IBM DB2 Everyplace

Installation and User's Guide

Version 8 Release 2

SC18-7184-05

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Note
Before using this information and the product it supports, read the information in "Notices" on page 119.

| **Sixth Edition (November 2005)**

| This edition applies to Version 8, Release 2 of IBM DB2 Everyplace and to all subsequent releases and modifications
| until otherwise indicated in new editions.

| This edition replaces SC18-7184-04.

Contents

About this book

This book provides instructions for installing and configuring IBM® DB2 Everyplace.

This book is designed to help database administrators, system programmers, application programmers, and system operators perform these tasks:

- Plan for the installation of DB2 Everyplace
- Install and configure DB2 Everyplace
- Use the DB2 Everyplace sample applications to perform basic tasks
- Diagnose and recover from DB2 Everyplace problems

Always check the DB2 Everyplace Library page for the most current version of this publication:

http://www.ibm.com/software/data/db2/everyplace/library.html

Conventions used in this book

This documentation uses the following highlighting conventions:

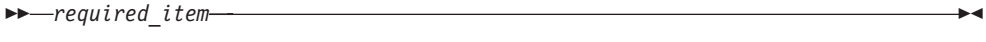
- **Boldface type** indicates commands or user interface controls such as names of fields, folder, icons, or menu choices.
- `Monospace type` indicates examples of text that you enter exactly as shown.
- *Italic type* indicates variables that you should replace with a value. It is also used to indicate book titles and to emphasize significant words.

In this documentation, <DSYPATH> refers to the directory where DB2 Everyplace is installed. For instructions that are specific to Linux and UNIX systems, $DSYINSTDIR refers to the directory where the DB2 Everyplace Sync Server instance is located for a given user ID.

How to read syntax diagrams

The following rules apply to the syntax diagrams that are used in this information:

- Read the syntax diagrams from left to right, from top to bottom, following the path of the line. The following conventions are used:
  - The >>--- symbol indicates the beginning of a syntax diagram.
  - The ---> symbol indicates that the syntax diagram is continued on the next line.
  - The >--- symbol indicates that a syntax diagram is continued from the previous line.
  - The --->< symbol indicates the end of a syntax diagram.
- Required items appear on the horizontal line (the main path).

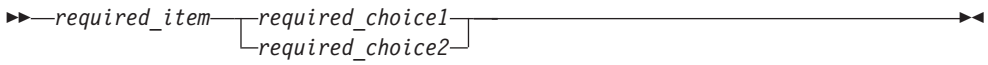


- Optional items appear below the main path.

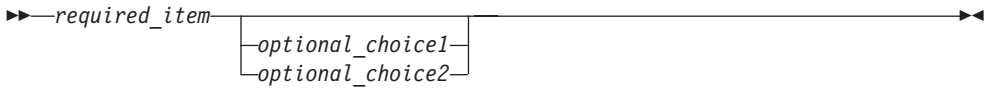
If an optional item appears above the main path, that item has no effect on the execution of the syntax element and is used only for readability.

- If you can choose from two or more items, they appear vertically, in a stack.

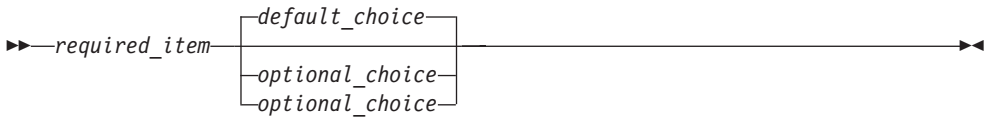
  If you *must* choose one of the items, one item of the stack appears on the main path.



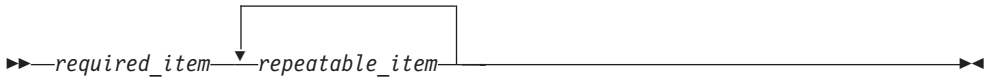
  If choosing one of the items is optional, the entire stack appears below the main path.



  If one of the items is the default, it appears above the main path, and the remaining choices are shown below.



- An arrow returning to the left, above the main line, indicates an item that can be repeated.



  If the repeat arrow contains a comma, you must separate repeated items with a comma.

  A repeat arrow above a stack indicates that you can repeat the items in the stack.
- Keywords, and their minimum abbreviations if applicable, appear in uppercase. They must be spelled exactly as shown. Variables appear in all lowercase italic letters (for example, *column-name*). They represent user-supplied names or values.
- Separate keywords and parameters by at least one space if no intervening punctuation is shown in the diagram.

- Enter punctuation marks, parentheses, arithmetic operators, and other symbols, exactly as shown in the diagram.
- Footnotes are shown by a number in parentheses, for example (1).

Service updates and support information

To find service updates and support information, including software fix packs, Frequently Asked Questions (FAQs), technical notes, troubleshooting information, and downloads, refer to the following Web page:

http://www.ibm.com/software/data/db2/everyplace/support.html

Receiving information updates automatically

By registering with the IBM My Support service, you can automatically receive a weekly e-mail that notifies you when new DCF documents are released, when existing product documentation is updated, and when new product documentation is available. You can customize the service so that you receive information about only those IBM products that you specify.

To register with the My Support service:

1. Go to http://www.ibm.com/support/mysupport.
2. Enter your IBM ID and password, or create one by clicking **register now**.
3. When the My Support page is displayed, click **add products** to select those products that you want to receive information updates about. DB2 Everyplace is located under **Software** -> **Data and Information Management** -> **Databases**.
4. Click **Subscribe to email** to specify the types of updates that you would like to receive.
5. Click **Update** to save your profile.

The DB2 Everyplace information set

DB2® Everyplace® technical information is available in the following formats:

PDF files

The PDF versions of the books are titled as follows:

- *DB2 Everyplace Application and Development Guide*
- *DB2 Everyplace Sync Server Administration Guide*
- *DB2 Everyplace Installation and User's Guide*

A description of each book in the DB2 Everyplace library is available from:

- The IBM Publications Center at http://www.ibm.com/shop/publications/order
- The DB2 Everyplace Web site at http://www.ibm.com/software/data/db2/everyplace/library.html

IBM developerWorks

IBM developerWorks has technical articles about DB2 Everyplace and a forum for interacting with other DB2 Everyplace users. You can access the DB2 Everyplace section of IBM developerWorks at http://www.ibm.com/developerworks/db2/products/db2e/index.html .

Information center

The information center contains the entire DB2 Everyplace library in a convenient searchable format. More information is available on the DB2 Everyplace library page at http://www.ibm.com/software/data/db2/everyplace/library.html.

under the **Information Center** heading.

Online help

You can open HTML browser-based online help from the Mobile Devices Administration Center user interface.

Accessibility features

Accessibility features help users with physical disabilities, such as restricted mobility or limited vision, to use software products successfully.

The Installer, Configuration Wizard, and Mobile Devices Administration Center are all accessible and include the following accessibility features:

- Operate all features using the keyboard instead of the mouse.
- Customize the size and color of your fonts.
- Receive either visual or audio alert cues.
- Supports accessibility applications that use the Java™ Accessibility API.
- Comes with documentation that is provided in an accessible format.

Keyboard input

You can use keys or key combinations to perform operations that can also be done using a mouse. You can access context-sensitive menus from the menu bar instead of right-clicking.

Accessible display

DB2 Everyplace has features that enhance the user interface and improve accessibility for users with low vision. These accessibility enhancements include support for customizing font properties.

Font settings

You can select the color, size, and font for the text in menus and dialog windows.

No dependence on color

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

Supports high contrast colors

The Mobile Devices Administration Center displays well when you use a high contrast color scheme.

No flashing or blinking content

No text or graphical user interface elements flash or blink during operation.

Alternative alert cues

You can specify whether you want to receive alerts through audio or visual cues.

Compatibility with assistive technologies

The Mobile Device Administration Center interface supports the Java Accessibility API , enabling use by screen readers and other assistive technologies used by people with disabilities.

Accessible documentation

Accessible documentation for is available from the information center at http://publib.boulder.ibm.com/infocenter/db2e82/index.jsp.

How to send your comments

Your feedback is important in helping to provide the most accurate and high-quality information. If you have any comments about this book or any other DB2 Everyplace documentation, use either of the following options:

- Use the online reader comment form, which is located at:

  http://www.ibm.com/software/data/rcf/
- Send your comments by e-mail to comments@us.ibm.com. Be sure to include the name of the book, the part number of the book, the version of DB2 Everyplace, and, if applicable, the specific location of the text you are commenting on (for example, a page number or table number).

IBM DB2 Everyplace Installation and User's Guide version 8.2

Product overview

DB2 Everyplace is part of the IBM solution for pervasive computing. By using DB2 Everyplace, mobile professionals (such as sales people, inspectors, auditors, field service technicians, doctors, realtors, and insurance claim adjusters) can have access to vital data that they need when they are away from the office.

Organizations can deliver their enterprise data to mobile and embedded devices. By using DB2 Everyplace, you can access and perform updates to a database that resides on your mobile device. By using DB2 Everyplace Sync Server, you can synchronize data from the mobile device to other data sources in your enterprise.

The DB2 Everyplace mobile database is a relational database that resides on your mobile device. To access data on the mobile device, you can write applications using rapid application development tools, the supported set of DB2 Call Level Interface (CLI) functions, Java™ Database Connectivity (JDBC) methods, Open Database Connectivity (ODBC) methods, or ADO.NET methods.

The following editions of DB2 Everyplace are available:

DB2 Everyplace Enterprise Edition
Provides database and synchronization software for mobile devices. On the server side, the enterprise edition provides DB2 Everyplace Sync Server to synchronize data between the mobile device and enterprise data sources.

DB2 Everyplace Express Edition
Developed on the same code base as DB2 Everyplace Enterprise Edition, DB2 Everyplace Express is easy to install, deploy, and manage. DB2 Everyplace Express Edition uses a licensing model that is designed to provide an attractive price point for smaller installations while still providing a full-function mobile data solution.

DB2 Everyplace Database Edition
Provides a high-performance, standards-compliant database that runs on a variety of mobile and embedded platforms.

Restriction: You can install different editions on the same server, but you must install them in different directories.

An example DB2 Everyplace scenario

DB2 Everyplace can increase the productivity and efficiency of a mobile workforce. In this example, an insurance adjuster uses a mobile device that runs a DB2 Everyplace application.

Insurance claims adjusters are responsible for inspecting the damaged property of customers who file claims. In many companies, the adjuster visits the claimant's property, fills out paper forms to validate or refute the claim, and assesses the amount of the damages to be paid to the claimant. Later, when the adjuster returns to the office, the forms are manually entered into the company's computer system in a tedious and expensive process.

Equipping the adjusters with a mobile device that runs a DB2 Everyplace application can considerably streamline this process. By using their mobile devices

wherever they are, the adjusters can access their inspection schedule, route, and claimant policy information. The adjusters can also complete the adjustment form on the mobile device. The adjusters can then synchronize the data on their mobile devices with the company's computer system by uploading the new adjustment form data to the company's enterprise database. If the adjusters need information in the field, they can synchronize the data on their mobile devices with the company's computer system immediately by using modem or wireless connection.

The claims adjustment process can now be completely paper free, which translates into significant cost savings for the insurance company. Claims are also settled faster because adjusters have instant access to their company's enterprise databases.

The DB2 Everyplace environment

The DB2 Everyplace solution for mobile data synchronization includes three components: the DB2 Everyplace mobile database, the DB2 Everyplace Sync Server, and the DB2 Everyplace Sync Client.

DB2 Everyplace mobile database
The DB2 Everyplace mobile database runs on a mobile device and stores a local copy of data from a source system. Users can use the mobile device to access and modify this data. See the *DB2 Everyplace Application Development Guide* for information about the DB2 Everyplace mobile database and how to write applications that use the database software. The DB2 Everyplace mobile database is included with DB2 Everyplace Database Edition, DB2 Everyplace Express Edition, DB2 Everyplace Enterprise Edition, and the Mobility on Demand feature of DB2 Universal Database.

DB2 Everyplace Sync Server
The DB2 Everyplace Sync Server is a client/server program that manages two-way data synchronization between a source database and a target database. You can synchronize data and applications between DB2 Everyplace mobile devices and enterprise data sources by using the DB2 Everyplace Sync Server and DB2 Everyplace Sync Client.

The DB2 Everyplace Sync Server acts as an intermediary between the synchronization client software on the mobile device and the DB2 UDB database or the JDBC database on the source server. The DB2 Everyplace Sync Server also provides a mechanism for conflict resolution. The DB2 Everyplace Sync Server includes two administration tools:

The DB2 Everyplace Mobile Device Administration Center
This tool helps you manage and deliver synchronization services to groups of users with similar data synchronization needs.

The XML scripting tool
The XML Scripting tool automates tasks otherwise performed using the Mobile Devices Administration Center. You can also use the XML Scripting tool to copy or move subscriptions, subscription sets, users, groups from one server to several other servers.

The DB2 Everyplace Sync Server accesses this administration information each time a user requests data synchronization. The DB2 Everyplace Sync Server is included with DB2 Everyplace Enterprise Edition, DB2 Everyplace Express Edition, and the Mobility on Demand feature of DB2 Universal Database.

DB2 Everyplace Sync Client

The DB2 Everyplace Sync Client, which runs on mobile devices, is an API that applications use to support synchronization with the DB2 Everyplace Sync Server. It handles bidirectional synchronization of enterprise relational data with the DB2 Everyplace mobile database. The DB2 Everyplace Sync Client also manages operations that are related to file subscriptions for easy distribution of mobile applications to the device and can run stored procedures that reside on a DB2 database.

For information about the Application Programming Interfaces APIs that are provided with the DB2 Everyplace Sync Client, see the Javadocs in <DSYPATH>\doc*lang*\javadoc\SyncClientJavaAPI\index.html, or the .NET API in <DSYPATH>\doc*lang*\javadoc\ISyncNetAPI\ISync.NET.chm, where *lang* is the four letter code of your language.

Basic setup for the DB2 Everyplace solution

Setting up the DB2 Everyplace solution consists of two basic tasks: developing DB2 Everyplace applications and setting up synchronization.

1. Develop DB2 Everyplace applications.

   These applications provide mobile users access to DB2 Everyplace database tables on their mobile devices. You can develop DB2 Everyplace applications by using a suite of application development tools for mobile devices. See the Developing DB2 Everyplace Applications topic in the DB2 Everyplace Information Center or PDF version of the *DB2 Everyplace Application Development Guide*.

2. Set up synchronization.

   Specify the data from the source server that will be accessed by each group of users. Mobile workers use applications that are developed with the DB2 Everyplace API to connect to the server and copy source data to their mobile devices. They modify this data by using these applications, and then they synchronize their changes with the source database.

The DB2 Everyplace sample applications

The sample applications provide an example of an application that uses DB2 Everyplace.

The Visiting Nurse sample application demonstrates bidirectional synchronization between the mobile database and the Sync Server. The sample application has two parts: one part runs on the Sync Server and another part runs on the mobile device that has the DB2 Everyplace mobile database. The sample application on the mobile device demonstrates the database engine functionality in a standalone environment. When the Sync Server sample application and the DB2 Everyplace mobile database engine sample application are used together, they work as a complete application that invokes all components of DB2 Everyplace.

The DB2 Sync sample application demonstrates how to use the IBM Sync Client API to synchronize tables of the subscriptions that are defined in the Mobile Devices Administration Center.

The Command-Line Processor is a sample application that interacts with DB2 Everyplace through a command line interface. The Command-Line Processor is used for the DB2 Everyplace mobile database on mobile devices. It is not used by the Sync Server.

Migrating mobile devices and services to DB2 Everyplace

This topic describes how to migrate previous versions of DB2 Everyplace to DB2 Everyplace Version 8.2. Migration can be performed using either parallel migration or sequential migration.

Use parallel migration if you want to keep your existing server operating until you are ready to move to the new DB2 Everyplace Version 8.2 server. By using parallel migration, you can test the migration without interrupting service, because the client devices can continue to synchronize with the old DB2 Everyplace server. If you are using UNIX or Linux servers, you can perform parallel migration on the same physical server by using separate DB2 Everyplace Sync Server instances. For Windows environments, parallel migration requires two physical servers.

Sequential migration is performed using only one physical server. Some server down time can be expected, because the DB2 Everyplace Sync Server cannot accept synchronization requests during migration. In addition, sequential migration does not let you test the new server before migrating to it. If you have many users, sequential migration is ***not*** recommended.

Restriction: Sequential migration cannot be performed with UNIX or Linux servers.

Performing parallel migration to DB2 Everyplace Version 8.2

This topic provides an overview of the steps that you need to perform in order to migrate DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 to DB2 Everyplace Version 8.2. With parallel migration, you can test, evaluate, and move users to the new DB2 Everyplace Version 8.2 server gradually by migrating a group at a time.

You can perform parallel migration if you meet these minimum requirements:

- You must be migrating from DB2 Everyplace Version 8.1, FixPak 2 or Version 8.1.4 to DB2 Everyplace Version 8.2.
- If you are migrating from DB2 Everyplace 8.1, FixPak 2, the build date must be later than April 29, 2004. Steps to check the build date are explained in "Preparing the DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 server for migration" on page 9
- If you are migrating to DB2 Everyplace Version 8.2 on a Windows server, you need a separate, physical server. UNIX and Linux servers support parallel migration on the same physical server, but DB2 Everyplace Version 8.2 must be a separate instance from the older version of DB2 Everyplace.
- Parallel migration to DB2 Everyplace Version 8.2 is supported for the following source databases:
  - OS/390
  - DB2 UDB
  - AS/400
  - Lotus Domino
  - Oracle
  - SQL Server

DB2 Everyplace Version 8.2 does not support parallel migration for configurations with Informix and Sybase source databases on any platform. If you are migrating to DB2 Everyplace Version 8.2 in a Windows environment with Informix or Sybase source databases, you can use sequential migration. If you are migrating to DB2 Everyplace Version 8.2 in a UNIX environment or Linux environment with Informix or Sybase source databases you cannot use parallel migration or sequential migration. For information about the migration steps for these unsupported databases, contact IBM customer support.

- If you have JDBC subscriptions with an Oracle source database, and the tables in the subscriptions have LONG or LONG RAW columns, do not migrate to DB2 Everyplace Version 8.2. Contact IBM software support for assistance.

Important:

- If you are running DB2 Everyplace Version 8.1.4, the build date must be later than July 15, 2004 to preserve group and user filter parameters during migration. Steps to check the build date are explained in "Preparing the DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 server for migration" on page 9
- Do not create or edit subscriptions on any server during migration. You must clean up and disable the DB2 Everyplace Version 8.1, FixPak 2 or Version 8.1.4 server before you edit or create subscriptions on the DB2 Everyplace Version 8.2 server.
- If you have both JDBC and DataPropagator subscriptions, you must import each type of subscription separately.
- The new DB2 Everyplace 8.2 server can write to the production source databases at the same time as the older version of DB2 Everyplace. If this is a concern, duplicate the source databases before beginning the migration process and test the new DB2 Everyplace Version 8.2 configuration with the test source databases. This test is supported only for JDBC subscriptions.
- DB2 Everyplace Version 8.2 supports Version 8.1, FixPak 2 and Version 8.1.4 mobile devices. Therefore, you can choose whether to upgrade the mobile devices.
- If you have DataPropagator subscriptions, you must follow special instructions for importing and exporting DataPropagator subscriptions. For more information about the DataPropagator migration process, see *DataPropagator Migration Guide: Migrating to DB2 Replication Version 8* .

To perform parallel migration to DB2 Everyplace Version 8.2:

1. Optional: If you want to test the new DB2 Everyplace Version 8.2 configuration before allowing it to write to the source databases, duplicate the source databases by copying them to a test server. This test is supported only for JDBC subscriptions. When migrating to DB2 Everyplace Version 8.2, both the DB2 Everyplace Version 8.1, FixPak 2 or Version 8.1.4 server and the DB2 Everyplace Version 8.2 server can write to the production source databases.
2. Prepare the DB2 Everyplace 8.1.4 server for migration.
3. Prepare the DB2 Everyplace Version 8.2 server for migration.
4. Export the DB2 Everyplace Version 8.1, FixPak 2 or Version 8.1.4 configuration. If you have both DataPropagator and JDBC subscriptions, you must export each type of subscription separately.
   - For configurations that use DataPropagator subscriptions
   - For configurations that use JDBC subscriptions

5. Import the DB2 Everyplace Version 8.1, FixPak 2 or Version 8.1.4 configuration into the DB2 Everyplace Version 8.2 server. If you have both DataPropagator and JDBC subscriptions, you must import each type of subscription separately.
   - For configurations that use DataPropagator subscriptions
   - For configurations that use JDBC subscriptions
6. Synchronize client devices with the DB2 Everyplace Version 8.2 server.
7. Disable the DB2 Everyplace Version 8.1, FixPak 2 or Version 8.1.4 system:
   a. Make sure that no applications are connected to the source database, including the DB2 Everyplace Version 8.2 Sync Server.
   b. Delete all the subscriptions that are using the DB2 Everyplace Version 8.1, FixPak 2 or Version 8.1.4 Mobile Devices Administration Center.

You can now create or edit subscriptions on the DB2 Everyplace Version 8.2 server. If you haven't done so already, you can also choose to upgrade client device software to DB2 Everyplace Version 8.2 after migration is complete.

Preparing the DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 server for migration

This topic describes the steps that you must perform to prepare the DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 server to support parallel migration. DB2 Everyplace 8.1, FixPak 2 supports parallel migration ***only*** if the build date is later than April 29, 2004. Preparation of the server involves two steps:

- Checking the build date of DB2 Everyplace (version 8.1, FixPak 2 only) and upgrading your system if needed
- Creating a backup of the data on your system

Do not create or edit subscriptions while performing this task. Perform this task on the DB2 Everyplace 8.1, FixPak 2 or 8.1.4 server. This task is part of the larger task of performing parallel migration to DB2 Everyplace Version 8.2. When you finish these steps, return to "Performing parallel migration to DB2 Everyplace Version 8.2" on page 7.

To prepare the DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 server for migration:

1. If you are migrating from DB2 Everyplace Version 8.1, FixPak 2, determine the build date.
   a. Open a Web browser to the following URL, http://localhost:8080/db2e/db2erdb. The default port is 8080, but it might differ from your configuration.
   b. Check the build date in the message that is displayed. The build date format is in the form YYYYMMDD. If the build level is *earlier* than April 29, 2004 download the latest build from www.ibm.com/software/data/db2/everyplace/fixpaks811.html. If your build date is April 29, 2004 or later, proceed to the next step.
2. Replicate each mirror database.
   - On Windows, use the dsyreplicate tool that is located in the <DSYPATH>\Server\bin\ directory, where <DSYPATH> is the directory where DB2 Everyplace is installed.

     ```
     dsyreplicate mirror_db_name
     ```
   - On UNIX or Linux, use the dsyreplicate tool that is located in the $DSYINSTDIR/Server/bin/ directory.

```
./dsyreplicate.sh mirror_db_name
```

where *mirror_db_name* is the name of the mirror database that you want to replicate.

3. Stop the DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 Sync Server servlet.
4. Back up all source and mirror databases and the DSYCTLDB control database. For details on how to back up DB2 databases, refer to the DB2 Information Center. For details on how to back up non-DB2 databases, refer to the product documentation.
5. Restart the DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 Sync Server servlet so that client devices can resume synchronization.

Preparing the DB2 Everyplace Version 8.2.1 server for migration

If you are migrating to DB2 Everyplace Version 8.2 on Windows, you must have a separate, physical server to migrate to. If the older version of DB2 Everyplace is on a UNIX or Linux server, you can migrate to DB2 Everyplace Version 8.2 by creating a new instance on the same server or by using a separate, physical server.

Prerequisite:

- Use the same system user IDs and passwords as the DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 server.
- Install DB2 UDB 8.1.4 or DB2 UDB 8.2.
- Install the DB2 Everyplace Version 8.2 Sync Server and test it by running the VNurse sample.

Do not create or edit subscriptions while you are performing this task. Perform this task on the DB2 Everyplace Version 8.2 server. This task is part of the larger task of performing parallel migration to DB2 Everyplace Version 8.2. When you finish these steps, return to "Performing parallel migration to DB2 Everyplace Version 8.2" on page 7.

To prepare the DB2 Everyplace 8.2 server for migration:

1. Stop the DB2 Everyplace Version 8.2 Sync Server servlet.
2. Create the mirror databases that are required for all JDBC subscriptions that you want to migrate. Do not create mirror databases for DataPropagator subscriptions. You will back up and restore mirror databases for DataPropagator subscriptions at a later time.
3. Catalog the source databases. If you have a DB2 series source database, you must catalog the source databases to make it accessible. Refer to the DB2 Information Center for catalog steps. If your source database is non-DB2, enter the correct information for the JDBC driver while you are creating a subscription so that it can connect to the source database correctly. For more information on connecting to non-DB2 source databases while creating subscriptions, see the Subscriptions topic of the DB2 Everyplace Information Center or the *Sync Server Administration Guide*. If you are using test source databases, make sure this database is accessible instead of the production source database. You can only use test source databases with JDBC subscriptions.
4. For file subscriptions only, copy the subscribed files with the same directory path as the DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 server to the new DB2 Everyplace Version 8.2 server.

Exporting the DB2 Everyplace 8.1, FixPak 2 or 8.1.4 configuration

This topic explains how to export your current DB2 Everyplace 8.1, FixPak 2 or 8.1.4 configuration into an XML script. There are separate instructions for JDBC and DataPropagator subscriptions.

Exporting the DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 configuration for DataPropagator subscriptions

Prerequisites:

- If your DataPropagator subscriptions access a source database that is running on an AS/400 server, you must complete the following step:
  1. Create a new index on the prune control table on the source database:

```
CREATE UNIQUE INDEX ASN.IBMSNAP_PRUNCNTLX
    ON ASN.IBMSNAP_PRUNCNTL (
    SOURCE_OWNER,
    SOURCE_TABLE,
    SOURCE_VIEW_QUAL,
    APPLY_QUAL,
    SET_NAME,
    TARGET_SERVER,
    TARGET_TABLE,
    TARGET_OWNER);
```

- If your source database is DB2 UDB Version 7, migrate your source database to DB2 UDB Version 8. You cannot add, modify, or delete any DB2 Everyplace subscriptions if the source database is DB2 UDB Version 7.
- In order to migrate to DB2 UDB Version 8, ensure that the DB2 UDB Version 7 source database has fix pack 4 or later installed, and that replication is running normally for at least a week at that fix pack level. For more information, see the *DataPropagator Migration Guide: Migrating to DB2 Replication Version 8* (REPL-MIG8).
- You must redefine filter parameters for users and groups if you are migrating from DB2 Everyplace 8.1, FixPak 2 or if the build date of DB2 Everyplace 8.1.4 is *earlier* than July 15, 2004. Check the build date by opening a Web browser to localhost:8080/db2e/db2erdb. The default port is 8080, but it might differ from your configuration. The build date format is in the form YYYYMMDD.

Do not create or edit subscriptions while you are performing this task. Perform this task on the DB2 Everyplace 8.1, FixPak 2 or 8.1.4 server. This task is part of the larger task of performing parallel migration to DB2 Everyplace Version 8.2. When you finish these steps, return to "Performing parallel migration to DB2 Everyplace Version 8.2" on page 7.

To export the DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 configuration for DataPropagator subscriptions:

1. Run the XML scripting tool:
   - On Windows, use the dsyadminxml tool that is located in the <DSYPATH>\Server\bin\ directory, where <DSYPATH> is the directory where DB2 Everyplace is installed.

     ```
     dsyadminxml -x outputFile.xml
     ```

   - On UNIX, use the dsyadminxml tool that is located in the $DSYINSTDIR/Server/bin/ directory.

     ```
     ./dsyadminxml.sh -x outputFile.xml
     ```

2. Remove all tags that apply to JDBC subscriptions. You must export JDBC subscriptions separately.
3. Transfer the outputFile.xml file to the DB2 Everyplace Version 8.2 server.

Exporting the DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 configuration for JDBC subscriptions

Do not create or edit subscriptions while you are performing this task. Perform this task on the DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 server. This task is part of the larger task of performing parallel migration to DB2 Everyplace Version 8.2. When you finish these steps, return to "Performing parallel migration to DB2 Everyplace Version 8.2" on page 7.

Note: In the text below, <DSYPATH> refers to the directory where DB2 Everyplace is installed.

To export the DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 configuration for JDBC subscriptions:

1. Run the XML scripting tool:
   - On Windows, use the dsyadminxml tool that is located in the <DSYPATH>\Server\bin\ directory.

     ```
     dsyadminxml -x outputFile.xml
     ```

   - On UNIX, use the dsyadminxml tool that is located in the $DSYINSTDIR/Server/bin/ directory.

     ```
     ./dsyadminxml.sh -x outputFile.xml
     ```

2. Remove all tags that apply to DataPropagator subscriptions. You must export DataPropagator subscriptions separately.
3. **Optional:** If you are using a test source database, edit the `Database` and `MasterDb` tags in the outputFile.xml file to point to the test source database instead of to the production source database.

   ```
   <AddJdbcMaster>
   ...
    <Database>jdbc:db2:testSourceDb</Database>
   ...
   </AddJdbcMaster>
   <AddJdbcSubscription>
   ...
    <MasterDb>jdbc:db2:testSourceDb</MasterDb>
   ...
   </AddJdbcSubscription>
   ```

   where *testSourceDb* is the name of the test source database. Be sure to edit the `MasterDb` tag for all your subscriptions.
4. Transfer the outputFile.xml to the DB2 Everyplace Version 8.2 server.

Importing the DB2 Everyplace 8.1, FixPak 2 or 8.1.4 configuration

These topics explain how to import your current DB2 Everyplace 8.1, FixPak 2 or 8.1.4 configuration into a DB2 Everyplace version 8.2 configuration. There are separate instructions for JDBC and DataPropagator subscriptions.

