Retek® Integrated Store Operations™ 10.4

Installation Guide

Customer Support

Customer Support hours

Customer Support is available 7x24x365 via email, phone, and Web access.

Depending on the Support option chosen by a particular client (Standard, Plus, or Premium), the times that certain services are delivered may be restricted. Severity 1 (Critical) issues are addressed on a 7x24 basis and receive continuous attention until resolved, for all clients on active maintenance. Retek customers on active maintenance agreements may contact a global Customer Support representative in accordance with contract terms in one of the following ways.

Contact Method	Contact Information
E-mail	support@retek.com
Internet (ROCS)	rocs.retek.com Retek's secure client Web site to update and view issues
Phone	+1 612 587 5800

Toll free alternatives are also available in various regions of the world:

Australia	+1 800 555 923 (AU-Telstra) or +1 800 000 562 (AU-Optus)
France	0800 90 91 66
Hong Kong	800 96 4262
Korea	00 308 13 1342
United Kingdom	0800 917 2863
United States	+1 800 61 RETEK or 800 617 3835

Mail	Retek Customer Support Retek on the Mall 950 Nicollet Mall Minneapolis, MN 55403

When contacting Customer Support, please provide:

- Product version and program/module name.

- Functional and technical description of the problem (include business impact).

- Detailed step-by-step instructions to recreate.

- Exact error message received.

- Screen shots of each step you take.

Contents

Chapter 1 – Introduction

Retek® ISO™ is deployed in a physically distributed architecture called Retek® Integrated Store Operations™ (ISO). ISO's physically distributed architecture creates a multi-tiered scalable system designed to handle a large workload without performance degradation. This architecture has configurable physical and working tiers for workload distribution and redundancy purposes.

The ISO platform allows for multiple network designs and supports multiple, logical tiers. ISO is a flexible architecture that can scale from two tiers to five tiers without changing the code. The three main tiers of the ISO architecture are the presentation tier, middleware tier, and application server tier. Each of these tiers functions best as standalone tiers within the ISO architecture. A fourth tier is the database tier. It is also recommended that this tier be a standalone tier with the database running on a dedicated server so the application servers can connect to the database.

The application servers contain multiple containers. A container is related to a unique Java® Virtual Machine (JVM). Each container can have several instances of a component, and each component corresponds to a specific SIM service. Distributing the workload between multiple containers allows you to horizontally scale the platform by introducing more instances of a container or service. As the request load for a service increases, more instances of a service are automatically created to handle the increased workload.

Also, if the workload warrants, you can vertically scale the ISO platform by adding more application servers. Because the SIM services are running on multiple application servers in a stateless system, the ISO platform does not need separate configurations for each application server. The clients are never aware that additional application servers have been added to help with the workload.

The middleware tier consists of a remote naming server (RNS). The RNS is responsible for storing references to remote objects. The clients will call on the RNS for references to services that are running on one or more application servers. The naming service will distribute these services to the clients. Basically, the RNS is a communication bridge between the clients and the application servers.

Each service corresponds to a remote reference that is stored on the RNS. When the RNS distributes a remote reference, it is really distributing a reference to a component within a container. These components are the SIM services that the application servers provide to the clients.

Figure 1-1 shows the five working tiers within the ISO platform.
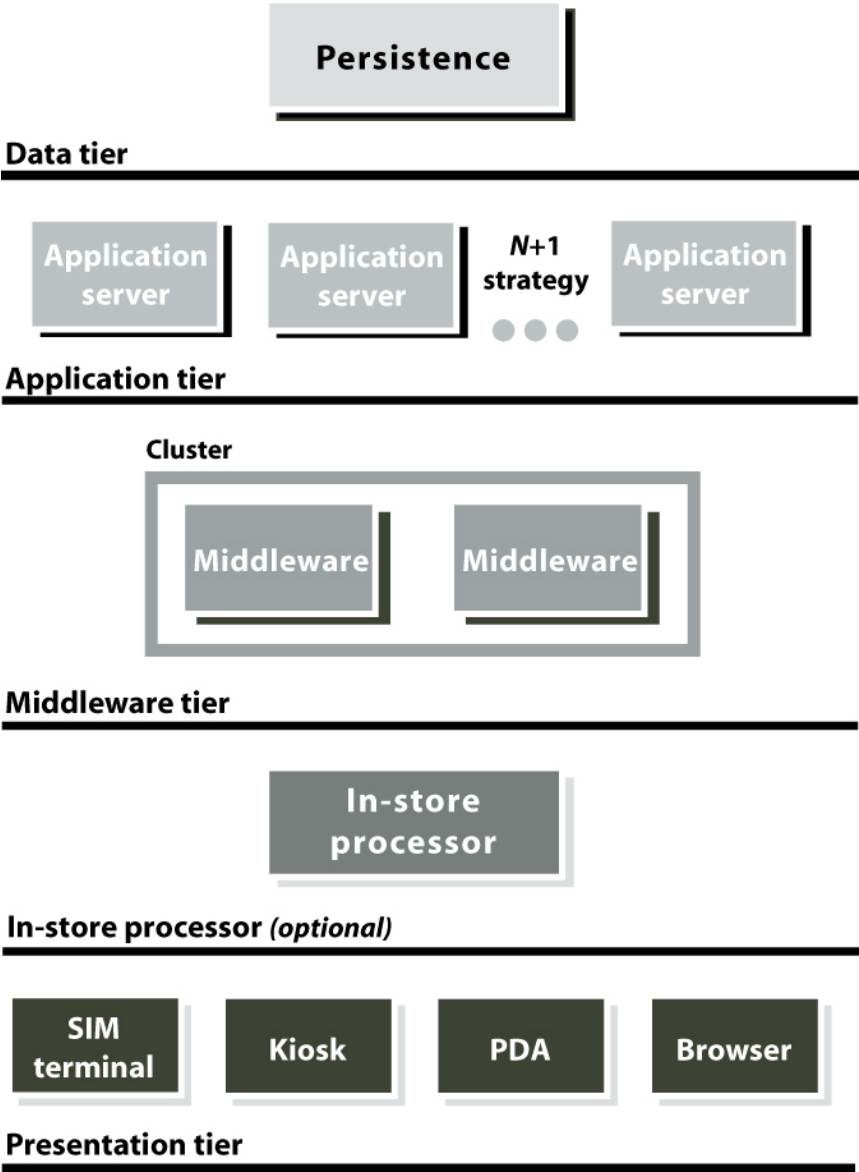
Figure 1-1   SIM employed in a five-tier architecture

