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## Tech Note 2      How to send email notifications based upon alarms or events from Red Lion remote devices



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### ***Abstract:***

This document describes the procedures for configuring Red Lion Controls Crimson 3.0 devices (G3 and Graphite Human Machine Interfaces (HMI), Data Station Plus Protocol Converter (DSP+), and ProducTVity Station plant floor visual management system) to send Email notifications via Red Lion Sixnet Series cellular and wired devices.

### ***Products:***

RAM-6021, SN 6000 series, RAM 6000 series, RAM 9000 series devices  
Crimson 3.0 devices

### ***Use Case/ Problem Solved:***

Due to the remote locations that M2M (Machine to Machine) applications are deployed, users need a method to be notified of any alarm conditions. SMS (Short Message Service) and email are two commonly used methods to achieve this goal. This document deals exclusively with email solutions. Please see HT-XX for SMS solutions.) Although Red Lion Crimson 3 devices can support unauthenticated email support natively, most providers now require SSL (Secure Socket Layer) authentication to their mail servers. Use of the SSL client on all Red Lion routers allows users to securely connect to these servers. The SN/RAM device acts as a gateway to send the email via the SSL tunnel to the email server address on the appropriate TCP port.

**Required Software:**

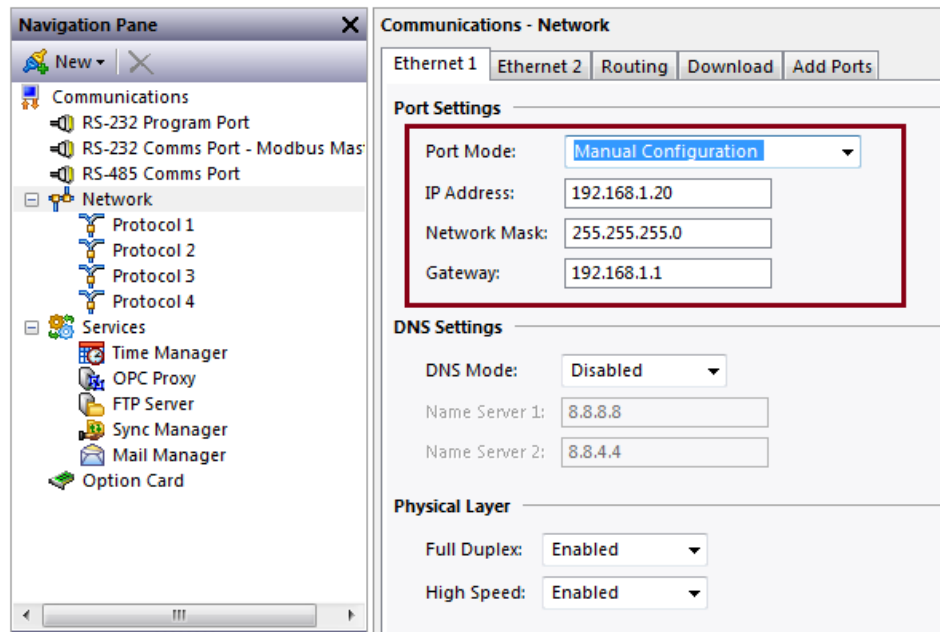
Crimson 3 configuration software available from [www.redlion.net](http://www.redlion.net)

