

Configuring and Troubleshooting SMTP on UCS C-Series

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Introduction

The Cisco IMC supports email-based notification of server faults to recipients without relying on the SNMP. The system uses the Simple Mail Transfer Protocol (SMTP) to send server faults as email alerts to the configured SMTP server.

We can configure the SMTP properties and add email recipients on the Mail Alert tab to receive email notifications for server faults.

Prerequisites

Requirements

Cisco recommends that you have the knowledge of these topics:

- UCS C Series - available on all servers except C220 M3, C240 M3, C22 M3 and C24 M3 servers.
- Firmware version 3.0.3a
- A maximum of four recipients is supported.

Components Used

The information in this document is based on these hardware & software components:

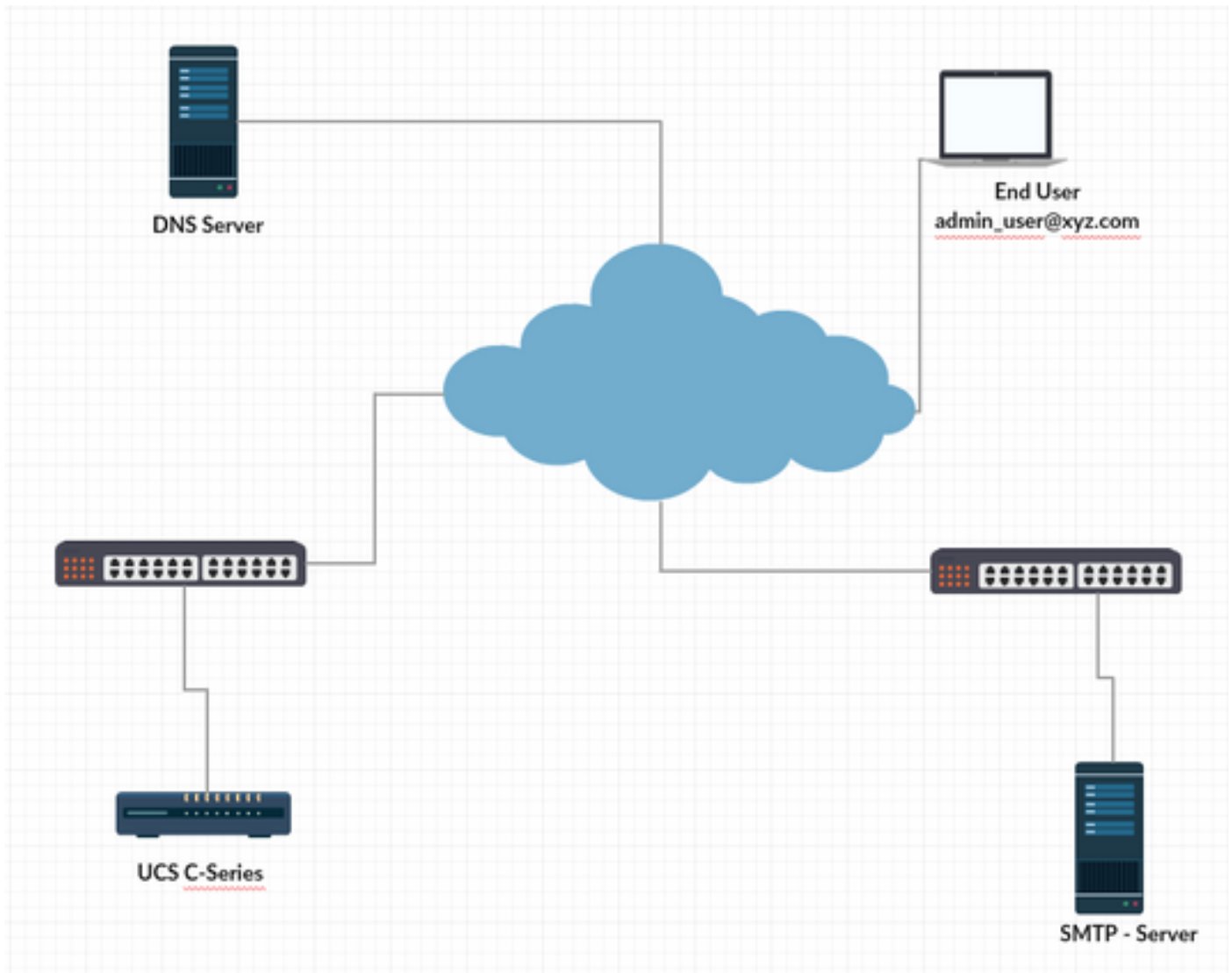
- UCS C Series
- SMTP Server
- DNS Server (if applicable)
- Tcpcdump tool

The information in this document was created from the devices in a specific lab environment. All of

the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any changes or configurations.