    Note: Depending on the number of tiers in your architecture, the ISO platform may not look exactly like Figure 1-1.

    Note: SIM does not utilize the In-store processor tier of ISO.

The table below lists and describes the five working tiers the ISO platform.

Tiers within the ISO Platform	
Tier	**Description**
Presentation tier	The presentation tier consists of the store-level clients on which SIM runs. The presentation tier allows for multi-channel presentation without changing the architecture's back-end.
In-store processor (optional)	In-store processors act as additional application servers and allow for thinner clients. This tier is an optional tier in the ISO logical architecture.
Middleware tier	The middleware tier consists of the RNS. The RNS is a single server or a clustered configuration of servers sharing the same virtual IP address. The RNS provides the store-level clients on the presentation tier with references to SIM services running on the application tier.
	The middleware tier handles high availability, fault tolerance, remote object binding or lookup, and load distribution. The middleware can reside at the application tier level in a non-production environment.
	The IP address of the RNS is all that is required for the clients.
Application tier	The application tier is where the application servers reside. All client requests are processed on the application servers. The application servers communicate directly with the database tier, process the data, and return the results to the clients.
	The application tier provides vertical scalability and horizontal scalability for the presentation tier and employs an N+1 strategy for high availability. Application servers within this tier house remote components or SIM services that can be accessed from anywhere on the network.
Database tier	The database tier is where the database servers and data reside. This tier, also called the persistence or data tier, is completely transparent to the client while providing data persistence. This tier can contain legacy applications such as inventory management and merchandising systems that provide behavior for current applications. This tier is configured based on the preferences and needs of your business.

Chapter 2 – System requirements

Before you can install Retek ISO, you should ensure that your information systems can adequately support the ISO application. This chapter lists the recommended hardware and software requirements for running ISO on your clients (including handheld wireless devices and printers), application servers, and database servers.

Because the ISO architecture is a flexible platform, system requirements for the clients, application servers, and database servers will vary depending on each company's business requirements.

Client requirements

The following are the minimum requirements for the store-level clients:

- Java Runtime Environment (JRE) 1.4.X (Java 2)

- 128 MB of RAM

- 1 GB of disk space (includes operating system)

- TCP/IP support

- Minimum of 800 x 600 video resolution

- Pointing device (mouse) and keyboard

- Full-time network connection to data tier

- Tethered scanner (optional)

Supported operating systems for clients

The store-level clients support the following operating systems:

- Windows 2000

- Windows XP®

    Note: Retek does not recommend or explicitly support terminal sessions such as MTS or Citrix.

Wireless handheld devices and printers

Contact Retek for requirements, recommendations, and evaluations of currently deployed equipment for operating SIM on wireless handheld devices and printers. The Retek ISO – Wireless Foundation™ has a component that runs on the handheld device and a corresponding component that runs on the application server. Wireless component installation and configuration is not covered in this installation guide.

Application server requirements

The following are the minimum requirements for any application servers that support a JVM:

- Java 1.4.1

      Note: Native hardware-specific JREs on UNIX platforms may perform better than other JREs. For example, the Sun JVM may perform better than an IBM JVM on a Sun server.

- 512 MB of RAM

- 1 GB of disk space

- TCP/IP support

- Oracle® 9.2.0.X Client needs to be installed on the application server prior to performing the install

- WinZip® (Windows) or the zip/unzip utilities(UNIX) need to be installed on the application server

Supported operating systems for application servers

The application servers support the following operating systems:

- Solaris

- HP-UX

- AIX

- Windows 2000

The table below lists operation requirements of the application server.

