IBM® DB2 Universal Database™

Quick Beginnings for DB2 Personal Edition

Version 8

GC09-4838-00

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Quick Beginnings for DB2 Personal Edition

Version 8

GC09-4838-00

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Part 1. About DB2 Personal Edition

DB2® Personal Edition is a single-user version of DB2. It can be used to create and manage local databases, or as a client to DB2 Workgroup Server Edition or Enterprise Server Edition database servers.

DB2 Personal Edition can also act as a satellite, remotely administered from a DB2 Enterprise Server Edition database server. For more information about using DB2 Personal Edition in a satellite environment, refer to the satellite administration documentation.

- If you have a previous version of DB2 Personal Edition installed, then go directly to Part 2, "Migrating from a previous version of DB2 Personal Edition" on page 7.
- If you do not have a previous version of DB2 Personal Edition installed, then you can go directly to Part 3, "Installing DB2 Personal Edition" on page 21.
- If you have finished with the installation process, then you can go directly to Part 4, "Configuring a Client to server connection" on page 47.

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Chapter 1. DB2 Personal Edition installation overview (Windows)

This topic provides and installation overview for DB2® Personal Edition (Windows).

Installation overview:

Preparing your environment for installation

Before you install, you must prepare your computer for installation. To prepare your computer, you will:

1. Verify that your computer meets the necessary installation requirements.
2. Ensure that your system has enough memory to run DB2 Personal Edition.
3. Ensure that your system has enough space to install DB2 Personal Edition.
4. Ensure that you have the necessary user accounts for installation and setup. You require one user account for installation and two user accounts for setup. The user accounts required for setup can be created before you install or you can have the DB2 Setup wizard create them for you.
5. If you are installing on Windows® 2000 or Windows .NET and are planning to use Light Weight Directory Access Protocol (LDAP), you will extend the Windows 2000 or Windows .NET directory schema so that it can contain DB2 object classes and attribute definitions.

Installing DB2

After preparing your environment, you will install DB2 Personal Edition using the DB2 Setup wizard. DB2 Setup wizard features include:

- A DB2 Setup Launchpad from which you can view installation notes, release notes, and learn about DB2 version 8 features
- Typical, Compact, and Custom installation types. Installation choices presented to you depend on the type of installation you choose
- The option to install support for multiple languages
- DB2 Administration Server setup (including DAS user setup)
- Administration contact and health monitor notification setup
- Instance setup and configuration (including instance user setup)

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- DB2 tools catalog and warehouse control database setup
- Response file creation

Installing the latest FixPak

After you install DB2 using the DB2 Setup wizard, it is recommended that you install the latest DB2 version 8 FixPak. DB2 FixPaks are available on the IBM® support site.

Verifying the installation

After you install DB2 using the DB2 Setup wizard and have applied the latest DB2 FixPak, it is recommended that you verify the installation. To verify the installation, you will:

1. Create a sample database using the **db2sampl** command. You can also create a sample database using the First Steps utility, if you choose to install it.
2. Once the sample database has been created successfully, you will run SQL commands to retrieve sample data.

Related concepts:

- "Instance creation" in the *Administration Guide: Implementation*

Related tasks:

- "Installing DB2 Personal Edition (Windows)" on page 23
- "Initializing a warehouse control database during installation" in the *Data Warehouse Center Administration Guide*
- "Tools catalog database and DAS scheduler setup and configuration" in the *Administration Guide: Implementation*
- "Notification and contact list setup and configuration." in the *Administration Guide: Implementation*

Related reference:

- "UPDATE HEALTH NOTIFICATION CONTACT LIST" in the *Command Reference*
- "db2setup - Install DB2" on page 82

Chapter 2. Installation overview for DB2 Personal Edition (Linux)

This topic provides an overview of the steps required to install DB2® Personal Edition on Linux using the DB2 Setup wizard.

Installation overview:

Preparing your environment for installation

Before you install, you must prepare your computer for installation. To prepare your computer, you will:

1. Verify that your computer meets the necessary operating system, memory, and disk requirements.
2. Mount the installation CD-ROM.

Installing DB2

After preparing your environment, you will install DB2 Personal Edition using the DB2 Setup wizard. DB2 Setup wizard features include:

- A DB2 Setup Launchpad from which you can view installation notes, release notes, and learn about DB2 version 8 features
- Typical, Compact, and Custom installation types. Installation choices presented to you depend on the type of installation you choose
- The option to install support for multiple languages
- DB2 Administration Server setup (including DAS user setup)
- Administration contact and health monitor notification setup
- Instance setup and configuration (including instance user setup)
- DB2 tools catalog setup
- Response file creation

Installing the latest FixPak

After you install DB2 using the DB2 Setup wizard, it is recommended that you install the latest DB2 version 8 FixPak. DB2 FixPaks are available on the IBM® support site.

Verifying the installation

After you install DB2 using the DB2 Setup wizard and have applied the latest DB2 FixPak, it is recommended that you verify the installation. To verify the installation, you will:

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1. Create a sample database using the **db2sampl** command. You can also create a sample database using the First Steps utility, if you choose to install it.
2. Once the sample database has been created successfully, you will run SQL commands to retrieve sample data.

Related concepts:

- "Instance creation" in the *Administration Guide: Implementation*

Related tasks:

- "Installing DB2 Personal Edition using the DB2 Setup wizard (Linux)" on page 37
- "Initializing a warehouse control database during installation" in the *Data Warehouse Center Administration Guide*
- "Tools catalog database and DAS scheduler setup and configuration" in the *Administration Guide: Implementation*
- "Notification and contact list setup and configuration." in the *Administration Guide: Implementation*

Related reference:

- "UPDATE HEALTH NOTIFICATION CONTACT LIST" in the *Command Reference*
- "db2setup - Install DB2" on page 82

Part 2. Migrating from a previous version of DB2 Personal Edition

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Chapter 3. Migrating DB2 Personal Edition on Windows

Migrating DB2 Personal Edition (Windows)

This topic describes the steps required to migrate from a previous version of DB2 Personal Edition on Windows.

Migrating from a previous version of DB2 requires that you perform pre-installation and post installation tasks.

Prerequisites:

Before you start the migration process, ensure that your system meets the installation requirements for DB2 version 8.

Restrictions:

Migration is only supported from DB2 version 6.x or DB2 version 7.x.

Procedure:

To migrate from a previous version of DB2 Personal Edition (Windows):

1. Prepare to migrate DB2 Personal Edition (Windows).
2. Install DB2 Personal Edition (Windows).
3. Migrate databases on DB2 Personal Edition (Windows).

Related tasks:

- "Preparing to migrate DB2 Personal Edition (Windows)" on page 10
- "Installing DB2 Personal Edition (Windows)" on page 23
- "Migrating databases on DB2 Personal Edition (Windows)" on page 12
- "Migrating DB2 (Windows)" in the *Quick Beginnings for DB2 Servers*

Related reference:

- "Installation requirements for DB2 Personal Edition (Windows)" on page 24

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Migration tasks

Preparing to migrate DB2 Personal Edition (Windows)

Preparing to migrate DB2 Personal Edition (Windows) is part of the larger task of*Migrating DB2 Personal Edition (Windows)*.

This topic describes the steps required to prepare for migration from a previous version of DB2 Personal Edition on Windows.

Prerequisites:

- To backup a database, you require SYSADM, SYSCTRL, or SYSMAINT authority for the database.

Restrictions:

Migration is only supported from DB2 version 6.x or DB2 version 7.x.

Procedure:

To prepare your system for migration:

1. Ensure that all databases you want to migrate are cataloged. To view a list of all the cataloged databases in the current instance, enter the following command:

   ```
   db2 list database directory
   ```

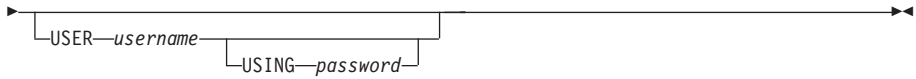
2. Disconnect all applications and users. To get a list of all database connections for the current instance, enter the **db2 list applications** command. If all applications are disconnected, this command will return the following message:

   ```
   SQL1611W No data was returned by the Database System Monitor.
   SQLSTATE=00000
   ```

   You can force a disconnection of applications and users by issuing the **db2 force applications** command.

3. Back up each of your local databases using the **backup database** command:

   BACKUP Command



where:

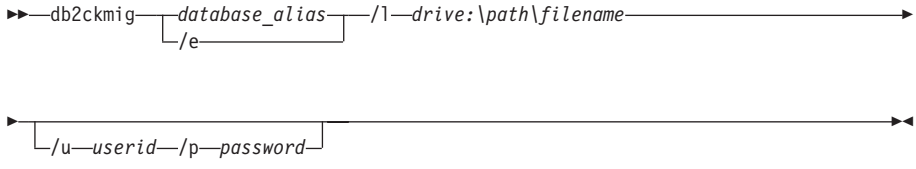
DATABASE *database-alias*
Specifies the alias of the database to back up.

USER *username*
Identifies the user name under which to back up the database.

USING *password*
The password used to authenticate the user name. If the password is omitted, the user is prompted to enter it.

4. Stop the DB2 License Service by entering the **db2licd -end** command.
5. On Windows 2000, the properties of a service can be set so that it restarts if the service fails. If the *restart on failure* option is set for any DB2 services, it must be disabled before proceeding.
6. Stop all command line processor sessions by entering the **db2 terminate** command in each session that was running the command line processor.
7. When all applications and users are disconnected and you have backed up your databases, stop the database manager by entering the **db2stop** command.
8. Enter the **db2ckmig** command to verify that databases owned by the current instance are ready to be migrated. The **db2ckmig** command is located in the `\db2\common` directory on your DB2 version 8 product CD-ROM. The **db2ckmig** command ensures that:
   - A database is not in an inconsistent state
   - A database is not in backup pending state
   - A database is not in rollforward pending state
   - Tablespaces are in a normal state

DB2CKMIG command



where:

database_alias
Specifies a database_alias name of a database to be verified for migration. This parameter is required if the /e parameter is not specified.

/e Specifies that all cataloged databases are to be verified for migration. This parameter is required if the database_alias parameter is not specified.

/l *drive:\path\filename*
Specifies a drive, target path and filename to keep a list of errors and warnings generated for the scanned database. The path variable is optional; if you do not specify a path, the path from which you execute the db2ckmig command will be used. You must specify a filename.

/u *userid*
Specifies the user account used to connect to the database. This parameter must be specified if you are logged on as a user without connect authority.

/p *password*
Specifies the password of the user account used to connect to the database. This parameter must be specified if you are logged on as a user without connect authority.

Your next step is *Installing DB2 Personal Edition (Windows)*.

Related concepts:

- "System administration authority (SYSADM)" in the *Administration Guide: Implementation*

Related tasks:

- "Installing DB2 Personal Edition (Windows)" on page 23

Related reference:

- "BACKUP DATABASE" in the *Command Reference*
- "db2ckmig - Database Pre-migration Tool" in the *Command Reference*

Migrating databases on DB2 Personal Edition (Windows)

This topic describes the steps required to be taken after installing to complete migration from a previous version of DB2 Personal Edition on Windows. For more in-depth migration instructions and complete command information for **migrate**, refer to the related reference sections at the end of this topic.

Prerequisites:

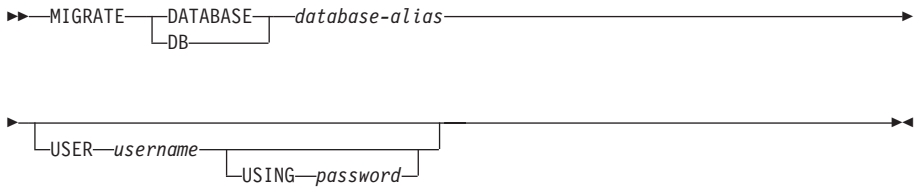
- To migrate a database, you require SYSADM authority.

Procedure:

Once DB2 Personal Edition has been installed, you must complete the migration process by migrating your databases. To migrate databases:

1. Log in with a user account that has SYSADM authority and migrate your databases using the **db2 migrate database** command.

   DB2 MIGRATE DATABASE command

   where:

   DATABASE *database-alias*
   Specifies the alias of the database to be migrated to the currently installed version of the database manager.

   USER *username*
   Identifies the user name under which the database is to be migrated.

   USING *password*
   The password used to authenticate the user name. If the password is omitted, but a user name was specified, the user is prompted to enter it.

2. *Optional:* Update statistics. When database migration is completed, the old statistics that are used to optimize query performance are retained in the catalogs. However, DB2 Version 8 has statistics that are modified or do not exist in DB2 version 6 or DB2 version 7. To take advantage of these statistics, you may want to execute the **runstats** command on tables, particularly those tables that are critical to the performance of your SQL queries.
3. *Optional:* Rebind packages. During database migration, all existing packages are invalidated. After the migration process, each package is rebuilt when it is used for the first time by the DB2 version 8 database manager. Alternatively, you can run the **db2rbind** command to rebuild all packages stored in the database.
4. *Optional:* Revoke EXECUTE privileges on external stored procedures that contain SQL data access from PUBLIC. During database migration, EXECUTE privileges are granted to PUBLIC for all existing functions, methods, and external stored procedures. This will cause a security exposure for external stored procedures that contain SQL data access

which allow users to access SQL objects for which they would not otherwise have privileges. Revoke the privileges by entering the **db2undgp - r** command.

Related concepts:

- "System administration authority (SYSADM)" in the *Administration Guide: Implementation*

Related reference:

- "MIGRATE DATABASE" in the *Command Reference*

Chapter 4. Migrating DB2 Personal Edition on Linux

Migrating DB2 Personal Edition (Linux)

This topic describes the steps required to migrate from a previous version of DB2 Personal Edition on Linux.

Migrating from a previous version of DB2 requires that you perform pre-installation and post-installation tasks.

Prerequisites:

Before you start the migration process, ensure that your system meets the installation requirements for DB2 version 8.

Restrictions:

Migration is only supported from DB2 version 6.x or DB2 version 7.x.

Procedure:

To migrate from a previous version of DB2 Personal Edition:

1. Prepare to migrate DB2 Personal Edition (Linux).
2. Install DB2 Personal Edition (Linux).
3. Migrate instances and databases on DB2 Personal Edition (Linux).

Related tasks:

- "Preparing to migrate DB2 Personal Edition (Linux)" on page 16
- "Installing DB2 Personal Edition using the DB2 Setup wizard (Linux)" on page 37
- "Migrating instances and databases on DB2 Personal Edition (Linux)" on page 18
- "Migrating DB2 (UNIX)" in the *Quick Beginnings for DB2 Servers*

Related reference:

- "Installation requirements for DB2 Personal Edition (Linux)" on page 38

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Migration tasks

Preparing to migrate DB2 Personal Edition (Linux)

Preparing to migrate DB2 Personal Edition (Linux) is part of the larger task of*Migrating DB2 Personal Edition (Linux)*.

This topic describes the steps required to prepare for migration from a previous version of DB2 Personal Edition on Linux.

Prerequisites:

- To backup a database, you require SYSADM, SYSCTRL, or SYSMAINT authority for the database.

Restrictions:

Migration is only supported from DB2 version 6.x or DB2 version 7.x.

Procedure:

To prepare your system for migration:

1. Ensure that all databases you want to migrate are cataloged. To view a list of all the cataloged databases in the current instance, enter the following command:

   ```
   db2 list database directory
   ```

2. Disconnect all applications and users. To get a list of all database connections for the current instance, enter the **db2 list applications** command. If all applications are disconnected, this command will return the following message:

   ```
   SQL1611W No data was returned by the Database System Monitor.
   SQLSTATE=00000
   ```

   You can force a disconnection of applications and users by issuing the **db2 force applications** command.

3. Log on as the instance owner and enter the **db2ckmig** command to verify that databases owned by the current instance are ready to be migrated. The **db2ckmig** command is located in the `\db2\common` directory on your DB2 version 8 product CD-ROM. The **db2ckmig** command ensures that:
   - A database is not in an inconsistent state
   - A database is not in backup pending state
   - A database is not in rollforward pending state
   - Tablespaces are in a normal state

DB2CKMIG command

where:

database_alias
Specifies a database_alias name of a database to be verified for migration. This parameter is required if the /e parameter is not specified.

/e Specifies that all cataloged databases are to be verified for migration. This parameter is required if the database_alias parameter is not specified.

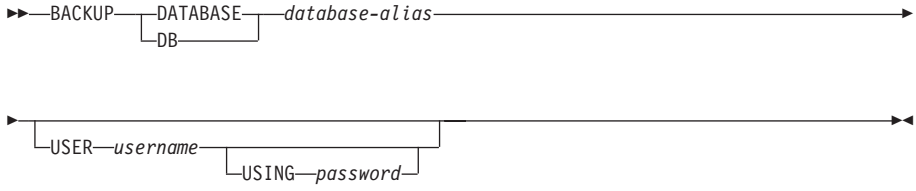
/l *logfile*
Specifies a drive, target path and filename to keep a list of errors and warnings generated for the scanned database. The path variable is optional; if you do not specify a path, the path from which you execute the db2ckmig command will be used. You must specify a filename.

/u *userid*
Specifies the user account used to connect to the database. This parameter must be specified if you are logged on as a user without connect authority.

/p *password*
Specifies the password of the user account used to connect to the database. This parameter must be specified if you are logged on as a user without connect authority.

4. Back up each of your local databases using the backup database command:

BACKUP Command



where:

DATABASE *database-alias*
Specifies the alias of the database to back up.

USER *username*
Identifies the user name under which to back up the database.

USING *password*
The password used to authenticate the user name. If the password is omitted, the user is prompted to enter it.

5. Stop the DB2 License Service by entering the **db2licd -end** command.
6. Stop all command line processor sessions by entering the **db2 terminate** command in each session that was running the command line processor.
7. When all applications and users are disconnected and you have backed up your databases, stop the database manager by entering the **db2stop** command.

Your next step is *Installing DB2 Personal Edition (Linux)*.

Related concepts:

- "System administration authority (SYSADM)" in the *Administration Guide: Implementation*

Related tasks:

- "Installing DB2 Personal Edition (Windows)" on page 23

Related reference:

- "BACKUP DATABASE" in the *Command Reference*
- "db2ckmig - Database Pre-migration Tool" in the *Command Reference*

Migrating instances and databases on DB2 Personal Edition (Linux)

This topic describes the steps required to be taken after installing to complete migration from a previous version of DB2 Personal Edition on Linux. For more in-depth migration instructions, complete command information for **db2imigr**, **migrate**, refer to the related reference sections at the end of this topic.

Prerequisites:

- To migrate instances, you require root authority.
- To migrate databases, you require SYSADM authority.

Procedure:

Once DB2 Personal Edition has been installed you must complete the migration process by migrating your instances and databases. To migrate instances and databases:

1. Migrate your instances using the **db2imigr** command:
   a. Log in as a user with root authority.

b. Migrate instances using the **db2imigr** command:

```
DB2DIR/instance/db2imigr [-u fencedID] InstName
```

where

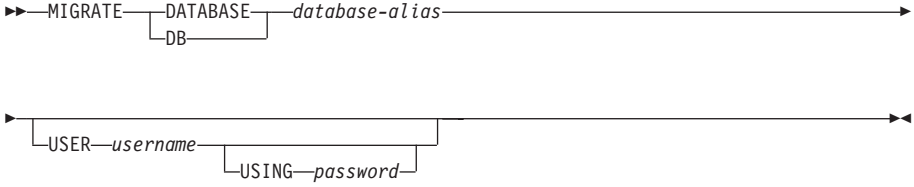
DB2DIR
is `/opt/IBM/db2/V8.1` on Linux operating systems.

-u fencedID
The user under which the fenced user-defined functions (UDFs) and stored procedures will execute. This option is only used if a client instance is being migrated to a server instance. It is not required when migrating from server to server, or client to client.

InstName
The login name of the instance owner.

2. Log in with a user account that has SYSADM authority and migrate your databases using the **DB2 MIGRATE DATABASE** command.

DB2 MIGRATE DATABASE command



where:

DATABASE *database-alias*
Specifies the alias of the database to be migrated to the currently installed version of the database manager.

USER *username*
Identifies the user name under which the database is to be migrated.

USING *password*
The password used to authenticate the user name. If the password is omitted, but a user name was specified, the user is prompted to enter it.

3. *Optional:* Update statistics. When database migration is completed, the old statistics that are used to optimize query performance are retained in the catalogs. However, DB2 Version 8 has statistics that are modified or do not exist in DB2 version 6 or DB2 version 7. To take advantage of these

statistics, you may want to execute the **runstats** command on tables, particularly those tables that are critical to the performance of your SQL queries.

