Migrating to IBM Rational DOORS 9.x configured to use Rational Directory Server

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Introduction

This document is intended to provide a complete step-by-step walk through to users planning to migrate / upgrade from Telelogic DOORS 8.x to Rational DOORS 9.x, where you intend to use external LDAP in version 9.x.

This document covers scenarios where user/groups are configured using either the native DOORS Local or Corporate LDAP (directly) possible with Telelogic DOORS 8.x.

In Rational DOORS 9.x, the Rational Directory Server tool is introduced for organizing & administering Users and Groups. It enables DOORS and other Rational products to communicate with Corporate LDAP or can also act as a Directory Server itself. Rational Directory Server operates in Corporate Mode and in Standalone mode.

- In Corporate mode, it enables Rational DOORS and other Rational products to communicate with the organizations' Corporate LDAP for User Authentication.
- In Standalone mode, it enables the user to create a centralized repository of all users & groups independently in the Rational Directory Server itself which can be used by DOORS and other Rational products for user authentication.

The product manual on Rational Directory Server is available using the link below:
http://publib.boulder.ibm.com/infocenter/rsdp/v1r0m0/topic/com.ibm.help.download.tds.doc/pdf5102/RDS_Product_Manual.pdf

Important Note:

1. To prevent any data loss of any unsaved data, ensure that there are no users logged into the DOORS 8.x database as there involves stopping of the DOORS 8.x database during this phase.

2. Take a backup of the DOORS 8.x database before making any changes to the database.

3. In the rest of the whitepaper mention of
   a. 8.x refers to version 8.x of Telelogic DOORS
   b. 9.x refers to version 9.x of Rational DOORS

DOORS 8.x with users configured locally or with Corporate LDAP to DOORS 9.x with Rational Directory Server

This scenario is applicable for users planning to migrate / upgrade from Telelogic DOORS 8.x which is configured to use native users & groups (DOORS local) or to use Corporate LDAP (directly) to Rational DOORS 9.x and configure it to use Corporate LDAP through Rational Directory Server for User Authentication or to use Rational Directory Server in Standalone mode for User Authentication.

Different phases involved in this migration are as shown below:

Phase 1 : Preparing 8.x Database for migration
Preparation refers to enabling or disabling certain properties of the DOORS database before its backup is taken.

Phase 2 : Migrating the 8.x DB to 9.x format
The backup from the previous phase. Migration refers to converting the backup to the higher version format. Information on where data needs to be placed, how to initiate the migration is covered. Result of this phase is that DOORS 8.x database is migrated to DOORS 9.x database format.

Phase 3 : Installing and configuring Rational Directory Server
DOORS is compatible with Rational Directory Server - Tivoli Version only.
The steps to install Rational Directory Server (Tivoli version) and configure it with Corporate LDAP (if installed in Corporate mode) is covered here.

Phase 4 : Configuring 9.x DB to use Rational Directory Server
To enable the use of Rational Directory Server for User Authentication certain changes to Rational DOORS 9.x DB are required which are covered in this phase.

Phase 5 : Migrating Users and User Groups to Rational Directory Server
Though the Directory configuration of Rational DOORS 9.x with Rational Directory Server is completed in Phase 4, the Roles of Users and Access rights of Users & Groups in the DOORS database will not be restored until the migration of XML files (created for both Users & Groups in Phase 4) into Rational Directory Server Administration is complete

