EmerLDAP

LDAP Synchronization Service
Version 2.0

Emerald Management Suite
IEA Software, Inc.

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Credits

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1. Introduction

The Emerald LDAP Synchronization service (Emerdap) is an interface to the Emerald database that allows synchronization of user information between a LDAP server and the Emerald database. This decreases the challenge of vendors trying to keep up with the database structure or program an ODBC interface into their products that may not be available on some platforms. Tight synchronization alleviates users from having to manage multiple user databases and offers greater scaleability and control for all products.

Emerdap will create and remove entries from an LDAP server as they are added and removed from Emerald. It can be configured to keep the two databases exactly the same or make exceptions based on predefined filters.

Note: Some knowledge of LDAP and an LDAP Server is required. We cannot support LDAP server specific problems.

2. Getting Started

Configuring Emerald

Before installing Emerdap you'll need to configure an Emerald External system and associate the Service Types you want synchronized with this system.   The Emerald External System Name must match the name of the Emerdap sync server you will be creating later.

LDAP Server

A free LDAP implementation is available from http://www.openldap.org.

After installing your LDAP server create a DN (Distinguished Name) to place your Emerald users under. For example ou=users,o=nasa. You can use the ldapadd utility included with some directory servers to add the DN if it does not already exist.

ldapadd –h localhost –D 'cn=Directory Manager' –w password

Ou=users,o=nasa

Ou=users

ObjectClass=OrganizationalUnit

$

A Java based LDAP client is also available from http://www.iit.edu/~gawojar/ldap/. This Base DN will be used later when configuring your sync server *(See Installing Emerdap)*

Next create an administrative user that has full access to your Base DN (or use the LDAP root /directory manager account) This user must not have any limitations set on the number of entries a search can retrieve or the amount of time a search operation can take. If Emerdap encounters these search limits database synchronization will fail.

While you're here you may want to turn up the debug level on your LDAP Server to help debug any problems.

External System

Test the system your integrating Emerald and LDAP with to make sure it can connect to your directory server and it's able to read entries within the Base DN you added above.

3. Installing an Emerdap Server

Start the Emerdap server in debug mode.

On Win32 platforms this is done by selecting Emerdap (Debug) from the Emerald program group. On the UNIX platform type './emerdap –debug' from your main Emerald directory (/usr/local/emerald)

```
D:\vss\emerdap\nsldap.exe
Debugging Emerald LDAP Sync 2.0.8.
Starting configuration Web server on TCP port 8012.
```

Welcome

Select an LDAP sync profile (Email) Qmail

(Email) Qmail
(Email) Netscape/IPlanet Messaging Server
(NIS) NIS+ and PAM/NSS UNIX Sync
(Generic) General contact information
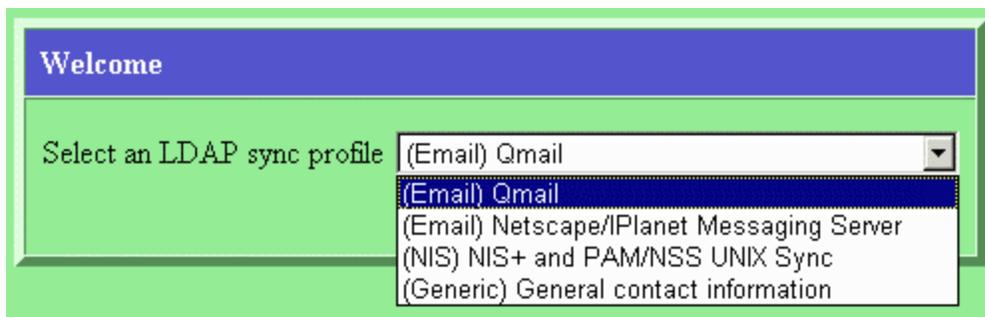
 Your display will have different Sync profiles from what's shown in the picture above. *(If there are no Sync profiles showing check the directory EmerAuth is installed to. It should contain an Emerdap sub directory with a file named 'emerdap.ini'. Enter the directory containing this file in the Directory field, then click 'Go'.)*

Now lets get started creating your sync server. Select the proper profile from the Sync profile screen.

