CYGSOFT LDAP BROWSER 2.0

USER MANUAL

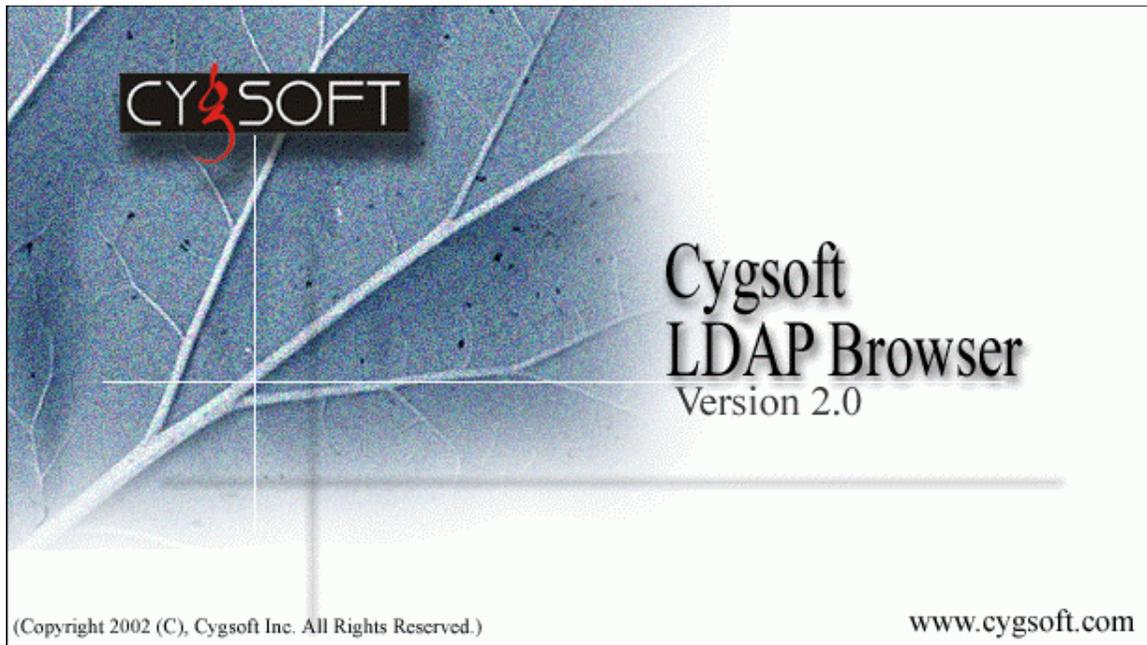www.cygsoft.com

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Figure Index

A List of all the figures present in the document is given below.

Icon Index

A list and description of all the Icons in Cygsoft LDAP Browser is given below.

Icon	Description
	Login - Use this button to login to LDAP Server.
	Logout - Use this button to logout from LDAP Server.
	Create New Profile -Use this button to Create a New Profile.
	Profile Manager - Use this button to edit/delete existing profiles.
	Create Object - Use this button to create a new Object.
	Add User - Use this button to add a new user object.
	Add Organization Unit - Use this button to add an organization unit.
	Cut – Use this button to cut a leaf object.
	Copy - Use this button to copy a leaf object.
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	Set Entries to View – Use this button to set the number of entries that can be viewed at a time.
	Refresh – Use this button to refresh the object tree.

	Show Next – Use this button to view the next set of entries according to the number of entries specified in set entries to view.
	Schema Manager - Use this button to view schema and add new object classes/ attributes to schema.
	LDAP Search - Use this button to perform a search operation from the selected Base DN.
	Create Template - Use this feature to create new XML template from selected object.
	Modify Template: Use this feature to modify available XML templates.
	Delete: Use this feature to delete leaf node or container object.
	Export LDIF: Use this feature to export selected tree to LDIF file.
	Import LDIF: Use this feature to import entries from LDIF file.
	View Root DSE: Use this feature to view Root DSE properties.

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Chapter 1
Overview of Cygsoft LDAP Browser

This chapter provides information on concepts relevant to Cygsoft LDAP Browser. The following points are explained in this chapter:

- **Introduction**
- **Cygsoft LDAP Browser for Windows**
- **System Requirements**
- **Features of Cygsoft LDAP Browser**

Introduction

Electronic mail and Internet information retrieval will dictate the future of effective business communication. The Internet comprises of several electronic directories, storing millions and millions of pages.

As information retrieval is becoming more complex, there is a need for an Internet protocol to access information from a centralized server.

Lightweight Directory Access Protocol (LDAP) is a software protocol for enabling anyone to locate organizations, individuals, and other resources such as files and devices in a network, whether on the public Internet or on a corporate intranet. LDAP is based on a client-server model in which a client makes a TCP connection to an LDAP server, over which it sends requests and receives responses.

Cygsoft LDAP Browser for Windows

The Cygsoft LDAP Browser is unique among C++ based browsers. It provides very powerful editing features for working with the information in LDAP directories. Directory managers can easily manage the contents of the LDAP databases.

The Cygsoft LDAP Browser displays the hierarchical information contained in a directory in the form of a tree. On selection of a particular object in the tree, properties for the selected object are displayed in a table on the right pane. The changes made to the directory structure are reflected in the right pane view immediately

or after pressing refresh. The application provides a user-friendly graphical user interface and easy-to-use menus. The software is easy to install, and adequate help is provided.

The Cygsoft LDAP Browser can work with any standard based LDAP version 2 and LDAP version 3 directory servers. E.g. iPlanet, Openldap,NDS, Microsoft ADS and Microsoft Exchange. This application has been developed using Microsoft Visual C++ and is available for Windows 95, Windows98, Windows NT Workstation 4.0, Windows NT Server 4.0 and Windows 2000.

System Requirements

SYSTEM REQUIREMENTS

System requirements of Cygsoft LDAP Browser are listed below:

1. Pentium-class processor
2. 64 MB of RAM (128 MB is recommended)
3. Any of the following operating system:

- Microsoft Windows 95 OSR 2.0
- Windows 98 Second Edition
- Windows NT 4.0
- Windows 2000

PREREQUISITES

- Service pack 6 is required on NT.
- IE 4.0 should be installed on Win95 OSR2.0
- Winsock2 should be installed on Win95 OSR2.0
- XML rendering feature requires Internet Explorer 5.0 or above on all operating systems.
- Adobe Acrobat Reader 4.0 or above.

Features of Cygsoft LDAP Browser

Cygsoft LDAP Browser provides a user-friendly Windows Explorer-like interface to LDAP directories with integrated browsing and editing capabilities.

Following are some of the features provided in Cygsoft LDAP Browser.

- **Schema browsing and Extending Schema**

  The application supports LDAP v3 feature of Schema browsing and extending Schema. New classes and new attributes can be created using Cygsoft LDAP Browser.

- **Search**

  You can search for information using the search facility provided. Search can be performed on various levels. Users could choose their Base DN by clicking on an object in the tree view and perform a search within it.

  Search results are displayed in a window that allows the results to be edited.

  (Combination of AND and OR logic for a maximum of 3 Attributes and 1 Object class is supported).

- **Cut, Copy and Paste**

  Cut, Copy and Paste operations can be performed on leaf objects.

- **Drag and Drop**

  You can perform drag and drop operations on the leaf objects.

- **Delete**

  Delete operation is supported on a leaf or a container object.

- **Set Entries to View**

  This feature speeds up the display of entries fetched from the server in situations where large amount of data is being worked on. By default 100 entries are displayed on screen at every level the user double clicks on. To view the next set of entries the user would need to use the Show Next button on the toolbar. The user can modify this default value.

- **Profile**

  You can create, edit and delete a profile. Users can maintain profiles to speed up the login process. It also helps in working with multiple LDAP servers easily.

- **Object Link**

  This feature is unique to Cygsoft LDAP Browser. An object Link is a pointer to another object. Object Links work in the same way as aliases except that the Object Links created are restricted to point towards objects on the same server.

  A user could also view the properties of the Linked Object when a link is created.

- **Import/Export LDIF file**

  Support for import and export of LDAP data in ldif format is provided.

- **Log file generation**

  - *General Log file*

    Errors encountered during the use of the application are stored in the general log file.

  - *LDIF Log file*

    Errors encountered during import and export of the LDIF file is registered in LDIF log file.

  - *Deleting the log file data can be accomplished in two ways*

    - By choosing a date for which data would be deleted.
    - By deleting the entire file.

  - *Edit properties*

    Properties of the selected item are displayed on the right pane of the application. The user can modify the attribute value by double clicking on it. The RDN (Relative Distinguished Name) value can be also modified for the leaf objects. Optional attributes can be added to existing objects by right clicking in the right pane and selecting Add Attribute to Object menu item.

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Chapter 2
Connect

This chapter gives information on the Connect menu. The following topics have been covered in this chapter:

- **Login**

- **Create New Profile**

- **Profile Manager**

- **Logout**

LOGIN

1. Click **Connect** > **Login**.
   Or
   Press **F6** key.
   Or

   Click on 🖥 icon in the toolbar.
   'Login' window appears.
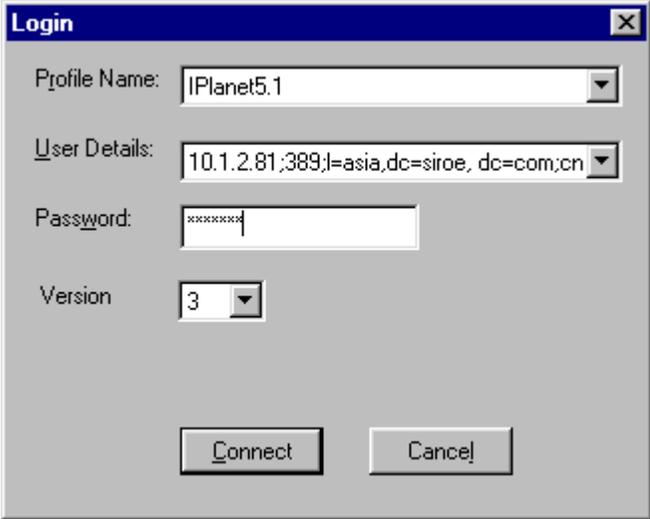
Fig **2.1**

2. Select your profile name from the **Profile Name** drop-down list.
3. Select your user details from the **User Details** drop down list.
4. Enter the password.
   If you have created the profile with Anonymous Binding, then the Password edit box is disabled.
5. Select the LDAP version using which you would like to bind to the server. The default version is 3.

6. Click **Connect** button to log in.

Note: *Typical error messages received during login are mentioned below:*
1. Binding Error

Error ☒

⚠ Binding to Particular Server Failed due to Protocol Error. Try Connecting to the same with Lower LDAP Version

[OK]

Reason: *You have tried to connect to an LDAP server, which does not support the LDAP version you selected in the Login screen.*
Action: *Try to connect to the server with a lower LDAP Version.*

Error ☒

✖ Failed to Connect to ldap:// 10.1.2.3 :389.

