

SYBASE®

Installation Guide

PocketBuilder™

2.5

DOCUMENT ID: DC50062-01-0250-01

LAST REVISED: December 2007

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About This Book

Audience	This book is for anyone installing PocketBuilder™.
How to use this book	Read this book before you run the setup program to install PocketBuilder. You can also install Sybase® Adaptive Server® Anywhere from the PocketBuilder setup program.
Related documents	<p>PocketBuilder documentation The PocketBuilder documentation set includes the following manuals:</p> <ul style="list-style-type: none">• <i>Introduction to PocketBuilder</i> - Provides an overview of the features of PocketBuilder and includes a tutorial that leads the new user through the basic process of creating and deploying a PocketBuilder application that includes database synchronization through MobiLink.• <i>Users Guide</i> - Provides an overview of the PocketBuilder development environment and explains in detail how to use the PocketBuilder user interface, which allows you to create and deploy applications to a supported handheld device or emulator. It describes basic techniques for building the objects in a PocketBuilder application, including windows, menus, DataWindow® objects, and user-defined objects.• <i>Resource Guide</i> - Presents advanced programming techniques and information about connecting to and synchronizing with a database. <p>The PocketBuilder reference set is made up of four manuals that are based on PowerBuilder® documentation:</p> <ul style="list-style-type: none">• <i>Connection Reference</i> - Describes the database parameters and preferences you use to connect to a database in PocketBuilder.• <i>DataWindow Reference</i> - Lists the DataWindow functions and properties and includes the syntax for accessing properties and data in DataWindow objects.

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- *Objects and Controls* - Describes the system-defined objects and their default properties, functions, and events.
 - *PowerScript Reference* - Describes syntax and usage for the PowerScript® language including variables, expressions, statements, events, and functions.

Online Help Reference information for PowerScript properties, events, and functions is available in the online Help with annotations indicating which objects and methods are applicable to PocketBuilder.

SQL Anywhere® documentation PocketBuilder is tightly integrated with SQL Anywhere (formerly Adaptive Server Anywhere), including its UltraLite®, MobiLink™, and Sybase Central™ components. You can install these products from the PocketBuilder setup program. Documentation for SQL Anywhere is available on the iAnywhere Web site at http://www.iAnywhere.com/developer/product_manuals/sqlanywhere/.

Sample applications

The PocketBuilder installation provides a Code Examples workspace with targets that illustrate many of the product's features. Commented text inside events of target objects helps explain the purpose of the sample code. The example workspace is installed in the Code Examples subdirectory under the main PocketBuilder directory.

More applications on the Web

You can find more sample PocketBuilder applications and techniques in the PocketBuilder project on the Sybase CodeXchange Web site at <http://pocketpb.codexchange.sybase.com/>. There is a link to this page on the Windows Start menu at Program Files>Sybase>PocketBuilder 2.5>Code Samples.

If you have not logged in to MySybase, you must log in to the Sybase Universal Login page to access CodeXchange. If you do not have a MySybase account, you can sign up. MySybase is a free service that provides a personalized portal into the Sybase Web site.

Other sources of information

Use the Sybase Getting Started CD, the SyBooks CD, and the Sybase Product Manuals Web site to learn more about your product:

- The Getting Started CD contains release bulletins and installation guides in PDF format, and may also contain other documents or updated information not included on the SyBooks CD. It is included with your software. To read or print documents on the Getting Started CD, you need Adobe Acrobat Reader, which you can download at no charge from the Adobe Web site using a link provided on the CD.

- The SyBooks CD contains product manuals and is included with your software. The Eclipse-based SyBooks browser allows you to access the manuals in an easy-to-use, HTML-based format.

Some documentation may be provided in PDF format, which you can access through the PDF directory on the SyBooks CD. To read or print the PDF files, you need Adobe Acrobat Reader.

Refer to the *SyBooks Installation Guide* on the Getting Started CD, or the *README.txt* file on the SyBooks CD for instructions on installing and starting SyBooks.

- The Sybase Product Manuals Web site is an online version of the SyBooks CD that you can access using a standard Web browser. In addition to product manuals, you will find links to EBFs/Maintenance, Technical Documents, Case Management, Solved Cases, newsgroups, and the Sybase Developer Network.

To access the Sybase Product Manuals Web site, go to Product Manuals at <http://www.sybase.com/support/manuals/>.

Sybase certifications on the Web

Technical documentation at the Sybase Web site is updated frequently.

❖ **Finding the latest information on product certifications**

- 1 Point your Web browser to Technical Documents at <http://www.sybase.com/support/techdocs/>.
- 2 Click Certification Report.
- 3 In the Certification Report filter select a product, platform, and timeframe and then click Go.
- 4 Click a Certification Report title to display the report.

❖ **Finding the latest information on component certifications**

- 1 Point your Web browser to Availability and Certification Reports at <http://certification.sybase.com/>.
- 2 Either select the product family and product under Search by Base Product; or select the platform and product under Search by Platform.
- 3 Select Search to display the availability and certification report for the selection.

