Chapter 31

Working with E-mail Objects

Introduction

The E-mail object provides alarm notification through electronic mail (e-mail) to personnel at a remote location. The E-mail object translates alarm messages into the correct e-mail format and sends the message via the local mail gateway (Simple Mail Transfer Protocol [SMTP] server).

Note: In order to function, the E-mail object must have access via Ethernet to an SMTP server on the Local Area Network (LAN). In addition, the N30 Device object must identify the location of the SMTP server.

For standard alarming, the E-mail object routes alarms based on filtering criteria defined in the E-mail object attributes. However, for BACnet alarming, set the E-mail object as a destination of the BACnet Notification Class in order to route alarms.

This chapter describes how to:

- add an E-mail object

- edit an E-mail object

- command an E-mail object

- delete an E-mail object

Key Concepts

E-mail Object Operation

The Message Router object sends a Status Notification Report (SNR) containing status change information to the E-mail object. The E-mail object converts the text of the SNR into the proper format for the body of an e-mail message.

The E-mail object sends the e-mail message to an SMTP server, which routes the message to the intended recipient (see Figure 31-1).

Note: The E-mail object can only guarantee delivery of the message to the SMTP server. The SMTP server is responsible for delivering the message to the intended recipient. If the SMTP server cannot deliver a message, the SMTP server sends a delivery failure notice to the e-mail address identified in the Reverse Path attribute.

If the E-mail object cannot send a message due to errors/failures in communicating with the server, the E-mail object buffers the message and tries again at a later time according to the values of the Number of Retries and the Retry Interval attributes.

TO:jane.smith@jci.com
FROM:john.smith@jci.com
SUBJECT:0001_SITE: SER HA 0001-AV-1 150.0 Deg F 14 Jan 2000 13:19:02

Site Name: 0001_SITE

Alarm Priority: SER
Event State: HA
Previous Event State: NOR

Object Name: 0001-AV-1
Object Value: 150.0 Deg F
Object Category: HVAC
Reliability: Reliable
Alarm Text: Chiller at northwest corner of building

Date: 14 Jan 2000
Time: 13:19:02

Message Type: Alarm

Acknowledge Required: TRUE

emailmsg

Figure 31-1: Sample E-mail Message

E-mail Delivery Failure

The E-mail object can only guarantee delivery of the message to the SMTP server. The SMTP server is responsible for delivering the message to the intended recipient. If the SMTP server cannot deliver a message, the SMTP server sends a delivery failure notice to the e-mail address identified in the Reverse Path attribute.

The following are sample situations in which an SMTP server cannot deliver a message and, as a result, sends a delivery failure notice to the Reverse Path e-mail address.

Attribute Values:

Recipient 1 = jsmith@acmeinc.com

Recipient 2 = hjones@acmeinc.com

Reverse Path = tedison@corpo.com

Situation 1

The mail system for Acme Inc. is currently full or not receiving messages. The E-mail object sends a delivery failure message to tedison@corpo.com indicating that the SNR message was not delivered because the Acme Inc. mail system failed to receive it.

Situation 2

A recipient e-mail address does not exist because John Smith is no longer an employee of Acme Inc. The E-mail object sends a delivery failure message to tedison@corpo.com indicating that the SNR message was not delivered because the recipient e-mail address does not exist.

SMTP Server Location

In order to use the E-mail object, the N30 Device object must identify the location of the SMTP server. If the site uses a Domain Name System (DNS) server, use the SMTP Server Name attribute in the N30 Device object to identify the SMTP server location. If the site does not use a DNS server, use the SMTP Server IP Address attribute in the N30 device object instead. See the *N30 Device (LIT-694610)* chapter in the *Object Dictionary* for details on using these attributes.

Attributes

Recipient 1/2/3 Name

Specifies the e-mail addresses of the intended recipients. Specifies up to three recipients.

Reverse Path Name

Specifies the e-mail address of the person who receives delivery failure messages for failures that occur after the e-mail has been sent to the SMTP server. If the SMTP server cannot deliver a message, the SMTP server sends a delivery failure notice to the e-mail address identified in this attribute. (The E-mail object cannot receive email messages and thus cannot receive delivery failure messages.)

Retry Interval

If delivery fails while the E-mail object is sending the e-mail to the SMTP server, the E-mail object retries sending the e-mail message periodically in this interval.

