Wisacwis
County Interface Database

Installation and Configuration Guide

Table of Contents

Overview

This document provides step-by-step instructions for how to install and configure the Wisacwis County interfaces.

There are several components that need to be installed individually:

- VPN Client
- Oracle Lite Database
- Java Runtime Environment
- WisacwisReplicator Java Client

All components need to be installed on the same physical machine. Ideally, this machine should be dedicated to the Wisacwis interfaces and not used for other purposes; otherwise installation, configuration and on-going support may be difficult to provide.

VPN Client

The VPN Client can be downloaded from the following link

http://dcf.wisconsin.gov/wisacwis/knowledge_web/technical/interfaces/County_interface.htm

Please contact Sue Zemke if you have any issues with installing the client. The related .pcf file (profile file) will be sent direct to the county IT contact on request.

Oracle 10g Lite (version 1)

Obtaining the Oracle Lite database client

The latest version of Oracle Lite software can be downloaded from Oracle's website –

http://www.oracle.com/technology/software/products/lite/index.html

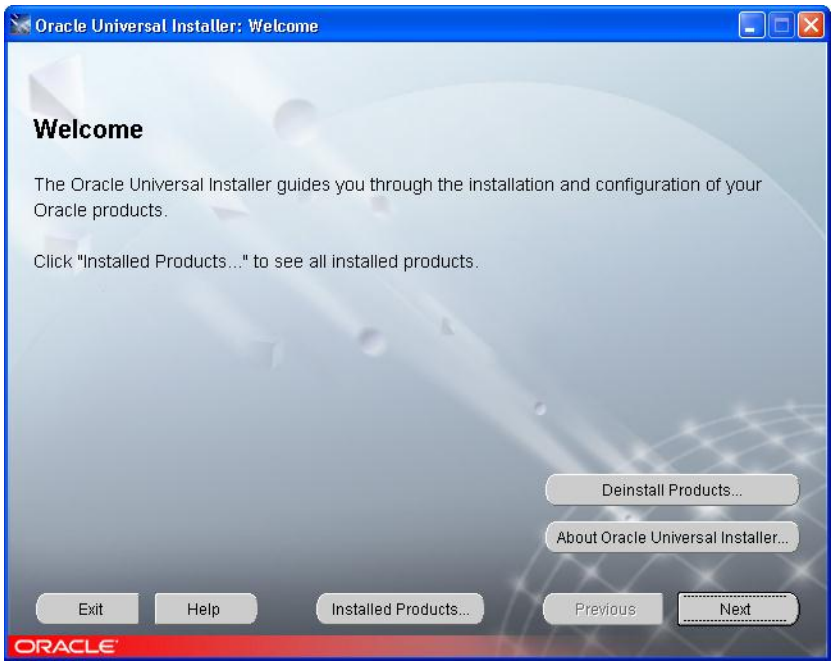
Pricing: please contact your own Oracle license vendor for any discounts etc.

At this time it is advised to install **10g Release 1,** as there seem to be issues with connecting to later releases with applications such as Access. (This version is still the recommend version to install as of 04/11/2011)

Setup

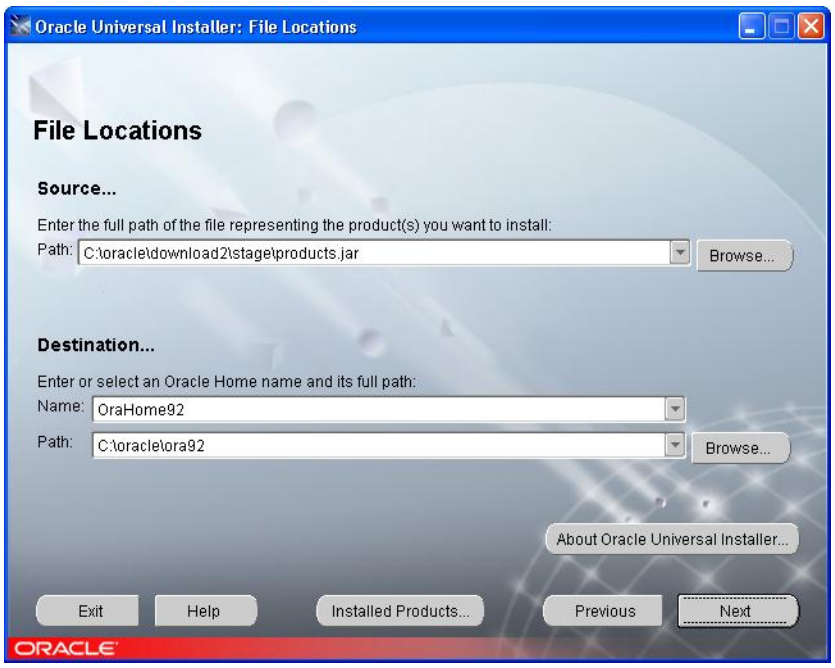
Oracle Lite is a complete mobile database and application solution for Oracle. Only the database engine is required for the Wisacwis interface and most of the components included with Oracle Lite should not be installed.

Run the "setup.exe" from the CD or location where the software was downloaded to.



Select "Next" button

File Locations



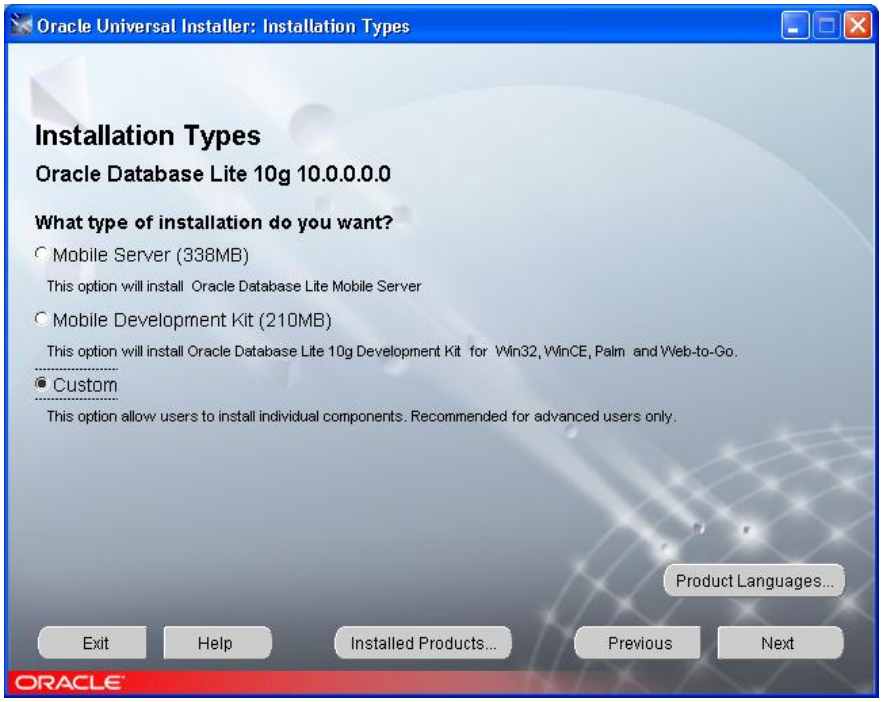
Source…

This should default to the CD or download location – do **not** change this.

Destination…

Enter Name: **Ora10gLite (your choice)**
Path: Enter a path or browse to a folder – you may be prompted to create the folder if it does not exist – respond “OK”.