❖ **Creating a personalized view of the Sybase Web site (including support pages)**

Set up a MySybase profile. MySybase is a free service that allows you to create a personalized view of Sybase Web pages.

- 1 Point your Web browser to Technical Documents at <http://www.sybase.com/support/techdocs/>.
- 2 Click MySybase and create a MySybase profile.

Sybase EBFs and software maintenance

❖ **Finding the latest information on EBFs and software maintenance**

- 1 Point your Web browser to the Sybase Support Page at <http://www.sybase.com/support>.
- 2 Select EBFs/Maintenance. If prompted, enter your MySybase user name and password.
- 3 Select a product.
- 4 Specify a time frame and click Go. A list of EBF/Maintenance releases is displayed.

Padlock icons indicate that you do not have download authorization for certain EBF/Maintenance releases because you are not registered as a Technical Support Contact. If you have not registered, but have valid information provided by your Sybase representative or through your support contract, click Edit Roles to add the “Technical Support Contact” role to your MySybase profile.

- 5 Click the Info icon to display the EBF/Maintenance report, or click the product description to download the software.

If you need help

Each Sybase installation that has purchased a support contract has one or more designated people who are authorized to contact Sybase Technical Support. If you cannot resolve a problem using the manuals or online help, please have the designated person contact Sybase Technical Support or the Sybase subsidiary in your area.

Installing PocketBuilder

About this book

This book explains how to install PocketBuilder 2.5 on supported Windows desktop platforms, and how to install the PocketBuilder VM on supported handheld devices and emulators.

About PocketBuilder

PocketBuilder is a smart-client application development tool for Windows CE or Windows Mobile platforms. It enables developers to build handheld applications in an object-centric, graphical, desktop environment and deploy them to a supported Pocket PC or Smartphone device or emulator.

The PocketBuilder installation program installs the PocketBuilder development environment on your desktop computer. It can also install required files on a Pocket PC or Smartphone device connected to your desktop and create installation files for Pocket PC and Smartphone emulators.

SQL Anywhere

When you install PocketBuilder, you can also install Sybase SQL Anywhere (formerly Adaptive Server Anywhere), a fully featured relational database and data management tool, to your desktop and to a Windows CE or Windows Mobile device or emulator. The SQL Anywhere installation is restricted to development use only. Deployed systems require a separate SQL Anywhere license or the SQL Anywhere Runtime Edition (see “SQL Anywhere Runtime Edition” on page 2).

The SQL Anywhere installation includes MobiLink, a session-based synchronization system that allows two-way synchronization between a main database and many remote databases, and the Sybase Central database management tool.

SQL Anywhere supports MobiLink synchronization with SQL Anywhere databases running on the Microsoft Windows operating systems listed in Table 1-2 on page 4, as well as other platforms that are not supported by PocketBuilder. SQL Anywhere also supports MobiLink synchronization with Sybase Adaptive Server Enterprise, Oracle, IBM DB2 UDB, and Microsoft SQL Server databases running on multiple platforms.

SQL Anywhere Runtime Edition

The PocketBuilder setup program allows you to install the SQL Anywhere for Windows CE Runtime Edition. The royalty-free runtime edition is a restricted-functionality version of the standalone SQL Anywhere database management system. The SQL Anywhere Runtime Edition does not support stored procedures and triggers, transaction logs, or synchronization.

The SQL Anywhere Runtime Edition files, *rteng10.exe* and its associated DLLs, are installed in platform-specific (ARM.30 and ARM.50) subdirectories of the PocketBuilder 2.5 *Support\ASA_CE_Runtime\SA10\ce* directory. To use the Runtime Edition, you must copy the DLLs to the *\Windows* or *\Storage\Windows* directory on a device. You can copy the *rteng10.exe* file to any directory on the device, as long as you specify the correct path in a DSN file for your PocketBuilder applications.

Getting Started and Sybooks CDs

In addition to the PocketBuilder installation CD, the PocketBuilder software package includes the Sybase Getting Started CD and the SyBooks CD. For more information about these CDs, see “Other sources of information” on page vi.

System and software requirements

This section provides system and software requirements for PocketBuilder and SQL Anywhere. You will probably need to install both PocketBuilder and SQL Anywhere, so you should consider their combined system requirements.

The disk space requirements provided are approximate. The actual disk space you need for each tool might vary depending on hard disk size, partitioning, and the features you choose to install. Additional temporary space is required on the hard disk during installation for uncompressing install files.

PocketBuilder system requirements

Table 1-1 shows system requirements for the PocketBuilder development and runtime environments.

Although PocketBuilder applications can be deployed to a storage card, installing the PocketBuilder runtime engine to a storage card is not recommended. All PocketBuilder DLLs and PKDs should be kept in main memory unless you are sure that the device will not be turned off or that the storage card will not be removed while the executable is running.