Phase 1 : Preparing 8.x Database for migration
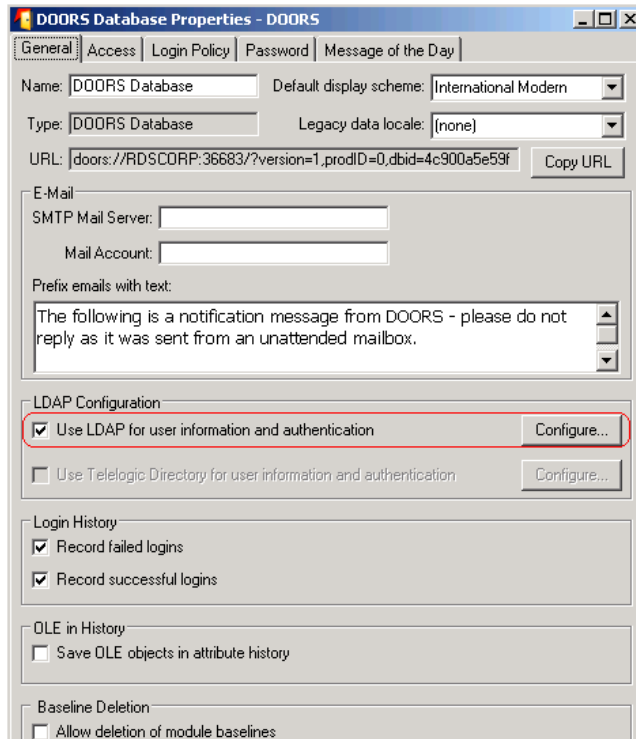
Prepare the DOORS 8.x database to be migrated:

1. Login to the Telelogic DOORS 8.x database as an 'Administrator'.

2. If the database is configured to use 'System Usernames', then disable it from the 'Login Policy' tab of the DOORS database properties screen as shown below.
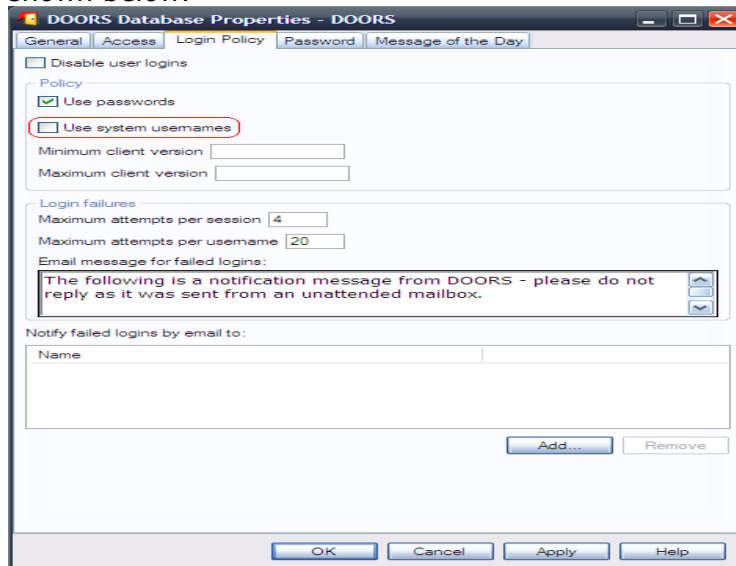
3. If the database is not configured with the 'Use Passwords' feature, enable it from the 'Login Policy' tab of the DOORS database properties screen as shown below.
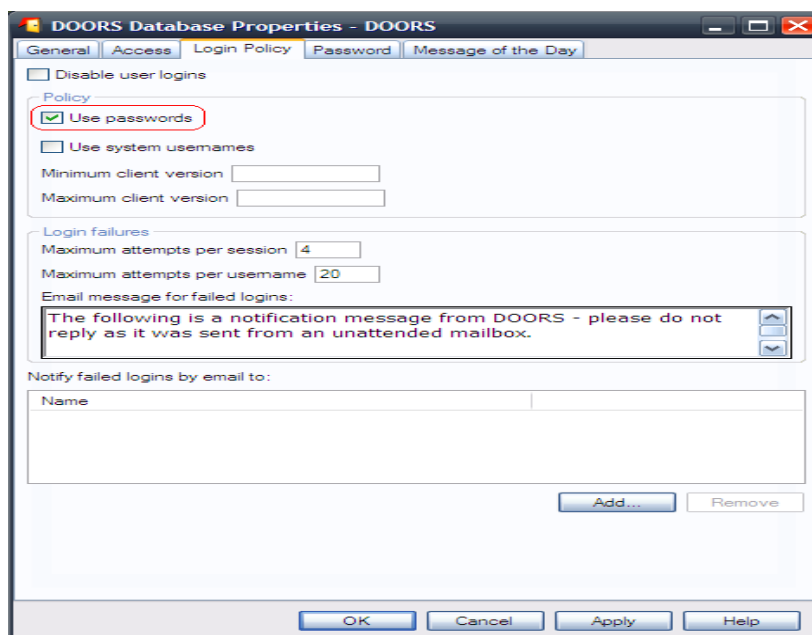
4. If DOORS 8.x database is configured to use Corporate LDAP (directly), then disconnect DOORS 8.x with Corporate LDAP prior to the DOORS 8.x database backup.

