you install your first CA Enterprise Log Manager server, you configure global settings for all services, including subscription. For subscription purposes, the first server you install is the default subscription proxy. You configure the update start time and the frequency with which this proxy checks the CA Subscription Server for updates. When you install additional servers, they are installed as subscription clients, by default. When you configure additional servers, you do so at the local level. Configuration at the local level is done by selecting the name of the server to configure and then overriding selected global configurations.

By default, the update start time of subscription clients is inherited from the global setting. When the inherited setting is not overridden manually to force a delay, problems arise. To prevent this problem, the update schedule for clients is now automated with a 15 minute delay. The update schedule for subscription clients no longer requires manual configuration.

# Chapter 10: Known Issues

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This section contains the following topics:

[Agents and CA Adapters](#) (see page 63)

[Appliance \(non-UI\)](#) (see page 69)

[Event Correlation](#) (see page 70)

[Event Refinement](#) (see page 72)

[Queries and Reports](#) (see page 73)

[Subscription](#) (see page 74)

[User and Access Management](#) (see page 75)

[Miscellaneous](#) (see page 76)

[LogSensors and Listeners](#) (see page 86)

## Agents and CA Adapters

The following are the known issues related to agents and CA adapters.

### Agent Installation Dependency on Red Hat Linux 4

**Symptom:**

When you install the CA Enterprise Log Manager agent on Red Hat Enterprise Linux 4 systems the installation fails and displays an error message about required dependencies.

**Solution:**

The CA Enterprise Log Manager agent on Red Hat Enterprise Linux 4 requires the Legacy Software Development Package. Install the Legacy Software Development Package before you install the agent.

### Bulk Connector Deployment with IPv6 Address Is Not Correct

**Symptom:**

Deployment of connectors from the Bulk Connector Deployment wizard providing the Server address in IPV6 format is not working as expected. After some time, the connector status displays as Running. When you edit the connector, you can see that the Server name displays only the first four digits in the IPV6 address. The user name, password, and domain fields display blanks.

**Solution:**

The CA Enterprise Log Manager user interface currently sends the source file contents using :: as the delimiter that separates every source. Since the IPv6 address contains the double-colon characters ::, it is processed as a delimiter. The connector record is not saved properly.

Do not use IPv6 addresses to perform bulk connector deployment. You *can* use hostnames to configure connectors for bulk deployment. You can also configure an IPv6 connector from the New Connector Creation wizard using the normal instructions.

## Domain Level Event Source Configuration Fails

**Symptom:**

Configuring any connector to access a Windows event source and read its logs involves creating a low-privileged user account and assigning it the needed permissions. When the event source is a Windows Server 2003 SP1 host, one of the steps is to set the local security policy, *Impersonate a client after authentication*. When this user right is set locally, no problem occurs. However, if this setting is applied as a domain policy to all servers, the global application has the affect of removing the existing local assignments for other users, namely Administrators and SERVICE.

A Microsoft support article states that "... problems occur when a Group Policy setting that defines the Impersonate a client after authentication user right is linked to the domain. This user right should be linked only to a site or to an organizational unit (OU)."

**Solution:**

See the Microsoft Knowledge Base article ID 930220 for the recommendation to restore full unsecured TPC/IP connectivity by disabling the IPSec services and restarting the computer and the steps to add back the Administrators and SERVICE groups as a Group Policy setting. Try the following link:

<http://support.microsoft.com/kb/930220>

Microsoft also recommends the following methods to resolve problems caused by applying the setting Impersonate a client after authentication as a group policy:

- Method 1: Modify Group Policy settings
- Method 2: Modify the Registry

See the Microsoft Knowledge Base article ID: 911801 for the steps to implement both recommended resolutions. Try the following link:

<http://support.microsoft.com/kb/911801>



## Limitation on Port Configuration

**Symptom:**

When the syslog listener is configured with the default UDP port on an agent running as a non-root user on a Linux host, UDP port 514 (default for syslog) is not opened and no syslog events are collected on that port.

**Solution:**

If the agent is running as a non-root user on a UNIX system, change the syslog listener ports to port numbers above 1024 or change the service to run as root.

