Administrator's Guide

Hach WIMS™ Multi-User with Oracle Database Support

Contents

1.1 Introduction

The Hach Water Information Management Solution (with DB Support) (referred to as WIMS^{TM} in this manual) is a data management system specifically designed for water and wastewater facilities. It allows you to track, report, graph, and analyze facility data including SCADA, lab, and operator entered data. The Hach WIMS^{TM} system consists of a rich front-end client running on each user's PC with a backend Oracle database. This manual is intended to assist the administrator install, configure, and maintain the WIMS^{TM} system.

Hach WIMS Multi-User with Oracle Database support has the following base features:

- Unlimited Variables and Facility Database Size

- Support for Oracle 9i or later

- Scheduled Output of reports and graphs (GNR Server)

Allows you to purchase:

- Up to 20 Concurrent Users

- Unlimited number of Facility Databases

- Unlimited number of interfaces

Knowledge Base

Our Knowledge base website is used to help our users via various articles and information. To access our knowledge base, please visit. http://www.opssys.com/instantkb/ From here you can use the browse or search functions to find information for the various components of the Hach WIMS System. Throughout this guide, links to Knowledge Base articles maybe presented to the user. We encourage you to visit our knowledge base for additional support.

1.2 Hach WIMS^{TM} System Requirements

Hach WIMS^{TM} Client and Components

Operating system:
- Microsoft Windows 2000 Service Pack 4
- Microsoft Windows XP Service Pack 2 or later
- Microsoft Vista RMT

- Microsoft Windows 2003 Server Service Pack 1

- Microsoft Windows 2003R2 Server Service Pack 2

- Microsoft Windows 2008

- Microsoft Windows 7

- See http://www.opssys.com/instantkb/Article.aspx?id=12215 for a complete list.

Data access:

- Access to an Oracle Database Server (release 9i or later)
- Oracle 32-bit Provider for OLE DB compatible with your version of Oracle. See your Oracle Database administrator for the proper versions.

Hardware (Minimum requirement for good performance):
- Processor :
  - Minimum: AMD Athlon, Intel Pentium III, 500 Mhz
  - Recommended : AMD Athlon 64 (or newer generation) , Intel Pentium IV (or newer generation), 1 Ghz (or more)
- Memory :
  - Minimum : 512 MB
  - Recommended : 1 GB (or more)
- Hard Disk :
  - 2 GB free disk space or more

- Display
  - Minimum : 1024x768
  - Recommended : 1280x1024 (or higher)
  - Color Depth : Minimum : 32 bit

See http://www.opssys.com/instantkb/Article.aspx?id=12913 for the latest information on hardware/software requirements.

NOTE: Hach WIMS^TM interfaces, Calc Engine, and GNR Server are designed to run as Windows (NT) services.

Hach WIMS^TM DATABASE NETWORK BANDWITH SPECS

Hach WIMS^TM is based upon a true client-server architecture. The client software has a large footprint and requires a speedy connection to the database server.

It is very hard to precisely state the minimum network bandwidth requirements for Hach WIMS^TM. It was developed to work efficiently on a 10 Megabit networks. Yet, depending on your current network bandwidth utilization, even 10 Megabit may not be enough.

We do not recommend deploying Hach WIMS^TM onto T1 bandwidth rated networks. If you are bound by such network hardware, please consider running the Hach WIMS^TM client on an application server (such as Windows Terminal Server, or Citrix).

1.3 System Overview

The Hach WIMS^TM data resides in an Oracle database typically provided by the client. Note: WIMS also supports MS SQL Server databases. The WIMS^TM database stores data from a variety of sources including LIMS, SCADA, and manually entered. It then performs user defined calculations and stores the results in the database. As this is a rich and robust program, there are some technical terms that are important to understand.
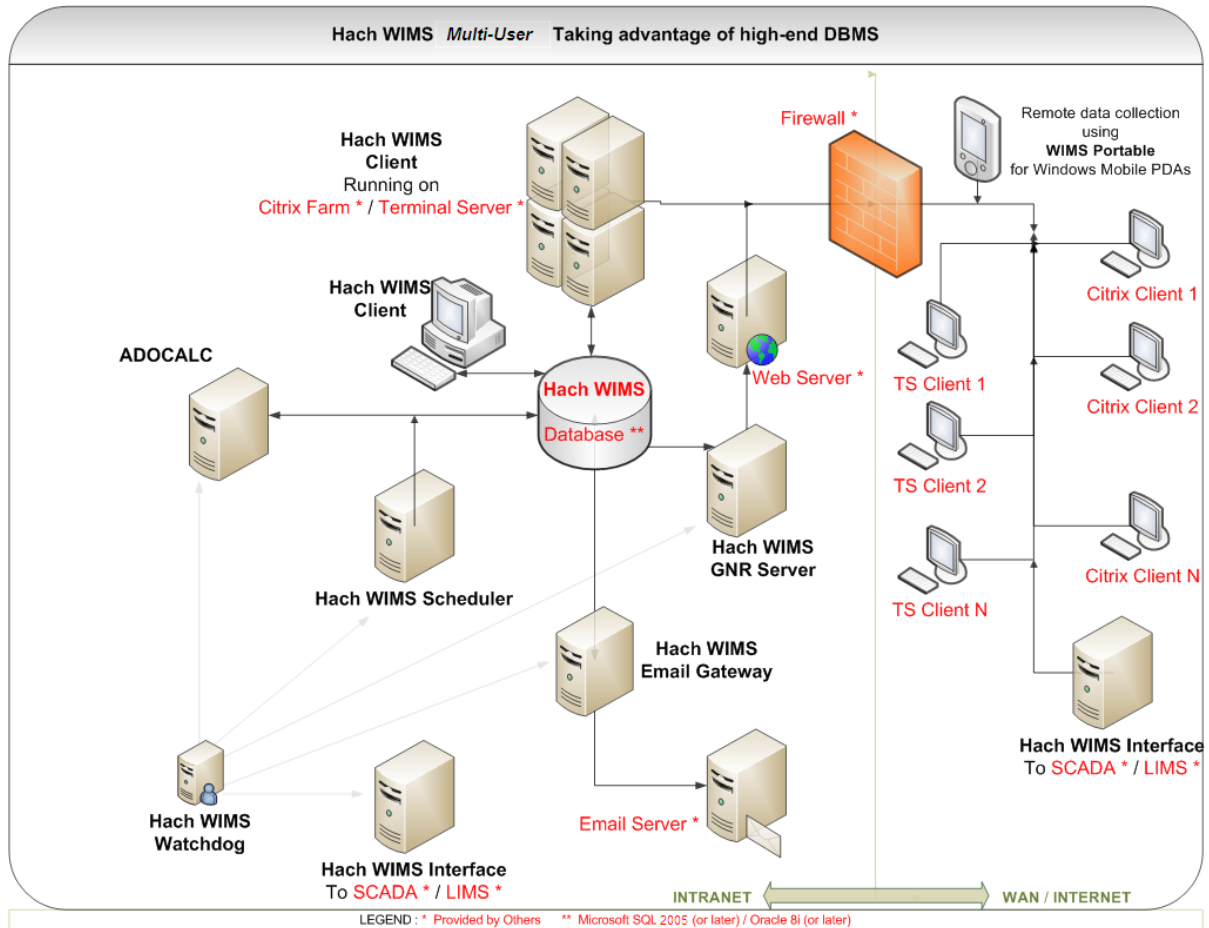
Definitions:

Client/server: An architecture in which the user's PC (the client) is the requesting machine and the server is the supplying machine, both of which are connected via a local area network (LAN) or wide area network (WAN). In this environment, servers are used to store and share data with the client PCs. The important concept of client/server is that both client and server each take on some of the application processing.

Client software: It is the Hach WIMS^{TM} executable (Hach_ WIMS.exe) that resides in a user's computer and is used to interact with the database. The client processes the user interface and can perform some or all of the application processing.

Database Support: Sometimes referred to as DB Support, allows Hach WIMS to utilize an enterprise Database Management System such as MS SQL Server (Enterprise, Standard, or Workgroup edition) or Oracle. Database Support is an add-on and is part of the software license.

Concurrent Users: Multiple users may log into the WIMS^{TM} ^{TM} system at the same time. These users are concurrent users because they are accessing the system concurrently.

Server software: Software that resides in a server and provides services to multiple users on the network. A database server maintains the databases and processes requests from the client to extract data from or to update the database. An application server provides additional business processing for the clients.

NT Services: Applications that run in the background, that do not require login or have no user interface. Typically these are run on the server.

MSSQL 2005:   MSSQL 2005 is the database management system typically provided by the client.

SMTP Server: Server that is used to send email. (Simple Mail Transfer Protocol)

Server\computer name: The unique ID of a computer on a network. The computer name can be found in System Properties on the Computer Name tab.

1.3.1 Installation Preparation

Hach WIMS^{TM} Mulit-User is designed run on a multiuser network. Below is a description of the system architecture.

a) Database Management Software (Oracle) resides on one machine.

b) Client software is installed on any number of machines. Including terminal service machines.

c) Server software (ADOCALC, GNR Server, etc…) can split onto multiple computers, installed on an App server, or on the DB Server itself.

Below are some additional definitions of the items and options for Hach WIMS^{TM}:

Server Setup: Utility used to create WIMS^{TM} tables, stored procedures, upload clients, restore database backups, etc…

ADO CALC: The WIMS^{TM} Calc engine is an NT Service that monitors the WIMS^{TM} databases and calculates data as required so it is available for reports, graphs, etc… ADO Calc should be places on a powerful PC that is close to the Server. **NOTE**: ADO Calc can run on the server, which will reduce network traffic and improve system performance.

DBA Helper: A Hach WIMS^{TM} NT Service that performs backups of the database.

Live Update: A Hach WIMS^{TM} NT Service that checks the Hach WIMS^{TM} website for updates of available for install by the user.

Email Gateway: Connects to your SMTP mail server and relays the emails generated by the Hach WIMS^{TM} Client (i.e. you choose to output a report or graph to email) or emails generated by the GNR Server (i.e. reports or graphs that are output on a scheduled basis)

Scheduler: Used to schedule output of report or graphs, database calculations, or database backups.

GNR Server: Receives requests from the scheduler to output reports and graphs, generates the output, sends the output to a printer, a file, or to email (i.e. it sends it to the email gateway)

IABroker: Facilitates the interaction of 3rd party software's interaction with the WIMS^{TM} System. (Such as IFix)

1.4 New Installation

Hach WIMS^{TM} installation uses the WIMS^{TM} Platform Installer. This Software assists you while installing the WIMS^{TM} Software. You may use this section to install any component to the WIMS System. The process is the same weather you are installing one component or all the components.

**NOTE: If you are upgrading from a previous version (OPS SQL), please refer to Upgrading from 6.x.x section for installation. Please make a backup of your old system!**

1. Close all programs that are currently running.

2. Place the Hach WIMS^{TM} DVD into your DVD drive and the Hach WIMS Platform Installer Welcome will be displayed. If the Welcome screen does not appear, double click on d:\Launcher\Launcher.hta where d: is your dvd drive.
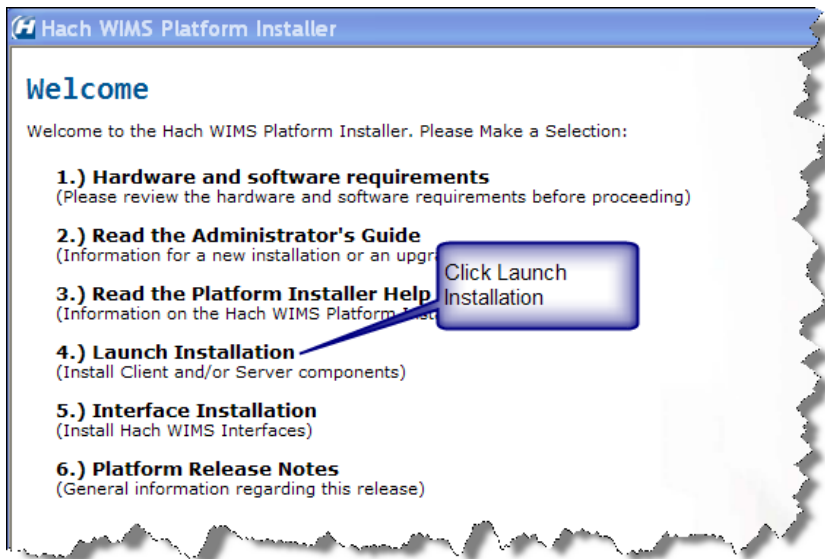
3. Click Launch Installation option from the Hach WIMS^{TM} Platform Installer Welcome.

NOTE: You may see a Prerequisites Wizard if any prerequisites are not installed. Please install these Prerequisites using the Prerequisites Wizard to continue installations. (.Net Framework is a common missing prerequisite.)

4. The Platform Installer will ask you to review and agree to the License Agreement. Check the Box if you agree and click **Next**.
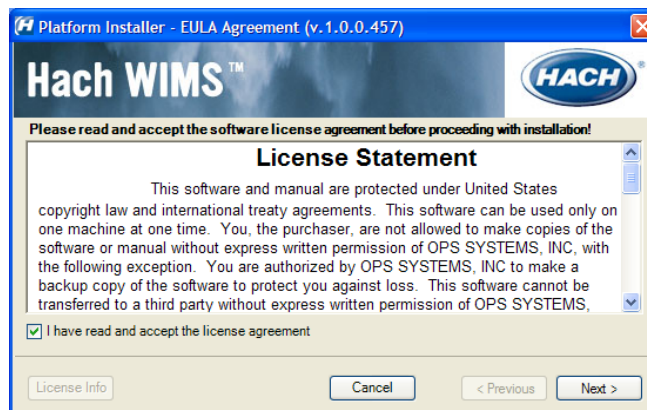
5. The Platform Installer should launch. Enter your Serial number and Browse to your License File (.License2008). Click the Next button. (Your license file should be on the CD or it may be emailed to you.)
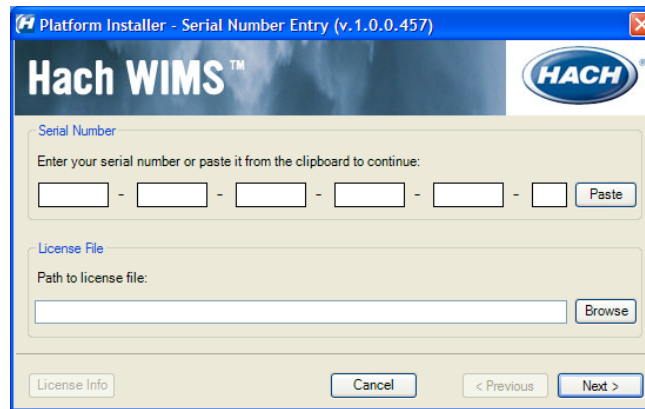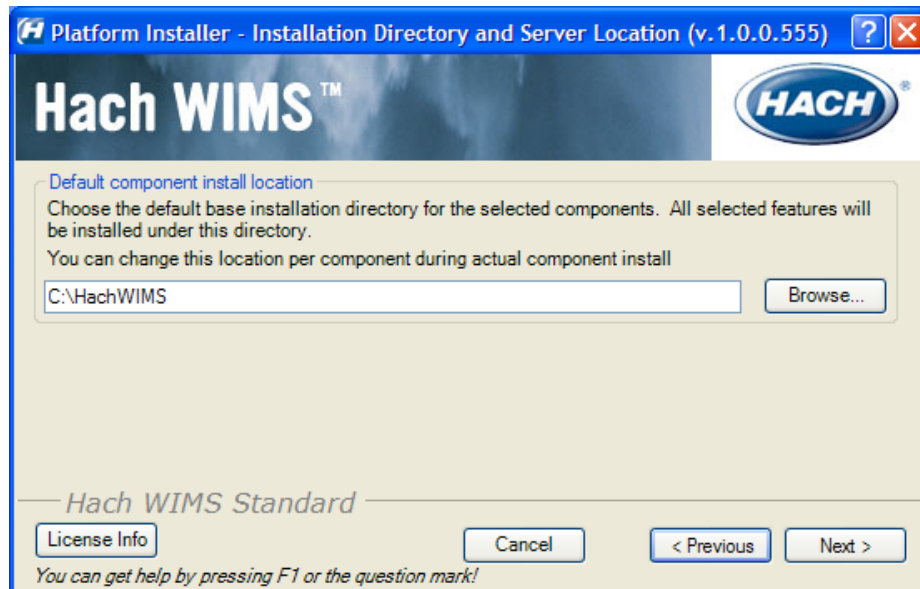