[OK]
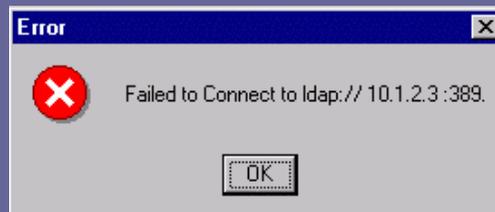
2. Failed to Connect to ldap://<ipaddress/host name>:port
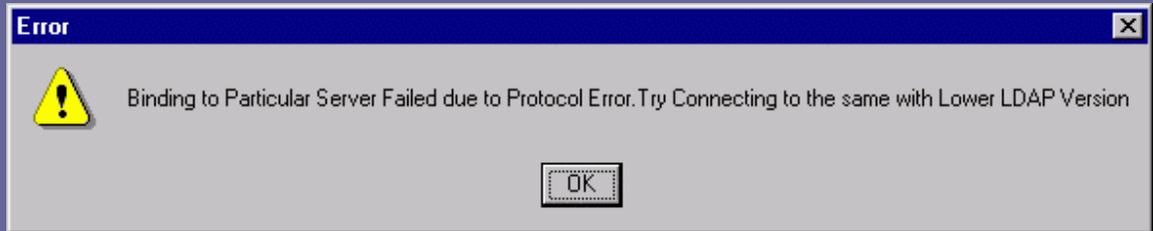**Reason:** *The server may be down or may not be listening to the port selected.*
Action: *Check the LDAP server configuration and edit the host information in the profile accordingly.*

3. Invalid Credentials / Server Response

Server Response ☒

✖ Invalid Credentials

[OK]
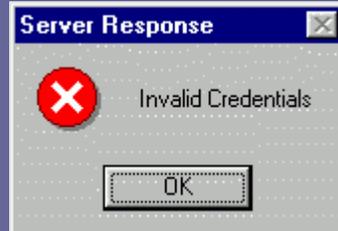
Reason: *The user name or the password entered is invalid.*
Action: *Enter the correct user name and the password.*
Note: The above error also indicates that the error message was generated by the LDAP Server {SERVER RESPONSE}.

4. LDAP Server Root DSE not accessible

Error ☒

✖ Cannot Access Server Root DSE

[OK]
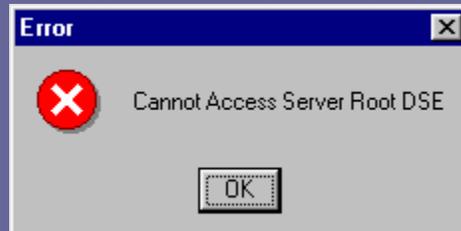
Reason: *LDAP server root DSE is not accessible when you select Fetch DN's.*
Action: *Enter the Base DN manually.*

Create New Profile

To create a new profile you will need the following information:

- IP address / Host Name of the LDAP Server
- Port number on which the LDAP server is running

CREATE A NEW PROFILE

1. Click **Connect** menu> **New Profile**.
   Or
   Press **F8** key.
   Or
   Click on [icon] icon in the toolbar.
   'New Profile' window appears.
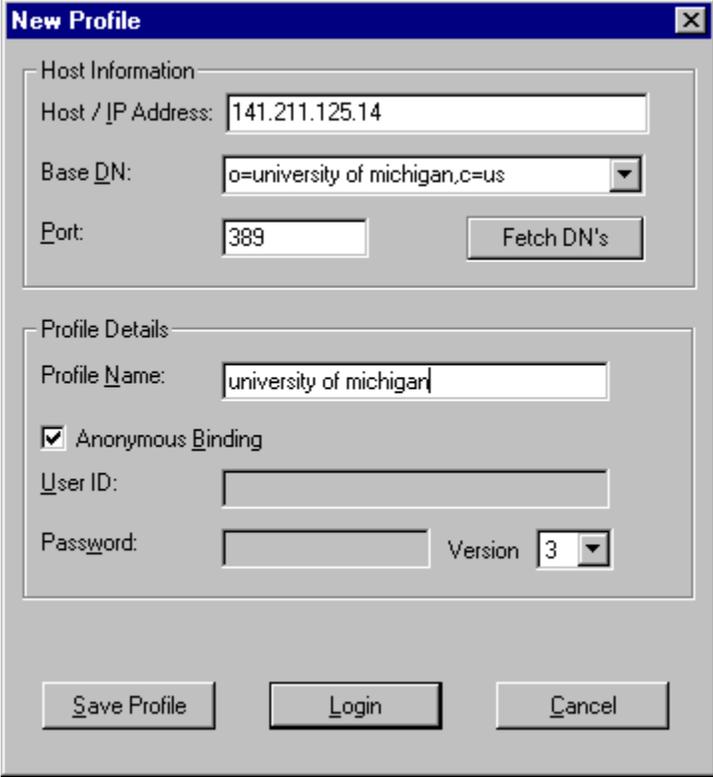
Fig **2.2**

2. Enter the IP address or host name of the LDAP server in the **Host/IP Address** text box (See Fig **2.2**).
3. Click **Fetch DN's** button in order to fetch the Base DN for the corresponding Host IP Address.
4. Enter the port number of the LDAP server in the **Port** text box. By default LDAP server uses port 389.
5. Enter a name under which you want to save your profile, in the **Profile Name** text box.
   By default Anonymous Binding check box is selected. If you

save a profile, at this point it will be saved as a profile with Anonymous binding.

6. If you want to login with a user name and password deselect the Anonymous Binding checkbox, Enter User ID e.g. cn=Directory Manager, and the password in respective fields.

7. Select the LDAP version number, which you are going to connect. By default application takes LDAP v3.

8. Click the **Save Profile** button to save the profile for further use.

9. Click **Login** button to login to the specified server.

Once Login is successful, the Cygsoft LDAP Browser displays the hierarchy of objects in a tree structure in the left pane. The attribute details associated with an object are displayed on the right pane when an object is selected in the tree. You can edit the attribute value by pressing F2 or by double clicking.

Profile Manager

MODIFY OR DELETE AN EXISTING PROFILE

1. Click **Connect** menu> **Profile Manager**.
   Or
   Press **F9** key.
   Or
   Click on ▣ icon on the tool bar.
   'New Profile' window appears.

2. Select the Profile name to be edited from the **Profile Name** dropdown list.

3. Select the **User details** against the chosen Profile name, from the drop down list (See Fig **2.3**).

4. Click **Edit** button to edit the Profile Details and Host Information.

5. After the desired change has been done, click **Save** button to reflect the changes in the Profile Information.

6. You can delete the selected profile by clicking delete button.
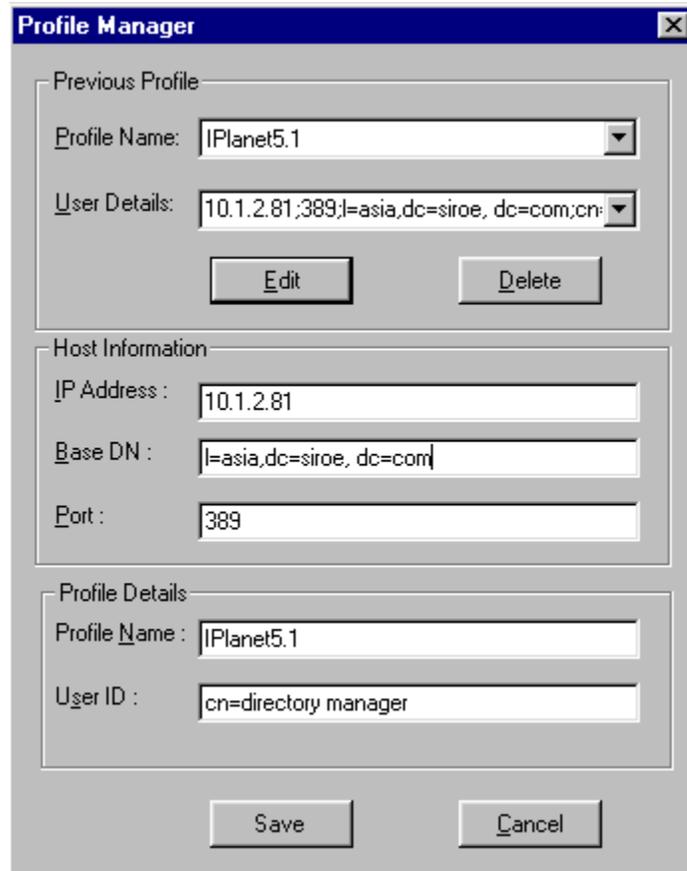
Fig **2.3**

LOGOUT

1. Click **Connect** menu> **Logout**.
   Or
   Click [icon] icon on the toolbar.
   Or
   Press **F7** key.
   'Logout' window appears.
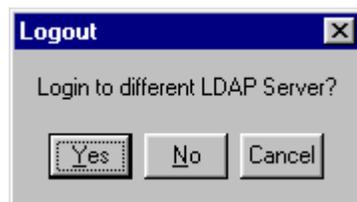
2. If you want to login to a different LDAP server click **Yes.**

3. Click **No** if you do not want to login to a different server.
   'Exit' window appears.

Exit

Do you want to exit Cygsoft LDAP Browser ?

[Yes]   [No]
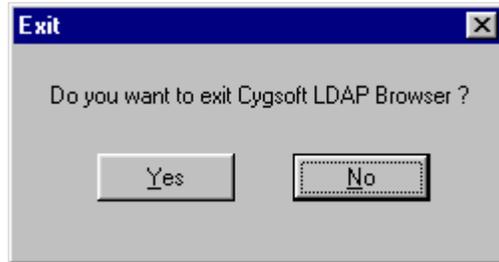
4. Click **Yes** to exit from the Cygsoft LDAP browser or else click **No**.

5. Click **Cancel** button to remain in the same session.

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Chapter 3
Object

This chapter gives you information on the following:

- **Add New User**
- **Add an Organization Unit**
- **Add Attribute**
- **Create Object**
- **Delete Object**
- **Delete Attribute**

ADD NEW USER

1. Select the object in which you want to add a new user.

2. Click **Object** menu>**Add**> **User**.
   Or
   Press **Ctrl+U**
   Or

   Click on [icon] icon from the tool bar
   'Add User' dialog box appears

3. Enter the **First** and **Last name** of the user in the Add User window (See Fig **3.1**).

Fig **3.1**

4. Click **OK** button.

ADD AN ORGANIZATION UNIT

1. Select the Object to which you want to add an organizational unit.

2. Click **Object** menu>**Add**> **Organization Unit**.
   Or
   Press **Ctrl+O** keys.

Or

Click on icon from the toolbar.

'Add Organisation Unit' window appears (See Fig **3.2**).

Fig **3.2**

3. Enter the name of the organization in the Add Organization Unit.

4. Click **OK** to save your changes.

ADD AN ATTRIBUTE TO THE OBJECT

Select the Object in which you want to add an attribute.