Configure

Network Diagram



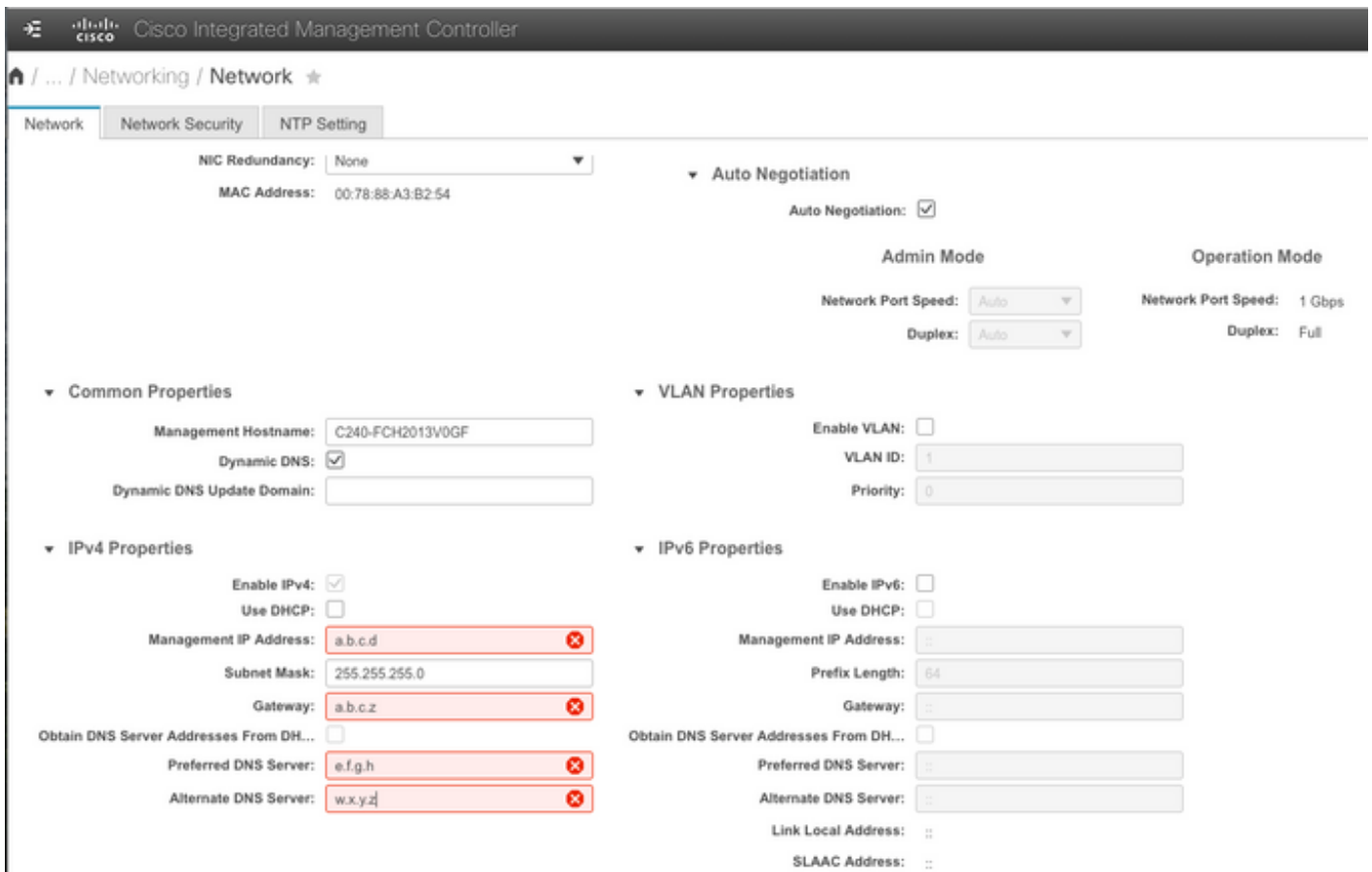
Configure DNS Settings on CIMC

Step 1. Login to Cisco Integrated Management Controller (CIMC).

Step 2. Navigate to Admin -> Networking --> Network.