Operation Requirements for the Application Servers	
Feature	**Requirements**
Memory usage	Each service on an application server requires a minimum of 4 MB of RAM and 16 to 20 MB of free memory.
Service monitoring	Service usage and traffic patterns should be monitored and idle instances of services should be terminated.
Maintenance: reboot/kill idle services	The system services should be restarted during a regularly scheduled maintenance routine. Restarting services should be done during off-peak and idle times.
Disk usage	To prevent logging errors, the disk partition on the application server should be a minimum of 1 GB of disk space.
Log Directory	Application needs 'WRITE' authority to the directory where the log files are written.

Database requirements

The following are the minimum requirements for the database servers:

- Oracle® 9.2.0.X RDBMS (Enterprise Edition)

- 1 GB of RAM

Chapter 3 – Installation and start sequences

Retek® SIM distribution CD

The Retek Store Inventory Management (SIM) Distribution CD has all the configuration and data files to install and run SIM on the clients and app servers. This CD also has resources and source code for developers to extend and customize SIM. The distribution CD for the SIM application contains the following .zip files under the Retek_SIM(version) directory:

- **clientWindows.zip**—contains the data and files necessary to install and run SIM on a client running Windows

- **clientLinux.zip**—contains the data and files necessary to install and run SIM on a client running Linux.

- **developer.zip**—contains the data, resources, and source files necessary for developers to extend and customize SIM.

- **reporting.zip---**contains default report templates, database views, a wb application and instructions to support integration with Crystal Reports Enterprise 10.

- **serverUnix.zip**—contains the data and files necessary to run SIM on an application server running UNIX.

- **serverWindows.zip**—contains the data and files necessary to run SIM on an application server running Windows.

    Note: Java® and WinZip® are not distributed on the Retek Store Inventory Management Distribution CD but will need to be installed on both the client and server machines before proceeding with the installation. In UNIX environments, the unzip utility must be installed and included the user's PATH variable setting to proceed.

Installation process

The installation process for ISO may vary depending on the architecture and number of tiers in which you deploy ISO. However, the startup sequence remains the same regardless of the platform architecture in which ISO is deployed.

The following is the installation process and startup sequence for deploying ISO:

1   Install ISO Directory Structure on the Application Server.

2   Install the ISO database objects.

3   Configure ISO Application Server.

4   Install and configure ISO on the client.

5   Start the ISO application server and client.

Install ISO directory structure on the application server

The first step in the installation process is to copy the ISO program files on the application servers. ISO must be copied on a server that has IP connectivity to other back-office servers.

 Note: The Java Runtime Environment (JRE) 1.4.X must be installed on the application server before installing SIM on the application servers. To verify the current version of Java loaded on an application server, type **java -version** at a command line.

To copy the ISO program files to the application servers:

1   Unzip the iso_10.4_install.zip file.

2   Copy the appropriate server<Platform>.zip file to the directory where ISO will be installed on your application server. The directory where ISO will be installed will be referred to as ISO_INSTALL_DIR going forward. Unzip the server<Platform>.zip file using either WinZip (Windows) or the unzip utility (UNIX/Linux). If using UNIX, run the following command after unzipping the file:

   ▪ chmod –R 755 server<Platform>

Create the ISO database and user

Create the ISO database

See Appendix A for sample database creation scripts.

Create the ISO database user

See Appendix B for user creation.

Install the ISO database objects

    📖   **Note:** You will need Oracle 9i client installed on your application server. SQLPlus is required to build the ISO database objects. This install assumes that you have created a ISO user on the database- the user must have permissions to create and drop database objects

1   Once the ISO database user has been created, change directories to ISO_INSTALL_DIR/server<Platform>/retek/sim/files/prod/database/arts_oracle.

2   If you are installing ISO to be integrated with RMS, run the following command once you have established a SQLPlus session as the ISO database user. If you are not integrating with RMS, skip this step and proceed to step #3.

```
SQL>@rebuild_for_rms_copy.sql
```

    📖   **Note:** This script drops all existing SIM objects before rebuilding them. There will be error messages caused by the attempt to drop non-existent objects the first time this is run. These can be ignored.

3   When installing a stand-alone version of ISO that is not integrated with RMS, run the following command once you have established a SQLPlus session as the ISO database user: Skip this step if the command in step #2 was completed.

```
SQL>@rebuild.sql
```

    📖   **Note:** This script drops all existing SIM objects before rebuilding them. There will be error messages caused by the attempt to drop non-existent objects the first time this is run. These can be ignored.

4   While in the same directory as #3, run the following file from your SQLPlus session to insert demo ISO user data. If you choose to load this data, the data seeding step must be complete (continue past the Run the RMS data seeding utility step below and then run the sql script)

```
SQL>@sim_users.sql
```

Configure SIM application server

    Note: Directory structures going forward will use the UNIX file separator standard - /. If the install is on a Windows machine, the file separator will actually be \ . In addition, scripts will be referred to as having a .sh extension – when performing a Windows installation the actual extension will be .bat.