1. Click **Object** menu > **Add attribute…**
   Or
   Press **Shift+R** keys.
   Or
   'Add attribute to Object' window appears (See Fig **3.3**).
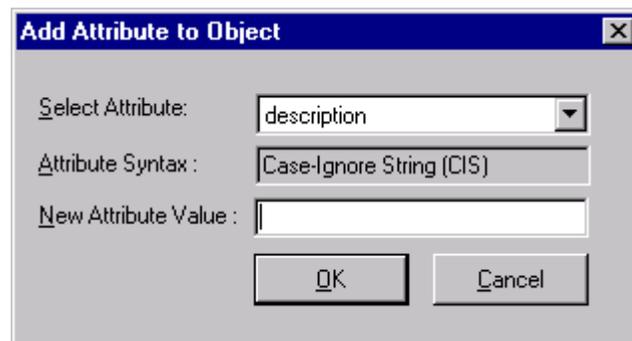
Fig **3.3**

2. Select the Attribute from the **Select Attribute** drop down list.

3. Enter the new Attribute value in the **New Attribute Value** text box.

4. Click **OK** to save the new attribute value.

CREATE AN OBJECT

1. Select the object in which you want to create a new object.

2. Click on the **Object** > **Create**.
   Or
   Press **Ctrl+T** keys.
   Or

   Click on [C] icon from the toolbar.
   Or
   'Create Object' window appears (See Fig **3.4**).
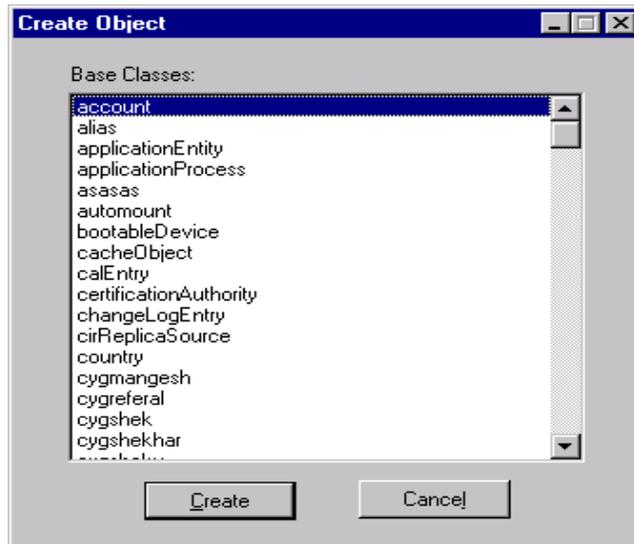
Fig **3.4**

3. Select the Base class from the list and click Create.
   'Mandatory Attributes' window opens (See Fig **3.5**).
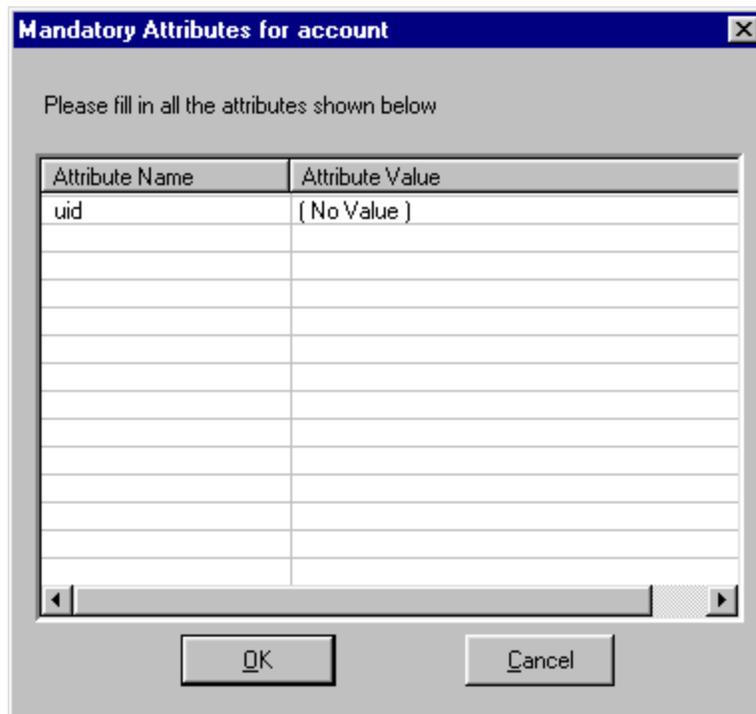
Fig **3.5**

4. Enter the attribute value for all attributes shown.

5. Click **OK** to create the object.

DELETE A LEAF OBJECT

1. Select the leaf object you want to delete.

2. Select **Object** > **Delete Object**.
   Or
   Click the **Delete** key on the keyboard.
   Or
   Select **Delete** from right click menu.
   'Delete' dialog box appears (See Fig **3.6**).
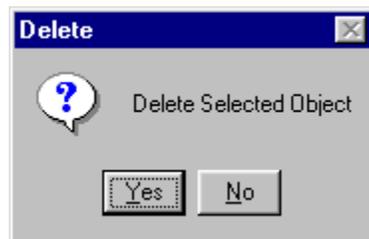
Fig **3.6**

3. Click **Yes** to delete the selected object along with the Object link.
   Or
   Click **No** if you don't want to delete the leaf object.

   When you try to delete a container object, the 'Delete Container Object' dialog box appears (See Fig **3.7**).
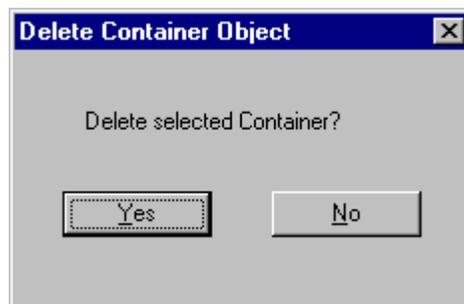
Fig **3.7**

4. Click **Yes** button if you want to delete selected container or else click **No** button.

> *Note:*
> * *The delete operation also deletes the object links of the deleted objects.*
> * *The delete operation could take some time to complete the deletion depending on the Object links existing in the tree.*

DELETE AN ATTRIBUTE

1. Select the Attribute.
2. Right Click the mouse button (See Fig **3.8**).
   Pop-up menu appears.
3. Click **Delete Attribute** option.
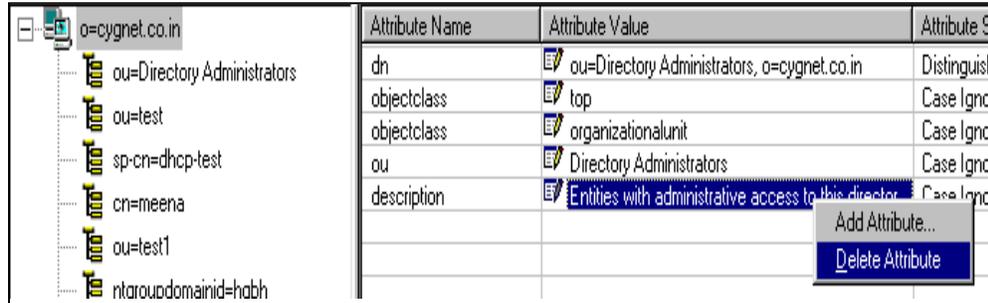
Fig **3.8**

Chapter 4
Edit Features

This chapter explains the following editing features provided by Cygsoft LDAP Browser:

- **Cut/Copy/Paste**

- **Drag and Drop**

- **Copy/Paste Object Link**

- **Edit Attribute**

- **Copy text of attribute value**

CUT/COPY/PASTE

After selecting a leaf object you can perform cut, copy and paste operations. These operations are also available on right clicking a selected object and are also present as icons on the toolbar.

DRAG AND DROP

Browser supports drag and drop of leaf objects. The following steps describes how to perform drag and drop operation:

1. Select the required leaf object

2. Drag this object to another object in the tree where you want to move it.

3. Release the mouse button.

COPY/PASTE OBJECT LINK

The Copy Object Link (**Ctrl+R or** Click on icon from the toolbar **or** from the right click menu) and Paste Object Link (**Ctrl+P or** Click on icon from the toolbar **or** from the right click menu) functions in the Edit menu help you to copy and paste the link objects at a location of your choice. This is a link is a pointer to a specific leaf object in the directory. Paste Object Link option will be enabled only if you copy an object. The Copy Object Link operation can be performed only on a leaf object.

You can view the original properties by selecting the Ref:ObjectName from the tree, and selecting the "view original properties" from the right click menu.

> *Note:*
> *Following steps describes how to create an attribute "CygAttrObjectLink"*
>   1. *Open the Schema Manager window.*
>   2. *Click on the "Add New Attribute" Button*
>
> *In the Add New Attribute Window*
>   1. *Enter the name as CygAttrObjectLink.*
>   2. *Enter the Object ID (OID).*
>   3. *Select the syntax as CASE IGNORE STRING (CIS).*
>
> *Following steps describes how to create a class "CygObjectLink"*
>   1. *Open the Schema Manager window.*
>   2. *Click on the "Add new Class" button*
>
> *In the add new Class Dialog Box*
>   1. *Type in "CygObjectLink" in the Class Name text box.*
>   2. *Enter the Object ID (OID).*
>   3. *Select the Parent class 'top' from the Combo Box.*
>   4. *From the Available Attributes add "CygAttrObjectLink", "Object class" and "cn" to the Mandatory Attributes List.*
>   5. *Click OK to Create the new class*

EDIT ATTRIBUTE

1. Select the Attribute Value you want to edit.

2. Click **Edit** > **Edit Attribute**.
   Or
   Press F2 key.
   Or
   Double click on the Attribute value.

COPY TEXT OF ATTRIBUTE VALUE

1. Double click the Attribute value
   Or
   Select the attribute and press **F2**.

2. Right click the mouse button.
   Pop-Up menu appears.

3. Select **Copy**.

Chapter 5
View

This chapter explains the procedure of the following:

- **Set entries to view**
- **View Root DSE Properties**
- **Count no of Entries**
- **Refresh**

SET ENTRIES TO VIEW

To speed up the display of entries fetched from the server by default 100 entries are displayed on screen at every level. If you want to change this value

1. Click **View** menu.
   Sub menu appears.

2. Click **Set Entries to View**.
   Or
   Click on [icon] icon from toolbar.
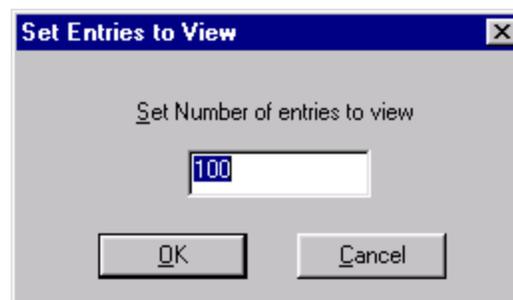   'Set Entries to View' window appears (See Fig **5.1**).

Fig **5.1**

3. Edit the Value.

4. Press **OK** button.

To view the next set of entries use the Show Next button [icon] on the toolbar.

VIEW ROOT DSE PROPERTIES

There is a special entry called the root directory specific entry, or rootDSE, that contains a description of the whole tree, its layout, and its contents.

