Configuring Communication Services

This chapter includes the following sections:

Configuring HTTP

Before You Begin

You must log in as a user with admin privileges to perform this task.

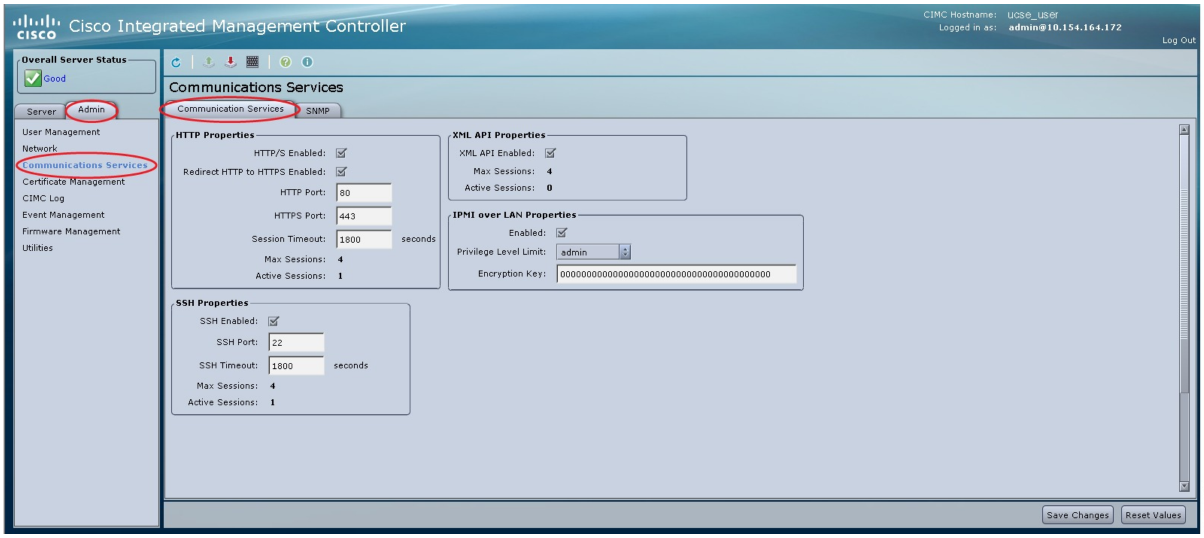
Procedure

Step 1 In the **Navigation** pane, click the **Admin** tab.

Step 2 On the **Admin** tab, click **Communications Services**.

Step 3 In the **Communications Services** pane, click the **Communication Services** tab.

Figure 1: Communication Services Tab



CIMC Hostname: ucse_user
Logged in as: admin@10.154.164.172

Overall Server Status: Good

Communications Services

HTTP Properties
HTTP/S Enabled: ☑
Redirect HTTP to HTTPS Enabled: ☑
HTTP Port: 80
HTTPS Port: 443
Session Timeout: 1800 seconds
Max Sessions: 4
Active Sessions: 1

XML API Properties
XML API Enabled: ☑
Max Sessions: 4
Active Sessions: 0

IPMI over LAN Properties
Enabled: ☑
Privilege Level Limit: admin
Encryption Key: 0000000000000000000000000000000000000000

SSH Properties
SSH Enabled: ☑
SSH Port: 22
SSH Timeout: 1800 seconds
Max Sessions: 4
Active Sessions: 1

Step 4 In the **HTTP Properties** area, update the following properties:

Name	Description
HTTP/S Enabled check box	Whether HTTP and HTTPS are enabled on the CIMC.
Redirect HTTP to HTTPS Enabled check box	If enabled, all attempts to communicate via HTTP are redirected to the equivalent HTTPS address. We strongly recommend that you enable this option if you enable HTTP.
HTTP Port field	The port to use for HTTP communication. The default is 80.
HTTPS Port field	The port to use for HTTPS communication. The default is 443
Session Timeout field	The number of seconds to wait between HTTP requests before the CIMC times out and terminates the session. Enter an integer between 60 and 10,800. The default is 1800 seconds.
Max Sessions field	The maximum number of concurrent HTTP and HTTPS sessions allowed on the CIMC. This value may not be changed.

Name	Description
Active Sessions field	The number of HTTP and HTTPS sessions currently running on the CIMC.

Step 5 Click **Save Changes**.

Configuring SSH

Before You Begin

You must log in as a user with admin privileges to configure SSH.