**Required Firmware:**

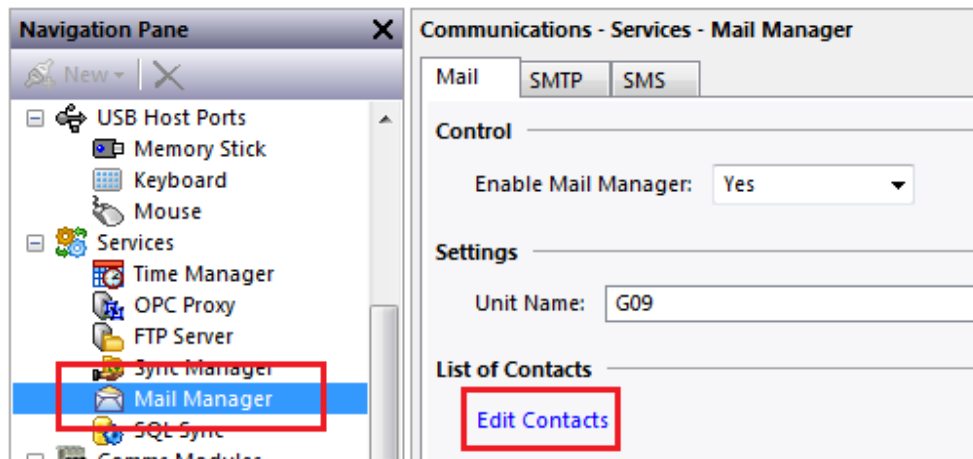
Version 3.18/4.18 or later

**Procedure:****Part 1: Crimson 3.0 Configuration for Email**

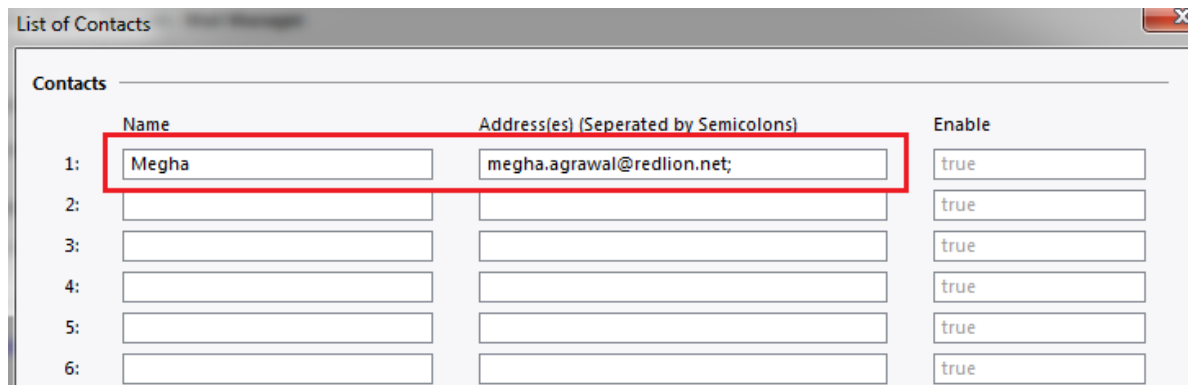
1. Open the Crimson 3.0 database.
2. In the Communications section, select **Network**, then the **Ethernet 1** tab
  - a. For **Port Mode**, select **Manual Configuration** and enter the **IP Address**, **Network Mask** and **Gateway** in the associated fields. The Gateway is the IP address of the port on SN/RAM that the Crimson 3.0 device is connected to. In this case we will enter the following:
    - 1) IP address: 192.168.1.20
    - 2) Network Mask: 255.255.255.0
    - 3) Gateway: 192.168.1.1(Note: this is the LAN IP address of RAM/SN router)



3. In Communications section, select **Mail Manager**, then the Mail tab
  - a. Under **Control**, **Enable Mail Manager**, select **Yes**
  - b. Under **Settings**, **Unit Name**, enter **G09**

