The LSS Database has the following set up administrative screens, Mail Admin, Notification Admin, and Database Admin. The Mail Admin view contains the configuration for setting up a client that connects to an email server to send notifications.

| Mail Settings | | | | | | | |
|-----------------|-------------|----------|---------|--|--|--|--|
| Host Name | localhost.c | | | | | | |
| Port | 25 | | | | | | |
| UserName | root@local | | | | | | |
| Password | | | | | | | |
| Server Type | PHP Mail |] | | | | | |
| Authorization | Unsecure | | | | | | |
| Encryption Type | • TLS | SSL | | | | | |
| | ≁Test | CRefresh | HSave 1 | | | | |

The IP Address or Domain Name for the email server is configured in the Host Name input field. An email client will use the designated port to establish the connection along with a user email account name and password. The type of service is available in the Server Type drop down list with an encryption option to keep the email message content private.

For verification an active email server and local host test server is used to verify the LSS Database functionality (software development). As shown in the following screen capture the email server received a connection request follow by an email transmission from the LSS Database.

The system administrator is Rick E with email address an of root@localhost. When Rick E is logged in, the current user's properties are retrieved from the database to be used in the administrative actions such as sending a test email. As noted following the activation of the test email, a connection from the LSS Database is done with an email message transmission.

| Mercury SMTP Server | |
|--|-------|
| Current connections and status | |
| Ready | Pause |
| | * |
| | Ŧ |
| | |
| Connection history: | |
| Connection history: Mercury/32 Transport System, SMTP Server Module v4.62 Copyright (c) 1993-2008, David Harris, All Rights Reserved. | * |
| Connection history: Mercury/32 Transport System, SMTP Server Module v4.62 Copyright (c) 1993-2008, David Harris, All Rights Reserved. Connection from 127.0.0.1, Wed Jul 22 08:52:34 2015 HELO RickE-Win7 | |
| Connection history: Mercury/32 Transport System, SMTP Server Module v4.62 Copyright (c) 1993-2008, David Harris, All Rights Reserved. Connection from 127.0.0.1, Wed Jul 22 08:52:34 2015 HELO RickE-Win7 MAIL FROM: <root@localhost.com></root@localhost.com> | |
| Connection history: Mercury/32 Transport System, SMTP Server Module v4.62 Copyright (c) 1993-2008, David Harris, All Rights Reserved. Connection from 127.0.0.1, Wed Jul 22 08:52:34 2015 HELD RickE-Win7 MAIL FROM: <root@localhost.com> RCPT T0:<root@localhost> DATA</root@localhost></root@localhost.com> | A |
| Connection history: Mercury/32 Transport System, SMTP Server Module v4.62 Copyright (c) 1993-2008, David Harris, All Rights Reserved. Connection from 127.0.0.1, Wed Jul 22 08:52:34 2015 HELD RickE-Win7 MAIL FROM: <root@localhost.com> RCPT T0:<root@localhost> DATA DATA - 29 lines, 799 bytes.</root@localhost></root@localhost.com> | A |
| Connection history: Mercury/32 Transport System, SMTP Server Module v4.62 Copyright (c) 1993-2008, David Harris, All Rights Reserved. Connection from 127.0.0.1, Wed Jul 22 08:52:34 2015 HELD RickE-Win7 MAIL FROM: <root@localhost.com> RCPT T0:<root@localhost> DATA DATA - 29 lines, 799 bytes. QUIT 0 sec. elansed_connection_closed Wed, Jul 22 08:52:34 2015</root@localhost></root@localhost.com> | A |

On the client's computer an email application is running and will periodically connect with the POP server. As shown the test message from the LSS Database is received. The LSS Database supports both HTML and plain text message transmissions. The message format is dependent on the type of client receiving the email. For instance a cell phone has limited message length and will receive brief text messages.

| From: To: Cc: | LSS Web Server [root@localhost.com] Rick E | Sent: | Wed 7/22/2015 8:53 AM |
|---------------------|---|-------|-----------------------|
| Subject: | Subject, LSS Test Message | | |
| Message | body HTML LSS Test Message | | |

F

After verifying the email settings the notification will need to be configured. As shown in the Notifications Admin screen the configuration se parameters are used for email links and how it is executed. The server domain name relates to the LSS Database and is included in the HTML notification email under the view column within the email message body. The "From input fields" consist of a return address and client name that are displayed in the recipients email, like the one shown above in the test message.