General   TO add LDAP support to Qmail see http://www.nrg4u.com/

Show advanced options   ☐

Server name *(Unique name identifing this server*   `test`

Description
```
TO add LDAP support to Qmail see <A HREF=http
```

Configuration server   Enabled

Configuration server port   8012

Service name   Emerdap QMail sync

Service control   Install   Remove

>> Continue

Sync options   TO add LDAP support to Qmail see http://www.nrg4u.com/

Enable Add   ☑

Enable Update   ☑

Enable Delete   ☑

Exclude search filter   [   ]

Partial sync (*secs*)   [120]

Full sync (*secs*)   [1728000]

Partial neg sync (*secs*) [300]

Full neg sync (*secs*)   [172800]

Config update (*secs*)   [30]

[>> Continue]

LDAP server   TO add LDAP support to Qmail see http://www.nrg4u.com/

LDAP host   [bluemarble.iea-software.c]

LDAP port   [   ]

Bind DN   [cn=Directory Manager   ]

Bind password   [********   ]

Base DN   [ou=bluemarble   ]

SSL enabled   ☐

Netscape 4.x SSL cert [   ]

[>> Continue]

As you can see, you have your work cut out for you ✍ If the 'Help' button is available in the Sync Configuration section it will share some configuration pointers specific to the sync profile you selected.

ODBC Datasources

Enter the name of the ODBC Data source of your Emerald database. An sa or equivalent username and password is required to Install Emerald Database Scripts for this profile if they have not already been installed. It's recommended you use a database account that's part of the EmeraldApps group instead of sa after installing DB scripts.

The sync server must be restarted before any changes in the ODBC Data sources section will take effect.

Directory Server Configuration

Enter your LDAP connect information and Base DN - See Getting Started.

SSL Cert	Netscape cert7db certificate database file (from Netscape 4.x)
SSL Enabled	Enable secure SSL connection to LDAP Server

Directory Update Options

These options control what and how often to make changes in LDAP based on what has been changed in Emerald.

Enable Insert	Allow new entry's to be added to the directory.
Enable Update	Allow existing entries to be updated.
Enable Delete	Allow deleted entries and their attributes to be deleted from the directory.
Partial Sync	Seconds between running partial sync (Differential Add/Update)
Full Sync	Seconds between running full sync (Complete Add/Update/Delete)
Full Neg Sync	Seconds between running full negative sync (Complete Delete)
Partial Neg Sync	Seconds between running partial negative sync (Differential Delete)
Config Update	Seconds between checking for configuration changes. Changes can not take effect until currently running sync operations are completed.
Exclude Filter	An LDAP search filter where a match is used to exclude entries from being updated or deleted. Don't set to disable the exclude filter.

Debug

All Errors are logged unconditionally. When first starting the sync server it's a good idea to check all of these and review the output by using the debug option in the Service Control section. When your confident things are working turn off debugging. Some of these options - especially Search and Update can generate large amounts of debug data.

Routines	Entering and leaving update functions
Reads	Summary of data read from all sources
Updates	Entries and attributes modified
Adds	New entries and attributes
Deletes	Deleted entries
SQL	SQL specific operations
LDAP	LDAP specific operations
Search	LDAP search operations

Directory Sync Configuration

This section is for advanced users. It allows you to modify defaults for the current sync profile. Please don't make changes to these fields unless you understand their implications.

Sync Fields	These SQL column names will be mapped to LDAP attributes of the same name. (space delimited)
Object Class	Object class(es) to include in the entry. (Space delimited)
Primary Key	This Column Name (attribute) becomes the DN of each entry.

Service Control

Installs or removes this sync server from the Windows NT service manager. The 'Service Title' field represents the name of the service listed in service manager. 'Debug' runs the sync server in debug mode within a command window. All messages in this mode are shown in the command window and not logged to disk. Make sure this server is not already running as a service before using the debug option.