    a. In the Database properties of DOORS 8.x, Under 'LDAP Configuration', remove the check mark from the 'Use LDAP for user information and Authentication' as shown in the screenshot below.

Click on 'Apply' and Click 'OK' on the Database properties screen of DOORS.

5. Stop DOORS 8.x Database Server service and take a backup of the DOORS 8.x data folder.

Now DOORS 8.x database ready to be migrated to Rational DOORS 9.x.

Phase 2 : Migrating the 8.x DB to 9.x format

Migrate the DOORS 8.x database to 9.x database:

1. Install Rational DOORS 9.x Server and Rational DOORS 9.x Client on the desired machine.

    a. Click the link below for the install guide on how to install Rational DOORS 9.2 Server and Client.
    http://publib.boulder.ibm.com/infocenter/rsdp/v1r0m0/topic/com.ibm.help.download.doors.doc/pdf92/doors_install_guide.pdf

2. Paste a copy of the contents present in the backup data folder of Telelogic DOORS 8.x which was created in the backup process discussed in Phase 1 to the Rational DOORS 9.x data folder

    a. The default data folder of Rational DOORS 9.x for windows is located at `C:\Program Files\IBM\Rational\DOORS\9.x\data`

3. Restart the Rational DOORS 9.x Server service.

4. Launch the Rational DOORS 9.x Client and Login to it as an 'Administrator'.

    As soon as the 'Administrator' attempts to login, you will be prompted with the Migration Confirmation window as shown below.
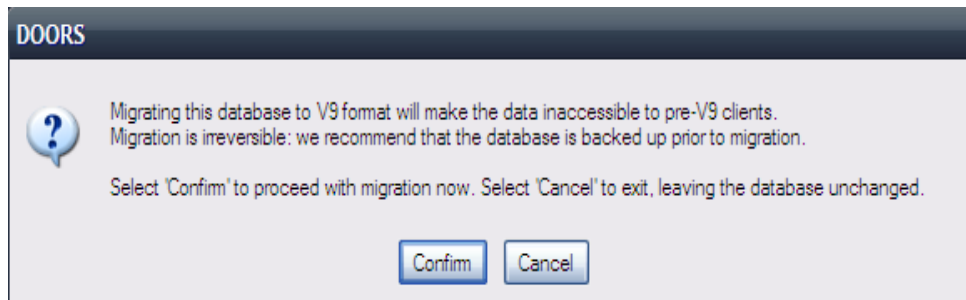
5. Click 'confirm' and the data will be successfully migrated to DOORS 9.x format.

Phase 3 : Installing and Configuring Rational Directory Server

Rational Directory Server is the server which holds the database and Rational Directory Administration is the client using which one can access Rational Directory Server database.

Below are the steps:

1. Decide the installation mode to install Rational Directory Server:
   The supported installation modes are:

   a. **Standalone mode** – In this mode, Rational Directory Server holds the Users & Groups information independently, where Rational Directory Server acts as the Directory Server (LDAP) itself. All User & Group administration has to be done in Rational Directory Administration.
   b. **Corporate mode** – In this mode Rational Directory Server can be configured to use Corporate LDAP for Users & Groups information and all User & Group administration has to be done in the Corporate LDAP.

      Note: If you want to enable the use of Corporate LDAP in DOORS 9.x, then you have to install Rational Directory Server in Corporate mode only.

2. Install Tivoli & DB2 together followed by Rational Directory Server installation and choose the desired mode of installation (Either Standalone mode or Corporate mode).

   a. Install Rational Directory Administration (if not installed during the Rational Directory Server installation)

   b. Click on the link below for the instructions on how to install Rational Directory Server and Rational Directory Administration.