4. *Optional:* Rebind packages. During database migration, all existing packages are invalidated. After the migration process, each package is rebuilt when it is used for the first time by the DB2 version 8 database manager. Alternatively, you can run the **db2rbind** command to rebuild all packages stored in the database.
5. *Optional:* Revoke EXECUTE privileges on external stored procedures that contain SQL data access from PUBLIC. During database migration, EXECUTE privileges are granted to PUBLIC for all existing functions, methods, and external stored procedures. This will cause a security exposure for external stored procedures that contain SQL data access which allow users to access SQL objects for which they would not otherwise have privileges. Revoke the privileges by entering the **db2undgp - r** command.

Related concepts:

- "System administration authority (SYSADM)" in the *Administration Guide: Implementation*

Related reference:

- "MIGRATE DATABASE" in the *Command Reference*
- "db2imigr - Migrate Instance" in the *Command Reference*

Part 3. Installing DB2 Personal Edition

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Chapter 5. Installing DB2 Personal Edition on Windows

Installing DB2 Personal Edition (Windows)

This topic outlines steps for installing DB2 Personal Edition on Windows.

Prerequisites:

Ensure that your computer meets the following requirements:

1. Installation requirements for DB2 Personal Edition (Windows)
2. Memory requirements for DB2 Personal Edition (Windows)
3. Disk requirements for DB2 Personal Edition (Windows)
4. User accounts for installation and setup of DB2 Personal Edition (Windows)

See the Related references at the bottom for more information.

Procedure:

It is recommended that you read the DB2 Personal Edition installation overview (Windows) prior to beginning the installation.

To install DB2 Personal Edition on Windows:

1. If you are installing on Windows 2000 or Windows .NET and intend to use Lightwight Directory Access Protocol (LDAP), you must extend the directory schema.
2. Install DB2 Personal Edition using the DB2 Setup Wizard (Windows).
3. *Optional:* Install the latest FixPak.
4. *Optional:* Verify the installation using the Command Line Processor (CLP).
5. *Optional:* Install the DB2 documentation (Windows).

Related concepts:

- "Installation methods for DB2" in the *Quick Beginnings for DB2 Servers*

Related tasks:

- "Extending the directory schema (Windows 2000 and Windows .NET)" on page 27
- "Starting the DB2 Setup wizard (Windows)" on page 29
- "Applying the latest FixPak" on page 31

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- "Verifying the installation using the command line processor (CLP)" on page 32
- "Installing DB2 online documentation (Windows)" on page 33

Related reference:

- "User accounts for installation and setup of DB2 Personal Edition" on page 28
- "Installation requirements for DB2 Personal Edition (Windows)" on page 24
- "Disk requirements for DB2 Personal Edition (Windows)" on page 26
- "Memory requirements for DB2 Personal Edition (Windows)" on page 25

Requirements (Windows)

Installation requirements for DB2 Personal Edition (Windows)

To install DB2 Personal Edition, the following operating system, software, and communications requirements must be met:

Operating system requirements

One of:

- Windows ME
- Windows NT Version 4 with Service Pack 6a or higher
- Windows 2000 (32–bit)
- Windows XP (32–bit or 64–bit)
- Windows .NET (32–bit or 64–bit)

Windows XP (64–bit) and Windows .NET (64–bit) support:

- local 32–bit applications
- 32–bit UDFs and stored procedures

Hardware requirements

For DB2 products running on Intel and AMD systems, a Pentium or Athlon CPU is required.

Software requirements

- If you plan to use the Tivoli Storage Manager facilities for backup and restore of your databases, you require the Tivoli Storage Manager Client Version 3 or later.
- MDAC 2.7 is required. The DB2 Setup wizard will install MDAC 2.7 if it is not already installed.
- Java Runtime Environment (JRE) Version 1.3.1 is required to run DB2's Java-based tools, such as the Control Center.
- A browser is required to view online help.

Communication requirements

- To connect to a remote database, you can use APPC, TCP/IP, and MPTN (APPC over TCP/IP). To remotely administer a version 8 DB2 database, you must connect using TCP/IP.
- To connect to a remote database using SNA (APPC), one of the following communication products is required:

Table 1. Windows SNA communications requirements

Operating system	SNA (APPC) communication product
Window ME	IBM Personal Communications Version 5.0 (CSD 3)
Windows NT	IBM Communications Server Version 6.1 or later, or IBM Personal Communications Version 5.0 (CSD 3)
Windows 2000	IBM Communications Server Version 6.1.1, or IBM Personal Communications Version 5.0 (CSD 3)
Windows XP	IBM Personal Communications Version 5.5
Windows .NET	SNA is not supported

- If you plan to use LDAP (Lightweight Directory Access Protocol), you require either a Microsoft LDAP client or an IBM SecureWay LDAP client V3.1.1.
- If you plan to use the Simple Network Management Protocol (SNMP) subagent, you require DPI 2.0 provided by IBM SystemView Agent. SNMP is not supported with DB2 offerings on Windows 64-bit platforms.
- Connections from 64-bit clients to downlevel 32-bit servers are not supported.
- Connections from downlevel 32-bit clients to 64-bit servers only support SQL requests.
- DB2 Version 8 Windows 64-bit servers support connections from DB2 Version 6 and Version 7 32-bit clients only for SQL requests. Connections from Version 7 64-bit clients are not supported.

Related tasks:

• "Installing DB2 Personal Edition (Windows)" on page 23

Memory requirements for DB2 Personal Edition (Windows)

The following table provides recommended memory requirements for DB2 Personal Edition installed with and without graphical tools. There are a

number of graphical tools you can install including the Control Center, Configuration Assistant, and Data Warehouse Center.

Table 2. Memory requirements for DB2 Personal Edition

Type of installation	Recommended memory (RAM)
DB2 Personal Edition without graphical tools	64 MB
DB2 Personal Edition with graphical tools	128 MB

When determining memory requirements, be aware of the following:

- The memory requirements documented above do not account for non-DB2 software that may be running on your system.
- Memory requirements may be affected by the size and complexity of your database system.

Related tasks:

- "Installing DB2 Personal Edition (Windows)" on page 23

Disk requirements for DB2 Personal Edition (Windows)

The disk space required for DB2 Personal Edition depends on the type of installation you choose. The DB2 Setup wizard provides Typical, Compact, and Custom installation types. This table provides an approximate disk space requirements for each installation type.

Table 3. DB2 Personal Edition disk requirements

Installation type	required disk space
Typical	150 to 200 MB
Compact	100 to 150 MB
Custom	100 to 450 MB

Typical installation
DB2 Personal Edition is installed with most features and functionality, using a typical configuration. Typical installation includes graphical tools such as the Control Center and Configuration Assistant. You can also choose to install a typical set of data warehousing features.

Compact installation
Only the basic DB2 Personal Edition features and functions are installed. Compact installation does not include graphical tools.

Custom installation
A custom installation allows you to select the features you want to install.

The DB2 Setup wizard will provide a disk space estimate for the installation options you select.

Remember to include disk space allowance for required software, communication products, and documentation. In DB2 version 8, HTML and PDF documentation is provided on separate CD-ROMs.

Related tasks:

- "Installing DB2 Personal Edition (Windows)" on page 23

Extending the directory schema (Windows 2000 and Windows .NET)

Extending the directory schema is part of the larger task of *Installing DB2 (Windows)*.

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

Prerequisites:

Your Windows user account must have Schema Administration authority.

Procedure:

To extend the directory schema, logon to a domain controller and execute the **db2schex.exe** program from the installation CD with Schema Administration authority. You can execute this program with Schema Administration 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.

Your next step is *Starting the DB2 Setup wizard (Windows)*.

Related reference:

- "Installation requirements for DB2 servers (Windows)" in the *Quick Beginnings for DB2 Servers*

User accounts for installation and setup of DB2 Personal Edition

If you are installing on Windows NT, Windows 2000, Windows XP, and Windows .NET, you require an installation user account and two user accounts for setup. The installation user account must be defined prior to running the DB2 Setup wizard. The setup user accounts (DB2 Administration server user, and DB2 instance user) can be defined prior to installation or you can have the DB2 Setup program create them for you.

All user account names must adhere to your system naming rules and to DB2 naming rules.

DB2 Personal Edition user accounts:

Installation user account

A local or domain user account is required to perform the installation. The user account must belong to the *Administrators* group on the machine where you will perform the installation and must have the following user rights:

- *Act as part of the operating system*

You can perform the installation without these user rights, but the installation program will be unable to validate accounts.

DB2 Administration Server user account

A local or domain user account is required for the DB2 Administration Server (DAS). You can create the DAS user account before installing DB2 or you can have the DB2 Setup wizard create it for you. The user account must belong to the *Administrators* group on the machine where you will perform the installation and must have the following user rights:

- *Act as part of the operating system*
- *Create token object*
- *Increase quotas*
- *Lock pages in memory*
- *Logon as service*
- *Replace a process level token*

The DB2 Administration Server (DAS) is a special DB2 administration service used to support the GUI tools and assist with administration tasks on local and remote DB2 servers. The DAS has an assigned user account that is used to log the DAS service on to the computer when the DAS service is started. It is recommended that the DAS user have SYSADM authority on each of the DB2 systems within your environment so that it can start or stop other instances if required.

DB2 instance user account

A local or domain user account is required for the DB2 instance. You can create the DB2 instance user account before installing DB2 or you can have the DB2 Setup wizard create it for you. The user account must belong to the *Administrators* group on the machine where you will perform the installation and must have the following user rights:

- *Act as part of the operating system*
- *Create token object*
- *Increase quotas*
- *Lock pages in memory*
- *Logon as service*
- *Replace a process level token*

On Windows, a DB2 instance exists as a service, except on Windows ME where a DB2 instance exists as a process. Every DB2 instance has one user that is assigned when the instance is created. DB2 logs on with this user name when the instance is started.

Related concepts:

- "User, userID and group naming rules" on page 105
- "DB2 system administrator group (Windows)" on page 81

Related tasks:

- "Installing DB2 Personal Edition (Windows)" on page 23
- "Granting user rights (Windows)" on page 80

Starting the DB2 Setup wizard (Windows)

Starting the DB2 Setup Wizard (Windows) is part of the larger task of *Installing DB2 (Windows)*.

This task describes how to start the DB2 Setup wizard on Windows. You will use the DB2 Setup wizard to define your installation and install DB2 to your system.

Prerequisites:

Before you start the DB2 Setup wizard:

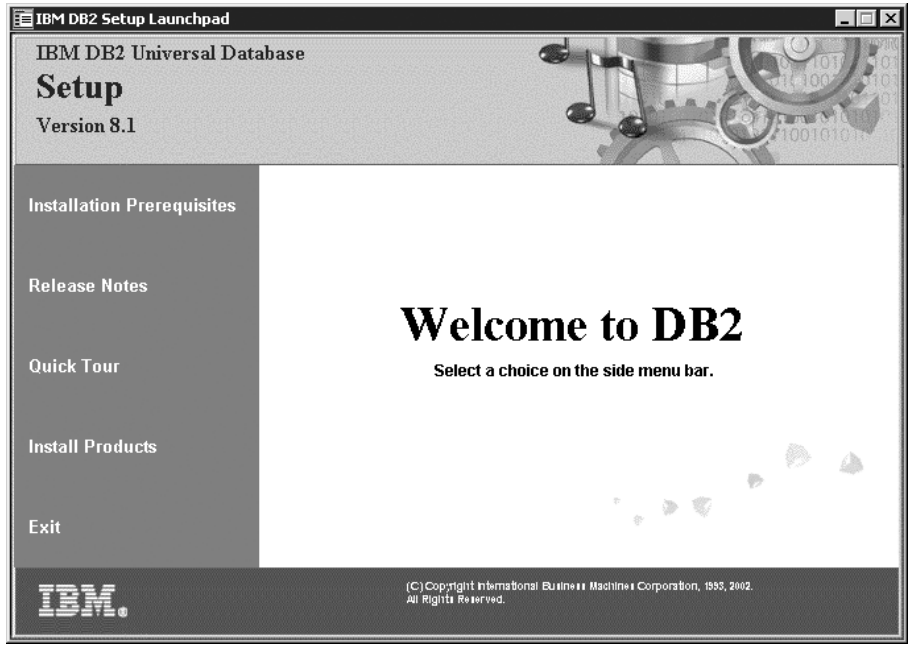
- Ensure that your system meets installation, memory, and disk requirements.
- If you are planning to use LDAP on Windows 2000 or Windows .NET, you must extend the directory schema before you install.

- You must have an account with local administrative privileges and the recommended user rights to perform the installation.

Procedure:

To start the DB2 Setup wizard:

1. Log on to the system with the Administrator account that you have defined for DB2 installation.
2. Close all programs so the installation program can update files as required.
3. Insert the CD-ROM into the drive. If enabled, the auto-run feature automatically starts the DB2 Setup launchpad:



From this window, you can view installation prerequisites and the release notes, you can take the DB2 Quick Tour to explore the features of DB2 Universal Database Version 8, or you can proceed directly to the installation. You may want to review the installation prerequisites and release notes for late-breaking information. Select **Install Products** and select the DB2 product to install.

4. The DB2 Setup wizard 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, you can start the DB2 Setup wizard manually. The syntax for starting the DB2 Setup wizard is described at the end of this procedure.

5. 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. DB2 files will only be copied to your system once you have clicked **Finish** on the last DB2 Setup wizard installation panel.

For information on errors encountered during installation, see the `db2.log` file. The `db2.log` file stores general information and error messages resulting from the install and uninstall activities. By default, the `db2.log` file is located in the `x:\'My Documents'\DB2LOG\` directory, where x: represents the drive on which your operating system is installed.

To start the DB2 Setup wizard manually:

1. Click **Start** and select the **Run** option.
2. In the **Open** field, enter the following command:

   ```
   x:\setup /i language
   ```

   where:

   - *x:* represents your CD-ROM drive
   - *language* is the territory identifier for your language (for example, EN for English).

   The `/i language` parameter is optional. If it is not specified, the DB2 Setup wizard will run in the same language as your operating system.
3. Click **OK**.

Your next step is *Applying the latest FixPak*.

Related tasks:

- "Extending the directory schema (Windows 2000 and Windows .NET)" on page 27

Related reference:

- "User accounts for installation and setup of DB2 Personal Edition" on page 28
- "Installation requirements for DB2 Personal Edition (Windows)" on page 24
- "Disk requirements for DB2 Personal Edition (Windows)" on page 26
- "Memory requirements for DB2 Personal Edition (Windows)" on page 25

Applying the latest FixPak

Applying the latest FixPak is optionally part of the larger task of *Installing DB2*.

A DB2 FixPak contains updates and fixes for bugs (Authorized Program Analysis Reports, or ″APARs″) found during testing at IBM, as well as fixes for bugs reported by customers. Every FixPak is accompanied by a document, called APARLIST.TXT, that describes the bug fixes it contains.

FixPaks are cumulative. This means that the latest FixPak for any given version of DB2 contains all of the updates from previous FixPaks for the same version of DB2. We recommend that you keep your DB2 environment running at the latest FixPak level to ensure problem-free operation.

When installing a FixPak on a partitioned ESE system, all participating computers must have the same FixPak installed while the system is offline.

Prerequisites:

Each FixPak may have specific prerequisites. See the FixPak README that accompanies the FixPak for more information.

Procedure:

1. Download the latest DB2 FixPak from the IBM DB2 UDB and DB2 Connect Online Support Web site at http://www.ibm.com/software/data/db2/udb/winos2unix/support.
2. Each FixPak contains a set of Release Notes and a README. The README provides instructions for installing the FixPak.

Your next step is *Verifying the installation using the command line processor (CLP)*.

Verifying the installation using the command line processor (CLP)

Verifying the installation using the command line processor (CLP) is optionally part of the larger task of *Installing DB2*.

Once you have completed installing DB2, you can verify the installation by creating a sample database and running SQL commands to retrieve sample data.

Prerequisites:

- The Sample Database component must be installed on your system. The Sample Database component is included in a typical installation.
- You require a user with SYSADM authority.

Procedure:

To verify the installation:

1. Log on to the system as a user with SYSADM authority.
2. Enter the **db2sampl** command to create the SAMPLE database.

   This command may take a few minutes to process. 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.
3. Start the database manager by entering the **db2start** command.
4. Enter the following DB2 commands from a DB2 command window to connect to the SAMPLE database, retrieve a list of all the employees that work in department 20, and reset the database connection:

   ```
   db2 connect to sample
   db2 "select * from staff where dept = 20"
   db2 connect reset
   ```

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

Related tasks:

- "Verifying the installation of DB2 servers using First Steps" on page 79

Installing DB2 online documentation (Windows)

This task describes how to install the DB2 online documentation using the DB2 Setup wizard on Windows. The DB2 online documentation is installed seperately from other DB2 products from it's own CD-ROM.

Prerequisites:

Before you start the DB2 Setup wizard:

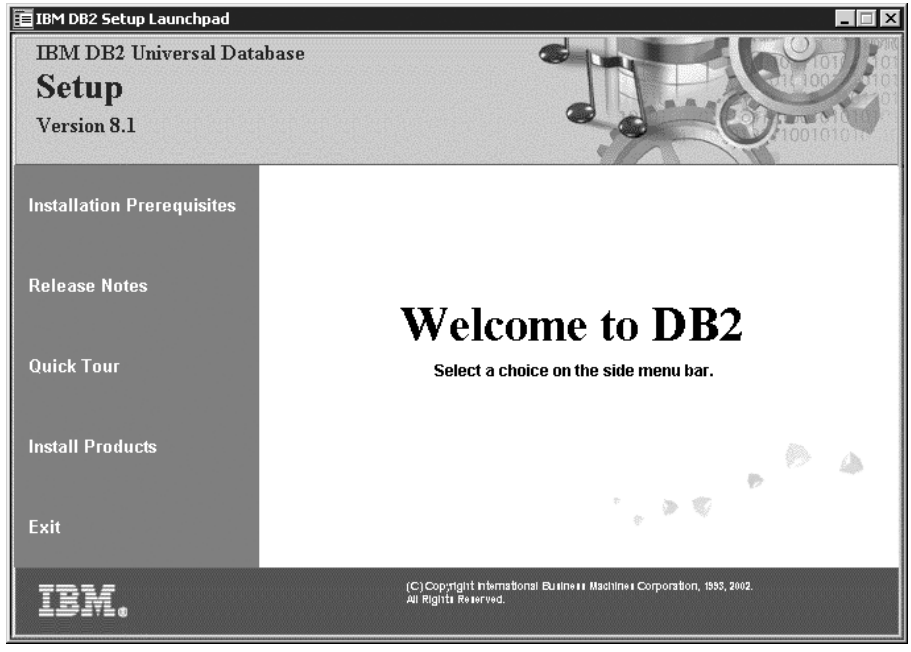
- Ensure that your system meets installation, memory, and disk requirements.
- You must have a local *Administrator* user account with the recommended user rights to perform the installation.

Procedure:

To start the DB2 Setup wizard:

1. Insert the CD-ROM into the drive. The auto-run feature automatically starts the DB2 Setup wizard. The DB2 Setup wizard 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, you can start the DB2 Setup wizard manually.

2. The DB2 Setup Launchpad opens.



From this window, you can view installation prerequisites and the release notes, you can take a Quick Tour to explore the features of DB2 Universal Database Version 8, or you can proceed directly to the installation. You may want to review the installation prerequisites and release notes for late-breaking information.

3. 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. DB2 files will only be copied to you system once you have clicked **Finish** on the last DB2 Setup wizard installation panel.

For information on errors encountered during installation, see the `db2.log` file. The `db2.log` file stores general information and error messages resulting from the install and uninstall activities. By default, the `db2.log file` is located in the `'My Documents'\DB2LOG\` directory. The location of the `'My Documents'` directory will depend on the settings on your computer.

To start the DB2 Setup wizard manually:

1. Click **Start** and select the **Run** option.
2. In the **Open** field, enter the following command:

   ```
   x:\setup /i language
   ```

where:

- *x:* represents your CD-ROM drive
- *language* is the territory identifier for your language (for example, EN for English).

The `/i language` parameter is optional. If it is not specified, the DB2 Setup wizard will run in the same language as your operating system.

3. Click **OK**.

Chapter 6. Installing DB2 Personal Edition on Linux

Installing DB2 Personal Edition using the DB2 Setup wizard (Linux)

This topic outlines steps for installing DB2 Personal Edition on Linux.

Prerequisites:

Ensure that your computer meets the following requirements:

1. Installation requirements for DB2 Personal Edition (Linux)
2. Memory requirements for DB2 Personal Edition (Linux)
3. Disk requirements for DB2 Personal Edition (Linux)
4. User accounts for installation and setup of DB2 Personal Edition (Linux)

See the Related references at the bottom for more information.