1   Modify the network.cfg file located at ISO_INSTALL_DIR/server<Platform>/retek/sim/files/prod/config/. Change the following settings:

<NamingServerIpAddress>	IP address of ISO application server
<port#>	Naming Server Port – recommend 40000
<AppServerIpAddress>	IP address of ISO application server
<port#>	Application Server Port – recommend 40001

    Note: The default port settings are 40000 and 40001 – if you wish to change these port settings, the scripts rns.sh and node_rns.sh. (located at ISO_INSTALL_DIR/server<Platform>/retek/sim/bin) will need to be changed to pass in the appropriate non-default port numbers.

2   Modify the jdbc.cfg file located at ISO_INSTALL_DIR/server<Platform>/retek/sim/files/prod/config/.

Change the following settings: It is assumed that the Oracle listener is running on port 1521 of the ISO database machine – if that is not correct, the port number will need to be changed as well.

<SIMDBMachineName>	Server where ISO db is located
<SIMDBName>	Oracle SID of ISO db
<SIMUserId>	ISO database user id
<password>	ISO database user password

If integrating with Retek RMS, you will need to change the setting under 'RMS Oracle Configuration' as well. Change the following settings: Once again, it is assumed that the Oracle listener is running on port 1521 of the RMS database machine – if that is not correct, the port number will need to be changed as well.

<RMSDBMachineName>	Server where RMS db is located
<RMSDBName>	Oracle SID of RMS db
<RMSUserId>	RMS database user id
<password>	RMS database user password

3   Modify the messaging.cfg file located at
    ISO_INSTALL_DIR/server<Platform>/retek/sim/files/prod/config/. Change the BROKER
    setting to point at the server name and port where the JMS server is running:

    BROKER=<server name>:<port>

     Note: USERNAME and PASSWORD should be blank

4   Modify the file wireless_services.cfg located at
    ISO_INSTALL_DIR/server<Platform>/retek/sim/files/prod/config/. Set PORT equal to the
    port you want your wireless container to listen on (default is 40002). Ensure that the PORT
    you choose is not in use by another application.

    A known Solaris bug requires the following changes to WirelessContainer.xml located at
    ISO_INSTALL_DIR/server<Platform>/retek/sim/files/prod/tuning : If you are running your
    application server on Solaris, add the following setting in the commandLineArgs tag and
    change the length attribute:

```
<commandLineArgs length="6">

<java.lang.String>CONTAINER_FILE=WirelessContainer</java.lang.String
>

<java.lang.String>STATS_CLASS=com.chelseasystems.cr.node.UnixProcess
Stats</java.lang.String>

<java.lang.String>DEFAULT_GROUP=RTK.USA.Rochester.MN.Server</java.la
ng.String>

<java.lang.String>DEVICE_TYPE=1</java.lang.String>

<java.lang.String>DEVICE_ID=WirelessContainer</java.lang.String>

<java.lang.String>file.encoding=Cp1252</java.lang.String>

</commandLineArgs>
```

    Contact Retek for requirements, recommendations, and evaluations of currently deployed
    equipment for operating SIM on wireless handheld devices and printers.

5   Modify the file ldap.cfg located at
    ISO_INSTALL_DIR/server<Platform>/retek/sim/files/prod/config/. Change the following
    settings:

<LDAPServerName or IP Address>	IP address of LDAP server machine
<LDAPPort>	Port LDAP is listening on (default is 389)
<LDAPServerBrand>	Brand of LDAP server (default is OpenLDAP)
<LDAPuserLoginName>	LDAP user login
<LDAPuserLoginPassword>	LDAP user password
<LDAPuserLoginName>	LDAP user login(second occurrence)

  Note: LDAP configuration is further discussed in Chapter 4

Run the RMS data seeding utility

  Note: There is a known issue with the IBM JRE on the AIX platform.. If you are using
    AIX with the JRE provided with IBM, edit the file java.security (located at
    JAVA_HOME/jre/lib/security). Remove the following line if it exists:
    security.provider.3=com.ibm.crypto.provider.IBMJCE

1   If your SIM installation is to be integrated with RMS, do the following: Change directories
    to ISO_INSTALL_DIR/server<Platform>/retek/sim/bin.

2   Run the command DataSeeding.sh

    This will load seed data from the RMS schema indicated in the jdbc.cfg file into the SIM
    database.

Install and configure SIM on the client

To copy the SIM program files on a client machine:

1   Unzip the Retek_ISO<version>.zip file. Change directories to the resulting
    Retek_ISO<version> folder.

2   Copy the appropriate client<Platform>.zip file to the directory where SIM will be installed on
    the client. The directory where SIM will be installed will be referred to as
    ISO_CLIENT_INSTALL_DIR going forward. Unzip the client<Platform>.zip file.

3   Modify the network.cfg file located at
    ISO_CLIENT_INSTALL_DIR/client<Platform>/retek/sim/files/prod/config/. Change
    <NamingServerIpAddress> and <AppServerIpAddress> to the name of the machine where
    the ISO application server was installed. The ports will also to have to match with the port
    numbers where the application server is listening.

Start the SIM application server and client

Start the application server

1   After you have completed the application server, client, and database portions of the install, you will need to start the application server.

