

# **ALLBASE/SQL Release G2 Release Notes**

## **HP 9000 Computer Systems**



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ALLBASE/SQL is Hewlett-Packard's relational database management system. ALLBASE/SQL includes the interactive SQL interface (ISQL); the C, FORTRAN, PASCAL and COBOL Preprocessors (psqlc, psqlfor, psqlpas and psqlcob respectively); and the utility programs SQLAudit, SQLUtil, SQLGEN, SQLMigrate and SQLMON. An optional component of ALLBASE/SQL is ALLBASE/NET, which you can install by itself to form a runtime client-only configuration, or in addition to the rest of ALLBASE/SQL in a server configuration.

ALLBASE/SQL, version G2 contains several major enhancements providing significant benefits in the following areas:

- Security
- Year 2000 Compatibility
- ODBCLink/SE

The ALLBASE/SQL version numbers for this release are:

- 36217-02A.G2.02 (Series 700 and 800)

## OMNIBACK Support Dropped from SQLUtil

ALLBASE/SQL no longer supports OMNIBACK as the backup routine in SQLUtil. Previously, OMNIBACK could be chosen to do the backup and restore operations in SQLUtil by invoking the SET BACKUP OMNIBACK option. SQLUtil now supports only ALLBASE/SQL internal backup mechanism, and it is the default setting.

SQLUtil is modified in the following manner:

- **SET BACKUP** command will not accept OMNIBACK as the keyword. It will fail with the message, “Command not yet implemented. (DBERR 8102).”
- SET will only display the following values for the flags: ECHO\_ALL, EXIT\_ON\_DBERR, and ALLBASE.
- Default backup setting is ALLBASE/SQL internal format. It can also be selected explicitly by SET BACKUP ALLBASE.

## **Features**

ALLBASE/SQL, version G2 contains several major enhancements providing significant benefits in the following areas:

- Security
- Year 2000 Compatibility
- ODBCLink/SE

If you are updating from an earlier release of ALLBASE/SQL, refer to the migration information in the “Installation Procedures” section appearing in the chapter “Compatibility and Installation Requirements.” To order this product, contact your HP Representative.

A list of ALLBASE/SQL reference manuals for HP-UX is provided in chapter 5.

## **Security**

Two new authorities have been added to the G2 release of ALLBASE/SQL: **MONITOR** and **INSTALL**. These new authorities can be granted to users using the **GRANT** command, or can be revoked from users using the **REVOKE** command.

### **MONITOR Authority**

**MONITOR** authority gives a user the ability to run **SQLMON**, an online diagnostic tool that monitors the activity of an ALLBASE/SQL DBEnvironment. Before this new authority, **SQLMON** can only be run by the creator of the DBEnvironment (also known as the **DBECreator**), someone who knows the maintenance word (maint word), or someone who has superuser capability.

### **INSTALL Authority**

**INSTALL** authority gives a user the ability to use the SQL preprocessors to create an SQL module owned by someone other than themselves, or to use **ISQL** to install a module owned by someone other than themselves. This is an important capability for those needing to move modules from a development DBEnvironment to a production DBEnvironment. Before this new authority, only a DBA had this ability.

## Year 2000 Compatibility

As the end of the century quickly approaches there has been much concern about dates being handled correctly in the twenty-first century. This is particularly an issue for systems and applications that are using a two digit year to express dates. ALLBASE/SQL has always stored dates in a four digit year format which largely eliminates the year 2000 compatibility problem. ALLBASE/SQL applications can be coded using four digit year dates, thus avoiding any ambiguity. However, for existing applications that may allow dates to be entered using a two digit year format, there is still an issue as to how these dates get converted to the ALLBASE/SQL internal format using the TO\_DATE function or TO\_DATETIME. For example, what date value would the following functions return?

```
TO_DATE('12/31/35','MM/DD/YY')
TO_DATETIME('351231235959','YYMMDDHHMISS')
```

Would these functions evaluate the year as 1935 or 2035?

### Solution

When YY is specified in the format specification of either TO\_DATE or TO\_DATETIME, and if its value of the year specified is less than 50, then the century part of the DATE or DATETIME defaults to 20, otherwise it is set to 19. This behavior can be overridden by setting the environment variable HPSQLsplitcentury to a value between 0 and 100. If the year specified is less than the value of the environment variable HPSQLsplitcentury then the century part is set to 20, otherwise it is set to 19.

For the above example,

#### Case 1: HPSQLsplitcentury is not set

```
TO_DATE('12/31/35','MM/DD/YY') = 2035-12-31
TO_DATETIME('351231235959','YYMMDDHHMISS') = 2035-12-31 23:59:59
```

#### Case 2: HPSQLsplitcentury is set to 0

```
TO_DATE('12/31/35','MM/DD/YY') = 1935-12-31
TO_DATETIME('351231235959','YYMMDDHHMISS') = 1935-12-31 23:59:59
```

#### Case 3: HPSQLsplitcentury is set to 70

```
TO_DATE('12/31/35','MM/DD/YY') = 2035-12-31
TO_DATETIME('351231235959','YYMMDDHHMISS') = 2035-12-31 23:59:59
```



## **ODBCLink/SE**

ODBCLink/SE is a replacement for the current HP PC/API. It is an implementation of Microsoft's Open Database Connectivity (ODBC) interface that enables Microsoft Windows based applications and tools to access ALLBASE/SQL on HP 9000, in a client/server environment. ODBCLink/SE is a part of ALLBASE/SQL.

In this environment, application developers and end-users can take advantage of the PC's graphical user interface (GUI) and processing power, while relying on the security, integrity, and database management capabilities of ALLBASE/SQL and IMAGE/SQL.

HP PC/API with Gupta can co-exist with ODBCLink/SE, but it will no longer be supported, and will not be distributed in HP-UX 11.0 and subsequent releases.

ODBCLink/SE server runs under HP-UX Versions 9.x, 10.x and 11.x on the HP 9000 Series 7xx and 8xx servers. The client side runs under Microsoft Windows 3.1 and 3.11, Windows95, or WindowsNT V3.51 and V4.0. Connection via Winsock is available in both the 16-bit and the new 32-bit version.

The driver can be used in two ways: by direct calls from a Windows program, such as Foxbase, or through an ODBC-compliant application, such as Microsoft Access or Visual Basic.

The ODBC LongVarBinary data type will be supported for binary large objects (BLOBs), such as compressed photographs or document images.

## **ODBC Level 2 Compliance**

ODBCLink/SE is 95 percent ODBC Level 2 compliant. These exceptions are not supported:

- SQLBrowseConnect
- SQLExtendedFetch
- SQLSetPos
- SQLSetStmtOptions
- Scalar functions
- SQL\_BIT, SQL\_TINYINT, and SQL\_BIGINT data types

## **Client/Server Interface**

The networked HP 9000 Series 7xx or 8xx with ALLBASE/SQL provides the relational database environment on the server.

Security is provided by the HP-UX logon system and ALLBASE/SQL.

ODBCLink/SE connects the client to the server with a collection of dynamic link libraries (DLLs) on the client and runs under Microsoft Windows 3.1 and 3.11, Windows95, or WindowsNT 3.51 and 4.0.

Client application requests are routed over the network to an ALLBASE/SQL database on the server, and replies are returned to the client application. A listener process establishes the connection between the client application and the target database on the server. The listener works with ARPA Services on the HP 9000.

