

## Chapter 43

# Using SDX Admin

This chapter describes SDX Admin. Topics include:

- Overview of SDX Admin on page 349
- Starting SDX Admin on page 350
- SDX Admin Main Window on page 351
- General Procedures for Using SDX Admin on page 359
- SDX Admin Limitations on page 362
- Internationalization with SDX Admin on page 363

### Overview of SDX Admin

---

You use SDX Admin to manage the SRC software. You can use SDX Admin to create and modify services, network definitions, and advanced SAE configurations; to configure the system management subagent; and to manage operator accounts. For small installations or demonstrations, you can also use SDX Admin to create and modify subscriber profiles and subscriptions to services. Use this interface to populate the directory with subscriber profiles and services.

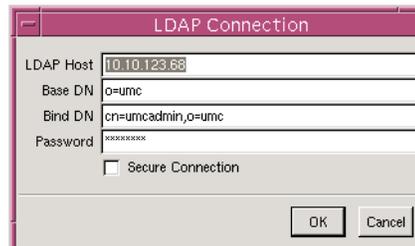
## Starting SDX Admin

To display the SDX Admin dialog box:

1. In a UNIX window, issue the command to start SDX Admin.

**`/opt/UMC/smg/bin/sdxadmin`**

The LDAP Connection dialog box appears.



2. Edit or accept the default values for the fields in the LDAP Connection dialog box.
3. Click **OK**.

### LDAP Connection Fields

In SDX Admin, you can modify the following fields in the LDAP Connection dialog box.

#### LDAP Host

- IP address or hostname of the directory server.
- Value— < IP address or hostname >
- Guidelines—You can connect to only one directory at a time.

#### Base DN

- Distinguished name (DN) of the base policy information in the directory server.
- Value—DN
- Default value—*o = umc*

#### Bind DN

- DN used for binding to the directory server.
- Value—DN
- Default—*cn = umcadmin, o = umc*

**Password**

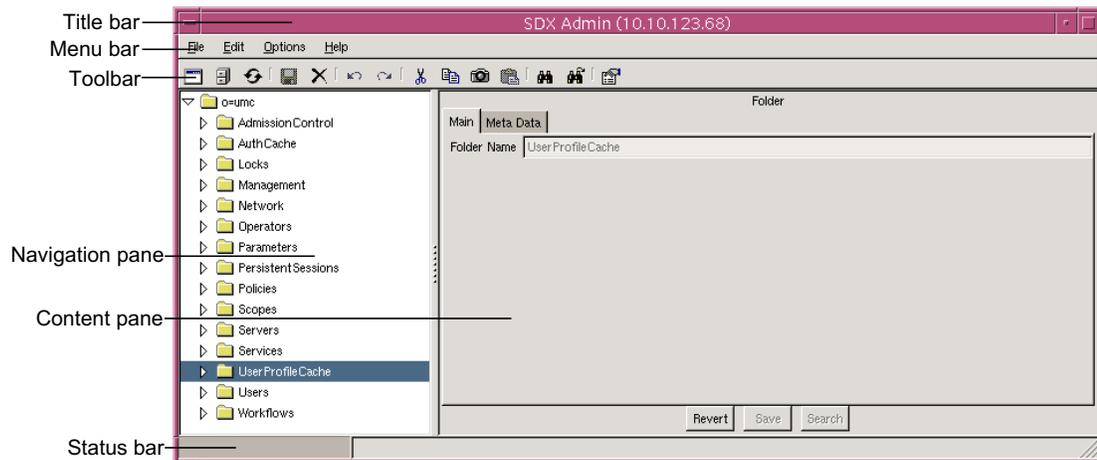
- Password associated with the bind DN.
- Value— < password >
- Default—admin123

**Secure Connection**

- Whether or not the connection is a secure LDAP connection.
- Value
  - Checked—Connection is a secure LDAP connection
  - Unchecked—Connection is a not secure LDAP connection

**SDX Admin Main Window**

After you configure the LDAP connection, the main window for SDX Admin appears. The SDX Admin window comprises six main areas, which are illustrated in Figure 34 and described in Table 27.