      Rational Directory Server 5.1 install Guide for Windows
      http://publib.boulder.ibm.com/infocenter/rsdp/v1r0m0/topic/com.ibm.help.download.tds.doc/pdf51_tiv/RDS_Install_Guide_Windows_51.pdf

      Rational Directory Server 5.1 install guide for UNIX
      http://publib.boulder.ibm.com/infocenter/rsdp/v1r0m0/topic/com.ibm.help.download.tds.doc/pdf51_tiv/RDS_Install_Guide_Unix_51.pdf

3. If Rational Directory Server is installed in Standalone mode, then login to Rational Directory Administration as 'tdsadmin' user to create users and groups.

Note: It is possible to migrate Users & Groups through XML files from Rational DOORS 9.x to Rational Directory Server (Standalone mode) which creates the same set of users & groups in Rational Directory Server and will restore the User level and Group level Access rights as well in DOORS. The process of creating XML files is discussed in Phase 4.

4. If Rational Directory Server is installed in Corporate mode, then follow the steps mentioned below.

   - Login to Rational Directory Administration as 'tdsadmin' user.
   - Create a partition with the Corporate LDAP details.
   - Configure MetaGroups (if required) for user and group filtering.
   - Users and Groups information has to be migrated from Rational DOORS into Rational Directory Server (Corporate Mode) to restore User roles and User & Group level Access rights back in DOORS after connecting it to Rational Directory Server. This is discussed in Phase 5.

Note: It is important to get the partition information like the User Logon attribute, Search base and others accurate while creating the partition for the first time as modifying partition later is not supported.

If you plan to use 'System Usernames' with Rational DOORS then choose 'SamAccountName' as the 'User Logon Attribute' while creating the Partition in Rational Directory Administration and ensure every user in the Corporate LDAP has the 'uid' field set with the appropriate value.

Note: If the Corporate LDAP is Microsoft Active Directory, then by default the 'uid' field of all the users will be blank.

For more information on this topic, refer to 'Creating Partitions' under Chapter 3 of the Rational Directory Server Product Manual. Click on the link below to access the Rational Directory Server Product manual.
http://publib.boulder.ibm.com/infocenter/rsdp/v1r0m0/topic/com.ibm.help.download.tds.doc/pdf51_tiv/RDS_Product_Manual_51.pdf

Click on the link below for instructions on 'how to configure MetaGroups in RDA'.
http://www-01.ibm.com/support/docview.wss?uid=swg21418307

## *Phase 4 : Configuring 9.x DB to use Rational Directory Server*

Once Rational DOORS 9.x database is connected to Rational Directory Server, the local User list & Group list will be removed and Access rights of all the items in the DOORS database will be reset (until the XML file migration discussed in Phase 5 is completed in Rational Directory Administration). As soon as DOORS is connected to Rational Directory Server, all the users & groups listed in Rational Directory Server will be displayed in Rational DOORS. Switching back to the Local DOORS User directory will not restore native Users & Groups, hence taking a backup of the Rational DOORS 9.x database prior to these modifications will help us revert back to the earlier state.

Follow the steps mentioned below to make the necessary changes in Rational DOORS 9.x database:

1. Ensure there are no users logged into the DOORS 9.x database.

2. Login to the Rational DOORS 9.x client as the 'Administrator' User.

    Before proceeding to the next step, ensure all the users in the DOORS 9.x database have System Usernames assigned.

