

HP ALLBASE/SQL and HP IMAGE/SQL

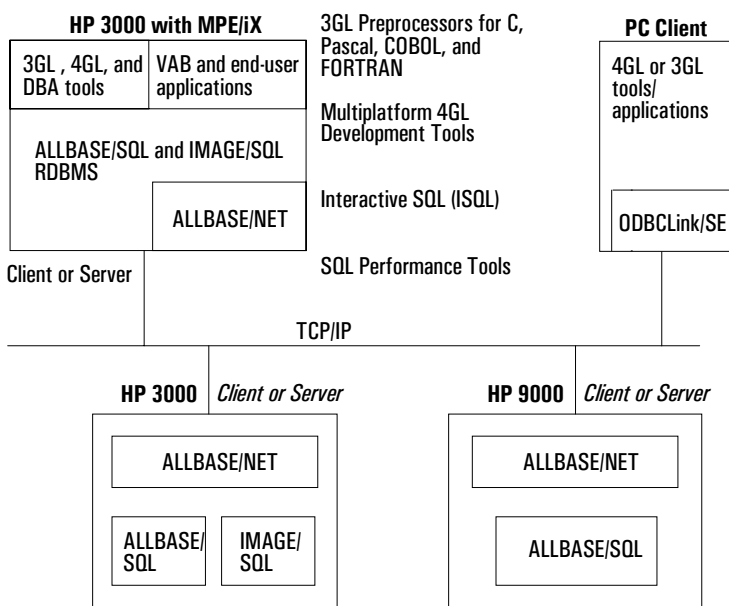
Configuration Guidelines

HP IMAGE/SQL and ALLBASE/SQL are HP's databases for the HP e3000 providing:

- Superior price/performance
- High quality
- Single vendor sale and support
- Leading third-party tools and applications
- Interoperability with third-party databases
- Preloaded bundle on HP e3000 that offers savings of 40% or greater*

* Based on competitive enterprise database applications.

Figure 9.1 Interoperability between HP e3000s and HP 9000s with HP Databases for HP ALLBASE/SQL and IMAGE/SQL



HP IMAGE/SQL

Product Description

HP IMAGE/SQL is a high-performance database management system for online transaction processing applications and batch jobs on HP e3000 A- and N-Class or Series 900 computers. In addition, it offers a full read/write SQL interface for client/server decision support, executive information systems and graphical user interface (GUI) application development.

IMAGE data can be accessed and manipulated using standard SQL protocols without data conversions. IMAGE/SQL supports a wide selection of client/server tools for decision support, executive information systems and application development.

Existing IMAGE applications can operate concurrently with applications using the SQL interface. There are no changes required to existing applications.

IMAGE/SQL includes:

- IMAGE intrinsics and database engine
- ALLBASE/SQL SQL interface
- ALLBASE/NET
- ODBCLink/SE from M.B. Foster Associates Ltd.
- IMAGE/SQL administrative utilities
- Interactive Structured Query Language (ISQL)
- SQL Preprocessors for COBOL, C, Pascal, and FORTRAN

HP ALLBASE/SQL

Product Description

ALLBASE/SQL is HP's high-performance relational database management system (RDBMS) for all MPE/iX and HP-UX systems. Key benefits include:

- Excellent OLTP performance for business-critical applications on HP servers
- Leading features such as stored procedures, rules and triggers, row-level locking, database shadowing, Microsoft Open Database Connectivity (ODBC), and built-in referential integrity
- Competitive cost-of-ownership
- Full read/write access to IMAGE/SQL databases from both the HP e3000 and HP 9000 via ALLBASE/NET.

The ALLBASE/NET client/server remote database access product is bundled with IMAGE/SQL and ALLBASE/SQL on the A- and N-Class and Series 900 and is backward-compatible for client systems running earlier versions of MPE/iX.

ALLBASE/SQL and IMAGE/SQL for MPE/iX provide 3GL preprocessors for using embedded SQL in C, Pascal, COBOL, and FORTRAN applications. They support third-party multi-platform 4GL development tools. Minimum system requirements are 4 MB RAM and 20 MB disk space.

Figure 9.2 Client-Server Architecture for IMAGE/SQL and ALLBASE/SQL Applications

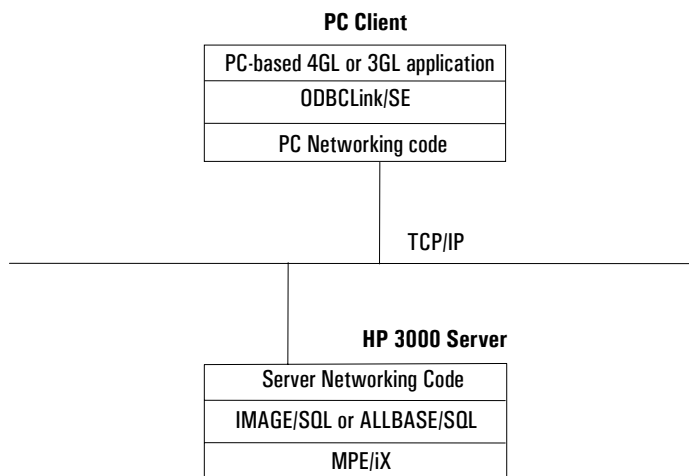


Table 9.1 Software Matrix for ALLBASE/SQL for the HP e3000 A- and N-Class or Series 900