Procedure:

It is recommended that you read the DB2 Personal Edition installation overview (Linux) prior to beginning the installation.

To install DB2 Personal Edition on Linux:

1. Mount the DB2 installation CD-ROM (Linux).
2. Install DB2 Personal Edition using the DB2 Setup wizard (Linux).
3. *Optional:* Install the latest FixPak.
4. *Optional:* Verify the installation using the command line processor (CLP).
5. *Optional:* Install the DB2 documentation (UNIX).

Related concepts:

- "Installation methods for DB2" in the *Quick Beginnings for DB2 Servers*

Related tasks:

- "Mounting the DB2 CD-ROM (Linux)" on page 40
- "Starting the DB2 Setup wizard (Linux)" on page 41
- "Applying the latest FixPak" on page 31
- "Verifying the installation using the command line processor (CLP)" on page 32
- "Installing DB2 online documentation (UNIX)" on page 44

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- "Mounting the CD-ROM on Linux" in the *Installation and Configuration Supplement*
- "Installing a DB2 product manually" in the *Installation and Configuration Supplement*

Related reference:

- "Disk requirements for DB2 Personal Edition (Linux)" on page 39
- "Memory requirements for DB2 Personal Edition (Linux)" on page 39
- "Installation requirements for DB2 Personal Edition (Linux)" on page 38

Requirements (Linux)

Installation requirements for DB2 Personal Edition (Linux)

To install a DB2 Personal Edition, the following hardware, operating system, software, and communications requirements must be met:

Hardware requirements

Intel 32–bit and 64–bit architecture is supported.

Distribution requirements

For Intel 32–bit architecture you require a recent Linux operating system distribution with:

- kernel level 2.4.9
- glibc 2.2.4
- rpm

For Intel 64–bit architecture you require one of the following Linux operating system distributions:

- Red Hat Linux 7.2
- SuSE Linux SLES-7

For Intel 64–bit architecture the following software is required:

- gcc 3.0.2
- gcc3 libstdc++ runtime libraries

The IBM Developer Kit for Java 1.3.1 is required for DB2 servers, to use the DB2 Control Center or create and run Java applications, including stored procedures and user-defined functions. Only the IBM JDK is supported.

A browser is required to view online help.

Communication requirements

For accessing remote databases, TCP/IP is required.

Related tasks:

- "Installing DB2 Personal Edition using the DB2 Setup wizard (Linux)" on page 37

Memory requirements for DB2 Personal Edition (Linux)

The following table provides recommended memory requirements for DB2 Personal Edition installed with and without graphical tools. There are a number of graphical tools you can install including the Control Center and the Configuration Assistant.

Table 4. Memory requirements for DB2 Personal Edition

Type of installation	Recommended memory (RAM)
DB2 Personal Edition without graphical tools	64 MB
DB2 Personal Edition with graphical tools	128 MB

When determining memory requirements, be aware of the following:

- The memory requirements documented above do not account for non-DB2 software that may be running on your system.
- Memory requirements may be affected by the size and complexity of your database system.

Related tasks:

- "Installing DB2 Personal Edition using the DB2 Setup wizard (Linux)" on page 37

Disk requirements for DB2 Personal Edition (Linux)

The disk space required for DB2 Personal Edition depends on the type of installation you choose. The DB2 Setup wizard provides typical, compact, and custom installation types. This table provides an approximate disk space requirement for each installation type.

Table 5. DB2 Personal Edition disk requirements

Installation type	Required disk space
Typical	150 to 250 MB
Compact	100 to 200 MB
Custom	100 to 400 MB

Typical installation
DB2 Personal Edition is installed with most features and functionality, using a typical configuration. Typical installation includes graphical tools such as the Control Center and Configuration Assistant. You can also choose to install a typical set of data warehousing features.

Compact installation
Only the basic DB2 Personal Edition features and functions are installed. Compact installation does not include graphical tools.

Custom installation
A custom installation allows you to select the features you want to install.

The DB2 Setup wizard will provide a disk space estimate for the installation options you select.

Remember to include disk space allowance for required software, communication products, and documentation. In DB2 version 8, HTML and PDF documentation is provided on separate CD-ROMs.

Related tasks:

- "Installing DB2 Personal Edition using the DB2 Setup wizard (Linux)" on page 37

Mounting the DB2 CD-ROM (Linux)

Mounting the DB2 CD-ROM (Linux) is part of the larger task of *Installing DB2*.

You must mount the installation CD-ROM before you can run the DB2 Setup wizard.

Prerequisites:

You must logon with a user ID that has root authority.

Procedure:

Many Linux distributions will automatically mount the CD. The mount point is often `/mnt/cdrom` or `/media/cdrom`. If your mount point is `/mnt/cdrom`, enter the following command:

```
mount /mnt/cdrom
```

Some distributions disable execute privileges on CD-ROM devices by default. To mount with execute permission at mount point /mnt/cdrom, issue the following command as root:

```
mount -o exec /mnt/cdrom
```

If your CD-ROM was not automatically mounted, enter:

```
mount -t iso9660 -o ro /dev/cdrom /mnt/cdrom
```

where */mnt/cdrom* represents the mount point of the CD-ROM.

Related tasks:

- "Starting the DB2 Setup wizard (Linux)" on page 41

Starting the DB2 Setup wizard (Linux)

Starting the DB2 Setup Wizard (Linux) is part of the larger task of *Installing DB2*.

This task describes how to start the DB2 Setup wizard on Linux. The DB2 Setup wizard is used to define your installation preferences and install DB2 onto your system.

Prerequisites:

Before you start the DB2 Setup wizard

- Ensure that your system meets installation, memory, and disk requirements.
- You require root authority to perform the installation.
- The DB2 product CD-ROM must be mounted on your system.
- The DB2 Setup wizard is a Java-based installer. In order for it to run on your machine, you must be running Xwindow software capable of rendering a graphical user interface.
- To use some features, such as the DB2 Quick Tour, a web browser is required.
- If NIS/NIS+ or similar security software is used in your environment, you must manually create required DB2 users before you start the DB2 Setup wizard. Refer to the referenced NIS topic before you begin.

Procedure:

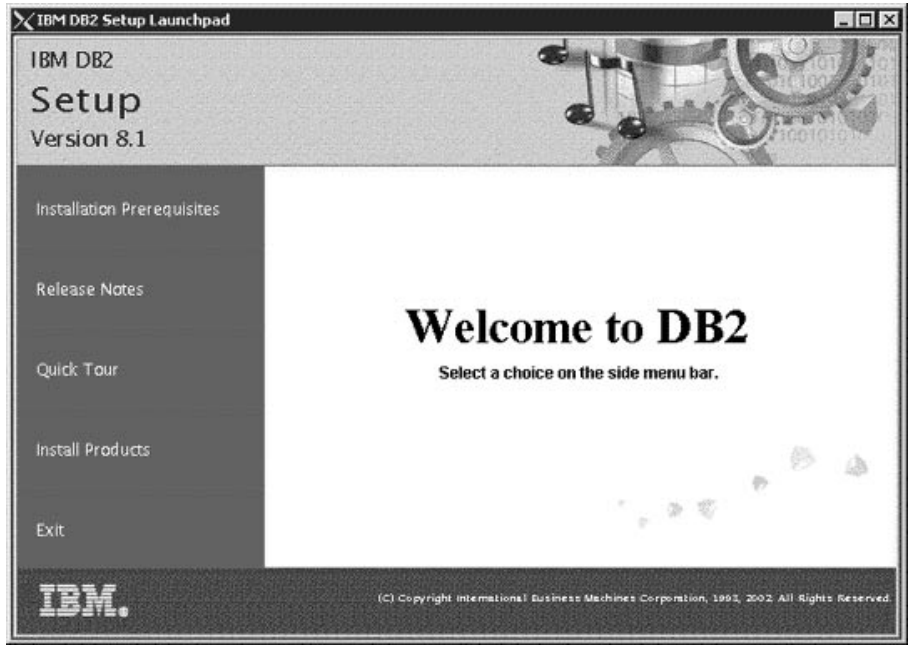
To install DB2 Personal Edition on Linux:

1. Log on to the system as a user with root authority.
2. Change to the directory where the CD-ROM is mounted by entering the following command:

   ```
   cd /media/cdrom
   ```

   where */media/cdrom* represents mount point of the CD-ROM.

3. Enter the **./db2setup** command to start the DB2 Setup wizard. After a few moments, the IBM DB2 Setup Launchpad opens.



From this window, you can view installation prerequisites and the release notes, you can take a Quick Tour to explore the features of DB2 Universal Database Version 8, or you can proceed directly to the installation. You may want to review the installation prerequisites and release notes for late-breaking information.

Once you have initiated the installation, proceed through the DB2 Setup wizard installation panels and make your selections. Installation help is available to guide you through the DB2 Setup wizard. To invoke the installation help, click **Help** or press F1. You can click **Cancel** at any time to end the installation. DB2 files will only be copied to your system once you have clicked **Finish** on the last DB2 Setup wizard installation panel.

When you have completed your installation, DB2 Personal Edition will be installed in `/opt/IBM/db2/V8.1`.

Your next step is *Applying the latest FixPak*.

Related tasks:

- "Manually creating required groups and users for DB2 Personal Edition (Linux)" on page 78

Related reference:

- "NIS installation considerations" on page 77
- "db2setup - Install DB2" on page 82

Applying the latest FixPak

Applying the latest FixPak is optionally part of the larger task of *Installing DB2*.

A DB2 FixPak contains updates and fixes for bugs (Authorized Program Analysis Reports, or "APARs") found during testing at IBM, as well as fixes for bugs reported by customers. Every FixPak is accompanied by a document, called APARLIST.TXT, that describes the bug fixes it contains.

FixPaks are cumulative. This means that the latest FixPak for any given version of DB2 contains all of the updates from previous FixPaks for the same version of DB2. We recommend that you keep your DB2 environment running at the latest FixPak level to ensure problem-free operation.

When installing a FixPak on a partitioned ESE system, all participating computers must have the same FixPak installed while the system is offline before bring the system online.

Prerequisites:

Each FixPak may have specific prerequisites. See the FixPak README that accompanies the FixPak for more information.

Procedure:

1. Download the latest DB2 FixPak from the IBM DB2 UDB and DB2 Connect Online Support Web site at http://www.ibm.com/software/data/db2/udb/winos2unix/support.
2. Each FixPak contains a set of Release Notes and a README. The README provides instructions for installing the FixPak.

Your next step is *Verifying the installation using the command line processor (CLP)*.

Verifying the installation using the command line processor (CLP)

Verifying the installation using the command line processor (CLP) is optionally part of the larger task of *Installing DB2*.

Once you have completed installing DB2, you can verify the installation by creating a sample database and running SQL commands to retrieve sample data.

Prerequisites:

- The Sample Database component must be installed on your system. The Sample Database component is included in a typical installation.
- You require a user with SYSADM authority.

Procedure:

To verify the installation:

1. Log on to the system as a user with SYSADM authority.
2. Enter the **db2sampl** command to create the SAMPLE database.

   This command may take a few minutes to process. 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.
3. Start the database manager by entering the **db2start** command.
4. Enter the following DB2 commands from a DB2 command window to connect to the SAMPLE database, retrieve a list of all the employees that work in department 20, and reset the database connection:

   ```
   db2 connect to sample
   db2 "select * from staff where dept = 20"
   db2 connect reset
   ```

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

Related tasks:

- "Verifying the installation of DB2 servers using First Steps" on page 79

Installing DB2 online documentation (UNIX)

This task describes how to install the DB2 online documentation using the DB2 Setup wizard on UNIX. The DB2 online documentation is installed seperately from other DB2 products from it's own CD-ROM.

Prerequisites:

Before you start the DB2 Setup wizard

- You require root authority to perform the installation.

- The DB2 product CD-ROM must be mounted on your system.
- The DB2 Setup wizard is a graphical installer. In order for it to run on your machine, you must have Xwindow software capable of rendering a graphical user interface.
- A Java Runtime Environment (JRE) must already be installed.

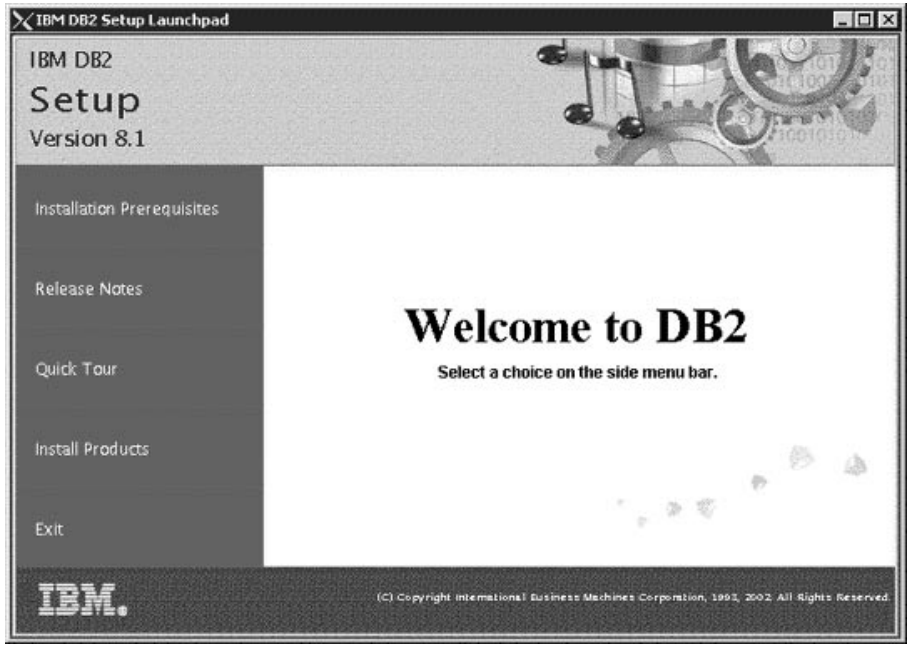
Procedure:

To install the DB2 online information using the DB2 Setup wizard:

1. Log on to the system as a user with root authority.
2. Change to the directory where the CD-ROM is mounted by entering the following command:

   ```
   cd /cdrom
   ```

   where */cdrom* represents mount point of the CD-ROM.
3. Enter the **./db2setup** command to start the DB2 Setup wizard. After a few moments, the IBM DB2 Setup Launchpad opens.



From this window, you can view installation prerequisites and the release notes, you can take a Quick Tour to explore the features of DB2 Universal Database Version 8, or you can proceed directly to the installation. You may want to review the installation prerequisites and release notes for late-breaking information.

Once you have initiated the installation, proceed through the DB2 Setup wizard installation panels and make your selections. Installation help is available to guide you through the remaining steps. To invoke the installation help, click **Help** or press F1. You can click **Cancel** at any time to end the installation. DB2 files will only be copied to you system once you have clicked **Finish** on the last DB2 Setup wizard installation panel.

Related concepts:

- "Installation overview for DB2 servers (UNIX)" in the *Quick Beginnings for DB2 Servers*
- "Installation overview for a partitioned DB2 server (UNIX)" in the *Quick Beginnings for DB2 Servers*
- Chapter 2, "Installation overview for DB2 Personal Edition (Linux)" on page 5

Part 4. Configuring a Client to server connection

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Chapter 7. Configuring a connection using the Configuration Assistant

Configuring a client to server connection using the Configuration Assistant (CA)

This task describes how to connect your DB2 client to a remote database using the Configuration Assistant (CA). The Configuration Assistant is a DB2 GUI tool that can be used to configure database connections and other database settings.

The Configuration Assistant (CA) was referred to as the Client Configuration Assistant (CCA) in previous releases of DB2.

Prerequisites:

- The Configuration Assistant must be installed on your DB2 client. For DB2 version 8, the Configuration Assistant is available as part of the DB2 Administration Client and DB2 Application Development Client.
- The remote server must be configured to accept inbound client requests. By default, the server installation program detects and configures most protocols on the server for inbound client connections.

Procedure:

To configure a connection to a database using the CA, select one of the following methods:

- Connecting to a database using discovery
- Connecting to a database using a profile
- Connecting to a database manually using the CA

Related tasks:

- "Configuring a database connection using Discovery" on page 54
- "Configuring a database connection using a profile" on page 53
- "Configuring a database connection using the Configuration Assistant (CA)" on page 51
- "Configuring communication protocols for a remote DB2 instance" in the *Installation and Configuration Supplement*
- "Configuring communication protocols for a local DB2 instance" in the *Installation and Configuration Supplement*

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- "Configuring a client to server connection using the command line processor" on page 57

Configuring a database connection

Configuring a database connection using the Configuration Assistant (CA) on Windows and Linux

If you have the information for the database you want to connect to and the server upon which it resides, you can manually enter all of the configuration information. This method is analogous to entering commands via the command line processor, however, the parameters are presented graphically.

Prerequisites:

Before you configure a connection to a database using the CA:

- Ensure that you have a valid DB2 user ID.
- If adding a database to a system that has a DB2 Server or DB2 Connect server product installed, ensure that you have a user ID with SYSADM or SYSCTRL authority for the instance.

Procedure:

To add a database to your system manually using the CA:

1. Log on to the system with a valid DB2 user ID.
2. Start the CA. The CA can be started using one of the following methods:
   - From the Start menu on Windows systems.
   - From an icon on Linux systems. The icon is only available from the instance owner's environment, otherwise is must be made available using the **db2icons** command.
   - From the **db2ca** command on Windows and Linux systems.
3. On the CA menu bar, under **Selected**, choose **Add a database using wizard**.
4. Select the **Manually configure a connection to a database** radio button and click **Next**.
5. If you are using Lightweight Directory Access Protocol (LDAP), select the radio button that corresponds to the location where you would like your DB2 directories to be maintained. Click **Next**.

   Note: LDAP is not supported on Linux.
6. Select the radio button that corresponds to the protocol that you want to use from the **Protocol** list.

If DB2 Connect is installed on your machine and you select TCP/IP or APPC, you have the option to select **The database physically resides on a host or OS/400 system**. If you select this check box, you will have the option of selecting the type of connection that you want to make to the host or OS/400 database:

- To make a connection through a DB2 Connect gateway, select the **Connect to the server via the gateway** radio button.
- To make a direct connection, select the **Connect directly to the server** radio button.

Click **Next**.

7. Enter the required communication protocol parameters and click **Next**.
8. Enter the database alias name of the remote database that you want to add in the **Database name** field and a local database alias name in the **Database alias** field.

   If you are adding a host or OS/400 database, type the Location name for an OS/390 or z/OS database, the RDB name for an OS/400 database, or the DBNAME for a VSE or VM database in the **Database name** field. Optionally add a comment that describes this database in the **Comment** field.

   Click **Next**.
9. If you are planning to use ODBC, register this database as an ODBC data source. ODBC must be installed to perform this operation.
10. Click **Finish**. You are now able to use this database. Select the **Exit** menu action to close the CA.

After you complete the procedure, you need to create the related topics for this task.

Configuring a database connection using the Configuration Assistant (CA)

If you have the information for the database you want to connect to and the server upon which it resides, you can manually enter all of the configuration information. This method is analogous to entering commands via the command line processor, however, the parameters are presented graphically.

Prerequisites:

Before you configure a connection to a database using the CA:

- Ensure that you have a valid DB2 user ID.
- If adding a database to a system that has a DB2 Server or DB2 Connect server product installed, ensure that you have a user ID with SYSADM or SYSCTRL authority for the instance.

Procedure:

To add a database to your system manually using the CA:

1. Log on to the system with a valid DB2 user ID.
2. Start the CA. The CA can be started from the Start menu on Windows or using the **db2ca** command on both Windows and UNIX systems.
3. On the CA menu bar, under **Selected**, choose **Add a database using wizard**.
4. Select the **Manually configure a connection to a database** radio button and click **Next**.
5. If you are using Lightweight Directory Access Protocol (LDAP), select the radio button that corresponds to the location where you would like your DB2 directories to be maintained. Click **Next**.
6. Select the radio button that corresponds to the protocol that you want to use from the **Protocol** list.

   If DB2 Connect is installed on your machine and you select TCP/IP or APPC, you have the option to select **The database physically resides on a host or OS/400 system**. If you select this check box, you will have the option of selecting the type of connection that you want to make to the host or OS/400 database:

   - To make a connection through a DB2 Connect gateway, select the **Connect to the server via the gateway** radio button.
   - To make a direct connection, select the **Connect directly to the server** radio button.

   Click **Next**.
7. Enter the required communication protocol parameters and click **Next**.
8. Enter the database alias name of the remote database that you want to add in the **Database name** field and a local database alias name in the **Database alias** field.

   If you are adding a host or OS/400 database, type the Location name for an OS/390 or z/OS database, the RDB name for an OS/400 database, or the DBNAME for a VSE or VM database in the **Database name** field. Optionally add a comment that describes this database in the **Comment** field.

