

HEWLETT-PACKARD

Migration to 900 Series HP 3000 Systems

From MPE V Based HP 3000 Systems

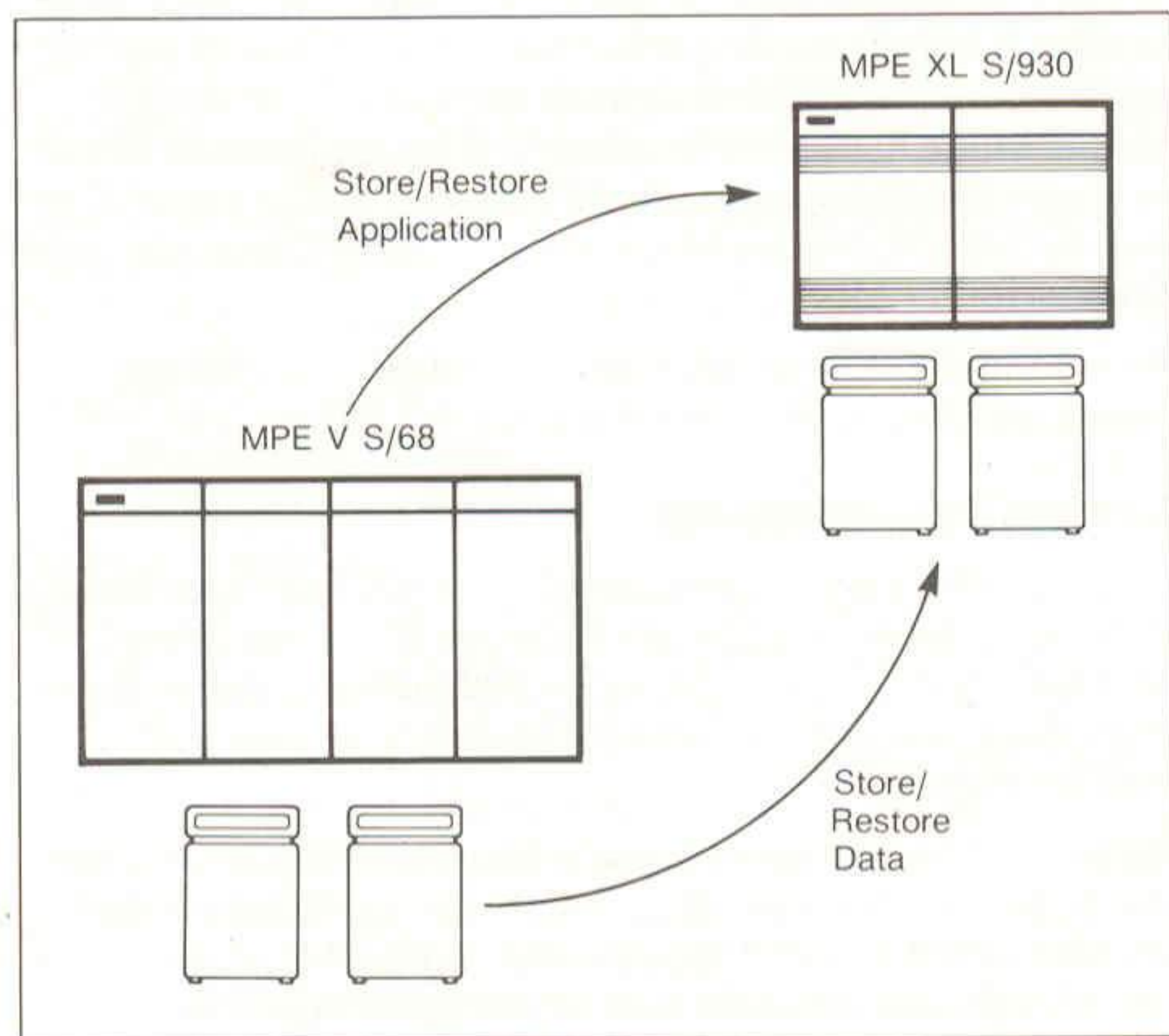
A Compatible Migration Path

Migration to 900 Series HP 3000 systems is based on full compatibility with the rest of the HP 3000 family. This compatible migration path protects your investment in HP 3000 hardware and software and provides you with a painless growth path to the high performance and capabilities of the 900 Series.