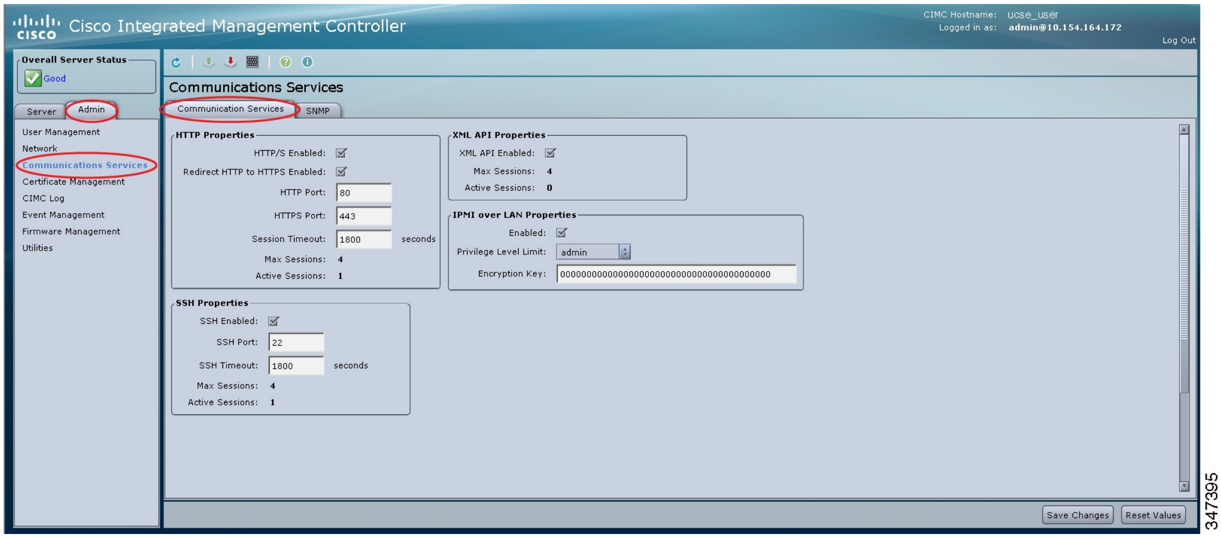
Procedure

Step 1 In the **Navigation** pane, click the **Admin** tab.

Step 2 On the **Admin** tab, click **Communications Services**.

Step 3 In the **Communications Services** pane, click the **Communication Services** tab.

Figure 2: Communication Services Tab



HTTP Properties

HTTP/S Enabled: ☑

Redirect HTTP to HTTPS Enabled: ☑

HTTP Port: 80

HTTPS Port: 443

Session Timeout: 1800 seconds

Max Sessions: 4

Active Sessions: 1

XML API Properties

XML API Enabled: ☑

Max Sessions: 4

Active Sessions: 0

IPMI over LAN Properties

Enabled: ☑

Privilege Level Limit: admin

Encryption Key: 0000000000000000000000000000000000000000

SSH Properties

SSH Enabled: ☑

SSH Port: 22

SSH Timeout: 1800 seconds

Max Sessions: 4

Active Sessions: 1

Step 4 In the **SSH Properties** area, update the following properties:

Name	Description
SSH Enabled check box	Whether SSH is enabled on the CIMC.

Name	Description
SSH Port field	The port to use for secure shell access. The default is 22.
SSH Timeout field	The number of seconds to wait before the system considers an SSH request to have timed out. Enter an integer between 60 and 10,800. The default is 1,800 seconds.
Max Sessions field	The maximum number of concurrent SSH sessions allowed on the CIMC. This value may not be changed.
Active Sessions field	The number of SSH sessions currently running on the CIMC.

Step 5 Click **Save Changes**.

Configuring the XML API

XML API for the CIMC

The Cisco CIMC XML application programming interface (API) is a programmatic interface to the CIMC for the E-Series Server. The API accepts XML documents through HTTP or HTTPS.

For detailed information about the XML API, see the *CIMC XML API Programmer's Guide for Cisco UCS E-Series Servers*.

Enabling the XML API

Before You Begin

You must log in as a user with admin privileges to perform this task.

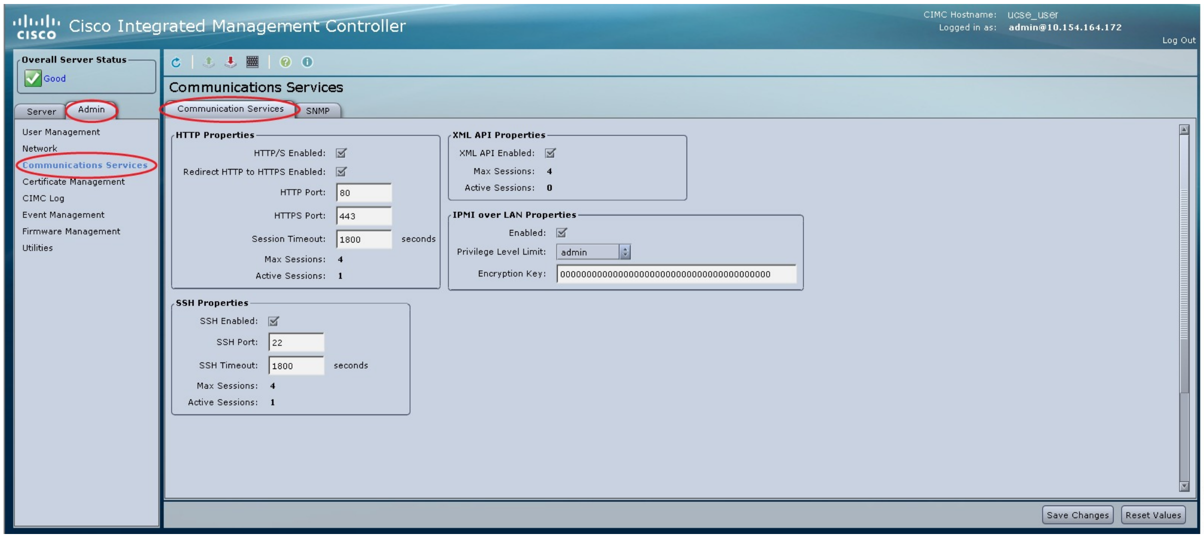
Procedure

Step 1 In the **Navigation** pane, click the **Admin** tab.