With ODBCLink/SE and application software on the client, you can develop SQL applications, generate reports, and query ALLBASE/SQL on the server. The tested client applications include the following as well as many more:

|                  |               |
|------------------|---------------|
| Cognos Axiant    | Paradox       |
| Cognos Impromptu | PowerBuilder  |
| Jetform          | Visual Basic  |
| Lotus 1-2-3      | Visual C++    |
| Microsoft Access | Visual FoxPro |
| Microsoft Query  |               |

## Requirements

- HP 9000 server requirements:
  - HP-UX Version 9.0 or 10.0 (or later)
  - ALLBASE/SQL Version A.G2.01 (or later)
  - ARPA Services must be configured and turned on
- Client requirements:
  - 486 processor at a minimum, preferably a Pentium
  - 8 MB memory at a minimum, preferably 16 MB
  - 5 MB of free disk space
  - Windows 3.1 or 3.11, Windows95, or WindowsNT V3.51 or 4.0
  - Microsoft or WRQ TCP/IP software
- Software provided:
  - Server program for the HP 9000
  - Client programs for both 16 and 32-bit platforms

When using a 32-bit operating system, you should use the 32-bit driver if possible. However, if you have a 16-bit application running under Win95 or WinNT, you must install the 16-bit

version of the driver. On Windows95 or WindowsNT, you can run both the 16 and 32-bit versions of ODBCLink/SE. 16 and 32-bit data-sources are maintained separately and coexist.

- Dr. DeeBeeSpy from Syware Inc. for tracing calls to the ODBC driver

## **Migration from HP PC API**

A data migration tool is provided to migrate data sources created from HP PC API to ODBCLink/SE. Once the sources are identified, the translation is performed automatically.

## **Performance Considerations**

ODBC access to the server is very fast. You should note the following performance exceptions:

- Reading and sorting a large table may prevent the server from returning control to the client until the entire database has been read and sorted.
- Opening a large table in MS-Access will cause a screen full of data to be displayed and then appear to wait for user input. In many cases, data is still being downloaded to the client. Careful thought needs to be employed before granting ODBC access to large tables on the server.
- Using dynamic substitution parameters speeds up your application, if you are writing your own SQL to do multi-row inserts or updates
- In general, ODBCLink/SE will not complete any request faster than ISQL would, and could be slower due to network overhead.

## **Supported Functions and Commands**

These are the ALLBASE/SQL functions and commands supported by ODBCLink/SE:

- The complete ALLBASE/SQL syntax dynamic SQL
- All SQL functions

You can use the ODBC SQLGetFunctions call to obtain a list of the supported ODBCLink/SE driver functions.

## **Areas Not Fully Implemented**

Some areas of certain functions are not fully implemented. They are as follows:

- SQLColAttributes

All functions will receive a return value of:

**Not Implemented**

except the following supported options:

|                         |                     |
|-------------------------|---------------------|
| SQL_COLUMN_COUNT        | SQL_COLUMN_NAME     |
| SQL_COLUMN_TYPE         | SQL_COLUMN_LENGTH   |
| SQL_COLUMN_PRECISION    | SQL_COLUMN_SCALE    |
| SQL_COLUMN_DISPLAY_SIZE | SQL_COLUMN_NULLABLE |

- SQLSetConnectOptions

All functions will return this message:

**Driver not Capable (SQLState S1C00)**

except the following supported options:

|                          |                             |
|--------------------------|-----------------------------|
| SQL_AUTOCOMMIT           | 1=ON (default) 0=OFF        |
| SQL_OPT_TRACE            | supported by Driver Manager |
| SQL_OPT_TRACEFILE        | supported by Driver Manager |
| SQL_TRANSLATE_DLL        | supported                   |
| SQL_TRANSLATE_OPTION     | supported                   |
| SQL_TXN_ISOLATION        | supported                   |
| SQL_TXN_READ_UNCOMMITTED | Read Uncommitted (RU)       |
| SQL_TXN_READ_COMMITTED   | Read Committed (RC)         |
| SQL_TXN_REPEATABLE_READ  | Repeatable Read (RR)        |
| SQL_TXN_SERIALIZABLE     | Repeatable Read (RR)        |
| SQL_TXN_VERSIONING       | Not Implemented             |

- SQLSetStmtOptions are not supported.

The driver will return either of these messages:

**Driver not Capable (SQLState S1C00)**

**Option value changed (SQLState O1S02)**

## Supported Data Types

ODBCLink/SE supports ALLBASE/SQL types.

The following table shows the correspondence between ALLBASE/SQL data types and ODBC data types.

| ALLBASE/SQL DATA TYPE                               | ODBC DATA TYPE    |
|---|-------------------|
| CHAR, max length <255                               | SQL_CHAR          |
| CHAR, max length >=255                              | SQL_LONGVARCHAR   |
| VARCHAR, max length <255                            | SQL_VARCHAR       |
| VARCHAR, max length >=255                           | SQL_LONGVARCHAR   |
| BINARY, length <256                                 | SQL_BINARY        |
| BINARY, length >=256                                | SQL_LONGVARBINARY |
| VARBINARY <256                                      | SQL_VARBINARY     |
| VARBINARY >=256                                     | SQL_LONGVARBINARY |
| LONG BINARY   | SQL_LONGVARBINARY |
| LONG VARBINARY                                      | SQL_LONGVARBINARY |
| INTEGER (32-bit)                                    | SQL_INTEGER       |
| SMALLINT (16-bit)                                   | SQL_SMALLINT      |
| DECIMAL (Internal representation is packed decimal) | SQL_DECIMAL       |
| FLOAT(24), REAL                                     | SQL_REAL          |
| FLOAT(53), DOUBLE PRECISION                         | SQL_DOUBLE        |
| DATE  | SQL_DATE          |
| TIME  | SQL_TIME          |
| DATETIME  | SQL_TIMESTAMP     |
| INTERVAL  | SQL_CHAR          |

ALLBASE/SQL Storage space for BLOBs should be created using a LONG VARBINARY column.

## Stored Procedures

ODBCLink/SE implements all types of ALLBASE/SQL stored procedures, including those which return multiple-format result sets. You can list the stored procedures available to your ODBC session by calling SQLProcedures. Parameter information for stored procedures is obtained by calling SQLProcedureColumns.

## Features Specific to ODBCLink/SE

The following is a list of features that are unique or specific to ODBCLink/SE and some details about them:

- Primary key name returned by SQLStatistics  
Most ODBC applications including MS Access, Visual Basic, and PowerBuilder require a unique primary key for a table to be updatable.
- Reading or writing to ALLBASE/SQL LongVarBinary items  
Any file residing on the Hewlett-Packard server can be inserted into an ALLBASE/SQL LongVarBinary field with the `INSERT INTO SQL` command.
- Maximum number of statements  
ODBCLink/SE supports up to 50 concurrent statements, or cursors, per connection.  
To use multiple statements when you are not writing your own SQL application, tell ODBCLink/SE to have SQLGetInfo report more than one statement per connection.

## ALLBASE/SQL Restrictions

These are the ALLBASE/SQL restrictions on the ODBC grammar.

| STATEMENT    | PROGRAMMING CONSIDERATIONS                       |
|--------------|--|
| CREATE TABLE | UNIQUE PRIMARY KEY must follow NOT NULL          |
| DROP TABLE   | ALLBASE/SQL does not provide CASCADE or RESTRICT |
| REVOKE       | ALLBASE/SQL does not provide RESTRICT            |

- ALLBASE/SQL provides a DATETIME data type similar to TIMESTAMP.
- ALLBASE/SQL does not implement optimistic locking.

Optimistic locking means that the DBMS does not lock data until just before an update is made, thus improving concurrency because locks are not held for long.