Key Features

Object Code Compatibility

900 Series HP 3000 systems have a run-time environment known as "Compatibility Mode" which allows customer developed object code from the rest of the HP 3000 family to run on 900 Series systems. Consequently, little or no changes are required to move these applications or data from existing HP 3000's to new 900 Series systems.

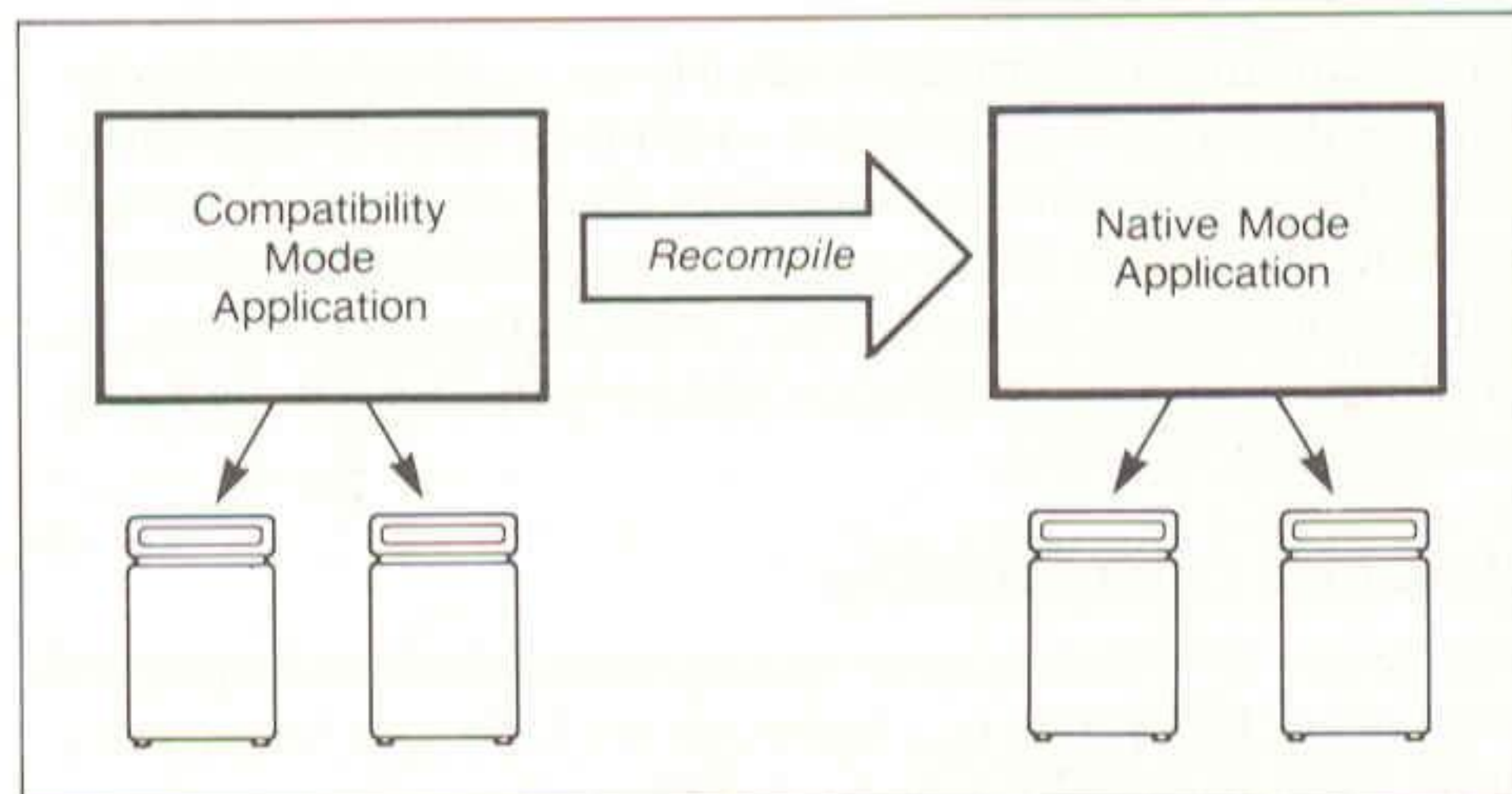


Object Code Compatibility

Source Code Compatibility