Step 2 On the **Admin** tab, click **Communications Services**.

Step 3 In the **Communications Services** pane, click the **Communication Services** tab.

Figure 3: Communication Services Tab



HTTP Properties
HTTP/S Enabled: ☑
Redirect HTTP to HTTPS Enabled: ☑
HTTP Port: 80
HTTPS Port: 443
Session Timeout: 1800 seconds
Max Sessions: 4
Active Sessions: 1

XML API Properties
XML API Enabled: ☑
Max Sessions: 4
Active Sessions: 0

IPMI over LAN Properties
Enabled: ☑
Privilege Level Limit: admin
Encryption Key: 0000000000000000000000000000000000000000

SSH Properties
SSH Enabled: ☑
SSH Port: 22
SSH Timeout: 1800 seconds
Max Sessions: 4
Active Sessions: 1

Step 4 In the **XML API Properties** area, update the following properties:

Name	Description
XML API Enabled check box	Whether API access is allowed on this server.
Max Sessions field	The maximum number of concurrent API sessions allowed on the CIMC. This value may not be changed.
Active Sessions field	The number of API sessions currently running on the CIMC.

Step 5 Click **Save Changes**.

Configuring IPMI

IPMI over LAN

Intelligent Platform Management Interface (IPMI) defines the protocols for interfacing with a service processor embedded in a server platform. This service processor is called a Baseboard Management Controller (BMC) and resides on the server motherboard. The BMC links to a main processor and other on-board elements using a simple serial bus.

During normal operations, IPMI lets a server operating system obtain information about system health and control system hardware. For example, IPMI enables the monitoring of sensors, such as temperature, fan speeds and voltages, for proactive problem detection. If the server temperature rises above specified levels, the server operating system can direct the BMC to increase fan speed or reduce processor speed to address the problem.

Configuring IPMI over LAN

Configure IPMI over LAN when you want to manage the CIMC with IPMI messages.

Before You Begin

You must log in as a user with admin privileges to perform this task.

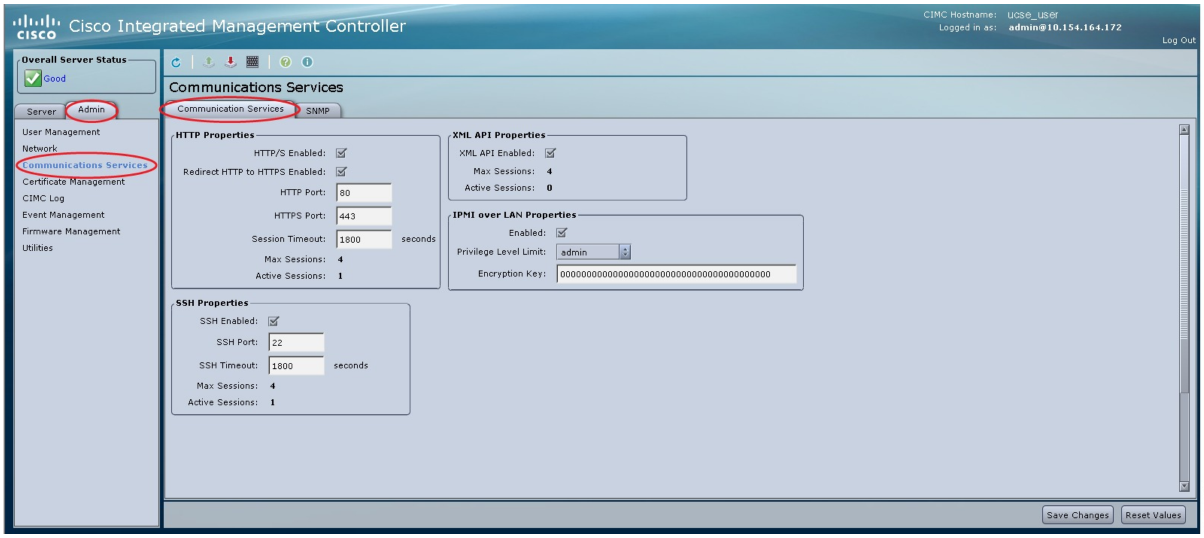
Procedure

Step 1 In the **Navigation** pane, click the **Admin** tab.

Step 2 On the **Admin** tab, click **Communications Services**.

Step 3 In the **Communications Services** pane, click the **Communication Services** tab.