6. The Platform Installer will search for Hach WIMS™ MSI Locations. You may need to browse to the MSI Location using the Browse button. When a location is found, a popup will inform you. Click **Next.** If you are installing from the DVD you can just click **Next**.
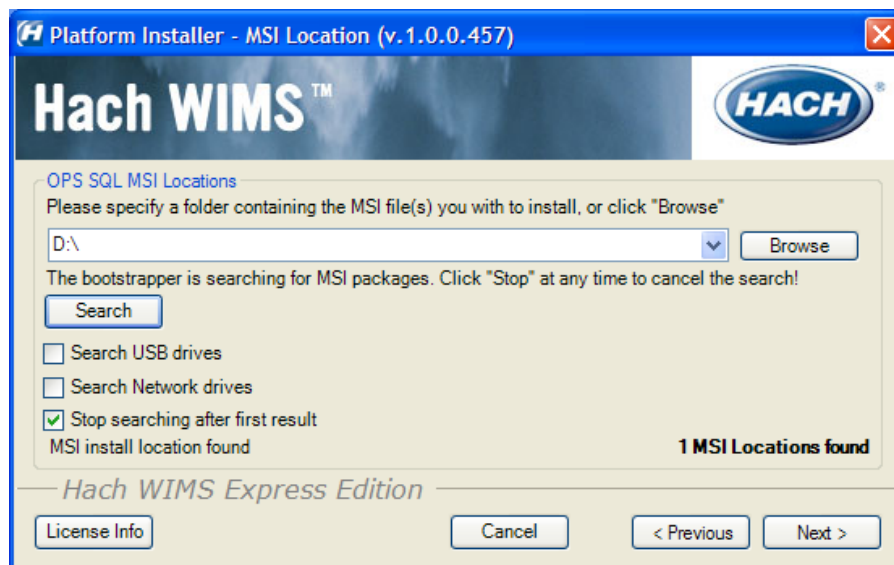
7. Next you are asked which components you wish to install. When you have selected the components you wish to install, click the **Next** button.

   a. Server – The Server components maybe split between multiple machines. Each Machine must have a connection to the machine hosting your database. Select the Components for this machine.

   b. Client - If you are installing just the client then you will need to make sure that only the client components are selected and **none** of the server components.

8. Next you will choose your default installation directory and your Server Location. The directory you choose will be the default and each component will be installed with this directory in mind.

9. The Platform Installer will list the Components that you selected and prepare them to be installed. If everything looks right, click the Begin button. Each Component will have its own Installation wizard. Complete each wizard to continue with installation. Please see the Component Installation section for help with each wizard. Once each component has finished, press the finished button. Congratulations! Hach WIMS^{TM} is now installed.

Platform Installer - Installation Status (v.1.0.0.457)

Hach WIMS™

HACH®

Click 'Begin' to start installation of selected features

Feature	Status	
SQL Server 2005 Native Client	Pending	
OPS Database Management system	Pending	
SQL Server 2005 Command Line Query Utils	Pending	
Hach WIMS GNR Server	Pending	
Hach WIMS Scheduler Service	Pending	
Hach WIMS Email Gateway Service	Pending	

Hach WIMS Express Edition

License Info | Cancel | < Previous | Begin

1.5 Upgrading from a 6.x.x (OPS SQL)

If you have a version earlier than 7.0.0, you will need to uninstall it. During the installation process, the Platform Installer will attempt to detect whether or not you have an earlier version. The OPS SQL Client will need to be uninstalled manual. During this upgrade process, your tutorial databases may be deleted (Rocky Creek and Sandy Beach). Please back them up if you wish to save their content. All the old OPS SQL components will be upgraded or uninstalled by the Hach WIMS™ Installer as needed. During the installation of Hach WIMS™, you will run into a few exceptions that you would not find in a normal installation.

NOTE: If you are upgrading you must backup your OPSSQL system.

1.5.1 Uninstalling OPS SQL Client

You will need to manually uninstall the OPS SQL Client via Add/Remove Programs. **NOTE: Please backup your OPSSQL system before uninstalling.**

1. Open Add/Remove Programs Via Control Panel.
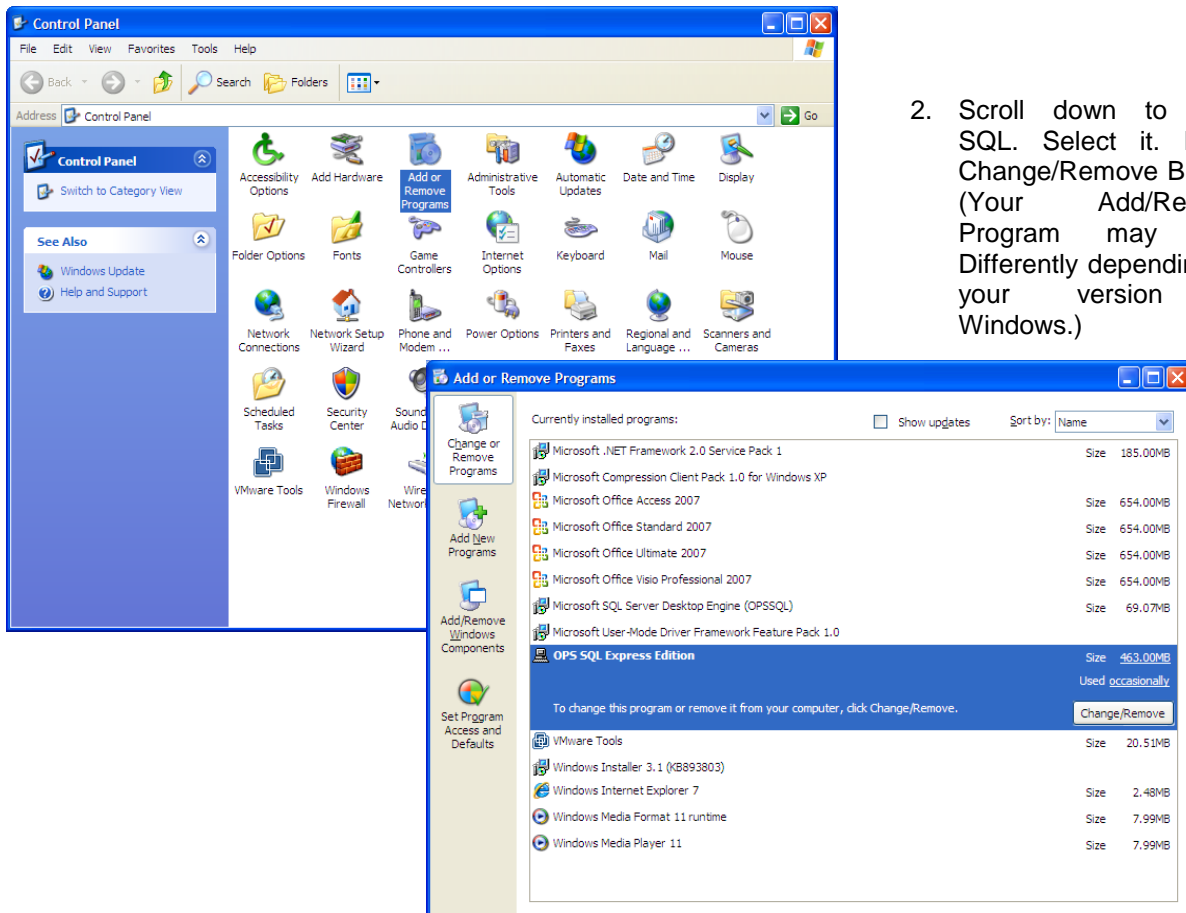
2. Scroll down to OPS SQL. Select it. Press Change/Remove Button. (Your Add/Remove Program may look Differently depending on your version of Windows.)
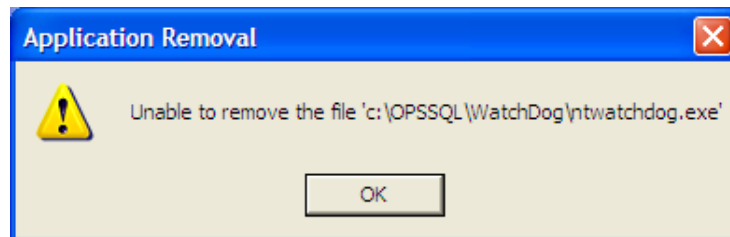
You will be presented with the OPS SQL Installer Removal. Press **Yes** when you are asked if you want to remove OPS SQL.
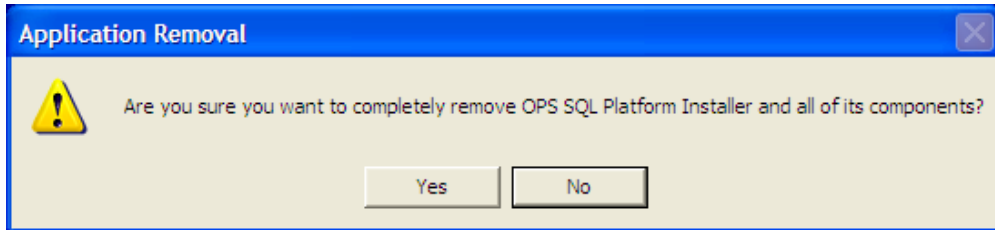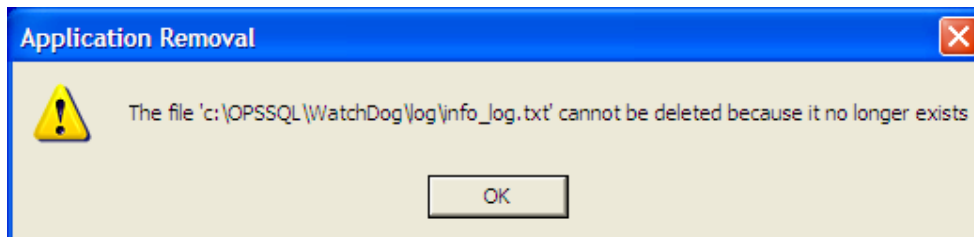

4. OPS SQL will begin uninstalling. You may be asked if you wish to remove a Shared file. Select [Remove None].
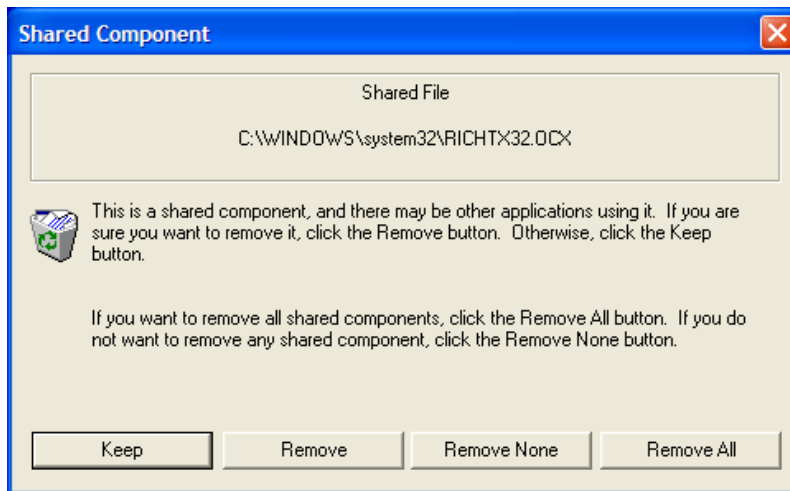
5. You may also be warned about files that cannot be removed. Press [OK]:


6. You may also receive the following warning. Press [OK]:

7. After multiple messages in steps 5 and 6, the un-installation will complete.

1.5.2 Hach WIMS^{TM} Installation

The installation of Hach WIMS^{TM} will proceed normally except a few exceptions listed here.

1. Close all programs that are currently running.

2. Place the Hach WIMS^{TM} DVD into your DVD drive and the Hach WIMS Platform Installer Welcome will be displayed. If the Welcome screen does not appear, double click on d:\Launcher\Launcher.hta where d: is your dvd drive.
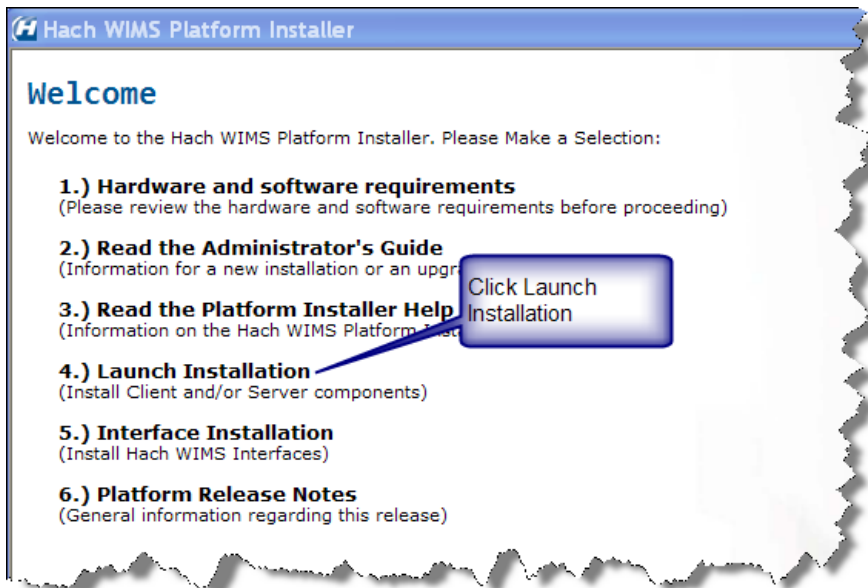

3. Click Launch Installation option from the Hach WIMS^{TM} Platform Installer Welcome.

NOTE: You may see a Prerequisites Wizard if any prerequisites are not installed. Please install these Prerequisites using the Prerequisites Wizard to continue installations. (.Net Framework is a common missing prerequisite.)

