Distributing Administrative Tasks

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- About Authenticating Administrative Users, on page 10
- Additional Controls on Access to the Security Management Appliance, on page 23
- Controlling Access to Sensitive Information in Message Tracking , on page 27
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About Distributing Administrative Tasks

You can distribute administrative tasks on the Cisco Content Security Management appliance to other people based on the user roles that you assign to their user accounts.

To set up to distribute administrative tasks, you will determine whether the predefined user roles meet your needs, create any needed custom user roles, and set up the appliance to authenticate administrative users locally on the security appliance, and/or externally using your own centralized LDAP or RADIUS system.

Additionally, you can specify additional controls on access to the appliance and to certain information on the appliance.

Assigning User Roles

- Predefined User Roles , on page 1
- Custom User Roles , on page 4

Additional configuration is required for quarantine access. See Access to Quarantines , on page 10.

Predefined User Roles

Except as noted, you can assign each user a predefined user role with the privileges described in the following table, or a custom user role.

Table 1: Descriptions of User Roles

User Role Name	Description	Web Reporting/Scheduled Reports Capability
admin	The **admin** user is the default user account for the system and has all administrative privileges. The admin user account is listed here for convenience, but it cannot be assigned via a user role, and it cannot be edited or deleted, aside from changing the passphrase. Only the **admin** user can issue the **resetconfig** and **revert**commands.	Yes/Yes
Administrator	User accounts with the Administrator role have full access to all configuration settings of the system.	Yes/Yes
Operator	User accounts with the Operator role are restricted from: • Creating or editing user accounts • Upgrading the appliance • Issuing the `resetconfig` command • Running the System Setup Wizard • Modifying LDAP server profile settings other than username and passphrase, if LDAP is enabled for external authentication. • Configuring, editing, deleting, or centralizing quarantines. Otherwise, they have the same privileges as the Administrator role.	Yes/Yes
Technician	User accounts with the Technician role can initiate system administration activities such as upgrades and reboots, save a configuration file from the appliance, manage feature keys, and so forth.	Access to System Capacity reports under the Web and Email tabs

User Role Name	Description	Web Reporting/Scheduled Reports Capability
Read-Only Operator	User accounts with the Read-Only Operator role have access to view configuration information. Users with the Read-Only Operator role can make and submit most changes to see how to configure a feature, but they cannot commit them or make any change that does not require a commit. Users with this role can manage messages in quarantines, if access is enabled. Users with this role cannot access the following: • File system, FTP, or SCP. • Settings for creating, editing, deleting or centralizing quarantines.	Yes/No
Guest	Users accounts with the Guest role can view status information including reports and Web Tracking, and manage messages in quarantines, if access is enabled. Users with the Guest role cannot access Message Tracking.	Yes/No
Web Administrator	User accounts with the Web Administrator role have access to all configuration settings under the **Web** tab.	Yes/Yes
Web Policy Administrator	User accounts with the Web Policy Administrator role can access the Web Appliance Status page and all pages in the Configuration Master. The web policy administrator can configure identities, access policies, decryption policies, routing policies, proxy bypass, custom URL categories, and time ranges. The web policy administrator cannot publish configurations.	No/No
Email Administrator	User accounts with the Email Administrator role have access to all configuration settings within the Email menu only, including quarantines.	No/No
Help Desk User	User accounts with the Help Desk User role are restricted to: • Message Tracking • Managing messages in quarantines Users with this role cannot access the rest of the system, including the CLI. After you assign a user this role, you must also configure quarantines to allow access by this user.	No/No

User Role Name	Description	Web Reporting/Scheduled Reports Capability
Custom Roles	User accounts that are assigned a custom user role can view and configure only policies, features, or specific policy or feature instances that have been specifically delegated to the role. You can create a new Custom Email User Role or a new Custom Web User Role from the Add Local User page. However, you must assign privileges to this Custom User Role before the role can be used. To assign privileges, go to **Management Appliance > System Administration > User Roles** and click the user name. **Note** Users assigned to a Custom Email User Role cannot access the CLI. For more information, see Custom User Roles , on page 4.	No/No

Custom User Roles

The Security Management appliance allows users with Administration privileges to delegate administration capabilities to custom roles. Custom roles provide more flexible control over your users' access than the predefined user roles do.

Users to whom you assign custom user roles can manage policies or access reports for a subset of appliances, features, or end users. For example, you might allow a delegated administrator for web services to manage policies for an organization's branch office in a different country, where the acceptable use policies might be different from those at the organization's headquarters. You delegate administration by creating custom user roles and assigning access permissions to those roles. You determine which policies, features, reports, custom URL categories, etc. that the delegated administrators can view and edit.

For more information, see:

- About Custom Email User Roles , on page 4
- Deleting Custom User Roles , on page 9

About Custom Email User Roles

You can assign custom roles to allow delegated administrators to access the following on the Security Management appliance:

- All reports (optionally restricted by Reporting Group)
- Mail Policy reports (optionally restricted by Reporting Group)
- DLP reports (optionally restricted by Reporting Group)
- Message Tracking
- Quarantines

Detailed information about each of these items follows this section. In addition, all users granted any of these privileges can see the System Status, available under the Management Appliance tab > Centralized Services menu. Users assigned to custom email user roles cannot access the CLI.

Note Custom user roles on the Email Security appliance offer more granular access than do user roles on the Security Management appliance. For example, you can delegate access to mail and DLP policies and content filters. For details, see the "Managing Custom User Roles for Delegated Administration" section in the "Common Administration" chapter of the documentation or online help for your Email Security appliance.

Access to Email Reporting

You can grant custom user roles access to Email reports as described in the following sections.

For complete information about the Email Security Monitor pages on the Security Management appliance, see the chapter on Using Centralized Email Security Reporting.

All Reports

If you grant a custom role access to All Reports, users assigned to this role can see the following Email Security Monitor pages either for all Email Security appliances, or for the Reporting Group that you select:

- Mail Flow Summary
- Mail FLow Details
- Outgoing Destinations
- User Mail Summary
- DLP Incidents
- Content Filters
- Virus Filtering
- TLS Encryption
- Scheduled Reports
- Archived Reports

Mail Policy Reports

If you grant a custom role access to Mail Policy Reports, users assigned to this role can see the following Email Security Monitor pages either for all Email Security appliances, or for the Reporting Group that you select:

- Mail Flow Summary
- Mail FLow Details
- Outgoing Destinations
- User Mail Summary
- Content Filters

- Virus Filtering
- Archived Reports

DLP Reports

If you grant a custom role access to DLP Reports, users assigned to this role can see the following Email Security Monitor pages either for all Email Security appliances, or for the Reporting Group that you select:

- DLP Incidents
- Archived Reports

Access to Message Tracking Data

If you grant a custom role access to Message Tracking, users to whom you assign this role can find the status of all messages tracked by the Security Management appliance.

