Building Management Systems – The Challenges of Alarm Notifications

May 25, 2025
Red Tree Systems, LLC

One if the key features of modern Building Management Systems (BMS) is the ability to send descriptive messages directly to individual's mobile phones to quickly alert the recipients to any situation that might need their attention. The body of the message usually contains detailed information about the partiuclar alarm condition and can be sent automatically to a pre-assigned list of individual recipients.

Alarm Notification Challenges:

Nearly all BMS systems have the ability to send these alarm notifications as emails or as text messages, but that is often where the challenges for the BMS provider begin.

We typically hear:

- *"When I send notifications as emails, sometimes they just start getting rejected by the SMTP email server. Why?"*
- *"If I send notifications as SMS text messages, they are often delayed or marked as spam by the wireless carriers and not delivered in time (or not at all)."*
- *"As staff members change over time the BMS needs to constantly be updated; adding or removing recipients email addresses or phone numbers keep up with the changes."*

While these challenges are related, they are individually the result of changes in policies for building operations, cybersecurity and the expanded use of technology. So let's take a more detailed look into each of them, and a potential solution.

1. Sending Notifications as Emails.

FACT: Sending emails is easy! Whether you are at your desktop PC or using your mobile device, you can easily compose and email and click "Send". Nothing to it!

Behind the scenes the application you are using (ex: Microsoft Outlook or a web service like Google's Gmail) connects to your account on an email server (ex: Microsoft Exchange) using SMTP (Simple Mail Transfer Protocol). Your email is then passed along to your recipient's email server which in turn delivers it to them.

But it can be more difficult when your BMS system needs to send important alarm notifications to recipients via email. Things like junk mail filters and increased email server security have entered the picture over time and what used to be simple outgoing emails might not always make it through now.

Here's some real-world email challenges for BMS systems:

Situation #1 - Corporate email servers: The BMS system resides on the end-user's corporate network and outgoing emails are sent through an account on the corporate email SMTP server. Initially everything works great until the corporate IT department introduces new restrictions on the use of the account, requires frequent account password changes, or even disables the account for some reason. Now important email notifications from the BMS system are not delivered on time,... or at all. You are faced with constantly revising the configuration settings in the BMS that affect outgoing email.

Situation #2 – Email server message limits: Some SMTP email servers are configured to limit the quantity of emails that can be sent over a period of time. For example, they are most often set to allow no more than (5) five emails per minute be sent per account to prevent sending spam. If the BMS has (7) seven critical alarm notifications to be emailed, the server may accept the first five and reject the last two with an error message similar to:

> *"System alarm: Cannot send message: 421 4.4.2 Message submission rate for this client has exceeded the configured server limit."*

Under these circumstances, some of the recipients will never get notified of the alarm condition.

2. Well then how about sending notifications as Text Messages?

FACT: Sending text messages from our phones is easy! Quickly tap out your message and click "Send". Once again, nothing to it. The recipient is notified almost instantly through their cellular provider's network.

But while text messages may be a convenient means of notifying someone "person-to-person", typical BMS systems are not normally capable of sending direct SMS (Short Message Service) notifications. Emails, Yes. Direct SMS, Not so much.

Text Message Workarounds... are coming to an end!

In the past there was an easy workaround for this problem,... most cellular service providers hosted a "email-to-text" service. The BMS system could send an email to the recipient's 10-digit cell phone number (*ex: <10-digit phone#>@txt.att.net*) and the message would be received on that individual's phone as a direct SMS text message.

But over time, spammers took advantage of these email-to-text services to send large volumes of unsolicited messages to customers and complaints to the cellular providers mounted. In response most providers now intentionally delay delivery of the resulting SMS message by hours and even days, or they have discontinued their email-to-text services alltogether.

For the BMS system that is relying on the "email-to-text" capabilities of celluar carriers to deliver critical alarm notifications, this workaround is soon coming to an end. Individuals that are accustomed to receiving SMS text alarm notifications won't receive them promptly, or at all.

3. The Challenge of Getting Notifications to the Right People.

> **FACT:** A typical BMS system offers a wide variety of options when it comes to setting up lists of recipients that will receive alarm notifications for each critical point in the system. This feature makes it possible to have each alarm condition message sent only to the person or list of persons best suited to respond to it.

But people come and go. Facilities management staff members change over time. People need to be added and removed as alarm message recipients often.

To keep things current, the task usually falls to the BMS administrator(s). And because these people are usually busy with other responsibilities, keeping alarm recipient lists up to date often goes overlooked. The lists easily become obsolete over time, resulting in alarm notifications often being sent to 'wrong' people and *not* being sent to the 'correct' people. The BMS administrator has the painful job of locating and updating the lists of recipients for all the alarms in the system so that important notifications are not missed.

Then there is the training requirement for those administrators. Navigating through the configuration options for alarm management in the BMS system is not always simple. Hours of training may be required to become competent in getting all the options set correctly.