Exception 1: Old Versions Cleanup

You will be presented with the Older Product Versions Installed screen. This screen will list all the older products you have install and will inform you of what will be done with these older versions.
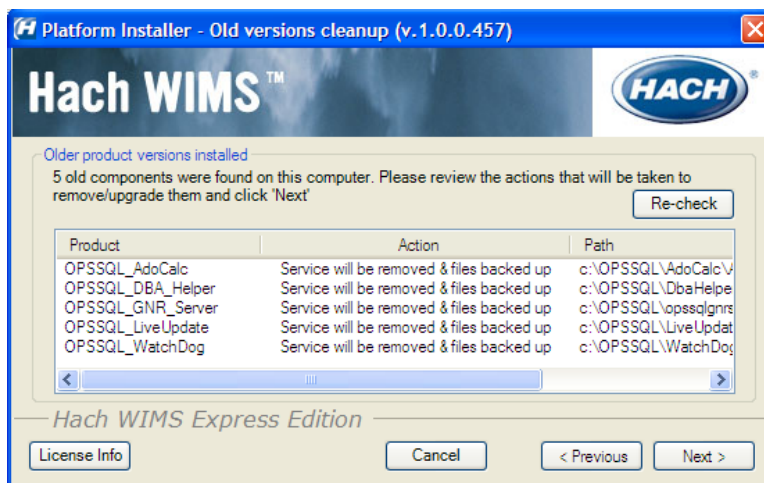

Click **Next**. From here continue installing like normal.

4. The Platform Installer will ask you to review and agree to the License Agreement. Check the Box if you agree and click **Next**.
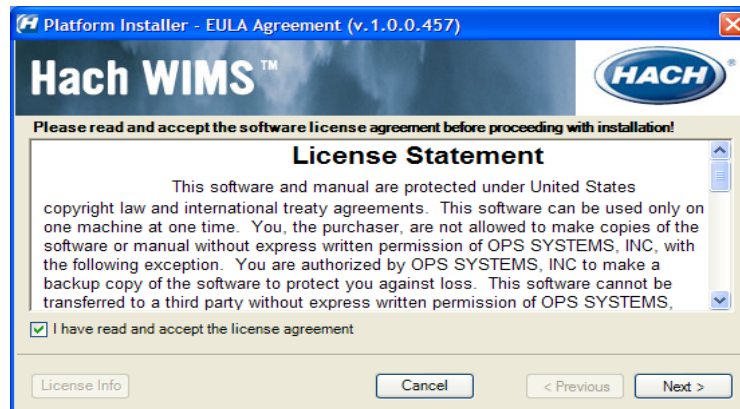
5. The Platform Installer should launch. Enter your Serial number and Browse to your License File (.License2008). Click the **Next** button. (Your license file should be on the WIMS DVD Case or it may be emailed to you.)
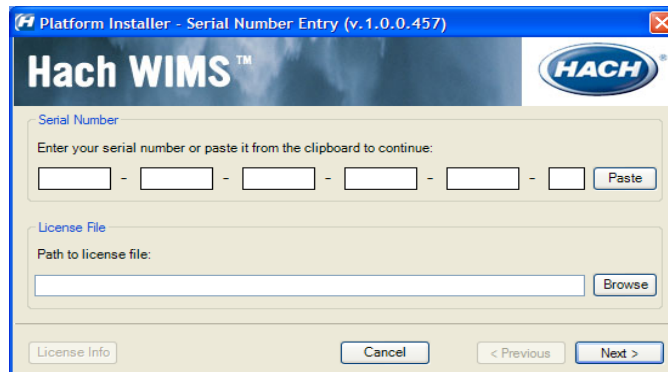

6. The Platform Installer will search for Hach WIMS^{TM} MSI Locations. You may need to browse to the MSI Location using the Browse button. When a location is found, a popup will inform you. Click Next. If you are installing from the CD you can just click **Next.**
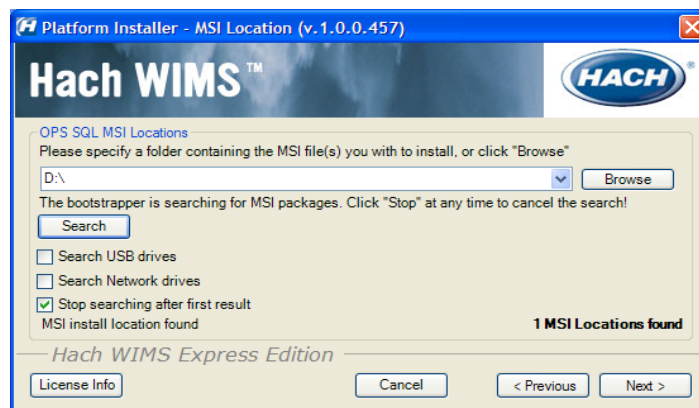

7. Next you are asked which components you wish to install. When you have selected the components you wish to install, click the **Next** button.

    a. Server - The Server components maybe split between multiple machines. Each Machine must have a connection to the machine hosting your database. Select the Components for this machine.

b. Client - If you are installing just the client then you will need to make sure that only the client components are selected and **none** of the server components.
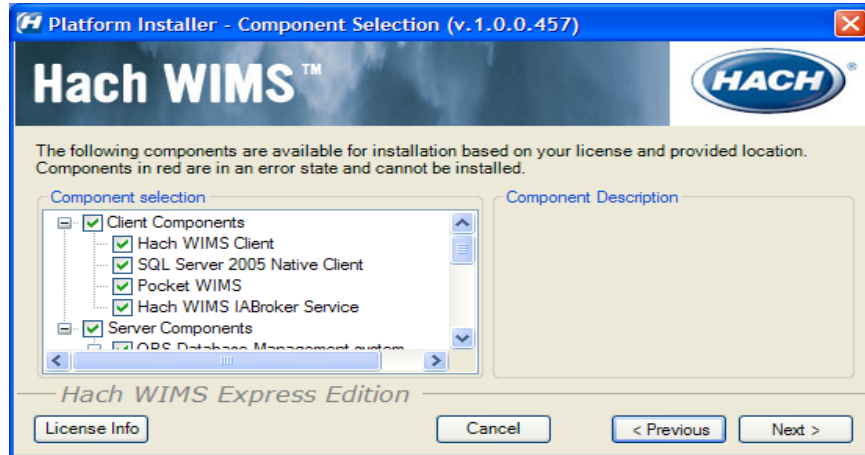

Exception 2: Upgrading from MSDE

When selecting which components you'd like to install, if you select server components, you will an additional message window informing you of the upgrade of your old Database.
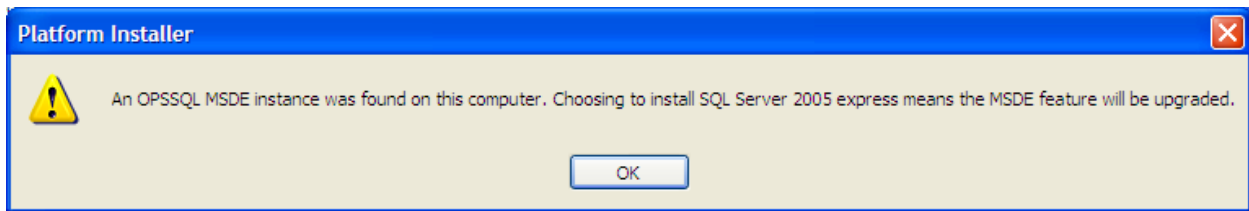
Click Ok. You will be warned about how long this upgrade may take. The larger your database, the longer it will take to upgrade.

Exception 3: MSSQL 2005 Warning

During the upgrade of MSDE to SQL 2005 you may get a popup window. Click **Retry**.
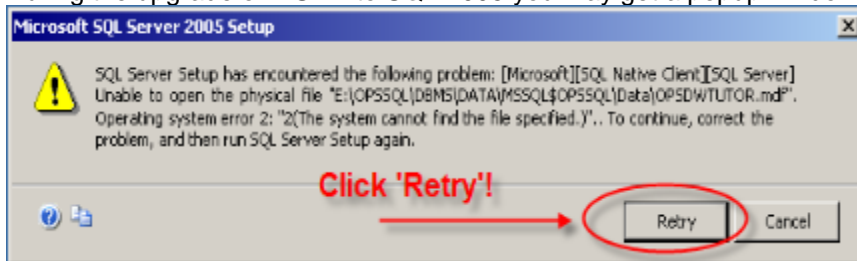
8. Next you will choose your default installation directory and your Server Location. The directory you choose will be the default and each component will be installed with this directory in mind.

9. The Platform Installer will list the Components that you selected and prepare them to be installed. If everything looks right, click the Begin button. Each Component will have its own Installation wizard. Complete each wizard to continue with installation. Please see the Component Installation section for help with each wizard. Once each component has finished, press the finished button. Congratulations! Hach WIMS^{TM} is now installed.
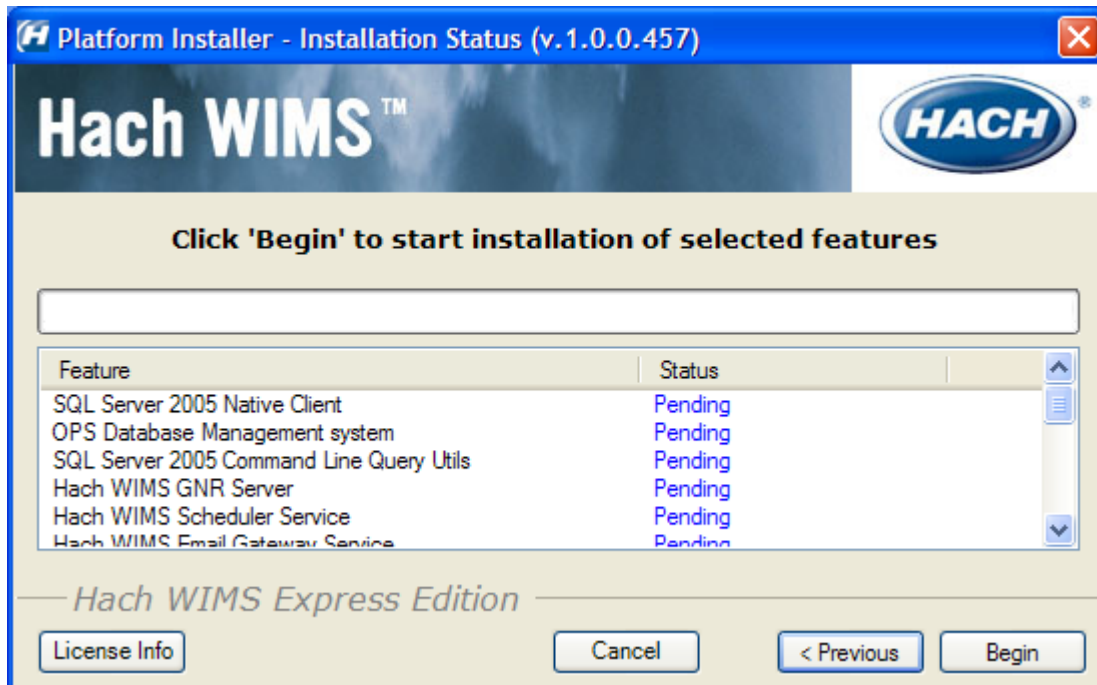
1.6 Hach WIMS^{TM} Server Setup

The Hach WIMS^{TM} Server Setup program allows the administrator to setup the Oracle database for use with WIMS, create new databases, restore backed up databases, import OPS 32 databases, and perform database upgrades.

1.6.1 Create Hach WIMS Root Tables

The utility needs access to an existing **Oracle service**. Once you specify the service name, the utility will try to connect to this service as **OPSROOT** user. If it cannot connect, the utility assumes that WIMS structures have not been installed on this service.

In the next step, Server Setup will try to create all needed structures on this service. It requires a username and password of a user with high Oracle privileges (DBA).

Note: This login information is not stored by any Hach WIMS product once the structures have been created.

Server Setup will create a new Oracle user called **OPSROOT**. Consequently, it will create a table space (**OPSMASTERSTORAGE**), which will be used to store all physical data for WIMS. The OPSMASTERSTORAGE is created on the server regardless of where the Server Setup is run from.

1. Run Hach WIMS^{TM} Server Setup (Oracle Edition). By default: Start, Programs, Hach Company, Hach WIMS, Hach WIMS Server Setup (Oracle), Server Setup (Oracle Edition). Click **Next.**



2. Connect to the Oracle Database:
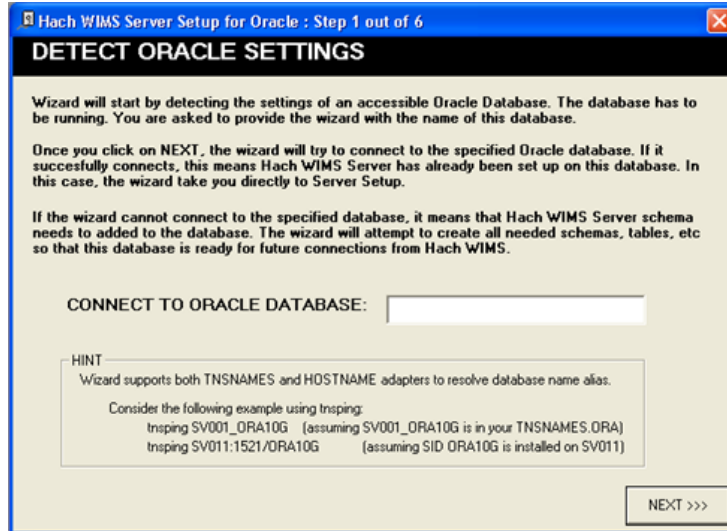
3. If this is the first time you are connecting Server Setup to this Oracle Instance, you will be prompted for an Oracle admin username and password. Enter your Oracle Username and password and click **Next**:
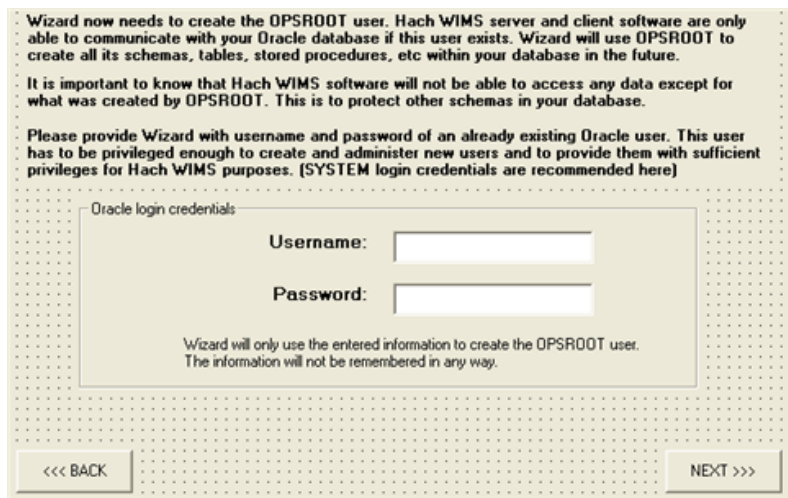
4. Server Setup will then create the Master Tablespace for WIMS. Enter the folder (Directory) or where the tablespace datafile should be placed and click **Next**.