2   While logged in to the application server, change directories to ISO_INSTALL_DIR/server<Platform>/retek/sim/bin and run the script startemall.sh. You can view the script to determine the three subscripts that are being called by this master script.

    The application server should now be running. The log files generated by the application server are located at ISO_INSTALL_DIR/server<Platform>/retek/sim/log.

Start the client

1   On the client machine, change directories to ISO_CLIENT_INSTALL_DIR/client<Platform>/retek/sim/bin. Run the command rss.sh

Configure RPOS application server

1   Modify the network.cfg file located at ISO_INSTALL_DIR/server<Platform>/retek/rpos/files/prod/config/. Change the following settings:

<NamingServerIpAddress>	IP address of ISO machine
<port#>	Naming Server Port – recommend 3000
<AppServerIpAddress>	IP address of ISO machine
<port#>	Application Server Port – recommend 3001

   Note: The default port settings are 3000 and 3001 – if you wish to change these port settings, the scripts rns.sh and node_rns.sh. (located at ISO_INSTALL_DIR/server<Platform>/retek/rpos/bin) will need to be changed to pass in the appropriate non-default port numbers.

2   Modify the jdbc.cfg file located at ISO_INSTALL_DIR/server<Platform>/retek/rpos/files/prod/config/.

   Change the following settings: It is assumed that the Oracle listener is running on port 1521 of the SIM database machine – if that is not correct, the port number will need to be changed as well.

<DBMachineName>	Server where ISO db is located
<DBName>	Oracle SID of ISO db
<UserId>	ISO database user id
<password>	ISO database user password

3   Modify the messaging.cfg file located at
ISO_INSTALL_DIR/server<Platform>/retek/rpos/files/prod/config/. Change the BROKER
setting to point at the server name and port where the JMS server is running:

BROKER=<server name>:<port>

    📖   **Note:** USERNAME and PASSWORD should be blank

4   To complete data setup, change directories to
ISO_INSTALL_DIR/server<Platform>/retek/rpos/bin and run the script
updateStoreDataFiles.sh.

Install and configure RPOS on the client

To copy the RPOS program files on a client machine(steps #1 and #2 are not necessary if the SIM
client has already been installed)

1   Unzip the Retek_ISO<version>.zip file. Change directories to the resulting
Retek_SIM<version> folder.

2   Copy the appropriate client<Platform>.zip file to the directory where RPOS will be installed
on the client. The directory where SIM will be installed will be referred to as
ISO_CLIENT_INSTALL_DIR going forward. Unzip the client<Platform>.zip file.

3   Modify the network.cfg file located at
ISO_CLIENT_INSTALL_DIR/client<Platform>/retek/rpos/files/prod/config/. Change
<NamingServerIpAddress> and <AppServerIpAddress> to the IP address of the machine
where the SIM application server was installed. The ports will also to have to match with the
port numbers where the application server is listening.

Start the RPOS application server and client

Start the application server

1   After you have completed the application server, client, and database portions of the install,
you will need to start the application server.

2   While logged in to the application server, change directories to
ISO_INSTALL_DIR/server<Platform>/retek/rpos/bin and run the script startemall.sh. You
can view the script to determine the three subscripts that are being called by this master
script.

The application server should now be running. The log files generated by the application
server are located at ISO_INSTALL_DIR/server<Platform>/retek/rpos/log.

Start the client

1   On the client machine, change directories to
ISO_CLIENT_INSTALL_DIR/client<Platform>/retek/rpos/bin. Run the command pos.bat .

Chapter 4 – LDAP Configuration User Guide

Getting SIM to work with OpenLDAP

Setup of LDAP

There are a number of commercial LDAP servers available on the market – a commonly used one is OpenLDAP (available at www.openldap.org).

    Note: Development of LDAP functionality in the SIM product was carried out by using OpenLDAP 2.1.12 server with a Berkeley DB 4.1.25 back-end on UNIX

Once an LDAP server has been selected and installed, the SIM data schema (retekSIM.schema) must be loaded on top of the default LDAP core schema (core.schema) supplied by the server. The following sample configuration files and scripts are included in this release at ISO_INSTALL_DIR/server<Platform>/retek/sim/files/prod/database/ldap for use with OpenLDAP and Berkeley DB installations:

    Note: The following scripts and configuration files are provided as examples only. Variations may be necessary based on the LDAP server that is chosen and installed.

- slapd.conf

  An example OpenLDAP server configuration file.

- start_ldap.sh (start_ldap.bat)

  An example Start up script that starts just the LDAP stand-alone server. <LDAPServerName> and <LDAPServerPort> will have to be set to fit your environment.

- loadnStart.sh (loadnStart.bat)

An example script that removes any LDAP databases, recreates the data directory, starts the LDAP stand-alone server, and loads a sample LDIF file. The sample LDIF files are discussed in the next section. This script will need to be modified to conform to your environment's directory structure and LDAP server.

    Note: Running this script will completely delete any data in the target LDAP repository and insert the test data contained in the ldif file the script references.

- stop_ldap.sh

  Stops the LDAP standalone server by killing the process.