   Click **Next**.
9. If you are planning to use ODBC, register this database as an ODBC data source. ODBC must be installed to perform this operation.
10. Click **Finish**. You are now able to use this database. Select the **Exit** menu action to close the CA.

Related tasks:

- "Configuring a database connection using Discovery" on page 54
- "Configuring a database connection using a profile" on page 53
- "Testing a database connection" in the *Installation and Configuration Supplement*

Configuring a database connection using a profile

A server profile contains information about server instances on a system, and databases within each server instance. A client profile contains database information that was cataloged on another client system. Use the steps in the following task to connect to a database using a profile.

Prerequisites:

Before you connect to a database through the CA using a profile:

- Ensure that you have a valid DB2 user ID.
- If adding a database to a system that has a DB2 Server or DB2 Connect server product installed, ensure that you have a user ID with SYSADM or SYSCTRL authority for the instance.

Procedure:

To connect to a database using a profile:

1. Log on to the system with a valid DB2 user ID.
2. Start the CA. The CA can be started from the Start menu on Windows or using the **db2ca** command on both Windows and UNIX systems.
3. On the CA menu bar, under **Selected**, choose **Add a database using wizard**.
4. Select the **Use a profile** radio button and click **Next**.
5. Click the **...** push button and select a profile. Select a remote database from the object tree that is displayed from the profile, and if the database selected is a gateway connection, select a connection route to the database. Click the **Next** push button.
6. Enter a local database alias name in the **Database alias** field and optionally enter a comment that describes this database in the **Comment** field. Click **Next**.
7. If you are planning to use ODBC, register this database as an ODBC data source. ODBC must be installed to perform this operation.
8. Click **Finish**. You are now able to use this database. Select the **Exit** menu action to exit the CA.

Related tasks:

- "Creating client profiles using the export function of the Configuration Assistant (CA)" on page 85
- "Testing a database connection" in the *Installation and Configuration Supplement*

Configuring a database connection using Discovery

You can use the Discovery feature of the Configuration Assistant to search a network for databases.

Prerequisites:

Before you configure a connection to a database using Discovery:

- Ensure that you have a valid DB2 user ID.
- If adding a database to a system that has a DB2 Server or DB2 Connect server product installed, ensure that you have a user ID with SYSADM or SYSCTRL authority for the instance.

Restrictions:

A DB2 Administration Server (DAS) must be running and enabled for the Discovery feature of the CA to return information about DB2 systems.

Procedure:

To add a database to your system using Discovery:

1. Log on to the system with a valid DB2 user ID.
2. Start the CA. The CA can be started from the Start menu on Windows or using the **db2ca** command on both Windows and UNIX systems.
3. On the CA menu bar, under **Selected**, choose **Add a database using wizard**.
4. Select the **Search the network** radio button and click **Next**.
5. Double-click on the folder beside **Known Systems** to list all the systems known to your client.
6. Click the **[+]** sign beside a system to get a list of the instances and databases on it. Select the database that you want to add, click the **Next** push button,
7. Enter a local database alias name in the **Database alias** field and optionally enter a comment that describes this database in the **Comment** field.
8. If you are planning to use ODBC, register this database as an ODBC data source. ODBC must be installed to perform this operation.

9. Click **Finish**. You are now able to use the database you added. Click **Close** to exit the CA.

Related tasks:

- "Configuring a database connection using the Configuration Assistant (CA)" on page 51
- "Configuring a database connection using a profile" on page 53
- "Testing a database connection" in the *Installation and Configuration Supplement*

Configuring a database connection using Discovery on Windows and Linux

You can use the Discovery feature of the Configuration Assistant to search a network for databases.

Prerequisites:

Before you configure a connection to a database using Discovery:

- Ensure that you have a valid DB2 user ID.
- If adding a database to a system that has a DB2 Server or DB2 Connect server product installed, ensure that you have a user ID with SYSADM or SYSCTRL authority for the instance.

Restrictions:

A DB2 Administration Server (DAS) must be running and enabled for the Discovery feature of the CA to return information about DB2 systems.

Procedure:

To add a database to your system using Discovery:

1. Log on to the system with a valid DB2 user ID.
2. Start the CA. The CA can be started using one of the following methods:
   - From the Start menu on Windows systems.
   - From an icon on Linux systems. The icon is only available from the instance owner's environment, otherwise is must be made available using the **db2icons** command.
   - From the **db2ca** command on Windows and Linux systems.
3. On the CA menu bar, under **Selected**, choose **Add a database using wizard**.
4. Select the **Search the network** radio button and click **Next**.

5. Double-click on the folder beside **Known Systems** to list all the systems known to your client.
6. Click the **[+]** sign beside a system to get a list of the instances and databases on it. Select the database that you want to add, click the **Next** push button,
7. Enter a local database alias name in the **Database alias** field and optionally enter a comment that describes this database in the **Comment** field.
8. If you are planning to use ODBC, register this database as an ODBC data source. ODBC must be installed to perform this operation.
9. Click **Finish**. You are now able to use the database you added. Click **Close** to exit the CA.

Chapter 8. Configuring a connection using the Command Line Processor (CLP)

Configuring a client to server connection using the command line processor

This task describes how to configure a connection from a DB2 client to a remote database using the command line processor (CLP). The task consists of cataloging the database node, cataloging the database, and testing the connection. Before you can complete this task, communications must be configured on the DB2 client and DB2 server.

You can also configure a client to server connection using the Configuration Assistant.

Prerequisites:

Before you configure a client to server connection:

- Communications must be configured on the client computer. Depending on your operating system, communications can be Named Pipes or one of the following communication protocols: APPC, NetBIOS, TCP/IP.
- Communications must be configured on the DB2 server. Depending on your operating system, communications can be Named Pipes or one of the following communication protocols: APPC, NetBIOS, TCP/IP.
- You must use one of the supported client to server connection scenarios. The connection scenarios outline which communication method or protocol can be used by which operating system. You cannot use NetBIOS to connect from a Windows client to a server running on a UNIX-based system.

Procedure:

To configure a client to server connection using the command line processor:

1. On the DB2 client, catalog the database node using one of the following methods:
   - Catalog the TCP/IP node on the DB2 client.
   - Catalog the NetBIOS node on the DB2 client.
   - Catalog the APPC node on the DB2 client.
   - Catalog the Named Pipes node on the DB2 client.
2. Catalog the database on the DB2 client.
3. Test the client to server connection.

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Related tasks:

- "Cataloging the TCP/IP node on the client" on page 58
- "Cataloging the NetBIOS node on the DB2 client" on page 60
- "Cataloging the APPC node on the DB2 client" in the *Installation and Configuration Supplement*
- "Cataloging the Named Pipes node on the client" on page 62
- "Cataloging a database using the CLP" on page 62
- "Testing the client to server connection using the CLP" on page 64
- "Configuring communication protocols for a remote DB2 instance" in the *Installation and Configuration Supplement*
- "Configuring communication protocols for a local DB2 instance" in the *Installation and Configuration Supplement*
- "Configuring APPC communications for a DB2 instance" in the *Installation and Configuration Supplement*
- "Configuring NetBIOS communications for a DB2 instance" in the *Installation and Configuration Supplement*
- "Configuring TCP/IP communications for a DB2 instance" in the *Installation and Configuration Supplement*
- "Configuring Named Pipes communications for a DB2 instance" in the *Installation and Configuration Supplement*
- "Configuring a client to server connection using the Configuration Assistant (CA)" on page 49

Related reference:

- "Client-to-Server communication scenarios" on page 84

Node cataloging

Cataloging the TCP/IP node on the client

This is part of the main task of *Configuring a client to server connection using the CLP*.

Cataloging the TCP/IP node adds an entry to the DB2 client's node directory to describe the remote node, the chosen node_name, and the hostname. This entry specifies the chosen alias (*node_name*), the *hostname* (or *ip_address*), and the *svcename* (or *port_number*) that the client will use to access the remote host.

Procedure:

To catalog a TCP/IP node, perform the following steps:

1. Log on to the system as a user with System Administrative (SYSADM) or System Controller (SYSCTRL) authority. You can also log on to the system without these authority levels if you have the `catalog_noauth` option set to `ON`.
2. If you are using a UNIX client, set up the instance environment and invoke the DB2 command line processor. Run the start-up script as follows:

   ```
   . INSTHOME/sqllib/db2profile    (for bash, Bourne or Korn shell)
   source INSTHOME/sqllib/db2cshrc (for C shell)
   ```

   where *INSTHOME* is the home directory of the instance.
3. Catalog the node by entering the following commands from a **db2** prompt:

   ```
   catalog tcpip node node_name remote hostname|ip_address\
  server service_name|port_number\
   [remote_instance instance_name] [system system_name] [ostype os_type]
   terminate
   ```

   Where:

   - `system` is the system name of the remote server;
   - `ostype` is the operating system of the remote server system.

   Specifying the `remote_instance`, `system`, and `ostype` is optional, but recommended for users who want to use the DB2 tools. The *service_name* used on the client does not have to be the same as the one on the server. However, the port numbers that they map to *must* match.

   For example, to catalog the remote host *myserver* on the node called *db2node*, using the service name *server1*, enter the following from a **db2** prompt:

   ```
   catalog tcpip node db2node remote myserver server server1
   terminate
   ```

   To catalog a remote server with the IP address *9.21.15.235* on the node called *db2node*, using the port number *3700*, enter the following from a **db2** prompt:

   ```
   catalog tcpip node db2node remote 9.21.15.235 server 3700
   terminate
   ```

   Note: The **terminate** command is needed to refresh the directory cache.

The next step is to catalog the database on the client.

Related tasks:

- "Configuring TCP/IP on the client using the CLP" in the *Installation and Configuration Supplement*

Related reference:

- "CATALOG TCP/IP NODE" in the *Command Reference*

Cataloging the NetBIOS node on the DB2 client

This task is part of the main task of *Configuring a client to server connection using the command line processor (CLP)*.

Cataloging the NetBIOS node adds an entry to the client's node directory to describe the remote node. Use the chosen node alias (*node_name*) as the node entry name. This entry specifies the client's logical adapter number (*adapter_number*) and the server's Workstation name *(nname*) that the client will use to access the remote DB2 server.

Prerequisites:

Before you configure NetBIOS on the client:

- You must be able to log on to the system with a valid DB2 user ID. If you are adding a database to a system that has a DB2 server or DB2 Connect server product installed, log on to this system as a user with System Administrative (SYSADM) or System Controller (SYSCTRL) authority on the instance.
- For more information about identifying these parameter values, see the NetBIOS parameter values worksheet.

Procedure:

To catalog the NetBIOS node:

1. Catalog the node by entering the following commands in the command line processor from a **db2** prompt:

   ```
   catalog netbios node node_name remote nname adapter adapter_number
   terminate
   ```

   For example, to catalog a remote database server *server1* on the node called *db2node*, using the logical adapter number *0*, use:

   ```
   catalog netbios node db2node remote server1 adapter 0
   terminate
   ```

The next step in *Configuring a client to server connection using the command line processor (CLP)* is to catalog the database on the client.

Related tasks:

- "Configuring NetBIOS on the client using the CLP" in the *Installation and Configuration Supplement*
- "Cataloging a database using the CLP" on page 62

Related reference:

- "CATALOG NETBIOS NODE" in the *Command Reference*
- "NetBIOS parameter values worksheet" in the *Installation and Configuration Supplement*

Cataloging the APPC node on the DB2 client on Windows and Linux

This task is part of the larger task of *Configuring a client to server connection using the command line processor (CLP)*.

You must add an entry to the DB2 client's node directory to describe the remote node. This entry specifies the chosen alias (*node_name*), symbolic destination name (*sym_dest_name*), and the APPC security type (*security_type*) that the client will use for the APPC connection.

Procedure:

To catalog the APPC or APPN node, perform the following steps:

1. Log on to the system with a valid user ID. If you are adding a database to a system that has a DB2 server or DB2 Connect server, you must log on as a user with System Administrative (SYSADM) or System Controller (SYSCTRL) authority. You can also log on to the system without these authority levels if you have the `catalog_noauth` option set to `ON`.
2.
   - To catalog an APPC node, specify the chosen alias (node_name), Symbolic destination name (sym_dest_name), and the APPC security type (security_type) that the client will use for the APPC connection. Enter the following commands in the command line processor:

     ```
     catalog "appc node node_name remote sym_dest_name \
     security security_type";
     terminate
     ```

     For example, to catalog a remote database server with the Symbolic destination name DB2CPIC on the node called db2node, using APPC Security type NONE, enter the following commands:

     ```
     catalog appc node db2node remote DB2CPIC security NONE
     terminate
     ```

   - To catalog an APPN node, specify the chosen alias (node_name), the network ID, the remote partner LU, the transaction program name, the mode, and the security type. Enter the following commands, substituting your own values:

     ```
     catalog "appn node db2node network SPIFNET remote NYX1GW0A
            tpname DB2DRDA mode IBMRDB security NONE"
     terminate
     ```

The next step is to catalog the database on the client.

Cataloging the Named Pipes node on the client

This task is part of the main task of *Configuring a client to server connection using the command line processor (CLP)*.

Cataloging the Named Pipes node adds an entry to the client's node directory to describe the remote node. This entry specifies the chosen alias (*node_name*), the remote *server's* workstation name (*computer_name*), and the instance (*instance_name*) that the client will use to access the remote DB2 server.

Procedure:

To catalog a Named Pipes node on a DB2 client, use the following command:

```
db2 catalog npipe node node_name remote computer_name instance instance_name
terminate
```

For example, to catalog a remote node called *db2node*, which is located on the server called *server1*, in the *db2* instance, use:

```
db2 catalog npipe node db2node remote server1 instance db2
terminate
```

The next step is to catalog the database on the client.

Related tasks:

- "Configuring Named Pipes on the client using the CLP" in the *Installation and Configuration Supplement*

Related reference:

- "CATALOG NAMED PIPE NODE" in the *Command Reference*
- "Named Pipes parameter values worksheet for configuring Named Pipes on the client" in the *Installation and Configuration Supplement*

Cataloging a database using the CLP

This task describes how to catalog a database using the CLP.

Before a client application can access a remote database, the database must be cataloged on the client. When you create a database, the database is automatically cataloged on the server with a database alias that is the same as the database name, unless a different database alias was specified. The information in the database directory, along with the information in the node directory (unless cataloging a local database where a node is not needed), is used on the DB2 client to establish a connection to the remote database.

Prerequisites:

Before you catalog the database:

- You require a valid DB2 user ID
- If you are cataloging a database on a system that has a DB2 server or DB2 Connect product installed, the user ID must have System Administrative (SYSADM) or System Controller (SYSCTRL) authority on the instance.
- The following parameter values are applicable when cataloging a *remote* database:
  - Database name
  - Database alias
  - Node name
  - Authentication type (optional)
  - Comment (optional)

  Refer to the Parameter values worksheet for cataloging a database. for more information about these parameters.
- The following parameter values are applicable when cataloging a *local* database:
  - Database name
  - Database alias
  - Authentication type (optional)
  - Comment (optional)

  Local databases can be uncataloged and re-cataloged at any time.

Procedure:

To catalog a database on the client, perform the following steps.

1. Log on to the system with a valid DB2 user ID. If you are cataloging a database on a system that has a DB2 server or DB2 Connect server installed, log onto this system as a user with System Administrative (SYSADM) or System Controller (SYSCTRL) authority on the instance.
2. Update the Your Value column in the Parameter values worksheet for cataloging a database..
3. If you are using DB2 on a UNIX platform, set up the instance environment. Run the start-up script as follows:

   ```
   . INSTHOME/sqllib/db2profile    (for bash, Bourne or Korn shell)
   source INSTHOME/sqllib/db2cshrc (for C shell)
   ```

   where *INSTHOME* is the home directory of the instance.
4. Start the DB2 command line processor. You can do this by issuing the **db2** command from a DB2 command window.

5. Catalog the database by entering the following commands in the command line processor:

   ```
   catalog database database_name as database_alias at\
   node node_name authentication auth_value
   ```

   For example, to catalog a remote database called *sample* so that it has the local database alias *mysample*, on the node *db2node*, enter the following commands:

   ```
   catalog database sample as mysample at node db2node\
   authentication server
   terminate
   ```

The next step is to test the client to server connection.

Related tasks:

- "Testing the client to server connection using the CLP" on page 64

Related reference:

- "CATALOG DATABASE" in the *Command Reference*

Testing the client to server connection using the CLP

This task is part of the main task of *Configuring a client to server connection using the command line processor (CLP)*.

After cataloging the node and the database, you should connect to the database to test the connection.

Prerequisites:

The following prerequisites apply:

1. The database node and database must be cataloged before you can test the connection.
2. The values for *userid* and *password* must be valid for the system on which they are authenticated. By default, authentication takes place on the server.
3. Start the database manager by entering the **db2start** command on the database server (if it was not already started).

Procedure:

To test the client to server connection:

1. If you are using a UNIX client, run the start-up script as follows:

   ```
   . INSTHOME/sqllib/db2profile    (for Bash, Bourne, or Korn shell)
   source INSTHOME/sqllib/db2cshrc (for C shell)
   ```

where *INSTHOME* represents the home directory of the instance.

2. Using the CLP, enter the following command on the client to connect to the remote database:

   ```
   connect to database_alias user userid
   ```

   For example, enter the following command:

   ```
   connect to mysample user jsmith
   ```

   You will then be prompted to enter your password.

If the connection is successful, you will receive a message showing the name of the database to which you have connected. A message similar to the following will be given:

```
Database Connection Information
Database server = DB2/NT 8.1.0
SQL authorization ID = JSMITH
Local database alias = mysample
```

You are now able to work with the database. For example, to retrieve a list of all the table names listed in the system catalog table, enter the following SQL command:

```
select tabname from syscat.tables
```

When you are finished using the database connection, enter the **connect reset** command to end the database connection.

Related reference:

- "db2start - Start DB2" in the *Command Reference*

Part 5. Reference

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Chapter 9. Removing DB2

Removing DB2 on Windows

This task provides steps for completely removing DB2 version 8 from your Windows operating system. You should only perform this task if you no longer require existing DB2 instances and databases.

Procedure:

To remove DB2 version 8 on Windows:

1. Drop all databases. You can drop databases using the Control Center or **drop database** command.
2. Stop all DB2 processes and services. This can be done through the Windows Services panel or by issuing a **db2stop** command. If DB2 services and process are not stopped before attempting to remove DB2, you will receive a warning containing a list of processes and services that are holding DB2 DLLs in memory.
3. Accessible through the Windows Control Panel, use the Add/Remove Programs window to remove DB2 products. Refer to your operating system's help for more information about removing software products from your Windows operating system.

Related tasks:

- "Removing DB2 on UNIX" on page 69

Related reference:

- "DROP DATABASE" in the *Command Reference*

Removing DB2 on UNIX

This task provides steps for removing DB2 Version 8 from your UNIX operating system. This task is not required to install a new version of DB2. Each version of DB2 on UNIX has a different installation path and can therefore coexist on the same computer.

Procedure:

To remove DB2 on UNIX:

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1. Optional: Drop all databases. You can drop databases using the Control Center or the **drop database** command.
2. Stop the DB2 Administration Server.
3. Stop DB2 instances.
4. Remove the Administration Server.
5. Remove DB2 instances.
6. Remove DB2 products.

Related concepts:

- "DB2 Administration Server" in the *Administration Guide: Implementation*

Related tasks:

- "Stopping the DB2 administration server (DAS)" on page 70
- "Stopping DB2 instances" on page 72
- "Removing the DB2 administration server (DAS)" on page 71
- "Removing DB2 instances" on page 73
- "Removing DB2 products on UNIX" on page 73
- "Removing DB2 on Windows" on page 69

Related reference:

- "DROP DATABASE" in the *Command Reference*

Stopping the DB2 administration server (DAS)

This task is part of the main task of *Removing DB2 on UNIX*.

You must stop the DB2 administration server (DAS) before you remove DB2 on UNIX.

Procedure:

To stop the Administration Server:

1. Log in as the DB2 administration server owner.
2. Stop the DB2 administration server by entering the **db2admin stop** command.

The next step in removing DB2 on UNIX is to stop DB2 instances.

Related concepts:

- "DB2 Administration Server" in the *Administration Guide: Implementation*

Related tasks:

- "Removing DB2 products on UNIX" on page 73

Related reference:
- "db2admin - DB2 Administration Server" in the *Command Reference*

Removing the DB2 administration server (DAS)

This task is part of the main task of *Removing DB2 on UNIX*.

You must remove the DB2 administration server (DAS) before you remove DB2.