Retries

If delivery fails while the E-mail object is sending the e-mail to the SMTP server, the E-mail object attempts to send the message in the time defined in the Retry Interval attribute. The Number of Retries attribute specifies how many times the E-mail object resends the message.

Max SNR Queue

Specifies the number of SNR messages that the SNR queue can hold.

Process Identifier

Used to route messages to the E-mail object. Must be a unique number for each device. If not specified, a value is automatically assigned on download.

Active Filter

Selects the type of filtering in effect for the E-mail object. The filter types are as follows:

- **Pass None** - No SNR messages sent.

- **Pass All** - Send all SNR messages.

- **Filter A** - Send SNR messages based on the settings of Filter A.

- **Filter B** - Send SNR messages based on the settings of Filter B.

- **Filter A and B** - Send SNR messages based on the settings of Filter A and Filter B.

Priority Filter A

This element of Filter A defines which priorities the E-mail object sends when Filter A is in effect. A value of True for a particular position (Critical, Serious, Important, or Status) means that the E-mail object sends messages of that defined priority.

Category Filter A

This element of Filter A defines which categories of messages the E-mail object sends when Filter A is in effect. This filter has no effect for SNRs that do not define a category. A value of True for a particular position (HVAC, Fire, Security, Services, or Administrative) means that the E-mail object sends messages of that defined category.

Msg Type Filter A

This element of Filter A defines which message types the E-mail object sends when Filter A is in effect. A value of True for a particular position (System Alert, Operator Transaction, or Alarm) means that the E-mail object sends a message of that defined type.

Priority Filter B

This element of Filter B defines which priorities the E-mail object sends when Filter B is in effect. A value of True for a particular position (Critical, Serious, Important, or Status) means that the E-mail object sends messages of that defined priority.

Category Filter B

This element of Filter B defines which categories of messages the E-mail object sends when Filter B is in effect. This filter has no effect for SNRs that do not define a category. A value of True for a particular position (HVAC, Fire, Security, Services, or Administrative) means that the E-mail object sends messages of that defined category.

Msg Type Filter B

This element of Filter B defines which message types the E-mail object sends when Filter B is in effect. A value of True for a particular position (System Alert, Operator Transaction, or Alarm) means that the E-mail object sends a message of that defined type.

Error State

Indicates the reason for the error. Possible values are:

- None

- Queue Full

- Server Error

Example

Figure 31-4 and Figure 31-5 show screens from a sample completed E-mail object.

```
B7F3LIZ-1: ADMIN                              Thu 09 Aug 2001 09:20 CDT
=======================================================================
     B7F3LIZ-1.Operator Devices.Email{2}
-----------------------------------------------------------------------
Object
 Object Name           HVAC E-mail
 Description           Sends HVAC-related e-mail messages
 Object Type           Email
 Object Category       HVAC

Setup
 Recipient 1 Name      jsmith@acmeinc.com
 Recipient 2 Name      hjones@acmeinc.com
 Recipient 3 Name      rschmidt@acmeinc.com
 Reverse Path Name     tedison@corpo.com
 Retry Interval              180 second
 Retries                       3
 Max SNR Queue                25
 Process Identifier           14


        F3-Save F4-Cancel []-Page
Enter an alphanumeric string
```

Figure 31-2: Completed E-mail Object - Screen 1

```
B7F3LIZ-1: ADMIN                                Thu 09 Aug 2001 09:21 CDT
=============================================================================
        B7F3LIZ-1.Operator Devices.Email{2}
-----------------------------------------------------------------------------


Active Filter           Filter A
Priority Filter A       [4] Items
Category Filter A       [5] Items
Msg Type Filter A       [3] Items
Priority Filter B       [4] Items
Category Filter B       [5] Items
Msg Type Filter B       [3] Items










        F3-Save F4-Cancel []-Page
Press space bar / backspace to select value
```