      Note: A stop script for Windows was not created – simply use ctl-c to stop the server process in the CMD window in which it is running

- retekSim.schema

  Contains the SIM LDAP schema that is loaded over the core.schema provided with the LDAP server.

- Several .ldif files that contain sample data are also included. They are explained further in the next section.

To configure SIM in an OpenLDAP environment LDAP server:

1   Customize the stop_ldap.sh script:

- Change the argument of the kill command to the location of the slapd.pid file as specified by the 'pidfile' key in the LDAP configuration file (slapd.conf).

2   Customize the start_ldap.sh and the loadnStart.ldap scripts:

- Change the LD_LIBRARY_PATH key to the location of the BerkeleyDB libraries (this depends on the distribution of OpenLDAP used, some are static-linked against the BerkeleyDB libraries and do not need this).

- In loadnStart.sh, change the lines that delete and recreate the LDAP database to reference your specific setup.

- Change line that launches the LDAP server. The format of the line is given in the script.

- In loadnStart.sh, change the line that loads the sample data into the LDAP server. The format of the line is given in the script.

3   Customize the slapd.conf file:

- Ensure that the retekSIM.schema file is referenced correctly near the top of the slpad.conf file.

4   Execute stop_ldap.sh (if the LDAP server is already running)

5   Execute start_ldap.sh or loadnStart.sh to start the stand-alone LDAP server.

If loadnStart.sh is run, a scrolling list of data inserts into the LDAP repository should be displayed. If you get an error starting the server - check to make sure the server was not started anyway.

For connection errors, double check that the rootdn name and password specified in slapd.conf and start_ldap.sh/loadnStart.sh match.

SIM data schema loads

A Lightweight Directory Access Protocol (LDAP) Server handles user authentication in SIM. In order to have SIM setup correctly and have users login to the application, SIM needs to communicate with a LDAP server. Once the LDAP server is configured and installed, the SIM data schema must be loaded on top of the default LDAP core schema (core.schema) supplied by the server. This is done by the example script loadnStart.sh above.

Loading the data consists of creating 3 primary objects that SIM uses:

1   Users

2   Roles

3   Stores

Several sample data entry files are available in the ISO_INSTALL_DIR/server<Platform>/retek/sim/files/prod/database/ldap directory and illustrate the formatting of the required data. The file sampleData.ldif contains a sample entry for the SIM schema. The other sample data files, testData.ldif and superLDIF.ldif contain varying amounts of sample data.

📖   **Note:** You can have more than one rsimStoreID by simply repeating the userStore line, but should only have 1 homeStore.

📖   **Note:** Any user store entry for the user object must have a corresponding Store data populated in the SIM Oracle database to allow a successful login (table PA_STR_RTL).

📖   **Note:** SIM does not currently use/validate against the employmentStatus field, but may at some future release. Valid types are below.
0 = active
1 = terminated
2 = onleave
3 = oncall

User roles contain various privileges that users assigned this rsimRoleName can access. If a role is set to TRUE in isStoreSuperUser, that role can perform all privileges in any store they are assigned to as long as that task is available in that store. If a user has TRUE in isSuperUser, they can perform any task in any store as long as that task is available in that store.

The privileges available in SIM are listed below.

- Create/View Stock Count (my store) - 1

- Create/View Stock Count (all stores) - 2

- Authorize Count - 4

- Item Lookup - 8

- Transfer Receive - 16

- Transfer Create/Save - 32

- Supplier Lookup - 64

- DSD - 128

- Return Stock - 256

- Warehouse Delivery - 512

- Container Lookup - 1024

- Inventory Adjustment - 2048

- Pricing - 4096

- View/Perform Stock Count - 8192

- Store Admin/Configuration – 16384

- Transfer Requests – 32768

- Item Requests – 65536

- Sequencing - 131072

LDAP store data must match the location data maintained in the SIM database. Stores also have privileges assigned to them. It needs to be noted that store privileges override user privileges. For example, if privilege 512 is not available to a store, users logged into that store will not be able to perform function 512 even if their role specifically allows it.

Once an LDAP user is correctly set up for a store that is present in your SIM database you will be able to log in to the SIM client.

Appendix A

Sample Oracle 9.2.0.x Database Creation Scripts

Read carefully. The scripts below are samples and may need to be modified for your environment. Retek recommends using UNDO instead of Rollback segments.

Script: crdb1.sql

Execute as: sysdba

    Note: Modify file paths and "MODIFY_SID" for your environment. The redo logs, TEMP and UNDO are not currently sized for a production environment.