## **ANSI Character Set**

The HP 9000 uses the default ROMAN8 character set. Most applications running under Microsoft Windows use the 8-bit ANSI (ISO 8859/1) character set to provide support for Western European languages (including American). The first 127 characters are the same for both ROMAN8 and ANSI character sets, only the extended and special characters are different.

If your client application uses these extended or special characters, then the data from the server must be converted from ROMAN8 to ANSI, and the data returning to the server must be converted from ANSI to ROMAN8. A translation DLL has been provided to accomplish this task.

## **Unsupported ALLBASE/SQL Statements**

There are several reasons why some ALLBASE/SQL statements are not supported in the ODBCLink/SE environment:

- ODBCLink/SE does not support embedded SQL, therefore statements that work only with embedded SQL are not supported.
- Statements that relate to functions, such as connection, that have been replaced by functions resident on the client.
- Some functions are best restricted to the DBA; statements which control these functions are accessible only through Interactive Structured Query Language (ISQL) on the server.
- ODBCLink/SE internally prepares an SQL statement to be dynamically preprocessed. Therefore, you cannot use some statements such as **EXECUTE IMMEDIATE**.

## **Statements that Work Only with Embedded SQL**

Client application software that accesses ALLBASE/SQL databases through ODBCLink/SE does not support embedded SQL. The application software calls the database functions directly; there is no need for preprocessing.

Because the following ALLBASE/SQL statements function only with embedded SQL, they are not supported by ODBCLink/SE:

|                     |                       |
|---------------------|-----------------------|
| CLOSE CURSOR        | BEGIN DECLARE SECTION |
| DECLARE CURSOR      | DESCRIBE              |
| END DECLARE SECTION | EXECUTE               |
| EXECUTE IMMEDIATE   | FETCH                 |
| INCLUDE             | OPEN                  |
| PREPARE             | REFETCH               |
| SQLEXPLAIN          | WHENEVER              |

### **Statements Replaced by Functions on the Client**

Some ALLBASE/SQL functions have been moved from the server to the client with ODBCLink/SE

The following ALLBASE/SQL statements are not supported because they have been replaced by other functions resident on the client:

|                  |                      |
|------------------|----------------------|
| CONNECT          | DISCONNECT           |
| RELEASE          | RESET                |
| SET CONNECT      | SET MULTITRANSACTION |
| START DBE        | START DBE NEW        |
| START DBE NEWLOG | STOP DBE             |

### **Utilities**

The utilities provided with ODBCLink/SE do the following:

- Test and verify that the driver is functioning correctly.
- Determine which version of ODBCLink/SE is running.
- Delete unwanted drivers.
- Delete unwanted translation DLL's

### **Tools on the Server**

The following server tools are available to allow monitoring of the ODBCLink/SE listener process:

- HP GlancePlus/UX Program
- HP-UX Process Status (ps) Command
- Monitoring ALLBASE/SQL Activity with SQLMON



- ODBCUTSE for testing/troubleshooting the host connection or table access
- The parameter to have error messages logged to the ODBCLOG files, "Trace SQL calls on the server."

### **Tools on the Client**

The tools on the client that you can use to monitor or troubleshoot the ODBCLink/SE client process:

- The configuration parameter, "Trace ODBC calls on the client" is used to log information to the ODBCLink.LOG file.
- The application, Dr. DeeBeeSpy, is used to trace calls to the ODBC driver. Dr. DeeBeeSpy is shipped with ODBCLink/SE.

### **ODBCLink**

ODBCLink/SE is a "Special Edition" of M.B. Foster Associates Limited ODBCLink option of DataExpress. ODBCLink, the full product, offers the following features in addition to the features of ODBCLink/SE:

- Support for serial and/or modem connections
- Read/Write access to CISAM files
- Read/Write access to byte stream files
- Support for PowerHouse dictionaries including PDL and PowerHouse subfiles
- Access to Oracle databases
- Access to Multiple DBEnvironments
- Access to procedures in a proclib, via remote procedure call
- Enhanced security via field level access controls

You may obtain an upgrade from ODBCLink/SE to the full product ODBCLink by contacting M.B. Foster Associates at 1-800-ANSWERS, (800-267-9377) or 613-448-2333, or by visiting the M.B. Foster website at [www.mbfoster.com](http://www.mbfoster.com).

### **Documentation**

For further information on ODBCLink/SE, refer to the *ODBCLink/SE Reference Manual* (36217-90406).

What's in This Version?  
ODBCLink/SE

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# **Compatibility and Installation Requirements**

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## **Software Requirements**

ALLBASE/SQL is bundled with HP-UX systems and requires Software Distributor(SD) as a prerequisite for the Software to be installed.

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## **Hardware Requirements**

ALLBASE/SQL is supported on HP 9000 Series 700 and 800 computer systems.

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## **Operating System Platform Requirements**

ALLBASE/SQL is supported on HP 9000 Series 700 and 800 computer systems running on the HP-UX based operating system.  
ALLBASE/SQL is also supported on HP 3000 computer systems running MPE/iX.

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## **Disk Space Requirements**

To install and operate ALLBASE/SQL, you need at least 4 megabytes of memory and 10 megabytes of swap space for a single-user DBEnvironment. Allow 3.5 megabytes of swap space for each additional concurrent ALLBASE/SQL user in a multiuser DBEnvironment.

- /opt Directory Space

The following is an estimate of the amount of disk space required in /opt to install each fileset in the ALLBASE/SQL product (figures are approximate):

**Table 3-1 Disk Space Required by ALLBASE/SQL FileSets**

| Fileset     | Name        | 700/800 Space |
|-------------|-------------|---------------|
| RunTime     | AB-RUN      | 25.2 Mbytes   |
| Development | AB-DEV      | 8.0 Mbytes    |
| AB-NET      | AB-NET      | 0.75 Mbytes   |
| AB-SAMPLEDB | AB-SAMPLEDB | 1.2 Mbytes    |

About two thirds of the total is in /opt/allbase/bin and one third is in /opt/allbase/lib.

- Local Directory Space

The following space is required in a local directory (\$local) to create a copy of the sample DBEnvironment PartsDBE and to preprocess, compile, and link the sample programs:

**Table 3-2 Disk Space Required for Copies of Sample DBEnvironment**

| Pathname               | 700/800 Space |
|------------------------|---------------|
| \$local/hpsql/sampledb | 2.6 Mbytes    |
| \$local/hpsql/programs | 15 Mbytes     |

### Files in the ALLBASE/SQL Filesets:

**Table 3-3 AB-RUN Fileset**

| MODE | OWNER | GROUP | FILENAME                  | DESCRIPTION             |
|------|-------|-------|---------------------------|-------------------------|
| 4555 | hpdb  | bin   | /opt/allbase/bin/dumpshm  | support tool            |
| 555  | bin   | bin   | /opt/allbase/bin/isql     | ISQL program file       |
| 4555 | hpdb  | bin   | /opt/allbase/bin/sqlgen   | SQLGEN program file     |
| 4555 | hpdb  | bin   | /opt/allbase/bin/sqlmig   | SQLMigrate program file |
| 4555 | hpdb  | bin   | /opt/allbase/bin/sqlutil  | SQLUtil program file    |
| 555  | bin   | bin   | /opt/allbase/bin/sqlver   | SQLVER program file     |
| 4555 | hpdb  | bin   | /opt/allbase/bin/sqlmon   | SQLMON program file     |
| 4555 | hpdb  | bin   | /opt/allbase/bin/sqlcheck | SQLCheck program file   |
| 555  | bin   | bin   | /opt/allbase/bin/sqlaudit | SQLAudit program file   |

