

# User Access Control

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Cisco EMF User Access Control, which is a component of Carrier Class Security, provides system administrators with the opportunity to control which features of their system can be accessed by various levels of personnel. This is important for security and efficient and effective network management.

Reliable security and ease-of-use plays a key role in a network management application. For example, given the rapid growth in high speed data services, many organizations have concurrently grown rapidly. Experienced Network Operations Center (NOC) personnel may spend more of their time training new employees in the skills of network management.

Additionally, complex new equipment technologies are being launched into the market by both existing and new equipment providers. Faced with many new equipment features, personnel may make mistakes, for example in equipment configuration, which could affect network uptime.

Service Provider organizations may be obligated under law to protect sensitive information contained within management systems. The ability to provide secure customer network management is therefore a valuable service to offer customers.

## Access Manager Objects

Cisco EMF Security allows system administrators to set up Access Manager objects using the Access Manager GUI. Access Manager objects can be classed as either personnel or services as follows:

- an access specification—a number of services grouped in a feature list with an associated access level (services)
- a group of users—identified by a user group name (personnel)
- a user—identified by login name (personnel).

The Access Manager object is set up to allow or restrict user access to features within Cisco EMF. For example, an administrator could set up a user to have access only to those parts of Cisco EMF which are relevant to their specific tasks. A user would only be aware of their own access to the system and the use of their password.

For example, Joe may be the NOC expert on xDSL modems, but he may be a relative ATM novice. Helen, on the other hand, may be the ATM expert but she may know very little about the intricacies of xDSL technologies. With Cisco EMF Access Control, the systems administrator is able to ensure Joe has read/write access to all xDSL network elements for configuration and test purposes, while Helen can only view the status information for these elements. Helen, on the other hand, can reconfigure ATM equipment, whereas Joe is refused access to the Element Manager windows which permit such reconfiguration.

### User Access Levels

Three levels of user access are available. These names describe the type of access available to each:

- Read Only (basic level)—useful for a new user finding their way around the Cisco EMF system
- Read-Write (normal level)—an operator would usually have read-write access to features required for day-to-day tasks. However, the operator may only have Read-Write access to a limited set of features.
- Read-Write-Admin (administration level)—used by an administrator who has Read-Write access to all features at all times.


### Security Levels

Cisco EMF Security also enables administrators to define security levels for specific managed object attributes. This is key to restricting access to sensitive or critical parameters of managed equipment (for example, the IP address of an item of equipment.) A user with Read-Write access may be able to apply a new configuration to that piece of equipment, but they may not be able to modify its IP address, as this could invalidate normal management of the device. Control of the IP address may be the specific responsibility of the network topology manager.

## Administration Tasks

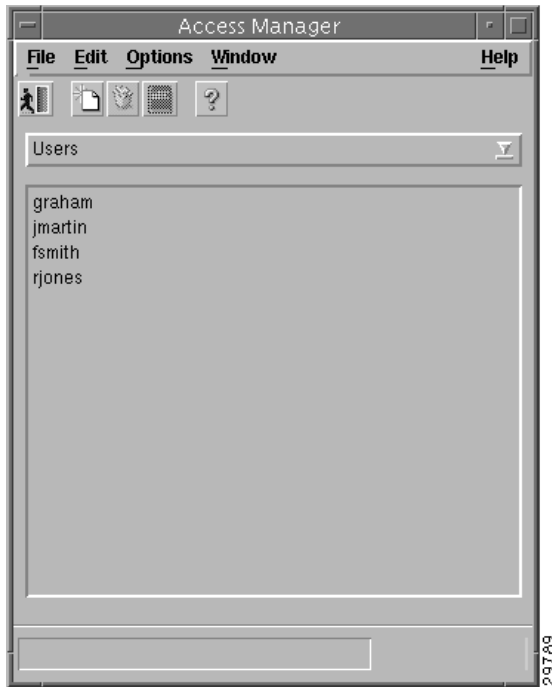
This section describes administration tasks you can accomplish with the Cisco EMF Access Manager.

### Launching the Access Manager Window

The Access Manager is launched using the  icon in the Cisco EMF Launchpad window or from other Cisco EMF applications, select **Access Manager** from a pop up menu. This menu is accessed by right clicking a selected object.

The Access Manager window, similar to Figure 9-1, is displayed.

Figure 9-1 Access Manager Window



To display a list of names in this window, select one of the following options from the drop down list:

- To list User names, select **Users**
- To list User Groups, select **User Groups**
- To list Access Specifications, select **Access Specifications**.

## Creating an Access Manager Object

An Access Manager object is either an Access Specification, a User Group, or a User. These objects can only be created by a system administrator. A typical work flow is to first create an Access Specification; then create an Object Group; and finally, create the User.

### Creating an Access Specification

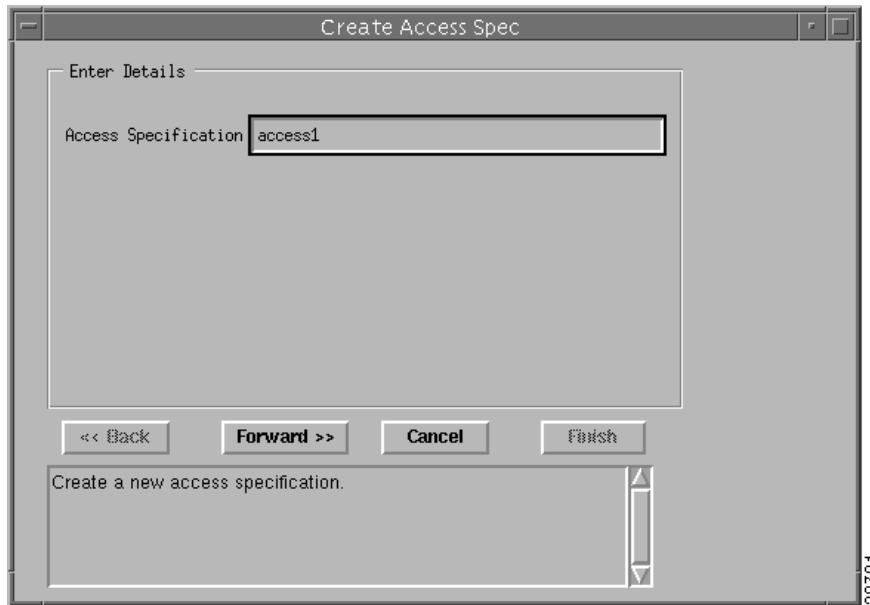
- Step 1** From the **Edit** drop down menu, select **Create**, then **Access Spec**.
- Step 2** The Create Access Specification wizard starts. A window similar to Figure 9-2 is displayed. Enter the name of the specification to be created, then click **Forward**.