Server Setup will create all tables, indexes and stored procedures that are needed by WIMS. The following figure displays a typical Oracle Setup for OPSROOT as shown in Oracle's DBA Studio.
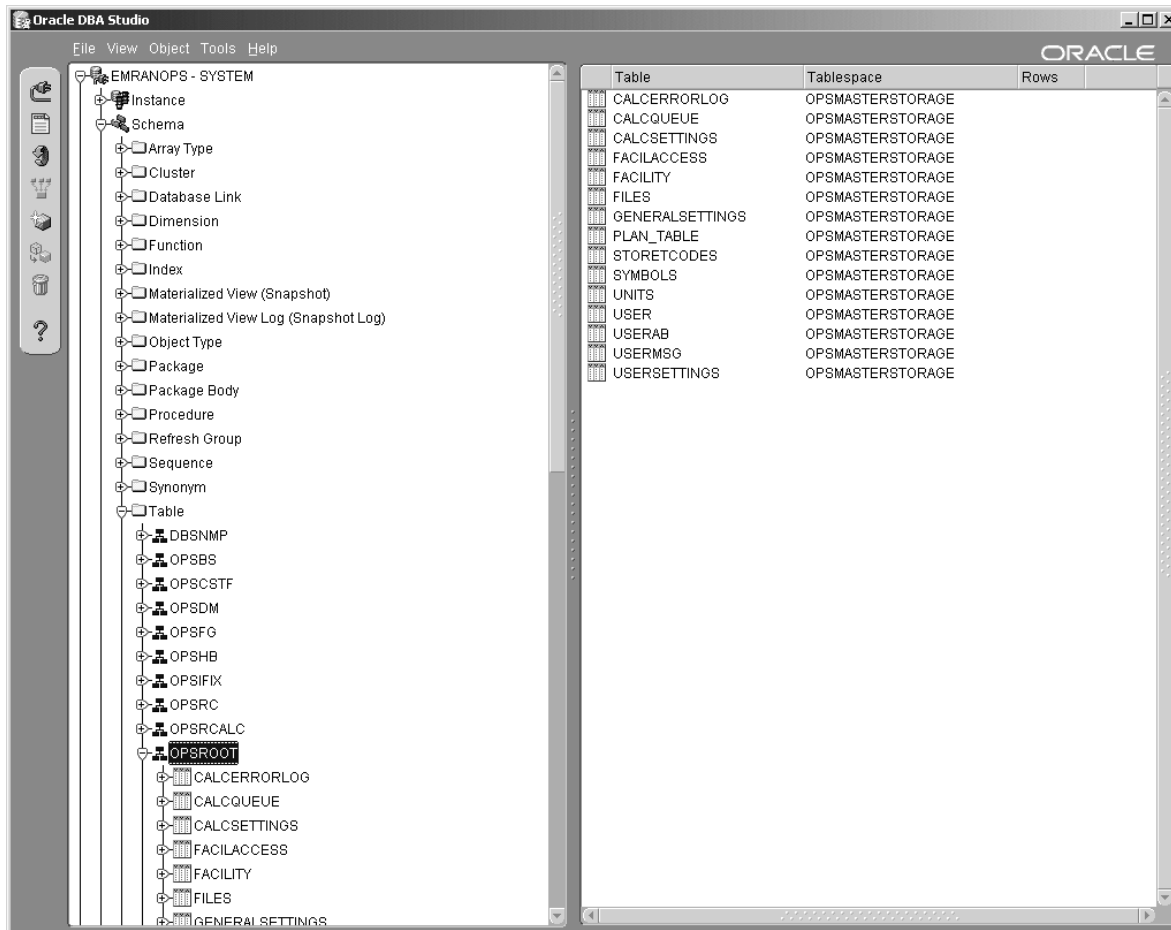
If you decide to import OPS32 security (which includes OPS 32 users, their facility access privileges and their shortcuts), click the **import OPS 32-security** checkbox. Then browse for the location of the User.97 file, which stores this security info.

When all of the above is done, Server Setup will ask you to restart the program so it can synchronize with the database server's time.

1.6.2 Creating New Hach WIMS^{TM} Facilities

You have two ways of creating WIMS^{TM} facilities using the Hach WIMS^{TM} Server Setup program.

    A. Create a new facility

    B. Import an OPS32 database

Both of these processes will require you to specify a unique identifier and a facility name for the new facility. The unique identifier is used to create a database under which all tables, stored procedures, and triggers will be held for the new facility.

|	
Unique Identifier:	This field can only contain letters. No numbers or other special characters. You are limited to a maximum of 8 characters – we recommend you only use 4 characters or less.
Data Source:	The Oracle Server that will be hosting this database.
Facility Name:	You should use your common facility name. If you call your plant Rocky Creek WWTP – type in Rocky Creek WWTP.

OPTION A: Creating a new facility

You will use the server setup utility to create a new Hach WIMS^{TM} database. This utility will require you to specify a unique identifier, data source, and a facility name for the new facility.

5. Run Hach WIMS^{TM} Server Setup (Oracle Edition). By default: Start, Programs, Hach Company, Hach WIMS, Hach WIMS Server Setup (Oracle), Server Setup (Oracle Edition)
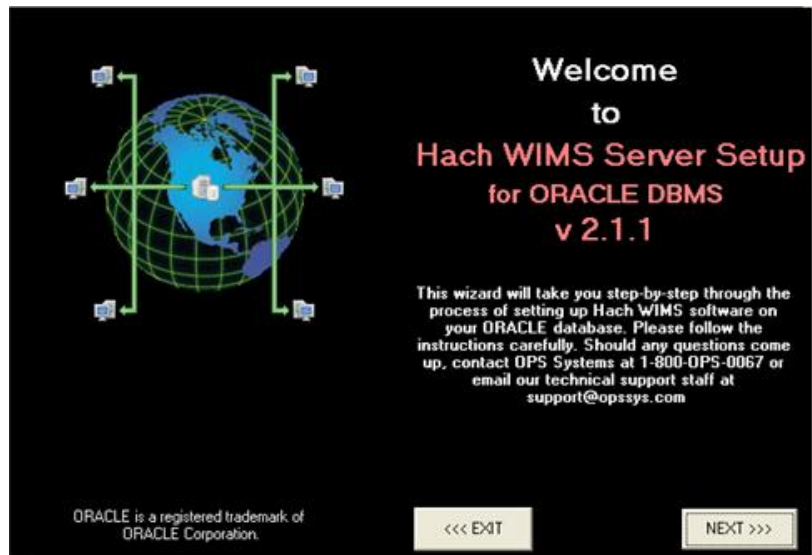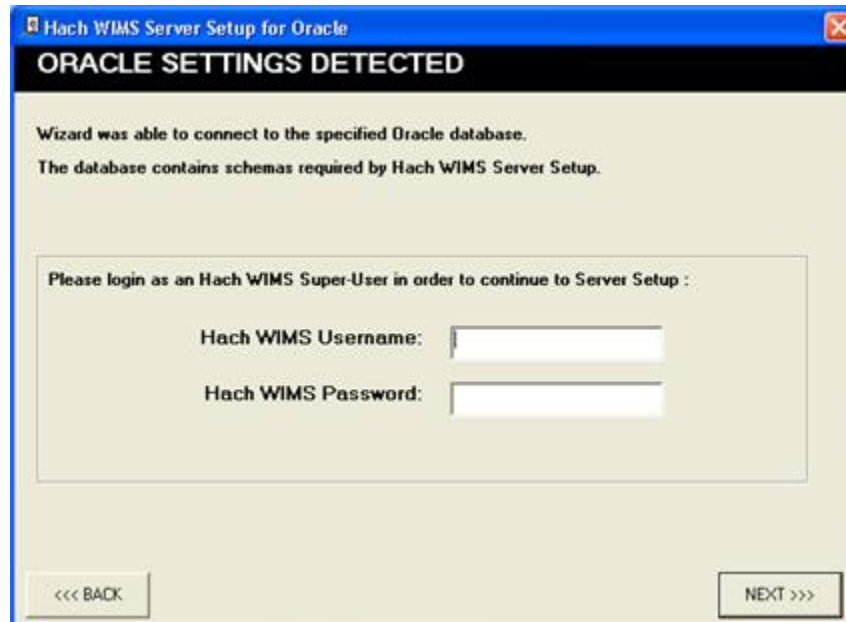
6. Click **Next**.
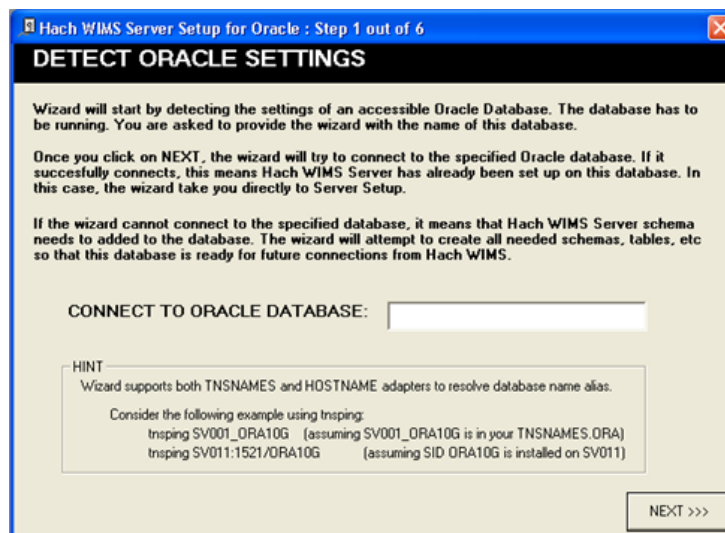
7. Enter Oracle Database Name Click **Next**.

8. Enter a Hach WIMS^{TM} Super Username and Password. The default username is Super, password Super. Click **Next**.
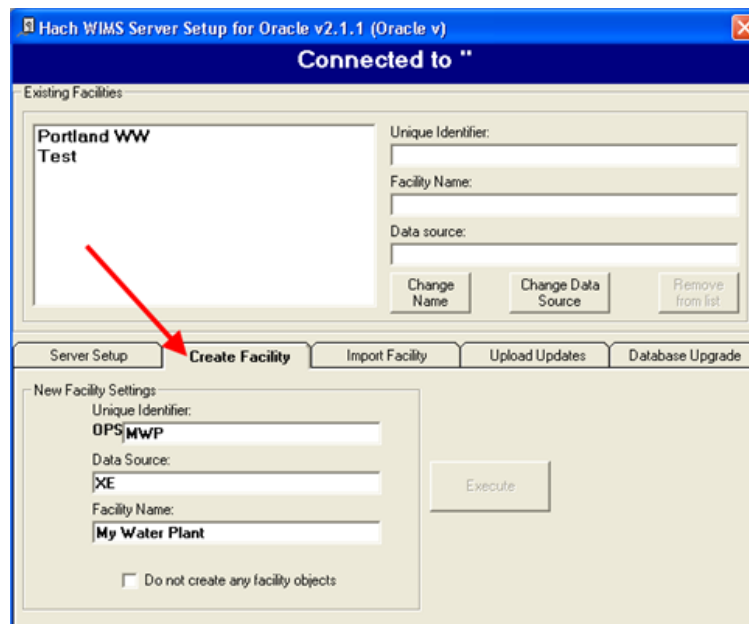
9. Click on the New Facility Tab to name your database.

Facility Name: You should use your common facility name. If you call your plant City WWTP – type in City WWTP.

Unique Identifier: A short identifier for the new database. This field will be defaulted when you enter a Facility Name. This field can only contain letters. No numbers or other special characters. You are limited to a maximum of 8 characters – we recommend you only use 4 characters or less.

**Data Source:** This should match the server you are connecting to.

10. Click **Execute**. The Server Setup will create a new database and display a success message. Click **OK**.

11. All new facilities are upgraded to the latest database version during their creation. This means you should be able to login to your new facility immediately.

OPTION B: Importing an OPS 32 database

You will use the server setup utility to import an OPS 32 databases to Hach WIMS™. You will need to browse for an OPS32 .mdb database file. We recommended that you repair and compact this database file before you import it into Hach WIMS™. Also, make sure that nobody is logged in the .mdb file when you are importing it (make sure the .ldb file does not exist).

NOTE: If you want to import your OPS32 User data into the Hach WIMS™ system, you will need to import it once while importing one of your facilities. To do this, simply add the user.2k file from your OPS32 installation on the "import security" tab inside system setup.

1. Start up Server Setup, connect to your Oracle Database and login.

2. The main Server Setup screen will be displayed. Click on the Import Facility tab:
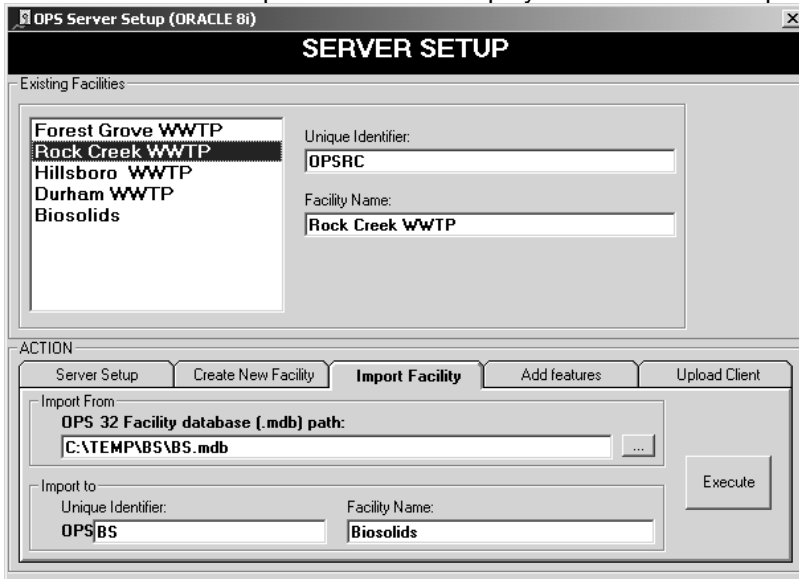
3. Click the **...** button to browse for your OPS 32 database to import.

NOTE: If you are having trouble identifying which OPS 32 database to import simply log into your database in OPS 32 and the location of the database is displayed in the title bar:

4. Enter the unique Identifier and the new facility name. Make sure the Data Source matches your Server Name/Instance of your server. Click **Execute**. The OPS 32 database will be imported. Depending on database size the import can take anywhere from a couple of minutes to several hours.

5. Upon completion of the import the following message will be displayed: Click **OK.**
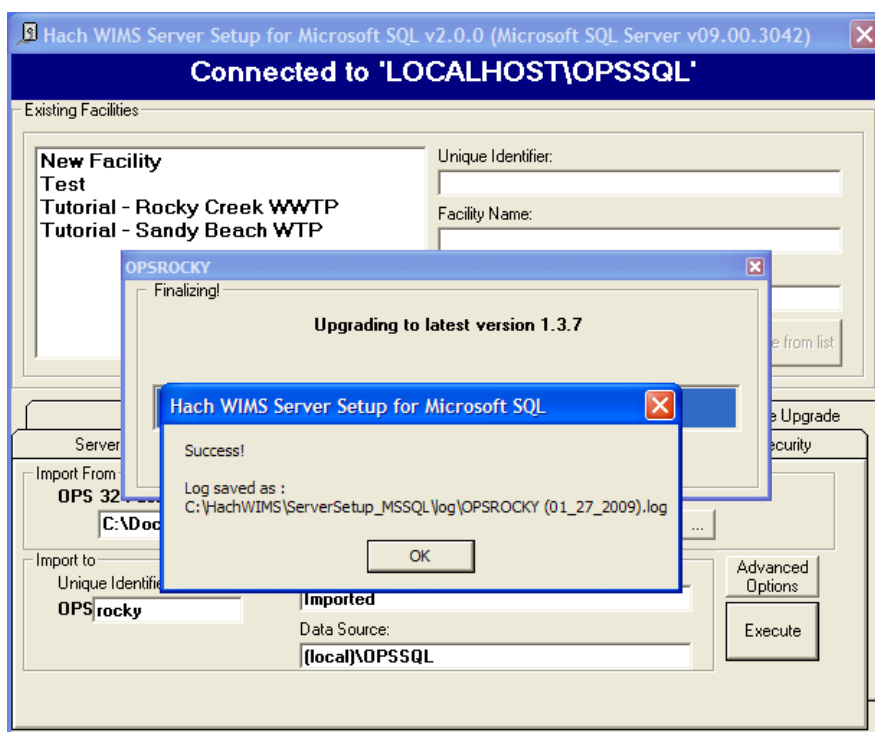

6. Imported facilities are upgraded to the latest database version during their creation. This means you should be able to login to your new facility immediately.