1. Click on **View** and then click on **Root DSE Properties**.
'Root DSE Information' window appears (See Fig **5.2**).

Root DSE Information		
Attribute Name	Attribute Value	
objectclass	top	
namingcontexts	o=Airius.com	
subschemasubentry	cn=schema	
supportedcontrol	2.16.840.1.113730.3....	
supportedsaslmechanisms	EXTERNAL	
supportedldapversion	3	
dataversion	nikhil.cygnet.co.in:38...	
netscapemdsuffix	cn=ldap://:389,dc=ni...	
supportedldapversion	2	
supportedcontrol	2.16.840.1.113730.3....	
supportedcontrol	1.2.840.113556.1.4.4...	
supportedcontrol	2.16.840.1.113730.3....	
supportedcontrol	2.16.840.1.113730.3....	
supportedcontrol	2.16.840.1.113730.3....	
supportedcontrol	2.16.840.1.113730.3....	
namingcontexts	o=NetscapeRoot	
namingcontexts	o=cygnet.co.in	

Close

Fig **5.2**

2. Click **Close** button to close the window.

COUNT NUMBER OF ENTRIES

1. Select the object to count number of entries present.
2. Click **View** > **Count No of Entries**.
'Entry count' window appears displaying the object entry details.

Entry count	
(i)	Selected DN: sp-cn=host, ou=Directory Administrators, o=cygnet.co.in has 17 entries in the Server
	OK

Fig **5.3**

Refresh

Refresh offers the following two options:
1. **Refresh Tree**
Use Refresh tree option when you want to refresh the entire object tree. The Refresh Tree option reflects the modifications made throughout the object tree.

2. **Refresh Node**
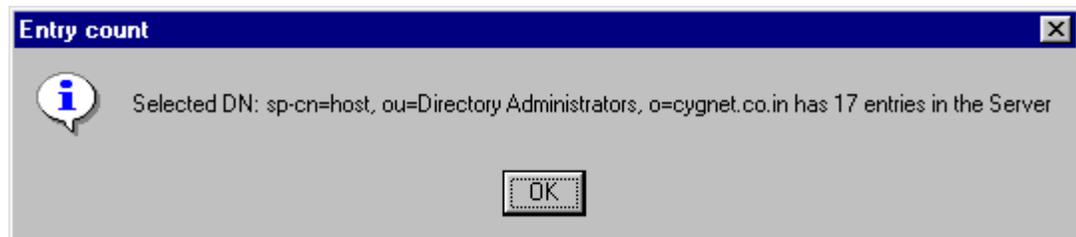   Use Refresh Node when you want to refresh only a specific node. The Refresh Node option reflects the modifications made in that particular node only.
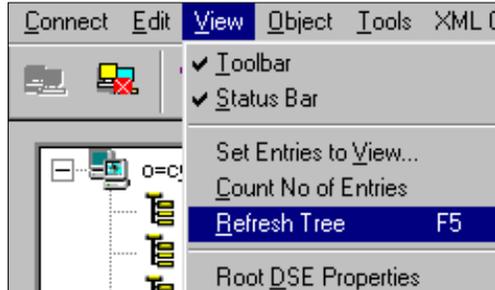
REFRESH TREE

Fig **5.4**

1. Click **View** > **Refresh Tree**.
   Or
   Select any object and Right click the mouse button.
   Or
   Press **F5** key (See Fig **5.4**).

REFRESH NODE

1. Select the node you want to refresh.
2. Press **F4** key.
   Or
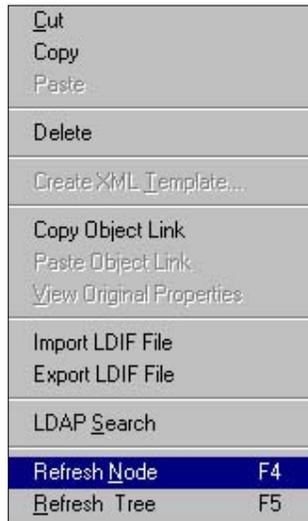   Right Click the mouse button.
   Pop-Up menu appears.

Fig **5.5**

3. Select **Refresh Node** option.

Chapter 6
XML Option

XML Option is the latest feature added in LDAP Browser. XML Rendering feature in XML Option is a very useful feature allowing the user to do the following:

1. **Create an object using Template**
2. **Create XML template**
3. **Modify XML Template**

XML Rendering

XML Rendering has made creating an object very simple by providing the user the following advantages. The user can:

- **Create Object using template**
  XML Rendering allows you to create objects using templates. Using templates you can enter the values for the attributes as required. You can also define validation rules and default values for attributes.

- **Create template**
  XML Rendering allows you to create a new template. To create a new template Click **XML Options** > **Create XML template** or use any text editor. Use only the tags defined by Cygsoft if you create template using text editor. The sample XML file shown below gives you an idea of the tags defined by Cygsoft and also the attributes of the tags.

- **Modify Template**
  XML Rendering allows you to modify the available templates. While Modifying templates you can also define the validation rules and default values for attributes.

Explanation of the tag attributes:

Tag	Brief Description

`<XMLTemplate Description = " " >`
……
……
`</XMLTemplate>`
	<XMLTemplate> …… </XMLTemplate> is the root attributes and has three child attributes
	
	`Description = " "`
	Description of XML template.
	Ex:<XmlTemplate Description="Create User">

`<ObjectClass> … </ObjectClass>`	<ObjectClass> … </ObjectClass> Is the name of ObjectClass from which you want to derive object. *Ex: <ObjectClass>top</ObjectClass>* *<ObjectClass>organizationalUnit</ObjectClass>*
`<Field> …… </Field>`	<Field>….. </Field> - is the attributes with six child attributes
`<Name>…………</Name>`	*Name tag specifies the attribute name* *Ex. <Name> c </Name>*
`<DisplayName>…………</DisplayName>`	*The value of this tag displays the name of the attribute.* *Ex. <DisplayName> Country Name :</DisplayName>*
`<DefaultValue>…………</DefaultValue>`	*DefaultValue tag specifies the default value of an attribute.* *(The Default values are only for TextBox,NonEditableTextBox and the PasswordField).* *Ex. <DefaultValue> India /DefaultValue>*
`<Input>…………</Input>`	*The values inside Input tag are TextBox,ComboBox,CheckBox, NonEditableBox and Password Field.* Brief explanation of the values*:* • ***TextBox*** *: Displays the TextBox where user can enter the values.* • ***NonEditableTextBox****: Displays the Non Editable text box.* • ***PasswordField*** *: The Characters in the fields are displayed as '*'.* • ***ComboBox****: Displays the ComboBox allowing the user to select one Item from the available list.* • ***CheckBox****: Displays a CheckBox which*

	can be checked or unchecked. CheckBox is used for storing the Boolean values which will be stored as on and off. *Ex. <Input> TextBox </Input>*
<Validation>…………</Validation>	Validation specifies the different types of validation rules that can be defined for entering different types of data in each field. Following is the brief explanation of the validation values*: -* **NonnegativeNumber:** *Accepts only Positive Numbers.* **Charactersonly:** *Accepts only Character values.* **Boolean**: *Accepts Boolean values like true and false as well as on and off.* **Alphanumeric**: *Accepts characters as well as numbers.* **Number:** *Accepts only numbers* *Ex. <Validation> CharactersOnly </Validation>*
<Size> ...... <Size>	Use the Size tag for specifying the size of the field. *Ex. <Size> 15 </Size>*
<MaxLength> .... </MaxLength>	Use the MaxLength tag to specify the maximum number of characters that the field can accept. *Ex. <MaxLength> 10 </MaxLength>*
<Color> .... </Color>	Use color tag to specify the text color of the input field contents. User can also specify the color values used in the html pages. *Ex. <Color> red </Color>* *<Color> #FF2222 </Color>*
<Option> .... </Option>	Use the Option tag to add values to the combo box *Ex.<Option> India </Option>* *<Option> USA </Option>* *<Option> Russia </Option>* *<Option> UK </Option>*

Note :

    1. All XML tags are case sensitive.
    2. The Invalid and Case Insensitive tags are Ignored.
    3. In Case, the xml tag is incorrect, an error message will be displayed.
    4. The DefaultValue tag is specifically used for the TextBox, NonEditableTextBox and PasswordField.
    5. The values inside Validation tag are case insensitive.

CREATE AN OBJECT USING TEMPLATE

1. Click **XML Options** > **XML Rendering** (See Fig **6.1**).

Fig **6.1**

2. Click to select the object under which you want to add a new object.
3. Click the **Create Object** [C] icon.
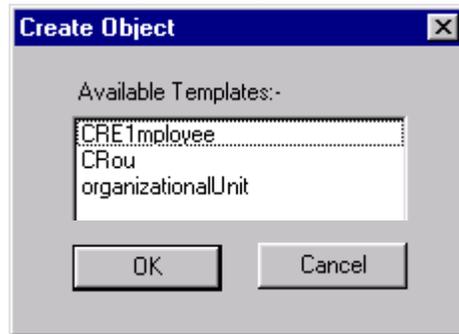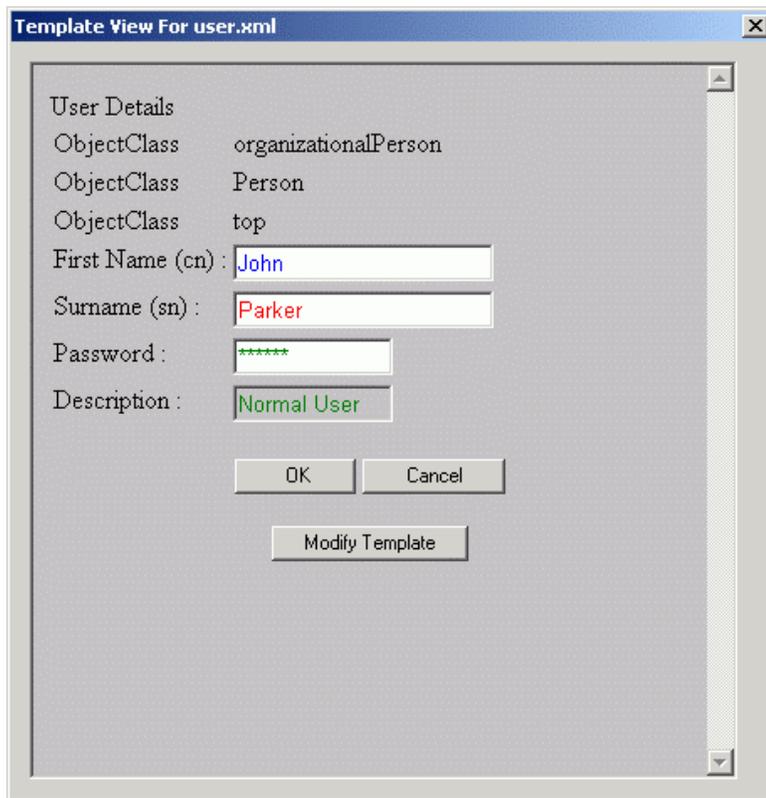   'Create Object' window appears displaying all the available create object templates (See Fig **6.2**).