Figure 4: Communication Services Tab



HTTP Properties
HTTP/S Enabled: ☑
Redirect HTTP to HTTPS Enabled: ☑
HTTP Port: 80
HTTPS Port: 443
Session Timeout: 1800 seconds
Max Sessions: 4
Active Sessions: 1

XML API Properties
XML API Enabled: ☑
Max Sessions: 4
Active Sessions: 0

IPMI over LAN Properties
Enabled: ☑
Privilege Level Limit: admin
Encryption Key: 0000000000000000000000000000000000000000

SSH Properties
SSH Enabled: ☑
SSH Port: 22
SSH Timeout: 1800 seconds
Max Sessions: 4
Active Sessions: 1

Step 4 In the **IPMI over LAN Properties** area, update the following properties:

Name	Description
Enabled check box	Whether IPMI access is allowed on this server.
Privilege Level Limit drop-down list	The highest privilege level that can be assigned to an IPMI session on this server. This can be one of the following: • **read-only**—IPMI users can view information but cannot make any changes. If you select this option, IPMI users with the "Administrator", "Operator", or "User" user roles can only create read-only IPMI sessions, regardless of their other IPMI privileges. • **user**—IPMI users can perform some functions but cannot perform administrative tasks. If you select this option, IPMI users with the "Administrator" or "Operator" user role can create user and read-only sessions on this server. • **admin**—IPMI users can perform all available actions. If you select this option, IPMI users with the "Administrator" user role can create admin, user, and read-only sessions on this server.
Encryption Key field	The IPMI encryption key to use for IPMI communications.

Step 5 Click **Save Changes**.

Configuring SNMP

SNMP

The Cisco UCS E-Series Servers support the Simple Network Management Protocol (SNMP) for viewing server configuration and status and for sending fault and alert information by SNMP traps. For information on Management Information Base (MIB) files supported by CIMC, see the *MIB Quick Reference for Cisco UCS* at this URL: http://www.cisco.com/en/US/docs/unified_computing/ucs/sw/mib/reference/UCS_MIBRef.html.

Configuring SNMP Properties

Before You Begin

You must log in as a user with admin privileges to perform this task.

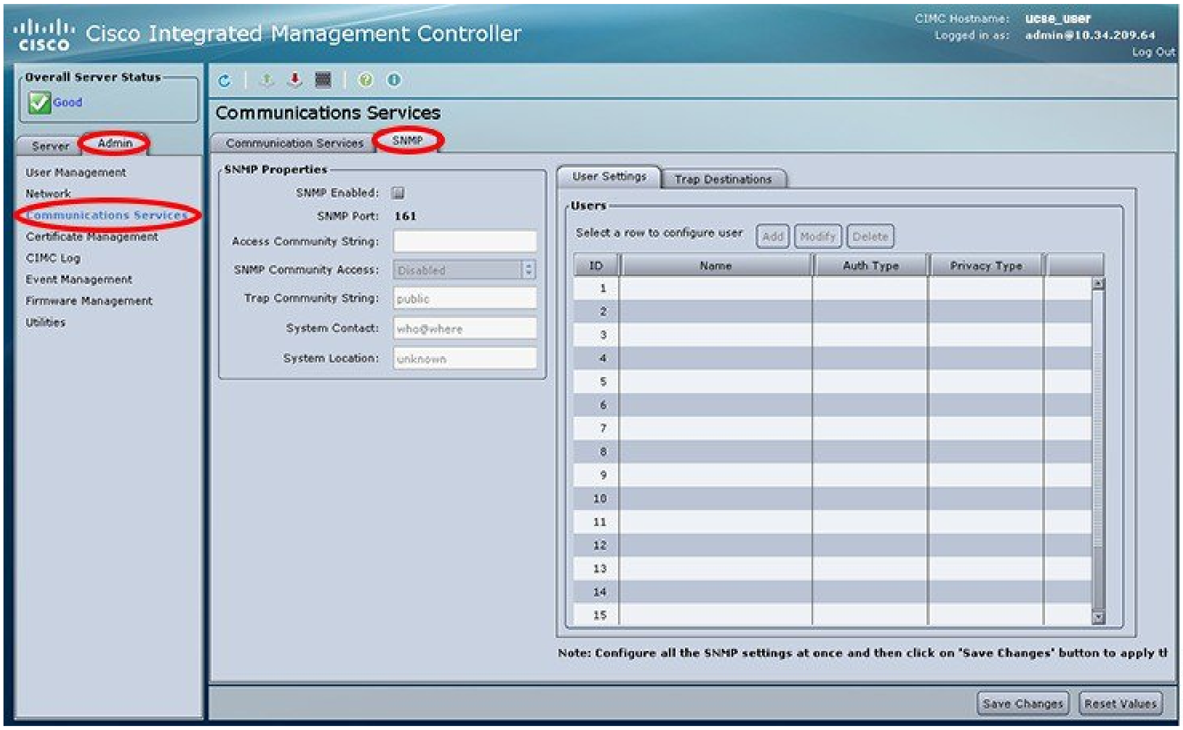
Procedure

Step 1 In the **Navigation** pane, click the **Admin** tab.

Step 2 On the **Admin** tab, click **Communications Services**.

Step 3 In the **Communications Services** pane, click the **SNMP** tab.

Figure 5: SNMP Tab



SNMP Enabled: □
SNMP Port: 161
Access Community String:
SNMP Community Access: Disabled
Trap Community String: public
System Contact: who@where
System Location: unknown

ID	Name	Auth Type	Privacy Type
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

Note: Configure all the SNMP settings at once and then click on 'Save Changes' button to apply th

Step 4 In the **SNMP Properties** area, update the following properties:

Name	Description
SNMP Enabled check box	Whether this server sends SNMP traps to the designated host. **Note** After you check this check box, you need to click **Save Changes** before you can configure SNMP users or traps.
SNMP Port field	The port the server uses to communicate with the SNMP host. This value cannot be changed.
Access Community String field	The default SNMP v1 or v2c community name or SNMP v3 username CIMC includes on any trap messages it sends to the SNMP host. Enter a string up to 18 characters.