To control access to sensitive information in messages that violate DLP policies, see Controlling Access to Sensitive Information in Message Tracking , on page 27.

For more information about message tracking, including instructions for setting up your appliances to enable access to message tracking on the Security Management appliance, see Tracking Messages.

Access to Quarantines for Custom User Role

If you grant a custom role access to quarantines, users to whom you assign this role can search for, view, release, or delete messages in all quarantines on this Security Management appliance.

Before users can access quarantines, you must enable that access. See Access to Quarantines , on page 10.

Creating Custom Email User Roles

You can create custom email user roles for access to Email Reporting, Message Tracking, and quarantines.

For descriptions of the access that each of these options permits, see About Custom Email User Roles , on page 4 and its subsections.

Note To grant more granular access or access to other features, reports, or policies, create custom user roles directly on each Email Security appliance.

Step 1 [New Web Interface Only] On the Security Management appliance, click ⚙ to load the legacy web interface.

Step 2 Choose **Management Appliance > System Administration > User Roles**.

Step 3 Click **Add Email User Role**.

Tip Alternatively, you can create a new role by duplicating an existing Email User Role: Click the Duplicate icon in the applicable table row, then modify the resulting copy.

Step 4 Enter a unique name for the user role (for example, “dlp-auditor”) and a description.

- Email and Web custom user role names must not be duplicated.

- The name must contain only lowercase letters, numbers, and dashes. It cannot start with a dash or a number.
- If you grant users with this role access to centralized policy quarantines, and you also want users with this role to be able to specify those centralized quarantines in message and content filters and DLP Message Actions on an Email Security appliance, the name of the custom role must be the same on both appliances.

Step 5 Choose the access privileges to enable for this role.

Step 6 Click **Submit** to return to the User Roles page, which lists the new user role.

Step 7 If you limited access by Reporting Group, click the **no groups selected** link in the Email Reporting column for the user role, then choose at least one Reporting Group.

Step 8 Commit your changes.

Step 9 If you granted this role access to quarantines, enable access for this role:

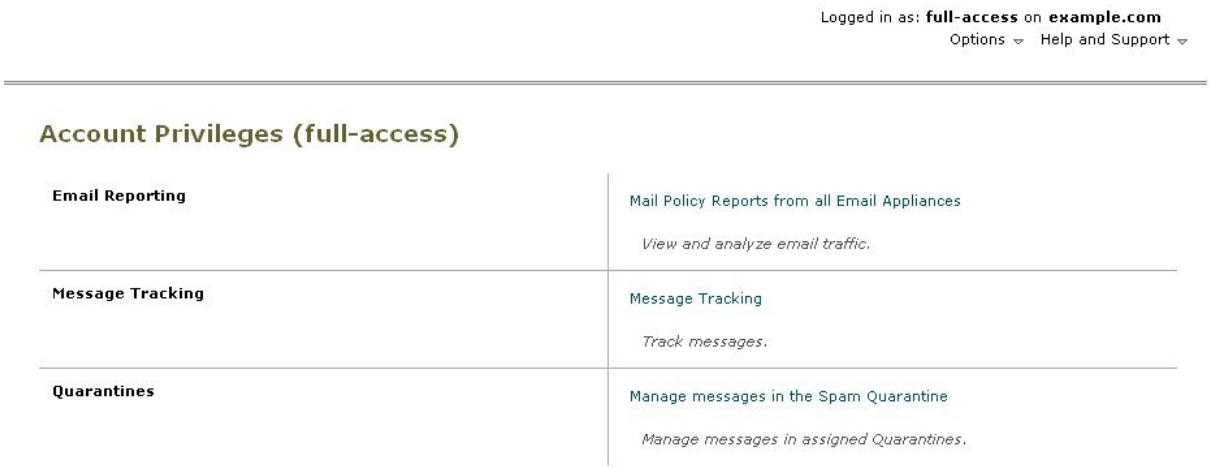
See:

- Configuring Administrative User Access to the Spam Quarantine
- Configuring Policy, Virus, and Outbreak Quarantines

Using Custom Email User Roles

When a user who is assigned a custom email user role logs into the appliance, that user sees only the links to the security features to which that user has access. The user can return to this main page at any time by selecting Account Privileges in the Options menu. These users can also access the features to which they have access by using the menus at the top of the web page. In the following example, the user has access to all features that are available on the Security Management appliance via custom email user roles.

Figure 1: Account Privileges Page for a Delegated Administrator assigned Custom Email User Roles



About Custom Web User Roles

Custom web user roles allow users to publish policies to different Web Security appliances, and gives them the permission to edit or publish the custom configuration to different appliances.

From the **Web > Configuration Master > Custom URL Categories** page on the Security Management appliance, you can view the URL categories and policies that you are allowed to administer and publish. Additionally, you can go to the **Web > Utilities > Publish Configuration Now** page and view the possible configurations.

Note Remember that when you create a custom role with Publish Privilege capabilities, when user logs in, they will not have any usable menus. They do not have the publish menu and they will land on an non-editable landing screen since the URL and policy tabs do not have any capabilities. In effect, you have a user that cannot publish or administer any categories or policies.The workaround to this issue is that if you want a user to be able to publish, but not to be able to manage any categories or policies, you **must** create a custom category which is not used in any policy, and give that user the ability to manage that custom category along with publishing. In this way, if they add or delete URLs from that category, it does not affect anything.

You can delegate web administration by creating and editing custom user roles.

- Creating Custom Web User Roles, on page 8
- Editing Custom Web User Roles, on page 9
- Deleting Custom User Roles , on page 9

Creating Custom Web User Roles

Step 1 [New Web Interface Only] On the Security Management appliance, click to load the legacy web interface.

Step 2 Choose **Management Appliance > System Administration > User Roles**.

Step 3 Click **Add Web User Role**.

Tip Alternatively, you can create a new role by duplicating an existing Web User Role: Click the Duplicate icon in the applicable table row, then modify the resulting copy.

Step 4 Enter a unique name for the user role (for example, “canadian-admins”) and a description.

Note The name must contain only lowercase letters, numbers, and dashes. It cannot start with a dash.

Step 5 Choose whether you want the policies and custom URL categories to be visible or hidden by default.

Step 6 Choose whether you want Publish privileges turned on or off.

This privilege allows the user to publish any Configuration Master for which the user can edit Access Policies or URL Categories.