Figure 31-3: Completed E-mail Object - Screen 2

Procedure Overview

Table 31-1: E-mail Object Procedure Overview

To Do This	Follow These Steps:
Add an E-mail Object	Browse to and highlight the Operator Devices container. Press the F3 (Add) key. Highlight E-mail and press Enter. Fill in the fields using Table 31-2. Press the F3 (Save) key. Check the User Assistance area of the screen to verify if the save was successful or if there were errors. Press any key to continue. Press the F4 (Cancel) key to return to the container hierarchy.
Edit an E-mail Object	Browse to and highlight an E-mail object. Press Enter to open the object. Press the F3 (Edit) key. Edit the fields according to Table 31-2. Press the F3 (Save) key. Check the User Assistance area of the screen to verify if the save was successful or if there were errors. Press any key to continue. Press the F4 (Cancel) key to return to the container hierarchy.
Command an E-mail Object	Browse to and highlight an E-mail object. Press the F2 (Command) key. Use the Spacebar and the Backspace key to cycle through the list of commands until the desired command appears. Press Enter.
Delete an E-mail Object	Browse to and highlight an E-mail object. Press Enter to open the object. Press the Delete key. Press the Tab key to confirm the deletion.

Detailed Procedures

Adding an E-mail Object

To add an E-mail object:

1. Browse to and highlight the Operator Devices container.

2. Press the F3 (Add) key.

3. Highlight the E-mail object from the list that appears and press Enter. The first of two E-mail object configuration screens appears (Figure 31-4). The second screen is shown in Figure 31-5.
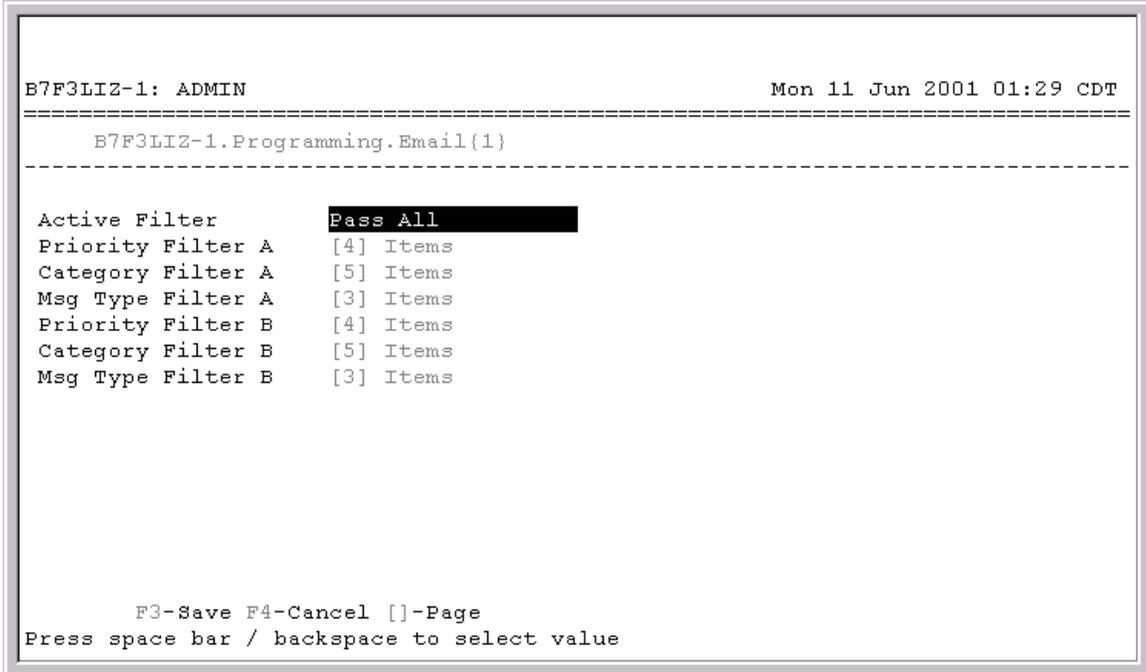
```
B7F3LIZ-1: ADMIN                                    Mon 11 Jun 2001 01:24 CDT
==============================================================================
       B7F3LIZ-1.Programming.Email{1}
------------------------------------------------------------------------------
Object
 Object Name              ████████████████████████
 Description
 Object Type              Email
 Object Category          HVAC

Setup
 Recipient 1 Name
 Recipient 2 Name
 Recipient 3 Name
 Reverse Path Name
 Retry Interval                   180  second
 Retries                            3
 Max SNR Queue                     25
 Process Identifier

         F3-Save F4-Cancel []-Page
Enter an alphanumeric string
```