Table 1-1: System requirements for PocketBuilder

System component	Development environment	Runtime environment
Operating system	Windows 2000 with Service Pack 2, Windows XP, Windows 2003, or Windows Vista	PocketPC 2002, PocketPC 2003, SmartPhone 2003, Windows Mobile 2003, Windows Mobile 5, and Windows Mobile 6
CPU	Pentium class or equivalent running at 400 MHz (or greater) with SVGA monitor	ARM or XScale processor
Minimum memory	64MB	5MB for program memory
Minimum disk space	175MB for a full installation	6.9MB for a full installation; 4MB for the PocketBuilder VM and the DataWindow library

SQL Anywhere system requirements

Table 1-2 shows minimum memory and disk space requirements for SQL Anywhere. The runtime and development environments supported by PocketBuilder are also supported by SQL Anywhere, although older devices using the Windows CE 3.0 and Windows CE 4.2 platforms might have trouble accommodating applications using both programs.

Do not install on a storage card

It is not a good idea to install a server executable on a device's storage card unless you can guarantee that the device will not be turned off or the storage card removed while the executable is running. Running the SQL Anywhere server or a SQL Anywhere database from a supported emulator's storage card (rather than its main memory) can produce an assertion failure due to the emulator's implementation of the GetFileInformationByHandle function.

SQL Anywhere supports development and runtime platforms that cannot be used with PocketBuilder. For more information, see the iAnywhere Web site at http://www.ianywhere.com/products/supported_platforms.html.

Table 1-2: System requirements for SQL Anywhere

System component	Development environment	Runtime environment
Minimum memory	40MB for the database server plus 80MB for the MobiLink server	6MB plus 2MB for MobiLink synchronization; UltraLite has built-in synchronization and requires under 1MB of program memory
Minimum disk space	400MB for the full installation including MobiLink synchronization files, tools, and documentation	10MB of storage memory; 27MB for a full installation

Required software

Microsoft ActiveSync Microsoft ActiveSync is required for communication between your desktop and mobile device. For Microsoft Vista, you must use the Windows Mobile Device Center (WMDC) instead of ActiveSync. To install PocketBuilder and SQL Anywhere directly to a Pocket PC device, install ActiveSync or the WMDC before running the PocketBuilder or SQL Anywhere installation program.

You can download the latest ActiveSync version from a link on the Microsoft Web site at <http://www.microsoft.com/windowsmobile/activesync/default.mspx>. The WMDC is available from links on the Microsoft Web site at <http://msdn2.microsoft.com/en-us/windowsmobile/bb264337.aspx>

Optional software

Device emulators PocketBuilder supports deployment to emulators using Microsoft Windows Mobile (WM) 2003 SE, WM 5, or WM 6 operating systems. Several of these emulators are available in Software Development Kits on the Microsoft Web site at <http://msdn.microsoft.com/mobility/downloads/sdk>.

You can download the following standalone emulators from the Microsoft Web site:

- Windows Mobile 5 at <http://www.microsoft.com/downloads/details.aspx?FamilyId=C62D54A5-183A-4A1E-A7E2-CC500ED1F19A&displaylang=en>

- Windows Mobile 6 at <http://www.microsoft.com/downloads/details.aspx?FamilyID=dd567053-f231-4a64-a648-fea5e7061303&DisplayLang=en>

You might also need to download the Virtual Machine Network Driver for your standalone emulator. You can download this driver from the Microsoft Web site at <http://www.microsoft.com/downloads/details.aspx?familyid=DC8332D6-565F-4A57-BE8C-1D4718D3AF65&displaylang=en>. Windows Vista users must install the Windows Mobile Device Center, available from links on the Microsoft Web site at <http://msdn2.microsoft.com/en-us/windowsmobile/bb264337.aspx>

If you installed Visual Studio 2005, you can use the Windows Mobile emulators that come with that product. You can also download the latest Windows Mobile SDK from a link on the Microsoft Web site at <http://msdn2.microsoft.com/en-us/windowsmobile/bb264337.aspx>

BioApi driver for fingerprint scanning applications

If you plan to develop fingerprint scanning applications for hp IPAQ h5500 or h5550 Pocket PC devices, you must install the BIOAPI.DLL on the client devices.

For information about installing this DLL, see “Installing a DLL for the HPBiometricScanner object” on page 19.

Pre-installation tasks

Before you install PocketBuilder, you need to perform the following tasks:

- Read the *Release Bulletin* for the latest information on the products that you are installing. The *Release Bulletin* is available on the Getting Started CD.

Release bulletins are also available on the Sybase Product Manuals Web site at <http://www.sybase.com/support/manuals/>. The *Release Bulletin* at this site sometimes contains more recent information than the bulletin on the Getting Started CD.

A *readme.txt* file for SQL Anywhere is available in the `\SA1001_Windows` directory on the CD. A *readme.txt* file for SQL Anywhere for Windows CE is available in the `\SA1001_Windows\ce` directory on the CD.

- Make sure the drive where you intend to install PocketBuilder is not compressed. If compression is enabled on the installation drive, the setup program fails.

- Make sure you have a TEMP environment variable that points to an existing directory location with at least 300MB free space. The setup programs write files to this directory during the installation and free the space after the installation is complete.
- If you installed a beta release of PocketBuilder, uninstall it.