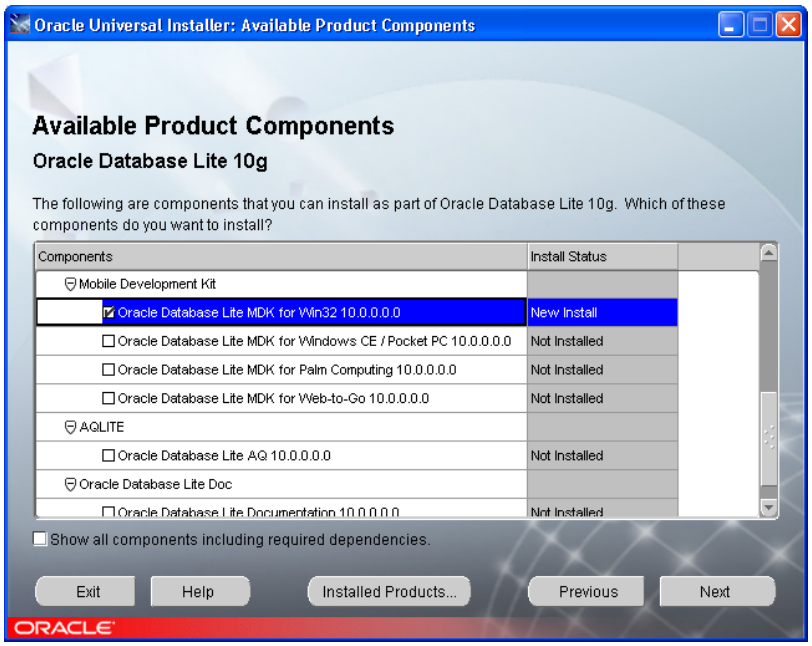
Installation Types



Select “Custom” then “Next” button

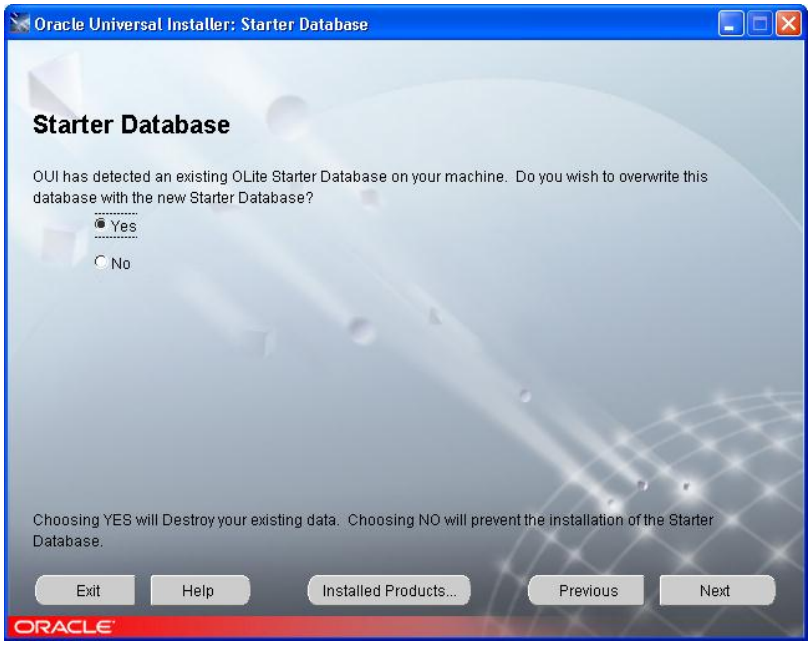
Products

Unselect **ALL** check boxes that were selected by default. (The first check box is disabled and cannot be unselected.)



Select the following items to be installed:

- ✓ Mobile Development Kit – Oracle Database Lite MDK for Win32 10.0.0.0.0
- ✓ Oracle database Lite Documentation (Optional)



Select Yes to overwrite the previous version.

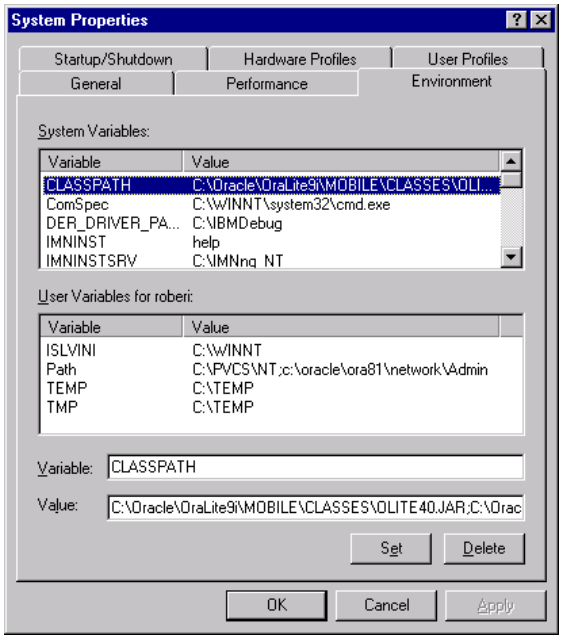
Click Install

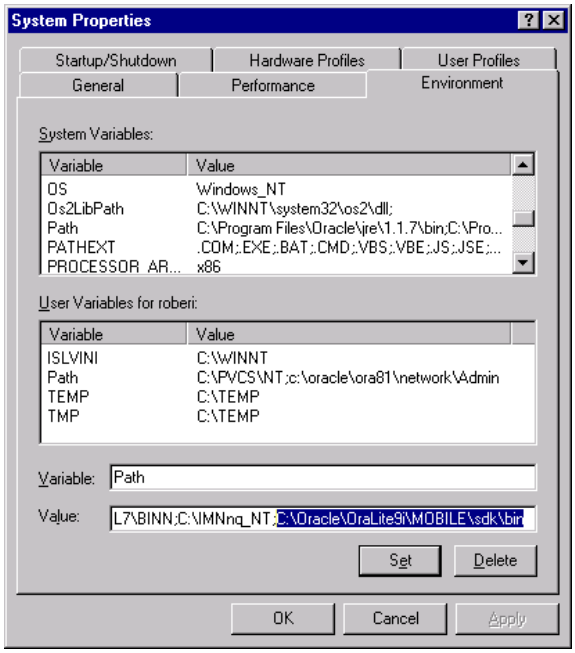
Wait while the software is installed…

The software should have installed successfully – click the "Exit" button and confirm to quit the installer.

Re-boot the system.

Post Installation Verification



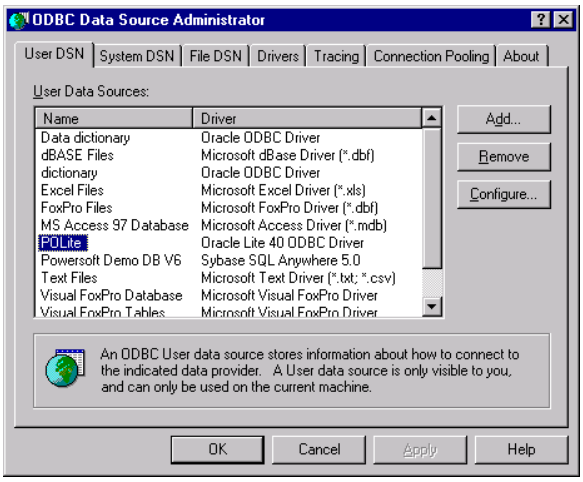


Go to "My Computer", right-click and select "Properties" from the pop-up context menu.

Select "Environment" tab:

Verify that the system Java CLASSPATH variable contains "…\MOBILE\CLASSES\OLITE40.JAR".
Verify that the system variable "Path" contains "…\MOBILE\Sdk\bin"

Do not set the CLASSPATH or PATH on the User variables – it must be the system variables.