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**Note** A valid name must have at least five characters with no spaces. You can use the **Tab** key to move between fields.

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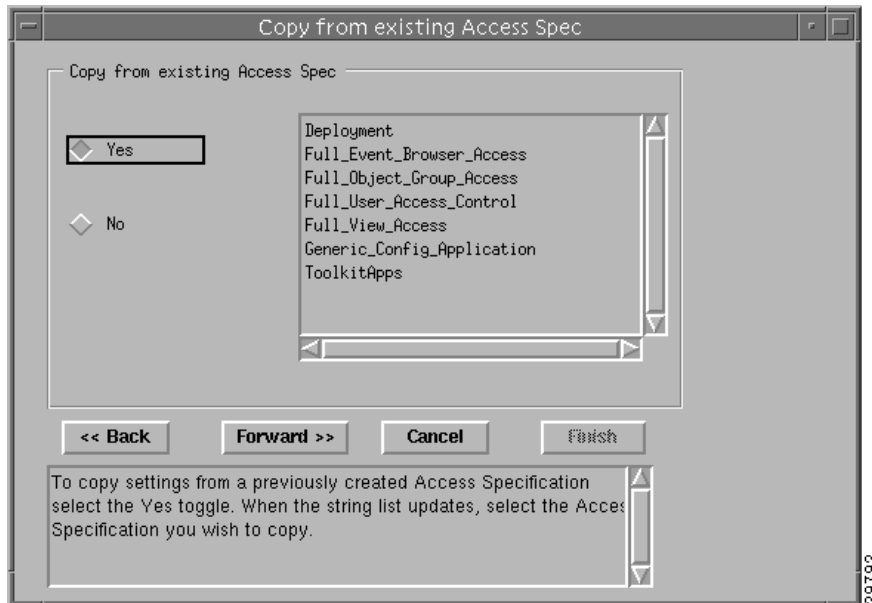
**Figure 9-2** Create Access Specification Wizard



You are now required to select settings for the new specification. You can copy settings from a previously created specification or create a new specification.

- Step 3** You may want to use settings from an existing access specification, and then create a new specification by adding or removing details using **Edit** (refer to “Editing an Access Specification” section on page 9-17. To copy settings from a previously created access specification:
- (a) Click **Yes**. A list of specifications is displayed. Select the one you wish to copy, then click **Forward**.
  - (b) A Summary Details window is displayed. If any details are incorrect, you can either click **Back** and make any corrections, or click **Cancel**.
  - (c) Click **Finish** to create the access specification.

Figure 9-3 Copy from Existing Access Specification



**Step 4** To create a new access specification:

- (a) Click **No**, then click **Forward**. The Select Permission window is displayed. Select either **Read Only**, **Read Write**, or **Read Write Admin**. Click **Forward**.
- (b) The Select User Groups window is displayed. Select the user group(s) you wish to include in the specification, then click the right arrow. This moves the selected item into the right hand panel. An alternative method is to double click a selected object. The left arrow moves the selected item back into the left panel. When the group is complete, click **Forward**.
- (c) The Select Feature Lists window is displayed. Select the feature list you want to apply to the new specification, then click the right arrow. When the group is complete, click **Forward**.
- (d) The Select Object Groups window is displayed. Select the object group you want to associate with the new specification, then click the right arrow. When the group is complete, click **Forward**.

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**Note** You can create an access specification without associating it with an Object Group.

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The Summary Details window, similar to Figure 9-4 is displayed. If any details are incorrect, you can either click **Back** and make any corrections, or click **Cancel** to exit the wizard.

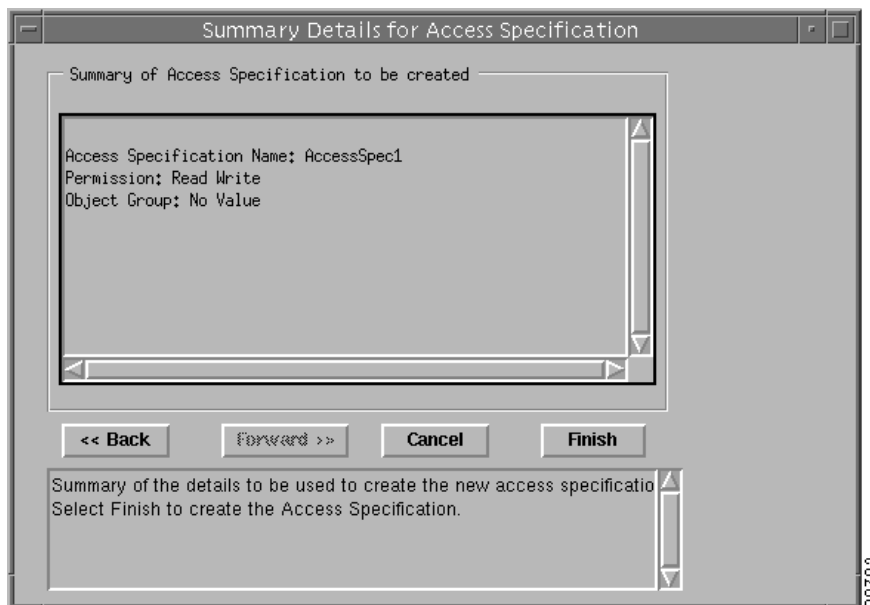
- (e) Click **Finish** to create the user group.

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**Note** You can create an access specification without an associated User Group or Feature Lists.

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**Figure 9-4** Summary Details for Access Specification Window



### Creating a User Group

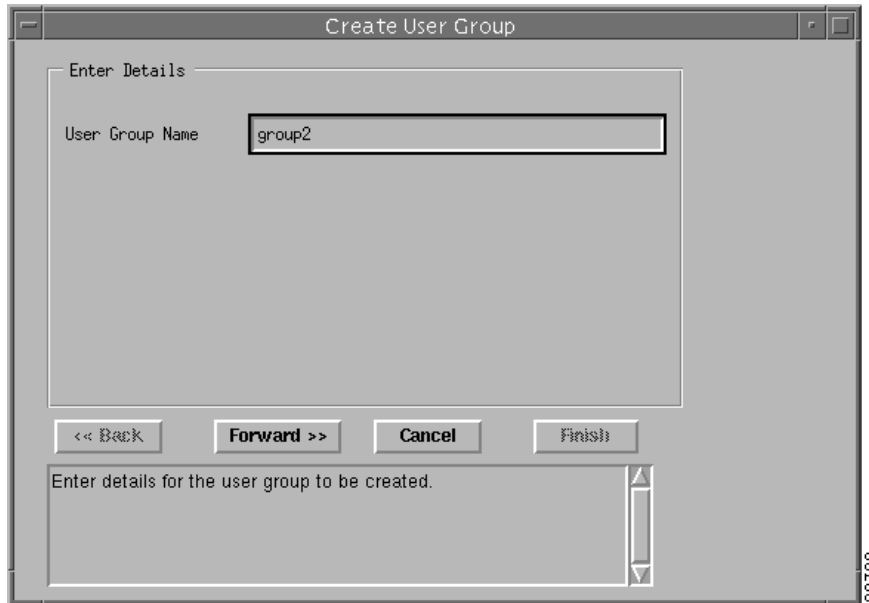
- Step 1** From the **Edit** drop down menu, select **Create**, then select **User Group**.  
The **Create User Group** wizard starts. A window similar to Figure 9-5 is displayed.
- Step 2** Enter the name of the User Group to be created, then click **Forward**.

