

# DB2 UDB SmarTeam Best Practices

**DB2.** Information Management Software

DB2 UDB V8.2 Windows edition

## ***DB2 Installation***

***for***

***Express Edition***

***Workgroup Server Edition***

***2<sup>nd</sup> edition rewritten***

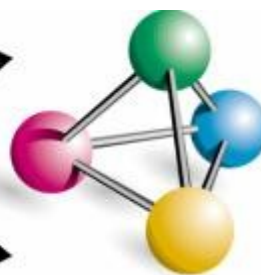
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**V2.05**

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#### *about the author*

**Amr Roushdi:** is an IBM Data Management consultant and provides support for IDSICC as well as SmarTeam and Dassault Systemes.

#### **Other contributions**

**DB2 Technical Enablement Services IBM Toronto Lab** for providing RDMS terms mapping to DB2

**Paul YIP IBM Toronto lab** for providing DB2 common command line processor commands

### Introduction and objectives

This publication does not replace any existing documentation provided for DB2. nor by SmarTeam's documentation and recommendations .

It's primary objective is to demonstrate methods to install DB2 on different Windows platforms .

DB2 provides you with different methods of installations . For the simplicity we opted for the standard method using the DB2installer provided .

In the annex you will find how to perform a silent install using response files included for the different editions .

For more information on DB2 and or on SmarTeam please refer to the documentation CD's provided .

This document is hyperlinked and http links are active . When viewed An Acrobat reader

An appendix containing a with different RDBMS Terminology mappings as well as a quick reference for the most db2 clp commands used .

You comments are always welcomed . Please address your comments to <mailto:idsicc@fr.ibm.com> .

## Getting the pieces needed to install DB2 .

At the moment of writing this publication which coincides with SmarTeam Release 5.14 DB2 is distributed with the SmarTeam media . You do not need any fixpaks if you are installing from DB2 V 8.2 .

If you are on DB2 V8.1 with or without fixpaks installed you will need to install fix pack 5a to upgrade your DB2 to the current V8.2 level.

Latest fixpaks as well as latest clients can be obtained from

<http://www-3.ibm.com/cgi-bin/db2www/data/db2/udb/win0s2unix/support/download.d2w/report>

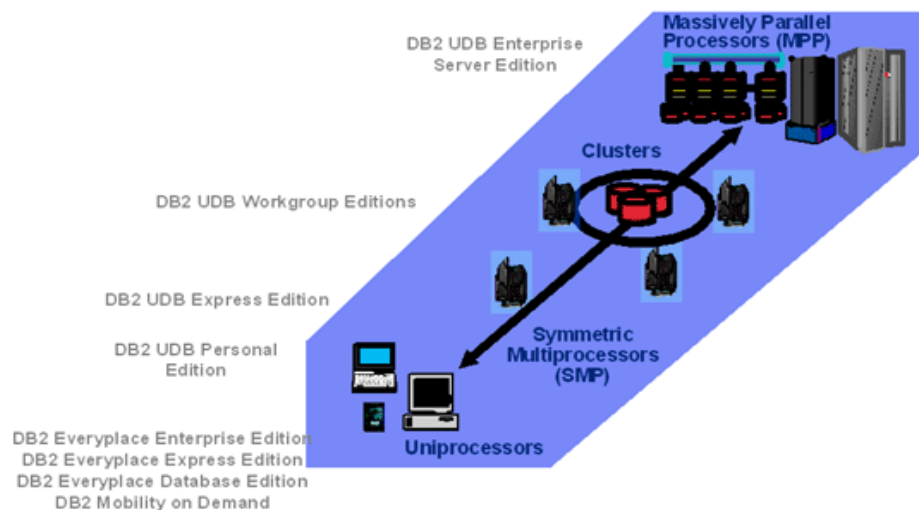
DB2 V8.2 is available as a full license product or a try and buy (60 days validity )

## DB2 V8.2 editions and requirements

### A sample IBM DB2<sup>®</sup> Universal Database<sup>™</sup> Configuration

Consists of an edition of DB2 Universal Database meeting your application needs, with your choice of

#### DB2 UDB - Sample Configuration



operating system. The DB2 Universal Database hardware real memory and disk space requirements are listed here as well. For more information, refer to the Installation Prerequisites in the documentation accompanying each product.

DB2 Universal Database not only runs on many platforms, but also has many packaging options that allow you to configure the right edition for your database deployment needs. Whether you are a small- and medium business (SMB) that tracks sales over the Internet, a mobile solutions provider, or a Fortune 500



company trying to analyze sales data to put the right products into the right hands at the right time, there is an edition of DB2 Universal Database that's right for your configuration. From Palmtop to Teraflop, or uniprocessors to massively parallel clustered system, DB2 Universal Database can be configured to power the most successful businesses. The DB2 Universal Database scaling is seamless from edition to edition, which gives you the ability to leverage your DB2 Universal Database investment as your business grows. With the exception of DB2 Everyplace<sup>®</sup> Edition,

each DB2 Universal Database edition has generally the same code base across the distributed platforms. A common code base offers portability and assurances that, when the time is right to scale up your DB2 Universal Database solution, it can be done seamlessly at minimal cost.

DB2 Universal Database family of open information infrastructure middleware editions, available in four production deployment editions and two application development deployment editions, is designed to meet requirements of various customer scenarios. In addition, IBM DB2 Universal Database offers several options requirements of various customer scenarios. In addition, IBM DB2 Universal Database offers several options for application specific customer requirements. The following positions these various editions and options.

---

### DB2 Universal Database Editions for Production Deployment

#### DB2 Universal Database Enterprise Server Edition

DB2 Enterprise Server Edition is designed to meet the relational database server needs of mid to large size businesses. It can be deployed on Linux<sup>™</sup>, UNIX<sup>®</sup>, or Microsoft<sup>®</sup> Windows<sup>®</sup> servers of any size, from one CPU to hundreds of CPUs. DB2 Enterprise Server Edition is an ideal foundation for building on demand enterprise wide solutions, such as, large data warehouses of multiple terabyte size or high performing 24-hours-day, 7-days-a-week available high volume transaction processing client / server or Web-based business solutions. It is the database back-end of choice for industry leading Independent Software Vendor (ISVs) building enterprise solutions, such as, Business Intelligence (BI), Content Management, e-Commerce, Enterprise Resource Planning (ERP), customer relationship management (CRM), or supply chain management (SCM). Additionally, DB2 Enterprise Server Edition offers connectivity, compatibility and integration with other enterprise DB2 and IBM Informix<sup>®</sup> data sources.

#### DB2 Workgroup Server Unlimited Edition

DB2 Workgroup Server Unlimited Edition offers a per processor licensing model for relational database deployment in a departmental or workgroup or medium sized business environment that has Internet users or a set number of users that makes per processor licensing more attractive than the DB2 Universal Database Workgroup Server Edition per user licensing model. The Unlimited Edition can be deployed in Linux, UNIX, and Windows environments on systems with up to four CPUs.

#### DB2 Universal Database Workgroup Server Edition

DB2 Universal Database Workgroup Server Edition is the relational database server of choice for deployment in a departmental or workgroup for the medium-sized business environment that has a set number of internal users. The Server Edition is licensed on a per user model, designed to provide an attractive price point for medium size installations, while providing a full function relational database server. DB2 Workgroup Server Edition can be deployed in Linux, UNIX, and Windows server environments on systems with up to four CPUs.

#### DB2 Universal Database Express Edition (DB2 Express)

DB2 Express is a full function DB2 relational database, which provides very attractive entry-level pricing for small to medium business SMB market. It is offered in both per user or per processor pricing models to



provide choices to match SMB customer needs. It comes with simplified packaging, and is easy to transparently install within an application. It is fully compatible with; scalable to; and has all the autonomic manageability features of its higher priced family of offerings. DB2 Express can be deployed on pervasive SMB operating systems, such as Linux or Windows, with up to two CPUs.

### DB2 Universal Database Personal Edition

DB2 Personal Edition provides a single user full-function relational database, with built-in replication, ideal for desktop or laptop PC-based deployments. DB2 Personal Edition can be remotely managed, making it the perfect choice for deployment in occasionally connected or remote office implementations that don't require multi-user capability. The Personal Edition can be deployed in Linux or Windows single user desktop or laptop workstations, with inbound connection limited to administration use only.

---

## DB2 Universal Database Editions for Application Development Deployment

### DB2 Universal Developers Edition

DB2 Universal Developers Edition offers low-cost package for use by an individual application developer to design, build, or prototype applications for deployment on any of the DB2 client or server platforms. It includes all DB2 client and server editions; DB2 Connect; DB2 Mobility on Demand; DB2 Extenders including. Spatial, Geodetic and NSE; DPF; DB2 Table Editor and Web Query Tools; DB2 Warehouse Manager; and DB2 Intelligent Miner. The software in this edition cannot be used for production systems.

### DB2 Personal Developers Edition

DB2 Personal Developers Edition enables an individual application developer to design, build or prototype single user desktop or laptop workstation applications. This offering includes Windows and Linux versions of DB2 Professional Edition, DB2 Connect Personal Edition, DB2 Mobility on Demand, as well as applicable DB2 Extenders. The software in this edition cannot be used for production systems.

---

## DB2 Universal Database Options

### DB2 Universal Database Partitioning Feature

DB2 Database Partitioning is an optional priced feature of DB2 Enterprise Server Edition that allows partitioning of a database within a single (SMP) system or across a cluster of (MPP) systems. The Database Partitioning Feature provides its customers with multiple benefits, including; scalability to support very large databases with complex workloads, increased parallelism for faster query processing and execution of various database administration tasks.

### DB2 Universal Database High Availability Disaster Recovery

DB2 High Availability Disaster Recovery (HADR) allows continuous availability required by on demand e-businesses running critical enterprise applications that must be available 24 hours a day, and seven days a week. This allows failover to a standby system, in the event of a software or hardware failure in primary system. Thus, providing database resilience in an unplanned disaster or planned schedule maintenance scenarios. The DB2 HADR is available in the Enterprise Server Edition edition, where as it is an optional priced offering for the DB2 Workgroup Server Unlimited Edition / Server Edition or DB2 Express editions.

### DB2 Universal Database Query Patroller

DB2 Query Patroller is a powerful query workload management offering that pro-actively and dynamically controls submission and execution of queries to better manage DB2 database workloads to meet business

needs. It is available as an optional priced offering for the DB2 Workgroup Server Unlimited Edition / Server Edition or DB2 Enterprise Server Edition editions.

### DB2 Universal Database Spatial Extender

DB2 Spatial Extender leverage the power of the relational database model to store, access, manage or

analyze location-based flat map information just as easily as traditional business data, It uses industry-standard SQL for spatial data analysis. The DB2 Spatial Extender is available free of charge in applicable DB2 Universal Database editions.

### DB2 Universal Database Geodetic Extender

DB2 Geodetic Extender provides ability to store, access, manage or analyze location-based round earth information for weather, defense, intelligence, home land security or natural resources applications for commercial or government sectors. It provides the ability to manage and analyze spatial information with accuracies in distance and area by treating the earth as a continuous spherical coordinate system. The DB2 Geodetic extender is available as a priced option for DB2 Enterprise Server Edition only.

### DB2 Universal Database Net Search Extender

DB2 Net Search Extender provides high-speed, scalable, integrated rich set of full-text search capability for DB2 Universal Database. It is a parallel and federated full-text search for text documents stored in DB2 and other databases. DB2 Net Search Extender offers excellent query performance and scalability by integrating caching and optimization technologies. The DB2 Net Search Extender is available as a priced option for DB2 Enterprise Server Edition or Workgroup Server Unlimited Edition

### DB2 Mobility of Demand

Now DB2 Universal Database customers can easily extend the reach of their DB2 solutions to include mobile devices such as mobile phones, personal data assistants (PDAs), and other pervasive devices to provide anytime, anywhere wireless access to their enterprise data. DB2 Mobility on Demand capability includes the high-performance, robust DB2 Everyplace database for mobile client deployment, as well as a powerful synchronization solution for use with DB2 Universal Database servers. This capability is available free of charge in all server-based editions of the DB2 Universal Database family (with the exception of DB2 Universal Database Personal Edition).

---

## Operating System Requirements

The operating system support level by various DB2 products is frequently updated. To obtain the current information for supported software levels, including recommended maintenance levels, refer to:

- [ibm.com/software/data/db2/udb/sysreqs.html](http://ibm.com/software/data/db2/udb/sysreqs.html)
- [ibm.com/software/data/](http://ibm.com/software/data/)

The Java™ Runtime Environment (JRE) 1.4.1 is required for developing and running applications and tools in all platforms, except for 64-bit Linux on Itanium-based systems, which requires JRE 1.3.1.

Minimal requirements for operating systems at the time of announcement are:

### Microsoft Windows

- Microsoft Windows 2000 Professional, Server, Advanced Server, and Datacenter Editions.
- Windows Server 2003, Standard Server, Enterprise Server, and Datacenter Editions
- Windows XP (32-bit) Professional Edition.
- Windows XP 64-bit Edition (for 64-bit Itanium systems).
- Support for Windows XP 64-bit Edition for 64-bit Extended Systems and Windows Server 2003 for 64-bit Extended Systems Standard and Enterprise Editions (supporting AMD64 and Intel EM64T systems) will be available after these operating systems become generally available.

### Linux

The following Linux distributions are recommended for new DB2 deployments on Linux:

- Red Hat Enterprise Linux (RHEL) 2.1, Update 4
- Red Hat Enterprise Linux (RHEL) 3, Update 2 or higher
- SuSe LINUX Enterprise Server (SLES) 8 (SP3)
- SuSe LINUX Enterprise Server (SLES) 9

### IBM zSeries® @server™:

- For 31-bit DB2 products running on Linux for S/390 and IBM @server zSeries, a 9672 G5, or higher, Multiprise 3000
- For 64-bit DB2 products for Linux on zSeries, any zSeries system that supports running Linux

The validation status for new Linux kernels and distributions is frequently updated. To obtain the current information for supported Linux software levels, refer to: [ibm.com/software/data/db2/linux/validate](http://ibm.com/software/data/db2/linux/validate)

### IBM AIX

- IBM AIX® 5.1 with maintenance level 6, or later
- AIX 5.2 with maintenance level 3, or later

### HP-UX

- HP-UX 11i V1 for HP9000 servers
- HP-UX 11i V2 for HP Integrity servers (Itanium-based systems)

## Sun Solaris

- Solaris 8
- Solaris 9

## Hardware Requirements

### Memory Requirements

The amount of memory required for the DB2 Run-Time client depends on the operating system and the database applications that are running. In most cases, it should be sufficient to use the minimum memory requirements of the operating system as the minimum requirement for running the DB2 Run-Time client. Graphical tools that are part of an Administration and Application Development client will require additional 256MB. The following table shows applicable recommended minimum memory for installation prerequisite in megabytes. The actual requirement depends on the applications the customer intends to run. Additional memory may be required to handle heavy workloads and large numbers of users. The numbers below are for reference only.

	HP-UX	Solaris	AIX	Windows	Linux
DB2 Personal Edition	64	64	64	64	64
DB2 Server Editions	256	256	256	256	256
Data Links Manager	N/A	256	256	256	N/A
Net Search Extender	256	256	256	256	256
Spatial Extender	16	16	16	16	16
Intelligent Miner Modeling / Scoring / Visualization	256	256	256	256	256
Query Patroller	256	256	256	256	256
Warehouse Manager Standard Edition <b>(1)</b>	N/A	512	512	512	N/A
Warehouse Manager Standard Edition <b>(2)</b>	N/A	256	256	256	N/A

**(1) Development environment: Heavy GUI usage, minimal DWC server and default agent work.**

**(2) Production environment: Minimal GUI usage, heavy DWC server usage, minimal default agent work.**

### Disk Space requirements

The following table shows applicable recommended minimum disk space for a typical install in megabytes. The actual space required may vary depending on the customers' file system and the components installed. The numbers below are for reference only.

	HP-UX	Solaris	AIX	Windows	Linux
DB2 Personal Edition	N/A	N/A	N/A	200	200
DB2 Enterprise Server Edition	450	450	450	350	450
DB2 Workgroup Server Edition	450	450	450	350	450
DB2 Run-Time Client	60	60	60	30	60
DB2 Administration Client	125	125	125	110	125
DB2 Application Development Client	160(1)	160 <b>(1)</b>	160(1)	325 <b>(2)</b>	160(1)

Spatial Extender	600(3)	600(3)	600(3)	600 <b>(3)</b>	600(3)
Data Links Manager	85	85	85	85	85
Net Search Extender	50	50	50	50	50
Intelligent Miner Modeling / Scoring / Visualization	200	200	150	150	150
Query Patroller	14	14	14	14	14
Warehouse Manager Standard Edition	1000	1000	1000	1000	1000

**(1) Does not include the Java Developer's Kit (JDK). (2) Includes the JDK.**

**(3) 563MB of 600MB is for United States geocoder reference data.**



### Security requirement :

A user account that will be used to perform the installation.

The account you are logged in as must:

- Be defined locally

- Belong to the Local Administrator's group

- Have the following advanced user rights:

  - Act as part of the operating system*

  - Create token object*

  - Increase quotas*

  - Replace a process level token*

**NB:** You can perform the installation without these advanced user rights, but the setup program will be unable to validate accounts. We recommend that any user account used to install this product have these advanced user rights.

During installation, you will provide a user account that will be used by the DB2 Administration Server to log on to the system and to start itself as a service. The account you specify must be defined locally and belong to the Local Administrator's group.

By default, the setup program will create a user account using the username db2admin and the password that you specify. You can accept the default user account, create your own user account by modifying the default values, or provide your own. If you create or provide your own user account, ensure that it conforms to DB2's naming rules.

You can also restrict the access to db2 objects to a specific group and specific users this specific feature during the installation process .

To verify that DB2 installed correctly, you will need to have a user account that belongs to the DB2 System Administrative (SYSADM) group. The account name must comply with DB2's naming rules, as described in Username, User ID, Group Name, and Instance Name Rules.

By default, any user that belongs to the Local Administrators group, on the local machine where the account is defined, has SYSADM authority on the instance. For more information, see Working with the System Administrative Group. For more information on valid DB2 usernames, see Appendix E, Naming Rules in the quick beginning guide .

### LDAP Considerations :

During the installation, you may also be prompted for user names and passwords for the products and services that you install.

If you want to use LDAP with Windows 2000, you must extend the directory schema to contain DB2 object classes and attribute definitions. You must do this once, before you install any DB2 product.

To extend the directory schema, execute the db2schex.exe program from the installation CD with Schema Admins authority. You can execute this program with Schema Admins authority, without logging off and logging on again, as follows:

```
runas /user:MyDomain\Administrator x:\db2\common\db2schex.exe
```

where x: represents the CD-ROM letter.

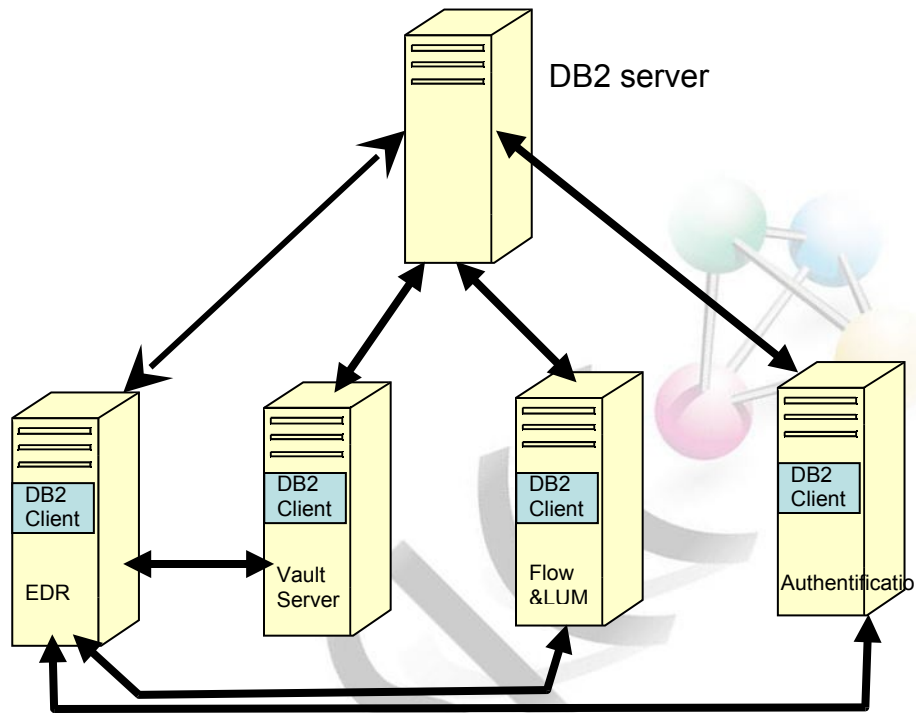
When db2schex.exe completes, you can continue with the installation.





## Sample Smarteam Hardware Configuration

### Configuration example



The upper diagram shows a typical Smarteam installation , in general DB2 server is installed on its own in a machine powerful enough to drive the workload generated by Smarteam requests.

One client per machine for servers other than the DB2 server .

## Performing the Server installation .

- Log on to the system as the user account that you want to use to perform the installation who has administration rights..

- Shut down any other programs so that the setup program can update files as required.
- Insert the CD-ROM into the drive. The auto-run feature automatically starts the setup program. The setup program will determine the system language, and launch the setup program for that language. If you want to run the setup program in a different language, or the setup program failed to auto-start.

### DB2setup command syntax for Server and client

```
>>-setup-----+----->
      '--i-- language -' '--l-- log_file -'

>+-----+-----+-----+-----><
  '--t-- trace_file -' '--r-- response_file -' +--?--+
                                     '--h--'
```

For Unix use db2setup instead

To manually invoke the setup program, perform the following steps:

Click Start and select the Run option.

In the Open field, enter the following command:

**x:\setup -i language -r rspfilename**

where:

x: represents your CD-ROM drive

language represents the country code for your language (for example, EN for English).

The The following table lists the code for each available language.

Click OK.