Go to Start menu*Settings*Control Panel then open the ODBC Data Sources. Verify that the default ODBC datasource was created. It is called POLite and uses the Oracle Lite 40 ODBC driver.

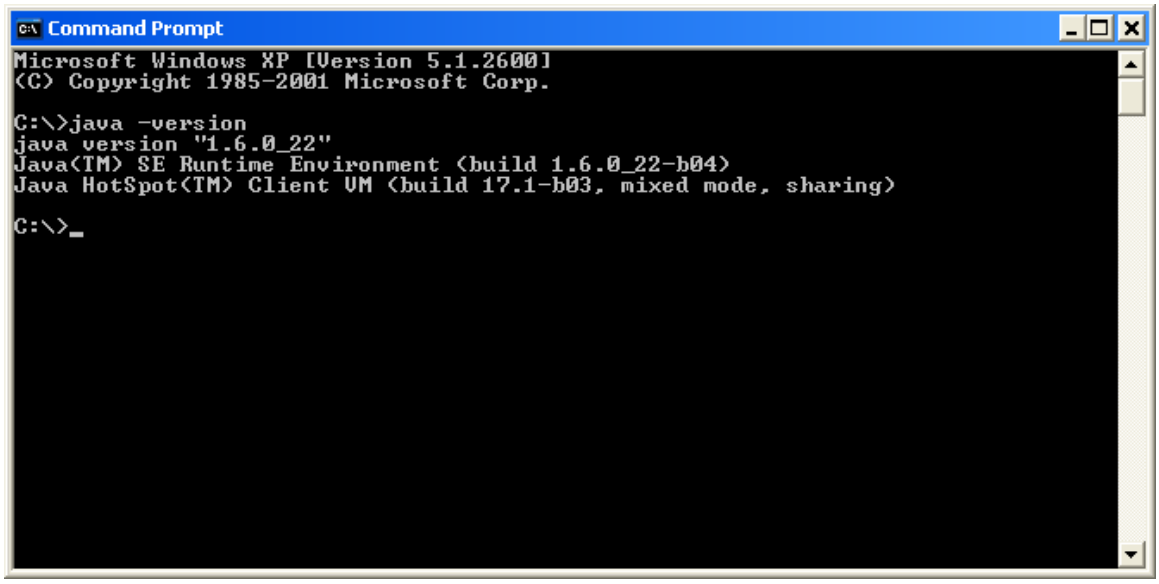
Java Runtime Environment (JRE)

The JRE is needed to run Java applications like the WisacwisReplicator client. It can be downloaded from Sun's web site for free. (Current version 1.6.0_24 as of April 2011)
(http://www.java.com/en/download/index.jsp)

Post installation verification

Open a DOS command window and verify that Java is the correct version. Run from the command prompt:

java –version



If it was not the expected version, check that no other Java version is in the system path. If so then remove it from the path.

Installing Oracle Lite 10g version 1 will mess up the path by adding JRE 1.3.2- this version will need to be either fully uninstalled or removed from the path.

eWiSACWIS Replicator

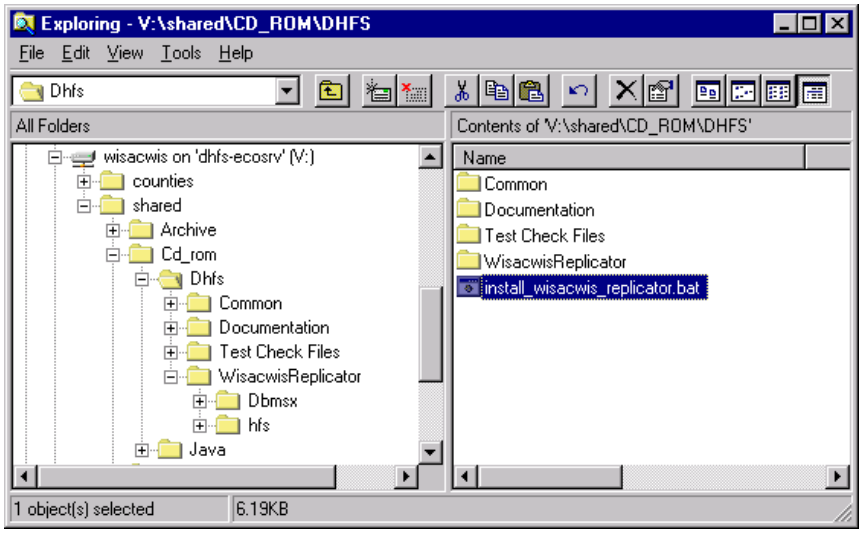
The WisacwisReplicator is a Java application that will copy county specific data from the central State Oracle database to the county Oracle Lite database.

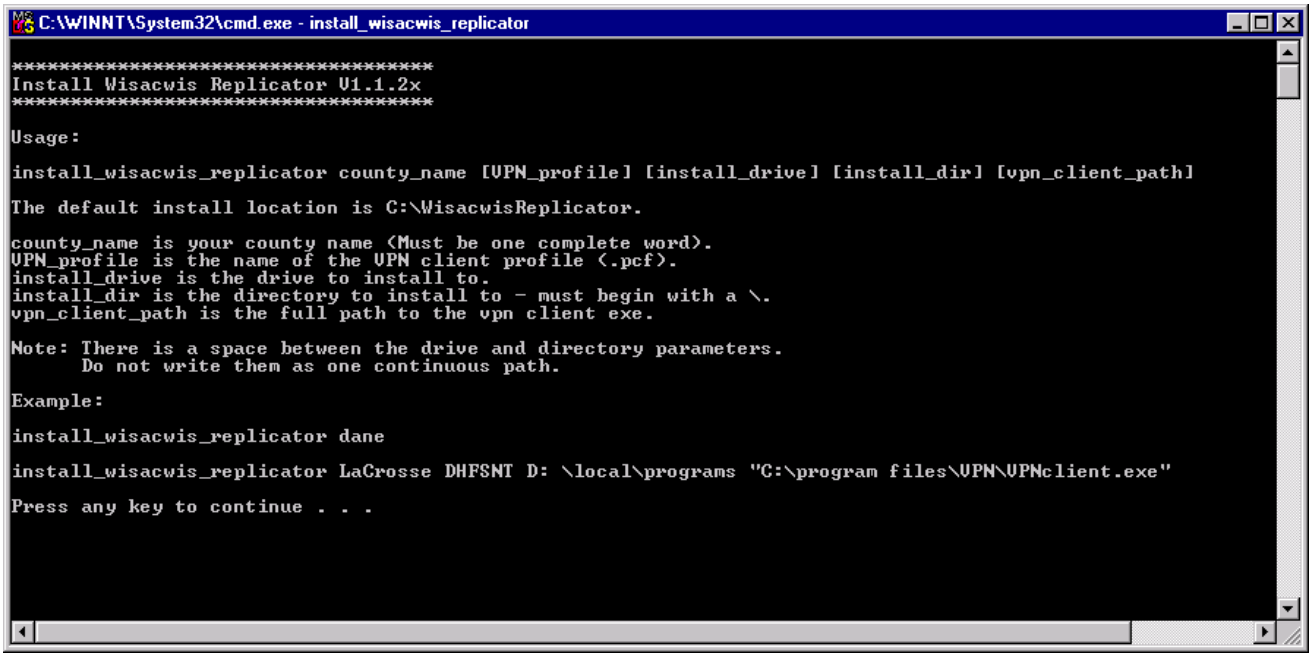
Mapping a drive to the VPN server prior to install

Open a DOS command prompt window and map a drive using the following: (contact Sue Zemke if you do not know your counties ID and or Password).