| <b>MODE</b> | <b>OWNER</b> | <b>GROUP</b> | <b>FILENAME</b>                   | <b>DESCRIPTION</b>                               |
|-------------|--------------|--------------|-----------------------------------|--|
| 444         | bin          | bin          | /opt/allbase/bin/odbcse/odbccl16  | Self-extracting file, all 16-bit client software |
| 444         | bin          | bin          | /opt/allbase/bin/odbcse/odbccl32  | Self-extracting file, all 32-bit client software |
| 6544        | bin          | bin          | /opt/allbase/bin/odbcse/odbcnlse  | The listener program                             |
| 4455        | bin          | bin          | /opt/allbase/bin/odbcse/odbcutse  | Utility for support purposes                     |
| 444         | bin          | bin          | /opt/allbase/lib/hpsqlcat         | message catalog file                             |
| 4555        | hpdb         | bin          | /opt/allbase/lbin/hpsqlproc       | ALLBASE/SQL program file                         |
| 444         | bin          | bin          | /opt/allbase/lib/isqlwel          | welcome message banner                           |
| 444         | bin          | bin          | /opt/allbase/lib/libsql.a         | ALLBASE/SQL library file                         |
| 444         | bin          | bin          | /opt/allbase/lib/nls/C/sqlver.cat | sqlver message catalog file                      |
| 444         | bin          | bin          | /opt/allbase/lib/nls/C/hpsqlcat   | message catalog file                             |
| 444         | bin          | bin          | /opt/allbase/lib/nls/C/isqlwel    | welcome message banner                           |
| 4555        | hpdb         | bin          | /opt/allbase/lbin/sqldaemon       | process cleanup daemon                           |

**Table 3-4 AB-DEV Fileset**

| <b>MODE</b> | <b>OWNER</b> | <b>GROUP</b> | <b>FILENAME</b>                  | <b>DESCRIPTION</b>                       |
|-------------|--------------|--------------|----------------------------------|--|
| 555         | bin          | bin          | /opt/allbase/bin/psqlc           | C preprocessor program file              |
| 555         | bin          | bin          | /opt/allbase/bin/psqlcbl         | COBOL preprocessor program file          |
| 555         | bin          | bin          | /opt/allbase/bin/psqlfor         | FORTRAN preprocessor program file        |
| 555         | bin          | bin          | /opt/allbase/bin/psqlpas         | Pascal preprocessor program file         |
| 444         | bin          | bin          | /opt/allbase/include/sqlcall.c   | COBOL preprocessor interface source file |
| 444         | bin          | bin          | /opt/allbase/include/sqlcall.cbl | COBOL preprocessor system file           |
| 444         | bin          | bin          | /opt/allbase/include/sqlcall.h   | COBOL preprocessor interface header file |

**Table 3-5 AB-NET Fileset**

| MODE | OWNER | GROUP | FILENAME                  | DESCRIPTION                      |
|------|-------|-------|---------------------------|----------------------------------|
| 4544 | root  | bin   | /opt/allbase/bin/hpdaARPA | listener daemon for ARPA         |
| 444  | bin   | bin   | /opt/allbase/lib/hpsqlcat | message catalog file             |
| 555  | bin   | bin   | /opt/allbase/bin/isql     | ISQL program file                |
| 444  | bin   | bin   | /opt/allbase/lib/isqlwel  | welcome message banner           |
| 444  | bin   | bin   | /opt/allbase/lib/libsql.a | ALLBASE/SQL library file         |
| 555  | bin   | bin   | /opt/allbase/bin/netutil  | ALLBASE/NET utility program file |
| 444  | bin   | bin   | /usr/lib/nls/C/hpsqlcat   | message catalog file             |
| 444  | bin   | bin   | /usr/lib/nls/C/isqlwel    | welcome message banner           |

**Table 3-6 AB-SAMPLEDB Fileset**

| MODE                                       | OWNER | GROUP | FILENAME                | DESCRIPTION       |
|--|-------|-------|-------------------------|-------------------|
| 444  | bin   | bin   | /opt/allbase/lib/readme | text file         |
| Files installed in /opt/allbase/lib/hpsql/ |       |       |                         |                   |
| 444  | bin   | bin   | readme                  | text file         |
| 555  | bin   | bin   | setup                   | executable script |
| 555  | bin   | bin   | sqlsetup                | executable script |
| 444  | bin   | bin   | sampledb/Album          | data file         |
| 444  | bin   | bin   | sampledb/CREAINDX       | command file      |
| 444  | bin   | bin   | sampledb/CREASEC        | command file      |
| 444  | bin   | bin   | sampledb/CREATABS       | command file      |
| 444  | bin   | bin   | sampledb/Clubs          | data file         |
| 444  | bin   | bin   | sampledb/Events         | data file         |
| 444  | bin   | bin   | sampledb/Inventor       | data file         |
| 444  | bin   | bin   | sampledb/LOADTABS       | command file      |
| 444  | bin   | bin   | sampledb/Members        | data file         |
| 444  | bin   | bin   | sampledb/OrderIte       | data file         |
| 444  | bin   | bin   | sampledb/Orders         | data file         |
| 444  | bin   | bin   | sampledb/Parts          | data file         |

| <b>MODE</b> | <b>OWNER</b> | <b>GROUP</b> | <b>FILENAME</b>   | <b>DESCRIPTION</b>      |
|-------------|--------------|--------------|-------------------|-------------------------|
| 444         | bin          | bin          | sampledb/Report1  | data file               |
| 444         | bin          | bin          | sampledb/STARTDBE | command file            |
| 444         | bin          | bin          | sampledb/SupplyBa | data file               |
| 444         | bin          | bin          | sampledb/SupplyPr | data file               |
| 444         | bin          | bin          | sampledb/TestData | data file               |
| 444         | bin          | bin          | sampledb/Title    | data file               |
| 444         | bin          | bin          | sampledb/Vendors  | data file               |
|             |              |              |                   |                         |
| 444         | bin          | bin          | sampledb/creajob  | creation script         |
| 444         | bin          | bin          | sampledb/gengen   | command file            |
|             |              |              |                   |                         |
| 444         | bin          | bin          | programs/TMPLC1   | Up and Running template |
| 444         | bin          | bin          | programs/TMPLC2   | Up and Running template |
| 444         | bin          | bin          | programs/TMPLC3   | Up and Running template |
| 444         | bin          | bin          | programs/TMPLCA   | Up and Running template |
| 444         | bin          | bin          | programs/TMPLCB   | Up and Running template |
|             |              |              |                   |                         |
| 444         | bin          | bin          | programs/cex10a   | C program               |
| 444         | bin          | bin          | programs/cex10b   | C program               |
| 444         | bin          | bin          | programs/cex12    | C program               |
| 444         | bin          | bin          | programs/cex2     | C program               |
| 444         | bin          | bin          | programs/cex5     | C program               |
| 444         | bin          | bin          | programs/cex7     | C program               |
| 444         | bin          | bin          | programs/cex8     | C program               |
| 444         | bin          | bin          | programs/cex8a    | C program               |
| 444         | bin          | bin          | programs/cex9     | C program               |
|             |              |              |                   |                         |
| 444         | bin          | bin          | programs/cobex10a | COBOL program           |
| 444         | bin          | bin          | programs/cobex10b | COBOL program           |
| 444         | bin          | bin          | programs/cobex12  | COBOL program           |