Procedure:

To remove the DB2 administration server:

1. Log in as the DB2 administration server owner.
2. Run the start up script:

   ```
   . DASHOME/das/dasprofile (bash, Bourne, or Korn shells)
   source DASHOME/das/dascshrc  (C shell)
   ```

   where *DASHOME* is the home directory of the DB2 administration server.
3. Back up the files in the DASHOME/das directory.
4. Log off.
5. Log in as root and remove the DB2 administration server by entering the following command: *DB2DIR*/**instance/dasdrop**

   where *DB2DIR* is /usr/opt/db2_08_01 on AIX and /opt/IBM/db2/V8.1 on all other UNIX-based operating systems.

The next step in removing DB2 on UNIX is to remove DB2 instances.

Related concepts:
- "DB2 Administration Server" in the *Administration Guide: Implementation*

Related tasks:
- "Removing DB2 products on UNIX" on page 73

Stopping DB2 instances

This task is part of the main task of *Removing DB2 on UNIX*.

You must stop all DB2 instances before you remove DB2.

Procedure:

To stop a DB2 instance:

1. Log in as a user with root authority.
2. To obtain a list of the names of all DB2 instances on your system, enter the *DB2DIR*/**bin/db2ilist** command.

   where *DB2DIR* is `/usr/opt/db2_08_01` on AIX and `/opt/IBM/db2/V8.1` on all other UNIX-based operating systems.
3. Log out.
4. Log back in as the owner of the instance you want to stop.
5. Run the start up script:

   ```
   . INSTHOME/sqllib/db2profile       (bash, Bourne, or Korn shells)
   source INSTHOME/sqllib/db2cshrc       (C shell)
   ```

   where *INSTHOME* is the home directory of the instance.
6. Back up files in the *INSTHOME*`/sqllib` directory, if needed, where *INSTHOME* is the home directory of the instance owner.
7. You might want to save the database manager configuration file, `db2systm`, the `db2nodes.cfg` file, or user defined function or fenced stored procedure applications in *INSTHOME*`/sqllib/function`.
8. Stop all database applications by entering the **db2 force application all** command.
9. Stop the DB2 database manager by entering the **db2stop** command.
10. Confirm that the instance is stopped by entering the **db2 terminate** command.
11. Repeat these steps for each instance.

The next step in removing DB2 on UNIX is to remove DB2 instances.

Related reference:

- "db2stop - Stop DB2" in the *Command Reference*
- "FORCE APPLICATION" in the *Command Reference*
- "db2ilist - List Instances" in the *Command Reference*

Removing DB2 instances

This task is part of the main task of *Removing DB2 on UNIX*.

You can remove some or all of the DB2 version 8 instances on your system. Once an instance is removed, all the DB2 databases owned by the instance, if any, will not be usable. Remove DB2 instances only if you are not planning to use DB2 Version 8 products, or if you do not want to migrate existing instances to a later version of DB2.

Procedure:

To remove an instance:

1. Remove the instance by entering the following command:

   ```
   DB2DIR/instance/db2idrop InstName
   ```

   where *DB2DIR* is `/usr/opt/db2_08_01` on AIX and `/opt/IBM/db2/V8.1` on all other UNIX-based operating systems.

   The **db2idrop** command removes the instance entry from the list of instances and removes the *INSTHOME*`/sqllib` directory, where *INSTHOME* is the home directory of the instance and where *InstName* is the login name of the instance.
2. Optional: As a user with root authority, remove the instance owner's user ID and group (if used only for that instance). Do not remove these if you are planning to re-create the instance.

   This step is optional since the instance owner and the instance owner group may be used for other purposes.

The next step in removing DB2 on UNIX is to remove DB2 products.

Related tasks:

- "Removing DB2 products on UNIX" on page 73

Related reference:

- "db2idrop - Remove Instance" in the *Command Reference*

Removing DB2 products on UNIX

This task is part of the main task of *Removing DB2 on UNIX*.

This task provides steps for removing DB2 Version 8 products using the **db2_deinstall** command. The **db2_deinstall** command removes all DB2 products from your system. If you want to remove a subset of DB2 products, use your operating system's native tools to remove DB2 components, packages, or file sets.

Prerequisites:

Before you remove DB2 products from your UNIX system:

- Ensure that you have performed all steps outlined in *Removing DB2 on UNIX* before removing DB2 products from your UNIX system.
- You must have root authority to remove DB2 products.
- The **db2_deinstall** command is found in the root directory on the DB2 Version 8 product CD-ROM. You will need your product CD-ROM to use the **db2_deinstall** command.

Root authority is required to remove DB2 products.

Procedure:

To remove DB2 products from your UNIX system:

1. Log in as user with root authority.
2. Mount the DB2 Version 8 product CD-ROM.
3. Run the **db2_deinstall -n** command from the root directory of your DB2 Version 8 product CD-ROM. The *-n* parameter makes **pkgrm** non-interactive. The *-n* parameter is only on System V (Solaris).

   This command will remove all DB2 products from your system.

There are alternative methods for removing DB2 products from your operating system. You may employ one of these methods if you only want to remove a subset of DB2 products from your system. Alternative methods for removing DB2 products include:

AIX On AIX systems you can use the System Management Interface Tool (SMIT) to remove some or all DB2 products. If you use SMIT to remove DB2, DB2 Version 8 products can be identified by their prefix of `db2_08_01`. You can also remove all DB2 products from AIX systems using the **installp** command by entering **installp -u db2_08_01**.

HP-UX
On HP-UX systems you can use the **swremove** command to remove some or all DB2 products.

Linux On Linux systems you can use the **rpm** command to remove some or all DB2 products.

Solaris operating environment

On the Solaris operating environment, you can remove some or all DB2 products using the **pkgrm** command.

Chapter 10. Referenced topics

NIS installation considerations

In environments that include security software, such as NIS or NIS+, there are some installation considerations. The DB2 installation scripts will attempt to update things that are under the control of the security packages, such as users and groups, and will not be able to do so.

At instance creation, without a security component present, the instance owning user's group properties will automatically be modified to add the administrative server's group as a secondary group, and the administrative server's group properties will be modified to include the instance owner's group. If the instance creation program is unable to do this (it will not if NIS/NIS+ is controlling the group), it will report that it could not, and in the warning message it will provide the necessary information to manually make the changes.

These considerations hold true for any environment where an external security program is involved that does not allow the DB2 installation or instance creation programs to modify user characteristics.

If the DB2 Setup wizard detects NIS on your computer, you will not be given the option of creating new users during the installation. Instead you must chose existing users.

The following restrictions apply if you are using NIS or NIS+:

- Groups and users must be created on the NIS server before running the DB2 Setup wizard.
- Secondary groups must be created for the DB2 instance owner and the DB2 Administration Server on the NIS server. You must then add the primary group of the instance owner to the secondary DB2 Administration Server group. Likewise, you must add the primary DB2 Administration Server group to the secondary group for the instance owner.
- On a DB2 ESE system, before you create an instance, there must be an entry for the instance in the `etc/services` file. For example, if you want to create an instance for the user `db2inst1`, you require an entry similar to the following:

  ```
  DB2_db2inst1    60000/tcp
  ```

Related tasks:

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- "Installing DB2 Personal Edition using the DB2 Setup wizard (Linux)" on page 37
- "Manually creating required groups and users for DB2 Personal Edition (Linux)" on page 78

Manually creating required groups and users for DB2 Personal Edition (Linux)

Three users and groups are required to operate DB2. The user and group names used in the following instructions are documented in the following table. You may specify your own user and group names as long as they adhere to your system naming rules and DB2 naming rules.

Table 6. Required users and groups

Required user	User name	Group name
Instance owner	db2inst1	db2iadm1
Fenced user	db2fenc1	db2fadm1
Administration server user	db2as	db2asgrp

Prerequisites:

You must have root authority to create users and groups.

Procedure:

To create groups on Linux, enter the following commands:

```
mkgroup -g 999 db2iadm1
mkgroup -g 998 db2fadm1
mkgroup -g 997 db2asgrp
```

Create users for each group:

```
mkuser -u 1004 -g db2iadm1 -G db2iadm1 -m -d /home/db2inst1
db2inst1 -p mypasswrd

mkuser -u 1003 -g db2fadm1 -G dbfadm1 -m -d /home/db2fenc1
db2fenc1 -p mypasswrd

mkuser -u 1002 -g db2asgrp -G db2asgrp -m -d /home/db2as
db2as -p mypasswrd
```

Related concepts:

- "User, userID and group naming rules" on page 105

Related tasks:

- "Installing DB2 Personal Edition using the DB2 Setup wizard (Linux)" on page 37

Verifying the installation of DB2 servers using First Steps

You should verify that the DB2 server installation has completed successfully by accessing data from the SAMPLE database.

Prerequisites:

- You must have the Control Center and the First Steps component installed to perform this task. First Steps is part of the Getting started component grouping in the DB2 Setup wizard. It is installed as part of a Typical installation or may be selected when performing a Custom installation.
- You must have SYSADM or SYSCTRL authority to perform this task.

Procedure:

1. Log on to the system with the user account that you want to use to verify the installation. Ensure that the domain user account you use to create the sample database has SYSADM or SYSCTRL authority.
2. Start First Steps.
3. Select **Create SAMPLE databases** on the First Steps Launchpad to open the Create SAMPLE databases window.
4. In the Create SAMPLE databases window, select the databases you want to create:
   - **DB2 UDB Sample database**
   - **Data Warehousing Sample database**

   The DB2 UDB Sample database is used to verify the installation. The Data Warehouse Sample database is used with the Business Intelligence tutorial.

   Note: The Data Warehousing sample database only applies if you installed the Base Warehouse components.
5. Click **OK**.

   By default, the `SAMPLE` database is created on the drive where DB2 is installed.

   This command may take a few minutes to process. When the `SAMPLE` database has been created, you will receive a completion message. Click **OK**.
6. Once the database is created, select **Work with the SAMPLE databases** on the First Steps Launchpad 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.

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

Related tasks:

- "Verifying the installation using the command line processor (CLP)" on page 32
- "Installing DB2 Personal Edition (Windows)" on page 23
- "Installing DB2 Personal Edition using the DB2 Setup wizard (Linux)" on page 37

Granting user rights (Windows)

This topic describes the steps required to grant user rights on Windows operating systems. Specific user rights are recommended for user accounts required to install and setup DB2.

Prerequisites:

To grant advanced user rights on Windows you must be logged on as a local Administrator.

Procedure:

Windows NT

1. Click **Start** and select **Programs —> Administrative Tools (Common) —> User Manager for Domains**.
2. In the User Manager window, select **Policies —> User Rights** from the menu bar.
3. In the User Rights Policy window, select the **Show Advanced User Rights** check box then in the **Right** drop down box, select the user right you want to grant. Click **Add**.
4. In the Add Users and Groups window select the user or the group you want to grant the right to and click **OK**.
5. In the User Rights Policy window, select the user or the group you have added from the **Grant To** list box and click **OK**.

Windows 2000, Windows XP, and Windows .NET

1. Click **Start** and select **Settings —> Control Panel —> Administrative Tools**.

   Note: On Windows XP and Windows .NET computers, for some Windows Themes, this will be: **Settings —> Control Panel —> Performance and Maintenance —> Administrative Tools**.
2. Select **Local Security Policy**.
3. In the left window pane, expand the **Local Policies** object, then select **User Rights Assignment**.
4. In the right window pane, select the user right that you want to assign.
5. From the menu, select **Action** —> **Security...**
6. Click **Add**, then select a user or group to assign the right to, and click **Add**.
7. Click **OK**.

Note: If your computer belongs to a Windows 2000 or Windows .NET domain, the domain user rights may override your local settings. In this case, your Network Administrator will have to make the changes to the user rights.

Related concepts:

- "User, userID and group naming rules" on page 105

Related tasks:

- "Installing DB2 Personal Edition (Windows)" on page 23

Related reference:

- "User accounts required for installation of DB2 servers (Windows)" in the *Quick Beginnings for DB2 Servers*
- "User accounts for installation and setup of DB2 Personal Edition" on page 28

DB2 system administrator group (Windows)

By default, System Administrative (SYSADM) authority is granted to any valid DB2® user account which belongs to the Administrators group on the machine where the account is defined. If the account is a local account, then it must belong to the local Administrators group. If the account is a domain account, then it must belong to the Administrators group at the domain controller.

For example, if a user logs on to a domain account and tries to access a DB2 database, DB2 will go to a Domain Controller to enumerate groups (including the Administrators group). You can force DB2 to always perform group lookup on the local machine by setting the registry variable **DB2_GRP_LOOKUP=local** and adding the domain accounts (or global groups) to the local group.

For a domain user to have SYSADM authority, it must belong to the Administrators group on the Domain Controller. Since DB2 always performs authorization at the machine where the account is defined, adding a domain user to the local Administrators group on the server does not grant the domain user SYSADM authority to this group.

To avoid adding a domain user to the Administrators group at the Domain Controller, we suggest that you create a global group and add the domain users to which you want to grant SYSADM authority, and then update the DB2 configuration parameter SYSADM_GROUP with the name of the global group. To do so, enter the following commands:

```
db2stop
db2 update dbm cfg using sysadm_group global_group
db2start
```

Related tasks:

- "Installing DB2 Personal Edition (Windows)" on page 23

Related reference:

- "User accounts for installation and setup of DB2 Personal Edition" on page 28

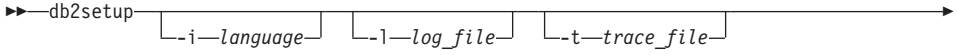
db2setup - Install DB2

Installs DB2 products.

This utility is located on the DB2 installation media. It launches the DB2 Setup wizard to define the installation and install DB2 products. If invoked with the *-u* option it performs an installation without further input taking installation configuration information from a response file.

For UNIX based systems

db2setup command



where:

-i *language*
Is the two letter language code of the language in which to perform the installation.

-l *log_file*
Is the full path and file name of the log file to use.

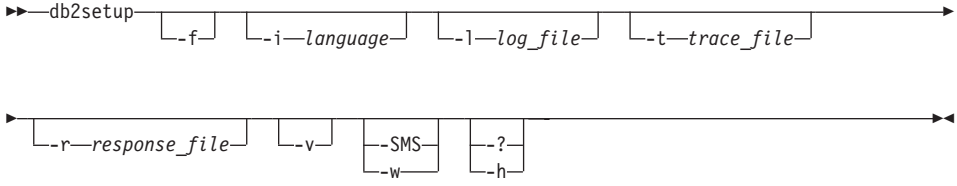
-t Generates a file with install trace information.

-r *response_file*
Is the full path and file name of the response file to use.

-?, -h Generates usage information.

For Windows based systems

db2setup command



where:

-f Forces any DB2 processes to stop before installing.

-i:*language*
Is the two letter language code of the language in which to perform the installation.

-l:*log_file*
Is the full path and file name of the log file to use.

-t Generates a file with install trace information.

-r:*response_file*
Is the full path and file name of the response file to use.

-v Passes additional command line arguments to msiexec.

-SMS, -w
Keeps the parent process alive until the installation finishes.

-?, -h Generates usage information.

Client-to-Server communication scenarios

The following table shows the communication protocols that can be used when connecting a DB2 client to a DB2 server. DB2 Workgroup Server Edition and DB2 Enterprise Server Edition can service requests from host or OS/400 clients.

Table 7. Client-to-Server communication scenarios

	AIX server	HP-UX server	Linux server	Solaris server	Windows NT/ Windows 2000/Windows XP/Windows .NET server
OS/400 V4R5 client	APPC TCP/IP	TCP/IP	TCP/IP	APPC TCP/IP	APPC TCP/IP
OS/400 V5R1 client	APPC TCP/IP	TCP/IP	TCP/IP	APPC TCP/IP	APPC TCP/IP
AIX client	APPC TCP/IP	TCP/IP	TCP/IP	APPC TCP/IP	APPC TCP/IP
HP-UX client	APPC TCP/IP	TCP/IP	TCP/IP	APPC TCP/IP	APPC TCP/IP
Linux client	TCP/IP	TCP/IP	TCP/IP	TCP/IP	TCP/IP
OS/390 or z/OS client	APPC TCP/IP	TCP/IP	TCP/IP	APPC TCP/IP	APPC TCP/IP
SQL/DS client	APPC	N/A	N/A	APPC	APPC
Solaris client	APPC TCP/IP	TCP/IP	TCP/IP	APPC TCP/IP	APPC TCP/IP
VSE V6 batch client	APPC	APPC	APPC	APPC	APPC
VSE V6 online client	APPC	APPC	N/A	APPC	APPC
VM V6 client	APPC TCP/IP	APPC TCP/IP	APPC TCP/IP	APPC TCP/IP	APPC TCP/IP
VSE V7 batch client	APPC TCP/IP	APPC TCP/IP	APPC TCP/IP	APPC TCP/IP	APPC TCP/IP
VSE V7 online client	TCP/IP	TCP/IP	TCP/IP	TCP/IP	TCP/IP
VM V7 client	APPC TCP/IP	APPC TCP/IP	APPC TCP/IP	APPC TCP/IP	APPC TCP/IP
Windows 98 client	TCP/IP	TCP/IP	TCP/IP	TCP/IP	NPIPE NetBIOS TCP/IP
Windows ME client	TCP/IP	TCP/IP	TCP/IP	TCP/IP	NPIPE NetBIOS TCP/IP
Windows NT/ Windows 2000 client	APPC TCP/IP	TCP/IP	TCP/IP	APPC TCP/IP	NPIPE NetBIOS TCP/IP
Windows XP/Windows .NET (32-bit) client	APPC TCP/IP	TCP/IP	TCP/IP	APPC TCP/IP	NPIPE NetBIOS TCP/IP
Windows XP/Windows .NET (64-bit) client	TCP/IP	TCP/IP	TCP/IP	TCP/IP	NPIPE NetBIOS TCP/IP

Client profiles

Client profiles are used to configure database connections between DB2® clients and servers. A client profile is generated from a client using the export function of the Configuration Assistant (CA) or by using the **db2cfexp** command. The information contained in a client profile is determined during the export process. Depending on the settings chosen, it can contain information such as the following:

- Database connection information (including CLI or ODBC settings).
- Client settings (including database manager configuration parameters and DB2 registry variables).
- CLI or ODBC common parameters.
- Configuration data for the local APPC or NetBIOS communications subsystem.

Once the information in a client profile has been determined, it can be used to configure other clients by using either the import function of the CA, or by importing profiles using the **db2cfimp** command. Clients can import all or a subset of the configuration information in an existing profile.

Related tasks:

- "Configuring a database connection using a profile" on page 53
- "Exporting and importing a profile" in the *Installation and Configuration Supplement*
- "Creating client profiles using the export function of the Configuration Assistant (CA)" on page 85
- "Configuring client profiles using the import function of the Configuration Assistant (CA)" in the *Quick Beginnings for DB2 Clients*

Creating client profiles using the export function of the Configuration Assistant (CA)

Client profiles are used to create connections between DB2 clients and servers. The information contained in a client profile is determined during the export process. Once the information in a client profile has been determined, it can be used to configure other clients by using the import process.

Procedure:

To create client profiles using the export function of the CA, perform the following steps:

1. Start the CA.

2. Click **Export**. The Select Export Option window opens.
3. Select one of the following options:
   - If you want to create a profile that contains all of the databases cataloged on your system, and all of the configuration information for this client, select the **All** radio button, click **OK**, and go to Step 8.
   - If you want to create a profile that contains all of the databases cataloged on your system *without* any of the configuration information for this client, select the **Database connection information** radio button, click **OK**, and go to Step 8.
   - If you want to select a subset of the databases that are cataloged on your system, or a subset of the configuration information for this client, select the **Customize** radio button, click **OK**, and go to the next step.
4. Select the databases to be exported from the **Available databases** box and add them to the **Selected databases** box by clicking on the push button. To add all of the available databases to the **Databases to be exported** box, click the **>>** button.
5. Select the check boxes from the **Select custom export option** box that correspond to the options that you want to set up for the target client.
6. Click **OK**. The Export Client Profile window opens.
7. Enter a path and file name for this client profile and click **OK**. The DB2 Message window opens.
8. Click **OK**.

Once you have completed this task, you must then use the import function to configure other clients.

Related concepts:

- "Client profiles" on page 85

Related tasks:

- "Configuring a database connection using a profile" on page 53
- "Exporting and importing a profile" in the *Installation and Configuration Supplement*
- "Configuring client profiles using the import function of the Configuration Assistant (CA)" in the *Quick Beginnings for DB2 Clients*

Modifying desktop icons (Linux)

DB2 includes a set of utilities for the creation of DB2 desktop folders and icons for launching the most commonly used DB2 tools on the Gnome and KDE desktops for supported Intel-based Linux distributions. These utilities are installed by default, and can be used after the installation to create and remove desktop icons for one or more selected users.