### Languages and Code Pages

Country Code	Language
--------------	----------

05/09/07

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bg	Bulgarian
br	Brazilian Portuguese
cn	Simplified Chinese (PRC)
cz	Czech
de	German
dk	Danish
en	English
es	Spanish
fi	Finnish
fr	French
gr	Greek
hu	Hungarian
il	Hebrew
it	Italian
jp	Japanese
kr	Korean
nl	Dutch
no	Norwegian
pl	Polish
pt	Portuguese
ru	Russian
se	Swedish
si	Slovenian
tr	Turkish
tw	Traditional Chinese (Taiwan)

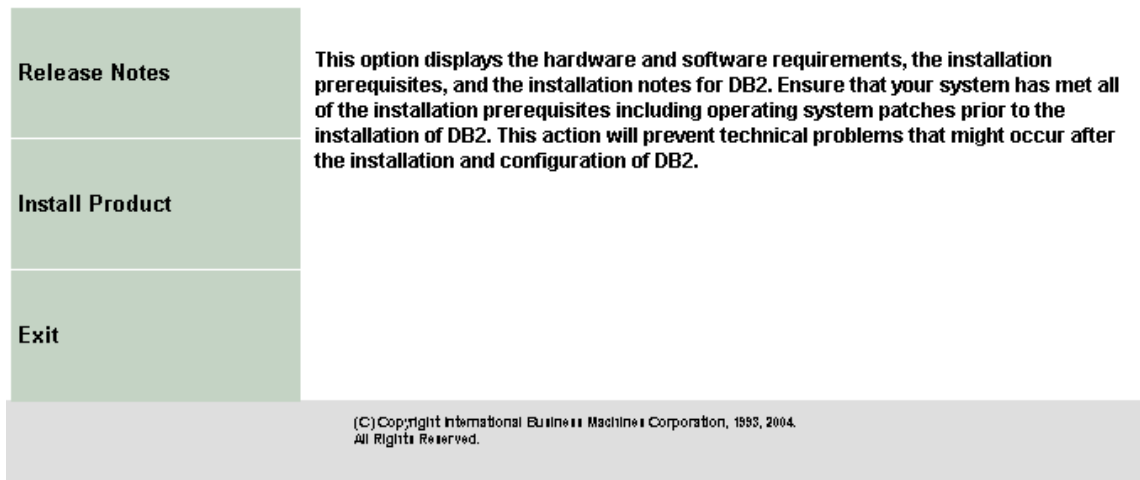


## DB2 Express edition installation

DB2 Launchpad opens after issuing setup / autorun . It looks similar to the following:



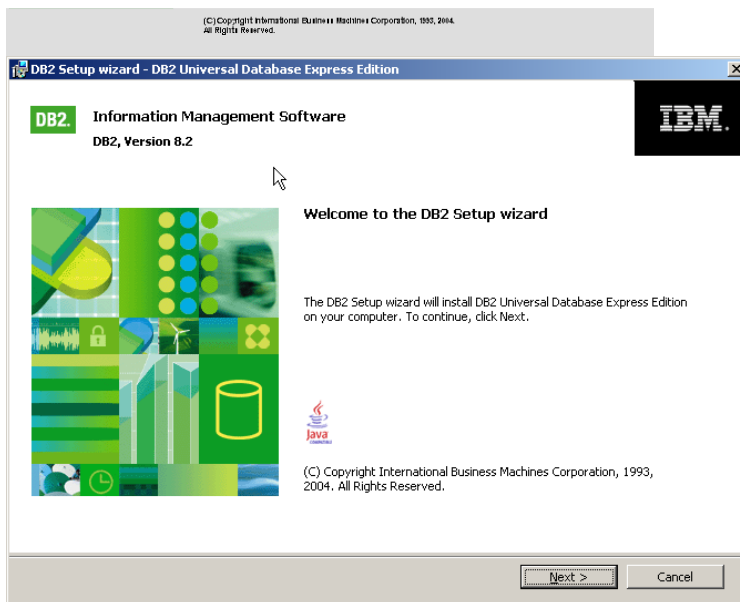
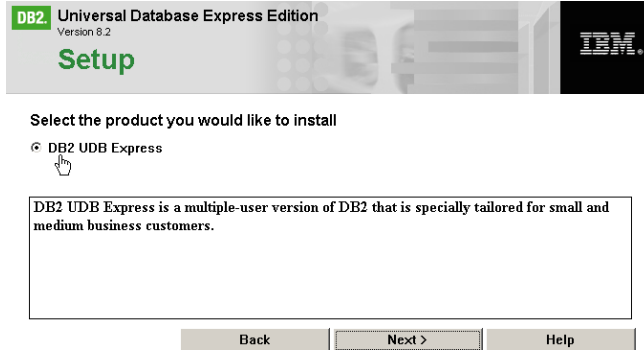
### Installation Prerequisites



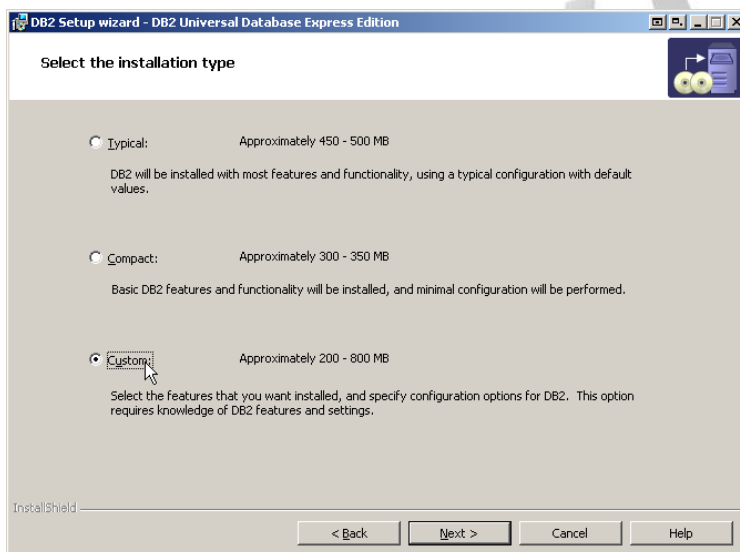
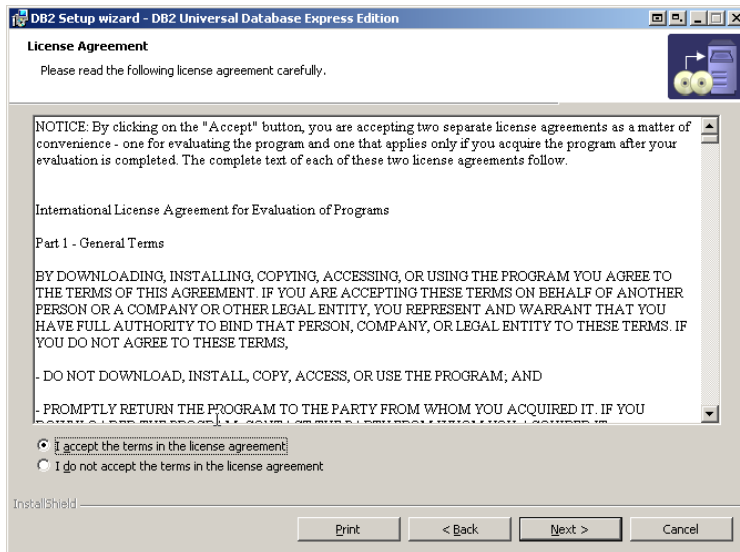
From this window, you can view the Installation Prerequisites and the Release Notes,

. Once you have initiated the installation, proceed by following the setup program's prompts. Online help is available to guide you through the remaining steps. To invoke the online help, click Help or press F1. You can click Cancel at any time to end the installation.

You will be presented with the product confirmation to accept



License agreement is presented please take the time to read it



If you select Typical Install, the following components are installed automatically :

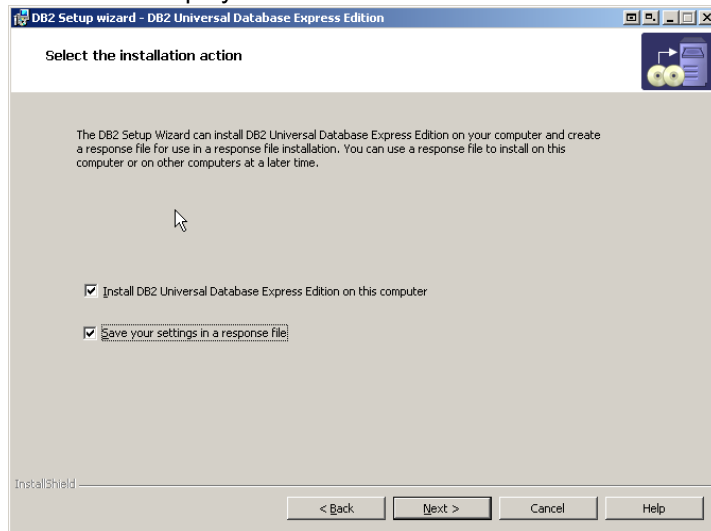
DB2

Base Warehouse

OLAP Starter Kit

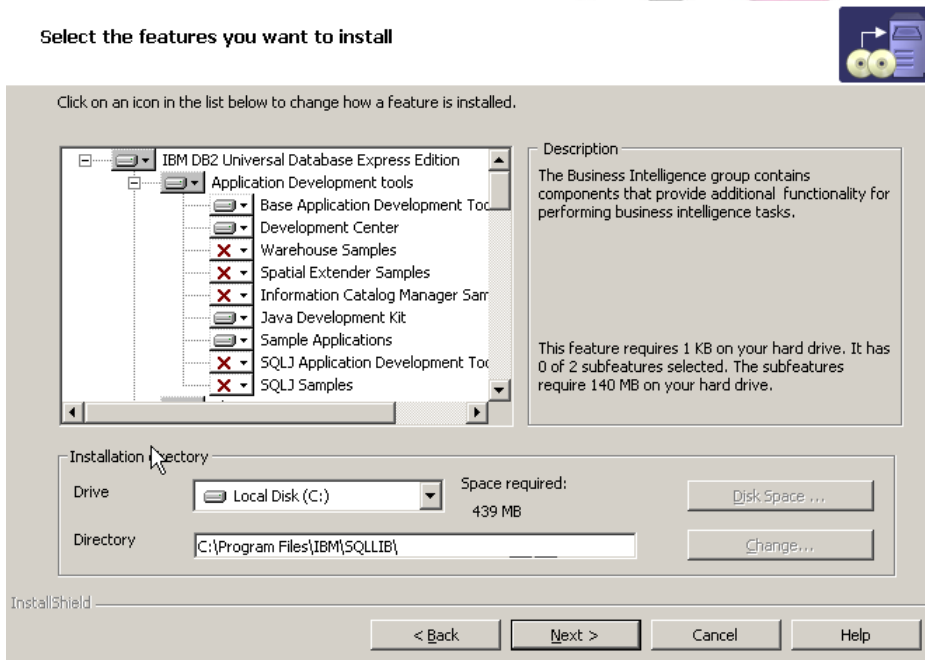
➔ select Custom Install.

You will be asked what action do you want to take . You can install , create a response file to be used late for deployment or both .



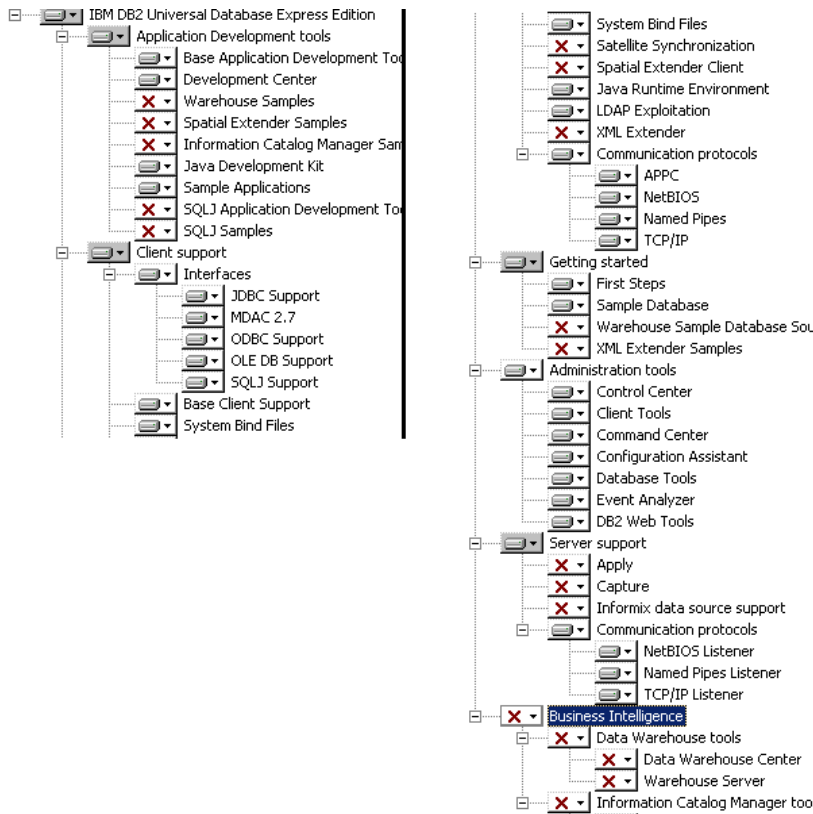
## Components selection

Select the features you want to install

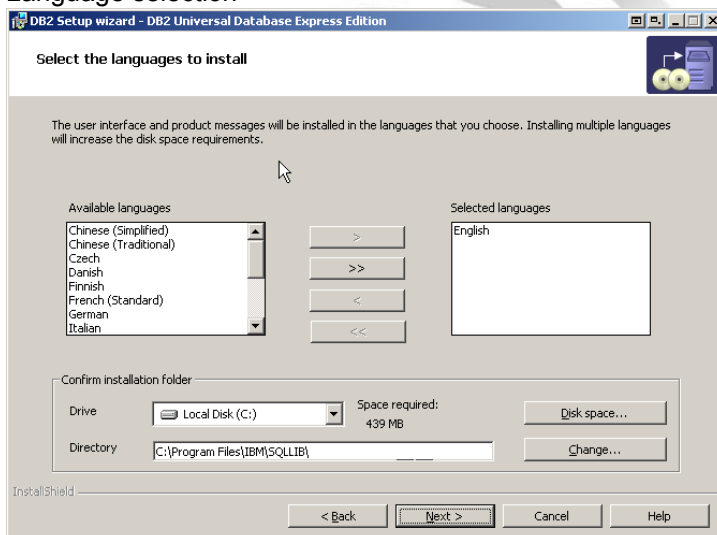


Here is the full list expanded

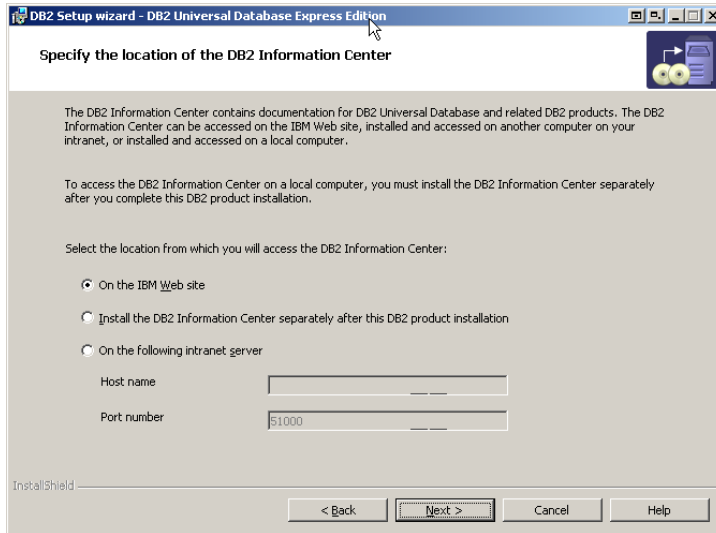




## Language selection

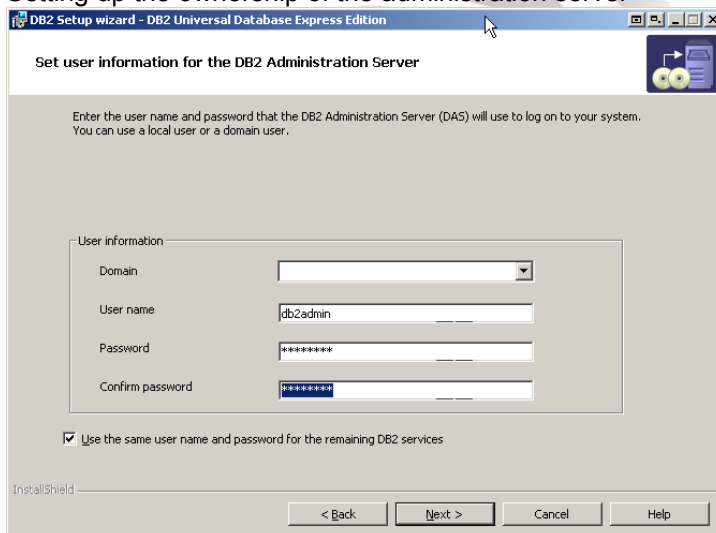


Specify the location of info center / help center / documentation

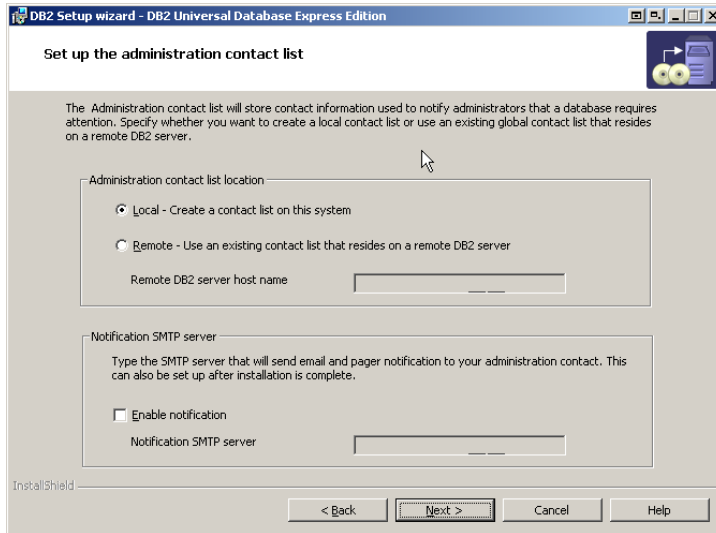


Note : Info center is supplied on its own CD , access it thru the Web :

## Setting up the ownership of the administration server



User if it is does not exist it will be created on the fly .

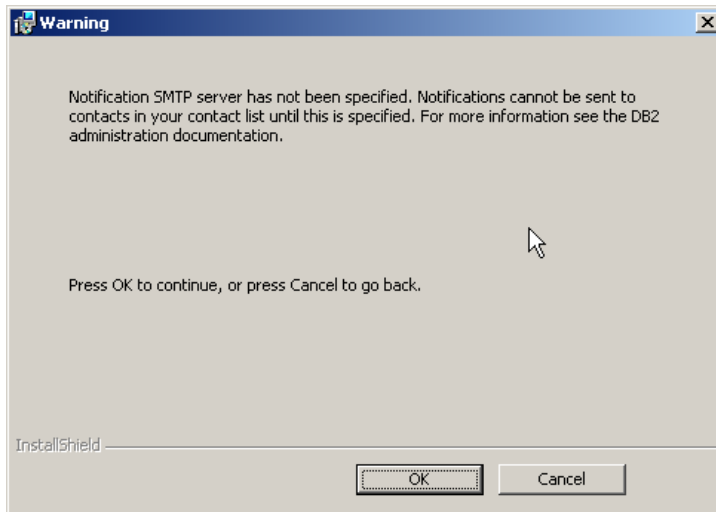


We specify the contact address to contact ( by email thru an SMTP server , local ....  
specify local

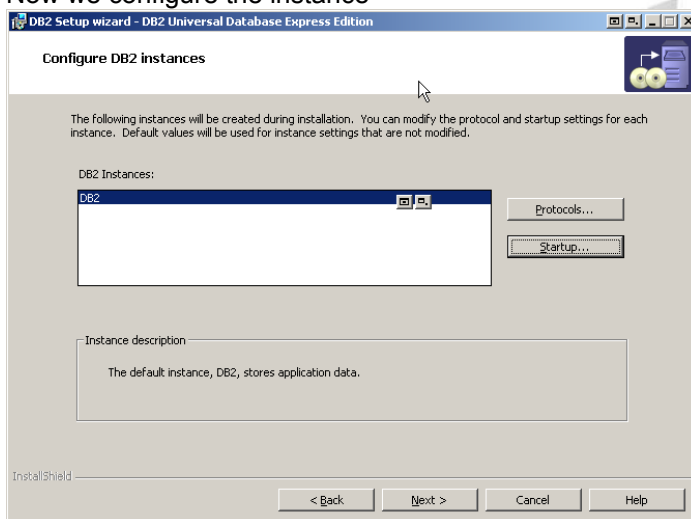
Currently disable notification

refer to the quick beginners guide for further information

You will receive a warning for disabling the notification which you can safely ignore

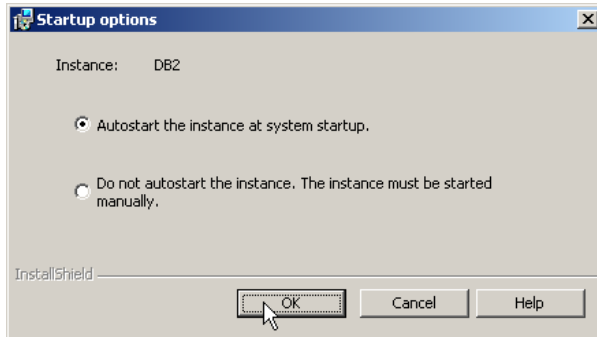


Now we configure the instance



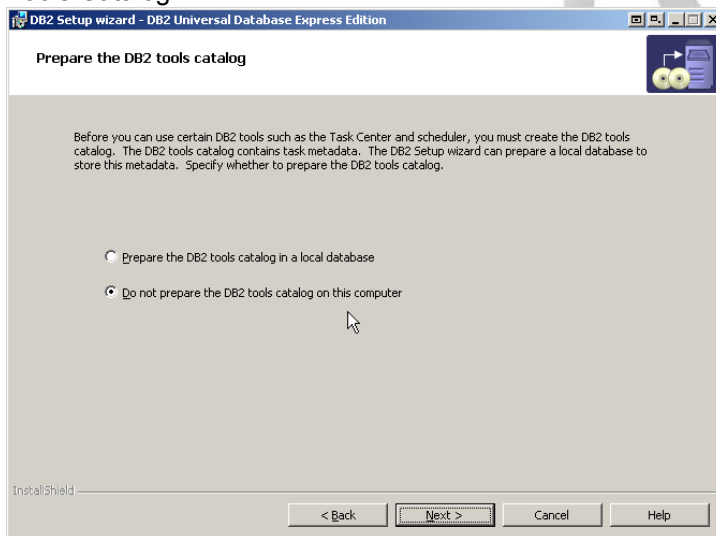
An instance named DB2 will be created

DB2 Startup

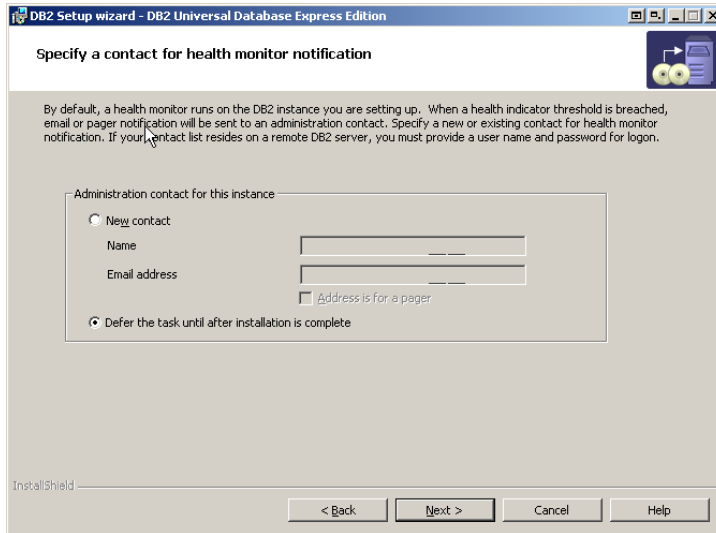


Choose whether you would like to start manually the db2 instance or to start automatically when the system starts . You can start them manually using **db2stop** and **db2start** or thru the Windows services applet.

## Tools Catalog



Db2 uses the tools catalog database for scheduling its own tasks , the database will be created when needed .



**Specify a contact for health monitor notification**

By default, a health monitor runs on the DB2 instance you are setting up. When a health indicator threshold is breached, email or pager notification will be sent to an administration contact. Specify a new or existing contact for health monitor notification. If your contact list resides on a remote DB2 server, you must provide a user name and password for login.

Administration contact for this instance

☐ New contact

Name

Email address

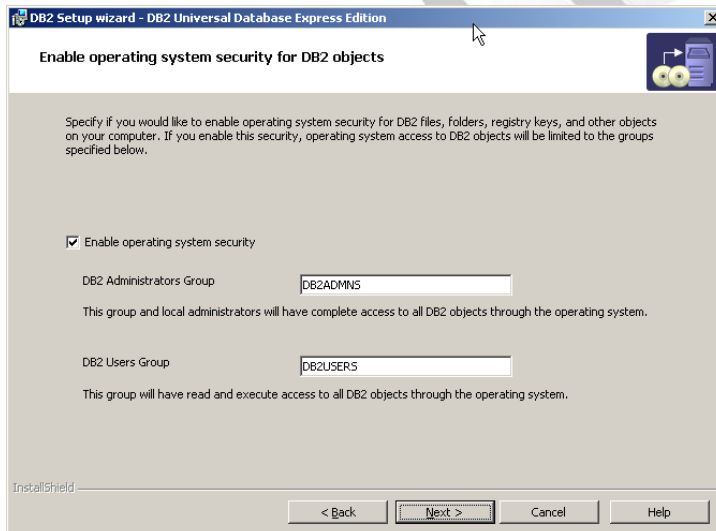
☐ Address is for a pager

☒ Defer the task until after installation is complete

InstallShield

< Back Next > Cancel Help

Here we specify a contact name to be notified in case of any deviations are observed in DB2 operating environment and specified in the health monitor.