ISSUES THAT CAN COME UP WHEN IMPORTING:

Hach WIMS™ Server Setup will do a massive conversion of OPS 32 equations, spread reports, cde forms and graphs so that they can be used in the Hach WIMS™ system. The most frequent translation that occurs is the VARNUM to VARID translation. Sometimes an error can occur with equation translations (usually when you're importing equations that have the @ symbol in them. They can refer to a facility that does not exist yet). **Do NOT panic or stop the import.** The equations can be fixed later on in the Hach WIMS™ Client.

As facilities are created, Hach WIMS^{TM} Server Setup creates a database and all tables, stored procedures, and triggers needed for that database. For example, Hach WIMS^{TM} Server Setup created OPSRC database that holds all the tables needed for the Rock Creek WWTP facility. The following figure displays the tables that are created by Server Setup for the OPSRC facility.
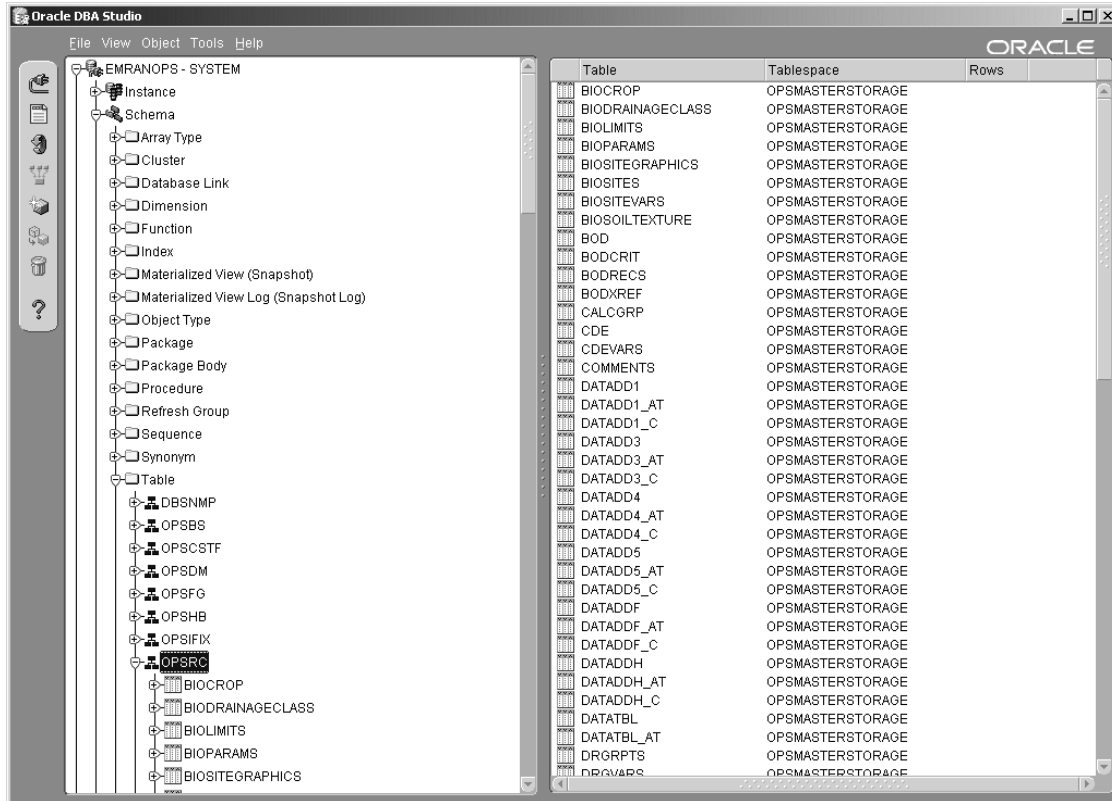
1.7 Database Upgrades

The facilities in the Hach WIMS system may not be up to date with the current version of Hach WIMS. If this occurs you will need to upgrade these facilities using Server Setup before you are allowed to use them.

NOTE: All users must exit WIMS^{TM} before Proceeding.

1. Start Server Setup.

2. Click Next to Login to server set up. Input Server/Instance Name. Click Next. Input Username and Password. The default Username and Password are:

   Username: Super

   Password: Super

   Click Next.

3. Select the Database Upgrade Tab.

4. Click the Refresh button to get a list of databases that are not up to date.

5. Press the UPGRADE Button. This will upgrade all the databases in the list.
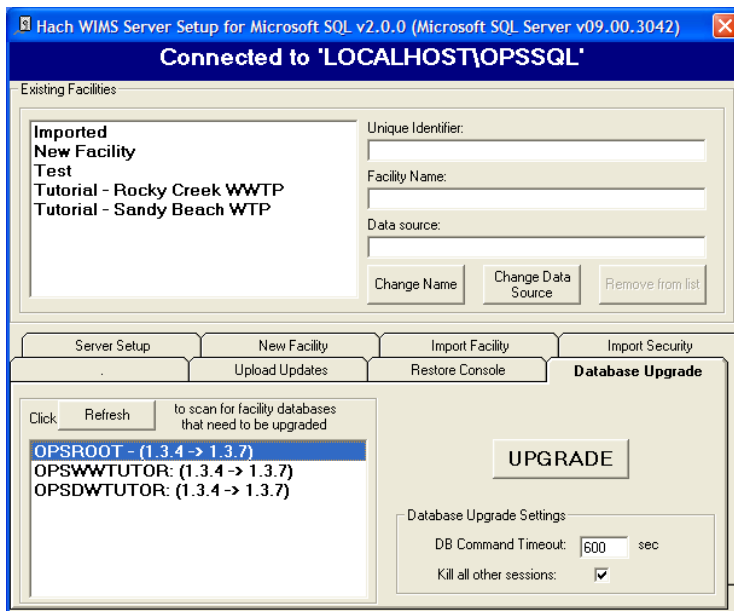
6. The system needs Full access to the database. It will kick anybody out that is currently accessing any database. It also informs you that you will need to restart your ADOCALC and GNR services once the upgrade is complete. If you understand these requirements, Click the Yes button.

7. Upon Success you will be able to log into any of the upgraded facilities.

1.8 Hach WIMS^{TM} Services

Hach WIMS^{TM} installs several NT services. These services perform a variety of tasks that are essential for Hach WIMS^{TM} to run properly. To view your services and to verify they are running go to *Start*, *Run* and run "Services.msc".
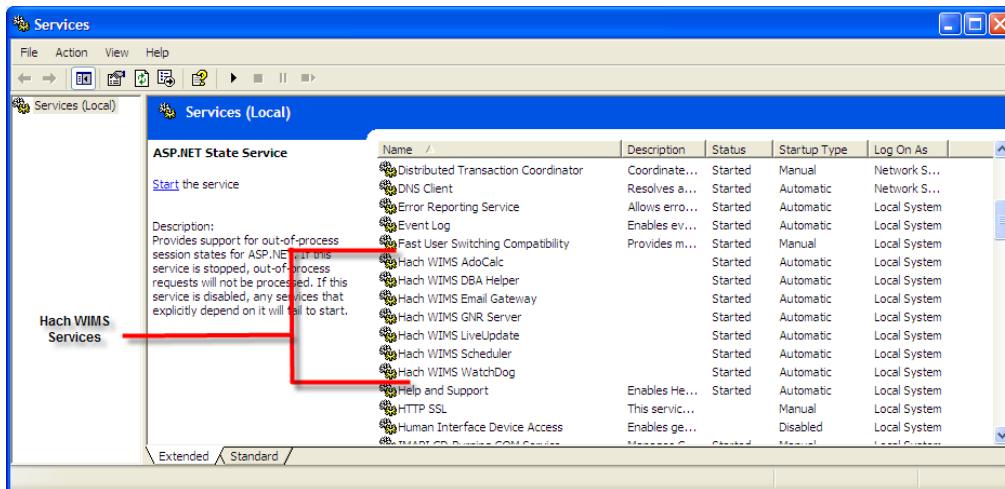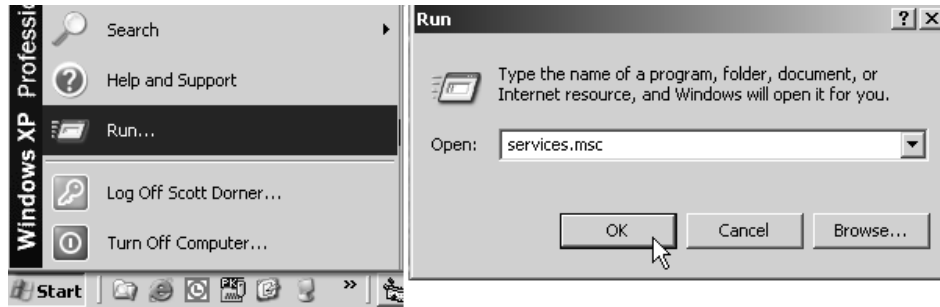
Hach WIMS^{TM} Services and the MSSQL 2005 service should have a Startup Type of Automatic and the Status should always be started. If you are having problems with a service, you may want to restart it. You can do this from the start menu. You can go to each services folder and find the restart services item.
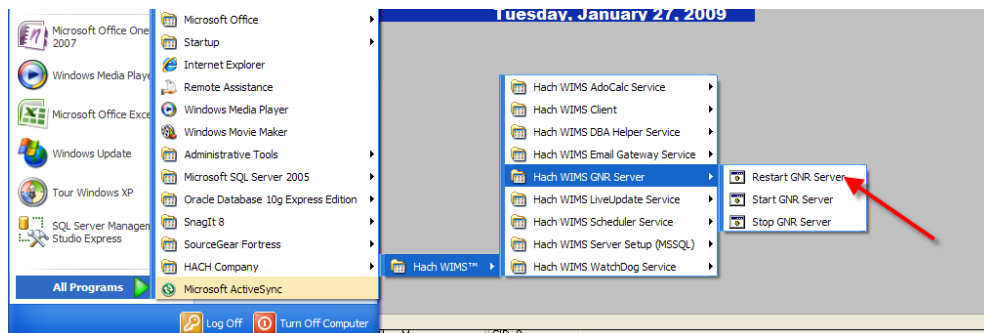
1.8.1 INI Files

Services in Hach WIMS^{TM} use INI files to set up some basic initialization settings. All these INI files share at least 3 fields. Additional Fields will be listed under each services section. INI Files are located under each service's directory in the Hach WIMS^{TM} root directory. (Default is C:\Hach WIMS) INI Settings are formatted as ATTRIBUTE=VALUE. In this section we list attributes and which values are acceptable.

HACHWIMS_CONNECTION_DBTYPE:

> For Hach WIMS (with DB Support), this can be equal to 1 or 2. 1 means MS SQL and 2 means Oracle. Example: HACHWIMS_CONNECTION_DBTYPE=1

HachWIMS_Connection_Provider:

> This signifies the OLEDB provider that the program/service should use to connect.

> Example:HACHWIMS_CONNECTION_PROVIDER=OraOLEDB.Oracle

HachWIMS_Connection_Datasource:

> This is your Oracle Server Name (in the TNSNAMES.ORA or Hostnames file) hosting the Hach WIMS^{TM} database.

> Example: HACHWIMS_CONNECTION_DATASOURCE=XE

1.8.2 ADOCALC

ADOCALC is the Hach WIMS^{TM} calculation engine. It should be online and connected to your database all the time. When a Hach WIMS^{TM} Client calculates data, it actually sends a calculation request to ADOCALC, the ADOCALC service then performs the calculation and notifies the client that the calc is complete. Example ADOCALC.INI:
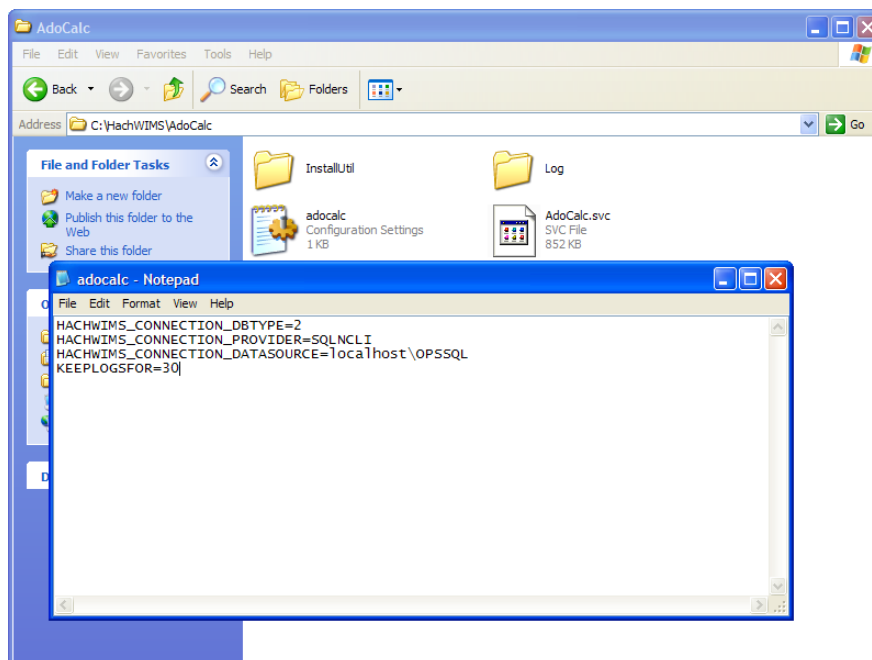
KEEPLOGSFOR

The ADOCALC service creates extensive logs of its activity. These logs are located in the log subfolder (default c:\HachWIMS\adocalc\log). This sets the number of days that the log files are kept.

1.8.3 DBAHelper

The Hach WIMS^{TM} DBAHelper service is responsible for generating back up files of the Hach WIMS^{TM} system. When a back up is requested from inside Hach WIMS^{TM}, The DBAHelper service will package the backup and place it in a location specified in its INI file.

The INI File has 2 additional fields.

KEEPLOGSFOR

This is the number of days logs will be saved.

LOCATION

This specifies the default path of where DBAHelper will place the backup files.

1.8.4 Email Gateway

The Hach WIMS^{TM} Email Gateway service is responsible for sending emails that are made from Hach WIMS^{TM} to a specified SMTP to be delivered via Email. For additional Information please consult our Knowledge Base. http://www.opssys.com/instantkb/Article.aspx?id=12003

The INI File has 6 additional fields.

KEEPLOGSFOR

This is the number of days logs will be saved.

SMTP

This specifies the SMTP Server.

SMTPPORT

This specifies the port that the SMTP is expecting data to be pushed through.

SMTPAUTH

This tells the email gate way if the SMTP will require authentication (login and password) 1 says that authentication is required. Anything else means that authentication is not required.

SMTPUSER

The Username of for this SMTP Server.