Fig **6.2**

4. Select the required template.

5. Click **OK** button.
   'XML rendered view (Create)' window appears (See Fig **6.3**).

Fig **6.3**

6. Enter the required data in the fields of the template.
7. Click **OK** button.
   The object is created.

For creating the above template, the following xml template file is used:
Template file Name -user.xml

```xml
<?xml version="1.0"?>
<?xml-stylesheet type="text/xsl" href="stylesheet.xsl"?>
<XmlTemplate Description="User Details ">
<ObjectClass>organizationalPerson</ObjectClass>
<ObjectClass>Person</ObjectClass>
<ObjectClass>top</ObjectClass>
<Field>
<Name>cn</Name>
<DisplayName>First Name  (cn) : </DisplayName>
<Input>TextBox</Input>
<DefaultValue>John</DefaultValue>
<Validation>charactersonly</Validation>
<Size>20</Size>
<MaxLength>20</MaxLength>
<Color>blue</Color>
</Field>
<Field>
<Name>sn</Name>
<DisplayName>Surname (sn)  :</DisplayName>
<Input>TextBox</Input>
<DefaultValue>Parker</DefaultValue>
<Validation></Validation>
<Size></Size>
<MaxLength>20</MaxLength>
<Color>red</Color>
</Field>
<Field>
<Name>userPassword</Name>
<DisplayName>Password :</DisplayName>
<Input>PasswordField</Input>
<DefaultValue>john12</DefaultValue>
<Validation>alphanumric</Validation>
<Size>10</Size>
<MaxLength>10</MaxLength>
<Color>green</Color>
</Field>
<Field>
<Name>description</Name>
<DisplayName>Description :</DisplayName>
<Input>NonEditableTextBox</Input>
<DefaultValue>Normal User</DefaultValue>
<Validation>charactersonly</Validation>
<Size>10</Size>
<MaxLength>10</MaxLength>
<Color>green</Color>
</Field>
</XmlTemplate>
```

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A sample xml template (country.xml) for Object Class country is shown below:

XML code of template country.xml:

```xml
<?xml version="1.0"?>
<?xml-stylesheet type="text/xsl" href="stylesheet.xsl"?>
<XmlTemplate Description="Country Details ">
<ObjectClass>country</ObjectClass>

<Field>
<Name>c</Name>
<DisplayName>Country Name</DisplayName>
<Input>ComboBox</Input>
<DefaultValue></DefaultValue>
<Validation>none</Validation>
<Option>Australia</Option>
<Option>Canada</Option>
<Option>India</Option>
<Option>Japan</Option>
<Option>Malaysia</Option>
<Option>Saudia Arabia</Option>
<Option>Singapore</Option>
<Option>South Africa</Option>
<Option>United States</Option>
<Option>United Kingdom</Option>
<Option>Others</Option>
<Color>blue</Color>
</Field>

<Field>
<Name>description</Name>
<DisplayName>Description</DisplayName>
<Input>TextBox</Input>
<DefaultValue>Asia</DefaultValue>
<Validation></Validation>
<Size>20</Size>
<MaxLength>10</MaxLength>
<Color>Red</Color>
</Field>
</XmlTemplate>
```

CREATE XML TEMPLATE

1. Click **XML Option**>**XML Rendering**.
   'Create XML template' option gets activated.

2. Click **XML Option** > **Create XML Template**.
   Or
   Select the object and right click the mouse button.
   Click **Create XML Template** from the Pop-Up menu.
   'Save XML Template' window appears (See Fig **6.4**).

Fig **6.4**

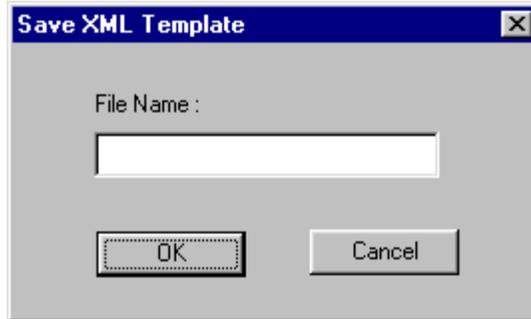3. Enter the **File name** in the File Name text box.
4. Click **Ok** button.

> **Note:**
> * *The xml file created by you, is saved in the folder where the Cygsoft LDAP Browser is installed .*

MODIFY TEMPLATE

1. Click **XML Options** > **Modify XML Template**.
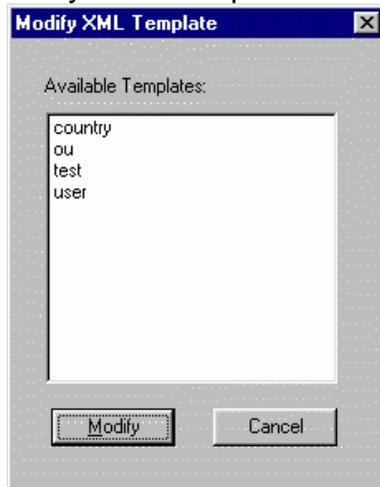   'Modify XML Template' window appears (See Fig **6.5**).

Fig **6.5**

2. Click to select the required template.
3. Click **Modify** button.

4. The selected template opens in the edit mode (see Fig **6.6**).


```
user.xml                                                    ×

<?xml version="1.0"?>
<?xml-stylesheet type="text/xsl" href="stylesheet.xsl"?>
<XmlTemplate Description="User Details ">
<ObjectClass>organizationalPerson</ObjectClass>
<ObjectClass>Person</ObjectClass>
<ObjectClass>top</ObjectClass>

<Field>
<Name>cn</Name>
<DisplayName>First Name  (cn) : </DisplayName>
<Input>TextBox</Input>
<DefaultValue>John</DefaultValue>
<Validation>charactersonly</Validation>
<Size>20</Size>
<MaxLength>20</MaxLength>
<Color>blue</Color>
</Field>

<Field>
<Name>sn</Name>
<DisplayName>Surname (sn)  :</DisplayName>
<Input>TextBox</Input>
<DefaultValue>Parker</DefaultValue>
<Validation></Validation>
<Size></Size>
<MaxLength>20</MaxLength>
<Color>red</Color>
</Field>

<Field>
<Name>userPassword</Name>
<DisplayName>Password :</DisplayName>
<Input>PasswordField</Input>
<DefaultValue>john12</DefaultValue>
<Validation>alphanumric</Validation>
```
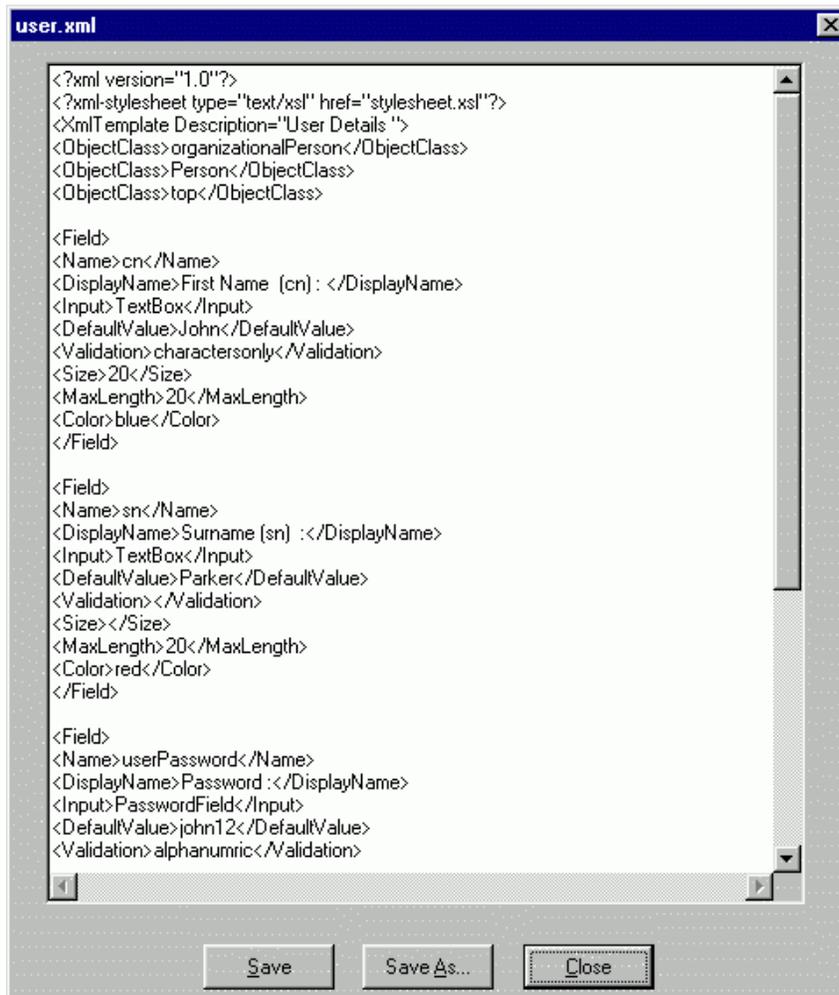
        Save   Save As...   Close

Fig **6.6**

5. Make the required changes.
6. Click **Save** button.

> *Note:*
> - *Click 'Save As' button if you want to save the template with a different name.*

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Chapter 7
Schema Manager

This chapter gives you information about Schema Manager. The Schema Manager helps you to browse the schema and extend schema (i.e. add new object classes and attributes to an existing schema).

The following topics are covered in this chapter:

- **Add a new class**
- **View Class Details**
- **Add New Attribute**
- **Attribute Details**

ADD A NEW CLASS

1. Click **Tools** > **Schema Manager** option from the sub- menu.
   Or
   Press **Ctrl+M** keys.
   Or

   Click on [icon] icon from the toolbar.
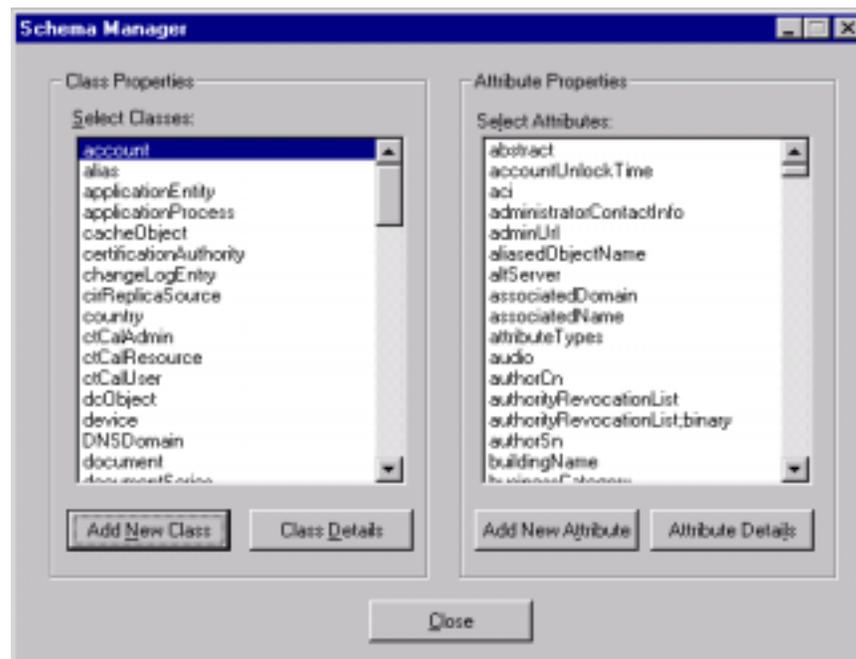   Schema Manager screen appears (See Fig **7.1**).