900 Series HP 3000 systems have a second environment known as "Native Mode" which allows efficient access to the full power of the 900 Series new HP Precision Architecture. An existing application can be easily recompiled to Native Mode because new 900 Series compilers have been designed to have source code compatibility with the rest of

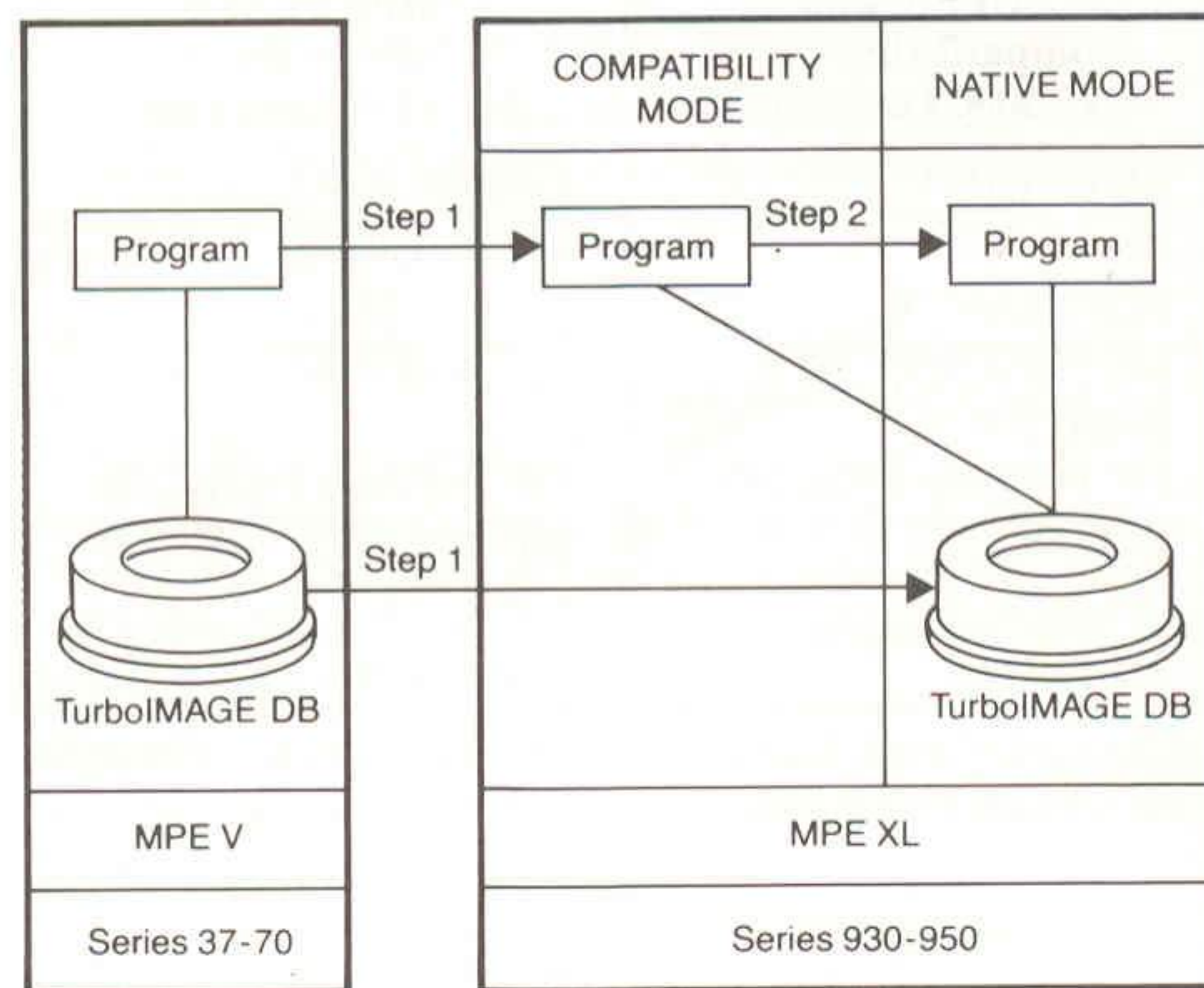
the HP 3000 family. Native Mode compilers will be available for HP FORTRAN 77/XL, COBOL II/XL, HP Business BASIC/XL, HP Pascal/XL, HP C/XL, HP Transact/XL, and HP RPG/XL.