**Figure 34: SDX Admin Window Layout****Table 27: SDX Admin Window Areas**

Area	Description
Title bar	Displays the name of the current window. Also provides the minimize, maximize, and close window buttons.
Menu bar	Displays a menu from which you can select commands from lists.
Toolbar	Displays the icons that have the same functionality as the corresponding entries in the main menu.
Navigation pane	Displays the objects in a hierarchical format, starting from the top-level folder and moving through the subfolders down to individual objects. Use this pane to navigate through the folders and select objects.
Content pane	Displays the details of the object selected in the navigation pane. Use this pane to display and modify information about objects.

**Table 27: SDX Admin Window Areas (continued)**

Area	Description
Status bar	Contains a progress indicator on the left side and a message area on the right side. The progress indicator is active for operations that take longer than 1 second (such as loading a large subtree); the message area names the operation that is in progress.

### Using the Menu Bar

The menu bar allows you to execute commands related to each of the menus. See the following tables for information about each menu command.

File	
New Window	Ctrl+N
Change Server	Alt+S
Reload	Ctrl+L
Save entry	Ctrl+S
Close Window	Ctrl+W
Exit	Ctrl+Q

Menu	Command	Choose to
File	New Window	Create a new SDX Admin window and connect it to a directory.
	Change Server	Close the current connection to a directory and open new directory connection.
	Reload	Get the current tree from the directory again.
	Save Entry	Save attributes of the current directory entry.
	Close Window	Close the current window.
	Exit	Close all windows and terminate SDX Admin.

Edit	
Can't Undo	Ctrl+Z
Can't Redo	Ctrl+Y
Cut	Ctrl+X
Copy	Ctrl+C
Copy Tree	Alt+C
Paste	Ctrl+V
Delete	Ctrl+D
Find...	Ctrl+F
Find Next	F3

Menu	Command	Choose to
Edit	Undo: [operation]	Show the most recent operation and cancel it. The text after Undo indicates the most recent operation. If no operation can be canceled, the menu says Can't Undo and is disabled.
	Redo	Reinstate the most recent operation that you canceled.
	Cut	Cut the currently selected object.
	Copy	Copy the currently selected object.
	Copy Tree	Copy the currently selected object, including its child entries.
	Paste	Paste the object copies from the cut or copy operation as a new child entry below the currently selected object.
	Delete	Delete the currently selected object.
	Find	Open a dialog box asking for search criteria and search objects in the directory based on the entered criteria. The first found object is selected; the remaining search results are stored.
	Find Next	Select the next object that the most recent Find operation has found. If no more objects are available, an error message appears. If no Find operation is in progress, the system starts a new Find operation as if you had selected Find.

Menu	Command	Choose to
Options Configure OSM Client Log	Configure	Open the Main Configuration dialog box to configure operational characteristics of the SDX Admin window.
	OSM Client Log	Open the OSM Client Reports dialog box to view responses received from the object state manager (OSM) regarding the state of managed objects.
Menu	Command	Choose to
Help About	About	View information about the SDX Admin software, including vendor name and software version.

### Options Menu: Configure

When you click **Configure** in the Options menu, the Main Configuration dialog box opens. Changing the parameters changes the appearance or behavior of SDX Admin or changes the default values it uses. See Table 28.

**Table 28: Main Configuration Parameters**

Parameter	Description
Encrypt userPassword	From the menu, you can select the default encryption algorithm for the LDAP attribute userPassword. <ul style="list-style-type: none"> <li>■ empty line—no encryption</li> <li>■ crypt—password encrypted through UNIX crypt command and stored in <i>/etc/security/passwd</i></li> <li>■ sha—Secure Hash Algorithm</li> <li>■ md5—Message Digest #5</li> </ul> <p><b>NOTE:</b> You must select an encryption method that your directory server supports.</p>
Show Objecttype	Selecting <b>Yes</b> shows the < attr > = prefix in the navigation pane.
Delete Subtree	Selecting <b>Yes</b> means that this operation is available; that is, you can recursively delete all child objects of an object that you select.
Subscriber Folder is Subscriber	Selecting <b>Yes</b> means that you can subscribe to services from the Subscriber folder. <p><b>NOTE:</b> Setting this option to Yes can affect performance for some directory servers, such as Sun One (iPlanet) version 5.2.</p>
Show Toolbar	Selecting <b>Yes</b> means that the toolbar appears in the SDX Admin window.
Show Statusbar	Selecting <b>Yes</b> means that the status bar appears in the SDX Admin window.
LDAP timelimit	Number of seconds allowed for LDAP operations.
UNDO levels	Number of commands stored for successive undo operations.
OSM Host	Address of server running the object state manager.
OSM Port	TCP port number running the object state manager.
OSM Transaction ID Prefix	Prefix used when you create transaction objects.
OSM Report Server Port	Local port number listening to OSM status reports.