SMTPPASSWORD

The Password for this SMTP Server.

1.8.5 Live Update

The Hach WIMS^{TM} Live Update service is responsible for automatically downloading and installing Hach WIMS^{TM} updates.

The INI File has 2 additional fields.

KEEPLOGSFOR

> This is the number of days logs will be saved.

HTTP

> This is the location that Live Update looks for new versions of Hach WIMS^{TM} (Default is http://www.opssys.com/support/LiveUpdate/LiveUpdate.aspx)

1.8.6 GNR Server

The Hach WIMS^{TM} GNR Server service is responsible for sending scheduled reports and graphs to their scheduled output (email, disk, or a printer). The GNR Service may require additional setup (see below in GNR SETUP section).

The INI File has 2 additional fields.

KEEPLOGSFOR

> This is the number of days logs will be saved.

HACHWIMSCLIENT

> This specifies the path to the Hach WIMS^{TM} client.

1.8.7 Scheduler

The Hach WIMS^{TM} Scheduler service is responsible for keeping track of scheduled tasks in the Hach WIMS^{TM} System. This keeps track of scheduled database backups, database calculations, scheduled reports, and scheduled graphs.

The INI File has 1 additional field.

KEEPLOGSFOR

> This is the number of days logs will be saved.

1.8.9 Watchdog

The Hach WIMS^{TM} Watchdog service is responsible for making sure all the other services are up and running. When one of its specified services stops illegally, the watchdog service will restart it automatically.

The INI File has 5 additional fields.

KEEPLOGSFOR

> This is the number of days logs will be saved.

POLL_EVERY_MS

> This specifies how often watchdog checks in on each service.

CONNECTION_TIMEOUT_S

This specifies how long watchdog waits for a service before it's considered timed out.

STAY_CONNECTED

NTSERVICE

This one specifies the name of an NT Service that watchdog needs to keep track of. This entry can be added multiple times to add any NT Service.
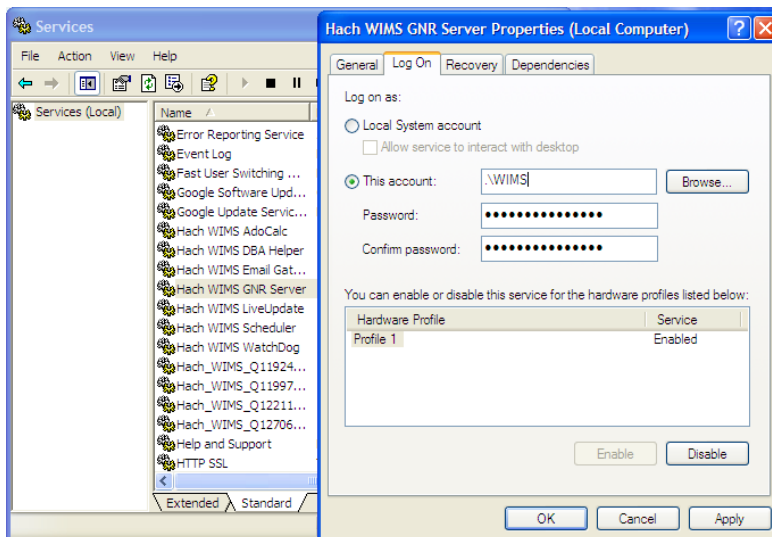
1.9 GNR Server Service Setup

GNR may require additional setup depending on how your system is configured. The first thing GNR Server will need is to be logged in as an administrator on the computer it's installed on. The second thing that will need to be set up are the printer for the GNR administrator user that GNR will have access to (including a PDF Printer).

1.9.1 GNR Server Service as Administrator

Services run under the Local System Account do not have access to printer information. In order for the GNR Server to interact with your printers, the GNR Service **MUST** be run under a admin account.

1. Open up Services.msc (go to start->run)

2. The services.msc window will open up. Search for the Hach WIMS^{TM} GNR Server Service.

3. Right click the Service and select properties.

4. Select the Log On Tab.

5. Select the "This Account" Radio button.

6. Type in a Windows administrator's account Username and Password

7. Click **OK**. This should change the login information for this service.

1.9.2 GNR Server PDF Printer

When you set up GNR to run under an administrator account, GNR has access to printers only added to that account. If you would like to have PDF capabilities, you will need to add a PDF Printer to the User account that GNR Server was setup to run under. Please Visit http://www.opssys.com/instantkb/Article.aspx?id=10032 for further instructions and access to files.

1. Login as the administrator that GNR Server is running under

2. Go to Start/Settings/Printers And Faxes

3. Now install at least one printer driver. This driver can be a "dummy driver" and does not need to have any printer hardware behind it. In case you want the GNR Server to print to multiple print locations, set up all drivers needed now.

4. Run **pdf995_32bit_and_64bit.exe** (Downloaded from Knowledge base article, http://www.opssys.com/instantkb/article.aspx?id=12741). Choose a path where you want to extract the installation files.
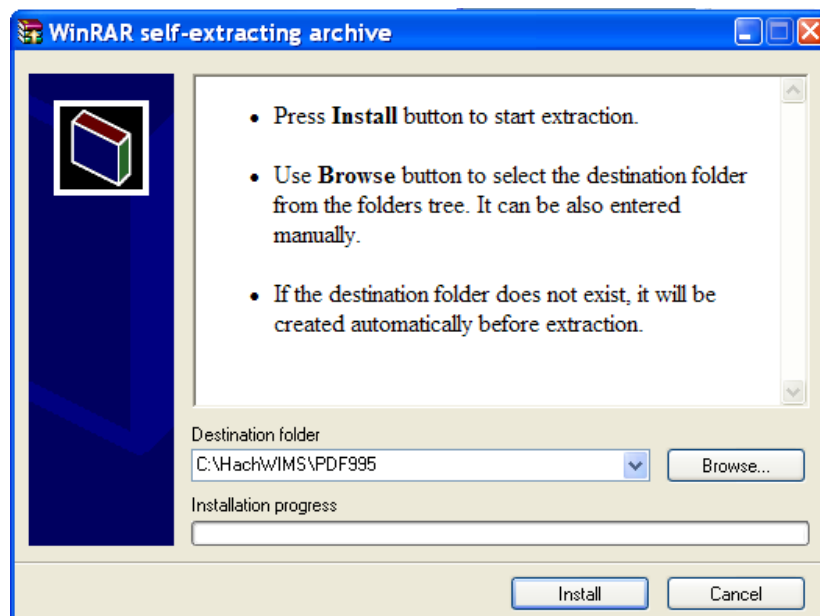
5. Click **Install**. The files will be extracted and the program will close.
6. In explorer, navigate to the directory where you just extracted the installation files.
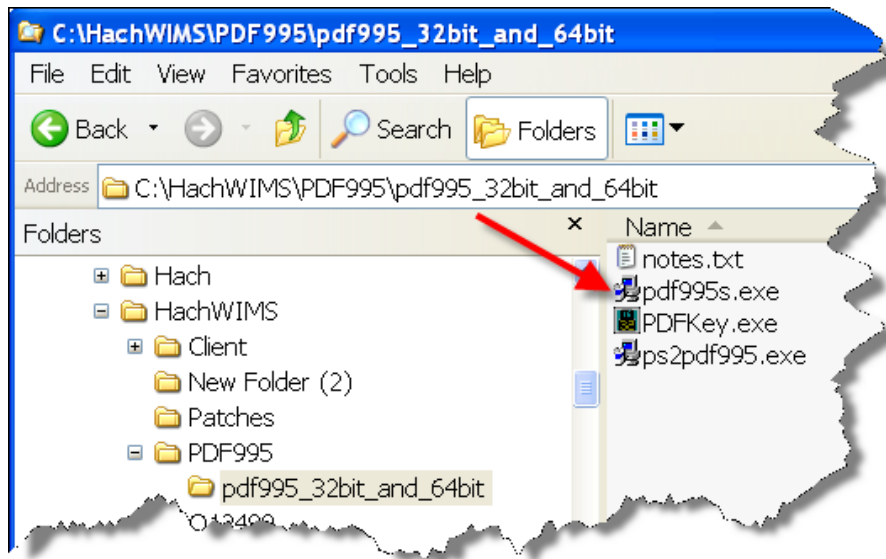
7. Run **pdf995.exe**. Let it run through the installation process.
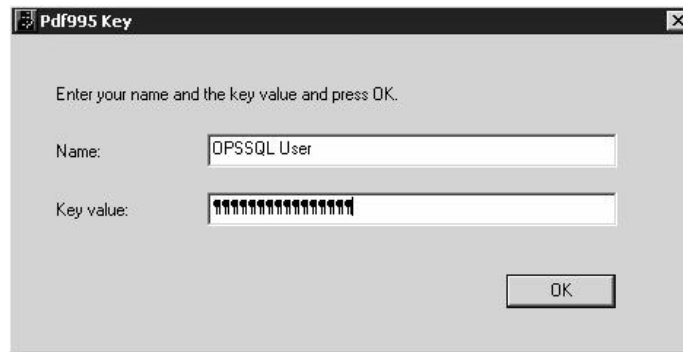8. Once it's done, Answer **NO** to the following message
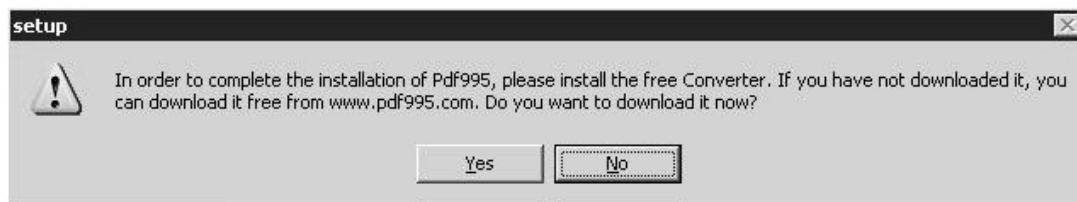
9. Run **ps2pdf995.exe,** answer **Accept** to the Pdf995 User Configuration message that will appear at the end of the install.
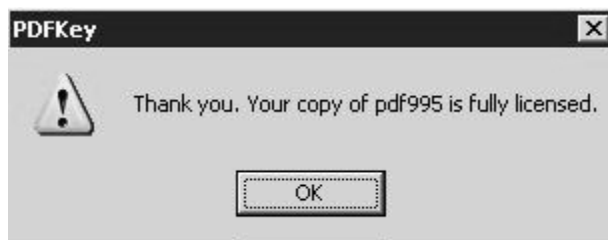10. The installation will confirm success with an IE message:
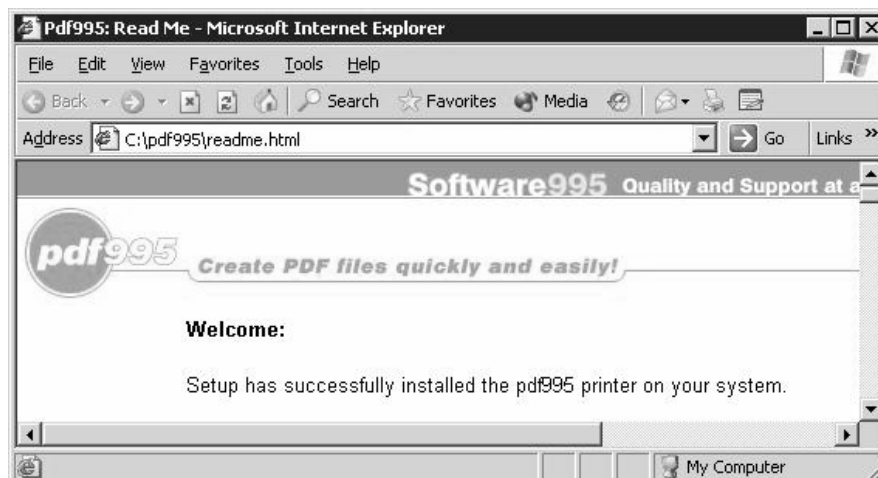
11. Run PDFKey.exe

12. Type in your name and the PDF995 key value (parkhurst924).

13. Click **OK** and you should see the following message:

14. Log into the PC as the User that the GNR Server Service is running under. Go to Start/Settings/Printers and Faxes

15. You should see PDF995 in the printers list
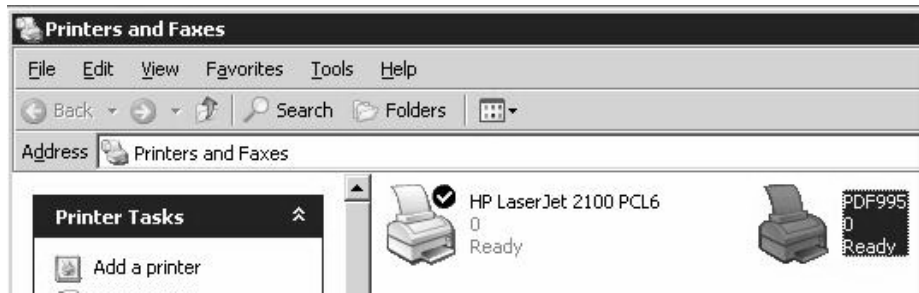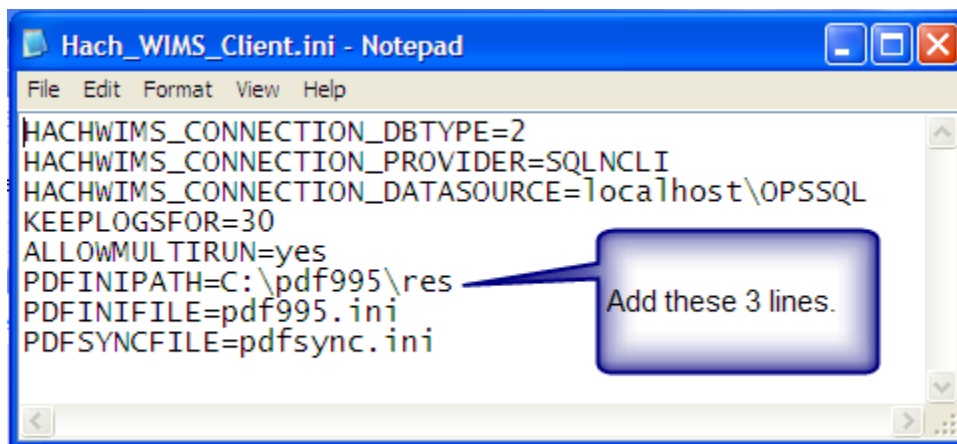
16. Right-Click on PDF995 and select Rename
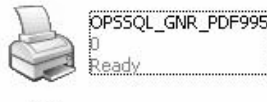
17. Rename to OPSSQL_GNR_PDF995

18. In Explorer, navigate to the Hach WIMS^{TM} Client folder

19. Open Hach_WIMS_Client.INI and add the following 3 settings at the end of the file:

```
PDFINIPATH=C:\pdf995\res

PDFINIFILE=pdf995.ini

PDFSYNCFILE=pdfsync.ini
```


20. Save Hach_WIMS_Client.INI

21. Start the GNR Server.

1.10 Updating the Hach WIMS^{TM} Client

Updates are periodically released to fix bugs and add minor features to the Hach WIMS^{TM} system. There are two ways to update your Hach WIMS^{TM} Client. The first is using the Live Update service. The second is to manually install the update.