## Message Parsing Files Fail to Appear in Integration Wizard

### Symptom:

After upgrading CA Enterprise Log Manager, when you open the integration wizard to edit an existing integration, or create a new one, Message Parsing files fail to appear. The XMP shuttle control where MP files normally appear is blank.

### Solution:

You can increase the java heap size to eliminate this issue, and display MP files in the Integration Wizard.

1. Navigate to the iTechnology Directory at /opt/CA/SharedComponents/iTechnology and stop iGateway:

```
./S99gateway stop
```

2. Open the caelm-agentmanager.group file and locate the max heap size value as shown in bold in the following example:

```
<JVMSettings>

    <loadjvm>true</loadjvm>

    <javahome>/usr/java/latest/jre</javahome>

    <Properties
name="java.endorsed.dirs=/opt/CA/SharedComponents/iTechnology/endorsed" >

<system-properties>java.endorsed.dirs=/opt/CA/SharedComponents/iTechnology/en
dorsed</system-properties>

    </Properties>

    <Properties name="initial heap size" >

        <jvm-property>-Xms512m</jvm-property>

    </Properties>

    <Properties name="max heap size" >

        <jvm-property>-Xmx768m</jvm-property>

    </Properties>

</JVMSettings>
```

3. Change the value as illustrated:

```
<jvm-property>-Xmx1024m</jvm-property>
```

4. Save and close the file, and restart iGateway:

```
./S99gateway start
```

## Removing Server from Federation Does Not Remove Default Agent

**Symptom:**

When removing a CA Enterprise Log Manager server from a group of federated servers, the deleted server's default agent is not removed from its related agent group.

**Solution:**

Manually delete the agent from its group in the Agent Explorer sub-tab.

## Reports with Data Collected from the CA SAPI Collector Are Not Displaying Events Properly

**Symptom:**

Events collected using the CA Audit SAPI Collector do not have all the event fields properly populated. This results in most of the reports not displaying the data in the expected manner.

**Solution:**

Use the CA Audit SAPI Router to collect events from your existing CA Audit infrastructure.

More information about configuring the SAPI Router is available in the *Implementation Guide* in the section, Considerations for CA Audit Users.

## The Text File Log Sensor Running on a Solaris Agent System Stops Receiving Events

### Symptom:

The Text File log sensor running on a Solaris agent system stops receiving events.

If you review the log file for the connector, it contains an error indicating that a library file, libssl.so.0.9.7, failed to open:

```
[4] 07/20/10 18:55:50 ERROR :: [ProcessingThread::DllLoad] :Error is: ld.so.1:
caelmconnector: fatal: libssl.so.0.9.7: open failed: No such file or directory [4]
07/20/10 18:55:50 ERROR :: [ProcessingThread::run] Dll Load and Initialize failed,
stopping the connector ...
[3] 07/20/10 18:55:50 NOTIFY :: [CommandThread::run] Cmd_Buff received is START
```

### Solution:

Identify the location of the library to enable the agent to receive events.

#### To resolve the error on the Solaris agent system

1. Navigate to /etc folder. For example:  

```
cd /etc
```
2. Open profile file in the etc folder. For example:  

```
vi /etc/profile
```
3. Add the following two lines at the end of the profile file:  

```
LD_LIBRARY_PATH=/usr/sfw/lib:$LD_LIBRARY_PATH
export LD_LIBRARY_PATH
```
4. Close the current session of the Solaris agent system.
5. Open a new session of the Solaris agent system.
6. Stop the CA Enterprise Log Manager agent on the Solaris system. For example:  

```
/opt/CA/ELMAgent/bin/S99elmagent stop
```
7. Start the CA Enterprise Log Manager agent on Solaris system. For example:

```
/opt/CA/ELMAgent/bin/S99elmagent start
```

The Text File log sensor starts receiving events and the error is no longer displayed in the log file.