Compatibility and Installation Requirements  
 Disk Space Requirements

| <b>MODE</b> | <b>OWNER</b> | <b>GROUP</b> | <b>FILENAME</b>   | <b>DESCRIPTION</b> |
|-------------|--------------|--------------|-------------------|--------------------|
| 444         | bin          | bin          | programs/cobex2   | COBOL program      |
| 444         | bin          | bin          | programs/cobex5   | COBOL program      |
| 444         | bin          | bin          | programs/cobex7   | COBOL program      |
| 444         | bin          | bin          | programs/cobex8   | COBOL program      |
| 444         | bin          | bin          | programs/cobex8a  | COBOL program      |
| 444         | bin          | bin          | programs/cobex9   | COBOL program      |
|             |              |              |                   |                    |
| 444         | bin          | bin          | programs/forex12  | FORTRAN program    |
| 444         | bin          | bin          | programs/forex2   | FORTRAN program    |
| 444         | bin          | bin          | programs/forex5   | FORTRAN program    |
| 444         | bin          | bin          | programs/forex7   | FORTRAN program    |
| 444         | bin          | bin          | programs/forex8   | FORTRAN program    |
| 444         | bin          | bin          | programs/forex8a  | FORTRAN program    |
| 444         | bin          | bin          | programs/forex9a  | FORTRAN program    |
| 444         | bin          | bin          | programs/forex9b  | FORTRAN program    |
|             |              |              |                   |                    |
| 444         | bin          | bin          | programs/pasex10a | Pascal program     |
| 444         | bin          | bin          | programs/pasex10b | Pascal program     |
| 444         | bin          | bin          | programs/pasex12  | Pascal program     |
| 444         | bin          | bin          | programs/pasex2   | Pascal program     |
| 444         | bin          | bin          | programs/pasex5   | Pascal program     |
| 444         | bin          | bin          | programs/pasex7   | Pascal program     |
| 444         | bin          | bin          | programs/pasex7l  | Pascal program     |
| 444         | bin          | bin          | programs/pasex8   | Pascal program     |
| 444         | bin          | bin          | programs/pasex8a  | Pascal program     |
| 444         | bin          | bin          | programs/pasex9   | Pascal program     |



## System Configuration

This section discusses the system configurable parameters which directly affect the execution of ALLBASE/SQL. These parameters are part of the system configuration and can be modified using SAM. Please refer to the *System Administration Tasks HP 9000* for more information. You may need to increase parameter values to meet your needs.

The system parameters namely semmni, semmns, shmmni and shmseg and their uses by ALLBASE/SQL are explained in the following table:

Table 3-7

Table 7. System Parameters Used By ALLBASE/SQL

| Parameter | 700/800 Default  | Purpose   |
|-----------|------------------|---|
| maxuprc   | 50               | Specifies the maximum number of processes that a user may have. When an application connects to a DBEnvironment, a process is spawned. In addition, each active DBEnvironment has one database daemon process running.  |
| semmni    | 64               | Specifies the number of sets (identifiers) of semaphores available to the users. The semmni should be set to:<br><br>$\text{semmni} = \text{NDBE} + (2 * \text{NCON})$ where: NDBE = number of distinct DBEnvironments<br>NCON = number of DBEnvironment connections<br>(maximum of 32 per user application)<br><br>See the <i>System Administration Tasks HP 9000</i> for the interactions of the semmni parameter with other system parameters. |
| semmap    | formula at right | Specifies the maximum number of semaphore maps. The system default is:<br><br>$\text{semmap} = ((\text{semmni} + 1) / 2 + 2)$ where: semmni = number of semaphore identifiers<br><br><b>Note: If semmap is set too low, the following message will appear on the console:</b><br><br>danger: mfree map overflow   |
| semmns    | 64               | Specifies the maximum number of semaphores. To determine the maximum number of semaphores allowed, use the following formula:<br><br>$\text{semmns} = (2 * \text{NDBE}) + (3 * \text{NCON})$ where: NDBE = number of distinct DBEnvironments<br>NCON = number of DBEnvironment connections<br>(maximum of 32 per user application)  |

| Parameter | 700/800 Default | Purpose  |
|-----------|-----------------|--|
| shmseg    | 12              | Specifies the maximum number of shared memory segments to which one process can simultaneously attach. An ALLBASE/SQL user application will be attached one shared memory segment for every connection to a DBEnvironment. The maximum number of DBEnvironment connections for a user application is 32. This shared memory segment allows communication between the user application and the ALLBASE/SQL DBCore process.  |
| shmmni    | 100             | <p>Specifies the maximum number of shared memory segments that can be allocated by the system. To determine how many shared memory segments you will need, use the following formula:</p> $\text{shmmni} = \text{NDBE} + \text{NCON}$ <p>where: NDBE = number of distinct DBEnvironments<br/>         NCON = number of DBEnvironment connections<br/>         (maximum of 32 per user application)</p>   |
| shmmax    | 64 Mbytes       | Specifies in hexadecimal the maximum number of bytes in a shared memory segment. (Decimal values are given in parentheses). The total size of the shared memory segment specified by the parameters of the SQL <code>START DBE</code> command or the SQLUtil <code>ALTDBE</code> command cannot exceed this maximum. For ALLBASE/SQL, the shared memory used by a particular DBEnvironment comprises the Number of Runtime Control Block Pages, the Number of Log Buffer Pages, the Number of Data Buffer Pages, and the Number of Transaction Block Buffer Pages. |

There are several other system parameters which are not directly affected by the execution of ALLBASE/SQL, but may be indirectly affected by an ALLBASE/SQL user's application. Refer to the *System Administration Tasks HP 9000* for information on memory allocation and system reconfiguration. Refer also to "Estimating Shared Memory Requirements" in the "Physical Design" chapter of the *ALLBASE/SQL Database Administration Guide* for further information on system parameters.

## Installation Procedures

ALLBASE/SQL is auto-installable. However, if you are updating from an earlier release of ALLBASE/SQL, you must perform the ALLBASE/SQL migration to migrate your DBEnvironments to the G2 format. The method used depends upon the version of ALLBASE/SQL you are currently running. The version options are:

- Updating from G0 or G1 using SQLINSTL
- Updating from E0, E1, or F0 using SQLMigrate
- Updating from versions prior to E0—contact your Hewlett-Packard Response Center for procedures if updating from these old versions.

## Backing Up your DBEnvironment and Software

Unless this is a new installation, create a backup of each DBEnvironment and the ALLBASE/SQL software prior to updating the operating system and ALLBASE/SQL software.

Do the following for each DBEnvironment that will be migrated:

1. Start ISQL and issue a `START DBE` statement. This ensures that the DBEnvironment is logically consistent. Type the following:

```
isql
isql=> START DBE 'DBEnvironmentName'

isql=> exit
```

2. Start SQLUtil and issue the `STORE` command to backup each DBEnvironment. Type the following:

```
sqlutil
>>store
WARNING:  If you are using STORE to support RollForward
          .
          .
          .
Do you wish to proceed (y/n)?: y
DBEnvironment Name: DBEnvironmentName
Maintenance Word: MaintenanceWord
To File Name: TAPE
```

---

### NOTE

Log files are not stored using this command.

See the *ALLBASE/SQL Database Administration Guide* appendix, “SQLUtil,” for more information.

3. Backup the ALLBASE/SQL software. Refer to the *Release Notes* for your current release of ALLBASE/SQL for a complete listing of files.
4. If you are updating the operating system, make sure you have a backup of the operating system. Refer to the *System Administration Tasks HP 9000* for information on how to do a system backup.