**Enable operating system security for DB2 objects**

Specify if you would like to enable operating system security for DB2 files, folders, registry keys, and other objects on your computer. If you enable this security, operating system access to DB2 objects will be limited to the groups specified below.

☒ Enable operating system security

DB2 Administrators Group

This group and local administrators will have complete access to all DB2 objects through the operating system.

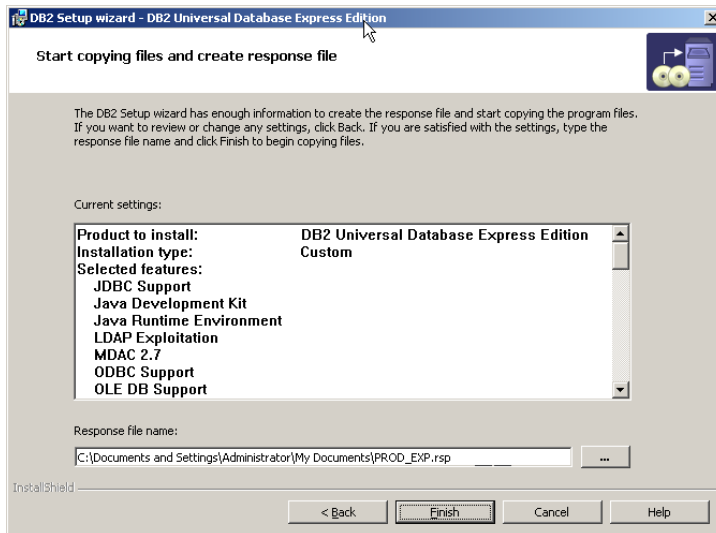
DB2 Users Group

This group will have read and execute access to all DB2 objects through the operating system.

InstallShield

< Back Next > Cancel Help

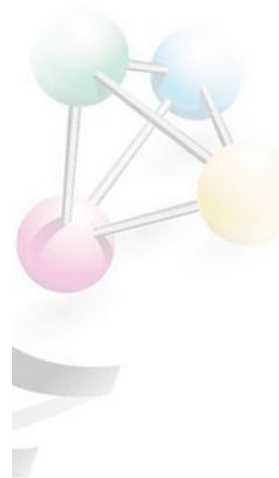
This entry is for security and we restrict access to persons members to specific DB2 groups users and administrators .



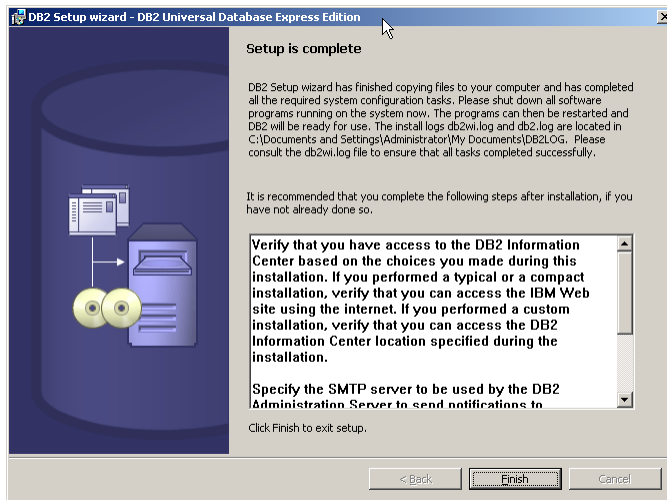
Here is a summary of the current situation and what is actually be installed and or response file creation



**Product to install:** DB2 Universal Database Express Edition  
**Installation type:** Custom  
**Selected features:**  
 JDBC Support  
 Java Development Kit  
 Java Runtime Environment  
 LDAP Exploitation  
 MDAC 2.7  
 ODBC Support  
 OLE DB Support  
 Sample Applications  
 Sample Database  
 SQLJ Support  
 DB2 Web Tools  
 APPC  
 Base Application Development Tools  
 Base Client Support  
 System Bind Files  
 Control Center  
 Client Tools  
 Command Center  
 Configuration Assistant  
 Database Tools  
 Development Center  
 Event Analyzer  
 First Steps  
 NetBIOS  
 NetBIOS Listener  
 Named Pipes  
 Named Pipes Listener  
 TCP/IP  
 TCP/IP Listener  
**Target directory:** C:\Program Files\IBM\SQLLIB  
**Space required:** 436 MB  
**New instances:**  
   **Instance name:** DB2  
   **Start instance on reboot:** Yes  
   **TCP/IP configuration:**  
     **Service name:** db2c\_DB2  
     **Port number:** 50000  
   **Instance user information:**  
     **User name:** db2admin  
**DB2 Administration server:**  
   **Instance user information:**  
     **User name:** db2admin



Once you press next you will be informed that the setup has finished.

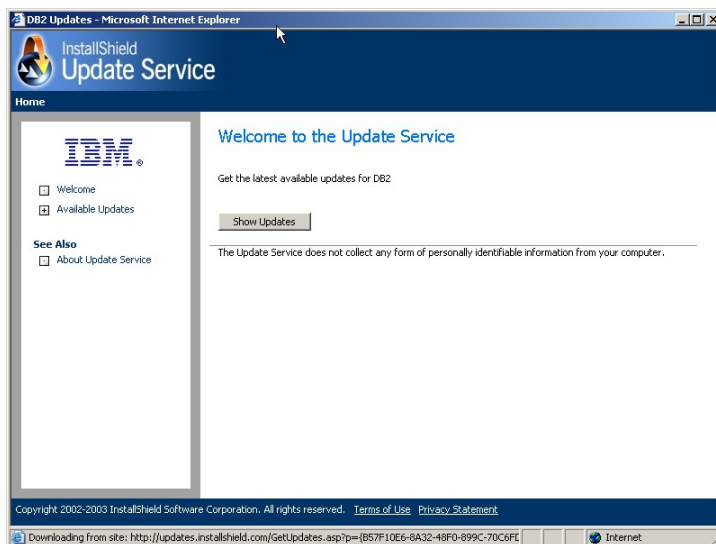


Here is the whole message .

**Verify that you have access to the DB2 Information Center based on the choices you made during this installation. If you performed a typical or a compact installation, verify that you can access the IBM Web site using the internet. If you performed a custom installation, verify that you can access the DB2 Information Center location specified during the installation.**

**Specify the SMTP server to be used by the DB2 Administration Server to send notifications to administration contacts. For more information see the documentation on notification and contact list setup and configuration.**

You will then be asked if you want to update your product with the latest updates available , it is a good practice to do these update is you have an internet connection .



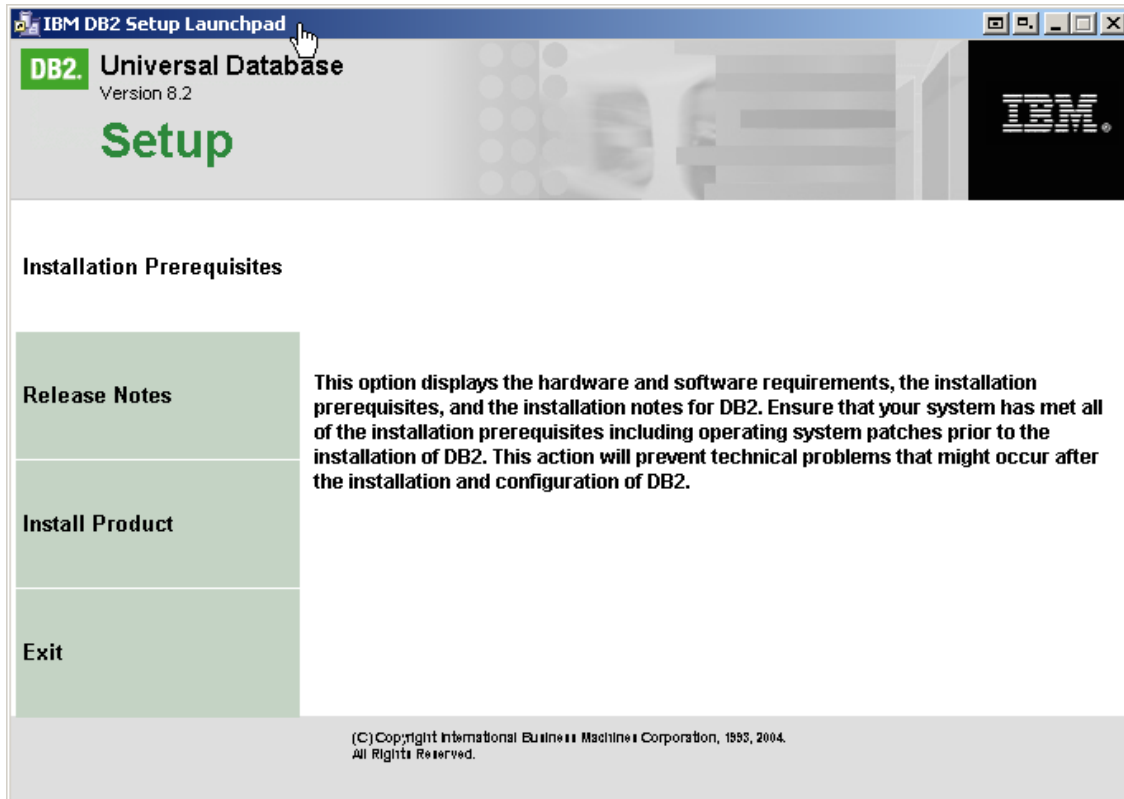
Please note that the Info Center CD is not shipped with the DB2 express edition . You should connect to the DB2 website and download it from there which is also updated version .

First steps panel then starts , it is a good starting point for a beginner.



## DB2 WorkGroup server edition installation

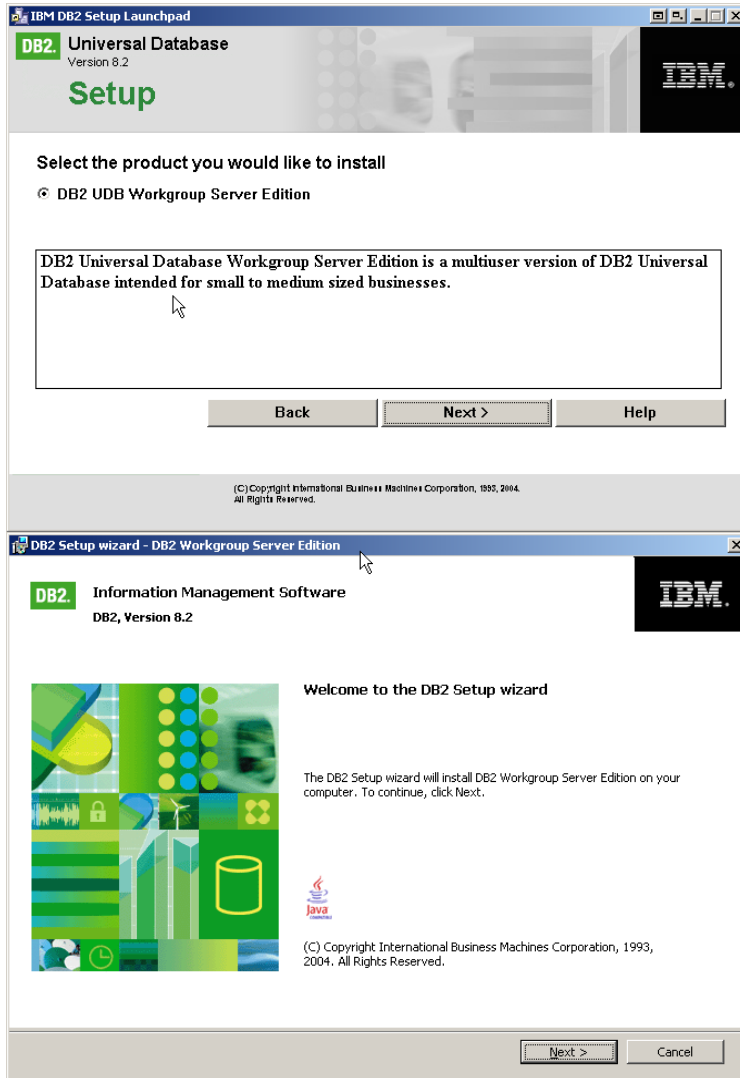
DB2 Launch pad opens after issuing setup / autorun . It looks similar to the following:



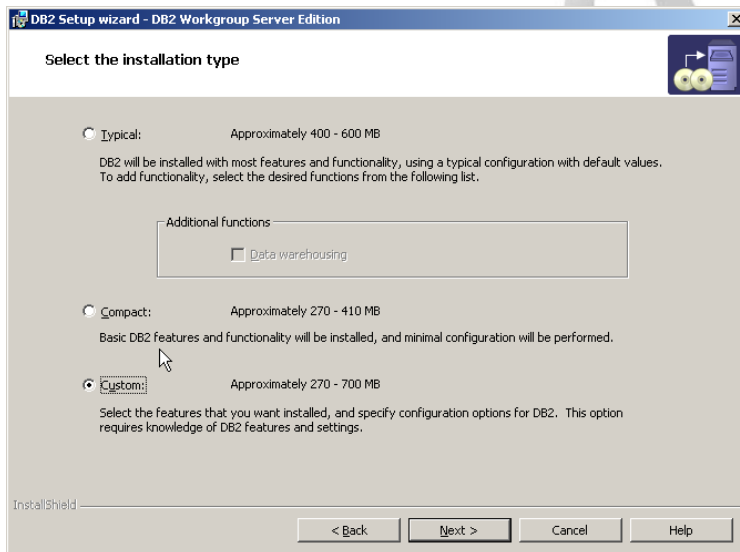
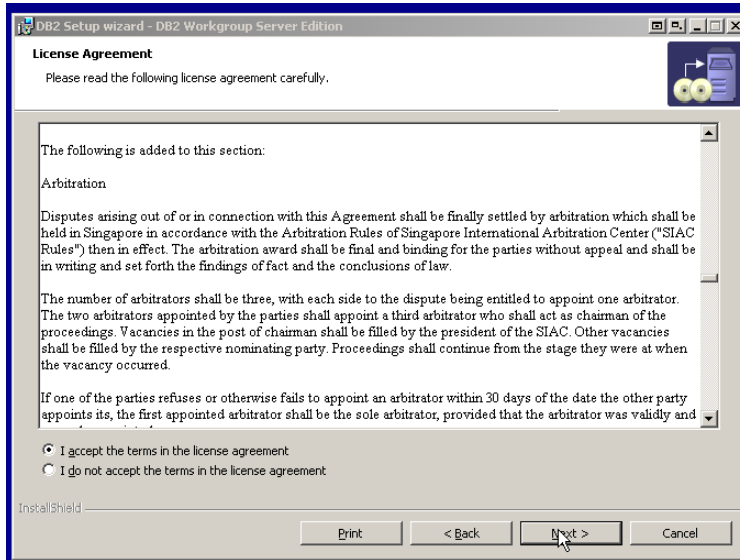
From this window, you can view the Installation Prerequisites and the Release Notes,

. Once you have initiated the installation, proceed by following the setup program's prompts. Online help is available to guide you through the remaining steps. To invoke the online help, click Help or press F1. You can click Cancel at any time to end the installation.

You will be presented with the product confirmation to continue.



License agreement is presented please take the time to read it and accept it if you wish to proceed .



If you select Typical Install, you can add the following components by selecting optional components :

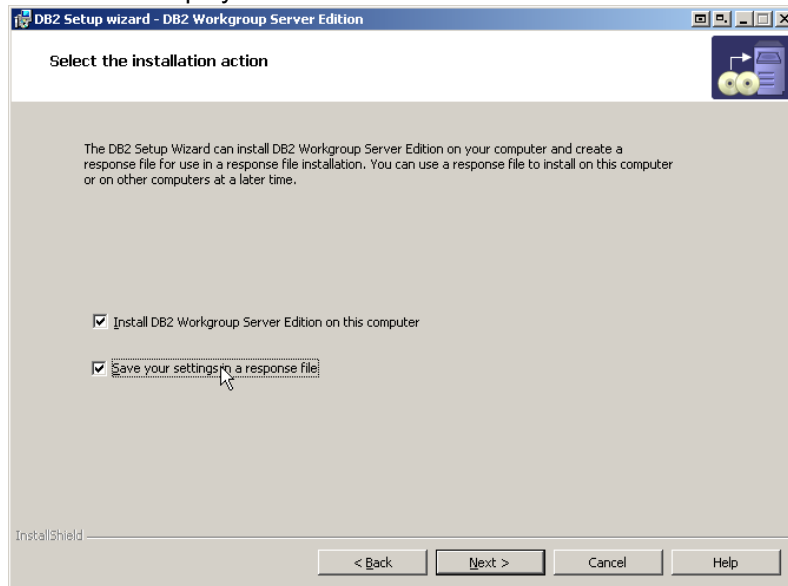
DB2 Base Warehouse

OLAP Starter Kit

➔ select Custom Install.

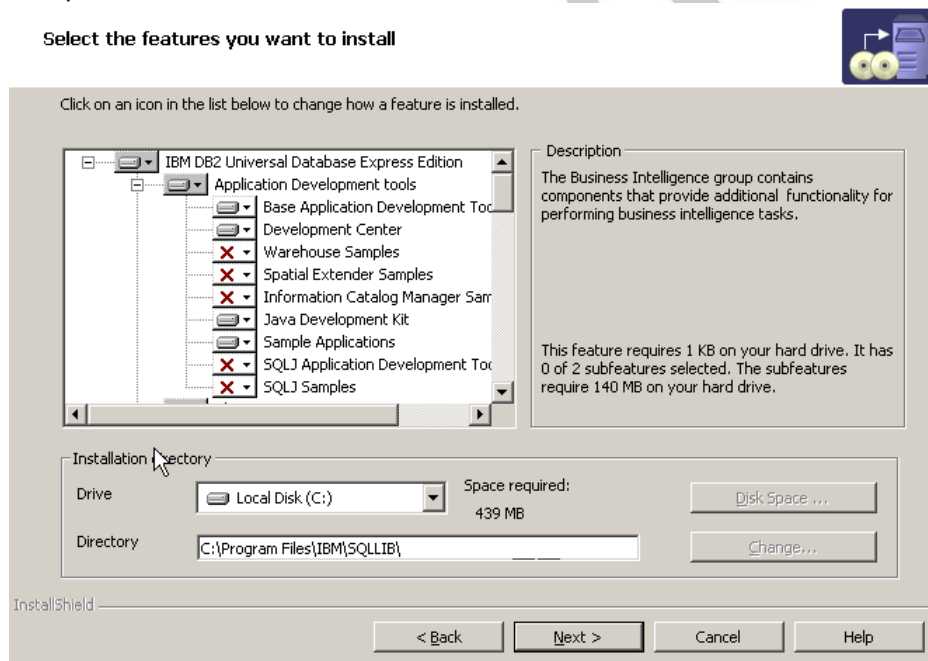


You will be asked what action do you want to take . You can install , create a response file to be used late for deployment or both .

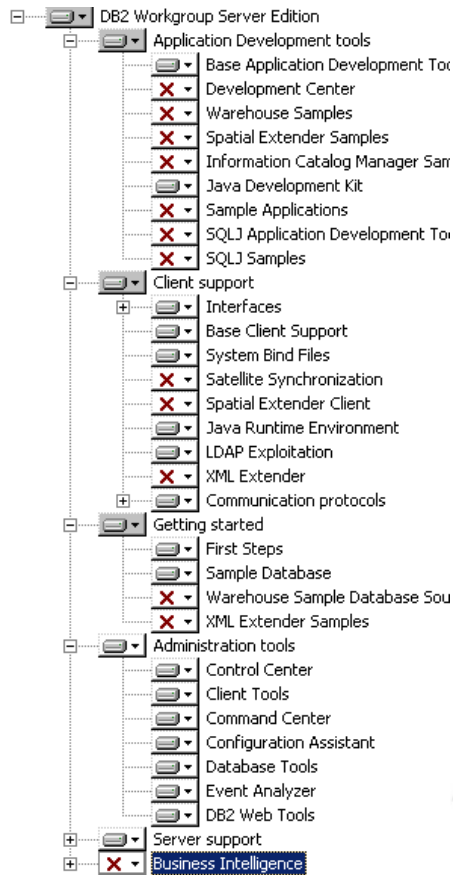


## Components selection

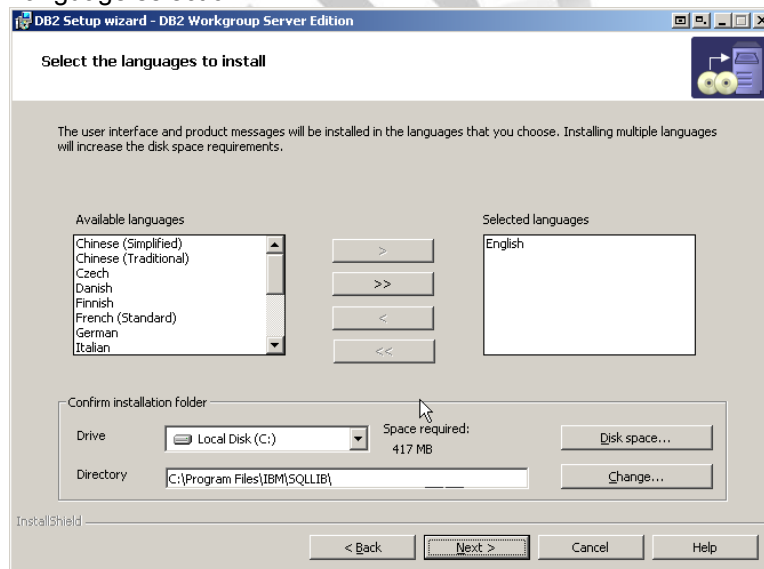
Select the features you want to install



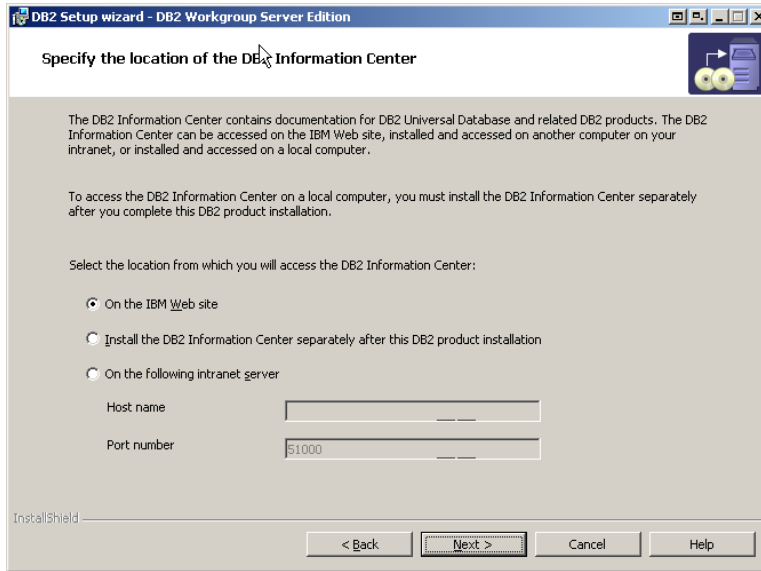
Here is the full list expanded



## Language selection

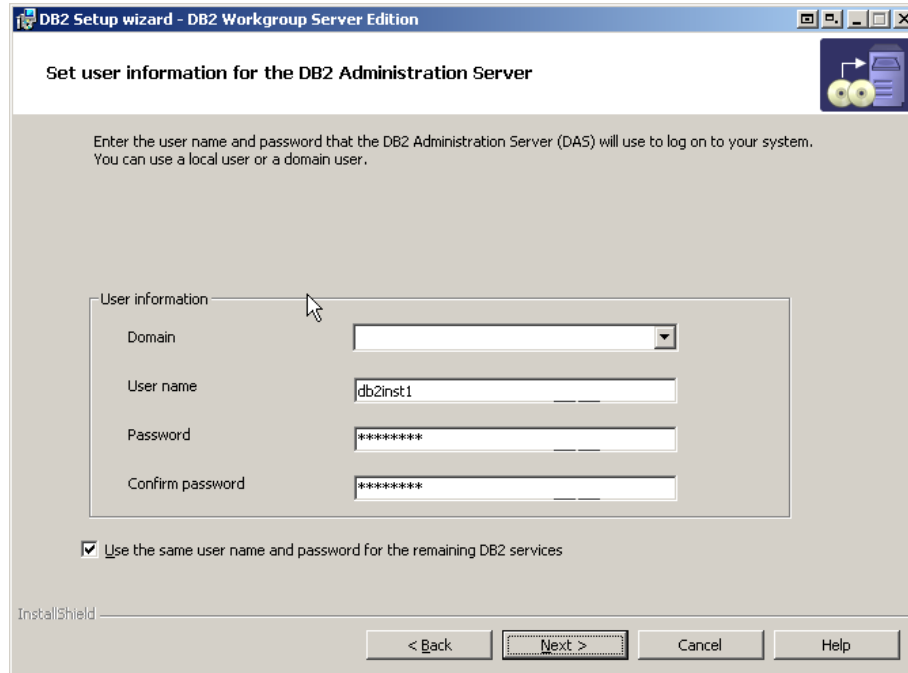


Specify the location infocenter / help center / documentation



Note : Info center is supplied on its own CD . I have selected the IBM web.