Step 7 Choose whether to start with new (empty) settings or to copy an existing custom user role. If you choose to copy an existing user role, choose from the list the role that you want to copy.

Step 8 Click **Submit** to return to the User Roles page, which lists the new user role.

Note If you have enabled the anonymized feature within web reporting, all user roles with access to web reporting will have unrecognizable user names and roles in the interactive reports page. See the Scheduling Web Reports section in chapter Using Centralized Web Reporting and Tracking. The exception is the Administrator role, which is able to see actual user names in the scheduled reports. If the anonymize feature is enabled, scheduled reports that are generated by the Operator and Web Administrator are anonymized.

If you use the **Web > Utilities > Security > Services Display > Edit Security Services Display** page to hide one of the Configuration Masters, the User Roles page also hides the corresponding Configuration Master column; however, privilege settings for the hidden Configuration Master are retained.

Editing Custom Web User Roles

Step 1 On the User Roles page, click the role name to display the Edit User Role page.

Step 2 Edit any of the settings: name, description, and visibility of policies and custom URL categories.

Step 3 Click **Submit.**

To edit privileges for a custom user role:

Navigate to the User Roles page.

- To edit access policy privileges, click “Access policies” to display a list of access policies configured in the Configuration Master. In the Include column, select the check boxes of the policies to which you want to give the user edit access. Click **Submit** to return to the User Roles page.

-or-

- To edit custom URL category privileges, click Custom URL Categories to display a list of the custom URL categories defined on the Configuration Master. In the Include column, select the check boxes of the custom URL categories to which you want to give the user edit access. Click **Submit** to return to the User Roles page.

Deleting Custom User Roles

If you delete a custom user role that is assigned to one or more users, you do not receive an error.

User Roles with Access to the CLI

Some roles can access both the GUI and the CLI: Administrator, Operator, Guest, Technician, and Read-Only Operator. Other roles can access the GUI only: Help Desk User, Email Administrator, Web Administrator, Web Policy Administrator, URL Filtering Administrator (for web security), and custom user.

Using LDAP

If you use an LDAP directory to authenticate users, you assign directory groups to user roles instead of to individual users. When you assign a directory group to a user role, each user in that group receives the permissions defined for the user role. For more information, see External User Authentication , on page 18.

Access to Quarantines

Before users can access quarantines, you must enable that access. See the following information:

- Configuring Administrative User Access to the Spam Quarantine
- About Distributing Message Processing Tasks to Other Users (for policy quarantines), and Configuring Policy, Virus, and Outbreak Quarantines
- Configuring Centralized Quarantine Access for Custom User Roles

Users Page

For Information About This Section	See
Users Reset Passphrases button	About Distributing Administrative Tasks , on page 1 Managing Locally-Defined Administrative Users , on page 11 Requiring Users to Change Passphrase on Demand , on page 16
Local User Account & Passphrase Settings	Setting Passphrase and Login Requirements , on page 13
External Authentication	External User Authentication , on page 18
DLP Tracking Privileges	Controlling Access to Sensitive Information in Message Tracking , on page 27

About Authenticating Administrative Users

You can control access to the appliance by defining authorized users locally on the appliance, and/or by using external authentication or two-factor authentication.

- Changing the Admin User's Passphrase, on page 10
- Changing the User's Passphrase After Expiry, on page 11
- Managing Locally-Defined Administrative Users , on page 11
- External User Authentication , on page 18
- Two-Factor Authentication, on page 21

Changing the Admin User's Passphrase

Any administrator-level user can change the passphrase for the "admin" user, via the GUI or the CLI.

Note Cisco recommends you to change the passphrase when you log in to the appliance for the first time or if you reset the configurations to factory defaults.

To change the passphrase via the GUI, do the following:

- [New Web Interface Only] On the Security Management appliance, click ⚙ to load the legacy web interface.
- Choose **Management Appliance > System Administration > Users** page and select the admin user.

To change the passphrase for the admin user in the CLI, use the `passphrase` command. The `passphrase` command requires you to enter the old passphrase for security.

If you forget the passphrase for the "admin" user account, contact your customer support provider to reset the passphrase.

Note Changes to the passphrase take effect immediately and do not require you to commit the change.

Changing the User's Passphrase After Expiry

If your account has expired, you will be prompted with the following message "Your passphrase expired. Please change your passphrase by clicking here."

Click on the link and enter the login details with your expired passphrase, to proceed to the Change Passphrase page. For more information on setting passphrases, Setting Passphrase and Login Requirements , on page 13.

Note Changes to the passphrase take effect immediately and do not require you to commit the change.

Managing Locally-Defined Administrative Users

- Adding Locally-Defined Users, on page 11
- Editing Locally-Defined Users, on page 12
- Deleting Locally-Defined Users, on page 12
- Viewing the List of Locally-Defined Users , on page 13
- Setting and Changing Passphrases , on page 13
- Setting Passphrase and Login Requirements , on page 13
- Requiring Users to Change Passphrase on Demand , on page 16
- Locking and Unlocking Local User Accounts , on page 17

Adding Locally-Defined Users

Follow this procedure to add users directly to the Security Management appliance if you are not using external authentication. Alternatively, use the **`userconfig`** command in the CLI.

Note If external authentication is also enabled, be sure that local user names do not duplicate externally-authenticated user names.

There is no limit to the number of user accounts that you can create on the appliance.

Step 1 If you will assign custom user roles, we recommend that you define those roles first. See Custom User Roles , on page 4.

Step 2 [New Web Interface Only] On the Security Management appliance, click ⚙ to load the legacy web interface.

Step 3 Choose **Management Appliance > System Administration > Users**.

Step 4 Click **Add User**.

Step 5 Enter a unique name for the user. You cannot enter words that are reserved by the system (such as "`operator`" and "`root`").

If you also use external authentication, user names should not duplicate externally-authenticated user names.

Step 6 Enter a full name for the user.

Step 7 Select a predefined role or a custom role. See the table *Descriptions of User Roles* in section Predefined User Roles , on page 1 for more information about user roles.

If you add a new Email role or Web role here, enter a name for the role. For naming restrictions, see Creating Custom Email User Roles , on page 6 or Creating Custom Web User Roles, on page 8.

Step 8 Confirm your current passphrase for security validation.

Step 9 You can generate or enter a passphrase and re-enter the passphrase to confirm the same.

Step 10 Submit and commit your changes.

Step 11 If you added a custom user role on this page, assign privileges to that role now. See Custom User Roles , on page 4.

Editing Locally-Defined Users

Use this procedure to change a passphrase, for example.