Name	Description
SNMP Community Access drop-down list	This can be one of the following: • **Disabled**—This option blocks access to the information in the inventory tables. • **Limited**—This option provides partial access to read the information in the inventory tables. • **Full**—This option provides full access to read the information in the inventory tables.
Trap Community String field	The name of the SNMP community group to which trap information should be sent. Enter a string up to 18 characters.
System Contact field	The system contact person responsible for the SNMP implementation. Enter a string up to 64 characters, such as an email address or a name and telephone number.
System Location field	The location of the host on which the SNMP agent (server) runs. Enter a string up to 64 characters.

Step 5 Click **Save Changes**.

What to Do Next

Configure SNMP trap settings as described in Configuring SNMP Trap Settings.

Configuring SNMP Trap Settings

Before You Begin

You must log in as a user with admin privileges to disable platform event alerts.

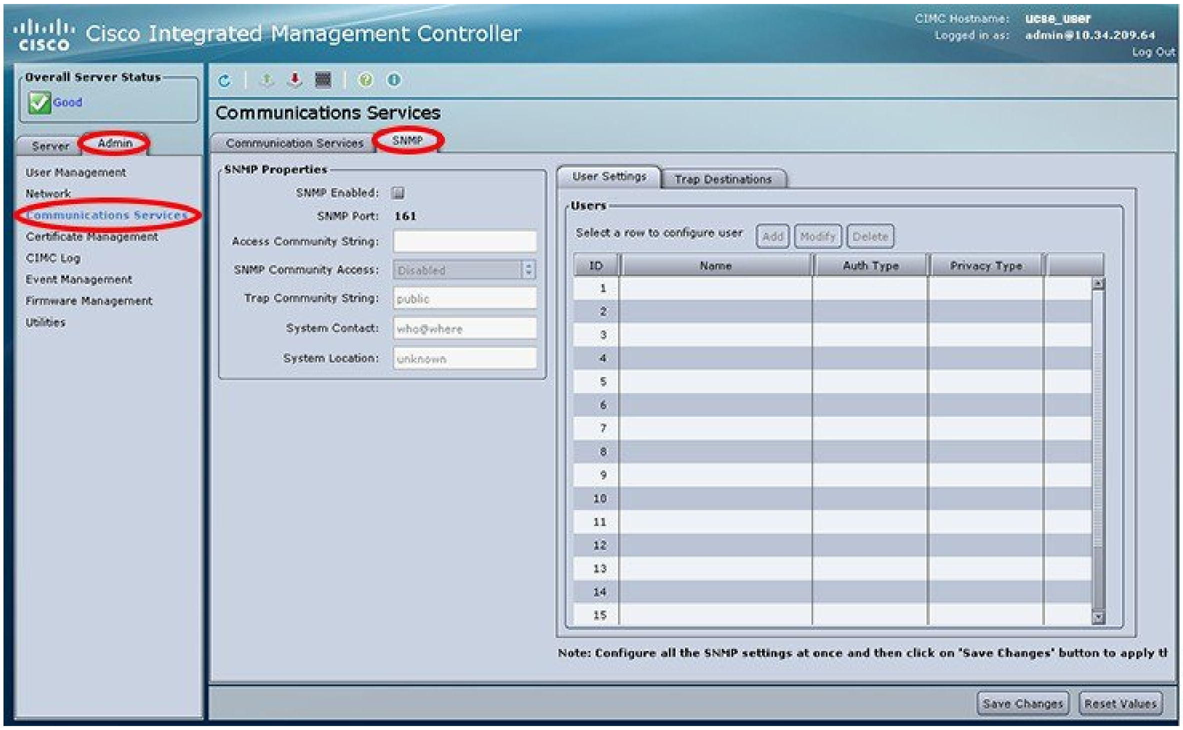
Procedure

Step 1 In the **Navigation** pane, click the **Admin** tab.

Step 2 On the **Admin** tab, click **Communications Services**.

Step 3 In the **Communications Services** pane, click the **SNMP** tab.

Figure 6: SNMP Tab



SNMP Properties

SNMP Enabled: ☐

SNMP Port: 161

Access Community String:

SNMP Community Access: Disabled

Trap Community String: public

System Contact: who@where

System Location: unknown

ID	Name	Auth Type	Privacy Type
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

Note: Configure all the SNMP settings at once and then click on 'Save Changes' button to apply tl

Step 4 Click on **Trap Destinations** tab.

Step 5 In the **Trap Destinations** area, you can do one of the following:

- To modify the trap destination information, select a row that is enabled, and then click **Modify**.
- To configure a new trap destination, select a row, and then click **Add**.

Note If the fields are not highlighted, select **Enabled**.

Step 6 In the **Trap Details** dialog box, complete the following fields:

Name	Description
ID field	The trap destination ID. This value cannot be modified.
Enabled check box	If checked, then this trap is active on the server.