REM Database Creation Script Part 1

```
spool SID.log
startup nomount pfile=${ORACLE_HOME}/dbs/init${ORACLE_SID}.ora
create database "MODIFY_SID"
        maxdatafiles 1000
        character set UTF8
    DATAFILE
        '/u00/oradata/$ORACLE_SID/system01.dbf' SIZE 100M
          AUTOEXTEND ON NEXT 10M MAXSIZE 2000M
    LOGFILE
      group 1 ('/u00/oradata/$ORACLE_SID/redo1a.log') size 100M,
      group 2 ('/u00/oradata/$ORACLE_SID/redo2a.log') size 100M,
      group 3 ('/u00/oradata/$ORACLE_SID/redo3a.log') size 100M
DEFAULT TEMPORARY TABLESPACE TEMP
        TEMPFILE '/u01/oradata/$ORACLE_SID/temp01.dbf' SIZE 500M
        EXTENT MANAGEMENT LOCAL UNIFORM SIZE 1M
undo tablespace UNDO_TS
        DATAFILE '/u00/oradata/$ORACLE_SID/undo_ts01.dbf' SIZE 500M
;

spool off
exit
```

Script: crdb2.sql

Execute as: sysdba

REM Database Creation Script Part 2

```
spool ${ORACLE_SID}2.log


REM # install data dictionary views:

PROMPT Running catalog.sql

@$ORACLE_HOME/rdbms/admin/catalog.sql

PROMPT Running catproc.sql

@$ORACLE_HOME/rdbms/admin/catproc.sql

PROMPT Running catblock.sql

@$ORACLE_HOME/rdbms/admin/catblock.sql


REM * If you create the oracle user externally, then set
os_authent_prefix="" in the init.ora

create user oracle identified externally;

grant dba to oracle;


REM * These privs needed for admin users to run proper grant code
when creating users.

grant select on dba_jobs to public with grant option;

grant select on dba_roles to public with grant option;

grant select on dba_role_privs to public with grant option;

grant execute on dbms_rls to public with grant option;


REM * These privs needed to be granted to all due to 9i security
changes.

grant select_catalog_role to public;

grant execute_catalog_role to public;

grant execute on dbms_lock to public;

grant execute on dbms_rls to public;


REM * query rewrite privilege needed to create function-based
indexes

grant query rewrite to public;


REM * dbms_system is needed for tracing

REM * grant execute on sys.dbms_system to public;
```

```
REM * For each DBA user, run DBA synonyms SQL script.  Don't forget
that EACH

REM * DBA USER created in the future needs dba_syn.sql run from its
account.

REM *

connect system/manager

PROMPT Running pupbld.sql

@$ORACLE_HOME/sqlplus/admin/pupbld.sql


PROMPT Creating PLAN table owned by SYSTEM

@$ORACLE_HOME/rdbms/admin/utlxplan.sql


PROMPT Creating public synonyn for the plan table

create public synonym PLAN_TABLE for SYSTEM.PLAN_TABLE;


REM *  Drop dbsnmp user since we are not using OEM and Oracle
Intelligent Agent

REM * drop user dbsnmp cascade;


disconnect
```

Script: crdb3.sql

Execute as: sysdba

REM Database Creation Script Part 3

```
spool ${ORACLE_SID}3.log


REM *  Install XDK and XSU
PROMPT altering system to set _system_trig_enabled to false
ALTER SYSTEM SET "_system_trig_enabled"=FALSE SCOPE=MEMORY;


PROMPT Running initjvm.sql to install Java objects
@$ORACLE_HOME/javavm/install/initjvm.sql


PROMPT Running initxml.sql to install XML and XSU
@$ORACLE_HOME/rdbms/admin/initxml.sql


PROMPT Running xmlja.sql to install NCOMP'ed XML Parser
@$ORACLE_HOME/xdk/admin/xmlja.sql


PROMPT Running catjava.sql to install catalog scripts for Java
@$ORACLE_HOME/rdbms/admin/catjava.sql


PROMPT Creating public synonyms and grants
CREATE PUBLIC SYNONYM XMLQUERY for SYS.DBMS_XMLQUERY;
GRANT EXECUTE ON XMLQUERY TO PUBLIC;
GRANT EXECUTE ON XMLPARSER TO PUBLIC;
GRANT EXECUTE ON XMLDOM TO PUBLIC;
CREATE PUBLIC SYNONYM XSLPROCESSOR for SYS.XSLPROCESSOR;
GRANT EXECUTE ON XSLPROCESSOR TO PUBLIC;


PROMPT Revaliding invalid objects
@$ORACLE_HOME/rdbms/admin/utlrp.sql


spool off
```