Importing the DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 configuration for DataPropagator subscriptions

Prerequisites:

- Ensure that the LogFileSize setting of mirror database is at least 1000 4KB.
- Create a backup image of the mirror database that is used in DataPropagator table subscriptions on the DB2 Everyplace 8.1, FixPak 2 or 8.1.4 server.
- Verify that the database user IDs and passwords in the output file, outputFile.xml, on the DB2 Everyplace Version 8.2 server are correct.
- Ensure that there are no applications connected to the source databases and that DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 does not perform a replication to the source database.
- If your source database is UDB Version 7, we recommend that you migrate your source database to Version 8. You cannot add, modify, or delete any DB2 Everyplace Version 8.2 subscriptions if the source database is Version 7.
- In order to migrate to UDB Version 8, ensure that the Version 7 source database has fix pack 4 or later installed. In addition, be sure that replication is running normally for at least a week after fix pack 4 is installed. For more information, see the *DataPropagator Migration Guide: Migrating to DB2 Replication Version 8* (REPL-MIG8).

Do not create or edit subscriptions while performing this task. Perform this task on the DB2 Everyplace Version 8.2 server. This task is part of the larger task of performing parallel migration to DB2 Everyplace Version 8.2. When you finish these steps, return to "Performing parallel migration to DB2 Everyplace Version 8.2" on page 7.

To import the DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 configuration for DataPropagator subscriptions

1. Stop the DB2 Everyplace Version 8.2 Sync Server servlet. Do *not* open the Mobile Devices Administration Center after you have stopped the DB2 Everyplace Version 8.2 Sync Server servlet. If you open the Mobile Devices Administration Center, the next import step will have errors.
2. Restore the mirror database backup image from the DB2 Everyplace 8.1, FixPak 2 or 8.1.4 server. If the restored database is in a rollforward-pending state and does not allow connections, enter the following command in a DB2 command window to bring the database into a defined state:

   ```
   db2 rollforward database DB_name to end of logs and complete
   ```

   where *DB_name* is the name of the restored database.
3. Catalog the source database.
4. Edit the DSYDPMIG8ENV file and supply values for the environment variables that are listed in the file.
   - On Windows, edit the DSYDPMIG8ENV.bat script that is located in the <DSYPATH>\config\work\migrate\ directory, where <DSYPATH> is the directory where DB2 Everyplace is installed.
   - On UNIX, edit the DSYDPMIG8ENV.sh script that is located in the $DSYINSTDIR/config/work/migrate/ directory.
5. Run the DSYPREASNMIG8 command.

   If you receive the following error: `DB2Exception: SQL1117N A connection to or activation of database dbname cannot be made because of ROLL-FORWARD PENDING` (SQLSTATE = 57019), you need to use the rollforward command to bring the database into a defined state as described in step 2.

6. For DB2 UDB Version 7 mirror database backup images only, perform DataPropagator migration (see ″Migrating UNIX and Windows servers″ in the *DataPropagator Migration Guide: Migrating to DB2 Replication Version 8* (REPL-MIG8))
   a. Create table spaces for migration on the mirror database of the DB2 Everyplace Version 8.2 server (BACKUPTS, UOWTS, and OTHERTS. See sqllib\samples\repl\mig8udb.sql for sizing detail).
   b. Customize and run the sqllib\samples\repl\mig8udb.sql on the mirror database of the DB2 Everyplace Version 8.2 server. If the default table space and schema names are acceptable, no customization is required.
   c. For iSeries only, run ASNPWD to create a password file for ASNMIG4C on the DB2 Everyplace Version 8.2 server and run ASNMIG4C.
   d. Bind the ASNMIG8 program on the DB2 Everyplace Version 8.2 server.
   e. Run ASNMIG8 BACKUP.
   f. Run ASNMIG8 MIGRATION.
7. Edit the outputFile.xml file so that each DataPropagator subscription has the attribute Replicate set to FALSE. For example:

   ```
   <AddDproprSubscription Replicate = "FALSE">
   ```

   Then remove all the <AddAdapter> and </AddAdapter> tags and their contents if they exist in the outputFile.xml file. If you do not remove the tags, you will receive the following error message: `Error processing XML: Adapter already exists in the next import step`.
8. Import the DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 configuration using the XML Scripting tool.
   - On Windows, use the dsyadminxml tool that is located in the <DSYPATH>\Server\bin\ directory, where <DSYPATH> is the directory where DB2 Everyplace is installed.

     ```
     dsyadminxml -d outputFile.xml
     ```
   - On UNIX, use the dsyadminxml tool that is located in the $DSYINSTDIR/Server/bin/ directory.

     ```
     ./dsyadminxml.sh -d outputFile.xml
     ```

   If the import results in filter and parameter syntax errors, fix them in the outputFile.xml file before you import the configuration again. See the table filters topic in *DB2 Everyplace Sync Server Administration Guide* for more information about filter syntax.
9. Run DSYPOSTASNMIG8.
10. Disable all groups that are using the DB2 Everyplace Version 8.2 Mobile Devices Administration Center.
11. Replicate each mirror database:
    - On Windows, use the dsyreplicate tool that is located in the <DSYPATH>\Server\bin\ directory, where <DSYPATH> is the directory where DB2 Everyplace is installed.

      ```
      dsyreplicate mirror_db_name
      ```
    - On UNIX, use the dsyreplicate tool that is located in the $DSYINSTDIR/Server/bin/ directory.

      ```
      ./dsyreplicate mirror_db_name
      ```

    where *mirror_db_name* is the name of the mirror database that you want to replicate.

12. Verify that the DB2 Everyplace Version 8.2 mirror database is correctly migrated and that it properly supports the DataPropagator table subscriptions.
13. Drop the BACKUPTS table space and all other tables in the schema BACKUP (substitute your own table space and schema names if you did not use the default names).
14. Start the DB2 Everyplace Version 8.2 Sync Server servlet.

Importing the DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 configuration for JDBC subscriptions

Prerequisites

- Verify that the database user IDs and passwords in the output file, outputFile.xml, on the DB2 Everyplace Version 8.2 server are correct.
- Ensure that there are no applications connected to the source databases. Make sure DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 does not perform a replication to the source database.

Do not create or edit subscriptions while performing this task. Perform this task on the DB2 Everyplace Version 8.2 server. This task is part of the larger task of performing parallel migration to DB2 Everyplace Version 8.2. When you finish these steps, return to "Performing parallel migration to DB2 Everyplace Version 8.2" on page 7.

To import the DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 configuration for JDBC subscriptions

1. Stop the DB2 Everyplace Version 8.2 Sync Server servlet.
2. Remove all the <AddAdapter> and </AddAdapter> tags from the outputFile.xml file. If you do not remove the tags, you will receive the following error message: `Error processing XML: Adapter already exists in the next import step`.
3. Import the DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 configuration by using the XML Scripting tool.
   - On Windows, use the dsyadminxml tool that is located in the <DSYPATH>\Server\bin\ directory, where <DSYPATH> is the directory where DB2 Everyplace is installed.

     ```
     dsyadminxml -d outputFile.xml
     ```

   - On UNIX, use the dsyadminxml tool located at $DSYINSTDIR/Server/bin/.

     ```
     ./dsyadminxml.sh -d outputFile.xml
     ```

   If the import results in filter and parameter syntax errors, fix them in the outputFile.xml file before you import the configuration again. See the table filters topic in *DB2 Everyplace Sync Server Administration Guide* for more information about filter syntax.
4. Disable all groups that are using the DB2 Everyplace Version 8.2 Mobile Devices Administration Center.
5. Replicate the mirror databases that you created for your subscriptions:
   - On Windows, use the dsyreplicate tool that is located in the <DSYPATH>\Server\bin\ directory, where <DSYPATH> is the directory where DB2 Everyplace is installed.

     ```
     dsyreplicate mirror_db_name
     ```

   - On UNIX, use the dsyreplicate tool that is located in the $DSYINSTDIR/Server/bin/ directory.

```
./dsyreplicate mirror_db_name
```

where *mirror_db_name* is the name of the mirror database that you want to replicate. Make sure that replication is successful. If there is an error, fix the error and rerun the script.

6. Start the DB2 Everyplace Version 8.2 Sync Server servlet.

Synchronizing client devices with the DB2 Everyplace Version 8.2 server

With parallel migration, you can migrate a small subset of your client devices that synchronize to the DB2 Everyplace 8.1, FixPak 2 or 8.1.4 server to synchronize to the DB2 Everyplace 8.2 server. Do not create or edit subscriptions while you are performing this task. This task is part of the larger task of performing parallel migration to DB2 Everyplace Version 8.2. When you finish these steps, return to "Performing parallel migration to DB2 Everyplace Version 8.2" on page 7.

To synchronize the client devices with the DB2 Everyplace Version 8.2 server:

1. On the DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 server:
   a. Identify a synchronization group to migrate.
   b. Synchronize all client devices that are in the group with the DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 server and ensure that synchronization is successful.

      Important: A client device must not make any changes to data during the time after this synchronization and before it synchronizes with the DB2 Everyplace Version 8.2 server. If it does, those changes are lost, because the client device refreshes when it synchronizes with the DB2 Everyplace Version 8.2 server for the first time.

   c. Replicate each mirror database and ensure successful replication.
   d. Disable this synchronization group in the Mobile Devices Administration Center.
2. On the DB2 Everyplace Version 8.2 server:
   a. Replicate each mirror database and ensure successful replication.
   b. Enable the same synchronization group that you disabled on the DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 server in the Mobile Devices Administration Center.
   c. **Optional:** Upgrade the group of client devices to DB2 Everyplace Version 8.2. DB2 Everyplace Version 8.2 is compatible with Version 8.1, FixPak 2 and 8.1.4 client devices, so you can choose to do this at a later time.
   d. Update the server IP address in the server settings of the synchronization client program to the IP address of the DB2 Everyplace Version 8.2 Sync Server for all client devices in the group.
   e. Synchronize the group and ensure it is successful.

      Important: The client devices that are in the group are refreshed, because they are now synchronizing to the new DB2 Everyplace Version 8.2 system. Any changes that a client device made after synchronizing for the last time with the DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 system are lost after this refresh.

   f. Compare all of the clients' table data with the source table data and make sure they are the same.

3. Repeat steps 1 - 2 until you migrate all client devices to the DB2 Everyplace Version 8.2 server.

Testing compatibility of different versions of DB2 Everyplace client devices

Because DB2 Everyplace Version 8.2 supports DB2 Everyplace Version 8.1, FixPak 2 and 8.1.4 client devices, you can test to see if the two types of client devices receive changes from each other. This test is optional. This task is part of the larger task of performing parallel migration to DB2 Everyplace Version 8.2. When you finish these steps, return to "Performing parallel migration to DB2 Everyplace Version 8.2" on page 7.

1. On a DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 client device:
   a. Insert, update, and delete rows from the client device.
   b. Synchronize the client device.
   c. Replicate each mirror database and ensure that the replication is successful.
   d. Compare the client device data with the source table data and ensure that they are the same.
2. On a DB2 Everyplace Version 8.2 client device:
   a. Synchronize the client device.
   b. Replicate each mirror database and ensure that the replication is successful.
   c. Synchronize the client device and ensure that the replication is successful.
   d. Compare the client device data and the source table data and ensure that they are the same.
   e. Insert, update, and delete rows from a client device.
   f. Synchronize the client device.
   g. Replicate each mirror database and ensure that the replication is successful.
   h. Compare the client device data with the source table data and ensure that they are the same.
3. On a DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 client device:
   a. Replicate each mirror database and ensure that the replication is successful.
   b. Synchronize the client device and ensure that the replication is successful.
   c. Compare the client device data and the source table data and ensure that they are the same.

Sequential migration: upgrading DB2 Everyplace on a single server

Prerequisites:

- Sequential migration supports only Windows servers.
- You can migrate only JDBC subscriptions.
- You must be migrating from DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 to DB2 Everyplace Version 8.2.

Sequential migration does not require you to have an extra physical server to migrate to. If you have a Windows server, use sequential migration only if you do not want to migrate to another physical server. If you have a UNIX or Linux server, use parallel migration with separate DB2 Everyplace Sync Server instances if you do not want to migrate to another physical server. Do not use sequential migration in a UNIX or Linux environment.

To perform sequential migration:

1. Back up the DB2 Everyplace Version 8.1. FixPak 2 or Version 8.1.4 configuration.
2. Export the DB2 Everyplace Version 8.1 FixPak 2 or Version 8.1.4
3. Uninstall DB2 Everyplace Version 8.1 FixPak 2 or Version 8.1.4
4. Install DB2 Everyplace Version 8.2

Backing up the DB2 Everyplace Version 8.1 FixPak 2 or Version 8.1.4 configuration

To back up the DB2 Everyplace Version 8.1 FixPak 2 or Version 8.1.4 configuration:

1. Notify all users to synchronize with the DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 Sync Server.
2. Replicate each mirror database by using the dsyreplicate tool that is located in the <DSYPATH>\Server\bin\ directory, where <DSYPATH> is the directory where DB2 Everyplace is installed.

   ```
   dsyreplicate mirror_db_name
   ```

   where *mirror_db_name* is the name of the mirror database that you want to replicate.
3. Stop the DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 Sync Server servlet.
4. Back up all source, mirror, and control databases. For details about backing up DB2 databases, refer to the DB2 Information Center. For details about backing up non-DB2 databases, refer to the product's documentation.

Exporting the DB2 Everyplace Version 8.1 FixPak 2 or Version 8.1.4 configuration

1. Run the XML scripting tool that is located in the <DSYPATH>\Server\bin\ directory (where <DSYPATH> is the directory where DB2 Everyplace is installed) to export the DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 configuration:

   ```
   dsyadminxml -x outputFile.xml
   ```
2. For DB2 Everyplace 8.1, FixPak 2 configurations only:
   a. Redefine filter parameters for users and groups in the exported XML.
   b. Rearrange the order of subscriptions in the exported XML if subscription order is important.
3. Remove all tags that apply to DataPropagator subscriptions. You cannot export DataPropagator subscriptions.
4. Remove the `<AddServer>` and `</AddServer>` tags and their contents if they exist in the outputFile.xml file.

Uninstalling DB2 Everyplace Version 8.1 FixPak 2 or Version 8.1.4

1. Use the DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 Sync Server to delete all subscriptions.
2. Uninstall DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4.
3. Drop all mirror databases and the control database (DSYCTLDB).
4. If the outputFile.xml file is located in the <DSYPATH> directory or its subdirectories (where <DSYPATH> is the directory where DB2 Everyplace is

installed), move it to a directory outside of <DSYPATH>. You can also choose to move other files if you want to keep them, such as log files.

5. Delete the <DSYPATH> directory from the server.

Installing DB2 Everyplace Version 8.2

Prerequisites:

If you are using DB2 UDB Version 7.2, upgrade to DB2 UDB Version 8.1.4 or 8.2.

To install DB2 Everyplace Version 8.2:

Note: In the steps below, <DSYPATH> refers to the directory where DB2 Everyplace is installed.

1. Install the DB2 Everyplace Version 8.2 Sync Server.
2. Stop the DB2 Everyplace Version 8.2 Sync Server servlet.
3. Re-create all the mirror databases with the same name and configuration (for example, the transaction log size), as the original mirror databases.
4. Open a new command or shell window so that all the environment variables are set correctly.
5. Import the DB2 Everyplace Version 8.1, FixPak 2 or 8.1.4 configuration using the XML Scripting tool.
   - Use the dsyadminxml tool located in the<DSYPATH>\Server\bin\ directory.

     ```
     dsyadminxml -d outputFile.xml
     ```

   If the import results in filter and parameter syntax errors, fix them in the outputFile.xml file before importing again. See the table filters section in *DB2 Everyplace Sync Server Administration Guide* for more information about filter syntax.
6. Replicate each mirror database byusing the dsyreplicate tool that is located in the <DSYPATH>\Server\bin\ directory.

   `dsyreplicate` *`mirror_db_name`*

   where *mirror_db_name* is the name of the mirror database that you want to replicate.
7. Start the DB2 Everyplace version 8.2 Sync Server servlet.
8. Optional: upgrade the client devices to DB2 Everyplace version 8.2. DB2 Everyplace version 8.2 is compatible with version 8.1.2 and 8.1.4 client devices, so you can choose to do this at a later time.
9. Synchronize a client device with the DB2 Everyplace Version 8.2 Sync Server, and ensure that it is successful.

Installing DB2 Everyplace

Topics in this topic explain how to install DB2 Everyplace files on a server and on mobile devices. It describes the procedures for each of the following DB2 Everyplace editions:

- DB2 Everyplace Database Edition
- DB2 Everyplace Enterprise Edition
- DB2 Everyplace Express

Before installing DB2 Everyplace

Topics in this topic apply only to DB2 Everyplace Enterprise Edition and DB2 Everyplace Express Edition.

Adjusting system parameters for AIX before you install DB2 Everyplace

In order for DB2 Everyplace to operate with the highest degree of efficiency, system parameters need to be adjusted. Failure to do so can result in the inability to create a new connection to the database. The extended shared memory segments should be enabled.

Note: Only 32-bit DB2 Universal Database instances are supported.

If DB2 Universal Database is already installed, perform the following steps for each DB2 UDB instance that will run DB2 Everyplace:

1. Modify the login profile (most likely /home/<username>/.profile), to include the following: `export EXTSHM=ON`
2. Exit the user shell.
3. Login as the user (to make the changes effective) and open a new shell.
4. From the shell prompt, execute the following command: `db2set DB2ENVLIST=EXTSHM`
5. Restart the DB2 Universal Database instance.

Preparing to install DB2 Everyplace on Linux on 32-bit Intel x86 systems

In order for DB2 Everyplace to operate as efficiently as possible, you must adjust your system parameters prior to installing DB2 Everyplace. Failure to do so can result in the inability to create a new connection to the database.

Important: Only 32-bit DB2 Universal Database instances are supported on 32-bit Intel x86 systems.

1. For Linux systems that are running kernel 2.4, log in as the root user and issue the following commands:

```
sysctl -w kernel.msgmni=2048
sysctl -w kernel.shmmax=1073741824
sysctl -w fs.file-max=32768
sysctl -w kernel.sem="512 32000 32 1024"
sysctl -w kernel.threads-max=20480
```

Important: To execute these commands automatically each time that you boot the system, place them at the end of the /etc/rc.d/rc.local file.

2. **For users of SUSE Linux version 9.1 and Red Hat Linux 4 Enterprise Edition:** Support for SUSE Linux version 9.1 and Red Hat Linux 4 Enterprise Edition on 32-bit Intel x86 systems is new as of DB2 Everyplace version 8.2 fix pack 2. To install DB2 Everyplace version 8.2 on these platforms you must first install the IBM Java Runtime Environment version 1.4.2.

   In the following examples, *<JAVA_HOME>* is the directory of the IBM Java Runtime Environment.

   To launch the DB2 Everyplace Launch Pad:

   a. Log in as the root user.
   b. Change to the directory of the DB2 Everyplace version 8.2 installation image.
   c. Issue the following command: `<JAVA_HOME>/jre/bin/java -classpath ./lib/dsysetup.jar:$CLASSPATH com.ibm.db2e.install.launchpad.LaunchPad`

   To launch the DB2 Everyplace Installer Wizard:

   a. Log in as the root user.
   b. Change to the directory of the DB2 Everyplace version 8.2 installation image.
   c. Issue the following command: `<JAVA_HOME>/jre/bin/java -classpath ./lib/dsysetup.jar:$CLASSPATH -jar ./lib/DB2Everyplace.jar`

   Important: Do not configure DB2 Everyplace 8.2. Instead, install the fix pack. After you apply the fix pack on Linux SUSE 9.1 and Red Hat Linux 4 Enterprise Edition, the Update Installer Wizard will ask if you want to configure your installation. Click Next to close the Wizard. At this time, your system will NOT be configured.

   To configure DB2 Everyplace version 8.2 fix pack 2

   a. Log in as the root user.
   b. Change to the <DSYPATH>/config directory.
   c. Issue the following command: `./DSYConfig <configuration_type>`

      where *configuration_type* is the type of configuration that you want to perform.

      Example: To perform a basic configuration, type: `./DSYConfig basic-config`

Adjusting system parameters for Solaris

In order for DB2 Everyplace to operate with the highest degree of efficiency, system parameters in DB2 Universal Database need to be adjusted. Failure to do so can result in unexpected interruptions. It is recommended that the kernel parameters are adjusted.

Note: Only 32-bit DB2 Universal Database instances are supported.

1. For Solaris systems, the default system kernel parameters are insufficient to run DB2 Universal Database and DB2 Everyplace. These values can be added or edited in the file, /etc/system.

2. The format for setting these values is: `set parameter_name = value`
3. The suggested parameters in the DB2 Universal Database should be adjusted to include the following minimum values:

```
set shmsys:shminfo_shmseg = 256
set semsys:seminfo_semume = 256
```

4. After modification of any kernel parameters, reboot the system to make the kernel settings effective.

Installing DB2 Everyplace Database Edition

Installing DB2 Everyplace Database Edition is a two-step process:

1. Copy files from a source to a workstation
2. Install the files on one or more mobile devices (or emulators)

DB2 Everyplace Database Edition includes an Installation wizard that copies files to a workstation; the procedure for installing the files on a mobile device varies depending on the device.

DB2 Everyplace Database Edition installation requirements

The exact configuration that you need to support your environment with satisfactory response time will vary depending on workstation speed, memory, and network and server workload. Evaluate and adjust the minimum recommended configurations according to your unique requirements.

Hardware requirements

Disk space recommendations are for the product installation and working space only. The actual hard disk space required will vary depending upon your installation. To copy DB2 Everyplace files locally, your workstation must meet or exceed the following hardware requirements:

- Intel Pentium III, AMD Athlon, AMD64, or comparable processor
- 512 MB of memory
- 80 MB of free disk space

Software requirements

To install DB2 Everyplace Database Edition, you need a workstation running Windows 2000, Windows 2003, or Windows XP.

You also need software that enables a workstation and a mobile device to communicate (for example, Palm HotSync). This software is not provided with DB2 Everyplace. You must obtain it from another source, such as the device manufacturer's Web site.

See Table 6 on page 38 for a list of mobile devices and processors that are supported by the DB2 Everyplace Database.

Application development workstation requirements

To develop applications for DB2 Everyplace, your workstation must meet or exceed these minimum requirements:

- Microsoft Windows 2000, Windows XP, or Windows 2003 Server
- 150 MB available disk space

- 256 MB of memory

Installing DB2 Everyplace Database Edition by using the Installation wizard

The Installation wizard copies files from a CD or compressed archive to a server. You can specify a destination directory, and you can choose one of the following installation types:

Typical
Copies a predefined set of files to default locations relative to a directory you specify.

Custom
Allows you to choose files for specific mobile devices.

To install DB2 Everyplace Database Edition by using the Installation wizard:

1. Start the Installation wizard.

   There are two ways to start the Installation wizard:
   - Insert the DB2 Everyplace CD, and the Installation wizard starts automatically.
   - Run the dsysetup.exe file. The dsysetup.exe file is in the root directory of the archive.
2. Proceed by following the wizard's prompts.

   DB2 Everyplace files are not copied to your system until you click **Next** in the Pre-installation Summary page.

Uninstalling DB2 Everyplace Database Edition

Use the uninstallation wizard to remove DB2 Everyplace Database Edition from your system.

Important: If you are running SUSE Linux version 9.1 or Red Hat Linux 4 Enterprise Edition, do not uninstall Fix Pack 2 before you uninstall DB2 Everyplace. Instead, leave Fix Pack 2 installed and follow the appropriate uninstallation instructions below.

Important: The Java Virtual Machine that is included with DB2 Everyplace version 8.2, Fix Pack 2 is newer than the one that is provided with DB2 Everyplace version 8.2. The DB2 Everyplace version 8.2 uninstallation program does not work with the newer Java Virtual Machine. Make sure that you follow the appropriate uninstallation instructions for your version of DB2 Everyplace.

To uninstall DB2 Everyplace Database Edition:

1. Start the DB2 Everyplace uninstallation wizard.

   If you are running DB2 Everyplace version 8.2, Fix Pack 2:

   Run the DB2EveryplaceUninstall.bat file, which is located in the <DSYPATH>\Uninstaller directory.

   If you are running DB2 Everyplace version 8.2, Fix Pack 1, or DB2 Everyplace version 8.2:

   Uninstall DB2 Everyplace by using either of the following methods:
   - Run the DB2EveryplaceUninstall.exe file, which is located in the <DSYPATH>\Uninstaller directory.

- Use the Windows Add/Remove Programs feature.

Important: The DB2 Everyplace version 8.2 uninstallation wizard does not remove the files that were modified by fix packs. The files in the <DSYPSATH>\Clients and <DSYPATH>\version directories are not deleted and remain on the system after you uninstall version 8.2. Delete the <DSYPATH> directory before you install DB2 Everyplace version 8.2 again.

2. Follow the instructions that are provided by the uninstallation wizard.
3. Click **Finish** to delete the DB2 Everyplace files from your system.

Installing DB2 Everyplace Enterprise Edition

You need to install the DB2 Everyplace Sync Server on a server, and install the DB2 Everyplace mobile database and DB2 Everyplace Sync Client software on each mobile device or emulator that connects to the server. Requirements vary depending on the hardware, software, and operating system of the target server, device, or emulator.

After you install and configure DB2 Everyplace, you can start the First Steps launchpad, which provides links to sample applications and other resources that will help you get started using DB2 Everyplace.

DB2 Everyplace Enterprise Edition installation requirements

The exact configuration you need to support your environment with satisfactory response time will vary depending on the size of the objects that you are working with, workstation speed, memory, and network and server workload. Evaluate and adjust the minimum recommended configurations according to your unique requirements.

Hardware requirements

To install DB2 Everyplace Enterprise Edition, your system must meet the following hardware requirements:

- Intel Pentium III, AMD Athlon, AMD64, SPARC (for Solaris), POWER (for AIX and SUSE Linux Version 8.1), or comparable processor
- 1 GB of memory (2 GB recommended)
- 1 GB of free disk space to install DB2 Everyplace Enterprise Edition. You will need additional space for the configuration process; the amount of space that is required depends on the type of configuration that you use. The DB2 Everyplace Configuration Wizard returns an error if the target computer does not have enough disk space for the specified configuration.

  Table 1 on page 26 lists the disk space requirements for different platforms based on the type of message store that you want to use. For Windows platforms, the hard drive must have the required amount of disk space. For Linux and UNIX, the home directory must have the required amount of disk space for each instance of the DB2 Everyplace Sync Server.

Table 1. Disk space requirements for different configuration types

Configuration type	Windows systems	Linux and UNIX systems
Basic	400 MB to use the database message store 350 MB to use the file system message store	520 MB to use the database message store 470 MB to use the file system message store
Distributed database	300 MB to use the database message store 250 MB to use the file system message store	420 MB to use the database message store 370 MB to use the file system message store
Distributed server	200 MB	320 MB
Cluster configuration (local databases)	300 MB	420 MB
Cluster configuration (remote databases)	100 MB	220 MB
Remote administration	100 MB	220 MB

Important: When you install DB2 Everyplace Enterprise Edition on a UNIX system, make sure that the sticky bit is not set on the directory that contains the home directories of the users. This is usually the /home directory. DB2 Everyplace will not work properly if the sticky bit is set.

Software requirements

The DB2 Everyplace Sync Server requires the following software:

- Workstation-to-mobile-device connection software, such as Palm HotSync, is required to enable the server and a mobile device to communicate. This software is not provided with DB2 Everyplace. You must obtain it from another source, such as Web site of the manufacturer of the mobile device.
- DB2 Universal Database Version 8.1 or Version 8.2. If the DB2 Everyplace installer does not find DB2 Universal Database on your system, it installs an embedded version of DB2 Universal Database Enterprise Server Edition with limited functionality.

  Restriction: Do not upgrade DB2 UDB to a new full version while DB2 Everyplace is installed. Instead, remove DB2 Everyplace, upgrade DB2 UDB, and then install DB2 Everyplace again.
- One of the following editions of WebSphere Application Server:
  - Embedded WebSphere Application Server Express Edition (included with DB2 Everyplace).
  - WebSphere Application Server Version 5 fix pack 2 or later
- A supported database server (if you want the DB2 Everyplace Sync Server to synchronize DB2 Everyplace data with a source database). See the DB2 Everyplace Web site at http://www.ibm.com/software/data/db2/everyplace for the list of database servers that the DB2 Everyplace Sync Server supports.

Operating system requirements

DB2 Everyplace Enterprise Edition runs on the following operating systems:

DB2 Everyplace Sync Server

- AIX (Korn shell or compatible environment required)
  - 5.1 Maintenance Level 5100-04 and later
  - 5.2 Maintenance Level 5200-01 + APAR IY44183
  - 5.2 Maintenance Level 5200-02 and later
- Mandrake Linux Version 8.2 and 9.2 (Intel and AMD x86 processors)
- Red Hat Enterprise Linux Version 3
- Red Hat Enterprise Linux Version 4
- Red Hat Linux Version 7.3 and 8.0 (Intel and AMD x86 processors)
- SUSE Linux Enterprise Server Version 9.1 RC 5 (Intel and AMD x86 processors)
- SUSE Linux Enterprise Server Version 9.1 RC 5 (POWER processors)
- SUSE Linux Version 8.1 (Linux for iSeries and POWER processors)
- Sun Solaris Version 8 and 9 (The Korn shell or compatible environment is required.)
- Microsoft Windows 2000 Server SP3 and SP4
- Microsoft Windows 2003 Server, Enterprise

DB2 Everyplace Database and DB2 Everyplace Sync Client

Operating system requirements vary depending on the processor of the target mobile device. See Table 6 on page 38 for more information.

Installing DB2 Everyplace Enterprise Edition on a server

Setting up DB2 Everyplace Enterprise Edition on a server is a two-step process: copy DB2 Everyplace files from a source to the server, then configure the environment.