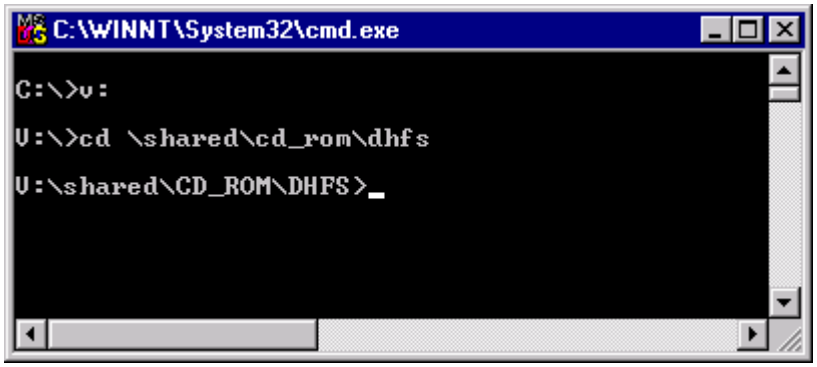
net use v: \\159.158.58.219\wisacwis <password> /user:dhfs\<countyuserID>

Installation





Open a DOS command prompt window and set the current directory to the installer directory (V: is the drive we mapped to the VPN Server):



Run the install_wisacwis_replicatorV2.0.005.bat file from a DOS command line, you will need to pass the install program the name of your county. The county name must be one word (eg. Dane, LaCrosse, FondDuLac) The install program will copy the required files to the local system.

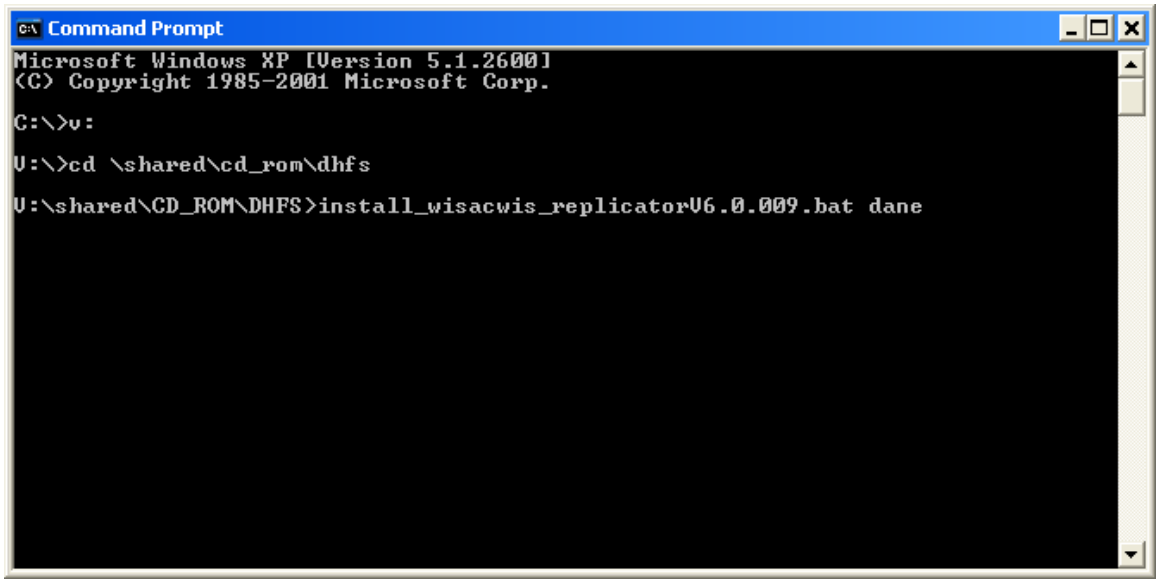
The default installation location is C:\WisacwisReplicator.

If an alternative location is desired then pass in the following parameters:

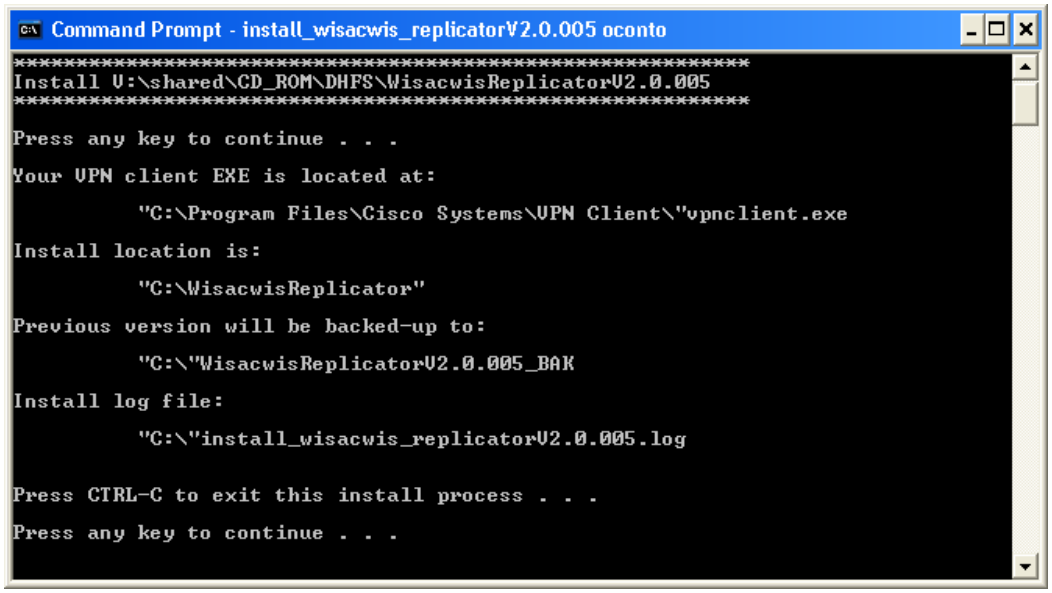
The full path of the install location (place the path in quotes if there is a space in the name)

Example installation commands:

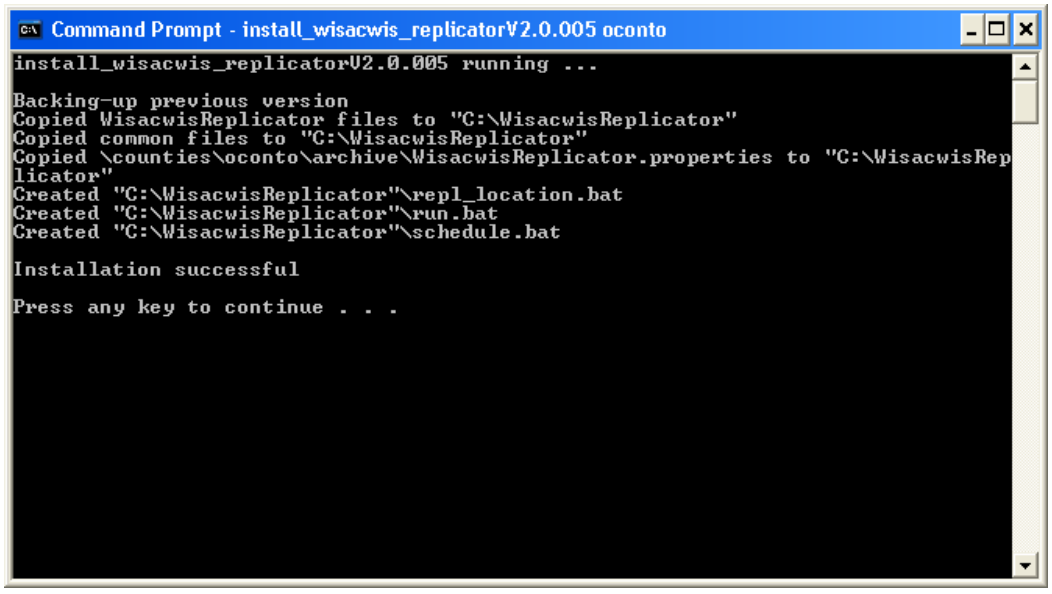
install_wisacwis_replicatorV6.0.009 Dane
install_wisacwis_replicatorV6.0.009 Dane "c:\dhfs programs"



Check that the installation locations are correct and press any key to install – to quit the install process press CTRL-C and confirm the termination of the batch job.