Setting up the ownership of the administration server



**Set user information for the DB2 Administration Server**

Enter the user name and password that the DB2 Administration Server (DAS) will use to log on to your system. You can use a local user or a domain user.

User information

Domain:

User name:

Password:

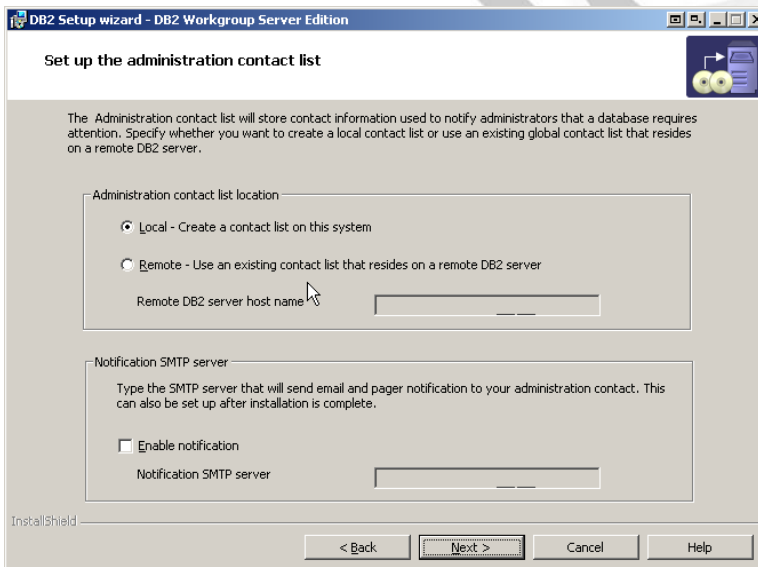
Confirm password:

☒ Use the same user name and password for the remaining DB2 services

InstallShield

< Back Next > Cancel Help

User if it does not exist it will be created on the fly .



**Set up the administration contact list**

The Administration contact list will store contact information used to notify administrators that a database requires attention. Specify whether you want to create a local contact list or use an existing global contact list that resides on a remote DB2 server.

Administration contact list location

☒ Local - Create a contact list on this system

☐ Remote - Use an existing contact list that resides on a remote DB2 server

Remote DB2 server host name:

Notification SMTP server

Type the SMTP server that will send email and pager notification to your administration contact. This can also be set up after installation is complete.

☐ Enable notification

Notification SMTP server:

InstallShield

< Back Next > Cancel Help

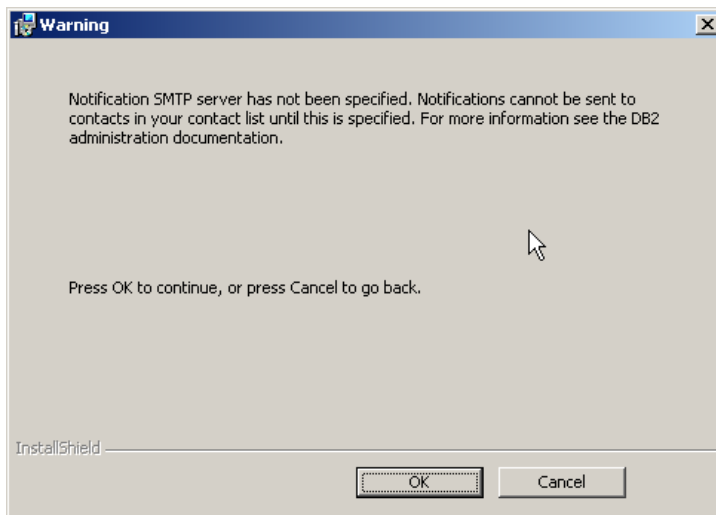
We specify the contact address to contact ( by email thru an SMTP server , local ....

→ specify local

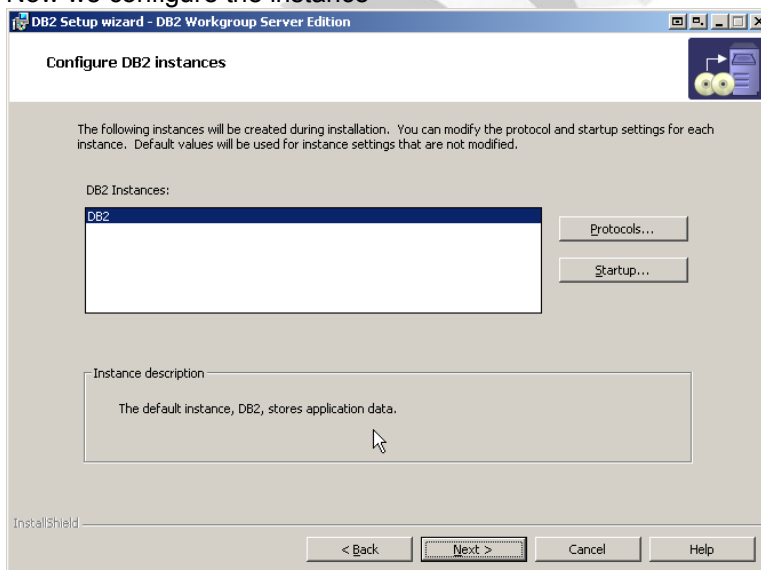
→ disable notification

refer to the quick beginners guide for further information

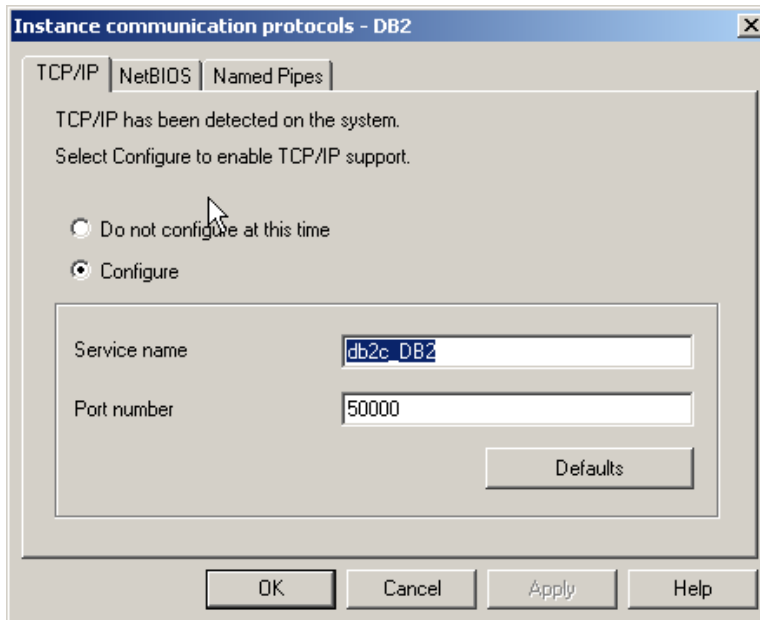
You will receive a warning for disabling the notification which you can safely ignore



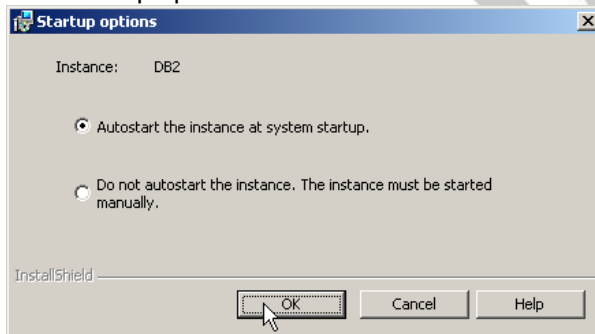
Now we configure the instance



An instance named DB2 will be created

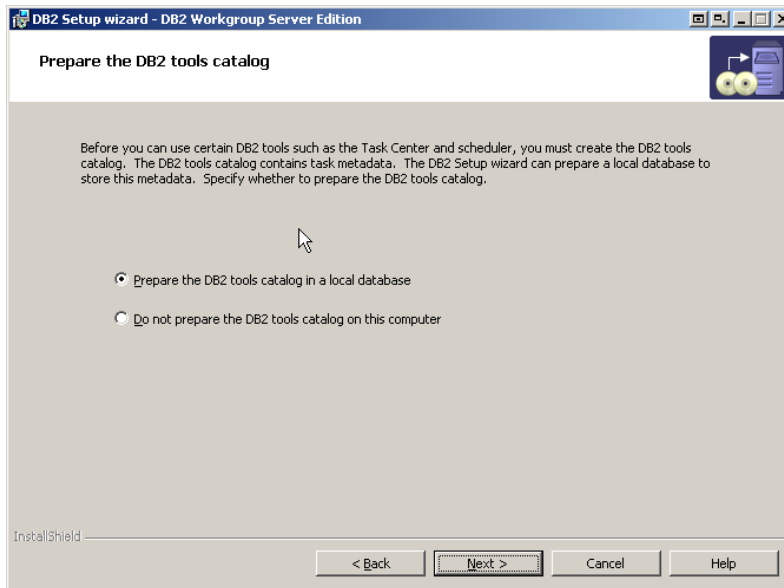


DB2 Startup options

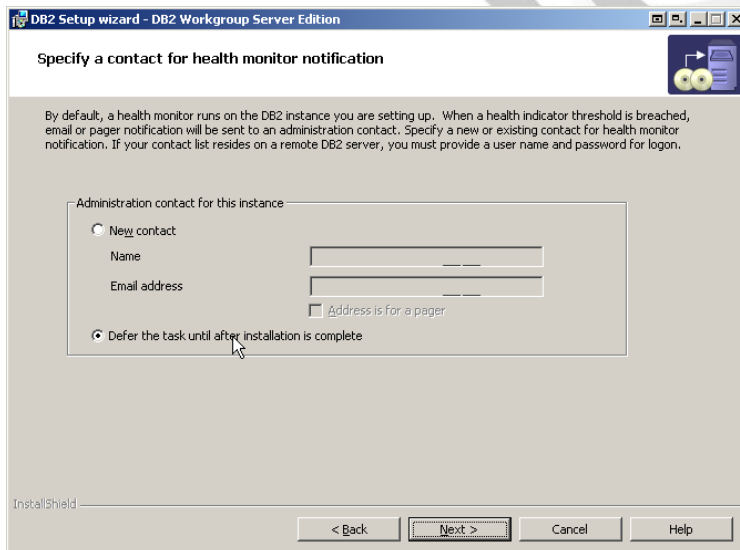


Choose whether you would like to start manually the db2 instance or to start automatically when the system starts . You can start them manually as well using **db2stop** and **db2start** commands or thru the Windows **services** applet.

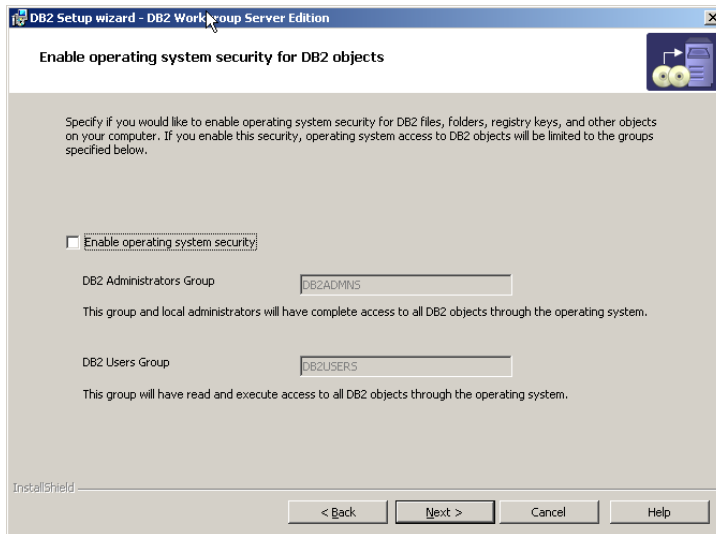
Tools Catalog



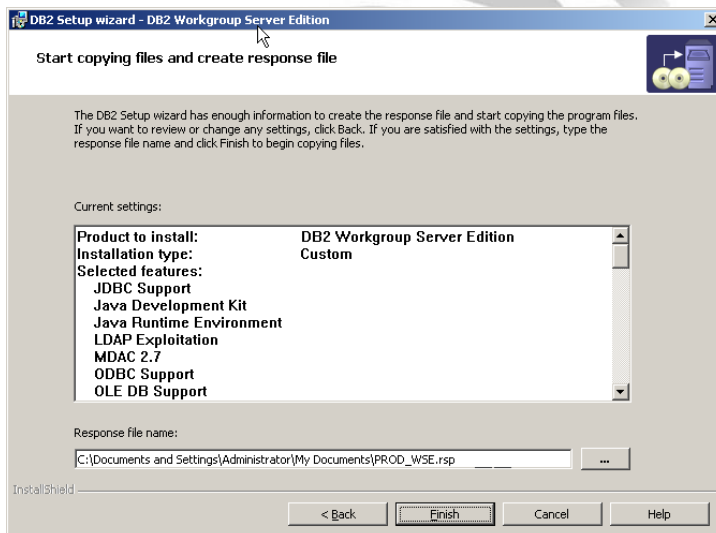
DB2 uses the tools catalog database for scheduling tasks such as a backup to be executed at a certain time , if you do not create it her the database will be created when needed .



Here we specify a contact name to be notified in case of any deviations are observed in DB2 operating environment and specified in the health monitor.



This entry is to enforce security and restrict access to persons members to specific DB2 groups users and administrators .





Following is a summary of the current situation and what is actually be installed and or response file creation



Product to install: DB2 Workgroup Server Edition  
 Installation type: Custom  
 Selected features:

JDBC Support  
 Java Development Kit  
 Java Runtime Environment  
 LDAP Exploitation  
 MDAC 2.7  
 ODBC Support  
 OLE DB Support  
 Sample Database  
 SQLJ Support  
 DB2 Web Tools  
 APPC  
 Base Application Development Tools  
 Apply  
 Base Client Support  
 System Bind Files  
 Capture  
 Control Center  
 Client Tools  
 Command Center  
 Configuration Assistant  
 Database Tools  
 Informix data source support  
 Event Analyzer  
 First Steps  
 NetBIOS  
 NetBIOS Listener  
 Named Pipes  
 Named Pipes Listener  
 TCP/IP  
 TCP/IP Listener



Target directory: C:\Program Files\IBM\SQLLIB

Space required: 414 MB

## New instances:

Instance name: DB2  
 Start instance on reboot: Yes  
 TCP/IP configuration:  
 Service name: db2c\_DB2  
 Port number: 50000  
 Instance user information:  
 User name: db2inst1

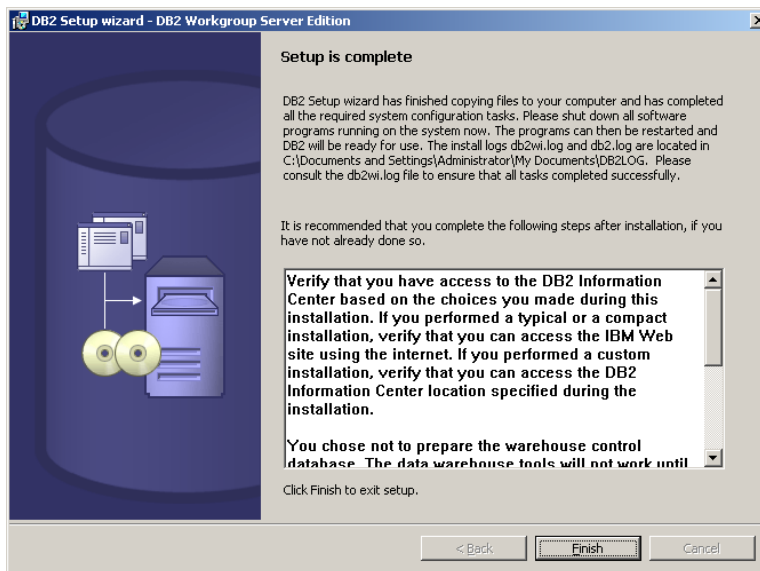
## DB2 Administration server:

Instance user information:  
 User name: db2inst1

## DB2 tools catalog:

Name: TOOLSDB  
 Schema: SYSTOOLS  
 Instance: DB2  
 Location: Local

Once you press next you will be informed that the setup has completed after the installation program performs the installation .

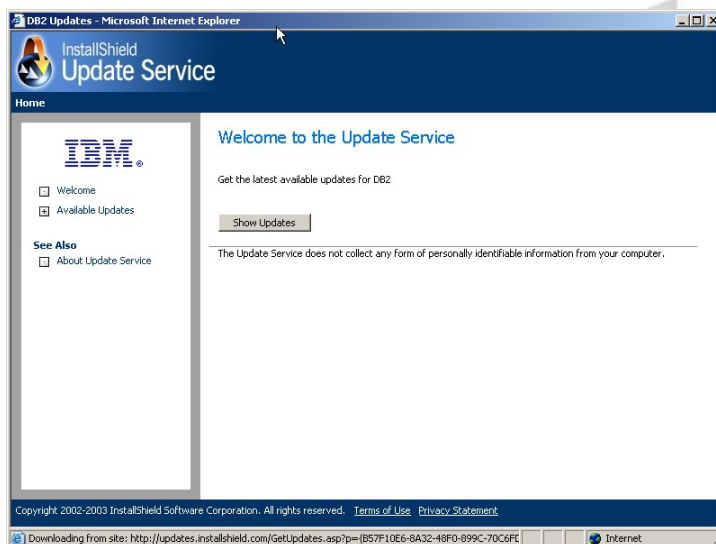


Here is the whole message .

**Verify that you have access to the DB2 Information Center based on the choices you made during this installation. If you performed a typical or a compact installation, verify that you can access the IBM Web site using the internet. If you performed a custom installation, verify that you can access the DB2 Information Center location specified during the installation.**

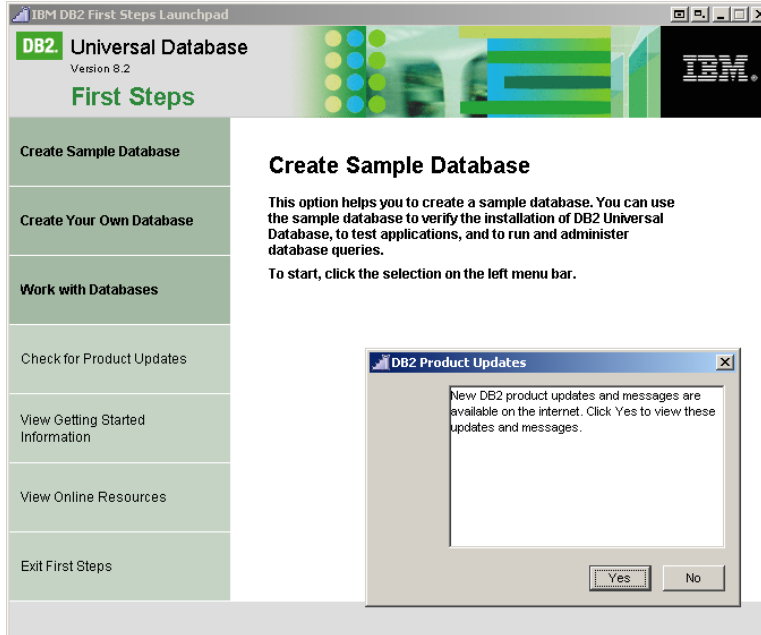
**Specify the SMTP server to be used by the DB2 Administration Server to send notifications to administration contacts. For more information see the documentation on notification and contact list setup and configuration.**

You will then be asked if you want to update your product with the latest updates available , it is a good practice to do these update is you have an internet connection .



Please note that the Info Center CD is not shipped with the DB2 express edition . You should connect to the DB2 website and download it from there which is also updated version .

First steps panel then starts , it is a good starting point for a beginner.



## Performing Client installation

Different clients are available and distributed with DB2 UDB product such as Administration client , Runtime client , Application development , Connect client , ...

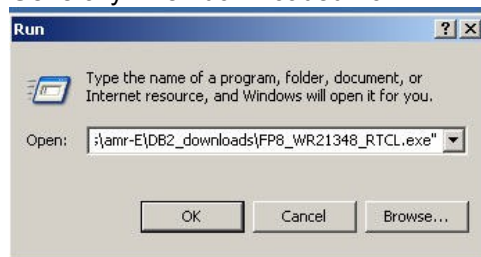
In our task we are interested in the Administration client that contains all the GUI tools for DB2 administration client that includes among other things as well as the runtime client .

It is recommended to get the latest client you need with the latest fixpak applied to save you the time of installing and binding of the fixpak .on top of the client .

You can get the latest client with the fixpak installed from

<http://www-3.ibm.com/cgi-bin/db2www/data/db2/udb/winos2unix/support/download.d2w/report>

Generally when downloaded from IBM website the clients are packed in zip self extract format

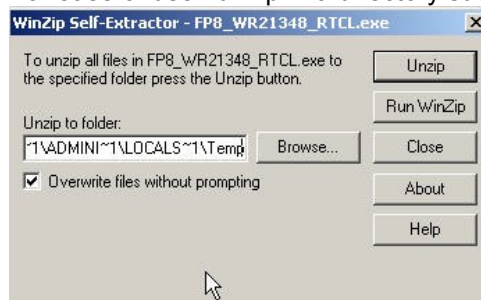


Executing this exe will generate the next prompt which you can safely ignore



Next you will be asked to specify the destination directory . generally the tem directory of the user

For ease of use I unzip in a directory such as x:\temp



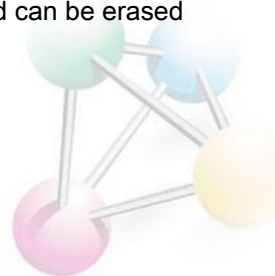
You will receive a message informing you that it has successfully unzipped the file



After the extraction you will have a CD image which you can burn or execute the db2setup ,  
And now also the downloaded image is no longer needed and can be erased

```
Directory of C:\temp\RTCL
06/15/2005  06:57 PM  <DIR>      .
06/15/2005  06:57 PM  <DIR>      ..
10/28/2004  12:58 PM                27 autorun.inf
06/15/2005  06:55 PM  <DIR>      db2
06/15/2005  06:57 PM  <DIR>      doc
01/25/2005  03:11 AM                254,020 setup.exe
                2 File(s)      254,047 bytes
                4 Dir(s)      4,254,818,304 bytes free

C:\temp\RTCL>db2setup
```



### Installing the administration client :

Perform this step if you want this work station to have the DB2 control center installed as well as a client .