**Table 28: Main Configuration Parameters (continued)**

Parameter	Description
Default Trap Receiver	Default value for trap receiver.
DirX Server Address	Address of the DirX server. Needed only if the address is different from the LDAP server.
SAE Admin Web Application Server	Address and port used for validation of substitutions. Default port is 8443.
Tool Path	An alternate path to use for invoking external tools, such as Telnet and SSH, which you can use to manage a router object from an SDX Admin session. Set the Tool Path if these external applications are installed in a path other than the standard path. For example, if the Telnet executable file is installed in the <i>/usr/local/bin</i> directory, you can list this path for a Tool Path.
Enable All Warnings	Displays warning messages again for those messages that do not appear because the <b>Don't show me this warning again</b> check box was previously selected for that message.

## Using the Toolbar

Table 29 shows the SDX Admin toolbar icons and the relationship between the icons and the menu commands. The toolbar icons exist in enabled and disabled modes. The mode depends on whether the operation is supported in the context of the selected object and on previous operations. For example, if no object was previously copied or cut, then Paste is disabled.

**Table 29: Toolbar Functions**

Icon	Corresponding Menu
	File > New Window
	File > Change Server
	File > Reload
	File > Save Entry
	Edit > Delete
	Edit > Undo
	Edit > Redo
	Edit > Cut
	Edit > Copy

**Table 29: Toolbar Functions (continued)**

Icon	Corresponding Menu
	Edit > Copy Tree
	Edit > Paste
	Edit > Find
	Edit > Find Next
	Options > Configure

### Using the Navigation Pane

The directory in the navigation pane consists of nested folders, all contained in the top-level folder. Although you can rename this folder, we use the default name, o = umc, throughout the SRC guides.

The initial installation of the directory creates a set of second-level folders. If it fails to create them (because, for example, of operator error or problems arising from integration with other directories), you must create these folders before you use the application. Different components of the SRC software will not start properly if the basic objects are missing.

To create the required second-level folders, highlight the top-level folder, right-click, and then select **New > Folder** in the pop-up menu that appears. You are prompted for the name of the subfolder that you want to create. Enter the appropriate name. You must create all of the following subfolders, using the names below:

- AdmissionControl
- AggregateServices
- AuthCache
- CongestionPoints
- Locks
- Management
- Network
- Operators
- Parameters
- Persistent Sessions
- Policies

- Scopes
- Servers
- Services
- UserProfileCache
- Users

After you create the second-level folders, the SDX Admin window should appear similar to Figure 34 on page 351 .

Initially, only the top-level and second-level folders are displayed. To open additional levels of the directory, click on the triangle to the left of the folders.

### Navigation Pane Icons

SDX Admin uses different icons in the navigation pane to differentiate the various objects. Table 30 shows the icons displayed in the navigation pane and lists their related object types. Manipulation of the different objects is explained throughout this guide.