Step 1 Click the user's name in the Users listing.

Step 2 Make changes to the user.

Step 3 Confirm your current passphrase for security validation.

Step 4 Submit and commit your changes.

Deleting Locally-Defined Users

Step 1 Click the trash can icon corresponding to the user's name in the Users listing.

Step 2 Confirm the deletion by clicking **Delete** in the warning dialog that appears.

Step 3 Click **Commit** to commit your changes.

Viewing the List of Locally-Defined Users

To view a list of locally-defined users, do the following:

- Choose **Management Appliance > System Administration > Users**.

Note Asterisks indicate users assigned custom user roles for delegated administration. “Unassigned” appears in red if the user’s custom role has been deleted. For more information on custom user roles, see Custom User Roles , on page 4.

Setting and Changing Passphrases

- When you add a user, you specify an initial passphrase for that user.
- To change passphrases for users configured on the system, use the Edit User page in the GUI (see Editing Locally-Defined Users, on page 12 for more information).

Note Cisco recommends you to change the passphrase when you log in to the appliance for the first time or after you complete the System Setup Wizard.

- To change the passphrase for the default admin user account for the system, see Changing the Admin User’s Passphrase, on page 10.
- To force users to change their passphrases, see Requiring Users to Change Passphrase on Demand , on page 16.
- Users can change their own passphrases by clicking the Options menu at the top right side of the GUI and selecting the Change Passphrase option.

Setting Passphrase and Login Requirements

You can define user account and passphrase restrictions to enforce organizational passphrase policies. The user account and passphrase restrictions apply to local users defined on the Security Management appliance. You can configure the following settings:

- **User account locking.** You can define how many failed login attempts cause the user to be locked out of the account.
- **Passphrase lifetime rules.** You can define how long a passphrase can exist before the user is required to change the passphrase after logging in.
- **Passphrase rules.** You can define what kinds of passphrases users can choose, such as which characters are optional or mandatory.

Step 1 [New Web Interface Only] On the Security Management appliance, click to load the legacy web interface.

Step 2 Choose **Management Appliance > System Administration > Users**.

Step 3 Scroll down to the **Local User Account and Passphrase Settings** section.

Step 4 Click **Edit Settings.**

Step 5 Configure settings:

Setting	Description
User Account Lock	Choose whether or not to lock the user account after the user fails to login successfully. Specify the number of failed login attempts that cause the account locking. You can enter any number from one (1) to 60. Default is five (5). When you configure account locking, enter the message to be displayed to the user attempting to login. Enter text using 7-bit ASCII characters. This message is only displayed when users enter the correct passphrase to a locked account. When a user account gets locked, an administrator can unlock it on the Edit User page in the GUI or using the `userconfig` CLI command. Failed login attempts are tracked by user, regardless of the machine the user connects from or the type of connection, such as SSH or HTTP. Once the user successfully logs in, the number of failed login attempts is reset to zero (0). When a user account is locked out due to reaching the maximum number of failed login attempts, an alert is sent to the administrator. The alert is set at the "Info" severity level. **Note** You can also manually lock individual user accounts. See Locking User Accounts Manually, on page 17.
Passphrase Reset	Choose whether or not users should be forced to change their passphrases after an administrator changes their passphrases. You can also choose whether or not users should be forced to change their passphrases after they expire. Enter the number of days a passphrase can last before users must change it. You can enter any number from one (1) to 366. Default is 90. To force users to change their passphrases at non-scheduled times, see Requiring Users to Change Passphrase on Demand , on page 16. When you force users to change their passphrases after they expire, you can display a notification about the upcoming passphrase expiration. Choose the number of days before expiration to notify users. **Note** When a user account uses SSH keys instead of a passphrase challenge, the Passphrase Reset rules still apply. When a user account with SSH keys expires, the user must enter their old passphrase or ask an administrator to manually change the passphrase to change the keys associated with the account.
Passphrase Rules: Require at least <number> characters.	Enter the minimum number of characters that passphrases may contain. Enter any number between one (1) and 128. The default is 8. Passphrases can have more characters than the number you specify here.
Passphrase Rules: Require at least one number (0-9).	Choose whether or not the passphrases must contain at least one number.

Setting	Description
Passphrase Rules: Require at least one special character.	Choose whether or not the passphrases must contain at least one special character. Passphrases may contain the following special characters: ~ ? ! @ # $ % ^ & * - _ + = \ | / [ ] ( ) < > { } ` ' " ; : , .

Passphrase Rules:
Ban usernames and their variations as passphrases.
	Choose whether or not the passphrase are allowed to be the same as the associated user name or variations on the user name. When user name variations are banned, the following rules apply to passphrases:
	• The passphrase may not be the same as the user name, regardless of case.
	• The passphrase may not be the same as the user name in reverse, regardless of case.
	• The passphrase may not be the same as the user name or reversed user name with the following character substitutions:
	  • "@" or "4" for "a"
	  • "3" for "e"
	  • "|", "!", or "1" for "i"
	  • "0" for "o"
	  • "$" or "5" for "s"
	  • "+" or "7" for "t"

Passphrase Rules: Ban reuse of the last <number> passphrases.	Choose whether or not users are allowed to choose a recently used passphrase when they are forced to change the passphrase. If they are not allowed to reuse recent passphrases, enter the number of recent passphrase that are banned from reuse. You can enter any number from one (1) to 15. Default is three (3).
Passphrases Rules: List of words to disallow in passphrases	You can create a list of words to disallow in passphrases. Make this file a text file with each forbidden word on a separate line. Save the file with the name forbidden_passphrase_words.txt and use SCP or FTP to upload the file to the appliance. If this restriction is selected but no word list is uploaded, this restriction is ignored.

Setting	Description
Passphrase Strength	You can display a passphrase-strength indicator when an admin or user enters a new passphrase. This setting does not enforce creation of strong passphrases, it merely shows how easy it is to guess the entered passphrase. Select the roles for which you wish to display the indicator. Then, for each selected role, enter a number greater than zero. A larger number means that a passphrase that registers as strong is more difficult to achieve. This setting has no maximum value. Examples: • If you enter 30 , then an 8 character passphrase with at least one upper- and lower-case letter, number, and special character will register as a strong passphrase. • If you enter 18 , then an 8 character passphrase with all lower case letters and no numbers or special characters will register as strong. Passphrase strength is measured on a logarithmic scale. Evaluation is based on the U.S. National Institute of Standards and Technology rules of entropy as defined in NIST SP 800-63, Appendix A. Generally, stronger passphrases: • Are longer • Include upper case, lower case, numeric, and special characters • Do not include words in any dictionary in any language. To enforce passphrases with these characteristics, use the other settings on this page.