Step 1. Log on to the system with the user account that you want to use to perform the installation .

Step 2. Shut down any other programs so that the setup program can update files as required.

Step 3. Insert the CD-ROM into the drive. The auto-run feature automatically starts the setup program. The setup program will determine the system language, and launch the setup program for that language. If you want to run the setup program in a different language, or the setup program failed to auto-start .

To manually invoke the setup program, perform the following steps:

Click Start and select the Run option.

In the Open field, enter the following command:

`x:\setup /i language`

where:

x: represents your CD-ROM drive

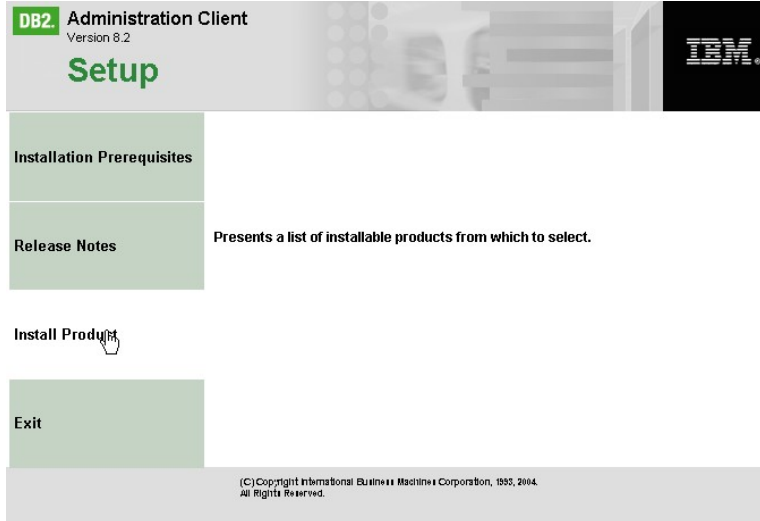
language represents the country code for your language (for example, EN for English).

Click OK.



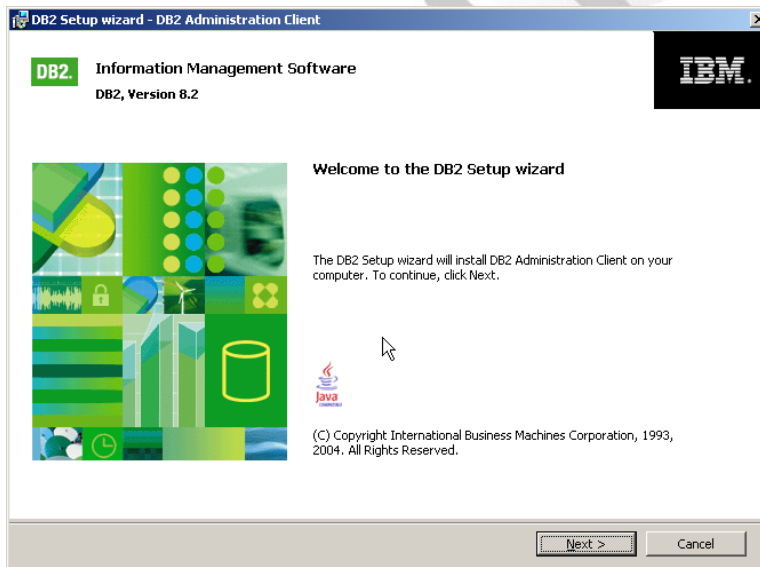
Step 4 :The DB2 Launchpad opens. It looks similar to the following:



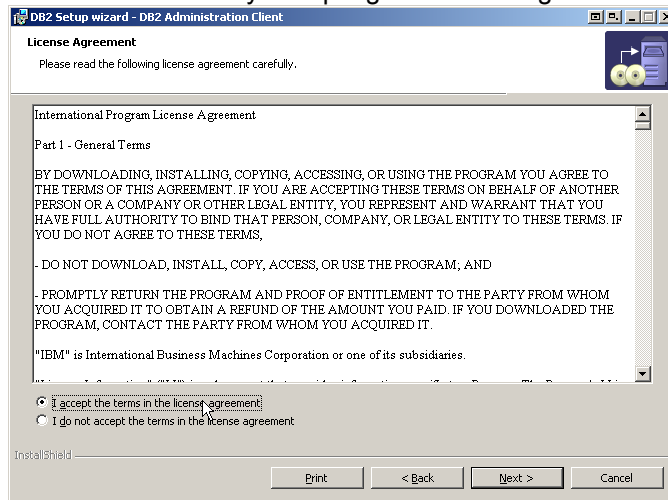


Step 5. From this window, you can view the Installation Prerequisites and the Release Notes, you can take a Quick Tour to explore the features, capabilities, and benefits of DB2 Universal Database Version 8.1, or you can proceed directly to the installation.

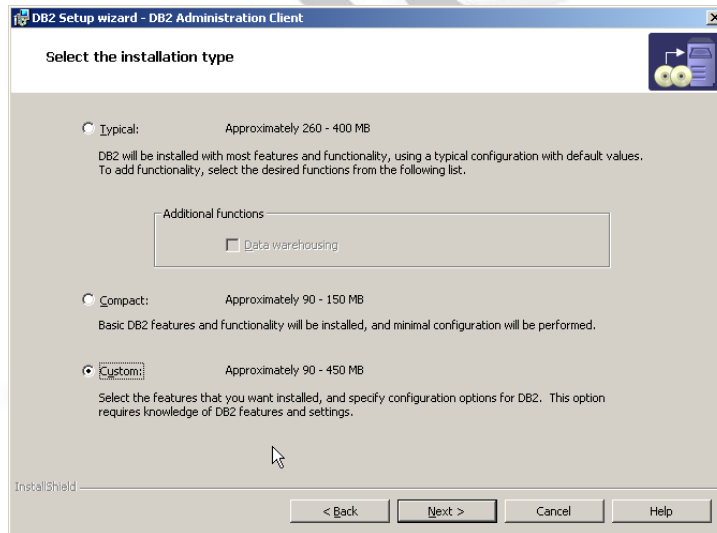
Step 6. Once you have initiated the installation, proceed by following the setup program's prompts. Online help is available to guide you through the remaining steps. To invoke the online help, click Help or press F1. You can click Cancel at any time to end the installation.



The installation starts and will start by accepting the license agreement

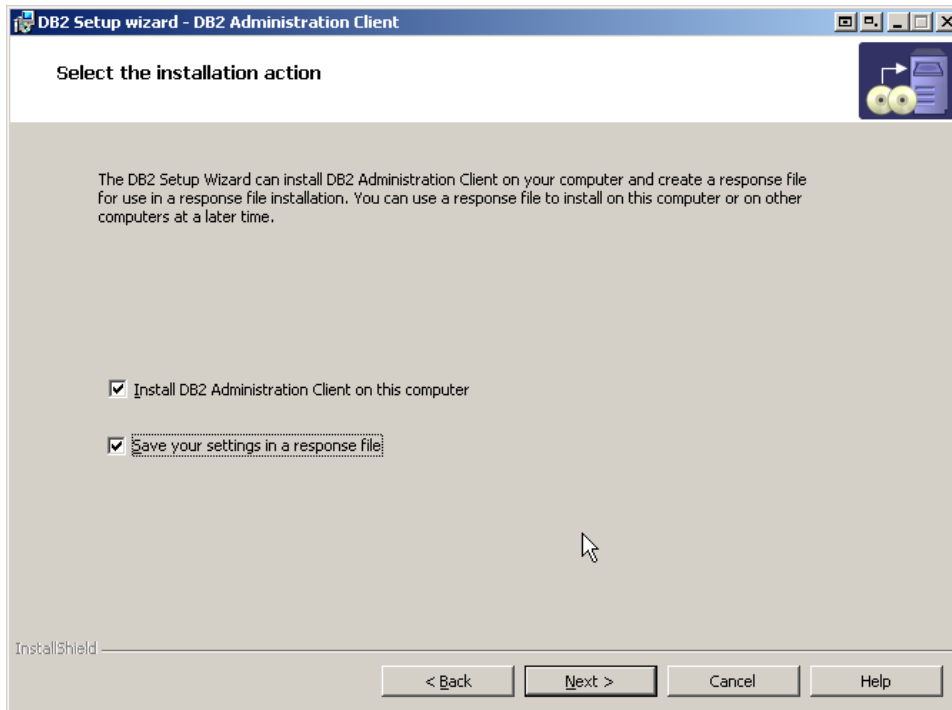


accept if you want to proceed with the installation and Click next .



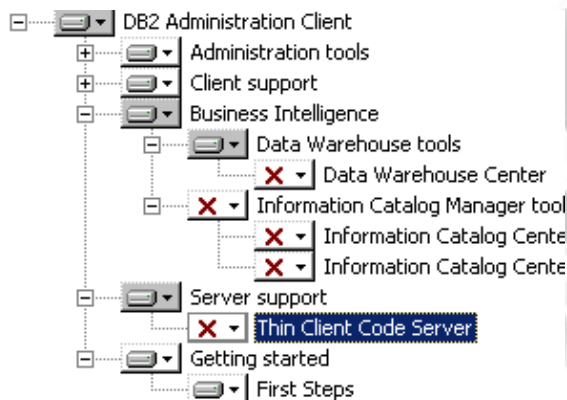
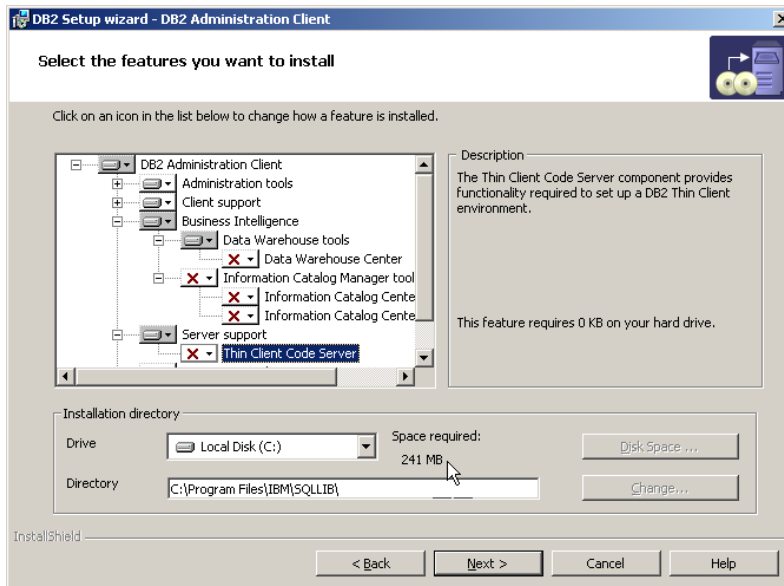
→ Select Custom

Next will confirm your action whether you want simply to install , build a response file or both. It is a good practice to have a response file to keep a record of what has been physically installed or to use the image to clone the db2 client installation .. The administration client as the name implies contain all the necessary parts to administer DB2 .

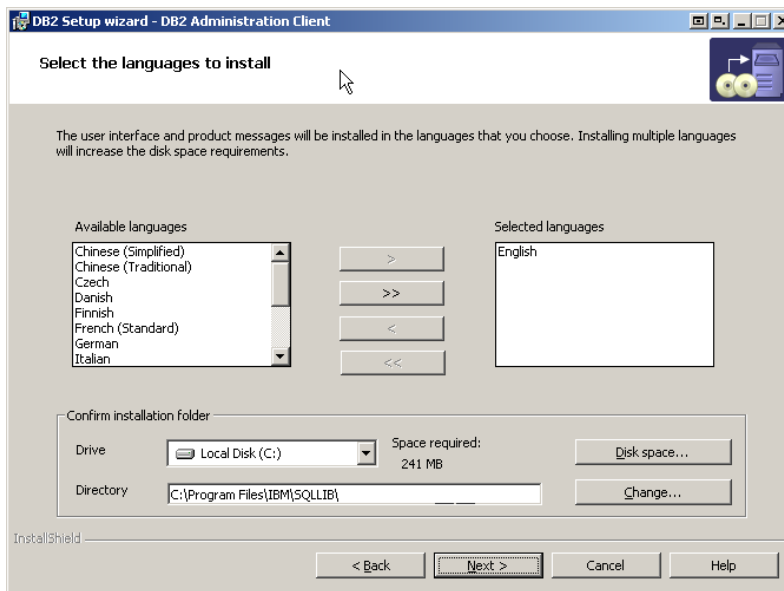


You will see a scrollable screen to select the different components ..Make sure that the following are unchecked :

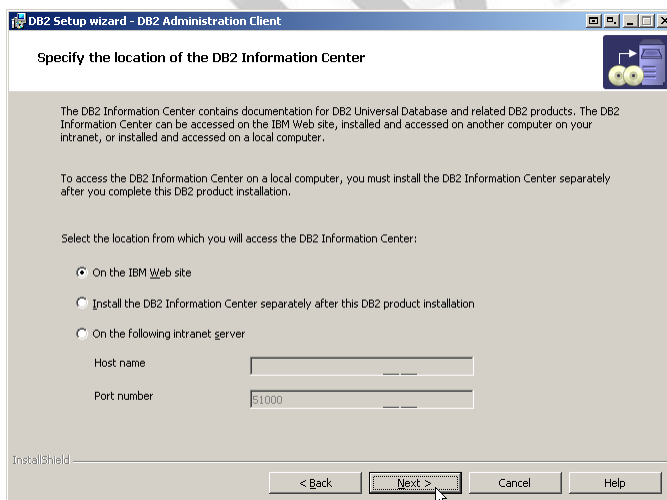
Any business intelligence such as , thin client code server ,Data Warehouse tools & toolkit



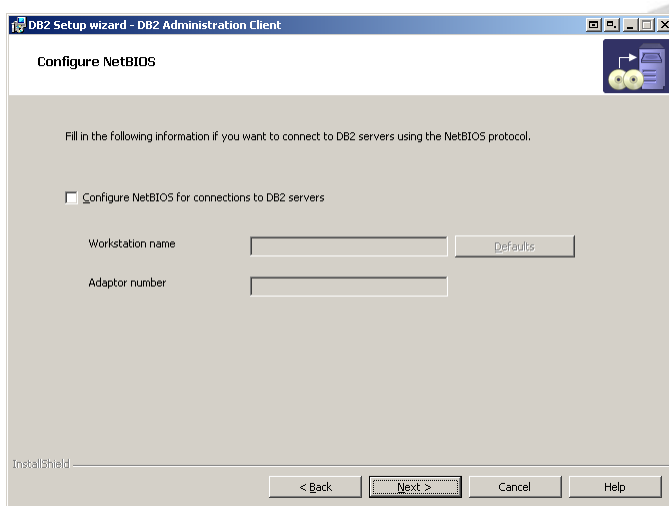
As you are aware DB2 can support different languages at the same time and the user has the choice of different interface language options .



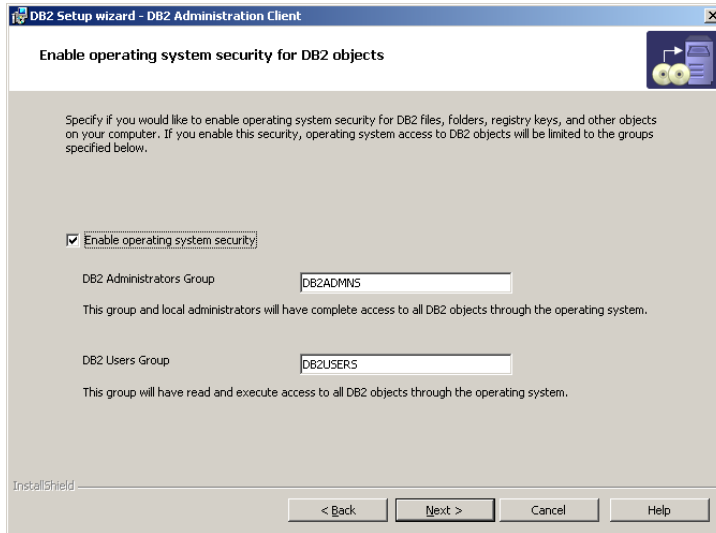
Next you have to identify where is your info center (help server) , locally InfoCenter server is supplied on a different CDROM., on a server on the local area network or on the IBM website( which is updated constantly ) .



We can skip the netbios configuration since SmarTeam does not use this protocol

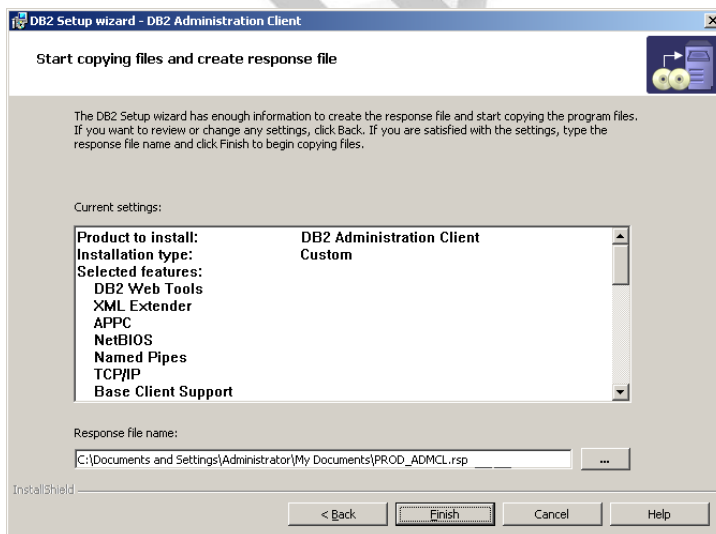


Next entry to select if we want to enable extended security on DB2 objects .



This is dependant on the security rules in your environment

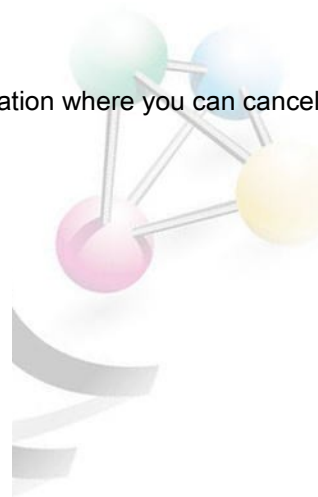
Next confirm



Next You will be presented with the summary of the operation where you can cancel if you wish .

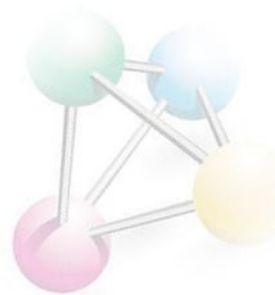
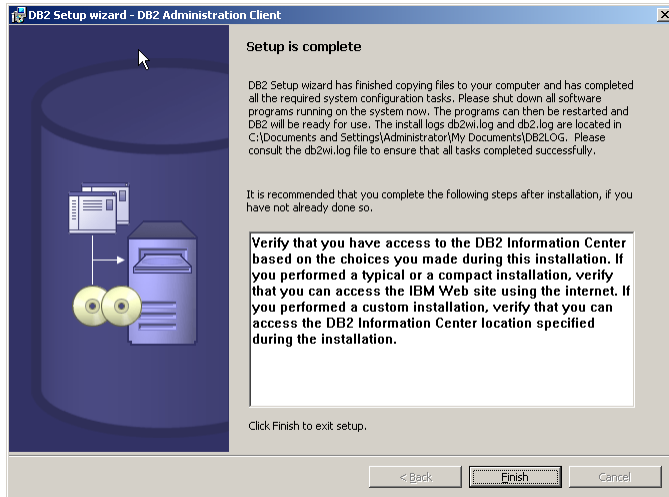
→ click Next .

<b>Product to install:</b>	DB2 Administration Client
<b>Installation type:</b>	Custom
<b>Selected features:</b>	
DB2 Web Tools	
XML Extender	
APPC	
NetBIOS	
Named Pipes	
TCP/IP	
Base Client Support	
System Bind Files	
Control Center	
Client Tools	
Command Center	
Configuration Assistant	
Event Analyzer	
First Steps	
Spatial Extender Client	
JDBC Support	
Java Runtime Environment	
LDAP Exploitation	
MDAC 2.7	
ODBC Support	
OLE DB Support	
SQLJ Support	
<b>Target directory:</b>	C:\Program Files\IBM\SQLLIB
<b>Space required:</b>	239 MB
<b>New instances:</b>	
Instance name:	DB2



After this step has finished. The admin client is installed and ready .





### Installing the run time client :

Perform this step if you want this work station to be a client with a minimal DB2 engine installed and no gui interfaces .

Step 1. Log on to the system with the user account that you want to use to perform the installation .

Step 2. Shut down any other programs so that the setup program can update files as required.

Step 3. Insert the CD-ROM into the drive. The auto-run feature automatically starts the setup program. The setup program will determine the system language, and launch the setup program for that language. If you want to run the setup program in a different language, or the setup program failed to auto-start .

To manually invoke the setup program, perform the following steps:

Click Start and select the Run option.

In the Open field, enter the following command:

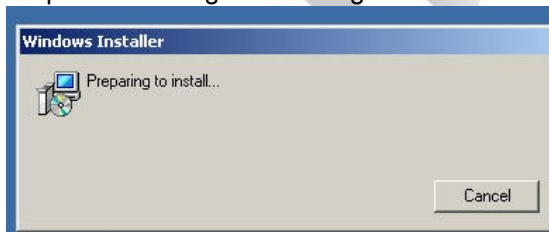
**x:\setup /i language**

where:

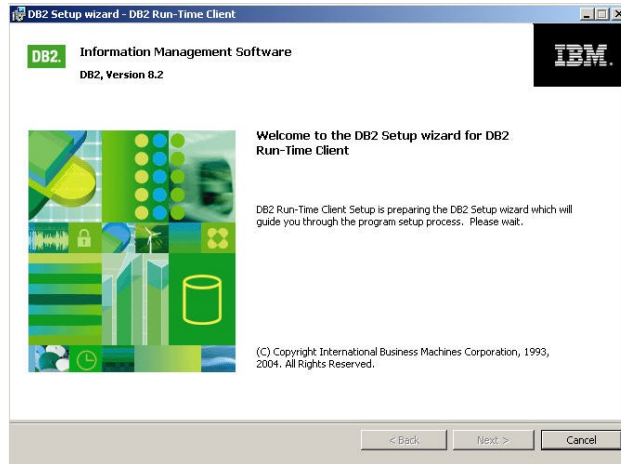
x: represents your CD-ROM drive

language represents the country code for your language (for example, EN for English).