Prerequisites:

You must have sufficient authority to generate or remove icons for other users. Typically, db2icons and db2rmicons can be used to create or remove icons for yourself if you are a normal user, and for others only if you are root, or another user with the authority to write to the specified users home directories.

Restrictions:

If icons are generated while a Gnome or KDE desktop environment is running, the user may need to force a manual desktop refresh to see the new icons.

Procedure:

To add a set of desktop icons for one or more users, enter the command:

```
db2icons <user1> [<user2> <user3>...]
```

To remove a set of desktop icons for one or more users, enter the command:

```
db2rmicons <user1> [<user2> <user3>...]
```

Part 6. Appendixes

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Appendix A. Language Support

Changing the DB2 interface language (Windows)

The interface language of DB2 is the language that appears in messages, help, and graphical tool interfaces. When installing DB2, you have the option of installing support for one or more languages. If, at some time after installation, you want to change the interface language for DB2 to one of the other installed interface languages, use the steps outlined in this task.

Do not confuse languages supported by DB2 with languages supported by the DB2 interface. Languages supported by DB2, that is, languages that *data* can exist in, are a superset of languages supported by the DB2 interface.

Prerequisites:

The DB2 interface language you want to use must be installed on your system. DB2 interface languages are selected and installed when you install DB2 using the DB2 Setup wizard. If you change the interface language of DB2 to a supported interface language that has not been installed, the DB2 interface language will default to the operating system language first, and if that is not supported, English.

Procedure:

Changing the interface language for DB2 on Windows requires that you change the default language setting for your Windows operating system.

To change the DB2 interface language on Windows:

1. Through the Control Panel on your Windows operating system, select **Regional Options**.
2. In the Regional Options dialog window, change the default language setting for the system to the language in which you want to interface with DB2.

Refer to your operating system help for additional information about changing the default system language.

Related reference:

- "Supported territory codes and code pages" in the *Administration Guide: Planning*
- "Supported DB2 interface languages, locales, and code pages" on page 92

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Changing the DB2 interface language (UNIX)

The interface language of DB2 is the language that appears in messages, help, and graphical tool interfaces. When installing DB2, you have the option of installing support for one or more languages. If, at some time after installation, you want to change the interface language for DB2 to one of the other installed interface languages, use the steps outlined in this task.

Do not confuse languages supported by DB2 with languages supported by the DB2 interface. Languages supported by DB2, that is, languages that *data* can exist in, are a superset of languages supported by the DB2 interface.

Prerequisites:

Support for the DB2 interface language you want to use must be installed on your system. DB2 interface language support is selected and installed when you install DB2 using the DB2 Setup wizard. If you change the interface language of DB2 to a supported interface language that has not been installed, the DB2 interface language will default to the operating system language first, and if that is not supported, English.

Procedure:

To change the DB2 interface language on UNIX systems, set the LANG environment variable to the desired locale.

For example, to interface with DB2 in French using DB2 for AIX, you must have French language support installed and you must set the LANG environment variable to a French locale, for example, fr_FR.

Related reference:

- "Supported territory codes and code pages" in the *Administration Guide: Planning*
- "Supported DB2 interface languages, locales, and code pages" on page 92

Supported DB2 interface languages, locales, and code pages

The following two tables list the languages (by operating system) supported by the DB2 interface, the language locale, and the code page for each locale. The DB2 interface includes messages, help, and graphical tool interfaces.

Do not confuse languages supported by DB2 with languages supported by the DB2 interface. Languages supported by DB2 that is, languages that *data* can exist in, are a superset of languages supported by the DB2 interface.

Language

Languages supported by the DB2 interface (messages, help, and graphical tool interfaces).

Locale/code page

The locale is used with the LANG environment variable on UNIX systems to set the language for the DB2 interface. A locale is not required for setting the DB2 interface language on Windows systems. On Windows systems, the DB2 interface language is determined by the system default language setting. The associated code page for each locale is listed as well.

Table 8. AIX, HP-UX, and Solaris Operating Environment locales and code pages

Language	AIX locale/code page	HP-UX locale/code page	Solaris locale/code page
French	fr_FR/819 Fr_FR/850 FR_FR/1208	fr_FR.iso88591/819 fr_FR.roman8/1051 fr_FR.utf8/1208	fr/819 fr_FR.UTF-8/1208
German	de_DE/819 De_DE/850 DE_DE/1208	de_DE.iso88591/819 de_DE.roman8/1051 de_DE.utf8/1208	de/819 de_DE.UTF-8/1208
Italian	it_IT/819 It_IT/850 IT_IT/1208	it_IT.iso88591/819 it_IT.roman8/1051 it_IT.utf8/1208	it/819 it_IT.UTF-8/1208
Spanish	es_ES/819 Es_ES/850 ES_ES/1208	es_ES.iso88591/819 es_ES.roman8/1051 es_ES.utf8/1208	es/819 es_ES.UTF-8/1208
Brazil. Portuguese	pt_BR/819 PT_BR/1208	pt_BR.iso88591/819 pt_BR.utf8/1208	pt_BR/819 pt_BR.UTF-8/1208
Japanese	ja_JP/954 Ja_JP/932 JA_JP/1208	ja_JP.eucJP/954 ja_JP.utf8/1208	ja/954 ja_JP.UTF-8/1208
Korean	Ko_KR/970 kO_KR1208	ko_KR.eucKR/970 ko_KR.utf8/1208	ko/970 ko_KR.UTF-81208
Simplified Chinese	zh_CN/1383 Zh_ CN.GBK/1386 ZH_CN/1208	zh_CN.hp15CN/1383 zh_CN.utf8/1208	zh/1383 zh_CN.UTF-8/1208
Traditional Chinese	zh_TW/964 Zh_ CN.GBK/950 ZH_CN/1208	zh_CN.hp15CN/1283 zh_CN.utf8/1208	zh/1383 zh_CN.UTF-8/1208

Table 8. AIX, HP-UX, and Solaris Operating Environment locales and code pages (continued)

Language	AIX locale/code page	HP-UX locale/code page	Solaris locale/code page
Danish	da_DK/819 Da_DK/850 DA_DK/1208	da_DK.iso88591/819 da_DK.roman8/1051 da_DK.utf8/1208	da/819 da_DK.UTF-8/1208
Dutch	nl_NL/819 NL_NL/	N/A	N/A
Finnish	fi_FI/819 Fi_FI/850 FI_FI/1208	fi_FI.iso88591/819 fi_FI.roman8/1051 fi_FI.utf8/1208	fi/819 fi_FI.UTF-8/1208
Norwegian	no_NO/819 No_NO/850 NO_NO/1208	no_NO.iso88591/819 no_NO.roman8/850 no_NO.utf8/1208	no/819 no_NO.UTF-8/1208
Swedish	Sv_SE/819 sv_SE/850 SV_SE/1208	sv_SE.iso88591/819 sv_SE.roman8/1051 sv_SE.utf8/1208	sv/819 sv_SE.UTF-8/1208
Czech	cs_CZ/912 CS_CZ/1208	cs_CZ.utf8/1208	cs_CZ.UTF-8/1208
Hungarian	hu_HU/912 HU_HU/1208	hu_HU.utf8/1208	hu_HU.UTF-8/1208
Polish	pl_PL/912 PL_PL/1208	pl_PL.utf8/1208	nl_NL.UTF-8/1208
Turkish	tr_TR/920 TR_TR/1208	tr_TR.utf8/1208	tr_TR.UTF-8/1208
Russian	ru_RU/915 RU_RU/1208	ru_RU.utf8/1208	ru_RU.UTF-8/1208
Bulgarian	bg_BG/915 BG_BG/1208	bg_BG.iso88595/915 bg_BG.utf8/1208	bg_BG.UTF-8/1208
Slovenian	sl_SI/912 SL_SI/1208	sl_SI.iso88592/912 sl_SI.utf8/1208	sl_SI/912 sl_SI.UTF-8/1208

Table 8. AIX, HP-UX, and Solaris Operating Environment locales and code pages (continued)

Language	AIX locale/code page	HP-UX locale/code page	Solaris locale/code page
Croatian	hr_HR/912 HR_HR/1208	hr_HR.iso88592/912 hr_HR.utf8/1204	hr_HR/912 hr_HR.UTF-8/1204
Slovak	sk_SK/912 SK_SK/1204	sk_SK.iso88592/912 sk_SK.utf8/1204	sk_SK/912 sk_SK.UTF-8/1204
Romanian	ro_RU/912 RO_RO/1204	ro_RO.iso88592/912 ro_RO.utf8/1204	N/A

Table 9. Linux and Linux/390 locales and codepages

Language	Linux locale/code page	Linux/390 locale/code page
French	fr/819 fr_FR.utf8/1208	fr/819 fr_FR.utf8/1208
German	de/819 de_DE.utf8/1208	de/819 de_DE.utf8/1208
Italian	de_DE.utf8/1208	it_IT.utf8/1208
Spanish	es_ES.utf8/1208	es_ES.utf8/1208
Brazil. Portuguese	pt_BR/819 pt_BR.utf8/1208	pt_BR/819 pt_BR.utf8/1208
Japanese	ja_JP.ujis/954 ja_JP.utf8/1208	ja_JP.ujis/954 ja_JP.utf8/1208
Korean	ko/970 ko_KR.utf8/1208	ko/970 ko_KR.utf8/1208
Simplified Chinese	zh zh_CN.GBKz/1386 h_CN.utf8/1208	zh zh_CN.GBK/1386 zh_CN.utf8/1208
Traditional Chinese	zh_TW.Big5/950 zh_TW.utf8/1208	zh_TW.Big5/950 zh_TW.utf8/1208

Table 9. Linux and Linux/390 locales and codepages (continued)

Language	Linux locale/code page	Linux/390 locale/code page
Russian	ru_RU/915 ru_RU.utf8/1208	ru_RU/915 ru_RU.utf8/1208
Arabic	ar/1089 ar_AA.utf8/1208	ar/1089 ar_AA.utf8/1208
Polish	pl_PL/912 pl_PL.utf8/1208	pl_PL/912 pl_PL.utf8/1208
Czech	cs_CZ/912 cs_CZ.utf8/1208	pl_PL/912 pl_PL.utf8/1208
Hungarian	hu_HU/912 hu_HU.utf81208	hu_HU/912 hu_HU.utf8/1208
Bulgarian	bg_BG/915 bg_BG.utf8/1208	bg_BG/915 bg_BG.utf8/1208
Slovanian	sl_SI/912 sl_SI.utf8/1208	sl_SI/912 sl_SI.utf8/1208
Croatian	hr_HR/912 hr_HR.utf8/1208	hr_HR/912 hr_HR.utf8/1208
Slovak	sk_SK/912 sk_SK.utf8/1208	sk_SK/912 sk_SK.utf8/1208
Romanian	ro_RO/912 ro_RO.utf8/1208	ro_RO/912 ro_RO.utf8 /1208

Related tasks:

- "Changing the diagnostic error level before DB2 migration" in the *Quick Beginnings for DB2 Servers*
- "Changing the DB2 interface language (Windows)" on page 91
- "Changing the DB2 interface language (UNIX)" on page 92

Related reference:

- "National language versions" in the *Administration Guide: Planning*

- "Supported territory codes and code pages" in the *Administration Guide: Planning*

Language identifiers (for running the DB2 Setup wizard in another language)

If you want to run the DB2 Setup wizard in a language different from the default language on your computer, you can start the DB2 Setup wizard manually, specifying a language identifier. The language must be available on the platform where you are running the installation.

Table 10. Language identifiers

Language	Language identifier
Arabic	ar
Bulgarian	bg
Brazilian Portuguese	br
Simplified Chinese	zh
Croatian	hr
Czech	cs
German	de
Danish	da
English	en
Slovenian	sl
Slovak	sk
Spanish	es
Finnish	fi
French	fr
Greek	gr
Hungarian	hu
Hebrew	il
Italian	it
Japanese	ja
Korean	ko
Dutch	nl
Norwegian	no
Polish	pl
Portuguese	pt
Russian	ru

Table 10. Language identifiers (continued)

Language	Language identifier
Romanian	ro
Swedish	sv
Slovenian	si
Turkish	tr
Traditional Chinese	zh

Bidirectional CCSID support

The following BiDi attributes are required for correct handling of Bidirectional data on different platforms:

```
- Text type (LOGICAL vs VISUAL)
- Shaping (SHAPED vs UNSHAPED)
- Orientation (RIGHT-TO-LEFT vs LEFT-TO-RIGHT)
- Numeral shape (ARABIC vs HINDI)
- Symmetric swapping (YES or NO)
```

Since defaults on different platforms are not the same, problems appear when DB2 data is sent from one platform to another. For example, Windows platforms use LOGICAL UNSHAPED data, while data on OS/390 is usually in SHAPED VISUAL format. Therefore, without any support for these attributes data sent from DB2 Universal Database for OS/390 and z/OS to DB2 UDB on a Windows 32-bit operating systems workstation displays incorrectly.

Bidirectional-specific CCSIDs:

Table 11. Bidirectional Coded Character Set Identifiers (CCSID) defined and implemented with DB2

CCSID	Code Page	String Type
00420	420	4
00424	424	4
08612	420	5
08616	424	6
12708	420	7
X'3F00'	856	4
X'3F01'	862	4
X'3F02'	916	4

Table 11. Bidirectional Coded Character Set Identifiers (CCSID) defined and implemented with DB2 (continued)

X'3F03'	424	5
X'3F04'	856	5
X'3F05'	862	5
X'3F06'	916	5
X'3F07'	1255	5
X'3F08	1046	5
X'3F09'	864	5
X'3F0A'	1089	5
X'3F0B'	1256	5
X'3F0C'	856	6
X'3F0D'	862	6
X'3F0E'	916	6
X'3F0F'	1255	6
X'3F10'	420	6
X'3F11'	864	6
X'3F12'	1046	6
X'3F13'	1089	6
X'3F14'	1256	6
X'3F15'	424	8
X'3F16'	856	8
X'3F17'	862	8
X'3F18'	916	8
X'3F19'	420	8
X'3F1A'	420	9
X'3F1B'	424	10
X'3F1C'	856	10
X'3F1D'	862	10
X'3F1E'	916	10
X'3F1F'	1255	10
X'3F20'	424	11
X'3F21'	856	11
X'3F22'	862	11

Table 11. Bidirectional Coded Character Set Identifiers (CCSID) defined and implemented with DB2 (continued)

X'3F23'	916	11
X'3F24'	1255	11

Table 12. Where CDRA String Types are defined

String Type	Text Type	Numerical Shape	Orientation	Shaping	Symmetrical Swapping
4	Visual	Arabic	LTR	Shaped	OFF
5	Implicit	Arabic	LTR	Unshaped	ON
6	Implicit	Arabic	RTL	Unshaped	ON
7(*)	Visual	Arabic	Contextual(*)	Unshaped-Lig	OFF
8	Visual	Arabic	RTL	Shaped	OFF
9	Visual	Passthru	RTL	Shaped	ON
10	Implicit		Contextual-L		ON
11	Implicit		Contextual-R		ON

Field orientation is left-to-right (LTR) when the first alphabetic character is a Latin one, and right-to-left (RTL) when it is a bidirectional (RTL) character. Characters are unshaped, but LamAlef ligatures are kept, and not broken into constituents.

Conversion of character data

When character data is transferred between machines, it must be convertedto a form that the receiving machine can use.

For example, when data is transferred between the DB2 Connect server and a hostor iSeries™ database server, it is usually converted from a server code pageto a host CCSID, and vice versa. If the two machines use different code pagesor CCSIDs, code points are mapped from one code page or CCSID to the other. This conversion is always performed at the receiver.

Character data sent *to* a database consistsof SQL statements and input data. Character data sent *from* a database consists of output data. Output data that is interpretedas bit data is not converted. For example, data from a column declared withthe FOR BIT DATA clause. Otherwise all input and output character data isconverted if the two machines have different code pages or CCSIDs.

For example, if DB2 Connect is used to access DB2 Universal Database for OS/390 and z/OS data, the following happens:

1. DB2® Connect sends an SQL statement and input data to OS/390® or z/OS.
2. DB2 Universal Database for OS/390 and z/OS converts the data to an EBCDIC CCSID and processes it.
3. DB2 Universal Database for OS/390 and z/OS sends the result back to the DB2 Connect server.
4. DB2 Connect™ converts the result to an ASCII or ISO code page and returnsit to the user.

The table that follows shows the conversions that are supported betweencode pages (on the DB2 Connect Server) and CCSIDs (on the host or iSeriesserver).

Table 13. Server Code Page to host or iSeriesCCSID Conversion

Host CCSIDs	Code Page	Territory
037, 273, 277, 278, 280, 284, 285, 297, 500,871, 1140-1149	437, 819, 850, 858, 860, 863, 1004, 1051,1252, 1275	Albania, Australia, Austria, Belgium, Brazil,Canada, Denmark, Finland, France, Germany, Iceland, Ireland, Italy, LatinAmerica, Netherlands, New Zealand, Norway, Portugal, South Africa, Spain,Sweden, Switzerland, UK, USA
423, 875	737, 813, 869, 1253, 1280	Greece
870	852, 912, 920[4],1250, 1282	Croatia, Czech Republic, Hungary, Poland,Romania, Serbia/Montenegro (Latin), Slovakia, Slovenia
1025	855, 866, 915, 1251, 1283	Bulgaria, FYR Macedonia, Russia, Serbia/Montenegro(Cyrillic)
1026	857, 920, 1254, 1281	Turkey
424	862, 916, 1255	Israel[3]
420	864, 1046, 1089, 1256	Arabic countries[3]
838	874	Thailand
930, 939, 5026, 5035	932, 942, 943, 954, 5039	Japan
937	938, 948, 950, 964	Taiwan
933, 1364	949, 970, 1363	Korea
935, 1388	1381, 1383, 1386	People's Republic of China

Table 13. Server Code Page to host or iSeriesCCSID Conversion (continued)

Host CCSIDs	Code Page	Territory
1112, 1122	921, 922	Estonia, Latvia, Lithuania
1025	915, 1131, 1251, 1283	Belarus
1123	1124, 1125, 1251	Ukraine

Notes:

1. Code page 1004 is supported as code page 1252.
2. In general, data can be converted from a code page to a CCSID and backagain to the same code page with no change. The following are the only exceptionsto that rule:
   - In double-byte character set (DBCS) code pages, some data containing user-definedcharacters may be lost.
   - For single-byte code pages defined within mixed-byte code pages, andfor some newer single-byte code pages, characters that do not exist in boththe source and the target may be mapped to substitution characters and thenlost when the data is converted back to the original code page.
3. For bidirectional languages, a number of special "BiDi CCSIDS" have beendefined by IBM® and are supported by DB2 Connect.

   If the bidirectional attributesof the database server are different from those of the client you can usethese special CCSIDS to manage the difference.

   See the DB2 Connect ReleaseNotes for detailed information about how to set them up for host or iSeriesconnections.
4. This code page is not support of VM systems.

Related concepts:

- "Guidelines for character conversion" in the *Administration Guide: Performance*

Appendix B. Naming Rules

Naming rules

Unless otherwise specified, all names can include the following characters:

- A through Z. When used in most names, characters A through Z are converted from lowercase to uppercase.
- 0 through 9
- @, #, $, and _ (underscore)

Names cannot begin with a number or with the underscore character.

Do not use SQL reserved words to name tables, views, columns, indexes, or authorization IDs.

There are other special characters that might work separately depending on your operating system and where you are working with DB2. However, while they might work, there is no guarantee that they will work. It is not recommended that you use these other special characters when naming objects in your database.

You also need to consider object naming rules, workstation naming rules, naming rules in an NLS environment, and naming rules in a Unicode environment.

Related concepts:

- "General rules for naming objects and users" in the *Administration Guide: Implementation*
- "DB2 object naming rules" on page 103
- "Workstation naming rules" on page 107
- "User, userID and group naming rules" on page 105
- "Federated database object naming rules" on page 106

DB2 object naming rules

All objects follow the General Naming Rules. In addition, some objects have additional restrictions shown below.

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Table 14. Database, database alias and instance naming Rules

Objects	Guidelines
• Databases • Database aliases • Instances	• Database names must be unique within the location in which they are cataloged. On UNIX-based implementations of DB2, this location is a directory path, while on Windows® implementations, it is a logical disk. • Database alias names must be unique within the system database directory. When a new database is created, the alias defaults to the database name. As a result, you cannot create a database using a name that exists as a database alias, even if there is no database with that name. • Database, database alias and instance names can have up to 8 bytes. • On Windows NT, Windows 2000, Windows XP and Windows .NET systems, no instance can have the same name as a service name. **Note:** To avoid potential problems, do not use the special characters @, #, and $ in a database name if you intend to use the database in a communications environment. Also, because these characters are not common to all keyboards, do not use them if you plan to use the database in another language.