Installing PocketBuilder

To install PocketBuilder, run the setup program on the PocketBuilder CD. The setup program installs PocketBuilder in default drives and directories unless you specify otherwise. If a directory you specify does not exist, the setup program creates it.

Installation options

You can choose the complete or custom installation options in the setup program. Table 1-3 lists the components that you can install with PocketBuilder.

Table 1-3: Components you can install with PocketBuilder

Component	Description
PocketBuilder 2.5 IDE	Desktop development environment and supporting files.
Code Examples	Sample applications that demonstrate PocketBuilder techniques and features.
Deployment Device Manual Install <ul style="list-style-type: none">• Pocket PC Device• Smartphone Device	Individual platform-specific PocketBuilder VM files that can be installed manually. You can select check boxes to install files to Pocket PC and Smartphone devices. The same files can be used to install PocketBuilder to emulators.

Component	Description
SQL Anywhere Database <ul style="list-style-type: none"> • SQL Anywhere 10 Developer Edition • SQL Anywhere Royalty Free Runtime 	Setup program for SQL Anywhere. You can select a check box to install the Developer Edition of SQL Anywhere 10, including Sybase Central, MobiLink, UltraLite, and a single-license version of SQL Anywhere for Windows CE devices. You can select a separate check box to copy the SQL Anywhere Runtime Edition for Windows CE to a PocketBuilder subdirectory. For more information about the runtime edition, see “SQL Anywhere Runtime Edition” on page 2.
PocketBuilder CABs for Deployment <ul style="list-style-type: none"> • Pocket PC Device • Smartphone Device 	CAB files that you can use to install the PKVM to Pocket PC and Smartphone devices. The CAB files can also be used to install PocketBuilder to emulators.
Documentation	Online Help files for PocketBuilder

Installation procedure

Installing to the desktop

The installation procedure that follows assumes you are installing from the PocketBuilder CD. If you are a system administrator and your site has multiple licenses, you might want to allow users to install PocketBuilder from a network drive instead. To do this, copy the files from the CD into a directory on a network drive. Users can then install PocketBuilder by running the setup program from the network.

You must have administrative privileges to fully install this product. If you are installing PocketBuilder for other users, make sure those users have write permission for the PocketBuilder 2.5 directory and the Windows registry.

Installing to a device

The installation procedure allows you to install PocketBuilder directly to a device. To do this, you must have Microsoft ActiveSync, or WMDC for Windows Vista, installed and running on the desktop computer and on the device or emulator. The device or emulator must be connected (cradled). The setup program can also create desktop Start Menu links for deploying PocketBuilder to a device or emulator at a later time, but you must have ActiveSync or the WMDC installed for this to happen.

If you want to install PocketBuilder to a device or emulator at a later time without using the Start Menu links, you can manually copy CAB files generated by the setup program. For more information, see “Copying files to a device or emulator” on page 15.

Smartphone device and emulator considerations

For a Smartphone device with a limited amount of available space, you might need to copy the PocketBuilder VMs manually rather than using the Start Menu links or manually copying the CAB file. Even if you install PocketBuilder to a mounted storage card, unpacking the CAB file requires temporary space in the main storage area.

If you do not have a file management program on your Smartphone device or emulator, you can copy the CAB file to the \Storage\Windows\Start Menu\Accessories folder. You can then display the CAB file by selecting Accessories from the Start menu and unpack the CAB file by pressing (on the Smartphone device) or clicking (on the Smartphone emulator) the Action button.

❖ To install PocketBuilder:

- 1 Exit any programs that are running.
If you do not, the setup program might not be able to copy some files to the appropriate directories.
- 2 Insert the CD into your CD-ROM drive and double-click the *setup.exe* program from the root directory if the Sybase PocketBuilder Install wizard does not start automatically.
If you get a security warning message box on Windows 2003 or Windows Vista, click Run.
- 3 On the License Agreement page, select your country or region, read the license, select the radio button to agree to the terms of the license, and click Next.

Back and Next

Use the Back and Next buttons to step backward and forward through the wizard to modify specifications as necessary.

- 4 On the Setup Type page, select Complete or Custom, accept the default folder location or browse to the folder where you want to install PocketBuilder, and click Next.

If you selected Complete for the setup type, skip to step 6. All components will be installed, and the SQL Anywhere setup program will start after PocketBuilder files are installed.

If you selected Custom, the Select Components page displays.

- 5 (Custom setup type only) Clear the check box on the Select Components page for any component that you do not want to install and click Next.

If you select a SQL Anywhere Developer Edition component in a Custom install, the setup program automatically starts the installation program for SQL Anywhere after installing PocketBuilder files.

- 6 On the Start Copying Files page, review your settings, then click Next to install the PocketBuilder files (or click Back to change your selections).

- 7 On the Deploy to the Device page, select one of the three deployment options and click Next.

The three deployment options are:

- Deploy to a Pocket PC device
- Deploy to a Smartphone device
- Don't deploy anything right now

If you select the option to deploy PocketBuilder to a Pocket PC or Smartphone device, the setup program copies the required files to the device or emulator, then displays the Application Downloading Complete dialog box.