Name	Description
SNMP Version drop-down list	The SNMP version and model used for the trap. This can be one of the following: • **V1** • **V2** • **V3**
Trap Type radio button	If you select **V2** for the version, this is the type of trap to send. This can be one of the following: • **Trap**: If this option is chosen, the trap will be sent to the destination but you do not receive any notifications. • **Inform**: When this option is chosen, you will receive a notification when a trap is received at the destination.
User drop-down list	The drop-down list displays all available users, select a user from the list.
Destination IP field	The IP address to which SNMP trap information is sent.

Step 7 Click **Save Changes**.

Step 8 To delete a trap destination, select the row, and then click **Delete**. Click **OK** in the confirmation prompt.

Sending an SNMP Test Trap Message

Before You Begin

You must log in as a user with admin privileges to perform this task.

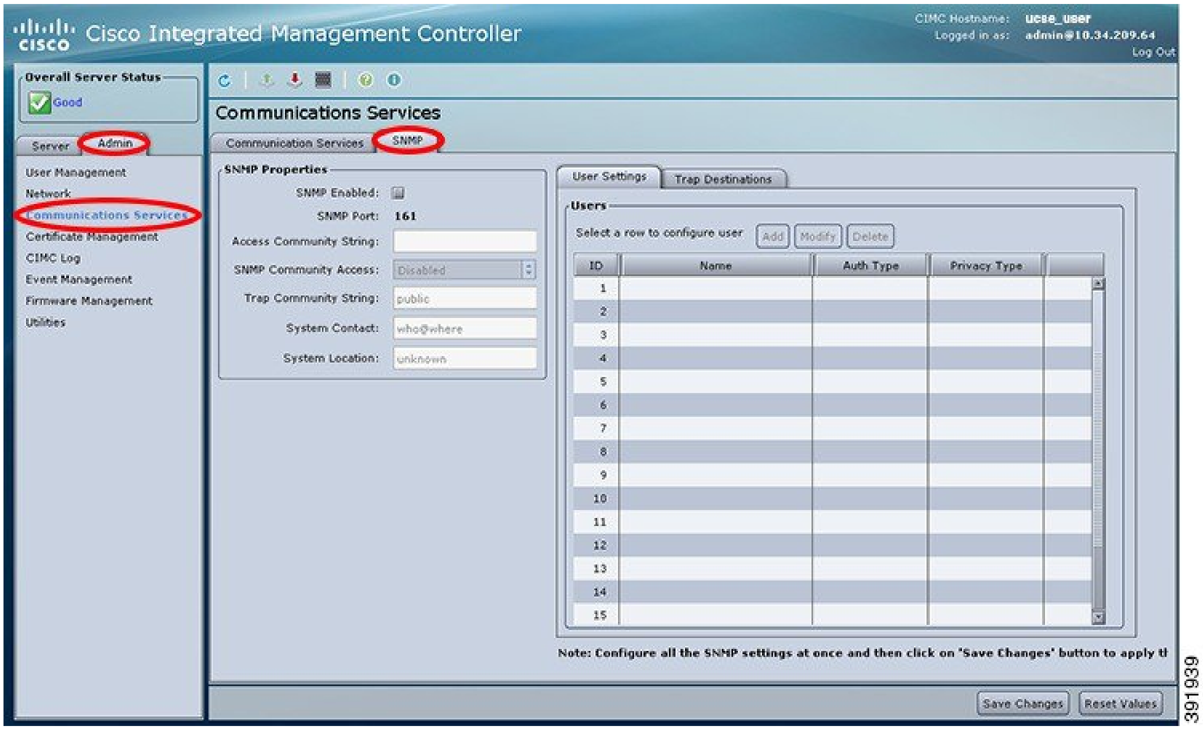
Procedure

Step 1 In the **Navigation** pane, click the **Admin** tab.

Step 2 On the **Admin** tab, click **Communications Services**.

Step 3 In the **Communications Services** pane, click the **SNMP** tab.

Figure 7: SNMP Tab



SNMP Properties

SNMP Enabled: □

SNMP Port: 161

Access Community String:

SNMP Community Access: Disabled

Trap Community String: public

System Contact: who@where

System Location: unknown

Users

Select a row to configure user

ID	Name	Auth Type	Privacy Type
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

Note: Configure all the SNMP settings at once and then click on 'Save Changes' button to apply th

Step 4 Click the **SNMP** tab, and then click on the **Trap Destinations** tab.

Step 5 In the **Trap Destinations** area, select the row of the desired SNMP trap destination.

Step 6 Click **Send SNMP Test Trap**.
An SNMP test trap message is sent to the trap destination.

Note The trap must be configured and enabled in order to send a test message.

Configuring SNMP Users

Before You Begin

You must log in as a user with admin privileges to perform this task.