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**Note** You can use the **Tab** key to move between fields.

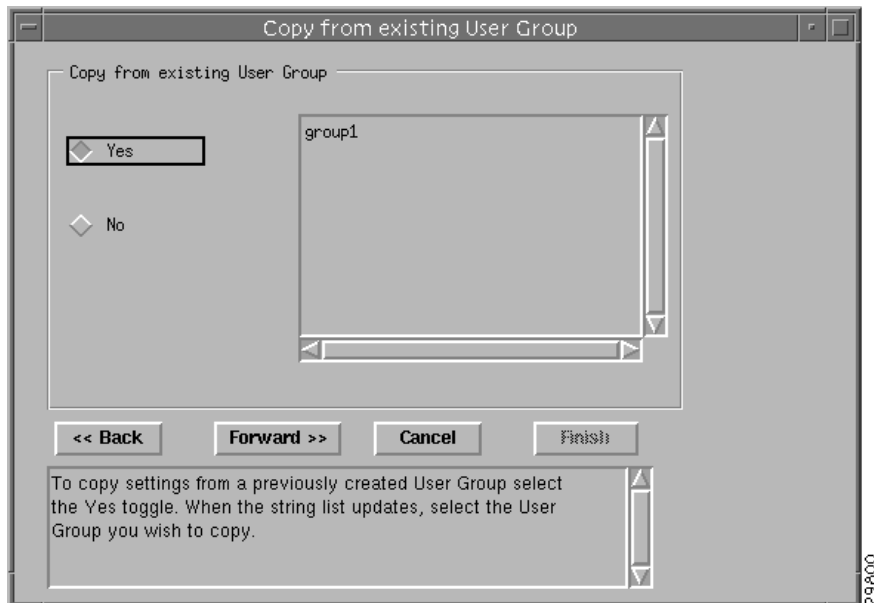
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**Figure 9-5 Create User Group Window**



You are required to select settings for the new User Group. You can copy settings from a previously created User Group or create a new User Group. A window similar to Figure 9-6 is displayed.

**Figure 9-6 Copy from Existing User Group Window**

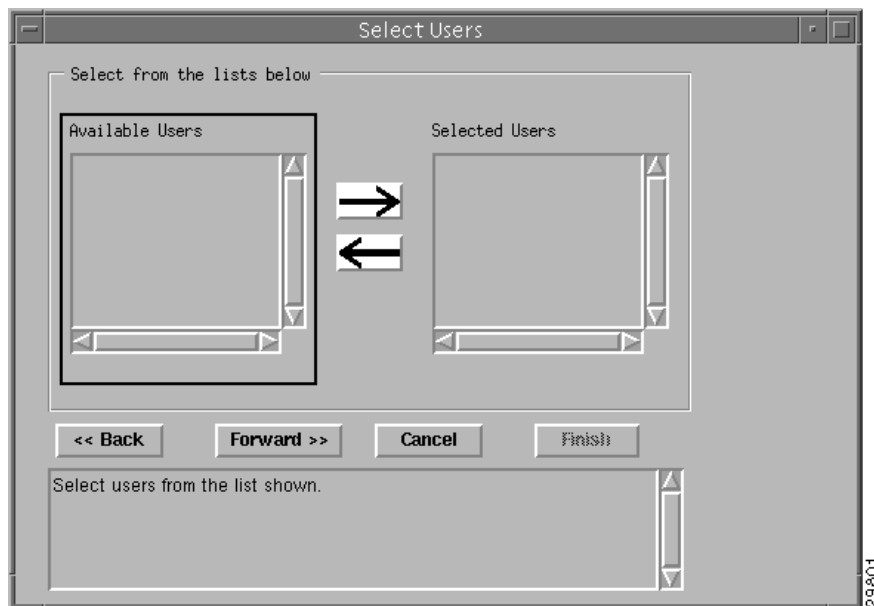


**Step 3** To copy settings from a previously created group:

- (a) Click **Yes**. A list of User Groups is displayed. Select the User Group you wish to copy, then click **Forward**.

- (b) The Summary Details window is displayed. If any details are incorrect, you can either click **Back** and make any corrections, or click **Cancel** to exit the wizard.
- (c) Click **Finish** to create the User Group.

**Figure 9-7** Select Users Window



**Step 4** To create a new User Group:

- (a) Click **No**, then click **Forward**. The Select Users window, shown in Figure 9-7 is displayed. The left hand panel displays a list of users.
- (b) Select the users you wish to include in the User Group, then click the right arrow. This moves the selected item into the right hand window. The left arrow moves the selected item back into the left panel. When the User Group is complete, click **Forward**.

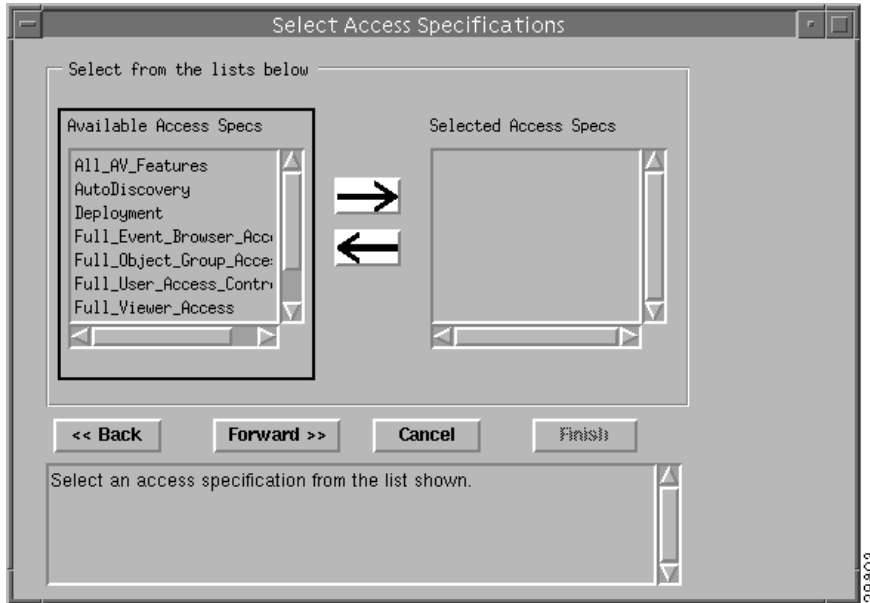
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**Note** You can click **Forward** without selecting any users. Users can be added later.