Prerequisites:

Windows

Log in as an administrator.

Linux and UNIX

- Log in as root user.
- Add the following line to the login profile for each DB2 Everyplace Sync Server instance: `export DISPLAY=`*`hostname`*`:0.0`

  Replace *hostname* with the name of the workstation where you want to use the Mobile Devices Administration Center.

For all supported operating systems, the server must meet or exceed the requirements specified in "DB2 Everyplace Enterprise Edition installation requirements" on page 25.

To install DB2 Everyplace Enterprise Edition on a server:

Choose one of the following methods:

- "Installing DB2 Everyplace Enterprise Edition by using the Installation wizard." The wizard takes input from a user and copies files to one server at a time.
- "Installing DB2 Everyplace Enterprise Edition by using a response file and the command line installation tool" on page 29. The command line installer reads input from a text file that contains setup information.

After installing DB2 Everyplace files, you must configure the runtime environment.

Installing DB2 Everyplace Enterprise Edition by using the Installation wizard

The DB2 Everyplace Installation wizard copies files from a source (such as a CD or compressed archive) to a server. You can choose one of the following installation types:

Typical
Copies a predefined set of files to default locations relative to a directory you specify.

Custom
You specify the files to copy (for example, to support specific mobile devices). A custom installation also allows you to save your specifications in a response file that you can use to automate the installation process on other computers at a later time.

To install DB2 Everyplace Enterprise Edition by using the Installation wizard:

1. Start the DB2 Everyplace Launchpad

   The procedure for starting the Launchpad varies depending on your operating system and whether you are installing from a CD or a downloaded archive. Table 2 lists the procedures for starting the Launchpad from a CD on various operating systems.

   Table 2. Starting the DB2 Everyplace Launchpad from a CD

Operating system	Procedure
Windows	The Launchpad starts automatically when you insert the CD.
Linux	1. Mount the CD. 2. Run dsysetup as the root user.
AIX and Solaris	1. Mount the CD labeled Disc 1 2. Copy Disc 1 to a temporary directory, hereafter referred to as $TMPDIR. 3. Mount the CD labeled Disc 2. 4. Copy Disc 2 to $TMPDIR. 5. Run dsysetup as the root user.

   Table 3 on page 29 lists the procedures for starting the Launchpad from an archive on various operating systems.

Table 3. Starting the DB2 Everyplace Launchpad from an archive

Operating system	Procedure
Windows	1. Unzip the archive file. 2. Run the DB2EveryplaceEnterprise82Windows\dsysetup.exe file.
Linux	1. Untar the archive file as root. 2. Change the working directory to DB2EveryplaceEnterprise82Linux 3. Run the ./dsysetup command as root.
Linux for iSeries	1. Untar the archive file as root. 2. Change the working directory to DB2EveryplaceEnterprise82iLinux 3. Run the ./dsysetup command as root.
AIX	1. Untar the archive file as root. 2. Change the working directory to DB2EveryplaceEnterprise82AIX 3. Run the ./dsysetup command as root.
Solaris	1. Untar the archive file as root. 2. Change the working directory to DB2EveryplaceEnterprise82Solaris 3. Run the ./dsysetup command as root.

2. Click **Install** to start the Install wizard. You can also read release notes and installation instructions from the launchpad.
3. Proceed by following the wizard's prompts. DB2 Everyplace files are not copied to your system until you click **Next** in the Pre-installation Summary page.

After copying the files to the server, you must configure the installation before you use the DB2 Everyplace Sync Server or the DB2 Everyplace Mobile Devices Administration Center. You can start the Configuration wizard from the Installation wizard by clicking **Configure** in the Post-Install Summary panel, or you can start the wizard manually later. You can also configure the installation by using the command line configuration tool.

Installing DB2 Everyplace Enterprise Edition by using a response file and the command line installation tool

The command line installer reads input from a file called a *response file*, and can automatically install DB2 Everyplace on multiple systems. A response file is an ASCII text file that contains setup data. The response file can be generated either by performing a custom installation with the DB2 Everyplace Installation wizard or by manual editing.

To install DB2 Everyplace by using a response file and the command line installation tool:

1. Open a command window and navigate to the top level directory of the CD or archive.

   The command line installer, installSilent, is in the top level directory of the CD or archive.
2. Run the installSilent command.

Windows

```
installSilent.bat full_path_to_response_file
```

Linux and UNIX

```
./installSilent.sh full_path_to_response_file
```

A sample response file is provided in the lib directory of the CD or archive.

The following example starts the command line installation tool on Windows and specifies C:\lib\db2eSilent.rsp as the response file.

```
C:\>installSilent.bat C:\lib\db2eSilent.rsp
```

Uninstalling DB2 Everyplace Enterprise Edition

Use the uninstallation wizard to remove DB2 Everyplace Enterprise Edition from your system.

Prerequisites: Before you use the uninstallation wizard, perform the following tasks:

Windows systems

1. Log in as an administrator.
2. Back up all user data.
3. Unconfigure DB2 Everyplace before you remove it. You can unconfigure DB2 Everyplace by using the configuration wizard or the command-line configuration tool.
4. If you are using the embedded DB2 UDB, drop all DB2 Everyplace databases, such as DSYCTLDB, DSYMSGDB, DSYCSTAT, VNURSE, and M_VN2.

Linux and UNIX systems

1. Log in as the root user.
2. Back up all user data.
3. Drop all DB2 Everyplace Sync Server instances. When you drop a DB2 Everyplace Sync Server instance, DB2 Everyplace unconfigures the instance and deletes the db2everyplace82 directory from the home directory of the instance.
4. If you are using the embedded DB2 UDB:
   a. Drop all DB2 UDB databases.
   b. Drop all DB2 UDB instances.
   c. Drop the DB2 Database Administration Server instance.

Important: If you are running SUSE Linux version 9.1 or Red Hat Linux 4 Enterprise Edition, do not uninstall Fix Pack 2 before you uninstall DB2 Everyplace. Instead, leave Fix Pack 2 installed and follow the appropriate uninstallation instructions below.

Important: The Java Virtual Machine that is included with DB2 Everyplace version 8.2, Fix Pack 2 is newer than the one that is provided with DB2 Everyplace version 8.2. The DB2 Everyplace version 8.2 uninstallation program does not work with the newer Java Virtual Machine. Make sure that you follow the appropriate uninstallation instructions for your version of DB2 Everyplace.

To remove DB2 Everyplace Enterprise Edition:

1. Start the DB2 Everyplace uninstallation wizard.

   Windows systems

   If you are running DB2 Everyplace version 8.2, Fix Pack 2:

   Run the DB2EveryplaceUninstall.bat file, which is located in the <DSYPATH>\Uninstaller directory.

   If you are running DB2 Everyplace version 8.2, Fix Pack 1, or DB2 Everyplace version 8.2:

   Uninstall DB2 Everyplace by using either of the following methods:

   - Run the DB2EveryplaceUninstall.exe file, which is located in the <DSYPATH>\Uninstaller directory.
   - Use the Windows Add/Remove Programs feature.

   Linux and UNIX systems

   If you are running DB2 Everyplace version 8.2, Fix Pack 2:

   a. Log in as the root user.
   b. Run the DB2EveryplaceUninstall.sh file, which is located in the <DSYPATH>/Uninstaller directory.

   If you are running DB2 Everyplace version 8.2, Fix Pack 1, or DB2 Everyplace version 8.2:

   a. Log in as the root user.
   b. Run the DB2EveryplaceUninstall.bin file, which is located in the <DSYPATH>/Uninstaller directory.

   Linux for iSeries systems

   If you are running DB2 Everyplace version 8.2, Fix Pack 2:

   a. Log in as the root user.
   b. Run the DB2EveryplaceUninstall.sh file, which is located in the <DSYPATH>/Uninstaller directory.

   If you are running DB2 Everyplace version 8.2, Fix Pack 1, or DB2 Everyplace version 8.2:

   a. Log in as the root user.
   b. Make sure that your system is running IBM JDK 1.3.1 or later.
   c. Issue the following command: `java -jar <DSYPATH>/Uninstaller/uninstall.jar`.

   Important: The DB2 Everyplace version 8.2 uninstallation wizard does not remove the files that were modified by fix packs. The files in the <DSYPSATH>\Clients and <DSYPATH>\version directories are not deleted and remain on the system after you uninstall version 8.2. Delete the <DSYPATH> directory before you install DB2 Everyplace version 8.2 again.

2. Follow the instructions that are provided by the uninstallation wizard.
3. Click **Finish** to delete the DB2 Everyplace files from your system. If an embedded version of DB2 UDB was installed by the DB2 Everyplace installation wizard, it is removed by the uninstallation wizard.

Installing DB2 Everyplace Express Edition

You need to install the DB2 Everyplace Sync Server on a server, and install the DB2 Everyplace mobile database and DB2 Everyplace Sync Client software on each mobile device or emulator that connects to the server. Requirements vary depending on the hardware, software, and operating system of the target server, device, or emulator.

After you install and configure DB2 Everyplace, you can start the First Steps launchpad, which provides links to sample applications and other resources that will help you get started using DB2 Everyplace.

DB2 Everyplace Express Edition installation requirements

The exact configuration you need to support your environment with satisfactory response time will vary depending on workstation speed, memory, size of objects, and network and server workload. Evaluate and adjust the minimum recommended configurations according to your unique requirements.

Hardware requirements

To use DB2 Everyplace Express Edition, your system must meet or exceed the following hardware requirements:

- Intel Pentium III, AMD Athlon, AMD64, POWER (for SUSE Linux Version 8.1), or comparable processor
- 512 MB of memory (1 GB recommended)
- The disk space requirements for DB2 Everyplace Express Edition depend on the type of message store that you are using.

  Windows
  1.2 GB of free disk space for database message store

  1.15 GB of free disk space for file system message store

  Linux 800 MB of free disk space + 520 MB for each instance of DB2 Everyplace Sync Server that uses database message store

  800 MB of free disk space + 470 MB for each instance of DB2 Everyplace Sync Server that uses file system message store

Software requirements

The DB2 Everyplace Sync Server requires the following software:

- Workstation-to-mobile-device connection software, such as Palm HotSync, is required to enable the server and a mobile device to communicate. This software is not provided with DB2 Everyplace. You must obtain it from another source, such as Web site of the manufacturer of the mobile device.
- DB2 Universal Database Version 8.1 or Version 8.2. If the DB2 Everyplace installer does not find DB2 Universal Database on your system, it installs an embedded version of DB2 Universal Database Enterprise Server Edition with limited functionality.

  Restriction: Do not upgrade DB2 UDB to a new full version while DB2 Everyplace is installed. Instead, remove DB2 Everyplace, upgrade DB2 UDB, and then install DB2 Everyplace again.
- One of the following editions of WebSphere Application Server:

  - Embedded WebSphere Application Server Express Edition (included with DB2 Everyplace).
  - WebSphere Application Server Version 5 fix pack 2 or later
- A supported database server (if you want the DB2 Everyplace Sync Server to synchronize DB2 Everyplace data with a source database). See the DB2 Everyplace Web site at http://www.ibm.com/software/data/db2/everyplace for the list of database servers that the DB2 Everyplace Sync Server supports.

Operating system requirements

DB2 Everyplace Express runs on the following operating systems:

DB2 Everyplace Sync Server

- Mandrake Linux Version 8.2 and 9.2 (Intel and AMD x86 processors)
- Red Hat Enterprise Linux Version 3
- Red Hat Enterprise Linux Version 4
- Red Hat Linux Version 7.3 and 8.0 (Intel and AMD x86 processors)
- SUSE Linux Enterprise Server Version 9.1 RC 5 (Intel and AMD x86 processors)
- SUSE Linux Enterprise Server Version 9.1 RC 5 (POWER processors)
- SUSE Linux Version 8.1 (POWER processors)
- Microsoft Windows 2000 Server SP3 and SP4
- Microsoft Windows 2003 Server, Enterprise

DB2 Everyplace Database and DB2 Everyplace Sync Client

Operating system requirements vary depending on the processor of the target mobile device. See Table 6 on page 38 for more information.

Installing DB2 Everyplace Express Edition on a server

Prerequisites:

Windows

Log in as an administrator.

Linux

- Log in as root user.
- Add the following line to the login profile for each DB2 Everyplace Sync Server instance: `export DISPLAY=`*`hostname`*`:0.0`

  Replace *hostname* with the name of the workstation where you want to use the Mobile Devices Administration Center.

For all supported operating systems, the server must meet or exceed the requirements specified in "DB2 Everyplace Express Edition installation requirements" on page 32.

To install DB2 Everyplace Express Edition on a server:

Choose one of the following methods:

- "Installing DB2 Everyplace Express Edition by using the Installation wizard" on page 34. The wizard guides you through the installation, copies files to a server, and configures the installation.

- "Installing DB2 Everyplace Express Edition by using a response file and the command line installation tool" on page 36. The command line installer uses input from a text file to install and configure DB2 Everyplace Express Edition.

If you need to change the configuration after installing files, you have two options:

- Use the Configuration wizard.
- Use the command line configuration tool.

Installing DB2 Everyplace Express Edition by using the Installation wizard

The DB2 Everyplace Express Edition Installation wizard copies files from a source (such as a CD or compressed archive) to a server and configures the installation. You can choose one of the following installation types:

Typical

Copies a predefined set of files to default locations relative to a directory you specify, then configures the installation.

In addition to the target directory, the wizard prompts you for the following information:

(Windows) DB2 Universal Database user ID and password
Provide user ID and password to access a database already installed on the server. This information is required.

(Linux) DB2 Everyplace Sync Server instance name and locale and password
Specify a DB2 Everyplace Sync Server instance name and locale and password. Databases and samples are created or copied using the specified locale. This information is required.

Custom

You specify the files to copy (for example, to support specific mobile devices), and you can specify additional configuration information. A custom installation also allows you to save your specifications in a response file that you can use to automate the installation process on other computers at a later time.

In addition to the information required for a typical installation, the wizard prompts you for the following parameters:

Class path for non-DB2 JDBC drivers
Enter the full path (including drive letter) to JDBC drivers from third parties such as Oracle or Sybase. Use Java CLASSPATH syntax: no spaces, single quotation marks, or double quotation marks are allowed. Use the separator character for your operating system (semicolon for Windows, colon for Linux). This information is not required. If no such drivers are installed on the server, you can leave the field blank.

Message store option
DB2 Everyplace can store messages from client devices in the server's file system or in a DB2 UDB database. The database option is recommended for most installations.

Application server configuration information
Enter a server name, IP address, server port, and SSL port.

(Windows) Start the Windows service for the DB2 Everyplace Sync Server Specify whether you want to start the windows service for DB2 Everyplace Sync Server at the end of the configuration. Starting the Windows service can take a few minutes.

(Linux) Start the daemon for DB2 Everyplace Sync Server Specify whether you want to start the daemon for DB2 Everyplace Sync Server at the end of the configuration. Starting the daemon can take a few minutes.

To install DB2 Everyplace Express Edition by using the Installation wizard:

1. Start the DB2 Everyplace Launchpad

   The procedure for starting the Launchpad varies depending on your operating system and whether you are installing from a CD or an archive (for example, a compressed file downloaded from ibm.com). Table 4 lists the procedures for starting the Launchpad from a CD on various operating systems

   Table 4. Starting the DB2 Everyplace Launchpad from a CD

Operating system	Procedure
Windows	The Launchpad starts automatically when you insert the CD.
Linux	1. Mount the CD. 2. Run dsysetup as the root user.
Linux for iSeries	1. Mount the CD. 2. Run dsysetup as the root user.

   Table 4 lists the procedures for starting the Launchpad from an archive on various operating systems

   Table 5. Starting the DB2 Everyplace Launchpad from an archive

Operating system	Procedure
Windows	1. Unzip the archive file. 2. Run the DB2EveryplaceExpress82Windows\ dsysetup.exe file.
Linux	1. Untar the archive file. 2. Change the working directory to DB2EveryplaceExpress82Linux 3. Run ./dsysetup as root.
Linux for iSeries	1. Untar the archive file. 2. Change the working directory to DB2EveryplaceExpress82iLinux 3. Run ./dsysetup as root.

2. Click **Install** to start the Install wizard. You can also read release notes and installation instructions from the launchpad.
3. Proceed by following the wizard's prompts. DB2 Everyplace files are not copied to your system until you click **Next** in the Pre-installation Summary page.

After it copies the files to the server, the Installation wizard configures DB2 Everyplace Express Edition. If you need to change the configuration, you can start

the Configuration wizard manually. You can also configure the installation by using the command line configuration tool.

Installing DB2 Everyplace Express Edition by using a response file and the command line installation tool

The command line installer can read input from a file called a *response file*, which can automatically install DB2 Everyplace on multiple systems. A response file is an ASCII text file that contains setup data. The response file can be generated either by performing a custom installation with the DB2 Everyplace Installation wizard or by manual editing.

To install DB2 Everyplace Express Edition by using a response file and the command line installation tool:

1. Open a command window and navigate to the top level directory of the CD or archive.

   The command line installer, installSilent, is in the top level directory of the CD or archive.
2. Run the installSilent command.

   Windows

   ```
   installSilent.bat full_path_to_response_file
   ```

   Linux

   ```
   ./installSilent.sh full_path_to_response_file
   ```

   A sample response file is provided in the lib directory of the CD or archive.

The following example starts the command line installation tool on Windows and specifies C:\db2eSilent.rsp as the response file.

```
installSilent.bat C:\db2eSilent.rsp
```

Uninstalling DB2 Everyplace Express Edition

Use the uninstallation wizard to remove DB2 Everyplace Express Edition from your system.

Prerequisites: Before you use the uninstallation wizard, perform the following tasks:

Windows systems

1. Log in as an administrator.
2. Back up all user data.
3. If you are using the embedded DB2 UDB, drop all DB2 Everyplace databases, such as DSYCTLDB, DSYMSGDB, DSYCSTAT, VNURSE, and M_VN2.

Linux systems

1. Log in as the root user.
2. Back up all user data.
3. If you are using the embedded DB2 UDB:
   a. Drop all DB2 UDB databases.
   b. Drop all DB2 UDB instances.
   c. Drop the DB2 Database Administration Server instance.

Important: If you are running SUSE Linux version 9.1 or Red Hat Linux 4 Enterprise Edition, do not uninstall Fix Pack 2 before you uninstall DB2 Everyplace. Instead, leave Fix Pack 2 installed and follow the appropriate uninstallation instructions below.

Important: The Java Virtual Machine that is included with DB2 Everyplace version 8.2, Fix Pack 2 is newer than the one that is provided with DB2 Everyplace version 8.2. The DB2 Everyplace version 8.2 uninstallation program does not work with the newer Java Virtual Machine. Make sure that you follow the appropriate uninstallation instructions for your version of DB2 Everyplace.

To remove DB2 Everyplace Express Edition:

1. Start the DB2 Everyplace uninstallation wizard.

   Windows systems

   If you are running DB2 Everyplace version 8.2, Fix Pack 2:

   Run the DB2EveryplaceUninstall.bat file, which is located in the <DSYPATH>\Uninstaller directory.

   If you are running DB2 Everyplace version 8.2, Fix Pack 1, or DB2 Everyplace version 8.2:

   Uninstall DB2 Everyplace by using either of the following methods:

   - Run the DB2EveryplaceUninstall.exe file, which is located in the <DSYPATH>\Uninstaller directory.
   - Use the Windows Add/Remove Programs feature.

   Linux systems

   If you are running DB2 Everyplace version 8.2, Fix Pack 2:

   a. Log in as the root user.
   b. Run the DB2EveryplaceUninstall.sh file, which is located in the <DSYPATH>/Uninstaller directory.

   If you are running DB2 Everyplace version 8.2, Fix Pack 1, or DB2 Everyplace version 8.2:

   a. Log in as the root user.
   b. Run the DB2EveryplaceUninstall.bin file, which is located in the <DSYPATH>/Uninstaller directory.

   Linux for iSeries systems

   If you are running DB2 Everyplace version 8.2, Fix Pack 2:

   a. Log in as the root user.
   b. Run the DB2EveryplaceUninstall.sh file, which is located in the <DSYPATH>/Uninstaller directory.

   If you are running DB2 Everyplace version 8.2, Fix Pack 1, or DB2 Everyplace version 8.2:

   a. Log in as the root user.
   b. Make sure that your system is running IBM JDK 1.3.1 or later.
   c. Issue the following command: `java -jar <DSYPATH>/Uninstaller/uninstall.jar`.

   Important: The DB2 Everyplace version 8.2 uninstallation wizard does not remove the files that were modified by fix packs. The files in the <DSYPSATH>\Clients and <DSYPATH>\version directories are not

deleted and remain on the system after you uninstall version 8.2. Delete the <DSYPATH> directory before you install DB2 Everyplace version 8.2 again.

2. Follow the instructions that are provided by the uninstallation wizard.
3. Click **Finish** to delete the DB2 Everyplace files from your system. If an embedded version of DB2 UDB was installed by the DB2 Everyplace installation wizard, it is removed by the uninstallation wizard.

Mobile device installation procedures

Topics in this section provide information about installing DB2 Everyplace on specific mobile devices.

DB2 Everyplace mobile device requirements

In the following table, an X indicates when DB2 Everyplace supports that combination of mobile device processor and operating system.

Table 6. Supported mobile device processors and operating systems

Operating System	Processor					
	ARM	**ARM v4T**	**StrongARM**	**x86**	**XScale**	**MIPS**
Linux™ Kernel 2.4			X	X	X	
Linux Kernel 2.6			X	X	X	
Palm OS 4.1	X					
Palm OS 5.0	X					
Palm OS 5.2.1	X				X	
QNX Neutrino 6.2			X	X		
Symbian OS 7	X			X		
Symbian OS 7s	X			X		
Windows® CE v3 • Microsoft PocketPC • PocketPC 2000 • PocketPC 2002 • Handheld PC 2000	X			X		X
Windows CE v4 • Windows Mobile 2003 for Pocket PC • Windows Mobile 2003 Second Edition for Pocket PC • Windows CE .NET	X	X		X	X	X
Windows 2000				X		
Windows 2003 Server				X		
Windows XP				X		

Important: The DB2 Everyplace client for Symbian OS 7s is not included on the DB2 Everyplace installation media. To install the DB2 Everyplace client for Symbian OS 7s, see "Installing files on Symbian OS Version 7 and Symbian OS Version 7s devices" on page 50.

Important: The Pocket PC SH4 processor is not supported. Ignore the SH4 directories in the DB2 Everyplace installation path.

Device considerations and limitations

- Due to the unique design of each mobile platform, not all mobile devices can support all of the functions that are offered by DB2 Everyplace.
- IBM cannot guarantee that all devices will work correctly due to differences in manufacturing, configuration and preloaded mobile device software.
- Some DB2 Everyplace clients for the supported devices are available as downloads and are not included on the DB2 Everyplace installation media.
- The availability of devices and the level of device support can change over time based on the actions of the manufacturer of the mobile device.

Installing DB2 Everyplace Database Edition on a Mobile Device

This section lists requirements and procedures for installing DB2 Everyplace Database Edition on a specific mobile platform.

Installing DB2 Everyplace files on a Linux mobile device

Prerequisites:

Prerequisites for installing DB2 Everyplace files on a Linux mobile device vary depending on the device.

Linux mobile devices take various forms. Depending on the type of mobile device that you have, there are several installation options. For example, you could transfer files to your mobile device by using one of the following methods, depending on the type of mobile device and how that mobile device is configured:

- Serial connection between the mobile device and your workstation using XModem or Kermit protocols
- Ethernet connection between the mobile device and your workstation using FTP software
- Floppy disk, if supported by your mobile device

The following table lists required run-time libraries for various processors.

Table 7. Required run-time libraries

Processor	Library
x86	glibc-2.2.4-13
StrongARM	glibc-2.2.5
XScale	glibc-2.2.5

To install DB2 Everyplace files on a Linux mobile device:

1. Install the DB2 Everyplace mobile database files.

   DB2 Everyplace mobile database files for Linux mobile devices are in the $DSYINSTDIR\Clients\linux\database\ directory, where $DSYINSTDIR is the directory where DB2 Everyplace is installed, *proc* is a processor type, for example, strongarm or x86, and *lang* represents the language.

   The file names are:

   proc\libcryptoplugin.so

   proc\libdb2e.so

   proc\libdb2ejdbc.so

proc\libpvcpkcs11.so

jdbc\db2ejdbc.jar

jdbc\DB2eAppl.class

lang\DB2eCLP*proc*\DB2eCLP

2. Set the environment variable **LD_LIBRARY_PATH** to the path where the DB2 Everyplace CLI shared library (libdb2e.so) is installed.

   For example, if the DB2 Everyplace CLI shared library is in the <DSYPATH>\database\x86 directory (where <DSYPATH> is the directory where DB2 Everyplace is installed), append <DSYPATH>\database\x86 to the existing LD_LIBRARY_PATH by using the following statement:

   ```
   export LD_LIBRARY_PATH=/DB2e/database/x86:$LD_LIBRARY_PATH
   ```

DB2 Everyplace also includes a development database library for Linux devices. The development library generates trace data in addition to the diagnostic data that release libraries generate. This data helps you troubleshoot problems as you develop and test DB2 Everyplace applications. The development library is located in the directories that end in "Dev". For example, the development library for Linux devices with x86 processors is located in the $DSYINSTDIR\Clients\linux\database\x86Dev directory, where $DSYINSTDIR is the directory where DB2 Everyplace is installed. To install this library, follow the procedure described in this topic, but copy the file from the appropriate Dev directory.

Installing DB2 Everyplace files on a Palm OS mobile device

Prerequisites:

1. On a Windows workstation, install and configure the HotSync connection software that came with the Palm OS mobile device.
2. Connect the Palm OS mobile device to the Windows workstation. Refer to the documentation that came with the mobile device to ensure that the mobile device is connected correctly.

Important: PalmOS applications that were compiled for DB2 Everyplace Version 8.1.4 and previous releases do not work with the db2e.lib file that is included with DB2 Everyplace Version 8.2. You must re-link these applications with the new db2e.lib file before you can use them.

Install DB2 Everyplace by transferring files onto your mobile device using one of the following methods, depending on whether you are using a mobile device or an emulator.

Mobile device
: On the workstation, use the Install Tool of the HotSync connection software that is included with the Palm OS mobile device to install the files. After you install the files, perform a HotSync function to complete the installation of the DB2 Everyplace files to the Palm OS mobile device.

Emulator
: Drag and drop the files into the emulator window. After you install all files, reset the emulator.

To install DB2 Everyplace files on a Palm OS mobile device:

Install the database engine and supporting files listed in the following table. These files are located in the <DSYPATH>\Clients directory.

Table 8 describes the database files that DB2 Everyplace provides for Palm OS. In this table, *lang* is a language code.

Example: The language code for United States English is `en_US`.

Table 8. Palm OS database files

File name	Description
palmos\database\CryptoPlugin.prc	Encryption library
palmos\database\DB2eCat.prc	DB2 Everyplace database engine
palmos\database\DB2eCLI.prc	DB2 Everyplace database engine
palmos\database\DB2eComp.prc	DB2 Everyplace database engine
palmos\database\DB2eDMS.prc	DB2 Everyplace database engine
palmos\database\DB2eRunTime.prc	DB2 Everyplace database engine
palmos\database\PBSPkcs11.prc	Encryption library
palmos\database*lang*\DB2eCLP\DB2eCLP.prc	DB2 Everyplace command line processor

Restriction: Encryption support is available only on Palm OS Version 4.1 or later. Install the PBSPkcs11.prc to use encryption between a Palm OS mobile device and the DB2 Everyplace Sync Server.

Installing files on a QNX Neutrino mobile device

Prerequisites:

Installation procedures for QNX Neutrino mobile devices vary depending on the device. Options include:

- Serial connection between the device and your workstation using XModem or Kermit protocols.
- Ethernet connection between the device and your workstation using FTP software.
- Floppy disk, if supported by your device.

For additional information about transferring files to your device, see the documentation provided with that device. You can also consult the QNX Neutrino Software Developer's Kit (SDK).

To install DB2 Everyplace files on a QNX Neutrino mobile device:

1. Install the DB2 Everyplace mobile database files.

   DB2 Everyplace database files for QNX Neutrino mobile devices are located in the <DSYPATH>\Clients\neutrino\database\ directory, where <DSYPATH> is the directory where DB2 Everyplace is installed.

   In the following list, *proc* represents a processor type, for example, strongarm or x86. :

   proc\libcryptoplugin.so
   proc\libdb2e.so
   proc\libdb2ejdbc.so
   proc\libvcpkcs11.so
   jdbc\db2ejdbc.jar
   jdbc\DB2eAppl.class

DB2eCLP*proc*\DB2eCLP

Note: The libcryptoplugin.so and libvcpkcs11.so libraries cannot be used with the J9 JVM.

2. Set the environment variable **LD_LIBRARY_PATH** to the path where the DB2 Everyplace CLI shared library (libdb2e.so) is installed. For example, if the DB2 Everyplace CLI shared library is stored in the <DSYPATH>/database/x86 directory (where <DSYPATH> is the directory where DB2 Everyplace is installed), append <DSYPATH>/database/x86 to your existing **LD_LIBRARY_PATH** using the following statement:

```
export LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/DB2e/database/x86
```

3. Start the mqueue process to enable encryption.
   a. To ensure the mqueue process is running, run the `ps` command. A list of active processes is displayed on the device.
   b. Verify that mqueue is listed. If not, use the mqueue command to start the process.

      Note: If the application terminates unexpectedly after you initialize the encryption library, the library could be corrupted.