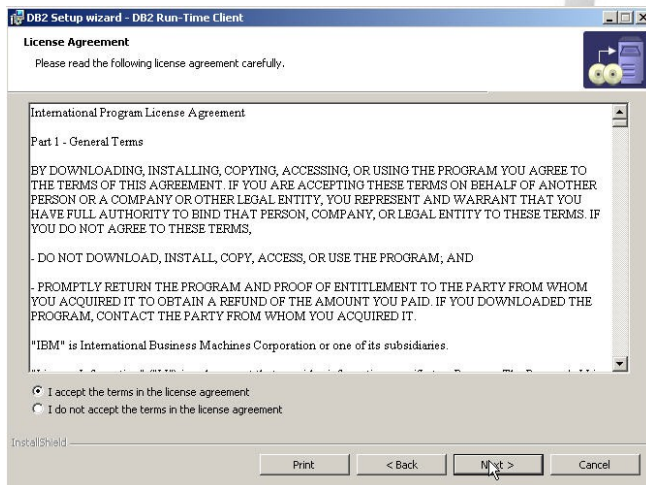
Step 4 : You will get a message from msi that it is preparing to install



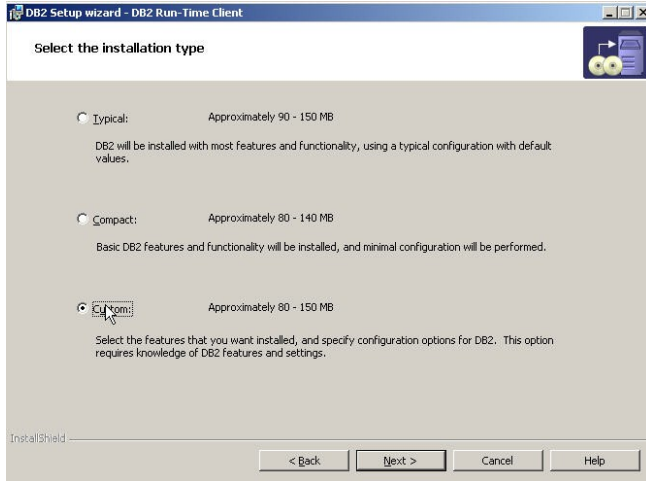
Then DB2 Launch pad opens after a certain time :



Next the license agreement that you should accept if you want to continue with the installation

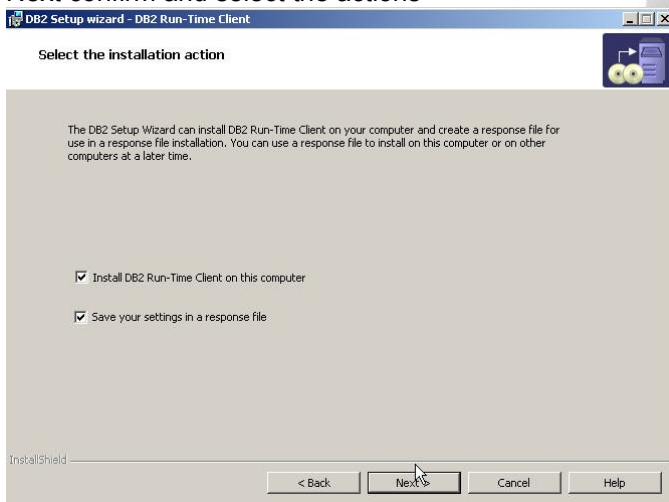


Installation selection

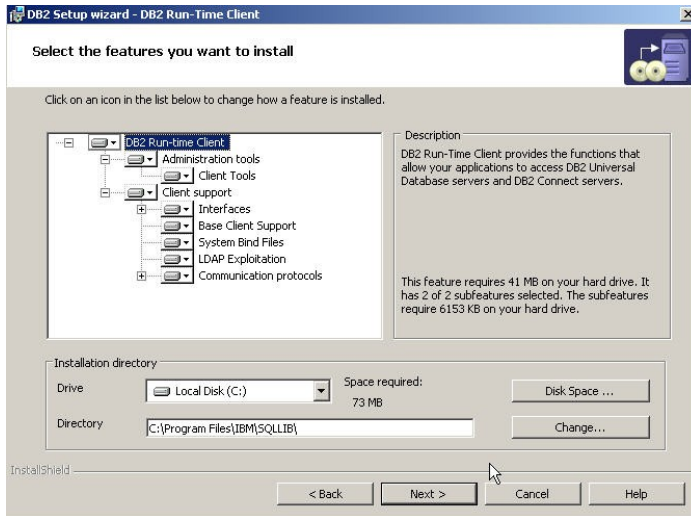


I prefer always the custom method to be informed of what components are being installed

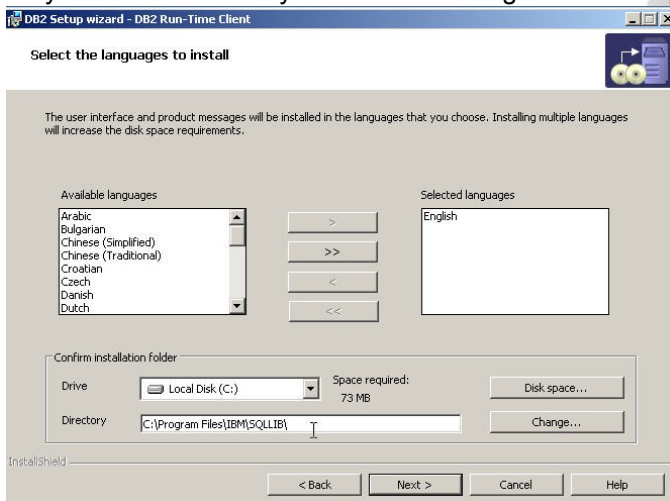
Next confirm and select the actions



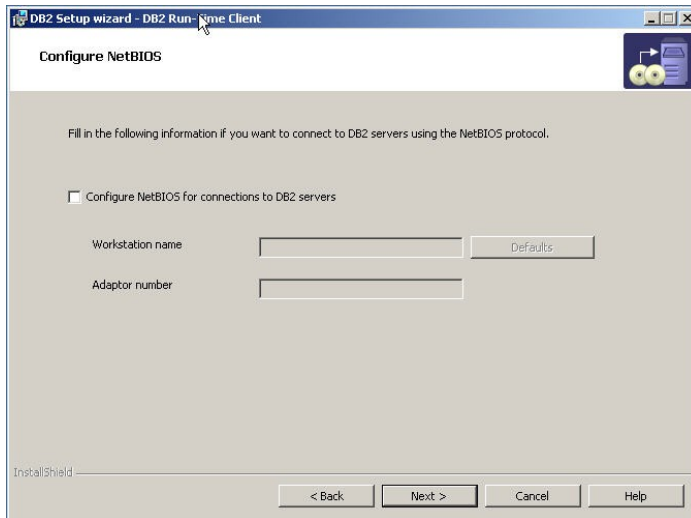
Feature selection:



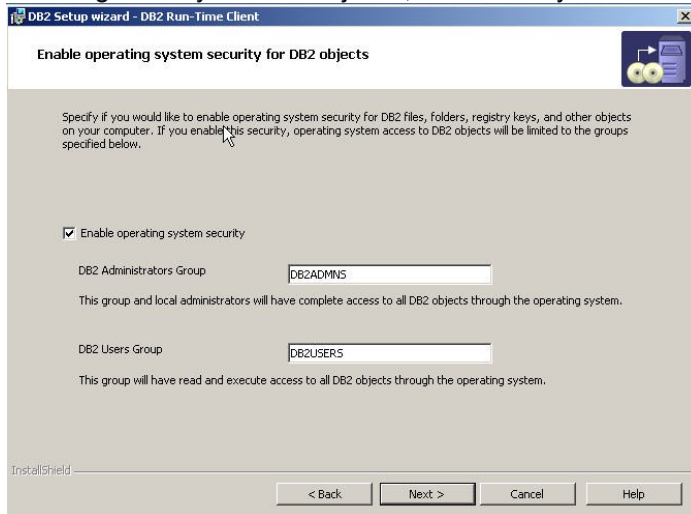
As you can see it is only the DB2 client engine and occupies around 73 MB .



Leave the netbios as is ( unchecked)

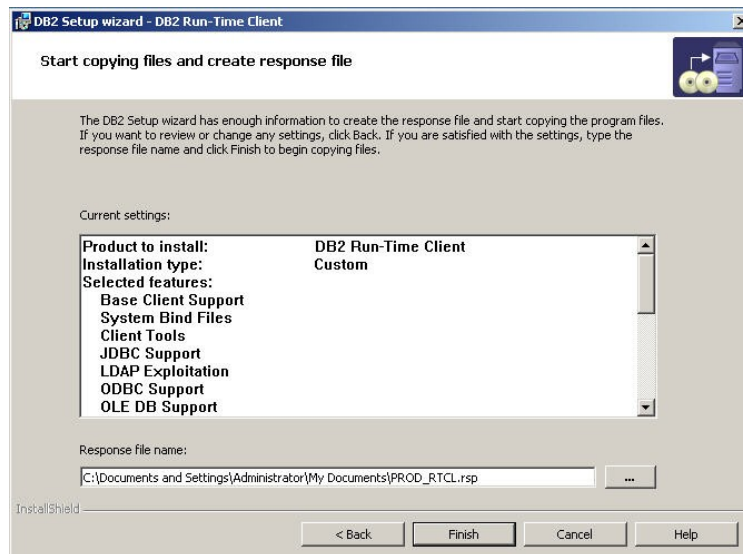


Enabling security on DB2 objects , here follow your installation standards

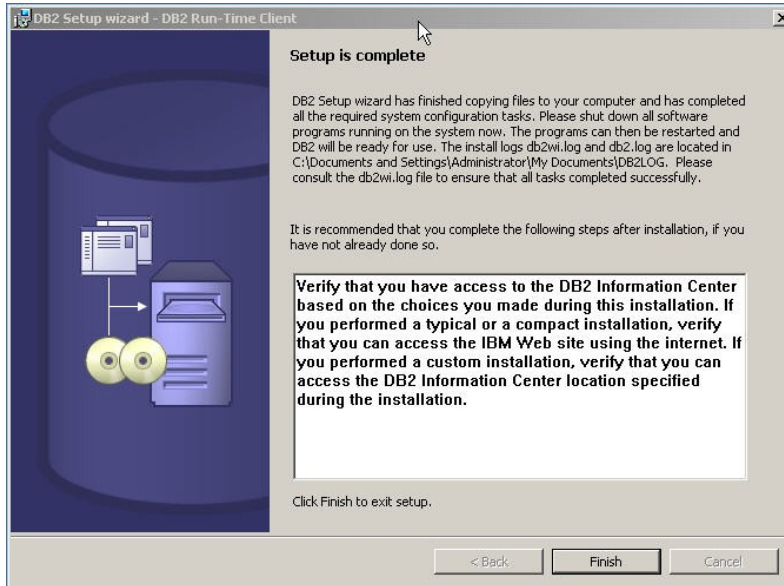


Products to install summary

**Product to install:** DB2 Run-Time Client  
**Installation type:** Custom  
**Selected features:**  
 Base Client Support  
 System Bind Files  
 Client Tools  
 JDBC Support  
 LDAP Exploitation  
 ODBC Support  
 OLE DB Support  
 SQLJ Support  
 APPC  
 NetBIOS  
 Named Pipes  
 TCP/IP  
**Target directory:** C:\Program Files\IBM\SQLLIB  
**Space required:** 73 MB  
**New instances:**  
**Instance name:** DB2



We start copying once we click finish





## Fix Pack installation :

DB2 Fixpacks are packaged in a cumulative way and there is a fixpack for every edition EXP,WSE or ESE and downloaded from IBM web . They are generally distributed as a self extracting zip file.

..

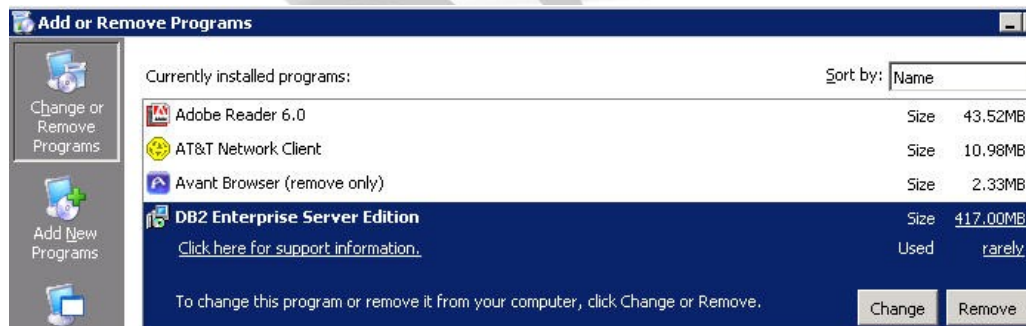
## Determining fixpack and DB2 product level needed .

### Determine the DB2 level you have installed :

Issue from the command line of the run command the following command "db2level" this will tell you which is the install level .

```
C:\Documents and Settings\Administrator>db2level
DB21085I Instance "DB2" uses "32" bits and DB2 code release "SQL08020"
with
level identifier "03010106".
Informational tokens are "DB2 v8.1.7.445", "s040812", "WR21342", and
FixPak
"7".
Product is installed at "E:\PROGRA~1\IBM\SQLLIB".
```

Another way to determine the level is thru the add remove software and locate IBM DB2



as you can notice I get here the DB2 Edition . To get the full information click on the support information



## DB2 V8 Fixpak nomenclature

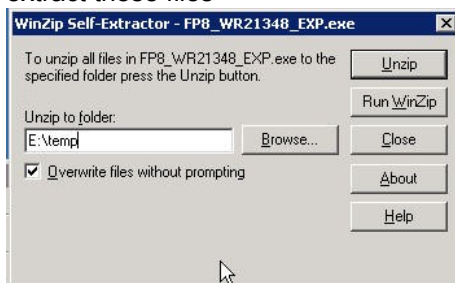
Currently DB2 V8 has the following nomenclature which helps us to know which level are we  
V8.1.fixpak number

If you are on fixpak 7 this means that you are on **DB2 V8.2** however db2level will report 8.1.7 and may skip this chapter .

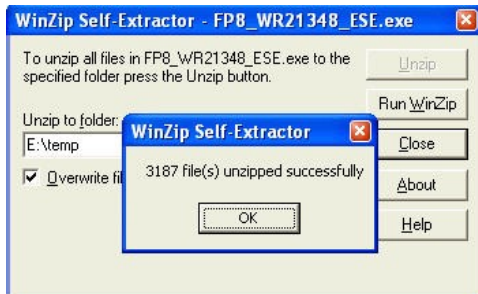
At the moment of writing this paper DB2 fixpak 8 is available but SmarTeam has not certified it yet .

If you have an earlier such 8.1.0 and above but fixpak less than 7 you should follow the following procedure.

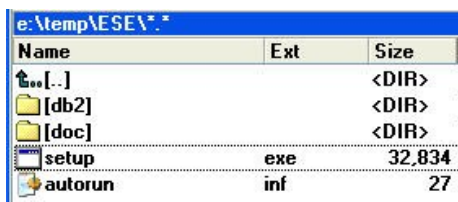
The fixpaks come as self extract images . one you execute it it asks for a directory where to extract these files



In general the filename of the fixpak identifies itself , which fixpak-WR(identifying Windows platform)\_DB2 edition. EXP for express , ESE for Enterprise edition .....



At the end of the extraction you will get a CD image which you can burn it if you want to keep it and reduce disk space utilization .



Step 1. Log on to the system with the user account that you want to use to perform the installation.

Step 2. Shut down any other programs so that the setup program can update files as required.

Step 3. Insert the CD-ROM into the drive. The auto-run feature automatically starts the setup program. The setup program will determine the system language, and launch the setup program for that language. If you want to run the setup program in a different language, or the setup program failed to auto-start .

To manually invoke the setup program, perform the following steps:

Click Start and select the Run option.

In the Open field, enter the following command:

**x:\setup /i language**

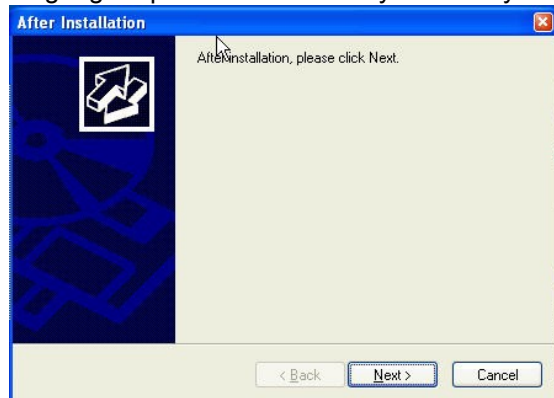
where:

05/09/07

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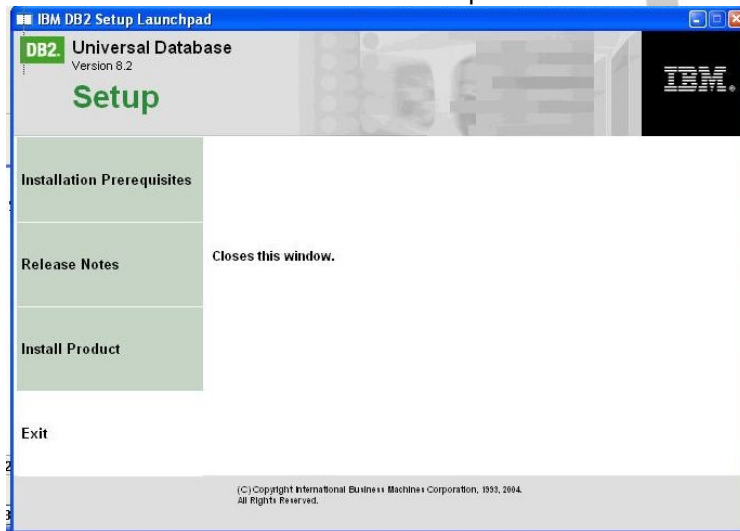
x: represents your CD-ROM drive

language represents the country code for your language (for example, EN for English).

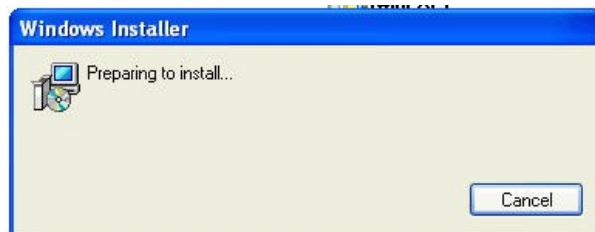
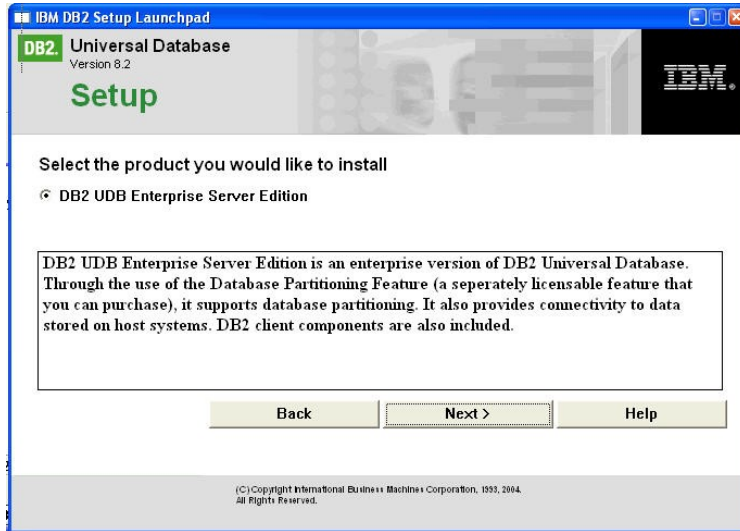


**IT IS IMPORTANT TO CLICK NEXT AFTER THE INSTALLATION IS COMPLETD DO NOT CLICK NOW**

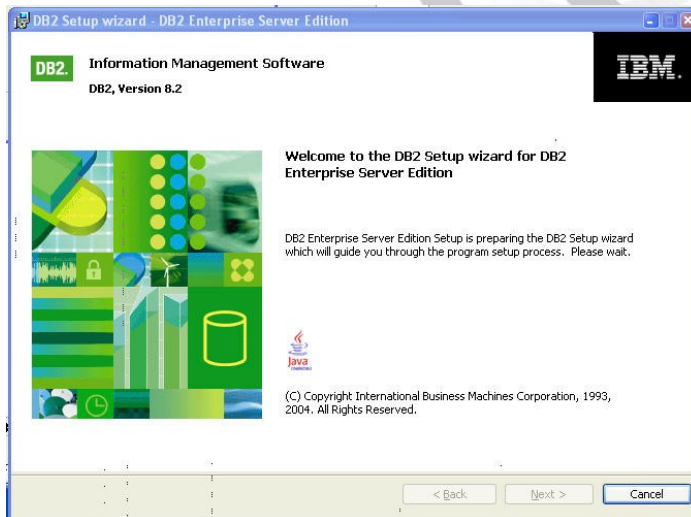
Select install Product from the focused panel



Here is the confirmation of the product we want the fixpak applied upon.

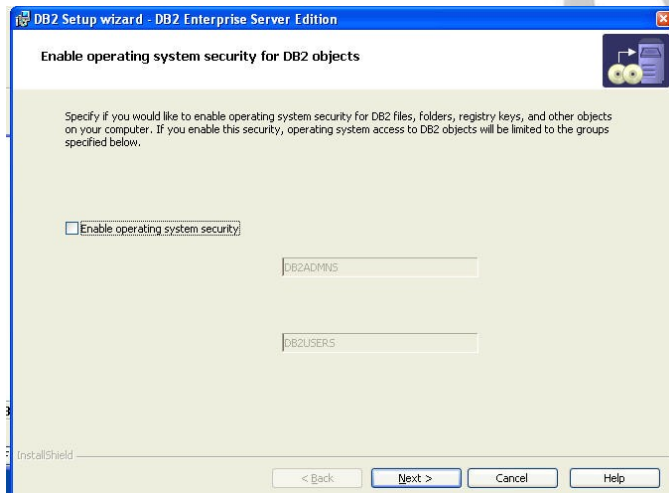


click next

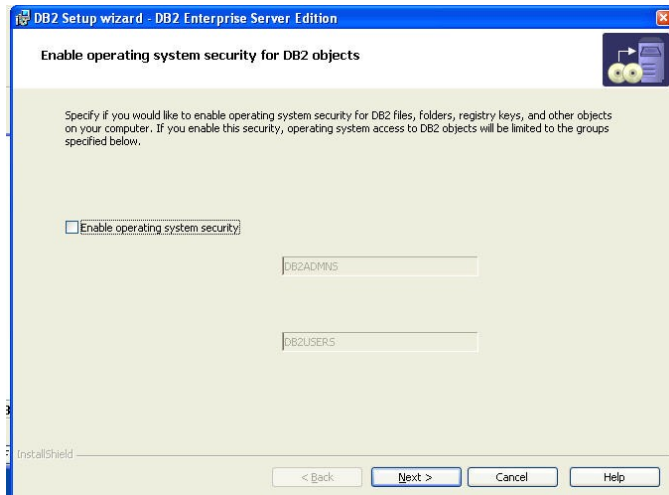




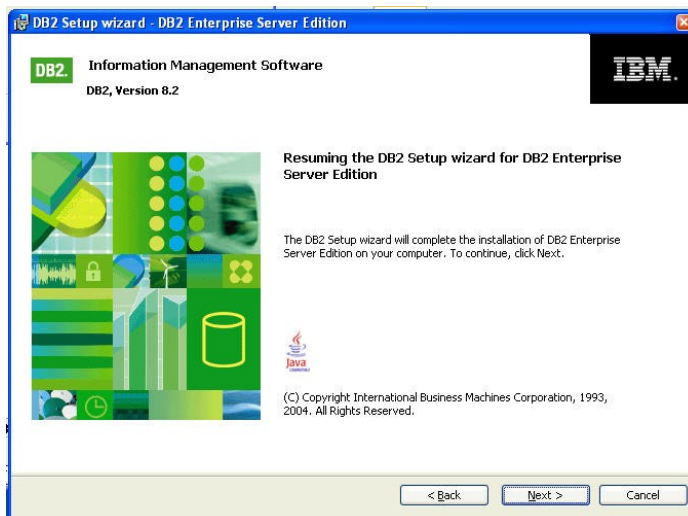
For a successful update of the currently installed DB2, all DB2 services has to shutdown, either shut them down from the services menu or let the fixpak installation do that for you.