Figure 31-4: E-mail Object Configuration Screen 1

```
B7F3LIZ-1: ADMIN                                    Mon 11 Jun 2001 01:29 CDT
==============================================================================
      B7F3LIZ-1.Programming.Email{1}
------------------------------------------------------------------------------

   Active Filter          Pass All
   Priority Filter A      [4] Items
   Category Filter A      [5] Items
   Msg Type Filter A      [3] Items
   Priority Filter B      [4] Items
   Category Filter B      [5] Items
   Msg Type Filter B      [3] Items




         F3-Save F4-Cancel []-Page
Press space bar / backspace to select value
```

Figure 31-5: E-mail Object Configuration Screen 2

4.   Fill in the fields using Table 31-2.

Table 31-2: E-mail Object Attributes

Screen Area	Attribute	Required	Default	Options/Range
Object	Object Name	No	Blank	Maximum 32 characters
				Invalid characters: @ . ? * $ # : ' [ ]
				If not completed, the system assigns a name.
	Description	No	Blank	Maximum 40 characters
	Object Type	Yes	Email	The default is preset and cannot be changed.
	Object Category	Yes	HVAC	HVAC, Fire, Security, Services, Administrative.
Continued on next page . . .				

Screen Area (Cont.)	Attribute	Required	Default	Options/Range
Setup	Recipient 1 Name	Yes	Blank	Maximum of 50 characters
	Recipient 2 Name	No	Blank	Maximum of 50 characters
	Recipient 3 Name	No	Blank	Maximum of 50 characters
	Reverse Path Name	Yes	Blank	Maximum of 50 characters
	Retry Interval	Yes	180	60-600 seconds
	Retries	Yes	3	0-10
	Max SNR Queue	Yes	25	3-100
	Process Identifier	Yes	Blank	This value is automatically assigned during download but must be assigned a value between 3 and 15 for the given device when it is being added from the VT100.
	Active Filter	Yes	Pass All	Pass None, Pass All, Filter A, Filter B, Filter A and B
	Priority Filter A	Yes	[4] Items	Critical, Serious, Important, Status
	Category Filter A	Yes	[5] Items	HVAC, Fire, Security, Services, Administrative
	Msg Type Filter A	Yes	[3] Items	System Alert, Operator Transaction, Alarm
	Priority Filter B	Yes	[4] Items	Critical, Serious, Important, Status
	Category Filter B	Yes	[5] Items	HVAC, Fire, Security, Services, Administrative
	Msg Type Filter B	Yes	[3] Items	System Alert, Operator Transaction, Alarm

5. Press F3 (Save) key.

6. Check the User Assistance area of the screen to verify if the save was successful or if there were errors. If errors were detected, correct them, and resave the entries. Once the save is successful, continue with Step 7.

7. Press any key to continue.

8. Press the F4 (Cancel) key to return to the container hierarchy.

Editing an E-mail Object

To edit an E-mail object:

1.   Browse to and highlight an E-mail object.

2.   Press Enter to open the object.

3.   Press the F3 (Edit) key. The E-mail object attribute screen appears. See Figure 31-4 and Figure 31-5.

4.   Edit the fields according to Table 31-2.

5.   Press the F3 (Save) key.

6.   Check the User Assistance area of the screen to verify if the save was successful or if there were errors. If errors were detected, correct them, and resave the entries. Once the save is successful, continue with Step 7.

7.   Press any key to continue.

8.   Press the F4 (Cancel) key to return to the container hierarchy.

Commanding an E-mail Object

To command an E-mail object:

1.   Browse to and highlight an E-mail object.

2.   Press the F2 (Command) key. The Command field appears.

3.   Use the Spacebar and the Backspace key to cycle through the list of commands until the desired command appears. The E-mail object supports the commands identified in Table 31-3.

Table 31-3: Supported Commands

Command	Description
Disable	Causes E-mail object to ignore incoming SNR messages.
Enable	Causes E-mail object to process incoming SNR messages.
Queue Clear	Clears all SNR messages in the SNR queue.

4.   Press Enter.

Deleting an E-mail Object

To delete an E-mail object:

1.   Browse to and highlight an E-mail object.

2.   Press Enter to open the object.

3.   Press the Delete key.

4.   Press the Tab key to confirm the deletion.