Wait while files are installed then press any key to complete the installation.



Testing the Installation

Test the Wisacwis Replicator configuration by running the test bat file. The test will connect to the central, State database and local Lite database then display the date and time.

If there is a VPN connection to the DHFS network already established, run:

WisacwisReplicator**NoVPN**____TEST.bat

If no VPN connection exists, run the following to establish a connection and perform the test:

WisacwisReplicator**VPN**____TEST.bat

Check the **repl.log** file that was created in the …\WisacwisReplicator installation folder; it should look similar to the following:

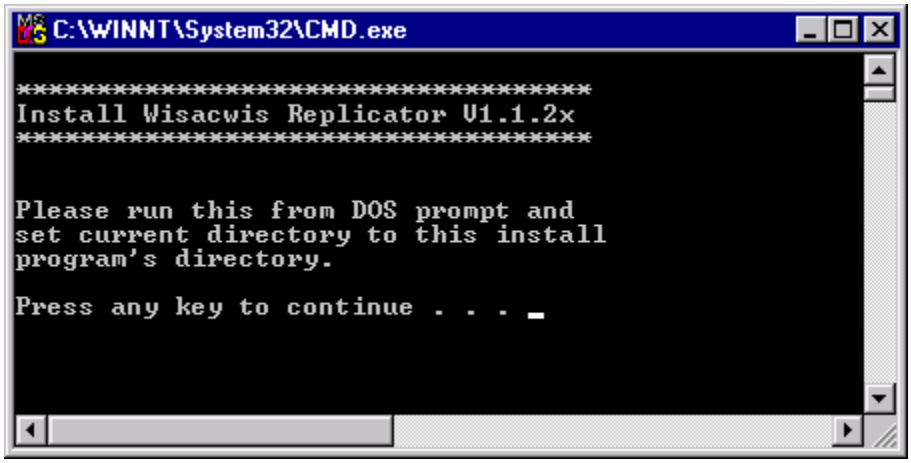
```
awt.toolkit=sun.awt.windows.WToolkit
file.encoding=Cp1252
file.encoding.pkg=sun.io
file.separator=\
java.awt.graphicsenv=sun.awt.Win32GraphicsEnvironment
java.awt.printerjob=sun.awt.windows.WPrinterJob
java.class.path=.\WisacwisReplicator.jar;.\classes12.jar;C:\oracle\oralitev1\MOBILE\CLASSES\OLITE40.JAR;;
java.class.version=48.0
java.endorsed.dirs=C:\Program Files\Java\j2re1.4.2_09\lib\endorsed
java.ext.dirs=C:\Program Files\Java\j2re1.4.2_09\lib\ext
java.home=C:\Program Files\Java\j2re1.4.2_09
java.io.tmpdir=C:\DOCUME~1\ZemkeS\LOCALS~1\Temp\
java.library.path=C:\WINDOWS\system32;.;C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\System32\Wbem;C:\WINDOWS
\system32\nls;C:\WINDOWS\system32\nls\ENGLISH;C:\Program
Files\Novell\ZENworks\;C:\MSSQL\BINN;C:\MSSQL7\BINN;C:\oracle\ora92\bin;%*PROGRAMFILES%\Oracle\jre\1.1.8\bin;C:\oracle\oralitev1\MOBILE\sdk\bin;C:\PVCS\N
T;Z:.
java.runtime.name=Java(TM) 2 Runtime Environment, Standard Edition
java.runtime.version=1.4.2_09-b05
java.specification.name=Java Platform API Specification
java.specification.vendor=Sun Microsystems Inc.
java.specification.version=1.4
java.util.prefs.PreferencesFactory=java.util.prefs.WindowsPreferencesFactory
java.vendor=Sun Microsystems Inc.
java.vendor.url=http://java.sun.com/
java.vendor.url.bug=http://java.sun.com/cgi-bin/bugreport.cgi
java.version=1.4.2_09
java.vm.info=mixed mode
java.vm.name=Java HotSpot(TM) Client VM
java.vm.specification.name=Java Virtual Machine Specification
java.vm.specification.vendor=Sun Microsystems Inc.
java.vm.specification.version=1.0
java.vm.vendor=Sun Microsystems Inc.
java.vm.version=1.4.2_09-b05
line.separator=

os.arch=x86
os.name=Windows XP
os.version=5.1
path.separator=;
sun.arch.data.model=32
sun.boot.class.path=C:\Program Files\Java\j2re1.4.2_09\lib\rt.jar;C:\Program Files\Java\j2re1.4.2_09\lib\i18n.jar;C:\Program Files\Java\j2re1.4.2_09\lib\sunrsasign.jar;C:\Program
Files\Java\j2re1.4.2_09\lib\jsse.jar;C:\Program Files\Java\j2re1.4.2_09\lib\jce.jar;C:\Program Files\Java\j2re1.4.2_09\lib\charsets.jar;C:\Program Files\Java\j2re1.4.2_09\classes
sun.boot.library.path=C:\Program Files\Java\j2re1.4.2_09\bin
sun.cpu.endian=little
sun.cpu.isalist=pentium i486 i386
sun.io.unicode.encoding=UnicodeLittle
sun.java2d.fontpath=
sun.os.patch.level=Service Pack 2
user.country=US
user.dir=C:\WisacwisReplicator
user.home=C:\Documents and Settings\ZemkeS
user.language=en
user.name=ZemkeS
user.timezone=
user.variant=
Args: /TEST
Loading /WisacwisReplicator.properties
{PK_LICENSE=ID_PRVD_ORG,ID_LCNS, LOCAL_URL=jdbc:Polite:Polite, REPL_ROW_WINDOW=10000, PARM_COUNTY_CODE=42,
MASTER_URL=jdbc:oracle:thin:@159.158.56.107:1521:repl, PK_PROVIDER_SERVICE=ID_PRVD_ORG,CD_SRVC, MAIL_USER=validUser@yourdomain.com,
MASTER_AUTH=u1UGhmkfnFGzsD2+3xBt26avpwRpw5b6, MAIL_SEND=N, PK_PROVIDER_PART=ID_PRVD_ORG,ID_PRSN, SQL_GRANT=,
PARM_SCHEMA_REPL=REPLICATE, MAIL_CC=, REPL_SOURCE=REPL_TABLE2, REPL_DELETE_DAYS_TO_KEEP=45, REPL_SECURITY_ID=15940,
LOCAL_SCHEMA=SYSTEM, PK_EPISODE=ID_EPSD, PK_PRVD_SRVC_LCNS=ID_PRVD_ORG,ID_LCNS,CD_SRVC, REPL_DEBUG=0,
LOCAL_DRIVER=oracle.lite.poljdbc.POLJDBCDriver, REPL_ONLY_TABLES=ALL,-CAN_TEXT,-DOC_NARRATIVE,-RATE_SETTING,-LEGAL_DOC,-TICKLER,-
```