Fig **7.1**

2. Click **Add New Class** button in the Class Properties pane to add a new class to the schema.
'Add New Object Class' window appears (See Fig **7.2**).

Fig **7.2**

3. Type the new **Class Name** in the Class name field.
4. Type the **OID**. If this field is kept blank a default value is inserted automatically.
5. Select the **Parent Class Name** from the drop down list box.
6. Select the **Mandatory** and **Optional attribute** from the available attribute list.
7. Click **OK** to save the new class.

VIEW CLASS DETAILS

The Class Details button in the Schema manager invokes a Class details dialog box (Figure 7.3), displaying the details of the selected class. It displays the name, OID, description of the class, the super class from which it is derived, mandatory and optional attributes.

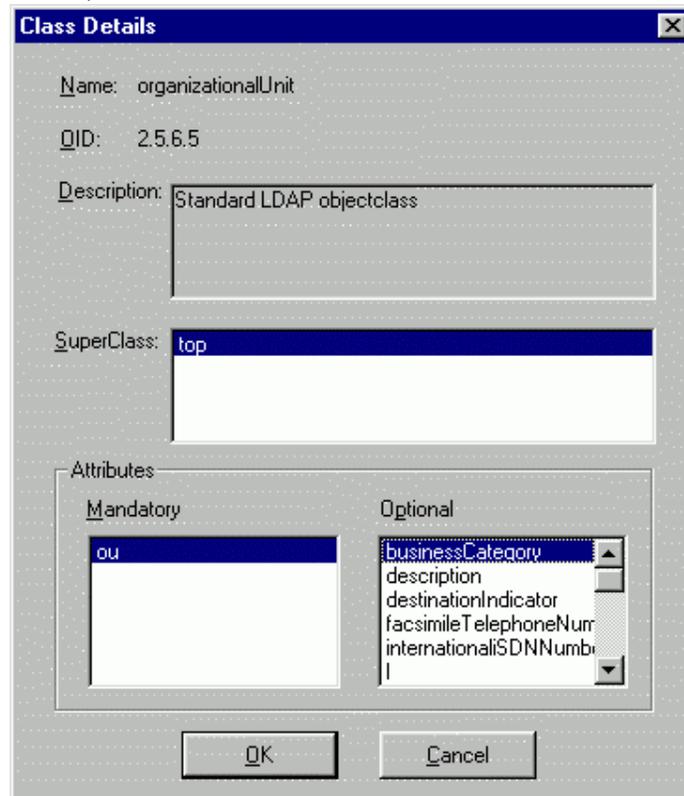1. To view class details, click the **Class Details** button (See Fig **7.3**)

Fig **7.3**

1. Click **Tools**>**Schema Manager**.

2. Click the **Add New Attribute** button.
   'Add New Attribute' window opens (See Fig **7.4**).

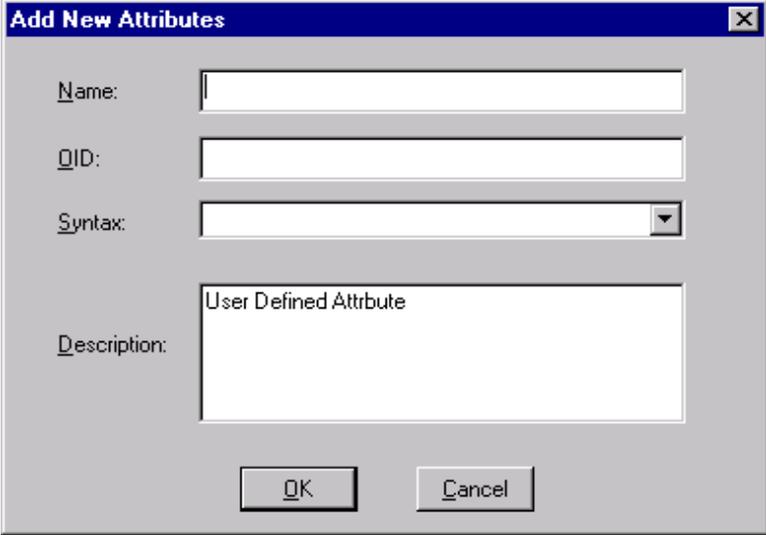3. In the **Name** field, enter the name of the attribute.

Fig **7.4**

4. In the **Object ID** field, enter the relevant ID. If this field is kept empty default OID is inserted.

5. In the **Syntax** field, choose the syntax from the drop down list.

6. In the **Description** field, enter the relevant attribute description.

7. Click **OK** to save the new attribute or Click Cancel to cancel your action.

> *Note: Only following attribute syntax are supported while adding new attribute in schema*
> - *Case Ignore String (cis)*
> - *Binary (bin)*
> - *Telephone Number (tel)*
> - *Case Exact String (ces)*
> - *Distinguished Name (dn)*
> - *Integer (int)*

ATTRIBUTE DETAILS

The attribute detail window displays the properties of the attribute. Cygsoft LDAP Browser allows you to view any attribute in the schema.

You can view the details of attributes in the Schema. To view an attribute detail of a selected attribute, click on the Attribute Details button in the Schema main window.

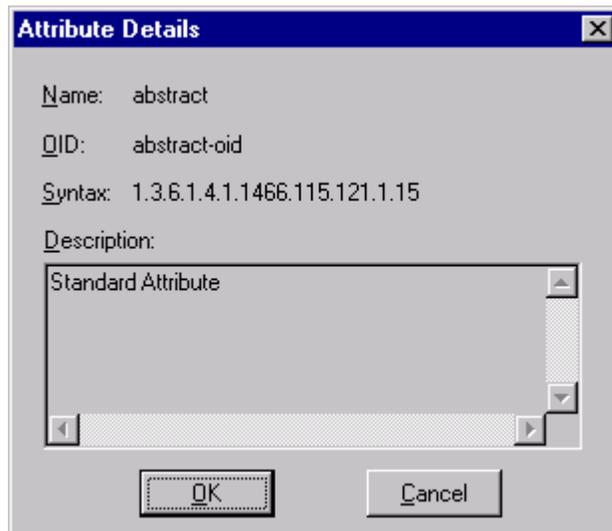The following screen (See Fig **7.5**) shows you how to view existing attribute details.

Fig **7.5**

The name, OID, syntax and the description of the selected attribute in the Schema are displayed in this window.

Depending upon your organizational needs, you can create as many classes and attributes as you require.

Chapter 8
Search for Information

Cygsoft LDAP Browser allows you to search for information stored in the LDAP server. You can activate a search operation from any Base DN. This chapter explains how to activate search function and how to Search with object class = *. The following two topics are covered in this chapter:

- **Activate the search function**
- **Examples**

ACTIVATE THE SEARCH FUNCTION

1. Click on **Tools**>**LDAP Search**.
   Or
   Press **Ctrl+F** keys.

Fig **8.1**

Or

Click on icon from the toolbar.

'LDAP Search' window appears (See Fig **8.1**).

You can perform a search operation from any level you choose in the tree structure. If you wish to search the entire data, click the Base DN. Features such as searching within the entire set of classes using the wildcard character * and using AND/OR operators for attribute values is supported.

> **Note:**
> - You can use * in the attribute value field as supported in normal search operations.
> - 'Save Search' button allows you to save the DN's.

Examples

SEARCH WITH OBJECT CLASS = *

Search within the entire set of Classes available on a selected base DN (See Fig **8.2**).

1. Select the required base DN from the browser window.
2. Open the search window.
3. Keep the default value as (*) in the object class field and enter appropriate values in the filter options field.
4. Click **Search** button.
5. The search result window displays all the entries inside the selected base DN.
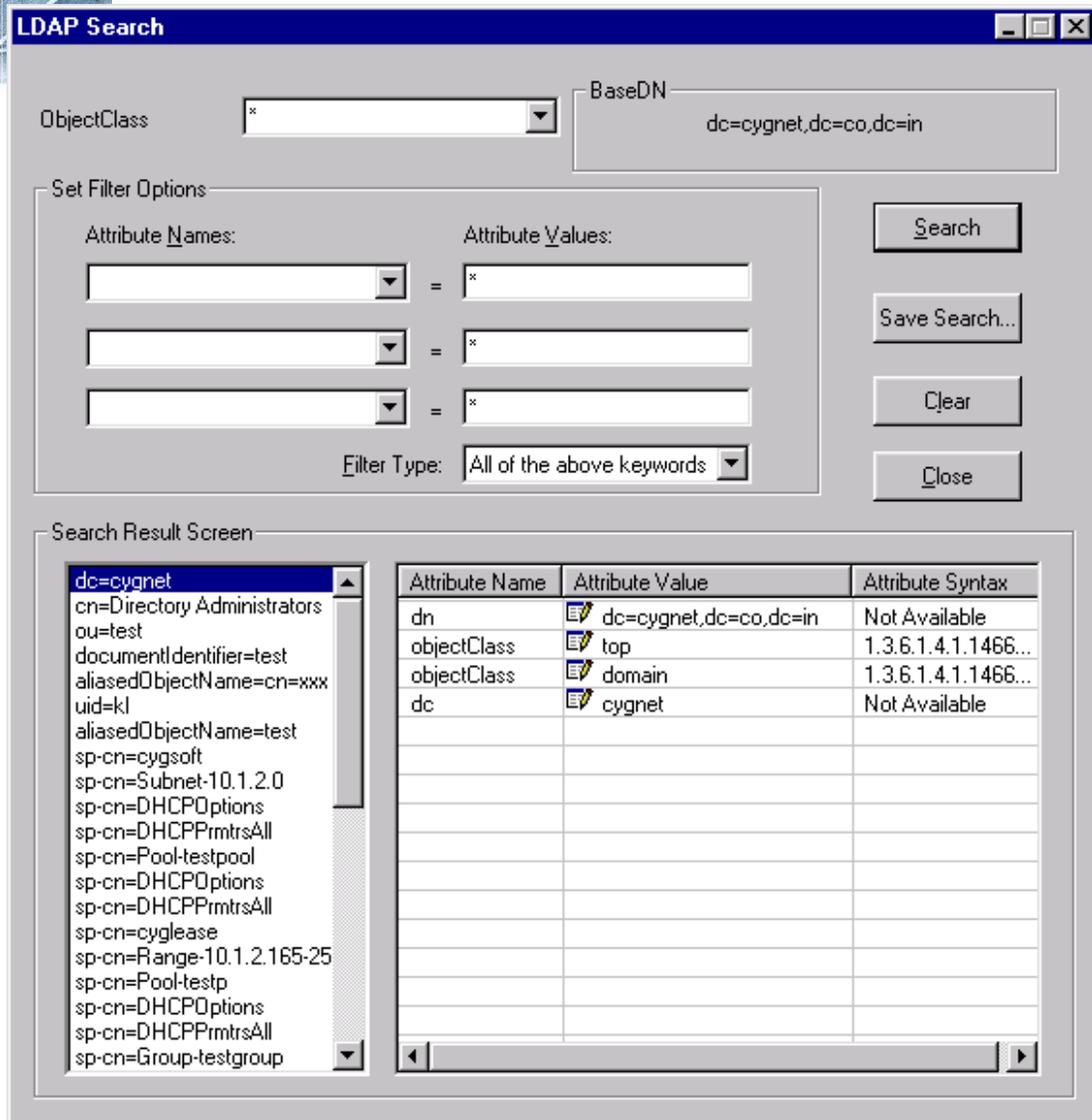
Fig **8.2**

SEARCH WITH ATTRIBUTE VALUES

To Search for specific attribute values within inetOrgPerson having attribute cn, which start with character 'p', (See Fig **8.3**).