    You can check the System Username field for a user in the tab of that user's properties window as shown below.
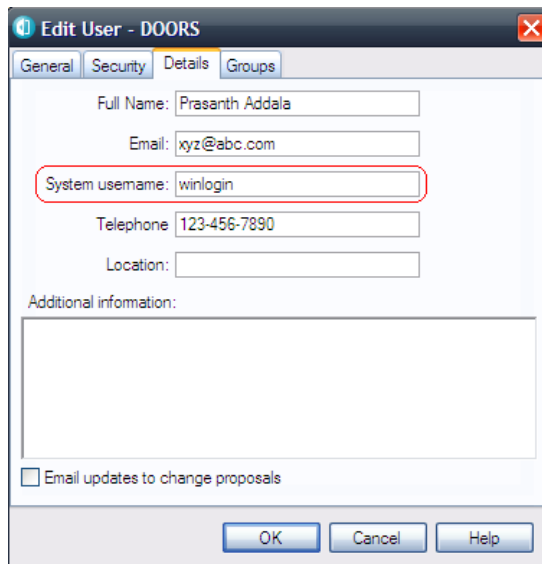
    Note: Once all the users in the DOORS database have the System Usernames assigned, proceed to the next step.
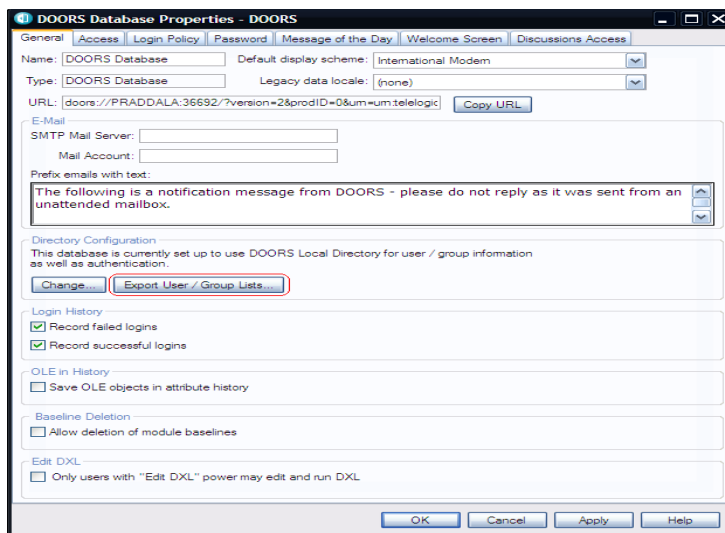
3. In the DOORS database explorer, right click on the DOORS database and open the DOORS database properties screen.

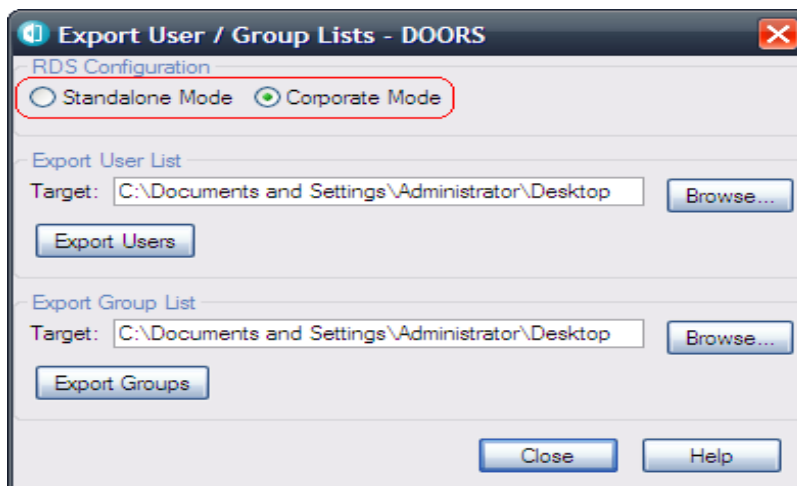   Before connecting DOORS 9.x database to use Rational Directory Server,

kindly export User and Group lists into XML files in DOORS. These XML files can later be used to migrate the user and group information into Rational Directory Server.

Follow the steps mentioned below to create XML files.

4. In the DOORS database properties window, click on 'Export User / Group Lists' as shown in the screenshot below.


5. Depending on the mode of installation of Rational Directory Server, select the appropriate mode in the Export User / Group Lists window as shown in the screenshot below and then create the XML files for Users and Groups.