If there is no device or emulator connected, the setup program installs a Windows CE setup program in the *PocketBuilder 2.5\WinCE* directory. This setup program is launched automatically the next time the device or emulator is connected.

If you leave the default option not to deploy to a device, and you selected the Complete setup type in step 4, or if you selected the Custom setup type in step 4 and the SQL Anywhere Developer Edition component in step 5, the SQL Anywhere 10 setup program starts. In this case, follow the directions in “Installing SQL Anywhere” next.

If you leave the default option and did not select the SQL Anywhere Developer Edition component in step 5, the setup program terminates and Readme files for locating the most recent Release Bulletin and describing the PocketBuilder sample applications open on the desktop.

- 8 (Deploying to a device) Click OK at the prompt to install PocketBuilder to the default directory on the Pocket PC or Smartphone.

- 9 If a message box displays telling you there are additional actions to take on the device or emulator, click OK.
On the device or emulator, tap OK (Pocket PC) or press the Action button (Smartphone) to complete the installation.

If you selected the Custom setup type in step 4 and the SQL Anywhere Developer Edition component in step 5, the SQL Anywhere 10 setup program starts. In this case, follow the directions in “Installing SQL Anywhere” next.

Otherwise, the installation is complete and ReadMe files for locating the most recent Release Bulletin and describing the PocketBuilder sample applications open on the desktop.

- 10 After the installation is complete, remove the CD from the CD-ROM drive.

You might need to restart your computer if you installed SQL Anywhere from the setup program.

If you use UltraLite 10 in the design time environment, you must copy UltraLite DLLs from the SQL Anywhere *Ultralite\Win32\386\lib\vs7* directory to the main PocketBuilder directory.

Installing SQL Anywhere

The SQL Anywhere setup program installs SQL Anywhere in default drives and directories unless you specify otherwise. If a directory you specify does not exist, the setup program creates it.

❖ To install SQL Anywhere:

- 1 On the Choose Setup Language page, select the language for the installation and click Next.
- 2 On the Welcome page, click Next. On the License Agreement page of the setup program, select your country or region, read the Sybase license agreement, select the radio button to accept the terms of the agreement, and click Next.

An additional product-specific license agreement page displays.

- 3 Read the product-specific license agreement and click Next.

- 4 On the Choose Location page, click Next to accept the destination folder path shown, or click Browse to select a different path for all the modules, click OK, and click Next.
- 5 On the Choose Samples Location page, click Next to accept the destination path shown, or click Browse to select a different path for the samples, click OK, and click Next.
- 6 On the Select Components page, you can click any of the components to display a description. Select the components you want to install, clear the check marks for the components you do not want to install, and click Next.

For PocketBuilder applications that use SQL Anywhere, make sure to select the SQL Anywhere for Windows CE components. Also, choose any MobiLink and UltraLite components and Sybase Central plug-ins that your PocketBuilder applications might require.

- 7 On the Select Program Folder page, select the program folder to which program icons will be added, specify a new one, or leave the default unchanged and click Next.
- 8 On the Start Copying Files page, review your settings, then click Next to begin installing files or Back to change your selections.

The next steps in the installation depend on selections you made in step 6.

If you selected this in step 6	Go to
Documentation but not SQL Anywhere for Windows CE	Step 9, then skip to step 11
Documentation and SQL Anywhere for Windows CE	Steps 9, 10, and 11
SQL Anywhere for Windows CE but not Documentation	Steps 10 and 11
Neither Documentation nor SQL Anywhere for Windows CE	Step 11

- 9 Select the documentation components you want to install and click Next twice to install the documentation, or click Cancel to continue without installing any documentation.

If you selected SQL Anywhere for Windows CE in step 6, the Confirm Launch of External Install page displays.

- 10 On the Confirm Launch of External Install, select Install to install SQL Anywhere to a device or emulator or select Skip to continue.

If you select Install, the SQL Anywhere 10 for Windows CE Install wizard opens. For how to complete the wizard, see “Installing SQL Anywhere on a device or emulator” next.
- 11 On the Setup Complete page, select the check box if you want to view the iAnywhere Online Resources page and click Finish.

The Install Wizard Complete page asks you if you want to restart your computer after the install is complete. To use SQL Anywhere command line utilities, you must restart the computer.
- 12 Select Yes or No for restarting your computer and click Finish.

If you started the SQL Anywhere setup program from the PocketBuilder setup program, both installations are now complete. The iAnywhere Online Resources page displays if you selected that in the previous step. Readme files for PocketBuilder also display after you close the Online Resources page.

Installing SQL Anywhere on a device or emulator

The SQL Anywhere 10 for Windows CE setup program is launched automatically when you select the Windows CE check box in the SQL Anywhere 10 setup program. You can also start the setup program manually from the Start menu or by running the *Setup.exe* file in the SQL Anywhere 10 *CE\Install* directory.

Required setup selection

If you install SQL Anywhere 10 to a device or emulator, make sure you select the International Components for Unicode (ICU) check box (Step 7). If you already installed SQL Anywhere 10 to a device without selecting this check box, you must reinstall SQL Anywhere with the ICU setup selection before running a PocketBuilder application that connects to a SQL Anywhere database.