| Description | Product/Opt Number |
|--|--------------------|
| HP ALLBASE/SQL RDBMS for A- and N-Class or Series 900 | 30368B |
| For use on A400 or A500 Servers | Opt. 310 |
| For use on N4000 220, 330 and 440 1-way and N4000 440 2-way Servers | Opt. 340 |
| For use on N4000 440 3- and 4-way, and N4000 550 3- and 4-way Servers | Opt. 360 |
| Credit for previous purchase on for use on A400 or A500 Servers when upgrading | Opt. OCD |
| Credit for previous purchase on for use on 220, 330 and 440 1-way and N4000 440 2-way Servers when upgrading | Opt. OGM |
| For use by 1–8 concurrent users | Opt. UA3 |
| For use by 1–20 users | Opt. OAF |
| For use by 1–32 users | Opt. UA7 |
| For use by 1–40 users | Opt. UCY |
| For use by 1–64 users | Opt. UA9 |
| For use by 1–100 users | Opt. UBD |
| For use by 1–128 users | Opt. UAB |
| For use by 1–160 users | Opt. UCN |
| For use by 1–256 users | Opt. UAD |
| For use by 1–384 users | Opt. UDW |
| For use by unlimited users | Opt. UAT |
| Credit for 8–user license add-on license when upgrading | Opt. UB3 |
| Credit for 20–user license add-on license when upgrading | Opt. UD8 |
| Credit for 32–user license add-on license when upgrading | Opt. UB7 |
| Credit for 40–user license add-on license when upgrading | Opt. UCZ |
| Credit for 64–user license add-on license when upgrading | Opt. UB9 |
| Credit for 100–user license add-on license when upgrading | Opt. UD9 |
| Credit for 128–user license add-on license when upgrading | Opt. UBA |
| Credit for 160–user license add-on license when upgrading | Opt. UDV |
| Credit for 256–user license add-on license when upgrading | Opt. UBV |
| Credit for 384–user license add-on license when upgrading | Opt. UDX |

ODBCLink/SE

ODBCLink/SE from M.B. Foster Associates Ltd. is a software product that provides a programmatic interface from PC-based applications to IMAGE/SQL and ALLBASE/SQL databases on an HP e3000 A- and N-Class, Series 900 server OR to ALLBASE/SQL on an HP 9000 Series 700 workstation or 800 server. It comes bundled at no extra cost. The application and development tools reside on the client Microsoft Windows environment while the DBMS is on the server. This allows application developers and end-users to exploit the graphical capabilities and extra processing power of the PC and at the same time, rely on the security, integrity and DBMS capabilities of ALLBASE/SQL (HP e3000 or HP 9000) and IMAGE/SQL on the HP e3000.

Requirements

Server Requirements

- MPE/iX Release 5.0 (or later)
- IMAGE/SQL Version B.G2.03 (or later)
- ALLBASE/SQL Version A.G2.00 (or later)
- ThinLAN Link/XL must be configured and turned on

Client Requirements

- 486 processor minimum; preferably Pentium
- 8 MB memory; 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 e3000 or HP 9000 as appropriate
- Client programs for both 16- and 32-bit platforms. When using a Windows95 or Windows NT, you should use the 32-bit driver if possible. However, if you have a 16-bit application running under Windows95 or WindowsNT, 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.

Some 4GLs/Decision Support Tools for ALLBASE/SQL and IMAGE/SQL

- PowerSoft PowerBuilder
- Cognos Impromptu
- Cognos PowerHouse 4GL
- Lotus® 1-2-3®
- Microsoft Excel
- Microsoft Visual Basic
- Microsoft Access
- Speedware 4GL
- Ingres 4GL tools
- IBI Focus 4GL
- Uniface 4GL

Note: Some of these tools do not require ODBC. Check with tool vendor for specifics.

DCE/3000

General Description

Distributed Computing Environment (DCE) is software based on OSF standards for distributing data and applications across multiple, multivendor systems. DCE is a set of platform independent tools and services for creating and running distributed applications.

Components of DCE Software

The basic unit of operation and administration in a DCE environment is a cell. A DCE cell is a group of users and systems that share resources and DCE services. A cell must have three DCE services: Security Service, Cell Directory Service (CDS), and Distributed Time Service (DTS). Each of these services includes software that runs on both DCE clients and DCE servers. All systems in the cell must have the DCE client software for these services. A cell must also contain server software for these services, including at least one Security server and at least one CDS server. Three DTS servers are recommended. The DTS server license is included with the Executive Client license.

Note that the terms DCE client and DCE server terms refer specifically to clients and servers of DCE software. A system may be an application and/or database server while being a DCE client. One system may act as a DCE server for multiple DCE services.