DB2 Everyplace also includes a development database library for QNX Neutrino devices. The development library generates trace data in addition to the diagnostic data that release libraries generate. This data helps you troubleshoot problems as you develop and test DB2 Everyplace applications. The development library is located in the directories that end in "Dev". For example, the development library for QNX Neutrino devices with x86 processors is located in <DSYPATH>\Clients\neutrino\database\x86Dev, where <DSYPATH> is the directory where DB2 Everyplace is installed. To install this library, follow the procedure described in this topic, but copy the file from the appropriate Dev directory.

Installing files on Symbian OS Version 7 and Symbian OS Version 7s devices

To install the DB2 Everyplace database files and the sample application files, configure the connection software that was included with the mobile device, connect the mobile device to the workstation, and then use the Install tool.

Prerequisites:

1. On a Windows workstation, install and configure the connection software that was included with the Symbian OS Version 7 and Symbian OS Version 7s mobile devices.
2. Connect the Symbian OS Version 7 mobile device or the Symbian OS Version 7s mobile device to the workstation. Use the documentation included with the mobile device to ensure that the device is correctly connected.

To install DB2 Everyplace files on Symbian OS Version 7 and Symbian OS Version 7s devices manually:

To install the DB2 Everyplace mobile database files and the sample application files, use the Install Tool from the connection software that is included with the Symbian OS Version 7 or Symbian OS Version 7s mobile devices.

In Symbian OS Version 7, the database files and the sample applications are in the <DSYPATH>\Clients\symbian7\database directory. The sample application files

are installed in the <DSYPATH>\Clients\symbian7\database*lang* directory. In Symbian OS Version 7s, the DB2 Everyplace libraries and the sample application files are located in the <DSYPATH>\Clients\Symbian7s\database directory. The files that you need to install are listed in the following tables.

Important: If you cannot locate the appropriate directory for your target platform, download the Clients_8_2_2_0.zip file from:

ftp://service.boulder.ibm.com/software/db2everyplace/v822/.

Extract the zip file to a temporary directory. Refer to this directory when you need to find files for your target platform.

In the tables, *proc* is a processor type, such as armi or wins.

Table 9. Symbian OS Version 7 database files

File name	Description
proc\DB2e.sis	DB2 Everyplace database engine
proc\db2ejdbc.sis	DB2 Everyplace JDBC driver
lang\DB2eCLP*proc*\DB2eCLP.sis	DB2 Everyplace Command Line Processor
lang\install\UIQ*proc*\DB2e_Symbian7.sis	DB2 Everyplace package (includes all of the preceding files in a single package)

Table 10. Symbian OS Version 7s database files

File name	Description
proc\DB2e.sis	DB2 Everyplace database engine
proc\DB2eJDBC.sis	DB2 Everyplace JDBC driver
lang\DB2eCLP*proc*\DB2eCLP.sis	DB2 Everyplace Command Line Processor
lang\install\Series80*proc*\DB2e_Symbian7s.sis	DB2 Everyplace package (includes all of the preceding files in a single package)

Installing files on a Windows CE device

Prerequisites:

1. On a Windows workstation, install and configure the Windows CE Services software (also known as ActiveSync) that came with the Windows CE mobile device.
2. Connect the Windows CE mobile device to the Windows workstation. Use the mobile device's documentation to ensure that the mobile device is connected correctly.
3. The CryptoPlugin.dll library (provided by DB2 Everyplace) requires Microsoft® High Encryption Pack for Pocket PC V1.0. The encryption pack comes with Windows Mobile 2003 for Pocket PC, but you must install it for Pocket PC 2000 and 2002. Go to http://www.microsoft.com/windowsmobile/downloads/highencryption.mspx to download the encryption pack. If the CryptoPlugin.dll library is present, but the encryption pack is not installed, applications cannot connect to any database (for example DB2eCLP cannot start). If an application requires encryption, install the Microsoft High Encryption Pack for Pocket PC V1.0. If encryption is not needed, delete the CryptoPlugin.dll from the Windows

directory on the Pocket PC device. Windows Mobile 2003 for Pocket PC does not require installation of the encryption pack or removal of the CryptoPlugin.dll library

To install the DB2 Everyplace files on a Windows CE device:

Use the Install Tool from the Windows CE Services connection software (or ActiveSync) that is included with the Windows CE device to install the files listed in the following table. These files are in the <DSYPATH>\Clients\wince\database directory.

In the following table, *ver* is the Windows CE version, for example, v3 for version 3, or v4 for version 4; and *proc* is the processor type, for example, ARMRel or X86Rel.

Table 11. Windows CE database files

File Name	Description
jdbc\db2ejdbc.jar	DB2 Everyplace JDBC driver
*ver**proc*\CryptoPlugin.dll	DB2 Everyplace database engine for data encryption
*ver**proc*\DB2e.dll	DB2 Everyplace database engine
*ver**proc*\DB2eJDBC.dll	DB2 Everyplace JDBC driver

DB2 Everyplace also includes a development database library for Windows CE version 3 devices. The development library generates trace data in addition to the diagnostic data that release libraries generate. This data helps you troubleshoot problems as you develop and test DB2 Everyplace applications. The development library is located in the directories that end in "Dev". For example, the development library for Windows CE version 3 devices with x86 processors are located in \Clients\wince\database\v3\x86Dev. To install this library, follow the procedure described in this topic, but copy the file from the appropriate Dev directory.

Installing files on a Windows client

Prerequisites:

The Microsoft Strong Encryption download (available from Microsoft) for your operating system must be installed to use encryption between Windows clients and the DB2 Everyplace Sync Server.

To install DB2 Everyplace files on a Windows client:

Copy DB2 Everyplace files from your Windows server to a folder on your Windows client.

DB2 Everyplace files are in the <DSYPATH>\Clients\win32\database directory, where <DSYPATH> is the directory where DB2 Everyplace is installed.

In the following table, *lang* represents a language code, for example, en_US.

Table 12. DB2 Everyplace files

File name	Description
x86\CryptoPlugin.dll	DB2 Everyplace database engine for data encryption
x86\DB2e.dll	DB2 Everyplace database engine
x86\DB2eJDBC.dll	DB2 Everyplace JDBC driver
x86\DB2eODBC.dll	DB2 Everyplace ODBC driver
jdbc\db2ejdbc.jar	DB2 Everyplace JDBC driver
jdbc\DB2eAppl.class	Sample Java application
jdbc\DB2eJavaCLP.class	Command Line Processor written in Java
lang\DB2eCLP\non-unicode\DB2eCLP.exe	Command Line Processor executable
x86\ODBCInst.exe	Registers the DB2 Everyplace ODBC driver

DB2 Everyplace also includes a development database library for Windows devices. The development library generates trace data in addition to the diagnostic data that release libraries generate. This data helps you troubleshoot problems as you develop and test DB2 Everyplace applications. The development library is located in the directories that end in ″Dev″. For example, the development library for Windows devices with x86 processors is located in the <DSYPATH>\Clients\win32\database\x86Dev directory, where <DSYPATH> is the directory where DB2 Everyplace is installed.

Installing DB2 Everyplace Enterprise Edition or Express Edition on a mobile device

This topic lists requirements and procedures for installing DB2 Everyplace Enterprise Edition or Express Edition on a specific mobile platform.

Installing DB2 Everyplace files on a Linux mobile device

Prerequisites:

Prerequisites for installing DB2 Everyplace files on a Linux mobile device vary depending on the device.

Linux mobile devices take various forms. Depending on the type of mobile device that you have, there are several installation options. For example, you could transfer files to your mobile device by using one of the following methods, depending on the type of mobile device and how that mobile device is configured:

- Serial connection between the mobile device and your workstation using XModem or Kermit protocols
- Ethernet connection between the mobile device and your workstation using FTP software
- Floppy disk, if supported by your mobile device

Table 13 on page 46 lists required run-time libraries for various processors.

Table 13. Required run-time libraries

Processor	Library
x86	glibc-2.2.4-13
StrongARM	glibc-2.2.5
XScale	glibc-2.2.5

To install DB2 Everyplace files on a Linux mobile device:

1. Install the DB2 Everyplace mobile database files.

   DB2 Everyplace mobile database files for Linux mobile devices are in the $DSYINSTDIR\Clients\linux\database\ directory, where $DSYINSTDIR is the root installation directory for DB2 Everyplace, *proc* is a processor type, for example, strongarm or x86, and *lang* represents the language.

   The file names are:

   proc\libcryptoplugin.so

   proc\libdb2e.so

   proc\libdb2ejdbc.so

   proc\libvcpkcs11.so

   jdbc\db2ejdbc.jar

   jdbc\DB2eAppl.class

   lang\DB2eCLP*proc*\DB2eCLP

2. Install the DB2 Everyplace Sync Client files.

   The files are located in <DSYPATH>\clients\linux\sync*proc*, where <DSYPATH> is the root installation directory for DB2 Everyplace and *proc* is a processor type, for example, strongarm or x86.

   Copy the following library files for the appropriate processor into usr/lib/DB2e/:

   libimsaconfig.so

   libimsadb2e.so

   libimsafile.so

   libisync4j.so

   libisyncconf.so

   libisyncore.so

   libisyncstat.so

   libisyncxpt.so

   libwbxml.so

   isync4j.jar

   DB2 Sync console is located at <DSYPATH>\Clients\linux\sync*lang**proc*\db2sync_console where <DSYPATH> is the root installation directory for DB2 Everyplace, *proc* represents a processor type and *lang* represents the language.

   Note: The SSL libraries for Linux are no longer packaged with the DB2 Everyplace Sync Client in DB2 Everyplace 8.2. Obtain the OpenSSL libraries (libcrypto.so, libssl.so) separately from http://www.openssl.org. DB2 Everyplace 8.2 currently only supports version 0.9.7. Optionally, for Sharp Zaurus devices, install the .ipk file that contains both the database and DB2 Everyplace Sync Client libraries.

3. Set the environment variable **LD_LIBRARY_PATH** to the path where you installed the DB2 Everyplace Sync Client files.

   For example, you installed the DB2 Everyplace Sync Client files in the usr/lib/DB2e/ directory (where <DSYPATH> is the root installation directory for DB2 Everyplace), append usr/lib/DB2e/ to the existing LD_LIBRARY_PATH by using the following statement:

   ```
   export LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/usr/lib/DB2e
   ```

4. Set the environment variable **LD_LIBRARY_PATH** to the path where the DB2 Everyplace CLI shared library (libdb2e.so) is installed.

   For example, if the DB2 Everyplace CLI shared library is in the <DSYPATH>\database\x86 directory, (where <DSYPATH> is the root installation directory for DB2 Everyplace) append <DSYPATH>\database\x86 to the existing LD_LIBRARY_PATH by using the following statement:

   ```
   export LD_LIBRARY_PATH=/DB2e/database/x86:$LD_LIBRARY_PATH
   ```

   The Linux DB2 Everyplace Sync Client uses the code page Cp1252 as the default. To synchronize data of a different code page, you need to include the `config-isyn` file in the directory where the application is run. For information about encodings that might be specified in the `config-isyn` file, see the information about the iscServiceOpenEx() function in the *DB2 Everyplace Application Development Guide*.

DB2 Everyplace also includes a development database library for Linux devices. The development library generates trace data in addition to the diagnostic data that release libraries generate. This data helps you troubleshoot problems as you develop and test DB2 Everyplace applications. The development library is located in the directories that end in "Dev". For example, the development library for Linux devices with x86 processors is located in <DSYPATH>\Clients\linux\database\x86Dev, where <DSYPATH> is the root installation directory for DB2 Everyplace. To install this library, follow the procedure described in this topic, but copy the file from the appropriate Dev directory.

Important: You must install DB2eCLP to a directory that has write permission.

Installing DB2 Everyplace files on a Palm OS mobile device

Prerequisites:

1. On a Windows workstation, install and configure the HotSync connection software that came with the Palm OS mobile device.
2. Connect the Palm OS mobile device to the Windows workstation. Refer to the documentation that came with the mobile device to ensure that the mobile device is connected correctly.

Important: PalmOS applications that were compiled for DB2 Everyplace Version 8.1.4 and previous releases do not work with the db2e.lib file that is included with DB2 Everyplace Version 8.2. You must re-link these applications with the new db2e.lib file before you can use them.

Install DB2 Everyplace by transferring files onto your mobile device using one of the following methods, depending on whether you are using a mobile device or an emulator.

Mobile device

On the workstation, use the Install Tool of the HotSync connection software that is included with the Palm OS mobile device to install the

files. After you install the files, perform a HotSync function to complete the installation of the DB2 Everyplace files to the Palm OS mobile device.

Emulator

Drag and drop the files into the emulator window. After you install all the files, reset the emulator.

To install DB2 Everyplace files on a Palm OS device:

1. Install the database engine and supporting files listed in the following table. These files are in the <DSYPATH>\Clients directory.

   Note: In Table 14 and Table 15, *lang* is a language code.

   Example: The language code for United States English is en_US.

   Table 14. Palm OS database files

File name	Description
palmos\database\CryptoPlugin.prc	Encryption library
palmos\database\DB2eCat.prc	DB2 Everyplace database engine
palmos\database\DB2eCLI.prc	DB2 Everyplace database engine
palmos\database\DB2eComp.prc	DB2 Everyplace database engine
palmos\database\DB2eDMS.prc	DB2 Everyplace database engine
palmos\database\DB2eRunTime.prc	DB2 Everyplace database engine
palmos\database\PBSPkcs11.prc	Encryption library
palmos\database*lang*\DB2eCLP\DB2eCLP.prc	DB2 Everyplace command line processor

   Restriction: Encryption support is available only on Palm OS Version 4.1 or later. Install the PBSPkcs11.prc file to use encryption between a Palm OS mobile device and the DB2 Everyplace Sync Server.

2. Optional: Install the DB2 Everyplace Sync Client files listed in the following table.

   The following files are required if you plan to use the DB2 Everyplace Sync Server. They are located in the <DSYPATH>\Clients\palmos\sync\ directory.

   Table 15 lists the files that are used by the PalmOS DB2 Everyplace Sync Client.

   Table 15. Palm OS DB2 Everyplace Sync Client files

File name	Description
imsaconfig.prc	IBM Sync Configuration adapter
imsadb2e.prc	IBM Sync DB2 Everyplace adapter
imsafile.prc	IBM Sync File adapter
isyncconf.prc	IBM Sync engine
isyncore.prc	IBM Sync engine
isyncstat.prc	IBM Sync statistics
isyncxpt.prc	IBM Sync transport library
SSLlib.prc	IBM Sync SSL library
wbxmllib.prc	IBM Sync WBXML library
lang\ db2sync.prc	DB2 Everyplace Sync Client GUI

Table 15. Palm OS DB2 Everyplace Sync Client files (continued)

File name	Description
lang\ dsyagent.prc	IBM Sync Remote Stored Procedure adapter
lang\ upgrade\ iUpgrade.prc	IBM Sync Auto Deploy

The Palm OS DB2 Everyplace Sync Client attempts to determine the code page from the read-only memory, but uses the code page Cp1252 as the default if it does not find any features. To synchronize data of a different code page, include the `config-isyn.pdb` file for the appropriate language.

Installing files on a QNX Neutrino mobile device

Prerequisites:

Installation procedures for QNX Neutrino mobile devices vary depending on the device. Options include:

- Serial connection between the device and your workstation using XModem or Kermit protocols.
- Ethernet connection between the device and your workstation using FTP software.
- Floppy disk, if supported by your device.

For additional information about transferring files to your device, see the documentation provided with that device. You can also consult the QNX Neutrino Software Developer's Kit (SDK).

To install DB2 Everyplace files on a QNX Neutrino mobile device:

1. Install the DB2 Everyplace mobile database files.

   The DB2 Everyplace database files for QNX Neutrino mobile devices are located in the <DSYPATH>\Clients\neutrino\database\ directory, where <DSYPATH> is the root installation directory for DB2 Everyplace.

   In the following list, *proc* represents a processor type, for example, strongarm or x86. :

   proc\libcryptoplugin.so

   proc\libdb2e.so

   proc\libdb2ejdbc.so

   proc\libpvcpkcs11.so

   jdbc\db2ejdbc.jar

   jdbc\DB2eAppl.class

   DB2eCLP*proc*\DB2eCLP

   Note: The libcryptoplugin.so and libpvcpkcs11.so files cannot be used with the J9 JVM.

2. Install the DB2 Everyplace Sync Client files.

   The files are located in <DSYPATH>\clients\neutrino\sync*proc*, where <DSYPATH> is the root installation directory for DB2 Everyplace and *proc* represents a processor type, for example, strongarm or x86.

   Copy the following library files for the appropriate processor into usr/lib/DB2e/:

   libimsaconfig.so

libimsadb2e.so
libimsafile.so
libisync4j.so
libisyncconf.so
libisyncore.so
libisyncstat.so
libisyncxpt.so
libwbxml.so
isync4j.jar
lang\db2sync_console

Note: Only QNX Neutrino 6.2 and above support DB2 Everyplace Sync Client libraries.

3. Set the environment variable **LD_LIBRARY_PATH** to the path where the DB2 Everyplace CLI shared library (libdb2e.so) is installed. For example, if the DB2 Everyplace CLI shared library is stored in <DSYPATH>/database/x86, where <DSYPATH> is the root installation directory for DB2 Everyplace, append <DSYPATH>/database/x86 to your existing **LD_LIBRARY_PATH** using the following statement:

   ```
   export LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/DB2e/database/x86
   ```

4. Start the mqueue process to enable encryption.
   a. To ensure the mqueue process is running, run the `ps` command. A list of active processes is displayed on the device.
   b. Verify that mqueue is listed. If not, use the mqueue command to start the process.

   Note: If the application terminates unexpectedly after you initialize the encryption library, the library could be corrupted.

   The QNX Neutrino DB2 Everyplace Sync Client uses the code page Cp1252 as the default. To synchronize data of a different code page, you need to include the `config-isyn` file in the directory where the application is run. For information about encodings that might be specified in the `config-isyn` file, see the information about the iscServiceOpenEx() function in the *DB2 Everyplace Application Development Guide*

DB2 Everyplace also includes a development database library for QNX Neutrino devices. The development library generates trace data in addition to the diagnostic data that release libraries generate. This data helps you troubleshoot problems as you develop and test DB2 Everyplace applications. The development library is located in the directories that end in "Dev". For example, the development library for QNX Neutrino devices with x86 processors is located in <DSYPATH>\Clients\neutrino\database\x86Dev, where <DSYPATH> is the root installation directory for DB2 Everyplace. To install this library, follow the procedure described in this topic, but copy the file from the appropriate Dev directory.

Installing files on Symbian OS Version 7 and Symbian OS Version 7s devices

To install the DB2 Everyplace database files, the sample application files, and the DB2 Everyplace Sync Client files, configure the connection software that was included with the mobile device, connect the mobile device to the workstation, and then use the Install tool.

Prerequisites:

1. On a Windows workstation, install and configure the connection software that came with the Symbian OS Version 7 or the Symbian OS Version 7s mobile device.
2. Connect the Symbian OS Version 7 or the Symbian OS Version 7s mobile device to the workstation. Use the documentation included with the mobile device to ensure that the device is correctly connected.

To install DB2 Everyplace files on a Symbian OS Version 7 and Symbian OS Version 7s devices:

1. Use the Install Tool from the connection software that is included with the Symbian OS Version 7 or Symbian OS Version 7s mobile device.

   In Symbian OS Version 7, the database files and the sample application files are in the <DSYPATH>\Clients\symbian7\database directory, where <DSYPATH> is the directory where DB2 Everyplace is installed. In Symbian OS Version 7s, the database files and the sample application files are in the <DSYPATH>\Clients\symbian7s\database directory. The files that you need to install are listed in the following tables.

   Important: If you cannot locate the appropriate directory for your target platform, download the Clients_8_2_2_0.zip file from:

   ftp://service.boulder.ibm.com/software/db2everyplace/v822/.

   Extract the zip file to a temporary directory. Refer to this directory when you need to find files for your target platform.

   In the following tables, *lang* is a language code, such as en_US, and *proc* is a processor type, such as armi or wins.

Table 16. Symbian OS Version 7 database files

File name	Description
proc\DB2e.sis	DB2 Everyplace database engine
proc\db2ejdbc.sis	DB2 Everyplace JDBC driver
lang\DB2eCLP*proc*\DB2eCLP.sis	DB2 Everyplace Command Line Processor
lang\install\UIQ*proc*\DB2e_Symbian7.sis	DB2 Everyplace package (includes all the preceding files in a single package)

Table 17. Symbian OS Version 7s database files

File name	Description
proc\DB2e.sis	DB2 Everyplace database engine
proc\DB2eJDBC.sis	DB2 Everyplace JDBC driver
samples*lang*\SampleCLP\Series80\proc\ DB2eCLP.sis	DB2 Everyplace Command Line Processor
install*lang*\Series80\DB2e_Symbian7s.sis	DB2 Everyplace package (includes all the preceding files in a single package)

2. Install the DB2 Everyplace Sync Client files listed in the following tables.

   In Symbian Version OS Version 7, the DB2 Everyplace Sync Client files are in the <DSYPATH>\Clients\symbian7\sync*lang**proc*\ directory. In Symbian Version OS 7s, the DB2 Everyplace Sync Client files are located in the <DSYPATH>\Clients\Symbian7s\sync*lang**proc* directory.

Table 18. DB2 Everyplace Sync Client files for Symbian OS Version 7

File name	Description
proc\DB2Sync.sis	DB2 Everyplace Sync Client
upgrade\IUpgrade.app	IBM Update Tool
upgrade\IUpgrade.rsc	IBM Update Tool

Table 19. DB2 Everyplace Sync Client files for Symbian OS Version 7s

File name	Description
proc\DB2Sync.sis	DB2 Everyplace Sync Client

Installing files on a Symbian OS Version 7 emulator

Prerequisite: On a Windows workstation, install and configure the connection software that came with the Symbian OS Version 7 mobile device emulator.

To install DB2 Everyplace files on a Symbian OS Version 7 device emulator:

1. In the Symbian emulator directory, create the following folders:
   - Symbian\UIQ_70\epoc32\release\winscw\udeb\Z\System\APPS\DB2Sync
   - Symbian\UIQ_70\epoc32\release\winscw\udeb\Z\System\APPS\SampleCLP
2. Copy the DLL files from \DB2Everyplace\Clients\symbian7\database\wins to \Symbian\UIQ_70\epoc32\release\winscw\udeb.
3. Copy the DLL files from \DB2Everyplace\Clients\symbian7\sync\en_US\wins to \Symbian\UIQ_70\epoc32\release\winscw\udeb.
4. Copy the following files from \DB2Everyplace\Clients\symbian7\database\en_US\DB2eCLP\wins to \Symbian\UIQ_70\epoc32\release\winscw\udeb\Z\System\APPS\SampleCLP:
   - SampleCLP.aif
   - SampleCLP.app
   - SampleCLP.mbm
   - SampleCLP.rsc
5. Copy the following files from \DB2Everyplace\Clients\symbian7\sync\en_US\wins to \Symbian\UIQ_70\epoc32\release\winscw\udeb\Z\System\APPS\DB2Sync
   - DB2SYNC.AIF
   - DB2SYNC.APP
   - DB2SYNC.RSC

   Symbian has provided a development tool that allows the Symbian emulator to use the host's networking. You can use this tool to set up networking for synchronization. For more information, see http://www.symbian.com/developer/downloads/tools.html#winsock

Installing files on a Windows CE device

Prerequisites:

1. On a Windows workstation, install and configure the Windows CE Services software (also known as ActiveSync) that came with the Windows CE mobile device.

2. Connect the Windows CE mobile device to the Windows workstation. Use the mobile device's documentation to ensure that the mobile device is connected correctly.
3. The CryptoPlugin.dll library (provided by DB2 Everyplace) requires Microsoft High Encryption Pack for Pocket PC V1.0. The encryption pack comes with Windows Mobile 2003 for Pocket PC, but you must install it for Pocket PC 2000 and 2002. Go to http://www.microsoft.com/windowsmobile/downloads/highencryption.mspx to download the encryption pack. If the CryptoPlugin.dll library is present, but the encryption pack is not installed, applications cannot connect to any database (for example DB2eCLP cannot start). If an application requires encryption, install the Microsoft High Encryption Pack for Pocket PC V1.0. If encryption is not needed, delete the CryptoPlugin.dll from the Windows directory on the Pocket PC device. Windows Mobile 2003 for Pocket PC does not require installation of the encryption pack or removal of the CryptoPlugin.dll library

To install the DB2 Everyplace files on a Windows CE device:

1. Use the Install Tool from the Windows CE Services connection software (or ActiveSync) that is included with the Windows CE device to install the files listed in the following table. These files are in the <DSYPATH>\Clients\wince\database directory, where <DYSPATH> is the root installation directory for DB2 Everyplace.

   In the following table, *lang* is the language code, *ver* is the Windows CE version, for example, v3 for version 3, or v4 for version 4; and *proc* is the processor type, for example, ARMRel or X86Rel.

Table 20. Windows CE database files

File Name	Description
jdbc\db2ejdbc.jar	DB2 Everyplace JDBC driver
*ver**proc*\CryptoPlugin.dll	DB2 Everyplace database engine for data encryption
*ver**proc*\DB2e.dll	DB2 Everyplace database engine
*ver**proc*\DB2eJDBC.dll	DB2 Everyplace JDBC driver
lang\DB2eCLP*ver**proc*\DB2eCLP.exe	Command Line Processor executable

2. Use the Install Tool from the Windows CE Services connection software (or ActiveSync) that is included with the Windows CE device to install the files listed in the following table.
3. Optional: If you plan to use the DB2 Everyplace Sync Server, install the files listed in the following table These files are in the <DSYPATH>\Clients\wince\sync*lang**ver**proc* directory,

   where <DSYPATH> is the root installation directory for DB2 Everyplace; *ver* is the Windows CE version, for example, v3 for version 3, or v4 for version 4;*proc* is the processor type, for example, ARMRel or X86Rel; and *lang* is the language code, for example, en_US; and. Install the DLL and JAR files to \Windows on the mobile device. EXE files can be run from any directory on the mobile device.

   DB2 Everyplace Sync Client XScale libraries are available only for devices that run Windows CE 4.x. For Windows CE 3.0 (most Pocket PC 2000 and 2002 devices), use DB2 Everyplace Sync Client libraries from ARM. For the DB2 Everyplace mobile database, XScale libraries are available for Windows CE 3 and 4.

Table 21. Windows CE DB2 Everyplace Sync Client files

File Name	Description
db2sync.exe	DB2 Everyplace Sync Client GUI
dsyagent.dll	IBM Sync Remote Stored Procedure adapter
imsaconfig.dll	IBM Sync Configuration adapter
imsadb2e.dll	IBM Sync DB2 Everyplace adapter
imsafile.dll	IBM Sync File adapter
isync4j.dll	IBM Sync Java interface
isync4j.jar	IBM Sync Java interface
isyncconf.dll	IBM Sync engine
isyncore.dll	IBM Sync engine
isyncstat.dll	DB2 Everyplace Sync Client statistics
isyncxpt.dll	IBM Sync transport library
wbxmllib.dll	IBM Sync WBXML library
upgrade\iUpgrade.exe	IBM Sync Auto Deploy

As an alternative, you can install the CAB files for your processor and software version that contains the DB2 Everyplace Sync Client libraries listed in the previous table. The CAB files are in <DSYPATH>\Clients\wince\sync*lang*\install and are described in the following table.

Note: <DSYPATH> is the root installation directory for DB2 Everyplace.

Table 22. Windows CE DB2 Everyplace Sync Client CAB files

File Name	Description
db2ev*ver.proc*.cab	DB2 Everyplace database files including JDBC driver
sampwce*ver.proc*.cab	DB2 Everyplace sample applications including DB2eCLP, VNurse
db2enmpcf.cab	DB2 Everyplace ADO.NET provider
syncv*ver.proc*.cab	DB2 Everyplace Sync Client files including Java wrapper
isyncnmp.cab	DB2 Everyplace Sync Client ISync.NET provider

If you install the CAB files, the DLL and JAR files are installed to \Windows on the mobile device. EXE files are installed in \Program Files\DB2 Everyplace Samples\ and \Program Files\DB2 Everyplace Sync Server\.

4. Perform a sync function to complete the installation of the DB2 Everyplace libraries and application files to the Windows CE mobile device.

   The following table shows where to obtain DB2 Everyplace Sync Client libraries for various emulators:

Table 23. DB2 Everyplace Sync Client libraries for emulators

File Name	Description
\Clients\WinCE\sync*lang*\v3\X86EMRel	Pocket PC 2000 emulator
\Clients\WinCE\sync*lang*\v3\X86Rel	Pocket PC 2002/Windows Mobile 2003 for Pocket PC emulator
\Clients\WinCE\sync*lang*\v4\emulatorRel	WinCE .NET emulator

Note: DB2 Everyplace Sync Client libraries are not supported on the STANDARD SDK emulator that comes with Embedded Visual C++ 4.0. Use the Windows Mobile 2003 for Pocket PC emulator instead.

DB2 Everyplace also includes a development database library for Windows CE version 3 devices. The development library generates trace data in addition to the diagnostic data that release libraries generate. This data helps you troubleshoot problems as you develop and test DB2 Everyplace applications. The development library is located in the directories that end in ″Dev″. For example, the development library for Windows CE version 3 devices with x86 processors are located in \Clients\wince\database\v3\x86Dev. To install this library, follow the procedure described in this topic, but copy the file from the appropriate Dev directory.

Installing files on a Windows client

Prerequisites:

The Microsoft Strong Encryption download (available from Microsoft) for your operating system must be installed to use encryption between Windows clients and the DB2 Everyplace Sync Server.

To install DB2 Everyplace files on a Windows client:

1. Copy DB2 Everyplace files from your Windows server to a folder on your Windows client.

   DB2 Everyplace files are in the <DSYPATH>\Clients\win32\database directory, where <DSYPATH> is the root installation directory for DB2 Everyplace.

   Table 24 lists files used by DB2 Everyplace on a Windows client. In the following table, *lang* represents a language code, for example, en_US.