**Table 30: SDX Admin Navigation Pane Icons**

Icon	Type
	Folder
	Traps
	Cached Authentication Profile
	Configuration
	License
	Router
	Operator Group
	Operator
	Global Parameter
	Policy Group
	Policy rule
	Service Scope
	Access Service/Access Subscription

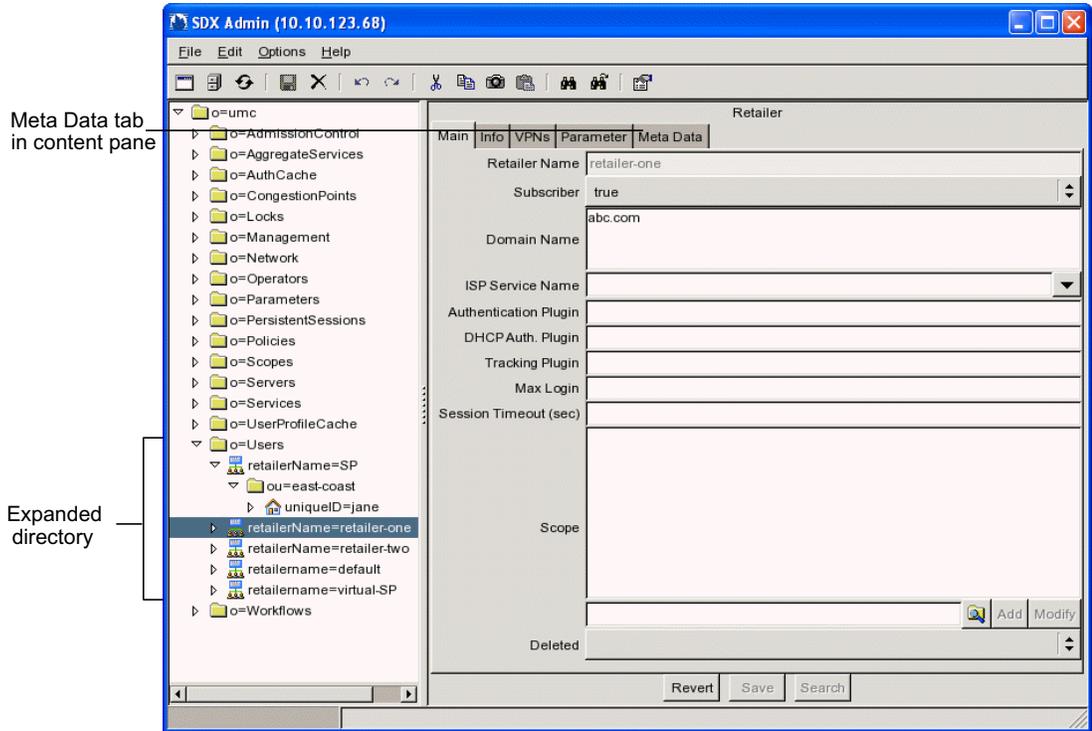
**Table 30: SDX Admin Navigation Pane Icons (continued)**

Icon	Type
	RADIUS Service/Subscription
	Outsource Service/Subscription
	SAE (SSP) Service
	Retailer
	Enterprise Subscriber
	Enterprise Site Subscriber
	Residential Subscriber
	Mutex Group
	State Machine
	Service Scheduler

### Using the Content Pane

When you select a folder or an individual object in the navigation pane, the system displays a form in the content pane that shows the attributes of the object (see Figure 35).

**Figure 35: SDX Admin General Window Structure**



Each object in the navigation pane has an associated Meta Data tab in the content pane (shown in Figure 35). Table 31 describes the Meta Data tab parameters.

**Table 31: Meta Data Tab Parameters**

Parameter	Description
Creation Timestamp	Time when the object was created
Creator	Bind DN of the user who created the object
Modification Timestamp	Time when the object was last modified
Modifier	Bind DN of the user who last modified the object

## General Procedures for Using SDX Admin

This section describes the general procedures for using SDX Admin.

In the navigation pane:

- To select an object—Move the cursor over the object, and click.
- To expand an object—Click on the triangle to the left of the object. When the object is expanded, the triangle points down.
- To collapse an object—Click on the triangle to the left of the object. When the object is collapsed, the triangle points to the right (toward the object).

In the content pane:

- To revert to (and display) the last saved information for the selected object—Click **Revert**.
- To save the currently displayed information for the selected object—Click **Save**.

### Using Pop-Up Menus

If you select a folder or an individual object in the navigation pane and then right-click, a pop-up menu appears. Available commands relative to the selected object appear. If the command appears dimmed, it is not available. Table 32 lists the menu selections that are available from one or more of the various pop-up menus.