Step 6 Submit and commit your changes.

What to do next

Require users to change their passphrases to new passphrases that meet the new requirements. See Requiring Users to Change Passphrase on Demand , on page 16

Requiring Users to Change Passphrase on Demand

To require all or selected users to change their passphrases at any time on an ad-hoc basis, perform the steps in this procedure. This is a one-time action.

To automate a periodic requirement for changing passphrases, use the Passphrase Reset option described in Setting Passphrase and Login Requirements , on page 13.

Step 1 [New Web Interface Only] On the Security Management appliance, click ⚙ to load the legacy web interface.

Step 2 Choose **Management Appliance > System Administration > Users**.

Step 3 In the Users section, select the check boxes beside the users who will be required to change passphrases .

Step 4 Select **Enforce Passphrase Changes**.

Step 5 Select options.

The global setting for the grace period is configured in Local User Account & Passphrase Settings.

Step 6 Click **OK**.

Locking and Unlocking Local User Accounts

Locking a user account prevents a local user from logging into the appliance. A user account can be locked in one of the following ways:

- You can configure all local user accounts to lock after users fail to log in successfully after a configured number of attempts. See Setting Passphrase and Login Requirements , on page 13.
- Administrators can manually lock user accounts. See Locking User Accounts Manually, on page 17.

AsyncOS displays the reason why the user account was locked when you view the user account on the Edit User page.

Locking User Accounts Manually

Step 1 First time only: Set up the appliance to enable user account locking:

Step 2 Perform the following:

a) [New Web Interface Only] On the Security Management appliance, click to load the legacy web interface.
b) Go to **Management Appliance > System Administration > Users**.
c) In the **Local User Account & Passphrase Settings** section, click **Edit Settings**.
d) Select the checkbox to **Display Locked Account Message if Administrator has manually locked a user account** and enter your message.
e) Submit the change.

Step 3 Go to **Management Appliance > System Administration > Users** and click the user name.

Note Before you lock the Admin account, be sure that you can unlock it. See the Note in Unlocking User Accounts , on page 17.

Step 4 Click **Lock Account**.

AsyncOS displays a message saying that the user will be unable to log into the appliance and asks if you want to continue.

Unlocking User Accounts

To unlock a user account, open the user account by clicking on the user name in the Users listing and click Unlock Account.

Note If you lock the admin account, you can only unlock it by logging in as the admin through a serial communications connection to the serial console port. The admin user can always access the appliance using the serial console port, even when the admin account is locked. See the "Setup and Installation" chapter in the documentation or online help for your Email Security appliance for more information on accessing the appliance using the serial console port.

External User Authentication

If you store user information in an LDAP or RADIUS directory on your network, you can configure your Security Management appliance to use the external directory to authenticate users who log in to the appliance.

Note Some features described in Customizing Your View are not available to externally-authenticated users.

- If your deployment uses both local and external authentication, local user names must not duplicate externally-authenticated user names.
- If the appliance cannot communicate with the external directory, a user who has both an external and a local account can log in with a local user account on the appliance.

See:

- Configuring External Authentication of Administrative Users Using LDAP
- Enabling RADIUS Authentication, on page 18

Configuring LDAP Authentication

To configure LDAP authentication, see Configuring External Authentication of Administrative Users Using LDAP.

Enabling RADIUS Authentication

You can use a RADIUS directory to authenticate users and assign groups of users to user roles for administering your appliance. The RADIUS server should support the CLASS attribute, which AsyncOS uses to assign users in the RADIUS directory to user roles.

Note If an external user changes the user role for their RADIUS group, the user should log out of the appliance and then log back in. The user will have the permissions of their new role.

Before you begin

The Shared Secret key for access to the RADIUS server must be no more than 48 characters long.

Step 1 [New Web Interface Only] On the Security Management appliance, click ⚙ to load the legacy web interface.

Step 2 Choose **Management Appliance** > **System Administration** > **Users** page and click **Enable**.

Step 3 Select the **Enable External Authentication** check box.

Step 4 Select RADIUS for the authentication type.

Step 5 Enter the host name for the RADIUS server.

Step 6 Enter the port number for the RADIUS server. The default port number is `1812`.

Step 7 Enter the Shared Secret key for the RADIUS server.

Note When enabling external authentication for a cluster of Email Security appliances, enter the same Shared Secret key on all appliances in the cluster.

Step 8 Enter the number of seconds that the appliance waits for a response from the server before timing out.

Step 9 Select whether to use Passphrase Authentication Protocol (PAP) or Challenge Handshake Authentication Protocol (CHAP) for the authentication protocol.

Step 10 (Optional) Click **Add Row** to add another RADIUS server. Repeat Steps 6 and 7 for each RADIUS server that your appliance uses for authentication.

When you define multiple external servers, the appliance connects to the servers in the order defined on the appliance. You might want to define multiple external servers to allow for failover in case one server is temporarily unavailable.

Step 11 Enter the amount of time to store external authentication credentials in the web user interface.

Note If the RADIUS server uses one-time passphrases, for example passphrases created from a token, enter zero (0). When the value is set to zero, AsyncOS does not contact the RADIUS server again to authenticate during the current session.

Step 12 Configure Group Mapping:

Setting	Description
Map externally authenticated users to multiple local roles (Recommended)	AsyncOS assigns RADIUS users to appliance roles based on the RADIUS CLASS attribute. CLASS attribute requirements: • 3 character minimum • 253 character maximum • no colons, commas, or newline characters • one or more mapped CLASS attributes for each RADIUS user (With this setting, AsyncOS denies access to RADIUS users without a mapped CLASS attribute.) For RADIUS users with multiple CLASS attributes, AsyncOS assigns the most restrictive role. For example, if a RADIUS user has two CLASS attributes, which are mapped to the Operator and Read-Only Operator roles, AsyncOS assigns the RADIUS user to the Read-Only Operator role, which is more restrictive than the Operator role. These are the appliance roles ordered from least restrictive to most restrictive: • Administrator • Email Administrator • Web Administrator • Web Policy Administrator • URL Filtering Administrator (for web security) • Custom user role (email or web) If a user is assigned multiple Class attributes that are mapped to custom user roles, the last class attribute on the list on the RADIUS server will be used. • Technician • Operator • Read-Only Operator • Help Desk User • Guest
Map all externally authenticated users to the Administrator role	AsyncOS assigns RADIUS users to the Administrator role.

Step 13 (Optional) Click **Add Row** to add another group. Repeat step 11 for each group of users that the appliance authenticates.

Step 14 Submit and commit your changes.