Table 24. DB2 Everyplace files

File name	Description
x86\CryptoPlugin.dll	DB2 Everyplace database engine for data encryption
x86\DB2e.dll	DB2 Everyplace database engine
x86\DB2eJDBC.dll	DB2 Everyplace JDBC driver
x86\DB2eODBC.dll	DB2 Everyplace ODBC driver
jdbc\db2ejdbc.jar	DB2 Everyplace JDBC driver
jdbc\DB2eAppl.class	Sample Java application
jdbc\DB2eJavaCLP.class	Command Line Processor written in Java
lang\DB2eCLP\non-unicode\DB2eCLP.exe	Command Line Processor executable
x86\ODBCInst.exe	Registers the DB2 Everyplace ODBC driver

2. Optional: If you plan to use the DB2 Everyplace Sync Server, copy the DB2 Everyplace Sync Client files to the same folder as in the previous step.

   Table 25 on page 56 lists files used by DB2 Everyplace Sync Client on the Windows platform. The DB2 Everyplace Sync Client files are in the <DSYPATH>\Clients\win32\sync*lang*\non-unicode\ directory, where <DSYPATH> is the root installation directory for DB2 Everyplace and *lang* is a language code, for example, en_US.

Table 25. DB2 Everyplace Sync Client files

File Name	Description
db2sync_console.exe	DB2 Sync interface
dsyagent.dll	IBM Remote Stored Procedure adapter
imsaconfig.dll	IBM Sync Configuration adapter
imsadb2e.dll	IBM Sync DB2 Everyplace adapter
imsafile.dll	IBM Sync File adapter
isync4j.dll	IBM Sync Java interface
isync4j.jar	IBM Sync Java interface
isyncconf.dll	IBM Sync engine
isyncore.dll	IBM Sync engine
isyncstat.dll	DB2 Everyplace Sync Client statistics
isyncxpt.dll	IBM Transport library
wbxmllib.dll	IBM Sync WBXML library

3. Optional: install your own DB2 Everyplace applications in the same folder as in the previous step.

   The Win32 DB2 Everyplace Sync Client uses the code page Cp1252 as the default. To synchronize data of a different code page, you need to include the `config-isyn` file in the directory where the application is run. For information about encodings that might be specified in the `config-isyn` file, see the information about the iscServiceOpenEx() function in the *DB2 Everyplace Application Development Guide*.

DB2 Everyplace also includes a development database library for Windows devices. The development library generates trace data in addition to the diagnostic data that release libraries generate. This data helps you troubleshoot problems as you develop and test DB2 Everyplace applications. The development library is located in the directories that end in "Dev". For example, the development library for Windows devices with x86 processors is located in <DSYPATH>\Clients\win32\database\x86Dev, where <DSYPATH> is the root installation directory for DB2 Everyplace.

Updating DB2 Everyplace Sync Client software using the DB2 Everyplace Update Tool

Before updating DB2 Everyplace Sync Client software using the DB2 Everyplace Update Tool, complete the following steps:

1. "Setting up the DB2 Everyplace Update Tool on the DB2 Everyplace Sync Server" on page 57
2. Installing the DB2 Everyplace Update Tool on a mobile device
   - "Installing the DB2 Everyplace Update Tool on a mobile device using a file subscription" on page 58
   - "Installing the DB2 Everyplace Update Tool manually on a mobile device" on page 59

The DB2 Everyplace Update Tool provides a user-friendly solution for DB2 Everyplace Sync Client users who want to upgrade their client software. Instead of physically bringing your mobile device into a service station to retrieve files, you

can launch the DB2 Everyplace Update Tool to download new IBM Sync files for you. This tool is available on the following platforms:

- Palm OS
- Symbian OS
- WinCE

To run the update tool from your mobile device:

1. Tap the **IBM Update** icon. The DB2 Everyplace Update Tool window opens.
2. Activate the menu bar and select **Settings**.
3. In the Settings window, fill in the **Server IP**, **Port #**, **User ID**, and **Password** fields. The information in these fields must be consistent with the settings in the DB2 Sync program.
4. Tap **OK**.
5. Tap the **Update** icon to begin the update process. When the update is complete, the message ″update succeeded″ appears in the DB2 Everyplace Update Tool window.
6. On Symbian operating systems, the update tool places all DB2 Everyplace Sync Client DLLs into C:\System\Libs and the sample application into C:\System\Apps\ISync by default. These paths can be changed in the **Advanced** panel. If the files are downloaded from the server successfully, a dialog window prompts you to specify the new target directory as part of the final update process. The target directory is where configuration and data files will be stored in the version 8 client, which by default is C:\System\Data\ISync. Configuration files from DB2 Everyplace Sync Client version 7 will be copied over to this new target directory for version 8. The update tool does not update the versions of DB2 Everyplace and Sync Server applications in the **Install/Remove** programs on the Control Panel. Instead of downloading individual DLLs, you may choose to download only DB2Sync.sis and DB2e.sis by modifying the DSYDeploy.properties file on your server. Once these two files are received and placed into C:\System\Libs, you can manually install them on the device, and the proper versions will be reflected.
7. On WinCE operating systems, the update tool places all DB2 Everyplace Sync Client DLLs into \Windows and the sample application into \Windows\Start by default. These paths can be changed in the **Advanced** panel. If the files are downloaded from the server successfully, a dialog window prompts you to specify the new target directory as part of the final update process. The target directory is where configuration and data files will be stored in the version 8 client, which by default is the root directory (\). Configuration files from DB2 Everyplace Sync Client version 7 will be copied over to this new target directory for version 8.

Setting up the DB2 Everyplace Update Tool on the DB2 Everyplace Sync Server

Before you install and run the DB2 Everyplace Update Tool, you need to modify the DSYDeploy.properties file on your server. This properties file tells the server where to locate the updates that are being sent to a client device.

This task is part of the main task of Updating DB2 Everyplace Sync Client software using the DB2 Everyplace Update Tool. After you complete these steps, return to “Updating DB2 Everyplace Sync Client software using the DB2 Everyplace Update Tool” on page 56.

Restrictions

You must have the DB2 Everyplace Synchronization Server Version 8.1 or later to use the update tool.

1. Open the <DSYPATH>/DB2e/Server/properties/com/ibm/mobileservices/DSYDeploy.properties file, where <DSYPATH> is the root installation directory for DB2 Everyplace.
2. Locate the entry for the type of mobile device that you are updating. For example, `Palm.M68.prc.syncserver=`
3. Update the entry to point to the directory where the file is located on the server. For example,

   ```
   Palm.M68.prc.syncserver=c:\db2everyplace\Clients\PalmOS\Sync\upgrade\
   ```

   iUpdate will send all the files with the .prc extension in this directory to the device. If you want to synchronize more than one update file at a time, create a directory path that does not end with a file name. For example,
   `Palm.M68.prc.myapp=c:\Mydirectory\Myapp\upgrade\`

Installing the DB2 Everyplace Update Tool on a mobile device

You must install the DB2 Everyplace Update Tool after you install DB2 Everyplace on a server and mobile device. The DB2 Everyplace Update Tool can be installed manually or by creating a file subscription that is synchronized to one or more mobile devices.

This task is part of the main task of Updating DB2 Everyplace Sync Client software using the DB2 Everyplace Update Tool. After you complete these steps, return to "Updating DB2 Everyplace Sync Client software using the DB2 Everyplace Update Tool" on page 56.

- "Installing the DB2 Everyplace Update Tool on a mobile device using a file subscription"
- "Installing the DB2 Everyplace Update Tool manually on a mobile device" on page 59

Installing the DB2 Everyplace Update Tool on a mobile device using a file subscription:

You must install the DB2 Everyplace Update Tool after you install DB2 Everyplace on a server and mobile device.

This task is part of the main task of updating DB2 Everyplace Sync Client software using the DB2 Everyplace Update Tool. After you complete these steps, return to "Updating DB2 Everyplace Sync Client software using the DB2 Everyplace Update Tool" on page 56.

The DB2 Everyplace Update Tool can be installed by creating a file subscription that is synchronized to one or more mobile devices. To install the update tool using a file subscription:

1. Start the Mobile Devices Administration Center.
   - On Windows, click **Start** → **Programs** → **DB2 Everyplace** → **Start Servlet for Sync Server** from the Start menu.
   - On UNIX, login as the DB2 Everyplace Sync Server instance owner and change directory to $DSYINSTDIR/Server/bin and execute dsyadmin.sh.
2. Right-click the **Subscriptions** folder on the object tree and select **Create** → **File Subscription** from the pop-up menu. The Create File Subscription notebook opens.

3. On the Identification page of the Create File Subscription notebook:
   a. Specify a name, description, and encryption level for the file subscription.
   b. Specify the name of the source file. The source file is the DB2 Everyplace Update Tool executable file that you are synchronizing to a mobile device.
   c. Select the check box for each device type that you want to receive the subscription.
4. On the Subscription sets page of the Create File Subscription notebook, assign the file subscription to a subscription set.
5. Click **OK**.

Before you close the Mobile Devices Administration Center, make sure that the correct groups and users are assigned to the subscription set that contains the new file subscription. For more information on creating a file subscription, see the *Sync Server Administration Guide*.

Installing the DB2 Everyplace Update Tool manually on a mobile device:

You must install the DB2 Everyplace Update Tool after you install DB2 Everyplace on a server and mobile device.

This task is part of the main task of Updating DB2 Everyplace Sync Client software using the DB2 Everyplace Update Tool. After you complete these steps, return to "Updating DB2 Everyplace Sync Client software using the DB2 Everyplace Update Tool" on page 56.

To install the DB2 Everyplace Update Tool manually:

1. On your workstation, install and configure a connection software program that is compatible with your mobile device. In some cases, the mobile device already includes connection software.
2. Connect the mobile device to the workstation.
3. The connection software program on your mobile device includes an Install Tool. Use the Install Tool to download the iUpgrade file to your mobile device. For example:
   - For Palm OS devices, download \Clients\PalmOS\Sync\lang\upgrade\iUpgrade.prc
   - For WinCE devices, download \Clients\WinCE\Sync\lang*ver**proc*\upgrade\iUpgrade.exe
   - For Symbian OS devices, download \Client\Symbian7\sync\lang*proc*\upgrade\iUpgrade.app
   - For Symbian OS devices, download \Client\Symbian7\sync\lang*proc*\upgrade\iUpgrade.rsc

   where *proc* is the processor type, and *ver* is the Windows CE version number of your mobile device.

DB2 Everyplace post-installation tasks

Topics in this section apply only to DB2 Everyplace Enterprise Edition and DB2 Everyplace Express Edition.

Adjusting system parameters for AIX after you install DB2 Everyplace

If you are using the embedded DB2 Universal Database provided with DB2 Everyplace, perform the following steps *after* you install DB2 Everyplace and *before* you configure DB2 Everyplace.

1. Modify the login profile (typically /home/<username>/.profile), to include the following: `export EXTSHM=ON`
2. Exit the user shell.
3. Login as the user (to make the changes effective) and open a new shell.
4. From the shell prompt, execute the following command: `db2set DB2ENVLIST=EXTSHM`
5. Restart the DB2 Universal Database instance.

Configuring DB2 Everyplace

Topics in this section explain how to configure DB2 Everyplace on a server and on mobile devices. It describes the processes for each of the following DB2 Everyplace editions:

- DB2 Everyplace Database Edition
- DB2 Everyplace Enterprise Edition
- DB2 Everyplace Express

Configuring DB2 Everyplace Database Edition

After installing DB2 Everyplace Database Edition by copying files to a mobile device, some configuration might be necessary, depending on the mobile device. See "Configuring mobile devices" on page 87 for information about configuring DB2 Everyplace on specific mobile devices.

The topic "Troubleshooting configuration errors" on page 109 provides information about errors that might arise when you configure DB2 Everyplace.

Configuring DB2 Everyplace Enterprise Edition

DB2 Everyplace Enterprise Edition is installed and configured in two separate processes, so you can change your server setup as needed without reinstalling the files each time. You can configure and re-configure DB2 Everyplace using either a wizard or a command line utility. On Linux and UNIX computers, configuring DB2 Everyplace creates a DB2 Everyplace Sync Server instance, also called a DSY instance.

The topic "Troubleshooting configuration errors" on page 109 provides information about errors that might arise when you configure DB2 Everyplace.

After you install and configure DB2 Everyplace, you can start the First Steps launchpad, which provides links to sample applications and other resources that will help you get started using DB2 Everyplace.

Using the Configuration wizard

DB2 Everyplace provides a Configuration wizard to help you set up the DB2 Everyplace Enterprise Edition DB2 Everyplace Sync Server and control databases.

Prerequisites:

Install DB2 Everyplace files on the server before you configure DB2 Everyplace.

(Windows)
Log in as an administrator.

(Linux and UNIX)
Log in as the root user.

To use the Configuration wizard:

Choose from the following configuration options:

Basic Configures DB2 Everyplace on a single local server.

Distributed
Configures the DB2 Everyplace Sync Server control database (Distributed Database) and the DB2 Everyplace Sync Server (Distributed Server) on two separate servers (instances on UNIX platforms). The DB2 Everyplace Sync Server can be administered using the Mobile Devices Administration Center on the server (instance) configured as a Distributed Server.

Clustered
Configures multiple DB2 Everyplace installations (instances) in a clustered environment. You must install IBM WebSphere Application Server to configure the cluster of DB2 Everyplace Application servers.

Remote administration
Configures the current DB2 Everyplace install (instance) for remote administration of DB2 Everyplace Sync Server configured on a remote server (instance). This option configures only the DB2 Everyplace Mobile Devices Administration Center.

DB2 Everyplace Enterprise Edition basic configuration

Prerequisites

Install DB2 Everyplace files on the server before you configure DB2 Everyplace.

After DB2 Everyplace files are installed, you can use the Configuration wizard to set up the runtime environment. A basic configuration configures DB2 Everyplace on a single local server. When you choose a basic configuration, the Configuration wizard prompts you for the following data:

(Windows) DB2 UDB user ID and password
Provide an existing DB2 UDB user ID and password. This data is required.

(Linux and UNIX) DB2 Everyplace Sync Server instance name, password, and locale Specify a DB2 Everyplace Sync Server instance name, password, and locale. This data is required. Databases and samples are created or copied using the specified locale.

Location for storing messages to and from clients
DB2 Everyplace can store messages from client devices in the server's file system or in a DB2 UDB database. The database option is recommended for most installations.

Class path for non-DB2 JDBC drivers
Enter the full path (including drive letter) to JDBC drivers from third parties such as Oracle or Sybase. Use Java CLASSPATH syntax: no spaces, single quotes, or double quotes are allowed. Use the separator character for your operating system (semicolon for Windows, colon for Linux and UNIX). This data is not required. If no such drivers are installed on the server, you can leave the field blank.

Configuration information for the DB2 Everyplace Sync Server
The Configuration wizard installs and configures an embedded application server used by the DB2 Everyplace Sync Server. Provide the server name, server IP address, HTTP port number, and SSL port number.

(Windows) Start the Windows service for the DB2 Everyplace Sync Server
Specify whether you want to start the windows service for DB2 Everyplace Sync Server at the end of the configuration. Starting the Windows service can take a few minutes.

(Linux and UNIX) Start the daemon for DB2 Everyplace Sync Server
Specify whether you want to start the daemon for DB2 Everyplace Sync Server at the end of the configuration. Starting the daemon can take a few minutes.

To perform a basic configuration:

1. Start the DB2 Everyplace Configuration wizard.

   Windows

   Run the DSYconfig.exe file, installed by default in the <DSYPATH>\config\bin directory, where <DSYPATH> is the directory where DB2 Everyplace is installed.

   You can also use a Start menu shortcut: **Start → Programs → IBM DB2 Everyplace Enterprise → Setup Tools → DB2 Everyplace Configuration Wizard**.

   Linux and UNIX
   As the root user, run the DSYconfig.bin file, installed by default in the $DSYINSTDIR/config/bin directory, where $DSYINSTDIR is the directory where DB2 Everyplace is installed.

   Linux for iSeries
   As the root user, run the DSYconfig.sh file, installed by default in the $DSYINSTDIR/config/bin directory, where$DSYINSTDIR is the directory where DB2 Everyplace is installed.
2. Click **Next**.
3. Choose **Configure** (on a Windows computer) or **Create** (on a Linux or UNIX computer).
4. Choose **Basic configuration**.
5. Proceed by following the wizard's prompts.

   DB2 Everyplace is not configured until you click **Next** in the Pre-configuration Summary panel.

DB2 Everyplace distributed configuration

A distributed configuration sets up the DB2 Everyplace Enterprise Edition DB2 Everyplace Sync Server control database and the DB2 Everyplace Sync Server installed on two separate servers. There are two distributed configuration actions:

Database configuration
Sets up the DB2 Everyplace Sync Server control database.

Server configuration
Sets up the DB2 Everyplace Mobile Devices Administration Center and the DB2 Everyplace Sync Server.

When performing a distributed configuration, you must complete the database configuration successfully before you begin the server configuration.

DB2 Everyplace distributed database configuration:

A distributed database configuration sets up the DB2 Everyplace Sync Server control database.

Prerequisites:

Install DB2 Everyplace files on the servers before you configure DB2 Everyplace.

When you choose a distributed database configuration, the Configuration wizard prompts you for the following data:

(Windows) DB2 UDB user ID and password
Provide an existing DB2 UDB user ID and password. This data is required.

(Linux and UNIX) DB2 Everyplace Sync Server instance name, password, and locale Specify a DB2 Everyplace Sync Server instance name, password, and locale. This data is required. Databases and samples are created or copied using the specified locale.

Location for storing messages to and from clients
DB2 Everyplace can store messages from client devices in the server's file system or in a DB2 UDB database. A database message store is recommended for most distributed installations. A file system message store is allowed only for a single-server environment.

To perform a distributed database configuration:

1. Start the DB2 Everyplace Configuration wizard.

   Windows

   Run the DSYconfig.exe file, installed by default in the <DSYPATH>\config\bin directory, where <DSYPATH> is the directory where DB2 Everyplace is installed.

   You can also use a Start menu shortcut: **Start → Programs → IBM DB2 Everyplace Enterprise → Setup Tools → DB2 Everyplace Configuration Wizard**.

   Linux and UNIX
   As the root user, run the DSYconfig.bin file, installed by default in the $DSYINSTDIR/config/bin directory.

   Linux for iSeries
   As the root user, run the DSYconfig.sh file, installed by default in the $DSYINSTDIR/config/bin directory.
2. Click **Next**.
3. Choose **Configure** (on a Windows computer) or **Create** (on a Linux or UNIX computer).
4. Choose **Distributed configuration**.
5. Choose **Database configuration**.
6. Proceed by following the wizard's prompts.

   DB2 Everyplace is not configured until you click **Next** in the Pre-configuration Summary panel.

DB2 Everyplace distributed server configuration:

Prerequisites:

- Install DB2 Everyplace files on the server before you configure DB2 Everyplace.
- Configure the DB2 Everyplace Sync Server control database before configuring the distributed server.
- The control database and the distributed server must use the same locale.
- The DB2 Everyplace Sync Server instance you configure will use databases on another DB2 Everyplace instance. That other instance must be already installed and configured.

A distributed server configuration sets up the DB2 Everyplace Mobile Devices Administration Center and the DB2 Everyplace Sync Server. When you choose a distributed server configuration, the Configuration wizard prompts you for the following data:

(Linux and UNIX) DB2 Everyplace Sync Server instance name
Specify the name of the DB2 Everyplace Sync Server instance to configure.

(Linux and UNIX) Remote control database locale
Specify the locale of the remote UDB instance that holds the DB2 Everyplace control database.

Connection parameters for a remote DB2 UDB instance
Host name, TCP/IP connection port, user ID, user password.

Location for storing messages to and from clients
DB2 Everyplace can store messages from client devices in the server's file system or in a DB2 UDB database. The database option is recommended for most installations.

Class path for non-DB2 JDBC drivers
Enter the full path (including drive letter) to JDBC drivers from third parties such as Oracle or Sybase. Use Java CLASSPATH syntax: no spaces, single quotes, or double quotes are allowed. Use the separator character appropriate for your operating system (semicolon for Windows, colon for Linux). This data is not required. If no such drivers are installed on the server, you can leave the field blank.

Configuration information for the DB2 Everyplace Sync Server
The Configuration wizard installs and configures an embedded application server used by the DB2 Everyplace Sync Server. Provide the server name, server IP address, HTTP port number, and SSL port number.

(Windows) Administrator user ID and password
The Configuration wizard uses the administrator user ID and password to start the DB2 Everyplace Sync Server as a Windows service.

(Windows) Start the DB2 Everyplace Sync Server as a service
Specify whether you want to start the DB2 Everyplace Sync Server as a service at the end of configuration. Starting the service can take a few minutes.

(Linux and UNIX) Start the daemon for DB2 Everyplace Sync Server
Specify whether you want to start the daemon for DB2 Everyplace Sync Server at the end of the configuration. Starting the daemon can take a few minutes.

To perform a distributed server configuration:

1. Start the DB2 Everyplace Configuration wizard.

   Windows

   Run the DSYconfig.exe file, installed by default in the <DSYPATH>\config\bin directory, where <DSYPATH> is the directory where DB2 Everyplace is installed.

   You can also use a Start menu shortcut: **Start → Programs → IBM DB2 Everyplace Enterprise → Setup Tools → DB2 Everyplace Configuration Wizard**.

Linux and UNIX
As the root user, run the DSYconfig.bin file, installed by default in the $DSYINSTDIR/config/bin directory.

Linux for iSeries
As the root user, run the DSYconfig.sh file, installed by default in the $DSYINSTDIR/config/bin directory.

2. Click **Next**.
3. Choose **Configure** (on a Windows computer) or **Create** (on a Linux or UNIX computer).
4. Choose **Distributed configuration**.
5. Choose **Server configuration**.
6. Proceed by following the wizard's prompts.

   DB2 Everyplace is not configured until you click **Next** in the Pre-configuration Summary panel.

Troubleshooting

If the Configuration wizard or the command line configuration tool fails to catalog the remote control database in the local database catalog, make sure you have specified correct values for the following properties:

Remote host
Specify the fully qualified host name.

TCP/IP connection port
Use the TCP/IP connection port that is specified in the services file for the remote DB2 instance. On Windows, the location of the services file is %SystemRoot%\system32\drivers\etc\services; on Linux and UNIX, the location of the services file is /etc/services.. On Windows, the TCP/IP connection port is usually 50 000. You can use the DB2 Control Center to display the configuration of the DB2 instance.

User ID
Provide a valid user name to connect to the remote control database.

Password
Enter the password that corresponds to the user name that you entered.

DB2 Everyplace clustered configuration

A clustered configuration configures multiple instances of the DB2 Everyplace Sync Server installed on multiple computers. When you choose a clustered configuration, the Configuration wizard prompts you for the following data:

Location for the control database and message store
Specify whether to create the DB2 Everyplace Sync Server control database and the message store database on the local server or catalog remote databases in the local database directory.

- If you choose to create the databases on the local server, provide the following:
  - (Windows) A DB2 UDB user ID and password.
  - (Linux and UNIX) A DB2 UDB instance name, password, and locale.
- If you choose to catalog remote databases in the local database directory, provide the following:

– (Windows) A remote database host name, TCP/IP connection port number, user ID, and password.
– (Linux and UNIX) A remote database host name, TCP/IP connection port number, user ID, and password, locale, and instance name.

Class path for non-DB2 JDBC drivers
Enter the full path (including drive letter) to JDBC drivers from third parties such as Oracle or Sybase. Use Java CLASSPATH syntax: no spaces, single quotes, or double quotes are allowed. Use the separator character appropriate for your platform (semicolon for Windows, colon for Linux and UNIX). This data is not required. If no such drivers are installed on the server, you can leave the field blank.

To perform a clustered configuration:

1. Start the DB2 Everyplace Configuration wizard.

   Windows

   Run the DSYconfig.exe file, installed by default in the <DSYPATH>\config\bin directory, where <DSYPATH> is the directory where DB2 Everyplace is installed.

   You can also use a Start menu shortcut: **Start → Programs → IBM DB2 Everyplace Enterprise → Setup Tools → DB2 Everyplace Configuration Wizard**.

   Linux and UNIX
   As the root user, run the DSYconfig.bin file, installed by default in the $DSYINSTDIR/config/bin directory.

   Linux for iSeries
   As the root user, run the DSYconfig.sh file, installed by default in the $DSYINSTDIR/config/bin directory.
2. Click **Next**.
3. Choose **Configure** (on a Windows computer) or **Create** (on a Linux or UNIX computer).
4. Choose **Clustered configuration**.
5. Proceed by following the wizard's prompts. You can stop the wizard by clicking **Cancel**. DB2 Everyplace is not configured until you click **Next** in the Pre-configuration Summary panel.

DB2 Everyplace remote administration configuration

Prerequisites:

- Install DB2 Everyplace files on the server before you configure DB2 Everyplace.
- Configure the remote DB2 Everyplace Sync Server using the basic configuration before performing remote administration configuration.
- The local and remote computers must use the same locale.
- Catalog all source and mirror databases used by the DB2 Everyplace Sync Server.
- The DB2 Everyplace Sync Server must use a real IP address during configuration. You cannot use 127.0.0.1. If you use 127.0.0.1, you cannot edit subscriptions.

The remote administration configuration enables you to run the Mobile Devices Administration Center on a local machine to administer a remote DB2 Everyplace

Sync Server. When you choose a remote administration configuration, the Configuration wizard prompts you for the following data:

(Linux and UNIX) DB2 Everyplace Sync Server instance name
Specify the name of the DB2 Everyplace Sync Server instance to configure.

(Linux and UNIX) Remote control database locale
Specify the locale of the remote UDB instance that holds the DB2 Everyplace control database.

Connection parameters for a remote DB2 UDB instance
Host name, TCP/IP connection port, user ID, user password.

Location for storing messages to and from clients
DB2 Everyplace can store messages from client devices in the server's file system or in an existing remote DB2 UDB database.

Class path for non-DB2 JDBC drivers
Enter the full path (including drive letter) to JDBC drivers from third parties such as Oracle or Sybase. Use Java CLASSPATH syntax: no spaces, single quotes, or double quotes are allowed. Use the separator character appropriate for your operating system (semicolon for Windows, colon for Linux). This data is not required. If no such drivers are installed on the server, you can leave the field blank.

To perform a remote administration configuration:

1. Start the DB2 Everyplace Configuration wizard.

   Windows

   Run the DSYconfig.exe file, installed by default in the <DSYPATH>\config\bin directory, where <DSYPATH> is the directory where DB2 Everyplace is installed.

   You can also use a Start menu shortcut: **Start → Programs → IBM DB2 Everyplace Enterprise → Setup Tools → DB2 Everyplace Configuration Wizard**.

   Linux and UNIX
   As the root user, run the DSYconfig.bin file, installed by default in the $DSYINSTDIR/config/bin directory.

   Linux for iSeries
   As the root user, run the DSYconfig.sh file, installed by default in the $DSYINSTDIR/config/bin directory.

2. Click **Next**.
3. Choose **Configure** (on a Windows computer) or **Create** (on a Linux or UNIX computer).
4. Choose **Remote administration**.
5. Proceed by following the wizard's prompts.

   DB2 Everyplace is not configured until you click **Next** in the Pre-configuration Summary panel.

Troubleshooting

If the Configuration wizard or the command line configuration tool fails to catalog the remote control database in the local database catalog, make sure you have specified correct values for the following properties:

Remote host
Specify the fully qualified host name.

TCP/IP connection port
Use the TCP/IP connection port that is specified in the services file for the remote DB2 instance. On Windows, the location of the services file is %SystemRoot%\system32\drivers\etc\services; on Linux and UNIX, the location of the services file is /etc/services.. On Windows, the TCP/IP connection port is usually 50 000. You can use the DB2 Control Center to display the configuration of the DB2 instance.

User ID
Provide a valid user name to connect to the remote control database.

Password
Enter the password that corresponds to the user name that you entered.

Configuring DB2 Everyplace Enterprise Edition by using the command line configuration tool

Prerequisites:

DB2 Everyplace files must be installed on the server before you run the configuration tool.

(Windows)
Log in as an administrator.

(Linux and UNIX)

- Log in as the root user.
- Back up all user data before you unconfigure DB2 Everyplace. Unconfiguring DB2 Everyplace drops all DB2 Everyplace Sync Server instances. Dropping a DB2 Everyplace Sync Server instance also deletes the db2everyplace82 directory from the instance user's home directory.

The command line configuration tool is an ANT-based utility that can configure or unconfigure DB2 Everyplace on a server. It is recommended for advanced users. On Linux and UNIX computers, configuring the DB2 Everyplace installation essentially means creating a DB2 Everyplace Sync Server instance, also referred to as a DSY instance.

Before you run the tool, edit the dsyconfig.properties file, installed by default in the <DSYPATH>\config directory on a Windows computer, and in the $DSYINSTDIR/config directory on a Linux or UNIX computer, where $DSYINSTDIR is the directory where DB2 Everyplace is installed.

The following tables list tasks and property values for the various configuration options.