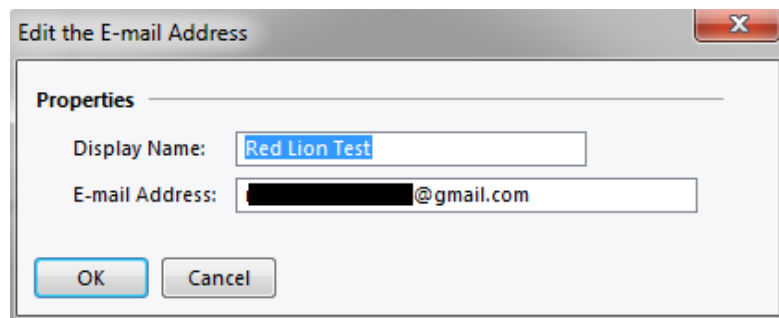
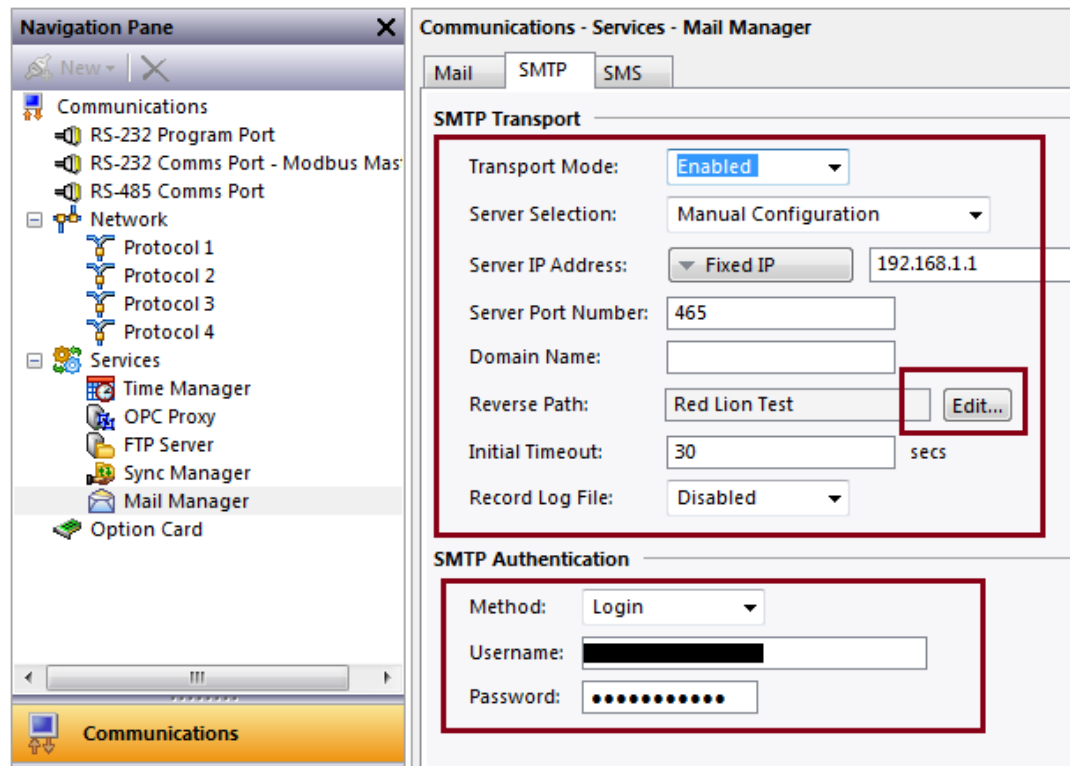


4. Click on **Edit Contacts**.
  - a. Type the name and email addresses of the contacts you want to send email.
  - b. Click **OK**

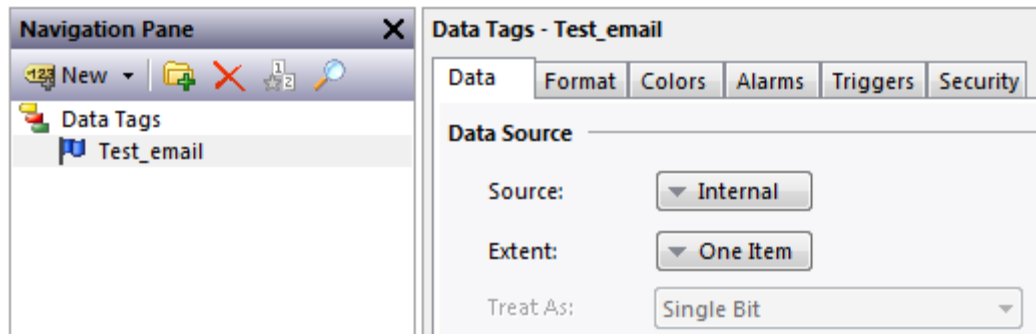


5. Select the **SMTP** tab,
  - a. Under **SMTP Transport**, use the following settings:
    - 1) **Transport Mode:** Enabled
    - 2) **Server Selection:** Manual Configuration
    - 3) **Server IP address:** Fixed IP, Enter 192.168.1.1 (this is LAN IP address of the RAM/SN router)
    - 4) **Server Port Number:** 465
    - 5) **Initial Timeout:** 30
    - 6) Click **Edit** after **Reverse Path**
    - 7) Enter **Display Name & Email Address** from which the emails will be sent.
    - 8) **Display Name:** Red Lion Test
    - 9) **Email Address:** abc@email.com (This is the email address from which the email will be sent.)
    - 10) Click **OK**
  - b. Under **SMTP Authentication**, enter the following:

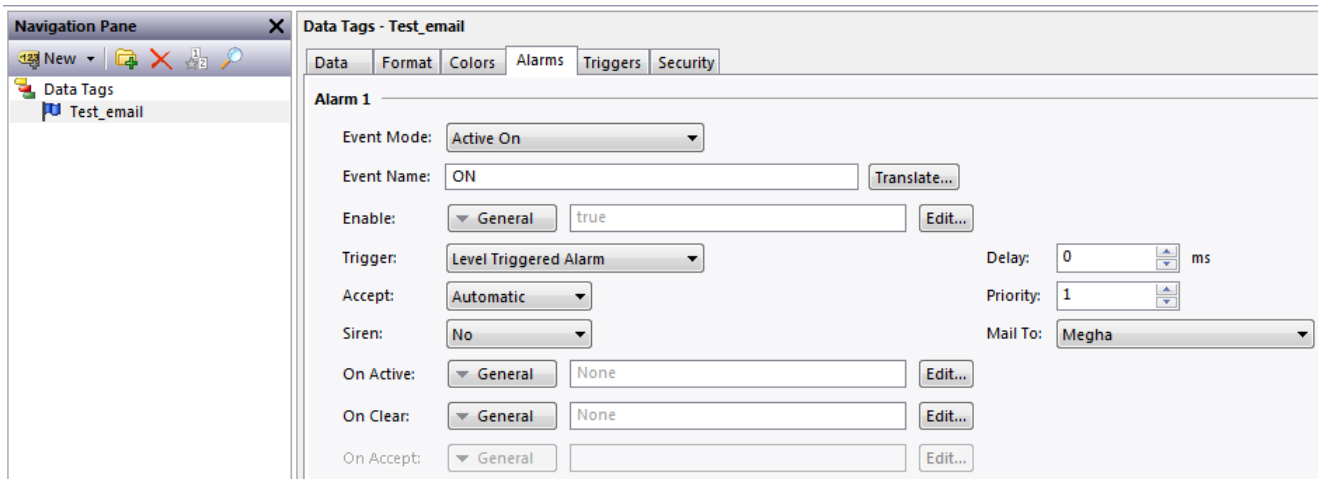
- 1) **Method:** Login
- 2) **Username:** abc@email.com *(enter your email login)*
- 3) **Password:** xxxxxx *(enter your password)*



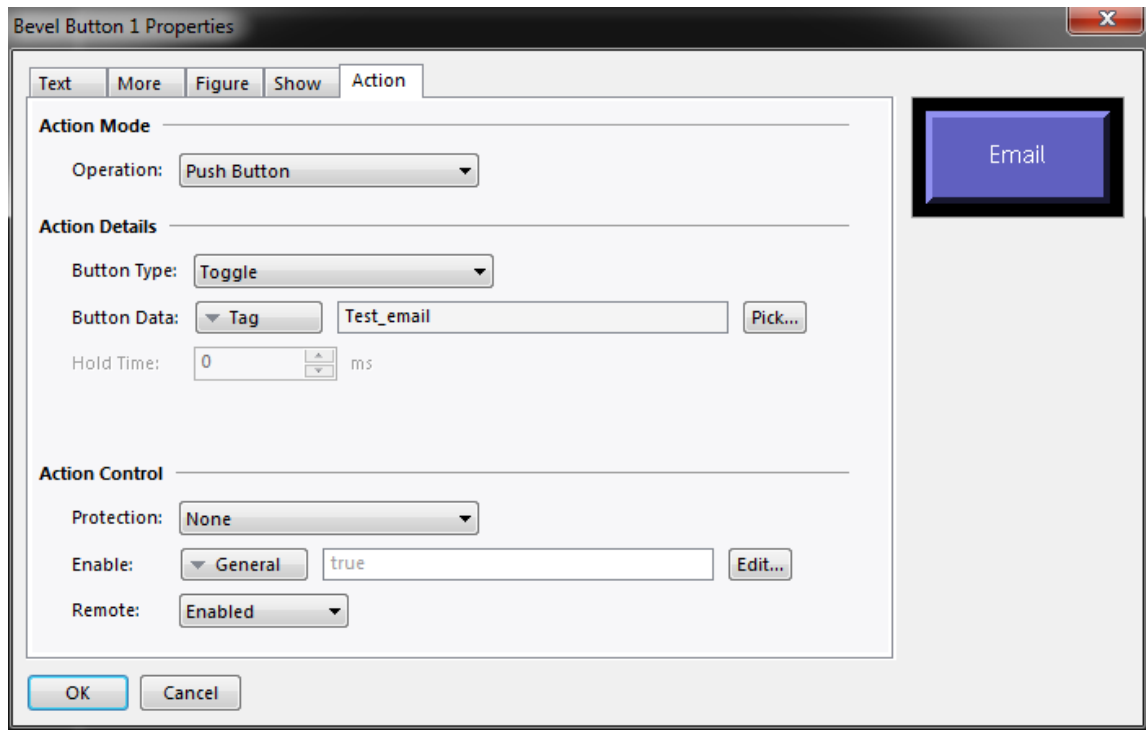
6. Navigate to the **Data Tags - Test\_email** section.
  - a. Create a new flag tag
  - b. Rename the tag as *"test\_email"*
  - c. Under **Data Source**, set **Source** to **Internal**