**Table 32: SDX Admin Main Pop-Up Menu**

Menu Item	Choose to
New	Create a new object of the type specified.
Edit	Open Policy Editor to edit the selected object. <i>Available only for some policy objects. See SRC-PE Services and Policies Guide, Chapter 7, Using Policy Editor for more information.</i>
Congestion Points	Create congestion points and congestion point profiles.
Convert Subscriptions	Convert subscriptions from the syntax used in SDX versions earlier than 5.0 to the syntax in SDX 5.0 or greater. or SRC 1.0.0 or greater
Discover Network	Search the router and virtual router in a subnet. <i>Available only for Network object.</i>
Reload Subtree	Refresh the navigation pane and reload the subtree from the directory.
Cut	Move the selected object (including subtree) to the clipboard.
Copy	Create a copy of the selected object (excluding subtree) in the clipboard.

**Table 32: SDX Admin Main Pop-Up Menus (continued)**

Menu Item	Choose to
Copy Tree	Create a copy of the selected object (including subtree) in the clipboard.
Paste	Insert the content of the clipboard below the selected object.
Delete	Delete the selected object.

## Modifying an Entry

SDX Admin allows you to undo or redo up to 10 operations. You can undo the following operations:

- **New**—Creation of a new directory entry, including creation of subentries and modifications of access controls.
- **Paste**—Creation of new directory entries by copying existing folders and objects.
- **Delete**—Deletion of a directory entry, including modification of dependent entries.
- **Delete subtree**—Recursive deletion of a directory entry, including modification of dependent entries.
- **Cut**—Recursive deletion of a directory entry, including modification of dependent entries. Undo reverts the directory only to the previous directory state. After you cut an entry, the clipboard contains a copy of what you selected from the directory; any previous content of the clipboard is removed. Undo restores the directory entry (similar to pasting the entry back at the original position) but does not restore the clipboard.
- **Modify**—Modification of a single directory entry, including modification of dependent entries. *Modify* means that the content of the object has been changed and saved to the directory. Undo will revert to the previous state of the object.
- **Edit**—Modification of a single entry without saving to the directory. Undoing an Edit entry reverts the entry back to the last saved entry from the directory. The difference from Revert is that the edit operation can be redone. When you save the changes to the directory, Edit object becomes a Modify object operation.

The parameters of a highlighted object are displayed in the content pane.

To modify the parameters:

Type in the new value

or

Select a new value from the menu for the parameter.



**NOTE:** Most parameters defined in SDX Admin objects are inherited from higher levels. That is, if you modify a parameter in a parent object, the child object inherits the value. However, SDX Admin does not immediately display the values inherited from the upper level. The inheritance is handled by the SAE at runtime.

---

### **Saving an Entry**

Save changes by selecting **Save** in the File menu or by clicking **Save** at the bottom of the form in the content pane. If you do not save changes that you make on the form, the application prompts you to save the changes.

### **Reverting an Entry**

If you click the **Revert** button, all attributes are loaded from the directory again and displayed.

### **Deleting an Entry**

Some objects in SDX Admin have a Deleted field that you can set to true or false. If you set this field to true, then the object is deleted from the perspective of any SRC component that uses the directory eventing system. Such components include the enterprise server, the SAE, and the SNMP agent. The object is still present in SDX Admin and in the directory. You can “undelete” such an object by setting the field to false.

To delete an entry, first highlight the object that you want to delete. Then you can delete the object by performing one of the following actions:

- Right-click and select **Delete**.
- From the Edit menu, select **Delete**.

The system displays the Delete menu. Click **Yes** to delete the entry.



**NOTE:** Objects that have child entries below them *cannot* be deleted. You must first delete the child entries.

---

## Searching Text

SDX Admin provides you with a text-searching function.

To search for information:

1. Select a multiline text field in a content pane (for example, the Description field in the Enterprise content pane), and then click **Search** at the bottom of the pane.

The SDX Admin dialog box appears.