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**Step 5** The Select Access Specifications window, shown in Figure 9-8 is displayed. Select the access specification you want to apply to the new User Group, then click the right arrow.

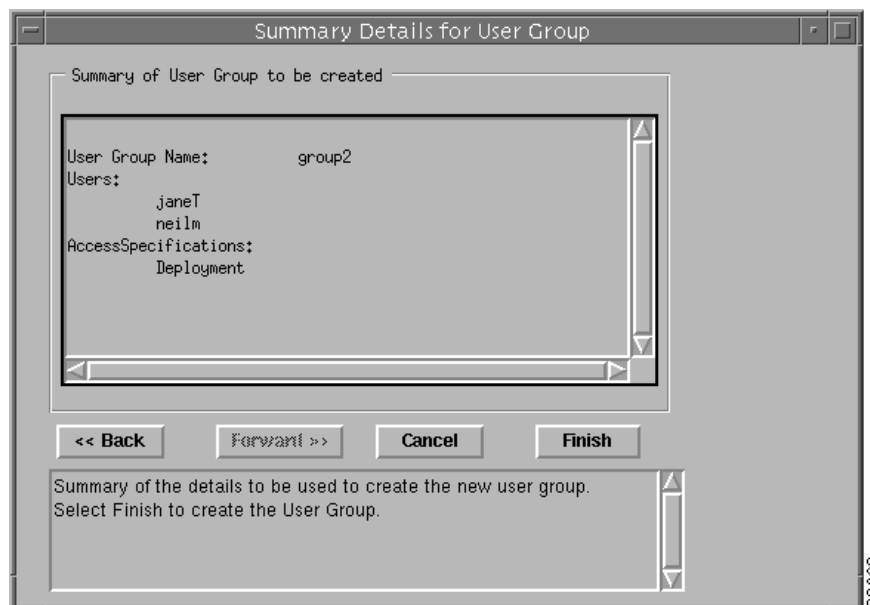
**Figure 9-8** Select Access Specification Window




**Step 6** The Summary Details window, shown in Figure 9-9 is displayed. If any details are incorrect, you can either click **Back** and make any corrections, or click **Cancel** to exit the wizard.

**Step 7** Click **Finish** to create the User Group.

**Figure 9-9** Summary Details for User Group Window



### Creating a User

**Step 1** From the **Edit** drop down menu, select **Create**, then select **User** or select the **New** icon  on the Toolbar.

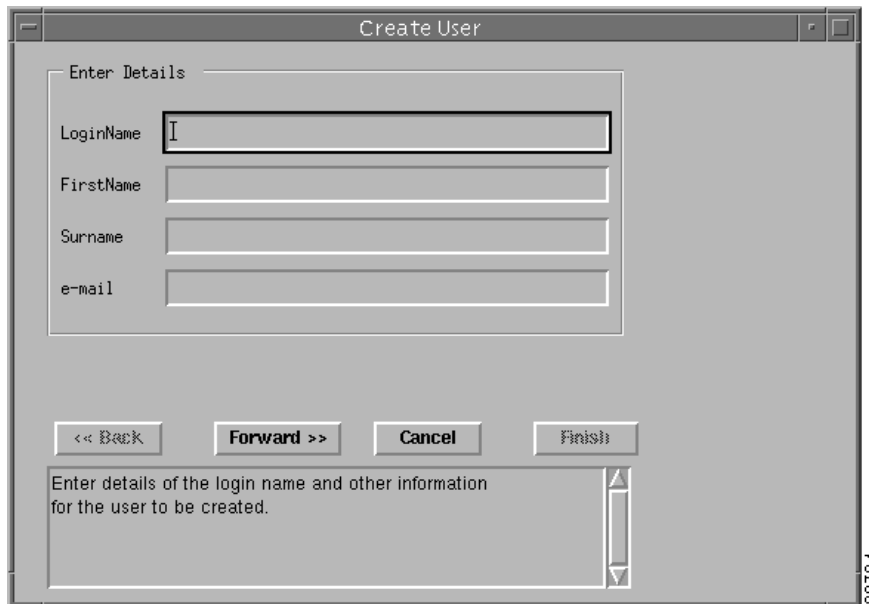
**Step 2** The **Create User Wizard** starts. A window similar to Figure 9-10 is displayed. Enter the details of the user to be created. You must enter a name for login; the other fields can be left blank. Click **Forward**.

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**Note** You can use the **Tab** key to move between fields. You must give each entry a value (a blank is considered a value).

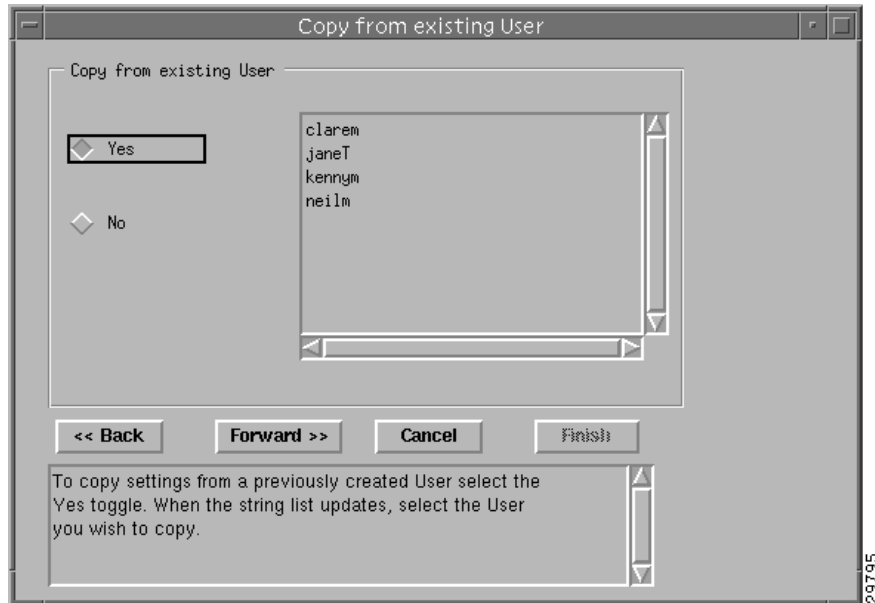
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**Figure 9-10** Create User Wizard Window