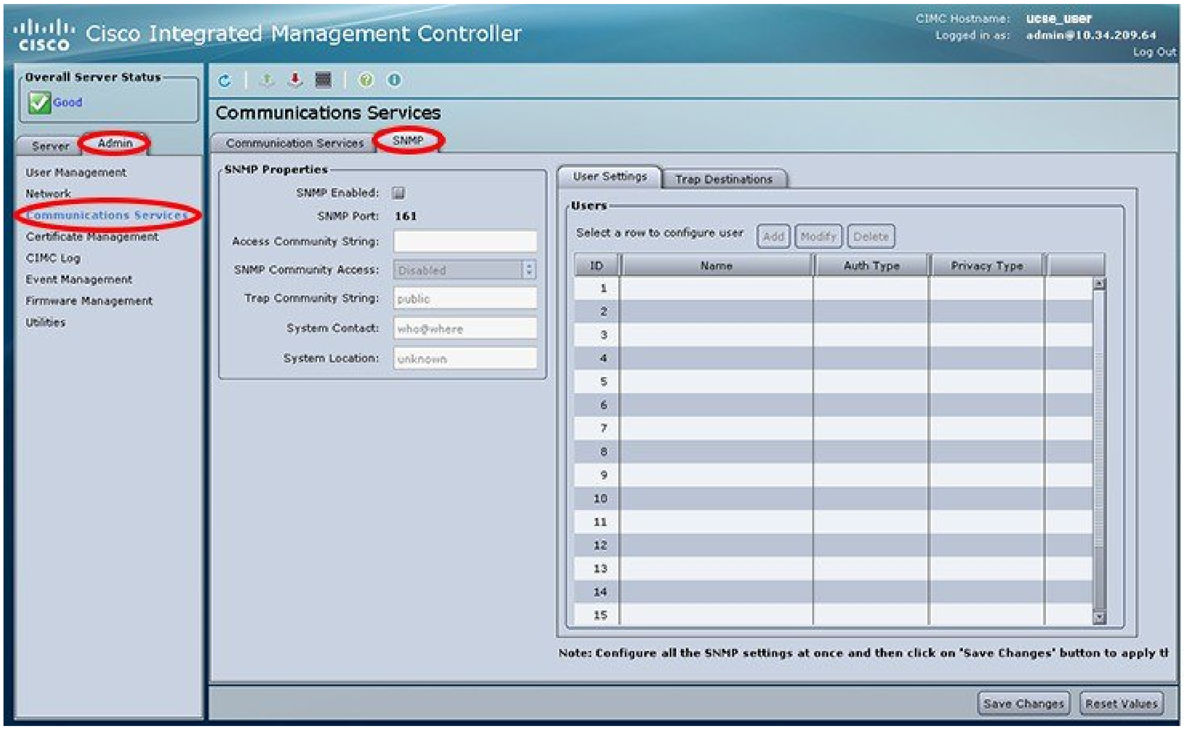
Procedure

Step 1 In the **Navigation** pane, click the **Admin** tab.

Step 2 On the **Admin** tab, click **Communications Services**.

Step 3 In the **Communications Services** pane, click the **SNMP** tab.

Figure 8: SNMP Tab



CIMC Hostname: ucse_user
Logged in as: admin@10.34.209.64

SNMP Properties

SNMP Enabled: □
SNMP Port: 161
Access Community String:
SNMP Community Access: Disabled
Trap Community String: public
System Contact: who@where
System Location: unknown

Select a row to configure user

ID	Name	Auth Type	Privacy Type
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

Note: Configure all the SNMP settings at once and then click on 'Save Changes' button to apply tl

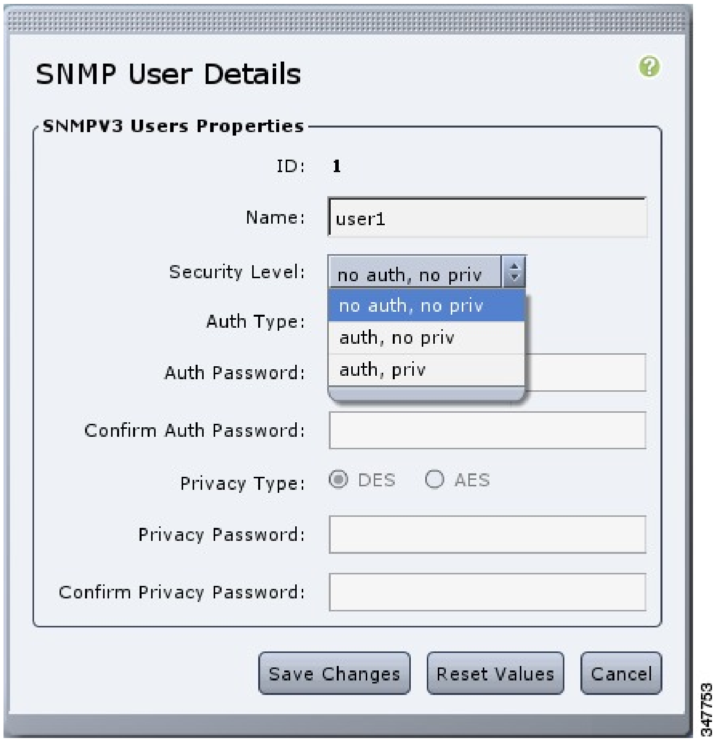
Step 4 Enable SNMP if it is not enabled. In the **SNMP Properties** area, check the **SNMP Enabled** check box, and then click **Save Changes**.

Step 5 Under the **User Settings** tab in the **Users** area, do one of the following:

- Select an existing user from the table and click **Modify**.

- Click **Add** to create a new user. The **SNMP User Details** dialog box appears.