Please refer to your specific installation standards if you are not sure leave it blank



click Next

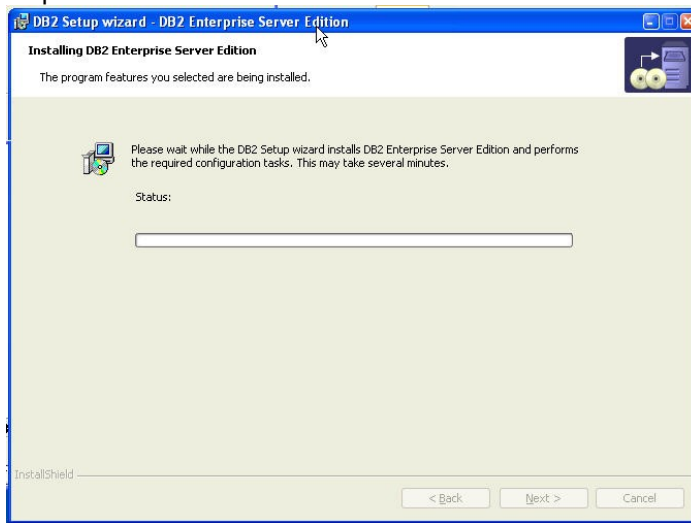


You might receive the following warnings which can be safely ignored

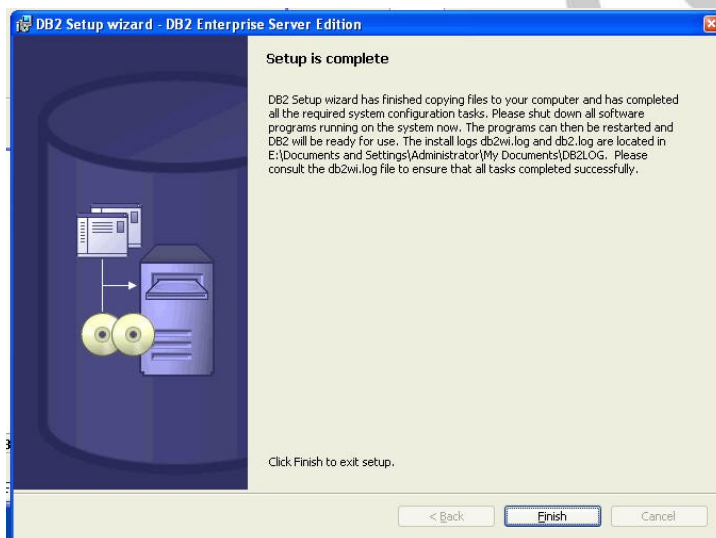




## Fixpak installation starts



## Fix pak installation completes



At this stage it is recommended to reboot





### Post Fixpack installation activities :

If you have any databases created before applying the fix pack for instance the SAMPLE database you have to perform the following **on each database** after applying the fixpack assuming that the instance has started if it has not been started you can always start it manually by issuing **db2start** from a command window :

Issue **db2cmd** to get a db2 window .

db2 terminate

db2 connect to xxxx user yyyy using zzzz

where xxxx is the DBNAME

yyyy is the USERNAME of the instance  
owner

zzzz is the password

now change to SQLLIB in our case c:\Program Files\sqlib

db2 BIND \$DB2DIR\BND\@db2ubind.lst GRANT PUBLIC

db2 BIND \$DB2DIR\BND\@db2cli.lst GRANT PUBLIC

db2 terminate

Where xxxx is the name of a database to which the utilities should be bound.

DB2UBIND.LST and DB2CLI.LST contain lists of commonly required bind files that are used for DB2.



## Verifying the DB2 UDB Server installation

You can verify that DB2 is installed correctly by creating the DB2 UDB SAMPLE database on your system, and accessing data from the database.

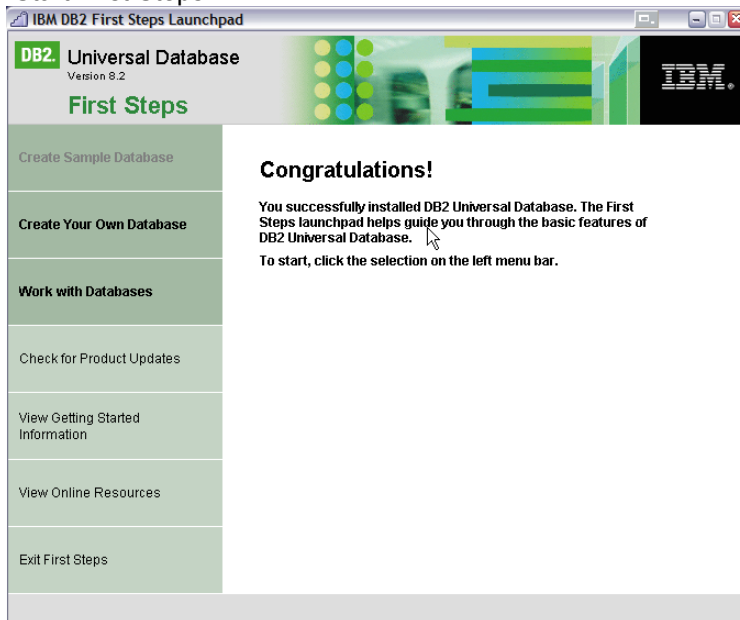
***If you have installed First Steps***, you can verify the installation by performing the following steps.

Step 1.

Log on to the system with the user account that you want to use to verify the installation.

Step 2.

Start First Steps.



Step 3.

Select Create SAMPLE databases on the First Steps Launchpad to open the Create SAMPLE databases window.

Step 4.

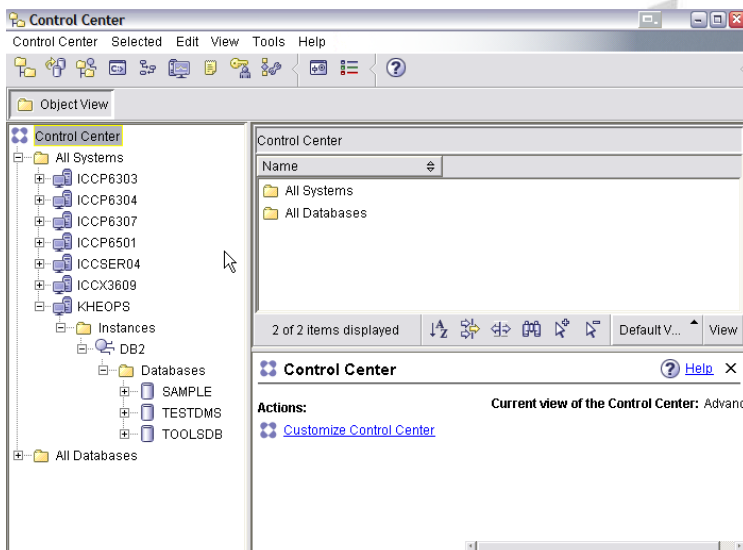
In the Create SAMPLE databases window, select the DB2 UDB Sample database

Step 5. and Click OK.

This command will take a few minutes to process. For a detailed description of the contents of the SAMPLE database, refer to the Administration Guide. When the SAMPLE database has been created, you will receive a completion message. Click OK.

### Step 6.

Once the database is created, select Work with the SAMPLE databases on the First Steps Launch pad to start the Control Center. The Control Center allows you to perform administration tasks on different instance and database objects.



In the left pane of the Control Center screen, expand the object tree to view the SAMPLE database and SAMPLE database objects. Select the Tables object to view the SAMPLE database tables in the right pane of the Control Center screen. For more information, see *Administering Instances and Databases with the DB2 Administration Tools*.

If ***you did not install the DB2 tools***, you can verify the installation by creating the SAMPLE database and connecting to it using the command line processor as follows:

Step 1.

Log on to the system with the DB2 user account that you created to verify the installation.

Step 2.

Enter the **db2sampl** command to create the SAMPLE database.

By default, the SAMPLE database will be created on the drive where DB2 was installed; however, you can specify a drive on which to create this database. For example, to create the SAMPLE database on the F: drive, enter the following command:

**db2sampl F:**

This command will take a few minutes to process. For a detailed description of the contents of the SAMPLE database, refer to the Administration Guide. There is no completion message; when the command prompt returns, the process is complete.

The SAMPLE database is automatically cataloged with the database alias SAMPLE when it is created.

Step 3.

Start the database manager by entering the **db2start** command.

Step 4.

Enter the following commands to connect to the SAMPLE database, retrieve a list of all the employees that work in department 20, and reset the database connection:

```
db2cmd
➔ FROM THE db2cmd SCREEN
db2 connect to sample
db2 "select * from staff where dept = 20"
db2 connect reset
```

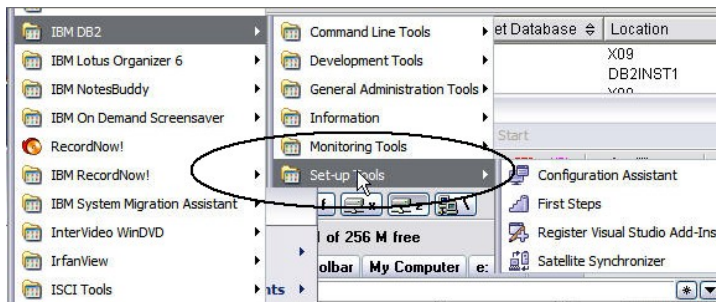
After you have verified your different installations , you can remove the SAMPLE database to free up disk space. Enter the db2 drop database sample command to drop the SAMPLE database.

It is a best practice to keep the SAMPLE database to test drive any doubtful situation and it might be very helpful in problem determination.

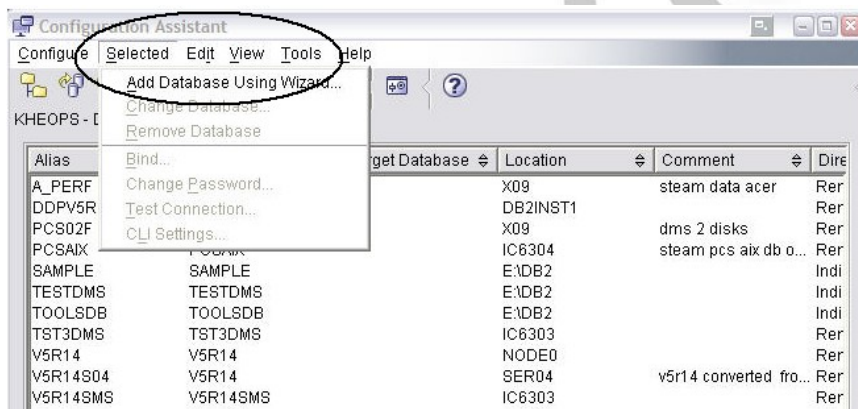


## Verifying the DB2 UDB Client installation

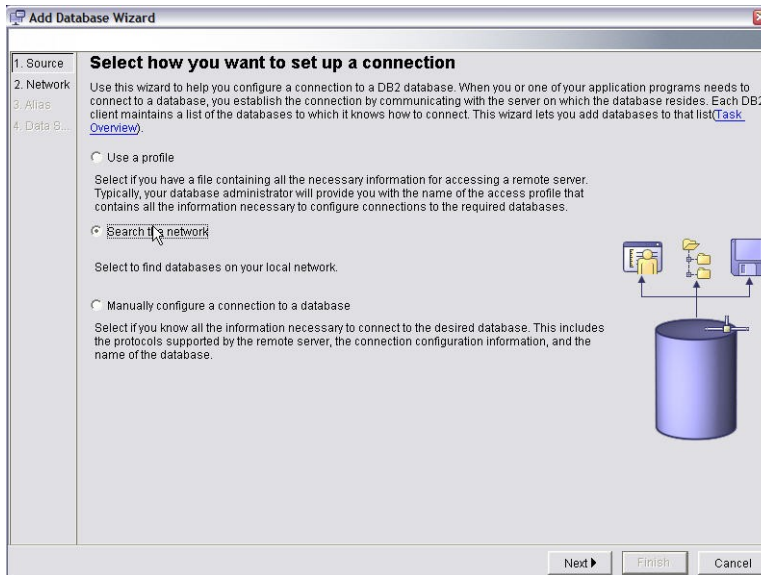
You can verify that DB2 client is properly installed by connecting to the DB2 UDB SAMPLE database on your system or any available DB2 data base , and accessing data from the database.



From the start menu select IBMDB2 → setup tools → configuration assistant . this gui comes when you install the client tools

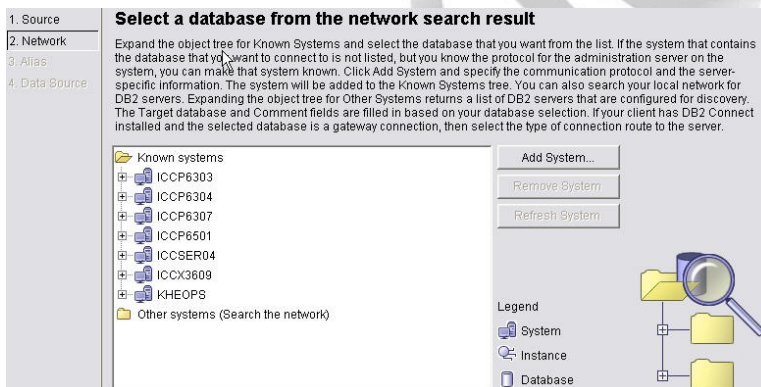


Selected → Add database using wizard



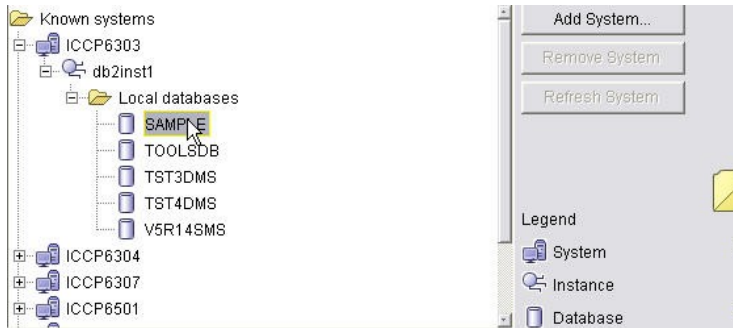
We have different choices to access DB2 database from the clients.

The easiest way is to let the client discover the database by itself , You can use a profile ( after creating the connection we export it in a file then we can import it on another client ) , finally you can enter the parameters manually if you know them .

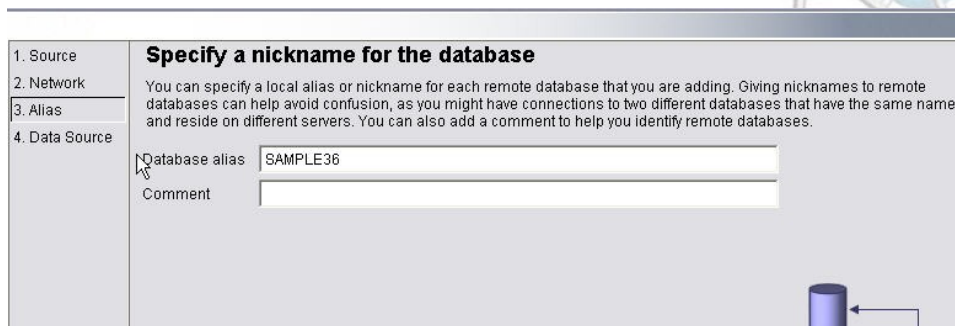


Previous identified systems are shown in the known systems. You can use also let the client discover the systems by clicking on other systems . Be aware in large networks this takes a long long time so it is better to add it manually thru the Add system button .

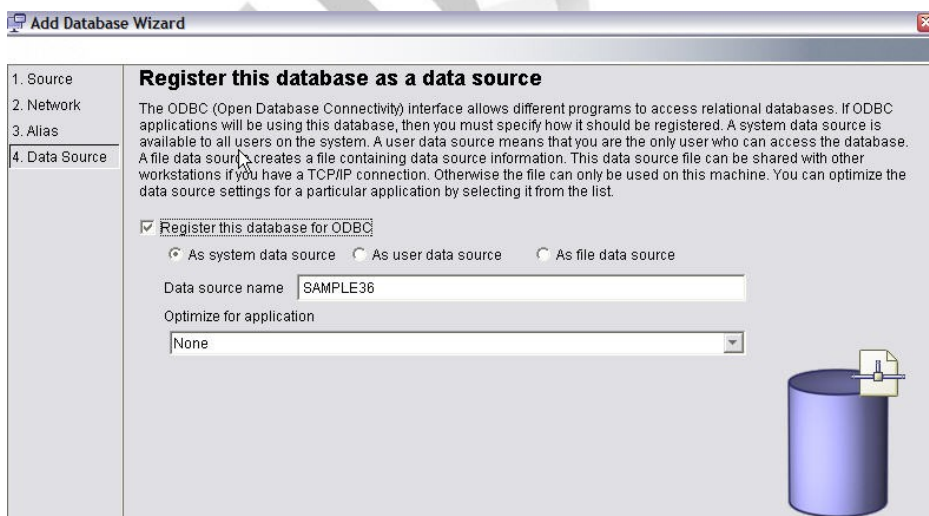




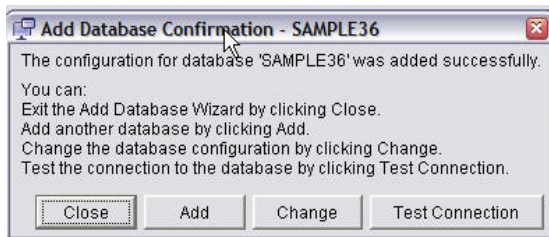
Once we have selected our system ( ICCP6303) the local databases are listed . We select Sample ( the one we are interested in ) We press next .



For the database sample we have to have a unique name on the client ( ALIAS) I named out sample to SAMPLE36.We press next



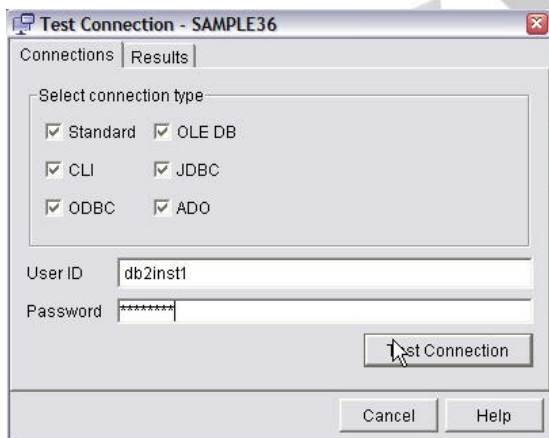
WE selected as well to register the database as a data source register it as a system datasource using ODBC Press next



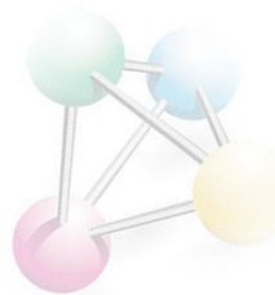
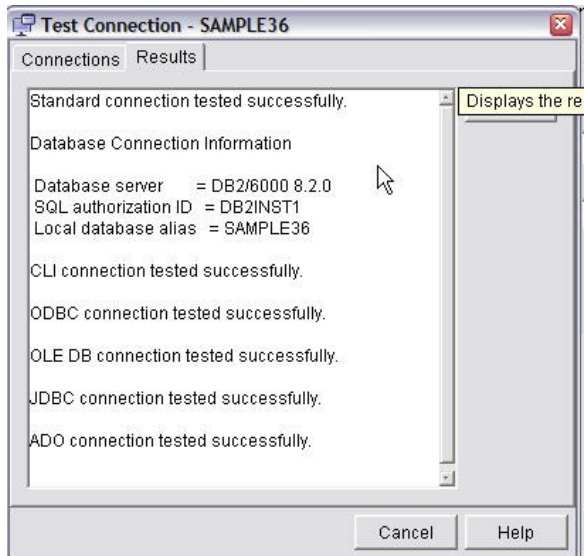
After successfully adding the configuration of the database we test the connectivity to the server .

Make sure that you can connect to the db2 server and ping it successfully and you also successfully solve its host name .

In the following we will be testing available connections



This is the output after testing the connections



---

**Appendix A DB2 installation Response files**

---

**UDB\_EXPRESS\_EDITION**

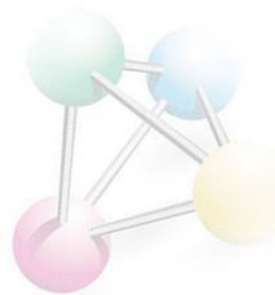
---

```
PROD=UDB_EXPRESS_EDITION
LIC_AGREEMENT=ACCEPT
FILE=C:\Program Files\IBM\SQLLIB\
INSTALL_TYPE=CUSTOM

COMP=JDBC_SUPPORT
COMP=IBM_JRE
COMP=LDAP_EXPLOITATION
COMP=MDAC
COMP=ODBC_SUPPORT
COMP=OLE_DB_SUPPORT
COMP=DB2_SAMPLE_DATABASE
COMP=SQLJ_SUPPORT
COMP=DB2_WEB_TOOLS
COMP=XML_EXTENDER
COMP=APPC_DB2_CLIENT_SUPPORT
COMP=BASE_CLIENT
COMP=SYSTEM_BIND_FILES
COMP=CONTROL_CENTER
COMP=CLIENT_TOOLS
COMP=COMMAND_CENTER
COMP=CONFIGURATION_ASSISTANT
COMP=DATABASE_TOOLS
COMP=EVENT_ANALYZER
COMP=FIRST_STEPS
COMP=NETBIOS_DB2_CLIENT_SUPPORT
COMP=NETBIOS_DB2_LISTENER_SUPPORT
COMP=NPIPE_DB2_CLIENT_SUPPORT
COMP=NPIPE_DB2_LISTENER_SUPPORT
COMP=TCPIP_DB2_CLIENT_SUPPORT
COMP=TCPIP_DB2_LISTENER_SUPPORT

LANG=EN
DAS_CONTACT_LIST=LOCAL

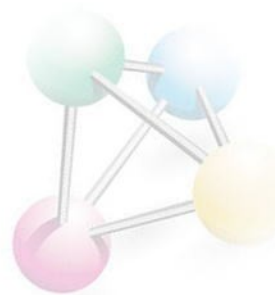
DATABASE=TOOLS_DB
TOOLS_CATALOG_DATABASE=TOOLS_DB
TOOLS_CATALOG_SCHEMA=SYSTOOLS
```



TOOLS\_DB.DATABASE\_NAME=TOOLSDB

INSTANCE=DB2

TOOLS\_DB.INSTANCE=DB2  
TOOLS\_DB.LOCATION=LOCAL  
DB2.NAME=DB2  
DEFAULT\_INSTANCE=DB2  
DB2.SVCENAME=db2c\_DB2  
DB2.DB2COMM=TCPIP  
DB2.PORT\_NUMBER=50000  
DB2.AUTOSTART=YES  
DB2.USERNAME=db2admin  
DB2.PASSWORD=232262422273332239323322  
ENCRYPTED=DB2.PASSWORD  
DAS\_USERNAME=db2admin  
DAS\_PASSWORD=232262422273332239323322  
ENCRYPTED=DAS\_PASSWORD  
DB2\_EXTSECURITY=NO



---

### WORKGROUP\_SERVER\_EDITION

PROD=WORKGROUP\_SERVER\_EDITION  
LIC\_AGREEMENT=ACCEPT  
FILE=C:\Program Files\IBM\SQLLIB\  
INSTALL\_TYPE=CUSTOM

COMP=JDBC\_SUPPORT  
COMP=IBM\_JDK  
COMP=IBM\_JRE  
COMP=LDAP\_EXPLOITATION  
COMP=MDAC  
COMP=ODBC\_SUPPORT  
COMP=OLE\_DB\_SUPPORT  
COMP=DB2\_SAMPLE\_DATABASE  
COMP=SQLJ\_SUPPORT  
COMP=DB2\_WEB\_TOOLS  
COMP=APPC\_DB2\_CLIENT\_SUPPORT  
COMP=APPLICATION\_DEVELOPMENT\_TOOLS  
COMP=REPLICATION\_APPLY