Other components of DCE include Remote Procedure Calls (RPCs) and DCE Threads. DCE RPC software automates the application development and implementation of networking communications between systems. RPCs are included in the DCE client software. Threads are “lightweight” processes that improve application performance through parallel processing. DCE Threads are based on POSIX threads. The DCE/3000 solution includes kernel threads built into the MPE/iX operating system, which allows parallel processing on HP e3000 multiprocessor systems. Kernel threads are included with MPE/iX 5.0 PowerPatch 2 (C.50.02).

DCE/3000 Product Structure

DCE/3000 Core Services Media includes all of the DCE/3000 client and server software, as well as one set of DCE/3000 manuals. The software may be ordered on either a digital data storage (DDS) or 6250 BPI tape media.

DCE/3000 Executive Client License (B3823AA) is a license to use the DCE client software on one HP e3000 system. A separate license must be ordered for each and every system running DCE client software. All systems in a DCE cell run DCE client software. Note that a license-to-use the DTS server software is not a separate product; the DCE Executive Client license allows use of the DTS server software.

POSIX on the HP e3000

The HP e3000 supports a wide range of industry standards, providing many open system benefits. It provides multivendor interoperability and coexistence with IBM, NT, and UNIX systems, and also supports application portability interfaces as defined by the most prominent standards groups. The primary focus for the HP e3000 platform is to provide open systems leadership in On Line Transaction Processing (OLTP) performance and functionality. The support of POSIX on the HP e3000 is evidence of the commitment to open interfaces providing a wider choice of application solutions to HP e3000 customers.

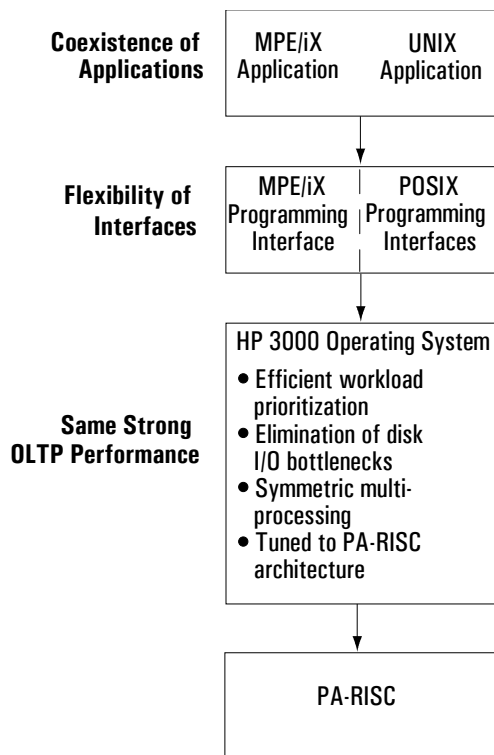
POSIX Standards at a Glance

To support application portability across systems, the IEEE P1003 group, accredited by ANSI, was chartered to specify a Portable Operating System Interface (POSIX) standard for application development. The POSIX group was formed to specify the functions and services an operating system must support and to specify the application programming interfaces to these services. POSIX is a set of interfaces common across many different computer systems. Several IEEE committees are defining POSIX interfaces. The POSIX 1003.1 committee has approved a set of standardized programmatic interfaces for the basic operating systems facilities. The POSIX 1003.2 standard specifies a UNIX-like interactive interface to shell and utility services. Other POSIX standards are evolving in the areas of real-time extensions, language bindings, security, systems administration, networking and transaction processing. The HP e3000 strategy is to adopt the standards that bring greatest value to commercial OLTP customers.

An Integrated POSIX Means Coexistence with Traditional MPE Applications

POSIX 1003.1 programmatic interface and the hierarchical directory structure have been incorporated in the MPE/iX operating system, and come standard with the fundamental operating system. This means MPE users can use the new functionality without impact to existing HP e3000 applications. Moreover, MPE applications can access POSIX files, applications, and databases providing full integration between them.

Figure 9.3



POSIX 1003.2 Shell and Utilities are Included

The POSIX 1003.2 specification describes a shell and a set of utilities that UNIX users are familiar with. On the HP e3000, the shell is called the iX Shell and Utilities, and it comes with the system for no additional charge. Also included are utilities such as awk, vi, lex, make, and yacc. This allows developers and users with UNIX skills to use the same tools they use in their UNIX environment, reducing the need for additional training.

MPE/iX Developer's Kit Offers a Comprehensive Environment for Developing or Porting POSIX Compliant Applications

The MPE/iX Developer's Kit (bundled with MPE/iX 5.5 or later versions) is designed for solution suppliers and customers who want to develop POSIX applications or port UNIX applications to the HP e3000. The kit includes all the software and documentation necessary to port or develop applications in a client/server environment. A workstation such as the HP 9000 Series 700 or Sun SPARC workstation may also be used with the HP e3000 for cross development. This allows developers to take advantage of programmer productivity tools (editors and debuggers) on the workstation while deploying the application on the HP e3000 for run-time operation.

System Environment

The MPE/iX Developer's Kit and the iX Shell and Utilities require MPE/iX Release 5.0 or subsequent versions. If a UNIX workstation is used for cross development, required components include NFS (from Quest) and LAN Link/3000.