## Very High Event Flow Causes the Agent to Become Unresponsive

### Symptom:

A CA Enterprise Log Manager agent becomes unresponsive and stops accepting events. The following error message appears in the caelmdispatcher.log file:

```
[275] 07/12/10 14:32:05 ERROR :: FileQueue::PutEvents Unable to write to new event file
```

```
[275] 07/12/10 14:32:05 ERROR :: WriterThread::run Unable to push events to FileQueue, Retrying
```

```
[275] 07/12/10 14:32:10 NOTIFY :: FileQueue::UpdateCurrentWriterFile Reached Max files configured limit=10, Not creating any new files for now
```

### Solution:

This indicates that there is a very high rate of incoming events for the hardware in the environment. You can address this issue by reconfiguring the agent, using the following procedure:

1. Click Administration, the Log Collection subtab, and expand the Agent Explorer folder.
2. Select the agent you want to reconfigure, click Edit, and adjust the following parameters:

#### Max Number of Files

Sets the maximum number of files that can be created in the event reception file queue. The Max Number limit is 1000 files. The default setting is 10.

#### Max Size per File

Sets the maximum size, in MB, for each file in the event reception file queue. When a file reaches the maximum size, CA Enterprise Log Manager creates a new file. The Max Size limit is 2048 MB. The default setting is 100 MB.

You can adjust these parameters upwards as required by your environment and event per second rate.

## Appliance (non-UI)

The following are the known issues related to the soft-appliance (not the CA Enterprise Log Manager user interface).

## Cannot Log into CA Enterprise Log Manager Server Using EiamAdmin User Name

**Symptom:**

EiamAdmin user name and password are not recognized when trying to log into the CA Enterprise Log Manager server (not through the user interface).

**Solution:**

To perform maintenance-related tasks, such as configuring archiving, the installation creates another user name, caelmadmin, and assigns it the same password as the installer provided for EiamAdmin. Use the caelmadmin user name and password to log into the CA Enterprise Log Manager server.

For more information, see Default User Accounts in the *Implementation Guide*.

## Event Correlation

The following are the known issues related to event correlation.

### Correlation Ignores Events Marked Ahead of the Server Time

**Symptom:**

The correlation engine ignores events with timestamps more than 5 minutes ahead of the CA Enterprise Log Manager server time.

**Solution:**

Such events are not considered for incident inclusion, regardless of the Correlation Event Span values.

## Correlation Service Fails to Initialize on Startup

**Symptom:**

The correlation engine fails to initialize on startup. When this happens CA Enterprise Log Manager generates a Correlation Service log entry, and a self-monitoring event with the following text:

```
Unable to initialize service CorrelationService: java.lang.RuntimeException:  
com.ca.elm.common.repository.RepositoryException: Error authenticating to EEM  
<hostname>
```

**Solution:**

To resolve this issue, restart ELM Services using the following procedure:

1. Click the Administration tab, then the Services subtab, and expand the System Status node.
2. Select the CA Enterprise Log Manager server where you want to restart services.
3. Click Restart Services.

## Correlation Rule Filters Fail to Identify Incident Events

**Symptom:**

An event correlation rule filter fails to identify events as expected when using wildcards. For example, a rule set to match the value "test\*" does not return values beginning with "test", such as "testa"

**Solution:**

The correlation engine uses strict regular expression syntax as regards wildcards. So in this example, you would have to use "test.\*" to return the results you want.

## Line Break Does Not Function in Correlation Wizard Fields

### Symptom:

In certain correlation rule field wizards, a line break cannot be created using "</BR>". This issue applies to the following fields:

- Incident Description in the Details step
- Incident Remediation in the Details step
- Subject in the Email tab of the Notifications step
- Text in the Email tab of the Notifications step

### Solution:

The "<" character is not currently allowed in the listed fields, so the line break cannot be entered.

## Rule Test Interface Does Not Show Completed State

### Symptom:

When you test a state transition correlation rule, the service completes the test and shows the results, but the test interface continues to display the "Finishing" state and not the "Completed" state.

### Solution:

The test has completed properly when results appear. This issue is purely cosmetic.

## Event Refinement

The following are the known issues related to event refinement.

## Block Mapping String and Numeric Values Require Different Operators

### Symptom:

When using the Mapping Wizard, block mapping values for numeric or text string columns do not respond as expected.

### Solution:

When creating block mappings, the 'Equal' operator can only be used with numeric columns. Use the 'Match' operator for all text string columns.



## Message Parsing Rules Produce an Error When Modified

**Symptom:**

If you copy the rules from subscription and try to modify their content, an error occurs.

**Solution:**

This error occurs because the content in the rules is unordered in a subscription. If you want to modify a rule, you must reposition the rules.