7. Select the **Alarms** tab and enter the following:
  - a. **Event Mode:** Active ON
  - b. **Event Name:** ON
  - c. **Trigger:** Level Triggered Alarm
  - d. **Accept:** Automatic
  - e. **Mail to:** Megha



8. Navigate to the display pages and create a new page
  - a. Select **Primitives**, then **Core Primitives** on the right side.
  - b. Drag and drop a text button on the page. Right-click on the button and select **Properties**.
  - c. Text: Email
  - d. Select the **Action** Tab on the button and use the following settings:
    - 1) **Operation:** Push Button
    - 2) **Button Type:** Toggle
    - 3) **Button Data:** Drag and drop tag "test\_email" from right side of the screen.
    - 4) Click **OK**



9. On the display page, drag and drop tag “**test\_email**” from data tags on the right side.



10. Email is enabled on the Crimson 3 database. Select **Link**, then **Update** to load the Crimson 3.0 database to the device.

## Part 2: SN/RAM Configuration

1. Log into the SN/RAM Web interface:
  - a. Enter the device's LAN/WAN IP, port 10000 into a web browser (http://ip\_address:10000)
  - b. **User Name:** *admin*
  - c. **Password:** Last six digits of the device's serial number
2. Navigate to → **Services** → **SSL Connections** → **SSL Client**
3. Under **Enable SSL**, select Yes

red lion Status Admin Network Services Automation Advanced

## SSL Client

SSL Client Running

Enable SSL: Yes

Select Activity Log Level: Summary

Wait for Connection (sec.): 20

Idle Timeout (min.): 720

Enable Advance Setup: No

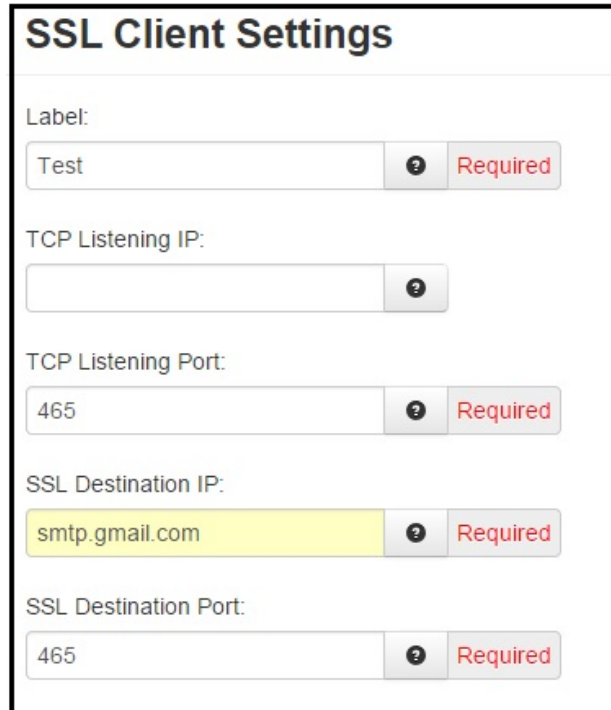
### SSL Client Table Properties

Label	TCP Listening IP	TCP Listening Port	SSL Destination IP	SSL Destination Port

Add

Edit

4. In the **SSL Client Table Properties**, click and enter the following:
  - a. **Label:** Test
  - b. **TCP Listening Port:** {Gmail and Yahoo use 465, check your provider for specific port}
  - c. **SSL Destination IP:** {email server IP or provider's SMTP domain address}
  - d. **SSL Destination Port:** {Gmail and Yahoo use 465, check your provider for specific port}
  - e. Click **Finish**



**SSL Client Settings**

Label:  
Test ? Required

TCP Listening IP:  
?

TCP Listening Port:  
465 ? Required

SSL Destination IP:  
smtp.gmail.com ? Required

SSL Destination Port:  
465 ? Required

5. Click **Apply** to save the settings and start the SSL Service.

#### Testing:

On the HMI, click on the **Email** button and an email will be sent to the email address in the contacts list.

#### Topology:

Red Lion Crimson 3.0 Device connected behind a Red Lion Router with a properly configured WAN connection, either cellular or Ethernet.

#### Disclaimer:

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