**Step 3** The Copy from Existing User window, similar to Figure 9-11, is displayed.

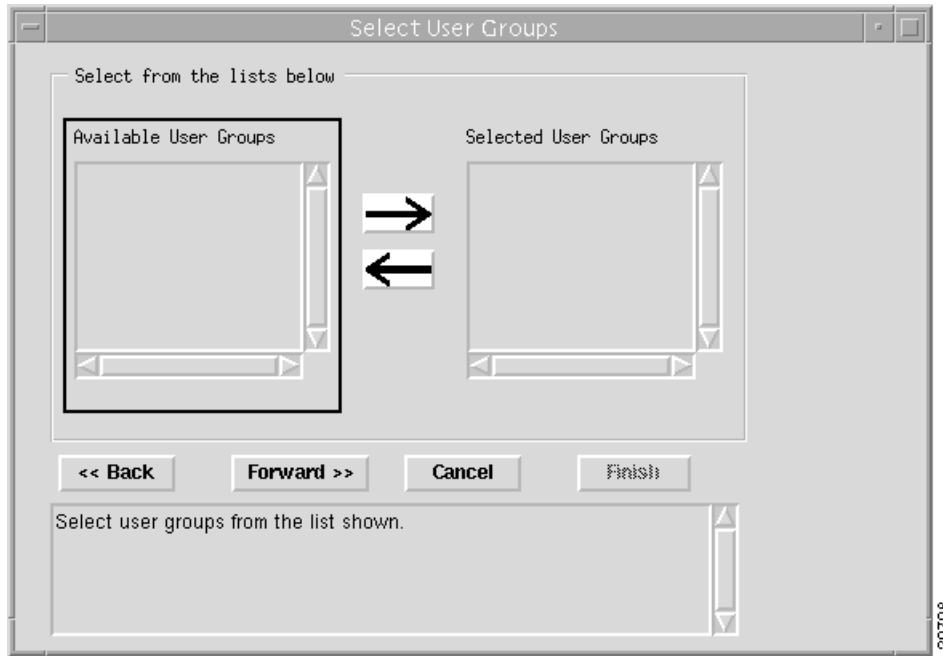
**Figure 9-11 Copy from Existing User**



You can select settings from an individual user or from a previously set up user group.

- (a) Click **Yes** if you want to copy settings from a previously created user. A list of users is displayed. Select the user you wish to copy, then click **Forward**.
- (b) Click **No** if you do not want to copy settings from another user. The Select User Groups window, similar to Figure 9-12, is displayed. The left hand panel displays a list of user groups. Select the user group you wish to copy, then click the right arrow. This moves the selected item into the right hand panel. The left arrow deselects the option. Click **Forward**.

Figure 9-12 Select User Groups Window



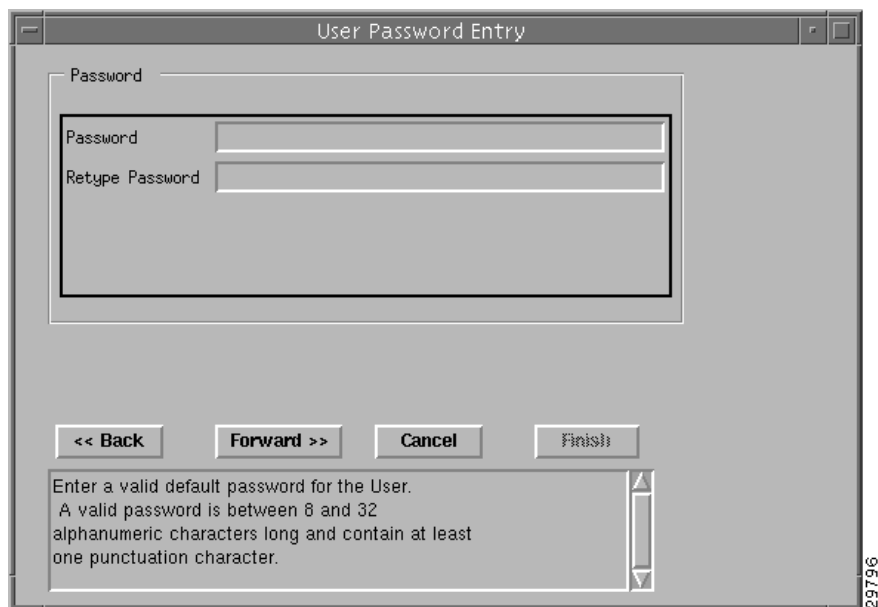
**Step 4** The User Password Entry window, shown in Figure 9-13, is displayed. Enter the password for the new user. Enter the password again to verify. Click **Forward**.

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**Note** A valid password must have between 8 and 32 alphanumeric characters, with at least one punctuation character.

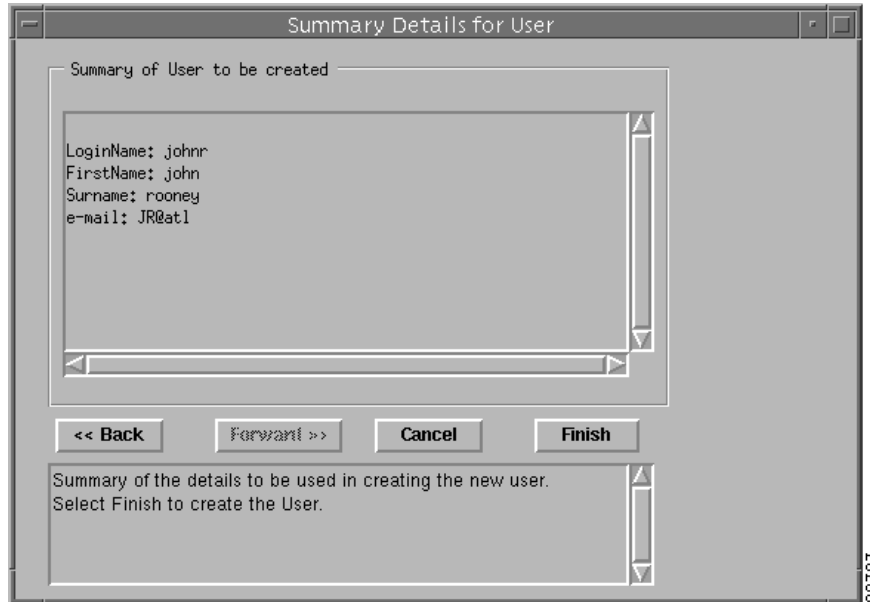
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Figure 9-13 User Password Entry Window



**Step 5** A Summary Details window, similar to Figure 9-14, is displayed. If any details are incorrect, you can either click **Back** and make any corrections, or click **Cancel** to exit the wizard.