If a rule requires a mapping variable of a mapping block, you must define the mapping variable before you use it in either that mapping block or its preceding mapping block. The following is the order of precedence of the mapping blocks:

1. Direct Mapping
2. Functional Mapping
3. Conditional Mapping
4. Block Mapping

## Queries and Reports

The following are the known issues related to queries and reports.

### Event Data With Non-UTF8 Characters Does Not Display in XML or PDF

**Symptom:**

Query or report results that contain non-UTF8 characters cannot be exported to XML or PDF formats. This issue applies only to events collected before updating to r12.5.

**Solution:**

Non-UTF8 characters in historical event data causes XML parsing to fail, which also prevents PDF export. Historical data without non-UTF8 characters exports properly to XML and PDF.

You can also export event data containing non-UTF8 characters as an MS Excel spreadsheet.

## Query and Reports Pages Are Displaying Error Messages When the UI is Loading

### Symptom:

When a CA Enterprise Log Manager server is loading the Queries and Reports pages, the following error is displayed on the UI:

Error getting query/report results: HTTP request error

### Solution:

This error occurs if you have used a medium configuration for collection and reporting servers using CA Enterprise Log Manager as a virtual appliance. In a Hub and Spoke model, we highly recommend that you use a medium deployment configuration for a collection server and a large deployment configuration for a reporting server.

## Scheduled Reports With No Limit Option Selected Fail to Appear in PDF Format

### Symptom:

When you schedule a report with the No Limit option selected in Step 3 of the Schedule Report wizard (Result Conditions), and then select PDF as the report format in Step 5 (Destinations), the report fails to publish correctly.

### Solution:

The PDF format does not support more than 5,000 event rows. If your report includes more than 5,000 rows, select the MS Excel or XML format.

## Unable to Delete Tags that Contain Special Characters

### Symptom:

Attempts to select or delete a query or report tag that contains the special characters, ~ ! @ # \$ % ^ & \* ( ) \_ + { } | : " < > ? is unsuccessful.

### Solution:

Do not use the noted special characters when creating query and report tags.

## Subscription

The following are the known issues related to subscription.

## Offline Subscription Files Are Unavailable on Offline Proxy

**Symptom:**

After upgrading to CA Enterprise Log Manager version 12.5, and manually installing an offline subscription package on an offline proxy server, you cannot access the offline package through the CA Enterprise Log Manager user interface. In Subscription Service Configuration for the offline server, when you choose the offline package in the File dropdown, and click Browse, a timeout message appears.

**Solution:**

A .jar file in the IGW folder of the proxy server needs to be deleted. To delete the file, do the following:

1. On the proxy server, navigate to the \$IGW\_LOC directory.
2. Stop igateway using the command  
`./S99igateway stop`
3. Delete the file subscription.jar using the command  
`rm -rf Subscription.jar`
4. Start igateway using `./S99igateway start`.

## Subscription Schedule is Reset after Upgrading the Subscription Server

**Symptom:**

When you configure the schedule for a subscription update, the schedule is reset after the subscription server is upgraded. The subscription clients are not upgraded.

**Solution:**

You can resolve this issue by performing the following steps:

1. Select each subscription client you want to upgrade.
2. Click Upgrade Now.

## User and Access Management

The following are the known issues related to user and access management.

## Custom Administrators Not Confined by Access Policies

**Symptom:**

If you create a custom administrator and assign users to that administrator, attempts to set access policies to confine the custom administrator to viewing only those users fails. A custom administrator can view any user regardless of identity access policy.

**Solution:**

This behavior occurs due to a user store management issue. You cannot presently create a custom administrator with rights to view only a certain subset of users.

## Limitation on Calendar Use with Access Policies

**Symptom:**

You have limited user or group access to CA Enterprise Log Manager during the times and days specified on a calendar with a policy that explicitly grants access. However, the calendar does not function as expected with a policy that explicitly denies access.

**Solution:**

Use the explicit grant policy type to limit the times you want to grant a group access rather than using an explicit deny policy.

## Miscellaneous

The following are the miscellaneous known issues.

### CA Enterprise Log Manager Is Sometimes Non-Responsive

**Symptom:**

Sometimes CA Enterprise Log Manager is non-responsive. That is, the user interface does not respond to user requests and internal requests from the agent to agent manager stop. However, log collection continues.