## Installing the Software

1. Install the appropriate version of the HP-UX operating system. Refer to the documentation on *Installing and Updating HP-UX* for information. If you are not installing a new operating system, omit this step.
2. Install the G2 version of the ALLBASE/SQL software. Refer to “HP-UX SWINSTALL Utility” later in these *Release Notes*.
3. If you are updating from an earlier version, proceed to the appropriate section for your older version.

## Updating from Versions G0 or G1 Using SQLINSTL

If your release of ALLBASE/SQL is G0 or G1, execute the SQLINSTL script to migrate to the current version G2. ALLBASE/SQL has added new views and modified some existing views. The SQLINSTL script is provided to make it easy for a database administrator to migrate between versions of a release (such as G1.14 to G1.15) or minor releases (such as G1 to G2). Using SQLINSTL ensures that you have access to the most recent version of the SYSTEM and CATALOG views, and it also uses `VALIDATE FORCE` statements to revalidate all stored sections.

If SQLINSTL is not executed on a DBEnvironment after installing a new version of ALLBASE/SQL, stored sections may not be properly revalidated causing run-time errors. Revalidating stored sections at run-time during production hours can also cause concurrency problems due to exclusive locks placed on the system catalog. You must execute SQLINSTL whenever a new version of ALLBASE/SQL is installed unless you need to use SQLMigrate. SQLINSTL does not need to be executed if SQLMigrate is being executed to migrate between major releases.

Example using SQLINSTL:

```
HP-UX /usr/bin/isql
isql=> start /usr/lib/allbase/hpsql/sqlinstl (mydbe);
isql=> exit;
```

Read the SQLINSTL file on your system for more information.

If you are using `ARCHIVE MODE LOGGING`, you must make a backup of the DBEnvironment after using SQLINSTL. This backup must be used if rollforward recovery is to be performed at some point in the future.

---

**NOTE**

---

Customers installing G2 cannot apply rollforward recovery to a backup created using the G0 version (or earlier) of ALLBASE/SQL.

## Updating from Versions E0, E1, or F0 Using SQLMigrate

If your old release of ALLBASE/SQL is E0, E1, or F0, use SQLMigrate to migrate to version G2. A backup of the DBE should be done prior to running SQLMigrate. The procedures below also appear in the *ALLBASE/SQL Database Administration Guide (36217-90005)*.

Use the following procedure to convert a DBEnvironment from E0, E1, or F0 format to the G2 format:

1. Enter the command:

```
:sqlmig
```

2. For each DBE that is to be migrated, check for potential errors during the migration by using the **PREVIEW** command, which follows:

```
SQLMIGRATE=> PREVIEW 'DBEnvironmentName' FORWARD;
```

---

**NOTE**

---

Make sure that you have a backup of the DBEnvironment prior to issuing the **PREVIEW** command since **PREVIEW** is not a read-only command.

During the **PREVIEW** check, you may receive messages stating that there is not enough space in the **SYSTEM DBEFileSet**. If this occurs, use the following commands to create a new **DBEFile** and add it to the **SYSTEM DBEFileSet**:

```
SQLMIGRATE=> CREATE DBEFILE DBEFileName  
WITH PAGES = DBEFileSize, NAME = 'SystemFileName' ;
```

```
SQLMIGRATE=> ADD DBEFILE DBEFileName TO DBEFILESET SYSTEM;
```

The syntax of these commands is the same as in ISQL.

Repeat this step until no errors are encountered and SQLMigrate returns the following message:

```
The proposed migration should be successful
```

3. Issue the **MIGRATE** command as follows:

```
MIGRATE=> MIGRATE 'DBEnvironmentName' FORWARD;
```

When the forward migration has successfully completed, SQLMigrate purges the old log files and performs a **START DBE NEWLOG** to create a new log file using the parameters stored in the **DBECON** file. This is shown in the following example.

```
START DBE NEWLOG BEGINNING (TUE, JUL 09, 1996, 4:12 PM)
```

```
START DBE 'DBENAME' NEWLOG  
BUFFER = (100,24),  
TRANSACTION = 50,  
MAXIMUM TIMEOUT = 3600 SECONDS,  
DEFAULT TIMEOUT = 30 SECONDS,  
RUN BLOCK = 37
```

```
LOG DBEFILE log1 WITH PAGES = 250,
```

```
NAME = 'DBELog1';
```

```
START DBE NEWLOG SUCCEEDED (TUE, JUL 19, 1996, 4:13 PM)
```

4. If the `START DBE NEWLOG` (issued by `SQLMigrate`) should fail for any reason, you must run `ISQL` and issue the `START DBE NEWLOG` command from `ISQL`.

5. To enable archive-mode logging, run `SQLUtil` and issue the `STOREONLINE` command.

6. Exit `SQLMigrate`:

```
SQLMIGRATE=> EXIT;
```

7. Make a backup of the migrated `DBEnvironment` immediately after the `START DBE NEWLOG` statement completes. `SQLUtil STOREONLINE` should be used for switching on archive logging and `STORE` for keeping up non-archive logging.

8. Start `SQLUtil` (if you are not already in `SQLUtil` from the previous step) and issue the `SHOWDBE` command to check the parameters of the new version of the `DBEnvironment`. Use the `ALTDBE` command if changes are necessary. Use the `SHOWLOG` command to display current log information.

9. Exit `SQLUtil`. The `DBEnvironment` should be ready for access.

## Installation Information and Recommendations

Before upgrading or installing ALLBASE/SQL, ensure that your system meets the requirements described in this section:

- HP-UX Version
- ALLBASE/SQL Configuration
- The User `hpdb`
- The ALLBASE/SQL Filesets
- RunTime ALLBASE/SQL Considerations
- HP-UX SWINSTALL Utility
- Using SQLVER

### HP-UX Version

These release notes are specifically for ALLBASE/SQL Release G2 on HP-UX release 11.0. Please make sure that your version of ALLBASE/SQL is appropriate for your version of HP-UX. If not, you must install the appropriate version of HP-UX on your system in addition to ALLBASE/SQL Release G2.

### ALLBASE/SQL Configuration

When running ALLBASE/SQL with a large number of users, increase the configurable parameters accordingly. You can do this when you first create the DBEnvironment or by using SQLUtil. Refer to the “Maintenance” chapter in the *ALLBASE/SQL Database Administration Guide* for more information setting ALLBASE/SQL parameters. See the *ALLBASE/SQL Performance and Monitoring Guidelines* for more information about choosing the optimal values for configurable parameters.

### The User `hpdb`

Before creating or connecting to an ALLBASE/SQL DBEnvironment, make sure there is a special user named `hpdb` with a user id number of 27 and a group id number of 2 on your system. If necessary, add the following line to the `/etc/passwd` file before invoking the HP-UX SWINSTALL utility to install the ALLBASE/SQL product:

```
hpdb:*:27:2: hpdb ALLBASE/SQL:/usr:/sbin/sh
```

In addition, add user `hpdb` to the group `bin` in the `/etc/group` file, as in the following example:

```
bin::2:root,rootc,bin,daemon,lp,hpdb
```

The user id number 27 is reserved for the user name *hpdb*, which is required to execute the ALLBASE/SQL program files. It is not required that the *hpdb* user belong to the group *bin*; however, all of the ALLBASE/SQL files are associated with *bin*. If the user id number 27 does not exist on your system, or if a user other than *hpdb* is assigned to this user id number, the security and integrity of your DBEnvironments cannot be guaranteed.