If you want to install SQL Anywhere directly to a device, ActiveSync or the Windows Mobile Device Center must be installed and running on your desktop computer and on the device.

Each time you run the setup program, you can install to a device or to one of the emulators. If you want to install to a device *and* an emulator, install to the device, then run the *setup.exe* program from the *SQL Anywhere 10\ce\install* directory on the CD and select the emulator. You can also run the setup program from the Windows Start menu.

Installing UltraLite on a device or emulator

The UltraLite DLL and EXE files are not installed by default with the SQL Anywhere 10 for Windows CE setup program. For a Pocket PC or Smartphone device, you can copy these files manually from the ARM and ARM\LIB subdirectories (or the 386 and 386\LIB subdirectories) in the desktop *SQL Anywhere 10\UltraLite\CE* path.

You copy the files to the *\Windows* directory on a Pocket PC emulator, and to the *\Storage\Windows* directory for a Smartphone device or emulator. You do not need to install SQL Anywhere on a device or emulator to use the UltraLite DBMS.

❖ To install SQL Anywhere on a Windows CE device or emulator:

- 1 If the setup program starts automatically, click Next on the Welcome page. If you started the program manually, skip to step 5.

The setup program starts automatically if you selected the SQL Anywhere Developer Edition component in the PocketBuilder installation wizard.

If you have already installed SQL Anywhere on the desktop, you can start the setup program by selecting Programs>Sybase>SQL Anywhere 10>Deploy SQL Anywhere for Windows Mobile from the desktop Start menu. Otherwise, you can Double-click *setup.exe* in the *SA1001_Windows\ce\install* directory on the PocketBuilder CD.

- 2 On the Choose Destination Location page, click Next to accept the destination folder path shown, or click Browse to select a different path for the Windows CE modules, click OK, and click Next.
- 3 On the Select Components page, select the device and emulation environments to which you want to install. Select other components as needed, click Next, then click Next on the Start Copying Files page.

The setup program installs the SQL Anywhere for CE setup program on your computer.

- 4 Select the check box to install to a device now and click Finish.
If you get a security warning message box on Windows 2003 or Windows Vista, click Run.

The SQL Anywhere for CE setup program starts automatically. The Choose Setup Language page displays. This is also the first setup page you see if you start the setup program manually.

- 5 On the Choose Setup Language page, select the language for the installation and click Next.
- 6 On the Deploy SQL Anywhere for Windows CE, select the platform for you connected device, and click Next.

You can elect to build CAB files for Windows Mobile 5, ARM, or ARMV4T platforms. For PocketBuilder, you would typically select either Windows Mobile 5, ARM, or both.

- 7 On the Select Features page, select the International Components for Unicode (UCI check box) and any other components that you want to install to a device or emulator and click Next.
- 8 Click Next on the Review Settings Before Building the CAB File page.
- 9 On the Install Shield Wizard Complete screen, select the check box to install SQL Anywhere directly to your connected device, then click Finish.

The setup program builds a CAB file for deploying SQL Anywhere to a device or emulator.

The setup program installs SQL Anywhere to the connected device or emulator.

ActiveSync not detected error

When no device is connected, or ActiveSync or the Windows Mobile Device Center is not running, the setup program attempts to connect to the Pocket PC emulator and fails. Select No when the setup program asks if you would like to try again. The setup program displays a message box indicating that it will build a CAB file. Click OK to create the CAB file.

If you want to install to both a device and an emulator, select Mobile Device to install to the device. You can install to the emulator later. To install to an emulator when you have a connection to a device, you must first disconnect the device.

For information about copying the CAB file to the emulator, see “Copying files to a device or emulator” next.

The setup program copies the required files to the connected device or emulator, or builds a CAB file for the specified platform, then displays the Application Downloading Complete dialog box.

- 10 Click OK in the Application Downloading Complete dialog box, then click Finish on the Setup Complete page for SQL Anywhere CE.

The SQL Anywhere CE Readme file and the iAnywhere Online Resources page display if you did not clear the check boxes on the Setup Complete page. After you close these pages, if you entered the SQL Anywhere 10 for Windows CE setup program from the desktop SQL Anywhere setup program, you return to the Setup Complete page (next-to-last step) of the desktop setup program.

- 11 If a response window displays on the device or emulator, tap OK (Pocket PC) or press the Action button (Smartphone) to complete the installation.

Copying files to a device or emulator

When you select a complete install in the PocketBuilder setup program, or when you select the Deployment Device Manual Install components on the Select Components page for a custom install, the setup program installs PocketBuilder VM files, *pkvm25.dll* and associated DLLs, and the *applist.exe* file in ARM (Pocket PC) and SPARM (Smartphone) subdirectories of the *PocketBuilder 2.5\WinCE* directory. *Applist.exe* is a program that makes it easier to locate and launch applications you build with PocketBuilder.

DLLs for the device or emulator

For most PocketBuilder applications, not all of the PocketBuilder DLLs are required. For information on which DLLs might or might not be required for your application, see the chapter on packaging and deploying an application in the Users Guide, or the What's New topic on DLL repackaging in the online Help.