**Solution:**

Use the following procedure to stop the iGateway process and restart it:

1. Log on to the non-responsive CA Enterprise Log Manager server through ssh as the caelmadmin user.
2. Switch users to the root account with the following command and provide the root password:

```
su -
```

3. Navigate to the \$IGW\_LOC directory.

By default, iGateway resides in the directory,  
/opt/CA/SharedComponents/iTechnology.

4. Stop the iGateway process with the following command:

```
./S99igateway stop
```

5. Start the iGateway process with the following command:

```
./S99igateway start
```

## Display Time is Wrong

**Symptom:**

Display time is wrong after CA Enterprise Log Manager server is provisioned using the Virtual Appliance.

**Solution:**

Use the following workaround to resolve this issue:

1. Stop the iGateway.
2. Set the display time manually.
3. Restart the iGateway.

## High Contrast Settings for Monitor

**Symptom:**

In Windows, the only supported high contrast setting is High Contrast Black; the other three high contrast options are not supported. High contrast options include High Contrast #1, High Contrast #2, High Contrast Black, and High Contrast White.

**Solution:**

Select the High Contrast Black setting, when a high contrast setting is needed. To set this option, select Display from the Control Panel. This accessibility option is set on the Display Properties dialog, Appearance tab, Color scheme drop-down list.

## iGateway Continuously Stopping and Restarting

### Symptom:

The CA Enterprise Log Manager interface occasionally stops responding during operations. Checking the CA Enterprise Log Manager server reveals that the iGateway process is stopping and restarting but failing to stay up. Use the following process to check the iGateway process:

1. Access a command prompt on the CA Enterprise Log Manager server.
2. Log in with the caelmadmin account credentials.
3. Switch users to the root account with the following command:

```
su - root
```

4. Use the following command to verify that the iGateway process is running:

```
ps -ef | grep igateway
```

The operating system returns the iGateway process information and a list of processes running under iGateway.

### Solution:

Use the following workaround to resolve the problem:

1. Go to \$IGW\_LOC (/opt/CA/SharedComponents/iTechnology), and locate the following file:

```
saf_epSIM.*
```

There are multiple versions, numbered sequentially, for example, saf\_epSIM.1, saf\_epSIM.2, saf\_epSIM.3, and so on.

2. Rename the lowest-numbered file and save it in another location for transmission to CA support.
3. If iGateway does not automatically restart, restart it:
  - a. Log in as the root user.
  - b. Access a command prompt and enter the following command:

```
/opt/CA/SharedComponents/iTechnology/S99igateway start
```

## Keyed Lists Configured Locally Fail to Appear After Upgrade

### Symptom:

After upgrading to CA Enterprise Log Manager version r12.5, when you examine the available Keyed Value list under Administration > Library > Keyed Lists > Subscription, some Keyed Values no longer appear.

### Solution:

In CA Enterprise Log Manager version r12.5, Keyed Value lists have been moved from Services to Library, under Administration. If you had previously specified a Keyed Value as local to a specific server, rather than global for your entire CA Enterprise Log Manager environment, that Keyed Value is not retained after upgrade to version r12.5.

To avoid losing Keyed Values, before upgrading to version r12.5, set all Keyed Values to global configuration.

## Max Disk Space for Virtual CA Enterprise Log Manager Is Too Small

### Symptom:

Not able to create a virtual machine with an allocated disk space of 512 GB in VMware ESX Server v3.5. My virtual CA Enterprise Log Manager server needs more than the 256 GB maximum to handle event volume.

### Solution:

VMware ESX Server uses a default Block Size of 1 MB, and calculates the maximum disk space using this value. When the block size is set to 1 MB, the maximum disk space defaults to 256 GB. If you want to configure more than 256 GB of virtual disk space, you can increase the default block size.

### To create a larger virtual disk

1. Access the service console on the VMware ESX Server.
2. Increase the Block Size to 2 MB with the following command:  

```
vmkfstools --createfs vmfs3 --blocksize 2M vmhba0:0:0:3
```

In this command, the value 2M means 512 GB (2 x 256).
3. Restart the VMware ESX Server.
4. Create a new virtual machine with disk space set to 512 GB.

More information about this command and other commands is available in the VMware ESX Server documentation.