- Table 26 on page 70
- Table 27 on page 70
- Table 28 on page 71
- Table 29 on page 71
- Table 30 on page 72
- Table 31 on page 72
- Table 32 on page 73

- Table 33 on page 73
- Table 34 on page 73
- Table 35 on page 74
- Table 36 on page 74
- Table 37 on page 74

Table 26. Basic configuration, single-box install (ANT task name: basic-config)

Required properties (Windows and Linux and UNIX)
createControldb (must be set to true)
isDB2MessageStore (set to true to use DB2 database for message store, else set to false)
dsyctldbUser (the database administrator user ID)
dsyctldbPassword (the database administrator password)
virtualHost (Virtual host where DB2 Everyplace Application server will be installed. The default value is default_host)
wasNode (Name of the WAS node where DB2 Everyplace application server will be installed. The default value is DefaultNode)
ip (IP address of the virtual host where DB2 Everyplace Application Server will be installed. You can specify 127.0.0.1, or the actual IP address of the host, or the complete host name, including domain.)
serverName (Name of the DB2 Everyplace Application Server, default is IBMDB2eServer)
jdbcDriverClasspath (Class path for non-DB2 JDBC drivers to be used by DB2 Everyplace Sync Server and DB2 Everyplace Mobile Devices Administration Center)
serverPort (HTTP port for the application server. Specify an unused port.)
sslPort (SSL port for the application server. Specify an unused port.)
bootPort (Bootstrap port for the application server. Specify an unused port.)
soapPort (SOAP port for the application server. Specify an unused port.)
Additional required properties (Linux and UNIX)
instance (Name of the DB2 Everyplace Sync Server instance. This must be an existing DB2 UDB instance)
instanceLang (Locale to be used for the DB2 Everyplace Sync Server instance. The DB2 Everyplace Sync Server control database and the DB2 Everyplace sample databases will be created in the locale specified. The Mobile Devices Administration Center messages will also be in the locale specified. The locale specified must be a supported locale for DB2 Everyplace. For details on the locales supported by DB2 Everyplace Sync Server, refer to the DB2 Everyplace Information Center).

Table 27. Basic unconfiguration, single-box install (ANT task name: basic-deconfig)

Required properties (Windows)
None.
Required properties (Linux and UNIX)
instance (Name of an existing DB2 Everyplace Sync Server instance.)

Table 28. Distributed install, database configuration (ANT task name: distributed-database-config)

Required properties (Windows and Linux and UNIX)
createControldb (must be set to true)
isDB2MessageStore (set to true to use DB2 database for message store, else set to false)
dsyctldbUser (the database administrator user ID)
dsyctldbPassword (the database administrator password)
Additional required properties (Linux and UNIX)
instance (Name of the DB2 Everyplace Sync Server instance. This must be an existing DB2 UDB instance)
instanceLang (Locale to be used for the DB2 Everyplace Sync Server instance. The DB2 Everyplace Sync Server control database and the DB2 Everyplace sample databases will be created in the locale specified. The Mobile Devices Administration Center messages will also be in the locale specified. The locale specified must be a supported locale for DB2 Everyplace.

Table 29. Distributed install unconfiguration, database (ANT task name: distributed-database-deconfig)

Required properties (Windows)
None.
Required properties (Linux and UNIX)
instance (Name of the DB2 Everyplace Sync Server instance.)

Table 30. Distributed install, server (ANT task name: distributed-server-config)

Required properties (Windows and Linux and UNIX)
createControldb (must be set to false)
isDB2MessageStore (set to true to use DB2 database for message store, else set to false)
dsyctldbUser (database administrator user ID for the remote control database)
dsyctldbPassword (database administrator password for the remote control database)
remoteHost (Fully qualified host name of the remote machine which hosts the DB2 Everyplace Sync Server control database. This information is required to catalog the remote node and the remote control database)
remoteConnectionPort (TCP/IP connection port for the remote DB2 instance that hosts the DB2 Everyplace Sync Server control database. This information is required to catalog the remote node and the remote control database)
virtualHost (Virtual host where DB2 Everyplace Application server will be installed. The default value is default_host)
wasNode (Name of the WAS node where DB2 Everyplace application server will be installed. The default value is DefaultNode)
ip (IP address of the virtual host where DB2 Everyplace Application Server will be installed. You can specify 127.0.0.1, or the actual IP address of the host, or the complete host name, including domain.)
serverName (Name of the DB2 Everyplace Application Server, default is IBMDB2eServer)
jdbcDriverClasspath (Classpath for non-DB2 JDBC drivers to be used by DB2 Everyplace Sync Server and DB2 Everyplace Mobile Devices Administration Center)
serverPort (HTTP port for the application server. Specify an unused port.)
sslPort (SSL port for the application server. Specify an unused port.)
bootPort (Bootstrap port for the application server. Specify an unused port.)
soapPort (SOAP port for the application server. Specify an unused port.)
Additional required properties (Linux and UNIX)
instance (Name of the DB2 Everyplace Sync Server instance. This must be an existing DB2 UDB instance)
instanceLang (The locale of the remote database. The DB2 Everyplace Sync Server control database and the DB2 Everyplace sample databases will be created in the locale specified. The Mobile Devices Administration Center messages will also be in the locale specified. The locale specified must be a supported locale for DB2 Everyplace. For details on the locales supported by DB2 Everyplace Sync Server, refer to the DB2 Everyplace Information Center).

Table 31. Distributed install unconfiguration, server (ANT task name: distributed-server-deconfig)

Required properties (Windows)
None.
Required properties (Linux and UNIX)
instance (Name of the DB2 Everyplace Sync Server instance.)

Table 32. Remote administration, Mobile Devices Administration Center only (ANT task name: remote-admin-config)

Required properties (Windows and Linux and UNIX)
createControldb (must be set to false)
isDB2MessageStore (set to true to use DB2 database for message store, else set to false)
dsyctldbUser (the database administrator user ID for the remote control database)
dsyctldbPassword (the database administrator password for the remote control database)
remoteHost (Fully qualified host name of the remote machine which hosts the DB2 Everyplace Sync Server control database. This information is required to catalog the remote node and the remote control database)
remoteConnectionPort (TCP/IP connection port for the remote DB2 instance that hosts the DB2 Everyplace Sync Server control database. This information is required to catalog the remote node and the remote control database)
jdbcDriverClasspath (Classpath for non-DB2 JDBC drivers to be used by DB2 Everyplace Sync Server and DB2 Everyplace Mobile Devices Administration Center)
Additional required properties (Linux and UNIX)
instance (Name of the DB2 Everyplace Sync Server instance. This must be an existing DB2 UDB instance)
instanceLang (The locale of the remote database. The DB2 Everyplace Sync Server control database and the DB2 Everyplace sample databases will be created in the locale specified. The Mobile Devices Administration Center messages will also be in the locale specified. The locale specified must be a supported locale for DB2 Everyplace. For details on the locales supported by DB2 Everyplace Sync Server, refer to the DB2 Everyplace Information Center).

Table 33. Remote administration unconfiguration (ANT task name: remote-admin-deconfig)

Required properties (Windows)
None.
Required properties (Linux and UNIX)
instance (Name of the DB2 Everyplace Sync Server instance.)

Table 34. Cluster configuration, creates control database and message store database on the node being configured (ANT task name: cluster-config)

Required properties (Windows and Linux and UNIX)
createControldb (must be set to true)
isDB2MessageStore (must be set to true to use DB2 database for message store)
dsyctldbUser (the database administrator user ID for the control database)
dsyctldbPassword (the database administrator password for the control database)
remoteHost (Fully qualified host name of the remote machine which hosts the DB2 Everyplace Sync Server control database. This information is required to catalog the remote node and the remote control database)
remoteConnectionPort (TCP/IP connection port for the remote DB2 instance that hosts the DB2 Everyplace Sync Server control database. This information is required to catalog the remote node and the remote control database)
clusterName (This value must be set to the name of the DB2 Everyplace cluster that will be created / has been created. The default value for the cluster is IBMDB2eCluster. The cluster name must not contain spaces.)
Additional required properties (Linux and UNIX)

Table 34. Cluster configuration, creates control database and message store database on the node being configured (ANT task name: cluster-config) (continued)

Required properties (Windows and Linux and UNIX)
instance (Name of the DB2 Everyplace Sync Server instance. This must be an existing DB2 UDB instance)
instanceLang (Locale to be used for the DB2 Everyplace Sync Server instance. The DB2 Everyplace Sync Server control database and the DB2 Everyplace sample databases will be created in the locale specified. The Mobile Devices Administration Center messages will also be in the locale specified. The locale specified must be a supported locale for DB2 Everyplace. For details on the locales supported by DB2 Everyplace Sync Server, refer to the DB2 Everyplace Information Center).

Table 35. Cluster configuration, does not create the DB2 Everyplace control database and the message store database on the node being configured (ANT task name: cluster-config)

Required properties (Windows and Linux and UNIX)
createControldb (must be set to false)
isDB2MessageStore (must be set to true to use DB2 database for message store)
dsyctldbUser (the database administrator user ID)
dsyctldbPassword (the database administrator password)
clusterName (Name of the DB2 Everyplace cluster that will be created. The default value for the cluster is IBMDB2eCluster. The cluster name must not contain spaces.)
Additional required properties (Linux and UNIX)
instance (Name of the DB2 Everyplace Sync Server instance. This must be an existing DB2 UDB instance)
instanceLang (Locale to be used for the DB2 Everyplace Sync Server instance. The DB2 Everyplace Sync Server control database and the DB2 Everyplace sample databases will be created in the locale specified. The Mobile Devices Administration Center messages will also be in the locale specified. The locale specified must be a supported locale for DB2 Everyplace. For details on the locales supported by DB2 Everyplace Sync Server, refer to the DB2 Everyplace Information Center).

Table 36. Cluster unconfiguration, if the DB2 Everyplace control database and the message store database has been created on the node being unconfigured (ANT task name: cluster-deconfig)

Required properties (Windows)
None.
Required properties (Linux and UNIX)
instance (Name of the DB2 Everyplace Sync Server instance.)

Table 37. Cluster unconfiguration, if the DB2 Everyplace control database and the message store database have not been created on the node being unconfigured (ANT task name: cluster-deconfig)

Required properties (Windows)
None.
Required properties (Linux and UNIX)
instance (Name of the DB2 Everyplace Sync Server instance.)

To use the command line configuration tool:

1. Navigate to the directory where the tool is stored.

   Windows

   By default, it's <DSYPATH>\config.

Linux and UNIX
By default, it's $DSYINSTDIR/config.

2. Start the configuration tool.

Windows
Enter DSYconfig *task* where *task* represents a configuration task to perform, for example, basic-config.

Linux and UNIX
Enter DSYconfig *task* where *task* represents a configuration task to perform, for example, basic-config.

The following example shows the command for configuring DB2 Everyplace from the command line on a Windows workstation.

```
C:\Program Files\IBM\DB2Everyplace\config> DSYconfig basic-config
```

To record messages and events that occurred during configuration, the tool creates log files in <DSYPATH>\log directory on a Windows computer, and in the $DSYINSTDIR/log directory on a Linux or UNIX computer.

Unconfiguring DB2 Everyplace Enterprise Edition

You must unconfigure DB2 Everyplace before you uninstall it. However, when you re-configure DB2 Everyplace, the configuration tools unconfigure DB2 Everyplace for you.

Prerequisites:

Windows

- Log in as an administrator.
- Back up all user data.

Linux and UNIX

- Log in as the root user.
- Back up all user data. Unconfiguring DB2 Everyplace drops all DB2 Everyplace Sync Server instances. Dropping a DB2 Everyplace Sync Server instance also deletes the db2everyplace82 directory from the instance user's home directory.

Use the Configuration wizard to unconfigure a DB2 Everyplace installation. The Configuration wizard detects the type of DB2 Everyplace installation (basic, remote, distributed, or clustered), then stops services, uncatalogs databases, and removes features as appropriate. On Linux and UNIX computers, unconfiguring DB2 Everyplace drops DB2 Everyplace Sync Server instances (also called DSY instances) and deletes the db2everyplace82 directory from the user's home directory.

To unconfigure DB2 Everyplace Enterprise Edition:

1. Start the DB2 Everyplace Configuration wizard.

Windows

Run the DSYconfig.exe file, installed by default in the <DSYPATH>\config\bin directory, where <DSYPATH> is the directory where DB2 Everyplace is installed.

You can also use a Start menu shortcut: **Start → Programs → IBM DB2 Everyplace Enterprise → Setup Tools → DB2 Everyplace Configuration Wizard**.

Linux and UNIX
As the root user, run the DSYconfig.bin file, installed by default in the $DSYINSTDIR/config/bin directory.

Linux for iSeries
As the root user, run the DSYconfig.sh file, installed by default in the $DSYINSTDIR/config/bin directory.

2. Click **Next**.
3. Choose **Unconfigure** (on a Windows computer) or **Drop** (on a Linux or UNIX computer).
4. Proceed by following the wizard's prompts.

Now, you can uninstall DB2 Everyplace.

Configuring DB2 Everyplace Express Edition

DB2 Everyplace Express Edition provides a wizard and a command line tool you can use to change a DB2 Everyplace configuration.

The topic "Troubleshooting configuration errors" on page 109 provides information about errors that might arise when you configure DB2 Everyplace.

Configuring DB2 Everyplace Express Edition by using the Configuration wizard

Prerequisites:

DB2 Everyplace files must be installed before you configure DB2 Everyplace.

(Windows)
Log in as an administrator.

(Linux)
Log in as the root user.

The Configuration wizard prompts you for the following data:

(Windows) DB2 Universal Database user ID and password
Provide user ID and password to access a database already installed on the server. This information is required.

(Linux) DB2 Everyplace Sync Server instance name, password, and locale
Specify a DB2 Everyplace Sync Server instance name, password, and locale. Configuration on Linux creates a DB2 Everyplace Sync Server instance. Databases and samples are also created or copied using the specified locale. This data is required.

To configure DB2 Everyplace Express Edition after you perform a custom installation, the wizard prompts you for additional data:

Class path for non-DB2 JDBC drivers
Enter the full path (including drive letter) to JDBC drivers from third parties such as Oracle or Sybase. Use Java CLASSPATH syntax: no spaces, single quotation marks, or double quotation marks are allowed. Use the

separator character for your operating system (semicolon for Windows, colon for Linux). This information is not required. If no such drivers are installed on the server, you can leave the field blank.

Message store option
DB2 Everyplace can store messages from client devices in the server's file system or in a DB2 UDB database. The database option is recommended for most installations.

Application server configuration information
Enter a server name, IP address, server port, and SSL port.

(Windows) Start the Windows service for the DB2 Everyplace Sync Server
Specify whether you want to start the windows service for DB2 Everyplace Sync Server at the end of the configuration. Starting the Windows service can take a few minutes.

(Linux) Start the daemon for DB2 Everyplace Sync Server
Specify whether you want to start the daemon for DB2 Everyplace Sync Server at the end of the configuration. Starting the daemon can take a few minutes.

To configure DB2 Everyplace Express Edition by using the DB2 Everyplace Configuration wizard:

1. Start the DB2 Everyplace Configuration wizard.

   Windows

   Run the DSYconfig.exe file, installed by default in the <DSYPATH>\config\bin directory, where <DSYPATH> is the directory where DB2 Everyplace is installed.

   You can also use a Start menu shortcut: **Start → Programs → IBM DB2 Everyplace Express → Setup Tools → DB2 Everyplace Configuration Wizard**.

   Linux As the root user, run the DSYconfig.bin file, installed by default in the $DSYINSTDIR/config/bin directory.

   Linux for iSeries
   As the root user, run the DSYconfig.sh file, installed by default in the $DSYINSTDIR/config/bin directory.

2. Click **Next**.
3. Proceed by following the wizard's prompts.

   DB2 Everyplace is not configured until you click **Next** in the Pre-configuration Summary panel.

Configuring DB2 Everyplace Express Edition by using the command line configuration tool

Prerequisites:

- DB2 Everyplace Express Edition files must be installed on the server before you run the configuration tool.
- Before you run the command line configuration tool, edit the dsyconfig.properties file, installed by default in the <DSYPATH>\config directory on a Windows computer (where <DSYPATH> is the directory where

DB2 Everyplace is installed), and in the$DSYINSTDIR/config directory on a Linux computer. Enter values or accept the default values for the following properties:

dsyctldbUser
User name for the control database.

dsyctldbPassword
Password for the control database.

ip Application server IP address.

serverName
Application server name.

jdbcDriverClasspath
The full path (including drive letter) to JDBC drivers from third parties such as Oracle or Sybase. Use Java CLASSPATH syntax: no spaces, single quotation marks, or double quotation marks are allowed. Use the separator character for your operating system (semicolon for Windows, colon for Linux). This data is not required. If no such drivers are installed on the server, you can leave the field blank.

serverPort
HTTP port for the application server. Specify an unused port.

sslPort
SSL port for the application server. Specify an unused port.

bootPort
Bootstrap port for the application server. Specify an unused port.

soapPort
SOAP port for the application server. Specify an unused port.

(Linux) instance
The name of the DB2 Everyplace Sync Server instance. This must be an existing DB2 UDB instance.

(Linux) instanceLang
Locale to use for the DB2 Everyplace Sync Server instance. The DB2 Everyplace Sync Server control database and the DB2 Everyplace sample databases are created in the locale specified. The Mobile Devices Administration Center messages are also be in the locale specified. The locale specified must be a supported locale for DB2 Everyplace.

To configure DB2 Everyplace Express Edition by using the command line configuration tool:

1. Navigate to the directory where the tool is stored.

   Windows default directory
   <DSYPATH>\config

   Linux default directory
   $DSYINSTDIR/config

2. Start the configuration tool.

   On Windows
   Enter `DSYconfig` *`task`* where *task* represents a configuration task to perform, for example, `express-config`.

   On Linux
   Enter `DSYconfig` *`task`* where *task* is a configuration task to perform, for

example, `express-config`. Post-install configuration on Linux creates a DB2 Everyplace Sync Server instance.

The following example shows the command for configuring DB2 Everyplace Express from the command line on a Windows workstation. The tool creates log files in the <DSYPATH>\config directory to record messages and events that occurred during configuration.

```
C:\Program Files\IBM\DB2Everyplace\config> DSYconfig express-config
```

Configuring DB2 Everyplace in WebSphere Application Server 6

Follow these steps to configure DB2 Everyplace in WebSphere Application Server version 6.

- Install WebSphere Application Server version 6.
- Install the WebSphere Application Server version 6.0.2.3 fix pack.

Important: Do *not* perform these instructions unless you are running WebSphere Application Server version 6.0.2.3 or newer. DB2 Everyplace will not function properly on an earlier version of WebSphere Application Server.

These instructions use the following placeholders:

WAS_HOME
refers to the installation directory of the WebSphere Application Server version 6

WAS_PROFILE_NAME
refers to the name of the profile created when a profile was created for WebSphere Application Server version 6

The default WebSphere Application Server profile name is ″default″. If your configuration uses more than one profile, use the script files of the profile that you want to associate with DB2 Everyplace.

To configure DB2 Everyplace in WebSphere Application Server version 6:

1. Start server1 in WebSphere Application Server.

   Windows

   a. Log in as the administrator.
   b. Issue the following command: `<WAS_HOME>\bin\startServer.bat server1`

   UNIX and Linux

   a. Log in as the root user
   b. Issue the following command: `<WAS_HOME>/bin/startServer.sh server1`

2. Install DB2 Everyplace.
3. Configure DB2 Everyplace based on your type of WebSphere environment. You have two choices:

   DB2 Everyplace basic configuration
   Use this option if you are running DB2 Everyplace on a single physical server.

DB2 Everyplace distributed configuration
Use this option if:

- You are running the DB2 Everyplace Distributed Database and the DB2 Everyplace Distributed Server on two separate physical servers.
- You are running the DB2 Everyplace Distributed Database and the DB2 Everyplace Distributed Server as unique instances on a single UNIX or Linux system.

4. Make sure the configured DB2 Everyplace Sync Server is not running. If the Sync Server is running, stop it:

   Windows
   Issue the following command: `<DSYPATH>\Server\bin\dsysyncstop.bat`

   UNIX and Linux
   a. Log in as the DB2 Everyplace Sync Server instance.
   b. Issue the following command:
      `$DSYINSTDIR/Server/bin/dsysyncstop.sh`

5. Create the DB2 Everyplace application server.

   Windows
   a. Change to the <DSYPATH>\config\work\was directory.
   b. Issue the following command:

      ```
      <WAS_HOME>\bin\wsadmin.bat -profileName profile_name -f
      dsyInstallDB2eWAS6.jacl DSYINSTDIR DSYSQLIBINSTDIR
      WAS_virtual_host WAS_node_name WAS_cell_name IP_address
      server_name application_name context_root WebServer_name
      [user] [group]
      ```

   UNIX and Linux
   a. Log in as the root user.
   b. Change to the $DSYINSTDIR\config\work\was directory.
   c. Issue the following command:

      ```
      <WAS_HOME>/bin/wsadmin.sh -profileName WAS_PROFILE_NAME -f
      dsyInstallDB2eWAS6.jacl DSYINSTDIR DSYSQLIBINSTDIR
      WAS_virtual_host WAS_node_name WAS_cell_name IP_address
      server_name application_name context_root WebServer_name user
      group
      ```

where

profile_name
The existing profile WebSphere Application Server profile name

WAS_node_name
The existing WebSphere node name for the DB2 Everyplace installation.

Example: For `expert.yourcompany.com`, use `expert`.

WAS_virtual_host
The existing WebSphere virtual host name.

Example: `default_host`

WAS_cell_name
The existing WebSphere cell name for DB2 Everyplace installation

IP_address
A valid IP address or fully qualified DNS host name for the server

server_name
The DB2 Everyplace server name.

Example: `DB2e1`

application_name
The name of the DB2 Everyplace Enterprise Application. Set this parameter to `DB2EveryplaceEnterprise8.2` for DB2 Everyplace Enterprise Edition or `DB2EveryplaceExpress8.2` for DB2 Everyplace Express Edition.

context_root
The context root for the DB2 Everyplace Enterprise Application. Set this parameter to `db2e`.

WebServer_name
The name of the HTTP server that interacts with WebSphere Application Server

user The name of the DB2 Everyplace Sync Server instance. This parameter is optional on Windows systems.

group The name of the primary group for the DB2 Everyplace Sync Server instance. This parameter is optional on Windows systems.

Starting the DB2 Everyplace application server in WebSphere Application Server version 6

After you have installed DB2 Everyplace in WebSphere Application Server version 6, you can start the DB2 Everyplace application server.

Prerequisites: Start your webserver.

1. Start the DB2 Everyplace application server.

   Windows
   Issue the following command:

   ```
   <WAS_HOME>\profiles\<PROFILE_NAME>\bin\startServer.bat
   <serverName>
   ```

   UNIX or Linux

   a. Log in as the root user.
   b. Source the profile of the DB2 Everyplace Sync Server instance.
      Example: `. ~<DSYINSTANCE>/<profile>`
      where *<profile>* is the file name of the login profile of the DB2 instance.
   c. Issue the following command:

      ```
      <WAS_HOME>/profiles/<PROFILE_NAME>/bin/startServer.sh
      <serverName>
      ```

   where

   PROFILE_NAME
   The name of the WebSphere Application Server profile that runs the DB2 everyplace application server.

   serverName
   The name of the DB2 Everyplace application server.
2. Check that the DB2 Everyplace application server has started properly.

a. Open a web browser.
b. Type the following URL: `http://yourhostname.yourdomain/db2e/db2erdb`

You should see the phrase "DB2e SyncServer" followed by the current time of the server.

Configuring DB2 Everyplace in WebSphere Application Server

Prerequisites:

1. Install DB2 Everyplace.
2. Upgrade WebSphere Application Server to version 5.1.1.7.

Important: Do *not* perform these instructions unless you are running WebSphere Application Server version 5.1.1.7 or newer. DB2 Everyplace will not function properly on an earlier version of WebSphere Application Server.

The DB2 Everyplace application server is created by the following steps, with the appropriate configuration parameters. If a copy of the DB2 Everyplace server is already running, stop the server before continuing.

To configure DB2 Everyplace in WebSphere Application Server:

1. Use the configuration wizard to perform a basic configuration of DB2 Everyplace.
2. Ensure that the DB2 Everyplace Sync Server is not running.

   If the DB2 Everyplace Sync Server is running, enter the following command to stop it.

   Windows

   ```
   <DSYPATH>\Server\bin\dsysyncstop.bat
   ```

   Linux or UNIX

   ```
   $DSYINSTDIR/Server/bin/dsysyncstop.sh
   ```

3. Create the DB2 Everyplace application server.

   Windows

   a. Change to the <DSYPATH>\config\work\was directory.
   b. Run wsadmin.bat by issuing the following command:

      ```
      <WAS_HOME>\bin\wsadmin.bat -f dsyInstallDB2e.jacl
      WAS_node_name WAS_virtual_host server_name IP_address
      DSYINSTDIR DSYSQLIBINSTDIR application_name context_root
      WAS_cell_name [user][group]
      ```

   Linux and UNIX

   a. Log in as the root user.
   b. Change to the $DSYINSTDIR/config/work/was directory.
   c. Run wsadmin.sh by issuing the following command:

      ```
      <WAS_HOME>/bin/wsadmin.sh -f dsyInstallDB2e.jacl WAS_node_name
      WAS_virtual_host server_name IP_address DSYINSTDIR
      DSYSQLIBINSTDIR application_name context_root WAS_cell_name
      user group
      ```

   where

WAS_node_name
The existing WebSphere node name for the DB2 Everyplace installation. This is the DNS host name of your machine, without the domain name.

Example: For `expert.yourcompany.com`, use `expert`.

WAS_virtual_host
The existing WebSphere virtual host name.

Example: `default_host`

server_name
The DB2 Everyplace server name.

Example: `DB2e1`

IP_address
A valid IP address or fully qualified DNS host name for the server.

DSYINSTDIR
The DB2 Everyplace instance installation directory. Directory names can not have spaces. When necessary, use the short name.

Example: Change C:\Program Files\IBM\SQLLIB to C:\Progra~1\IBM\SQLLIB.

DSYSQLIBINSTDIR
The DB2 UDB installation directory. Directory names can not have spaces. When necessary, use the short name.

Example: Change C:\Program Files\IBM\SQLLIB to C:\Progra~1\IBM\SQLLIB.

application_name
The name of the DB2 Everyplace Enterprise Application. Set this parameter to `DB2EveryplaceEnterprise8.2` for DB2 Everyplace Enterprise installation or `DB2EveryplaceExpress8.2` for DB2 Everyplace Express installation.

context_root
The context root for the DB2 Everyplace Enterprise Application. Set this parameter to `db2e`.

WAS_cell_name
The existing WebSphere cell name for DB2 Everyplace installation.

user The name of the DB2 Everyplace Sync Server instance. This parameter is optional on Windows systems.

group The name of the primary group for the DB2 Everyplace Sync Server instance. This parameter is optional on Windows systems.

After you have configured the DB2 Everyplace application server, start the application server. To start the application server:

Windows
Issue the following command:

```
<WAS_HOME>\bin\startServer.bat [server_name]
```

Linux and UNIX

- Log in as the root user
- Issue the following command:

```
. ~[dsyinstance]/[profile]
<WAS_HOME>/bin/startServer.sh [server_name]
```

Important: There is a space between the period and tilde in this command.

where

dsyinstance
the DB2 Everyplace Sync Server instance.

profile
the default login profile of the user. This file is the .profile file for the K shell and the .bashrc file for the bash shell.

server_name
the name of the DB2 Everyplace Application Server.

Important: If the DB2 Everyplace Application Server is part of a WebSphere Network Deployment environment, issue the `. ~<userinstance>/<profile>` command before you start the node agent. The node agent passes the environment to the servers it manages directly.

Configuring DB2 Everyplace in a clustered application server environment

Follow these steps to configure DB2 Everyplace in a clustered application server environment.

Prerequisites:

1. Install WebSphere Application Server Network Deployment on a dedicated server.
2. Upgrade WebSphere Application Server Network Deployment to version 5.1.1.7.

   Important: Do *not* perform these instructions unless you are running WebSphere Application Server Network Deployment version 5.1.1.7 or newer. DB2 Everyplace will not function properly on an earlier version of WebSphere Application Server Network Deployment.
3. Make sure the WebSphere installations on each node are at the same level as the deployment manager, and each node is added to the deployment manager. The *WebSphere Application Server Network Deployment Documentation* describes how to setup the node configuration. Start the deployment manager before configuring the cluster.
4. Install and configure DB2 Everyplace on each node. Configure DB2 Everyplace with the cluster configuration option.
5. When you configure DB2 Everyplace, select the DSYMSGDB database for the message store.
6. Ensure all DB2 Everyplace installations that are part of the clustered configuration share the DB2 Everyplace Sync Server databases DSYCTLDB and DSYMSGDB. The DB2 Everyplace configuration catalogs these databases.
7. Catalog the source and mirror databases that are used for DB2 Everyplace subscriptions on each of the nodes in the cluster. Catalog these databases with the same name.
8. Ensure all files that are used by DB2 Everyplace file subscriptions are shared across all nodes in the cluster.

9. Ensure all databases that are used by DB2 Everyplace JDBC and DataPropagator subscriptions are catalogued in the database directory of each node.

Host the DB2 Everyplace databases on a dedicated database server. This database server can also host the source and mirror databases that DB2 Everyplace uses.

If security is enabled in WebSphere Application Server, provide a WebSphere Application Server security ID user name and password as parameters to each WebSphere command.

To configure DB2 Everyplace in a clustered environment:

1. Create the first server.

   Windows

   a. Change to the <DSYPATH>\config\work\was directory.
   b. Run wsadmin.bat.

      ```
      <WAS_HOME>\bin\wsadmin.bat -f dsyInstallDB2e.jacl
      WAS_node_name WAS_virtual_host server_name IP_address
      DSYINSTDIR DSYSQLIBINSTDIR application_name context_root
      WAS_cell_name [user][group]
      ```

   Linux and UNIX

   a. Log in as the root user.
   b. Change to the $DSYINSTDIR/config/work/was directory.
   c. Run wsadmin.sh.

      ```
      <WAS_HOME>/bin/wsadmin.sh -f dsyInstallDB2e.jacl WAS_node_name
      WAS_virtual_host server_name IP_address DSYINSTDIR
      DSYSQLIBINSTDIR application_name context_root WAS_cell_name
      user group
      ```

   where

   WAS_node_name
   The existing WebSphere node name for DB2 Everyplace installation. This is the DNS host name of your machine, without the domain name.

   Example: For `mentor.mycompany.com`, use `mentor`.