1. Select the base DN in which you want to perform search operation, from the browser window.
2. Open the search window.
3. Select the required object class field as **inetOrgPerson**.
4. Select the Attribute Name as **cn**.
5. Select the Attribute value as **p***.
6. Click **Search** button.
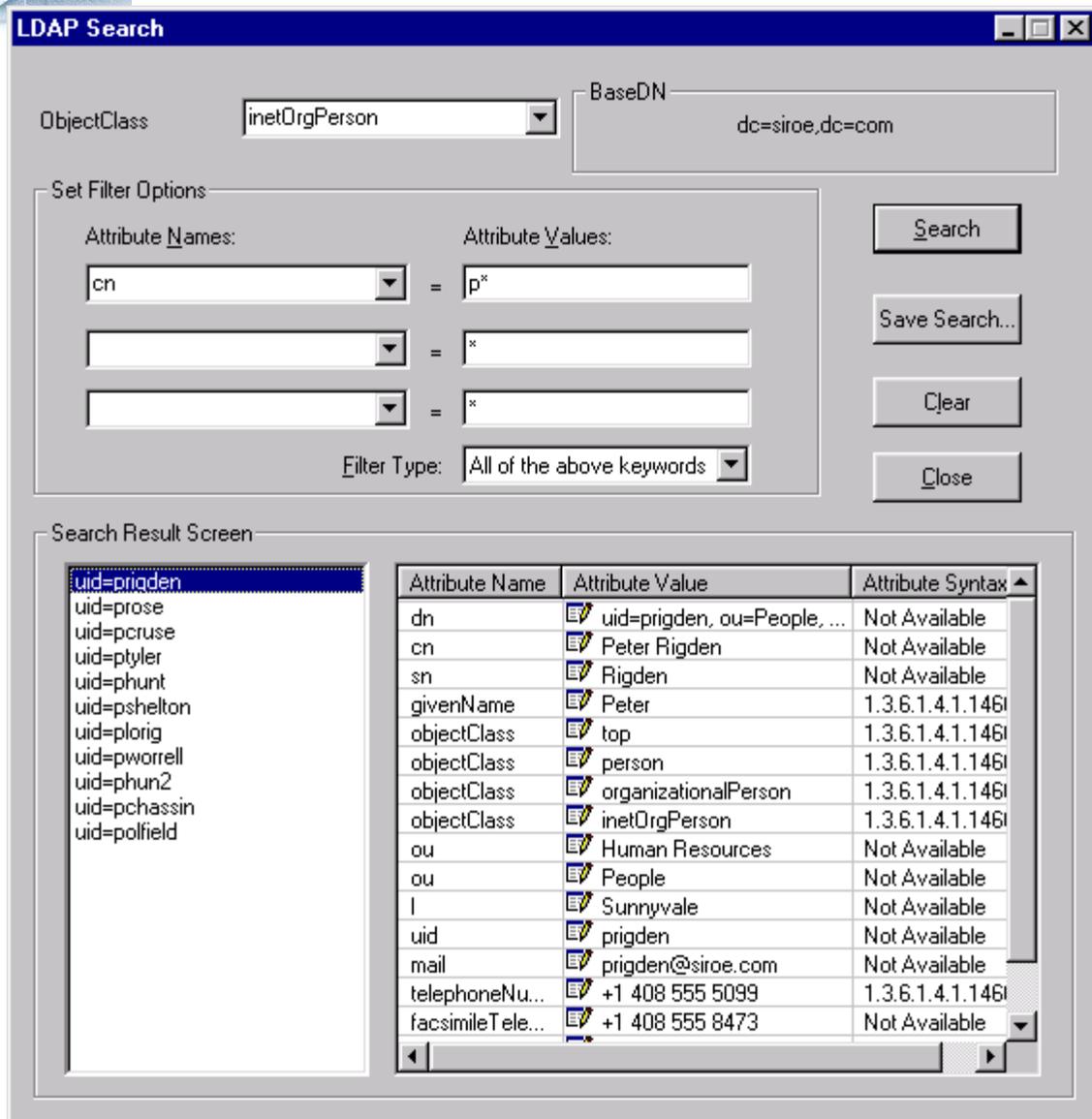7. The search result window displays all the entries, which satisfies the above condition for the selected base DN.

Fig **8.3**

SEARCH - WILD CARDS WITH AND OPERATION

To display all the persons in inetOrgPerson class having the following condition (See Fig **8.4**):

- 'cn' starts with 'p'
- 'sn' ends with 'r'
- 'given name' is 'pete'.,

1. Select the required base DN from the browser window.
2. Open the search window
3. Select the required object class field as inetOrgPerson.

4. Set the **Attribute Name** and **Attribute Value** as shown above.
5. Select the filter Options field as **All of the above Keywords**.
6. Click **Search** button.

The search result window will display all the names, which satisfy all the above condition for the selected base DN.
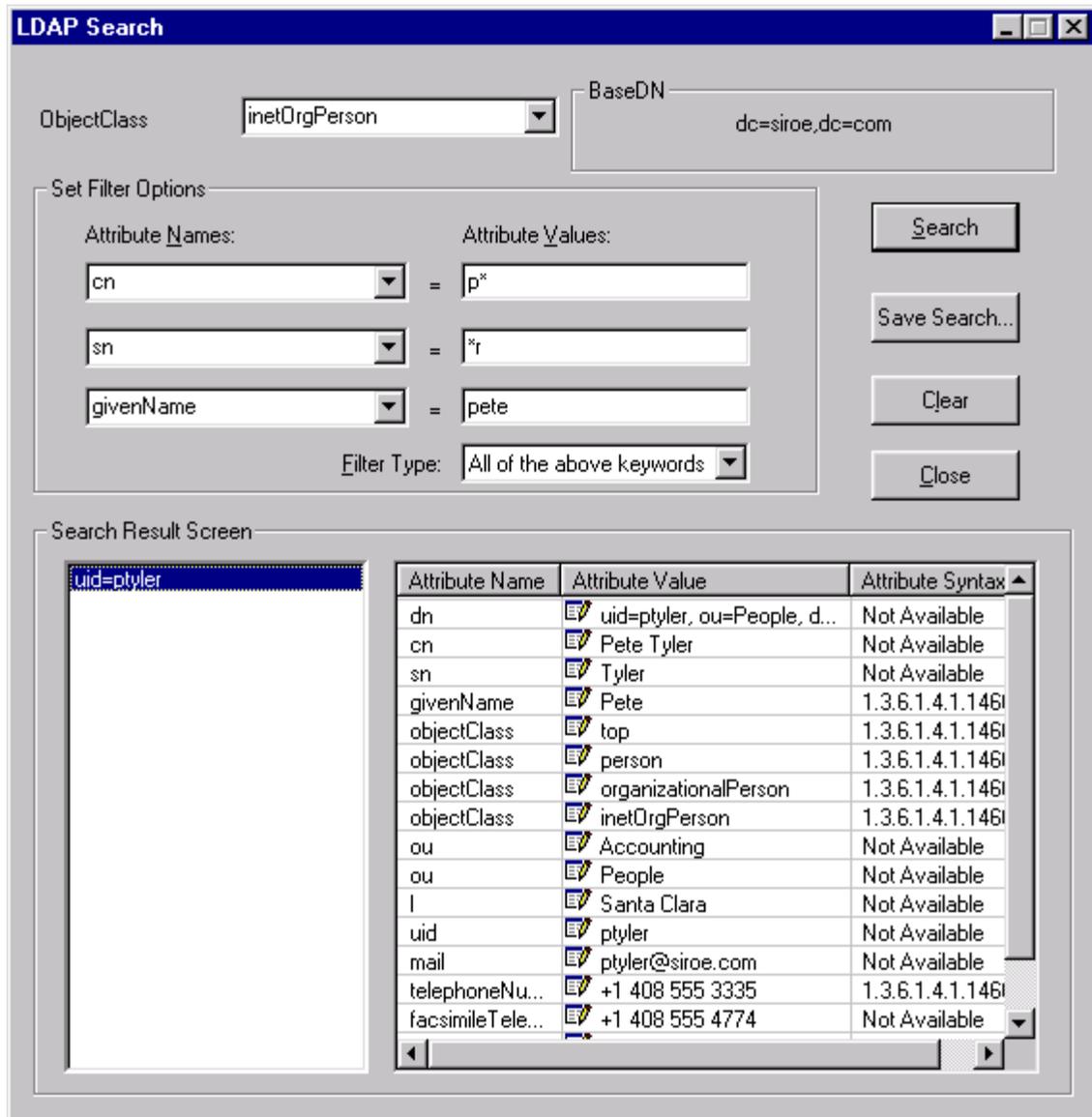

Fig **8.4**

SEARCH- WILD CARDS WITH OR OPERATION

To display all the persons in inetOrgPerson class having any of the following condition, (See Fig **8.5**).

- 'cn' starts with 'p'

- 'sn' ends with 'r'
- 'given name' is 'pete'.,

1. Select the base DN from the browser window.
2. Open the search window.
3. Select the required object class field as inetOrgPerson.
4. Set the **Attribute Name** and **Attribute Value** as shown above.
5. Select the filter Options field as **Any of the above key words**.
6. Click **Search** button.