Two-Factor Authentication

You can use a RADIUS directory to configure two-factor authentication for specific user roles. The appliance supports the following authentication protocols for communicating with the RADIUS server:

- Passphrase Authentication Protocol (PAP)
- Challenge Handshake Authentication Protocol (CHAP)

You can enable two-factor authentication for the following user roles:

- predefined
- custom

The feature has been tested with:

- RSA Authentication Manager v8.2
- FreeRADIUS v1.1.7 and above
- ISE v1.4 and above

Related Topics:

- Enabling Two-Factor Authentication, on page 21
- Disabling Two-Factor Authentication, on page 22
- Adding an Email or Web Security appliance over SSH with Pre-Shared Keys, on page 22

Enabling Two-Factor Authentication

Make sure that you get the required RADIUS server details for two-factor authentication from your IT administrator.

Step 1 [New Web Interface Only] On the Security Management appliance, click ⚙ to load the legacy web interface.

Step 2 Choose **System Administration > Users** page and click **Enable** under Two-Factor Authentication.

Step 3 Enter the hostname or IP address of the RADIUS server.

Step 4 Enter the port number of the RADIUS server.

Step 5 Enter the Shared Secret passphrase of the RADIUS server.

Step 6 Enter the number of seconds to wait for a response from the server before timing out.

Step 7 Select the appropriate authentication protocol.

Step 8 (Optional) Click **Add Row** to add another RADIUS server. Repeat steps 2 to 6 for each RADIUS server.

Note You can add up to ten RADIUS servers.

Step 9 Select the required user roles for which you want to enable two-factor authentication.

Step 10 Submit and commit your changes.

When two-factor authentication is enabled, the user is prompted to enter a passcode after entering the username and passphrase, to login to the appliance.

Disabling Two-Factor Authentication

Before you begin

Make sure you have enabled two-factor authentication on your appliance.

Step 1 [New Web Interface Only] On the Security Management appliance, click ⚙ to load the legacy web interface.

Step 2 Choose **System Administration > Users** page and click **Edit Global Settings** under Two-Factor Authentication

Step 3 Deselect **Enable Two-Factor Authentication**.

Step 4 Submit and commit your changes.

Adding an Email or Web Security appliance over SSH with Pre-Shared Keys

The following example demonstrates how to add an Email Security applaince (testesa.example.com) to the Security Management appliance (testsma.example.com) over SSH using pre-shared keys.

To add a Web Security appliance, choose **WSA** when prompted to enter the type of Cisco appliance.

```
testsma.example.com> applianceconfig

Choose the operation you want to perform.

ADD - Add SMA Connection Parameters and Keys.
EDIT - Edit an appliance.
DELETE - Remove an appliance.
TEST - Test that an appliance is properly configured.
SERVICES - Configure the centralized services for an appliance.
STATUS - Display the status of centralized services.
PORT - Configure which port is used to communicate with remote appliances.

[]> add

Please enter the type of Cisco appliance that this device is
1. ESA
2. WSA

[1]> 1

Enter the IP address or hostname of an appliance to transfer data with.
(A hostname may be entered in this field, however it will be immediately
resolved to an IP address when the form is submitted.)
[]> IP address entered

Enter a name to identify this appliance

[]> name of appliance

File transfer access via SSH is required to transfer reporting data, message logs,
and quarantine safelist/blocklist data from appliances
```

```
Would you like to configure file transfer access for this appliance? [Y]>

Would you like to use a custom ssh port to connect to this appliance? [N]>

Would you like to connect an Email Security appliance using pre-shared keys?
Use this option if you have enabled two-factor authentication on the Email
Security appliance. [N]> yes

To add an Email Security appliance to the Content Security Management appliance
using pre-shared keys, log in to the Email Security appliance,
run the smaconfig > add command, enter the following details.

Host: vm10sma0006.qa

User Key:
AAAAB3NzaC1yc2EAAAADAQABAAABAQDgm3kG9RHc4gVZxRe0orh5DW5Yje5UB9BpJqcTRQJoxUIAv2Xig
8q5geyaWHZcFoUxH61YQbPX3R8CVMYgJ8/QB/iunjkr3jowV/SCuBBikEFgj1zuxlsFhL0L487epEgby1gH0rfJ
gwSa2/6dhfyUayst6pT87CZGOQltgx7s51wc+ve770X3SqlQD5bdYC4x9+gCX0wdwfhTH1+4/82jwYjK1lAEXc
O4k4TuZJEJnyBQ3YyCyVwXuDkXpI6xJDemxcc36e7Wwtpn3mn2VLaTG2/I38XwSvlYB6TcqmWnO10gL+aD
wkKAKcuhYpz4NFr9myej1mhMk7ZAFXmRNxvT
```

Note Before you proceed to the next step, ensure that you have added the **Host** and **User Key** details to the Email or Web Security appliance. Commit the changes in your Email or Web Security appliance before continuing the process of adding connection parameters in the Security Management appliance.

```
Do you want to continue connecting using pre-shared keys? [Y]> yes
```

Additional Controls on Access to the Security Management Appliance

- Configuring IP-Based Network Access, on page 23
- Configuring the Web UI Session Timeout, on page 26

Configuring IP-Based Network Access

You can control from which IP addresses users access the Security Management appliance by creating access lists for users who connect directly to the appliance and users who connect through a reverse proxy, if your organization uses reverse proxies for remote users.

- Direct Connections, on page 23
- Connecting Through a Proxy, on page 24
- Creating the Access List , on page 24

Direct Connections

You can specify the IP addresses, subnets, or CIDR addresses for machines that can connect to the Security Management appliance. Users can access the appliance from any machine with IP address from the access list. Users attempting to connect to the appliance from an address not included in the list are denied access.

Connecting Through a Proxy

If your organization's network uses reverse proxy servers between remote users' machines and the Security Management appliance, AsyncOS allows you create an access list with the IP addresses of the proxies that can connect to the appliance.

Even when using a reverse proxy, AsyncOS still validates the IP address of the remote user's machine against a list of IP addresses allowed for user connections. To send the remote user's IP address to the Email Security appliance, the proxy needs to include the x-forwarded-for HTTP header in its connection request to the appliance.

The x-forwarded-for header is a non-RFC standard HTTP header with the following format:

x-forwarded-for: client-ip, proxy1, proxy2,... CRLF .

The value for this header is a comma-separated list of IP addresses with the left-most address being the address of the remote user's machine, followed by the addresses of each successive proxy that forwarded the connection request. (The header name is configurable.) The Security Management appliance matches the remote user's IP address from the header and the connecting proxy's IP address against the allowed user and proxy IP addresses in the access list.