The ALLBASE/SQL program files are owned by the user *hpdb*. Several of the ALLBASE/SQL program files have set the file mode to 4555 which causes the “switch user id bit” to be turned on. Any users executing these ALLBASE/SQL program files have their effective user name changed to *hpdb* while these program files are executing. The user's group name remains the same as the group name the user is associated with in the file */etc/group*. All files that are created as part of the database have the file permissions of 600, are owned by *hpdb*, and have the file creator's group association. For example, if user *peter*, who is a member of group *dbsupport*, creates a DBEnvironment named *PartsDBE*, the HP-UX file permissions and ownership for the DBECon file (DBEnvironment configuration file) will appear as follows:

```
-rw- 1 hpdb      dbsupport  12288 Apr 15 17:00 PartsDBE
```

## The ALLBASE/SQL Filesets

The number of filesets on your installation tape depends on which bundle of ALLBASE/SQL you have purchased.

ALLBASE/SQL Development bundle has the following filesets:

- ALLBASE-SQL.Development.AB-DEV
- ALLBASE-SQL.Development.AB-NET
- ALLBASE-SQL.Development.AB-RUN
- ALLBASE-SQL.Development.AB-SAMPLEDB

ALLBASE/SQL Runtime bundle has the following filesets:

- ALLBASE-SQL.Runtime.AB-NET,
- ALLBASE-SQL.Runtime.AB-RUN, and
- ALLBASE-SQL.Runtime.AB-SAMPLEDB

ALLBASE/SQL Replicate bundle has this fileset:

- ALLBASE-SQL.Replicate.AB-REPLICATE

You do not need to load the SAMPLEDB fileset. SAMPLEDB is provided as an educational example and is not required for either the runtime or development version of ALLBASE.



## Runtime ALLBASE/SQL Considerations

With Release G2, you have the option of installing a runtime version of ALLBASE/SQL. If you are installing only the runtime system, *and* if you have previously installed a complete earlier version of ALLBASE/SQL on your system, you should remove pre-Release G2 ALLBASE/SQL files from your system to ensure that all database files are consistent. Before removing the ALLBASE/SQL pre-Release G2 files, you may want to make a backup copy of them. If the database files are in their original directories, you may have to remove all previously installed ALLBASE/SQL files.

For example, assume that your system currently has ALLBASE/SQL F0.00. Installing the runtime version of ALLBASE/SQL G2 would result in an F0.00 version of the ALLBASE/SQL preprocessors coexisting with a Release G2 version of the runtime system. In this case the preprocessors will not work correctly.

After removing the old files, install your new ALLBASE/SQL package as shown in the section “HP-UX SWINSTALL Utility.”

## Client-Only Configuration

The AB-NET fileset contains ALLBASE/NET, which is required for remote database access. If you desire a runtime client-only configuration, this is the only fileset you need to install.

## Terminating a Database Process

The *kill -9* command, commonly used by a superuser to abort a process, may cause an undetected deadlock condition to occur or other processes connected to the same DBEnvironment to terminate or hang if it is used to abort a database process in a multiuser environment. You should never use the *kill -9* command to abort an ALLBASE/SQL database process in a multi-user environment. Instead, use the **TERMINATE USER** command in ISQL to terminate a specific SessionID or all sessions for a DBEUserID. Refer to the *ALLBASE/ISQL Reference Manual* for further details.

## Remote Database Access

Use ALLBASE/NET to establish remote access to ALLBASE/SQL DBEnvironments.

## HP-UX SWINSTALL Utility

The `swinstall` utility is used by system administrator to add optional software to the system and to update the entire system when necessary. For detailed instructions on the use of `swinstall`, refer to the appropriate HP-UX Installation manual for your series.

The `swinstall` command installs the software-selections from a software source (tape) to the local host (root filesystem). The software is configured for use on the target after it is installed.

There are three main steps in the installation process namely:

- **Selection phase**
- **Analysis phase**
- **Install phase**

Type `swinstall` at the command line.

You will be first asked to specify the target or destination of the software. Then you will be asked for the source from where the software will be installed. Fill up the details for Source Host Name and the Source Depot Path from where the software has to be installed. Press OK. You will get the message saying “Reading the Software source.” The Software Selection Window then displays the Software bundle that is available with the tape.

### **Selection Phase**

ALLBASE/SQL is available on both S800 and S700 platforms and is bundled as follows:

- B5419AA\_APX ALLBASE/SQL Runtime Environment (S800)
- B5421AA\_APX ALLBASE/SQL Development Environment (S800)
- B5425AA\_APX ALLBASE/SQL Replicate Environment (S800)
- B5415AA\_APX ALLBASE/SQL Runtime Environment (S700)
- B5417AA\_APX ALLBASE/SQL Development Environment (S700)
- B5423AA\_APX ALLBASE/SQL Replicate Environment (S700)
- B5419AA\_APZ ALLBASE/SQL Runtime Environment (S800)
- B5415AA\_APZ ALLBASE/SQL Runtime Environment (S700)
- B5421AA\_APZ ALLBASE/SQL Development Environment (S800)
- B5417AA\_APZ ALLBASE/SQL Development Environment (S700)
- B5425AA\_APZ ALLBASE/SQL Replicate Environment (S800)
- B5423AA\_APZ ALLBASE/SQL Replicate Environment (S700)

---

**NOTE**

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Your product tape will only contain the bundles that you have ordered.

Select the software bundle that you need to install.

1. Select and highlight the names of software bundles to install by pointing and clicking the left mouse button.

2. Mark the highlighted bundles or products by selecting the Mark For Install item from the Actions menu. You will get the message marked Yes under Marked column of the Software Selection Screen.

### **Analysis Phase**

The **Analysis Phase** lets you determine if the software can be successfully installed on the system BEFORE it is actually installed. A series of checks are performed on the process and the results are displayed in the window or written to a log file.

1. Open up the Actions pop-up menu of the Software Selection screen.
2. Select the option `Install(Analysis)`. There will be a new pop-up window Install Analysis, when the analysis phase is being carried out.

Once the Analysis Phase is successful, the confirmation window for Installation appears and waits for you to type Yes or No to continue the Installation Process.

3. Select Yes for installation.

The Install Window screen appears.

### **Install Phase**

The **Install Phase** is when the actual installation takes place. The Install window allows you to monitor the progress of the operation as the software is loaded and configured.

This completes the process of Installation of ALLBASE/SQL on HP-UX System. To confirm that the installation is successful and no files are missing, refer to “Using SQLVer” below.

### **Native Language Support Issues**

The default user language for ALLBASE/SQL and HP-UX Release 10.0 is C.

## Using SQLVer

SQLVer allows you to check the version strings of the ALLBASE/SQL files. To verify that the correct files have been installed and that no files are missing, run SQLVer, as shown in this example:

```
% sqlver
```

```
-----  
Checking AB-RUN(Runtime).  
AB-RUN: No missing files.
```

```
-----  
Checking AB-DEV (Development).  
AB-DEV: No missing files.
```

```
-----  
Checking AB-NET (Net).  
AB-NET: No missing files.
```

```
-----  
                                *****  
                                This Pass => A.G2.00  
                                *****  
0 missing files.  
-----
```

## G1 and G2 New Features

The following table highlights the new or changed functionality added in G1 and G2 releases, and shows you where each feature is documented.