Table 15. Database Object Naming Rules

Objects	Guidelines
• Aliases • Buffer pools • Columns • Event monitors • Indexes • Methods • Nodegroups • Packages • Package versions • Schemas • Stored procedures • Tables • Table spaces • Triggers • UDFs • UDTs • Views	Can contain up to 18 bytes *except* for the following: • Table names (including view names, summary table names, alias names, and correlation names), which can contain up to 128 bytes • Package names, which can contain up to 8 bytes • Schema names, which can contain up to 30 bytes • Package versions, which can contain up to 64 bytes • Object names can also include: – valid accented characters (such as ö) – multibyte characters, except multibyte spaces (for multibyte environments) • Package names and package versions can also include periods (.), hyphens (-), and colons (:).

Related concepts:

• "Naming rules" on page 103

Subconcepts

Delimited identifiers and object names

Keywords can be used. If a keyword is used in a context where it could also be interpreted as an SQL keyword, it must be specified as a delimited identifier.

Using delimited identifiers, it is possible to create an object that violates these naming rules; however, subsequent use of the object could result in errors. For example, if you create a column with a + or – sign included in the name and you subsequently use that column in an index, you will experience problems when you attempt to reorganize the table.

Related concepts:

- "Naming rules" on page 103

User, userID and group naming rules

Table 16. User, userID and group naming rules

Objects	Guidelines
• Group names • User names • User IDs	• Group names can contain up to 8 bytes. • User IDs on UNIX-based systems can contain up to 8 characters. • User names on Windows® can contain up to 30 characters. Windows NT, Windows 2000, Windows XP and Windows .NET currently have a practical limit of 20 characters. • When not Client authentication, non-Windows 32-bit clients connecting to Windows NT, Windows 2000, Windows XP and Windows .NET with user names longer than 8 characters are supported when the user name and password are specified explicitly. • Names and IDs cannot: – Be USERS, ADMINS, GUESTS, PUBLIC, LOCAL or any SQL reserved word – Begin with IBM, SQL or SYS. – Include accented characters.

Notes:

1. Some operating systems allow case sensitive user IDs and passwords. You should check your operating system documentation to see if this is the case.
2. The authorization ID returned from a successful CONNECT or ATTACH is truncated to 8 characters. An ellipsis (...) is appended to the authorization ID and the SQLWARN fields contain warnings to indicate truncation.

Related concepts:

- "Naming rules" on page 103
- "Federated database object naming rules" on page 106

Federated database object naming rules

Table 17. Federated database object naming rules

Objects	Guidelines
• Function mappings • Index specifications • Nicknames • Servers • Type mappings • User mappings • Wrappers	• Nicknames, mappings, index specifications, servers, and wrapper names cannot exceed 128 bytes. • Server and nickname options and option settings are limited to 255 bytes. • Names for federated database objects can also include: – Valid accented letters (such as ö) – Multibyte characters, except multibyte spaces (for multibyte environments)

Related concepts:

- "Naming rules" on page 103

Additional schema names information

- User-defined types (UDTs) cannot have schema names longer than 8 bytes.
- The following schema names are reserved words and must not be used: SYSCAT, SYSFUN, SYSIBM, SYSSTAT.
- To avoid potential migration problems in the future, do not use schema names that begin with SYS. The database manager will not allow you to create triggers, user-defined types or user-defined functions using a schema name beginning with SYS.
- It is recommended that you not use SESSION as a schema name. Declared temporary tables must be qualified by SESSION. It is therefore possible to have an application declare a temporary table with a name identical to that of a persistent table, in which case the application logic can become overly complicated. Avoid the use of the schema SESSION, except when dealing with declared temporary tables.

Related concepts:

- "Naming rules" on page 103

Additional password information

You may be required to perform password maintenance tasks. Since such tasks are required at the server, and many users are not able or comfortable working with the server environment, performing these tasks can pose a significant challenge. DB2® UDB provides a way to update and verify passwords without having to be at the server. For example, DB2 for OS/390® Version 5 supports this method of changing a user's password. If an error message SQL1404N "Password expired" is received, use the CONNECT statement to change the password as follows:

```
CONNECT TO <database> USER <userid> USING <password>
   NEW <new_password> CONFIRM <new_password>
```

The "Password change" dialog of the DB2 Configuration Assistant (CA) can also be used to change the password.

Related concepts:

- "Naming rules" on page 103
- "DB2 object naming rules" on page 103
- "Workstation naming rules" on page 107
- "User, userID and group naming rules" on page 105
- "Federated database object naming rules" on page 106
- "Delimited identifiers and object names" on page 105
- "Additional schema names information" on page 106

Workstation naming rules

A *workstation name* specifies the NetBIOS name for a database server, database client, or DB2® Personal Edition that resides on the local workstation. This name is stored in the database manager configuration file. The workstation name is known as the *workstation nname*.

In addition, the name you specify:

- Can contain 1 to 8 characters
- Cannot include &, #, or @
- Must be unique within the network

In a partitioned database system, there is still only one workstation *nname* that represents the entire partitioned database system, but each node has its own derived unique NetBIOS *nname*.

The workstation *nname* that represents the partitioned database system is stored in the database manager configuration file for the database partition server that owns the instance.

Each node's unique *nname* is a derived combination of the workstation *nname* and the node number.

If a node does not own an instance, its NetBIOS *nname* is derived as follows:

1. The first character of the instance-owning machine's workstation *nname* is used as the first character of the node's NetBIOS *nname*.
2. The next 1 to 3 characters represent the node number. The range is from 1 to 999.
3. The remaining characters are taken from the instance-owning machine's workstation *nname*. The number of remaining characters depends on the length of the instance-owning machine's workstation *nname*. This number can be from 0 to 4.

For example:

Instance-Owning Machine's *Workstation nname*	**Node Number**	**Derived Node NetBIOS** *nname*
GEORGE	3	G3ORGE
A	7	A7
B2	94	B942
N0076543	21	N216543
GEORGE5	1	G1RGE5

If you have changed the default workstation *nname* during the installation, the workstation *nname*'s last 4 characters should be unique across the NetBIOS network to minimize the chance of deriving a conflicting NetBIOS *nname*.

Related concepts:

- "Naming rules" on page 103

Naming rules in an NLS environment

The basic character set that can be used in database names consists of the single-byte uppercase and lowercase Latin letters (A...Z, a...z), the Arabic numerals (0...9) and the underscore character (_). This list is augmented with three special characters (#, @, and $) to provide compatibility with host database products. Use special characters #, @, and $ with care in an NLS environment because they are not included in the NLS host (EBCDIC) invariant character set. Characters from the extended character set can also be used, depending on the code page that is being used. If you are using the

database in a multiple code page environment, you must ensure that all code pages support any elements from the extended character set you plan to use.

When naming database objects (such as tables and views), program labels, host variables, cursors, and elements from the extended character set (for example, letters with diacritical marks) can also be used. Precisely which characters are available depends on the code page in use.

Extended Character Set Definition for DBCS Identifiers:

In DBCS environments, the extended character set consists of all the characters in the basic character set, plus the following:

- All double-byte characters in each DBCS code page, except the double-byte space, are valid letters.
- The double-byte space is a special character.
- The single-byte characters available in each mixed code page are assigned to various categories as follows:

Category	Valid Code Points within each Mixed Code Page
Digits	x30-39
Letters	x23-24, x40-5A, x61-7A, xA6-DF (A6-DF for code pages 932 and 942 only)
Special Characters	All other valid single-byte character code points

Related concepts:

- "Naming rules" on page 103
- "DB2 object naming rules" on page 103
- "Workstation naming rules" on page 107

Naming rules in a Unicode environment

In a UCS-2 database, all identifiers are in multibyte UTF-8. Therefore, it is possible to use any UCS-2 character in identifiers where the use of a character in the extended character set (for example, an accented character, or a multibyte character) is allowed by DB2® UDB.

Clients can enter any character that is supported by their environment, and all the characters in the identifiers will be converted to UTF-8 by the database manager. Two points must be taken into account when specifying national language characters in identifiers for a UCS-2 database:

- Each non-ASCII character requires two to four bytes. Therefore, an *n*-byte identifier can only hold somewhere between $n/4$ and n characters,

depending on the ratio of ASCII to non-ASCII characters. If you have only one or two non-ASCII (for example, accented) characters, the limit is closer to *n* characters, while for an identifier that is completely non-ASCII (for example, in Japanese), only *n*/4 to *n*/3 characters can be used.

- If identifiers are to be entered from different client environments, they should be defined using the common subset of characters available to those clients. For example, if a UCS-2 database is to be accessed from Latin-1, Arabic, and Japanese environments, all identifiers should realistically be limited to ASCII.

Related concepts:

- "Naming rules" on page 103
- "DB2 object naming rules" on page 103
- "Workstation naming rules" on page 107

Appendix C. DB2 Universal Database technical information

Overview of DB2 Universal Database technical information

DB2 Universal Database technical information can be obtained in the following formats:

- Books (PDF and hard-copy formats)
- A topic tree (HTML format)
- Help for DB2 tools (HTML format)
- Sample programs (HTML format)
- Command line help
- Tutorials

This section is an overview of the technical information that is provided and how you can access it.

Categories of DB2 technical information

The DB2 technical information is categorized by the following headings:

- Core DB2 information
- Administration information
- Application development information
- Business intelligence information
- DB2 Connect information
- Getting started information
- Tutorial information
- Optional component information
- Release notes

The following tables describe, for each book in the DB2 library, the information needed to order the hard copy, print or view the PDF, or locate the HTML directory for that book. A full description of each of the books in the DB2 library is available from the IBM Publications Center at www.ibm.com/shop/publications/order

The installation directory for the HTML documentation CD differs for each category of information:

htmlcdpath/doc/htmlcd/%L/*category*

where:

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- *htmlcdpath* is the directory where the HTML CD is installed.
- *%L* is the language identifier. For example, `en_US`.
- *category* is the category identifier. For example, `core` for the core DB2 information.

In the PDF file name column in the following tables, the character in the sixth position of the file name indicates the language version of a book. For example, the file name `db2d1e80` identifies the English version of the *Administration Guide: Planning* and the file name `db2d1g80` identifies the German version of the same book. The following letters are used in the sixth position of the file name to indicate the language version:

Language	**Identifier**
Arabic	w
Brazilian Portuguese	b
Bulgarian	u
Croatian	9
Czech	x
Danish	d
Dutch	q
English	e
Finnish	y
French	f
German	g
Greek	a
Hungarian	h
Italian	i
Japanese	j
Korean	k
Norwegian	n
Polish	p
Portuguese	v
Romanian	8
Russian	r
Simp. Chinese	c
Slovakian	7
Slovenian	l
Spanish	z
Swedish	s
Trad. Chinese	t
Turkish	m

No form number indicates that the book is only available online and does not have a printed version.

Core DB2 information

The information in this category cover DB2 topics that are fundamental to all DB2 users. You will find the information in this category useful whether you are a programmer, a database administrator, or you work with DB2 Connect, DB2 Warehouse Manager, or other DB2 products.

The installation directory for this category is `doc/htmlcd/%L/core`.

Table 18. Core DB2 information

Name	Form Number	PDF File Name
IBM DB2 Universal Database Command Reference	SC09-4828	db2n0x80
IBM DB2 Universal Database Glossary	No form number	db2t0x80
IBM DB2 Universal Database Master Index	SC09-4839	db2w0x80
IBM DB2 Universal Database Message Reference, Volume 1	GC09-4840	db2m1x80
IBM DB2 Universal Database Message Reference, Volume 2	GC09-4841	db2m2x80
IBM DB2 Universal Database What's New	SC09-4848	db2q0x80

Administration information

The information in this category covers those topics required to effectively design, implement, and maintain DB2 databases, data warehouses, and federated systems.

The installation directory for this category is `doc/htmlcd/%L/admin`.

Table 19. Administration information

Name	Form number	PDF file name
IBM DB2 Universal Database Administration Guide: Planning	SC09-4822	db2d1x80
IBM DB2 Universal Database Administration Guide: Implementation	SC09-4820	db2d2x80
IBM DB2 Universal Database Administration Guide: Performance	SC09-4821	db2d3x80
IBM DB2 Universal Database Administrative API Reference	SC09-4824	db2b0x80

Table 19. Administration information (continued)

Name	Form number	PDF file name
IBM DB2 Universal Database Data Movement Utilities Guide and Reference	SC09-4830	db2dmx80
IBM DB2 Universal Database Data Recovery and High Availability Guide and Reference	SC09-4831	db2hax80
IBM DB2 Universal Database Data Warehouse Center Administration Guide	SC27-1123	db2ddx80
IBM DB2 Universal Database Federated Systems Guide	GC27-1224	db2fpx80
IBM DB2 Universal Database Guide to GUI Tools for Administration and Development	SC09-4851	db2atx80
IBM DB2 Universal Database Replication Guide and Reference	SC27-1121	db2e0x80
IBM DB2 Installing and Administering a Satellite Environment	GC09-4823	db2dsx80
IBM DB2 Universal Database SQL Reference, Volume 1	SC09-4844	db2s1x80
IBM DB2 Universal Database SQL Reference, Volume 2	SC09-4845	db2s2x80
IBM DB2 Universal Database System Monitor Guide and Reference	SC09-4847	db2f0x80

Application development information

The information in this category is of special interest to application developers or programmers working with DB2. You will find information about supported languages and compilers, as well as the documentation required to access DB2 using the various supported programming interfaces, such as embedded SQL, ODBC, JDBC, SQLj, and CLI. If you view this information online in HTML you can also access a set of DB2 sample programs in HTML.

The installation directory for this category is doc/htmlcd/%L/ad.

Table 20. Application development information

Name	Form number	PDF file name
IBM DB2 Universal Database Application Development Guide: Building and Running Applications	SC09-4825	db2axx80
IBM DB2 Universal Database Application Development Guide: Programming Client Applications	SC09-4826	db2a1x80
IBM DB2 Universal Database Application Development Guide: Programming Server Applications	SC09-4827	db2a2x80
IBM DB2 Universal Database Call Level Interface Guide and Reference, Volume 1	SC09-4849	db2l1x80
IBM DB2 Universal Database Call Level Interface Guide and Reference, Volume 2	SC09-4850	db2l2x80
IBM DB2 Universal Database Data Warehouse Center Application Integration Guide	SC27-1124	db2adx80
IBM DB2 XML Extender Administration and Programming	SC27-1234	db2sxx80

Business intelligence information

The information in this category describes how to use components that enhance the data warehousing and analytical capabilities of DB2 Universal Database.

The installation directory for this category is doc/htmlcd/%L/wareh.

Table 21. Business intelligence information

Name	Form number	PDF file name
IBM DB2 Warehouse Manager Information Catalog Center Administration Guide	SC27-1125	db2dix80
IBM DB2 Warehouse Manager Installation Guide	GC27-1122	db2idx80

DB2 Connect information

The information in this category describes how to access host or iSeries data using DB2 Connect Enterprise Edition or DB2 Connect Personal Edition.

The installation directory for this category is `doc/htmlcd/%L/conn`.

Table 22. DB2 Connect information

Name	Form number	PDF file name
APPC, CPI-C, and SNA Sense Codes	No form number	db2apx80
IBM Connectivity Supplement	No form number	db2h1x80
IBM DB2 Connect Quick Beginnings for DB2 Connect Enterprise Edition	GC09-4833	db2c6x80
IBM DB2 Connect Quick Beginnings for DB2 Connect Personal Edition	GC09-4834	db2c1x80
IBM DB2 Connect User's Guide	SC09-4835	db2c0x80

Getting started information

The information in this category is useful when you are installing and configuring servers, clients, and other DB2 products.

The installation directory for this category is `doc/htmlcd/%L/start`.

Table 23. Getting started information

Name	Form number	PDF file name
IBM DB2 Universal Database Quick Beginnings for DB2 Clients	GC09-4832	db2itx80
IBM DB2 Universal Database Quick Beginnings for DB2 Servers	GC09-4836	db2isx80
IBM DB2 Universal Database Quick Beginnings for DB2 Personal Edition	GC09-4838	db2i1x80
IBM DB2 Universal Database Installation and Configuration Supplement	GC09-4837	db2iyx80
IBM DB2 Universal Database Quick Beginnings for DB2 Data Links Manager	GC09-4829	db2z6x80

Tutorial information

Tutorial information introduces DB2 features and teaches how to perform various tasks.

The installation directory for this category is `doc/htmlcd/%L/tutr`.

Table 24. Tutorial information

Name	Form number	PDF file name
Business Intelligence Tutorial: Introduction to the Data Warehouse	No form number	db2tux80
Business Intelligence Tutorial: Extended Lessons in Data Warehousing	No form number	db2tax80
Development Center Tutorial for Video Online using Microsoft Visual Basic	No form number	db2tdx80
Information Catalog Center Tutorial	No form number	db2aix80
Video Central for e-business Tutorial	No form number	db2twx80
Visual Explain Tutorial	No form number	db2tvx80

Optional component information

The information in this category describes how to work with optional DB2 components.

The installation directory for this category is `doc/htmlcd/%L/opt`.

Table 25. Optional component information

Name	Form number	PDF file name
IBM DB2 Life Sciences Data Connect Planning, Installation, and Configuration Guide	GC27-1235	db2lsx80
IBM DB2 Spatial Extender User's Guide and Reference	SC27-1226	db2sbx80
IBM DB2 Universal Database Data Links Manager Administration Guide and Reference	SC27-1221	db2z0x80

Table 25. Optional component information (continued)

Name	Form number	PDF file name
IBM DB2 Universal Database Net Search Extender Administration and Programming Guide **Note:** HTML for this document is not installed from the HTML documentation CD.	SH12-6740	N/A

Release notes

The release notes provide additional information specific to your product's release and FixPak level. They also provides summaries of the documentation updates incorporated in each release and FixPak.

Table 26. Release notes

Name	Form number	PDF file name	HTML directory
DB2 Release Notes	See note.	See note.	doc/prodcd/%L/db2ir where %L is the language identifier.
DB2 Connect Release Notes	See note.	See note.	doc/prodcd/%L/db2cr where %L is the language identifier.
DB2 Installation Notes	Available on product CD-ROM only.	Available on product CD-ROM only.	

Note: The HTML version of the release notes is available from the Information Center and on the product CD-ROMs. To view the ASCII file:

- On UNIX-based platforms, see the `Release.Notes` file. This file is located in the `DB2DIR/Readme/%L` directory, where `%L` represents the locale name and `DB2DIR` represents:
  - `/usr/opt/db2_08_01` on AIX
  - `/opt/IBM/db2/V8.1` on all other UNIX operating systems
- On other platforms, see the `RELEASE.TXT` file. This file is located in the directory where the product is installed.

Related tasks:

- "Printing DB2 books from PDF files" on page 119

- "Ordering printed DB2 books" on page 120
- "Accessing online help" on page 120
- "Finding product information by accessing the DB2 Information Center from the administration tools" on page 124
- "Viewing technical documentation online directly from the DB2 HTML Documentation CD" on page 125

Printing DB2 books from PDF files

You can print DB2 books from the PDF files on the *DB2 PDF Documentation* CD. Using Adobe Acrobat Reader, you can print either the entire book or a specific range of pages.

Prerequisites:

Ensure that you have Adobe Acrobat Reader. It is available from the Adobe Web site at www.adobe.com

Procedure:

To print a DB2 book from a PDF file:

1. Insert the *DB2 PDF Documentation* CD. On UNIX operating systems, mount the DB2 PDF Documentation CD. Refer to your *Quick Beginnings* book for details on how to mount a CD on UNIX operating systems.
2. Start Adobe Acrobat Reader.
3. Open the PDF file from one of the following locations:
   - On Windows operating systems:

     x:\doc*language* directory, where *x* represents the CD-ROM drive letter and *language* represents the two-character territory code that represents your language (for example, EN for English).
   - On UNIX operating systems:

     /*cdrom*/doc/*%L* directory on the CD-ROM, where */cdrom* represents the mount point of the CD-ROM and *%L* represents the name of the desired locale.