Source Code Compatibility

Database Compatibility

TurboIMAGE applications and databases can be restored and run on a 900 Series systems without modification. Both Compatibility Mode programs and Native Mode programs can access the same Native Mode TurboIMAGE database and intrinsics.



Database Compatibility

An entirely new version of IMAGE, called HPIMAGE, has been developed to take full advantage of the HP Precision Architecture. For applications that will execute on 900 Series systems only, HPIMAGE provides the greatest feature set and performance. To maintain the ability to use the same source code on MPE V based HP 3000's and 900 Series systems, an interface to HPIMAGE, called TurboWindow, can be used. Because HPIMAGE has a state of the art database internal architecture different than TurboIMAGE, source code changes are required to use HPIMAGE or TurboWindow.

Phased Migration

Once running in Compatibility Mode, applications can be recompiled into Native Mode in phases, at your convenience; they do not have to migrate all at once. Applications running in Native Mode can continue to share databases with applications running in Compatibility Mode. This dual mode execution is transparent to users and is switched automatically by MPE XL.

Network Compatibility

900 Series HP 3000 systems can communicate transparently with other HP 3000s in a network via Network Services/3000 over an 802.3 Local Area Network.

Cross Development

You can develop applications on a 900 Series system for use on other HP 3000 systems, allowing the use of a 900 Series system for centralized application development. However, final testing should be done on the target machine. Applications can be developed in any of the following languages.

| MPE V and Compatibility Mode HP 3000 Languages | MPE XL and Native Mode HP 3000 Languages |
|---|---|
| COBOL II/V | COBOL II/XL |
| Pascal/V | HP Pascal/XL |
| FORTTRAN/V | |
| HP FORTTRAN 77/V | HP FORTTRAN 77/XL |
| BASIC/V | |
| HP Business BASIC/V | HP Business BASIC/XL |
| RPG/V | HP RPG/XL |
| SPL/V | HP C/XL |
| Transact/V | Transact/XL |

VPLUS Compatibility

Applications using VPLUS screens can operate in Compatibility or Native Mode.

Operational Compatibility

The MPE XL operating system is a compatible superset of MPE V/E, providing 900 Series system managers, operators and users with the same operating environment they're used to on existing HP 3000's. Consequently, only minimal retraining is required to learn additional functionality and ease of use features of MPE XL.

Exceptions

Privileged Mode

Applications which use undocumented procedures, execute in Privileged Mode, call routines that require Privileged Mode or use privileged machine instructions may need to be modified when moved to a 900 Series system just as they may need modification between versions of MPE V.

SPL

Applications which are written in SPL can migrate to the 900 Series and run in Compatibility Mode. However, SPL applications cannot be recompiled into Native Mode due to SPL's close dependence on the MPE V based HP 3000 architecture. If Native Mode performance is required, these applications should be rewritten in Pascal, C, or other Native Mode high level languages. If an application written in a high level language calls SPL procedures, it can still be recompiled into Native Mode and call the SPL procedures in Compatibility Mode.

For additional, less frequently encountered exceptions, please see your Sales Representative.