When an LSS-100P report is received, the LSS Database will store the data for review with notification processing status. The notification process is executed on a periodic basis via a system cron entry. A corn execution timestamp is

Notifications Settings

| rver Domain Name | localhost | | | | | |
|----------------------------|--------------------|------------------|---------------|--|--|--|
| rom Email Address | root@localhost.com | | | | | |
| From Name | LSS Web Server | | | | | |
| un in Background | • | | | | | |
| Last Cron Run Date/Time | Tue Jul 21 | 2015 12:09:06 | 6 GMT- | | | |
| Interval Microseconds | 1000 | | | | | |
| | | C Refresh | H Save | | | |
| Test | Notification, Sir | mulated LSS-10 | 0 Data | | | |
| | Test Data 1 | ITest Data 2 | ITest Data 3 | | | |

provided as verification that it is running as expected. The Test Cron button will invoke the notification process on demand as a tool to verify notifications.

The LSS Database has a built in test feature to verify notification processing by using the Test Data buttons along the bottom of the screen. This will generate a set of simulated data that is logged and will be emailed if the user is associated with the simulated theater and set to receive notifications.

The notification setting can be updated in the Modify Users screen and as shown Rick E is set to receive all LSS-100P reports. For each user notification settings is available and are None, Error Only, and None. For our test case all have been selected.

Modify Users

| | User ID ${}^{\scriptstyle \vee}$ | User Name 🗠 | Company ~ | Email Addre.:. | Notification $^{\scriptscriptstyle \vee}$ | Created ~ | Level ~ | Phone ~ |
|--------|----------------------------------|-------------|-----------|----------------|---|------------|---------------|----------------|
| \sim | 14 | user | USL | user@uslinc | None | 2015-06-08 | User | 1+805-549-0161 |
| ~ | 13 | manager | USL | manager@u | None | 2015-06-08 | Manager | 1+805-549-0161 |
| | 12 | admin | USL | admin@uslin | None | 2015-06-08 | Administrator | 1+805-549-0161 |
| | 11 | demo | USL | demo@uslin | None | 2015-06-08 | Manager | 1+805-549-0161 |
| ~ | 24 | Rick E | USL | root@localhost | All | 2015-07-21 | Administrator | 805-549-0161 |

To associate the user with the simulated theater, the Modify Groups is used and can be done after executing the Test Data button. As a note the simulated report will use the current administrator's organization (Company) setting for the OrgKey with a theater number of -1. The -1 is reserved for simulated data and should never be used in an LSS-100P theater number assignment.

As shown the notification email is generated after executing the Test Data followed by the Test Cron button and waiting for the email server to process the mail transmission. In our test case below the SPL Left Channel is within limits as shown in black fornt with the following error in red font.

| From: LSS Web Server [root@localhost.com] To: Rick E Cc: | | | | | | | | Sent: | Wed 7/22/2015 9:52 AM | | |
|--|--|--------------------|----------|---------|---------|--------|---------|-------|-----------------------|--|--|
| Subject: | LSS-100P Notification | | | | | | | | | | |
| T CC 40 | | | | | | | | | - | | |
| LSS-10 | LSS-100 Notification 2015-07-16 16:52:10 UTC | | | | | | | | | | |
| | | | | | | | | | | | |
| | Notification Leve | l: A11 | | | | | | | | | |
| | Company | y: USL | | | | | | | | | |
| | Theater Name | e: San Luis Obispo | | | | | | | | | |
| | Theater Number | r: -1 | | | | | | | | | |
| | Screen | n: 1 | | | | | | | | | |
| | Serial Number | r: 100007 | | | | | | | | | |
| | Comment | s: Simulation | | | | | | | | | |
| | Firmwar | e: 150309 | | | | | | | | | |
| | | | Report D | ata | | | | | | | |
| Date Ti | me | Description | Value | Minimum | Maximum | Record | Data ID | Link | | | |
| 2015-07 | -16 16:52:10 | SPL Left Channel | 80.95dB | 80.1 | 85.2 | 900001 | 704 | View | | | |
| 2015-07 | -16 16:52:10 | Color Y | 0.29435y | 0.314 | 0.351 | 900002 | 705 | View | | | |
| 2015-07 | -16 16:52:10 | Color X | 0.2828y | 0.314 | 0.351 | 900003 | 706 | View | | | |
| 2015-07 | -16 16:52:10 | Luminance | 13.5ft-L | 14.1 | 17.9 | 900004 | 707 | View | - | | |