## Out of Memory Error on Machines with Low Memory

### Symptom:

The download of a subscription update to a computer with less than the recommended 8 GB of memory fails with a Java out of memory error.

### Solution:

If you install CA Enterprise Log Manager on hardware with less than the recommended 8 GB of memory, change the JVM heap size setting by editing the caelm-java.group file.

#### To change the JVM heap size setting

1. Log on to the CA Enterprise Log Manager server as caelmadmin.
2. Navigate to the iGateway folder.
3. Open the caelm-java.group file and locate the the JVM settings section.
4. Add the new line, as shown in the following illustration in bold:

```
<JVMSettings>
    <loadjvm>true</loadjvm>
    <javahome>/usr/java/latest/jre</javahome>
    <Properties
name="java.endorsed.dirs=/opt/CA/SharedComponents/iTechnology/endorsed">

<system-properties>java.endorsed.dirs=/opt/CA/SharedComponents/iTechnology/en
dorsed</system-properties>

    </Properties>

    <Properties
name="maxmemory"><jvm-property>-Xmx1250M</jvm-property></Properties>
</JVMSettings>
```

5. Save and close the caelm-java.group file

**Important!** Setting the JVM heap size can cause problems when using the Export to PDF option with large data sets. Thus, this option is best used on only small computers, which run with less than the recommended RAM and processing power.



## Refreshing Browser Logs User Out of CA Enterprise Log Manager

**Symptom:**

Refreshing your browser while logged in to CA Enterprise Log Manager ends your session, logging you out.

**Solution:**

CA Enterprise Log Manager does not support browser refresh because of Flex limitations. Avoid refreshing your browser.

## EE\_POZERROR Repository Error Appears on Login When Using Remote EEM

**Symptom:**

When you open the CA Enterprise Log Manager interface in an environment using a remote EEM server, the interface may fail to display properly. Instead an "EE\_POZERROR Repository Error" appears.

**Solution:**

Close and reopen the browser to resolve the issue.

## Service or Explorer Interface Error May Occur After iGateway Restart

**Symptom:**

If you click on an object in the CA Enterprise Log Manager interface services or explorer trees immediately after an iGateway restart, you may see an error message reading "Network error on receive" rather than the requested content.

**Solution:**

This error occurs if you attempt to access one of the specified objects while they are still being reloaded after the iGateway restart. Wait five minutes to allow the reload to finish and click the services or explorer item you want.

## Uploads and Imports Fail with any Non-IE Browser

### Symptom:

When you browse to CA Enterprise Log Manager with Mozilla Firefox, Safari, or Chrome, you can perform most CA Enterprise Log Manager tasks successfully. However, any upload or import tasks fail when using any of these browsers. Examples follow:

- Importing a query definition fails with an "IO Error: Request Failure" message.
- Uploading a CSV file with the bulk connector deployment wizard fails, despite the message, "Uploading file."

### Solution:

Browse to CA Enterprise Log Manager with Microsoft Internet Explorer when you want to upload or import files.

## User Interface Unexpectedly Fails to Display Properly on Installation with Remote EEM

### Symptom:

When installing CA Enterprise Log Manager with a remote EEM server, the user interface occasionally fails to display properly on initial login. Reviewing the iGateway log files reveals that the agentmanager, calmreporter, subscclient and subscproxy services have not started.

You may see log file syntax similar to this:

```
[1087523728] 09/23/09 20:35:32 ERROR :: Certificate::loadp12 : etpki_file_to_p12
failed [ errorcode : -1 ]

[1087523728] 09/23/09 20:35:32 ERROR :: Certificate::loadp12 : etpki_file_to_p12
failed [ errorcode : -1 ]

[1087523728] 09/23/09 20:35:32 ERROR :: Certificate::loadp12 : etpki_file_to_p12
failed [ errorcode : -1 ]

[1087527824] 09/23/09 17:00:07 ERROR ::
OutProcessSponsorManager::stopSponsorGroup : terminating safetynet process for
SponsorGroup [ caelm-msgbroker ] didn't respond OK for the termination call

[1087527824] 09/23/09 17:00:07 ERROR ::
OutProcessSponsorManager::stopSponsorGroup : terminating safetynet process for
SponsorGroup [ caelm-oaserver ] didn't respond OK for the termination call

[1087527824] 09/23/09 17:00:07 ERROR ::
OutProcessSponsorManager::stopSponsorGroup : terminating safetynet process for
SponsorGroup [ caelm-sapicollector ] didn't respond OK for the termination call

[1087527824] 09/23/09 17:07:46 ERROR :: OutProcessSponsorManager::start :
SponsorGroup [ caelm-java ] failed to start ]

[1087527824] 09/23/09 17:07:49 ERROR :: SponsorManager::start : Sponsor [
agentmanager ] failed to load

[1087527824] 09/23/09 17:07:49 ERROR :: SponsorManager::start : Sponsor [
calmreporter ] failed to load

[1087527824] 09/23/09 17:07:49 ERROR :: SponsorManager::start : Sponsor [
subscclient ] failed to load

[1087527824] 09/23/09 17:07:49 ERROR :: SponsorManager::start : Sponsor [
subscproxy ] failed to load
```