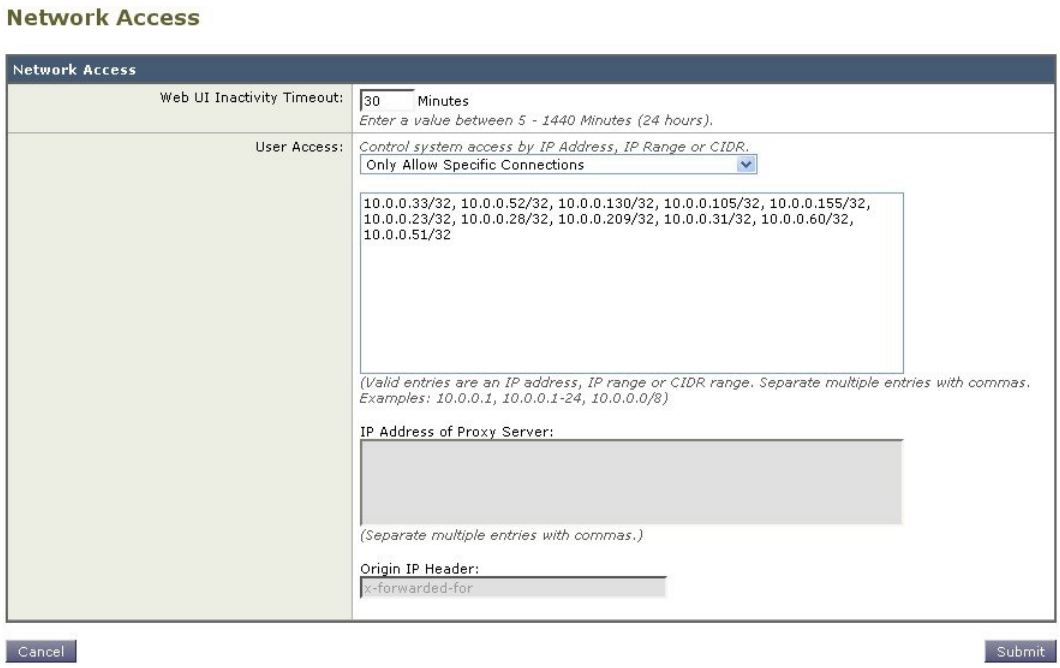
Note AsyncOS supports only IPv4 addresses in the x-forwarded-for header.

Creating the Access List

You can create the network access list either via the Network Access page in the GUI or the **`adminaccessconfig > ipaccess`** CLI command. The following figure shows the Network Access page with a list of user IP addresses that are allowed to connect directly to the Security Management appliance.

The following settings are applicable for the legacy web interface and the new web interface of the appliance.

Figure 2: Example Network Access Settings



AsyncOS offers four different modes of control for the access list:

- **Allow All.** This mode allows all connections to the appliance. This is the default mode of operation.
- **Only Allow Specific Connections.** This mode allows a user to connection to the appliance if the user's IP address matches the IP addresses, IP ranges, or CIDR ranges included in the access list.
- **Only Allow Specific Connections Through Proxy.** This mode allows a user to connect to the appliance through a reverse proxy if the following conditions are met:
  - The connecting proxy's IP address is included in the access list's IP Address of Proxy Server field.
  - The proxy includes the x-forwarded-header HTTP header in its connection request.
  - The value of x-forwarded-header is not empty.
  - The remote user's IP address is included in x-forwarded-header and it matches the IP addresses, IP ranges, or CIDR ranges defined for users in the access list.
- **Only Allow Specific Connections Directly or Through Proxy.** This mode allows users to connect through a reverse proxy or directly to the appliance if their IP address matches the IP addresses, IP ranges, or CIDR ranges included in the access list. The conditions for connecting through a proxy are the same as in the Only Allow Specific Connections Through Proxy mode.

Please be aware that you may lose access to the appliance after submitting and committing your changes if one of the following conditions is true:

- If you select **Only Allow Specific Connections** and do not include the IP address of your current machine in the list.
- If you select **Only Allow Specific Connections Through Proxy** and the IP address of the proxy currently connected to the appliance is not in the proxy list and the value of the Origin IP header is not in the list of allowed IP addresses.
- If you select **Only Allow Specific Connections Directly or Through Proxy** and

- the value of the Origin IP header is not in the list of allowed IP addresses

  OR

- the value of the Origin IP header is not in the list of allowed IP Addresses and the IP address of the proxy connected to the appliance is not in the list of allowed proxies.

If you choose to continue without correcting the access list, AsyncOS will disconnect your machine or proxy from the appliance when you commit your changes.

Step 1 [New Web Interface Only] On the Security Management appliance, click ⚙ to load the legacy web interface.

Step 2 Choose **System Administration > Network Access**.

Step 3 Click **Edit Settings**.

Step 4 Select the mode of control for the access list.

Step 5 Enter the IP addresses from which users will be allowed to connect to the appliance.

You can enter an IP address, IP address range or CIDR range. Use commas to separate multiple entries.

Step 6 If connecting through a proxy is allowed, enter the following information:

- The IP addresses of the proxies allowed to connect to the appliance. Use commas to separate multiple entries.
- The name of the origin IP header that the proxy sends to the appliance, which contains the IP addresses of the remote user's machine and the proxy servers that forwarded the request. By default, the name of the header is x-forwarded-for .

Step 7 Submit and commit your changes.

Configuring the Web UI Session Timeout

You can specify how long a user can be logged into the Security Management appliance's Web UI before AsyncOS logs the user out due to inactivity. This Web UI session timeout applies to all users, including admin, and it is used for both HTTP and HTTPS sessions.

Once AsyncOS logs a user out, the appliance redirects the user's web browser to login page.

Note The Web UI Session Timeout does not apply to spam quarantine sessions, which have a 30 minute timeout that cannot be configured.

Step 1 [New Web Interface Only] On the Security Management appliance, click ⚙ to load the legacy web interface.

Step 2 Use the **System Administration > Network Access** page.

Step 3 Click **Edit Settings**.

Step 4 In the **Web UI Inactivity Timeout** field, enter the number of minutes users can be inactive before being logged out. You can define a timeout period between 5 and 1440 minutes.

Step 5 Submit and commit your changes.

Configuring the CLI Session Timeout

You can specify how long a user can be logged into the Security Management appliance's CLI before AsyncOS logs the user out due to inactivity. The CLI session timeout applies:

- To all users, including administrator
- Only to the connections using Secure Shell (SSH), SCP, and direct serial connection

Note Any uncommitted configuration changes at the time of CLI session timeout will be lost. Make sure that you commit the configuration changes as soon as they are made.