**Figure 9-14 Summary Details for User Window**



**Step 6** Click **Finish** to create the User.

## Modifying an Access Manager Object

An Access Manager object is either a User, a User Group, or an Access Specification. Objects can only be modified by a system administrator.

Two options exist to initiate modifying an object:

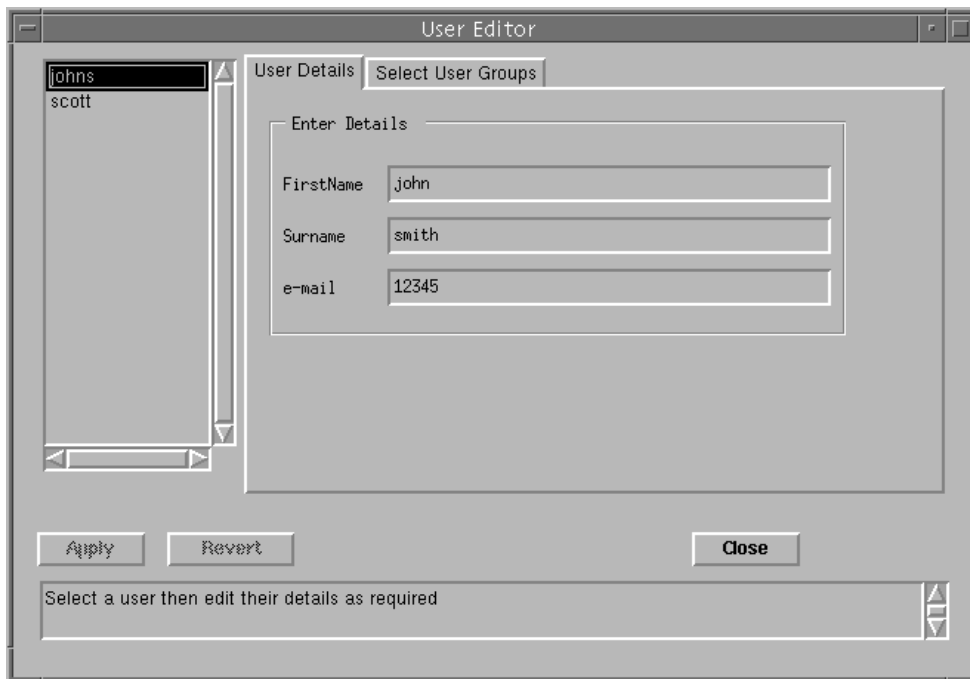
- 1 From the **Edit** drop down menu, select the **Modify** option.
- 2 Double-click the desired object in the Access Manager window.

The Edit User window is displayed.

### Editing a User

The Edit User window, shown in Figure 9-15, has a panel on the left which lists all users and a panel on the right that has two tabs: **User Details** and **Select User Groups**.

Figure 9-15 User Editor Window, User Details Tab



- Step 1** Select the user to be edited.
- Step 2** Click the **User Details** tab, then edit the details as required. A value must be entered in each box (a blank is considered a value). Click **Apply**.

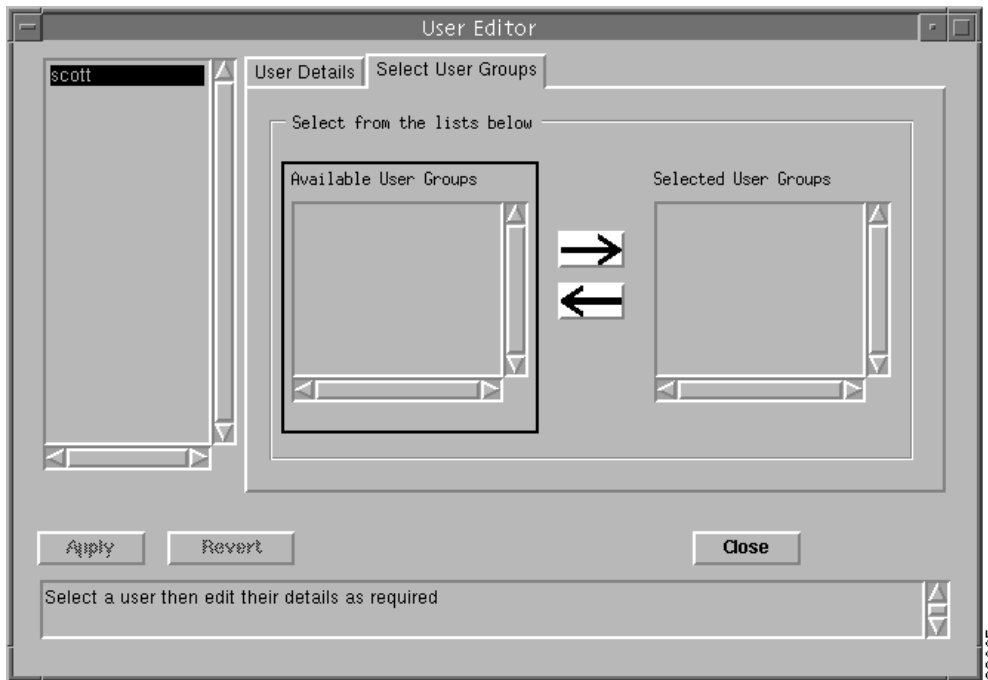
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**Note** **Revert** is grayed out until any changes are made. The **Revert** button cancels any changes made and reverts to the original settings. Select **Yes** to revert to the original settings or **No** to cancel.

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- Step 3** To change the user group within which the user is included, click the **Select User Group** tab. A window similar to Figure 9-16 is displayed. Make your selection from the list, then click the right arrow. The selected item is moved into the right hand panel. The left arrow moves the selected item back into the left panel. When the group is complete click **Apply**. You can then choose to make other changes and click **Apply** again.