6. After successful creation of the XML files, connect DOORS 9.x database to Rational Directory Server.

Connecting DOORS to Rational Directory Server

7. In the DOORS database properties screen, Under 'Directory Configuration', click on 'Change' and enter the details of the Rational Directory Server machine in the appropriate fields as shown below.
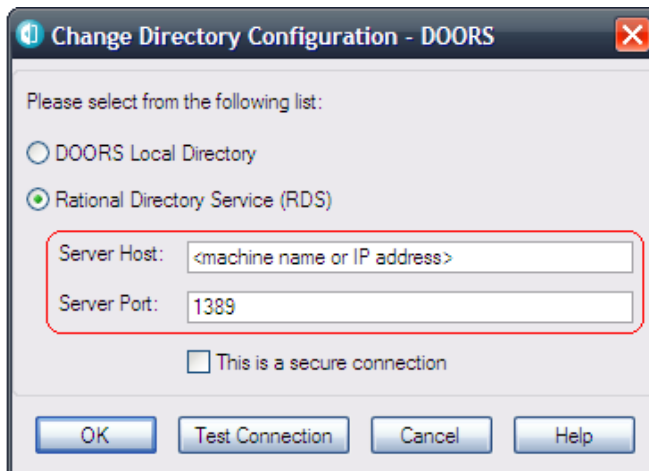
- In the 'Server Host' field of the above screen, you can enter the machine name or the IP address of the machine on which Rational Directory Server is installed.

- In the 'Server Port' field of the above screen, you can enter '1389' (default port number) for non-secure connectivity or can enter '1636' (default port number) for secure connection to Rational Directory Server.

For using port '1636' (SSL) in DOORS:

a. If Rational Directory Server is installed in Corporate mode, then you have to setup the partition in Rational Directory Server with the secure port details of the Corporate LDAP (i.e., the port number used in the partition should be '1636') and should also have to import the CA certificate from the Active Directory Server into every DOORS clients' Key Database file (tdsclientkey.kdb).

b. If Rational Directory Server is installed in Standalone mode, then you have to import the CA certificate from the Active Directory Server into every DOORS clients' Key Database file (tdsclientkey.kdb).

For more information on this, refer to 'Enabling Secure Sockets Layer (SSL) security' under Chapter 3 of the Rational Directory Server Administration Guide. Given below is the link for the same. http://publib.boulder.ibm.com/infocenter/rsdp/v1r0m0/topic/com.ibm.help .download.tds.doc/pdf51_tiv/RDS_Administration_Guide_51.pdf

8. After giving the appropriate Server host name and Server port number, click on 'Test connection' to confirm the connectivity between Rational DOORS and Rational Directory Server. If the test connectivity is successful then click on 'OK' to proceed with the Directory Configuration in DOORS.

9. You will be prompted with a confirmation screen like the one shown below
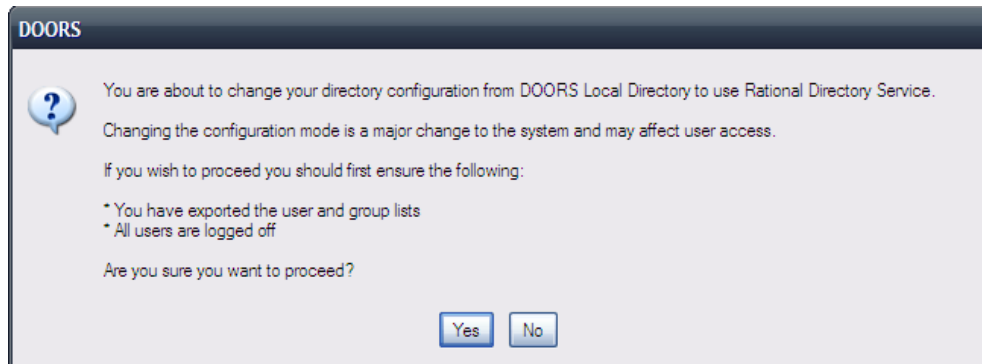
10. Clicking on 'Yes' on this screen will configure Rational DOORS 9.x to use Corporate LDAP through Rational Directory Server. Close the DOORS 9.x client.