2. Enter the search information in the Find text box.
3. To limit the search, select one of the search criteria (Ignore Case, or Regular Expression); otherwise, click **Find**.

The system displays the results of the search.

## SDX Admin Limitations

---

SDX Admin does not automatically check for duplicate inputs, nor does it check for consistency. It allows such entries and does not alert you to these kinds of entries as you make them. Subsequently, SAE functionality can be affected. However, the directory checks some parameters; if the parameters are invalid, they are refused.

### Unique User IDs Only

The user ID that you create *must* be unique. Ensure that you do not create two users with the same name. If you enter a user ID that is in use, the system allows the input, but subsequent customer authentication fails.

### Consistency

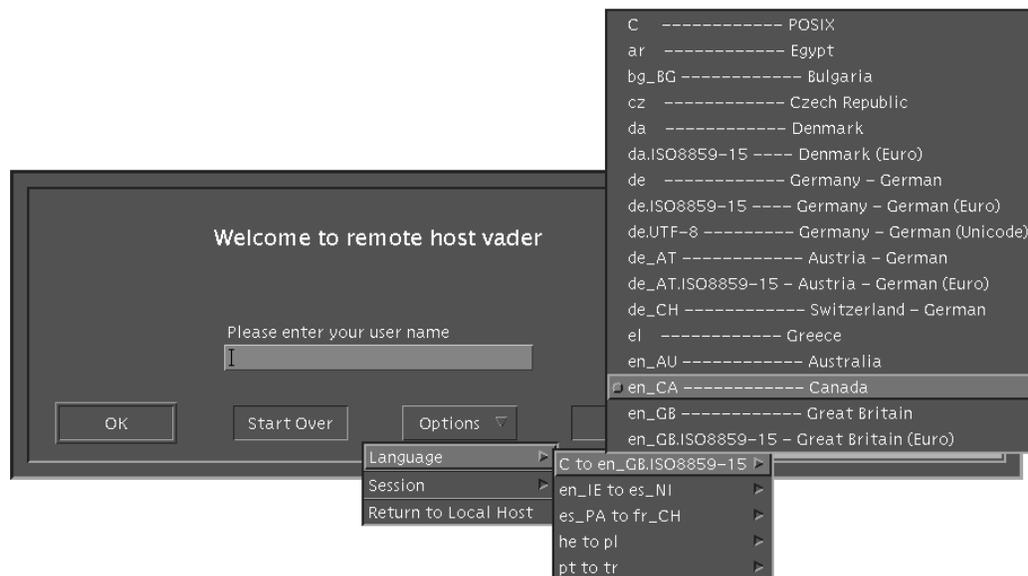
Ensure that you consistently enter all values that are required to define a service. If you do not consistently specify a mandatory value, SDX Admin does not warn you of this inconsistency. However, the SAE logs a runtime error, and the service will not work.

### Interdependence

If you modify an attribute related to an object, the dependent objects do not change automatically. For example, the access service object allows you to specify the default value for the primary Domain Name System (DNS) host. If you change this value, current subscriptions to this service are not changed automatically. Where required, you must change the default value manually.

## Internationalization with SDX Admin

SDX Admin allows you to set the language for the SRC interfaces so that information can be displayed in the language of choice. The language environment is set globally on the host that the SDX Admin software is running on. Set the language either at login time or as a system-wide default. For example, the system default for Solaris systems is stored in the file `/etc/default/init`. The Solaris login prompt includes a list for choosing the language for the next login session.



### Locale

To force a particular language, SDX Admin may be started from a shell with the LANG environment variable set to the desired language.

The SDX Admin function has support for translating all user-visible messages and dialogs into local languages. Please contact Juniper Networks support if a particular language is not yet supported.

### Localization of Data Storage

Data entered through SDX Admin is converted to Unicode Transformation Format-8 (UTF-8) encoding and stored in the backend directory. Data retrieved from the backend directory is converted from UTF-8 to the currently selected system encoding (for example, latin-1 for most Western computing environments). If the data contains characters that cannot be displayed in the current language, the character is replaced by a replacement character (for example, ? for ASCII encoding) that is specified by the current language.