**Figure 9-16** User Editor Window - Select User Groups Tab

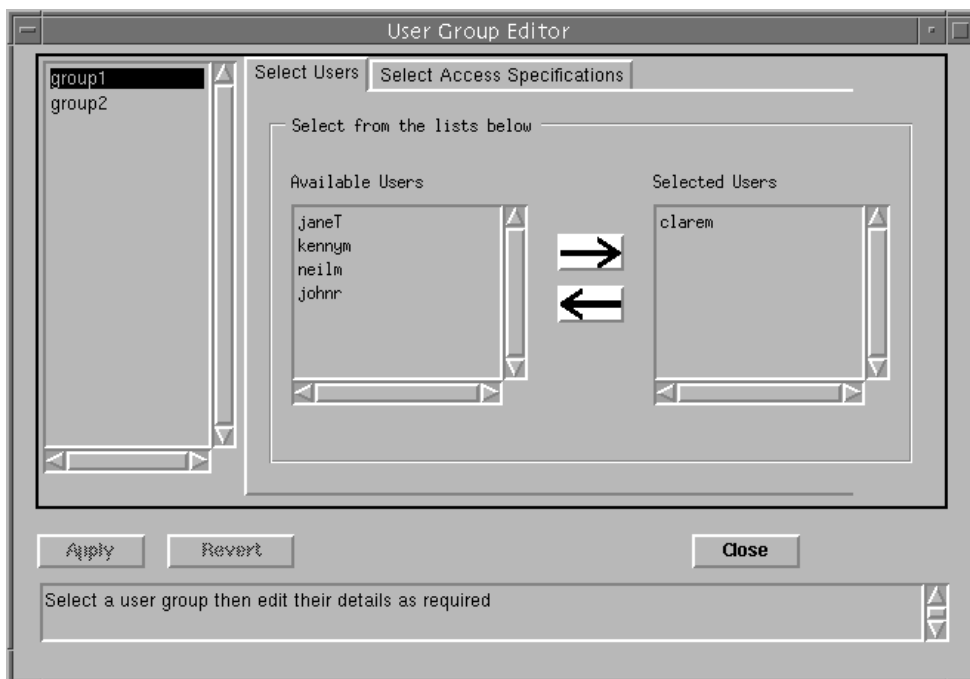


- Step 4** Click **Close**.  
A dialog box asking if you want to `Save Changes before Closing?` is displayed.
- Step 5** Click **Yes** to save changes before closing, or **No** to discard the changes and close the editor window, or **Cancel** to discard the changes and return to the editor window.

### Editing a User Group

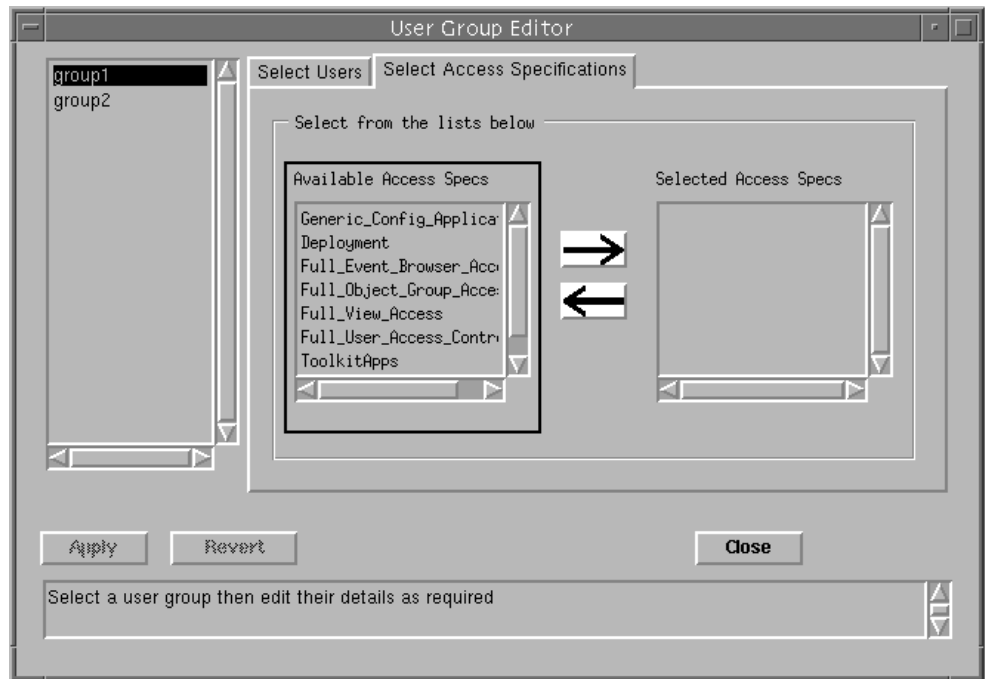
The User Group Editor window, shown in Figure 9-17, has a panel on the left which lists all user groups and a panel on the right that has two tabs: **Select Users** and **Select Access Specifications**.

**Figure 9-17 User Group Editor Window - Select Users Tab**



- Step 1** Select the user group to be edited.
- Step 2** To change the members of the user group, click the **Select Users** tab. Make your selections from the list. To include a user in a group, select the name, then press the right arrow to move the selected item into the right hand panel. The left arrow removes the selected user from the group. When the group is complete, click **Apply** to save the changes.
- Step 3** Click the **Access Specifications** tab to change the specifications which apply to a user group. To include a specification, select the name, then press the right arrow to move the selected item into the right hand panel. The left arrow removes the selected specification from the list. When the list is complete, click **Apply**.
- Step 4** Click **Close**.  
A dialog box asking if you want to `Save Changes before Closing?` is displayed.
- Step 5** Click **Yes** to save changes before closing, or **No** to disregard changes and close the editor window, or **Cancel** to disregard the changes and return to the editor window.

Figure 9-18 User Group Editor Window - Select Access Specification Tab



### Editing an Access Specification

The Access Specification Editor window, shown in Figure 9-19, has a panel on the left which lists all access specifications. The panel on the right has four tabs, **Select Permission**, **Select User Groups**, **Select Feature Lists**, and **Select Object Groups**.

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**Note** Use the left/right arrow buttons to access all of the tabs.

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Some tabs have two panels, **Available Values** and **Selected Values**. For example, on the **Select Object Groups** tab, to include an available item (value), select the name, then press the right arrow to move the selected item into the right hand panel. The left arrow removes the selected item (value) from the list. When the list is complete, click **Apply**. Refer to Figure 9-20.