11. Restart the DOORS 9.x client and login as the 'Administrator' user.

12. Click on 'Tools' and click on 'Manage Users'.

13. In the Manage Users window, Click on the 'Users' tab, type the symbol **'*'** and click on 'Refresh', this should display the users from Corporate LDAP as defined in Rational Directory Server. In the similar way, Click on the 'Groups' tab, type the symbol **'*'** and click on 'Refresh', this should display the groups from Corporate LDAP as defined in Rational Directory Server.

Note: This step has to be performed prior to the migration of the XML files into Rational Directory Administration (as discussed in Phase 5) as it helps in creating the extended objects in the Rational Directory Server database.

Phase 5 : Migrating Users and User Groups to Rational Directory Server

Migrate the XML files of User/Group Lists of Rational DOORS 9.x to Rational Directory Server Administration:

1. Login to Rational Directory Administration as 'tdsadmin' user.

2. Click on 'Console' and Click on 'Migrate' as shown in the screenshot below.
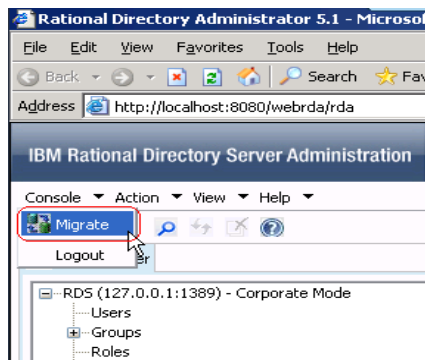
3. In the Migration Configuration Wizard, select the migration source as XML Data file.

4. Choose the Migration type as 'User Migration' and browse for the XML file which holds the User list of DOORS.

5. Upload the file to the server by clicking on 'Upload' and then click on 'Finish'.

6. The Pre-Migration Analysis will now be complete and the user records will be listed accordingly under Definitive or Conflicting or Duplicate records depending on the information each user record holds. Select the User records accordingly and migrate them to the Rational Directory Server Database by clicking on 'migrate'.

Perform the same steps for Groups migration as well, the only change would be in Step 4 of Phase 5 where you need to choose the migration type as 'Group Migration' instead of 'User migration' and browse for the XML file which holds the Group list of DOORS.

For detailed information on Migration of Users and Groups from DOORS to Rational Directory Server, review Chapter 5 of the Product manual of Rational Directory Server by clicking on the link below.
http://publib.boulder.ibm.com/infocenter/rsdp/v1r0m0/topic/com.ibm.help.download.tds.doc/pdf51_tiv/RDS_Product_Manual_51.pdf

CONCLUSION

The implementation of Rational Directory Server helps you to have a centralized repository of all users and groups which can be used by most of the Rational Products for User and Group information and authentication. Having this integration will enable you to use your Corporate LDAP credentials (Rational Directory Server in Corporate mode) or to have a common repository with all user and group information which acts as an LDAP itself (Rational Directory Server in standalone mode) when logging into most of the Rational Products which are configured to use Rational Directory Server.

This document can be used as a reference to identify the work flow of the process involved in migrating from DOORS 8.x to Rational DOORS 9.x when there exists Corporate LDAP configuration.

As a summary, this document can prove effective as a checklist and as an illustration of various phases involved when migrating an existing setup of Telelogic DOORS to Rational DOORS along with Rational Directory Server and Corporate LDAP (if applicable).

References

The following were used in references or as other sources of information:

- http://publib.boulder.ibm.com/infocenter/rsdp/v1r0m0/topic/com.ibm.help.download.tds.doc/pdf5102/RDS_Product_Manual.pdf

- http://publib.boulder.ibm.com/infocenter/rsdp/v1r0m0/topic/com.ibm.help.download.doors.doc/pdf92/doors_install_guide.pdf

- http://publib.boulder.ibm.com/infocenter/rsdp/v1r0m0/topic/com.ibm.help.download.tds.doc/pdf51_tiv/RDS_Install_Guide_Windows_51.pdf

- http://www-01.ibm.com/support/docview.wss?uid=swg21418307

- http://publib.boulder.ibm.com/infocenter/rsdp/v1r0m0/topic/com.ibm.help.download.tds.doc/pdf51_tiv/RDS_Administration_Guide_51.pdf