

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

The ALLBASE/SQL version numbers for this release are:

- 36217-02A.G2.00 (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.

Announcements

OMNIBACK Support Dropped from SQLUtil

Features

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

- Security
- Year 2000 Compatibility

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 4.

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
```

Compatibility and Installation Requirements

Software Requirements

ALLBASE/SQL is bundled with HP-UX 10.X systems and requires Software Distributor(SD) as a prerequisite for the Software to be installed.

Hardware Requirements

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

Operating System Platform Requirements

ALLBASE/SQL is supported on HP 9000 Series 700 and 800 computer systems running on the HP-UX 10.X based operating system.

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-DEV 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

MODE	OWNER	GROUP	FILENAME	DESCRIPTION
444	bin	bin	/opt/allbase/lib/hppcapi	MS-DOS self-extracting file for PC API
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 message catalog
			/sqlver.cat	file
444	bin	bin	/opt/allbase/lib/nls/n-computer/hpsqlcat	message catalog file
444	bin	bin	/opt/allbase/lib/nls/n-computer/isqlwel	welcome message banner
4555	hpdb	bin	/opt/allbase/lbin/sqldaemon	process cleanup daemon

Table 3-4 AB-RUN Fileset

MODE	OWNER	GROUP	FILENAME	DESCRIPTION
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	FORTTRAN 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/ n-computer/hpsqlcat	message catalog file
444	bin	bin	/usr/lib/nls/ n-computer/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

MODE	OWNER	GROUP	FILENAME	DESCRIPTION
444	bin	bin	sampledb/Orders	data file
444	bin	bin	sampledb/Parts	data file
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

Compatibility and Installation Requirements
Disk Space Requirements

MODE	OWNER	GROUP	FILENAME	DESCRIPTION
444	bin	bin	programs/cobex10b	COBOL program
444	bin	bin	programs/cobex12	COBOL program
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: $\text{semmni} = \text{NDBE} + (2 * \text{NCON})$ where: NDBE = number of distinct DBEnvironments NCON = number of DBEnvironment connections (maximum of 32 per user application) 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: $\text{semmap} = ((\text{semmni} + 1) / 2 + 2)$ where: semmni = number of semaphore identifiers Note: If semmap is set too low, the following message will appear on the console: danger: mfree map overflow
semmns	64	Specifies the maximum number of semaphores. To determine the maximum number of semaphores allowed, use the following formula: $\text{semmns} = (2 * \text{NDBE}) + (3 * \text{NCON})$ where: NDBE = number of distinct DBEnvironments NCON = number of DBEnvironment connections (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	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: $\text{shmmni} = \text{NDBE} + \text{NCON}$ where: NDBE = number of distinct DBEnvironments NCON = number of DBEnvironment connections (maximum of 32 per user application)
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 START DBE command or the SQLUtil ALTDBE 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 10.30 version of the HP-UX operating system. Refer to *Installing and Updating HP-UX 10.30* 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
```

- 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
```

- 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)
```

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

ALLBASE/SQL release G2 is supported on HP-UX release 10.30. If you have a release of the HP-UX operating system prior to 10.0, you must install HP-UX 10.30 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

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.  
-----
```


Title	Part Number
<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