### Solution:

You can resolve this problem by restarting iGateway, and logging in to the interface again.

**To restart the iGateway service**

1. Click the Administration tab and then click the Services subtab.
2. Expand the System Status entry.
3. Select a specific CA Enterprise Log Manager server.
4. Click the service's Administration tab.
5. Click Restart iGateway.

## Upgrade to CA Audit Required for Interoperation with CA Enterprise Log Manager

### Symptom:

The installation of a CA Enterprise Log Manager server uses an existing CA Embedded Entitlements Manager server installed with CA Audit r8 SP2. When accessing the Audit Administrator user interface, an attempt to edit agent details returns the error message:

"Warning: There are no Log Manager Servers available."

All the fields in the Audit Administrator's Edit Agent Details page have blank values.

The caused is an incompatible interaction between the r8.1 CA EEM server and the r8.4 CA EEM client present in CA Enterprise Log Manager r12.1. The older version does not support a function called by the newer SDK.

### Solution:

To resolve the version mismatch and to use CA Enterprise Log Manager with CA Audit r8 SP2, upgrade the existing CA Audit implementation to CA Audit r8 SP2 CR1. You can then use the CA Enterprise Log Manager Agent and Agent Manager features with CA Audit.

## Upgrade to 12.5.x From Earlier Versions Fails

### Symptom:

When you update CA Enterprise Log Manager from a release before 12.5.0 to release 12.5.0 or later using the CA Enterprise Log Manager subscription system, you may experience errors or upgrade failure.

### Solution:

To avoid these errors, you can manually install the 12.5 preupgrade package, using the following procedure. This procedure can be used for both Subscription and Offline upgrades. It replaces the preupgrade package installation procedures described in the appropriate sections of this document.

### To install the CA Enterprise Log Manager 12.5.x preupgrade package manually

1. Navigate to the FTP offline subscription site:  
`ftp://ftp.ca.com/pub/elm/connectors/ftp/outgoing/pub/elm/ELM_Offline_Subscription`

The directory index displays a folder for each major CA Enterprise Log Manager release.

2. Select the 12.5\_Offline\_Subscription folder, and the Pre\_12.5\_Upgrade folder.
3. Download the pre-12.5 offline subscription update package. The file name follows the following format:

`subscription_12_5_xx_yy.tar`

4. Using physical media such as a disk, or using scp, manually copy the .tar file to the CA Enterprise Log Manager appliance. We recommend a partition with a large amount of available space, such as /data/temp.
5. Untar the subscription file in your chosen directory.

The main .tar file package contains four update.zip files:

- iGateway
- Java
- EEM
- ELM binary

6. Manually open each of these zip files using `jar -xf`. You can do so in any order, but the ELM binary package must be last.

Each zip file contains an update shell script that installs the contents of the package. For example, `EEM_update.sh`

7. Locate and run each of these update scripts, ending with the ELM update, `Upgrade_Server.sh`.

A message containing the target update version appears.

8. Enter yes to continue, and wait for the upgrade to complete.

Return to the CA Enterprise Log Manager interface to confirm the upgrade.

When you have finished this procedure, you can complete your [Subscription upgrade](#) (see page 13) or [Offline upgrade](#) (see page 17).