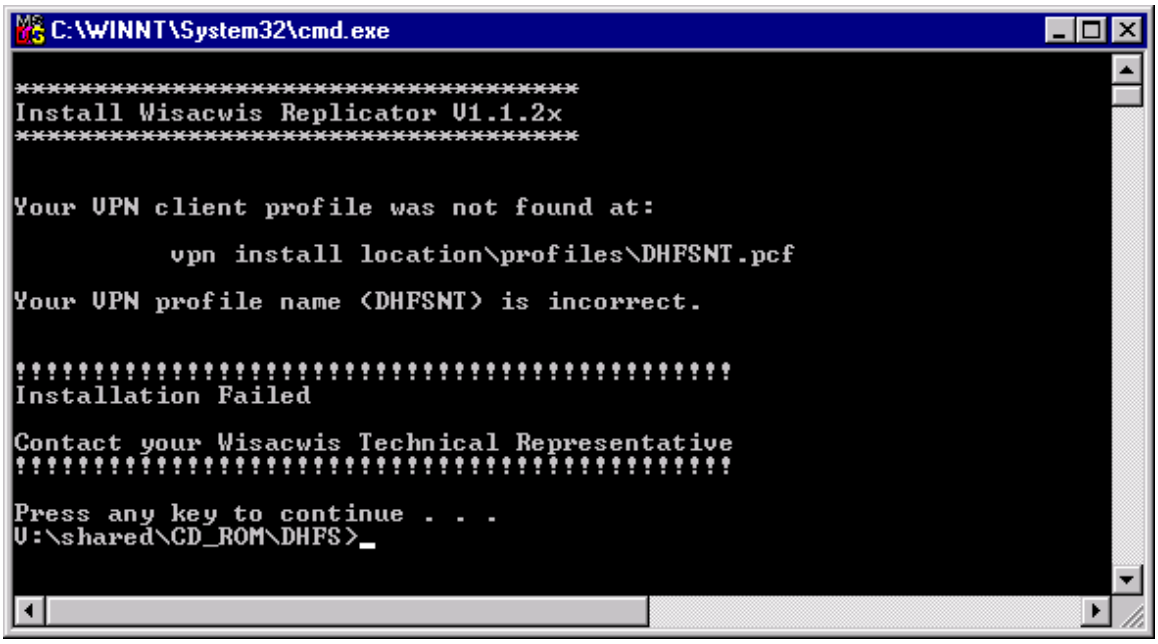
```
APPROVAL,-APPROVAL_HISTORY,-STREET_TALK,-PERSON_MERGE,-ASSESSMENT,-KIDS_TRANS,-MEDICAID_CERT,-PARENT_AGENCY,
PK_PROVIDER_ORG=ID_PRVD_ORG, LOCAL_ID=system, REPL_REFRESH_ALL_ON_SCHEMA_CHANGE=N, MASTER_ID=repluser, MAIL_TO=,
LOCAL_AUTH=xz8StfXINDXb1cSzAWm8fQ==, REPL_RETRY_ATTEMPTS=24, MAIL_HOST=yourSmtpMailHost,
LOCAL_CLASS=hfs.dmt.bis.wisacwis.replicator.OracleLiteLocalDB , PARM_SCHEMA_DATA=ACCOUNT1,
PARM_LIST=PARM_COUNTY_CODE,PARM_SCHEMA_DATA,PARM_SCHEMA_REPL, MASTER_CLASS=hfs.dmt.bis.wisacwis.replicator.OracleMasterDB,
REPL_RETRY_MINUTES=30, MASTER_DRIVER=oracle.jdbc.driver.OracleDriver}
WiSACWIS Replicator Fri Dec 09 11:01:36 CST 2005:WiSACWIS Replicator Version:2.0.005 @ HFS000671O7(159.158.96.100) started Fri Dec 09 11:01:36 CST 2005
WiSACWIS Replicator Fri Dec 09 11:01:36 CST 2005:Initializing custom properties hfs.dmt.bis.wisacwis.replicator.OracleLiteLocalDB
WiSACWIS Replicator Fri Dec 09 11:01:36 CST 2005:>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
WiSACWIS Replicator Fri Dec 09 11:01:36 CST 2005:Oracle Lite ORDBMS
WiSACWIS Replicator Fri Dec 09 11:01:36 CST 2005:10.0.0.0.0
WiSACWIS Replicator Fri Dec 09 11:01:36 CST 2005:oracle.lite.poljdbc.POLJDBCDriver OLite 4.0
WiSACWIS Replicator Fri Dec 09 11:01:36 CST 2005:jdbc:polite:POLITE
WiSACWIS Replicator Fri Dec 09 11:01:36 CST 2005:User:SYSTEM Schema:SYSTEM
WiSACWIS Replicator Fri Dec 09 11:01:36 CST 2005:>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
WiSACWIS Replicator Fri Dec 09 11:01:36 CST 2005:Initializing custom properties hfs.dmt.bis.wisacwis.replicator.OracleMasterDB
WiSACWIS Replicator Fri Dec 09 11:01:36 CST 2005:hfs.dmt.bis.wisacwis.replicator.OracleMasterDB
WiSACWIS Replicator Fri Dec 09 11:01:36 CST 2005:Connecting...jdbc:oracle:thin:@159.158.56.107:1521:repl attempt 1
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:Oracle
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:Oracle9i Enterprise Edition Release 9.2.0.6.0 - Production
With the Partitioning, OLAP and Oracle Data Mining options
JServer Release 9.2.0.6.0 - Production
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:Oracle JDBC driver 10.1.0.2.0
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:jdbc:oracle:thin:@159.158.56.107:1521:repl
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:User:REPLUSER Schema:ACCOUNT1
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:Testing hfs.dmt.bis.wisacwis.replicator.OracleLiteLocalDB
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:select SYSDATE from dual
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:Type:TIMESTAMP
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:rs.getObject(1)    2005-12-09 11:01:37.0
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:rs.getDate(1)      2005-12-09
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:rs.getTimestamp(1) 2005-12-09 11:01:37.0
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:rs.getTime(1)      11:01:37
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:rs.getString(1)    2005-12-09 11:01:37
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:doRowDataGet       2005-12-09 11:01:37.0
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:Testing hfs.dmt.bis.wisacwis.replicator.OracleMasterDB
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:select SYSDATE from dual
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:Type:DATE
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:rs.getObject(1)    2005-12-09
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:rs.getDate(1)      2005-12-09
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:rs.getTimestamp(1) 2005-12-09 11:01:38.0
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:rs.getTime(1)      11:01:38
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:rs.getString(1)    2005-12-09 11:01:38.0
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:doRowDataGet       2005-12-09
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:hfs.dmt.bis.wisacwis.replicator.OracleLiteLocalDB closed connection to jdbc:Polite:Polite
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:hfs.dmt.bis.wisacwis.replicator.OracleMasterDB closed connection to jdbc:oracle:thin:@159.158.56.107:1521:repl
WiSACWIS Replicator Fri Dec 09 11:01:37 CST 2005:Exit:0
```