1.10.1 Updating Via Live Update

The Live Update Service will help you do your updating quickly and easily. The way this works is the service is in communication with the Hach WIMS^{TM} servers. You tell your system to check for new updates. Once this completes, if there are any updates, your system will automatically begin the download. Once the download is complete, you will be notified via a Hach WIMS^{TM} Message. You can then tell your client to update you directly.

1. Open Hach WIMS^{TM} Client and log in to any facility.

2. Go to Help->Support->Check for Updates Now.
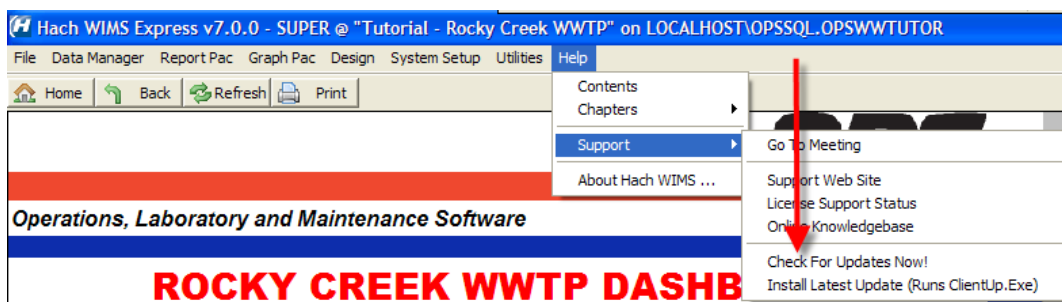
3. When Live Update has checked the server for updates, it will respond to you via Hach WIMS^{TM} Message. (See Hach WIMS^{TM} Message Section for details). Check your Message Box until you receive a response.

4. The response can say a multitude of things. If there is a new update, it will inform you and begin downloading. When it has completed downloading it will inform you in the same manner.

5. Once the download is complete, you can install it. Go to Help->Support->Install Latest Update
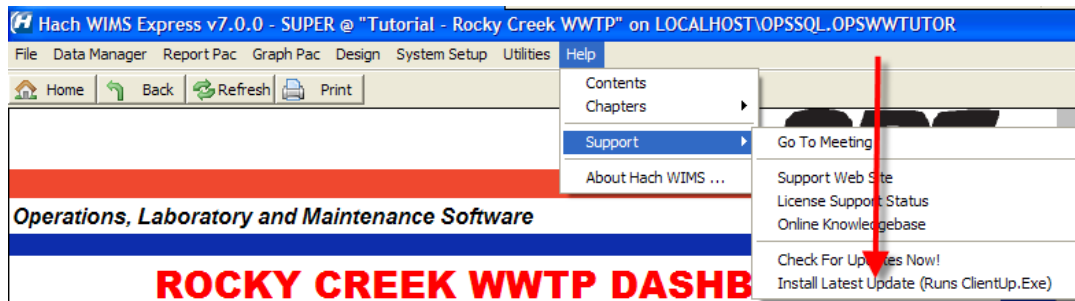
6. If you have other clients installed on other machines, you do not need to download the update again. The update is stored in the database as a blob file that can be retrieved by any client. To force the other clients to update, Open System Setup->Admin Console.
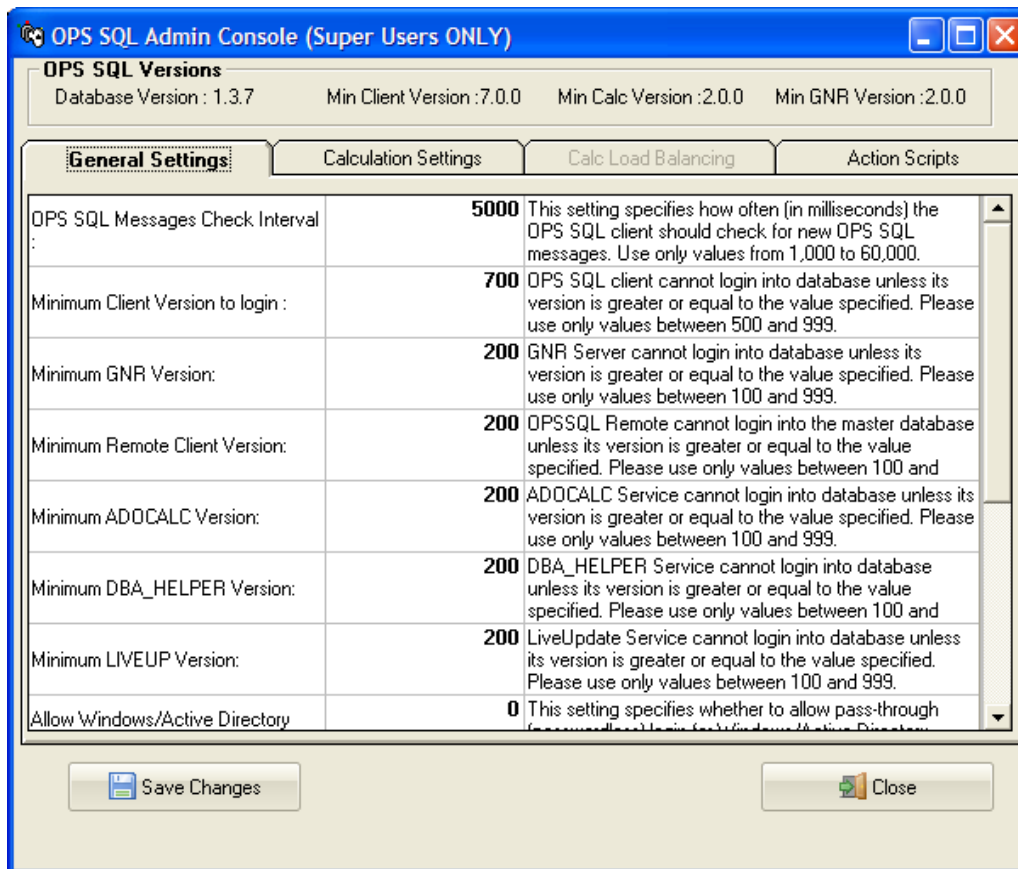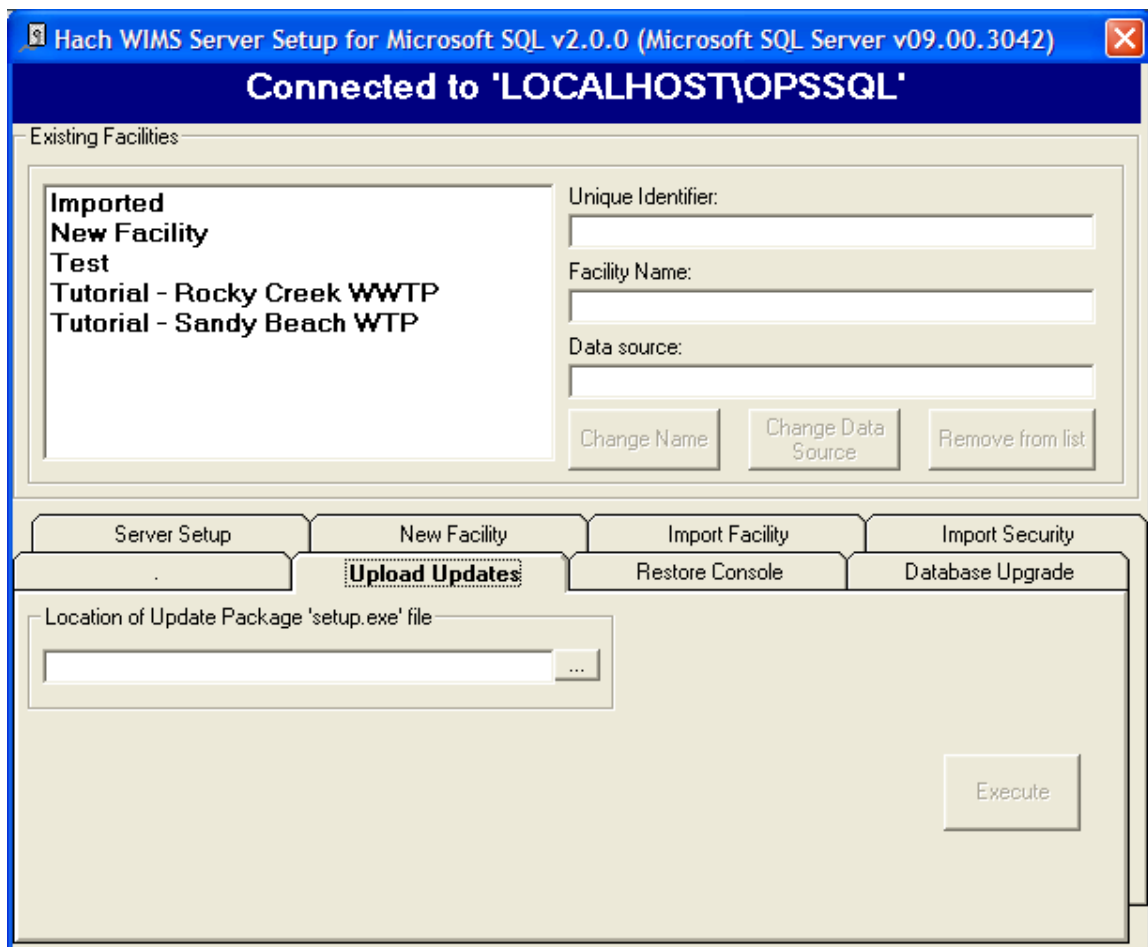

7. Change the setting that called "Minimum Client Version to Login:" to the version number that was just download without any periods (7.0.0 is typed in as 700) when a client tries to connect to the server that does not meet this requirement, they will be asked to confirm an update to their client.

1.10.2 Updating Manually

Updating manually requires a bit more work. The idea is the same. You down load an update. You extract the update. You push the update into the server. You tell the server to disallow any user below a certain version. As people login, they will be forced to update.

1. Visit www.opssys.com/support.html
2. You may need to create an account. If you do not have an account, create one. Log in.
3. If you created you account you will need to add your product License number.
4. Enter the Hach WIMS^{TM} Support area.
5. Download the latest version of the Hach WIMS^{TM} Client.
6. The Client update is an EXE that when run will extract a Setup Program. Run this EXE and extract the files.
7. You will need to run Server Setup. Start->All Programs->Hach Company->Hach WIMS->Hach WIMS Server Setup (MSSQL) and login.
8. Go to the Upload Updates Tab.

9. Browse to the location where you extracted the update. Select the Setup.exe
10. Once you select the setup EXE you will be presented with basic information, such as the version number for the update. You will need this number for later.
11. Once the Update has been load, close Server Setup and Open the Hach WIMS^{TM} Client.
12. The update is stored in the database as a blob file that can be retrieved by any client. To force the clients to update, Open System Setup->Admin Console.
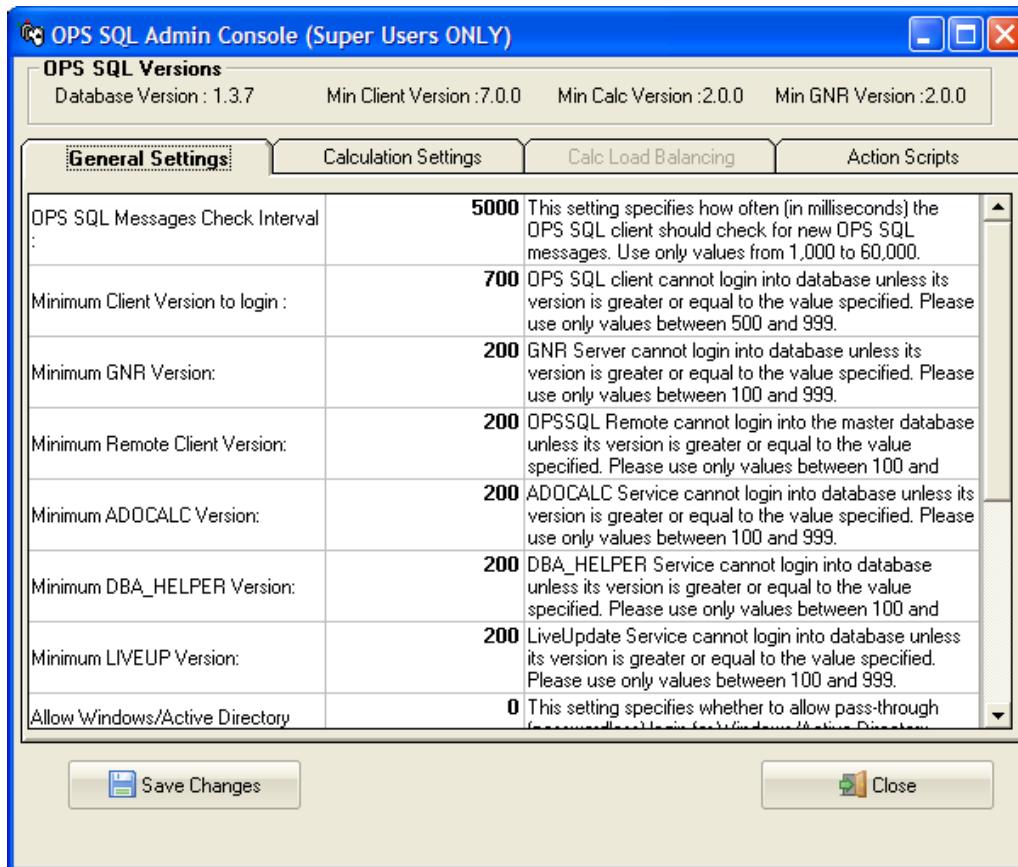
13. Change the setting that called "Minimum Client Version to Login:" to the version number that was just download without any periods (7.0.0 is typed in as 700) when a client tries to connect to the server that does not meet this requirement, they will be asked to confirm an update to their client.

1.11 Hach WIMS^{TM} User Messages

Hach WIMS^{TM} comes with a messaging system that allows any Hach WIMS^{TM} user to send a message to any other Hach v user.

Moreover, the Hach WIMS^{TM} Services (ADOCALC, DBA_Helper, interfaces …) will use these user messages to report about their behaviors. You can also apply a user message to 'ping' the Services.