Figure 9: SNMP User Details Dialog Box



SNMP User Details

SNMPV3 Users Properties

ID: 1

Name: user1

Security Level: no auth, no priv

Auth Type:

Auth Password:

Confirm Auth Password:

Privacy Type: ● DES ○ AES

Privacy Password:

Confirm Privacy Password:

Step 6 Update the following properties:

Name	Description
ID field	The unique identifier for the user. This field cannot be changed.
Name field	The SNMP username.
Security Level drop-down list	The security level for this user. This can be one of the following: • **no auth, no priv**—The user does not require an authorization password or a privacy password. • **auth, no priv**—The user requires an authorization password but not a privacy password. If you select this option, CIMC enables the Auth fields described below. • **auth, priv**—The user requires both an authorization password and a privacy password. If you select this option, CIMC enables the Auth and Privacy fields.

Name	Description
Auth Type field	The authorization type. This can be one of the following: • **MD5** • **SHA**
Auth Password field	The authorization password for this SNMP user.
Confirm Auth Password field	The authorization password again for confirmation purposes.
Privacy Type field	The privacy type. This can be one of the following: • **DES** • **AES**
Privacy Password field	The privacy password for this SNMP user.
Confirm Privacy Password field	The authorization password again for confirmation purposes.

Step 7 Click **Save Changes**.

Step 8 If you want to delete a user, select the user and click **Delete**.
Click **OK** in the delete confirmation prompt.

Managing SNMP Users

Before You Begin

You must log in as a user with admin privileges to perform this task.

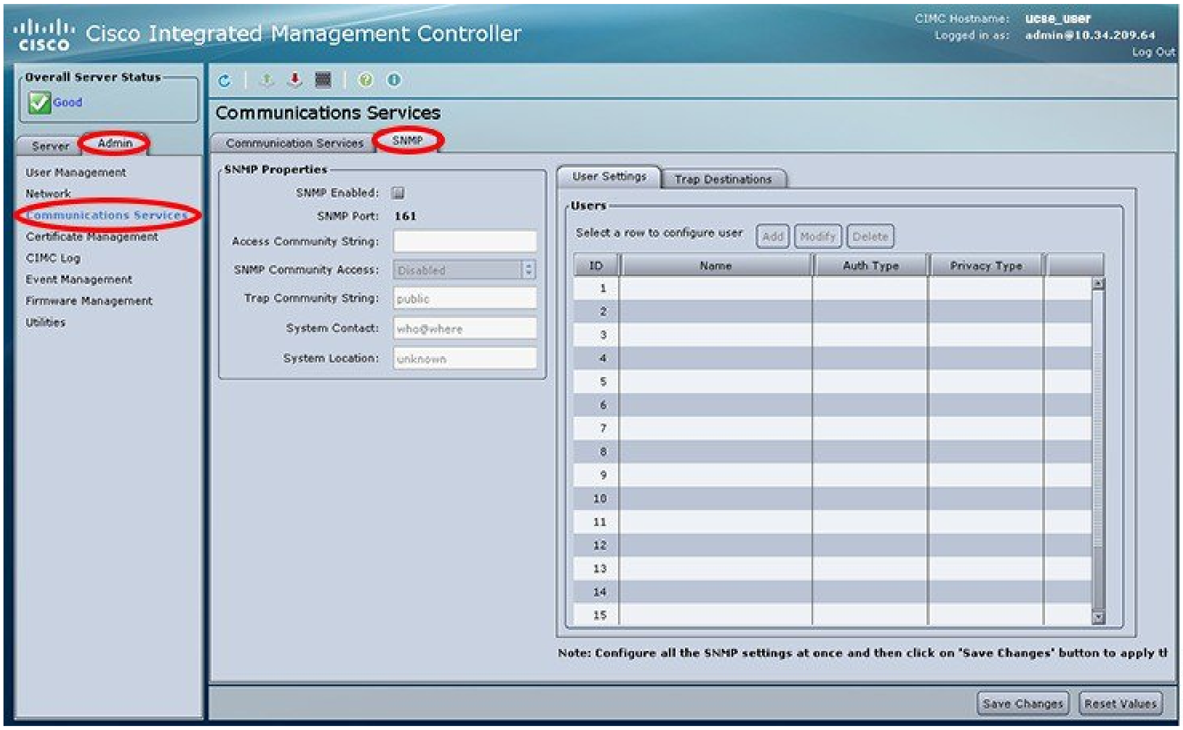
Procedure

Step 1 In the **Navigation** pane, click the **Admin** tab.

Step 2 On the **Admin** tab, click **Communications Services**.

Step 3 In the **Communications Services** pane, click the **SNMP** tab.

Figure 10: SNMP Tab



SNMP Properties

SNMP Enabled: □

SNMP Port: 161

Access Community String:

SNMP Community Access: Disabled

Trap Community String: public

System Contact: who@where

System Location: unknown

Note: Configure all the SNMP settings at once and then click on 'Save Changes' button to apply tl

Step 4 Under the **User Settings** tab in the **Users** area, update the following properties:

Name	Description
Add button	Click an available row in the table then click this button to add a new SNMP user.
Modify button	Select the user you want to change in the table then click this button to modify the selected SNMP user.
Delete button	Select the user you want to delete in the table then click this button to delete the selected SNMP user.
ID column	The system-assigned identifier for the SNMP user.
Name column	The SNMP user name.
Auth Type column	The user authentication type.

Name	Description
Privacy Type column	The user privacy type.

Step 5 Click **Save Changes**.