Resolving Installation Problems

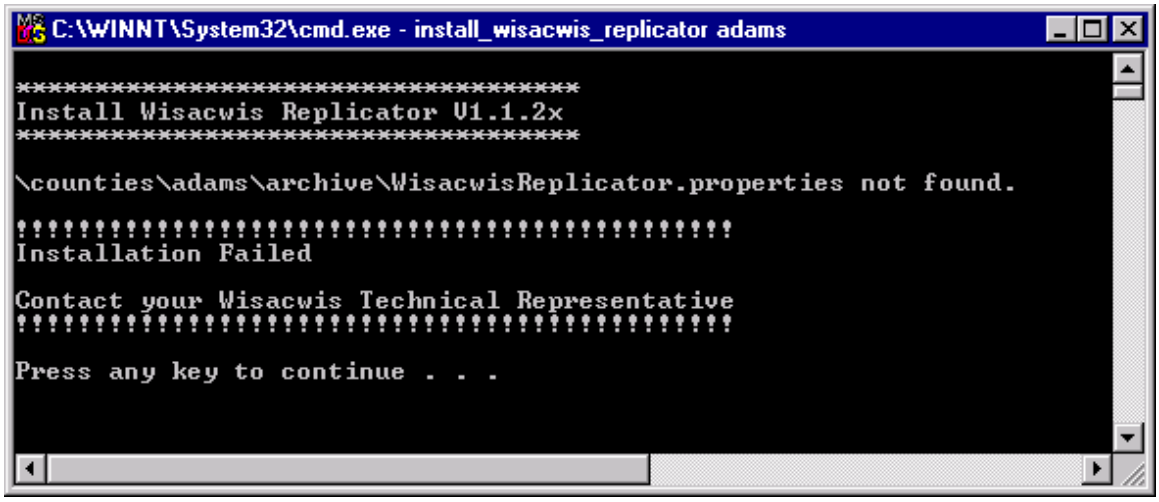
Here are some typical problems that occur when installing the WisacwisReplicator and how to fix them.



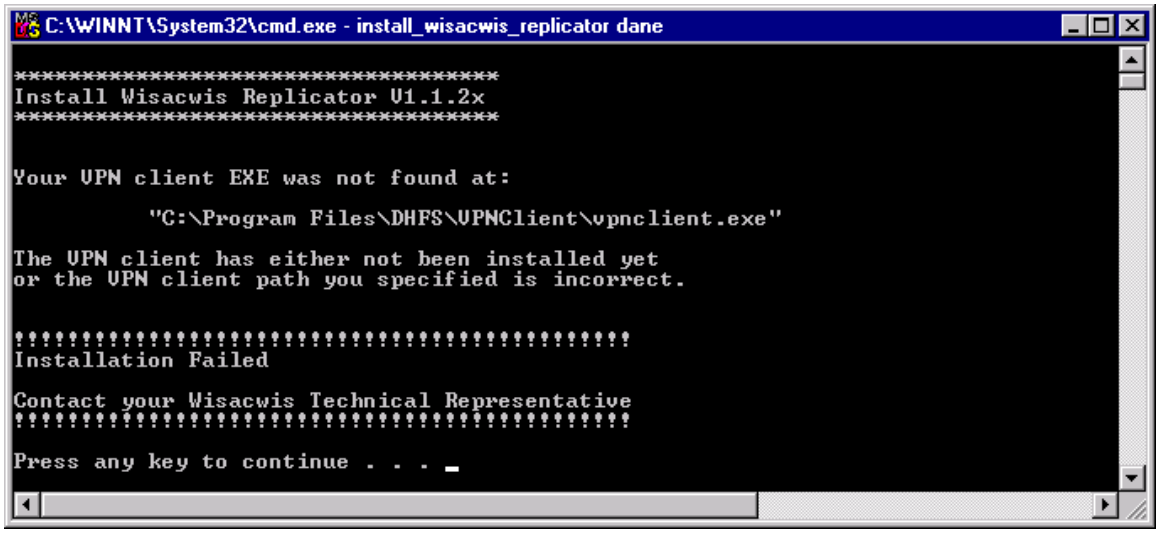
The installer must be run from a DOS command prompt and current directory needs to be the installer directory. The installer was probably run by double-clicking from the Windows Explorer.



The installer was unable to find the VPN client connection profile. The default profile is called DHFSNT.PCF. If, when you installed the VPN client, you created a custom profile for split-tunneling then you need the pass the profile name to the installer as the second command-line parameter.



Each county receives a custom property file to run the replicator. This file is stored on the VPN server in the \counties*countyName*\Archive folder. The file cannot be found, has been renamed or deleted. Contact your Wisacwis technical representative to have them create a new property file for you.



The VPN client could not be found. Check the installation path and add it to the command-line parameters.

Additional Install instructions to counties NOT using Oracle Lite

Using any versions after and including 2.0.005 of the replication software, require all passwords to be encrypted; this is already done for you for Oracle Lite. However, if you are using a different DBMS you will need to encrypt the password yourself.

The passwords are stored in the file Wisacwisreplicator.properties found in the \Wisacwisreplicator directory where the replication software is installed.

To encrypt your password we have provided a file that will do this for you:

- At a DOS prompt change directory to the \wisacwisreplicator directory, and type the following followed by the password you want to encrypt:

  WisacwisReplicatorNoVPN____ENCRYPT.bat <password>

- This will create the repl.log file with the results of the encryption at the end of the file. Look for the following lines:

  Args: /ENCRYPT password
  TE+btrrcw+1IBK944A/cUA==

  (The second line is the password encrypted).

- Edit the wisacwisreplicator.properties file in notepad, and locate the applicable section for your current DBMS set up.
  Change the line LOCAL_AUTH= to show the newly encrypted password copied from the repl.log created in the above steps.

Example (using Oracle):
Before:

```
################################################################################
#County Oracle Server
################################################################################

LOCAL_DRIVER=oracle.jdbc.driver.OracleDriver
LOCAL_URL=jdbc:oracle:thin:@IPAddress?:1521:db?
LOCAL_ID=youruserIDhere
LOCAL_AUTH=newlyencryptedpasswordhere
LOCAL_SCHEMA=yourschemanamehere
LOCAL_CLASS=hfs.dmt.bis.wisacwis.replicator.OracleLocalDB
```

After:

```
################################################################################
#County Oracle Server
################################################################################

LOCAL_DRIVER=oracle.jdbc.driver.OracleDriver
LOCAL_URL=jdbc:oracle:thin:@IPAddress?:1521:db?
LOCAL_ID=youruserIDhere
LOCAL_AUTH= TE+btrrcw+1IBK944A/cUA==
LOCAL_SCHEMA=yourschemanamehere
LOCAL_CLASS=hfs.dmt.bis.wisacwis.replicator.OracleLocalDB
```

Replicating into another DBMS

Overview

Oracle Lite was selected for the main replication database because it's SQL syntax is the same as the central DHFS database; it is easy to install and practically requires zero administration. Unfortunately, Oracle Lite is not designed to be a high-powered, multi-user DBMS – that's what Oracle Server does! It is possible to connect a number of clients (users) to an Oracle Lite DB on a network drive but each user must have a local copy of Oracle Lite to gain access to the ODBC driver – The Oracle Lite ODBC driver cannot be installed alone.

Many IT departments already have a chosen DBMS and users are familiar with the reporting and data access tools that come with it. To facilitate replicating the Oracle Lite data into the chosen DBMS, several additional database classes were developed that support replication into alternative DBMSs that are JDBC compliant.

This section is provided as an example of how to approach replicating data from Oracle Lite into a MS SQL Server 2000. This process has been successfully tested within the DHFS network. We cannot guarantee that the class files provided will work "out of the box" on individual county networks. In most cases where classes did not work, this could be solved either by configuring a database option or altering a small amount of Java code.

Classes have been developed for:

- MS SQL Server 2000
- Oracle 8i Server
- DB2/AS 400

Given the generic nature of the JDBC interface, these classes will hopefully work for the same databases on slightly different platforms.