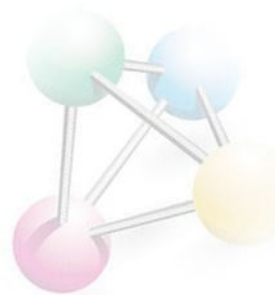
COMP=BASE\_CLIENT  
COMP=SYSTEM\_BIND\_FILES  
COMP=REPLICATION\_CAPTURE  
COMP=CONTROL\_CENTER  
COMP=CLIENT\_TOOLS  
COMP=COMMAND\_CENTER  
COMP=CONFIGURATION\_ASSISTANT  
COMP=DATABASE\_TOOLS  
COMP=INFORMIX\_DATA\_SOURCE\_SUPPORT  
COMP=EVENT\_ANALYZER  
COMP=FIRST\_STEPS  
COMP=NETBIOS\_DB2\_CLIENT\_SUPPORT  
COMP=NETBIOS\_DB2\_LISTENER\_SUPPORT  
COMP=NPIPE\_DB2\_CLIENT\_SUPPORT  
COMP=NPIPE\_DB2\_LISTENER\_SUPPORT  
COMP=TCPIP\_DB2\_CLIENT\_SUPPORT  
COMP=TCPIP\_DB2\_LISTENER\_SUPPORT

LANG=EN  
DAS\_CONTACT\_LIST=LOCAL

DATABASE=TOOLS\_DB  
TOOLS\_CATALOG\_DATABASE=TOOLS\_DB  
TOOLS\_CATALOG\_SCHEMA=SYSTOOLS  
TOOLS\_DB.DATABASE\_NAME=TOOLSDB

INSTANCE=DB2

TOOLS\_DB.INSTANCE=DB2  
TOOLS\_DB.LOCATION=LOCAL  
DB2.NAME=DB2  
DEFAULT\_INSTANCE=DB2  
DB2.SVCENAME=db2c\_DB2  
DB2.DB2COMM=TCPIP  
DB2.PORT\_NUMBER=50000  
DB2.FEDERATED=YES  
DB2.AUTOSTART=YES  
DB2.USERNAME=db2inst1  
DB2.PASSWORD=232262422265326213352409  
ENCRYPTED=DB2.PASSWORD  
DAS\_USERNAME=db2inst1  
DAS\_PASSWORD=232262422265326213352409  
ENCRYPTED=DAS\_PASSWORD



DB2\_EXTSECURITY=NO

---

**ADMINISTRATION\_CLIENT**

PROD=ADMINISTRATION\_CLIENT

LIC\_AGREEMENT=ACCEPT

FILE=C:\Program Files\IBM\SQLLIB\

INSTALL\_TYPE=CUSTOM

COMP=DB2\_WEB\_TOOLS

COMP=XML\_EXTENDER

COMP=APPC\_DB2\_CLIENT\_SUPPORT

COMP=NETBIOS\_DB2\_CLIENT\_SUPPORT

COMP=NPIPE\_DB2\_CLIENT\_SUPPORT

COMP=TCPIP\_DB2\_CLIENT\_SUPPORT

COMP=BASE\_CLIENT

COMP=SYSTEM\_BIND\_FILES

COMP=CONTROL\_CENTER

COMP=CLIENT\_TOOLS

COMP=COMMAND\_CENTER

COMP=CONFIGURATION\_ASSISTANT

COMP=EVENT\_ANALYZER

COMP=FIRST\_STEPS

COMP=SPATIAL\_EXTENDER\_CLIENT\_SUPPORT

COMP=JDBC\_SUPPORT

COMP=IBM\_JRE

COMP=LDAP\_EXPLOITATION

COMP=MDAC

COMP=ODBC\_SUPPORT

COMP=OLE\_DB\_SUPPORT

COMP=SQLJ\_SUPPORT

LANG=EN

INSTANCE=DB2

DB2.NAME=DB2

DEFAULT\_INSTANCE=DB2

DB2.TYPE=CLIENT

DB2\_EXTSECURITY=YES

DB2\_USERSGROUP\_NAME=DB2USERS

DB2\_ADMINGROUP\_NAME=DB2ADMNS



DB2\_EXTSECURITY=NO

---

### Configuration client assistant sample exported profile

;Use BINARY file transfer

[FILE\_DESCRIPTION]

APPLICATION=DB2/NT 8.2.0

FILE\_CONTENT=DB2 CCA Exported Data Sources

FILE\_TYPE=CommonServer

FILE\_FORMAT\_VERSION=2.0

Platform=5

DB2SYSTEM=KHEOPS

Instance=DB2

[REGISTRY\_GLOBAL]

DB2\_EXTSECURITY=NO

DB2\_DOCPORT=51000

DB2\_DOCHOST=localhost

DB2INSTDEF=DB2

[REGISTRY\_LOCAL]

DB2ACCOUNTNAME=KHEOPS\db2inst1

DB2INSTOWNER=KHEOPS

DB2PORTRANGE=60000:60003

DB2COMM=TCPIP

[DBM\_CONFIG]

NODETYPE=4

RELEASE=0xa00

DIAGLEVEL=3

RQRIOLBK=32767

DOS\_RQRIOLBK=4096

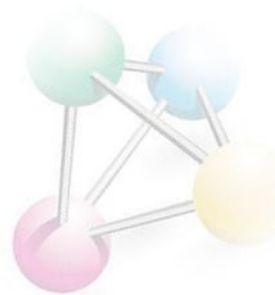
AUTHENTICATION=0

DIR\_CACHE=1

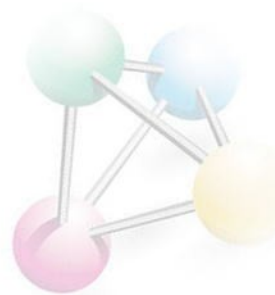




DISCOVER=2  
TP\_MON\_NAME=  
SYSADM\_GROUP=  
SYSCTRL\_GROUP=  
SYSMAINT\_GROUP=  
SYSMON\_GROUP=  
TM\_DATABASE=1ST\_CONN  
DFT\_ACCOUNT\_STR=  
DISCOVER\_COMM=  
CATALOG\_NOAUTH=0  
NOTIFYLEVEL=3  
DFT\_CLIENT\_ADPT=0  
DIR\_TYPE=0  
DIR\_OBJ\_NAME=  
ROUTE\_OBJ\_NAME=  
DFT\_CLIENT\_COMM=  
JAVA\_HEAP\_SZ=512  
FEDERATED=0  
USE\_SNA\_AUTH=0  
FED\_NOAUTH=0  
UTIL\_IMPACT\_LIM=100  
GROUP\_PLUGIN=  
CLNT\_PW\_PLUGIN=  
CLNT\_KRB\_PLUGIN=IBMkrb5  
LOCAL\_GSSPLUGIN=  
MAX\_QUERYDEGREE=-1  
AUDIT\_BUF\_SZ=0  
INTRA\_PARALLEL=0  
NUMDB=8  
INITFENCED\_JVM=0  
INDEXREC=1  
SHEAPTHRES=10000  
BACKBUFSZ=1024  
RESTBUFSZ=1024  
MAXAGENTS=400



MAXCAGENTS=-1  
ASLHEAPSZ=15  
FENCED\_POOL=-1  
KEEPFENCED=1  
AGENTPRI=-1  
DFT\_MON\_UOW=OFF  
DFT\_MON\_STMT=OFF  
DFT\_MON\_TABLE=OFF  
DFT\_MON\_BUFPOOL=OFF  
DFT\_MON\_LOCK=OFF  
DFT\_MON\_SORT=OFF  
DFT\_MON\_TIMESTAMP=ON  
MIN\_PRIV\_MEM=32  
PRIV\_MEM\_THRESH=20000  
CPUSPEED=3.975564e-007  
QUERY\_HEAP\_SZ=1000  
MAXTOTFILOP=16000  
AGENT\_STACK\_SZ=16  
MON\_HEAP\_SZ=66  
RESYNC\_INTERVAL=180  
UDF\_MEM\_SZ=256  
DATALINKS=0  
SPM\_LOG\_FILE\_SZ=256  
SPM\_MAX\_RESYNC=20  
TRUST\_ALLCLNTS=YES  
SS\_LOGON=1  
NUM\_INITFENCED=0  
SPM\_NAME=KHEOPS  
NUM\_INITAGENTS=0  
MAX\_COORDAGENTS=-1  
NUM\_POOLAGENTS=-1  
FCM\_NUM\_BUFFERS=4096  
MAX\_LOGICAGENTS=-1  
TRUST\_CLNTAUTH=CLIENT  
DISCOVER\_INST=1

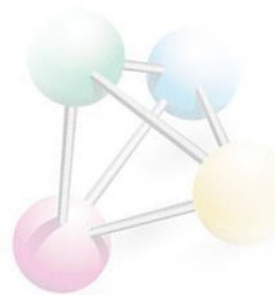


MAX\_CONNECTIONS=-1  
INSTANCE\_MEMORY=6504  
HEALTH\_MON=OFF  
SRV\_PLUGIN\_MODE=1  
SRVCON\_PW\_PLUGIN=  
SRVCON\_GSSPLUGIN\_LIST=  
SRVCON\_AUTH=255  
COMM\_BANDWIDTH=1.000000e+000  
CONN\_ELAPSE=10  
MAX\_CONNRETRIES=5  
MAX\_TIME\_DIFF=60  
START\_STOP\_TIME=10

[ADMINNODE>ICCP6303]  
DB2SYSTEM=ICCP6303  
ServerType=DB26000  
Nodetype=U  
Protocol=TCPIP  
Hostname=iccp6303  
Portnumber=523  
Security=0

[ADMINNODE>ICCP6304]  
DB2SYSTEM=ICCP6304  
ServerType=DB2NT  
Nodetype=U  
Protocol=TCPIP  
Hostname=iccp6304  
Portnumber=523  
Security=0

[ADMINNODE>ICCP6307]  
DB2SYSTEM=ICCP6307  
ServerType=DB26000  
Nodetype=U



Protocol=TCPIP

Hostname=iccp6307

Portnumber=523

Security=0

[ADMINNODE>ICCP6501]

DB2SYSTEM=ICCP6501

ServerType=DB26000

Nodetype=U

Protocol=TCPIP

Hostname=iccp6501

Portnumber=523

Security=0

[ADMINNODE>ICCSER04]

DB2SYSTEM=ICCSER04

ServerType=DB2NT

Nodetype=U

Protocol=TCPIP

Hostname=iccs04

Portnumber=523

Security=0

[ADMINNODE>KHEOPS]

DB2SYSTEM=KHEOPS

Comment=Local workstation

ServerType=DB2NT

Nodetype=U

Protocol=LOCAL

instance\_name=DB2DAS00

[ADMINNODE>NODE09]

DB2SYSTEM=ICCX3609

ServerType=DB2NT

Nodetype=U



Protocol=TCPIP

Hostname=iccx3609

Portnumber=523

Security=0

[NODE>DB2INST1]

DB2SYSTEM=ICCP6501

Instance=db2inst1

ServerType=DB26000

Nodetype=4

Protocol=TCPIP

Hostname=iccp6501

Portnumber=50000

Security=0

[NODE>IC6303]

DB2SYSTEM=ICCP6303

Instance=db2inst1

ServerType=DB26000

Nodetype=4

Protocol=TCPIP

Hostname=iccp6303

Portnumber=50001

Security=0

[NODE>IC6304]

DB2SYSTEM=ICCP6304

Instance=db2inst1

ServerType=DB26000

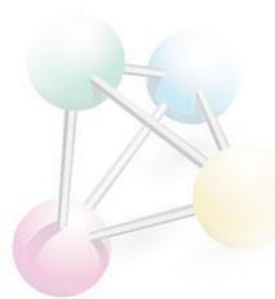
Nodetype=4

Protocol=TCPIP

Hostname=iccp6304.idsicc.ibm.com

Portnumber=60000

Security=0



[NODE>NODE0]

DB2SYSTEM=ICCP6307

Instance=v5r14

ServerType=DB26000

Nodetype=4

Protocol=TCPIP

Hostname=iccp6307.idsicc.ibm.com

Portnumber=50002

Security=0

[NODE>SER04]

DB2SYSTEM=ICCSER04

Instance=DB2

ServerType=DB2NT

Nodetype=1

Protocol=TCPIP

Hostname=iccs04

Portnumber=50000

Security=0

[NODE>X09]

DB2SYSTEM=ICCX3609

Instance=DB2

ServerType=DB2NT

Nodetype=4

Protocol=TCPIP

Hostname=iccx3609.idsicc.ibm.com

Portnumber=50000

Security=0

[INST>DB2]

instance\_name=DB2

NodeType=4

ServerType=DB2NT

Authentication=SERVER



DB2COMM=TCPIP

[DB>!LOCAL:SAMPLE]

Dir\_entry\_type=INDIRECT

Drive=E:\DB2

DBName=SAMPLE

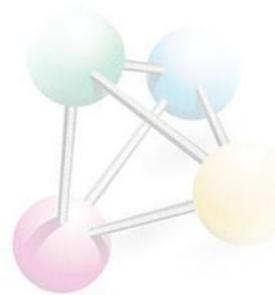
[CLI\_ODBC>SAMPLE]

DataSourceName=SAMPLE

DataSourceType=User

DBALIAS=SAMPLE

ODBCParameters=No



## Appendix B : RDBMS Terminology mappings :

### Mapping of Oracle Terminology to DB2 UDB

The following table gives readers who are familiar with Oracle a quick mapping to DB2 UDB terminology:

DB2 UDB	Oracle	Comments
DB2 UDB EE	Oracle EE	Enterprise product.
DB2 UDB EEE	Oracle Parallel	Support node partitioning.
DB2 Connect	Oracle Gateway	DRDA access to hosts.
SQL Control Statements	PL/SQL	Programming language extension to SQL. DB2 UDB stored procedures can be programmed in SQL Control Statements (subset of PSM standard), Java, C, C++, COBOL, Fortran, OLE, and REXX. DB2 functions can be programmed in Java, C, C++, OLE, or SQL control statements.
DB2 CLP	SQL*Plus	Command line interface to the server.
Instance	Instance	Processes and shared memory. In DB2 it also includes a permanent directory structure: an instance is usually created at install time (or can be later) and must exist before a database can be created. A DB2 instance is also known as the <i>database manager</i> (DBM).
Database	Database	Physical structure containing data. In Oracle, multiple instances can use the same database, and an instance can connect to one and only one database. In DB2, multiple databases can be created and used concurrently in the same instance.
DBM and database configuration files, etc.	Control files and .ora files	In Oracle, files that name the locations of files making up the database and provide configuration values. In DB2, each instance (DBM) and database has its own set of configuration parameters stored in a binary file; there are also other internal files and directories: none is manually edited.
Federated System	Database Link	In Oracle, an object that describes a path from one database to another. In DB2 a federated system is used. One database is chosen as the federated database and within it wrappers, servers, nicknames, and other optional objects are created to define how to access the other databases (including Oracle databases) and objects in them. Once an application is connected to the federated database it can access all authorized objects in the federated system.
Table spaces	Table spaces	Contains actual database data.
Containers	Data files	Entities inside the table spaces.



Objects	Segments	Entities inside the containers/data files.
Extents	Extents	Entities inside the objects/segments.
Pages	Data blocks	Smallest storage entity in the storage model.
N/A	Clusters	Data structure that allows related data to be stored together on disk; can be table or hash clusters. The closest facility to this in DB2 is a <i>clustering index</i> , which causes rows inserted into a table to be placed physically close to the rows for which the key values of this index are in the same range.
System catalog	Data dictionary	Metadata of the database.
SMS	N/A	System-managed table space.
DMS	Data files	Database-managed table space.
Buffer pools	Data cache	Buffers data in the table spaces to reduce disk I/O.
Package cache	Statement cache	Cache prepared dynamic SQL statements.
Log files	Redo logs	Recovery logs.
N/A	Rollback segments	Store the old version of data for a mutating table. In DB2 the old version of an updated row is stored in the log file along with the new version.
Database manager and database shared memory	SGA	Shared memory area(s) for the database server. In Oracle there is one, while in DB2 there is one at the database manager (instance) level and one for each active database.
Agent / application shared memory	UGA	Shared memory area to store user-specific data passed between application process and the database server.
Package	N/A	A precompiled access plan for an embedded static SQL application stored in the server.
N/A	Package	A logical grouping of PL/SQL blocks that can be invoked by other PL/SQL applications.

---

**Appendix C. Most used DB2 Commands****Quick Reference: Common DB2® Command Line Processor****(CLP) Commands**

Maintained by Paul Yip IBM® Toronto Lab November 2002

The following is a quick reference for the most commonly used DB2 CLP commands. While not a complete reference, this document should prove valuable at the desk side of any new DB2 user. Feedback can be sent to [ypaul@ca.ibm.com](mailto:ypaul@ca.ibm.com).

Arguments enclosed in square brackets are optional, and variables are denoted by enclosing angle brackets. For example, the syntax for `CONNECT` is:

```
connect to <dbname>
[ [user <userid>]
  using <pwd>]
```

This means that a `CONNECT` to database sample as *user1* using password *mypass* can have the following forms:

```
Connect to sample
Connect to sample user user1
Connect to sample user user1 using mypass
```

All commands are organized by their scope. For any CLP command, you may type in the keyword prefixed by a question mark (“?”) to see its full syntax.

Have fun!

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### Instance

CLP Command	Description
db2start	Starts the database manager instance.
db2stop	Stops the database manager instance.
get dbm cfg	Returns the database manager configuration settings.
get dbm cfg show detail	Displays current and delayed values of database manager parameters (as of V8).
update dbm cfg using <p> <v>	Updates the database manager configuration parameter <p> with value <v>.
get instance	Returns the value of DB2INSTANCE environment variable.
list active databases	Lists active databases and number of connections.
list application [show detail]	Returns information about the currently connected applications.
force application (h1 [,h2,...,hn])	Disconnects specific application(s) by handle number.
force application all	Disconnects all applications from the database.
attach to <node> user <userid> using <pwd>	Attaches to remote instance identified by <node> as user <userid> using password <pwd>.

<sup>1</sup> Some parameters take effect immediately. Others require instance stop and restart.

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### Database

create database <dbname>	Creates a database called <dbname>.
activate database <dbname>	Explicitly activates the database.
Deactivate database <dbname>	Explicitly deactivates the database.
connect to <dbname> [ [user <userid>] using <pwd>]	Connects to database <dbname> using explicit user <userid> and password <pwd> if needed.
connect reset	Disconnects from current database.
get db cfg show detail	Displays current and delayed values of database configuration parameters (v8 only).
zget db cfg for <dbname>	Returns the database configuration settings for database <dbname>.
update db cfg for <dbname> using <p> <v>	Updates the database configuration parameter <p> with value <v> for database <dbname>.
list tables [for {user   all   system   schema <schemaname>}] [show detail]	Lists tables in the database. If no arguments are specified, the default is to list the current user's tables.
describe table <tablename>	Displays column information for a table or view.
list tablespaces [show detail]	Displays table space ID, name, type, contents and state.
list tablespace containers for <tablespace_id> [show detail]	Displays container information for the specified table space using <tablespace_id>.
quiesce tablespaces for table <tablename> reset	Resets the state of a table space to normal.

## Connectivity

<code>3catalog [admin] &lt;protocol&gt; node ...</code>	Creates an entry in the node directory for .protocol <protocol>.
<code>list [admin] node directory</code>	Returns contents of the node directory.
<code>4catalog database &lt;dbname&gt;...</code>	Creates an entry in the database directory for database <dbname>.
<code>list database directory [on &lt;path&gt;]</code>	Returns contents of the database directory.

<sup>2</sup> Some parameters take effect immediately. Others require database deactivation and reactivation.

<sup>3</sup> Use “? catalog <protocol>” to get full syntax. For example “? catalog tcPIP”. Be careful: It is possible to catalog a node that does not exist.

<sup>4</sup> Use “? catalog database” to get full syntax. Be careful: It is possible to catalog a database that does not exist.

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## Performance

<code>get monitor switches</code>	Returns the state of the session's monitor switches.
<code>update monitor switches using &lt;monitor&gt; &lt;on off&gt;</code>	Sets the state of the session monitor switch for <monitor>.
<code>5reset monitor all</code>	Resets performance monitor values.
<code>get snapshot for dbm</code>	Returns performance information at the instance level.
<code>6get snapshot for all on &lt;dbname&gt;</code>	Returns all performance information at the database level for database <dbname>.
<code>get snapshot for dynamic sql on &lt;dbname&gt;</code>	Returns the contents of the dynamic SQL cache.
<code>7runstats on table &lt;tbschema&gt;.&lt;tbname&gt;</code>	Gathers statistics for table <tbname>. Table name must be fully qualified with <tbschema>.
<code>8reorgchk on table all</code>	Determines if tables need to be reorganized. Useful for automatically performing <i>runstats</i> on all tables.
<code>reorg table &lt;tablename&gt;</code>	Reorganizes a table by reconstructing the rows to eliminate fragmented data and compacting information.

<sup>5</sup> It is generally recommended to reset monitors before each performance test<sup>6</sup> More snapshot variations are available. More information is available when monitors are on. <sup>7</sup>Use db2rbind to rebind packages using latest statistics <sup>8</sup> Use db2rbind to rebind packages using latest statistics. Use REORG if tables or indexes need to be reorganized.

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## Administration

<code>9export</code>	Extracts database data into a flat file.
<code>10import</code>	Imports data into the database using the IMPORT utility.
<code>11load</code>	Imports data into the database using the LOAD utility.
<code>load query table &lt;tbname&gt; [to local-message-file] [nosummary   summaryonly] [showdelta]</code>	Returns the progress of the LOAD utility.
<code>backup database &lt;dbname&gt; [to &lt;path&gt;]</code>	Performs a database backup.
<code>12restore database &lt;dbname&gt; [from &lt;path&gt;]</code>	Performs a database restore.
<code>get health snapshot for dbm</code>	Returns health snapshot information for instance (v8 only).
<code>13get health snapshot for all on &lt;dbname&gt;</code>	Returns all health snapshots for database <dbname> (v8 only).

## Admin server

<code>get admin cfg</code>	Returns the admin server configuration settings.
<code>update admin cfg using &lt;p&gt; &lt;v&gt;</code>	Updates the admin server configuration parameter <p> with value <v>.

## Application development

<code>get routine into &lt;filename&gt; from [specific] procedure &lt;routine-name&gt; [hide body]</code>	Extracts SQL procedure to binary file.
<code>put routine from &lt;filename&gt; [owner &lt;new-owner&gt; [use registers]]</code>	Deploys SQL procedure from binary file.

<sup>9</sup> See “? export” for more information <sup>10</sup> See “? import” for more information <sup>11</sup> See “? load” for more information <sup>12</sup> If more than one backup image exists at the specified path, the TAKEN AT clause is required. <sup>13</sup> More variations of health snapshots are available. Use “? get health snapshot” for more information.



## IDSICC contact information

### IDSICC - IBM Dassault Systèmes International Competency Center:

*In April 1999, IBM and Dassault Systèmes announced the establishment of the **IBM / Dassault Systèmes International Competency Center (IDSICC)** located at Dassault Systèmes headquarters in Suresnes, France.*

*A team of highly skilled specialists from both IBM and Dassault Systèmes staff the IDSICC. All of whom have extensive hands-on experience with implementing IBM and Dassault Systèmes Digital Enterprise solutions for customers.*

*The center's mission is to provide worldwide technical experience and comprehensive Digital Enterprise systems recommendations to customers as well as to IBMers and IBM Business Partners to address every phase of development from research to implementation and production.*

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*[idsicc@fr.ibm.com](mailto:idsicc@fr.ibm.com)*



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## Resources on the World Wide Web

IBM home page <http://www.ibm.com/>

IBM data management home page (English only) <http://www.software.ibm.com/data/>

DB2 home page (English only) <http://www.software.ibm.com/data/db2/>

DB2 Technical Library (English only) <http://www.software.ibm.com/data/db2/library/>

Developers Works <http://www.ibm.com/developersworks>





**DB2 Technical support & FIXPAK downloads.**



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**Understanding DB2 Documentation**