

Partitioning Users by Country In Learning Management System (LMS)

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Product: Lotus Learning Management System (LMS) v 1.0.5,
IBM Tivoli Directory Server V5.2, DB2 UDB 8.1.6

Task: *Configuring LMS for a multinational company*

Find out how to Configure LMS to a multinational company and partition users by country.

By Raghu Macha

In the present hi-tech global market, most of the companies have operations in multiple countries, such as IBM. You can implement Lotus Learning Management System (LMS) for the whole company and segment the users by country to make the employee training process easier and country specific. In this case, let's assume CGS (Computer Generated Solutions) has operations in US and Canada, and each country wants to see only their employees in the system to make their training management easier by LMS, the users in Canadian branch will have no visibility to US IBM and vice versa.

In this article, I show you how to achieve this task by using Organizational tree structure in LDAP directory and rostering the users that are available in the LDAP directory to LMS database.

This article assumes that you have installed and configured LMS v1.0.5 with DB2 v8.1.5 and IBM Tivoli Directory Server v5.2 by using the following Organizational tree structure:

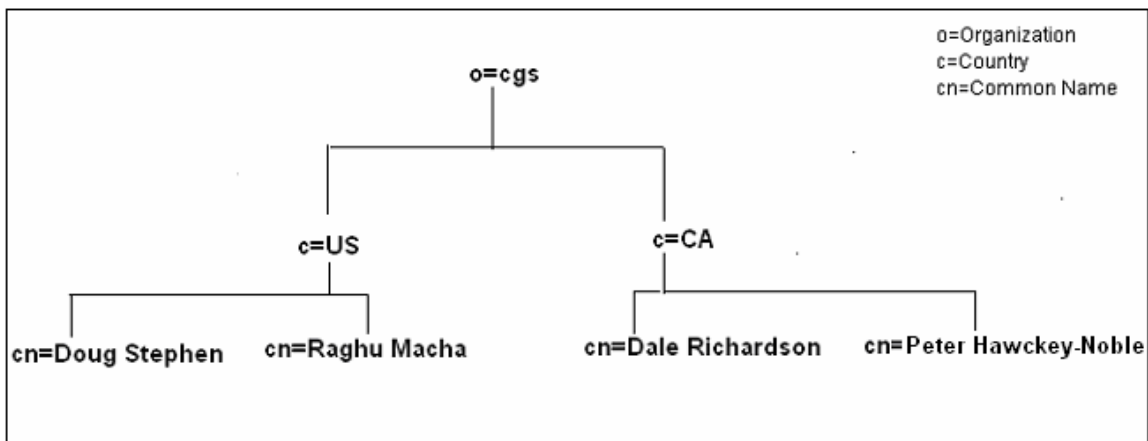


Figure: 1

Partitioning users by organizational tree (As specified in Figure: 1) structure involves limiting users' visibility to a certain branch of the directory tree. For example, you could partition a user to the "c=US,o=cgs" company branch of the directory tree.

Follow the steps below to configure LMS system for both the countries:

1. Create a LDIF file with a DN (Distinguished Name) for each country with a Common Name (CN), Country (C) and Organization (o) attributes.

Example:

```
dn: CN=Doug Stephen,C=US,O=cgs
dn: CN=Raghu Macha,C=US,O=cgs
dn: CN=Dale Richardson,C=CA,O=cgs
dn: CN=Peter Hackey-noble,C=CA,O=cgs
```

Note: The values for Country (C) attribute should be in ISO standard format (Example: US for USA, CA for Canada, BR for Brazil etc).

2. Import the above created LDIF file into LDAP (IBM Tivoli Directory Server).
3. Restart LDAP Server, HTTP Server (if applicable), DB2 Database and LMS server.
4. Create a text file (Example, c:\roster_sets.txt) specified by the **-f** option in the following table (see the table in step#6), and add the following line to the file:

```
Directory: */*/cgs
```

Note: In the above line, first * searches for all the CN values and the second * searches for all the countries in the user **dn** of the LDIF file.

5. Open settings.xml file (<WAS_Root>\installedApps\lms\IBMLotusLMSLMM.ear\lms-lmm-complete-23.war\WEB-INF\classes) and modify the middle="ou" to middle="c" in the following line:

```
<dnQualifiers first="cn" middle="ou" last="o"/>
```

Example: <dnQualifiers first="cn" middle="c" last="o"/>

Note: This setting enables you to search the users by using the above DN that we specified in step#1.

6. Run the following command to roster the users by using rosterCrt utility, this utility helps you to populate SEARCH_BASE field in USR table of LMM database.

```
<lms_install_root_directory>\bin> rosterCrt.bat <parameters>
```

Where parameters are:

-f	Name of the text file (for example, c:\roster_sets.txt).
-dbd	Database driver (for example, COM.ibm.db2.jdbc.app.DB2Driver).
-dbv	Database vendor (for example, DB2). The supported values are: DB2, Oracle, SQLServer, and Cloudscape.
-dbr	Database URL (for example, jdbc:db2:dbname).
-dbu	Name of database administrator (for example, db2admin).
-dbp	Password of database administrator (for example, password).
-ldapv	LDAP vendor (for example, IBM). The supported values are IBM, Lotus, iPlanet, and Microsoft.
-ldapr	LDAP URL (for example, ldap://server.cgs.com:389).
-ldapc	Starting context of LDAP directory hierarchy (for example, o=cgs). Note: o=cgs is your suffix DN, that you have created while you were configuring the LDAP.
-ldapu	Name of LDAP administrator (for example, cn=root).
-ldapp	Password of LDAP administrator (for example, password).
-u	Name of the LMS administrator (for example, lmsadmin). Note: You should have created LMS admin ID when the Learning Management System was installed.
-sb	the value used with this switch should be either be set (if you use this value, roster utility sets the search base (SEARCH_BASE) for the users listed in the LDIF file.

Example:

```
C:\IBM\lms\lib> rosterCrit -f c:\roster1.txt -dbd COM.ibm.db2.jdbc.app.DB2Driver  
-dbv DB2 -dbr jdbc:db2:lmm -dbu db2admin -dbp db2admin -ldapv IBM -ldapr  
ldap://  
lms.cgs.com:389 -ldapc o=cgs -ldapu cn=root -ldapp password -u lmsadmin -p  
pas  
sword -sb set
```

Now, you have rostered all the users from the LDIF file. Rostering users means, adding users and their attributes to database. If you open USR table under LMM (Learning Management Module) database, you'll see the table fields with the data that was defined in LDIF file along with SEARCH_BASE field, which is a required field for user segmentation:

Now, login to LMS with any of the defined users in LDIF file, you should be able to search only the employees who belong to your country!

Software used for this article:

Software	Version
Operating system	Windows 2000 Server, Service Pack 4
LMS	1.0.5
WebSphere Application Server	5.1
IBM HTTP Server	1.3.28
IBM Tivoli Directory Server	5.2
DB2 UDB	8.1 + FP 5