So What Is SentryLogic.com... and how can it help with these Challenges ?

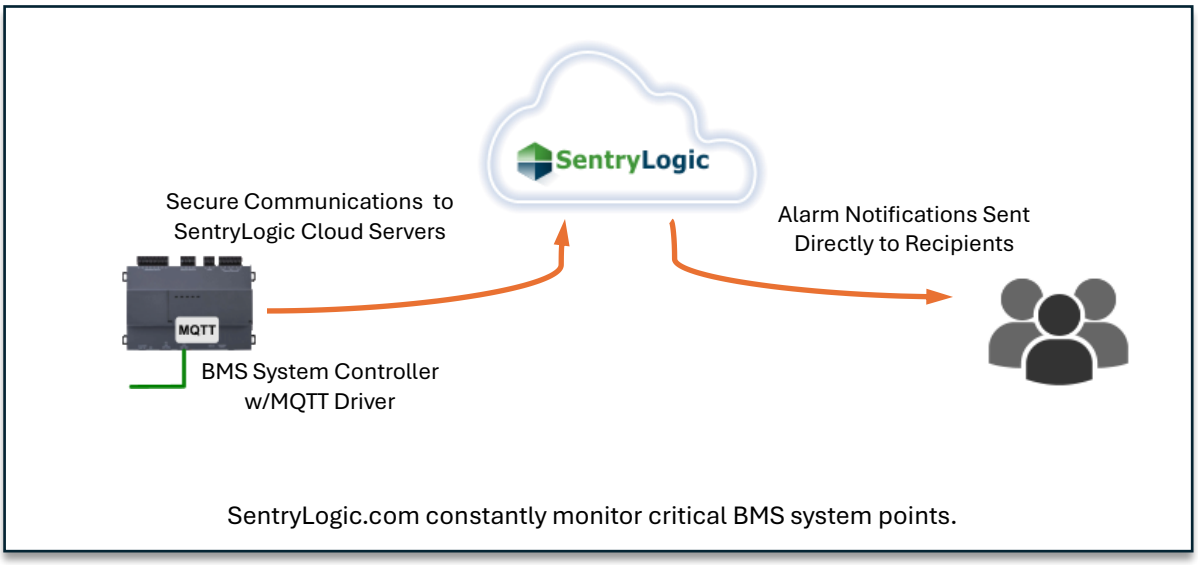
SentryLogic.com is a cloud-based monitoring platform specifically designed to complement the operation of popular BMS systems. When you link critical points in your BMS system to **SentryLogic.com**, you can be confident that they are monitored continuously and can automatically trigger alarm notifications to individuals without all the hassels.

- SentryLogic is not tied to the constraints of corporate SMTP Email servers.
  Emails are sent from SentryLogic.com's own email servers.
- SentryLogic sends SMS text messages directly, without the need for "email-to-text" services.
  SentryLogic sends native SMS messages without wireless carrier's limitations and delays.
- SentryLogic web pages make it easy to add, remove and update individual recipients and delivery settings for each monitored point.
  Easily manage alarm notification properties and list of recipients from a single web page.

SentryLogic.com utilizes a secure communications protocol to monitor the critical points in BMS systems and responds quickly when alarm conditions occur. Notifications can be sent as any combination of emails, text messages and voice messages to individuals with detailed desctriptions of any actions that are needed.

What does it take to link critical BMS points to SentryLogic.com?
If your BMS system resides on a network that has an outbound path to the internet, you are all set!

Most popular BMS systems are already equipped to use a popular communication protocol known as MQTT, (Message Queuing Telemetry Transport). MQTT enables the BMS can send point values out to the SentryLogic.com cloud servers. MQTT messages are compact and encrypted so your values are transmitted quickly and securely.



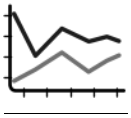
If your BMS is from one of the following manufacturers, it is more than likely already equipped with MQTT capability and will work directly with SentryLogic.com.

- Tridium – Niagara
- Schneider Electric – EcoStruxure Building Operations
- Automated Logic - WebCTRL
- Johnson Controls – Metasys
- Distech – Eclypse
- Delta Controls

SentryLogic.com - Alarm Notifications Features:

- Messages can be sent in any combination of email, SMS text, or voice.

- Alarm messages sent directly to persons you designate. Individuals or entire groups.

	• Descriptive alarm messages identify the problem so corrective action can begin immediately.
	• All data is held securely in redundant SentryLogic.com servers. Available 24 x 7 from your web browser.
	• Includes historic trends for each point to aid in analysis of alarm conditions.
	• **Free** to use for up to 10 monitored points! Paid plans available for larger systems.

Try it for FREE ! - Send Your Alarm Notifications through SentryLogic.com.

Follow this link to instructions on how to get your critical points linked to the Free Trial offer at SentryLogic.com

Create Your SentryLogic.com Account