   WAS_virtual_host
   The existing WebSphere virtual host name.

   Example: `default_host`

   server_name
   The DB2 Everyplace server name.

   Example: `DB2e1`

   IP_address
   A valid IP address or fully qualified DNS host name for the server.

   DSYINSTDIR
   The DB2 Everyplace instance installation directory. Directory names may not have spaces. When necessary, use the short name.

   Example: Change C:\Program Files\IBM\SQLLIB to C:\Progra~1\IBM\SQLLIB.

DSYSQLIBINSTDIR
The DB2 UDB installation directory. Directory names may not have spaces. When necessary, use the short name.

Example: Change C:\Program Files\IBM\SQLLIB to C:\Progra~1\IBM\SQLLIB.

application_name
The name of the DB2 Everyplace Enterprise Application. Set this parameter to `DB2EveryplaceEnterprise8.2` for DB2 Everyplace Enterprise installation or `DB2EveryplaceExpress8.2` for DB2 Everyplace Express installation.

context_root
The context root for the DB2 Everyplace Enterprise Application. Set this to `db2e`.

WAS_cell_name
The existing WebSphere cell name for DB2 Everyplace installation.

user The name of the DB2 Everyplace Sync Server instance. This parameter is optional on Windows systems.

group The name of the primary group for the DB2 Everyplace Sync Server instance. This parameter is optional on Windows systems.

2. Convert the first server to a cluster according to the *WebSphere Application Server Network Deployment* documentation.
3. Synchronize the nodes in the DB2 Everyplace cluster according to the *WebSphere Application Server Network Deployment* documentation.
4. Regenerate the WebSphere plug-in configuration file according to the *WebSphere Application Server Network Deployment* documentation.
5. Start the DB2 Everyplace cluster.
   a. Use a Web browser to log in to the Network Deployment Manager.
   b. Go to **Servers** → **Clusters** → **DB2Everyplace_Cluster**.
   c. Select the **DB2Everyplace_Cluster** check box, then click Start.
6. Test DB2 Everyplace in the clustered environment:
   a. On the database server node, open a DB2 command window and change to the SAMPLE directory. The directory name depends on the platform that you are using.

      Windows
      <DSYPATH>\Server\sample\

      Linux and UNIX
      $DSYINSTDIR/Server/sample/

   b. Create a sample database by issuing the following command:

      ```
      db2 -vtf Vnurse.ddl
      ```

   c. Catalog the sample databases on each node in the cluster that is running DB2 Everyplace.

      The sample databases must be cataloged with the same name on each node.

      For the VNurse sample, catalog the databases VNURSE and M_VN2.

      Refer to the *DB2 Information Center* for information about how to catalog the remote databases.

   d. On one of the server nodes in the cluster, change to the config directory. The directory name depends on the platform that you are using.

Windows
<DSYPATH>\config\

Linux and UNIX
$DSYINSTDIR/config/

e. Run the create-sample command.

Windows
Issue the following command:

```
dsyconfig.bat create-sample
```

Linux and UNIX

1) Log in as the DB2 Everyplace instance.
2) Issue the following command:

```
./dsyconfig.sh create-sample
```

f. Follow the instructions outlined in "Mobile device installation procedures" on page 38 to install DB2 Everyplace Sync Client on a mobile device.

g. Configure the device to synchronize with the DB2 Everyplace cluster HTTP server according to the instructions in "Configuring mobile devices."

h. Synchronize the mobile device.

Configuring mobile devices

Topics in this section provide information that will help you configure DB2 Everyplace on mobile devices.

Configuring SSL for DB2 Everyplace client devices

Secure Sockets Layer (SSL) provides added security when synchronizing by encrypting data. To use SSL, you must install a certificate on the client device so that it can verify that it is in communication with the appropriate server. The certificate must be obtained from the public SSL certificate of the HTTP server with which the clients will synchronize data. Refer to the documentation for the server that is providing the SSL service for information about how to obtain and export the certificate in a format that the client can install and use. Be sure to obtain a real, signed certificate from a certificate authority. If you are using the IBM HTTP Server that is installed with the WebSphere Application Server, use the ikeyman tool in the <IHS>\bin directory to export the SSL certificate. If you are using the embedded version of the WebSphere Application server, ikeyman is in the <DSYPATH>\WAS\bin directory, where DSYPATH is the directory where DB2 Everyplace is installed. Be sure to export the public certificate.

Windows CE and Symbian devices do not need manual installation of certificates. When synchronizing with these client devices, you only need to specify the address of the SSL server. For example, https://www.syncsample:9558/

To configure SSL for DB2 Everyplace client devices:

- "Configuring SSL for Linux client devices"
- "Configuring SSL for Palm OS client devices" on page 88
- "Configuring SSL for Windows client devices" on page 89

Configuring SSL for Linux client devices

Prerequisites:

Linux device clients require the OpenSSL libraries. Download these libraries from http://www.openssl.org and install the libraries before configuring SSL on Linux client devices.

To configure SSL for Linux client devices:

1. Obtain the certificate file that you want to install on the DB2 Everyplace Sync Client. Use base-64 encoded X.509 format. **Tip:** You can obtain the certificate by using a web browser and then export it to the needed format. The web site will send it to the client on the first connection.
2. Copy this file to /usr/share/ss/certs as the root user.
3. Find out the hash value of the certificate by entering the following command:

   `openssl x509 -noout -hash -in` *`ca_certificate file`*where *ca_certificate file* is the name of the base-64 encoded X.509 certificate file.
4. Create a symbolic link to the certificate file. The name of the link must be the hash value appended with a ".0". For example:

   `ln -s` *`ca_certificate file 9c975d97`*`.0`where *ca_certificate file* is the name of the certificate file and *9c975d97* is the hash value obtained from the previous step.
5. Verify the installation of the certificate by entering the following command:

   `openssl verify -CApath /usr/share/ssl/certs /usr/share/ssl/certs/`*`ca_certificate_file`*You will see a message similar to the following if the installation succeeded:
   `/usr/share/ssl/certs/ca_certificate_file: OK`

   If you receive an error message, go to http://www.openssl.org/docs/apps/verify.html to look up the error message.

Configuring SSL for Palm OS client devices

Prerequisites:

Download the certificate conversion utility, palmdb.exe, from http://www.ibm.com/support/.

To configure SSL for Palm OS client devices:

1. Start IBM Key Management (ikeyman), which is included with the IBM HTTP server.
2. Open a key database file that includes an appropriate certificate.
3. Select a certificate to extract.

   For a self-signed certificate:
   - Select **Personal Certificates** from the drop-down list
   - Select an appropriate self-signed certificate from the list of personal certificates.
   - Click **Extract Certificate**.

   For a real certificate that is obtained from CA:
   - Select **Signer Certificates** from the drop-down list.
   - Select an appropriate certificate from the list of signer certificates.
   - Click extract at the upper right.
4. Select **Binary DER data** as the Data type.
5. Enter cacerts.bin as the certificate file name and save it.
6. Put the palmdb.exe file in the same directory as cacerts.bin.

7. Enter `palmdb.exe` at the command prompt with no arguments. Make sure a file named SSLCaCerts.pdb was created in the same directory as palmdb.exe and cacerts.bin after running the command.
8. Install SSLCaCerts.pdb on the Palm OS client device using the Palm Desktop
9. Check SSL enable on the Palm OS client device.

Configuring SSL for Windows client devices

To configure SSL for Windows client devices:

1. Connect to the SSL server using a web browser using the following address: https://*server*:*port*/db2e/db2erdb/.

   Note: If a window displays telling you that you are viewing pages over a secure connection, click **OK**. The Security Alert window opens.
2. Click **View Certificate**. The Certificate window opens
3. Click on **Install Certificate**. The Certificate Import Wizard opens.
4. Click **Next**.
5. Select **Automatically select the certificate store based on the type of certificate** and click **Next**.
6. Click **Finish**. The Security Warning window opens.
7. Click **Yes**. The Certificate Import Wizard window opens confirming a successful import.
8. Click **OK**. The Certificate window opens.
9. Click **OK**. The Security Alert window opens.
10. Click **Yes** to connect to the SSL server. You should see the DB2 Everyplace Sync Server message: `DB2e SyncServer (date and time)`.

Configuring a Palm mobile device

This topic lists DB2 Everyplace configuration procedures that are unique to the Palm platform.

Synchronizing and verifying data on a Palm OS mobile device or emulator

Prerequisites:

Install DB2 Everyplace files on the Palm OS mobile device or emulator.

Install the Visiting Nurse sample application on the Palm OS mobile device or emulator.

To synchronize and verify data on a Palm OS mobile device or emulator:

1. Start the DB2 Everyplace Sync Server.
   - For Windows, click **Start → Programs → DB2 Everyplace → Administration Tools → Start Servlet for Sync Server** from the Start menu.
   - On UNIX®, login as the DB2 Everyplace Sync Serverinstance owner and change directory to $DSYINSTDIR/Server/bin and execute dsysync.sh
2. Go to http://127.0.0.1:<*port*>/db2e/db2erdb to verify that the DB2 Everyplace Sync Server is running. Replace <*port*> with the actual port of the DB2 Everyplace Sync Server. Ensure that you see the following message:

   ```
   DB2eSyncServer<datetime string>
   ```

3. Start the mobile device or emulator.
4. Click **DB2 Sync**.
5. Click **Synchronize**. The synchronization begins. You can stop a synchronization at any time by clicking the **Cancel** button. When the synchronization ends, one of the following messages will appear as the final synchronization status:
   - `Synchronization succeeded`
   - `Synchronization failed`
   - `Synchronization cancelled`
6. When the Palm OS emulator or device displays the message `Synchronization succeeded`, open QBE.
7. Specify a user name and password.
8. Click the **Select Table** menu and select the **VNMEDICALRECORD** table. The contents of the table show on the screen.
9. Open the Mobile Devices Administration Center and DB2 Control Center.
   - For Windows, select **Start** → **Programs** → **IBM DB2 Everyplace** → **Start Mobile Devices Administration Center**.
   - For UNIX, login as the DB2 Everyplace Sync Serverinstance owner and change the directory to $HOME/db2everyplace82/Server/bin and execute dsyadmin.sh.
10. Expand the object tree in the DB2 Control Center until you see the VNURSE database.
11. Select the **Tables** folder of the VNURSE database to show the VNURSE tables.
12. Right-click the **VNMEDICALRECORD** table and select **Sample Contents** from the menu.
13. Compare the contents of the table on the Palm OS emulator or device to the sample contents of the table in the DB2 Control Center.

Configuring a Windows mobile device

This topic lists DB2 Everyplace configuration procedures that are unique to the Windows Mobile platform.

Configuring the DB2 Everyplace ODBC driver

Prerequisites:

- The DB2 Everyplace ODBC driver is supported only on Windows 32-bit operating systems.
- ODBC Manager is required. These Windows system files are not packaged with DB2 Everyplace. You can download the Microsoft Data Access Components from the Microsoft Universal Data Access Web site. If ODBC Manager is missing, ODBCInst.exe returns the following error message `The ODBC installer DLL is not installed on this system.`

Open Database Connectivity (ODBC) is an application programming interface for developing programs that are database independent or that access multiple data sources simultaneously. To reduce DB2 Everyplace's footprint, DB2 Everyplace ODBC driver and setup functions are provided in a separate file, DB2eODBC.dll.

The DB2 Everyplace ODBC driver supports the same functions as the DB2 Everyplace CLI interface, and faces the same limitations. It might not meet the requirements of most ODBC GUI tools. One good use of this driver is to write

database-independent code without compiling or linking with DB2 Everyplace files. You can also access multiple data sources from different vendors simultaneously.

When you install DB2 Everyplace, the following files are copied to the same directory as DB2e.dll (default location: C:\Program Files\IBM\DB2Everyplace\Clients\win32\database\x86).

- DB2eODBC.dll : DB2 Everyplace ODBC driver and setup utility.
- ODBCInst.exe : Program for registering the ODBC driver.

To configure the DB2 Everyplace ODBC driver:

1. Register the DB2 Everyplace ODBC driver with the desktop ODBC manager. From command line, enter `odbcinst.exe -i`
2. Add a user data source.
   a. Start the "ODBC Data Sources" program from the Control Panel

      Choose **Start → Settings → Control Panel → Administrative Tools → Data Sources (ODBC)**
   b. Click **Add** in the User DSN panel.
   c. Choose **IBM DB2 Everyplace ODBC Driver** from the list of drivers in the Create New Data Source window.
   d. Click **Finish**.
   e. Enter the following in the IBM DB2 Everyplace ODBC Driver configuration panel:
      - **Data Source Name**: ODBC data source name.
      - **Description**: A description of the data source.
      - **DB2 Everyplace Database Directory**: DB2 Everyplace data source name. Example: `C:\data\employee\`

After you configure the DB2 Everyplace ODBC driver, you can use it to execute the functions provided in the DB2 Everyplace CLI interface, plus the following additional C/C++ function.

SQLGetFunctions()

This function reports whether a specific function is supported, allowing applications to adapt to varying levels of support when connecting to different database servers.

Syntax

```
SQLRETURN SQLGetFunctions(
     SQLHDBC ConnectionHandle,
     SQLUSMALLINT FunctionId,
     SQLUSMALLINT * SupportedPtr);
```

Arguments

`ConnectionHandle`
`[Input]`

Connection handle.

`FunctionId`
`[Input]`

A `#define` value that identifies the ODBC function of interest:

- SQL_API_ODBC3_ALL_FUNCTIONS is used by an ODBC 3.x application to determine support of ODBC 3.x and earlier functions.
- SQL_API_ALL_FUNCTIONS is used by an ODBC 2.x application to determine support of ODBC 2.x and earlier functions.

```
SupportedPtr
[Output]
```

SupportedPtr can point to a single value or an array of values, depending on the value of FunctionId, as shown in the following table. Arrays returned in SupportedPtr use zero-based indexing

FunctionId	SupportedPtr
identifies a single ODBC function	Points to a single SQLUSMALLINT value. The value is SQL_TRUE if the specified function is supported by the driver; otherwise, the value is SQL_FALSE.
SQL_API_ODBC3_ALL_FUNCTIONS	Points to a SQLSMALLINT array with a number of elements equal to SQL_API_ODBC3_ALL_FUNCTIONS_SIZE. The Driver Manager treats this array as a 4,000-bit bitmap that can be used to determine whether an ODBC 3.x or earlier function is supported.
SQL_API_ALL_FUNCTIONS	Points to an SQLUSMALLINT array of 100 elements. The array is indexed by `#define` values used by FunctionId to identify each ODBC function; some elements of the array are unused and reserved for future use. An array element's value is SQL_TRUE if it identifies an ODBC 2.x or earlier function supported by the driver. It is SQL_FALSE if it does not identify an ODBC function, or if it identifies an ODBC function that the driver does not support.

DB2 Everyplace samples

Topics in this section describe how to install and use DB2 Everyplace sample applications.

Starting the First Steps launchpad

The First Steps launchpad provides links to sample applications and other resources that will help you get started using DB2 Everyplace.

Prerequisites:

Install and configure DB2 Everyplace.

To start the First Steps launchpad:

Run the First Steps command.

(Windows)

There are two ways to run the First Steps command:

- Use the Start menu shortcut, replacing [EditionName] with the name of your DB2 Everyplace edition (for example, Express): **Start → Programs → IBM DB2 Everyplace [EditionName] → Setup Tools → First Steps**
- Run the dsyfs file in the <DSYPATH>\Server\bin directory, where <DSYPATH> is the directory where DB2 Everyplace is installed.

(Linux and UNIX)

As the DB2 Everyplace Sync Server instance user, run the dsyfs.sh file in the $DSYINSTDIR/Server/bin directory.

The First Steps launchpad provides buttons linked to resources that will help you get started with DB2 Everyplace. The number of buttons and associated resources varies depending on your operating system and DB2 Everyplace configuration.

Overview of DB2 Everyplace sample applications

DB2 Everyplace includes sample applications for each target platform, as described in the following tables.

Table 38. DB2 Everyplace sample applications by target platform. <DSYPATH> is the directory where DB2 Everyplace is installed.

Target platform	Type	Sample applications
Palm	Client	• DB2eCLP • VNurse • DB2eAppl • DB2 Sync

Table 38. DB2 Everyplace sample applications by target platform (continued). <DSYPATH> is the directory where DB2 Everyplace is installed.

Target platform	Type	Sample applications
Symbian 7	Client	• DB2eCLP • DB2 Sync • PersonList • DB2eJavaCLP
Windows CE	Client	• DB2eCLP • VNurse • DB2eAppl • DB2eJavaCLP • DB2 Sync
Windows	Client	• DB2eCLP • DB2eAppl • DB2eJavaCLP • DB2 Sync Console
Linux (including Sharp Zaurus) and Neutrino	Client	• Command Line CLP • DB2 Sync Console • PersonList • DB2eJavaCLP

The following table describes where the DB2 Everyplace sample applications are located and which edition of DB2 Everyplace includes each sample. Abbreviations for each edition are as follows:

- DE = Database Edition
- EE = Enterprise Edition
- EXP = Express Edition

Note: <DSYPATH> is the root installation directory of DB2 Everyplace.

Table 39. DB2 Everyplace sample applications by version and location

Application	Description	Edition	Directory
DB2eCLP	Utility file	DE/EE/EXP	<DSYPATH> \Clients\ *platform* \database*lang**proc*\DB2eCLP
VNurse	Up and running sample	DE/EE/EXP	<DSYPATH> \Clients\ *platform* \database*lang*\Samples\VNurse

Table 39. DB2 Everyplace sample applications by version and location (continued)

Application	Description	Edition	Directory
DB2 Sync C • db2sync_console . exe • db2sync.exe • db2sync.prc • DB2Sync.sis • db2sync_console Java and ISync.NET • ISyncSample • DB2SyncConsole	Up and running synchronization samples (binaries)	EE/EXP	For Windows:<DSYPATH> \Clients\ win32\ sync*lang*\ *[Unicode/non-Unicode}*\db2sync_console.exe For WinCE:<DSYPATH> \Clients\ wince\sync*lang**version**proc*\db2sync.exe For Palm OS:<DSYPATH> \Clients\ palmos \sync*lang*\db2sync.prc For Linux and Neutrino:$DSYINSTDIR \Clients\ *platform*\sync*proc* \db2sync_console For Symbian OS Version 7:<DSYPATH> \Clients\ symbian7\sync*lang*\DB2SYNC.APP For Java:<DSYPATH> \Clients\ clientapisample\Java_API For ISync.NET:<DSYPATH> \Clients\ clientapisample\NMP
JDBCSample • DB2eAppl • DB2eJavaCLP	JDBC sample application	DE/EE/EXP	For Windows and WinCE:<DSYPATH>\Clients\ *platform*\database\jdbc\ For Symbian OS Version 7:<DSYPATH>\Clients\ symbian7\database\ *lang* \JDBCSample\classes\ For Palm OS:<DSYPATH>\Clients\ palmos\database\jdbc\cldc\sample\ For Linux:$DSYINSTDIR\Clients\ linux\database\jdbc\

The Command Line Processor (CLP) sample application

The Command Line Processor (CLP) sample application demonstrates how to control DB2 Everyplace by using a command line interface.

The CLP sample application was developed separately for each platform. Table 40 lists the development tools that were used to create the CLP sample application for each platform.

Table 40. Development tools used to create the CLP sample application

Platform	Language	Development tool
Palm OS	C	Metrowerks CodeWarrior for Palm Computing Platform
QNX Neutrino	C	QNX Neutrino Developers Kit
embedded Linux	C	MontaVista Linux from MontaVista Software
Windows CE	C	Microsoft eMbedded Visual C++ 3.0
Windows NT®	C	Microsoft Visual C++ Version 6
Windows 2000	C	Microsoft Visual C++ Version 6
Symbian OS	C++	Microsoft Visual C++ Version 6 and Symbian C++ Software Developers Kit

CLP commands

This application is a simple Command Line Processor (CLP) for working with DB2 Everyplace tables and data. Application developers can directly execute SQL statements from this command line interface. For example:

```
SELECT * FROM PHONEBOOK
```

On some platforms, each statement must end in a semicolon. For example:

```
SELECT * FROM PHONEBOOK;
```

The Command Line Processor also supports some extended commands.

$file [input file] [output file]

Executes SQL statements from an input file, and writes the result to an output file. This command is not supported on Palm OS, Symbian OS, or Windows CE. For all other platforms, you can specify the full path.

AUTOCOMMIT OFF|ON

Specifies whether the application commits each statement by default (the engine default is ON). When autocommit mode is on (true), each statement is treated as a single, complete transaction. AUTOCOMMIT OFF changes the transaction mode to manual, enabling applications to either roll back or commit work.

BLASTDB

Drops all user tables in the database.

COMMIT WORK (or COMMIT)

Commits all previous update, delete, insert operation, and starts a new transaction scope.

CONNECT TO arg1

Automatically disconnects the application from the current connection and reconnects the application to a local database (**arg1**). The specification is in the SQLConnect() CLI call. The delimiter for the paths for CLI-SQLConnect is either \ (backslash) or / (slash). Both delimiters are understood on all platforms and mapped to the appropriate delimiter when the file system is accessed, thus allowing databases to reside in different directories. For example,

```
connect to c:\temp \
create table t (a int)
insert into t values (10)
select * from t
```

CONNECT TO arg1 USER arg2 USING arg3

Connects the application to a local database (**arg1**) using the specified user name (**arg2**) and password (**arg3**). This information is needed to access encrypted tables. If the application is already connected to another database, that connection is dropped.

Note: A directory name can include a space. For example, C:\System\program files\ is a valid directory structure, but you must use the same directory structure that exists on your machine.

DBCHECK outputfile

Runs the data integrity check tool and writes the result to an output file in the database directory. This command is supported on Linux and Windows 32-bit operating systems only.

DESCRIBE SELECT

Describe the type, column, and name length of the data returned by a SELECT statement. For example:

```
DESCRIBE SELECT * FROM PHONEBOOK
```

DISABLE APPLICATION SET DIRTY

Disables setting dirty bit by the Command Line Processor.

DISABLE LONG FILENAME

Creates files in 8.3 file name format.

DISABLE PHYSICAL DELETE

Disables physical delete mode (default).

DISABLE READ DELETED

Disables reading deleted rows.

DISABLE REORG

Disables table reorganization.

ENABLE APPLICATION SET DIRTY

Enables setting dirty bit by the Command Line Processor.

ENABLE LONG FILENAME

Creates files in long file name format (default).

ENABLE PHYSICAL DELETE

Enables physical delete mode. Deleted rows will no longer be readable.

ENABLE READ DELETED

Enables reading deleted rows.

ENABLE REORG

Enables table reorganization automatically (default).

HELP

Lists all available commands.

LIST COLUMNS

List all user table columns in the database.

LIST INDEX

List all indexes ordered by table name, index name, and column order.

LIST TABLES

List all user tables in the database.

ROLLBACK WORK (or ROLLBACK)

Rolls back all previous update, delete, insert operations, and starts a new transaction scope.

VERSION

Prints the DB2 Everyplace mobile database version string. It returns the same string as the SQLGetInfo() function.

Importing and exporting data using the CLP

The DB2 Everyplace Command Line Processor for Palm OS, Symbian OS, Windows CE, Windows platforms, Neutrino, and embedded Linux supports importing data from a file to DB2 Everyplace and exporting DB2 Everyplace data to a file. Importing and exporting data on the Palm OS uses the memo files on the device.

- **To import data from a file on a mobile device to DB2 Everyplace:**
  1. Type `IMPORT FROM file_name OF DEL INSERT INTO table_name [(column list)]` where *file_name* is the name of the file to import from.

     On Palm OS, *file_name* is the name of the memo to import from. The file name must appear on the first line of the memo. Palm memos have a limitation of storing 4K bytes text. *table_name* is the name of an existing table to import into. For example, to import data from a file named mydata.txt to an existing table named mytable, type:

     ```
     IMPORT FROM mydata.txt OF DEL INSERT INTO mytable
     ```

- **To export data from DB2 Everyplace to a file:**
  1. Type `EXPORT TO file_name OF DEL stmt` where *file_name* is the name of the file to write the data to. *stmt* is the SELECT statement to select the data to export. For example, to export all data from the table named mytable to a file named myfile.txt, type:

     ```
     EXPORT TO myfile.txt OF DEL SELECT * FROM mytable
     ```

DB2 Everyplace for Palm OS uses a set of command line tools for Windows and a Palm OS application to import and export data as PDB files. The Import/Export tools include the following executable files, which are installed on the Windows workstation. These files are located in the <DSYPATH>\Clients\utilities directory, where <DSYPATH> is the root installation directory for DB2 Everyplace:

CSV2DB2e.exe
This file imports data from a Comma Separated Values file (with file extension of .csv) into a DB2 Everyplace table. A DB2e table (for example, named PERSON) is represented by two files, DSY_PERSON and DSY_iPERSON. The DSY_PERSON file contains the data, and DSY_iPERSON contains the indexing information.

DB2e2PDB.exe
This program converts a DB2 Everyplace table into Palm OS PDB format. It then copies the files into the user's directory and informs the HotSync program that there are files to install. If more than one user is defined in the system, a user list will be displayed so that you can select the intended user.

PDB2DB2e.exe
PDB2DB2e.exe converts Palm OS PDB files from the user backup area into a DB2 Everyplace table. If more than one user is defined in the system, a user list will be displayed so that you can select the intended user.

DB2e2CSV.exe
DB2e2CSV exports a DB2 Everyplace table into a CSV file. It also makes use of the DB2 Everyplace system catalog files named DB2eSYSTABLES and DB2eSYSCOLUMNS.

PalmImport.bat
PalmImport.bat combines the operations of CSV2DB2e.exe and DB2e2PDB.exe.

PalmExport.bat
PalmExport.bat combines the operations of PDB2DB2e.exe and DB2e2CSV.exe.

The Import/Export tools include the following Palm OS application:

DB2eImport.prc
This program registers the DB2 Everyplace files transferred by the HotSync program to the local DB2 Everyplace system.

- To import data to the Palm OS device:
  1. Create two files with the same name (for example, VNPERSON), one with a .csv extension and one with a .sch extension. The .csv file contains the data, and the .sch file contains the schema for the table to be imported. Note that the file name cannot contain any blank spaces. Sample .csv and .sch files are located in the DemoImport\ folder. The files are named VNPERSON.csv and VNPERSON.sch.

     Table 41 lists the supported data types and their representation in the CSV file.

Table 41. Data types and their representation in a CSV file

Data type	Represented as
integer (or int)	1234
smallint	1234
decimal(n,p)	12.34
char(n)	″John″
varchar(n)	″John″
date	yyyymmdd
time	″14.05.48″
timestamp	″2001-05-01-16.16.51.000000″

     To represent a null value for a column, enter nothing between the commas of the CSV file. For example, three integer columns with a null in the second column would be represented as `1,,3` in the CSV file and become `1, null, 3` in the database.
  2. Start the import tool, PalmImport.bat, providing the schema of the table as a parameter. The schema should be in an associated .sch file. Use the following syntax to start the Import tool:

     `PalmImport.bat` *`path_name file_name`*where *path_name* is the path to the CSV file, and *file_name* is the CSV file name in uppercase without an extension. The CSV file name cannot be enclosed in double quotation marks or contain any blank spaces. For example:

     ```
     PalmImport.bat DemoImport VNPERSON
     ```

     The imported tables are automatically added to the Palm Install Tool to be installed after the next HotSync operation.

3. Install the DB2eImport.prc to the Palm OS device using the Palm Install Tool.
4. Perform a HotSync operation to complete the installation of the imported tables and DB2eImport.prc.
5. Start the DB2eImport program on the Palm OS device to complete the import.

- To export data from the Palm OS device:
  1. Perform a HotSync operation to back up the Palm OS device. Always back up and remove the DB2 Everyplace files (files starting with DSY) from the Palm OS user's backup directory before starting a HotSync operation. The backup area on Windows workstations is usually located at *PalmDir**user_name*\Backup where *PalmDir* is the directory where the Palm OS software is installed, and *user_name* is the user name of the Palm OS user.
  2. Start the export program, PalmExport.bat, with the following syntax:

     ```
     PalmExport.bat path_name file_name
     ```

     where *path_name* is the output path, and *file_name* is the DB2 Everyplace table name in uppercase. The DB2 Everyplace table name cannot be enclosed in double quotation marks or contain any blank spaces. For example:

     ```
     PalmExport.bat DemoExport VNPERSON
     ```

     The resulting file is in the same path as the source file.

When an error is encountered, the Import/Export tools reports the number of records processed.

A sample using the Import/Export tools is included in the <DSYPATH>\Clients\utilities directory, where <DSYPATH> is the root installation directory for DB2 Everyplace. The batch files PalmExport.bat and PalmImport.bat provide examples of how to use the CSV2DB2e.exe and DB2e2CSV.exe tools.

Testing synchronization using IBM Sync

This topic explains how to set up the necessary software and mobile devices in order to test synchronization using IBM Sync.

Overview of DB2 Sync

DB2 Sync works with the DB2 Everyplace Sync Server to synchronize data and applications between mobile devices and enterprise data sources. Before you configure DB2 Sync, you need to define a user, group, subscription, and subscription set in the Mobile Devices Administration Center.

DB2 Sync is a synchronization application with a graphic interface that utilizes the DB2 Everyplace Sync Client C API. It is available for Palm OS, Windows CE, and the Symbian platforms. A command line program (DB2 Sync Console) is also provided to test synchronization on Windows, Neutrino, and Linux platforms.

You can use the command line program (DB2 Sync Console) to test synchronization on Windows, Neutrino, and Linux platforms. Both the DB2 Sync and DB2 Sync Console are sample programs that demonstrate how to use the DB2 Everyplace Sync Client C-API. DB2 Sync and DB2 Sync Console are open source.

Important: Read the license agreement before you use the source code.