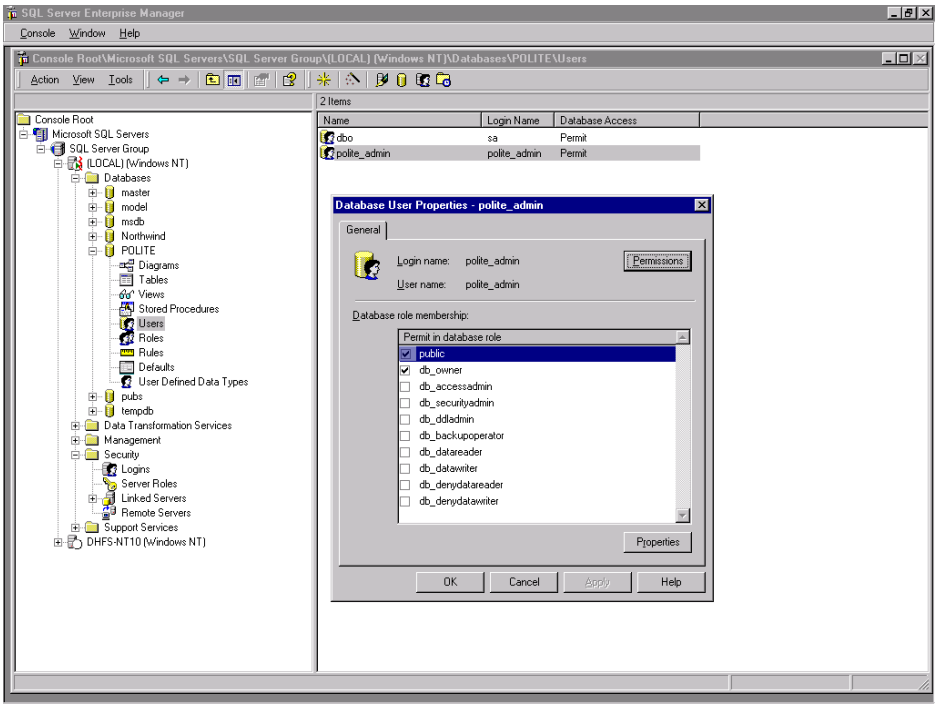
Most of the customizations that are required would be to override Java methods that implement database specific features :

Data types – NUMBER vs NUMERIC, VARCHAR vs VARYING CHARACTER, DATE vs TIMESTAMP
Date formats and representations – '01-Oct-2004' vs '2004/10/01'
SQL Syntax – How to "CREATE TABLE"
Functions – How to get the current time of day

MS SQL Server Replication Setup

In order to replicate into MS SQL Server a number of preliminary tasks must be performed. It is assumed that an MS SQL Server DBA is available and is familiar with database administration tasks.

- Create a new MS SQL Server Database called “POLITE”.
- Add a new user called “polite_admin” and grant the user “db_owner” rights to POLITE.
- Add additional users and rights as needed (**See housekeeping below**).



Replicating directly into a DBMS using JDBC

If the target DBMS is JDBC-compliant then the WisacwisReplicator can be configured to copy the data directly into the database via JDBC.

Replicating directly into the county DBMS requires:

- A “**split tunneled**” VPN connection is needed because both the DHFS and county networks have to be visible. The replicator has to be able to “see” the DHFS Oracle server and the county database server at the same time.

  If a split-tunneled VPN is not used then the replication has to be run in two steps:

  Replicate from DHFS to Oracle Lite.
  Replicate from Oracle Lite to county dbms.

Contact your Wisacwis technical representative for further information.

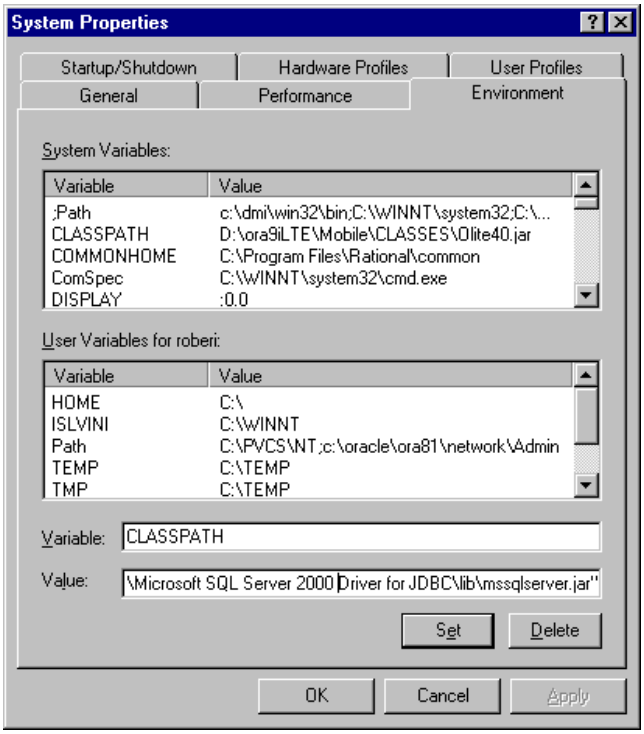
- A JDBC driver for the county DBMS has to be licensed and installed on the "replication" server. (Note: Most DBMSs now provide a JDBC driver but some do not, in which case, a 3rd-party driver has to be purchased and installed.) Optionally – but not recommended – the Sun Microsystem's JDBC-ODBC bridge driver can be used if the DBMS has an ODBC driver but no JDBC driver. Sun provide this bridge driver "AS-IS" and do not guarantee it will be work or be reliable.

- Microsoft provide a free JDBC Driver for MS SQL Server 2000 which can be downloaded from their web site:

  http://www.microsoft.com/sql/downloads/default.asp

  There are also several commercially available drivers from 3rd party software vendors.

- After installing your JDBC driver, set up the classpath so that Java can find the class files.



Add all the required .jar files to the system class path.

Alternatively, the classpath can be set locally in the WisacwisReplicator.bat file:

set classpath="C:\Program Files\Microsoft SQL Server 2000 Driver for JDBC\lib\mssqlserver.jar";"C:\Program Files\Microsoft SQL Server 2000 Driver for JDBC\lib\msutil.jar";"C:\Program Files\Microsoft SQL Server 2000 Driver for JDBC\lib\msbase.jar";%classpath%

Note: This is all on one line in the .bat file, do not insert carriage returns/new lines.

- Alter the WisacwisReplicator.properties file as follows:

  Comment out the Oracle Lite LOCAL_* properties.

```
LOCAL_DRIVER=com.microsoft.jdbc.sqlserver.SQLServerDriver
LOCAL_URL=jdbc:microsoft:sqlserver://192.168.12.1; SelectMethod=Cursor;Databasename=POLITE
LOCAL_ID=polite_admin
LOCAL_AUTH=thePassword
LOCAL_SCHEMA=dbo
LOCAL_CLASS=hfs.dmt.bis.wisacwis.replicator.MsSqlLocalDB
```

  Uncomment the MS SQL Server LOCAL_* propertties and replace the items marked '?' (italicized above) with your local information – user, password, IP address etc.

- To test the driver is installed correctly and the database can be connected to run:

  WisacwisReplicatorVPN____TEST.bat

- To run the replication, simply run the normal Oracle Lite replicator.

  WisacwisReplicatorVPN____REPLICATE.bat

- To drop the tables (from Oracle Lite and county DBMS) and completely refresh all data:

  WisacwisReplicatorVPN____REFRESH.bat

Housekeeping tasks etc

The account that connects and copies the data into your DBMS effectively owns the schema and all objects within it. This should be borne in mind if additional permissions and objects are created. The replicator can drop and create tables when it replicates and this action would also drop (delete) any items that are associated with the table (e.g. indexes, permissions etc)

If your DBA creates additional indexes and permissions then these should be refreshed after replication runs.

The replicator can be configured to execute a single SQL statement when a table is created. Alter the following property to enable this:

SQL_GRANT=*grant select on* :TABLENAME *to public*

This option will enable select permissions on the table that was created – leave :TABLENAME as is.