## An Undefined Server Name Replaces the Primary CA Enterprise Log Manager Server Name

### Symptom:

When you deploy CA Enterprise Log Manager as a virtual appliance, the name of the primary CA Enterprise Log Manager server is displayed as ca-elm on the Subscription Dashboard.

### Solution:

You can resolve this issue by performing the following steps:

1. Click the Administration tab, the Services subtab, and the Subscription Service folder.

The Global Service Configuration: Subscription Service page is displayed.

2. Type the name of the primary CA Enterprise Log Manager server in Default Subscription Proxy.
3. Select the name of the primary CA Enterprise Log Manager server from the Subscription Proxy(s) for Client Updates.
4. Select the name of the primary CA Enterprise Log Manager server from the Subscription Proxy(s) for Content Updates.
5. Click Save.

## LogSensors and Listeners

The following are the known issues related to the logsensors and listeners.

## Repeated Events Appear in CA Enterprise Log Manager

**Symptom:**

CA Enterprise Log Manager receives repeated events when you reboot the event source computer from which the WMI logsensor is receiving events.

**Solution:**

This is a known issue. A fix for this issue will be available in a future release of CA Enterprise Log Manager.

## User Credentials Authentication Fails on WMI LogSensor

**Symptom:**

CA Enterprise Log Manager fails to authenticate a user when you deploy a WMI logsensor to receive events from a local computer. The WMI logsensor is able to receive events from the local computer.

**Solution:**

This is default behavior. Microsoft Windows does not validate user credentials when you deploy a WMI logsensor on the local computer.

## Connector Deployment Fails for a Cisco Router Integration

**Symptom:**

When you deploy a connector using the syslog listener for Cisco Router 12.1 or Cisco Router 12.2 integrations, the connector deployment fails intermittently.

**Solution:**

This is a known issue. A fix for this issue will be available in a future release of CA Enterprise Log Manager.





# Chapter 11: Fixed Issues

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This section contains the following topics:

[Issues List](#) (see page 89)

## Issues List

The following DARs have been fixed in CA Enterprise Log Manager r12.5.01:

- 19364896
- 19451459
- 19553745
- 19656250
- 18716957
- 18853355
- 19113735
- 18759230

The following customer-reported issues have been fixed in CA Enterprise Log Manager r12.5.01:

- 19987186-01
- 19899858
- 19919163-01
- 19922298-01
- 19987384-01
- 19556222
- 19703760-02



# Chapter 12: Documentation

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This section contains the following topics:

[Bookshelf](#) (see page 91)

[How to Access the Bookshelf](#) (see page 92)

## Bookshelf

The Bookshelf provides access to all CA Enterprise Log Manager documentation from a central location. The Bookshelf includes the following:

- Single expandable list of contents for all guides in HTML format
- Full text search across all guides with search terms highlighted in the content and ranked search results

**Note:** When searching for purely numeric terms, precede the search value with an asterisk.

- Breadcrumbs that link you to higher level topics
- Single index across all guides
- Links to PDF versions of guides for printing

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5. Open the bookshelf folder.
6. Open the bookshelf:
  - Open Bookshelf.hta if the bookshelf is on the local system and you are using Internet Explorer.
  - Open Bookshelf.html if the bookshelf is on a remote system or if you are using Mozilla Firefox.

The bookshelf opens.

# Appendix A: Third-Party Acknowledgements

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This section contains the following topics:

[Adaptive Communication Environment \(ACE\) 5.5.10](#) (see page 94)

[Software under the Apache License](#) (see page 96)

[Boost 1.39.0](#) (see page 100)

[DataDirect OpenAccess 6.0](#) (see page 100)

[dom4j 1.6.1](#) (see page 100)

[Google Protocol Buffers 2.3.0](#) (see page 101)

[Jaxen 1.1](#) (see page 102)

[JAXP 1.2.0-FCS](#) (see page 104)

[JDOM 1.0](#) (see page 106)

[Red Hat Enterprise Linux 5.5](#) (see page 107)

[SNMP4J 1.9.3d](#) (see page 111)

[Sun JDK 1.6.0\\_19](#) (see page 115)

[PCRE 6.3](#) (see page 120)

[TPSR--POI 3.0](#) (see page 121)

[POI 3.6](#) (see page 126)

[Zlib 1.2.3](#) (see page 132)

[ZThread 2.3.2](#) (see page 133)

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