Step 3. Add the DNS information for name resolution (as shown in figure 1)

Figure 1



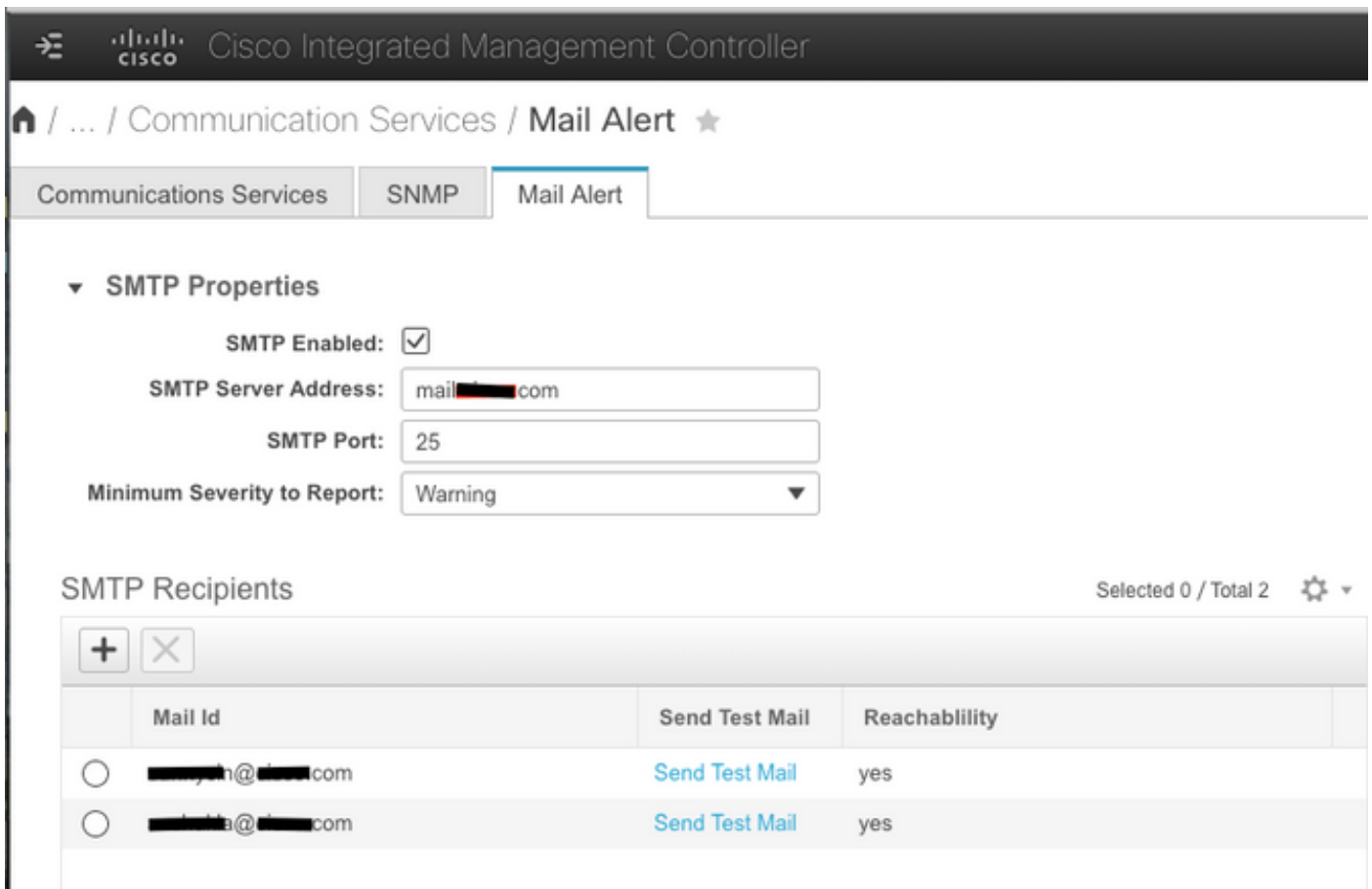
Configure SMTP Settings on CIMC

Step 4. Next, Navigate to Admin -> Communication Services -> Mail Alert.

Step 5. Add the information for SMTP properties.

Step 6. Add the SMTP Recipients (as show in figure 2)