When you select a complete install, or when you select the PocketBuilder CABs for Deployment components in a custom install, the PocketBuilder setup program installs CAB files on the desktop that you can use to install PocketBuilder to a device or emulator. Each CAB file contains *applist.exe* and the PocketBuilder DLL files for a specific platform. The following CAB files are installed in the *PocketBuilder 2.5\WinCE* directory:

- *PocketBuilder.ARM.CAB* for Pocket PC devices and emulators
- *PocketBuilder_Signed.ARM.CAB* for Windows Mobile 5 and 6 Pocket PC devices and emulators that require signed applications
- *SP_PocketBuilder.ARM.CAB* for the Smartphone device
- *BW_PocketBuilder.ARM.CAB* for WinCE 3.x and 4.x, and WinCE .NET devices

You can copy the CAB files or the individual DLLs to a device or emulator. Make sure that you copy the correct CAB file to the device or emulator where you want to install the PocketBuilder VM.

Instead of copying files manually, you can launch a setup program from the desktop Start menu to install PocketBuilder to a connected handheld device. The Setup PocketPC, Setup WM-5 PocketPC, and the Setup Smartphone commands from the Start>Programs>Sybase>PocketBuilder 2.5 menu install PocketBuilder to the connected device or emulator.

The SQL Anywhere setup program also installs files that you can copy to a device or emulator in platform-specific subdirectories of the *SQL Anywhere 10\ce* directory.

The following procedures describe how to copy files to a device or emulator.

❖ **To copy files to a Pocket PC or Smartphone device using ActiveSync and Windows File Explorer:**

- 1 On your desktop, open ActiveSync and click the Explore button.
Explorer opens with Mobile Device as the current address.
- 2 Navigate to the directory where the file or files are located on the desktop, select them, and select Edit>Copy.

You can use the Up button in Explorer to navigate to the desktop, or you can browse to an address using the drop-down list in the Address toolbar or the Explorer.
- 3 Use the Address drop-down list to return to the Mobile Device directory.

- 4 Double-click My Pocket PC and navigate to the directory where you want to copy the files.

DLL files must be installed in the `\Windows` directory. For a Smartphone, this can be the `\Storage\Windows` directory.

- 5 Select Edit>Paste to install the files.
- 6 If you copied a CAB file, select Programs>File Explorer from the Start menu on the device, navigate to the directory where you copied the file, and tap it (Pocket PC) or press the Action button (Smartphone) to install its contents.

❖ **To copy files to a Pocket PC or Smartphone emulator using the Windows CE Remote File Viewer:**

- 1 On your desktop computer, open *cefilevw.exe* and select the device or emulator to which you want to copy files.

By default, the *cefilevw* tool is installed in `C:\Program Files\Windows CE Tools\Common\Platman\bin` when you install the Pocket PC or Smartphone Software Development Kit.

- 2 Navigate to the directory to which you want to copy a file.
DLL files must be installed in the `\Windows` directory.
- 3 Click the Export File button (a yellow Up arrow) on the toolbar.
- 4 In the Export File dialog box, navigate to the directory where the first file you want to copy is located, select the file, and click Open.
The Remote File Viewer copies the file.
- 5 Repeat steps 2 to 4 for any additional files you want to copy.
- 6 If you copied a CAB file, select Programs>File Explorer from the Start menu on the device or emulator, navigate to the directory where you copied the file, tap it (Pocket PC device), select it using the Action button (Smartphone), or click it (on the emulator) to unpack the CAB file and install the PocketBuilder VM.

Copying CAB files to the Pocket PC 2002 or 2003 emulator

If a CAB file is too large to copy, you can change the default memory configuration for the Pocket PC 2002 or 2003 emulator in the Windows registry. For instructions, see the Release Bulletin. When you shut down the emulator, make sure you select Save Emulator State. By default, files that you copy to the emulator are deleted when you shut it down.

What the setup program does

On your desktop computer, the setup program does the following:

- Installs Sybase files in a *Sybase* directory
- Creates a program group and icons for each product installed
- Creates uninstall files to identify what needs to be removed if you uninstall a product
- Makes changes to the Windows registry
- Creates or updates INI files including *PK.INI*

Registry changes

The setup program makes the following changes to the Windows registry:

- Creates or updates the Sybase key in *HKEY_CURRENT_USER\Software* and *HKEY_LOCAL_MACHINE\Software*
- Adds the appropriate paths to the registry path *HKEY_LOCAL_MACHINE\Software\Microsoft\Windows\CurrentVersion\App Paths*
- Adds the paths to compiled HTML Help files to the registry path *HKEY_LOCAL_MACHINE\Software\Microsoft\Windows\HTMLHelp*
- Adds the paths to Windows Help files to the registry path *HKEY_LOCAL_MACHINE\Software\Microsoft\Windows\Help*

Adding PocketBuilder components later

You can install additional components by running the setup program again.

❖ To add one or more components to your installation:

- 1 Insert the PocketBuilder CD in your CD-ROM drive and run the *setup.exe* program.
- 2 On the Welcome page, select Modify and click Next.