**Table 4-1**      **New Features in ALLBASE/SQL Releases G1 and G2**

| Feature (Category)                                   | Description   | Documented in ...   |
|--|---|---|
| New operand to concatenate strings (Standards)       | Adds an operand to concatenate character or binary strings in an expression. New operand:   | <i>ALLBASE/SQL Reference Manual</i> , "Expressions."                                      |
| RENAME Column or Table (Usability)                   | Adds capability of defining a new name for an existing table or column in a DBEnvironment. You cannot rename a table or column that has check constraints or an IMAGE/SQL table. New commands: RENAME COLUMN, RENAME TABLE.   | <i>ALLBASE/SQL Reference Manual</i> , RENAME COLUMN and RENAME TABLE in "SQL Statements." |
| CAST function added to Expression syntax (Usability) | Adds the CAST function to allow explicitly converting from one data type to another. It allows conversion between compatible data types and between normally incompatible data types such as CHAR and INTEGER. New Expression function: <i>CastFunction</i> .   | <i>ALLBASE/SQL Reference Manual</i> , "Cast" in "Expressions."                            |
| Syntax added to VALIDATE (Usability, Performance)    | Automates execution of COMMIT WORK after each module or procedures is validated when WITH AUTOCOMMIT is used. All sections are revalidated whether valid or invalid when FORCE is used. This can reduce log space and shared memory requirements for the VALIDATE statement. New syntax for VALIDATE: FORCE, WITH AUTOCOMMIT. | <i>ALLBASE/SQL Reference Manual</i> , VALIDATE in "SQL Statements."                       |

What's New in this Release  
G1 and G2 New Features

| <b>Feature (Category)</b>   | <b>Description</b>   | <b>Documented in ...</b>   |
|---|--|--|
| Syntax added to DELETE (Usability, Performance)   | Automates execution of COMMIT WORK at the beginning of the DELETE and after each batch of rows is deleted when WITH AUTOCOMMIT is used. Reduces log-space and shared-memory requirements. WITH AUTOCOMMIT cannot be used in some cases (see the DELETE statement). New syntax for DELETE: WITH AUTOCOMMIT. | <i>ALLBASE/SQL Reference Manual</i> , DELETE in “SQL Statements.”  |
| Decimal operations (Usability)  | Increases maximum precision from 18 to 27.   | <i>ALLBASE/SQL Reference Manual</i> , “Decimal Operations” in “Data Types.”                                    |
| Terminate a query (Usability, Performance)  | Allows termination of a query for a connection or transaction. New statement: TERMINATE QUERY. New syntax for SET SESSION, SET TRANSACTION.  | <i>ALLBASE/SQL Reference Manual</i> , TERMINATE QUERY, SET SESSION, SET TRANSACTION in “SQL Statements.”       |
| Terminate a transaction (Usability, Performance)  | Allows stopping of a given transaction. New statement: TERMINATE TRANSACTION. New syntax for SET SESSION, SET TRANSACTION.   | <i>ALLBASE/SQL Reference Manual</i> , TERMINATE TRANSACTION, SET SESSION, SET TRANSACTION in “SQL Statements.” |
| Timeout enhanced to allow specifying what is rolled back or terminated (Usability, Performance) | Allows specifying the action when a timeout expires. New attributes for SET SESSION and SET TRANSACTION: TERMINATION AT LEVEL, USER TIMEOUT, ON TIMEOUT ROLLBACK.  | <i>ALLBASE/SQL Reference Manual</i> , in “SQL Statements.”   |
| New SQLUtil command CHKPTHLP reduces time for flushing data (Performance)                       | Flushes the data in parallel to the CHECKPOINT command in ISQL. New SQLUtil command: CHKPTHLP.   | <i>ALLBASE/SQL Database Administration Guide</i> , CHKPTHLP in “SQLUtil”                                       |
| Allow or disallow SQLMON for users. (Usability)   | Grants or revokes the ability to run SQLMON for specific users. New attribute for GRANT and REVOKE: MONITOR.   | <i>ALLBASE/SQL Reference Manual</i> , GRANT, REVOKE in “SQL Statements.”                                       |
| Allow or disallow authority to create modules. (Usability)                                      | Grants or revokes the ability to create modules for specific users. New attributes for GRANT and REVOKE: INSTALL.  | <i>ALLBASE/SQL Reference Manual</i> , GRANT, REVOKE in “SQL Statements.”                                       |

| Feature (Category)  | Description  | Documented in ...   |
|---|--|---|
| Script for migration to a new release (Usability, Tools)        | Provides SQLLINSTL script for migration to a new release of ALLBASE/SQL. Read the SQLINSTL file on your system for more information.   | SQLINSTL file; <i>Communicator 3000 MPE/iX Release 5.5 (Non-Platform Software Release C.55.00)</i> , "ALLBASE/SQL Enhancements"; <i>ALLBASE/SQL Database Administration Guide</i> in "SQLINSTL" section of the "DBA Tasks and Tools" chapter. |
| GENPLAN on a section (Usability)                                | Obtains an access plan of a stored static query by specifying the module and section number. Changed syntax: GENPLAN.  | <i>ALLBASE/SQL Reference Manual</i> , GENPLAN in "SQL Statements."  |
| POSIX support (Tools)   | Starting with G1, the ALLBASE/SQL preprocessor (PSQLCOB) supports preprocessing and generation of Microfocus COBOL source code under POSIX (Portable Operating system Interface).              | <i>Communicator 3000 MPE/iX Release 5.5 (Non-Platform Software Release C.55.00)</i> , "ALLBASE/SQL Enhancements."   |
| Terminate a user's connections (Connectivity)                   | Terminates one or more connections for a user. New syntax for TERMINATE USER: CID <i>ConnectionID</i> .  | <i>ALLBASE/SQL Reference Manual</i> , TERMINATE USER in "SQL Statements."   |
| Run Queue Control for ALLBASE/NET (Connectivity)                | Allows running HPDADVR in D queue for an MPE/iX session or HP-UX connection or C queue for an MPE/iX job connection. New environment variable: HPSQLJOBTYPE.                                   | <i>Communicator 3000 MPE/iX Release 5.5 (Non-Platform Software Release C.55.00)</i> , "ALLBASE/SQL Enhancements."   |
| PC ODBC 16-bit and 32-bit support (Connectivity, Client/Server) | ODBCLINK/SE allows connectivity to ALLBASE and IMAGE/SQL servers from a PC running MS Windows using ODBC.  | <i>ODBCLINK/SE Reference Manual</i>   |
| Year 2000 solution (Standards)                                  | Provides the JCW HPSQLSPLITCENTURY to use in setting a value between 0 and 99. This value is used to change the century part of the DATE and DATETIME functions to override the default of 19. | "Date/Time Functions" in the "Expressions" chapter of the <i>ALLBASE/SQL Reference Manual</i> .   |

What's New in this Release  
**G1 and G2 New Features**



| <b>Title</b>  | <b>Part Number</b> |
|---|--------------------|
| <i>ALLBASE/ISQL Reference Manual</i>                      | 36217-90188        |
| <i>ALLBASE/NET User's Guide</i>                           | 36217-90093        |
| <i>ALLBASE/SQL Advanced Application Programming Guide</i> | 36217-90186        |
| <i>ALLBASE/SQL C Application Programming Guide</i>        | 36217-90014        |
| <i>ALLBASE/SQL COBOL Application Programming Guide</i>    | 36217-90058        |
| <i>ALLBASE/SQL Database Administration Guide</i>          | 36217-90005        |
| <i>ALLBASE/SQL FORTRAN Application Programming Guide</i>  | 36217-90013        |
| <i>ALLBASE/SQL Message Manual</i>                         | 36217-90009        |
| <i>ALLBASE/SQL Pascal Application Programming Guide</i>   | 36217-90007        |
| <i>ALLBASE/SQL Performance and Monitoring Guidelines</i>  | 36217-90185        |
| <i>ALLBASE/SQL Reference Manual</i>                       | 36217-90001        |
| <i>Up and Running with ALLBASE/SQL</i>                    | 36389-90011        |