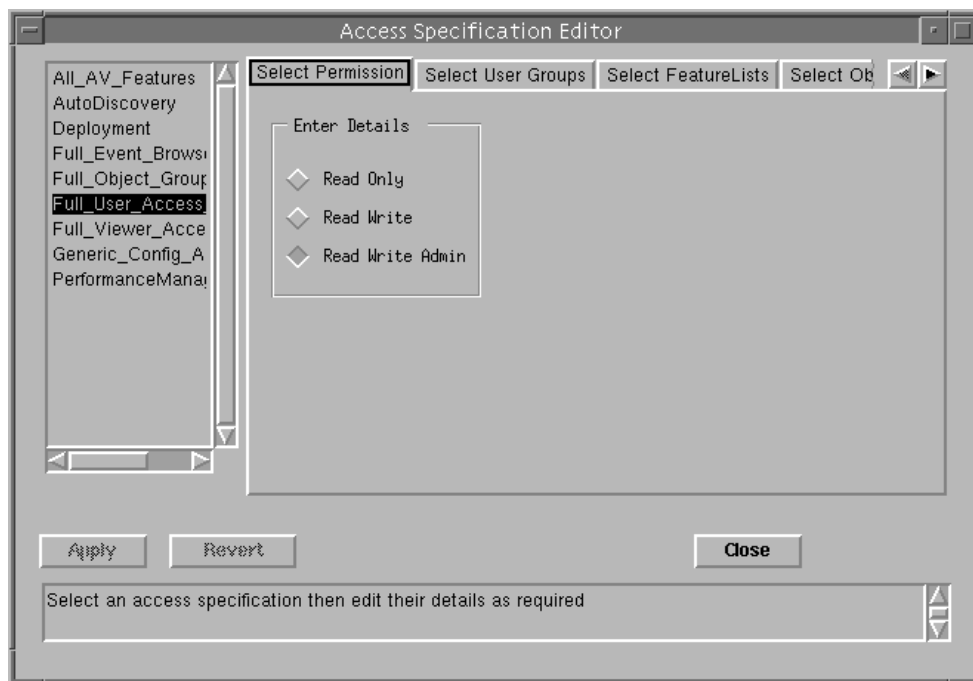
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**Note** **Revert** restores the values to those that are currently set. Select **Yes** to revert to the original settings or **No** to cancel.

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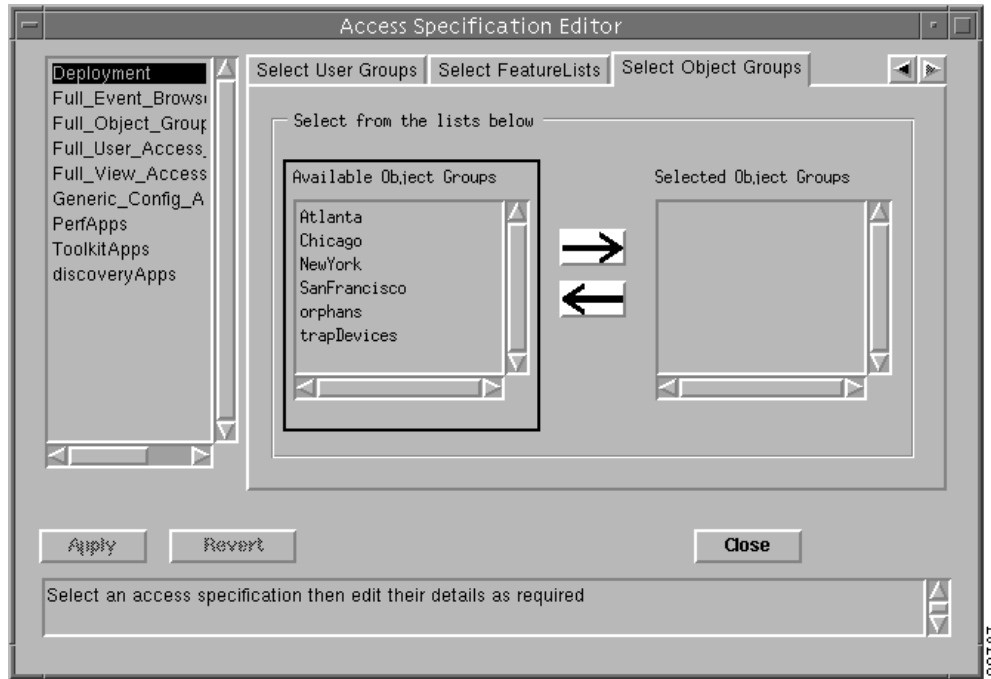
- Step 1** In the left hand panel, select the access specification to be edited.
- Step 2** To change the permissions for the access specification, click the **Select Permission** tab, then select either **Read Only**, **Read Write**, or **Read Write Admin**, then click **Apply**.

Figure 9-19 Edit Access Specification Window - Select Permission Tab



- Step 3** Click the **Select User Groups** tab. Select or deselect User Groups from the lists as required, then click **Apply**.
- Step 4** Click the **Select Feature Lists** tab. Select or deselect Feature Lists from the lists as required, then click **Apply**.
- Step 5** Click the **Select Object Groups** tab. Select or deselect Object Groups from the lists as required, then click **Apply**.


Figure 9-20 Edit Access Specification Window - Select Object Groups Tab



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## Deleting an Access Manager User, User Group, or Access Specification

A User, a User Group, or an Access Specification can only be deleted by a system administrator using the Access Manager.

- Step 1** In the Access Manager window, select the **User**, **User Group**, or **Access Specification** to be deleted.
- Step 2** From the **Edit** menu, select **Delete** or select the **Delete** icon  from the Toolbar.  
A dialog box asking *Are you sure?* is displayed.
- Step 3** Click **Yes** to proceed, **No** to cancel.

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**Note** You cannot delete the default Administrator user.

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## Passwords

You must have a user name and password to login to Cisco EMF. The password is initially set up by the system administrator and you can change it if necessary.

A valid password must have between eight and thirty two alphanumeric characters with at least one punctuation character.

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**Note** You cannot login using an incorrect password. You have three attempts to specify the correct password. If an incorrect password is entered a fourth time, access is denied. You should then contact your system administrator.

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## Changing a Password

You can change your own password. An administrator can change their own password and any other user's password. To make administrative password changes:

**Step 1** Open the Access Manager window and select the name of the user whose password is to be changed.

**Step 2** From the **Edit** menu, select **Change Password** or select the Change Selected User's Password icon  from the Toolbar. To change the Admin Password, select **Change Admin Password**.

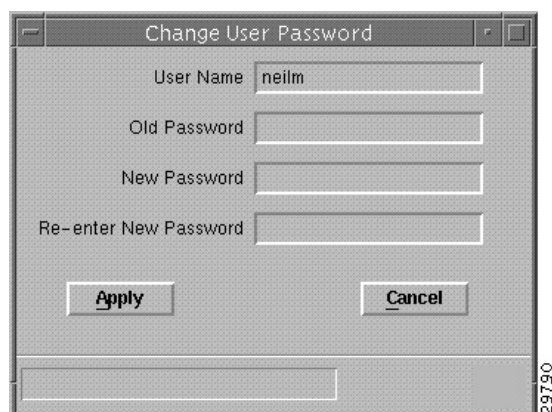
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**Note** The **Change Admin Password** option is only available to system administrators.

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The Change User Password window, shown in Figure 9-21, is displayed.

**Figure 9-21** Change User Password Window



**Step 3** Enter the existing password in the **Old Password** box. Enter a new password in the **New Password** box, re-enter the new password to verify your choice, then click **Apply**.

**Step 4** If an invalid password is entered or the new password is not verified correctly, an error message is displayed. Click **Ok** to try again.