To Send a Message to a user or service, go to *Utilities*, *Send Message*:
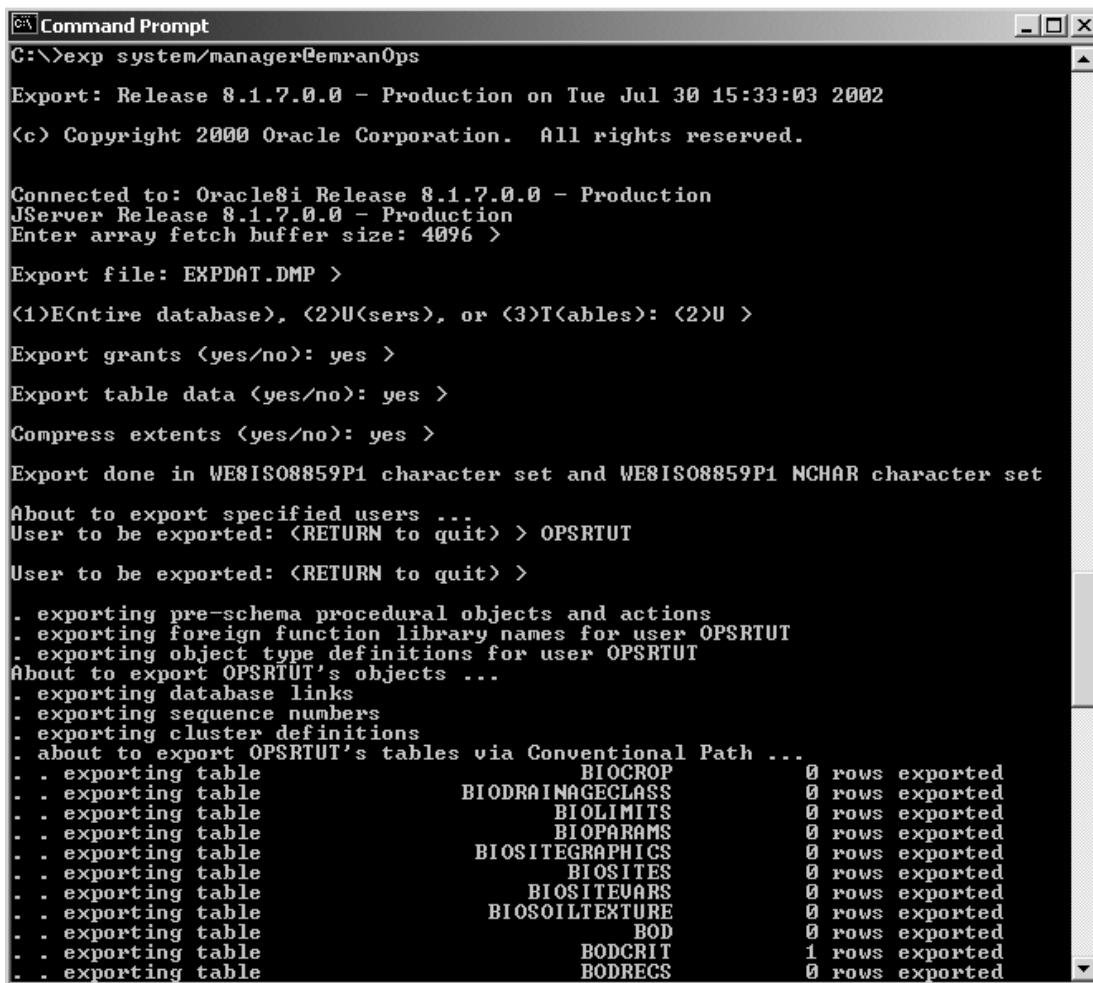
To open your Inbox go to Utilities-> Message Inbox.

1.12 Export/Import Utility

OPS SQL facilities can be exported from Oracle using the Oracle Export Utility. This chapter describes how to use the Export utility to write data from an Oracle database into an operating system file in binary format. This file is stored outside the database, and it can be read into another Oracle database using Oracle's Import utility. OPS Systems may request an exported OPS SQL facility for Tech Support purposes.

Steps to Export:

1. Logon to a PC with the Oracle Export utility installed. The Exp.exe program is distributed by Oracle Corp to the C:\oracle\ora81\bin by default.

2. Get to the command line prompt. Type "Exp Username/Password@Service" as shown below. NOTE: The Username must be a DBA with EXP_FULL_DATABASE role to perform this task. To Export the OPSRTUT (OPS Rocky Tutorial) using the system account from the EmranOPS Oracle Service:

Figure 1: Command Prompt Window

This will create a file called EXPDAT.DMP in the current folder.

To Import the facility data (OPSRTUT) from an existing Export dump file to a different Oracle Service:

1. Create a blank facility (user/schema owner). In this case "OPSRTUT". Use Ops Server Setup Utility to create the OPSRTUT facility. Check "Do not create any Facility Objects".
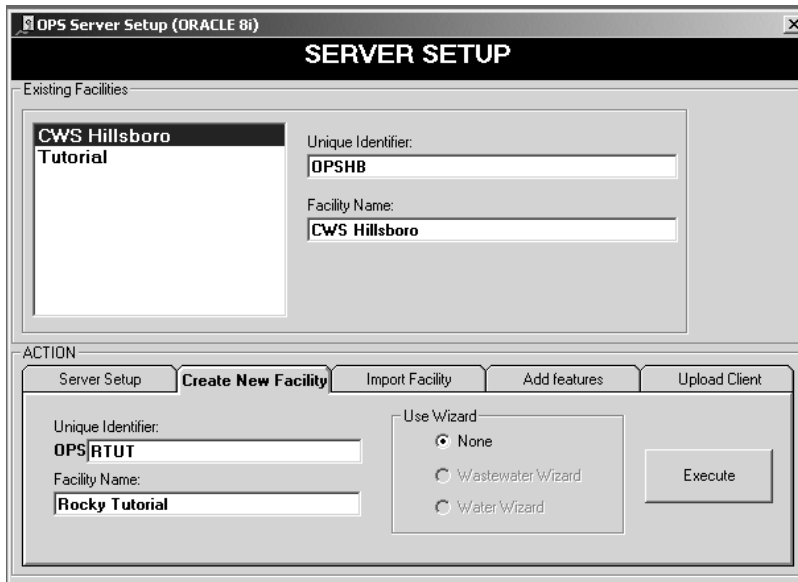

Figure 2: Server Setup

NOTE: If you are importing the schema to a Service that already has a schema with the same name, the import will not work. For example, if OPSRTUT already exists on the database you are importing to, the import will not work. If you want to overwrite the schema you must first drop the user and then perform Step 1 above to create the facility with no Facility Objects. To drop a user in DBA Studio, go to security, highlight the user (OPSRTUT in this case), right click, choose delete, and choose to cascade the delete to all objects.

2. Get to the command line prompt. Type "Imp Username/Password@Service" as shown below. **NOTE**: The Username must be a DBA with EXP_FULL_DATABASE role to perform this task. To Import the OPSRTUT (OPS Rocky Tutorial) using the system account into the ScottOPS Oracle Service:
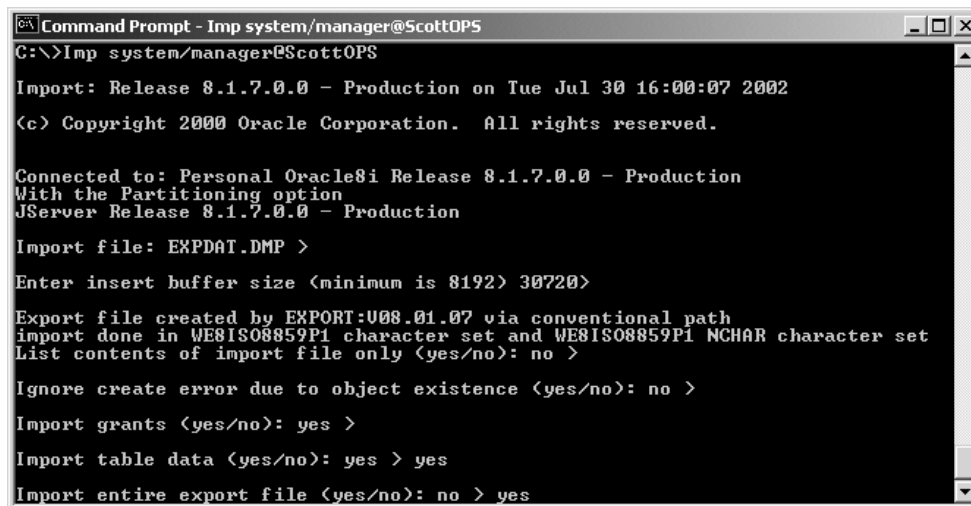

Figure 3: Command Prompt for server setup

The facility will be imported.

WARNING: **Import overwrites existing table data if the Facility (User/schema owner) already exists.**

Appendix A: Enabling Relaying on your Email Server for Hach WIMS™

The GNR service allows Hach WIMS™ to send periodic emails, however Hach WIMS™ itself is not an email server. You must have a machine with an SMTP (email) server already setup. The PC on which the GNR service resides must be able to connect and use your SMTP server to actually send the email. This is called "relaying". By default, relaying is usually disabled as a security consideration. You will need to enable relaying for the PC that is hosting the GNR service.

This guide will explain how to do this through Microsoft Exchange 2003, a popular email server.

NOTE: If you don't feel comfortable with modifying Exchange settings, which can have far-reaching effects, please have your system administrator help you!

1. Open the Exchange System Manager console and navigate through the tree to Servers/Protocols/SMTP/Default SMTP Virtual Server:
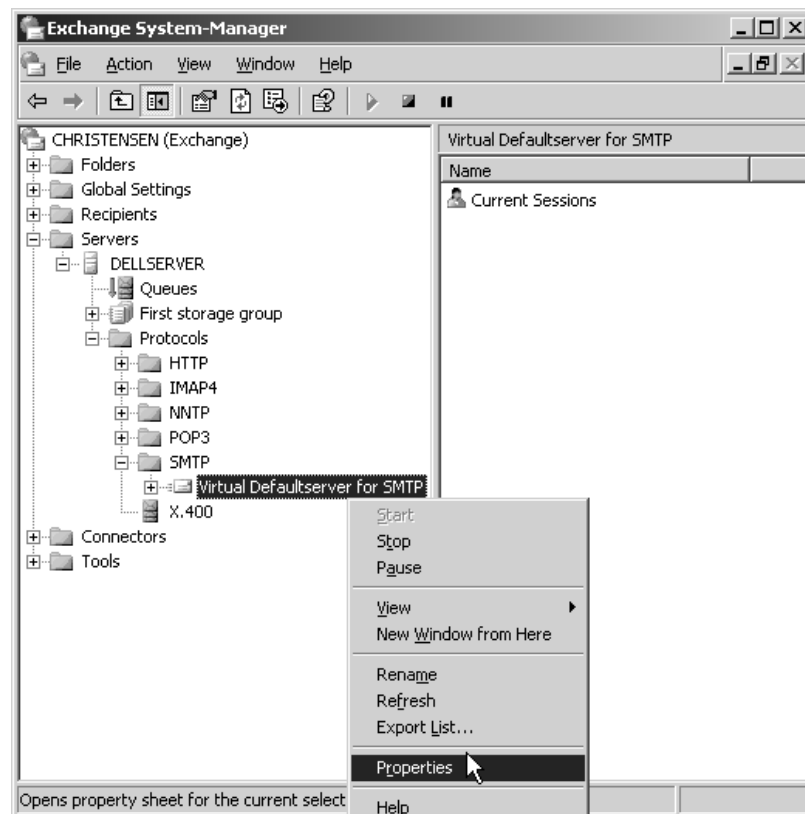

2. Click Properties and then click the Access tab:

We'll need to modify the Access Control, Connection and Relay Restriction options in order for email to go through. Note that modification might be unnecessary in case your Exchange server has already been setup properly.

3. Click the Authentication tab and make sure that the Anonymous Access option is enabled, as the GNR service does not authenticate as a specific user:

4. Mark the checkbox for Anonymous access and click **OK**. This should get you back to the Access tab.
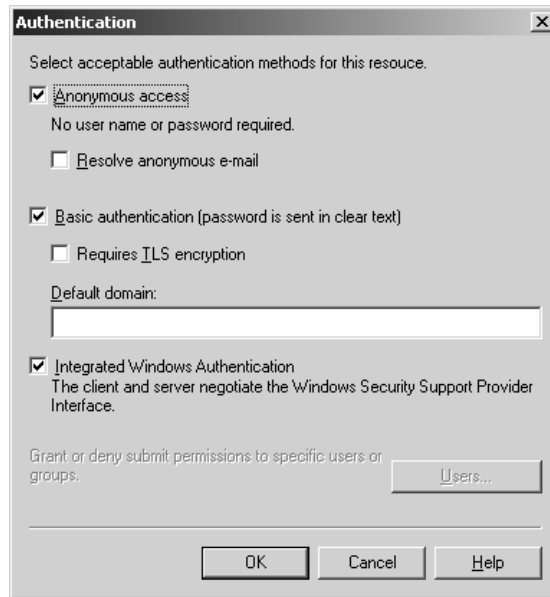
5. Now click on Connection. This is where you have to make sure that the machine's IP address that is hosting the GNR service is either listed as an allowed IP address, or is NOT listed as a blacklisted IP address.
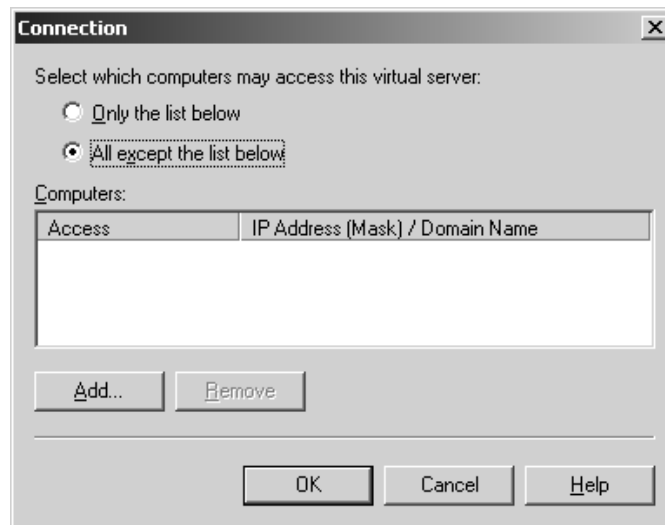
The two radio buttons, "Only the list below" and "All except the list below" control whether the listed IP addresses/Hostnames are either white-listed or black-listed. E.g., if the radio button "Only the list below" is selected and the GNR machine is NOT listed, email sending will not work because the machine is not in the white list; if it's present in the list, all is OK. Conversely, if the radio button "All except the list below" is checked and the GNR machine IP address/hostname is NOT listed, email will work, while if it's in the list, it is black-listed and will get rejected.

Either make sure that it's present in the list if the first radio button is selected, or make sure it's NOT present if the second radio button is selected. Click OK to go back to the Access tab.

6. Click the Relay button to go to the Relay screen. This screen is similar to the Connection screen:
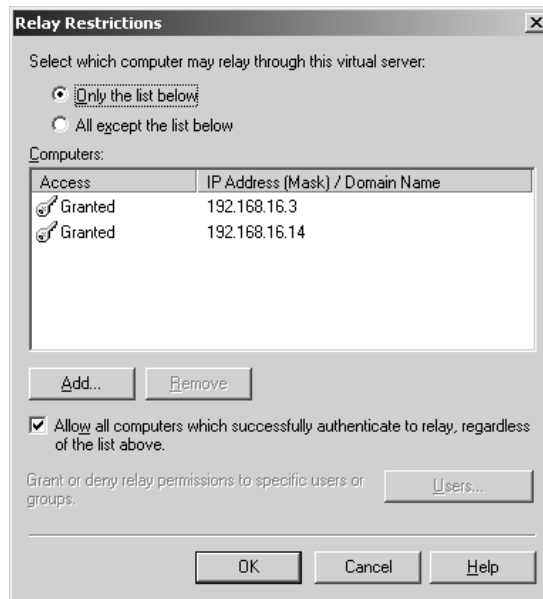
The logic is the same as in under the allowed connections screen, i.e., the "Only the list below" radio button controls the white-list and you MUST make sure the GNR machine is listed, while the "All except the list below" button controls the black-listed machines and you MUST make sure the machine is NOT listed. Click **OK**.

7. Disable your anti-virus program on the SMTP (email server) machine. This is necessary because the anti-virus program interferes with the way Hach WIMS™ sends emails.

NOTE: Modifying email settings can have serious security consequences. Please have your system or network administrator help you or do the actual modifications if necessary!

Using MS SQL 2008 DBMS

Driver is SQLNCLI10???