Related tasks:

- "Ordering printed DB2 books" on page 120
- "Finding product information by accessing the DB2 Information Center from the administration tools" on page 124
- "Viewing technical documentation online directly from the DB2 HTML Documentation CD" on page 125

Related reference:

- "Overview of DB2 Universal Database technical information" on page 111

Ordering printed DB2 books

Procedure:

To order printed books:

- Contact your IBM authorized dealer or marketing representative. To find a local IBM representative, check the IBM Worldwide Directory of Contacts at www.ibm.com/shop/planetwide
- Phone `1-800-879-2755` in the United States or `1-800-IBM-4YOU` in Canada.
- Visit the IBM Publications Center at www.ibm.com/shop/publications/order

Related tasks:

- "Printing DB2 books from PDF files" on page 119
- "Finding topics by accessing the DB2 Information Center from a browser" on page 122
- "Viewing technical documentation online directly from the DB2 HTML Documentation CD" on page 125

Related reference:

- "Overview of DB2 Universal Database technical information" on page 111

Accessing online help

The online help that comes with all DB2 components is available in three types:

- Window and notebook help
- Command line help
- SQL statement help

Window and notebook help explain the tasks that you can perform in a window or notebook and describe the controls. This help has two types:

- Help accessible from the **Help** button
- Infopops

The **Help** button gives you access to overview and prerequisite information. The infopops describe the controls in the window or notebook. Window and notebook help are available from DB2 centers and components that have user interfaces.

Command line help includes Command help and Message help. Command help explains the syntax of commands in the command line processor. Message help describes the cause of an error message and describes any action you should take in response to the error.

SQL statement help includes SQL help and SQLSTATE help. DB2 returns an SQLSTATE value for conditions that could be the result of an SQL statement. SQLSTATE help explains the syntax of SQL statements (SQL states and class codes).

Note: SQL help is not available for UNIX operating systems.

Procedure:

To access online help:

- For window and notebook help, click **Help** or click that control, then click **F1**. If the **Automatically display infopops** check box on the **General** page of the **Tool Settings** notebook is selected, you can also see the infopop for a particular control by holding the mouse cursor over the control.
- For command line help, open the command line processor and enter:
  - For Command help:

    ```
    ? command
    ```

    where *command* represents a keyword or the entire command.

    For example, `? catalog` displays help for all the CATALOG commands, while `? catalog database` displays help for the CATALOG DATABASE command.
- For Message help:

  ```
  ? XXXnnnnn
  ```

  where *XXXnnnnn* represents a valid message identifier.

  For example, `? SQL30081` displays help about the SQL30081 message.
- For SQL statement help, open the command line processor and enter:
  - For SQL help:

    ```
    ? sqlstate or ? class code
    ```

    where *sqlstate* represents a valid five-digit SQL state and *class code* represents the first two digits of the SQL state.

    For example, `? 08003` displays help for the 08003 SQL state, while `? 08` displays help for the 08 class code.
  - For SQLSTATE help:

```
help statement
```

where *statement* represents an SQL statement.

For example, `help SELECT` displays help about the SELECT statement.

Related tasks:

- "Finding topics by accessing the DB2 Information Center from a browser" on page 122
- "Viewing technical documentation online directly from the DB2 HTML Documentation CD" on page 125

Finding topics by accessing the DB2 Information Center from a browser

The DB2 Information Center accessed from a browser enables you to access the information you need to take full advantage of DB2 Universal Database and DB2 Connect. The DB2 Information Center also documents major DB2 features and components including replication, data warehousing, metadata, Life Sciences Data Connect, and DB2 extenders.

The DB2 Information Center accessed from a browser is composed of the following major elements:

Navigation tree
The navigation tree is located in the left frame of the browser window. The tree expands and collapses to show and hide topics, the glossary, and the master index in the DB2 Information Center.

Navigation toolbar
The navigation toolbar is located in the top right frame of the browser window. The navigation toolbar contains buttons that enable you to search the DB2 Information Center, hide the navigation tree, and find the currently displayed topic in the navigation tree.

Content frame
The content frame is located in the bottom right frame of the browser window. The content frame displays topics from the DB2 Information Center when you click on a link in the navigation tree, click on a search result, or follow a link from another topic or from the master index.

Prerequisites:

To access the DB2 Information Center from a browser, you must use one of the following browsers:

- Microsoft Explorer, version 5 or later
- Netscape Navigator, version 6.1 or later

Restrictions:

The DB2 Information Center contains only those sets of topics that you chose to install from the *DB2 HTML Documentation CD*. If your Web browser returns a `File not found` error when you try to follow a link to a topic, you must install one or more additional sets of topics *DB2 HTML Documentation CD*.

Procedure:

To find a topic by searching with keywords:

1. In the navigation toolbar, click **Search**.
2. In the top text entry field of the Search window, enter two or more terms related to your area of interest and click **Search**. A list of topics ranked by accuracy displays in the **Results** field.

   Entering more terms increases the precision of your query while reducing the number of topics returned from your query.
3. In the **Results** field, click the title of the topic you want to read. The topic displays in the content frame.

To find a topic in the navigation tree:

1. In the navigation tree, click the book icon of the category of topics related to your area of interest. A list of subcategories displays underneath the icon.
2. Continue to click the book icons until you find the category containing the topics in which you are interested. Categories that link to topics display the category title as an underscored link when you move the cursor over the category title. The navigation tree identifies topics with a page icon.
3. Click the topic link. The topic displays in the content frame.

To find a topic or term in the master index:

1. In the navigation tree, click the “Index” category. The category expands to display a list of links arranged in alphabetical order in the navigation tree.
2. In the navigation tree, click the link corresponding to the first character of the term relating to the topic in which you are interested. A list of terms with that initial character displays in the content frame. Terms that have multiple index entries are identified by a book icon.
3. Click the book icon corresponding to the term in which you are interested. A list of subterms and topics displays below the term you clicked. Topics are identified by page icons with an underscored title.
4. Click on the title of the topic that meets your needs. The topic displays in the content frame.

Related concepts:

- "Accessibility" on page 131
- "DB2 Information Center for topics" on page 133

Related tasks:

- "Finding product information by accessing the DB2 Information Center from the administration tools" on page 124
- "Updating the HTML documentation installed on your machine" on page 126
- "Troubleshooting DB2 documentation search with Netscape 4.x" on page 128
- "Searching the DB2 documentation" on page 129

Related reference:

- "Overview of DB2 Universal Database technical information" on page 111

Finding product information by accessing the DB2 Information Center from the administration tools

The DB2 Information Center provides quick access to DB2 product information and is available on all operating systems for which the DB2 administration tools are available.

The DB2 Information Center accessed from the tools provides six types of information.

Tasks Key tasks you can perform using DB2.

Concepts
Key concepts for DB2.

Reference
DB2 reference information, such as keywords, commands, and APIs.

Troubleshooting
Error messages and information to help you with common DB2 problems.

Samples
Links to HTML listings of the sample programs provided with DB2.

Tutorials
Instructional aid designed to help you learn a DB2 feature.

Prerequisites:

Some links in the DB2 Information Center point to Web sites on the Internet. To display the content for these links, you will first have to connect to the Internet.

Procedure:

To find product information by accessing the DB2 Information Center from the tools:

1. Start the DB2 Information Center in one of the following ways:
   - From the graphical administration tools, click on the **Information Center** icon in the toolbar. You can also select it from the **Help** menu.
   - At the command line, enter **db2ic**.
2. Click the tab of the information type related to the information you are attempting to find.
3. Navigate through the tree and click on the topic in which you are interested. The Information Center will then launch a Web browser to display the information.
4. To find information without browsing the lists, click the **Search** icon to the right of the list.

   Once the Information Center has launched a browser to display the information, you can perform a full-text search by clicking the **Search** icon in the navigation toolbar.

Related concepts:

- "Accessibility" on page 131
- "DB2 Information Center for topics" on page 133

Related tasks:

- "Finding topics by accessing the DB2 Information Center from a browser" on page 122
- "Searching the DB2 documentation" on page 129

Viewing technical documentation online directly from the DB2 HTML Documentation CD

All of the HTML topics that you can install from the *DB2 HTML Documentation CD* can also be read directly from the CD. Therefore, you can view the documentation without having to install it.

Restrictions:

Because the following items are installed from the DB2 product CD and not the *DB2 HTML Documentation CD*, you must install the DB2 product to view these items:

- Tools help
- DB2 Quick Tour
- Release notes

Procedure:

1. Insert the *DB2 HTML Documentation* CD. On UNIX operating systems, mount the *DB2 HTML Documentation CD*. Refer to your *Quick Beginnings* book for details on how to mount a CD on UNIX operating systems.
2. Start your HTML browser and open the appropriate file:
   - For Windows operating systems:

     ```
     e:\Program Files\sqllib\doc\htmlcd\%L\index.htm
     ```

     where *e* represents the CD-ROM drive, and %L is the locale of the documentation that you wish to use, for example, **en_US** for English.
   - For UNIX operating systems:

     ```
     /cdrom/Program Files/sqllib/doc/htmlcd/%L/index.htm
     ```

     where */cdrom/* represents where the CD is mounted, and %L is the locale of the documentation that you wish to use, for example, **en_US** for English.

Related tasks:

- "Finding topics by accessing the DB2 Information Center from a browser" on page 122
- "Copying files from the DB2 HTML Documentation CD to a Web Server" on page 128

Related reference:

- "Overview of DB2 Universal Database technical information" on page 111

Updating the HTML documentation installed on your machine

It is now possible to update the HTML installed from the *DB2 HTML Documentation CD* when updates are made available from IBM. This can be done in one of two ways:

- Using the Information Center (if you have the DB2 administration GUI tools installed).
- By downloading and applying a DB2 HTML documentation FixPak .

Note: This will NOT update the DB2 code; it will only update the HTML documentation installed from the *DB2 HTML Documentation CD*.

Procedure:

To use the Information Center to update your local documentation:

1. Start the DB2 Information Center in one of the following ways:
   - From the graphical administration tools, click on the **Information Center** icon in the toolbar. You can also select it from the **Help** menu.
   - At the command line, enter **db2ic**.
2. Ensure your machine has access to the external Internet; the updater will download the latest documentation FixPak from the IBM server if required.
3. Select **Information Center —> Update Local Documentation** from the menu to start the update.
4. Supply your proxy information (if required) to connect to the external Internet.

The Information Center will download and apply the latest documentation FixPak, if one is available.

To manually download and apply the documentation FixPak :

1. Ensure your machine is connected to the Internet.
2. Open the DB2 support page in your Web browser at: www.ibm.com/software/data/db2/udb/winos2unix/support
3. Follow the link for version 8 and look for the ″Documentation FixPaks″ link.
4. Determine if the version of your local documentation is out of date by comparing the documentation FixPak level to the documentation level you have installed. This current documentation on your machine is at the following level: **DB2 v8.1 GA**.
5. If there is a more recent version of the documentation available then download the FixPak applicable to your operating system. There is one FixPak for all Windows platforms, and one FixPak for all UNIX platforms.
6. Apply the FixPak:
   - For Windows operating systems: The documentation FixPak is a self extracting zip file. Place the downloaded documentation FixPak in an empty directory, and run it. It will create a **setup** command which you can run to install the documentation FixPak.
   - For UNIX operating systems: The documentation FixPak is a compressed tar.Z file. Uncompress and untar the file. It will create a directory named `delta_install` with a script called **installdocfix**. Run this script to install the documentation FixPak.

Related tasks:

- "Copying files from the DB2 HTML Documentation CD to a Web Server" on page 128

Related reference:

- "Overview of DB2 Universal Database technical information" on page 111

Copying files from the DB2 HTML Documentation CD to a Web Server

The entire DB2 information library is delivered to you on the *DB2 HTML Documentation CD*, so you can install the library on a Web server for easier access. Simply copy to your Web server the documentation for the languages that you want.

Procedure:

To copy files from the *DB2 HTML Documentation CD* to a Web server, use the appropriate path:

- For Windows operating systems:

  ```
  E:\Program Files\sqllib\doc\htmlcd\%L\*.*
  ```

  where *E* represents the CD-ROM drive and *%L* represents the language identifier.
- For UNIX operating systems:

  ```
  /cdrom:Program Files/sqllib/doc/htmlcd/%L/*.*
  ```

  where *cdrom* represents the CD-ROM drive and *%L* represents the language identifier.

Related tasks:

- "Searching the DB2 documentation" on page 129

Related reference:

- "Supported DB2 interface languages, locales, and code pages" on page 92
- "Overview of DB2 Universal Database technical information" on page 111

Troubleshooting DB2 documentation search with Netscape 4.x

Most search problems are related to the Java support provided by web browsers. This task describes possible workarounds.

Procedure:

A common problem with Netscape 4.x involves a missing or misplaced security class. Try the following workaround, especially if you see the following line in the browser Java console:

```
Cannot find class  java/security/InvalidParameterException
```

- On Windows operating systems:

  From the *DB2 HTML Documentation CD*, copy the supplied *x*:Program Files\sqllib\doc\htmlcd*locale*\InvalidParameterException.class file to the java\classes\java\security\ directory relative to your Netscape browser installation, where *x* represents the CD-ROM drive letter and *locale* represents the name of the desired locale.

  Note: You may have to create the java\security\ subdirectory structure.

- On UNIX operating systems:

  From the *DB2 HTML Documentation CD*, copy the supplied */cdrom*/Program Files/sqllib/doc/htmlcd/*locale*/InvalidParameterException.class file to the java/classes/java/security/ directory relative to your Netscape browser installation, where *cdrom* represents the mount point of the CD-ROM and *locale* represents the name of the desired locale.

  Note: You may have to create the java/security/ subdirectory structure.

If your Netscape browser still fails to display the search input window, try the following:

- Stop all instances of Netscape browsers to ensure that there is no Netscape code running on the machine. Then open a new instance of the Netscape browser and try to start the search again.
- Purge the browser's cache.
- Try a different version of Netscape, or a different browser.

Related tasks:

- "Searching the DB2 documentation" on page 129

Searching the DB2 documentation

To search DB2's documentation, you need Netscape 6.1 or higher, or Microsoft's Internet Explorer 5 or higher. Ensure that your browser's Java support is enabled.

A pop-up search window opens when you click the search icon in the navigation toolbar of the Information Center accessed from a browser. If you are using the search for the first time it may take a minute or so to load into the search window.

Restrictions:

The following restrictions apply when you use the documentation search:

- Boolean searches are not supported. The boolean search qualifiers *and* and *or* will be ignored in a search. For example, the following searches would produce the same results:
  - servlets *and* beans
  - servlets *or* beans
- Wildcard searches are not supported. A search on *java** will only look for the literal string *java** and would not, for example, find *javadoc*.

In general, you will get better search results if you search for phrases instead of single words.

Procedure:

To search the DB2 documentation:

1. In the navigation toolbar, click **Search**.
2. In the top text entry field of the Search window, enter two or more terms related to your area of interest and click **Search**. A list of topics ranked by accuracy displays in the **Results** field.

   Entering more terms increases the precision of your query while reducing the number of topics returned from your query.
3. In the **Results** field, click the title of the topic you want to read. The topic displays in the content frame.

Note: When you perform a search, the first result is automatically loaded into your browser frame. To view the contents of other search results, click on the result in results lists.

Related tasks:

- "Troubleshooting DB2 documentation search with Netscape 4.x" on page 128

Online DB2 troubleshooting information

With the release of DB2® UDB Version 8, there will no longer be a *Troubleshooting Guide*. The troubleshooting information once contained in this guide has been integrated into the DB2 publications. By doing this, we are able to deliver the most up-to-date information possible. To find information on the troubleshooting utilities and functions of DB2, access the DB2 Information Center from any of the tools.

Refer to the DB2 Online Support site if you are experiencing problems and want help finding possible causes and solutions. The support site contains a

large, constantly updated database of DB2 publications, TechNotes, APAR (product problem) records, FixPaks, and other resources. You can use the support site to search through this knowledge base and find possible solutions to your problems.

Access the Online Support site at www.ibm.com/software/data/db2/udb/winos2unix/support, or by clicking the **Online Support** button in the DB2 Information Center. Frequently changing information, such as the listing of internal DB2 error codes, is now also available from this site.

Related concepts:

- "DB2 Information Center for topics" on page 133

Related tasks:

- "Finding product information by accessing the DB2 Information Center from the administration tools" on page 124

Accessibility

Accessibility features help users with physical disabilities, such as restricted mobility or limited vision, to use software products successfully. These are the major accessibility features in DB2® Universal Database Version 8:

- DB2 allows you to operate all features using the keyboard instead of the mouse. See "Keyboard Input and Navigation".
- DB2 enables you customize the size and color of your fonts. See "Accessible Display" on page 132.
- DB2 allows you to receive either visual or audio alert cues. See "Alternative Alert Cues" on page 132.
- DB2 supports accessibility applications that use the Java™ Accessibility API. See "Compatibility with Assistive Technologies" on page 132.
- DB2 comes with documentation that is provided in an accessible format. See "Accessible Documentation" on page 132.

Keyboard Input and Navigation

Keyboard Input

You can operate the DB2 Tools using only the keyboard. You can use keys or key combinations to perform most operations that can also be done using a mouse.

Keyboard Focus

In UNIX-based systems, the position of the keyboard focus is highlighted, indicating which area of the window is active and where your keystrokes will have an effect.

Accessible Display

The DB2 Tools have features that enhance the user interface and improve accessibility for users with low vision. These accessibility enhancements include support for customizable font properties.

Font Settings

The DB2 Tools allow you to select the color, size, and font for the text in menus and dialog windows, using the Tools Settings notebook.

Non-dependence on Color

You do not need to distinguish between colors in order to use any of the functions in this product.

Alternative Alert Cues

You can specify whether you want to receive alerts through audio or visual cues, using the Tools Settings notebook.

Compatibility with Assistive Technologies

The DB2 Tools interface supports the Java Accessibility API enabling use by screen readers and other assistive technologies used by people with disabilities.

Accessible Documentation

Documentation for the DB2 family of products is available in HTML format. This allows you to view documentation according to the display preferences set in your browser. It also allows you to use screen readers and other assistive technologies.

DB2 tutorials

The DB2® tutorials help you learn about various aspects of DB2 Universal Database. The tutorials provide lessons with step-by-step instructions in the areas of developing applications, tuning SQL query performance, working with data warehouses, managing metadata, and developing Web services using DB2.

Before you begin:

Before you can access these tutorials using the links below, you must install the tutorials from the *DB2 HTML Documentation* CD-ROM.

If you do not want to install the tutorials, you can view the HTML versions of the tutorials directly from the *DB2 HTML Documentation CD*. PDF versions of these tutorials are also available on the *DB2 PDF Documentation CD*.

Some tutorial lessons use sample data or code. See each individual tutorial for a description of any prerequisites for its specific tasks.

DB2 Universal Database tutorials:

If you installed the tutorials from the *DB2 HTML Documentation* CD-ROM, you can click on a tutorial title in the following list to view that tutorial.

Business Intelligence Tutorial: Introduction to the Data Warehouse Center
Perform introductory data warehousing tasks using the Data Warehouse Center.

Business Intelligence Tutorial: Extended Lessons in Data Warehousing
Perform advanced data warehousing tasks using the Data Warehouse Center. (Not provided on CD. You can download this tutorial from the Downloads section of the Business Intelligence Solutions Web site at http://www.ibm.com/software/data/bi/.)

Development Center Tutorial for Video Online using Microsoft® Visual Basic
Build various components of an application using the Development Center Add-in for Microsoft Visual Basic.

Information Catalog Center Tutorial
Create and manage an information catalog to locate and use metadata using the Information Catalog Center.

Video Central for e-business Tutorial
Develop and deploy an advanced DB2 Web Services application using WebSphere® products.

Visual Explain Tutorial
Analyze, optimize, and tune SQL statements for better performance using Visual Explain.

DB2 Information Center for topics

The DB2® Information Center gives you access to all of the information you need to take full advantage of DB2 Universal Database™ and DB2 Connect™ in your business. The DB2 Information Center also documents major DB2 features and components including replication, data warehousing, the Information Catalog Center, Life Sciences Data Connect, and DB2 extenders.

The DB2 Information Center accessed from a browser has the following features:

Regularly updated documentation
Keep your topics up-to-date by downloading updated HTML.

Search
Search all of the topics installed on your workstation by clicking **Search** in the navigation toolbar.

Integrated navigation tree
Locate any topic in the DB2 library from a single navigation tree. The navigation tree is organized by information type as follows:

- Tasks provide step-by-step instructions on how to complete a goal.
- Concepts provide an overview of a subject.
- Reference topics provide detailed information about a subject, including statement and command syntax, message help, requirements.

Master index
Access the information in topics and tools help from one master index. The index is organized in alphabetical order by index term.

Master glossary
The master glossary defines terms used in the DB2 Information Center. The glossary is organized in alphabetical order by glossary term.

Related tasks:

- "Finding topics by accessing the DB2 Information Center from a browser" on page 122
- "Finding product information by accessing the DB2 Information Center from the administration tools" on page 124
- "Updating the HTML documentation installed on your machine" on page 126

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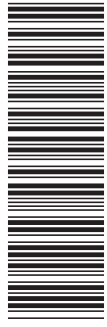

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