Sample Database init.ora

```
####################################################################
###########
# Oracle 9.2.0.x Parameter file
#
# NOTES:
# 1.  Change all file directory paths as necessary for your
environment.
# 2.  Search and replace the string "MODIFY_SID" with your database
name.
# 3.  Modify parameters as necessary for your development, test,
#     and production environments.
#
# ----------------------------------------------------------------------
------
# MAINTENANCE LOG
#
# Date     By           Parameter          Old/New        Notes
# +------+ +---------+ +----------------+ +-------------+ +--------
-----+
# 09/15/03 Retek      NA                           NA
creation
#
####################################################################
###########


# ----------------------------------------------------------------------
-------------
# The following SGA parameters are CRITICAL to the performance of
the
# database. The following settings are based off 1GB of allotted
memory.
# Adjust these parameters for your environment.
# The SGA is composed of:
#    db_cache_size, log_buffer,java_pool_size, large_pool_size,
shared_pool_size
# ----------------------------------------------------------------------
-------------
db_cache_size                  = 256M
java_pool_size                 = 150M              # Retek
required (minimum=100M)
```

```
log_buffer                    = 10485760

shared_pool_size              = 150M


# ----------------------------------------------------------------------
--------------

# The following parameters do not affect SGA size and should be
adjusted for

# your environment.

# ----------------------------------------------------------------------
--------------

background_dump_dest          =
$ORACLE_BASE/admin/$ORACLE_SID/bdump

compatible                    = 9.2.0

control_files                 =
(/u01/oradata/MODIFY_SID/MODIFY_SID_01.ctl


,/u01/oradata/MODIFY_SID/MODIFY_SID_02.ctl)

core_dump_dest                =
$ORACLE_BASE/admin/$ORACLE_SID/cdump

db_block_size                 = 8192             # default is
2k; adjust before db creation, cannot change after db is created

db_files                      = 200              # default is
200; set to max number of database files

db_file_multiblock_read_count = 8                # (max io
size)/(block size); adjust as needed; platform specific


db_name                       = MODIFY_SID

job_queue_processes           = 9                # Retek
required; number of cpu's +1

local_listener                =
"(ADDRESS=(PROTOCOL=TCP)(HOST=localhost)(PORT=1521))"

nls_date_format               = DD-MON-RR        # Retek
required

nls_calendar                  = GREGORIAN

nls_language                  = AMERICAN         # default

nls_territory                 = AMERICA          # default

open_cursors                  = 900              # Retek
required (minimum=900); default is 50

optimizer_features_enable     = 9.2.0

optimizer_mode                = CHOOSE           # Retek
required

processes                     = 500              # max number
of os processes that can connect to oracle
```

```
query_rewrite_enabled          = TRUE                 # Retek
required; fct based indexes

remote_dependencies_mode       = SIGNATURE            # Retek
required; default is TIMESTAMP

sessions                       = 1500                 #
~(3*processes); one forms connection can spawn several sessions


session_cached_cursors         = 100                  # default is
0

undo_management                = AUTO

undo_tablespace                = undo_ts              # match with
tablespace name used in your creation script

undo_retention                 = 1800                 # currently
set for 30 minutes; set to avg length of transactions in secs

user_dump_dest                 =
$ORACLE_BASE/admin/$ORACLE_SID/udump

utl_file_dir                   = $ORACLE_BASE/utl_file


# ***  Archive Logging, set if needed  ***

#log_archive_dest              =
'location=$ORACLE_BASE/admin/$ORACLE_SID/arch/'

#log_archive_format            = $ORACLE_SIDarch%s.log

#log_archive_min_succeed_dest  = 1

#log_archive_start             = TRUE

#log_checkpoint_interval       = 9999999999
```

Sample Tablespace Creation Scripts

The following tablespaces are required. Retek recommends the use of locally managed tablespaces with automatic extent and segment space management. These tablespaces are not sized for a production environment!

```
CREATE TABLESPACE INDEX_DATA DATAFILE
    '/u01/oradata/$ORACLE_SID/index_data01.dbf'  SIZE 500M
    AUTOEXTEND ON NEXT 100M MAXSIZE 2000M
    EXTENT MANAGEMENT LOCAL
    SEGMENT SPACE MANAGEMENT AUTO
;
CREATE TABLESPACE RETEK_DATA DATAFILE
    '/u01/oradata/$ORACLE_SID/retek_data01.dbf'  SIZE 500M
    AUTOEXTEND ON NEXT 100M MAXSIZE 2000M
    EXTENT MANAGEMENT LOCAL
    SEGMENT SPACE MANAGEMENT AUTO
;
CREATE TABLESPACE USERS DATAFILE
    '/u01/oradata/$ORACLE_SID/users01.dbf'  SIZE 100M
    AUTOEXTEND ON NEXT 100M MAXSIZE 2000M
    EXTENT MANAGEMENT LOCAL
    SEGMENT SPACE MANAGEMENT AUTO
;
CREATE TABLESPACE LOB_DATA DATAFILE
    '/u01/oradata/$ORACLE_SID/lob_data01.dbf'  SIZE 50M
    AUTOEXTEND ON NEXT 100M MAXSIZE 2000M
    EXTENT MANAGEMENT LOCAL
    SEGMENT SPACE MANAGEMENT AUTO
;
```

Appendix B

Retek User Creation Script

Run the following commands as the sysdba user. Replace "SIM" with an appropriate account name.

```
create user SIM identified by retek

default tablespace retek_data

temporary tablespace &TEMP_TABLESPACE;

grant select_catalog_role, alter session, analyze any,

create any synonym, create database link, create library,

create procedure, create public database link, create public
synonym,

create sequence, create session, create synonym, create table,
create trigger,

create view, drop any synonym, execute any procedure, select any
sequence,

select any table, query rewrite to SIM;


alter user SIM quota unlimited on retek_data;

alter user SIM quota unlimited on index_data;

alter user SIM quota unlimited on lob_data;

grant select on sys.dba_role_privs to SIM;

grant select on sys.dba_jobs to SIM;

grant select on sys.dba_roles to SIM;
```