During every synchronization, the client software checks whether the client's configuration (the subscription sets and subscriptions assigned to the client's group) must be updated. For example, when you refresh a file referenced in a subscription, a flag indicating that the subscription has changed is set so that the new version is downloaded to all subscribed users on the next synchronization.

Configuring DB2 Sync

Prerequisites:

Before configuring, be sure that DB2 Everyplace is installed on your client device. For more information, see *Installation and User's Guide*.

To configure the URL, user ID, and password on a mobile device or emulator:

1. Locate the DB2 Sync application on the mobile device or emulator.
2. Start **DB2 Sync**.
3. Select **Server Settings** from the menu.
4. Type the URL of the DB2 Everyplace Sync Server in the **URL** field. The default port used by the DB2 Everyplace Sync Server basic application server is 8080.
5. Type a user ID in the **User** field. The user ID is created in the DB2 Everyplace Mobile Devices Administration Center by the DB2 Everyplace Sync Server administrator.
6. Type a password in the **Password** field. The user's password is created in the DB2 Everyplace Mobile Devices Administration Center by the DB2 Everyplace Sync Server administrator.

DB2 Sync menu options

After you set up DB2 Sync, you can configure other DB2 Sync menu options. Be sure that you have installed DB2 Everyplace on the mobile device and that the mobile device or emulator is set up for network connections.

In the upper left-hand corner of the DB2 Sync dialog, click the **DB2 Sync** menu. A drop-down menu appears with the following options:

- Subs sets
- Server settings
- Client settings
- Network settings
- About DB2 sync

Subs sets (Subscription sets)

You can view the subscription sets to which the DB2 Everyplace Sync Client subscribes by selecting the **Subscription Sets** option from the menu. In the subscription set panel, the check box next to a subscription set indicates if the subscription set is enabled for synchronization. Thus, you can disable synchronization on subscription sets by unchecking a check box. The command buttons and their actions in the panel are explained as follows:

OK After changing the synchronization options of the subscriptions, you can save the changes by clicking **OK**.

Cancel
If you want to discard the changes, click **Cancel**.

Details

When you click the **Details** button, the **Details** panel displays detailed information about the selected subscription set. In addition, if you want to discard the mobile device data and perform a refresh of a subscription set, simply select the **Reset** check box. The next time that you synchronize, the DB2 Everyplace Sync Client refreshes the data on that subscription set by dropping the data and re-fetching the source data from the server.

Purge This button drops the current subscription set information. The next time that you synchronize, the DB2 Everyplace Sync Client refreshes the subscription set information, and then refreshes each subscription set.

Important: If you made changes to the local tables but have not synchronized these changes with the source database, you will lose those changes when you perform a purge operation.

Server settings

When you click the **Server Settings** menu option, the Setting dialog opens. In this dialog, you can configure some of the DB2 Sync settings. The settings that can be configured are as follows:

URL Tap the drop-down list next to URL, then select **-enter-** and enter the DB2 Everyplace Sync Server URL. If the DB2 Everyplace Sync Server is configured on a port other than 80, you must specify the port number in the URL. Each new server URL that you enter is stored in the drop-down list.

User Enter a user name in the User ID field. The user name that you enter must be defined in the DB2 Everyplace Mobile Devices Administration Center. For information about creating a user in the Mobile Devices Administration Center, see *Sync Server Administration Guide*.

Password

Enter a password in the Password field. The password that you enter must be defined in the DB2 Everyplace Mobile Devices Administration Center. For information about creating a user in the Mobile Devices Administration Center, see *Sync Server Administration Guide*. Select the **Save Password** check box if you want to save the password for subsequent uses.

Client settings

You can configure the settings that are specific to the client by selecting the **Client Settings** option from the menu. The client settings that can be configured are as follows:

Trace Tap the drop-down list next to **Trace**, and select **Detailed** to generate detailed tracing information when you encounter problems during synchronization.

Memory slot

Tap the drop-down list next to **Memory slot**, and select the target memory expansion card where you want to save the client information and synchronized data. The default **Device** setting is the main memory on the mobile device. When a memory slot other than **Device** is selected, you can also specify the exact target path in the **Target Path** field, for which the default is the root.

Table 42 lists the default paths where DB2 Sync stores client information and synchronized data for each platform.

Table 42. Default paths for DB2 Everyplace Sync Client information and synchronized data

Platform	Default installation path
Palm	Main memory
Windows	Current directory
Linux	Current directory
QNX Neutrino	Current directory
Windows CE	\
Symbian	C:\System\Data\Sync\

Network settings

You can configure the network settings by selecting the **Network Settings** option from the menu. The network settings that can be configured are as follows:

Timeout
In this drop-down list, you can specify a time-out duration for synchronization. Select a longer duration if the server is busy or if there is a large amount of data to be synchronized. If you frequently encounter time-out error messages during synchronization, contact the system administrator for the proper setting of this value. The default value is 1 minute.

Network Speed
Tap the drop-down list next to **Network Speed**, and select the proper network speed. This setting allows the DB2 Everyplace Sync Client to adjust the actual message size when communicating with the DB2 Everyplace Sync Server to achieve the best network performance.

Use Proxy
If the system uses a proxy server, select the **Use Proxy** check box and enter the IP address and the port number of the proxy server.

About DB2 Sync

When you select **About DB2 Sync**, DB2 Sync displays the mobile device information, including the version number and the build date for the DB2 Everyplace client and device ID.

Synchronizing data using DB2 Sync

Prerequisites:

Before you use the DB2 Sync application, you need to configure the DB2 Sync application as described in "Configuring DB2 Sync" on page 101.

1. **To synchronize data using DB2 Sync:**
   a. Start the mobile device.
   b. Start the DB2 Sync application. The system displays the main DB2 Sync window.

c. Tap **Synchronize**. The synchronization begins. The panel will display the status and the progress of the synchronization. You can cancel a synchronization at any time by clicking the **Cancel** button. When the synchronization ends, the following messages will appear to indicate the synchronization succeeds, fails, or get cancelled respectively.
   - Synchronization succeeded
   - Synchronization failed
   - Synchronization cancelled

   If the synchronization fails, you can click the **Log** button to see the cause (error) of the failure. If the synchronization is successful, then you can go on to verify that the synchronized data is correct.

2. Verify the data on the client.
   a. Start DB2eCLP on the mobile device.
   b. Enter an SQL statement that selects all the records from the table that you recently synchronized.
3. Verify the data on the data source using the DB2 Command Line Processor:
   a. Open the DB2 CLP on the source database.
   b. Enter an SQL statement to select all the records of the subscribed table.

      Note: If you are using DB2 UDB, you can also verify the data on the source database using the DB2 UDB Control Center. Right-click the subscribed table and select **Sample Contents** to browse the contents of the table.
4. Compare the contents of the table on the mobile device to that of the data source.

The Visiting Nurse sample application

The Visiting Nurse sample application provides an example of how DB2® Everyplace® can increase the productivity of an employee.

This sample application is designed for nurses who visit patients at their homes. If they did not have this DB2 Everyplace sample application, the nurses would have to take notes on paper, then later transcribe their notes into a database on a workstation in their offices. After performing an initial synchronization with the server, the visiting nurses can:

- Access a patient's general information, such as name, address, phone number, and medical condition.
- Collect a patient's medical status, such as blood pressure, pulse rate, temperature, and weight.
- Get an automatic time and date stamp on the new medical record.
- Access a list of people to contact in case of an emergency.

At the end of the day, the visiting nurse can synchronize the data on the mobile device with a central database to:

- Update the central database with the patient status.
- Obtain a list of patients to visit the next day.

Installing the Visiting Nurse sample application

Follow these steps to install the Visiting Nurse sample application on a mobile device.

Prerequisite: Before you can install the Visiting Nurse sample application, you must install the synchronization application that came with your mobile device.

To install the Visiting Nurse sample application on a mobile device:

1. Locate the Visiting Nurse sample application for your platform. The application is located in the following directory:
   <DSYPATH>\Clients\<*platform*>\database\<*language*>\Samples\VNurse
   where

   <platform>
   the operating system of the mobile device that you are using

   <language>
   the language code that you are using.

   Example: The language code for United States English is en_US.
2. Copy the Visiting Nurse sample application files onto your mobile device by using the synchronization application that came with your mobile device.

   Palm OS devices

   a. Connect the mobile device to a workstation. Use the documentation that came with your mobile device to ensure that the mobile device is connected correctly.
   b. On the workstation, start the HotSync synchronization application. Use the Install Tool to install the files for the Visiting Nurse application.
   c. Perform a HotSync function to complete the installation.

   Windows CE devices

   a. Connect the mobile device to a workstation. Use the documentation that came with your mobile device to ensure that the mobile device is connected correctly.
   b. On the workstation, start the ActiveSync synchronization application. Use the Install Tool to install the files for the Visiting Nurse sample application.
   c. Synchronize the device to complete the installation.

You are now ready to run the Visiting Nurse sample application.

Running the Visiting Nurse application

You can view the Visiting Nurse sample application on your mobile device. The examples in this topic show how the Visiting Nurse sample application looks on the Palm OS emulator or mobile device.

To run the Visting Nurse application:

1. Tap the **Nurse** icon to start the Visiting Nurse sample application. The Schedule window opens with a list of the patients to visit that day.

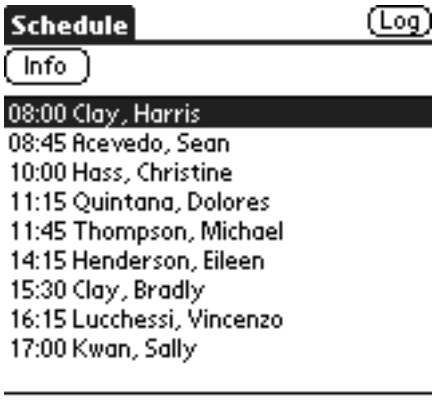


Figure 1. The Schedule window

2. Select a patient's name from the list and tap the **Info** button to view general information about the patient.

Figure 2. The Patient Information window

3. Enter a new medical record:
   a. Tap the **Records** button. The Medical Record List window opens with a list of all of the records previously created for the patient.

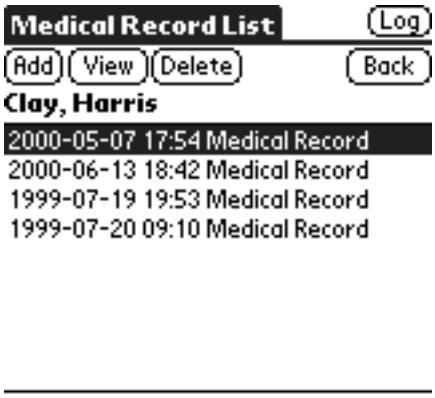


Figure 3. The Medical Record List window

b. Tap the **Add** button. The Medical Record window opens.

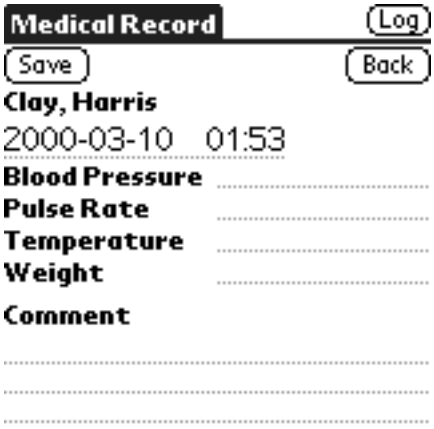


Figure 4. The Medical Record window

c. Fill in the patient's vital statistics and tap the **Save** button to save the medical record. The medical record will be saved with the current date and time. Tap the **Back** button to return to Person Information window.

4. View the patient's emergency contact list.
   a. Tap the **Contacts** button. The Emergency Contact List window opens with a list of the patient's emergency contacts.
   b. View information about a contact person by selecting the person's name from the list and tapping the **Info** button.

Visiting Nurse sample application tables

This topic contains a description of each sample application table for the Visiting Nurse. See "The Visiting Nurse sample application" on page 104 for an example of a Visiting Nurse application that uses DB2 Everyplace.

VNSCHEDULE

Contains the nurse's appointments. This table contains information such as patient ID and time of the appointment. The table schema is:

```
CREATE TABLE VNSchedule (PatientID Char(9) NOT NULL,
                         Time_C Time PRIMARY KEY)
```

VNPERSON

Contains data about the patients. This table contains information such as name, Social Security Number, address, and phone numbers. The Social Security Number is used as the primary key. The table schema is:

```
CREATE TABLE VNPerson (ID Char(9) PRIMARY KEY,
                       Name Varchar(40),
                       Address Varchar(50),
                       City Varchar(30),
                       HomePhone Varchar(20),
                       WorkPhone Varchar(20),
                       MobilePhone Varchar(20))
```

VNMEDICALRECORD

Contains the patients' medical records. This table contains information such as blood pressure, pulse rate, and temperature. The medical record ID is used as the primary key. The table schema is:

```
CREATE TABLE VNMedicalRecord (RecordID Integer PRIMARY KEY,
                              Date_C Date,
                              Time_C Time,
                              PatientID Char(9) NOT NULL,
                              BloodPressure Char(7),
                              PulseRate Smallint,
                              Temperature Decimal(4,1),
                              Weight Decimal(5,2),
                              Comment Varchar(100))
```

VNCONTACT

Contains the list of emergency contacts for each patient. This table contains information such as the patient Social Security Number, emergency contact name, and relationship to the patient. The table schema is:

```
CREATE TABLE VNContact (PatientID Char(9) NOT NULL,
                        ContactID Char(9) NOT NULL,
                        Relationship Varchar(20),
                        PRIMARY KEY (PatientID, ContactID))
```

VNSIGNATURE

Contains binary signature data. This table is empty when the sample application is run for the first time. This table is used with the Visiting Nurse Plus application. The table schema is:

```
CREATE TABLE VNSignature (RecordID Integer not null PRIMARY KEY,
                          NurseName Varchar(40),
                          Signature Blob(2000))
```

DB2 Everyplace support and troubleshooting

This topic presents tools, utilities, and techniques you can use to identify and solve DB2 Everyplace problems.

Troubleshooting configuration errors

This topic provides information that will help you troubleshoot errors that might arise while using the Configuration wizard or the command line configuration tool.

Stop the DB2 Everyplace Sync Server

If you receive an error message due to an incorrect or invalid value for a property in the Configuration wizard or the dsyconfig.properties file, stop the servlet or process for the DB2 Everyplace Sync Server (the default name is IBMDB2eServer) before you run the Configuration wizard or the command line configuration tool again.

To stop the DB2 Everyplace Sync Server, open a command window and issue the following command:

Windows

`<DSYPATH>\server\bin\dsysyncstop`, where <DSYPATH> is the directory where DB2 Everyplace is installed.

You can also use a Start menu shortcut:

Enterprise Edition

Start → Programs → IBM DB2 Everyplace Enterprise → Admin tools → Stop Servlet for Sync Server

Express Edition

Start → Programs → IBM DB2 Everyplace Express → Admin tools → Stop Servlet for Sync Server

.

Linux

1. Log in to the desired DB2 Everyplace Sync Server instance (also called a DSY instance).
2. Run the `$DSYINSTDIR\server\bin\dsysyncstop` command.

Unconfiguration of embedded Application Server - Express fails

When a Windows service is stopped, files that are locked by that service are not always released immediately. As a result, the DB2 Everyplace configuration tools might be unable to delete certain files and directories, and the unconfiguration process will fail. If this happens, start the unconfiguration process again.

Testing the DB2 Everyplace Sync Server servlet

To ensure that the DB2 Everyplace Sync Server can successfully communicate with clients, make sure that the servlet is running. You do not need to have any clients installed in order to perform a check.

1. **To test the servlet on Windows:**
   a. Start the DB2 Everyplace Sync Server.
   b. In a Web browser, go to http://yourhostname.yourdomain:8080/db2e/db2erdb. 8080 is the default HTTP port number. Substitute port 8080 with the correct port number of the DB2 Everyplace Sync Server which is listed in the Post-install summary panel which is displayed at the end of the DB2 Everyplace installation.
2. **To test the servlet on Linux:**
   a. Login as the DB2 Everyplace Sync Server instance owner
   b. Open a shell window and change the directory to $DSYINSTDIR/Server/bin
   c. Run dsysync.sh.
   d. In a Web browser, go to http://yourhostname.yourdomain:8080/db2e/db2erdb. 8080 is the default HTTP port number. Substitute port 8080 with the correct port number of the DB2 Everyplace Sync Server which is listed in the Post-install summary panel which is displayed at the end of the DB2 Everyplace installation.
3. If the servlet is running correctly, it will display the following message: `DB2e SyncServer <datetime string>`
4. For the Application Server - Express that ships with DB2 Everyplace, the server log files located in $DSYINSTDIR/Server/logs/*servername* might contain a message saying that the port is already taken by another program. If you receive this message, change the port number. The default value during installation for the server name is IBMDB2eServer. The default value during installation for the server IP address is 127.0.0.1.
5. Optional: To change the port number:
   - Windows:
     ```
     cd [DSYINSTDIR]\Server\installableApps\common
     [DSYINSTDIR]\WAS\bin\stopServer.bat IBMDB2eServer
     [DSYINSTDIR]\WAS\bin\wsadmin.bat -conntype NONE -f
     dsyConfigEmbedded.jacl DefaultNode default_host DB2eServer 127.0.0.1
     [DSYINSTDIR] [new http port] [new https port]
     ```
   - Linux or UNIX:
     ```
     cd [DSYINSTDIR]/Server/installableApps/common
     [DSYINSTDIR]/WAS/bin/stopServer.sh IBMDB2eServer
     [DSYINSTDIR]/WAS/bin/wsadmin.sh -conntype NONE -f
     dsyConfigEmbedded.jacl DefaultNode default_host DB2eServer 127.0.0.1
     [DSYINSTDIR] [new http port] [new https port]
     ```

Tracing and diagnostics

DB2 Everyplace provides basic error logging facilities for mobile devices that use Linux, QNX Neutrino, or Windows 32-bit operating systems. DB2 Everyplace also provides development libraries that you can install on these devices to generate trace data. This data can help you troubleshoot problems as you develop and test DB2 Everyplace applications.

Tracing

To enable tracing, install development libraries on the mobile device. These libraries are in directories that end in "Dev". For example, the development libraries for Linux devices with x86 processors are located in \Clients\linux\database\x86Dev.

When you use the development libraries to run an application, DB2 Everyplace writes data to a trace file in the database directory, using a file name listed in the following table. If a trace file exists in the database directory, CLI trace information is appended to that file.

Table 43. Tracing and diagnostics file names

	Long file name	Short file name (8.3 format)
Trace file	DSY_DB2eTRACE	_trc.DBs
Log file	db2ediag.log	_diag.DBs
Dump files	DB2e_c*xxxxx*	_c*xxxxx*.DBs

where *xxxxx* is the process identifier (PID) number of the affected process.

Diagnostic data

DB2 Everyplace generates diagnostic data for applications running either release or development libraries. When an application encounters a severe system error (SQLState 58005), DB2 Everyplace logs the error in a log file and captures the system state in a dump file. The previous table lists the file names for log files and dump files. All files are located in the same directory as the database.

You can find diagnostic data in the following log files:

- <DSYPATH>\Server\logs\IBMDB2eServer\syncadapterinit.log
- <DSYPATH>\Server\logs\IBMDB2eServer\dsy*nnnn*.trace
- <DSYPATH>\Server\logs\dsyadmin*nnnn*.trace

Log files improperly displayed in Windows command prompt

If you are using Windows, view the DB2 Everyplace log files in Wordpad. Non-English characters in the log files might not display correctly if viewed from the command prompt.

Verifying database integrity with the data integrity check tool

The data integrity check tool reports whether tables and indexes are corrupted. To run this tool, execute the DBCHECK command in the sample CLP application. The command syntax is:

```
DBCHECK outputfile
```

The *outputfile* parameter specifies a text file in the database directory where the tool will write the results.

Note: This tool is supported on Linux and Windows 32-bit operating systems only.

DB2 Everyplace Update Tool error messages

The table below lists all of the error messages that can be generated by the DB2 Everyplace Update Tool. Table 44 displays the error message and a possible remedy for the problem.

Table 44. Troubleshooting guide

Error message	Possible remedy
Authentication failed (invalid encryption key) - update aborted	Verify that the client settings match the user's settings defined in the Mobile Device Administration Center.
File size exceeds available memory	Delete any applications or files that are no longer needed on the device and try again.
Internal server error	This is an internal error that you need to report to IBM Software Support with the trace file.
Failed to open connection	Check your network connection and the SyncServer. Make sure that the host is connected and the server is running.
Failed to establish connection	Check your network connection and the SyncServer. Make sure that the host is connected and the server is running.
Failed to send request	Try to synchronize again when there is less traffic on the network or try to synchronize from a faster network.
Failed to receive reply	Try to synchronize again when there is less traffic on the network or try to synchronize from a faster network.
Timeout while receiving reply	Specify a larger timeout value or try to synchronize when there is less traffic on the network.
Failed to receive acknowledge	Try to synchronize again when there is less traffic on the network or try to synchronize from a faster network.
Failed to open Net library	Verify that the network library exists on the device. Try to reinstall the library.
Failed to resolve hostname	Verify that the hostname and the DNS addresses are correct.
Failed to allocate working buffer for transport	Delete any applications or files that are no longer needed on the device and try again.
Unknown network error	This is an internal error that you need to report to IBM Software Support with the trace file.
Failed to create target file	Verify that the target file is not being used by another application. If the target file is being used, unlock it and synchronize again.
No files received for update	This is an informational message stating that the server does not have an update for the mobile device.

Glossary

Special characters

$DSYINSTDIR
Refers to the directory where DB2 Everyplace is installed on a Linux or UNIX computer.

<DSYPATH>
Refers to the directory where DB2 Everyplace is installed on a Windows computer.

A

Apply qualifier
A character string that identifies subscription definitions that are unique to each instance of the DataPropagator™ Apply program.

authentication
The process of validating a user's ID and password against entries in the control database to ensure that the user is authorized to use the DB2 Everyplace Sync Server to synchronize data.

authorization
In computer security, the right granted to a user to communicate with or make use of a computer system.

B

binary large object (BLOB)
A sequence of bytes, where the size of the sequence ranges from 0 to 2 gigabytes. This byte sequence does not have an associated code page and character set. Image, audio, and video objects are stored in BLOBs.

bind In SQL, the process by which the output from the SQL precompiler is converted to a usable structure called an access plan. During this process, access paths to the data are selected and some authorization checking is performed.

BLOB See *binary large object* .

C

client A program or user that communicates with and accesses a database server. You define clients using the Mobile Devices Administration Center.

conflict detection
The process of detecting an out-of-date row in a target table that was updated by a user application. When a conflict is detected, the transaction that caused the conflict is rejected.

Control Center
A graphical interface that shows database objects (such as databases and tables) and their relationship to each other. From the Control Center, you can perform the tasks provided by the DBA Utility, Visual Explain, and Performance Monitor tools.

D

data filter
See *filter*.

data synchronization
See *mobile data synchronization*.

database management system (DBMS)
A computer program that manages data by providing the services of centralized control, data independence, and complex physical structures for efficient access, integrity, recovery, concurrency control, privacy, and security.

database server
A functional unit that provides database services for databases.

DB2 Control Center
See *Control Center*.

DB2 DataPropagator
A replication product that provides an automated method of replicating data from sources to targets. During mobile data synchronization, the mirror and remote databases serve as both source and target. DataPropagator replicates clients' changes from the mirror to the remote database, and also replicates changes from the remote database to the mirror database.

DBCS See *double-byte character set*.

DHCP See *Dynamic Host Configuration Protocol*.

DPROP
See *DB2 DataPropagator*.

double-byte character set (DBCS)
A set of characters in which each character is represented by two bytes.

Dynamic Host Configuration Protocol (DHCP)
An Internet protocol for automating the configuration of computers that use TCP/IP.

E

enterprise database
See *source database*.

enterprise server
See *source server*.

F

filter A device or program that separates data, signals, or material in accordance with specified criteria.

G

group A collection of clients that have similar mobile data synchronization needs. You define synchronization characteristics for each group, such as which applications the users in the group need to access to perform their jobs and what subsets of enterprise data they need to access.

H

handheld device
Any computing device that can be held in the hand. Handheld devices include palm-sized PCs and personal digital assistants (PDAs).

I

IBM Sync
The name for the icon representing the client component of the DB2 Everyplace Sync Server software.

J

join A relational operation that allows for retrieval of data from two or more tables based on matching column values.

K

key A column or an ordered collection of columns that are identified in the description of a table, index, or referential constraint.

L

large object (LOB)
A sequence of bytes, where the length can be up to 2 gigabytes. It can be any of three types: BLOB (binary), CLOB (single-byte character or mixed), or DBCLOB (double-byte character).

LOB See *large object*.

local database
A database that is physically located on the computer in use. Contrast with *remote database*.

log A Mobile Devices Administration Center object containing synchronization error messages and their descriptions.

M

master database
See *source database* .

MDAC
See *Mobile Devices Administration Center*.

mid-tier system
The machine where the DB2 Everyplace Sync Server is installed. In a two-tier synchronization configuration, the mid-tier and source systems refer to the same machine.

mirror database
A database that the DB2 Everyplace Sync Server uses internally to store the data that is required for synchronization and replication.

mobile
Pertaining to computing that is performed on a portable computer or a handheld device by a user who is frequently moving among various locations and using different types of network connections (for example, dial-up, LAN, or wireless).

mobile data synchronization
A two-step process whereby mobile users, or *clients*, submit changes that

they made to local copies of source data and receive any changes that were made to source data (in a remote database) since the last time they synchronized.

Mobile Devices Administration Center (MDAC)
A graphical interface that allows you to create, edit, and view synchronization objects and their relationships to each other. The Mobile Devices Administration Center also allows you to view synchronization status of individual clients and error messages.

O

object Anything that can be created or manipulated with SQL, for example, tables, views, indexes, or packages. In object-oriented design or programming, an abstraction consisting of data and operations associated with that data.

ODBC
See *Open Database Connectivity* .

Open Database Connectivity (ODBC)
An API that allows access to database management systems using callable SQL, which does not require the use of an SQL preprocessor. The ODBC architecture allows users to add modules, called database drivers, that link the application to their choice of database management systems at run time. Applications do not need to be linked directly to the modules of all the supported database management systems.

P

PDA See *personal digital assistant* .

persistent
Pertaining to data that is maintained across session boundaries, usually in nonvolatile storage such as a database system or a directory.

personal digital assistant (PDA)
A handheld device that is used for personal organization tasks (such as managing a calendar and note-taking) and includes telephone, fax, and networking features.

pervasive computing (PVC)
The use of a computing infrastructure that includes specialized appliances, known as information appliances, from which users can access a broad range of network-based services (including services that are typically offered through the Internet). These information appliances include televisions, automobiles, telephones, refrigerators, and microwave ovens. Pervasive computing provides convenient access to relevant information and the ability to take action on that information.

primary key
A unique key that is part of the definition of a table. A primary key is the default parent key of a referential constraint definition. With the DB2 Everyplace Sync Server Version 7, each replication source must have one and only one primary key.

privilege
The right to access a specific database object in a specific way. These rights are controlled by users with SYSADM (system administrator) authority or

DBADM (database administrator) authority or by creators of objects. Privileges include rights such as creating, deleting, and selecting data from tables.

PVC See *pervasive computing* .

Q

QBE See *Query-by-Example*.

query A request for information from the database based on specific conditions; for example, a request for a list of all customers in a customer table whose balance is greater than $1000.

Query-by-Example
An application that allows a user to dynamically view and modify the data stored in a DB2 Everyplace table.

R

RAS See *Remote Access Service* .

refresh
A process in which all of the data of interest in a user table is copied to the target table, replacing existing data.

remote database
A database that is physically located on a computer other than the one in use. Contrast with local database. The remote computing device can be stationary and nonportable, or it can be portable.

Remote Access Service (RAS)
A Windows program that manages connections between two systems.

replication
The process of taking changes that are stored in the database log or journal at a source server and applying them to a target server.

replication source
A database table that is defined as a source for replication. After you define a database table as a replication source, the table can accept copy requests.

S

SQL See *Structured Query Language* .

source database
A database residing on a source server containing data to be copied to a target system.

source server
The database location of the replication source.

source table
A table that contains the data that is to be copied to a target table. The source table must be a replication source table. Contrast with *target table*.

subscription
A specification for how the information in a source database is to be replicated to a target database. A subscription allows you to define which subsets of data and files can be copied from the source database. You can

create two types of subscriptions: file subscriptions for files stored at the source server and table subscriptions for tables in the source database.

subscription set
A Mobile Devices Administration Center object containing replication subscriptions. To provide group members with access to the data and files defined in replication subscriptions, you create a subscription set and assign subscriptions to it, then assign the subscription set to a group. The subscription set object replaces the application object.

synchronization
See mobile data synchronization.

synchronization object
A manageable item within the Mobile Devices Administration Center that contains information about aspects of the synchronization process in your organization. There are five types of synchronization objects: group, client, subscription set, subscription, and log.

synchronization session
A transaction in which mobile users, or *clients*, submit changes that they made to local copies of source data and receive any changes that were made to source data (residing on the remote server) since the last time they synchronized.

Structured Query Language (SQL)
A programming language that is used to define and manipulate data in a relational database.

T

target database
A DB2 Everyplace database residing on a mobile device to which data from a source database is copied.

target table
A table to which data from a source table is copied. Mirror tables on the mid-tier server are targets, and DB2 Everyplace tables on the mobile device are targets.

tap To use a stylus to interact with a handheld device.

temporary table
A table created during the processing of an SQL statement to hold intermediate results.

V

view A logical table that consists of data that is generated by a query.

W

wireless LAN
In wireless uses, a mobile user can connect to a local area network (LAN) through a radio connection. Wireless technologies for LAN connection include speed spectrum, microwave, and infrared light.

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