Step 1 [New Web Interface Only] On the Security Management appliance, click ⚙ to load the legacy web interface.

Step 2 Use the **System Administration > Network Access** page.

Step 3 Click **Edit Settings**.

Step 4 In the **CLI Inactivity Timeout** field, enter the number of minutes users can be inactive before being logged out. You can define a timeout period between 5 and 1440 minutes.

Step 5 Submit and commit your changes.

What to do next

You can also use the `adminaccessconfig` command in CLI to configure CLI session timeout. See *CLI Reference Guide for AsyncOS for Cisco Email Security Appliances*.

Controlling Access to Sensitive Information in Message Tracking

Step 1 [New Web Interface Only] On the Security Management appliance, click ⚙ to load the legacy web interface.

Step 2 Go to the **Management Appliance > System Administration > Users** page.

Step 3 In the **Tracking Privileges** section, click **Edit Settings**.

Step 4 Select the roles for which you want to grant access to sensitive information in Message Tracking.

Only custom roles with access to Message Tracking are listed.

Step 5 Submit and commit your changes.

The Centralized Email Message Tracking feature must be enabled under Management Appliance > Centralized Services for this setting to take effect.

Displaying a Message for Administrative Users

You can display a message that administrative users will see when they sign in to the appliance.

To set or clear a message:

Step 1 If you are planning to use a text file, upload it to the `/data/pub/configuration` directory on the appliance.

Step 2 Access the command-line interface (CLI).

Step 3 Run the `adminaccessconfig > BANNER` command.

Step 4 Load the banner message.

Step 5 Commit the change.

Viewing Administrative User Activity

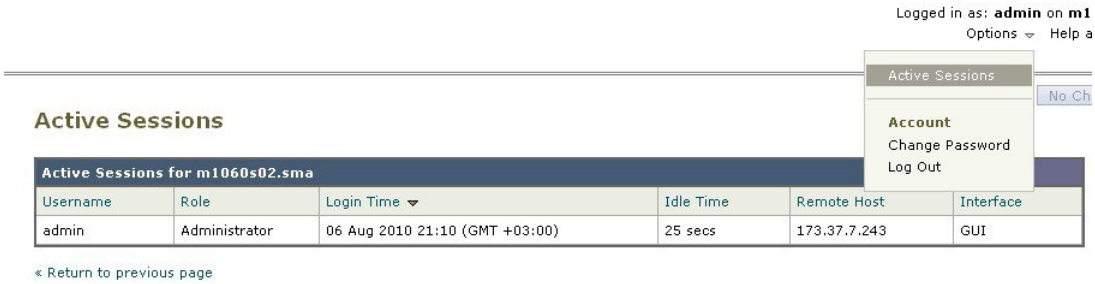
- Viewing Active Sessions Using the Web , on page 28
- Viewing Your Recent Login Attempts , on page 29
- Viewing Administrative User Activity via the Command Line Interface , on page 29

Viewing Active Sessions Using the Web

From the Security Management appliance, you can view all active sessions and users logged in to the appliance.

From the upper right corner of the window, choose **Options > Active Sessions**.

Figure 3: Active Sessions Menu



From the Active Sessions page you can view the User name, what role the user has, the time the user logged in, idle time, and whether the user is logging in from the command line or the GUI.

Viewing Your Recent Login Attempts

To view your last few recent login attempts (failed or successful) via the web interface, SSH, and/or FTP:

Step 1 Log in.

Step 2 Click the Figure-icon icon beside "Logged in as" near the top right side of the screen.

Viewing Administrative User Activity via the Command Line Interface

The following commands support multiuser access to the appliance.

- The **who** command lists all users who are logged in to the system via the CLI or the web user interface, the role of the user, the time of login, the idle time, and the remote host from which the user is logged in.
- The whoami command displays the user name and full name of the user currently logged in, and which groups the user belongs to:

```
mail3.example.com>
whoami
Username: admin
Full Name: Administrator
Groups: admin, operators, config, log, guest
```

- The last command displays which users have recently logged into the appliance. The IP address of the remote host, and the login, logout, and total time also appear.

```
mail3.example.com> last
Username  Remote Host  Login Time        Logout Time       Total Time
========  ===========  ================  ================  ==========
admin     10.1.3.67    Sat May 15 23:42  still logged in   15m
admin     10.1.3.67    Sat May 15 22:52  Sat May 15 23:42  50m
admin     10.1.3.67    Sat May 15 11:02  Sat May 15 14:14  3h 12m
admin     10.1.3.67    Fri May 14 16:29  Fri May 14 17:43  1h 13m
shutdown                                 Fri May 14 16:22
shutdown                                 Fri May 14 16:15
admin     10.1.3.67    Fri May 14 16:05  Fri May 14 16:15  9m
admin     10.1.3.103   Fri May 14 16:12  Fri May 14 16:15  2m
admin     10.1.3.103   Thu May 13 09:31  Fri May 14 14:11  1d 4h 39m
admin     10.1.3.135   Fri May 14 10:57  Fri May 14 10:58  0m
admin     10.1.3.67    Thu May 13 17:00  Thu May 13 19:24  2h 24m
```

Troubleshooting Administrative User Access

- Error: User Has No Access Privileges Assigned, on page 29
- User Has No Active Menus , on page 30
- Externally-Authenticated Users See Preferences Option , on page 30

Error: User Has No Access Privileges Assigned

Problem

A user to whom you have delegated administration can log in to the Security Management appliance but sees a message that no access privileges are assigned.

Solution

Make sure that you have assigned privileges to the custom user role to which this user is assigned. Look at Management Appliance > System Administration > Users to determine the User Role assigned, then go to Management Appliance > System Administration > User Roles, click the name of the User Role, and assign privileges to the role.

If you have assigned access based on Reporting Group, make sure you have selected a Reporting Group for that user on the Management Appliance > System Administration > User Roles page. To assign a group, click the **No groups selected** link in the Email Reporting column of the User Roles for Delegated Administration table.

User Has No Active Menus

Problem

A user to whom you have granted Publish privileges has no active menus upon login.

Solution

Make sure you have granted access to at least one Access Policy or Custom URL Category. If you do not want to grant this user privileges to edit either of these, create a custom URL category which is not used in any policy and grant this user role privileges to this category on the Custom User Role page.

Externally-Authenticated Users See Preferences Option

Problem

Externally-authenticated users see the Preferences option.

Solution

Ensure that users that you add directly in the Security Management appliance have unique usernames that are not also used in your external authentication database.