- 3 On the Select Components page, select the components you want to add, *select any components that you have already installed* that you do not want to remove, and click Next.

If you clear the check box for any of the components on this page, apart from SQL Anywhere, the component will be removed. If you select the check box for a component that has already been installed, it is not reinstalled.

Installing a DLL for the HPBiometricScanner object

If a PocketBuilder application that you develop uses the HPBiometricScanner object for fingerprint scanning, you must install the BIOAPI.DLL on client devices.

❖ Obtaining and installing the BIOAPI.DLL file

- 1 Register with the iPAQ Developer Program on the Hewlett-Packard Website at http://h71018.www7.hp.com/hp_ids/login.aspx.

A Developer-level membership is currently required to obtain the BIOAPI.DLL file.

- 2 Log in and go to the Technical Tools>Technical Documents page.
- 3 Select iPAQ SDK to open the HP iPAQ Downloads page.

In the menu pane, expand the Technical Downloads>iPAQ Pocket PC SDK node and select the iPAQ Pocket PC h5400 Series link.

- 4 Click the Biometric API Library and Sample entry under the Online Support tab of the main download page.

A message box prompts you to open or save the biometric API library and sample zip file.

- 5 Unzip the sample zip file to a local directory and copy the BIOAPI.DLL file to the `\Windows` directory on all the devices where you want your fingerprint scanning application to run.

Removing PocketBuilder

The following procedures describe how to remove PocketBuilder from your desktop computer and from a Pocket PC device.

❖ **To remove PocketBuilder from your desktop computer:**

- 1 In the Windows Control Panel, select Add or Remove Programs.
- 2 Select Sybase PocketBuilder 2.5 from the list of currently installed programs and click Change/Remove.

The PocketBuilder 2.5 Setup Welcome page opens.

- 3 On the Welcome page, select Remove and click Next.

The setup program displays a message box that prompts you for confirmation.

- 4 Click OK to remove PocketBuilder, then click Finish.

Using the setup program to remove PocketBuilder

You can also remove PocketBuilder from your desktop computer using the PocketBuilder CD. Insert the PocketBuilder CD in your CD-ROM drive and run the *setup.exe* program, then follow steps 3 and 4 of the previous procedure.

❖ **To remove PocketBuilder from a Pocket PC device or emulator:**

- 1 Make sure that no PocketBuilder applications are running.

To do so, select Settings>System>Memory>Running Programs from the Start menu, select any PocketBuilder applications, and click Stop.

- 2 Select Settings from the Start menu, select the System tab, and tap the Remove Programs icon.
- 3 Select Sybase PocketBuilder 2.5 from the list of programs, and click Remove.

If you manually installed the PocketBuilder VM files to a Smartphone device or emulator, you must remove the files using a file manager, the ActiveSync Explorer window, or the Windows CE Remote File Viewer. If you installed PocketBuilder using a CAB file (or the Start Menu link), the procedure to remove PocketBuilder is essentially the same as for the Pocket PC device or emulator.

❖ To remove PocketBuilder from a Smartphone device or emulator:

- 1 Make sure that no PocketBuilder applications are running.
- 2 Select Settings from the Start menu, then select Remove Programs.
Typically the Remove Programs item is on the second page of Settings items.
- 3 Select Sybase PocketBuilder 2.5 from the list of programs, select Remove, and press the Action button.

Removing SQL Anywhere

Although you can install PocketBuilder and SQL Anywhere from the same setup program, you must remove them separately. If you have installed SQL Anywhere documentation and SQL Anywhere for Windows CE, you must also remove these SQL Anywhere components separately.

The following procedures describe how to remove SQL Anywhere from your desktop computer and from a Pocket PC device.

❖ To remove SQL Anywhere from your desktop computer:

- 1 In the Windows Control Panel, select Add or Remove Programs.
- 2 From the list of currently installed programs, select Sybase SQL Anywhere 10, Software and click Change/Remove.
A message box asks you for confirmation.
- 3 Click Yes to remove SQL Anywhere software or documentation, then click Finish on the Maintenance Complete page.
If any SQL Anywhere files and registry entries have been left on your computer, a message box prompts you to view the list of items that have not been removed. You can click Yes to see the list, then select the items in a second message box and click Erase Selected Items to remove these additional files and registry entries.
- 4 To remove SQL Anywhere documentation, repeat this procedure, but select Sybase SQL Anywhere 10, Documentation in step 2.
- 5 To remove SQL Anywhere for Windows CE files from the desktop, repeat this procedure, but select Sybase SQL Anywhere 10 for Windows CE in step 2.

❖ **To remove SQL Anywhere from a Pocket PC device:**

- 1 Make sure that no PocketBuilder applications are running.
To do so, select Settings>System>Memory>Running Programs from the Start menu, select any PocketBuilder applications, and click Stop.
- 2 Select Settings from the Start menu, select the System tab, and tap the Remove Programs icon.
- 3 Select Sybase SQL Anywhere for Windows CE from the list of programs, and click Remove.

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