Figure 2



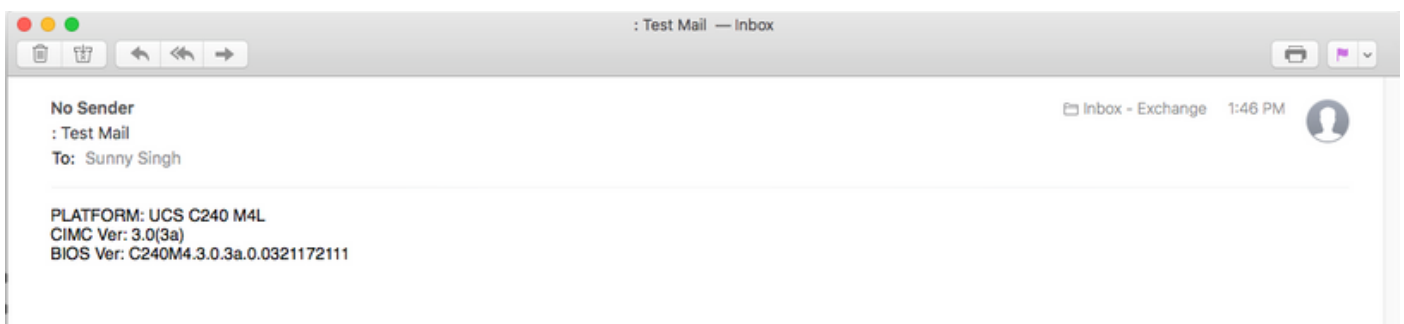
Verify

Step 1. Navigate to Admin -> Communication Services -> Mail Alert.

Step 2. Click on Send Test Mail under SMTP Recipients (as shown in figure 2 above)

Step 3. You should notice a Test Mail received with Platform, CIMC Ver, BIOS Ver (as shown in figure 3)

Figure 3



Troubleshoot

Step 1. SSH to the CIMC of the UCS server.

Step 2. Scope smtp and show detail to check and confirm the configuration information.

```
C240M4 /smtp # show detail
SMTP Setting:
Enabled: yes
Port Number: 25
Server Address: SMTP@xyz.com
Minimum Severity to Report: minor
Recipient1:
Name : minion@xyz.com
Reachable: yes
Recipient2:
Name : pokemon@xyz.com
Reachable: yes
Recipient3:
Name :
Reachable: na
Recipient4:
Name :
Reachable: na
```

Step 3. Initiate the send-test-mail for recipients

```
C240M4 /smtp # send-test-mail recipient1
Test mail sent Successful.
C240M4 /smtp # send-test-mail recipient2
Test mail sent Successful.
```

Step 4. Contact TAC and login to the debug shell of CIMC.

Step 5. Run tcpdump on the CIMC to check if the DNS and SMTP communication is initiated/established. You will see output similar to below,

```
[Thu Jan 18 13:48:31 root@C240-XXXXXXX:~]$tcpdump -v
```

DNS name resolution packets

```
13:48:43.389913 IP (tos 0xc0, ttl 1, id 34153, offset 0, flags [none], length: 36, optlength: 4 ( RA ))
1.1.1.1 > all-systems.mcast.net: igmp query v3 [max resp time 10s]
13:48:43.397914 IP (tos 0x0, ttl 64, id 6176, offset 0, flags [DF], length: 71) a.b.c.d.40129 >
dns-a.xyz.com.53: 2105+[[domain]
13:48:43.400914 IP (tos 0x0, ttl 246, id 33332, offset 0, flags [none], length: 131) dns-
a.xyz.com.53 > a.b.c.d.40129: 2105 NXDomain*[[domain]
13:48:43.402914 IP (tos 0x0, ttl 64, id 6182, offset 0, flags [DF], length: 71) a.b.c.d.59928 >
dns-a.xyz.com.53: 59991+[[domain]
13:48:43.407914 IP (tos 0x0, ttl 246, id 46211, offset 0, flags [none], length: 131) dns-
a.xyz.com.53 > a.b.c.d.59928: 59991 NXDomain*[[domain]
```

....Output truncated

SMTP Mail server communication packets (SYN and ACK)

13:48:44.741972 IP (tos 0x0, ttl 64, id 53796, offset 0, flags [DF], length: 60) a.b.c.d.53972 > dns-a.xyz.com.25: S 552849221:552849221(0) win 5840 <mss 1460,sackOK,timestamp 1747918177[[tcp]>

13:48:44.784974 IP (tos 0x0, ttl 116, id 7066, offset 0, flags [DF], length: 60) dns-a.xyz.com.25 > a.b.c.d.53972: S 1757202142:1757202142(0) ack 552849222 win 8192 <mss 1460,nop,wscale 8,sackOK,timestamp[[tcp]>

13:48:44.785974 IP (tos 0x0, ttl 64, id 53797, offset 0, flags [DF], length: 52) a.b.c.d.53972 > dns-a.xyz.com.25: . [tcp sum ok] ack 1 win 1460 <nop,nop,timestamp 1747918221 231930758>

13:48:44.828976 IP (tos 0x0, ttl 116, id 7067, offset 0, flags [DF], length: 149) dns-a.xyz.com.25 > a.b.c.d.53972: P 1:98(97) ack 1 win 514 <nop,nop,timestamp 231930761 1747918221>