The search result window will display all the names, which satisfy any of the above condition for the selected Base DN.
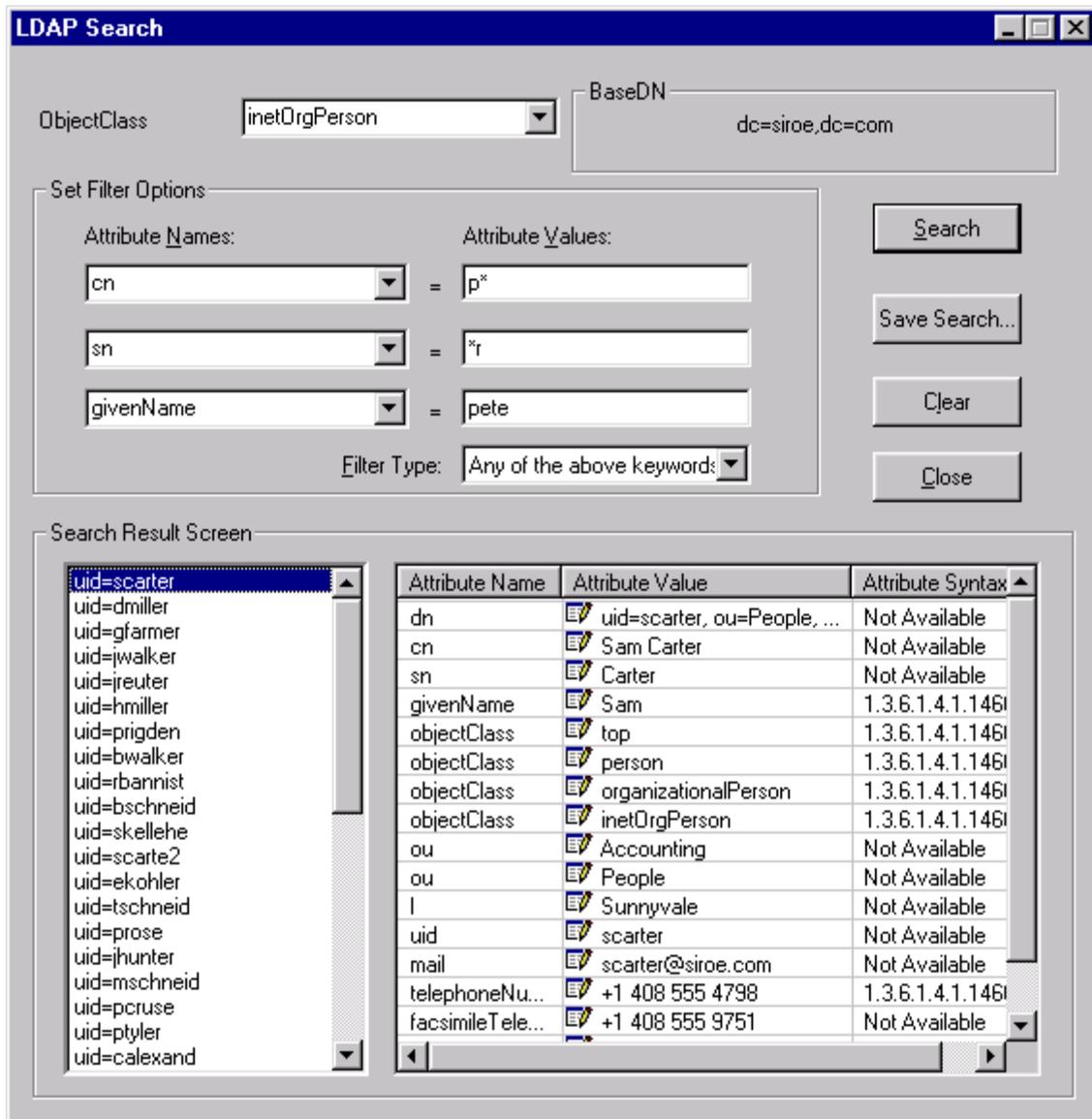

Fig **8.5**

Chapter 9
Import and Export of LDIF files

This chapter covers the following topics:

- **Export to LDIF File**

- **Import from LDIF File**

LDIF (Lightweight Directory Interchange Format) is an ASCII file format used to exchange data and enable the synchronization of that data between Lightweight Directory Access Protocol (LDAP) servers.

EXPORT TO LDIF FILE

1. Select the base DN from the browser window.
2. Click **Tools**>**Export LDIF File**.
   Or
   Press **Ctrl+E** keys.
   Or
   Select **Export LDIF File** from the right click menu.
   'Export LDIF file' dialog box appears (See Fig **9.1**).
3. Click **Browse** button to select the export file path.
   Or
   Enter the LDIF file name in the LDIF File text box.

> **Note:**
> - *The file is by default, exported to the folder where the Cygsoft LDAP Browser is installed..*
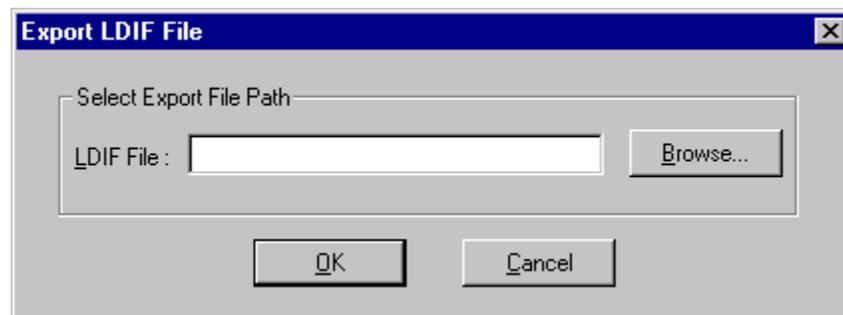
4. Click **OK** button.

Fig **9.1**

You can either export complete information from an entire server, or from a selected sub tree.

1. Select the base DN from the browser window.
2. Click **Tools**>**Import LDIF File**.
   Or
   Press **Ctrl+I** keys.
   Or
   Select **Import LDIF File** from the right click menu.
   'Import LDIF file' dialog box appears (See Fig **9.2**).
3. Click the **Browse** button to select the file to be imported.
   Or
   Enter the file name with complete path.
4. Click **OK** button.

   The directory structure will be created, according to the LDIF file contents.
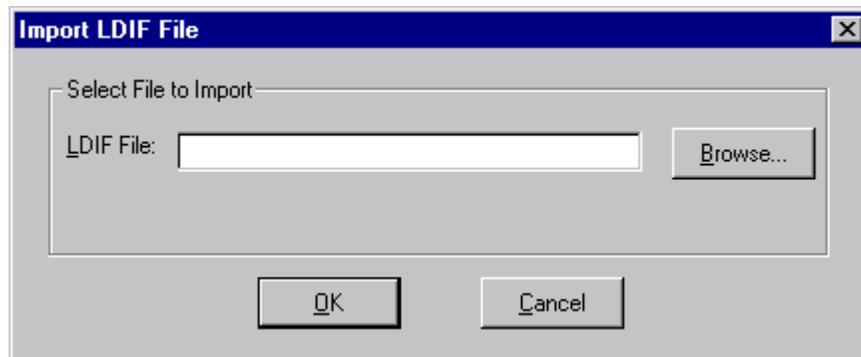

Fig **9.2**

> *Note:*
> • *LDIF Import is only possible with LDIF files, Which have been exported using Cygsoft LDAP Browser 2.0.*

Chapter 10
Log Manager

Errors shown on console while using the browser are registered in general log file. This chapter explains how to:

- **View the General Log**
- **View the LDIF Log**
- **Delete General Log**
- **Delete LDIF Log**

VIEW THE GENERAL LOG

1. Click **Log Manager**>**View General Log** option.
   Or
   Press **Ctrl+ Shift + G** keys.

Errors shown on console while importing/exporting the LDIF file are also registered in log file.

VIEW THE LDIF LOG

1. Click **Log Manager**>**View LDIF Log**.
   Or
   Press **Ctrl+ Shift + F**.

DELETE GENERAL LOG

1. Click **Log Manager**>**Delete General Log**.
   Or
   Press **Ctrl+ Shift + L** keys.
2. To delete logs for a specific date, select the date from the drop down date list.
   Or
   Check mark **Delete Entire Log** check box in order to delete the entire log.
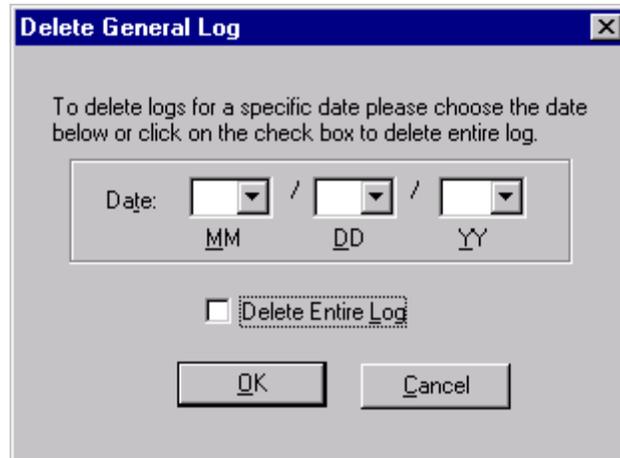3. Click **Ok** button.

Fig **10.1**

DELETE LDIF LOG

1. Click **Log Manager**>**View General Log** option.
   Or
   Press **Ctrl+ Shift + D** keys.
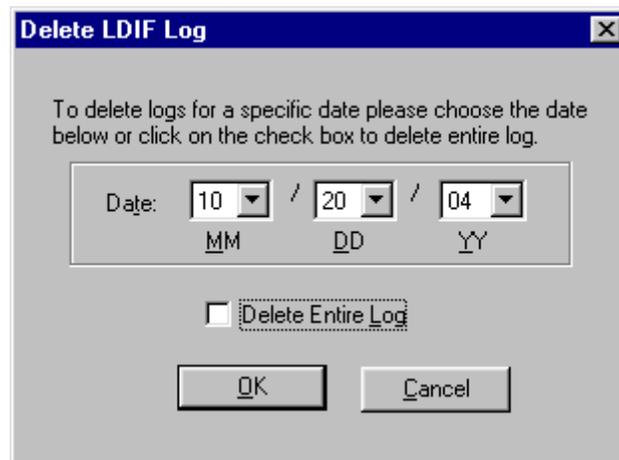   'Delete LDIF log' window appears.

Fig **10.2**

2. To delete logs for a specific date, select the date from the drop
   down date list.
   Or
   Check mark **Delete Entire Log** check box in order to delete the
   entire log.
3. Click **Ok** button.

Chapter 11
Getting more information

This chapter describes where to get more information on the topics related to LDAP browser. All the related URL's have been listed down for your reference. For any queries and technical help you can visit the URL for Customer Support.

Useful URL's

- OpenLDAP Server
  http://www.openldap.org

- iPlanet Directory Server
  http://iplanet.com/products/iplanet_directory/home_directory.html

- Active Directory Overview
  http://www.microsoft.com/windows2000/server/evaluation/features/dirlist.asp

Documentation

- A list of documentation like User Manuals, FAQ and technical specification documents are available on our Website:
  www.cygsoft.com.

Customer Support

- For any queries and technical help please e-mail:
  support@cygsoft.com indicating the name of the product and the nature of the problem.

Cygsoft, Inc.
21600 Lindbergh Drive
Los Gatos, CA 95033

Phone: (**408**) -**353-5764**
Fax: (**408**) -**353-5765**

For more information:
E-mail: support@cygsoft.com

Website: www.cygsoft.com