System Requirements

Any HP 3000 system can upgrade to a 900 Series system. Even the discontinued Series II, Series III, Series 30 and Series 33 systems can upgrade to 900 Series systems. However, these will require some assistance from your HP account team.

Because of the amount of time it takes to integrate and test the numerous peripherals and software applications that are supported on HP 3000 systems, support of some peripherals and software will be provided in phased releases. Please contact your Sales Representative for the HP applications and peripherals currently supported.

Migration Tools

The Migration Tools play a key part in the migration process. The tools assist migration in each of its phases from Planning, Preparation, and Installation of the 900 Series System to Compatibility Mode and Native Mode Operation.

Migration Toolset

The Migration Toolset can be used in advance of receiving a 900 Series system as part of your Planning. These tools execute on existing MPE V based HP 3000s and help identify incompatibilities, such as the PTAPE intrinsic, that may exist in your applications. (P.N. 32428A)

The following tools are included with the Migration Toolset:

- **Object Code Analyzer (OCA)** — Identifies incompatibilities which may exist in programs and SL's. This tool comprehensively scans individual or groups of Programs or Segmented Libraries and identifies potential incompatibilities which may exist.
- **Run Time Monitor (RTM)** — Identifies incompatibilities which exist in applications as they execute. This tool will interrogate parameters passed to intrinsics for potential incompatibilities and log any incompatibilities which are found for later analysis.

MPE XL FOS Migration Tools

A set of Migration Tools is also included with the 900 Series System. These tools assist in System Installation, Compatibility Mode, and Native Mode Operation.

The following tools are included with the MPE XL Fundamental Operating System:

- **Directory Migration Tool (DIRMIG)** — Migrates an MPE V operating environment to a 900 Series System. This tool will migrate the directory structure, the Resource Identification Number Table and User Logging IDs as well as the User Defined Command environment and Private Volume information and files.
- **Object Code Translator (OCT)** — Improves an applications' performance within Compatibility Mode. It translates MPE V object code into HP Precision Architecture instructions. This tool will be especially useful for SPL programs and programs which will not be recompiled in Native Mode and those which do not have NM compilers.
- **Switch Assist Tool** — Helps customers develop mode switching procedures. This tool will generate HP Pascal/XL source code which allows programs which have been recompiled in Native Mode to call procedures

which reside in Compatibility Mode SL's. This tool will be of particular use in calling SPL based Segmented Library procedures which reside in Compatibility Mode libraries.

- **Floating Point Conversion Intrinsic** — Converts from the MPE V HP 3000 floating point format to the IEEE floating point standard which is supported in Native Mode on 900 Series systems. Although, converting HP 3000 floating point data to the IEEE format is optional, Native Mode programs will have better performance if floating point data is converted to the IEEE format when the Floating Point Co-processor is installed.

Consulting Services

Consulting services are available for those wishing individual advice on planning and implementing a migration.

Planning Consulting

Planning consulting, to help plan the migration of applications, can be delivered at your site by a migration trained System Engineer whose goal is to provide you with the methodology for optimal migration planning.

Project Center Consulting

A System Engineer can help with the actual migration of your applications. As part of our migration services, HP can also assist customers with Series II/III/30/33 systems in moving to 900 Series systems.

Migration Literature

Migration Planning Guide — gives in-depth information on migration and the tools and services available. It also outlines steps that can be undertaken on existing MPE V based HP 3000 systems to prepare for migration to a 900 Series system. Available now. (P.N. 5954-9347)

HP 3000 Systems Configuration Guide — Updated to include information regarding peripheral and HP application support on the Series 930. Available now. (P.N. 5954-9354)

Migration Toolset Data Sheet — Provides an overview of the tools included in the Migration Toolset. Available fall 1987. (P.N. 5954-9446)

Migration Toolset Guide — Included with the Migration Toolset, this guide will provide an overview of migration and a step-by-step explanation of tool usage. Included with Migration Toolset.

Migration Manual Series — Individual, detailed manuals covering each aspect of migration. Available at volume shipments of the Series 930.

